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Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Road East, Bldg. 1
Santa Fe, NM 87505

SUBJECT: Submittal of the Response to the Notice of Disapproval for the Tijeras Arroyo Groundwater (TAG) Investigation Report at Sandia National Laboratories/New Mexico

Dear Mr. Bearzi:

On behalf of the Department of Energy/National Nuclear Security Administration (DOE/NNSA) and Sandia Corporation, DOE/NNSA is submitting Responses to the NMED's "Notice of Disapproval: TAG Investigation Report, November 2005, Sandia National Laboratories, EPA ID NM5890110518, SNL-05-028.," received August 1, 2008.

Should you have any questions on this response, contact me at (505) 845-6036 or John Gould of my staff at (505) 845-6089.

Sincerely,

Kimberly A. Davis
Acting Manager

Enclosure

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AOP 95-45, 06

CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

Document title: **Responses to NMED's "Notice of Disapproval: Tijeras Groundwater Investigation Report, November 2005, Sandia National Laboratories, EPA ID NM5890110518, SNL-05-028."**

Document author: **Mike Sanders, Department 06765**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature: _____ 2/18/09
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Francis B. Nimick
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February 2009

U.S. Department of Energy/Sandia Corporation Responses to the New Mexico Environment Department's Comments in "Notice of Disapproval: Tijeras Arroyo Groundwater Investigation Report, November 2005 Sandia National Laboratories EPA ID# NM5890110518 SNL-05-028"

INTRODUCTION

This document responds to the comments in the Notice of Disapproval (NOD) letter dated August 1, 2008 from the New Mexico Environment Department (NMED) to the U.S. Department of Energy (DOE) and Sandia Corporation (Sandia) regarding the current conceptual model of groundwater hydrology and contaminant distribution in the Tijeras Arroyo Groundwater (TAG) study area in the vicinity of Technical Areas I, II, and IV at Sandia National Laboratories/New Mexico (SNL/NM). The letter is entitled: "Notice of Disapproval: Tijeras Arroyo Groundwater Investigation Report, November 2005 Sandia National Laboratories EPA ID# NM5890110518 SNL-05-028."

The NMED NOD letter contains 29 comments. This response lists each NMED comment in boldface, followed by the DOE/Sandia response in normal font under "Response." New or revised versions of text, tables, and figures as requested in the NOD are attached to this response to comments.

It should be reiterated that the work documented in the subject report was based on agreements negotiated by the TAG High Performing Team (HPT) on groundwater issues that span institutional boundaries, specifically property controlled by the City of Albuquerque (COA), Kirtland Air Force Base (KAFB), and SNL/NM. The HPT agreements were made with input by representatives of the DOE, the SNL/NM Environmental Restoration Project, the KAFB Installation Restoration Program, the U.S. Environmental Protection Agency (EPA) (Region 6), the NMED Hazardous Waste Bureau (NMED/HWB), the NMED DOE Oversight Bureau (NMED/DOE OB), the NMED Ground Water Quality Bureau (NMED/GWQB), the Bernalillo County Environmental Health Department, and the COA Environmental Health Department.

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General Comments

1. **According to the Investigation Report, a total of 68 groundwater monitoring wells exist within the TAG groundwater monitoring well network. The Permittees shall provide contemporaneous, current groundwater elevation data for all 68 groundwater monitoring wells within the TAG network, in compliance with the Compliance Order on Consent (Consent Order), dated April 29, 2004. Section IV.C of the Consent Order states that the Permittees (Respondents) [sic] shall determine the "[d]epth to water, water levels, water table, potentiometric surface, and any seasonal variations" to the satisfaction of the NMED. The data deliverable shall be submitted as a table and in electronic form. Reporting Requirements specified in the Consent Order in Section X.A state, "[a]ll work plans and reports shall be submitted to the Department in the form of one electronic copy and two paper copies. Where information cannot be reasonably converted to an electronic format, the Respondents [sic] shall notify the Department prior to the submittal date for the information and shall seek approval for submission of the information in an alternative format. Text documents submitted as an electronic file shall be compatible with Microsoft Word™ and Excel™, and shall be submitted on a compact disk, or in other file formats and devices approved by the Department."**

   Response: In accordance with requirements in Comment 1, concurrent contemporaneous water levels were obtained from those wells that were part of the July 2003 through October 2004 TAG HPT well network (herein after simply referred to as the TAG HPT well network) between December 10 and December 17, 2008 (Appendix A, Table A-1). Five of the original TAG monitoring wells (KAFB-0214, KAFB-0215, KAFB-0216, KAFB-0217, and KAFB-0218) were plugged and abandoned prior to December 2008, leaving a total of 63 of the original TAG HPT network wells. Electronic versions of the TAG Investigation Report (IR) and electronic versions of all changed text, tables, and figures required by this NOD are provided on the compact disc (CD) that accompanies this response.

2. **Groundwater monitoring wells with well screens completed in the regional aquifer are labeled as "regional wells" and those with well screens completed in the perched aquifer bear the "perched well" label." A third type of well, "merging," indicates a groundwater monitoring well with a well screen completed in an intermediate water-bearing unit associated with the merger of the perched system and the regional aquifer. The Investigation Report uses these labels inconsistently. For example, well completion data indicate groundwater monitoring well KAFB-0308 screen is completed in the regional aquifer; however, Figure 3.1.3-5 (page 3-15) includes this well among other wells completed in the perched aquifer. For clarity, the Permittees shall provide a table listing all 68 groundwater monitoring wells within the TAG network; the table shall include the following:**

   - **Well name**
   - **Well owner (e.g., Sandia National Laboratories [SNL], Kirtland Air Force Base [KAFB], or City of Albuquerque [COA])**

General Comments

- **Screened interval (e.g., regional, perched, or merging)**
- **Well completion elevations, in feet above mean sea level (ft amsl)**
  - **Ground surface**
  - **Top of casing or measuring point (choose one only, if the measuring point is chosen, indicate via individual footnote for each pertinent well the relationship between the top of casing and the measuring point)**
  - **Screening interval(s)**
  - **Bottom of casing**
  - **Bottom of borehole**
- **Whether the well was sampled for six quarters**

Response: The requested information (where available) has been compiled into Table B-1 (Appendix B). As noted in the comment, the designation of aquifer system is, at times ambiguous. This is due to the very complex hydrogeologic system in the study area and the evolution of the conceptual model over time by numerous workers at different agencies. The designations of aquifer system presented in Appendix B and in figures/text/tables in the remainder of this response are based on the most recent interpretation of the December 2008 water level data by DOE/Sandia.

3. The Permittees shall provide a figure showing all 68 TAG monitoring wells on a single figure. The figure will distinguish between "regional wells," "perched wells", and "merging wells." Furthermore, the figure shall indicate from which wells sample collection occurred over six quarters from July 2003 through October 2004.

Response: The December 2008 water level elevation data described in the response to Comment 1 were used to determine the aquifer of completion. In response to Comments 22 and 23 of this NOD, updated regional aquifer and perched system potentiometric surface maps have been generated. The water level elevation contours shown in the two figures are based on the December 2008 water level measurements completed in the 63 existing TAG wells. The aquifer of completion (perched system, merging zone, or regional aquifer) for each well was reevaluated as part of the potentiometric surface update task. DOE/Sandia currently believe that 37 of the 63 wells are completed in the regional aquifer, one well (TJA-4) is a merging zone well, and the remaining 25 wells are completed in the perched system aquifer.

General Comments

A new figure (Appendix C) has been generated that shows the 68 original (63 existing) TAG HPT network wells and identifies the wells completed in the regional aquifer, merging zone, and perched system. The aquifer of completion for each well that is shown in the new figure reflects the current DOE/Sandia interpretation. The figure also shows the five wells that had been plugged and abandoned prior to December 2008. In addition, this figure also indicates the 49 TAG HPT network wells that were sampled for six quarters between July 2003 and October 2004 (several KAFB wells were actually sampled in November 2004 during the sixth quarterly event).

Specific Comments

4. Information regarding the number of wells in the TAG network is inconsistent and contradictory:

a. <u>Executive Summary, page i, 5th paragraph, 4th bullet</u>
The sentence states, "[c]urrently, SNL/NM has installed a network of <u>45</u> monitoring wells that consists of <u>35</u> groundwater and <u>10</u> soil vapor wells. KAFB and the COA have installed approximately <u>25</u> groundwater monitoring wells in the vicinity."

b. <u>Executive Summary, page iii, 2nd paragraph, 2nd and 3rd sentences</u>
The sentence states, "[a]s of the January 2001 sampling event, SNL/NM had installed <u>23</u> monitoring wells. <u>Eleven</u> monitoring wells are completed in the perched system, while <u>twelve</u> monitoring wells are completed in the regional aquifer."

c. <u>Section 1.2, pages 1-5 and 1-6, Table 1.1-1</u>
According to the table, SNL/NM operates a total of <u>25</u> groundwater monitoring wells, as of December 2004. This total is the same as that of January 2001 due to the addition and subsequent removal of two wells, leaving the total number of wells unchanged.

The Permittees shall provide the current number of wells within its TAG network, correct these discrepancies, and submit corrected pages.

<u>Response</u>: The revised Table 1.1-1 shows that prior to the submittal of the TAG Work Plan (June 2003), a total of 26 groundwater monitoring wells, and 5 soil-vapor wells had been installed by Sandia. As discussed in Section 2.9.2 of the TAG IR, five additional soil-vapor wells were installed and sampled as a requirement of the TAG Work Plan, totaling 10 soil-vapor wells in the study area. Item A of NMED Comment 4 (Executive Summary, page i, 5th paragraph, 4th bullet) has been modified to reflect the correct number of SNL/NM wells as shown in the revised Table 1.1-1. The replacement page for ES-i is included as Appendix D.

Table 1.1-1 also shows that 23 groundwater monitoring wells had been installed as of January 2001, so no change to Item B of NMED Comment 4 (Executive Summary, page iii, 2nd paragraph, 2nd and 3rd sentences) is necessary.

Review of Table 1.1-1 (Section 1.2, pages 1-5 and 1-6), Item C of NMED Comment 4 showed that one well (TA1-W-08, installed in August 2001) had been omitted from the table. Table 1.1-1 has been revised to include well TA1-W-08. The replacement page for 1-5 (Revised Table 1.1-1) is included as Appendix D.

For the July 2003 through the October 2004 (November 2004 for some KAFB wells) investigation, the TAG HPT groundwater monitoring well network consisted of 68 groundwater monitoring wells, of which 63 still exist as of February 2009. At the time of

this response, SNL/NM, KAFB, and the COA currently own 26, 33, and 4 (respectively) of the original TAG HPT network wells.

5. Section 1.1, page 1-2, 2nd paragraph, 4th through last sentences

The excerpt states the following:

"[t]he SNL/NM CME [Corrective Measures Evaluation] Work Plan identifies the specific area within the overall TAG boundary for which SNL/NM has responsibility and outlines a process for evaluating remedial alternatives within this area. The SNL/NM CME Work Plan was approved (with modifications) by the NMED in October 2004 (NMED October 2004). The boundary of the area addressed in the SNL/NM CME Work Plan is contained within the overall TAG boundaries. In order to clearly distinguish it from the overall TAG study area, the area that the SNL/NM CME Work Plan addresses is referred to as the SNL/NM Area of Responsibility (AOR). The SNL/NM AOR encompasses approximately 2 square miles in the north-central portion of KAFB, or approximately 26 percent of the entire TAG study area, as defined by the TAG Investigation Work Plan (SNL/NM June 2003) and this TAG Investigation Report. Within the SNL/NM AOR, composed of Technical Area (TA)-I, TA-II, and TA-IV, 13 potential release sites are managed by SNL/NM."

The Permittees shall provide a new figure explicitly showing the boundaries of the SNL AOR, the overall TAG boundaries, and Technical Areas-I, -II, and –IV, as no figure within the Investigation Report specifically indicates the SNL AOR.

Response: Figure 1-2 of the TAG Corrective Measures Evaluation (CME) Work Plan showing the DOE/Sandia Area of Responsibility (AOR) is included as Appendix E.

As explained above in the preamble, the work described in the TAG IR was performed by multiple parties (KAFB, COA, and DOE/Sandia) and reviewed by multiple parties (KAFB, DOE/Sandia, NMED/HWB, NMED/GWQB, NMED/DOEOB, EPA, Bernalillo County, and the COA). Although work was performed by multiple parties, DOE/Sandia agreed to prepare the TAG IR and synthesize the information provided by all parties.

As noted, the AOR is a term from the CME Work Plan that does not correspond to the TAG boundaries as used in the TAG IR. Between the time of the agreement to implement the TAG CME Work Plan and the production of the TAG IR, DOE/Sandia received the Compliance Order on Consent (NMED April 2004) requiring the completion of a CME in the TAG study area. Because DOE/Sandia prepared the TAG IR, and the other parties were not required to perform a CME in the TAG study area, DOE/Sandia thought it would be beneficial to briefly discuss the CME. As no other AORs have been defined for other parties, DOE/Sandia did not deem it appropriate to define the DOE/Sandia AOR in the TAG IR. As mentioned above, Figure 1-2 and subsequent figures in the NMED-approved TAG CME Work Plan (submitted to NMED in July

2004) show the DOE/Sandia AOR. The same AOR boundary is explicitly shown in multiple figures in the TAG CME Report (submitted to NMED in August 2005).

6. Section 1.2, page 1-7, 5th paragraph, 3rd sentence; Section 4.2.3, page 4-13, 2nd paragraph, 5th sentence; and Annex F

The sentence from Section 1.2 states, "[h]istorically, the concentrations of these VOCs are low, ranging from less than 1.0 (estimated values) to 9.6 µg/L [micrograms per liter], with only <u>three</u> [perched system] monitoring wells (TA2-W-19, TA2-W-26, and WYO-4) historically exhibiting concentrations above the EPA MCL [U.S. Environmental Protection Agency maximum contaminant level] for TCE of 5.0 µg/L." In contrast, the sentence from Section 4.2.3 states, "TCE exceeded the MCL (5.0 µg/L) in only <u>two</u> perched system monitoring wells (TA2-W-19 and WYO-4)." These statements present inconsistent information regarding the number of wells exhibiting TCE concentrations greater than the EPA MCL. Furthermore, the groundwater data results from monitoring well TA2-W-26, as presented in Table 4.2.3.1 (page 4-14) and in Annex F, indicate that TCE concentrations in groundwater samples collected from monitoring well TA2-W-26 do not exceed the EPA MCL.

The Permittees shall determine which groundwater sample results, and from which monitoring wells, exhibit TCE concentrations greater than the EPA MCL. The Permittees shall correct these and any other pertinent sentences and submit the replacement pages.

<u>Response</u>: DOE/Sandia notes the conflicting statements and, accordingly, the trichloroethene (TCE) concentrations have been reviewed and the text corrected. Replacement page for 1-7 is included as Appendix F. Review of TCE concentrations confirms that there are two [perched system] monitoring wells (TA2-W-19 and WYO-4) historically exhibiting concentrations above the EPA maximum contaminant level (MCL) of 5.0 µg/L for TCE. Monitoring well TA2-W-26 was incorrectly listed on page 1-7 as a third well with concentrations exceeding the EPA MCL and has been removed from the text. No changes were necessary to Section 4.2.3, page 4-13, where it is correctly stated that "TCE exceeded the MCL (5 µg/L) in only two perched system monitoring wells (TA2-W-19 and WYO-4)." Table 4.2.3.1 and Table F-1 in Annex F remain unchanged, showing TCE concentrations from monitoring well TA2-W-26 at levels below the EPA MCL.

7. Section 2.1.2, pages 2-5 through 2-8, Table 2.1.2-1; Section 2.2.2, pages 2-10 through 2-14, Table 2.2.2-1; and Section 2.4.2, pages 2-16 through 2-21, Table 2.4.2-1

Each table is a summary of investigations conducted at SNL/NM SWMUs located in TA-I, in TA-II, and along Tijeras Arroyo. Each table lists the SWMU number and name, potential contaminants, investigations and results, and regulatory status. According to the tables, the NMED accepted an NFA petition for each SWMU in the

table. The Permittee shall modify the table to include references for each accepted NFA petition and submit the modified table.

Response: Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1 have been revised to include reference citations for NMED (or, in some cases, EPA) documents that show when the no further action (NFA) petitions for each of the SNL/NM solid waste management units (SWMUs) in the TAG study area were initially approved by the regulatory authority. The cited references are also included at the end of each table. Revised versions of Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1 are included as Appendix G.

8. Section 2.2.2, page 2-9, 3rd paragraph, 1st sentence; Section 2.6, page 2-27, Table 2.6-2; and Section 2.6, page 2-28, 4th paragraph

The sentence states, "[n]o SNL/NM testing or disposal activities involving HE [high-explosive] material are suspected of releasing nitrate to the environment in the TAG study area." According to Table 2.6-2 (page 2-27), SNL identified HE as a possible contaminant in waste water at SWMUs 48, 136, 159, 167, 166, 167, 227, and 229 in TA-II. Furthermore, Section 2.6 (page 2-28) states, "[b]ecause some HE compounds can degrade to nitrate, the TA-II buildings in which HE materials were handled that were also connected to waste-water disposal systems were evaluated for anthropogenic nitrate. Using the rationale discussed for TCE, the concern level for HE-derived nitrate is based upon the type and scale of historical operations that were conducted at each building." The Permittees shall explain this discrepancy and indicate the likely source for the nitrate that is contaminating groundwater within the AOR.

Response: The text from Section 2.2.2, page 2-9, 3rd and 4th paragraphs has been rewritten to resolve the inconsistency identified. The replacement page for 2-9 is included as Appendix H, and the revised text reads as follows:

> Past SNL/NM testing and/or disposal activities involving HE material suspected of releasing nitrate to the environment in the TAG study area are identified in Table 2.6-2. However, due to the lack of HE compounds found in soil samples taken from TA-II SWMUs, the potential for HE to degrade to nitrate in this area is low. All TA-II sites that were sampled for HE compounds have been approved for NFA status (Table 2.2.2-1).
>
> Comprehensive soil sampling results indicate that the TA-II SWMU sites pose little or no additional risk to groundwater. This is demonstrated by the fact that COCs in the soil in this area are at or below background and/or acceptable risk-based levels (Table 2.2.2-1).

9. Section 2.6, pages 2-23 through 2-28; page 2-27, Table 2.6-2; and Section 2.10, page 2-49, Table 2.10-1

This section describes the three criteria used to determine whether SNL considered a particular SWMU a potential source of TCE and/or nitrate that could potentially threaten groundwater. The 2nd paragraph, 1st and last sentences (page 2-23) state, "[t]he first criterion is based upon whether or not the NMED had approved an NFA

proposal for a site. If the NMED has approved the respective NFA proposal, the site need not be considered as an ongoing potential source of groundwater contamination (Moats November 2001)." The 3rd paragraph, 1st two sentences (page 2-23) state, "[i]n order to make this report as current as possible, the second criterion addresses sampling results that may not have yet been fully reviewed by the NMED. Sites with soil samples that contained levels of COCs below background and/or risk-based levels were not considered to be potential sources." On page 2-26, the 1st paragraph, 1st sentence, states, "[t]he third criterion addresses the volume of water (waste, septic, or storm) associated with each site." Use of these criteria resulted in Table 2.6-2 (page 2-27) and the assignment of the identifier "potential release sites with a high level of concern for release of TCE and/or nitrate to groundwater" in Table 2.10-1 (page 2-49), as well as throughout the report text.

The Permittees shall provide information regarding the following:

a. Explain whether one applies each criterion in successive order, beginning with criterion one.

b. If application of the criteria does not occur successively, explain whether each criterion carries equal weight (importance) or if any possess greater favor than any other criterion.

c. Explain the discrepancy between SWMUs listed as potential release sites in Table 2.6-2 (page 2-27) and the same SWMUs listed with accepted NFA proposals in Table 2.1.2-1 (pages 2-5 through 2-8), Table 2.2.2-1 (pages 2-10 through 2-14), and Table 2.4.2-1 (pages 2-16 through 2-21). The listing of these sites as potential release sites appears in contradiction to criterion two. Of particular note are SWMUs 46, 165, and 187; each of which bear the label "high concern level for potential release" in Table 2.6-2 (page 2-27), Table 2.10-1 (page 2-49), and in various parts of the Investigation Report text. The NMED approved the NFA petitions for SWMUs 165 and 187 in June 2006; the listing of these two SWMUs as potential release sites now also appears in contradiction to criterion one.

Response: The use of the three criteria (NFA approval status for the site, presence of constituents of concern [COCs] above background at the site, and consideration of the volume of water potentially discharged at the site) at the time the TAG IR was written was to capture those sites that were considered to be possible sources for nitrate or TCE that could potentially reach groundwater. The intent was that the site had to meet at least one of the criteria, or a combination of the criteria, to be considered a potential source of groundwater contamination.

Regarding Item C of this comment, a comparison was made between the second and third columns from the left in Table 2.6-2 (which shows the level of concern for TCE and nitrate contamination for 13 SNL/NM SWMUs and other sites owned by KAFB or the COA) and the second column from the right in Table 2.6-1, which shows whether each of

the SNL/NM sites listed in that table (including the 13 SNL/NM SWMUs listed in Table 2.6-1) are or are not potential sources for TCE or nitrate. Discrepancies between the two tables were noted for SWMUs 96 and 226. Table 2.6-2 indicates that SWMUs 96 and 226 have a low to no concern as potential TCE or nitrate sources, whereas Table 2.6-1 indicates that the two SWMUs <u>are</u> potential sources for TCE or nitrate. Table 2.6-1 has been revised to agree with Table 2.6-2, and now indicates that SWMUs 96 and 226 <u>are not</u> potential sources for TCE or nitrate. For SWMUs 46, 165, and 187, both tables indicate that these three SWMUs are potential sources for TCE or nitrate, so there is no apparent discrepancy between Table 2.6-1 and 2.6-2.

Also, the NFA approval status for the SWMUs listed in Table 2.6-1 (shown in the fifth column from the right on Table 2.6-1) was reviewed in response to Comment 7, and it was determined that the NFA petitions for two SWMUs (46 and 190) had not been accepted by regulators at the time the TAG IR was written (November 2005). The NFA petitions for the other SWMUs listed in Table 2.6-1 were accepted by regulators prior to completion of the TAG IR. Based on this review, the fifth column from the right in Table 2.6-1 has been revised to reflect the status of NFA acceptances by the regulators as of November 2005.

The review also determined that the NFA petitions for SWMUs 165 and 187 were accepted by regulators in October and December 2004, respectively. References for the NMED acceptance of the NFA petitions for SWMUs 165 and 187 are as follows:

<u>SWMU 165 NFA Approval</u>

New Mexico Environment Department (NMED) October 2004. "RE: Order on Consent Deliverables #5 and #6 (Table XI-3) Environmental Restoration Project Solid Waste Management Unit (SWMUs) Assessment Reports and Proposals for No Further Action: Drain and Septic Systems (DSS) Sites 1010, 1028, 1083, and 1086, and Request for Supplemental Information Response for SWMUs 48, 135, 136, 159, 165, 166, and 167: June 2004, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-04-032" New Mexico Environment Department, Santa Fe, New Mexico. October 7, 2004.

<u>SWMU 187 NFA Approval</u>

New Mexico Environment Department (NMED) December 2004. "Certificates of Completion: Environmental Restoration Project Response to NMED's Request for Supplemental Information on the No Further Action Proposals for Solid Waste Management Units 96, 187, and 226, Dated May 1997: September 2004, Sandia National Laboratories, NM5890110518, HWB-SNL-04-019" New Mexico Environment Department, Santa Fe, New Mexico. December 20, 2004.

Replacement page 2-24 (revised Table 2.6-1) with the revisions described above is included as Appendix I.

Specific Comments

10. Section 2.6, page 2-26, top of page, 1st complete sentence; Section 2.1.2, pages 2-5 through 2-8, Table 2.1.2-1; Section 2.2.2, pages 2-10 through 2-14, Table 2.2.2-1; and Section 2.4.2, pages 2-16 through 2-21, Table 2.4.2-1

The sentence states, "NFA proposals for three sites are currently awaiting NMED approval." The Permittees shall identify the three sites and indicate whether any of them are listed in Table 2.1.2-1 (pages 2-5 through 2-8), Table 2.2.2-1 (pages 2-10 through 2-14), and Table 2.4.2-1 (pages 2-16 through 2-21). If one of the tables lists any, or all, of the sites, the Permittees shall correct the sentence and submit the modified page.

Response: As requested in NMED Comment 7, Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1 have been revised to include references for NMED or EPA documents that show when the NFA petitions for each of the SWMUs listed in the three tables were initially approved by NMED or the EPA. Revised Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1 are included as Appendix G.

The addition of this information to the three tables indicate that the NFA petitions for SWMUs 46 and 190 had not been initially approved by the NMED by the time the TAG IR was completed (November 2005). The NMED initially approved the NFA petitions for SWMUs 46 and 190 in March 2006, after the TAG IR had been completed. References for the initial regulatory approval of the NFA petitions for SWMUs 46 and 190 are as follows:

SWMU 46 NFA Approval

New Mexico Environment Department (NMED) March 2006. "Notice of Approval: Response to Request for Supplemental Information and Notice of Deficiency for SWMU 46, October 2005, Sandia National Laboratories, EPA ID#NM5890110518, HWB-SNL-99-006" New Mexico Environment Department, Santa Fe, New Mexico. March 1, 2006.

SWMU 190 NFA Approval

New Mexico Environment Department (NMED) March 2006. "Intent to Approve: February 2005 Petitions for No Further Action (Corrective Action Complete) for Twenty-Seven (27) Solid Waste Management Units/Areas of Concern, Sandia National Laboratories, EPA ID#NM5890110518, HWB-SNL-05-015" New Mexico Environment Department, Santa Fe, New Mexico. December 20, 2004. March 20, 2006.

In Section 2.6, page 2-26, top of page, the first complete sentence has been revised as follows: "NFA proposals for two sites are currently awaiting NMED approval." Replacement page 2-26 is included as Appendix J.

Specific Comments

11. Section 2.6, page 2-24, Table 2.6-1; Section 2.1.2, pages 2-5 through 2-8, Table 2.1.2-1; Section 2.2.2, pages 2-10 through 2-14, Table 2.2.2-1; and Section 2.4.2, pages 2-16 through 2-21, Table 2.4.2-1

Table 2.6-1 (page 2-24) summarizes the field investigations conducted at SNL SWMUs and areas of concern (AOCs). This Table 2.6-1 (page 2-24) provides incorrect data based upon the descriptions listed in Table 2.1.2-1 (pages 2-5 through 2-8), Table 2.2.2-1 (pages 2-10 through 2-14), and Table 2.4.2-1 (pages 2-16 through 2-21). In particular, one of the columns (5th from the right end) bears the title, "NFA proposal approved." The Permittees shall correct all data in Table 2.6-1, ensuring consistency with other data presented and submit the modified table.

Response: In response to Comment 7, references for the NMED or EPA documents that show when the NFA petitions for each of the SWMUs listed in the three tables were initially approved have been added to Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1 (Appendix G). Table 2.6-1 has also been revised to more accurately reflect information presented for the SWMUs listed in Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1and also reflects Comment 7 revisions to those three tables.

Table 2.6-1 (and Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1 as well) now show that at the time the TAG IR was completed (November 2005), NFA petitions for two sites (SWMUs 46 and 190) had not yet been initially approved by the NMED, whereas NFA petitions for all other SMWUs shown in Table 2.6-1 had been approved at that time.

Replacement page 2-24 (revised Table 2.6-1) is included as Appendix I.

12. Section 2.6, page 2-26, last paragraph, 1st sentence and Section 2.6, page 2-27, Table 2.6-2

The sentence states "[e]ight of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential nitrate sources resulting from septic water." According to Table 2.6-2 (page 2-27), nine SWMUs may be potential nitrate sources. The Permittees shall correct this sentence and submit the corrected page.

Response: The correct number of SWMUs considered to be potential sources of nitrate is nine. The text in Section 2.6, page 2-26, last paragraph, first sentence has been revised to reflect this change:

> Nine of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential nitrate sources resulting from septic water. TA-I contains one site (SWMU 187) as a potential nitrate source. TA-II contains six potential nitrate sources (SWMUs 48, 136, 159, 165, 166, and 167). The disposal of TA-I waste water containing nitrate at the Acid Waste Line Outfall (SWMU 46) is possible, but not highly probable. The disposal of septic waste into open ditches was unlikely to have occurred because of obvious odor and health issues. However, during utility construction at TA-I, inadvertent cross-connects at various sewer lines were discovered. . . .

Specific Comments

The replacement page for 2-26 is included as Appendix J.

13. Section 2.6, page 2-26, last paragraph, 4th sentence; Executive Summary, page iv, 1st paragraph, 2nd and 3rd sentences; Section 4.3.1, page 4-18, last paragraph, last two sentences; Section 5.2, page 5-3, 5th paragraph, 1st sentence; Section 2.4.2, pages 2-16 through 2-21, Table 2.4.2-1; Section 2.6, page 2-24, Table 2.6-1; and Section 2.6, page 2-27, Table 2.6-2

The sentence states "[t]he disposal of TA-I waste water containing nitrate at the Acid Waste Line Outfall (SWMU 46) is possible but not highly probable." This sentence is problematic because it contradicts information presented in the Executive Summary, Section 4.3.1, Section 5.2, and two tables of Section 2.6.

- **The Executive Summary (page iv) states, "[b]ased upon current understanding, three SNL/NM SWMUs are assigned a high concern level for being nitrate-release sites that may have impacted groundwater. These three SWMUs are SWMU 46 (Old Acid Waste Line Outfall), SWMU 165 (the Building 901 Septic System in TA-II), and SWMU 187 (the TA-I Sanitary Sewer System)."**

- **Section 4.3.1 (page 4-18) states, "[a] possible sixth [nitrate] plume includes well TJA-7, which exhibited concentrations almost three times the MCL for nitrate. This plume is located near the southwestern corner of TA-IV and is most likely associated with SWMU 46."**

- **Section 5.2 (page 5-3) states, "[a]t SNL/NM, nitrate may have reached groundwater due to the disposal of septic water at six TA-II septic-system leachfields (SWMUs 48, 136, 159, 166, and 167), leakage from the TA-I Sanitary Sewer System (SWMU 187), and possibly the inadvertent discharge of septic water along with waste water at SWMU 46."**

- **Both Table 2.6-1 (page 2-24) and Table 2.6-2 (page 2-27) indicate SWMU 46 is a potential source of nitrate for groundwater.**

However, Table 2.4.2-1 (pages 2-16 through 2-21) does not list nitrate as a potential contaminant and the descriptions within the table give no indication of nitrate data collection. The Permittees shall explain and correct these discrepancies, corrected tables and sections, and explain the absence of nitrate from Table 2.4.2-1 (pages 2-16 through 2-21) for SWMU 46.

Finally, although the summary table (Table 2.4.2-1, page 2-16 through 2-21) provides no statement indicating an evaluation of HE in connection with SWMU 46, the Permittees shall indicate whether they have evaluated if HE-contaminated water may have been disposed of through this outfall.

Specific Comments

Response: Regarding Section 2.6, page 2-26, last paragraph, 4th sentence: Available information for the nature of waste discharged to the Acid Waste Line Outfall (SWMU 46) suggests that the SMWU was a likely nitrate release site. Surface and subsurface soil samples were collected at the site from January 2001 to August 2003, but none of these samples were analyzed for nitrate. Two groundwater monitoring wells were installed at the northwest side of SWMU 46 in 1998 and 2001. Well TJA-3 was installed in the regional aquifer (depth to water approximately 500 feet below ground surface [bgs]), and well TJA-7 was installed in the perched aquifer (depth to water approximately 300 feet bgs). In Fiscal Year (FY)07, nitrate plus nitrite (NPN) concentrations in the regional aquifer well TJA-3 ranged from 2.21 to 2.59 milligrams per liter (mg/L), compared with the MCL of 10 mg/L. However, NPN concentrations in the perched aquifer well TJA-7 in FY07 exceeded the MCL, and ranged from 22.4 to 29.9 mg/L. NPN concentrations in TJA-7 groundwater are a further indication that SWMU 46 can be assumed to have been a likely nitrate release site. Therefore, given this assumption, the following change to Section 2.6, page 2-26, last paragraph, 4th sentence has been made:

> Nine of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential nitrate sources resulting from septic water. TA-I contains one site (SWMU 187) as a potential nitrate source. TA-II contains six potential nitrate sources (SWMUs 48, 136, 159, 165, 166, and 167). The disposal of TA-I waste water containing nitrate at the Acid Waste Line Outfall (SWMU 46) is considered likely. The disposal of septic waste into open ditches was unlikely to have occurred because of obvious odor and health issues. However, during utility construction at TA-I, inadvertent cross-connects at various sewer lines were discovered. Such cross-connects to the Acid Waste Line (SWMU 226) have not been documented, but may have . . .

The replacement page for 2-26 is included as Appendix J.

Regarding Section 2.4.2, pages 2-16 through 2-21, Table 2.4.2-1: The first and second pages of Table 2.4.2-1 have been modified to add nitrate as a potential contaminant for SWMU 46. The replacement pages for 2-16 through 2-21 (revised Table 2.4.2-1) are included as Appendix G.

Regarding Section 2.6, page 2-24, Table 2.6-1: SWMU 46 is considered a likely nitrate release site. Therefore, Table 2.6-1 has been modified to include nitrate as a potential contaminant at SWMU 46. Table 2.6-1 has also been corrected to show SWMUs 48, 136, and 226 as potential nitrate sources. The replacement pages for 2-24 and 2-25 (revised Table 2.6-1) are included as Appendix I.

Regarding an evaluation of high explosives (HE) in connection with SWMU 46: Four rounds of HE soil samples have been collected from SWMU 46, as summarized in the following table.

Specific Comments

Table 13-1
Summary of HE Soil Samples Collected at SWMU 46 (SNL/NM March 2006)

Sample Date	Sample Location	Number of HE Soil Samples	Sampling Depths (feet bgs)	HE Analytical Results
January 2001	Well TJA-6 borehole (south end of SWMU 46)	4	45, 95, 145, 245	No HE compounds detected
March 2001	Well 46-VW-01 borehole (north end of SWMU 46)	6	45, 95, 145, 195, 245, 295	No HE compounds detected
April 2001	Three locations at northern end, and one location at the southern end of SMWU 46	5	0.5–2.5	No HE compounds detected
August 2001	11 boreholes at northern end of SWMU 46	27	4–17.5	One HE compound (2-nitrotoluene at 0.0152 milligrams per kilogram) in one sample

bgs = Below ground surface.
HE = High explosive(s).
SNL/NM = Sandia National Laboratories/New Mexico.
SWMU = Solid Waste Management Unit.
Cited reference:
Sandia National Laboratories/New Mexico (SNL/NM). March 2006. "Justification for Class III Permit Modification, SWMU 46 Operable Unit 1309 Old Acid Waste Line Outfall," Environmental Restoration Project, Sandia National Laboratories, Albuquerque, New Mexico.

As can be seen from Table 13-1, numerous soil samples have been collected from SWMU 46 to determine whether HE was disposed of at the site, and no evidence of any significant HE contamination was found. Therefore, it was determined, based on these sampling results, that HE was not a potential COC at the site, and no modification of Table 2.4.2-1 in this regard is required.

Regarding Section 2.6, page 2-27, Table 2.6-2: Table 2.6-2 has been corrected to show the nitrate concern as none (rather than low) at SWMU 135, and low (rather than none) at SWMU 226. The replacement page for 2-27 (revised Table 2.6-2) is included as Appendix K.

14. Section 2.6, page 2-27, Table 2.6-2

The Permittees shall modify the table with the inclusion of the month and year of the maximum measured concentration in the Summary of Process Knowledge descriptions for each potential source, as applicable. For example, at SWMU 46, the 3rd line of the description states, "[w]ell 46-VW-01 located near waste-line outfall;

sampling ports set at 50-ft intervals from 15 to 265 ft bgs [below ground surface]; <u>maximum TCE concentration to date of 46,000 ppb (v/v) [parts per billion on a volume to volume basis] from 115 ft bgs</u>." In this example, the underlined phrase shall be modified to include March 2002. The Permittees shall submit the modified table.

<u>Response</u>: Table 2.6-2 has been modified to include the additional information required by NMED. The replacement page for 2-27 is included as Appendix K.

15. Section 2.9.3, page 2-36, 1st paragraph, 1st sentence

The sentence states, "SNL performed TAG soil-vapor sampling in December 2004 and January 2005." The Permittees shall submit to the NMED the analytical and quality assurance data for this sampling.

<u>Response</u>: The analytical and quality assurance data for the soil-vapor sampling is extensive (over 1,800 pages) and is therefore provided as portable document format (PDF) files on the CD that accompanies this set of responses. The analytical and quality assurance data packages for the soil-vapor sampling are found in the following files on the CD:

- Response to comment #15_TAG Soil Vapor Data ARCOC 608032.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608033.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608034.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608035.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608036.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608037.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608038.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608039.pdf
- Response to comment #15_TAG Soil Vapor Data ARCOC 608040.pdf

16. Section 2.9.3, page 2-40, 2nd paragraph, 2nd sentence and Section 2.9.3, pages 2-41 and 2-42 , Table 2.9.3-1

The sentence states, "TCE was the most commonly detected analyte and accounted for 0 to 100 percent of the total VOCs." To support this discussion, the Permittees shall modify Table 2.9.3-1 and add a column to show the percent of total VOC for TCE. The Permittees shall submit the modified table.

<u>Response</u>: Table 2.9.3-1 has been modified with the addition of a column that shows the percent of volatile organic compounds (VOCs) that consists of TCE. Replacement pages 2-41 and 2-42 (revised Table 2.9.3-1) are included as Appendix L.

Specific Comments

17. Section 2.9.3, page 2-43, Figure 2.9.3-1 and Section 2.9.8, page 2-44, Figure 2.9.3-2

The Permittees shall superimpose the perched aquifer potentiometric surface on the referenced figures to facilitate understanding of the discussion presented in Section 2.9.8. The Permittees shall submit the modified figures.

Response: Figures 2.9.3-1 and 2.9.3-2 have been modified to show the perched aquifer potentiometric surface at the time the soil-vapor sampling was performed (December 2004 – January 2005). Replacement pages 2-43 and 2-44 (revised Figures 2.9.3-1 and 2.9.3-2) are included as Appendix M.

18. Section 2.9.5, page 2-45, 2nd paragraph, 5th, 6th, 2nd to last sentence, and last sentence; Section 2.9.5, page 2-46, Table 2.9.5-1; Figure 7 of Annex A; and References

The 5th and 6th sentences of Section 2.9.5, 2nd paragraph state, "[o]nly a few of the trend lines exhibit good correlation with the linear models, as demonstrated by R^2 coefficient values near one (for example TA2-VW-21). The other graphs had R^2 coefficient values near zero, indicating a poor correlation to a linear model." Moreover, the 2nd to last sentence of the paragraph states, "[w]ith these extremely low R^2 coefficient values, it is not reasonable to use the trend lines to project future data values." In contrast, the paragraph concludes, in contradiction to the preceding sentences, "[h]owever, TCE and total VOC concentrations qualitatively appear to be decreasing over time as illustrated in Annex A and Table 2.9.5-1."

Data presented in Annex A do not support this conclusion. For example, in Annex A, Figure 7, the TCE concentration values of five of eight soil vapor samples (collected in 2001 through 2002) ranged from 45,000 to 46,000 ppbv. The TCE concentration values of the three remaining samples ranged from 34,000 to 37,000 ppbv. It is not possible to establish a definitive trend among all of these analytical results. The next soil vapor sample was collected two years later (in 2004) and the TCE concentration value was 30,000 ppbv. However, this single result, alone, cannot yield a reliable decreasing soil vapor concentration trend, as indicated in Table 2.9.5-1 (page 2-46), without conducting additional subsequent sampling. Therefore, the Permittees shall modify Table 2.9.5-1 (page 2-46), to include a column containing the uncertainty for each measured value (e.g, [sic] ± 8%). The Permittees shall submit the revised table. Furthermore, the Permittees shall provide additional information regarding the specific equipment configuration employed by the contracted analytical laboratory for the soil vapor analyses. The Permittees shall indicate whether the gas chromatograph had non-specific detector(s) (including but not limited to, the nitrogen-phosphorus detector, flame ionization detector, electron capture detector, and/or photo-ionization detector) or a specific detector (such as, the linear quadrupole mass spectrometer operating in either the select ion monitoring mode or the SCAN mode). Finally, the References list Method TO-14 as follows:

Specific Comments

U.S. Environmental Protection Agency (EPA), January, 1999. "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air," 2nd ed., EPA/625/R-96/010b U.S. Environmental Protection Agency, Washington, D.C.

However, as stated in the 2nd paragraph of the Acknowledgements of the above-listed method, "Method TO-14 was originally published in March of 1989 as one of a series of peer reviewed methods in the second supplement to "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air," EPA 600/4-89-018. Method TO-14 has been revised and updated as Method TO-14A in this Compendium to eliminate time sensitivity material and correct a small number of errors." The Permittees shall state whether the analytical laboratory employed Method TO-14 or TO-14a for the soil vapor analyses.

Response: This is an overly complex comment that perhaps would have been better presented as several comments. DOE/Sandia suggests that the requested information and/or changes in Comment 18 can be paraphrased as follows:

Comment 18A (paraphrased): Reevaluate the correlations/trend lines for soil vapor samples, correct sentences of Section 2.9.5 to jibe with data presented in Annex A.

Response 18A: Although no explanation or rewrite is requested by NMED, DOE/Sandia note that there should be a reevaluation of the trend lines and strength of correlations for the vapor trend plots. The figures presented in Annex A of the TAG IR show that for the most part, there is significant amount of variation (scatter) in the TCE and total VOC soil-vapor concentration data for samples collected from 1998 to 2001. With the exception of the 50-foot TCE and total VOC samples in well TA2-VW-21, the R^2 coefficient values for the trend lines (presented in Table 2.9.5-1, and Annex A) show poor correlation with the data sets, again reflecting considerable variability in the concentration data. It can also be expected that if multiple samples had also been collected starting in 2004, a similar amount of variation (scatter) would also be expected.

Therefore, DOE/Sandia agree that TCE and total VOC concentration trends (as represented by the linear regression trend lines shown in the figures) are not a reliable representation of concentration trends in the sampled wells, with the exception of the TCE and total VOC trends shown for the 50-foot samples from well TA2-VW-21 (Figures A-3 and A-4 in Annex A). The R^2 values (0.8755 for TCE and 0.8599 for total VOCs) are close to 1, indicating that the trendlines are a close fit to the data and that the decreasing trends shown for TCE and total VOCs at 50 feet in this well are reliable.

Accordingly, Table 2.9.5-1, Section 2.9.5, and Table 2.9.5-1 in Section 2.9-6 have been modified as follows:

2.9.5 Historical Trends at SNL/NM Soil-Vapor Wells

Soil-vapor samples have been collected since 1997 for the TA-II wells and since April 2002 for the Tijeras Arroyo wells. The recently installed TAG soil-vapor wells have been sampled

only once and, therefore, are not discussed in this section. Different laboratories using different analytical methods analyzed the first few rounds of soil-vapor samples from the TA-II wells. The results from these early sampling events (July 1997 through May 1998) do not appear to be comparable with the more recent data. Therefore, the early data are not discussed.

From September 1998 to December 2000, all soil-vapor samples were analyzed by Quanterra/Severn Trent Laboratories using EPA Method TO-14, and starting in December 2000, by Method TO-14A (EPA January 1999). The TCE and total VOC results from these sampling events have been plotted as concentration-versus-time graphs for Figures A-1 through A-12 (Annex A). These graphs show that the TCE and total VOC concentrations in soil vapor for the most part exhibit a large amount of scatter. Trend lines are constructed on the graph using linear regression analysis (Table 2.9.5-1). Only two of the trend lines exhibit good correlation with the data, as demonstrated by R^2 coefficient values near one (for the 50-ft depth samples for TCE and total VOCs in well TA2-VW-21). The other graphs had R^2 coefficient values closer to zero, indicating a poor correlation to the data. These data sets were then tested for nonlinear correlation using a second order polynomial regression analysis. R^2 coefficient values did not improve significantly as no oscillations are prominent on these trend diagrams that would correlate with seasonal changes (or other periodicity) in soil-vapor mobility in the monitoring wells. With these low R^2 coefficient values, it is not reasonable to use the trend lines to project future data values for the majority of the wells presented in Table 2.9.5-1.

2.9.6 KAFB Soil-Vapor Investigations around the Former Sewage Lagoons

As part of the KAFB IRP, a multi-phase, soil-vapor investigation was completed in the vicinity of the former sewage lagoons (WP-26) from October through December 2004. The soil-vapor investigation is summarized in “Summary of Activities at Solid Waste Management Unit WP-26, Sewage Lagoons and Golf Course Main Pond, Kirtland Air Force Base, New Mexico” (MWH Americas, Inc. June 2005). The purpose of the project was to investigate the presence of TCE in the vadose zone and perched system beneath the former sewage lagoons. The results of the investigation further define the vertical and horizontal extent of TCE in soil vapor.

Specific Comments

Table 2.9.5-1
Summary of Concentration Trends in Soil Vapor Over Time at
Select SNL/NM Vapor Wells (Annex A)

Vapor Well	Depth (ft)	Analyte	Annex A Figure	Trend	R^2
TA2-VW-20	72	TCE	A-1	Uncertain	0.0008
TA2-VW-20	72	Total VOCs	A-2	Uncertain	0.2139
TA2-VW-21	50	TCE	A-3	Decreasing	0.8755
TA2-VW-21	50	Total VOCs	A-4	Decreasing	0.8599
TA2-VW-21	92	TCE	A-5	Uncertain	0.2104
TA2-VW-21	92	Total VOCs	A-6	Uncertain	0.2483
46-VW-01	115	TCE	A-7	Uncertain	0.3063
46-VW-01	115	Total VOCs	A-8	Uncertain	0.3265
46-VW-02	46	TCE	A-9	Uncertain	0.0438
46-VW-02	46	Total VOCs	A-10	Uncertain	0.0254
227-VW-01	225	TCE	A-11	Uncertain	0.0454
227-VW-01	225	Total VOCs	A-12	Uncertain	0.0449

ft = Foot (feet).
SNL/NM = Sandia National Laboratories/New Mexico.
TCE = Trichloroethene.
VOC = Volatile organic compound.

The replacement pages for 2-45 and 2-46 (including revised Table 2.9.5-1) are included as Appendix N.

Comment 18B (paraphrased): Determine the uncertainty for each measured value (e.g., ± 8%)" Modify Table 2.9.5-1 to include a column containing the uncertainty for each measured value (e.g., ± 8%).

Response 18B: Concentrations of individual analyzed constituents in TAG soil-vapor samples were reported as single concentration values by the analytical laboratory. A percent uncertainty, or other quantification of uncertainty for reported values, was not provided by the laboratory for the TAG soil-vapor samples. The case narrative for each of the nine analytical data packages for the December 2004 and January 2005 soil-vapor samples contains the following statement:

> Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria.

No changes have been made to Table 2.9.5-1.

Comment 18C (paraphrased): Determine the specific equipment configuration (detector) employed by the contracted analytical laboratory for the soil vapor analyses.

Response 18C: EPA Methods TO-14 and TO-14A are gas chromatography/mass spectroscopy (GC/MS) techniques. The target analytes were analyzed with a mass selective detector operated in the SCAN mode.

Specific Comments

Comment 18D (paraphrased): Determine if the analytical laboratory used Method TO-14 or TO-14a for the soil vapor analyses.

Response 18D: Method TO-14 was used from July 1998 through December 2000. Method TO-14A has been used since December 2000. The second paragraph of Section 2.9.5 has been modified to include this clarification. Replacement page 2-45 is included as Appendix N.

19. Section 2.9.8, page 2-47, 5th paragraph, 4th sentence

The sentence states, "[h]owever, since waste-water disposal has ceased, no recharge mechanism currently exists (the estimates of evapotranspiration in the study area range from 90 to 95 percent of precipitation), and it is unlikely that additional TCE mass will be transported to the perched system[.]" The Permittees shall submit a reference for the estimate of evapotranspiration.

Response: The reference for the estimate of evapotranspiration is:

Sandia National Laboratories/New Mexico (SNL/NM), February 1998. "Revised Site-Wide Hydrogeologic Characterization Project Calendar Year 1995 Annual Report," Sandia National Laboratories, Environmental Restoration Project, Albuquerque, New Mexico. February 1998.

20. Section 3.1.3.2 , page 3-3, Figure 3.1.3-1

The Permittees shall modify the figure to include a legend with abbreviations and any other features (e.g., hatching) explained. The Permittees shall remove the abbreviation "SGWS" (shallow groundwater system), as it is inconsistent with Investigation Report terminology. The current descriptor "Perched System" shall replace the old abbreviation "SGWS." The Permittees shall submit the modified figure.

Response: Replacement page 3-3 (revised Figure 3.1.3-1) is included as Appendix O.

21. Section 3.1.3.3, page 3-6, 4th paragraph, 1st sentence and Section 3.1.3.2 , page 3-3, Figure 3.1.3-1

The sentence states, "[a]s shown in Figures 3.1.3-5 and 3.1.3-6, groundwater in the perched system appears to merge with that of the regional aquifer." The Permittees shall indicate whether the apparent merging of the two-aquifer systems relates to the presence of the West Sandia Fault or other structural or hydrostratigraphic feature shown on the above-referenced figure. Furthermore, the Permittees shall provide any available supporting evidence.

Response: A revised geologic model of KAFB that incorporated geological and geophysical data produced since the Site-Wide Hydrogeologic Characterization Project of

1994 and 1995 was presented in a report titled "Geologic Investigation: An Update of Subsurface Geology on Kirtland Air Force Base, New Mexico" (Van Hart June 2003). In this report, new structural interpretations were made that had repercussions for the TAG study area. Van Hart concluded that, in the absence of compelling data, the West Sandia fault was tentatively assumed to have no appreciable effect on the hydrogeologic model for the TAG study area, and that the geometry of the perched and regional groundwater systems in the TAG area could just as well be explained by variable stratigraphy within the Santa Fe Group sediments.

As stated above, groundwater in the perched system is solely contained in the fine-grained alluvial fan facies. Perched system groundwater appears to merge with the regional aquifer in the area indicated in Figure 3.1.3-6. The relatively impermeable fine-grained alluvial fan facies acts as a perching mechanism or aquitard for the perched system. This fine-grained lithofacies changes to a more permeable, mixed alluvial fan lithofacies in the aquifer merging area. Descriptions of cuttings from wells in the merging area indicate that the stratigraphic interval in that area (which is laterally equivalent to the fine-grained alluvial fan facies) consists largely of sand with only occasional clayey beds. Such a permeable sequence would probably not be capable of acting as a basal aquitard or perching mechanism for perched groundwater. At the point where the fine-grained alluvial fan facies loses its aquitard-prone character toward the east, the perched groundwater migrates downward and merges with the regional system. As originally proposed in Van Hart (June 2003), the approximate boundary between the fine-grained alluvial fan lithofacies to the west and the laterally equivalent mixed alluvial fan lithofacies to the east has been added to Figure 3.1.3-6. Replacement page 3-10 (revised Figure 3.1.3-6) is included as Appendix P.

Reference Cited:

Van Hart, D., June 2003. "Geologic Investigation: An Update of Subsurface Geology on Kirtland Air Force Base, New Mexico" SAND Report SAND2003-1869, Sandia National Laboratories, Albuquerque, New Mexico.

22. Section 3.1.3.3, page 3-7, Figure 3.1.3-3 and Section 3.3.4.1, page 3-20, 1st paragraph, last two sentences

On March 10, 2008, the Permittees provided groundwater elevation data in electronic format for 25 SNL TAG monitoring wells. The water levels published in Figure 3.1.3-3 (page 3-7) appear inconsistent with the water levels in the Excel file; the values published in the figure generally did not match any of the values in the electronic data file for the designated sampling period of September 2004 through January 2005. The Permittees shall explain this discrepancy.

In Section 3.3.4.1 (1st paragraph), the last two sentences state, "[s]everal wells in the southeastern portion of the study area have anomalous groundwater elevations and were excluded from contouring the potentiometric surface of the regional aquifer shown in Figure 3.1.3-3. These wells with anomalous groundwater elevations most

likely represent intermediate water-bearing intervals in the zone of merging." These "anomalous" groundwater monitoring wells include TA2-W-25, TJA-4, KAFB-0310, KAFB-0312, KAFB-0602, KAFB-0615, and KAFB-0616. Only three groundwater monitoring wells (TJA-4, KAFB-0310, and KAFB-0602) were previously identified as having well screens in the merging or intermediate zone.

In consideration of General Comments 1 and 2, the Permittees shall submit a new potentiometric surface map for the regional aquifer. The Permittees shall use data from each one of the 68 TAG monitoring wells to construct the figure. Any data excluded as "anomalous" shall require a detailed explanation with references.

Response: Please disregard the March 2008 data informally transmitted to the NMED by SNL/NM ER staff. At the time of the request, it was unclear why NMED required that data and it was thought that only general water level trends were of interest. The data that were readily available in the electronic format requested by NMED had not been through a quality assurance check. This data set does not supersede the data provided in the TAG IR.

As described in the response to Comment 3, a total of 68 monitoring wells were selected for the TAG HPT well network in the early part of the decade. In accordance with requirements in Comment 1, concurrent contemporaneous water levels were obtained from all existing TAG HPT network wells in December 2008. Five of the original TAG monitoring wells (KAFB-0214, KAFB-0215, KAFB-0216, KAFB-0217, and KAFB-0218) had been plugged and abandoned prior to December 2008, leaving a total of 63 TAG HPT network wells from which water level measurements were obtained. The December 2008 water level elevation data are included as Appendix A in the response to Comment 1, and the screened interval (perched system, merging zone, or regional aquifer) that DOE/Sandia currently consider each of the 63 network wells to be completed in are included as Appendix B in response to Comment 2.

A new regional aquifer potentiometric surface map has been generated using the December 2008 water level data (Appendix A) and is included as Appendix Q. Based on a revised interpretation of water level data, a total of 37 of the 63 existing TAG wells are currently considered to be completed in the regional aquifer, and 36 of the 37 wells were used for the new regional aquifer potentiometric surface contour map. One of the regional TAG HPT network wells (KAFB-0615) was not used for contouring because of an anomalous water level elevation that is significantly different from those in surrounding wells. Well KAFB-0615 is located east of the West Sandia Fault and is between the fault and the Manzanita mountain front. The water level elevation in this well is much higher (409 feet) than the nearest TAG monitoring well (KAFB-0616), located approximately 5,000 feet northwest of KAFB-0615.

The new regional aquifer potentiometric map differs in some details as compared to the version presented in the November 2005 TAG IR; however, the overall hydrogeologic conceptual model has not changed. The new map continues to demonstrate the northwest groundwater flow direction for the regional aquifer that has been shown in previous regional aquifer contour maps.

23. Section 3.1.3.3, page 3-8, Figure 3.1.3-4

The Permittees provided groundwater elevation data in electronic format for 25 SNL TAG monitoring wells on March 10, 2008. Upon comparison with newly provided electronic data, the water levels published in Figure 3.1.3-4 (page 3-8) generally did not match any of the values in the electronic data file for the designated sampling period of September 2004 through January 2005. The Permittees shall explain this discrepancy.

In consideration of General Comments 1 and 2, the Permittees shall submit a new potentiometric surface map for the regional aquifer. The Permittees shall use data from each one of the 68 TAG monitoring wells to construct the figure. Any data excluded as "anomalous" shall require a detailed explanation with references.

Response: As explained in the response to Comment 22, the March 2008 data informally transmitted to the NMED by SNL/NM ER staff should be disregarded.

A new perched system potentiometric surface map has been generated using the December 2008 water level data (Appendix A) and is included as Appendix R. Based on a revised interpretation of water level data, a total of 25 of the 63 existing TAG wells are currently considered to be completed in the perched system, and one of the 63 wells (TJA-4) is considered to be completed in the merging zone. TJA-4 is included in the new perched system potentiometric map. Of the 26 wells shown in the perched system map, 24 were used for contouring.

Two of the wells (TJA-4 and KAFB-0903) were not used for contouring because they have anomalous water level elevations that are significantly different from those in surrounding wells. The current water level elevation in TJA-4 is approximately 36 feet lower than that in the co-located perched zone well TJA-5, and approximately 107 higher than the nearest regional aquifer well (KAFB-0311). This well appears to be completed in an areally limited, intermediate, water-bearing interval between the perched system and regional aquifer. The water level elevation in well KAFB-0903 is approximately 63 to 130 feet higher than that in the other nearby TAG perched aquifer wells TA2-W-26 and KAFB-0315. This well appears to be completed in another areally limited, perched, saturated layer that is above the primary perched system in the study area.

The new perched system potentiometric map differs in some details as compared to the previous version presented in the November 2005 TAG IR; however, the overall hydrogeologic conceptual model has not changed. The new map continues to demonstrate the southeast groundwater flow direction for the perched system that has

been shown in previous perched system contour maps. Elevation contours for the perched zone and regional aquifer also continue to demonstrate that the two aquifer systems merge on the east side of the TAG study area.

24. Section 3.1.3.3, page 3-7, Figure 3.1.3-3; page 3-8, Figure 3.1.3-4; and page 3-9, Figure 3.1.3-5

The Permittees shall modify Figures 3.1.3-3 (page 3-7) and 3.1.3-4 (page 3-8) to include the cross-section line of Figure 3.1.3-5 (page 3-9). The Permittees shall submit the modified figures.

Response: The cross-section line A-A' pertaining to the cross-section Figure 3.1.3-5 in the TAG IR has been added to the new regional aquifer potentiometric surface map (Figure Q-1, Appendix Q), and the new perched system potentiometric surface map (Figure R-1, Appendix R).

25. Section 3.3.4.3, page 3-22, Figure 3.3.4-1 and Section 3.3.4.3, page 3-21, 3rd paragraph, last sentence

The sentence states, "[t]he line of demarcation between increasing water levels and decreasing water levels approximates the eastern extent of the ARG [Ancestral Rio Grande] facies in the subsurface." The Permittees shall indicate the eastern extent of the ARG facies on Figure 3.3.4-1 to illustrate this statement. The Permittees shall submit the modified figure.

Response: The line indicating the eastern extent of the Ancestral Rio Grande (ARG) facies (taken from Figure 3.1.3-3 of the TAG IR) has been added to Figure 3.3.4-1. Replacement page 3-22 (revised Figure 3.3.4-1) is included as Appendix S.

26. Section 3.3.5.7, pages 3-32 through 3-37, all text and page 3-34, Figure 3.3.5-2

The Permittees shall submit to the NMED a sensitivity analysis of the groundwater modeling input parameters to illustrate under what conditions, if any, contaminants might be expected to reach production wells at concentrations that would not be protective of human health and the environment.

The figure contains an inconsistent fault configuration, compared with Figure 3.1.3-1 (page 3-3). Hidden contour interval labels make it difficult to understand the groundwater flow direction near the West Sandia Fault. The Permittees shall modify and submit Figure 3.3.5-2 to correct the location of the fault and to make clear the contour interval labels.

Response: As explained in the first paragraph of the section, Section 3.3.5.7 summarizes the Evaluation of Contaminant Transport that is presented in detail as Attachment C to the TAG CME Report (delivered to NMED in August 2005). The detailed explanation of modeling input parameters, model calibration techniques, and a description of the conditions (contaminant concentrations) that are expected to reach production wells are thoroughly covered in Attachment C of the TAG CME Report. All of the modeled concentrations are below the MCLs and are therefore protective of human health and the environment.

The figure from Attachment C of the TAG CME Report was taken *in toto* from the original source. This comment will be addressed when other TAG CME Report comments are received from NMED.

27. Section 4.2.1, page 4-7, Table 4.2.1-1

The Permittees shall show the standard deviation and the upper confidence level of the mean at a 95% confidence level for each analyte. The Permittees shall modify the table and submit it to the NMED.

Response: The standard deviation and the upper confidence level (UCL) of the mean at a 95% confidence level for each analyte have been added to Table 4.2.1-1, and the appropriate text in Section 4.2.1-1 has been modified to reflect the table changes, as follows:

4.2.1 Major Ion Chemistry

Major ion chemistry data from groundwater quality analyses can often reveal distinct characteristics useful for interpreting aquifer flow characteristics. To evaluate possible changes in groundwater chemistry over time, Piper Trilinear and Stiff Diagrams were produced.

The average, median, maximum, minimum, standard deviation, and upper confidence level (UCL) of the mean at a 95% confidence level for anion and cation concentrations for both the regional aquifer and perched system are presented in Table 4.2.1-1. Average values of some anions and cations maybe biased either slightly high or low because of one-time anomalies. Most concentrations within the six quarters of sampling results for each well were within 20 percent of all concentrations recorded for that well over the six quarters. A few concentrations were between 20 and 35 percent of other values recorded for a specific well and some inexplicable anomalies ranged from 50 to greater than 100 percent higher than other values recorded for a specific well. Examples of the extreme anomalies are found in analytical results for Eubank-3, KAFB-0508, KAFB-0904, PGS-2 in the regional aquifer and KAFB-0903 in the perched system. Both the Piper and Stiff diagrams show the inexplicable one-time concentration anomalies. Calcium, chloride, and sulfate varied more in the perched system than in the regional aquifer, whereas sodium, potassium, magnesium, and alkalinity as HCO_3 had more consistent values.

Specific Comments

Table 4.2.1-1
Regional Aquifer and Perched System Anion/Cation
Average, Median, Maximum, and Minimum Concentrations
(Milligrams per Liter)

Regional Aquifer							
Anion/Cation	Na	K	Ca	Mg	Cl	HCO_3	SO_4
Average	26.45	2.56	73.15	12.75	28.55	147.40	72.55
Median	25.60	2.22	68.65	11.88	15.20	140.00	66.45
Maximum	48.30	10.50	150.00	43.20	120.00	237.00	292.00
Minimum	18.20	1.60	46.30	2.30	2.56	84.70	8.07
Standard Deviation	5.39	2.20	15.75	5.23	24.79	30.28	44.39
UCL of the Mean	27.12	2.95	73.23	13.4	33.81	152.6	82.14
Perched System							
Average	28.60	2.18	127.42	18.15	92.57	106.33	167.14
Median	23.30	2.02	85.30	15.60	73.00	104.00	76.00
Maximum	83.00	9.00	400.00	44.70	263.00	228.00	672.00
Minimum	16.40	1.30	59.50	8.50	7.70	44.80	13.60
Standard Deviation	13.65	0.78	82.28	8.89	64.26	29.41	187.6
UCL of the Mean	30.42	2.30	158.4	19.47	103.9	113.3	270.7

The following generalizations can be made about the major ion chemistry data:

- No discernable temporal trends are apparent.
- The regional aquifer and the perched system have distinct geochemistries.
- The regional aquifer geochemical signatures are more consistent between well locations and have lower calcium and higher bicarbonate/alkalinity.
- The perched system geochemical signatures are less consistent between well locations and have higher chloride, nitrate, and sulfate.

Replacement pages 4-7 and 4-7A are included as Appendix T.

28. Section 4.2.3, page 4-14, Table 4.2.3-1; Section 4.3.2, page 4-22, Figure 4.3.2-1; Section 4.3.2, page 4-23, Figure 4.3.2-2; Annex F, Table F-1; and Annex G, Table G-1

A number of discrepancies between these tables and figures are visible. The following are most noticeable:

<u>Perched Wells</u>

- **KAFB-0313: Figure 4.3.2-1 (page 4-22) lists the monitoring well's maximum TCE concentration as <0.5 µg/L. According to the data in Annex G (Table G-1) and Table 4.2.3-1 (page 4-14), the measured maximum TCE concentration is 0.7 µg/L.**
- **TA2-W-26: Table 4.2.3-1 (page 4-14) lists the monitoring well's TCE concentration as "ND" in Quarter 4. The data in Annex F (Table F-1)**

indicate the measured TCE concentrations are 3.1BJ µg/L and 3.0BJ µg/L. Figure 4.3.2-1 (page 4-22) lists the highest value from Annex F (Table F-1), which is 3.1JB µg/L.

- **TA2-W-27: Table 4.2.3-1 (page 4-14) indicates "ND" as the TCE concentration in Quarter 4. According to the data in Annex F (Table F-1), the measured TCE concentration is 1.3J µg/L, which is the value listed in Figure 4.3.2-1 (page 4-22).**

Regional Wells

- **KAFB-0307: Figure 4.3.2-2 (page 4-23) indicates the maximum TCE concentration is <0.5 µg/L. According to the data in Annex G (Table G-1) and Table 4.2.3-1 (page 4-14), the measured maximum TCE concentration is 0.7 µg/L.**

- **TA1-W-01: Figure 4.3.2-2 (page 4-23) lists the maximum TCE concentration as 0.03J µg/L. According to Annex F (Table F-1) and Table 4.2.3-1 (page 4-14), the measured maximum TCE concentration is 0.30J µg/L.**

- **TJA-6: Table 4.2.3-1 (page 4-14) lists the Quarter 4 TCE concentration as "ND." Figure 4.3.2-2 (page 4-23) states that the TCE concentration is <5.0 µg/L. According to Annex F (Table F-1), the measured TCE concentration is 1.2BJ µg/L.**

The Permittees shall correct Section 4.3.2, Table 4.3.2-1, Figures 4.3.2-1 and 4.3.2-2, and any other data errors. The Permittees shall provide a new table containing the undetected values for each sample. The table shall contain the method detection limit, practical quantitation limit, data and laboratory qualifiers, and test methods. Submit new table and all modified figures and tables to the NMED.

Response: Table 4.2.3-1 has been revised to include method detection limits (MDLs), practical quantitation limits (PQLs), laboratory and data validation qualifiers, the test method used for the sample analyses, and MDLs and PQLs for nondetect analyses where available. This information has been provided for samples from all 16 of the monitoring wells in which TCE was detected during the six quarters of sampling of the TAG groundwater monitoring network. Not all requested information was available for some of the KAFB wells.

The discrepancies noted in Comment 28 on Table 4.2.3-1 compared to Annexes F-1 and G-1 of the TAG IR have been corrected, and Figures 4.3.2-1 and 4.3.2-2 have in turn been revised to correctly reflect TCE concentrations presented in the revised Table 4.2.3-1. It appears that the well referred to in the second bullet under "Regional Wells" of Comment 28 should have been identified as "TA1-W-04" instead of "TA1-W-01." For Figure 4.3.2-2 (page 4-23), the maximum TCE concentration for

TA1-W-04 has been changed to reflect the true concentration of 0.30 J µg/L (estimated value).

The text from Section 4.3.2, page 4-13, second paragraph also has been revised to reflect the revisions to Table 4.2.3-1, as follows:

> Of these five compounds, TCE is the only compound to exceed the MCL and has been detected below, at, and just above detection limits in several wells during the July 2003 through December 2004 reporting period. TCE is the only VOC considered to be a COC with a maximum detected concentration of 7.7 µg/L. TCE was detected in 16 of the 49 TAG monitoring wells (Table 4.2.3-1). Of the 16 wells, only 6 had sporadic detections and the other 10 had more consistent detections. TCE exceeded the MCL (5 µg/L) in only two perched system monitoring wells (TA2 W-19 and WYO-4). TCE was plotted for nine wells, eight perched system wells (KAFB-0506, TA1-W-06, TA2-W-01, TA2-W-19, TA2-W-26, TJA-2, TJA-7, and WYO-4) and one regional aquifer well (KAFB-0615) where TCE was more consistently detected (Figures 4.2.3-1 and 4.2.3-2). These nine wells are in the perched system with the exception of KAFB-0615. TCE concentrations over time are fairly consistent at any given location. The concentration trend line is level to slightly decreasing for five of the wells (KAFB 0506, TA1-W-06, TA2-W-01, TA2-W-26, and TJA-7). The trend lines for four wells (KAFB-0615, TA2-W-19, TJA-2, and WYO-4) exhibit generally increasing concentrations, although the more recent data indicate stable TCE concentrations.

Replacement pages 4-13, 4-14 (revised Table 4.2.3-1), 4-22 (revised Figure 4.3.2-1), and 4-23 (revised Figure 4.3.2-2) are included as Appendix U.

29. Section 4.3.2, page 4-21, 2nd paragraph, first two sentences; Annex F; and Annex G

The sentences state, "[s]ix wells within the regional aquifer exhibited concentrations above detection limits (Figure 4.3.2-2). One well, KAFB-0615, located near the eastern edge of the TAG study area, exhibited consistent increase in TCE with a maximum concentration of 1.2 µg/L (Figure 4.2.3-2). The other six wells within the regional aquifer exhibited general low and sporadic TCE detections." Based upon the data in the Annexes, the number of wells exhibiting concentration above detection limits seems higher. The sentence seems disconnected from the data. The Permittees shall explain the apparent discrepancy.

Response: A detailed review of TCE detections in regional aquifer monitoring wells reported in Annex F and Annex G indicates that five (rather than six) regional aquifer wells (TA1-W-04, TJA-6, KAFB-0307, KAFB-0310, and KAFB-0615) had detections of TCE above the MDLs. As of December 2008, well KAFB-0310 is considered by DOE/Sandia to be a perched zone well. TCE concentrations in these five wells during the sampling period included in Annexes F and G (FY 2003 4th quarter through FY 2005 1st quarter) were all substantially lower than the MCL for TCE (5 µg/L), and ranged from 0.3 J (estimated value) to 1.2 µg/L.

TCE detections in perched system monitoring wells reported in Annexes F and G were also reviewed, and it was determined that 12 perched system wells (including KAFB-0310, which is now classified as a perched system well) had TCE detections

above MDLs, rather than 8 as originally reported. TCE concentrations in these 12 wells ranged from 0.32 to 7.7 µg/L.

As a result of this review, Section 4.3.2 has been modified to read as follows:

4.3.2 Chlorinated Solvents

The horizontal distribution of TCE in groundwater is sporadic, which may reflect multiple small sources of TCE. Twelve wells located within the perched system had consistent TCE detections with maximum values ranging from 0.32 to 7.7 µg/L (Figure 4.3.2-1). Graphical representations of TCE concentrations for the perched system wells over six quarters of sampling (July 2003 through December 2004) are presented in Figure 4.2.3-1. The highest concentrations within the perched system were found at well WYO-4 ranging from 6.0 to 7.7 µg/L. Monitoring well WYO-4 is located near the central portion of the study area and is not in proximity to any potential release site.

Four wells within the regional aquifer (TA1-W-04, TJA-6, KAFB-0307, and KAFB-0615) exhibited concentrations above detection limits (Figure 4.3.2-2). One well, KAFB-0615, located near the eastern edge of the TAG study area, exhibited a consistent increase in TCE with a maximum concentration of 1.2 µg/L (Figure 4.2.3-2). The other three wells within the regional aquifer exhibited generally low and sporadic TCE detections. No wells with the regional aquifer exhibited TCE concentrations exceeding the MCL of 5 µg/L.

Replacement page 4-21 is included as Appendix V.

February 2009

U.S. Department of Energy/Sandia Corporation Responses to the New Mexico Environment Department's Comments in "Notice of Disapproval: Tijeras Arroyo Groundwater Investigation Report, November 2005 Sandia National Laboratories EPA ID# NM5890110518 SNL-05-028"

Appendices

Appendix Designation	Applies to Comment(s)	Description of Supporting Documentation
A	1, 22, 23	New Table A-1 December 2008 Groundwater Elevations Tijeras Arroyo Groundwater, Sandia National Laboratories/New Mexico
B	2	New Table B-1. TAG HPT Monitoring Well Network Completion Data
C	3	New Figure C-1 Tijeras Arroyo Groundwater Monitoring Network July 2003 – November 2004
D	4	Replacement Page for ES-i, Replacement Page for 1-5 (Revised Table 1.1-1)
E	5	New Figure—Reprint of Figure 1-2 of the Corrective Measures Evaluation Work Plan (SNL/NM December 2004): Monitoring and Water-Supply Wells and Potential Release Sites in the Area of Responsibility
F	6	Replacement Page for 1-7.
G	7, 10, 11, 13	Replacement Pages for 2-5 through 2-8A (Revised Table 2.1.2-1, Plus References), 2-10 through 2-14A (Revised Table 2.2.2-1, Plus References), 2-16 through 2-21B (Revised Table 2.4.2-1, Plus References).
H	8	Replacement Page for 2-9.
I	9, 11, 12, 13	Replacement Page for 2-24 (Revised Table 2.6-1).
J	10, 12, 13	Replacement Page for 2-26.
	11	**DEFER TO APPENDIX G and I**
	12	**DEFER TO APPENDIX I AND J**
	13	**DEFER TO APPENDIX G, I, AND J**
K	14	Replacement Page for 2-27 (Revised Table 2.6-2).
	15	**NO APPENDIX**--9 Data Packages Provided as pdf on CD.
L	16	Replacement Pages 2-41 and 2-42 (Revised Table 2.9.3-1).
M	17	Replacement Pages 2-43 (Revised Figure 2.9.3-1) and 2-44 (Revised Figure 2.9.3-2).
N	18	Replacement Pages 2-45 and 2-46 (Revised Table 2.9.5-1)
	19	**NO APPENDIX**--Requested Reference Provided in Comment.
O	20	Replacement Page 3-3 (Revised Figure 3.1.3-1).
P	21	Replacement Page 3-10 (Revised Figure 3.1.3-6).
Q	22, 24	New Figure Q-1: Tijeras Arroyo Groundwater Investigation Potentiometric Surface Map for the Regional Aquifer (December 2008)
R	23, 24	New Figure R-1: Tijeras Arroyo Groundwater Investigation Potentiometric Surface Map for the Perched Aquifer (December 2008)
	24	**DEFER TO APPENDIX Q and R**
S	25	Replacement Page 3-22 (Revised Figure 3.3.4-1).
	26	**NO APPENDIX**--Comment Requires No Changes to Figure.
T	27	Replacement Pages 4-7 and 4-7A (Revised Table 4.2.1-1).
U	28	Replacement Pages 4-13, 4-14 through 4-14F (Revised Table 4.2.3-1), 4-22 (Revised Figure 4.3.2-1), and 4-23 (Revised Figure 4.3.2-2).
V	29	Replacement Page 4-21.

Appendix A

Documentation in Support of Notice of Disapproval Comments 1, 22, and 23:

- New Table A-1. December 2008 Groundwater Elevations Tijeras Arroyo Groundwater, Sandia National Laboratories/New Mexico

Table A-1
December 2008 Groundwater Elevations
Tijeras Arroyo Groundwater, Sandia National Laboratories/New Mexico

Well Number	Date of Measurement	Depth to Water (FBTOC[a])	Groundwater Elevation (FAMSL[b])
EUBANK-1	12/11/08	552.39	4905.04
EUBANK-2	12/15/08	581.67	4890.05
EUBANK-3	12/15/08	610.42	4885.64
EUBANK-5	12/15/08	619.76	4884.97
KAFB-0213	12/17/08	419.18	4860.15
KAFB-0214	Well is plugged and abandoned—no measurement available		
KAFB-0215	Well is plugged and abandoned—no measurement available		
KAFB-0216	Well is plugged and abandoned—no measurement available		
KAFB-0217	Well is plugged and abandoned—no measurement available		
KAFB-0218	Well is plugged and abandoned—no measurement available		
KAFB-0307	12/16/08	433.13	4928.73
KAFB-0308	12/16/08	449.61	4929.37
KAFB-0309	12/12/08	482.32	4926.81
KAFB-0310	12/12/08	351.17	5062.64
KAFB-0311	12/11/08	423.40	4927.22
KAFB-0312	12/12/08	420.40	5009.10
KAFB-0313	12/12/08	348.99	5067.32
KAFB-0314	12/12/08	415.41	5037.67
KAFB-0315	12/12/08	440.41	5023.03
KAFB-0504	12/16/08	496.58	4858.62
KAFB-0505	12/16/08	507.07	4853.07
KAFB-0506	12/16/08	204.92	5155.88
KAFB-0507	12/16/08	502.02	4854.13
KAFB-0508	12/16/08	498.19	4851.02
KAFB-0510	12/16/08	516.24	4848.19
KAFB-0512	12/16/08	447.16	4854.24
KAFB-0514	12/16/08	347.16	4856.58
KAFB-0516	12/16/08	345.73	4857.24
KAFB-0602	12/12/08	317.80	5045.00
KAFB-0608	12/12/08	293.37	5065.13
KAFB-0609	12/12/08	297.41	5065.79
KAFB-0610	12/12/08	288.55	5068.25
KAFB-0615	12/16/08	190.97	5444.79
KAFB-0616	12/12/08	442.28	5036.12
KAFB-0901	12/11/08	473.42	4913.98
KAFB-0903	12/10/08	235.51	5153.45
KAFB-0904	12/12/08	351.86	4937.37
KAFB-1021	12/16/08	486.71	4858.64
KAFB-3391	12/11/08	273.37	5120.56
KAFB-3392	12/12/08	541.46	4850.38
KAFB-8281	12/17/08	551.35	4847.01
KAFB-8282	12/17/08	270.35	5129.90
PGS-2	12/12/08	556.49	4849.13
TA1-W-01	12/11/08	545.29	4855.86
TA1-W-02	12/11/08	527.41	4886.54

Refer to footnotes at end of table.

Table A-1 (Concluded)
December 2008 Groundwater Elevations
Tijeras Arroyo Groundwater, Sandia National Laboratories/New Mexico

Well Number	Date of Measurement	Depth to Water (FBTOC[a])	Groundwater Elevation (FAMSL[b])
TA1-W-03	12/11/08	344.03	5110.33
TA1-W-04	12/11/08	574.63	4883.68
TA1-W-05	12/12/08	576.92	4854.25
TA1-W-06	12/11/08	304.90	5109.53
TA1-W-07	12/11/08	285.02	5117.23
TA1-W-08	12/12/08	307.83	5123.69
TA2-NW1-325	12/12/08	315.30	5103.97
TA2-NW1-595	12/12/08	526.71	4891.88
TA2-SW1-320	12/12/08	315.60	5093.58
TA2-W-01	12/12/08	324.56	5092.76
TA2-W-19	12/10/08	269.49	5079.05
TA2-W-24	12/10/08	445.50	4915.49
TA2-W-25	12/10/08	473.46	4898.73
TA2-W-26	12/10/08	283.57	5089.53
TA2-W-27	12/10/08	277.52	5082.66
TJA-2	12/11/08	275.17	5074.64
TJA-3	12/10/08	499.12	4888.77
TJA-4	12/10/08	304.22	5034.27
TJA-5	12/10/08	268.89	5069.90
TJA-6	12/10/08	451.23	4889.26
TJA-7	12/10/08	302.26	5086.34
WYO-3	12/10/08	532.05	4857.37
WYO-4	12/10/08	288.99	5100.91

[a]FBTOC = Feet below top of casing.
[b]FAMSL = Feet above mean sea level.

Appendix B

Documentation in Support of Notice of Disapproval Comment 2:

- New Table B-1. TAG HPT Monitoring Well Network Completion Data

Table B-1
TAG HPT Monitoring Well Network Well Completion Data

Well Identification	Well Owner	Aquifer	Well Completion Elevations (ft amsl)						Sampled 6 Quarters?
			Ground Surface	Top of Casing	Screen Interval		Bottom of Casing	Bottom of Borehole	
					Top	Bottom			
EUBANK-1	COA	Regional	5455.35	5457.35	4905.35	4845.35	4840.35	4825.35	Yes
EUBANK-2	COA	Regional	--	5471.72	--	--	--	--	Yes
EUBANK-3	COA	Regional	--	5496.06	--	--	--	--	Yes
EUBANK-5	COA	Regional	--	5504.73	--	--	--	--	Yes
KAFB-0213	KAFB	Regional	5294.59	5279.33	4916.59	4866.59	4856.59	4844.59	No
KAFB-0214	KAFB	P&A	--	5252.55	--	--	--	--	No
KAFB-0215	KAFB	P&A	--	5260.43	--	--	--	--	No
KAFB-0216	KAFB	P&A	--	5238.94	--	--	--	--	No
KAFB-0217	KAFB	P&A	--	5249.11	--	--	--	--	No
KAFB-0218	KAFB	P&A	--	5266.82	--	--	--	--	No
KAFB-0307	KAFB	Regional	5360.00	5361.86	4955.00	4910.00	4900.00	4858.00	Yes
KAFB-0308	KAFB	Regional	5378.00	5378.98	4915.00	4890.00	4880.00	4858.00	No
KAFB-0309	KAFB	Regional	5408.00	5409.13	4908.00	4883.00	4873.00	4846.00	Yes
KAFB-0310	KAFB	Perched	5410.50	5413.81	5010.50	4965.50	4955.50	4900.50	Yes
KAFB-0311	KAFB	Regional	5349.00	5350.62	4916.00	4891.00	4881.00	4879.00	Yes
KAFB-0312	KAFB	Regional	5427.52	5429.50	4924.52	4899.52	4894.52	4890.52	Yes
KAFB-0313	KAFB	Perched	5414.27	5416.31	5066.27	5046.27	5041.27	4879.27	Yes
KAFB-0314	KAFB	Perched	5451.24	5453.08	5023.24	5003.24	4998.24	4994.24	No
KAFB-0315	KAFB	Perched	5461.40	5463.44	5014.40	4989.40	4984.40	4980.40	Yes
KAFB-0504	KAFB	Regional	5354.23	5354.22	4884.23	4864.23	4854.23	4836.23	No
KAFB-0505	KAFB	Regional	5358.14	5360.14	4862.74	4837.64	4836.84	4834.14	Yes
KAFB-0506	KAFB	Perched	--	--	--	--	--	--	Yes
KAFB-0507	KAFB	Regional	--	5356.15	--	--	--	--	Yes
KAFB-0508	KAFB	Regional	--	5349.21	--	--	--	--	Yes
KAFB-0510	KAFB	Regional	--	5364.43	--	--	--	--	Yes
KAFB-0512	KAFB	Regional	5298.40	5301.40	4874.40	4849.40	4848.40	4826.40	Yes
KAFB-0514	KAFB	Regional	--	5203.74	--	--	--	--	Yes
KAFB-0516	KAFB	Regional	--	5202.97	--	--	--	--	Yes
KAFB-0602	KAFB	Regional	5361.49	5362.8	4924.49	4904.49	4894.49	4866.49	Yes
KAFB-0608	KAFB	Perched	5357.23	5358.50	5050.23	5030.23	5019.23	4982.23	Yes
KAFB-0609	KAFB	Perched	5361.95	5363.20	5045.95	5025.95	5016.95	5006.95	Yes
KAFB-0610	KAFB	Perched	5354.60	5356.80	5021.60	5001.60	4991.60	4959.60	Yes
KAFB-0615	KAFB	Regional	--	5635.76	--	--	--	--	Yes
KAFB-0616	KAFB	Regional	--	5478.40	--	--	--	--	Yes

Refer to footnotes at end of table.

Table B-1 (Continued)
TAG HPT Monitoring Well Network Well Completion Data

Well Identification	Well Owner	Aquifer	Well Completion Elevations (ft amsl)						Sampled 6 Quarters?
			Ground Surface	Top of Casing	Screen Interval		Bottom of Casing	Bottom of Borehole	
					Top	Bottom			
KAFB-0901	KAFB	Regional	5387.13	5387.40	4922.13	4860.13	4850.13	4816.13	No
KAFB-0903	KAFB	Perched	--	--	--	--	--	--	Yes
KAFB-0904	KAFB	Regional	--	--	--	--	--	--	Yes
KAFB-1021	KAFB	Regional	5345.31	5345.35	4865.81	4840.81	4839.81	4835.81	No
KAFB-3391	KAFB	Perched	--	--	--	--	--	--	No
KAFB-3392	KAFB	Regional	5390.73	5392.84	4854.73	4829.73	4828.73	4820.73	No
KAFB-8281	KAFB	Regional	5399.03	5398.36	4855.03	4830.03	4829.03	4826.03	No
KAFB-8282	KAFB	Perched	--	--	--	--	--	--	Yes
PGS-2	SNL/NM	Regional	5405.19	5405.62	4870.19	4840.19	4750.19	4745.19	Yes
					4820.19	4810.19			No
					4780.19	4760.19			No
TA1-W-01	SNL/NM	Regional	5399.10	5401.15	4824.10	4804.10	4798.30	4786.10	Yes
TA1-W-02	SNL/NM	Regional	5414.23	5413.95	4874.23	4854.23	4848.63	4836.23	Yes
TA1-W-03	SNL/NM	Perched	5452.24	5454.36	5115.24	5095.24	5089.64	5089.24	Yes
TA1-W-04	SNL/NM	Regional	5455.55	5458.31	4879.55	4859.55	4853.85	4825.55	Yes
TA1-W-05	SNL/NM	Regional	5431.47	5431.17	4833.97	4813.97	4808.27	4806.47	Yes
TA1-W-06	SNL/NM	Perched	5414.71	5414.43	5114.71	5094.71	5089.11	5084.71	Yes
TA1-W-07	SNL/NM	Perched	5400.08	5402.25	5131.48	5111.48	5110.98	5110.08	No
TA1-W-08	SNL/NM	Perched	5431.96	5431.52	5129.96	5109.96	5104.96	5096.96	Yes
TA2-NW1-325	SNL/NM	Perched	5417.31	5419.27	5122.31	5092.31	5087.01	5086.41	No
TA2-NW1-595	SNL/NM	Regional	5417.28	5418.59	4882.28	4862.28	4819.28	4767.28	Yes
					4832.28	4822.28			No
TA2-SW1-320	SNL/NM	Perched	5407.36	5409.18	5107.76	5087.76	5082.76	5082.56	Yes
TA2-W-01	SNL/NM	Perched	5414.71	5417.32	5102.71	5082.71	5082.71	5076.71	Yes
TA2-W-19	SNL/NM	Perched	5346.26	5348.54	5080.39	5060.39	5060.39	5046.26	Yes
TA2-W-24	SNL/NM	Regional	5359.05	5360.99	4894.05	4874.05	4868.45	4854.05	No
TA2-W-25	SNL/NM	Regional	5369.80	5372.19	4877.80	4857.80	4852.00	4849.80	No
TA2-W-26	SNL/NM	Perched	5371.09	5373.10	5095.09	5075.09	5069.49	5066.09	Yes
TA2-W-27	SNL/NM	Perched	5358.10	5360.18	5083.10	5063.10	5057.50	5051.60	Yes
TJA-2	SNL/NM	Perched	5348.58	5350.53	5073.58	5053.58	5043.58	5038.58	Yes
TJA-3	SNL/NM	Regional	5385.07	5387.89	4889.07	4869.07	4863.37	4863.07	Yes
TJA-4	SNL/NM	Merging	5335.80	5338.49	4975.80	4955.80	4950.10	4936.80	Yes
TJA-5	SNL/NM	Perched	5335.77	5338.66	5068.77	5048.77	5043.07	5037.77	No
TJA-6	SNL/NM	Regional	5337.90	5340.49	4883.00	4863.00	4857.20	4834.90	Yes

Refer to footnotes at end of table.

Table B-1 (Concluded)
TAG HPT Monitoring Well Network Well Completion Data

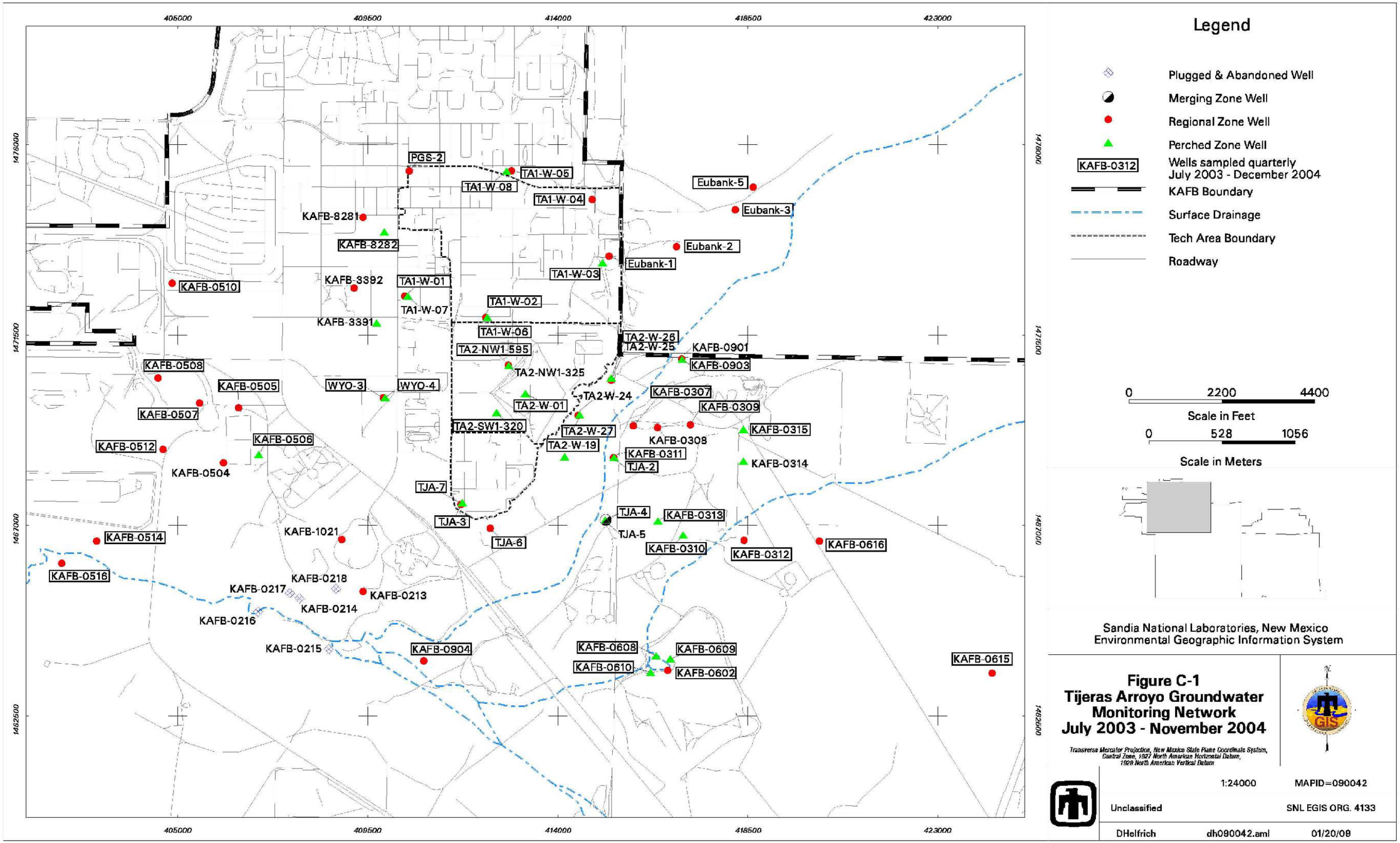
Well Identification	Well Owner	Aquifer	Well Completion Elevations (ft amsl)						Sampled 6 Quarters?
			Ground Surface	Top of Casing	Screen Interval		Bottom of Casing	Bottom of Borehole	
TJA-7	SNL/NM	Perched	5385.70	5388.60	5095.20	5075.20	5069.40	5069.70	Yes
WYO-3	SNL/NM	Regional	5387.32	5389.42	4867.32	4847.32	4842.32	4832.32	Yes
WYO-4	SNL/NM	Perched	5387.52	5389.90	5112.52	5092.52	5087.52	5082.52	Yes

COA = City of Albuquerque.
ft amsl = Feet above mean sea level.
KAFB = Kirtland Air Force Base.
P&A = Plugged and abandoned (as of December 2008).
SNL/NM = Sandia National Laboratories/New Mexico.
TAG = Tijeras Arroyo Groundwater.
-- = SNL/NM data for well not available or incomplete.

Appendix C

Documentation in Support of Notice of Disapproval Comment 3:

- New Figure C-1. Tijeras Arroyo Groundwater Monitoring Network July 2003 – November 2004


Legend
Plugged & Abandoned Well
Merging Zone Well
Regional Zone Well
Perched Zone Well
KAFB-0312
Wells sampled quarterly
July 2003 - December 2004
KAFB Boundary
Surface Drainage
Tech Area Boundary
Roadway
0
2200
4400
Scale in Feet
0
528
1056
Scale in Meters
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure C-1
Tijeras Arroyo Groundwater
Monitoring Network
July 2003 - November 2004
Transverse Mercator Projection, New Mexico State Plane Coordinate System,
Central Zone, 1927 North American Horizontal Datum,
1929 North American Vertical Datum
1:24000
MAPID=090042
Unclassified
SNL EGIS ORG. 4133
DHelfrich
dh090042.aml
01/20/08
405000
409500
414000
418500
423000
1476000
1471500
1467000
1462500
PGS-2
TA1-W-05
TA1-W-08
TA1-W-04
Eubank-5
Eubank-3
Eubank-2
Eubank-1
KAFB-8281
KAFB-8282
TA1-W-03
KAFB-0510
KAFB-3392
TA1-W-01
TA1-W-07
TA1-W-02
KAFB-3391
TA1-W-06
TA2-NW1-595
TA2-W-26
TA2-W-25
KAFB-0901
KAFB-0903
KAFB-0508
TA2-NW1-325
KAFB-0505
WYO-3
WYO-4
TA2-W-24
KAFB-0307
KAFB-0507
TA2-W-01
KAFB-0309
TA2-SW1-320
TA2-W-27
KAFB-0315
KAFB-0506
KAFB-0308
KAFB-0512
TA2-W-19
KAFB-0311
TJA-2
KAFB-0314
KAFB-0504
TJA-7
TJA-4
KAFB-0313
TJA-3
TJA-5
KAFB-1021
TJA-6
KAFB-0310
KAFB-0312
KAFB-0616
KAFB-0514
KAFB-0516
KAFB-0218
KAFB-0217
KAFB-0213
KAFB-0214
KAFB-0216
KAFB-0215
KAFB-0904
KAFB-0608
KAFB-0609
KAFB-0610
KAFB-0602
KAFB-0615

Appendix D

Documentation in Support of Notice of Disapproval Comment 4:

- Replacement Page for ES-i
- Replacement Page for 1-5 (Revised Table 1.1-1)

EXECUTIVE SUMMARY

The Tijeras Arroyo Groundwater (TAG) Investigation Report summarizes the findings of the TAG investigation that is being conducted by Sandia National Laboratories/New Mexico (SNL/NM), Kirtland Air Force Base (KAFB), and the City of Albuquerque (COA). Groundwater investigations conducted during the last 10 years by the SNL/NM Environmental Restoration Project and the KAFB Installation Restoration Program (IRP) have identified trichloroethene (TCE) and nitrate as the primary constituents of concern (COCs) in TAG.

Environmental studies in the TAG study area have ascertained Solid Waste Management Unit (SWMU) locations, the hydrogeologic setting, the distribution of TCE and nitrate in groundwater, the occurrence of these and other COCs in the soil, and the principal release sites. No ongoing contamination is occurring at the SWMUs. For example, the Technical Area (TA)-II septic systems have been taken out of service. No dumping or disposal of toxic materials is currently allowed at SNL/NM sites.

Forty-three SNL/NM SWMUs and six drain and septic system sites are located in the TAG study area, which includes TA-I, TA-II, TA-IV, and the Tijeras Arroyo Operable Unit. KAFB IRP and the COA Environmental Health Department manage approximately 41 sites in the vicinity of the TAG study area.

The SNL/NM characterization work has been completed. At the majority of the SWMUs, only minor amounts of hazardous and/or radioactive materials were released. Therefore, most SWMUs have not required remediation.

A wide variety of environmental studies, consisting of the following, have been conducted by SNL/NM to address specific TAG-related data gaps and to investigate the numerous SWMUs in the study area:

- Research activities for the SWMUs compiled process knowledge by interviewing current and former SNL/NM employees, as well as reviewing historical documents, such as memoranda, aerial photographs, and engineering drawings. The process knowledge revealed that 40 of the 43 SWMUs required site characterization.

- Soil sampling has been conducted at all 40 SWMUs. Soil-vapor sampling has been conducted at 20 of the SWMUs.

- Analytical results are available for all of the SWMUs that required sampling. Based upon these analytical results, the New Mexico Environment Department has accepted No Further Action proposals for the 40 characterized SWMUs. Risk assessments are being, or will be, prepared for the remaining SWMUs.

- Between July 2003 and October 2004, SNL/NM owned a network of 36 TAG monitoring wells consisting of 26 groundwater monitoring and 10 soil-vapor wells. During the same period KAFB and the COA owned 42 TAG monitoring wells in the study area.

Table 1.1-1
Tijeras Arroyo Groundwater Investigation Historical Timeline of SNL/NM Activities

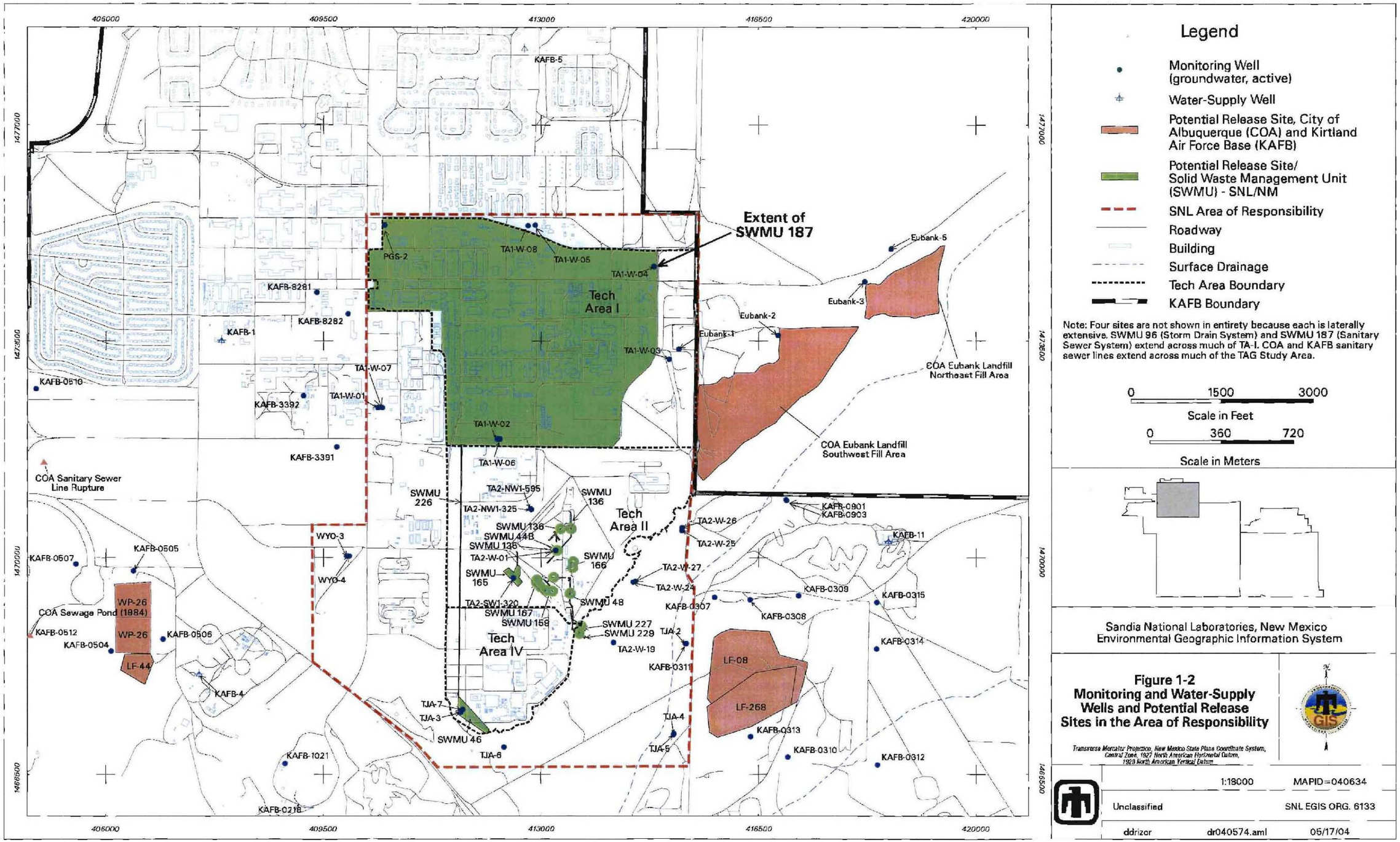
Month	Year	Event	Reference
November–July	1992–1993	SNL/NM began investigation of TA-II groundwater. Perched system discovered as first wells were installed (TA2-SW1-320, TA2-NW1-325, and TA2-NW1-595).	SNL/NM March 1995
March–July	1994	Installed monitoring wells TA2-W-01 and TJA-2.	SNL/NM March 1995
October	1994	Analytical results from groundwater sampling first detected TCE.	SNL/NM March 1996
August–September	1995	Installed monitoring wells WYO-1, WYO-2, and PGS-2.	SNL/NM March 1996
November	1995	Analytical results from groundwater sampling first detected TCE above the EPA MCL of 5 μg/L.	SNL/NM March 1996
November	1995	Installed monitoring well TA2-W-19.	SNL/NM March 1996
March	1996	Sandia North Groundwater Investigation Plan submitted to the NMED/HWB.	SNL/NM March 1996
September	1996	Shallow Water-Bearing Zone Hydrologic Evaluation prepared.	Wolford September 1996
November	1996	Pressure transducer program initiated for select monitoring wells.	SNL/NM March 1998
November–December	1996	Installed TA-II soil-vapor monitoring wells TA2-VW-20 and TA2-VW-21.	IT January 1997
March	1997	Sandia North Geological Investigation Project Report prepared.	Fritts and Van Hart March 1997
March–April	1997	Installed monitoring wells TAI-W-01 and TA2-W-25.	SNL/NM March 1998
August	1997	Borehole geophysical investigation (electromagnetic induction, neutron, and natural gamma) completed on 21 SNL/NM and KAFB monitoring wells.	SNL/NM March 1998
January–February	1998	Installed monitoring wells TAI-W-02, TAI-W-03, TAI-W-06, TA2-W-24, TA2-W-26, and TA2-W-27.	SNL/NM June 2000
March	1998	Fiscal Year 1997 Sandia North Groundwater Investigation Annual Report submitted to the NMED/HWB.	SNL/NM March 1998
August–December	1998	Installed monitoring wells TAI-W-04, TAI-W-05, TAI-W-07, TJA-3, TJA-4, and TJA-5.	SNL/NM June 2000
May–June	1999	Colloidal borescope investigation performed on 18 SNL/NM and KAFB monitoring wells.	AquaVISION July 1999
October	1999	Analysis of the USGS aeromagnetic survey performed to revise the interpretation of the SNL/NM and KAFB area geologic structure.	Van Hart et al. October 1999
June	2000	Fiscal Year 1998 Sandia North Groundwater Investigation Annual Report submitted to the NMED/HWB.	SNL/NM June 2000
October	2000	TAG High Performing Team convened for the first time.	SNL/NM June 2003
December	2000	Project name changed to the Tijeras Arroyo Groundwater Investigation.	Collins December 2000
January–March	2001	Installed groundwater monitoring wells TJA-6 and TJA-7, and soil-vapor monitoring wells 46-VW-01, 46-VW-02, and 227-VW-01.	SNL/NM November 2002
February	2001	Preliminary model of the perched system updated.	BGW February 2001
June	2001	Geologic model of the perched system updated.	Van Hart June 2001
July	2001	Monitoring wells WYO-1 and WYO-2 plugged and abandoned, replaced by WYO-3 and WYO-4.	SNL/NM June 2003
August	2001	Installed groundwater monitoring well TA1-W-08	SNL/NM June 2003
November	2002	TAG Continuing Investigation Report submitted to the NMED/HWB.	SNL/NM November 2002

Refer to footnotes at end of table.

Appendix E

Documentation in Support of Notice of Disapproval Comment 5:

- New Figure—Reprint of Figure 1-2 of the Corrective Measures Evaluation Work Plan (SNL/NM December 2004): Monitoring and Water-Supply Wells and Potential Release Sites in the Area of Responsibility


Legend
Monitoring Well (groundwater, active)
Water-Supply Well
Potential Release Site, City of Albuquerque (COA) and Kirtland Air Force Base (KAFB)
Potential Release Site/ Solid Waste Management Unit (SWMU) - SNL/NM
SNL Area of Responsibility
Roadway
Building
Surface Drainage
Tech Area Boundary
KAFB Boundary
Note: Four sites are not shown in entirety because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.
0 1500 3000
Scale in Feet
0 360 720
Scale in Meters
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure 1-2
Monitoring and Water-Supply Wells and Potential Release Sites in the Area of Responsibility
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum
1:18000
MAPID=040634
Unclassified
SNL EGIS ORG. 6133
ddrizor
dr040574.aml
05/17/04
Extent of SWMU 187
Tech Area I
Tech Area II
Tech Area IV
COA Eubank Landfill Northeast Fill Area
COA Eubank Landfill Southwest Fill Area
COA Sanitary Sewer Line Rupture
COA Sewage Pond (1984)
SWMU 226
SWMU 136
SWMU 44B
SWMU 135
SWMU 165
SWMU 166
SWMU 48
SWMU 167
SWMU 158
SWMU 227
SWMU 229
SWMU 46
WP-26
LF-44
LF-08
LF-268
KAFB-5
KAFB-8281
KAFB-8282
KAFB-1
KAFB-0510
KAFB-3392
KAFB-3391
KAFB-0507
KAFB-0505
KAFB-0512
KAFB-0504
KAFB-0506
KAFB-4
KAFB-1021
KAFB-0218
KAFB-11
KAFB-0901
KAFB-0903
KAFB-0307
KAFB-0309
KAFB-0308
KAFB-0315
KAFB-0314
KAFB-0311
KAFB-0313
KAFB-0310
KAFB-0312
PGS-2
TA1-W-08
TA1-W-05
TA1-W-04
TA1-W-03
TA1-W-07
TA1-W-01
TA1-W-02
TA1-W-06
TA2-NW1-595
TA2-NW1-325
TA2-W-01
TA2-SW1-320
TA2-W-26
TA2-W-25
TA2-W-27
TA2-W-24
TA2-W-19
TJA-2
TJA-3
TJA-4
TJA-5
TJA-6
TJA-7
WYO-3
WYO-4
Eubank-1
Eubank-2
Eubank-3
Eubank-5
406000
409500
413000
416500
420000
1477000
1473500
1470000
1466500

Appendix F

Documentation in Support of Notice of Disapproval Comment 6:

- Replacement Page for 1-7

Groundwater in the vicinity of the TAG study area occurs in the regional aquifer and the perched system, both within the upper unit of the Tertiary-age Upper Santa Fe Group. Aquifer tests and drilling data indicate that the regional aquifer is semi-confined to unconfined in the study area, with hydraulic conductivities ranging from approximately 0.77 to 14.8 ft/day. Depth to water in the regional aquifer ranges from 450 to 550 ft bgs (4,854 to 4,924 ft above mean sea level [amsl]) in the study area. The direction of groundwater flow in the regional aquifer is principally north-northwest at a gradient of 0.01 feet/foot (ft/ft), toward the KAFB, COA, and Veterans Administration (VA) water-supply wells in the northwestern portion of the study area. In this portion of the study area, groundwater levels have been declining in the regional aquifer due to pumping from these production wells.

In the eastern section of the TAG study area, the upper portion of the regional aquifer is located within the alluvial fan facies of the Santa Fe Group. In the western section of the study area, the upper portion of the regional aquifer is within the Ancestral Rio Grande (ARG) fluvial facies. These two lithofacies exhibit complex interfingering in a north-south line approximated by Wyoming Boulevard. The ARG fluvial facies are typically coarse-grained and well-sorted, exhibit relatively continuous and well-connected bedding, and have moderate to high hydraulic conductivity. In contrast, the alluvial fan facies are typically finer-grained and poorly sorted, exhibit lenticular bedding that is moderately to well-connected, and have low to moderate hydraulic conductivities.

The perched system consists of multiple perched saturated intervals, located up to several hundred feet above the regional water table (5,019 to 5,320 ft amsl) within the alluvial fan facies of the Upper Santa Fe Group. The perched system is presently understood to cover approximately 3.8 square miles. The flow in the perched system is in a general southeasterly direction at a gradient of 0.01 (ft/ft), with hydraulic conductivity values ranging from 0.043 to 3.99 ft/day.

Potential recharge sources for the perched system include the following:

- Localized, irrigated (grassy) areas such as the Parade Ground north of TA-I
- A buried ancestral Tijeras Arroyo channel (supplying water from portions of Tijeras Arroyo upstream of KAFB)
- Leaking water mains or sewer lines
- The high-volume acid-waste line (now inactive)
- High-volume septic systems (now inactive)
- The KAFB Sewage Lagoons (now inactive)
- Tijeras Arroyo Golf Course (KAFB)

The data available from previous and ongoing site investigations have identified TCE and nitrate as the two major COCs. The presence of volatile organic compounds (VOCs) such as TCE, 1,1-dichloroethane [DCA], and cis-1,2-dichloroethene [DCE] has been confirmed in perched system monitoring wells. Historically, the concentrations of these VOCs are low, ranging from less than 1.0 (estimated values) to 9.6 μg/L, with only two monitoring wells (TA2-W-19, and WYO-4) historically exhibiting concentrations above the EPA MCL

Appendix G

Documentation in Support of Notice of Disapproval Comments 7, 10, 11, and 13:

- Replacement Pages for 2-5 through 2-8A (Revised Table 2.1.2-1, Plus References)
- Replacement Pages for 2-10 through 2-14A (Revised Table 2.2.2-1, Plus References)
- Replacement Pages for 2-16 through 2-21B (Revised Table 2.4.2-1, Plus References)

Table 2.1.2-1
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
25	Burial Site (South of TA-I)	HE	• Aerial photography investigation and field inspections (1994)	• No burials found at the 12 candidate sites	NFA accepted (EPA December 1995)
			• Review of historical records (1994)	• No reliable evidence found	
30	Reclamation Yard	Metals, PCBs, TPH	• VCM excavated PCB-contaminated soil above 1 mg/L; confirmatory sampling conducted (2000)	• Site successfully remediated	NFA accepted (NMED January 2004a)
			• Soil sampling to 5 ft bgs (1995)	• PCB cleanup of areas identified; no other COCs required cleanup	
			• Soil sampling (1986, 1991/1992)	• PCBs detected up to 6,200 µg/L	
32	Steam Plant Oil Spill	TPH (diesel fuel)	• Soil sampling to maximum depth of 107 ft bgs for surface spill (1992)	• Low levels of TPH present above 80 ft bgs; no remediation necessary	NFA accepted (EPA December 1995)
33	Motor Pool	TPH, SVOCs, VOCs, Metals	• Soil sampling to 25 ft bgs (2001)	• No significant COCs detected	NFA accepted (NMED January 2004a)
			• Soil sampling to 30 ft bgs (1995)	• Low levels of VOCs, SVOCs, and metals detected; all below action levels	
			• Soil sampling around UST to 30 ft bgs (1991)	• TPH detected up to 1,120 mg/L	
41	Building 838 Mercury Release	Mercury	• Soil sampling to 3 ft bgs (1993 and 1994)	• No mercury detected	NFA accepted (EPA December 1995)
42	Building 870 Water Treatment Facility	Acids/bases, Metals, VOCs, SVOCs	• Soil sampling to 30 ft bgs (1995)	• No VOCs, SVOCs, or metals exceeded risk-based cleanup levels	NFA accepted (NMED December 1999a)
			• Soil sampling to 22 ft bgs (1993)	• No anomalous pH values; minor amounts of metals, VOCs, and SVOCs	
73	Building 895 Hazardous Waste Repackaging/Storage	None	• Research of documents; personnel interviews (1994)	• No releases of chemicals or hazardous material were identified	NFA accepted (EPA December 1995)
96	Storm Drain System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Acids/bases, TPH	• Soil sampling to 17 ft bgs (2002)	• No significant COCs detected	NFA accepted (NMED December 2004)
			• Soil sampling to 12 ft bgs (1995)	• No VOCs, SVOCs, TPH, metals, radionuclides, or PCBs exceeded risk-based cleanup levels	

Refer to footnotes at end of table.

Table 2.1.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
96 (cont.)	Storm Drain System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Acids/bases, TPH	• Pipeline camera survey and trenching • Soil samples to 8 ft bgs (1993)	• Pipe breaks identified • No metals, PCBs, radionuclides, SVOCs, and VOCs detected	NFA accepted (NMED December 2004)
			• Soil sampling at Building 870 (1993)	• Several metals detected	
			• Discharge area and channel surface soil sampling (1992)	• Some radionuclides detected	
			• Storm water sampling (1992)	• Concentrations below COA NPDES limits	
98	Building 863 TCA and Photochemical Releases	TCA, TCE, Acids/bases, Silver	• Soil and soil-vapor sampling to 140 ft bgs (1999)	• No VOCs detected in soil samples; low levels of VOCs detected in soil-vapor samples	NFA accepted (NMED December 2000)
			• Soil and soil-vapor sampling to 30 ft bgs (1995)	• No VOCs, SVOCs, or elevated metals detected in soil samples; low levels of VOCs detected in soil-vapor samples	
104	PCB Spill, Computer Facility	PCBs	• Review of historical documents; personnel interviews (1994)	• Spills of PCB oils were confined to building interior	NFA accepted (EPA December 1995)
186	Building 859 TCE Disposal	TCE	• Soil-vapor sampling (1999)	• Low levels of Freon-113 were identified in soil vapor along pipe chases, but not at original surface spill location	NFA accepted (NMED March 2000)
			• Soil-vapor sampling to 20 ft bgs; soil sampling to 30 ft bgs (1995)	• No significant levels of VOCs detected in soil or soil vapor	
187	TA-I Sanitary Sewer System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Nitrate	• Soil sampling to 17 ft bgs (2002)	• No significant COCs (including nitrate) detected	NFA accepted (NMED December 2004
			• Soil sampling to 12 ft bgs (1995)	• VOCs, SVOCs, PCBs, metals, and radionuclides below risk-based cleanup levels	
			• Building 824 soil sampling (1994)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	
			• Building 838 and 839 soil sampling (1994)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	
			• Building 870 soil sampling (1994)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	

Refer to footnotes at end of table.

Table 2.1.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
187 (cont.)	TA-I Sanitary Sewer System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Nitrate	• Building 814 soil sampling (1993) • Building 870 soil sampling to 11 ft bgs (1993) • Pipeline camera survey and trenching (1993)	• No VOCs, SVOCs, or elevated metals or radionuclides detected • No VOCs, SVOCs, or elevated metals or radionuclides detected • Pipe breaks identified	NFA accepted (NMED December 2004
190	Steam Plant Tank Farm	TPH (diesel fuel), VOCs, SVOCs	• Biovent remediation wells installed (1998)	• Reduction of TPH in soil-vapor samples	NFA not accepted (NMED January 2004b)
			• Hollow-stem-auger soil sampling to 120 ft bgs (1997)	• TPH concentrations greater than 100 mg/L confined to depths of 80 ft bgs or less	
			• Geoprobe soil sampling to 50 ft bgs (1995)	• TPH detected up to 52,100 mg/L	
			• Soil sampling to 5 ft bgs (1991)	• TPH detected up to 17,200 mg/L	
192	TA-I Waste Oil Tank	TPH, VOCs, SVOCs, PCBs, Metals	• Soil sampling to 30 ft bgs (1995)	• No COCs detected in soil samples	NFA accepted (NMED December 1999b)
211	Building 840 Former UST 840-1	TPH, Metals, PCBs, SVOCs, VOCs	• Soil sampling to 30 ft bgs for metals, PCBs, SVOCs, and VOCs (1995)	• No COCs detected in soil samples	NFA accepted (NMED March 2000)
			• Soil sampling in tank excavation for SVOCs and VOCs (1989)	• No COCs detected in soil samples	
226	Old Acid Waste Line	Metals, PCBs, SVOCs, VOCs, Cyanide, Tritium, Gamma-Emitting Radionuclides	• Soil sampling to 17 ft bgs (2002) • Geoprobe soil sampling to 14 ft bgs along entire 1.3 miles of line; sediment sampling from line (1995) • Soil sampling at Building 839 to 14 ft bgs (1994)	• No significant COCs detected • No significant levels of VOCs, SVOCs, PCBs, metals; tritium, gamma-emitting radionuclides detected • Low levels of radionuclides and metals detected	NFA accepted (NMED December 2004)
			• Pipeline camera survey and trenching (1993)	• Pipe breaks identified	
			• Soil sampling at K and 9th Streets to 8 ft bgs (1992)	• No COCs detected	

Refer to footnotes at end of table.

Table 2.1.2-1 (Concluded)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

bgs	= Below ground surface.
COA	= City of Albuquerque.
COC	= Constituent of concern.
EPA	= U.S. Environmental Protection Agency.
ft	= Foot (feet).
HE	= High explosive(s).
µg/L	= Microgram(s) per liter.
mg/L	= Milligram(s) per liter.
NFA	= No Further Action.
NMED	= New Mexico Environment Department.
NPDES	= National Pollutant Discharge Elimination System.
PCB	= Polychlorinated biphenyl.
SNL/NM	= Sandia National Laboratories/New Mexico.
SVOC	= Semivolatile organic compound.
SWMU	= Solid Waste Management Unit.
TA	= Technical Area.
TCA	= Trichloroethane.
TCE	= Trichloroethene.
TPH	= Total petroleum hydrocarbons.
UST	= Underground storage tank.
VCM	= Voluntary Corrective Measure.
VOC	= Volatile organic compound.

Table 2.1.2-1 References

New Mexico Environment Department (NMED), December 1999a. "DOE/SNL Environmental Restoration Project Responses to NMED Request for Supplemental Information—No Further Action Proposals (7th Round), Dated May 1997," New Mexico Environment Department, Santa Fe, New Mexico. December 7, 1999.

New Mexico Environment Department (NMED), December 1999b. "DOE/SNL Environmental Restoration Project Proposals for No Further Action—ER Sites 54, 56, and 192: October 1996, 5th Round," New Mexico Environment Department, Santa Fe, New Mexico. December 17, 1999.

New Mexico Environment Department (NMED), March 2000. "DOE/SNL Environmental Restoration Project Proposals for No Further Action, October 1996—SWMU's 186 and 211 (5th Round NFA's)," New Mexico Environment Department, Santa Fe, New Mexico. March 27, 2000.

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New Mexico Environment Department (NMED), January 2004a. "Supplemental Risk Document Supporting Class 3 Modification Process, October 2003, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-03-024," New Mexico Environment Department, Santa Fe, New Mexico. January 23, 2004.

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Table 2.2.2-1
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
1	Radioactive Waste Landfill (and Chemical Disposal Pit)	VOCs, SVOCs, Metals, Radionuclides	• Excavation backfilled and verification soil samples collected (2003 and 2004)	• Remediation is complete	NFA accepted (NMED July 2005a)
			• Soil-staging area clearance (2001) • Additional verification soil sampling (1999)	• COCs below risk-based levels • COCs below risk-based levels	
			• Confirmatory soil sampling (1997)	• COCs below risk-based levels	
			• VCM excavation (1996)	• Entire landfill contents removed; SWMU 1 boundary enlarged to encompass SWMU 3	
			• Historical records research (1995)	• Process knowledge acquired	
			• Historical aerial photography interpretation (1994)	• Chemical disposal pit identified within RWL; disturbances noted in RWL from 1951 to 1959	
			• Surface geophysical surveys (1993, 1994)	• Magnetic anomalies detected in trench and pit areas	
			• Surface and near-surface soil sampling – NESHAP (1993, 1994)	• No activities detected above background	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs identified in Petrex tubes	
			• Organic vapor walk-over survey (1991)	• No organic vapor identified	
			• Radiation survey (1991)	• No activities detected above background	
2	Classified Waste Landfill	VOCs, SVOCs, PCBs, HE, Metals, Radionuclides	• Excavation backfilled and verification soil samples collected (2003 and 2004)	• Remediation is complete	NFA accepted (NMED July 2005b)
			• Additional soil-pile sampling (2001) • Confirmatory soil sampling (2000)	• Low levels of PCBs require additional sampling • COCs below risk-based levels	
			• VCM excavation (1998–2000)	• Entire landfill contents removed	
			• Surface geophysical survey (1997)	• 84 anomalies identified	
			• Historical records research (1996)	• Process knowledge acquired	
			• Soil samples to 100 ft bgs (1994)	• Acetone, methylene chloride, and bis (2-ethylhexyl) phthalate detected. Low levels of COC metals detected. Tritium and low levels of uranium identified	
			• Surface geophysical surveys (1993, 1994)	• Surveys identified burial trenches and pits	
			• Soil-vapor survey (1993)	• Two, small, separate vapor plumes of TCE and PCE identified; minor BTEX and other VOCs also identified in Petrex tubes	

Refer to footnotes at end of table.

Table 2.2.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
2 (cont.)	Classified Waste Landfill	VOCs, SVOCs, PCBs, HE, Metals, Radionuclides	• Organic vapor walk-over survey (1991)	• No organic vapors detected	NFA accepted (NMED July 2005b)
			• Radiation survey (1991)	• No activities detected above background	
			• Organic vapor survey (1988)	• Low levels of VOCs detected	
			• Radiation survey (1988)	• Gamma radiation at or below background levels	
43	Radioactive Material Storage Yard	Metals and Radionuclides	• Surface soil samples (1999)	• Tritium not detected; COCs below risk-based levels	NFA accepted (NMED December 1999a
			• Surface and near-surface (to 2 ft bgs) soil samples (1994)	• Low levels of radionuclides above background	
			• Surface and near-surface (to 3 ft bgs) soil samples (1993)	• Low levels of radionuclides and metals above background	
			• Surface soil samples (1991) • Surface radiation survey (1991)	• Tritium and uranium above background • Radioactive soil detected	
44A	Uranium Calibration Pits	Metals and Radionuclides	• Confirmatory soil sampling (1994)	• COCs below risk-based levels	NFA accepted (NMED December 1999b)
			• VCM excavation (1994)	• UCP culverts and contaminated soil removed	
			• Downhole radiation survey (in UCPs) (1994)	• UCPs 1 and 2 had elevated radiation. No elevated radiation detected above background in UCP 3 or 4	
			• Organic vapor survey (1991)	• No VOCs detected	
			• Radiation survey (1991)	• No elevated radiation	
44B	Decontamination Areas	Metals and Radionuclides	• Surface soil sampling (1994)	• COCs below risk-based levels	NFA accepted (NMED December 1999b)
			• Surface radiation survey (1994)	• Activities above background were measured at three locations	
			• Surface geophysical surveys (1993, 1994)	• Magnetic anomalies identified as the Building 906 Septic System, utilities, fence lines, and surface debris	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs detected in Petrex tubes	
			• Organic vapor survey (1991)	• Low levels of VOCs and SVOCs	
			• Radiation survey (1991)	• No elevated radiation	

Refer to footnotes at end of table.

Table 2.2.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
48	Building 904 Septic System	VOCs, SVOCs, HE, Metals, Cyanide, Radionuclides	• Quarterly soil-vapor sampling (April 2001) • Review of engineering drawings and historical aerial photography (2001) • Trenching and soil sampling (2000) • Soil-vapor monitoring well TA2-VW-021 installed with sampling ports set at 50 and 92 ft bgs (1997)	• TCE maximum of 1,000 ppb (v/v), total VOCs at 1,064 ppb (v/v) • Historical discharge from SWMU 48 documented at SWMUs 227 and 229 • May 1998 sampling: TCE = 230 ppb (v/v), total VOCs = 253 ppb (v/v)	NFA accepted (NMED October 2004)
			• Soil sampling to 50 ft bgs (1994)	• Barium detected above background; VOCs, SVOCs, HE, metals, cyanide, tritium, and gamma-emitting radionuclides not evaluated with respect to current risk-based levels	
			• Historical aerial photography interpretation (1994)	• Vegetation apparent along both sanitary and HE lines between 1964 and 1992	
			• Soil-vapor surveys (1993, 1995)	• Low levels of BTEX and PCE identified in Petrex tubes, but not indicative of contamination	
			• Soil sampling along septic line trench (1993)	• No VOCs, SVOCs, HE, metals, tritium, and radioisotopes were detected above RCRA Subpart S action levels	
			• Organic vapor survey (1991)	• No VOCs detected	
			• Radiation survey (1991)	• No elevated radiation detected	
113	Area II Firing Sites	Metals, HE, VOCs, SVOCs	• Surface and shallow soil sampling (1994)	• COCs below risk-based levels	NFA accepted (NMED April 2001)
			• Surface radiation survey (1994)	• No elevated radiation	
			• Geophysical survey (1993)	• No magnetic anomalies identified	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs identified in Petrex tubes	
114	Explosive Burn Pit	Metals, HE, VOCs	• RSI excavation of surrounding area (2001) • Confirmatory sampling (2000)	• No debris or additional burn pits found • No soil contamination detected	NFA accepted (NMED January 2004)
			• VCM excavation; confirmatory soil sampling (1995 and 1996)	• All burn pit material removed, metals below risk-based levels	
			• Historical aerial photography interpretation (1995)	• Additional EBP areas identified	
			• Soil sampling to a maximum of 12 ft bgs (1994)	• Barium concentrations exceeded background	
			• Soil-vapor survey (1993)	• Low BTEX levels identified in Petrex tubes	
			• Soil sampling to 6 ft bgs (1992)	• Barium concentrations exceeded background	

Refer to footnotes at end of table.

Table 2.2.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
135	Building 906 Septic System	Metals, Radionuclides, HE, VOCs, SVOCs, PCBs, Herbicides	• Soil-vapor monitoring well installed to 150 ft bgs (2003)	• No significant VOCs detected	NFA accepted (NMED October 2004)
			• Trenching and soil sampling (2000)	• Risk assessment showed no significant risk	
			• Soil samples collected to 52 ft bgs (1994)	• Low levels of VOCs and SVOCs detected. All other COCs within background or acceptable risk	
			• Surface radiation survey (1994)	• Three anomalies identified	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs identified in Petrex tubes	
			• Surface geophysical survey (1993)	• No buried magnetic anomalies identified	
136	Building 907 Septic System	VOCs, SVOCs, HE, Metals, Cyanide, Radionuclides	• Quarterly soil-vapor sampling (April 2001) • Trenching and soil sampling (2000) • Soil-vapor monitoring well T2-VW-020 installed with sampling port at 72 ft bgs (1997)	• TCE maximum of 21 ppb (v/v); total VOCs at 189 ppb (v/v) • May 1998 sampling: TCE = 9 ppb (v/v), total VOCs = 65 ppb (v/v)	NFA accepted (NMED October 2004)
			• Soil sampling to 50 ft bgs (1994)	• No significant VOCs, SVOCs, HE, or radionuclides detected	
			• Soil-vapor survey (1993)	• No VOCs detected in Petrex tubes	
			• Septic-line trench soil samples to 3 ft bgs (1993)	• Low levels of COCs detected	
			• Organic vapor survey (1991)	• No VOCs detected	
			• Radiation survey (1991)	• No elevated radiation	
159	Building 935 Septic System	HE, Metals, Radionuclides, VOCs, SVOCs, PCBs, Nitrate	• Trenching and soil sampling (2000)	• Risk assessment showed no significant risk	NFA accepted (NMED October 2004)
			• Soil sampling to 100 ft bgs (1994)	• No COCs detected and/or above background	
			• Soil-vapor survey (1994)	• No VOCs or SVOCs detected in Petrex tubes	
			• Soil sampling to 50 ft bgs (1994)	• Some metals above background; no VOCs, PCBs, SVOCs, or HE detected; radionuclides within background	
			• Soil-vapor survey (1993)	• No VOCs detected in Petrex tubes	
			• Soil sampling to 50 ft bgs (1992)	• Barium above background; other COCs either nondetect or below background	
			• Soil sampling to 150 ft bgs (1992)	• No COCs identified above background levels	
			• Surface soil sampling (1992)	• Tritium detected above background; other radionuclides within background	

Refer to footnotes at end of table.

Table 2.2.2-1 (Concluded)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Initial Regulatory Acceptance Status (Reference)
165	Building 901 Septic System	VOCs, SVOCs, HE, Metals, Radionuclides, Nitrate, Inorganics	• Trenching and soil sampling (2000)	• COCs below risk-based levels	NFA accepted (NMED October 2004)
			• Soil-vapor survey (1993)	• No VOCs detected in Petrex tubes	
			• Soil sampling to 50 ft bgs (1992)	• Lead and mercury above background; other COCs either nondetect or below background	
			• Soil sampling to 300 ft bgs (1992)	• No COCs detected	
166	Building 919 Septic System	VOCs, SVOCs, HE, Metals, Radionuclides, Nitrate	• Trenching and soil sampling (2000)	• COCs below risk-based levels	NFA accepted (NMED October 2004)
			• Historical aerial photography interpretation (1994)	• Identified septic lines	
			• Soil sampling to 50 ft bgs (1994)	• Barium, lead, and zinc above background; other COCs either nondetect or below background	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs detected in Petrex tubes	
			• Septic-line trench soil sampling to 3 ft bgs (1993)	• COCs either nondetect or below background	
167	Building 940 Septic System	Metals, HE, VOCs, SVOCs	• Trenching and soil sampling (2000)	• COCs below risk-based levels	NFA accepted (NMED October 2004)
			• Historical aerial photography interpretation (1994)	• Septic lines identified through vegetation changes	
			• Soil sampling to 50 ft bgs (1994)	• Nickel and zinc above background; other COCs either nondetect or below background	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs detected in Petrex tubes	

bgs = Below ground surface.
BTEX = Benzene, toluene, ethylbenzene, and xylene.
COC = Constituent of concern.
EBP = Explosive Burn Pit.
ft = Foot (feet).
HE = High explosive(s).
NESHAP = National Emissions Standards for Hazardous Air Pollutants.
NFA = No Further Action.
NMED = New Mexico Environment Department.
PCB = Polychlorinated biphenyl(s).
PCE = Tetrachloroethene.
ppb (v/v) = Parts per billion by volume.
RCRA = Resource Conservation and Recovery Act.
RWL = Radioactive Waste Landfill.
RSI = Request for Supplemental Information.
SNL/NM = Sandia National Laboratories/New Mexico.
SVOC = Semivolatile organic compound.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TCE = Trichloroethene.
UCP = Uranium Calibration Pit.
VCM = Voluntary Corrective Measure.
VOC = Volatile organic compound.

Table 2.2.2-1 References

New Mexico Environment Department (NMED), December 1999a. "RE: DOE/SNL Environmental Restoration Project Proposal for No Further Action – ER Site 43: August 1994, First Round," New Mexico Environment Department, Santa Fe, New Mexico. December 20, 1999.

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New Mexico Environment Department (NMED), October 2004. "RE: Order on Consent Deliverables #5 and #6 (Table XI-3) Environmental Restoration Project Solid Waste Management Unit (SWMUs) Assessment Reports and Proposals for No Further Action: Drain and Septic Systems (DSS) Sites 1010, 1028, 1083, and 1086, and Request for Supplemental Information Response for SWMUs 48, 135, 136, 159, 165, 166, and 167: June 2004, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-04-032," New Mexico Environment Department, Santa Fe, New Mexico. October 7, 2004.

New Mexico Environment Department (NMED), July 2005a. "RE: Request for Supplemental Information and Certificates of Completion: Environmental Restoration Project Supplemental and No Further Action Information for Various Solid Waste Management Units (SWMUs 1, 78, 196, 45 and 46); October 2004, Sandia National Laboratories, EPA ID#NM5890110518, HWB-SNL-99-006, 99-021, and 99-01," New Mexico Environment Department, Santa Fe, New Mexico. July 19, 2005.

New Mexico Environment Department (NMED), July 2005b. "RE: Certificates of Completion: Environmental Restoration Project No Further Action Proposal Addendum and Toxic Substances Control Act Final Report for Solid Waste Management Unit 2 –Classified Waste Landfill at Technical Area II; September 2004, Sandia National Laboratories, EPA ID#NM5890110518, HWB-SNL-02-004," New Mexico Environment Department, Santa Fe, New Mexico. July 12, 2005.

Table 2.4.2-1
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Initial Regulatory Acceptance Status (Reference)
45	Liquid Discharge	VOCs, SVOCs, Metals	• Geoprobe soil sampling to 14 ft bgs (2004)	• No significant COCs detected	NFA accepted (NMED March 2005)
			• Historical aerial photography review (2001)	• No suspicious environmental problems evident	
			• Excavation of metallic anomalies; soil sampling at 3 ft bgs (1995)	• Metallic items were excavated, no drums or stained soil evident; no VOCs detected, metals below background	
			• Geophysical survey (1995)	• Buried metallic items identified	
			• Geoprobe soil sampling to 14 ft bgs (1995)	• Barium slightly above background, other metals and radionuclides below background; no VOCs detected	
			• Soil-vapor sampling (1995)	• No VOCs or SVOCs detected in Petrex tubes	
			• Surface-soil sampling (1995)	• No VOCs detected, metals and radionuclides within background	
			• Historical aerial photography review (1994)	• No stained soil evident; typical cut-and-fill soil piles present	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Soil sampling in sewer line trench (1993)	• No VOCs, SVOCs, or HE detected; metals and radionuclides below background	
			• Surface UXO survey (1994)	• No UXO visible	
46	Old Acid Waste Line Outfall	VOCs, SVOCs, Metals, Nitrate, Chromium-VI, Cyanide, PCBs, Tritium, Gamma-Emitting Radionuclides	• VCM conducted to remove PCB-contaminated soil (2003)	• Remediation is completed	NFA not accepted (NMED July 2005)
			• Geoprobe sampling to 18 ft bgs near waste line (August 2001)	• Analytical results defined extent of contamination	
			• Quarterly groundwater sampling (April 2001)	• TCE at 0.51 (estimated) µg/L, MEK at 42 µg/L, ethylbenzene at 0.63 (estimated) µg/L, methylene chloride at 1.2 (estimated) µg/L, perchlorate at 1.27 µg/L	
			• Quarterly soil-vapor sampling (April 2001)	• Soil vapor at north end of site, maximum TCE concentration of 46,000 ppb (v/v) at 115 ft bgs, low levels of other VOCs detected from 15 to 265 ft bgs. Soil vapor at south end of site, maximum TCE concentration of 250 ppb (v/v) at 96 ft bgs; low levels of other VOCs detected in soil vapor from 46 to 296 ft bgs	
			• Soil sampling to 3 ft bgs near acid waste line (April 2001)	• Most RCRA metals significantly above background; total PCBs at 50 mg/L, TCE at 2 µg/L, low levels of other VOCs and SVOCs detected; radionuclides within background	
			• Backhoe trenching	• Outfall ends of acid waste line identified	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Initial Regulatory Acceptance Status (Reference)
46 (cont.)	Old Acid Waste Line Outfall	VOCs, SVOCs, TAL Metals, Nitrate, Chromium-VI, Cyanide, PCBs, Tritium, Gamma-Emitting Radionuclides	• Groundwater monitoring wells installed; soil samples collected to 295 ft bgs (2001)	• Shallow groundwater present near the north end of site at 300 ft bgs; metal concentrations in soil at background levels, no significant VOCs	NFA not accepted (NMED July 2005)
			• Quarterly groundwater sampling (July 2001)	• Nitrate detected in groundwater at 30.5 mg/L	
			• Soil-vapor (FLUTe) monitoring wells installed (2001)	• TCE detected in soil vapor	
			• Historical aerial photography review (2000)	• Three outfall ditches identified at end of acid waste line	
			• Soil-vapor survey (1999)	• Low levels of 17 COCs, including TCE, detected in VaporTec tubes	
			• Monitoring well installed; soil samples collected to 237 ft bgs; soil-vapor samples collected to 312 ft bgs (1998)	• Regional aquifer present at 500 ft bgs; metal concentrations in soil at background levels; 16 VOCs detected in soil vapor with TCE maximum of 10,000 ppb (v/v) at 137 ft bgs	
			• Soil sampling (1994)	• Samples incorrectly collected from surface-water ditch (error determined in 2000)	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
50	Old Centrifuge Site	HE, DU, Metals	• Surface-soil sampling (1999)	• Radionuclides within background	NFA accepted (NMED March 2000a)
			• Soil sampling (1994)	• No HE detected; all radionuclides and metals within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface-soil sampling (1989)	• No SVOCs, HE, PCBs, pesticides, herbicides; metals and radionuclides within background	
			• Surface UXO survey (1994)	• No UXO visible	
77	Oil Surface Impoundment	PCBs and VOCs	• Obtain NPDES compliance documents for the storm-water impoundment (1998)	• Impoundment already regulated; no releases known	NFA accepted (NMED October 1999)
			• Soil sampling (1994)	• No PCBs or VOCs detected	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Initial Regulatory Acceptance Status (Reference)
227	Building 904 Outfall (one of the two discharge points for TA-II SWMU 48)	VOCs, SVOCs, Metals, HE, Cyanide, Radionuclides	• Quarterly soil-vapor sampling (April 2001)	• TCE maximum of 4,900 ppb (v/v)	NFA accepted (NMED June 2004)
			• Excavate trench at outfall point; soil sampling to 19 ft bgs at trench and to 3 ft bgs on floodplain (2001)	• Background levels of metals and radionuclides in soil; few "J" values for VOCs and SVOCs; no detected HE or cyanide	
			• Historical aerial photography review (2001)	• Waste-water discharge point identified	
			• Installation of FLUTe soil-vapor monitoring well with soil-vapor ports to 225 ft bgs; soil samples collected to 200 ft bgs (2001)	• April 2001 concentrations of TCE in soil vapor ranged from 40 ppb (v/v) at 25 ft bgs, to 4,900 ppb (v/v) at 225 ft bgs, toluene concentrations ranged from 2.1 ppb (v/v) at 25 ft bgs to 13 ppb (v/v) at 125 ft bgs; metal concentrations in soil at background levels, no significant VOCs	
			• Soil-vapor survey (1995)	• No VOCs or SVOCs detected in Petrex tubes	
			• Soil sampling to 3 ft bgs (1994)	• No VOCs, SVOCs, HE, or cyanide detected; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994) • Soil-vapor survey (1993)	• No UXO visible • No VOCs or SVOCs detected in Petrex tubes	
228	Centrifuge Dump Site	228A: DU, Metals, HE, VOCs, SVOCs	• Confirmatory soil sampling (1998–1999)	• No HE detected; low levels of VOCs and SVOCs detected; metals and radionuclides within background	228A: NFA accepted (NMED March 2000b)
			• Confirmatory geophysical surveys (1998–1999)	• No anomalies identified	
			• VCM remediation (1998–1999)	• 1,800 cubic yards of soil excavated; DU fragments and debris segregated from soil	
			• Geophysical and radiation survey (1997)	• Identified buried debris and DU fragments	
			• Historical document research and aerial photography review (1997)	• Process knowledge acquired	
			• Soil-vapor survey (1997)	• No VOCs detected	
			• Surface-water survey (1997)	• Discovered gully erosion and scattered DU fragments on floodplain	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Initial Regulatory Acceptance Status (Reference)
228 (cont.)	Centrifuge Dump Site	228A: DU, Metals, HE, VOCs, SVOCs	• Surface radiation survey (1995)	• DU fragments identified in gully; gully partially excavated and 13 drums filled with DU fragments and DU-contaminated soil	228A: NFA accepted (NMED March 2000b)
			• Soil-vapor survey (1995)	• No VOCs detected in Petrex tubes	
			• Surface UXO survey (1994)	• No UXO visible	
		228B: Friable Asbestos	• Confirmatory soil sampling (2000)	• No friable asbestos detected	228B: NFA accepted (NMED March 2001)
			• Confirmatory geophysical surveys (1999–2000)	• No buried anomalies identified	
			• Housekeeping remediation (1999–2000)	• Entire site excavated; approximately 20,000 cubic yards of construction/demolition debris and soil hauled to KAFB landfill	
			• Geophysical and radiation surveys (1998)	• Buried debris identified; no radioactive anomalies found	
			• Sampling of construction/demolition debris (1998)	• Friable asbestos identified at one small area	
			• Trenching for utilities installation (1997 and 1998)	• No buried debris identified along perimeter of site	
			• Surface radiation surveys (1994 and 1995)	• One radioactive anomaly (a household electrical part) identified and removed from site	
			• Historical aerial photography review	• Dumping identified across 5 acres of site	
			• Surface UXO survey (1994)	• No UXO visible	
229	Storm Drain System Outfall (one of the two discharge points for TA-II SWMU 48)	VOCs, SVOCs, Metals, HE, Cyanide, Radionuclides	• Excavate trench at outfall point; soil sampling to 7 ft bgs at trench and to 5 ft bgs on floodplain (2001)	• Background levels of metals and radionuclides in soil; few "J" values for VOCs and SVOCs	NFA accepted (NMED June 2004)
			• Historical aerial photography review (2001) • Soil-vapor survey (1995)	• Waste-water discharge point identified • No VOCs or SVOCs detected in Petrex tubes	
			• Soil sampling to 3 ft bgs (1994)	• No VOCs, SVOCs, cyanide, HE, or TPH detected; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994) • Soil-vapor survey (1993)	• No UXO visible • No VOCs or SVOCs detected in Petrex tubes	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Initial Regulatory Acceptance Status (Reference)
230	Storm Drain System Outfall (from TA-IV)	VOCs, SVOCs, Metals	• Backhoe soil sampling to 5 ft bgs (2001)	• Risk assessment showed no significant risk	NFA accepted (NMED January 2004)
			• Soil sampling to 3 ft bgs (1994)	• No VOCs or SVOCs detected, TPH maximum of 120 mg/kg; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
231	Storm Drain System Outfall (from TA-IV)	VOCs, SVOCs, Metals	• Backhoe soil sampling to 5 ft bgs (2001)	• Risk assessment showed no significant risk	NFA accepted (NMED January 2004)
			• Soil sampling to 3 ft bgs (1994)	• No VOCs or SVOCs detected, TPH maximum of 130 mg/kg; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
232	Storm Drain System Outfall (from TA-IV)	232-1: VOCs, SVOCs, TPH, Metals	• Backhoe soil sampling to 10 ft bgs (2001)	• Risk assessment showed no significant risk	NFA accepted (NMED January 2004)
			• GeoProbe soil sampling to 10 ft bgs (1995)	• TPH concentrations up to 32 mg/L	
			• Soil sampling to 3 ft bgs (1994)	• No VOCs or SVOCs detected; metals and radionuclides within background; TPH concentrations up to 860 mg/L	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
		232-2: VOCs, SVOCs, TPH, Metals	• Backhoe soil sampling to 5 ft bgs (2001)	• Risk assessment showed no significant risk	
			• Confirmatory soil sampling to 10 ft bgs (1994)	• Maximum remaining TPH in soil was 32 mg/L; no stained soil present	
			• VCM excavation (1994)	• About 429 cubic yards of soil excavated and shipped off site; action level was 100 mg/L TPH	
			• Inspection of July 1994 mineral oil spill (1994)	• Oil-stained soil extended about 50 ft from outfall	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	

Refer to footnotes at end of table.

Table 2.4.2-1 (Concluded)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Initial Regulatory Acceptance Status (Reference)
233	Storm Drain System Outfall (from TA-IV)	VOC, SVOC, Metals	• Backhoe soil sampling to 5 ft bgs	• Risk assessment showed no significant risk	NFA accepted (NMED November 2005)
			• Soil sampling to 3 ft bgs	• No VOCs or SVOCs detected; TPH maximum of 140 mg/kg; all radionuclides, metals, and nitrate within background and/or below risk criteria	
			• Surface radiation survey	• No elevated radiation	
			• Surface UXO survey	• No UXO visible	
234	Storm Drain System Outfall (from TA-IV)	VOCs, SVOCs, Metals	• Excavate trench at suspected outfall; soil sampling with backhoe to 5 ft bgs	• Risk assessment showed no significant risk	NFA accepted (NMED November 2005)
			• Soil sampling to 3 ft bgs	• No VOCs, SVOCs, or TPH detected; all radionuclides, metals, and nitrate within background and/or below risk criteria	
			• Surface radiation survey	• No elevated radiation	
			• Surface UXO survey	• No UXO visible	
235	Storm Drain System Outfall (from TA-I and KAFB)	VOCs, SVOCs, Metals	• Soil sampling to 3 ft bgs (1994)	• No VOCs, SVOCs, or TPH detected; all radionuclides, metals, and nitrate within background	NFA accepted (NMED June 2000)
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	

bgs = Below ground surface.
COC = Constituent of concern.
DU = Depleted uranium.
FLUTe = Flexible Liner Underground Technology, Ltd.
ft = Foot (feet).
HE = High explosive(s).
J = Estimated quantity.
KAFB = Kirtland Air Force Base.
MEK = Methyl ethyl ketone.
µg/L = Microgram(s) per liter.
mg/kg = Milligram(s) per kilogram.
mg/L = Milligrams per liter.
NFA = No Further Action.
NMED = New Mexico Environment Department.
NPDES = National Pollution Discharge Elimination System.
PCB = Polychlorinated biphenyl.
ppb (v/v) = Parts per billion by volume.
RCRA = Resource Conservation and Recovery Act.
SNL/NM = Sandia National Laboratories/New Mexico.
SVOC = Semivolatile organic compound.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TCE = Trichloroethene.
TPH = Total petroleum hydrocarbon(s).
UXO = Unexploded ordnance.
VCM = Voluntary Corrective Measure.
VOC = Volatile organic compound

Table 2.4.2-1 References

New Mexico Environment Department (NMED), October 1999. "Notice of Deficiency: SNL/DOE Responses to NMED Notice of Deficiency Regarding Proposals for No Further Action, Environmental Restoration Project, June 1995, Round 2 NFA's," New Mexico Environment Department, Santa Fe, New Mexico. October 13, 1999.

New Mexico Environment Department (NMED), March 2000a. "DOE/SNL Responses to Notice of Deficiency for Proposals for No Further Action, Environmental Restoration Project, June 1995, SWMU's 7, 50, and 235 (2nd Round NFA's)," New Mexico Environment Department, Santa Fe, New Mexico. March 27, 2000.

New Mexico Environment Department (NMED), March 2000b. "RE: DOE/SNL Proposals for No Further Action, Environmental Restoration Project, SWMU's 16, 228A, 65A, 65B, 65C, and 94E; September 1999, 13th Round," New Mexico Environment Department, Santa Fe, New Mexico. March 23, 2000.

New Mexico Environment Department (NMED), June 2000. "RE: Intent to Approve: Requested Class III Modification to Approve No Further Action Status for 34 Solid Waste Management Units, Sandia National Laboratories, EPA ID# NM 5890110518-1, HRMB-SNL-00-003," New Mexico Environment Department, Santa Fe, New Mexico. June 27, 2000.

New Mexico Environment Department (NMED), March 2001. "RE: Proposals for No Further Action: Environmental Restoration Project SWMUs 94C, 94G, and 228B, Submittal Dated March 2001, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-01-002," New Mexico Environment Department, Santa Fe, New Mexico. March 30, 2001.

New Mexico Environment Department (NMED), January 2004. "RE: Responses to NMED Notices of Deficiency for Solid Waste Management Units 230, 231, 232, 233, and 234 No Further Action Proposals Dated June 1995 (2nd Round) and August 1997 (8th Round), December 2002 HWB-SNL-04-002; Supplemental Risk Document Supporting Class 3 Modification Process, October 2003, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-03-024," New Mexico Environment Department, Santa Fe, New Mexico. January 23, 2004.

New Mexico Environment Department (NMED), June 2004. "RE: Environmental Restoration Project Response to NMED Notice of Deficiency for SWMUs 227 and 229 Proposals for No Further Action (2nd Round), Dated June 1995, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-99-006," New Mexico Environment Department, Santa Fe, New Mexico. June 25, 2004.

Table 2.4.2-1 References (Concluded)

New Mexico Environment Department (NMED), March 2005. "RE: Certificate of Completion and Request for Supplemental Information: Environmental Restoration Project Supplemental and No Further Action Information for Various Solid Waste Management Units (SWMUs 1, 78, 196, 45 and 46); October 2004, Sandia National Laboratories, EPA ID#NM5890110518, HWB-SNL-99-006, 99-021, and 99-01," New Mexico Environment Department, Santa Fe, New Mexico. March 2, 2005.

New Mexico Environment Department (NMED), July 2005. "RE: Request for Supplemental Information and Certificates of Completion: Environmental Restoration Project Supplemental and No Further Action Information for Various Solid Waste Management Units (SWMUs 1, 78, 196, 45 and 46); October 2004, Sandia National Laboratories, EPA ID#NM5890110518, HWB-SNL-99-006, 99-021, and 99-01," New Mexico Environment Department, Santa Fe, New Mexico. July 19, 2005.

New Mexico Environment Department (NMED), November 2005. "RE: Notice of Approval: SWMUs 52, 233 and 234, Notice of Disapproval: SWMUs 4 and 5, Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-99-006 and 99-020," New Mexico Environment Department, Santa Fe, New Mexico. November 2, 2005.

Appendix H

Documentation in Support of Notice of Disapproval Comment 8:

- Replacement Page for 2-9

consisted of research facilities, storage yards, warehouses, office trailers, and shipping facilities. Since 1999, most of the structures in TA-II have been removed and operations moved elsewhere, including the Explosive Components Facility, which began operations in 1995.

2.2.2 Previous Investigations

Fourteen SWMUs are located in TA-II. Table 2.2.2-1 summarizes the COCs, investigations, and regulatory status for each TA-II site. The NMED has accepted NFA proposals for all 14 sites.

Several phases of excavation work have been conducted at TA-II as part of voluntary corrective measures. The Radioactive Waste Landfill (SWMU 1, which now includes SWMU 3, the Chemical Disposal Pit [TA-II]) and the Classified Waste Landfill (SWMU 2) have been fully excavated and the landfill contents removed; the excavation work confirmed that neither landfill had been used for the disposal of liquids. Excavation work also has been conducted at all of the ER septic systems to confirm the locations of distribution boxes and leachfields (Galloway 2001a, 2001b).

Past SNL/NM testing and/or disposal activities involving HE material suspected of releasing nitrate to the environment in the TAG study area are identified in Table 2.6-2. However, due to the lack of HE compounds found in soil samples taken from TA-II SWMUs, the potential for HE to degrade to nitrate in this area is low. All TA-II sites that were sampled for HE compounds have been approved for NFA status (Table 2.2.2-1).

Comprehensive soil sampling results indicate that the TA-II SWMU sites pose little or no additional risk to groundwater. This is demonstrated by the fact that COCs in the soil in this area are at or below background and/or acceptable risk-based levels (Table 2.2.2-1).

The following seven TA-II sites are associated with significant volumes of waste water and/or septic water that may have reached groundwater:

- SWMU 48, Building 904 Septic System
- SWMU 135, Building 906 Septic System
- SWMU 136, Building 907 Septic System
- SWMU 159, Building 935 Septic System
- SWMU 165, Building 901 Septic System
- SWMU 166, Building 919 Septic System
- SWMU 167, Building 940 Septic System

The analytical results for groundwater and soil-vapor samples are summarized in Table 2.2.2-1, and groundwater results are discussed in more detail in Chapter 4.0. Groundwater sampling has been conducted on a quarterly basis at seven monitoring wells in the vicinity of TA-II. Soil-vapor samples also have been collected quarterly at SWMU 136 (the Building 907 Septic System) and SWMU 48 (the Building 904 Septic System) from vapor wells TA2-VW-20 and TA2-VW-21, respectively. SWMUs 48 and 136 were uniquely designed to handle more waste water than the other TA-II septic systems. Instead of just being connected to buried disposal components (leachfields, seepage pits, and/or dry wells), these two SWMUs also discharged into open ditches. The disposal ditches were used only for the disposal of waste water, not septic water, because of the obvious odor and health problems inherent in exposure to septic waste.

Appendix I

Documentation in Support of Notice of Disapproval Comments 9, 11, 12, and 13:

- Replacement Page for 2-24 (Revised Table 2.6-1)

Table 2.6-1
Summary of Field Investigations Conducted at SNL/NM SWMUs and AOCs in the TAG Study Area[a]

SWMU/AOC Number	SWMU/AOC Name	Potential Contaminants												Field Investigation																Potential Source Criteria			Potential Source of TCE or Nitrate	Type of Potential source relevant to groundwater
														Survey						Sampling					Remediation		Monitoring Well							
		Volatile organic compounds	Semivolatile organic compounds	Total petroleum hydrocarbons	Polychlorinated biphenyls	High explosives	Metals	Radionuclides	Cyanide	Acids/Bases	Herbicides/Pesticides	Asbestos	Nitrate	Geophysical—ground surface	Organic-vapor—breathing zone	Pipeline camera—buried piping	Radiation survey—ground surface	Trench—below grade	Unexploded ordnance—ground surface	Groundwater	Sediment (from buried piping)	Soil (maximum depth in feet)	Soil vapor	Storm water	Bio-venting wells	Excavation and removal of debris and/or contaminated soil	Soil vapor	Shallow groundwater	Regional aquifer	NFA proposal approved	Soil above background[b]	Significant water volume		
1	Radioactive Waste Landfill (includes SWMU 3, Chemical Disposal Pit)	•	•				•	•						•	•		•					11	•			•				Yes	Yes	No	No	
2	Classified Waste Landfill	•	•		•	•	•	•						•	•		•					100	•			•				Yes	Yes	No	No	
30	Reclamation Yard			•	•		•															5				•				Yes	No	No	No	
32	Steam Plant Oil Spill			•																		107								Yes	No	No	No	
33	Motor Pool	•	•	•			•															30								Yes	No	No	No	
41	Building 838 Mercury Release						•															3								Yes	No	No	No	
42	Building 870 Water Treatment Facility	•	•				•			•												30								Yes	No	No	No	
43	Radioactive Material Storage Yard						•	•									•					3								Yes	No	No	No	
44A	Uranium Calibration Pits						•	•							•		•					8				•				Yes	No	No	No	
44B	Decontamination Areas						•	•						•	•		•			•		3	•							Yes	Yes	No	No	
45	Liquid Discharge	•	•				•							•			•	•	•			14	•							Yes	No	No	No	
46	Old Acid Waste Line Outfall	•	•		•		•	•	•				•				•	•	•	•		295	•				•	•	•	No	Yes	Yes	Yes	TCE, Nitrate
48	Building 904 Septic System	•	•			•	•	•	•				•		•		•	•		•		50	•				•	•	•	Yes	No	Yes	Yes	TCE, Nitrate
50	Old Centrifuge Site					•	•	•									•		•			3								Yes	No	No	No	
77	Oil Surface Impoundment	•			•																	3								Yes	No	No	No	
96	Storm Drain System	•	•	•	•		•	•		•						•		•		•		17		•						Yes	No	Yes	No	
98	Building 863 Trichloroethane and Photochemical Releases	•					•			•												140	•							Yes	No	No	No	
113	Area II Firing Sites	•	•			•	•							•			•					2	•							Yes	No	No	No	
114	Explosive Burn Pit	•				•	•											•				12	•			•				Yes	No	No	No	
135	Building 906 Septic System	•	•		•	•	•	•			•			•			•	•		•		52	•							Yes	No	Yes	No	TCE
136	Building 907 Septic System	•	•			•	•	•	•				•		•		•	•		•		50	•				•	•	•	Yes	No	Yes	Yes	TCE, Nitrate
159	Building 935 Septic System	•	•		•	•	•	•					•					•		•		150	•							Yes	No	Yes	No	TCE, Nitrate
165	Building 901 Septic System	•	•			•	•	•	•				•					•		•		300	•					•	•	Yes	No	Yes	Yes	TCE, Nitrate
166	Building 919 Septic System	•	•			•	•	•					•					•		•		50	•					•	•	Yes	No	Yes	Yes	TCE, Nitrate
167	Building 940 Septic System	•	•			•	•						•					•		•		50	•							Yes	No	Yes	No	TCE, Nitrate
186	Building 859 TCE Disposal	•																				30	•							Yes	No	No	No	
187	TA-I Sanitary Sewer System	•	•		•		•	•					•			•				•		17						•	•	Yes	No	Yes	Yes	TCE, Nitrate
190	Steam Plant Tank Farm	•	•	•																•		120	•		•			•	•	No	Yes	No	No	
192	TA-I Waste Oil Tank	•	•	•	•		•															30								Yes	No	No	No	
211	Building 840 Former Underground Storage Tank 840-1	•	•	•	•		•											•				30								Yes	No	No	No	
226	Old Acid Waste Line	•	•		•		•	•	•				•			•				•	•	17						•	•	Yes	No	Yes	No	Nitrate
227	Building 904 Outfall (discharge point for TA-II SWMU 48)	•	•			•	•	•	•								•	•	•	•		200	•				•	•	•	Yes	No	Yes	Yes	TCE
228	Centrifuge Dump Site (consists of SWMUs 228A and 228B)	•	•			•	•	•				•		•			•	•	•	•		3	•			•				Yes	No	No	No	
229	Storm Drain System Outfall (discharge point for TA-II SWMU 48)	•	•			•	•	•	•								•	•	•	•		7	•					•	•	Yes	No	Yes	Yes	TCE
230	Storm Drain System Outfall (from TA-IV)	•	•				•										•		•			5								Yes	No	No	No	
231	Storm Drain System Outfall (from TA-IV)	•	•				•										•		•			5								Yes	No	No	No	
232	Storm Drain System Outfall (consists of SWMUs 232-1 and 232-2)	•	•	•			•										•		•			10				•				Yes	No	No	No	
233	Storm Drain System Outfall (from TA-IV)	•	•				•										•		•			5								Yes	I	No	No	
234	Storm Drain System Outfall (from TA-IV)	•	•				•										•	•	•			5								Yes	I	No	No	
235	Storm Drain System Outfall (from TA-I and Kirtland Air Force Base)	•	•				•										•		•			3								Yes	No	No	No	
276	Former Building 829X Silver Recovery Sump	•	•		•	•	•	•	•													13	•			•				Yes	Yes	No	No	
1001	Building 898 Septic System (TA-I) (DSS Site 1001)	•	•		•	•	•	•	•									•			•	10	•							Yes	No	No	No	

Refer to footnotes at end of table.

Appendix J

Documentation in Support of Notice of Disapproval Comments 10, 12, 13:

- Replacement Page for 2-26

submitted to the NMED with the appropriate Notice of Deficiency/Request for Supplemental Information responses. NFA proposals for two sites are currently awaiting NMED approval.

The third criterion addresses the volume of water (waste, septic, or storm) associated with each site. The water volume was assumed to be useful because the vadose zone beneath the TAG study area varies in thickness from approximately 250 to 300 ft. Waste-water outfalls and sewer-line systems are considered to be significant because of multi-year operations that potentially involved millions of gallons of water. In contrast, a small volume of water, such as the one-time discharge of a dust-suppression water tanker at SWMU 45, is not considered to be significant. Storm water from parking lots is considered insignificant because of the desert climate at SNL/NM.

As a conservative measure, each of the TA-II septic systems is assumed to have discharged a significant volume of water. As shown in Table 2.6-2, the TA-II septic systems were used from the late 1940s until the early 1990s. The systems were connected to Buildings 901/902, 904, 906, 907, 919, 935, and 940. Each TA-II septic system is unique with respect to its construction details. The systems were constructed of one or more buried, effluent-disposal components consisting of leachfields, seepage pits, and/or dry wells (Table 2.6-2).

The TAG study area contains the following types of potential sources of groundwater contamination from SNL/NM SWMUs:

- Leachfields/seepage pits/dry wells at seven SNL/NM SWMUs (48, 135, 136, 159, 165, 166, 167)
- Waste-water disposal ditches at four SNL/NM SWMUs (46, 136, 227, 229)
- A storm-water channel/culvert system (SWMU 96)
- A sanitary sewer-line system (SWMU 187)
- An acid waste line (SWMU 226)

Table 2.6-2 lists each potential source of TCE and/or nitrate as well as the type of water, years of operation, and relevant comments.

Thirteen of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential sources of groundwater contamination involving TCE. TA-I contains three sites (SWMUs 96, 187, and 226). TA-II contains seven sites (SWMUs 48, 135, 136, 159, 165, 166, and 167). Three sites (SWMUs 46, 227, and 229) managed by the TJAOU also are categorized as potential TCE sources.

Nine of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential nitrate sources resulting from septic water. TA-I contains one site (SWMU 187) as a potential nitrate source. TA-II contains six potential nitrate sources (SWMUs 48, 136, 159, 165, 166, and 167). The disposal of TA-I waste water containing nitrate at the Acid Waste Line Outfall (SWMU 46) is considered likely. The disposal of septic waste into open ditches was unlikely to have occurred because of obvious odor and health issues. However, during utility construction at TA-I, inadvertent cross-connects at various sewer lines were discovered. Such cross-connects to the Acid Waste Line (SWMU 226) have not been documented, but may have

Appendix K

Documentation in Support of Notice of Disapproval Comment 14:

- Replacement Page for 2-27 (Revised Table 2.6.2)

Table 2.6-2
Concern Level for Potential Sources of TCE and Nitrate in the TAG Study Area

Potential Source	TCE Concern	Nitrate Concern	Years of Use	Type of Water	Summary of Process Knowledge
SNL/NM SWMU 46, Old Acid Waste Line Outfall	**High**	**High**	1948–1974	TA-I waste water and possibly septic water	Estimated 1.3 billion gallons of waste water from six TA-I research/office buildings (839, 840, 841, 860, 863, 892) discharged into the three outfall ditches at south end of SWMU 226. Possible TCE in waste water. Septic water from possible cross-connects between the SWMU 226 waste line and sewer lines may have discharged at SWMU 46. In 2000, two soil-vapor monitoring wells installed at SWMU 46; soil-vapor sampling conducted quarterly. Well 46-VW-01 located near waste-line outfall; sampling ports set at 50-ft intervals from 15 to 265 ft bgs; maximum TCE concentration to date of 46,000 ppb (v/v) from 115 ft bgs in March 2002. Well 46-VW-02 located 900 ft farther southeast with sampling ports set at 50-ft intervals from 46 to 296 ft bgs; maximum TCE concentration to date of 650 ppb (v/v) from 96 ft bgs in December 2002.
SNL/NM SWMU 48, Building 904 Septic System	Medium	Medium	1947–1992	TA-II septic and waste water	Two systems connected to large research/office Building 904. First system (leachfield/seepage pit) discharged septic water near center of TA-II. Second system (pair of outfall ditches at SWMUs 227 and 229) discharged waste water outside the southern apex of TA-II. Possible TCE and HE in waste water. Soil samples collected along the SWMU 48 piping contain no significant contamination. In 1997, soil-vapor monitoring well TA2-VW-21 installed near SWMU 48 piping with sampling ports set at 50 and 92 ft bgs. Soil-vapor sampling conducted quarterly with maximum TCE concentration to date of 1,500 ppb (v/v) at 92 ft bgs in December 2002).
SNL/NM SWMU 96, Storm Drain System	Low	None	1948–Present	TA-I storm water	Storm-water channels and culverts extend across TA-I. No significant contamination detected in soil samples.
SNL/NM SWMU 135, Building 906 Septic System	Low	None	1950–1992	TA-II waste water	Leachfield (dry well previously) connected to small research Building 906. No significant contamination detected in soil samples.
SNL/NM SWMU 136, Building 907 Septic System	Medium	Medium	1948–1992	TA-II septic and waste water	Two systems connected to large research/office Building 907. First system (leachfield/seepage pit) discharged septic water west of Building 907. Second system (ditch in center of TA-II) discharged waste water which possibly contained TCE and HE. In 1997, soil-vapor monitoring well TA2-VW-20 installed near ditch with sampling port set at 72 ft bgs. Soil-vapor sampling conducted quarterly with maximum TCE concentration to date of 47 ppb (v/v) in March 2002.
SNL/NM SWMU 159, Building 935 Septic System	Low	Low	1963–1991	TA-II waste and septic water	Dry wells and seepage pit connected to small research/office Building 935. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
SNL/NM SWMU 165, Building 901 Septic System	**High**	**High**	1948–1992	TA-II septic and waste water	Leachfield connected to personnel shower/laundry facility (Building 901) and small research/machine shop Building 902. Possible TCE and HE in waste water. No significant contamination detected in soil samples. Groundwater samples from perched system monitoring well TA2-SW1-320 have contained maximum nitrate concentrations of 25 mg/L in October 2004, and TCE has not been detected in the well.
SNL/NM SWMU 166, Building 919 Septic System	Low	Medium	1969–1990	TA-II waste and septic water	Leachfield, seepage pit, and dry well connected to large office/research Building 919. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
SNL/NM SWMU 167, Building 940 Septic System	Low	Low	1965–1990	TA-II waste and septic water	Seepage pits connected to small research/office Building 940. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
SNL/NM SWMU 187, TA-I Sanitary Sewer System	Low	**High**	1948–Present	TA-I septic and waste water	Possibly leaking sewer lines and several cross-connects with waste-water lines. System connected to numerous research/office buildings in TA-I. No significant contamination detected in soil samples.
SNL/NM SWMU 226, Old Acid Waste Line Outfall	Low	Low	1948–1974	TA-I waste water	Waste-water line from six TA-I research/office buildings discharged at the three SWMU 46 outfall ditches. No significant contamination detected in soil samples collected along the SWMU 226 piping.
SNL/NM SWMU 227, Bunker 904 Outfall	Medium	None	1947–1992	TA-II waste water	Waste water from SWMU 48 discharged into outfall ditch at SWMU 227. Possible TCE and HE in waste water. No significant contamination detected in soil samples. In 2000, soil-vapor monitoring well 227-VW-01 installed with sampling ports set at 50-ft intervals from 25 to 225 ft bgs. Soil-vapor sampling conducted quarterly with maximum TCE concentration to date of 14,000 ppb (v/v) at 225 ft bgs in March 2002.
SNL/NM SWMU 229, Storm Drain System Outfall (Building 904 Outfall)	Medium	None	1947–1992	TA-II waste water	Waste water from SWMU 48 discharged into outfall ditch at SWMU 229. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
KAFB Landfill LF-02	Low	Medium	1945–1967	Storm water	Industrial and residential waste, landscape debris; unlined landfill covers 50 acres (KAFB 2000a). Estimated debris volume is 1,000,000 cubic yards. No drums found in test pits dug in 2000.
KAFB Landfill LF-08	Low	Medium	1960–1989	Storm water	Industrial and residential waste, landscape debris, possible buried drums; unlined landfill covers 30 acres; Estimated debris volume is 600,000 cubic yards (KAFB 2000a). No drums found in test pits dug in 2000. TCE detected in soil vapor up to 1,100 ppb (v/v) in April 2000, but modeling indicates that TCE will not reach groundwater.
KAFB Landfill LF-44	None	Medium	1979–1988	Storm water	Landscape debris; unlined landfill covers 2 acres; debris volume is not known. Most debris removed in 1992 and 1993 (KAFB 2000a).
KAFB Landfill LF-268	None	Medium	1989–Present	Storm water	Construction/demolition debris, landscape debris; landfill covers 45 acres; debris volume is not known (KAFB 2000a).
KAFB Sewage Lagoons	**High**	**High**	1966–1987	KAFB and TA-I septic and waste water	Most of the estimated 7.3 billion gallons of water discharged at the two lagoons, the remainder piped to the golf-course pond (Montgomery Watson August 2000). TCE detected in 1987 sewage lagoon water samples.
KAFB Golf Course Main Pond	**High**	**High**	1966–1987	KAFB and TA-I septic and waste water	Lagoon (septic) water piped to pond, and used for turf irrigation (Montgomery Watson August 2000). Unknown amount of water may have leaked through pond liner. TCE detected in 1987 pond-water samples. Pond refurbished in 1998 and currently used for storing turf-irrigation water pumped from extraction well.
KAFB Sanitary Sewer Lines	Low	**High**	1940s–Present	KAFB septic water	Leaking sewers lines may be ongoing problem across KAFB.
KAFB Septic Tank Systems	Low	Medium	1940s–Present	Septic water	Approximately 30 septic-tank systems located in study area.
KAFB Manzano Training Area (Base) Blasting	None	Medium	1950s	Storm water	Dynamite blasting associated with construction of storage bunkers may have left residual explosive material that has degraded to nitrate.
COA Eubank Landfill – Northeast Fill Area	**High**	**High**	1974?–1984	Storm and septic water	Residential and industrial waste dumped in unlined landfill (Nelson June 1997). Landfill covers 27 acres, waste depth of 30 to 40 ft. Estimated debris volume is 1,000,000 cubic yards. Residential sewage lagoons installed nearby and used for disposal of septic water from mobile home park, some sewer lines cross the landfill (CH2M Hill April 1996). September 2001 soil-vapor samples contained PCE at 1,100 ppb (v/v) and TCE at 620 ppb (v/v) (DBS&A, April 2002). Maximum soil-vapor sampling depth of 10 ft bgs.
COA Eubank Landfill – Southwest Fill Area	**High**	Medium	Early 1960s–1973?	Storm water	Residential and industrial waste dumped in unlined landfill (Nelson June 1997). Landfill covers 60 acres; maximum waste depth of 36 to 40 ft. Volume of debris is unknown. September 2001 soil-vapor samples contained PCE at 7,100 ppb (v/v) and TCE at 2,000 ppb (v/v) (DBS&A April 2002). Ongoing uncontrolled dumping of household waste, landscape debris, and vehicles.
COA Sanitary-Sewer Line Rupture / Temporary Sewage Pond	Low	**High**	1994	COA septic water	100 million gallons spilled. Unknown volume of septic water recovered from temporary pond on floodplain (Montgomery Watson August 2000).
COA Sanitary Sewer Lines	Low	**High**	1940s–Present	COA septic water	Leaking sewer lines may be ongoing problem on KAFB.
COA Montessa Park/Tree Nursery	None	**High**	1950s–Present	Septic water/ Irrigation water	Sewage lagoon used at Montessa Park Correctional Facility. Irrigation ponds and fertilizer used at tree nursery operated by U.S. Department of Agriculture from approximately 1959 until mid-1990s.

bgs = Below ground surface.
COA = City of Albuquerque.
ft = Foot (feet).
HE = High explosive(s).
KAFB = Kirtland Air Force Base.
mg/L = Milligram(s) per liter.
PCE = Tetrachloroethene).
ppb (v/v) = Parts per billion by volume.
SNL/NM = Sandia National Laboratories/New Mexico.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

Appendix L

Documentation in Support of Notice of Disapproval Comment 16:

- Replacement Pages 2-41 and 2-42 (Revised Table 2.9.3-1)

Table 2.9.3-1
TAG TCE and Total VOC Analytical Results for Soil-Vapor Samples,
December 2004–January 2005

Sample Attributes				Results (EPA Method TO-14[a]) in ppb (v/v)		
Sample ID	Sample Date	Laboratory and Chain of Custody Number	Sample Depth (ft)	TCE	Total VOCs	TCE as a percent of Total VOCs (%)
TA2-VW-20-SV-72	1/3/2005	Severn Trent AR/COC 608032	72	15	93.9	16
TA2-VW-021-SV-50	1/3/2005		50	160	204.5	78
TA2-VW-021-SV-92	1/3/2005		92	260	279.8	93
46-VW-01-SV-015	12/30/2004	Severn Trent AR/COC 608033	15	960	985.6	97
46-VW-01-SV-065	12/30/2004		65	8,700	8,997	97
46-VW-01-SV-115	12/30/2004		115	30,000	31,160	96
46-VW-01-SV-165	12/30/2004		165	14,000	14,627	96
46-VW-01-SV-215	12/30/2004		215	1,200	1,241.7	97
46-VW-01-SV-265	12/30/2004		265	220	226.3	97
46-VW-02-SV-046	1/3/2005	Severn Trent AR/COC 608034	46	160	193.9	83
46-VW-02-SV-096	1/3/2005		96	360	376.8	96
46-VW-02-SV-146	1/3/2005		146	79	82.5	96
46-VW-02-SV-196	1/3/2005		196	240	243.4	99
46-VW-02-SV-246	1/3/2005		246	490	507.3	97
46-VW-02-SV-296	1/3/2005		296	5.2	12.9	40
227-VW-01-SV-025	1/3/2005	Severn Trent AR/COC 608035	25	14	15.3	92
227-VW-01-SV-075	1/3/2005		75	690	696.1	99
227-VW-01-SV-125	1/3/2005		125	2,900	2,908	100
227-VW-01-SV-175	1/3/2005		175	5,000	5,000	100
227-VW-01-SV-225	1/3/2005		225	9,000	9,000	100
227-VW-01-SV-275	1/3/2005		275	19	19.6	97
TAG-SV01-48	12/30/2004	Severn Trent AR/COC 608036	48	5	6.7	75
TAG-SV01-98	12/30/2004		98	15	21.1	71
TAG-SV01-148	12/30/2004		148	12	16.5	73
TAG-SV01-148-SD	12/30/2004		148	12	20.2	59
TAG-SV01-198	12/30/2004		198	22	27.1	81
TAG-SV01-248	12/30/2004		248	110	146.7	75

Refer to footnotes at end of table.

Table 2.9.3-1 (Concluded)
TAG TCE and Total VOC Analytical Results for Soil-Vapor Samples,
December 2004–January 2005

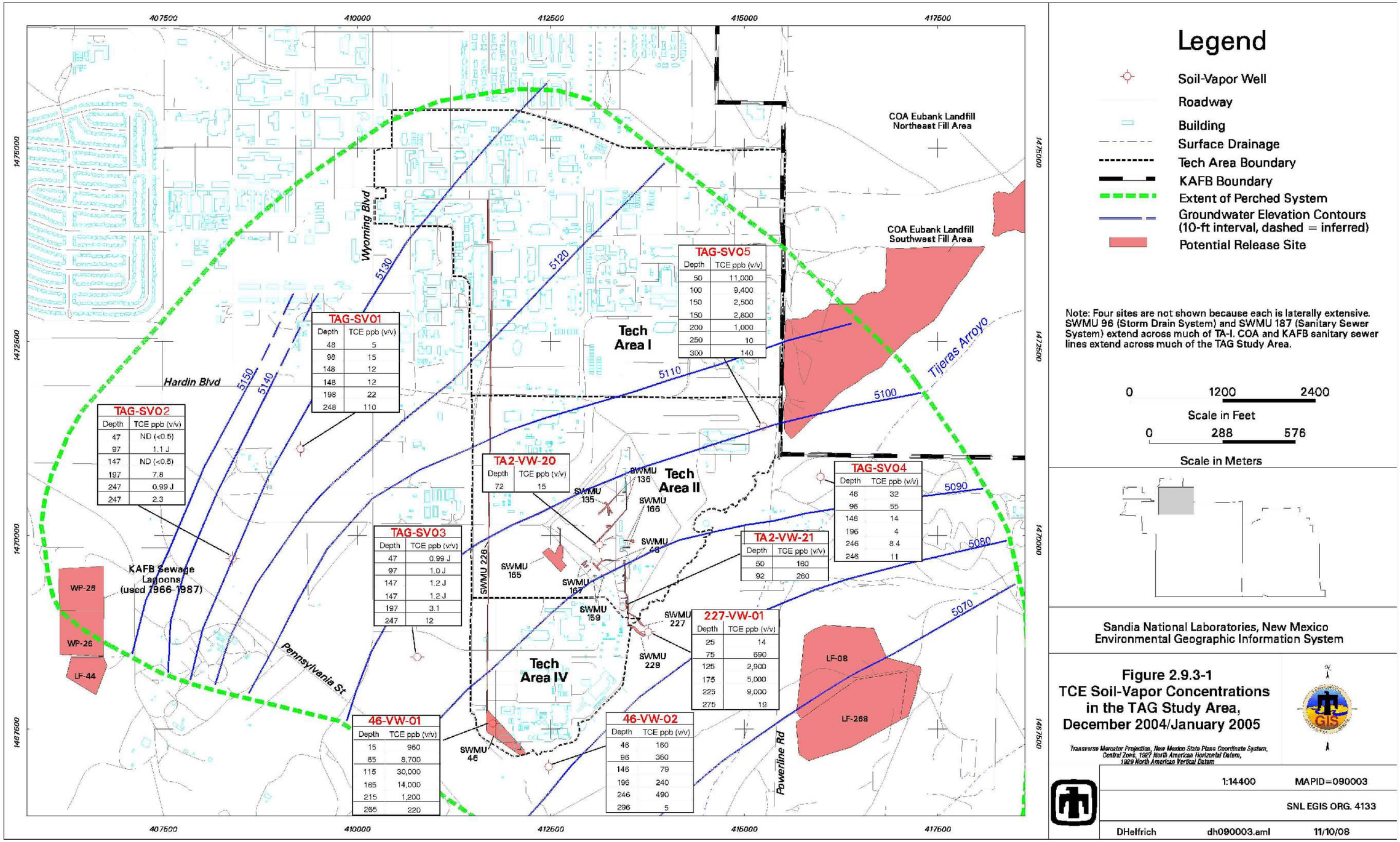
Sample Attributes				Results (EPA Method TO-14[a]) in ppb (v/v)		
Sample ID	Sample Date	Laboratory and Chain of Custody Number	Sample Depth (ft)	TCE	Total VOCs	TCE as a percent of Total VOCs (%)
TAG-SV02-47	12/29/2004	Severn Trent AR/COC 608037	47	ND (<0.5)	3.6	0
TAG-SV02-97	12/29/2004		97	1.1 J	5	22
TAG-SV02-147	12/29/2004		147	ND (<0.5)	0.6	0
TAG-SV02-197	12/29/2004		197	7.8	29.1	27
TAG-SV02-247	12/29/2004		247	0.99 J	10.2	10
TAG-SV02-247-SD	12/29/2004		247	2.3	95.9	2
TAG-SV03-47	12/29/2004	Severn Trent AR/COC 608038	47	0.99 J	9.7	10
TAG-SV03-97	12/29/2004		97	1.0 J	6.5	15
TAG-SV03-147	12/29/2004		147	1.2 J	53.4	2
TAG-SV03-147-SD	12/29/2004		147	1.2 J	7.7	16
TAG-SV03-197	12/29/2004		197	3.1	62.6	5
TAG-SV03-247	12/29/2004		247	12	24	50
TAG-SV04-46	12/28/2004	Severn Trent AR/COC 608039	46	32	705.8	4
TAG-SV04-96	12/28/2004		96	55	774.1	7
TAG-SV04-146	12/28/2004		146	14	259	5
TAG-SV04-196	12/28/2004		196	4.2	37	11
TAG-SV04-246	12/28/2004		246	8.4	151.1	6
TAG-SV04-246-SD	12/28/2004		246	11	182.7	6
TAG-SV05-50	12/28/2004	Severn Trent AR/COC 608040	50	11,000	44,225	25
TAG-SV05-100	12/28/2004		100	9,400	45,534	21
TAG-SV05-150	12/28/2004		150	2,500	15,410	16
TAG-SV05-150[b]	12/28/2004		150	2,800	16,962	16
TAG-SV05-200	12/28/2004		200	1,000	4,898	20
TAG-SV05-250	12/28/2004		250	10	24.4	41
TAG-SV05-300	12/28/2004		300	140	576.4	24

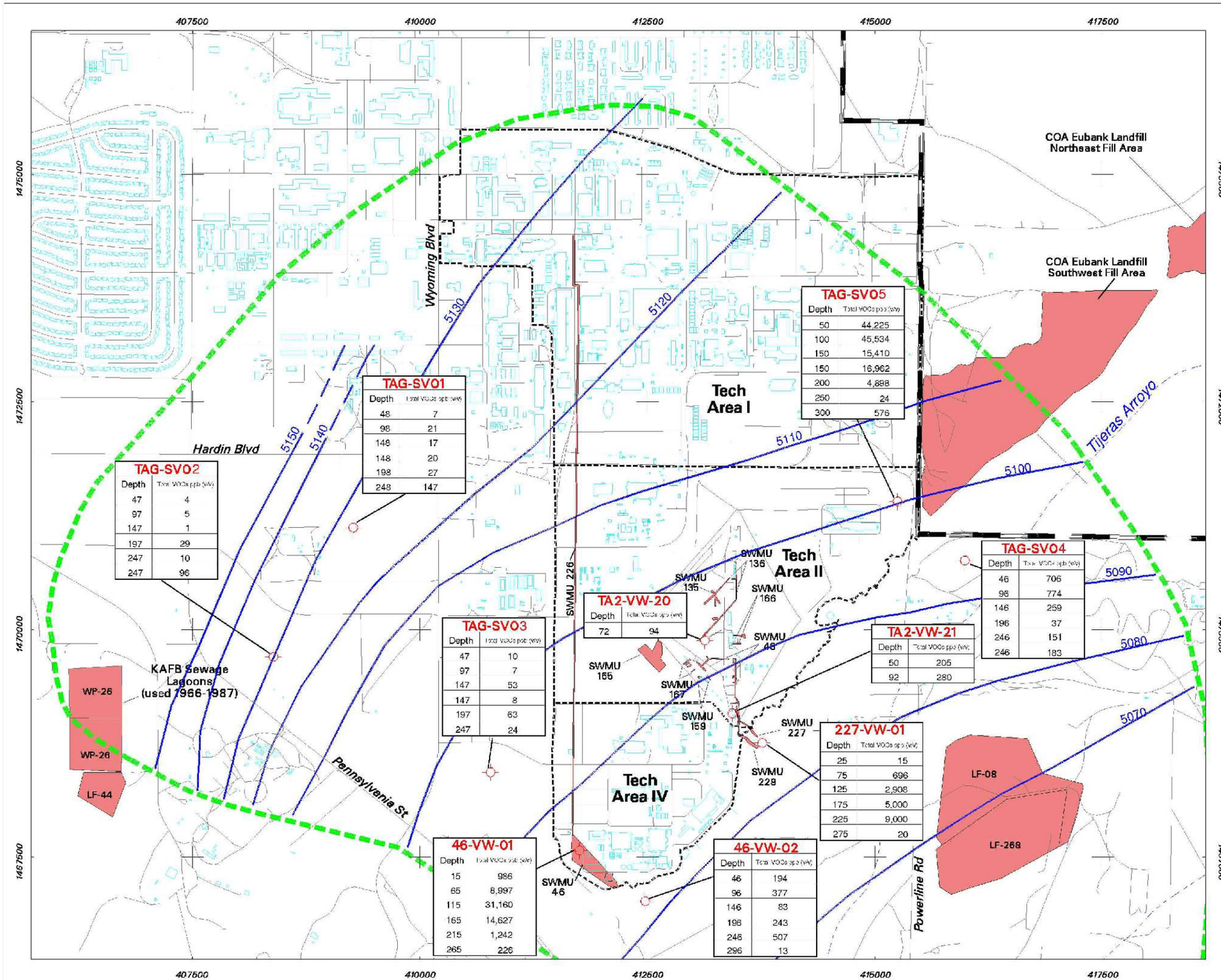
[a]EPA January 1999.
[b]Duplicate sample.
AR/COC = Analysis request/chain-of-custody.
EPA = U.S. Environmental Protection Agency.
ft = Foot (feet).
ID = Identification.
J = Estimated concentration.
MDL = Method detection limit.
ND ( ) = Not detected above the MDL, shown in parentheses.
ppb (v/v) = Part(s) per billion on a volume by volume basis.
SD = Sample duplicate.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.
VOC = Volatile organic compound.

Appendix M

Documentation in Support of Notice of Disapproval Comment 17:

- Replacement Page 2-43 (Revised Figure 2.9.3-1)
- Replacement Page 2-44 (Revised Figure 2.9.3-2)


407500
410000
412500
415000
417500
1476000
1475000
1472500
1470000
1467500
Legend
Soil-Vapor Well
Roadway
Building
Surface Drainage
Tech Area Boundary
KAFB Boundary
Extent of Perched System
Groundwater Elevation Contours (10-ft interval, dashed = inferred)
Potential Release Site
Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.
0 1200 2400
Scale in Feet
0 288 576
Scale in Meters
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure 2.9.3-1
TCE Soil-Vapor Concentrations in the TAG Study Area, December 2004/January 2005
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum
1:14400
MAPID=090003
SNL EGIS ORG. 4133
DHelfrich
dh090003.aml
11/10/08
COA Eubank Landfill Northeast Fill Area
COA Eubank Landfill Southwest Fill Area
Wyoming Blvd
Hardin Blvd
Tijeras Arroyo
Pennsylvania St
Powerline Rd
Tech Area I
Tech Area II
Tech Area IV
KAFB Sewage Lagoons (used 1966-1987)
WP-26
WP-26
LF-44
LF-08
LF-268
SWMU 136
SWMU 135
SWMU 166
SWMU 48
SWMU 165
SWMU 167
SWMU 159
SWMU 227
SWMU 229
SWMU 228
SWMU 46
5150
5140
5130
5120
5110
5100
5090
5080
5070
TAG-SV01
Depth TCE ppb (v/v)
48 5
98 15
148 12
148 12
198 22
248 110
TAG-SV02
Depth TCE ppb (v/v)
47 ND (<0.5)
97 1.1 J
147 ND (<0.5)
197 7.8
247 0.99 J
247 2.3
TAG-SV03
Depth TCE ppb (v/v)
47 0.99 J
97 1.0 J
147 1.2 J
147 1.2 J
197 3.1
247 12
TAG-SV04
Depth TCE ppb (v/v)
46 32
96 55
146 14
196 4
246 8.4
246 11
TAG-SV05
Depth TCE ppb (v/v)
50 11,000
100 9,400
150 2,500
150 2,800
200 1,000
250 10
300 140
TA2-VW-20
Depth TCE ppb (v/v)
72 15
TA2-VW-21
Depth TCE ppb (v/v)
50 160
92 260
227-VW-01
Depth TCE ppb (v/v)
25 14
75 690
125 2,900
175 5,000
225 9,000
275 19
46-VW-01
Depth TCE ppb (v/v)
15 960
65 8,700
115 30,000
165 14,000
215 1,200
265 220
46-VW-02
Depth TCE ppb (v/v)
46 160
96 360
146 79
196 240
246 490
296 5



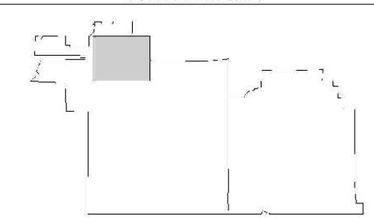
Legend

- Soil-Vapor Well
- Roadway
- Building
- Surface Drainage
- Tech Area Boundary
- KAFB Boundary
- Extent of Perched System
- Groundwater Elevation Contours (10-ft interval, dashed = inferred)
- Potential Release Site

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1200 2400
Scale in Feet

0 288 576
Scale in Meters



Sandia National Laboratories, New Mexico
Environmental Geographic Information System

Figure 2.9.3-2
Total VOC Soil-Vapor Concentrations in the TAG Study Area, December 2004/January 2005

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

1:14400 MAPID=090004

SNL EGIS ORG. 4133

DHelfrich dh090003.aml 11/10/08

Appendix N

Documentation in Support of Notice of Disapproval Comment 18:

- Replacement Pages 2-45 and 2-46 (Revised Table 2.9.5-1)

2.9.4 Contaminant Soil-Vapor Distribution

Based upon the SNL/NM soil-vapor investigation, the vertical and horizontal distribution of TCE and total VOCs most likely do not represent continuous vapor plumes in the vadose zone. Very low concentrations of VOCs are found at all locations with a varied suite of VOCs at levels mostly below 100 ppb (v/v). Only two of the vapor wells currently have concentrations exceeding 10,000 ppb (v/v) (Table 2.9.3-1). The 46-VW-01 vapor plume was first identified in 2001. The vertical distribution of soil vapor at this location shows VOCs increasing with depth to a maximum at 115 ft then dropping off drastically before reaching the perched system. The TAG-SV05 vapor plume was first identified in 2004; concentrations of VOCs in soil vapor are greater nearest the surface and decrease below 200 ft bgs.

2.9.5 Historical Trends at SNL/NM Soil-Vapor Wells

Soil-vapor samples have been collected since 1997 for the TA-II wells and since April 2002 for the Tijeras Arroyo wells. The recently installed TAG soil-vapor wells have been sampled only once and, therefore, are not discussed in this section. Different laboratories using different analytical methods analyzed the first few rounds of soil-vapor samples from the TA-II wells. The results from these early sampling events (July 1997 through May 1998) do not appear to be comparable with the more recent data. Therefore, the early data are not discussed.

From September 1998 to December 2000, all soil-vapor samples were analyzed by Quanterra/Severn Trent Laboratories using EPA Method TO-14, and starting in December 2000, by Method TO-14A (EPA January 1999). The TCE and total VOC results from these sampling events have been plotted as concentration-versus-time graphs for Figures A-1 through A-12 (Annex A). These graphs show that the TCE and total VOC concentrations in soil vapor for the most part exhibit a large amount of scatter. Trend lines are constructed on the graph using linear regression analysis (Table 2.9.5-1). Only two of the trend lines exhibit good correlation with the data, as demonstrated by R^2 coefficient values near one (for the 50-ft depth samples for TCE and total VOCs in well TA2-VW-21). The other graphs had R^2 coefficient values closer to zero, indicating a poor correlation to the data. These data sets were then tested for nonlinear correlation using a second order polynomial regression analysis. R^2 coefficient values did not improve significantly as no oscillations are prominent on these trend diagrams that would correlate with seasonal changes (or other periodicity) in soil-vapor mobility in the monitoring wells. With these low R^2 coefficient values, it is not reasonable to use the trend lines to project future data values for the majority of the wells presented in Table 2.9.5-1.

2.9.6 KAFB Soil-Vapor Investigations around the Former Sewage Lagoons

As part of the KAFB IRP, a multi-phase, soil-vapor investigation was completed in the vicinity of the former sewage lagoons (WP-26) from October through December 2004. The soil-vapor investigation is summarized in “Summary of Activities at Solid Waste Management Unit WP-26, Sewage Lagoons and Golf Course Main Pond, Kirtland Air Force Base, New Mexico” (MWH Americas, Inc. June 2005). The purpose of the project was to investigate the presence of TCE in the vadose zone and perched system beneath the former sewage lagoons. The results of the investigation further define the vertical and horizontal extent of TCE in soil vapor.

Table 2.9.5-1
Summary of Concentration Trends in Soil Vapor Over Time at
Select SNL/NM Vapor Wells (Annex A)

Vapor Well	Depth (ft)	Analyte	Annex A Figure	Trend	R^2
TA2-VW-20	72	TCE	A-1	Uncertain	0.0008
TA2-VW-20	72	Total VOCs	A-2	Uncertain	0.2139
TA2-VW-21	50	TCE	A-3	Decreasing	0.8755
TA2-VW-21	50	Total VOCs	A-4	Decreasing	0.8599
TA2-VW-21	92	TCE	A-5	Uncertain	0.2104
TA2-VW-21	92	Total VOCs	A-6	Uncertain	0.2483
46-VW-01	115	TCE	A-7	Uncertain	0.3063
46-VW-01	115	Total VOCs	A-8	Uncertain	0.3265
46-VW-02	46	TCE	A-9	Uncertain	0.0438
46-VW-02	46	Total VOCs	A-10	Uncertain	0.0254
227-VW-01	225	TCE	A-11	Uncertain	0.0454
227-VW-01	225	Total VOCs	A-12	Uncertain	0.0449

ft = Foot (feet).
SNL/NM = Sandia National Laboratories/New Mexico.
TCE = Trichloroethene.
VOC = Volatile organic compound.

The first phase of the investigation consisted of 17 direct-push technology (DPT) locations sampled at 25-ft depth intervals to a maximum depth of 125 ft. The second phase of the investigation consisted of installation and sampling of two FLUTe™ soil-vapor monitoring wells. The depths of the FLUTe™ sampling ports were based upon the results of field instrument readings and range from approximately 30- to 60-ft intervals relative to one another. Subsurface soil and perched groundwater were also investigated (MWH Americas, Inc. June 2005); however, these results are not discussed in this report.

Soil-vapor samples from DPT and FLUTe™ locations were collected in SUMMA® canisters and analyzed for VOCs by EPA Method TO-15 (EPA January 1999). Twenty VOCs, including the primary COC TCE, were positively identified in DPT soil-gas samples from the vicinity of the former sewage lagoons at concentrations greater than the reporting limit. TCE was detected at all but one DPT location at concentration levels up to 110 ppb (v/v). The overall pattern at any given DPT location indicated increasing concentration with depth. TCE was detected at both FLUTe™ locations at concentration levels up to 150 ppb (v/v). The areal distribution of TCE from the DPT and FLUTe™ sample locations shows that the higher concentrations are on the western side of the former sewage lagoons.

2.9.7 COA Soil-Vapor Investigation of the Eubank Landfill

The COA EHD conducted soil-vapor investigations in 1996 and 2001. During the 1996 investigation, soil-vapor sampling probes were set at a grid spacing of 100 ft across the Northeast Fill Area with sampling depths ranging from 1.5 to 4.5 ft bgs (CH2M Hill April 1996). The maximum TCE concentration was 71 ppb (v/v). No soil-vapor investigations were conducted at the Southwest Fill Area in 1996. In September 2001, soil-vapor sampling was conducted at scattered locations across both fill areas to a maximum depth of 10 ft bgs (DBS&A

Appendix O

Documentation in Support of Notice of Disapproval Comment 20:

- Replacement Page 3-3 (Revised Figure 3.1.3-1)

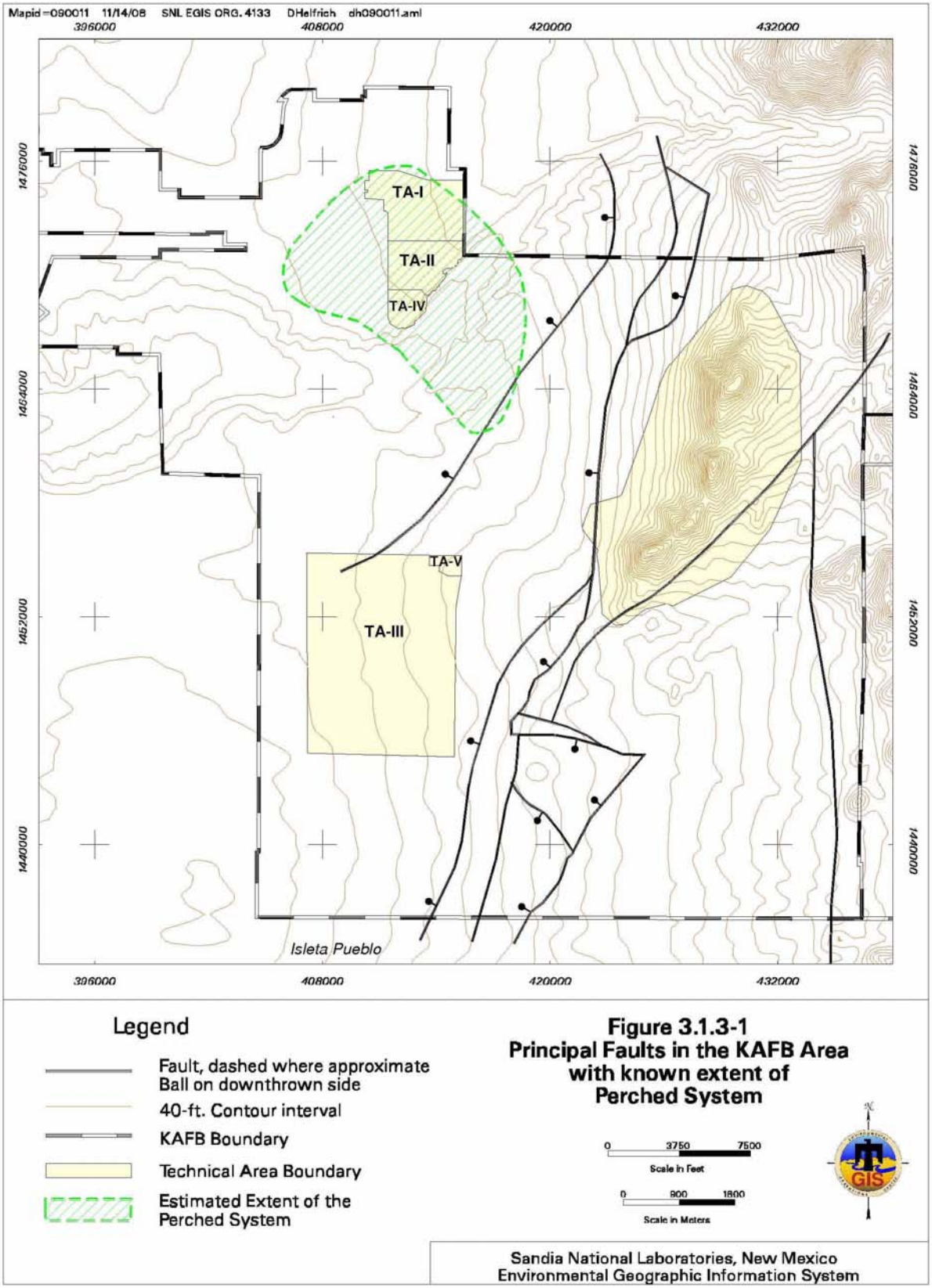


Figure 3.1.3-1
Principal Faults in the KAFB Area with known extent of Perched System

Appendix P

Documentation in Support of Notice of Disapproval Comment 21:

- Replacement Page 3-10 (Revised Figure 3.1.3-6)

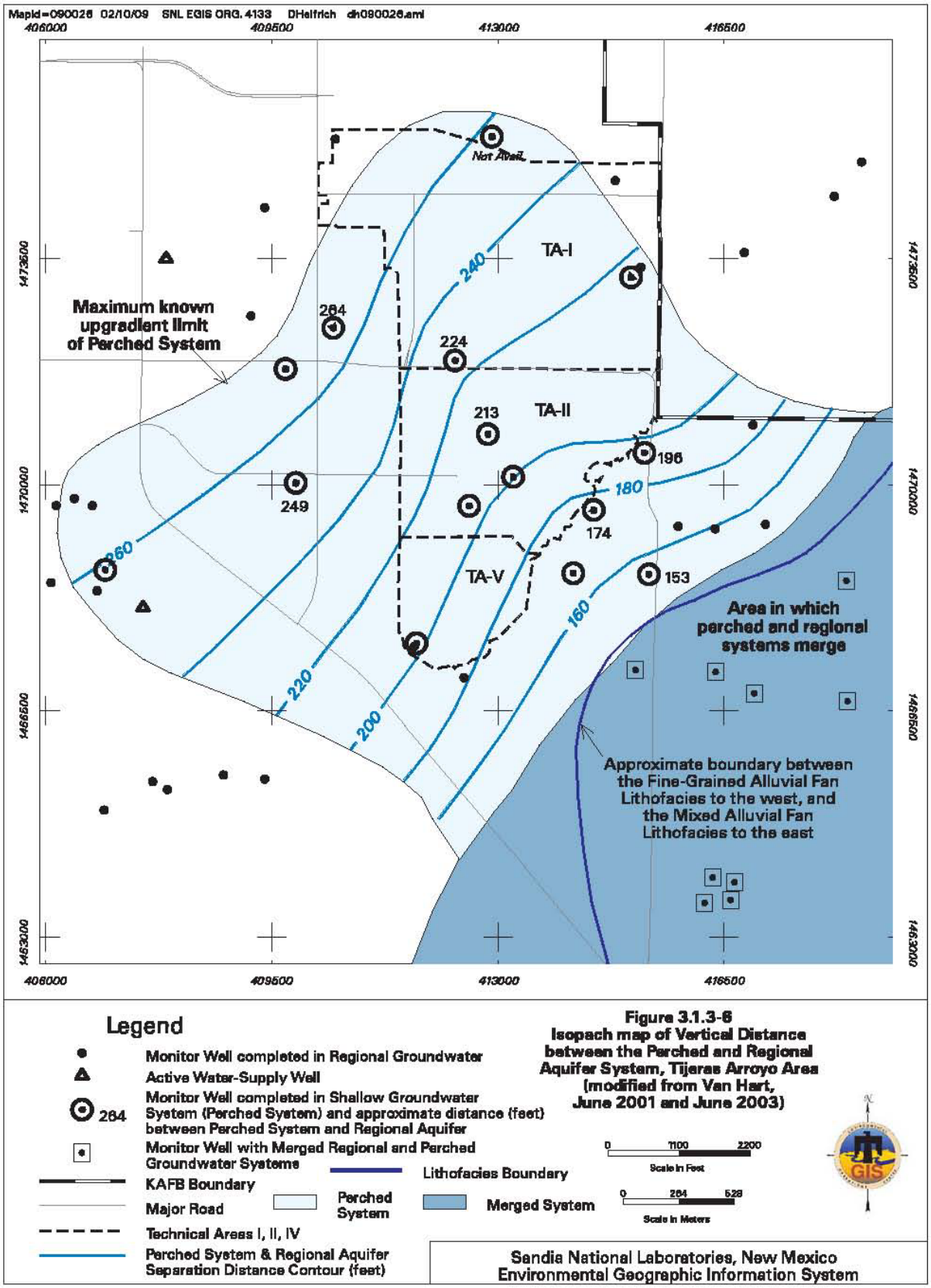
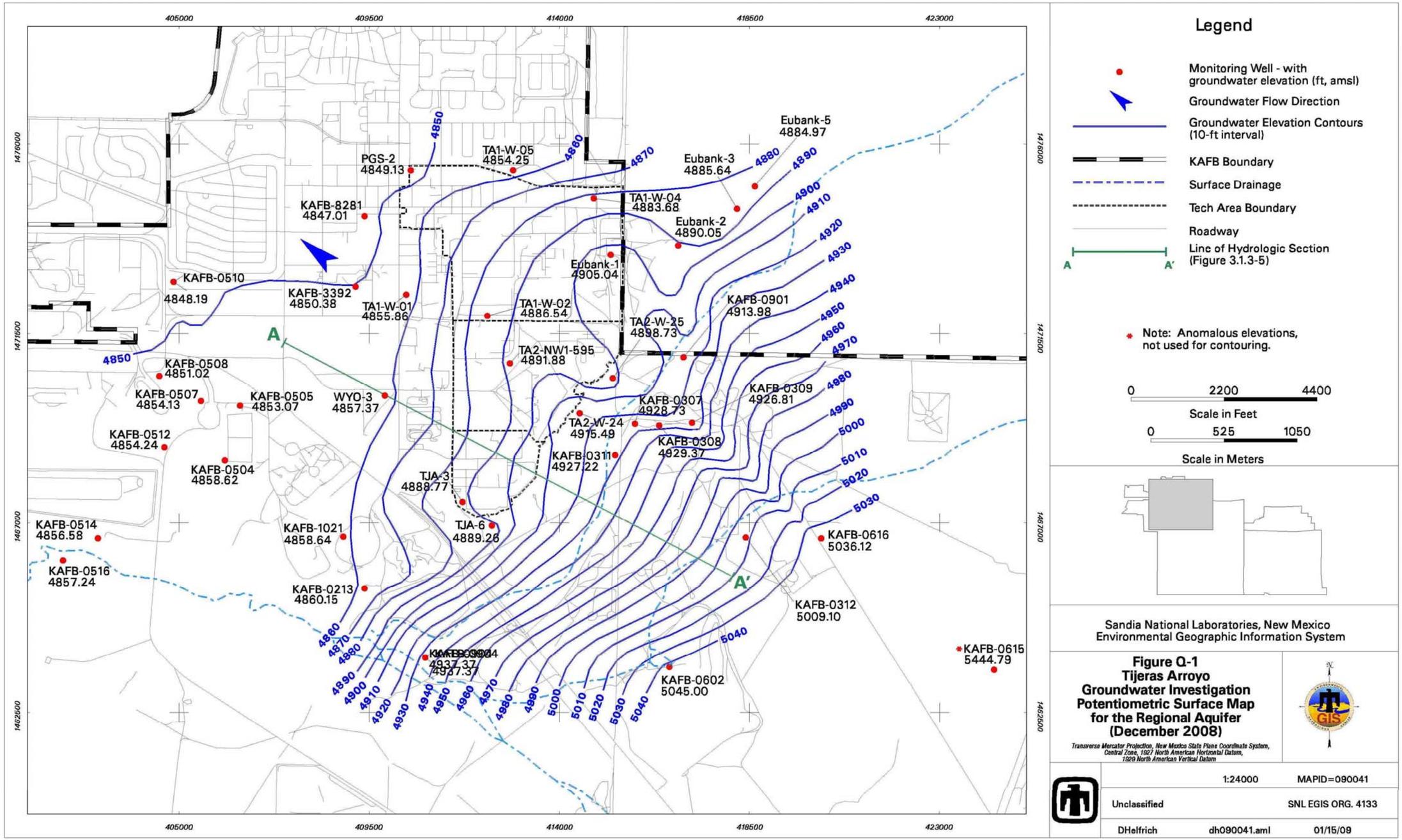


Figure 3.1.3-6
Isopach map of Vertical Distance between the Perched and Regional Aquifer System, Tijeras Arroyo Area (modified from Van Hart, June 2001 and June 2003)

Appendix Q

Documentation in Support of Notice of Disapproval Comments 22 and 24:

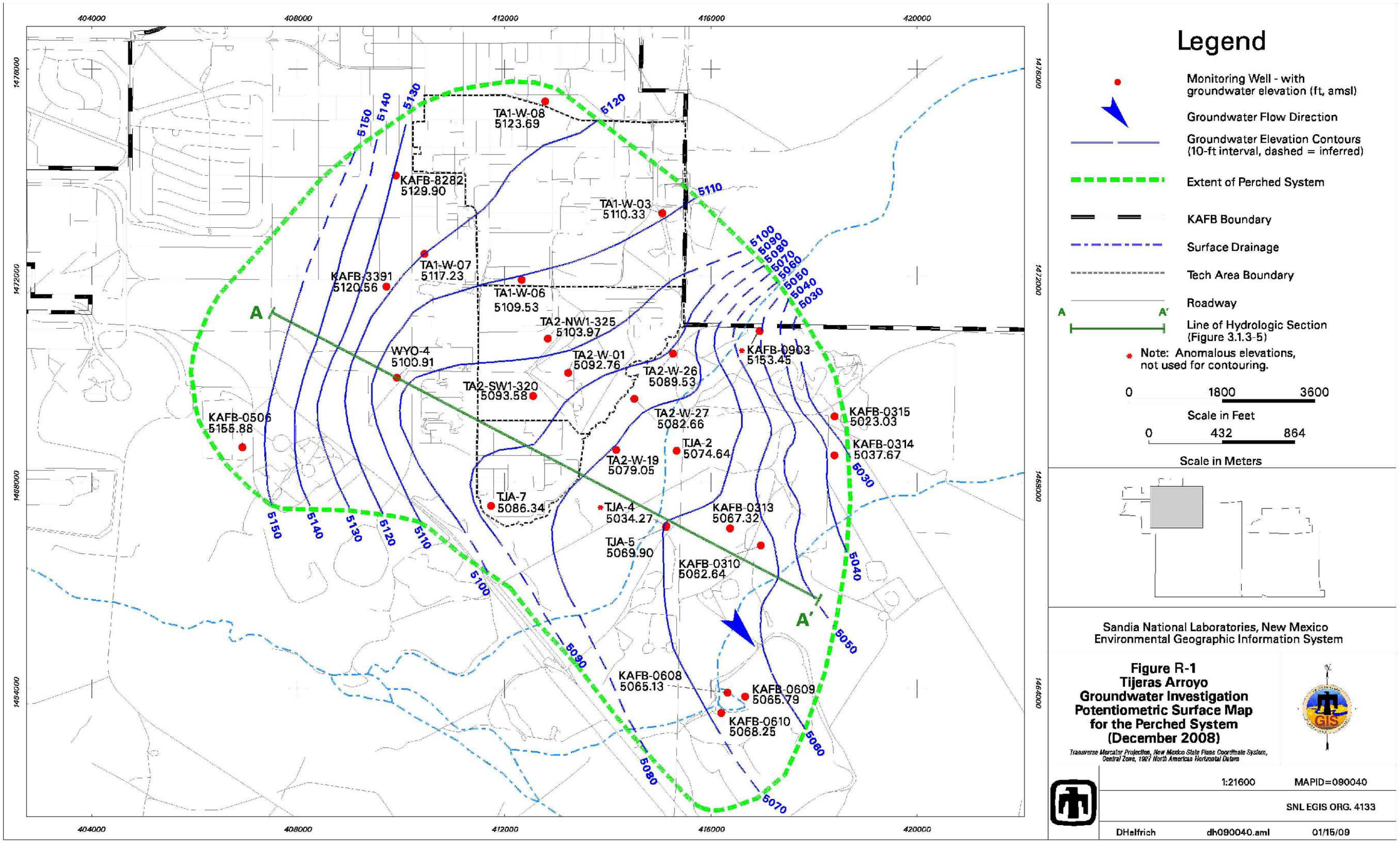
- New Figure Q-1: Tijeras Arroyo Groundwater Investigation Potentiometric Surface Map for the Regional Aquifer (December 2008)


Legend
Monitoring Well - with groundwater elevation (ft, amsl)
Groundwater Flow Direction
Groundwater Elevation Contours (10-ft interval)
KAFB Boundary
Surface Drainage
Tech Area Boundary
Roadway
Line of Hydrologic Section (Figure 3.1.3-5)
Note: Anomalous elevations, not used for contouring.
0 2200 4400
Scale in Feet
0 525 1050
Scale in Meters
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure Q-1
Tijeras Arroyo
Groundwater Investigation
Potentiometric Surface Map
for the Regional Aquifer
(December 2008)
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum
1:24000
MAPID=090041
Unclassified
SNL EGIS ORG. 4133
DHelfrich
dh090041.aml
01/15/09
Eubank-5 4884.97
Eubank-3 4885.64
TA1-W-05 4854.25
PGS-2 4849.13
KAFB-8281 4847.01
TA1-W-04 4883.68
Eubank-2 4890.05
Eubank-1 4905.04
KAFB-0510 4848.19
KAFB-3392 4850.38
TA1-W-01 4855.86
TA1-W-02 4886.54
KAFB-0901 4913.98
TA2-W-25 4898.73
TA2-NW1-595 4891.88
KAFB-0508 4851.02
KAFB-0507 4854.13
KAFB-0505 4853.07
WYO-3 4857.37
KAFB-0309 4926.81
KAFB-0307 4928.73
TA2-W-24 4915.49
KAFB-0512 4854.24
KAFB-0308 4929.37
KAFB-0311 4927.22
KAFB-0504 4858.62
TJA-3 4888.77
KAFB-0514 4856.58
KAFB-1021 4858.64
TJA-6 4889.26
KAFB-0616 5036.12
KAFB-0516 4857.24
KAFB-0213 4860.15
KAFB-0312 5009.10
KAFB-0615 5444.79
KAFB-0602 5045.00
A
A'
4850
4860
4870
4880
4890
4900
4910
4920
4930
4940
4950
4960
4970
4980
4990
5000
5010
5020
5030
5040
405000
409500
414000
418500
423000
1476000
1471500
1467000
1462500

Appendix R

Documentation in Support of Notice of Disapproval Comments 23 and 24:

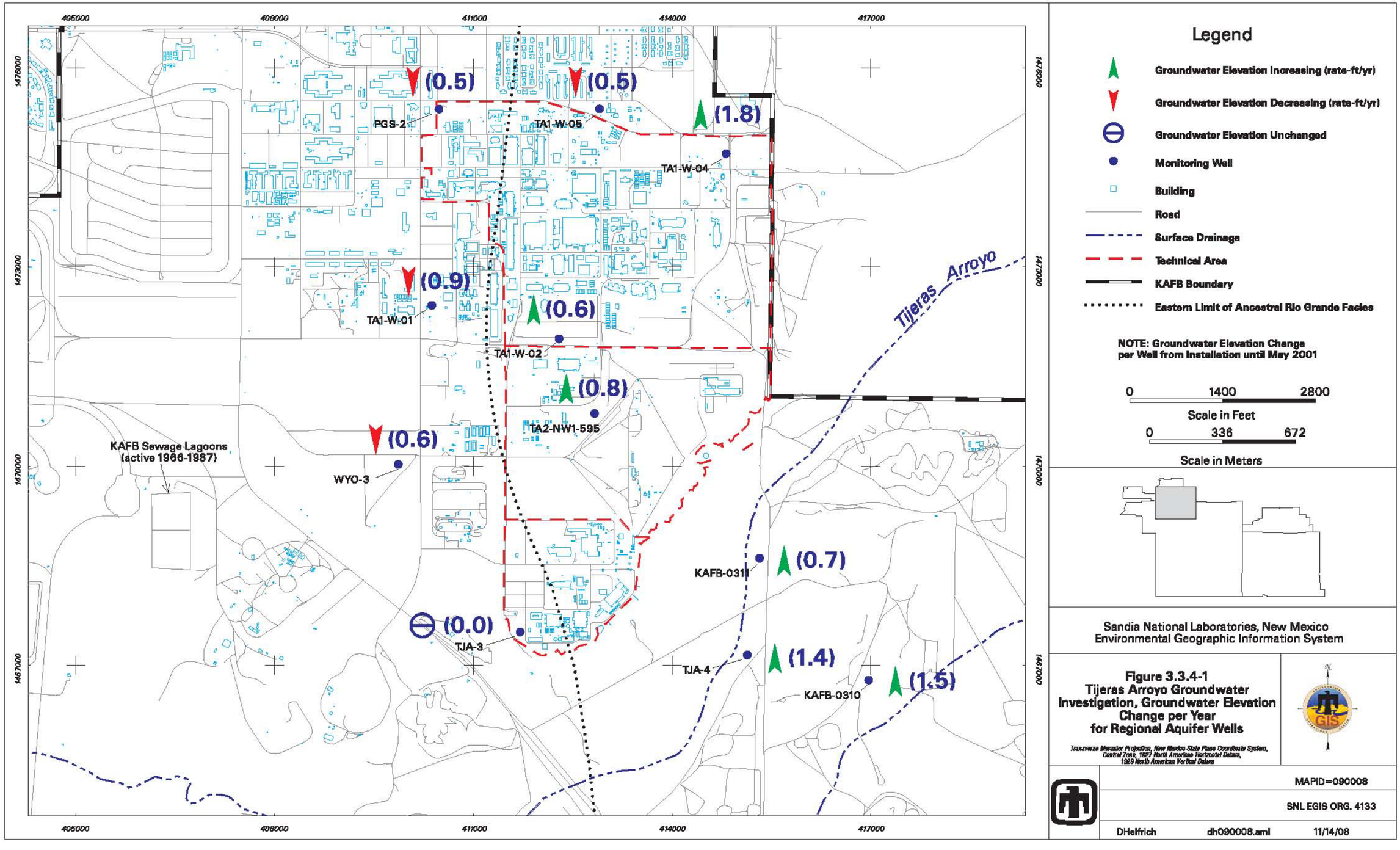
- New Figure R-1: Tijeras Arroyo Groundwater Investigation Potentiometric Surface Map for the Perched Aquifer (December 2008)


Legend
Monitoring Well - with groundwater elevation (ft, amsl)
Groundwater Flow Direction
Groundwater Elevation Contours (10-ft interval, dashed = inferred)
Extent of Perched System
KAFB Boundary
Surface Drainage
Tech Area Boundary
Roadway
Line of Hydrologic Section (Figure 3.1.3-5)
Note: Anomalous elevations, not used for contouring.
0 1800 3600
Scale in Feet
0 432 864
Scale in Meters
TA1-W-08 5123.69
KAFB-8282 5129.90
TA1-W-03 5110.33
TA1-W-07 5117.23
KAFB-3391 5120.56
TA1-W-06 5109.53
TA2-NW1-325 5103.97
WYO-4 5100.91
TA2-W-01 5092.76
TA2-W-26 5089.53
KAFB-0903 5153.45
TA2-SW1-320 5093.58
KAFB-0506 5155.88
TA2-W-27 5082.66
KAFB-0315 5023.03
TJA-2 5074.64
KAFB-0314 5037.67
TA2-W-19 5079.05
TJA-7 5086.34
TJA-4 5034.27
KAFB-0313 5067.32
TJA-5 5069.90
KAFB-0310 5062.64
KAFB-0608 5065.13
KAFB-0609 5065.79
KAFB-0610 5068.25
A
A'
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure R-1
Tijeras Arroyo
Groundwater Investigation
Potentiometric Surface Map
for the Perched System
(December 2008)
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum
1:21600
MAPID=090040
SNL EGIS ORG. 4133
DHelfrich
dh090040.aml
01/15/09

Appendix S

Documentation in Support of Notice of Disapproval Comment 25:

- Replacement Page 3-22 (Revised Figure 3.3.4-1)


Legend
Groundwater Elevation Increasing (rate-ft/yr)
Groundwater Elevation Decreasing (rate-ft/yr)
Groundwater Elevation Unchanged
Monitoring Well
Building
Road
Surface Drainage
Technical Area
KAFB Boundary
Eastern Limit of Ancestral Rio Grande Facies
NOTE: Groundwater Elevation Change per Well from Installation until May 2001
0 1400 2800
Scale in Feet
0 336 672
Scale in Meters
(0.5)
(0.5)
(1.8)
(0.9)
(0.6)
(0.8)
(0.6)
(0.7)
(0.0)
(1.4)
(1.5)
PGS-2
TA1-W-05
TA1-W-04
TA1-W-01
TA1-W-02
TA2-NW1-595
WYO-3
KAFB-0311
TJA-3
TJA-4
KAFB-0310
KAFB Sewage Lagoons (active 1966-1987)
Tijeras Arroyo
405000
408000
411000
414000
417000
1476000
1473000
1470000
1467000
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure 3.3.4-1
Tijeras Arroyo Groundwater Investigation, Groundwater Elevation Change per Year for Regional Aquifer Wells
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum
MAPID=090008
SNL EGIS ORG. 4133
DHelfrich
dh090008.aml
11/14/08

Appendix T

Documentation in Support of Notice of Disapproval Comment 27:

- Replacement Pages 4-7 and 4-7A (Revised Table 4.2.1-1)

4.2.1 Major Ion Chemistry

Major ion chemistry data from groundwater quality analyses can often reveal distinct characteristics useful for interpreting aquifer flow characteristics. To evaluate possible changes in groundwater chemistry over time, Piper Trilinear and Stiff Diagrams were produced.

The average, median, maximum, minimum, standard deviation, and upper confidence level (UCL) of the mean at a 95% confidence level for anion and cation concentrations for both the regional aquifer and perched system are presented in Table 4.2.1-1. Average values of some anions and cations maybe biased either slightly high or low because of one-time anomalies. Most concentrations within the six quarters of sampling results for each well were within 20 percent of all concentrations recorded for that well over the six quarters. A few concentrations were between 20 and 35 percent of other values recorded for a specific well and some inexplicable anomalies ranged from 50 to greater than 100 percent higher than other values recorded for a specific well. Examples of the extreme anomalies are found in analytical results for Eubank-3, KAFB-0508, KAFB-0904, PGS-2 in the regional aquifer and KAFB-0903 in the perched system. Both the Piper and Stiff diagrams show the inexplicable one-time concentration anomalies. Calcium, chloride, and sulfate varied more in the perched system than in the regional aquifer, whereas sodium, potassium, magnesium, and alkalinity as HCO_3 had more consistent values.

Table 4.2.1-1
Regional Aquifer and Perched System Anion/Cation
Average, Median, Maximum, and Minimum Concentrations
(Milligrams per Liter)

Regional Aquifer							
Anion/Cation	Na	K	Ca	Mg	Cl	HCO_3	SO_4
Average	26.45	2.56	73.15	12.75	28.55	147.40	72.55
Median	25.60	2.22	68.65	11.88	15.20	140.00	66.45
Maximum	48.30	10.50	150.00	43.20	120.00	237.00	292.00
Minimum	18.20	1.60	46.30	2.30	2.56	84.70	8.07
Standard Deviation	5.39	2.20	15.75	5.23	24.79	30.28	44.39
UCL of the Mean	27.12	2.95	73.23	13.4	33.81	152.6	82.14
Perched System							
Average	28.60	2.18	127.42	18.15	92.57	106.33	167.14
Median	23.30	2.02	85.30	15.60	73.00	104.00	76.00
Maximum	83.00	9.00	400.00	44.70	263.00	228.00	672.00
Minimum	16.40	1.30	59.50	8.50	7.70	44.80	13.60
Standard Deviation	13.65	0.78	82.28	8.89	64.26	29.41	187.6
UCL of the Mean	30.42	2.30	158.4	19.47	103.9	113.3	270.7

The following generalizations can be made about the major ion chemistry data:

- No discernable temporal trends are apparent.
- The regional aquifer and the perched system have distinct geochemistries.

- The regional aquifer geochemical signatures are more consistent between well locations and have lower calcium and higher bicarbonate/alkalinity.

- The perched system geochemical signatures are less consistent between well locations and have higher chloride, nitrate, and sulfate.

Appendix U

Documentation in Support of Notice of Disapproval Comment 28:

- Replacement Page 4-13
- Replacement Page 4-14 through 4-14F (Revised Table 4.2.3-1)
- Replacement Page 4-22 (Revised Figure 4.3.2-1)
- Replacement Page 4-23 (Revised Figure 4.3.2-2)

4.2.3 Volatile Organic Compounds

Twenty VOC species have been detected in TAG samples over the past 12 years. Most of the VOCs occurred at very low concentrations, and the number of detections is inconsistent from quarter to quarter. The VOCs most often encountered are TCE, PCE, cis-1,2-PCE, 1,1-DCA, and 1,1-DCE.

Of these five compounds, TCE is the only compound to exceed the MCL and has been detected below, at, and just above detection limits in several wells during the July 2003 through December 2004 reporting period. TCE is the only VOC considered to be a COC with a maximum detected concentration of 7.7 μg/L. TCE was detected in 16 of the 49 TAG monitoring wells (Table 4.2.3-1). Of the 16 wells, only 6 had sporadic detections and the other 10 had more consistent detections. TCE exceeded the MCL (5 μg/L) in only two perched system monitoring wells (TA2-W-19 and WYO-4). TCE was plotted for nine wells, eight perched system wells (KAFB-0506, TA1-W-06, TA2-W-01, TA2-W-19, TA2-W-26, TJA-2, TJA-7, and WYO-4) and one regional aquifer well (KAFB-0615) where TCE was more consistently detected (Figures 4.2.3-1 and 4.2.3-2). These nine wells are in the perched system with the exception of KAFB-0615. TCE concentrations over time are fairly consistent at any given location. The concentration trend line is level to slightly decreasing for five of the wells (KAFB-0506, TA1-W-06, TA2-W-01, TA2-W-26, and TJA-7). The trend lines for four wells (KAFB-0615, TA2-W-19, TJA-2, and WYO-4) exhibit generally increasing concentrations, although the more recent data indicate stable TCE concentrations.

Tables for the other detected VOCs (PCE, cis-1,2-DCE, 1,1-DCA, and 1,1-DCE) are presented in Annexes F and G.

4.2.4 Isotopes

Currently, KAFB contractors are performing a comprehensive groundwater sampling program in compliance with a Nitrate-Abatement Plan (Montgomery Watson August 2000). The KAFB program requires stable isotopic analysis of groundwater, including the two stable isotopes of nitrogen, ^{14}N and ^{15}N. For the TAG investigation, groundwater samples were collected from five monitoring wells and analyzed for isotopes of nitrogen ($^{15}N/^{14}N$ [$\delta^{15}N$]), oxygen ($^{18}O/^{16}O$ [$\delta^{18}O$]), and hydrogen (deuterium/hydrogen [D/H]). These isotopic ratios can be used to identify sources in groundwater.

Nitrogen isotope studies (e.g., Kreitler [1975], Keeney [1986], and Kendall [1998]) are based upon the fact that when nitrogen compounds are altered chemically within a system, the stable, nonradioactive isotopes ^{14}N and ^{15}N can undergo isotopic fractionation. Some of the fractionations can be unique; therefore, the nitrogen isotopes can be used to determine original sources of nitrogen-bearing compounds in groundwater systems (Kreitler 1975) and are usually expressed as the ratio of ^{15}N and ^{14}N. The average abundance of ^{15}N in the atmosphere (air) is constant, with the $^{15}N/^{14}N$ ratio equal to 1/272. The convention is to report nitrogen isotope ratios in parts per thousand (or per mil) relative to N_2 in atmospheric air using the standard definition of δ:

$$^{15}N_{AIR} = \{[(^{15}N/^{14}N)_X/(^{15}N/^{14}N)_{AIR}]-1\} * 1000$$

Table 4.2.3-1
Summary of Detected TCE Concentrations in TAG Monitoring Wells

Fiscal Year 2003, 4th Quarter (July-September 2003) – TAG Quarter 1

Well ID	Result[a] (µg/L)	MDL (µg/L)	PQL (µg/L)	Laboratory Qualifier	Validation Qualifier
TA1-W-04 29-Jul-03	ND	0.36	1		
TA1-W-06 29-Jul-03	ND	0.36	1		
TA1-W-08 30-Jul-03	ND	0.36	1		
TA2-W-01 07-Aug-03	1.29	0.36	1		
TA2-W-19 23-Sep-03	3.77	0.36	1		
TA2-W-19 (Duplicate)	NS	NA	NA		
TA2-W-26 04-Aug-03	1.9	0.36	1		
TA2-W-26 (Duplicate)	NS	NA	NA		
TA2-W-27 6-Aug-03	ND	0.36	1		
TJA-2 31-Jul-03	2.59	0.36	1		
TJA-6 11-Aug-03	ND	0.36	1		
TJA-7 12-Aug-03	1.46	0.36	1		
TJA-7 (Duplicate)	NS	NA	NA		
WYO-4 14-Aug-03	**6.57**	0.36	1		
WYO-4 (Duplicate) 14-Aug-03	**6.39**	0.36	1		
KAFB-0307	ND	NR	NR		
KAFB-0310 31-Jul-03	ND	NR	NR		
KAFB-0313	ND	NR	NR		
KAFB-0506 25-Jul-03	3.9	NR	NR		
KAFB-0506 (Duplicate)	NS	NA	NA		
KAFB-0615 16-Jul-03	0.6	0.043	0.5		

Table 4.2.3-1 (Continued)
Summary of Detected TCE Concentrations in TAG Monitoring Wells

Fiscal Year 2004, 1st Quarter (October-December 2003) – TAG Quarter 2

Well ID	Result[a] (µg/L)	MDL (µg/L)	PQL (µg/L)	Laboratory Qualifier	Validation Qualifier
TA1-W-04 14-Oct-03	ND	0.36	1		
TA1-W-06 09-Oct-03	0.438	0.36	1	J	
TA1-W-08 21-Oct-03	ND	0.36	1		
TA2-W-01 01-Dec-03	1.96	0.36	1		J
TA2-W-19 07-Oct-03	4.54	0.36	1		
TA2-W-19 (Duplicate)	NS	NA	NA		
TA2-W-26 16-Oct-03	1.98	0.36	1		J
TA2-W-26 (Duplicate) 16-Oct-03	2.13	0.36	1		J
TA2-W-27 23-Oct-03	ND	0.36	1		
TJA-2 15-Oct-03	2.36	0.36	1		J
TJA-6 5-Nov-03	ND	0.36	1		J
TJA-7 28-Oct-03	ND	0.36	1		
TJA-7 (Duplicate)	NS	NA	NA		
WYO-4 03-Nov-03	**6.06**	0.36	1		J
WYO-4 (Duplicate) 03-Nov-03	**7.05**	0.36	1		J
KAFB-0307	ND	NR	NR		
KAFB-0310 13-Oct-03	ND	0.5	NR		
KAFB-0313	ND	NR	NR		
KAFB-0506 23-Oct-03	4.2	NR	0.5		
KAFB-0506 (Duplicate) 23-Oct-03	4.3	NR	0.5		
KAFB-0615 28-Oct-03	0.9	0.031	0.5		

Table 4.2.3-1 (Continued)
Summary of Detected TCE Concentrations in TAG Monitoring Wells

Fiscal Year 2004, 2nd Quarter (January-March 2004) – TAG Quarter 3

Well ID	Result[a] (µg/L)	MDL (µg/L)	PQL (µg/L)	Laboratory Qualifier	Validation Qualifier
TA1-W-04 6-Jan-04	ND	0.36	1		
TA1-W-06 09-Feb-04	0.362	0.36	1	J	J
TA1-W-08 10-Feb-04	ND	0.36	1		
TA2-W-01 12-Jan-04	1.63	0.36	1		
TA2-W-19 13-Jan-04	4.19	0.36	1		
TA2-W-19 (Duplicate)	NS	NA	NA		
TA2-W-26 20-Jan-04	1.81	0.36	1		J
TA2-W-26 (Duplicate) 20-Jan-04	1.56	0.36	1		J
TA2-W-27 15-Jan-04	0.519	0.36	1	J	J
TJA-2 19-Jan-04	3.08	0.36	1		J
TJA-6 4-Feb-04	ND	0.36	1		
TJA-7 22-Jan-04	0.430	0.36	1	J	J
TJA-7 (Duplicate)	NS	NA	NA		
WYO-4 03-Feb-04	**6.99**	0.36	1		J
WYO-4 (Duplicate) 03-Feb-04	**6.60**	0.36	1		J
KAFB-0307	ND	NR	NR		
KAFB-0310 21-Jan-04	ND	0.5	NR		
KAFB-0313	ND	NR	NR		
KAFB-0506 21-Jan-04	4.8	NR	0.5		
KAFB-0506 (Duplicate)	NS	NA	NA		
KAFB-0615 29-Jan-04	0.5	NR	0.5		

Table 4.2.3-1 (Continued)
Summary of Detected TCE Concentrations in TAG Monitoring Wells

Fiscal Year 2004, 3rd Quarter (April-June 2004) – TAG Quarter 4

Well ID	Result[a] (µg/L)	MDL (µg/L)	PQL (µg/L)	Laboratory Qualifier	Validation Qualifier
TA1-W-04 26-Apr-04	0.30	0.06	5	J	
TA1-W-06 21-May-04	ND	0.06	5		
TA1-W-08 23-Apr-04	0.44	0.06	5	J	
TA2-W-01 17-May-04	1.8	0.06	5	J	
TA2-W-19 27-Apr-04	**5.2**	0.06	5		
TA2-W-19 (Duplicate) 27-Apr-04	**5.1**	0.06	5		
TA2-W-26 21-Apr-04	3.1	0.06	5	B, J	5.0 U, B
TA2-W-26 (Duplicate) 21-Apr-04	3.0	0.06	5	B, J	5.0 U, B
TA2-W-27 19-Apr-04	1.3	0.06	5	J	5.0 U, B1
TJA-2 05-May-04	3.3	0.06	5	J	
TJA-6 22-Apr-04	1.2	0.06	5	B, J	5.0 U, B
TJA-7 30-Apr-04	ND	0.06	5		
TJA-7 (Duplicate)	NS	NA	NA		
WYO-4 30-Apr-04	**7.7**	0.06	5		
WYO-4 (Duplicate) 30-Apr-04	**7.6**	0.06	5		
KAFB-0307	ND	NR	NR		
KAFB-0310 **2**0-Apr-04	ND	0.5	NR		
KAFB-0313	ND	NR	NR		
KAFB-0506 26-Apr-04	3.6	NR	0.5		
KAFB-0506 (Duplicate)	NS	NA	NA		
KAFB-0615 14-Apr-04	1.1	NR	0.5		

Table 4.2.3-1 (Continued)
Summary of Detected TCE Concentrations in TAG Monitoring Wells

Fiscal Year 2004, 4th Quarter (July-September 2004) – TAG Quarter 5

Well ID	Result[a] (µg/L)	MDL (µg/L)	PQL (µg/L)	Laboratory Qualifier	Validation Qualifier
TA1-W-04 26-Jul-04	ND	0.06	5		
TA1-W-06 06-Aug-04	0.32	0.06	5	J	
TA1-W-08 13-Aug-04	ND	0.06	5		
TA2-W-01 12-Aug-04	1.3	0.06	5	J	
TA2-W-19 27-Jul-04	4.2	0.06	5	J	
TA2-W-19 (Duplicate)	NS	NA	NA		
TA2-W-26 30-Jul-04	1.4	0.09	5	J	P2
TA2-W-26 (Duplicate) 30-Jul-04	1.3	0.09	5	J	P2
TA2-W-27 28-Jul-04	0.51	0.06	5	J	
TJA-2 16-Aug-04	3.1	0.06	5	J	
TJA-6 4-Aug-04	ND	0.09	5		
TJA-7 06-Aug-04	0.55	0.06	5	J	
TJA-7 (Duplicate) 06-Aug-04	0.53	0.06	5	J	
WYO-4 03-Aug-04	**6.7**	0.09	5		
WYO-4 (Duplicate)	**6.0**	0.09	5		
KAFB-0307	ND	NR	NR		
KAFB-0310 28-Jul-04	ND	NR	NR		
KAFB-0313	ND	NR	NR		
KAFB-0506 03-Aug-04	4.0	NR	NR		
KAFB-0506 (Duplicate)	NS	NA	NA		
KAFB-0615	NS	NA	NA		

Table 4.2.3-1 (Continued)
Summary of Detected TCE Concentrations in TAG Monitoring Wells

Fiscal Year 2005, 1ST Quarter (October-December 2004) – TAG Quarter 6

Well ID	Result[a] (µg/L)	MDL (µg/L)	PQL (µg/L)	Laboratory Qualifier	Validation Qualifier
TA1-W-04 7-Oct-04	ND	0.36	1		
TA1-W-06 26-Oct-04	ND	0.36	1		
TA1-W-08 8-Oct-04	ND	0.36	1		
TA2-W-01 18-Oct-04	1.38	0.36	1		
TA2-W-19 04-Oct-04	4.56	0.36	1		J
TA2-W-19 (Duplicate) 04-Oct-04	4.65	0.36	1		J
TA2-W-26 13-Oct-04	ND	0.36	1		
TA2-W-26 (Duplicate)	NS	NA	NA		
TA2-W-27 14-Oct-04	0.412	0.36	1	J	
TJA-2 11-Oct-04	3.1	0.36	1		J
TJA-6 13-Oct-04	ND	0.36	1		
TJA-7 15-Oct-04	ND	0.36	1		
TJA-7 (Duplicate) 15-Oct-04	ND	0.36	1		
WYO-4 06-Oct-04	**7.35**	0.36	1		
WYO-4 (Duplicate) 06-Oct-04	**7.43**	0.36	1		
KAFB-0307 02-Nov-04	0.7	NR	0.5		
KAFB-0310 27-Oct-04	0.6	NR	0.5		
KAFB-0313 02-Nov-04	0.7	NR	0.5		
KAFB-0506 19-Oct-04	4.3	NR	0.5		
KAFB-0506 (Duplicate) 19-Oct-04	4.2	NR	0.5		
KAFB-0615 21-Oct-04	1.2	NR	0.5		

Note: Values in **bold** indicate that the concentration exceeds the EPA MCL of 5 µg/L.
[a]EPA Method 8260B. U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., Update 3, SW846, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.
ID = Identification.
MCL = Maximum contaminant level.
MDL = Method detection limit.
µg/L = Microgram(s) per liter.
NA = Not applicable.
ND = Not detected.
NS = No sample collected.

Table 4.2.3-1 (Concluded)
Summary of Detected TCE Concentrations in TAG Monitoring Wells

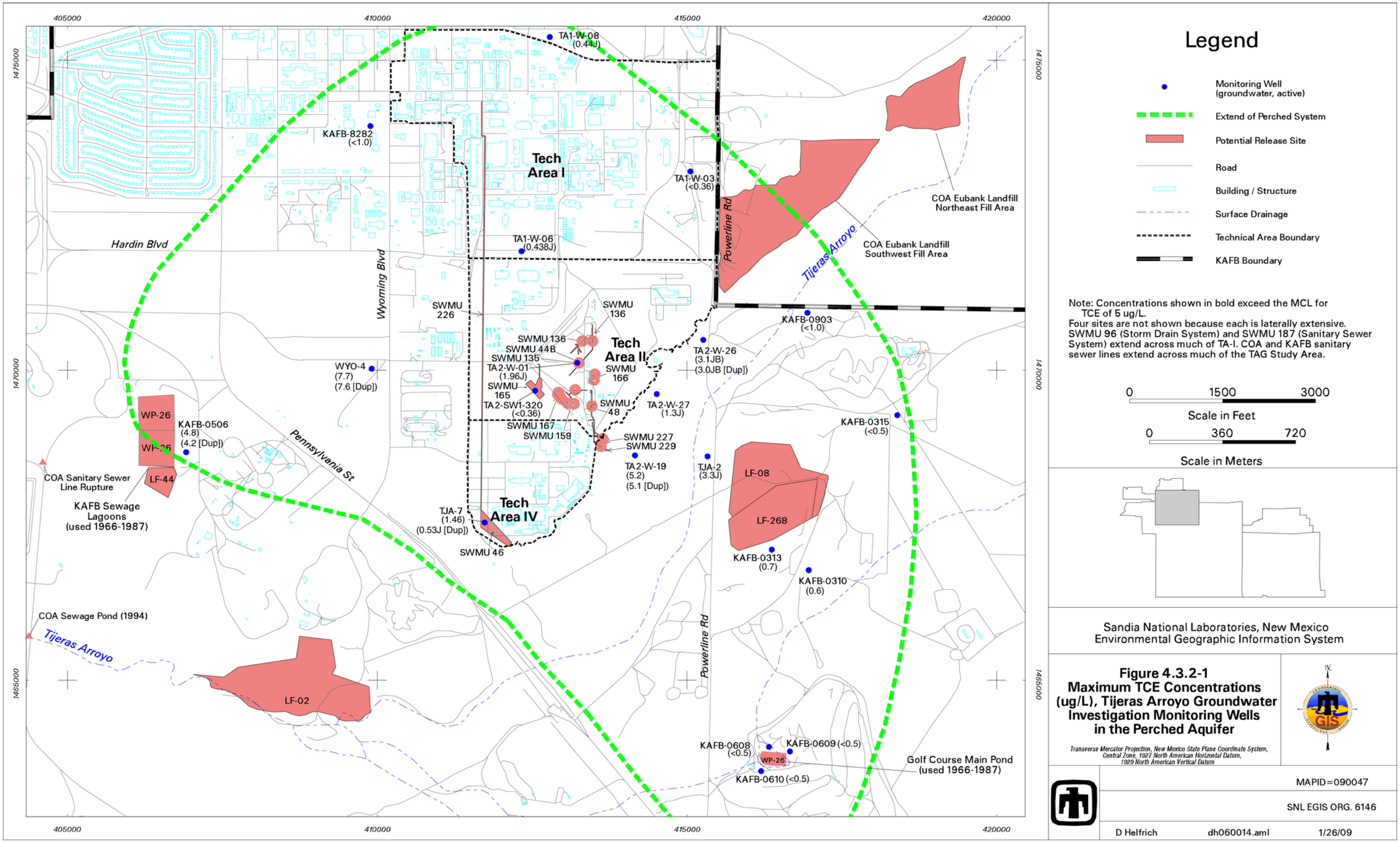
NR = Not reported.
PQL = Practical quantitation limit.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

Laboratory Qualifiers:
(If blank, quality control samples met acceptance criteria with respect to submitted sample.)

B = Analyte detected in associated laboratory method blank.
J = Amount detected is below the PQL.

Validation Qualifiers:
(If blank, quality control samples met acceptance criteria with respect to submitted sample.)

B = Analyte present in associated laboratory method blank sample.
B1 = Analyte present in associated trip blank sample.
J = The associate value is an estimated quantity.
P2 = Insufficient quality control data to determine laboratory precision.
# U = Analyte was qualified as not detected at the listed value.
# UJ = Analyte was qualified as not detected at listed value. The value is an estimate.



840857.02160000 B1

Legend

- Monitoring Well (groundwater, active)
- Extend of Perched System
- Potential Release Site
- Road
- Building / Structure
- Surface Drainage
- Technical Area Boundary
- KAFB Boundary

Note: Concentrations shown in bold exceed the MCL for TCE of 5 ug/L.
Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1500 3000
Scale in Feet

0 360 720
Scale in Meters

Sandia National Laboratories, New Mexico
Environmental Geographic Information System

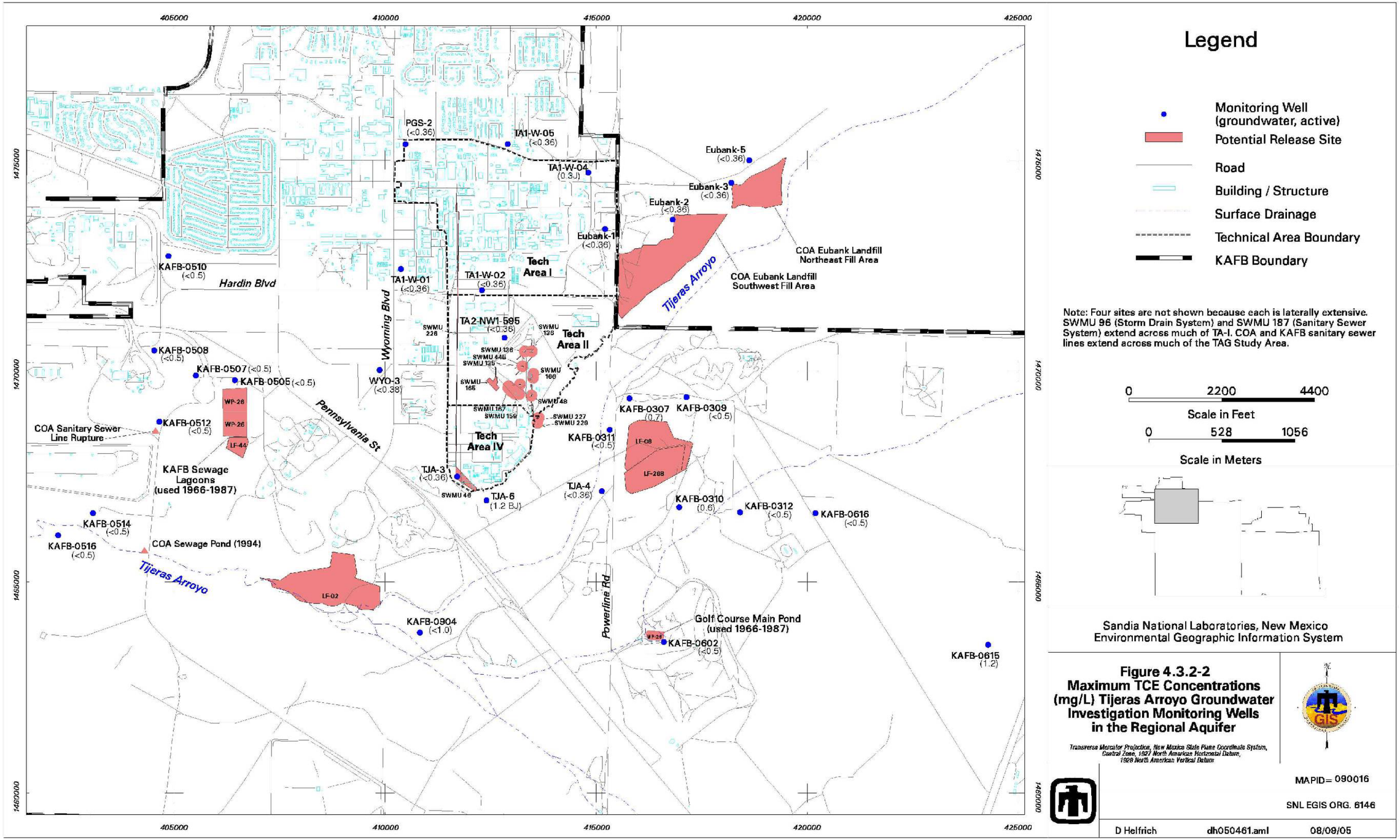
Figure 4.3.2-1
Maximum TCE Concentrations (ug/L), Tijeras Arroyo Groundwater Investigation Monitoring Wells in the Perched Aquifer

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

MAPID=090047

SNL EGIS ORG. 6146

D Helfrich dh060014.aml 1/26/09


Legend
Monitoring Well (groundwater, active)
Potential Release Site
Road
Building / Structure
Surface Drainage
Technical Area Boundary
KAFB Boundary
Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.
0 2200 4400
Scale in Feet
0 528 1056
Scale in Meters
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure 4.3.2-2
Maximum TCE Concentrations (mg/L) Tijeras Arroyo Groundwater Investigation Monitoring Wells in the Regional Aquifer
Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum
MAPID= 090016
SNL EGIS ORG. 6146
D Helfrich
dh050461.aml
08/09/05
405000
410000
415000
420000
425000
1475000
1470000
1465000
1460000
PGS-2 (<0.36)
TA1-W-05 (<0.36)
TA1-W-04 (0.3J)
Eubank-5 (<0.36)
Eubank-3 (<0.36)
Eubank-2 (<0.36)
Eubank-1 (<0.36)
COA Eubank Landfill Northeast Fill Area
COA Eubank Landfill Southwest Fill Area
Tijeras Arroyo
Tech Area I
Tech Area II
Tech Area IV
KAFB-0510 (<0.5)
Hardin Blvd
TA1-W-01 (<0.36)
TA1-W-02 (<0.36)
Wyoming Blvd
TA2-NW1-595 (<0.36)
KAFB-0508 (<0.5)
KAFB-0507 (<0.5)
KAFB-0505 (<0.5)
WYO-3 (<0.38)
Pennsylvania St
COA Sanitary Sewer Line Rupture
KAFB-0512 (<0.5)
KAFB Sewage Lagoons (used 1966-1987)
KAFB-0307 (0.7)
KAFB-0309 (<0.5)
KAFB-0311 (<0.5)
TJA-3 (<0.36)
TJA-6 (1.2 BJ)
TJA-4 (<0.36)
KAFB-0310 (0.6)
KAFB-0312 (<0.5)
KAFB-0616 (<0.5)
KAFB-0514 (<0.5)
KAFB-0516 (<0.5)
COA Sewage Pond (1994)
Powerline Rd
KAFB-0904 (<1.0)
Golf Course Main Pond (used 1966-1987)
KAFB-0602 (<0.5)
KAFB-0615 (1.2)

Appendix V

Documentation in Support of Notice of Disapproval Comment 29:

- Replacement Page 4-21

4.3.2 Chlorinated Solvents

The horizontal distribution of TCE in groundwater is sporadic, which may reflect multiple small sources of TCE. Twelve wells located within the perched system had consistent TCE detections with maximum values ranging from 0.32 to 7.7 μg/L (Figure 4.3.2-1). Graphical representations of TCE concentrations for the perched system wells over six quarters of sampling (July 2003 through December 2004) are presented in Figure 4.2.3-1. The highest concentrations within the perched system were found at well WYO-4 ranging from 6.0 to 7.7 μg/L. Monitoring well WYO-4 is located near the central portion of the study area and is not in proximity to any potential release site.

Four wells within the regional aquifer (TA1-W-04, TJA-6, KAFB-0307, and KAFB-0615) exhibited concentrations above detection limits (Figure 4.3.2-2). One well, KAFB-0615, located near the eastern edge of the TAG study area, exhibited a consistent increase in TCE with a maximum concentration of 1.2 μg/L (Figure 4.2.3-2). The other three wells within the regional aquifer exhibited generally low and sporadic TCE detections. No wells with the regional aquifer exhibited TCE concentrations exceeding the MCL of 5 μg/L.

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD:
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608032	STCA	E5A100213		2/1/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	W Palencia		2-1-05	
FINAL TRANSMITTED TO/DATE:	Jackson		2-1-05	
SENT TO VALIDATION BY/DATE:		N/A		
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO (ERDMS) OR RECORDS CENTER BY/DATE:	R Kavanaugh		2-1-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader COLLINS | Project Name TAG VAPOR WELL SAMPLING | Case No. 7222_01.05

AR/COC No. 608032 | Analytical Lab SEVERN TRENT | SDG No. E5A100213

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples		X	1,1,2-TRICHLOR-1,2,2-TRIFLUOROETHANE DETECTED IN METHOD BLANK
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.)			
a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082)			
a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals)			
a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry			
a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted:-_____

Reviewed by: W. Palencia Date:_____ Closed by:_____Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC 608032

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21613
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		SEE BOTTLE ORDER
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066343-001	TA2-VW-20-SV-72	72		1/3/2005 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12177	
066344-001	TA2-VW-21-SV-50	50		1/3/2005 0830	SG	SC	6L	none	G	SA	TO-14 summa# 93111	
066345-001	TA2-VW-21-SV-92	92		1/3/2005 0840	SG	SC	6L	none	G	SA	TO-14 summa# 93043	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/07/05
Entered by: JAC
QC inits. WJP

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RLL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER 44649

Commercial Invoice

Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination;
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES

				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED- EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

RK 1-19-05

ESA100213

ESA100213

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Page 1 of 1

AR/COC 608032

Internal Lab

Batch No. N/A

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		SEE BOTTLE ORDER
Logbook Ref. No.:		SMO Contact/Phone:	Pam Pulssant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

☐ Waste Characterization
-Send preliminary/copy report to:

☐ Released by COC No.:
☐ Validation Required

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066343-001	TA2-VW-20-SV-72	72		1/3/2005 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12177 -1	
066344-001	TA2-VW-21-SV-50	50		1/3/2005 0830	SG	SC	6L	none	G	SA	TO-14 summa# 93111 -2	
066345-001	TA2-VW-21-SV-92	92		1/3/2005 0840	SG	SC	6L	none	G	SA	TO-14 summa# 93043 -3	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ Negotiated TAT QC inits.

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

*Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RLL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

E5A100213 COC 608032

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/11/05
Page : 1
Time : 17:49:45

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05 /7222
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066343-001/TA2-VW-20-SV-72
Date Sampled: 1/03/05 Time Sampled: 9:00
LAB ID: E5A100213-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066344-001/TA2-VW-21-SV-50
Date Sampled: 1/03/05 Time Sampled: 8:30
LAB ID: E5A100213-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066345-001/TA2-VW-21-SV-92
Date Sampled: 1/03/05 Time Sampled: 8:40
LAB ID: E5A100213-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

ORIGINAL

ESA100213

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC 608032

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: LB	
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21613	
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Released by COC No.:
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		☐ Validation Required
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To:Sandia National Labs (Accounts Payable) P.O. Box 5800 MS 0154 Albuquerque, NM 87185-0154
Location	Tech Area 2				
Building	Room				

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066343-001	TA2-VW-20-SV-72	72		1/3/2005 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12177	
066344-001	TA2-VW-21-SV-50	50		1/3/2005 0830	SG	SC	6L	none	G	SA	TO-14 summa# 93111	
066345-001	TA2-VW-21-SV-92	92		1/3/2005 0840	SG	SC	6L	none	G	SA	TO-14 summa# 93043	

000003

RMMA	☐ Yes ☑ No Ref. No.	**Sample Tracking** Smo Use	**Special Instructions/QC Requirements**
Sample Disposal	☐ Return to Client ☑ Disposal by lab	Date Entered(mm/dd/yy)	**EDD** ☑ **Yes** ☐ **No**
Turnaround Time	☐ 7 Day ☐ 15 Day ☑ 30 Day	Entered by:	**Level C Package** ☑ **Yes** ☐ **No**
Return Samples By:	☐ **Negotiated TAT** QC inits.		***Send report to:**

Abnormal Conditions on Receipt

Lab Use

	Name	Signature	Init	Company/Organization/Phone/Cellular
Sample Team Members	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RLL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Cover Letter 2
Case Narrative 2
Chain of Custody 3
Analytical Report 11
QA/QC 22
STL Los Angeles Raw Data 28
Raw Data: TO-14A 29

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

January 28, 2005

STL LOT NUMBER: **E5A100213**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the three samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

000151

This report contains _____ pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100213

ESA100213

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

nal Lab

h No. N/A

SMO Use

AR/COC 608032

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: SB	
ect Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21673	☐ Released by COC No.:
rd Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Validation Required
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To: Sandia National Labs (Accounts Payable) P.O. Box 5800 MS 0154 Albuquerque, NM 87185-0154
ation	Tech Area 2				
ing	Room				

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066343-001	TA2-VW-20-SV-72	72		1/3/2005 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12177	
066344-001	TA2-VW-21-SV-50	50		1/3/2005 0830	SG	SC	6L	none	G	SA	TO-14 summa# 93111	
066345-001	TA2-VW-21-SV-92	92		1/3/2005 0840	SG	SC	6L	none	G	SA	TO-14 summa# 93043	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

☐ **Negotiated TAT** QC inits.

Sample Tracking Smo Use

Date Entered(mm/dd/yy)

Entered by:

Special Instructions/QC Requirements

EDD ☑ **Yes** ☐ **No**

Level C Package ☑ **Yes** ☐ **No**

rn Samples By:

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple m nbers	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

linquished by		Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by		Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
linquished by		Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by		Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
linquished by		Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by		Org.	Date	Time	6. Received by	Org	Date	Time

4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 12177
DATE CLEANED: 12/1/04 A, 12/1/04 C, ~~11/29/04 A, 12/6/04 A, 12/7/04 C~~
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.73	1-11-05	~
FINAL PRESSURE (PSIA)	24.07	1-11-05	~

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

N:\COI\DOCS\CANISTER FIELD DATA RECORD(012103).doc

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93111
DATE CLEANED: 12/1/04 A, 12/1/04 C, 10/29/04 A, 12/6/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.99	1-11-05	[illegible]
FINAL PRESSURE (PSIA)	21.07	1-11-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93043
DATE CLEANED: 12/1/04A, 12/1/04C, 12/2/04A, 12/2/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	13.02	1-11-05	TB
FINAL PRESSURE (PSIA)	24.25	1-11-05	TB

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

N:\COI\DOCS\CANISTER FIELD DATA RECORD(012103).doc

CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch 12·1·04 A

Date of QC 12-2-04

Data File Number MB12022(MSB)

Canister ID Numbers

* A-286	93043
11341	11372
GL0113	93111
A-295	9313B
A-173	12652
11201	12177

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte-concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: 12-2-04 Date:

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:54
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,A286
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.299	8.326	(1.000)	479142	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.319	9.345	(0.920)	573397	48.6689	48.67
* 72 1,4-Difluorobenzene	114	10.131	10.157	(1.000)	1503796	50.0000	
$ 87 Toluene-d8	100	12.748	12.765	(1.258)	688728	46.7202	46.72
* 99 Chlorobenzene-d5	117	15.409	15.418	(1.000)	979431	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.664	(1.146)	692624	39.6182	39.62

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D

Date : 02-DEC-2004 13:54

Client ID: BLANK

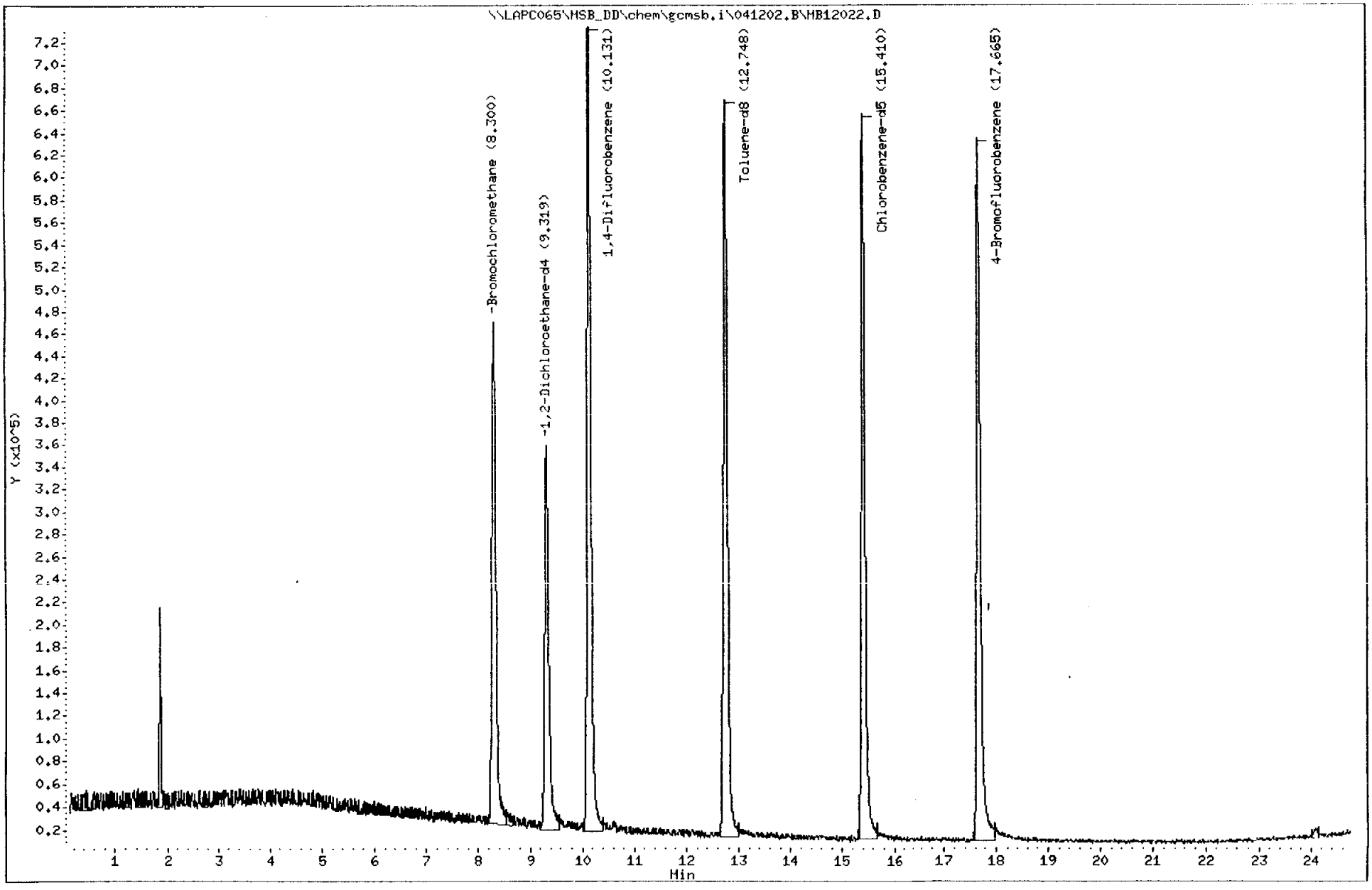
Instrument: gcmsb.i

Sample Info: BLANK,BLANK,A286

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05 /7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100213

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100213

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066343-001/TA2-VW-20-SV-72 01/03/05 09:00 001				
Dichlorodifluoromethane	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	2.9	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	50 B	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.4 J	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	3.4	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	2.6	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	15	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	3.0	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	0.68 J	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	1.7 J	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	5.9	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	1.6 J	2.0	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	2.0	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
066344-001/TA2-VW-21-SV-50 01/03/05 08:30 002				
Dichlorodifluoromethane	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	30	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	0.66 J,B	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	9.5	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	160	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	0.66 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
066345-001/TA2-VW-21-SV-92 01/03/05 08:40 003				
Dichlorodifluoromethane	0.81 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	1.7 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3 J,B	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.3 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	3.4	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	6.4	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	260	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	0.56 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	1.9 J	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100213

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100213

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DF8	001	066343-001/TA2-VW-20-SV-72	01/03/05	09:00
G2DGC	002	066344-001/TA2-VW-21-SV-50	01/03/05	08:30
G2DGE	003	066345-001/TA2-VW-21-SV-92	01/03/05	08:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066343-001/TA2-VW-20-SV-72

GC/MS Volatiles

Lot-Sample #...: E5A100213-001 **Work Order #...:** G2DF81AD **Matrix.....:** AE
Date Sampled...: 01/03/05 09:00 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012178 **Analysis Time..:** 14:36
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**1.4 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**2.9**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**50 B**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**2.4 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**3.4**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	**2.6**	**2.0**	**ppb(v/v)**	**0.50**
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**15**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**3.0**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**0.68 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066343-001/TA2-VW-20-SV-72

GC/MS Volatiles

Lot-Sample #...: E5A100213-001 **Work Order #...:** G2DF81AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	**1.7 J**	**2.0**	**ppb(v/v)**	**0.50**
m-Xylene & p-Xylene	**5.9**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	**1.6 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	**2.0**	**2.0**	**ppb(v/v)**	**0.70**
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.80**
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066344-001/TA2-VW-21-SV-50

GC/MS Volatiles

Lot-Sample #...: E5A100213-002 **Work Order #...:** G2DGC1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 08:30 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012178 **Analysis Time..:** 15:07
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**1.2 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**30**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.66 J,B**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**9.5**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**160**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	**1.2 J**	**2.0**	**ppb(v/v)**	**0.80**
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.66 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066344-001/TA2-VW-21-SV-50

GC/MS Volatiles

Lot-Sample #...: E5A100213-002 **Work Order #...:** G2DGC1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066345-001/TA2-VW-21-SV-92

GC/MS Volatiles

Lot-Sample #...: E5A100213-003 **Work Order #...:** G2DGE1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 08:40 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012178 **Analysis Time..:** 15:34
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.81 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**1.7 J**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**1.3 J,B**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**2.3 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**3.4**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**6.4**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**260**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.56 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**1.9 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066345-001/TA2-VW-21-SV-92

GC/MS Volatiles

Lot-Sample #...: E5A100213-003 **Work Order #...:** G2DGE1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100213

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5012178	
002	AE	EPA-21 TO-14A		5012178	
003	AE	EPA-21 TO-14A		5012178	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100213 **Work Order #...:** G2F221AA **Matrix.....:** AIR
MB Lot-Sample #: M5A120000-178

Prep Date.....: 01/11/05 **Analysis Time..:** 11:24
Analysis Date..: 01/11/05 **Prep Batch #...:** 5012178 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 101605

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.69 J**	**2.0**	**ppb(v/v)**	**EPA-21 TO-14A**
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100213 **Work Order #...:** G2F221AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100213 **Work Order #...:** G2F221AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-178 G2F221AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012178 **Analysis Time..:** 10:16
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**105**	**(70 - 125)**			**EPA-21 TO-14A**
	102	**(70 - 125)**	**3.0**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**104**	**(75 - 120)**			**EPA-21 TO-14A**
	102	**(75 - 120)**	**1.6**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	101	**(70 - 125)**	**0.35**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**97**	**(75 - 125)**			**EPA-21 TO-14A**
	99	**(75 - 125)**	**2.4**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**113**	**(65 - 130)**			**EPA-21 TO-14A**
	110	**(65 - 130)**	**2.3**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100213 **Work Order #...:** G2F221AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-178 G2F221AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012178 **Analysis Time..:** 10:16
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**53.0**	**ppb(v/v)**	**105**		**EPA-21 TO-14A**
	50.5	**51.4**	**ppb(v/v)**	**102**	**3.0**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**56.6**	**ppb(v/v)**	**104**		**EPA-21 TO-14A**
	54.5	**55.7**	**ppb(v/v)**	**102**	**1.6**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.4**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**50.2**	**ppb(v/v)**	**101**	**0.35**	**EPA-21 TO-14A**
Toluene	**49.5**	**48.1**	**ppb(v/v)**	**97**		**EPA-21 TO-14A**
	49.5	**49.2**	**ppb(v/v)**	**99**	**2.4**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**56.3**	**ppb(v/v)**	**113**		**EPA-21 TO-14A**
	50.0	**55.0**	**ppb(v/v)**	**110**	**2.3**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100213

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: 01/20/05

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

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Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
18 1,1-Difluoroethane	+++++ +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372	
19 Vinyl Bromide	0.62278 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391	
20 Dichlorofluoromethane (F21)	1.78533 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446	
21 Trichlorofluoromethane (F11)	2.44228 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083	
22 n-Pentane	1.21122 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395	
23 1,1-DC-1-flouroethane(F141b)	2.58910 +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444	
24 Ethanol	+++++ 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705	
25 Ether (Diethyl ether)	0.49364 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284	
26 Acrolein	0.20601 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263	<-
27 Propionaldehyde (Propanal)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
28 1,1-Dichloroethene	1.26790	1.17864	1.08330	1.12535	1.10018	1.07502			
	1.06973						1.12859	6.381	
29 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715	2.59937	2.38876	2.40025	2.34655	2.25977			
	2.22085						2.44467	9.559	
31 Acetone	+++++	0.12242	0.14598	0.16090	0.16041	0.16574			
	0.20458						0.16001	16.836	
32 Iodomethane	1.11548	1.03774	1.38752	1.40857	2.82193	2.47154			
	1.87248						1.73075	39.751	<-
33 Carbon Disulfide	0.84200	0.90775	0.92884	1.06258	1.12947	1.19849			
	1.35974						1.06127	17.279	
34 2-Propanol	+++++	0.45343	0.48827	0.55577	0.58306	0.59777			
	0.71716						0.56591	16.380	
35 Acetonitrile	0.04928	0.08266	0.12149	0.13210	0.18434	0.18610			
	0.15546						0.13021	39.137	<-
36 Allyl Chloride	0.54011	0.56312	0.52171	0.54469	0.60226	0.61352			
	0.71567						0.58587	11.302	
37 Methylene Chloride	0.81147	0.73641	0.65629	0.67719	0.66235	0.64310			
	0.69121						0.69686	8.458	

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384	1.84557	1.78175	1.69840	1.73692	1.68874		
	1.43818						1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680	0.92384	0.86786	0.85814	1.07070	0.99994		
	0.81576						0.93758	10.283
72 n-Heptane	0.65292	0.59087	0.57809	0.57044	0.59474	0.58371		
	0.52727						0.58544	6.367
74 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Trichloroethene	0.49675	0.44912	0.44758	0.42160	0.43287	0.42172		
	0.38637						0.43657	7.756
76 Methylcyclohexane	0.42140	0.36653	0.33095	0.30891	0.38179	0.35467		
	0.29346						0.35110	12.546
77 1-Butanol	+++++	0.02081	0.01680	0.01594	0.01842	0.01675		
	0.01390						0.01710	13.662
78 1,2-Dichloropropane	0.16774	0.15879	0.17082	0.16553	0.16628	0.16412		
	0.15399						0.16390	3.481
79 Dibromomethane	0.53415	0.48041	0.44691	0.42596	0.54917	0.51576		
	0.44421						0.48522	9.991
80 Methyl methacrylate	+++++	0.23366	0.24181	+++++	0.31202	0.30819		
	0.31492						0.28212	14.422

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++ / 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014	
82 Bromodichloromethane	0.49808 / 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427 / 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++ / 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414 / 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++ / 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270	
87 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Toluene	1.01334 / 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491	
90 n-Octane	0.59003 / 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058 / 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201	

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92 Ethyl methacrylate	+++++	0.43783	0.49371	0.60033	0.82761	0.80134			
	0.70016						0.64350	24.924	
93 1,1,2-Trichloroethane	0.61878	0.60883	0.58026	0.57107	0.55612	0.53136			
	0.48182						0.56403	8.318	
94 1,3-Dichloropropane	0.69617	0.64285	0.59370	0.56549	0.70784	0.65124			
	0.54479						0.62887	10.012	
95 Tetrachloroethene	0.91266	0.87257	0.82493	0.78006	0.75451	0.71516			
	0.61982						0.78282	12.629	
96 2-Hexanone	+++++	+++++	0.15338	0.19060	0.25602	0.28482			
	0.37703						0.25237	34.442	<-
97 Dibromochloromethane	0.78993	0.82338	0.94305	0.99419	1.07413	1.06868			
	0.93269						0.94658	11.682	
98 1,2-Dibromoethane	0.91324	0.94281	0.96570	0.97781	0.98546	0.97568			
	0.85734						0.94544	4.882	
M 99 Xylenes (total)	0.41650	0.37835	0.38910	0.37063	0.43924	0.43533			
	0.42479						0.40771	6.871	
100 1-Chlorohexane	0.67959	0.60195	0.56163	0.56717	0.70682	0.65981			
	0.54704						0.61772	10.341	
102 Chlorobenzene	1.04688	0.94435	0.92214	0.89483	0.91484	0.89472			
	0.80831						0.91801	7.759	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
113 Cyclohexanone	+++++ / 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036	<-
115 Bromobenzene	0.62810 / 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953	
116 1,1,2,2-Tetrachloroethane	1.35006 / 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.35429	6.584	
117 1,2,3-Trichloropropane	0.40312 / 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311	
118 trans-1,4-Dichloro-2-butene	+++++ / +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055	<-
119 n-Propylbenzene	1.28187 / 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097	
120 2-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
121 4-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
122 3-Ethyltoluene	1.05354 / 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139	
123 4-Ethyl Toluene	0.81519 / 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558 +++++	1.21368	0.81082	0.65064	0.83940	0.78774	0.94631	29.818
125 n-Decane	0.46267 0.32620	0.34922	0.25520	0.27626	0.36839	0.34720	0.34073	19.844
126 .beta.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Ethyltoluene	1.11542 1.16620	0.94881	0.85458	0.95853	1.30303	1.23402	1.08294	15.307
128 .alpha.-Methylstyrene	0.43803 0.54809	0.36069	0.33804	0.37867	0.54465	0.52825	0.44806	20.459
129 tert-Butylbenzene	0.80994 0.87914	0.73130	0.67470	0.76818	1.05286	1.00081	0.84528	16.570
130 Pentachloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955 +++++	0.35806	0.23173	0.19988	0.25825	0.25412	0.27527	23.368
132 sec-Butylbenzene	1.53068 1.68519	1.27842	1.22547	1.37218	1.91352	1.87496	1.55435	17.948
133 D-Limonene	0.56335 0.43408	0.44070	0.33104	0.35410	0.48917	0.46237	0.43926	17.978

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030		
	0.69853						0.52632	18.610
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222		
	1.26479						1.14477	17.565
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895		
	0.67222						0.54141	18.711
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417		
	0.67804						0.64142	16.131
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209		
	1.02647						0.56325	55.511 <-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348		
	0.55025						0.48440	18.904
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253		
	0.64790						0.53798	14.023
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416		
	0.23934						0.27616	17.206
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159		
	0.79399						0.72730	19.989
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136		
	0.17470						0.37429	42.157 <-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++ / 0.27629	0.26338	0.25799	0.22180	0.31565	0.26332	0.26641	11.388
145 Hexachlorobutadiene	0.56644 / 0.51820	0.58610	0.42156	0.35251	0.47676	0.47942	0.48586	16.727
146 Naphthalene	+++++ / 0.49153	0.70441	0.53060	0.46537	0.55710	0.47106	0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850 / 0.25906	0.48714	0.49598	+++++	0.42244	0.27752	0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014 / 0.39572	0.40234	0.40611	0.41316	0.41851	0.44633	0.41033	4.531
$ 88 Toluene-d8	0.51061 / 0.54926	0.50803	0.52649	0.50915	0.52457	0.53681	0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642 / 1.09717	0.79382	0.81777	0.80936	0.95153	0.96622	0.89318	12.833

Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

* COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0 AA 01/04/05

E5A100213

STL Los Angeles
Air Toxics Lab GC/MS Run Log

Instrument ID:	Data Directory: D:\GCMSB\ 050103A.B	BFB Standard: PSL99112B3	Initial Calibration ID: 1-3 05
GCMS-B	Method File: TO14A	Daily Standard: MSL04011028	SOP: GOI-MS-003
Logbook ID:	Tune File:	LCS Standard: MSL04011043	MDL Date: 01-28-01
R-AMS-041	BF041123.B	I.S. Standard: ISL99112B3	Blank Lot No. 9050301.00

	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
	1305	1909	BF01032	-	-	-	BFB	28	-	-	-	m	OK	A	
		1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL0571
		2002	IL01031	-	-	-	2.0 PIBV STD	40	-	-	-	m	OK	10	MSL04011043
		2037	IL01032	-	-	-	4.0	80	-	-	-	m	OK	10	
		2112	IL01033	-	-	-	10	200	-	-	-	m	OK	10	
		2148	IL01034	-	-	-	25	500	-	-	-	m	OK	10	
		2223	IL01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
		2258	IL01036	-	-	-	100	250	-	-	-	m	OK	11	
		2334	IL01037	-	-	-	500	1250	-	-	-	m	OK	11	
0	1405	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 c/o?
1		0014	LL01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
2		0119	CL01034	-	-	-	CCD	500	-	-	-	m	OK	13	
3		0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
4		0342	B7371	G1PG5AA	001	CLA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EYL220306-1
5		0417	B7372	G1PG7AA			002	872	24.4/14.0	-		m	OK	1	-2
6		0452	B7373	G1PH0AA			003	1130	24.4/10.9	-		m	OK	2	-3
7		0527	B7374	G1PH2AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
8		0602	B7375	G1PH4AA			005	1000	24.5/11.6	-	1.00	m	O/R	4	-5

Reviewed: _____

E5A100213

STL Los Angeles
Air Toxics Lab GC/MS Run Log

trument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
gbook ID:	Tune File:	LCS Standard: 1-4-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-4-05	0637	B7376	G1PA11AA	CCA	CRA	A 17178-AW-CCA	1150	244/1.7	–	1.00	W	OK	5	EGL22063-6
↓	0712	B7377	G1D191AD	↓	TAST	LGSVE0513B 0730	40	244/1.1	100/10	2730	W	O/R	6	EGL23056-1
↓	0741	B7378	G1Z2A1AD	↓	↓	LGSVE0513B 1030	40	244/1.2	100/10	2720	W	OK	7	↓ -2

eviewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

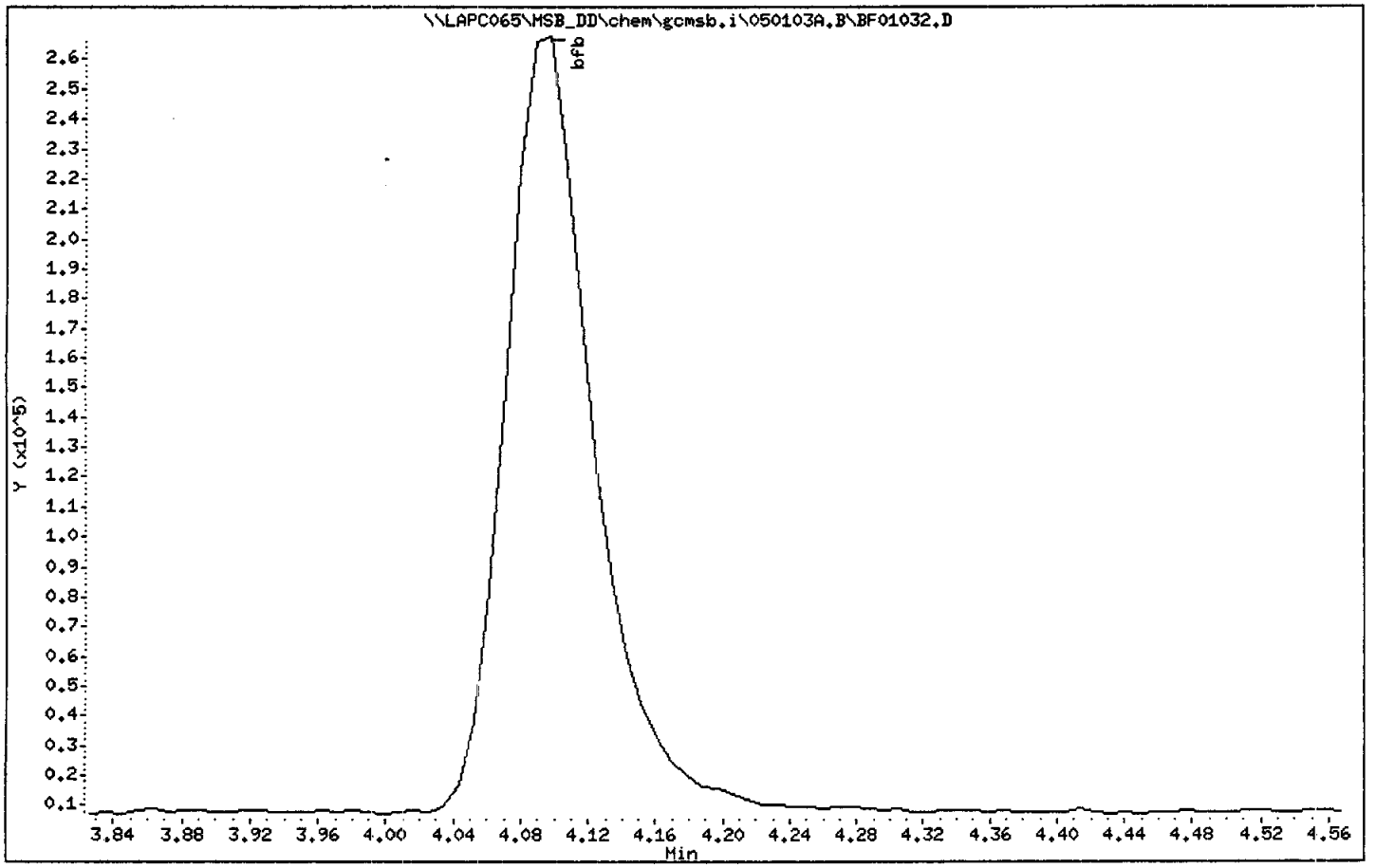
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

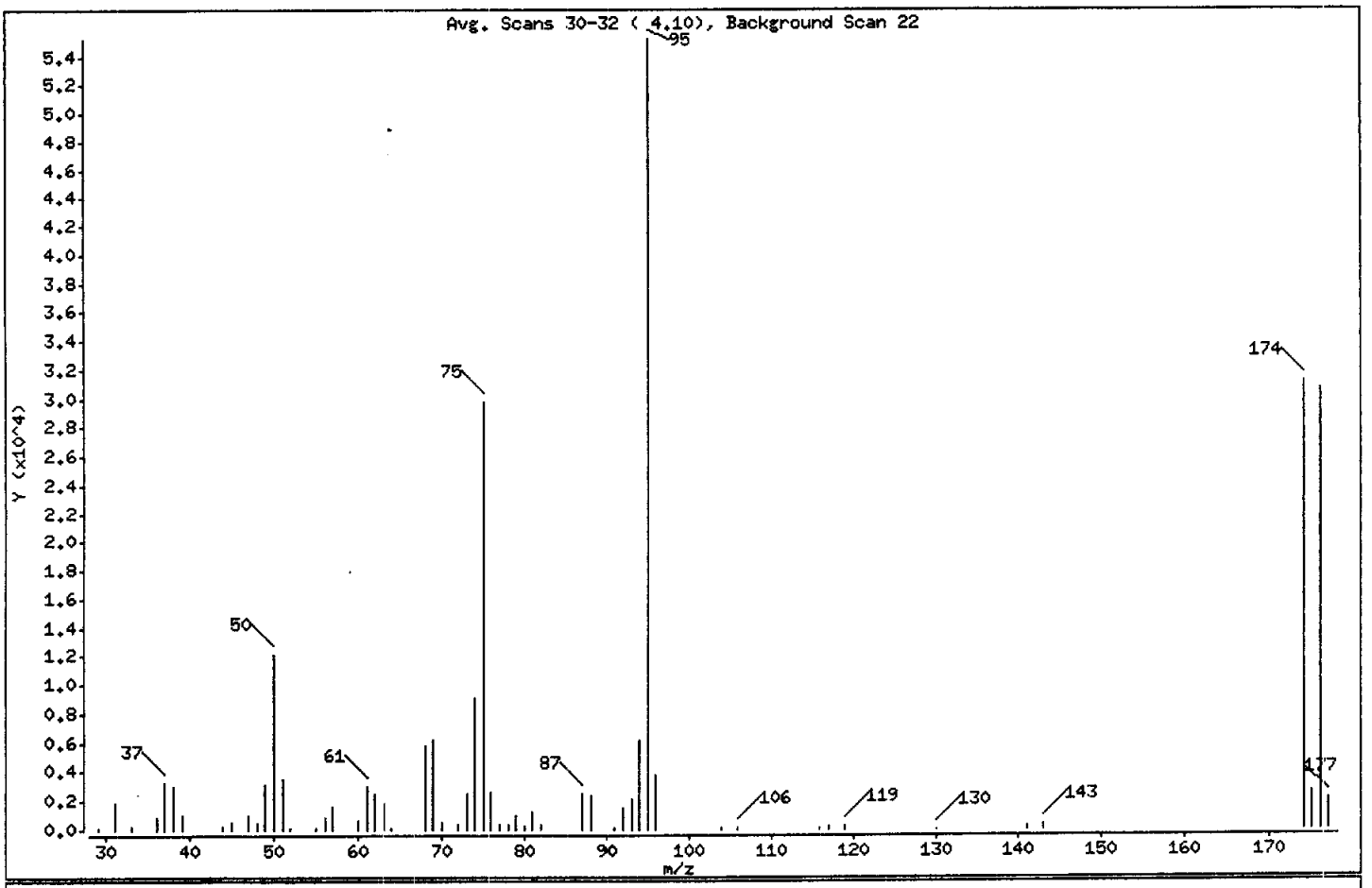
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

AA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

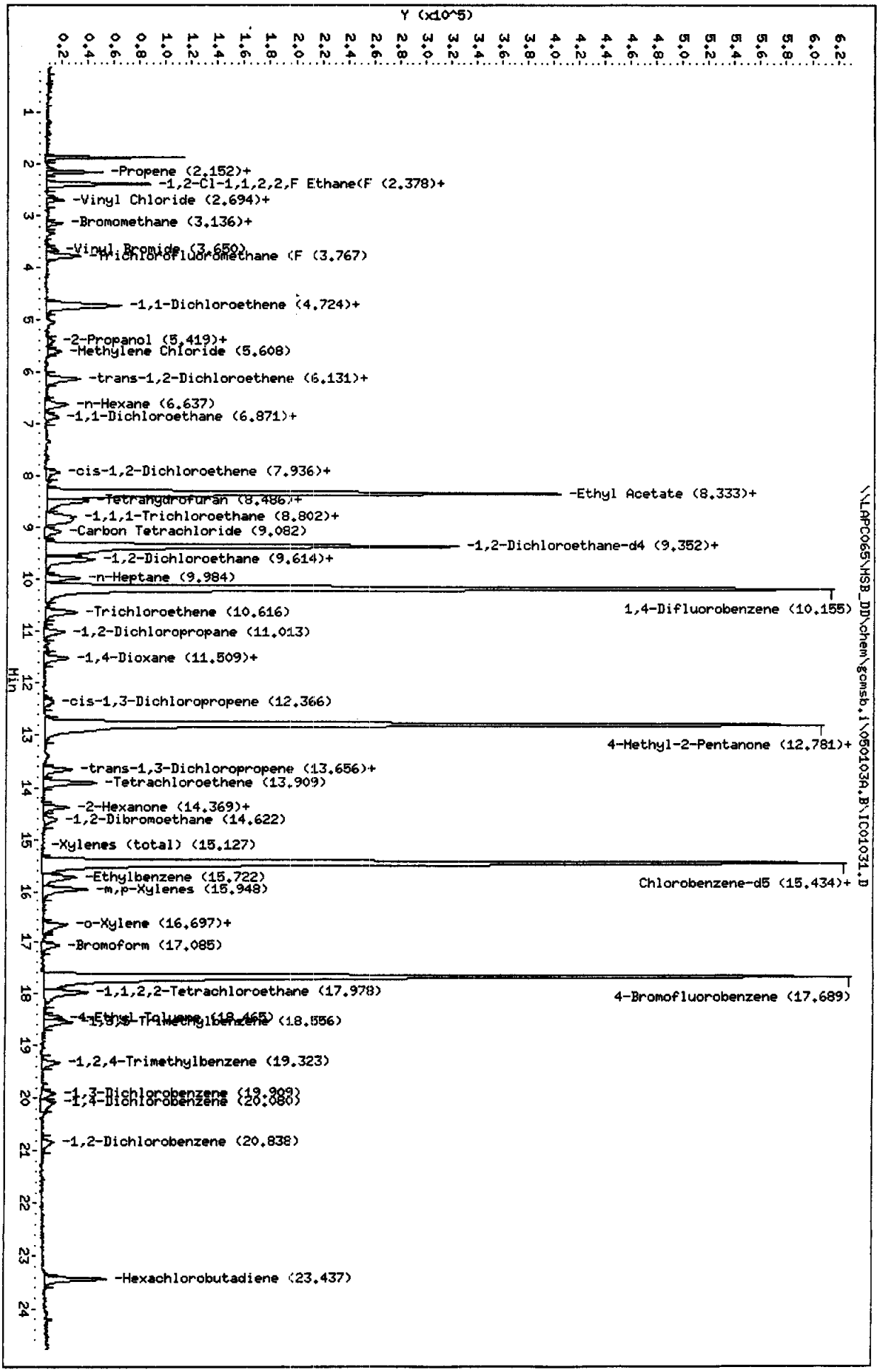
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether(MTBE)	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

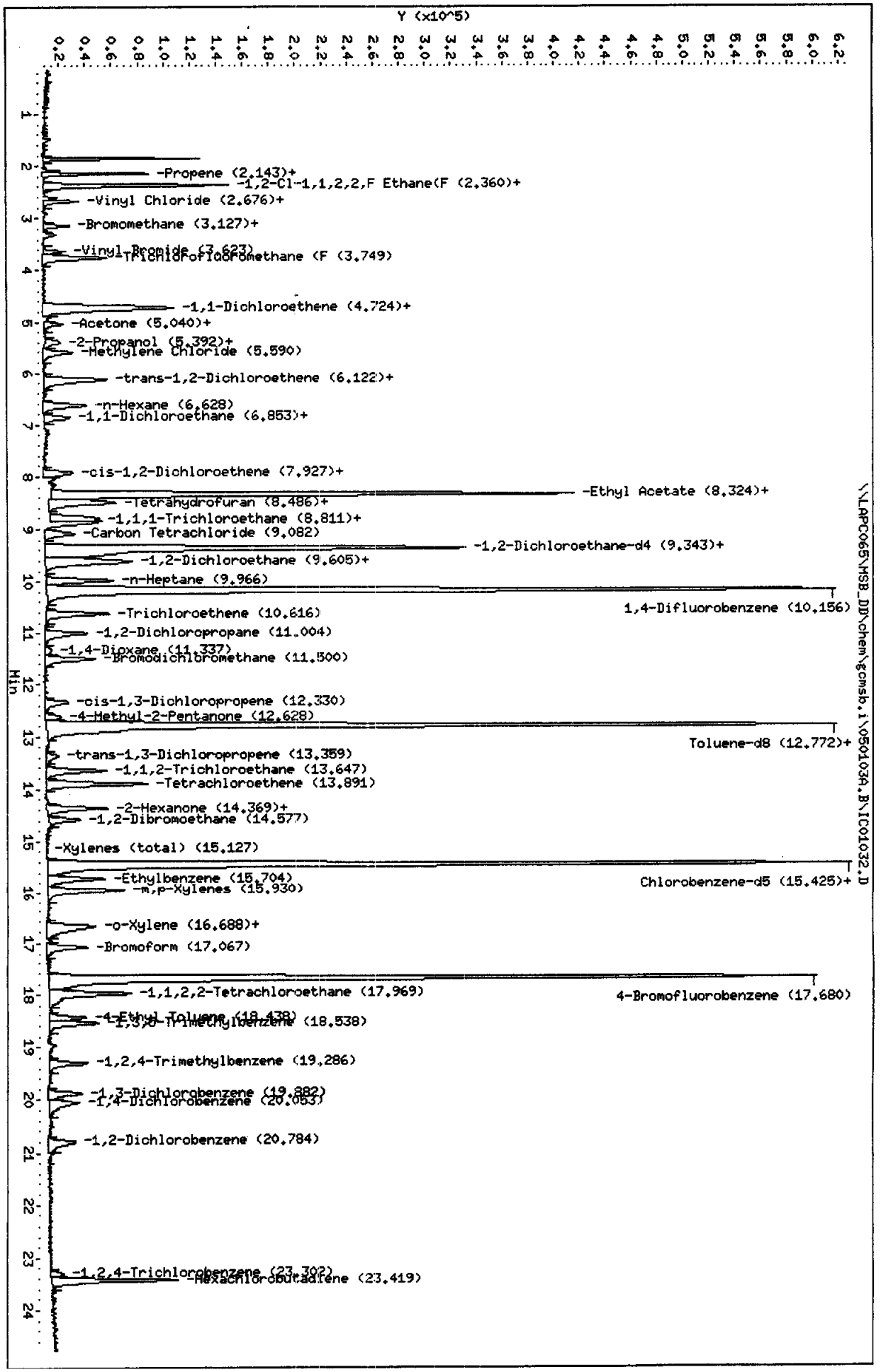
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
	36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
	37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
	40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
	41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
	42 Methyl-tert-butyl ether[MTBE]-	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
	43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
	45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
	53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
	54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
	56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
*	58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
	59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
	60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
	62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
	64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
	68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
	69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
	72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
	81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
	82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
	85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
	89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
	91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
	93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
	95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
	96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
	98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
*	101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
	102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M	99 Xylenes (total)	106				196706	30.0000	28.63
	104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
	105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
	107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
	108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
	110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
	116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

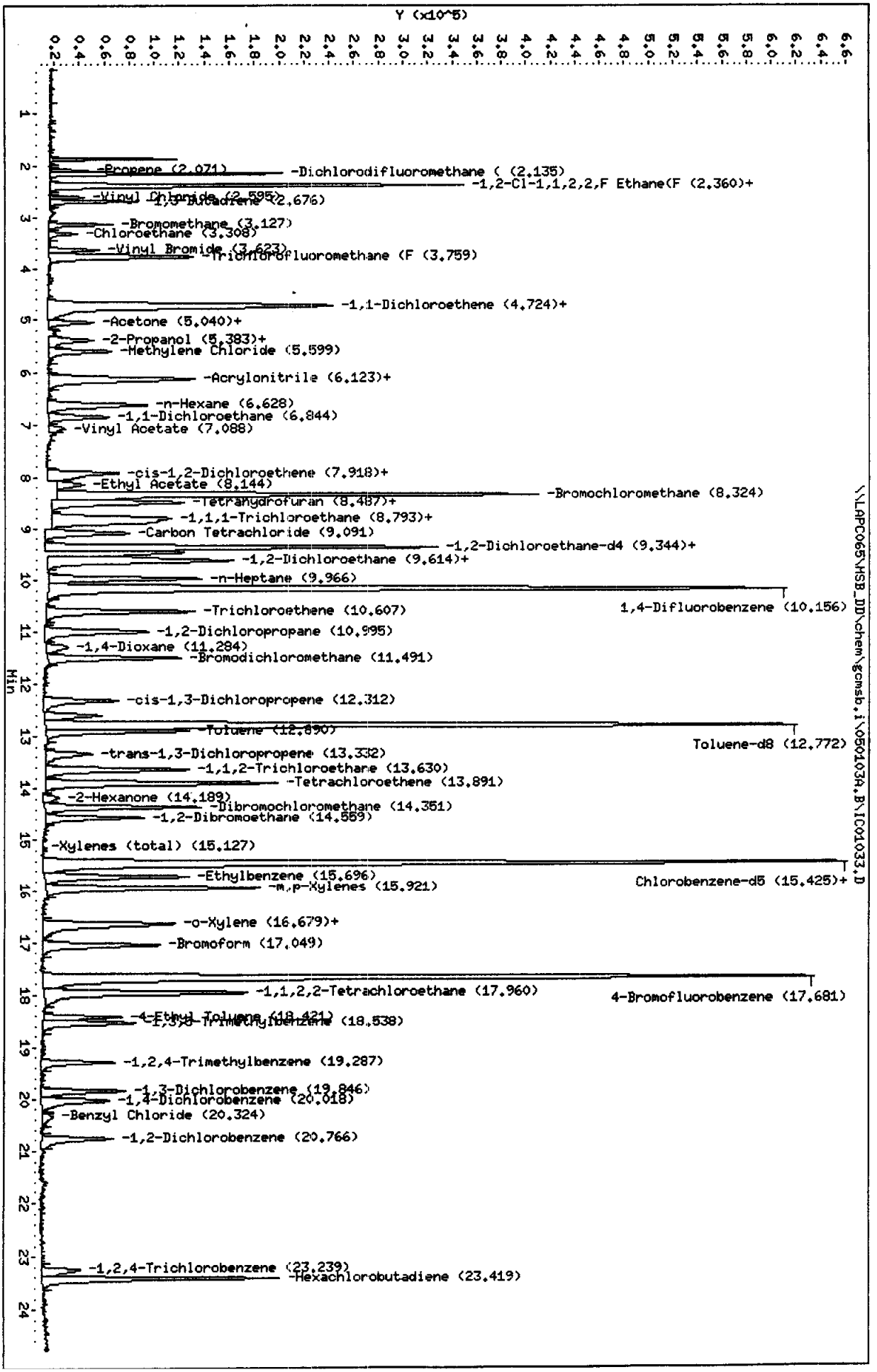
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
	36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
	37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
	40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
	41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
	43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
	44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
	45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
	53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
	54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
	56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
*	58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
	59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
	60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
	61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
	62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
	64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$	66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
	68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
	69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
	70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
	72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
*	73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
	75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
	78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
	81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
	82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
	85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
	86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$	88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
	89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
	91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
	93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
	95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
	96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
	97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
	98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
*	101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
	102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M	99 Xylenes (total)	106				477975	75.0000	68.20
	104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
	105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
	107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
	108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
	110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$	114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

QC Flag Legend

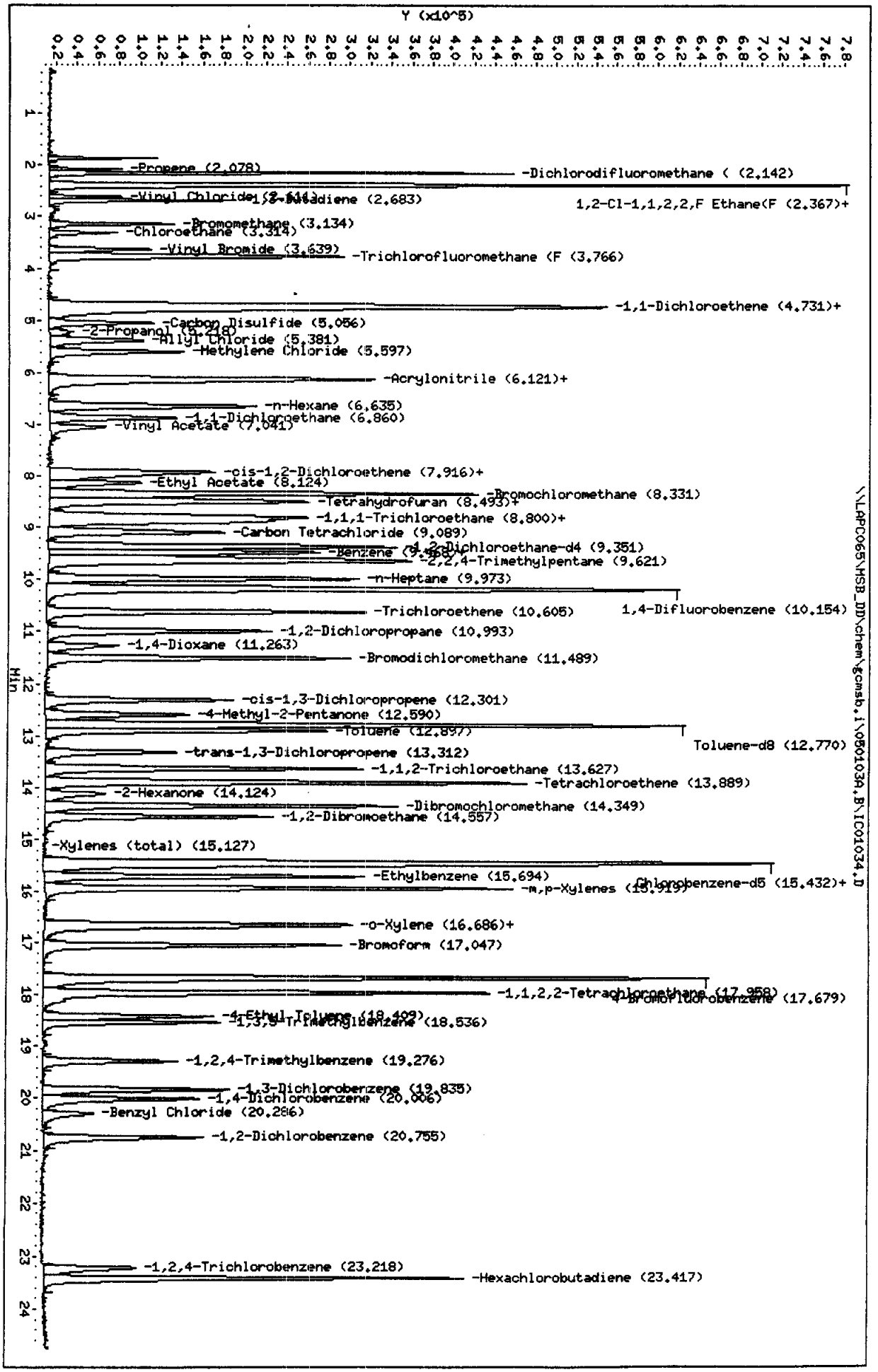
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

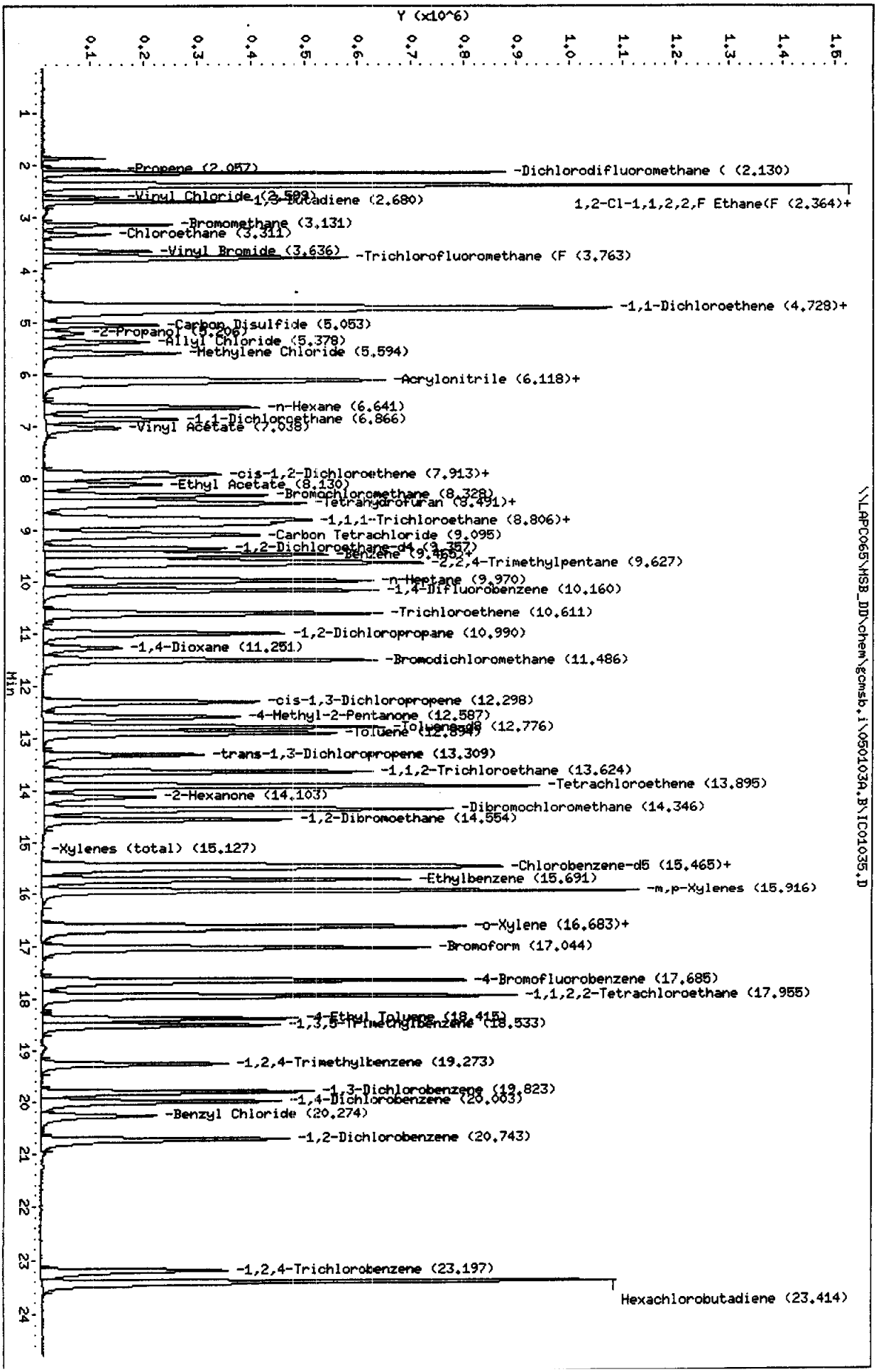
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
	36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
	37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
	40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
	41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
	43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
	44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
	45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
	53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
	54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
	56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
*	58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
	59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
	60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
	61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
	62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
	64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$	66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
	68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
	69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
	70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
	72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
*	73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
	75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
	78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
	81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
	82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
	85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
	86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$	88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
	89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
	91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
	93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
	95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
	96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
	97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
	98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
*	101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
	102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M	99 Xylenes (total)	106				2384108	300.000	320.3
	104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
	105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
	107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
	108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
	110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$	114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

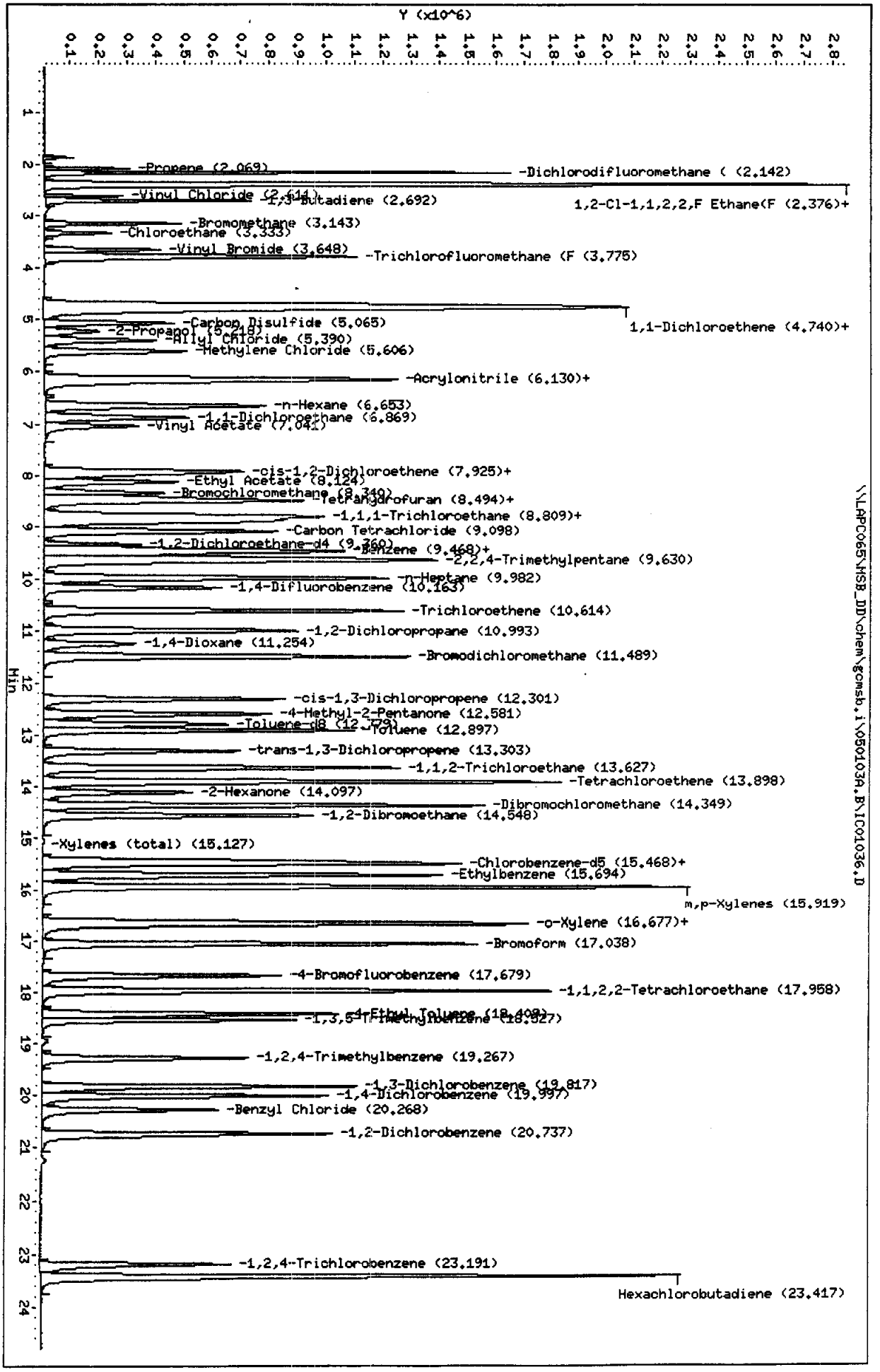
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Lab Smp Id: 500 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

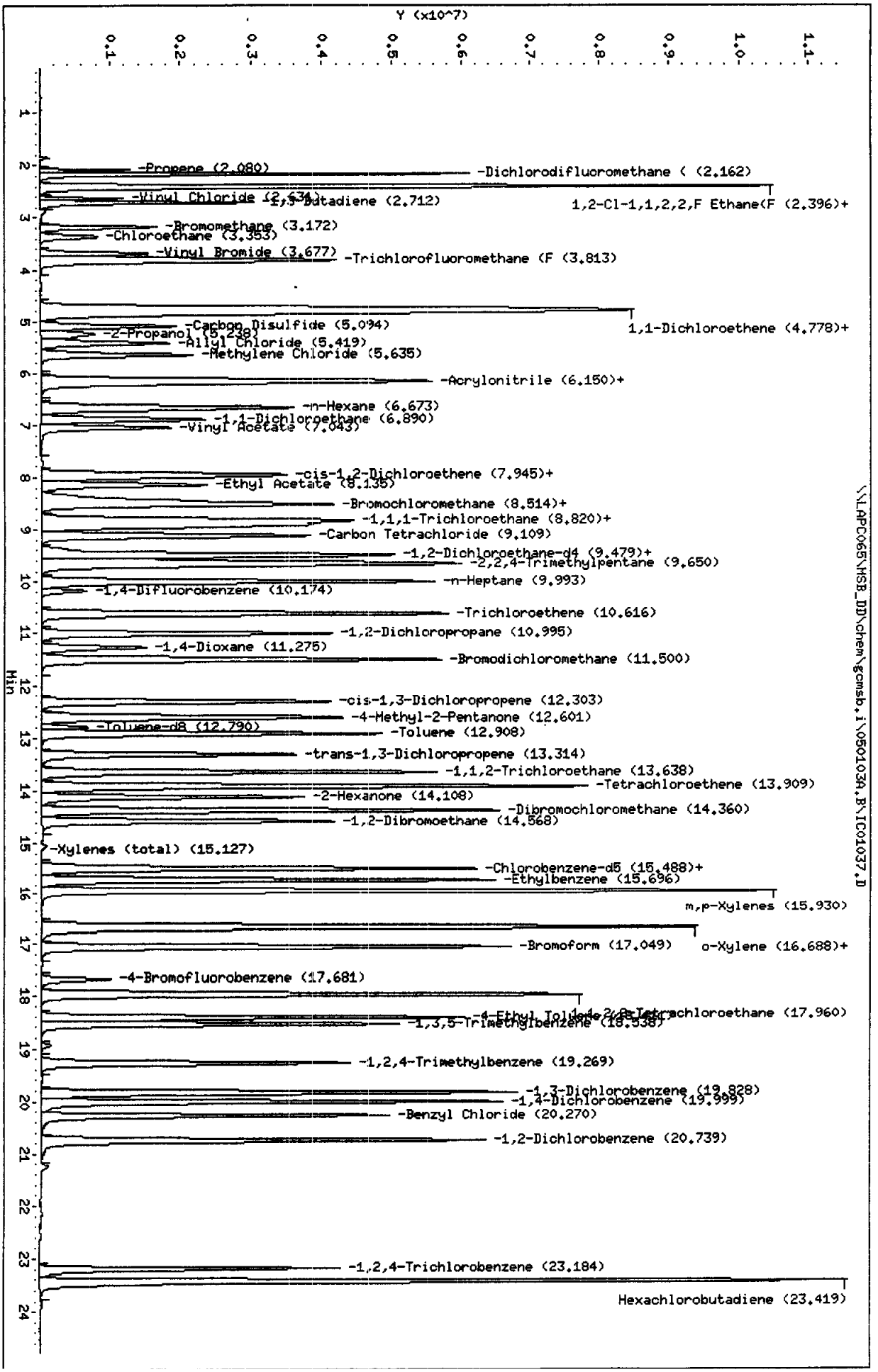
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

TO-14A - Initial Calibration

SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011105 / 5012178

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\ 050111 B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3 05
MS-B	Method File: T014A	Daily Standard: PSL9911028	SOP: GC-MS.003
ook ID:	Tune File:	LCS Standard: PSL9911359	MDL Date: 1-28-01
MS-041	BF041123.m	I.S. Standard: PSL9911283	Blank Lot No. 9050301.00

Date	Time	Data File	Work Order No.	Container No	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
11-05	0751	BF0111	-	-		BFB	28	-	-	-	m	OK	A	
	0802	BF0112	-	-	-	BFB	23	-	-	-	m	OK	A	
	0820	LC0111	-	-	-	CW	125	-	-	-	m	NO	B	
	0844	LC0112	-	-	-	LCS	250	-	-	-	m	NA	C	
	0933	LC0112	-	-	-	CW	125	-	-	-	m	OK.	B	
	1016	LC0112	-	-	-	LCS	250	-	-	-	m	OK	C	
	1045	LC0113	-	-	-	LCSD	250	-	-		m	OK	C	
	1124	MB0111	-	-	-	Method Blank	500	-	-	-	AA	OK	15	Fill "J"
	1152	B7525	G2CWK2Ac	0.1	WMI	GP9A	20	24.3/12.7	-	47.6	AA	OK	16	ESA100153-2
	1[illegible]	B7526	G2CWL2Ac			GP9B	40	24.4/12.6	-	12.2	AA	OK	1	-3
	1259	B7527	G2CWV2Ac			G13A	40	24.2/12.8	100/50	47.3	AA	OK	2	-6
	1335	B7528	G2CWI2Ac			GP13B	20	24.4/12.5	-	48.8	AA	OK	3	-7
	1403	B7529	G141L1Ac	0.1	ERM	LB IN-16	20	22.9/13.6	-	42.1	AA	O/R	4	ESA040240-2
	1430	B7530	G2DF81Ap	0.1	SANDIA	066343 0.1	949	24.1/12.7	-	1	AA	OK	5	ESA100213-1
	1507	B7531	G2DGCIp	0.1		066344-0.1	927	24.1/13.4	-	1	AA	OK	6	2
	1534	B7532	G2DGEIp	0.1		066345-0.1	931	24.2/13.4	-	1	AA	OK	7	3
	1603	B7533	G141L2Ap	0.1	ERM	LB IN-16	20	22.9/13.6	100/100	42.1	AA	OK	4	ESA040240-2
	1633	LC0114	—	—	—	LCS	250	—	—	—	AA	OK	C	

iewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
:MS-B	Method File:	Daily Standard: see previous page	SOP:
ook ID:	Tune File:	LCS Standard:	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
/11	17-1	LC0115			-	LCSD	250	-	-	-	AA	OK	C	
	1737	CC0113	-	-	-	Cellosolve Ace	50	-	-	-	AA	No	7	low?
	1806	CC0114	-	-	-	UBER CCV	250	-	-	-	AA	OK	8	MSL0501060
	1834	CC0115	-	-	-	Methyl Meth.	250	-	-	-	AA	OK	8	MSL0501039
	1910	CC0116	-	-	-	CELLOSOLVE ACE	50	-	-	-	AA	OK	9	MSL0501074
	1945	CC0117	-	-	-	FINAL CCV	250	-	-	-	AA	No	10	MSL0401990
	2021	MB0112	-	-	-	METHOD BLANK	500	-	-	-	AA	OK	11	
	2057	B7534	G18GIAD	001	GZA	SAMS 8 HR	108.0	24.1/12	-	1.00	AA	O/R	12	E4L300284-1 low 50
	2132	B7535	G2EDPIAA		KOMEX	V3-IN-011005	40	23.5/12.8	-	23.2	AA	OK	13	ESA110183-1
	2208	B7536	G2EDRIAA			V3 OUT	300	23.5/12.8	-	3.10	AA	OK	14	-2
	2243	B7537	G2EDUIAA			V1-OUT	964 300	23.5/12.8 23.9/12.4	-1.0	3.10 1.0	AA	OK	15	-3
	2319	B7538	G2DGFIAA		SAWCA	CC6346 001	300	23.5/12.8	-	3.10	AA	OK	16	ESA100214-1
	2355	B7539	G2DGGIAD			CC6347	25	24.8/12.8	-	38.8	AA	OK	1	-2
11/05	0030	B7540	G2DGHIAD			CC6348	50	24.3/12.8	100/200	94.9	AA	OK	2	-3
	0106	B7541	G2DGKIAD			CC6349	20	24.3/12.8	-	47.5	AA	OK	3	-4
	0142	B7542	G2DGLIAD			CC6350	250	24.4/12.7	-	3.94	AA	OK	4	-5
	0217	B7543	G2DGMIAD			CC6351	934	23.7/12.8	-	1.05	AA	OK	5	-6
	0253	B7544	G2ENRIAA		SAWC	FR00044	50	TENTAT	100/10	1000	AA	OK	6	ESA110247-1

iewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ıment ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
MS-B	Method File:	Daily Standard: See Previous Page	SOP:
ɔok ID:	Tune File:	LCS Standard: 1-12-05	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-5	0328	B7545	G2ENTIAA	001	SHAW	FQ[illegible]	250	[illegible]	–	2.00	[illegible]	OK	7	ESA110247 2
	0403	B7546	G2DGPIAD		SANDIA	066352-0001	887	24/13.5	–	1.00	[illegible]	OK	8	ESA100218-1
	0439	B7547	G2DGQIAD			066353	923	23.5/12.9	–		[illegible]	OK	9	-2
	0514	B7548	G2DGRIAD			066354	927	23.4/12.9	–		[illegible]	OK	10	-3
	0548	B7549	G2DGTIAD			066355	950	24.5/12.9	–		[illegible]	OK	11	-4
	0616	B7550	G2DGVIAD			066356	954	24.6/12.9	–		[illegible]	OK	12	-5
	0645	B7551	G2DGWIAD			066357	985	25.4/12.9	–		[illegible]	OK	13	-6
	0714	B7552	G2DG3IAD			066361	50	25.4/12.8	–	41.5	[illegible]	OK	14	ESA100219-4
	0741	B7553	G2DG4IAD			066362	25	22.7/12.8	–	38.6	[illegible]	OK	15	-5

[illegible] 1-12-05

iewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	LCS	605430	8.33	1300958	10.16	858989	15.42
02	LCSD	601083	8.34	1250526	10.16	867984	15.43
03	BLANK	572958	8.32	1219937	10.16	740051	15.42
04	GP9A	593130	8.29	1218775	10.12	812797	15.41
05	GP9B	596256	8.34	1213989	10.16	801292	15.42
06	GP13A	589247	8.32	1206323	10.15	746218	15.42
07	GP13B	587312	8.32	1177970	10.16	741573	15.43
08	LB-IN-16	578407	8.29	1223565	10.13	991223	15.43
09	066343-0001	582886	8.32	1231816	10.16	846746	15.42
10	066344-0001	570864	8.33	1171946	10.16	771769	15.42
11	066345-0001	572298	8.20	1177424	10.06	782311	15.38
12	LB-IN-16	556681	8.33	1192709	10.16	892002	15.42
13	LCS	567294	8.34	1169230	10.16	809704	15.42
14	LCSD	561973	8.30	1176185	10.13	817623	15.42
15	BLANK	555301	8.32	1148790	10.16	769229	15.42
16	SAM'S 8 HR 1	579780	8.36	1152084	10.17	790955	15.42
17	V3-IN 011005	570338	8.32	1161203	10.16	790597	15.42
18	V3-OUT 01100	583371	8.32	1145557	10.15	797949	15.42
19	V1-OUT 01100	535847	8.31	1137317	10.14	785434	15.41
20	066346-0001	522369	8.32	1087705	10.16	657329	15.42
21	066347-0001	545543	8.32	1110011	10.16	726842	15.42
22	066348-0001	537458	8.32	1105439	10.15	769715	15.41

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	066349-0001	544629	8.33	1096053	10.16	754907	15.42
02	066350-0001	535837	8.32	1084269	10.15	721181	15.41
03	066351-0001	535855	8.32	1095897	10.15	723587	15.41
04	FD60044	554825	8.32	1128856	10.15	798570	15.41
05	FD60062	562180	8.32	1140823	10.15	867571	15.41
06	066352-001	540916	8.30	1147952	10.14	804454	15.40
07	066353-001	540953	8.32	1132528	10.15	785812	15.41
08	066354-001	530687	8.31	1116997	10.15	765404	15.40
09	066355-001	546225	8.31	1123284	10.14	779205	15.40
10	066356-001	538046	8.31	1122921	10.14	770855	15.39
11	066357-001	535908	8.31	1104823	10.13	766786	15.39
12	066361-001	554218	8.31	1137553	10.13	788983	15.39
13	066362-001	553034	8.31	1143685	10.13	699702	15.39
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D
Lab Smp Id:
Inj Date : 11-JAN-2005 08:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.083	4.200	(0.000)	95	61389			0.00- 100.00	100.00
4.083	4.200	(0.000)	50	14311			15.00- 40.00	23.31
4.083	4.200	(0.000)	75	33800			30.00- 60.00	55.06
4.083	4.200	(0.000)	96	4414			5.00- 9.00	7.19
4.083	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.083	4.200	(0.000)	174	34714			50.00- 120.00	56.55
4.083	4.200	(0.000)	175	2883			5.00- 9.00	8.31
4.083	4.200	(0.000)	176	33896			95.00- 101.00	97.64
4.083	4.200	(0.000)	177	2457			5.00- 9.00	7.25

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

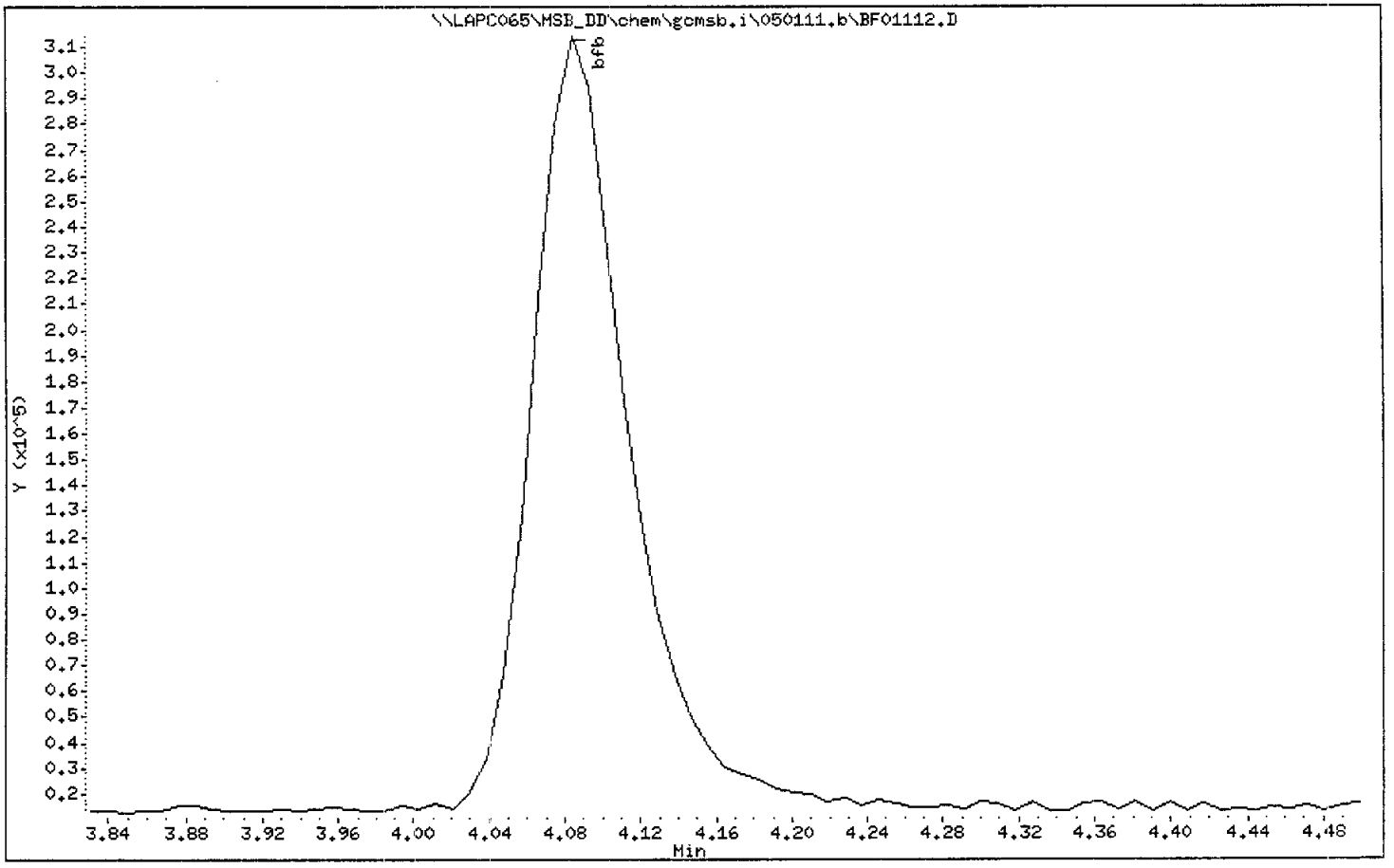
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

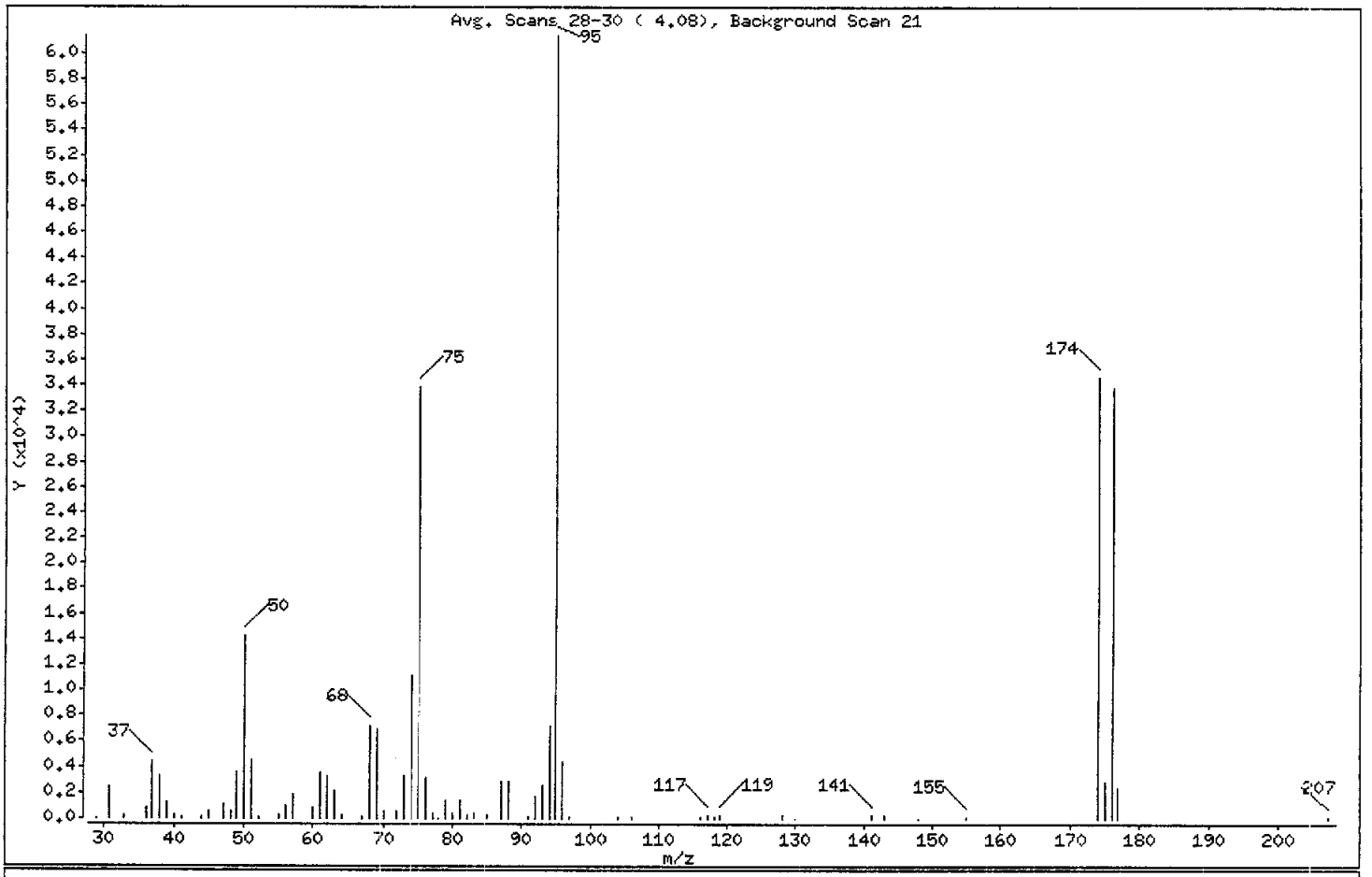
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.31
75	30.00 - 60.00% of mass 95	55.06
96	5.00 - 9.00% of mass 95	7.19
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.55
175	5.00 - 9.00% of mass 174	4.70 (8.31)
176	95.00 - 101.00% of mass 174	55.22 (97.64)
177	5.00 - 9.00% of mass 176	4.00 (7.25)

1/11/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01112.D
Spectrum: Avg. Scans 28-30 (4.08), Background Scan 21
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	49	56.00	1041	79.00	1354	117.00	309
31.00	2469	57.00	1799	80.00	435	118.00	72
33.00	306	60.00	819	81.00	1455	119.00	261
36.00	815	61.00	3492	82.00	343	128.00	244
37.00	4317	62.00	3302	83.00	416	130.00	64
38.00	3306	63.00	2183	85.00	222	141.00	328
39.00	1329	64.00	243	87.00	2778	143.00	288
40.00	218	67.00	79	88.00	2844	148.00	61
41.00	75	68.00	7171	91.00	173	155.00	73
44.00	151	69.00	6921	92.00	1757	174.00	34712
45.00	557	70.00	534	93.00	2514	175.00	2883
47.00	1063	72.00	615	94.00	7253	176.00	33896
48.00	603	73.00	3214	95.00	61384	177.00	2457
49.00	3532	74.00	11218	96.00	4414	207.00	147
50.00	14311	75.00	33800	97.00	128		
51.00	4552	76.00	3160	104.00	170		
52.00	210	77.00	457	106.00	82		
55.00	238	78.00	49	116.00	157		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 11-JAN-2005 09:33
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.083	2.083	(0.250)	117930	50.0000	51.33
3 Dichlorodifluoromethane (F12)	85	2.156	2.156	(0.259)	1335764	50.0000	50.53
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.381	2.381	(0.286)	1100999	50.0000	51.22
8 Chloromethane	52	2.426	2.426	(0.291)	63714	50.0000	54.30
9 Vinyl Chloride	62	2.616	2.616	(0.314)	261876	50.0000	51.42
12 1,3-Butadiene	39	2.688	2.688	(0.323)	363774	100.000	105.4
15 Bromomethane	94	3.148	3.148	(0.378)	326505	50.0000	51.57
16 Chloroethane	64	3.328	3.328	(0.400)	169618	50.0000	52.59
19 Vinyl Bromide	106	3.644	3.644	(0.438)	382508	50.0000	52.74
21 Trichlorofluoromethane (F11)	101	3.771	3.771	(0.453)	1341408	50.0000	50.34
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	711253	50.0000	50.32
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.745	4.745	(0.570)	1516275	50.0000	49.52
31 Acetone	58	4.853	4.853	(0.583)	107056	50.0000	53.42(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	780141	50.0000	58.69

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.214	5.214	(0.626)	364415	50.0000	51.42
	36 Allyl Chloride	41	5.386	5.386	(0.647)	393313	50.0000	53.60
	37 Methylene Chloride	49	5.593	5.593	(0.672)	426041	50.0000	48.82
	40 Acrylonitrile	53	6.089	6.089	(0.731)	129782	50.0000	55.14
	41 trans-1,2-Dichloroethene	61	6.107	6.107	(0.733)	630975	50.0000	51.30
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	1051552	50.0000	50.39
	43 n-Hexane	41	6.640	6.640	(0.797)	479458	50.0000	49.66
	44 1,1-Dichloroethane	63	6.865	6.865	(0.824)	774211	50.0000	49.98
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	800344	50.0000	53.69
	53 cis-1,2-Dichloroethene	96	7.912	7.912	(0.950)	407276	50.0000	50.88
	54 2-Butanone	72	7.975	7.975	(0.958)	142440	50.0000	53.43
	56 Ethyl Acetate	43	8.120	8.120	(0.975)	831706	50.0000	57.75
*	58 Bromochloromethane	49	8.327	8.327	(1.000)	626211	50.0000	
	59 Tetrahydrofuran	42	8.426	8.426	(1.012)	346205	50.0000	50.08
	60 Chloroform	83	8.489	8.489	(1.020)	983891	50.0000	49.38
	61 1,1,1-Trichloroethane	97	8.787	8.787	(1.055)	1008479	50.0000	50.63
	62 Cyclohexane	84	8.886	8.886	(1.067)	495362	50.0000	49.57
	64 Carbon Tetrachloride	117	9.085	9.085	(1.091)	891656	50.0000	67.37
$	66 1,2-Dichloroethane-d4	65	9.347	9.347	(0.920)	574558	50.0000	51.69
	68 Benzene	78	9.446	9.446	(0.930)	926438	50.0000	50.26
	69 1,2-Dichloroethane	62	9.482	9.482	(0.933)	599238	50.0000	49.91
	70 2,2,4-Trimethylpentane	57	9.617	9.617	(0.947)	2400722	50.0000	50.71
	72 n-Heptane	43	9.969	9.969	(0.981)	804793	50.0000	50.74
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1354487	50.0000	
	75 Trichloroethene	130	10.601	10.601	(1.044)	598705	50.0000	50.62
	78 1,2-Dichloropropane	76	10.980	10.980	(1.081)	232636	50.0000	52.40
	81 1,4-Dioxane	88	11.250	11.250	(1.107)	238899	50.0000	55.83
	82 Bromodichloromethane	85	11.485	11.485	(1.131)	836676	50.0000	56.68
	85 cis-1,3-Dichloropropene	75	12.297	12.297	(1.210)	708701	50.0000	58.22
	86 4-Methyl-2-Pentanone	58	12.577	12.577	(1.238)	324482	50.0000	52.15(Q)
$	88 Toluene-d8	100	12.766	12.766	(1.257)	729149	50.0000	51.41
	89 Toluene	91	12.883	12.883	(1.268)	1196268	50.0000	50.16
	91 trans-1,3-Dichloropropene	75	13.299	13.299	(0.862)	531738	50.0000	60.66
	93 1,1,2-Trichloroethane	97	13.614	13.614	(0.883)	584963	50.0000	50.02
	95 Tetrachloroethene	166	13.885	13.885	(0.901)	799613	50.0000	49.27
	96 2-Hexanone	58	14.102	14.102	(0.915)	299445	50.0000	57.23(Q)
	97 Dibromochloromethane	129	14.336	14.336	(0.930)	1180268	50.0000	60.14
	98 1,2-Dibromoethane	107	14.544	14.544	(0.943)	1064031	50.0000	54.28
*	101 Chlorobenzene-d5	117	15.419	15.419	(1.000)	1036663	50.0000	
	102 Chlorobenzene	112	15.473	15.473	(1.004)	963820	50.0000	50.64
M	99 Xylenes (total)	106				1339965	150.000	158.5
	104 Ethylbenzene	91	15.681	15.681	(1.017)	1553375	50.0000	52.72
	105 m,p-Xylenes	106	15.906	15.906	(1.032)	899918	100.000	105.2
	107 o-Xylene	106	16.664	16.664	(1.081)	440047	50.0000	53.37
	108 Styrene	104	16.691	16.691	(1.083)	578818	50.0000	56.03
	110 Bromoform	173	17.034	17.034	(1.105)	1027616	50.0000	66.57
$	114 4-Bromofluorobenzene	95	17.675	17.675	(1.146)	949556	50.0000	51.28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1513781	50.0000	53.91
123 4-Ethyl Toluene	105	18.396	18.396	(1.193)	981084	50.0000	55.86
124 1,3,5-Trimethylbenzene	105	18.523	18.523	(1.201)	858186	50.0000	43.74
131 1,2,4-Trimethylbenzene	120	19.263	19.263	(1.249)	268525	50.0000	47.05
134 1,3-Dichlorobenzene	146	19.813	19.813	(1.285)	604990	50.0000	55.44
136 1,4-Dichlorobenzene	146	19.993	19.993	(1.297)	553651	50.0000	49.32
138 Benzyl Chloride	91	20.255	20.255	(1.314)	697827	50.0000	59.76
140 1,2-Dichlorobenzene	146	20.724	20.724	(1.344)	562107	50.0000	50.39
144 1,2,4-Trichlorobenzene	180	23.187	23.187	(1.504)	338601	50.0000	61.30
145 Hexachlorobutadiene	225	23.404	23.404	(1.518)	457511	50.0000	45.42

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
1 Propene	0.18345	0.18832	0.010	2.7	30.0	
3 Dichlorodifluoromethane (F1	2.11052	2.13309	0.010	1.1	30.0	
5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.75819	0.010	2.5	30.0	
8 Chloromethane	0.09369	0.10175	0.100	8.6	30.0	
9 Vinyl Chloride	0.40660	0.41819	0.010	2.8	30.0	
12 1,3-Butadiene	0.27551	0.29046	0.010	5.4	30.0	
15 Bromomethane	0.50552	0.52140	0.010	3.1	30.0	
16 Chloroethane	0.25753	0.27087	0.010	5.2	30.0	
19 Vinyl Bromide	0.57915	0.61083	0.010	5.5	30.0	
21 Trichlorofluoromethane (F11	2.12773	2.14210	0.010	0.7	30.0	
28 1,1-Dichloroethene	1.12859	1.13580	0.010	0.6	30.0	
30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.42135	0.010	-1.0	30.0	
31 Acetone	0.16001	0.17096	0.010	6.8	30.0	
33 Carbon Disulfide	1.06127	1.24581	0.010	17.4	30.0	
34 2-Propanol	0.56591	0.58194	0.010	2.8	30.0	
36 Allyl Chloride	0.58587	0.62808	0.010	7.2	30.0	
37 Methylene Chloride	0.69686	0.68035	0.010	-2.4	30.0	
40 Acrylonitrile	0.18791	0.20725	0.010	10.3	30.0	
41 trans-1,2-Dichloroethene	0.98199	1.00761	0.010	2.6	30.0	
42 Methyl-tert-butyl ether[MTB	1.66607	1.67923	0.010	0.8	30.0	
43 n-Hexane	0.77083	0.76565	0.010	-0.7	30.0	
44 1,1-Dichloroethane	1.23672	1.23634	0.100	-0.0	30.0	
45 Vinyl Acetate	1.19013	1.27807	0.010	7.4	30.0	
53 cis-1,2-Dichloroethene	0.63910	0.65038	0.010	1.8	30.0	
54 2-Butanone	0.21287	0.22746	0.010	6.9	30.0	
56 Ethyl Acetate	1.14995	1.32816	0.010	15.5	30.0	
59 Tetrahydrofuran	0.55193	0.55286	0.010	0.2	30.0	
60 Chloroform	1.59075	1.57118	0.010	-1.2	30.0	
61 1,1,1-Trichloroethane	1.59033	1.61045	0.010	1.3	30.0	
62 Cyclohexane	0.79797	0.79105	0.010	-0.9	30.0	
64 Carbon Tetrachloride	1.05674	1.42389	0.010	34.7	30.0	<-
$ 66 1,2-Dichloroethane-d4	0.41033	0.42419	0.010	3.4	30.0	
68 Benzene	0.68038	0.68398	0.010	0.5	30.0	
69 1,2-Dichloroethane	0.44323	0.44241	0.010	-0.2	30.0	
70 2,2,4-Trimethylpentane	1.74763	1.77242	0.010	1.4	30.0	

AA 1/11/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	72 n-Heptane	0.58544	0.59417	0.010	1.5	30.0	
	75 Trichloroethene	0.43657	0.44202	0.010	1.2	30.0	
	78 1,2-Dichloropropane	0.16390	0.17175	0.010	4.8	30.0	
	81 1,4-Dioxane	0.15796	0.17638	0.010	11.7	30.0	
	82 Bromodichloromethane	0.54492	0.61771	0.010	13.4	30.0	
	85 cis-1,3-Dichloropropene	0.44931	0.52323	0.010	16.5	30.0	
	86 4-Methyl-2-Pentanone	0.22967	0.23956	0.010	4.3	30.0	
$	88 Toluene-d8	0.52356	0.53832	0.010	2.8	30.0	
	89 Toluene	0.88039	0.88319	0.010	0.3	30.0	
	91 trans-1,3-Dichloropropene	0.42279	0.51293	0.010	21.3	30.0	
	93 1,1,2-Trichloroethane	0.56403	0.56427	0.010	0.0	30.0	
	95 Tetrachloroethene	0.78282	0.77133	0.010	-1.5	30.0	
	96 2-Hexanone	0.25237	0.28886	0.010	14.5	30.0	
	97 Dibromochloromethane	0.94658	1.13853	0.010	20.3	30.0	
	98 1,2-Dibromoethane	0.94544	1.02640	0.010	8.6	30.0	
	102 Chlorobenzene	0.91801	0.92973	0.300	1.3	30.0	
M	99 Xylenes (total)	0.40771	0.43086	0.010	5.7	30.0	
	104 Ethylbenzene	1.42124	1.49844	0.010	5.4	30.0	
	105 m,p-Xylenes	0.41273	0.43405	0.010	5.2	30.0	
	107 o-Xylene	0.39767	0.42448	0.010	6.7	30.0	
	108 Styrene	0.49829	0.55835	0.010	12.1	30.0	
	110 Bromoform	0.74450	0.99127	0.100	33.1	30.0	<-
$	114 4-Bromofluorobenzene	0.89318	0.91597	0.010	2.6	30.0	
	116 1,1,2,2-Tetrachloroethane	1.35429	1.46024	0.300	7.8	30.0	
	123 4-Ethyl Toluene	0.84706	0.94639	0.010	11.7	30.0	
	124 1,3,5-Trimethylbenzene	0.94631	0.82783	0.010	-12.5	30.0	
	131 1,2,4-Trimethylbenzene	0.27527	0.25903	0.010	-5.9	30.0	
	134 1,3-Dichlorobenzene	0.52632	0.58359	0.010	10.9	30.0	
	136 1,4-Dichlorobenzene	0.54141	0.53407	0.010	-1.4	30.0	
	138 Benzyl Chloride	0.56325	0.67315	0.010	19.5	30.0	
	140 1,2-Dichlorobenzene	0.53798	0.54223	0.010	0.8	30.0	
	144 1,2,4-Trichlorobenzene	0.26641	0.32663	0.010	22.6	30.0	
	145 Hexachlorobutadiene	0.48586	0.44133	0.010	-9.2	30.0	

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D

Date : 11-JAN-2005 09:33

Client ID: MSL04011028

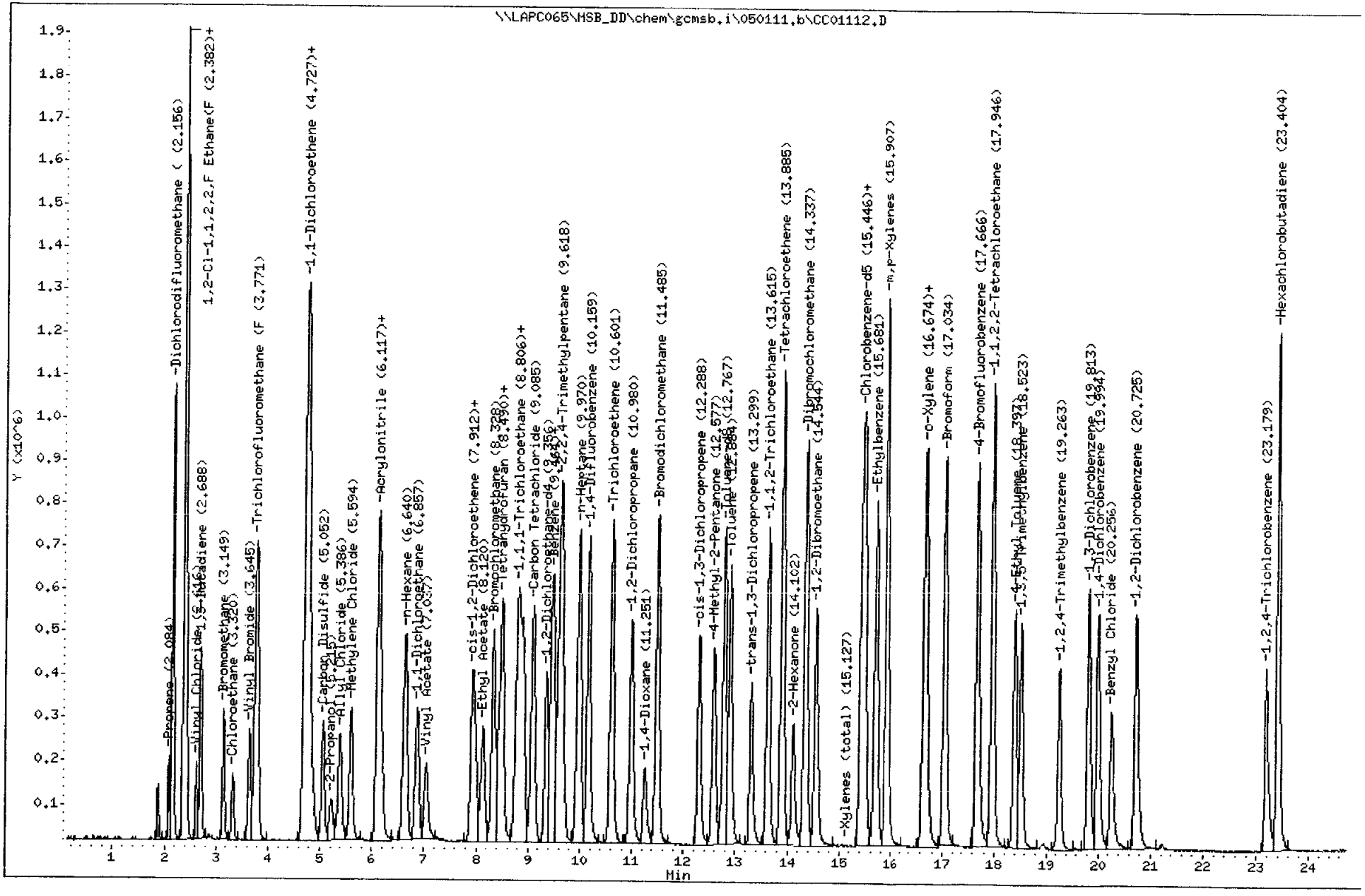
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



E5A100213

Reduced By: KH Date: 1/11/05 LCSD Report
Reviewed By: [illegible] Date: 1/12/05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01112.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 11-JAN-2005 10:16

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01113.D
Samp Info : LCSD,LCSD,PSL9911359
Inj Date : 11-JAN-2005 10:45

	Concentration				%Recovery			RPD	
	Mass Spiked	Measured							
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	53.0	51.4	52.2	103.4	70	125	3	20
Methylene Chloride									
54.5	188.95	56.6	55.7	56.1	103.0	75	120	2	20
Trichloroethene									
49.5	265.47	50.4	50.2	50.3	101.7	70	125	0	20
Toluene									
49.5	186.17	48.1	49.2	48.6	98.3	75	125	2	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	56.3	55.0	55.7	111.3	65	130	2	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01112.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 11-JAN-2005 10:16
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

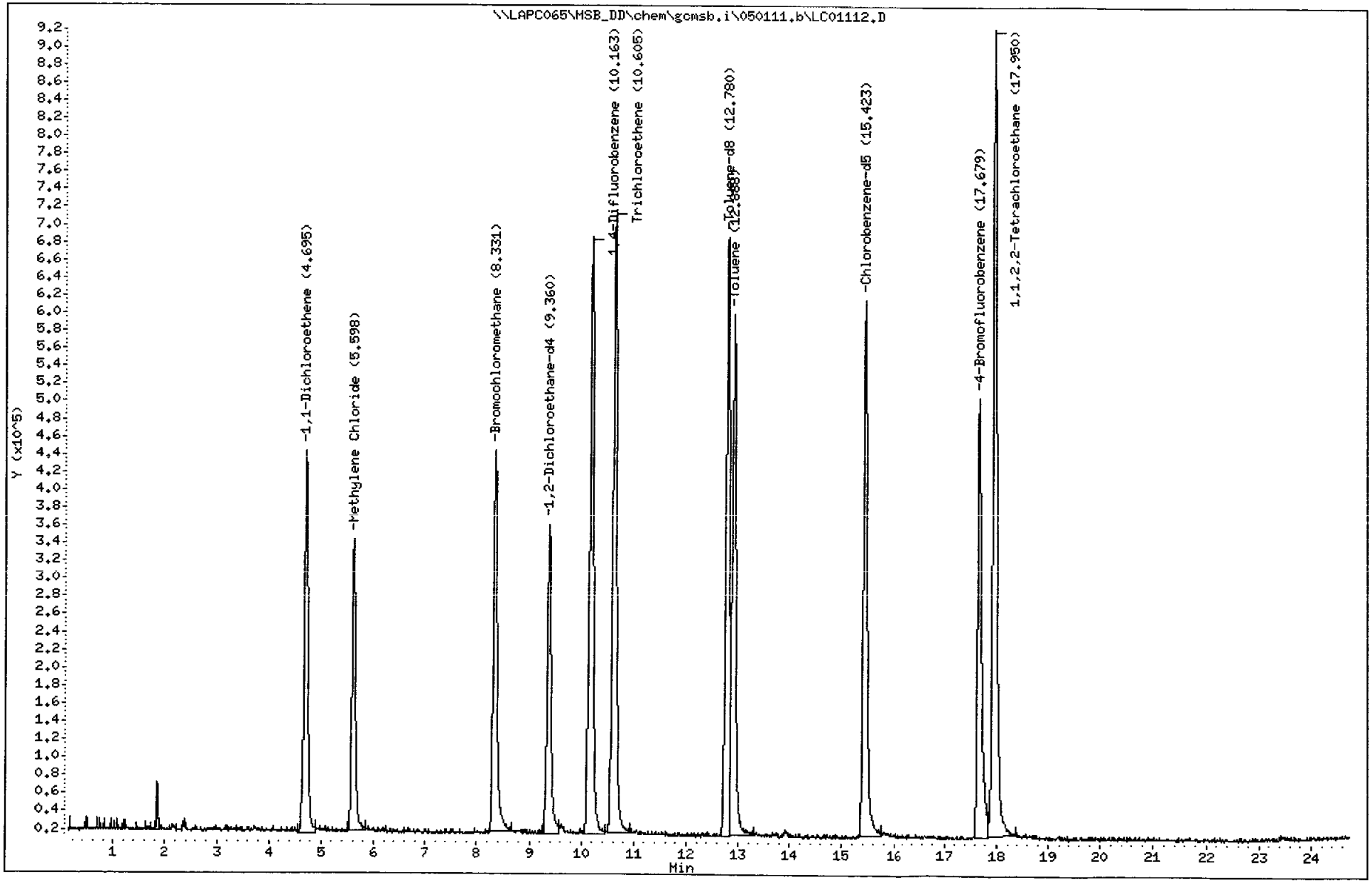
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.695	4.700	(0.564)	724253	52.9980	53.00
37 Methylene Chloride	49	5.606	5.593	(0.673)	477583	56.5990	56.60
* 58 Bromochloromethane	49	8.331	8.327	(1.000)	605430	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.360	9.347	(0.921)	525576	49.2277	49.23
* 73 1,4-Difluorobenzene	114	10.163	10.159	(1.000)	1300958	50.0000	
75 Trichloroethene	130	10.605	10.601	(1.044)	572629	50.4107	50.41
$ 88 Toluene-d8	100	12.779	12.766	(1.257)	671849	49.3186	49.32
89 Toluene	91	12.887	12.883	(1.268)	1101020	48.0649	48.06
* 101 Chlorobenzene-d5	117	15.423	15.419	(1.000)	858989	50.0000	
$ 114 4-Bromofluorobenzene	95	17.678	17.675	(1.146)	558279	36.3825	36.38
116 1,1,2,2-Tetrachloroethane	83	17.949	17.945	(1.164)	1309842	56.2974	56.30

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01112.D
Date : 11-JAN-2005 10:16
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01113.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 11-JAN-2005 10:45
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,PSL9911359
Misc Info : 1,1,100,100,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

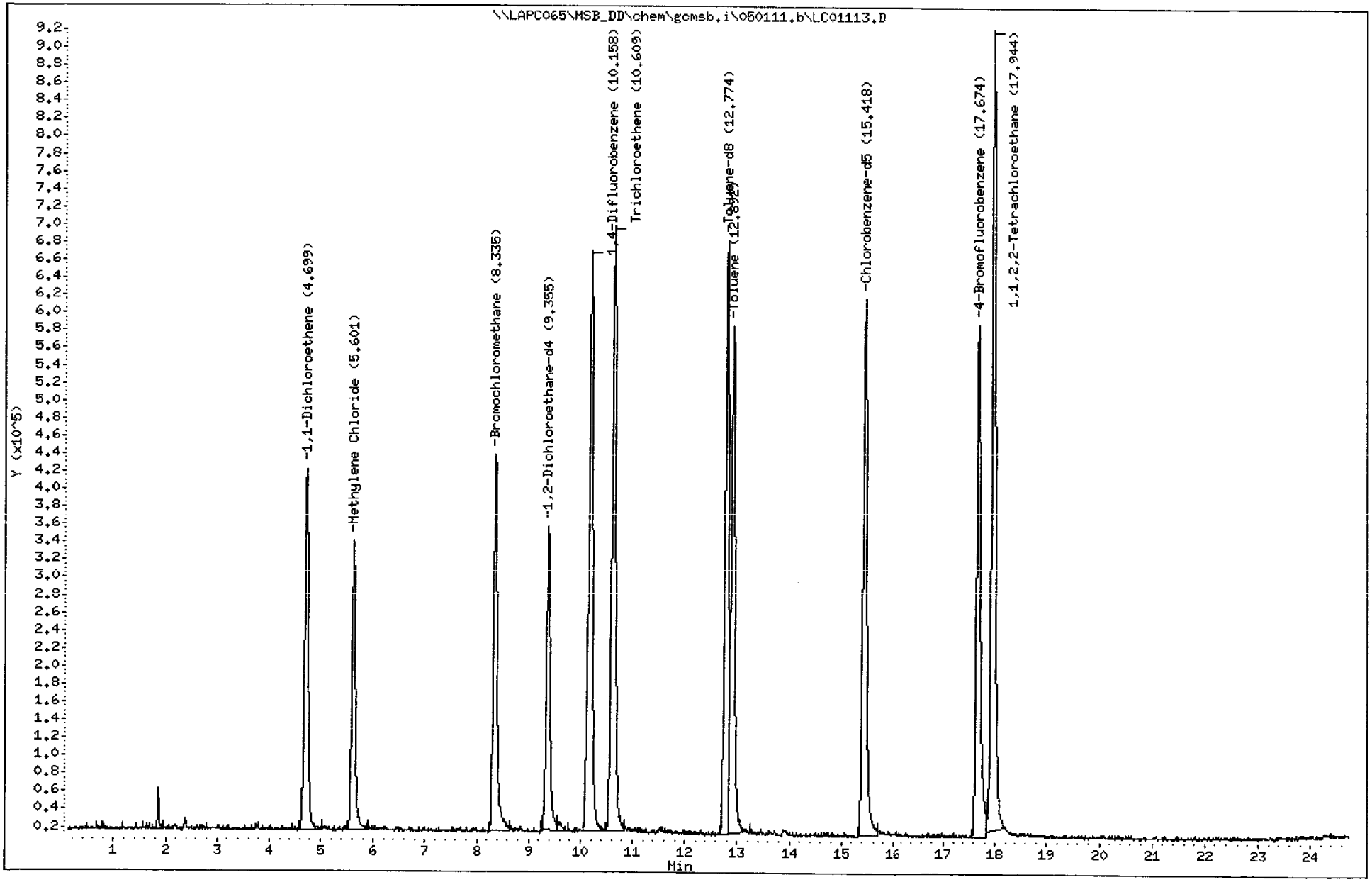
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.699	4.700	(0.564)	697714	51.4252	51.42
37 Methylene Chloride	49	5.601	5.593	(0.672)	466383	55.6715	55.67
* 58 Bromochloromethane	49	8.335	8.327	(1.000)	601083	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.354	9.347	(0.921)	502239	48.9390	48.94
* 73 1,4-Difluorobenzene	114	10.157	10.159	(1.000)	1250526	50.0000	
75 Trichloroethene	130	10.609	10.601	(1.044)	548466	50.2308	50.23
$ 88 Toluene-d8	100	12.774	12.766	(1.258)	654420	49.9766	49.98
89 Toluene	91	12.891	12.883	(1.269)	1083980	49.2294	49.23
* 101 Chlorobenzene-d5	117	15.427	15.419	(1.000)	867984	50.0000	
$ 114 4-Bromofluorobenzene	95	17.673	17.675	(1.146)	645945	41.6594	41.66
116 1,1,2,2-Tetrachloroethane	83	17.944	17.945	(1.163)	1294107	55.0447	55.04

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01113.D
Date : 11-JAN-2005 10:45
Client ID: LCSD
Sample Info: LCSD,LCSD,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01111.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 11-JAN-2005 11:24
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.745	(0.570)	19265	0.68772	0.6877(a)
* 58 Bromochloromethane	49	8.323	8.327	(1.000)	572958	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.352	9.347	(0.921)	501738	50.1161	50.12
* 73 1,4-Difluorobenzene	114	10.155	10.159	(1.000)	1219937	50.0000	
$ 88 Toluene-d8	100	12.772	12.766	(1.258)	594614	46.5480	46.55
* 101 Chlorobenzene-d5	117	15.424	15.419	(1.000)	740051	50.0000	
$ 114 4-Bromofluorobenzene	95	17.680	17.675	(1.146)	481489	36.4212	36.42

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

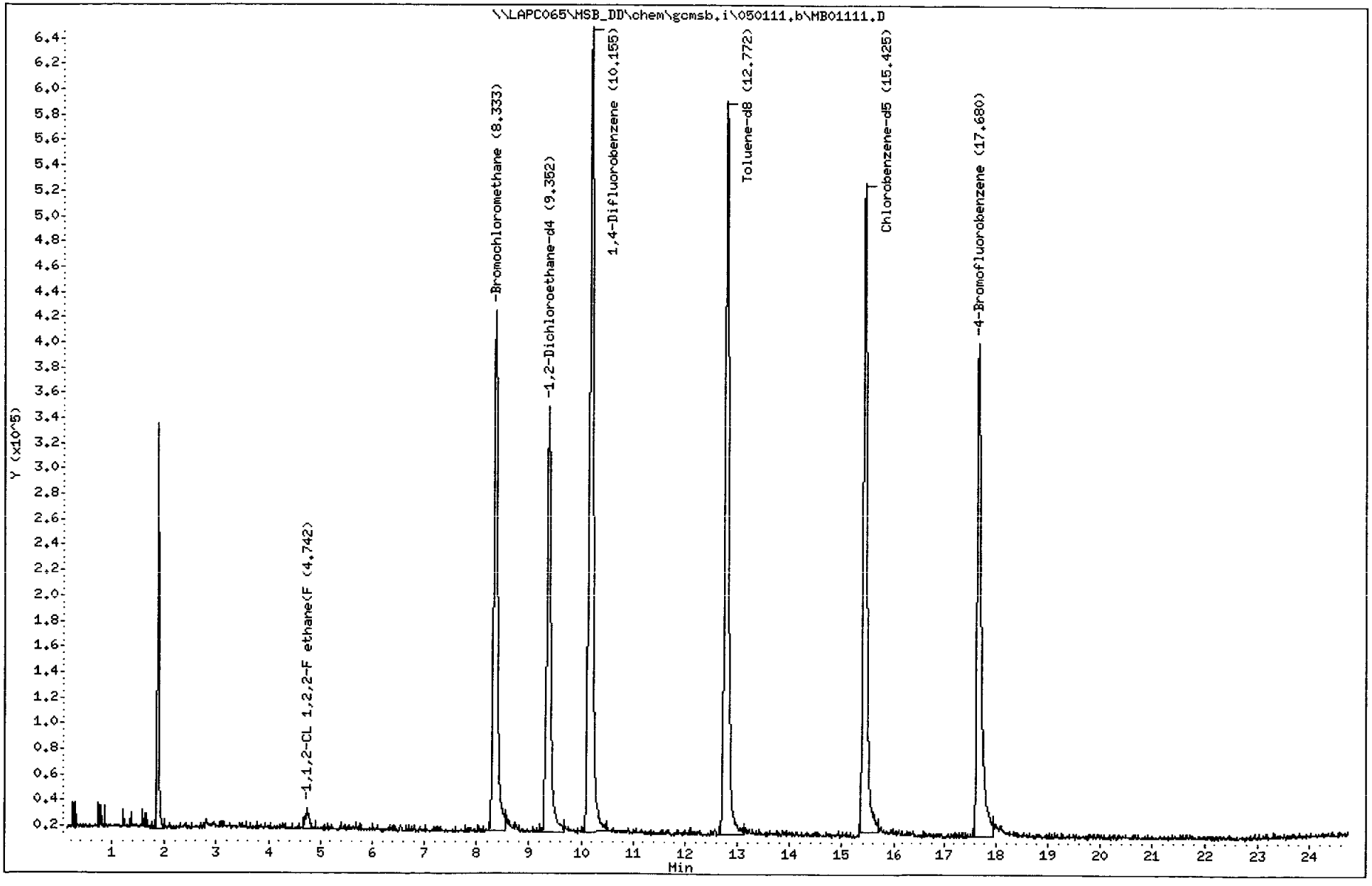
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01111.D
Date : 11-JAN-2005 11:24
Client ID: BLANK
Sample Info: BLANK,BLANK,

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01111.D

Date : 11-JAN-2005 11:24

Client ID: BLANK

Instrument: gcmsb.i

Sample Info: BLANK,BLANK,

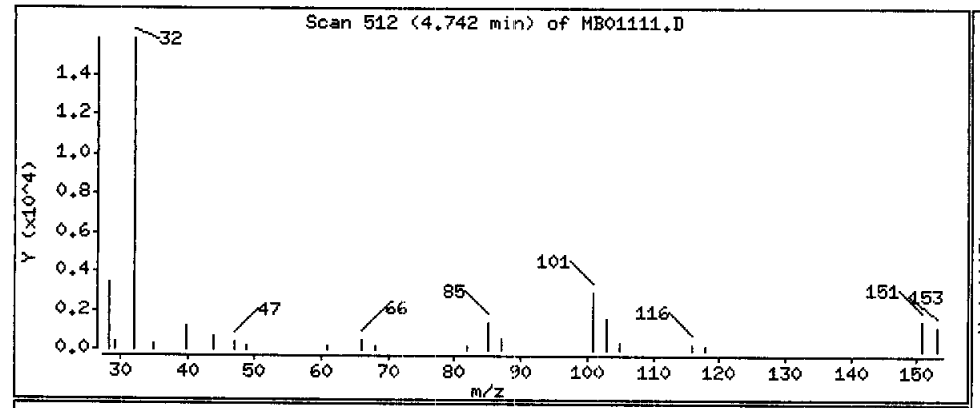
Operator: DLK

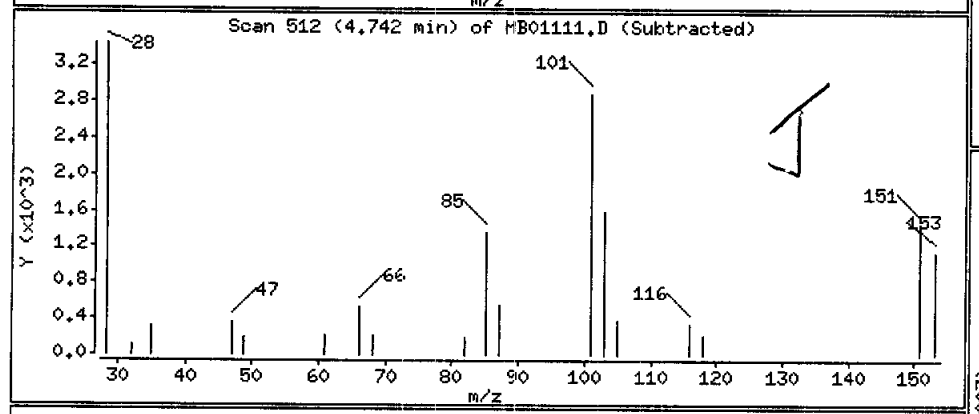
Column phase: J&W DB-624

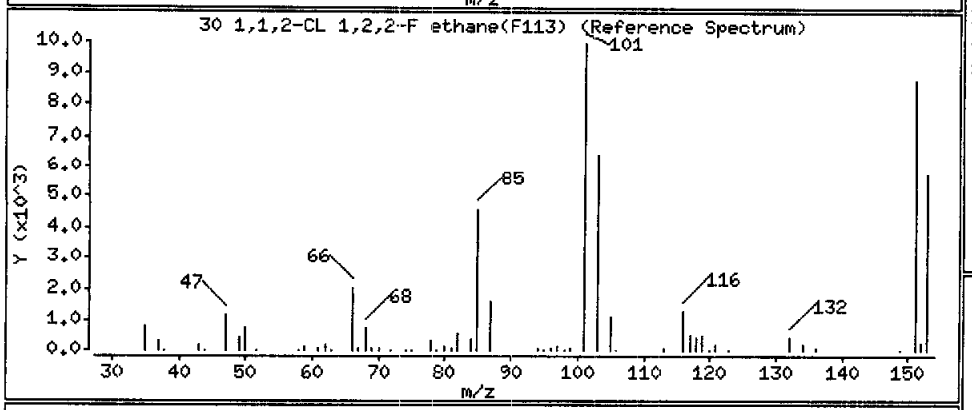
Column diameter: 0.53

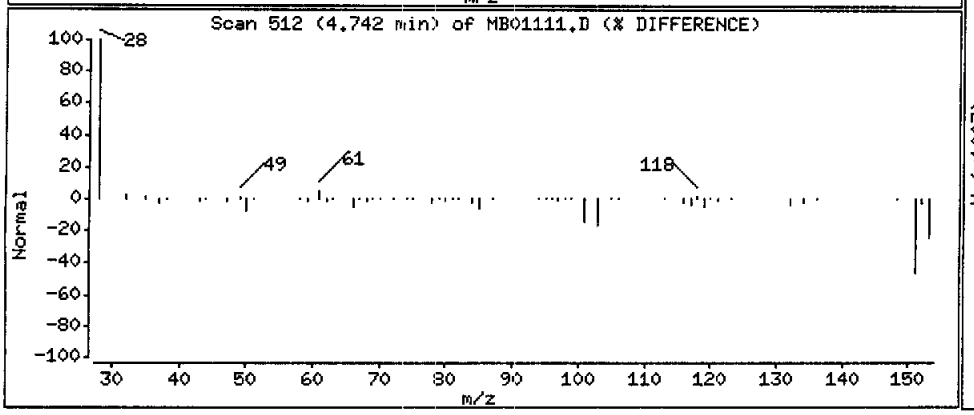
30 1,1,2-CL 1,2,2-F ethane(F113)

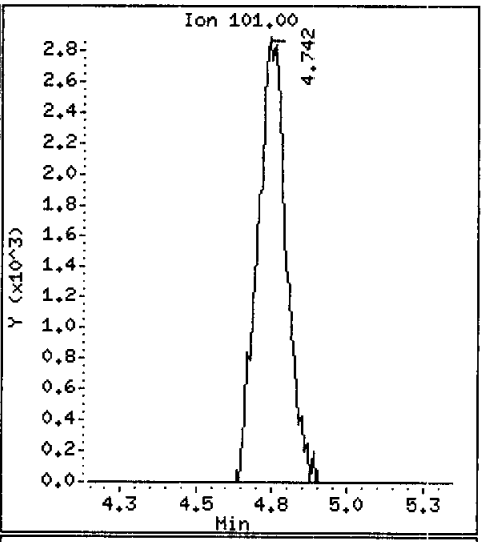
Concentration: 0.6877 ppbv

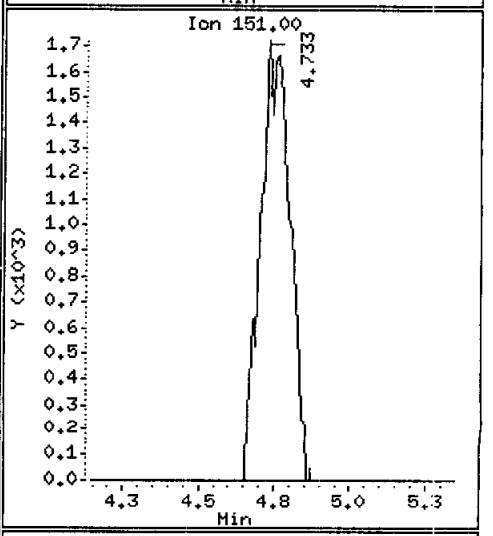


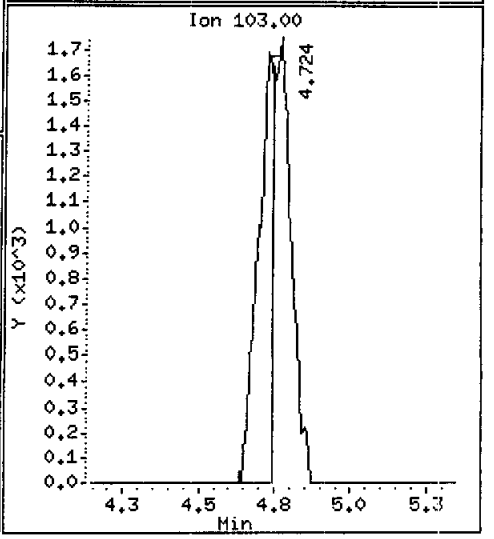












STL LOS ANGELES

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B\B7530.D
Lab Smp Id: G2DF81AD Client Smp ID: 066343-0001
Inj Date : 11-JAN-2005 14:36
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DF81AD,066343-0001,SANDIA,E5A100213-1
Misc Info : 24.1,12.7,500,949,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 10:53 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.100	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	949.000	SmpVol

after MI 1/20/05

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	3 Dichlorodifluoromethane (F12)	85	2.144	2.156	(0.258)	34069	1.38471	1.384(a)
	21 Trichlorofluoromethane (F11)	101	3.750	3.771	(0.451)	71677	2.88968	2.889
	30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.745	(0.569)	1433551	50.3013	50.29
	31 Acetone	58	4.914	4.853	(0.591)	4502	2.41353	2.413(a)
*	58 Bromochloromethane	49	8.315	8.317	(1.000)	582886	50.0000	
	60 Chloroform	83	8.487	8.489	(1.021)	63093	3.40225	3.402
	64 Carbon Tetrachloride	117	9.064	9.085	(1.090)	31532	2.55959	2.559
$	66 1,2-Dichloroethane-d4	65	9.344	9.347	(0.920)	527674	52.1984	52.19
*	73 1,4-Difluorobenzene	114	10.156	10.149	(1.000)	1231816	50.0000	
	75 Trichloroethene	130	10.589	10.601	(1.043)	163810	15.2303	15.23
$	88 Toluene-d8	100	12.763	12.766	(1.257)	637183	49.3993	49.39
	89 Toluene	91	12.881	12.883	(1.268)	64426	2.97038	2.970
	95 Tetrachloroethene	166	13.900	13.885	(0.902)	8975	0.67700	0.6769(a)
M	99 Xylenes (total)	106				51649	7.44719	7.446

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 101 Chlorobenzene-d5	117	15.416	15.418	(1.000)	846746	50.0000	
104 Ethylbenzene	91	15.705	15.681	(1.019)	41041	1.70517	1.705(a)
105 m,p-Xylenes	106	15.921	15.906	(1.033)	41004	5.86650	5.865
107 o-Xylene	106	16.688	16.664	(1.083)	10645	1.58068	1.580(a)
$ 114 4-Bromofluorobenzene	95	17.672	17.675	(1.146)	674153	44.5691	44.56
123 4-Ethyl Toluene	105	18.384	18.396	(1.193)	29021	2.02310	2.023
124 1,3,5-Trimethylbenzene	105	18.538	18.523	(1.203)	9579	0.59779	0.5977(aM)
131 1,2,4-Trimethylbenzene	120	19.287	19.263	(1.251)	5865	1.25815	1.258(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D
Lab Smp Id: G2DF81AD Client Smp ID: 066343-0001
Inj Date : 11-JAN-2005 14:36
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DF81AD,066343-0001,SANDIA,E5A100213-1
Misc Info : 24.1,12.7,500,949,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.100	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	949.000	SmpVol

Before MI
1/01/2005

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	3 Dichlorodifluoromethane (F12)	85	2.144	2.156	(0.258)	34069	1.38474	1.384(a)
	21 Trichlorofluoromethane (F11)	101	3.750	3.771	(0.451)	71677	2.88970	2.889
	30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.745	(0.569)	1433551	50.3013	50.29
	31 Acetone	58	4.914	4.853	(0.591)	4502	2.41362	2.413(a)
*	58 Bromochloromethane	49	8.315	8.327	(1.000)	582886	50.0000	
	60 Chloroform	83	8.487	8.489	(1.021)	63093	3.40227	3.402
	64 Carbon Tetrachloride	117	9.064	9.085	(1.090)	31532	2.55964	2.559
$	66 1,2-Dichloroethane-d4	65	9.344	9.347	(0.920)	527674	52.1983	52.19
*	73 1,4-Difluorobenzene	114	10.156	10.159	(1.000)	1231816	50.0000	
	75 Trichloroethene	130	10.589	10.601	(1.043)	163810	15.2303	15.23
$	88 Toluene-d8	100	12.763	12.766	(1.257)	637183	49.3993	49.39
	89 Toluene	91	12.881	12.883	(1.268)	64426	2.97039	2.970
	95 Tetrachloroethene	166	13.900	13.885	(0.902)	8975	0.67703	0.6769(a)
M	99 Xylenes (total)	106				51649	7.44730	7.446

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 101 Chlorobenzene-d5	117	15.416	15.419	(1.000)	846746	50.0000	
104 Ethylbenzene	91	15.705	15.681	(1.019)	41041	1.70520	1.705(a)
105 m,p-Xylenes	106	15.921	15.906	(1.033)	41004	5.86661	5.865
107 o-Xylene	106	16.688	16.664	(1.083)	10645	1.58069	1.580(a)
$ 114 4-Bromofluorobenzene	95	17.672	17.675	(1.146)	674153	44.5691	44.56
123 4-Ethyl Toluene	105	18.384	18.396	(1.193)	29021	2.02315	2.023
124 1,3,5-Trimethylbenzene	105	18.384	18.523	(1.193)	29021	1.81095	1.811(a)
131 1,2,4-Trimethylbenzene	120	19.287	19.263	(1.251)	5865	1.25826	1.258(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

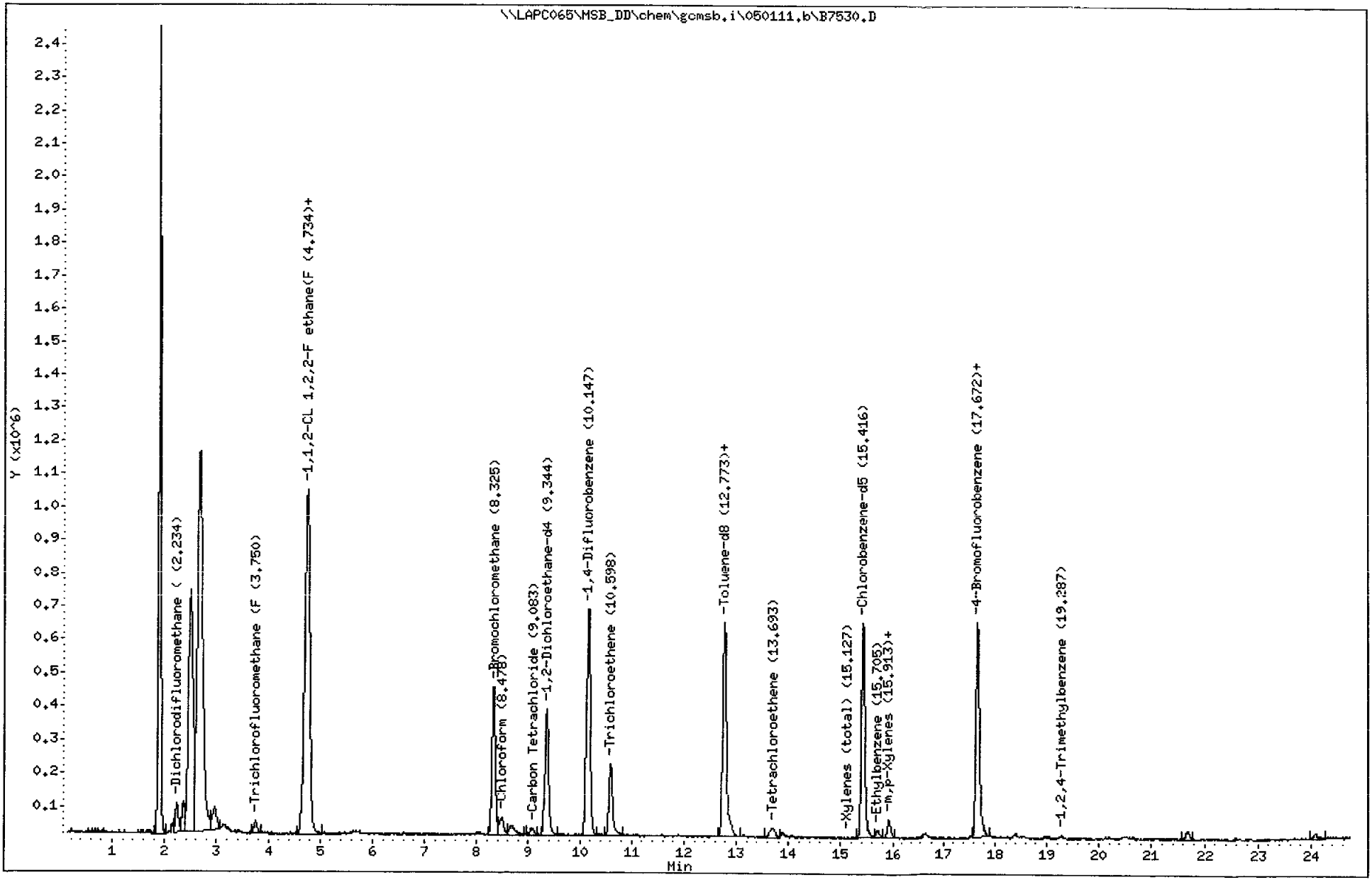
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D
Date : 11-JAN-2005 14:36
Client ID: 066343-0001
Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

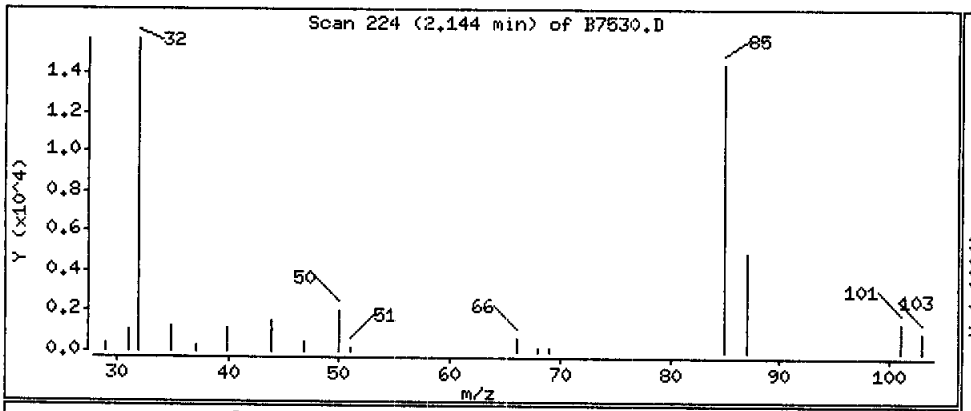
Operator: DLK

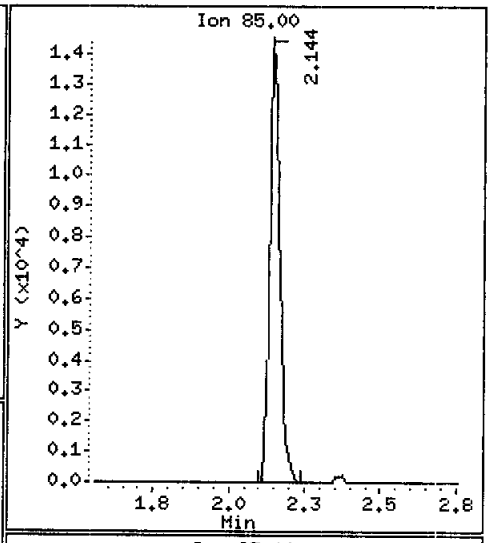
Column phase: J&W DB-624

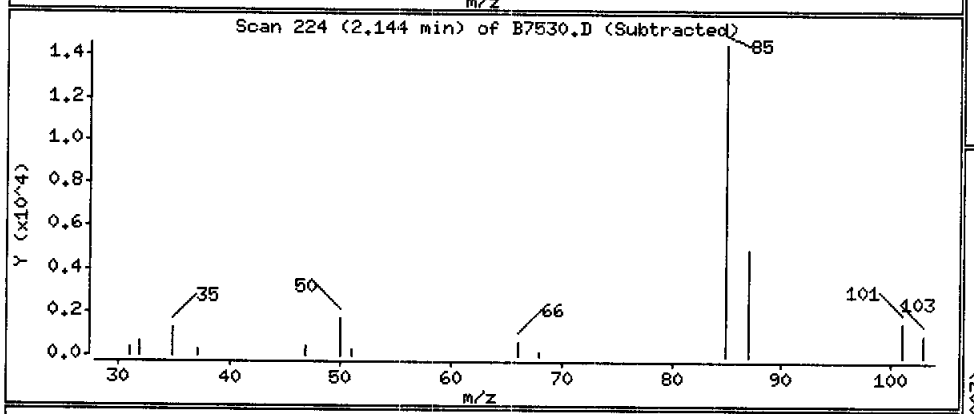
Column diameter: 0.53

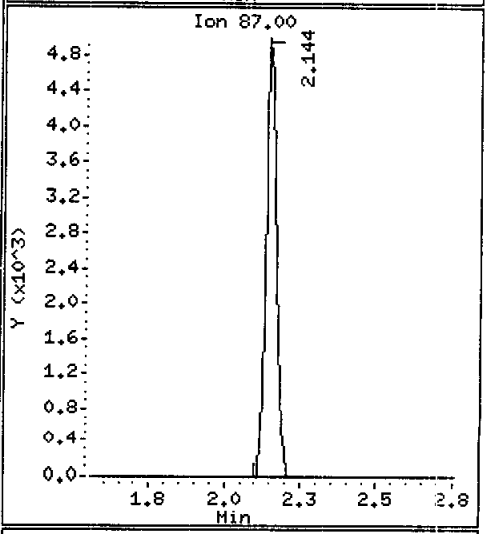
3 Dichlorodifluoromethane (F12)

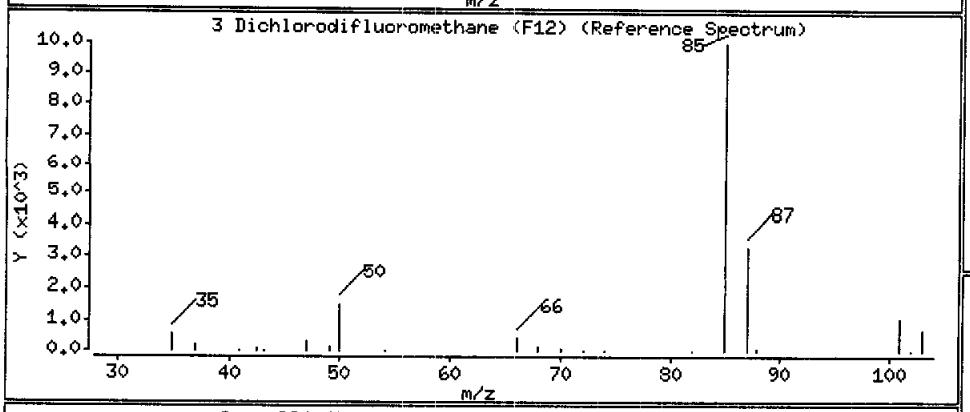
Concentration: 1.384 ppbv

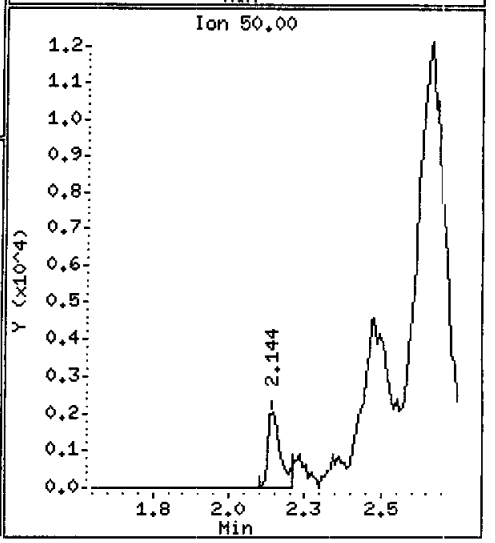


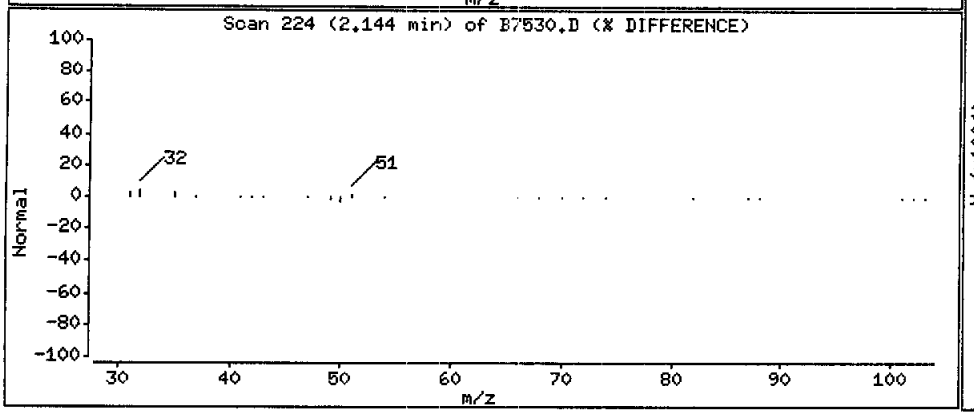












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

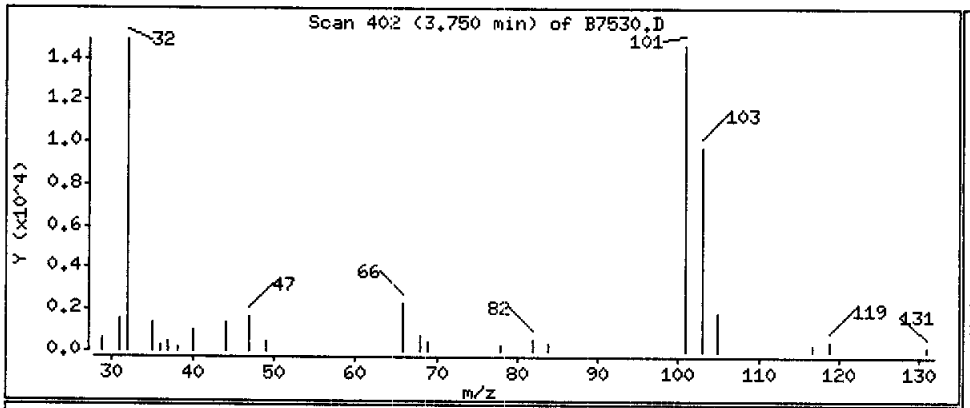
Operator: DLK

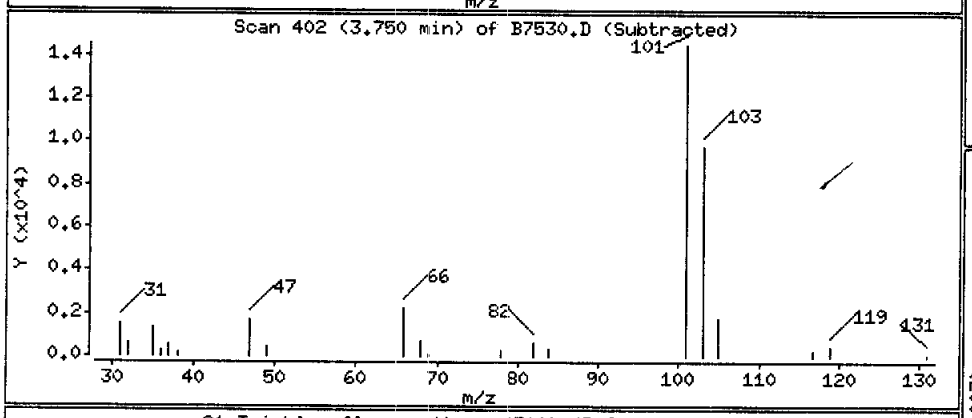
Column phase: J&W DB-624

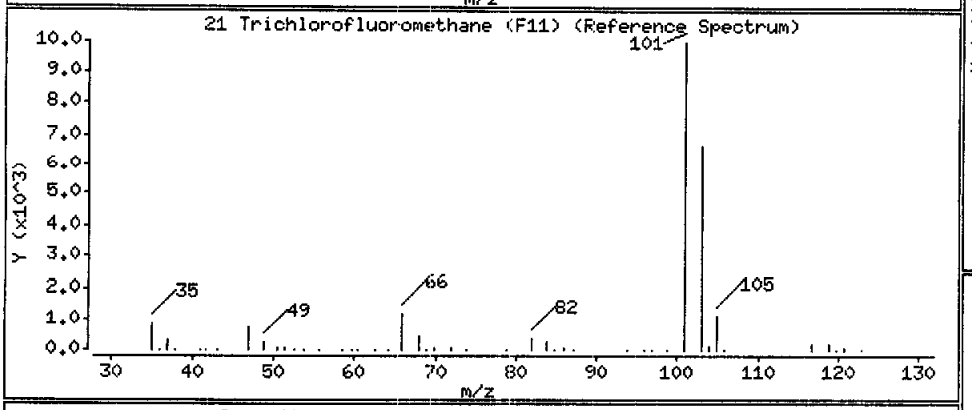
Column diameter: 0.53

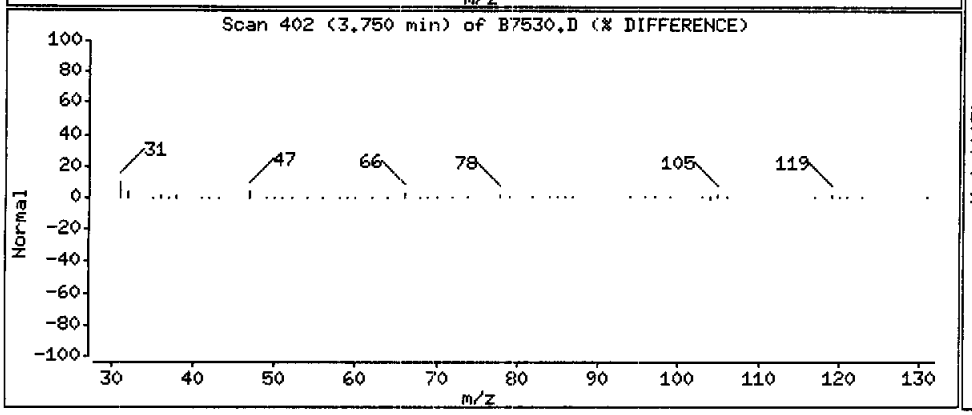
21 Trichlorofluoromethane (F11)

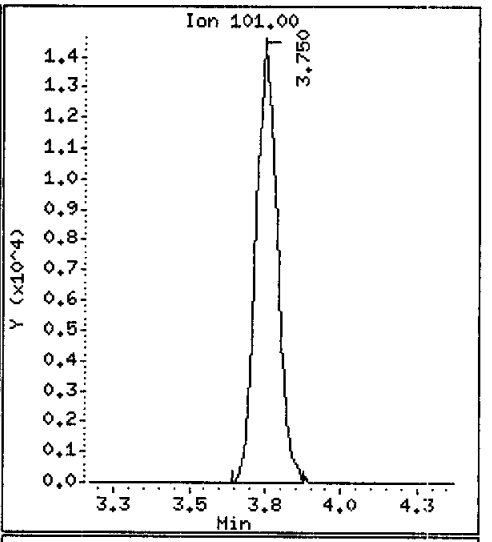
Concentration: 2.889 ppbv

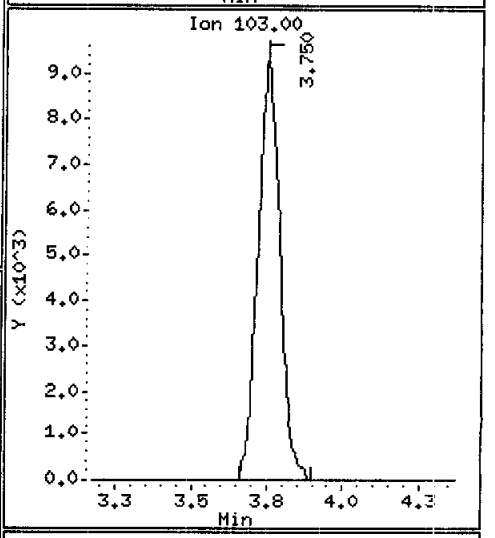


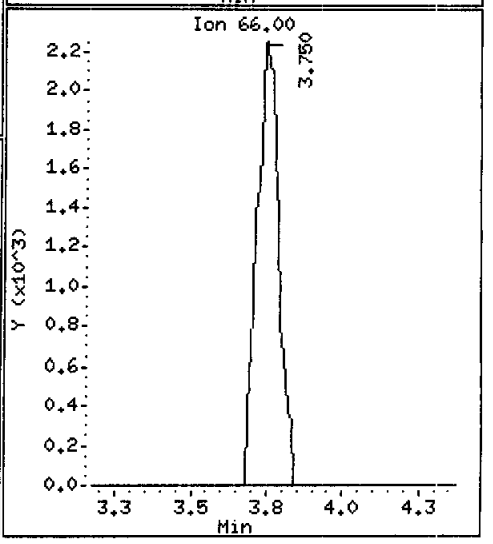












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

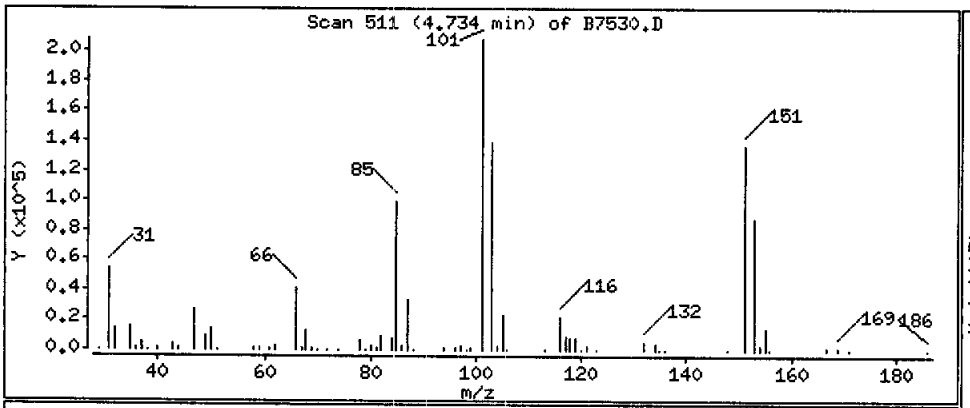
Operator: DLK

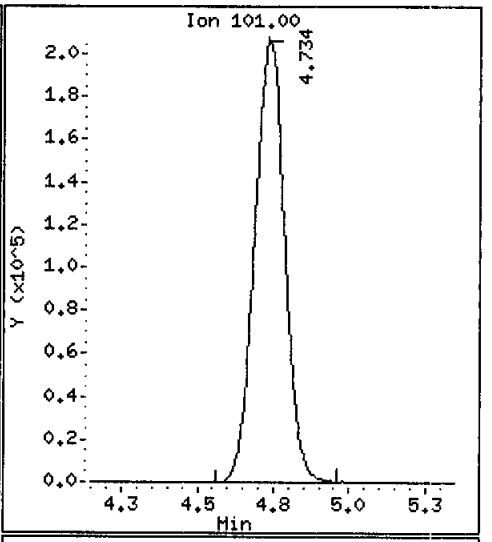
Column phase: J&W DB-624

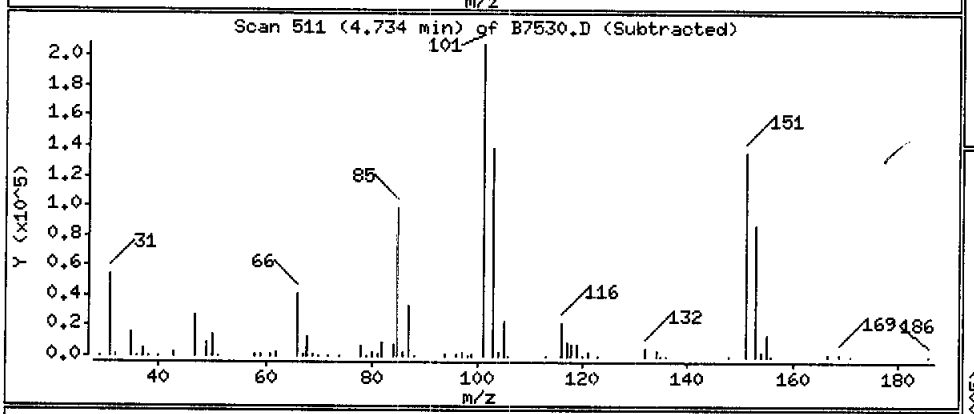
Column diameter: 0.53

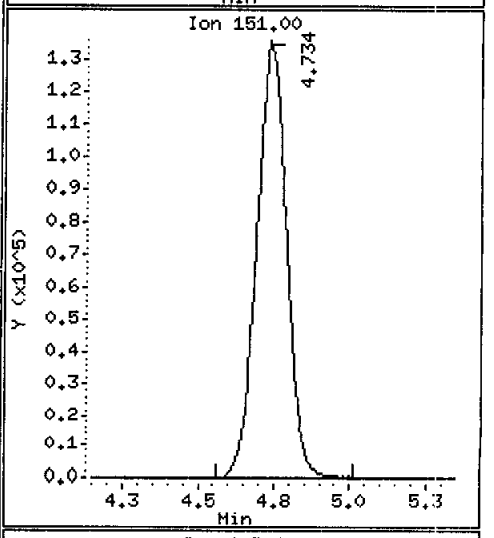
30 1,1,2-CL 1,2,2-F ethane(F113)

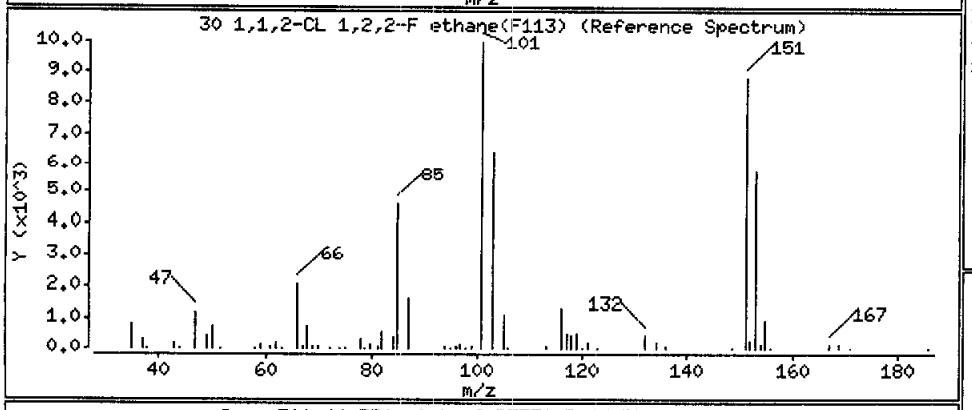
Concentration: 50.29 ppbv

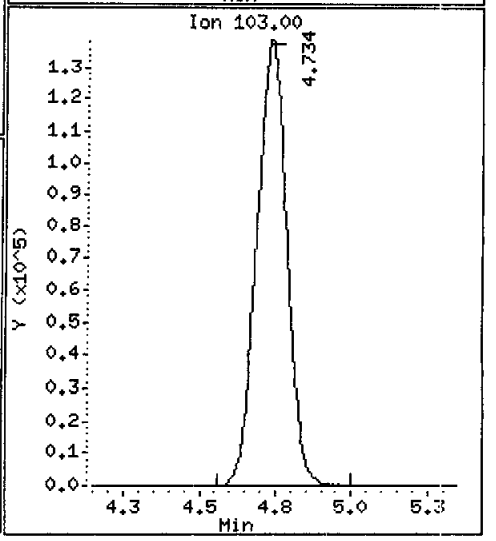


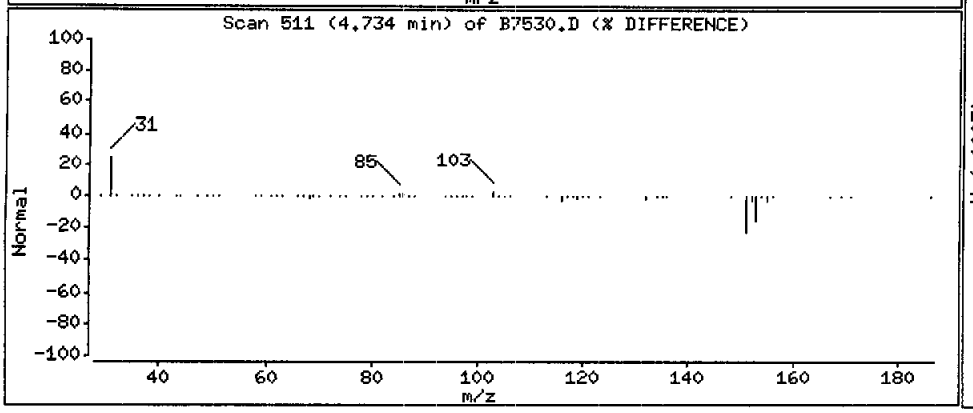












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

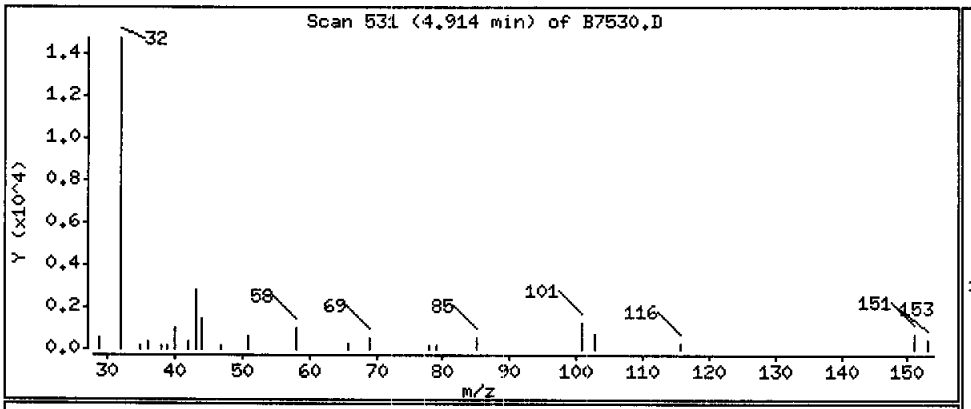
Operator: DLK

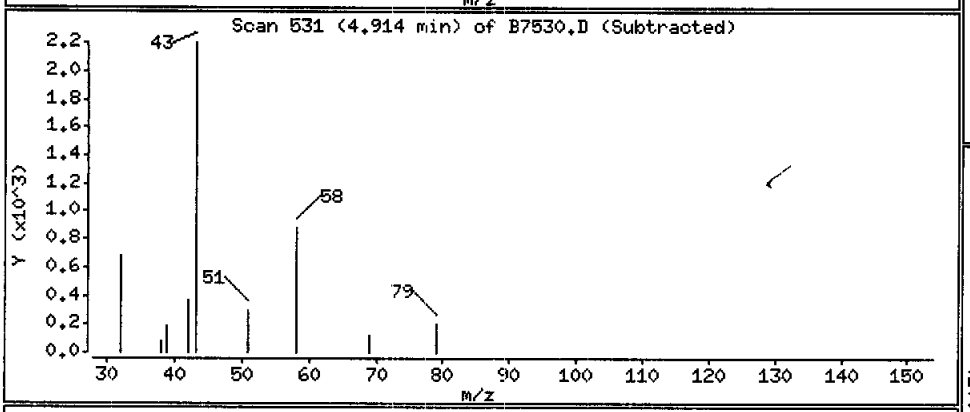
Column phase: J&W DB-624

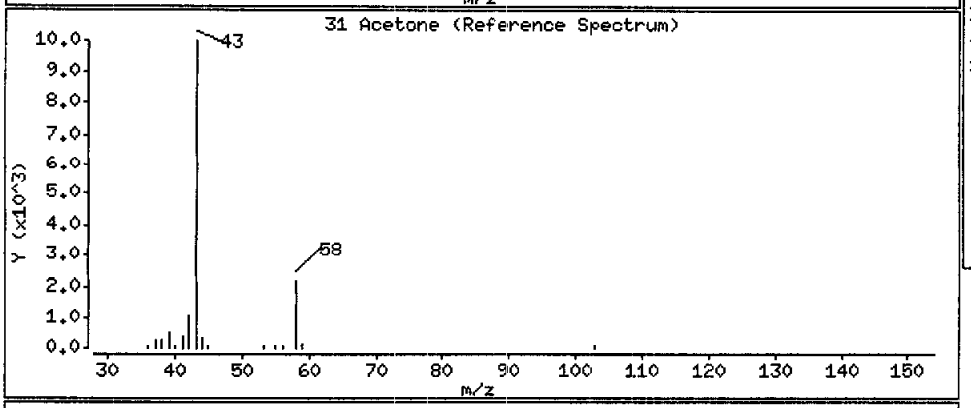
Column diameter: 0.53

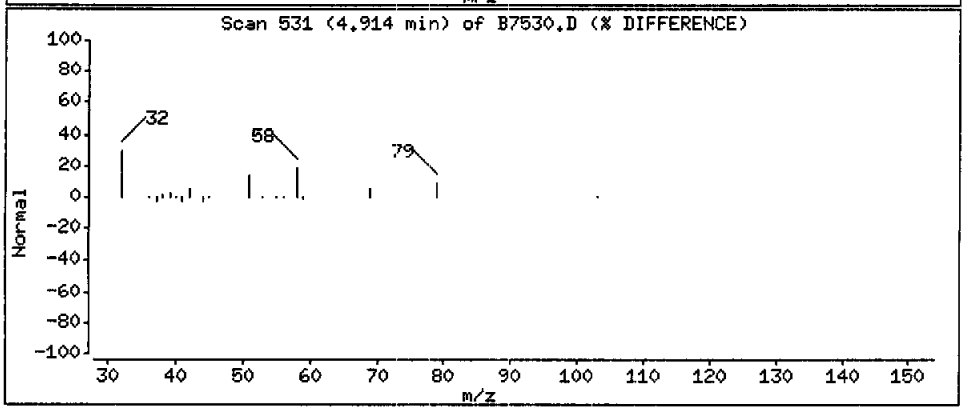
31 Acetone

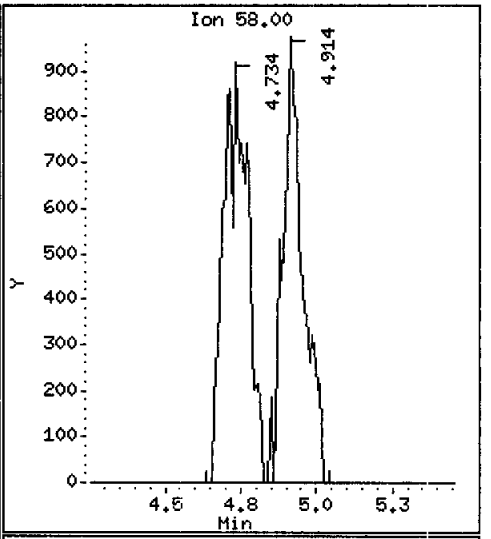
Concentration: 2.413 ppbv

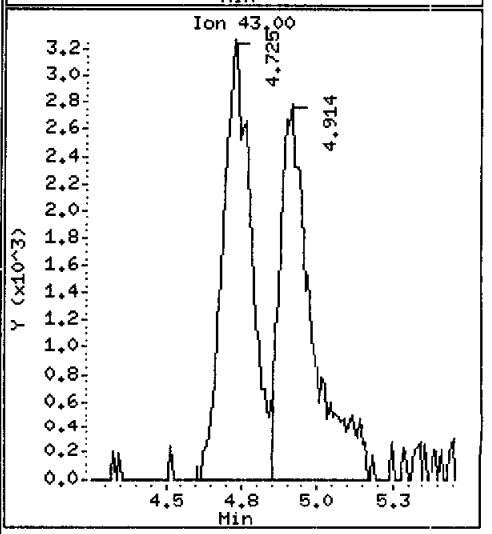












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

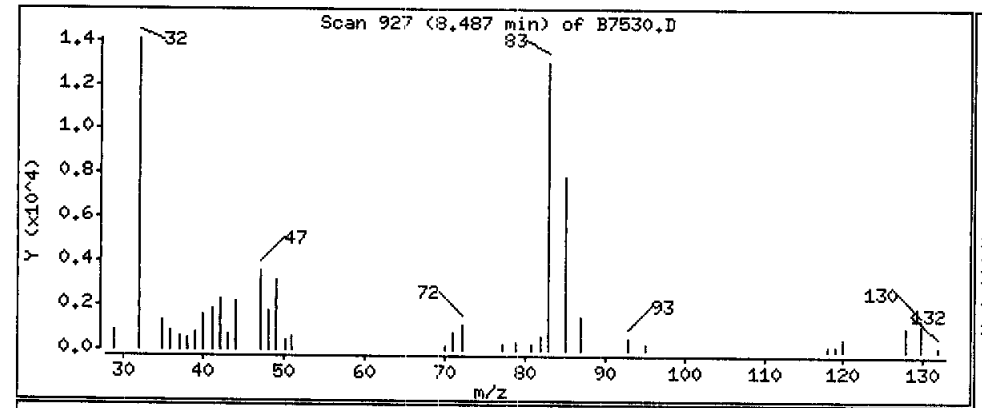
Operator: DLK

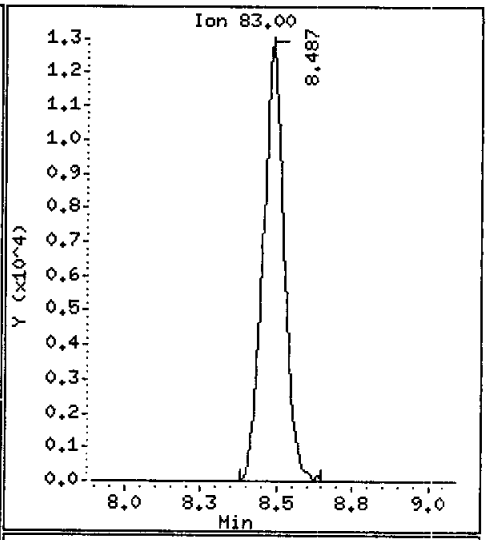
Column phase: J&W DB-624

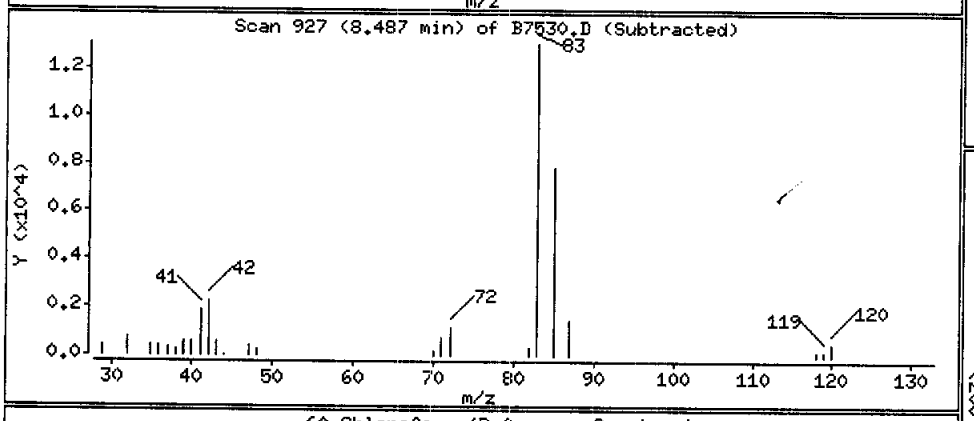
Column diameter: 0.53

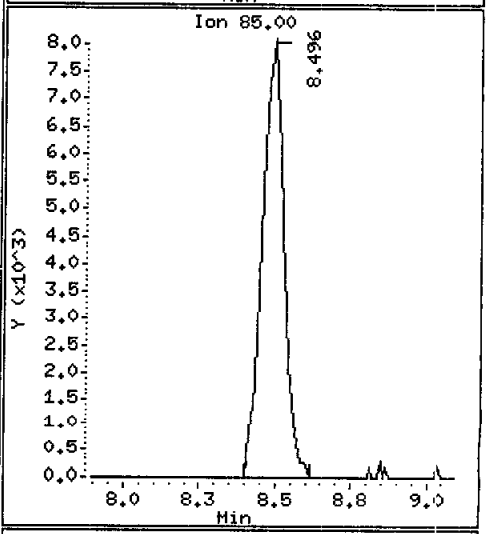
60 Chloroform

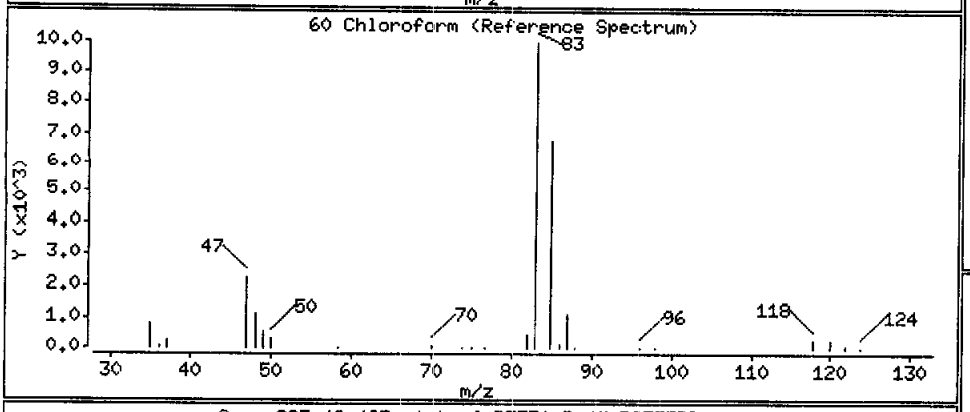
Concentration: 3.402 ppbv

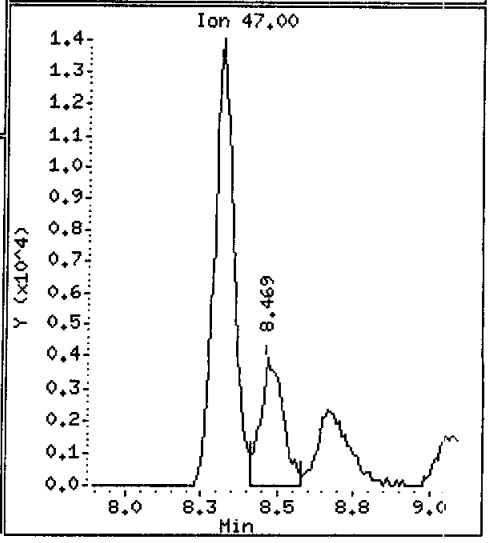


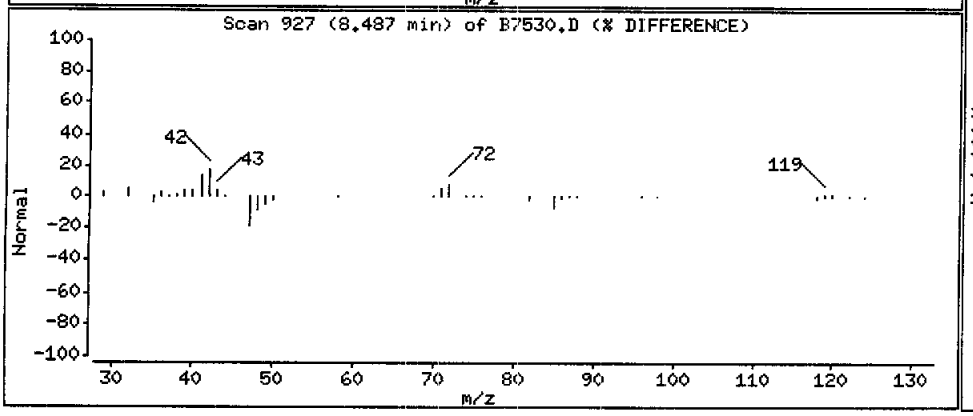












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

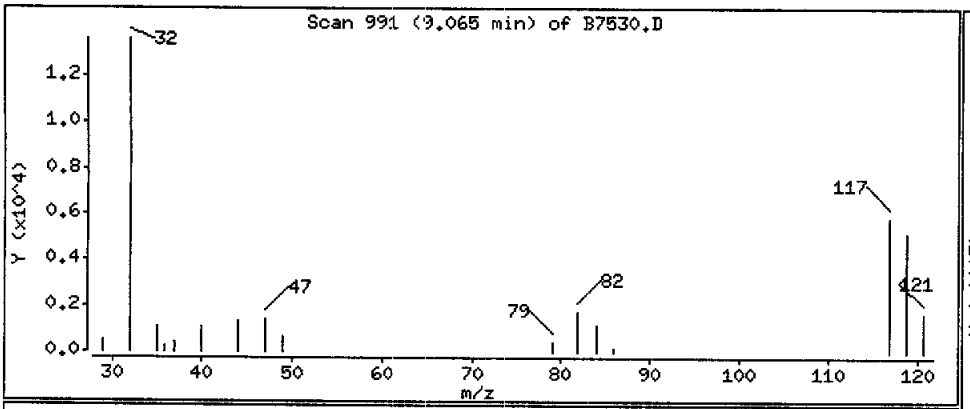
Operator: DLK

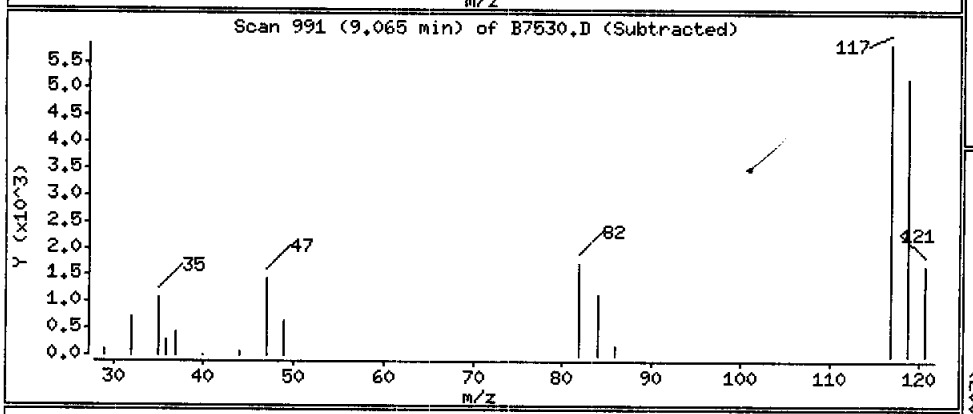
Column phase: J&W DB-624

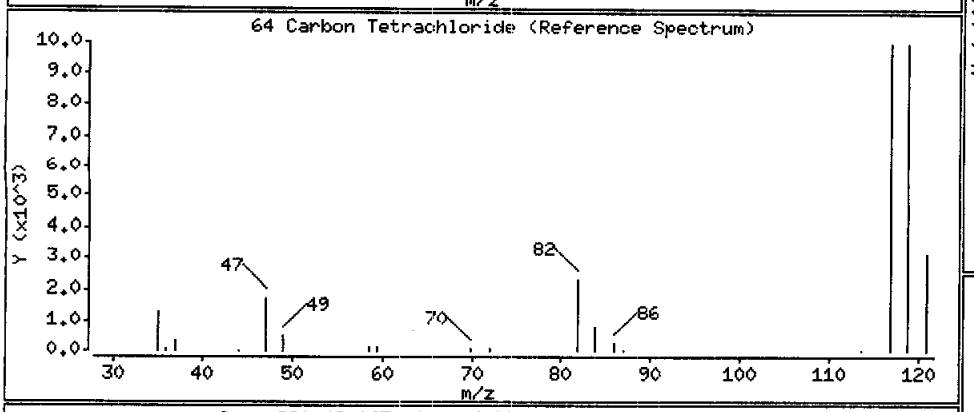
Column diameter: 0.53

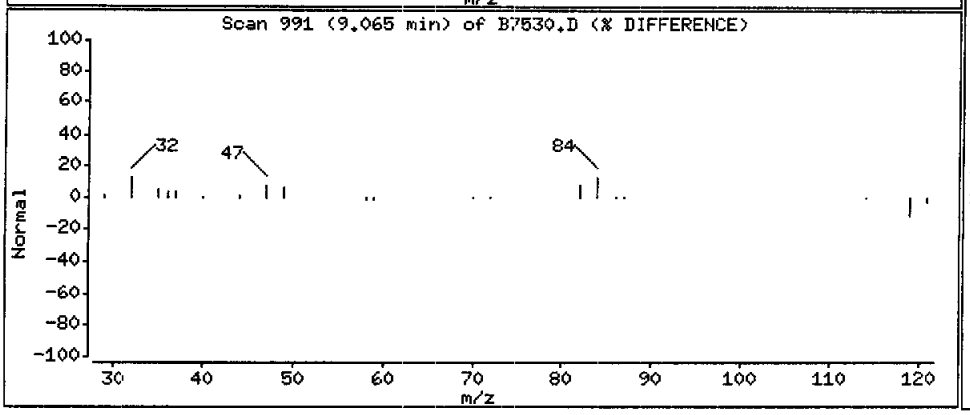
64 Carbon Tetrachloride

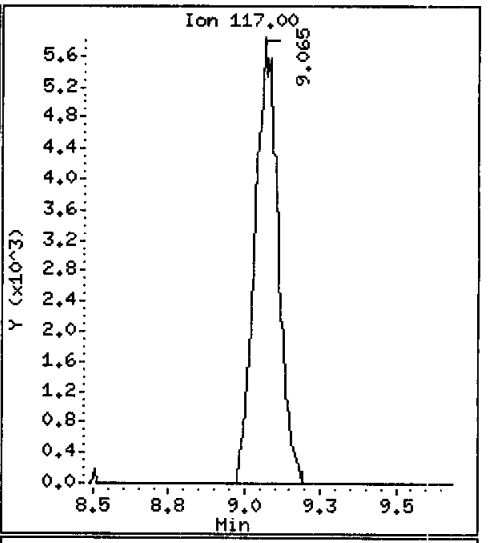
Concentration: 2.559 ppbv

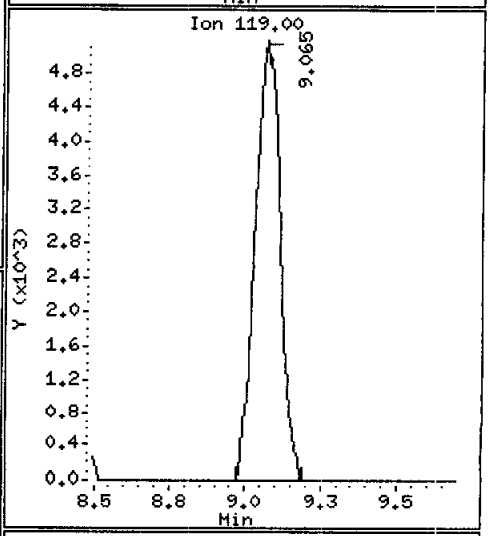


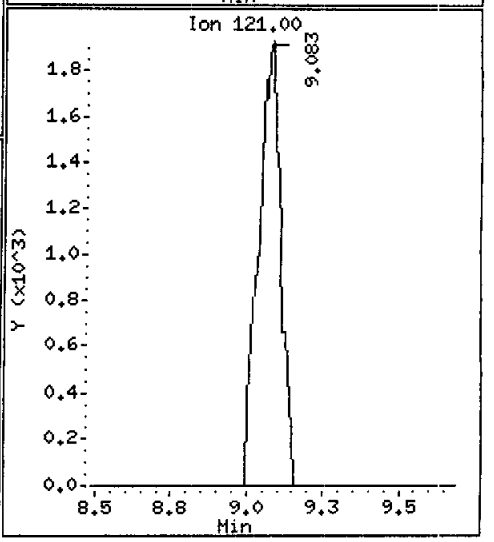












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

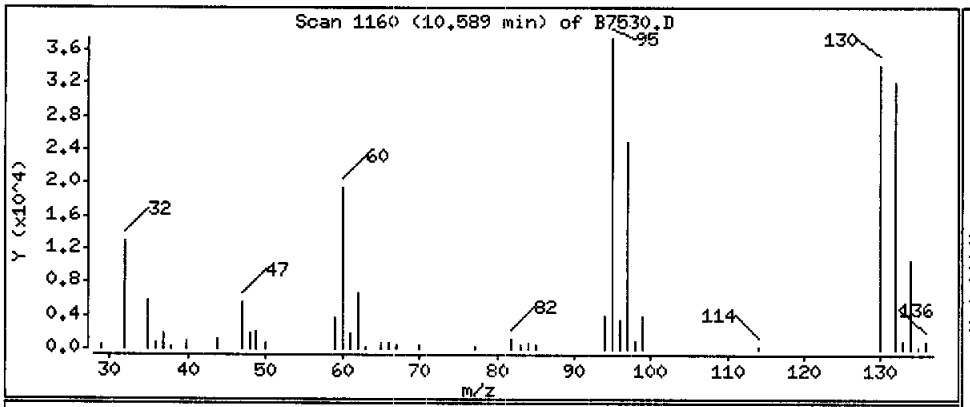
Operator: DLK

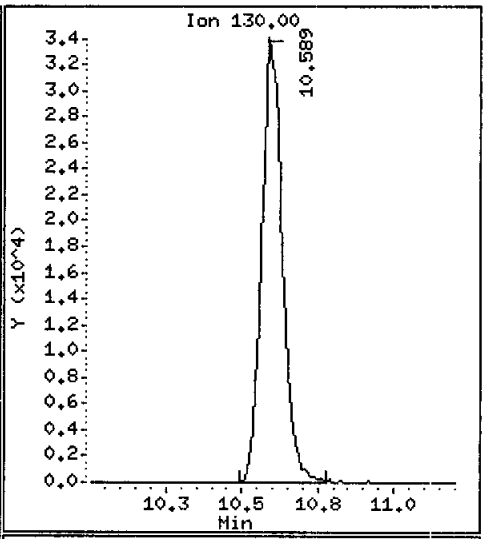
Column phase: J&W DB-624

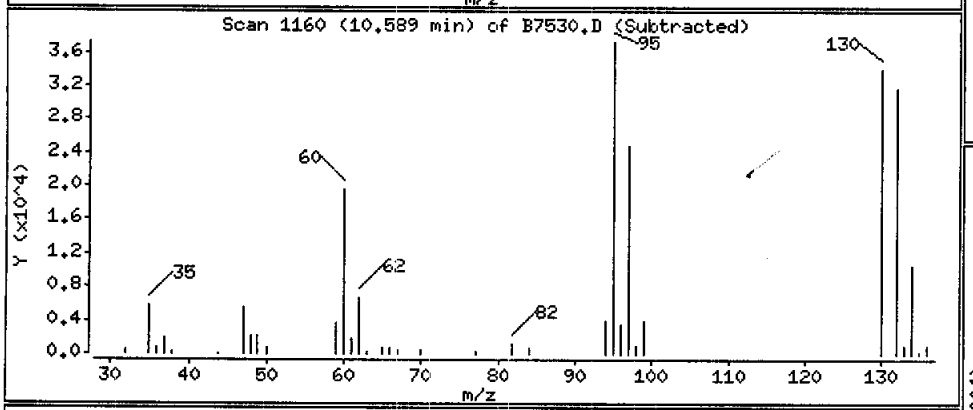
Column diameter: 0.53

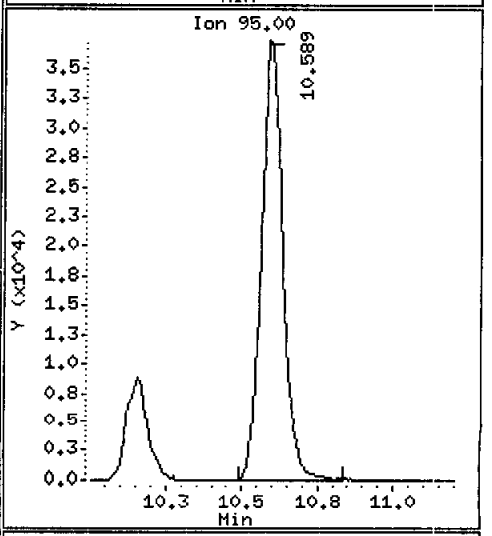
75 Trichloroethene

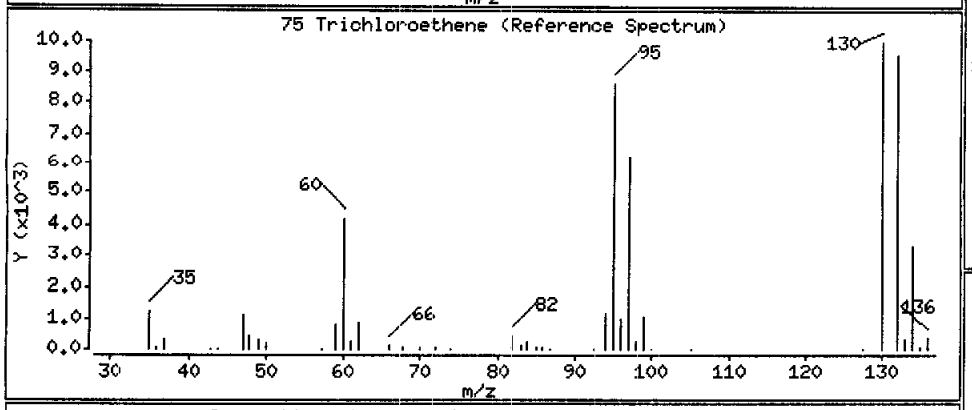
Concentration: 15.23 ppbv

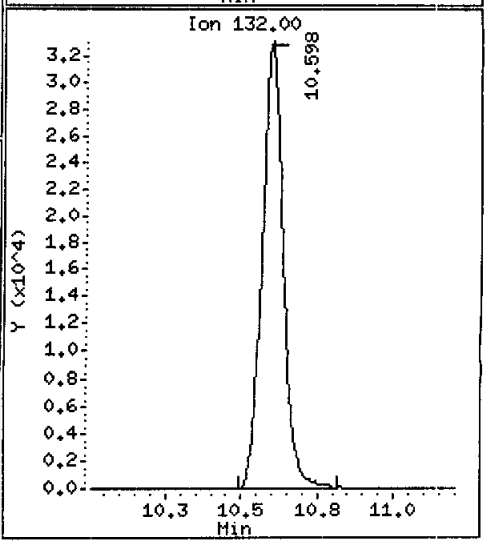


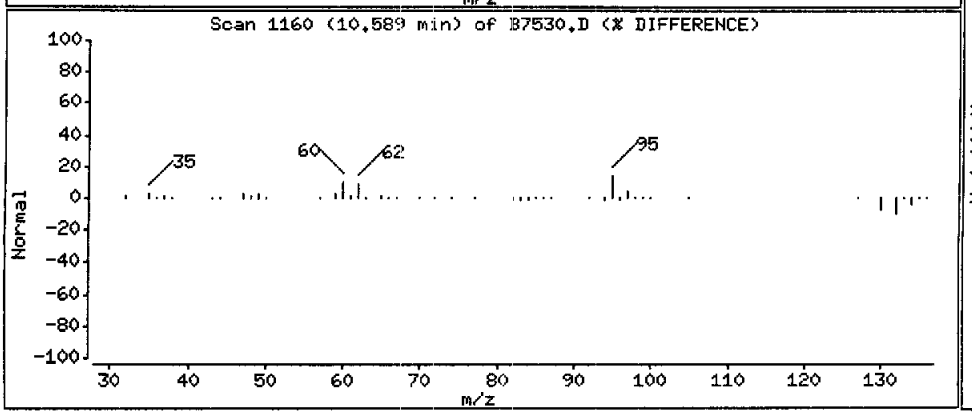












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

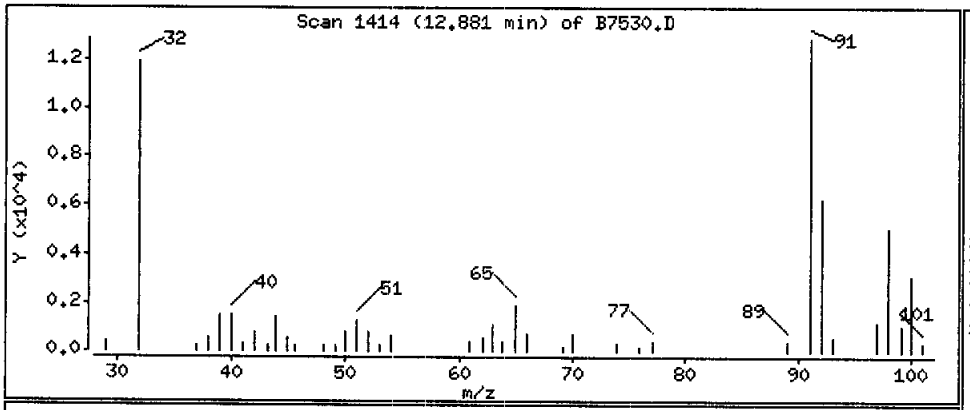
Operator: DLK

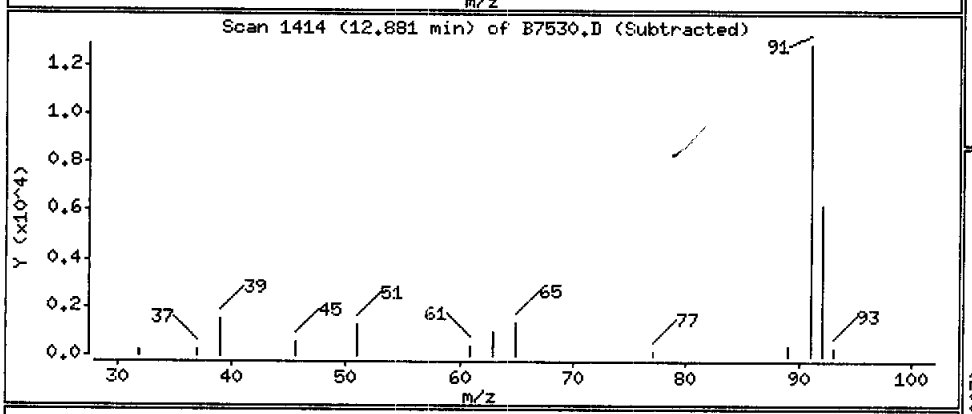
Column phase: J&W DB-624

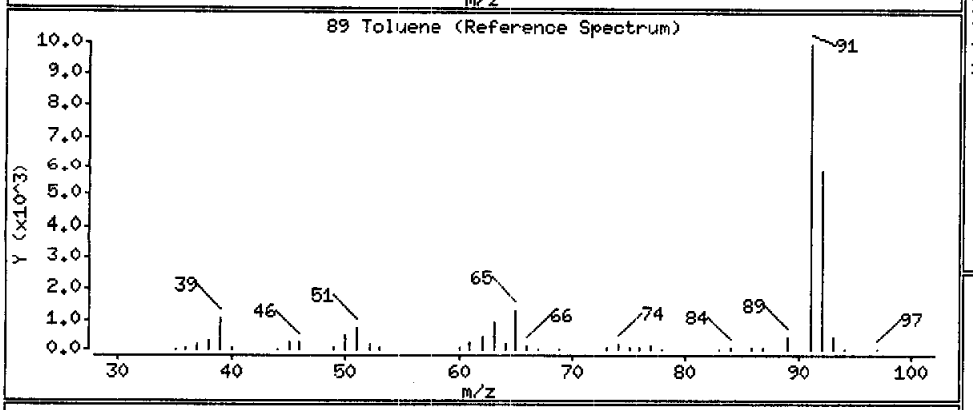
Column diameter: 0.53

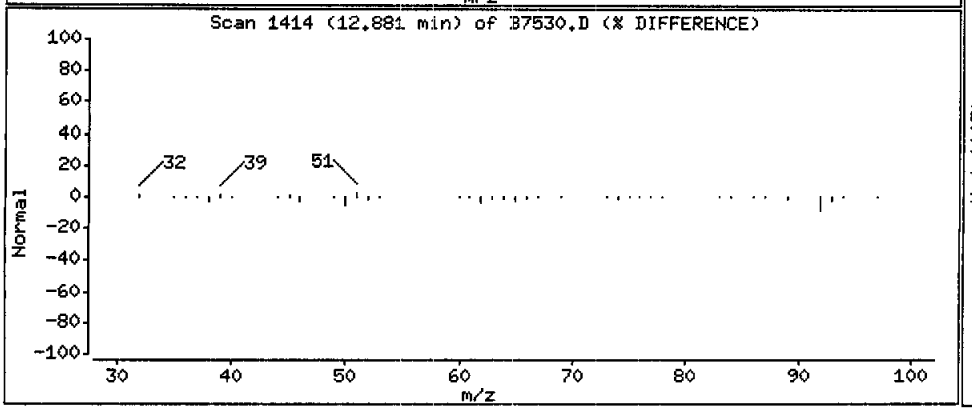
89 Toluene

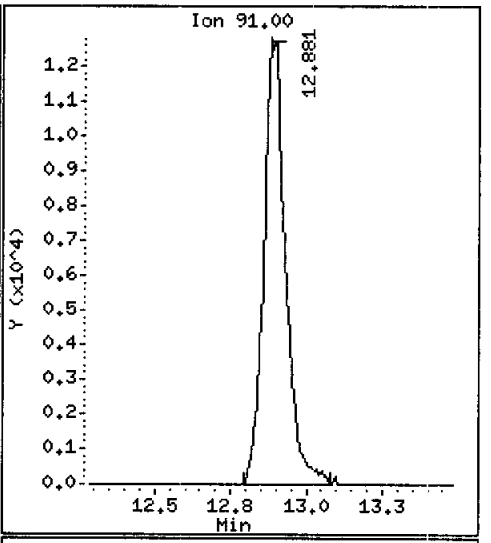
Concentration: 2.970 ppbv

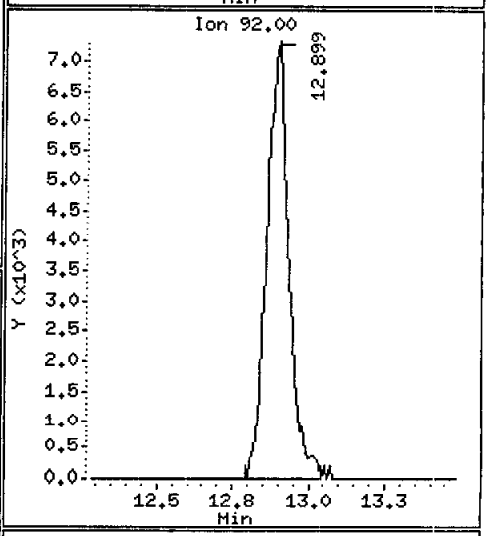


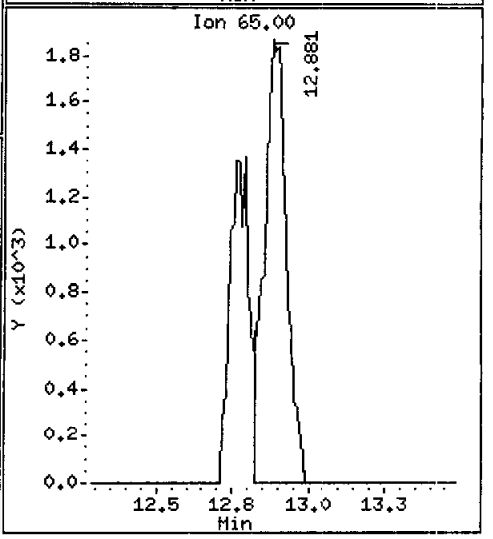












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

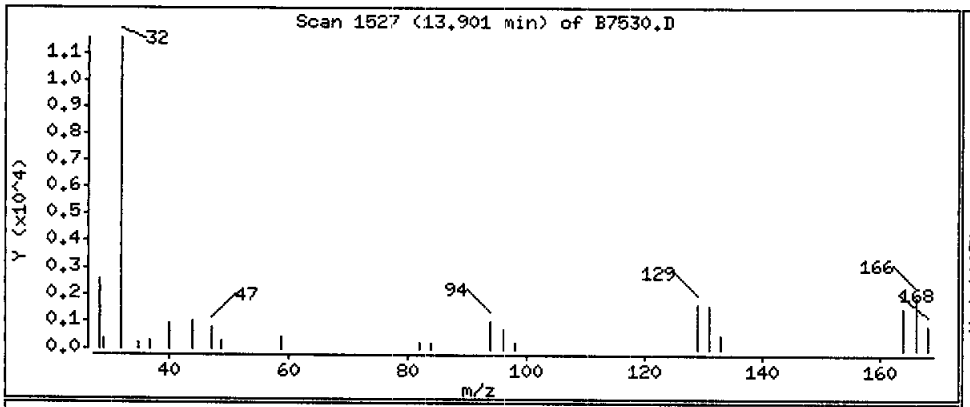
Operator: DLK

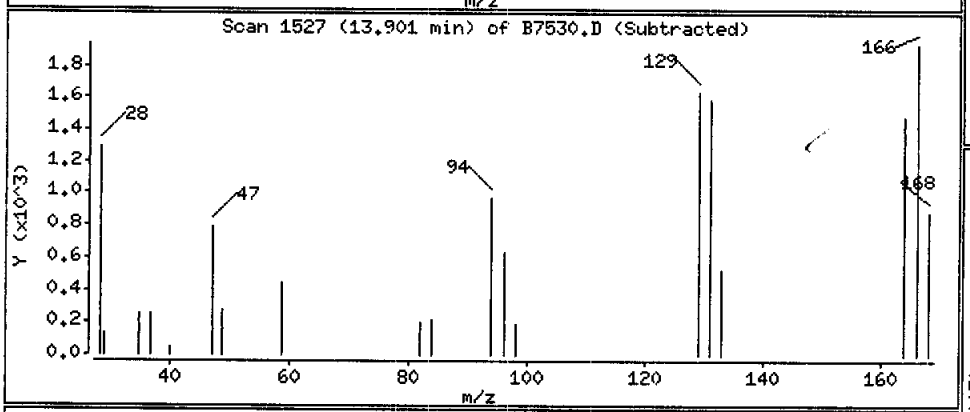
Column phase: J&W DB-624

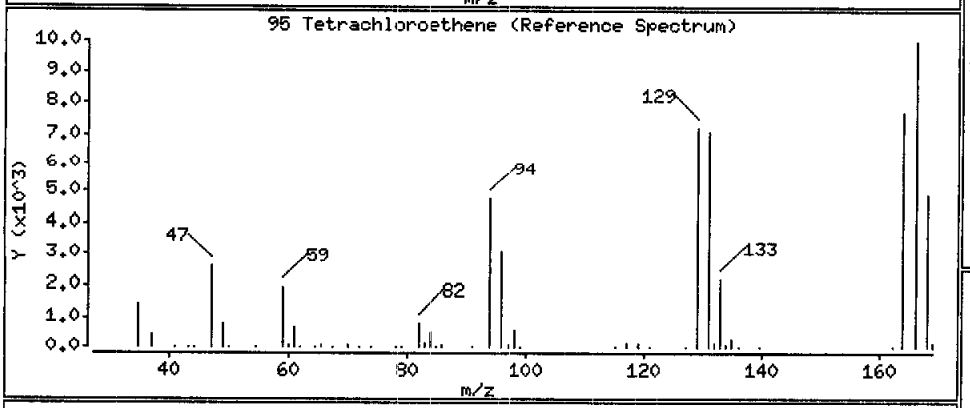
Column diameter: 0.53

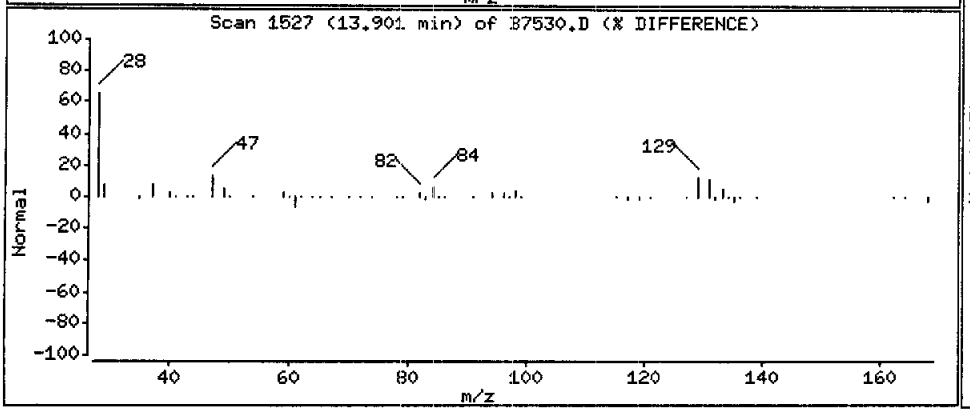
95 Tetrachloroethene

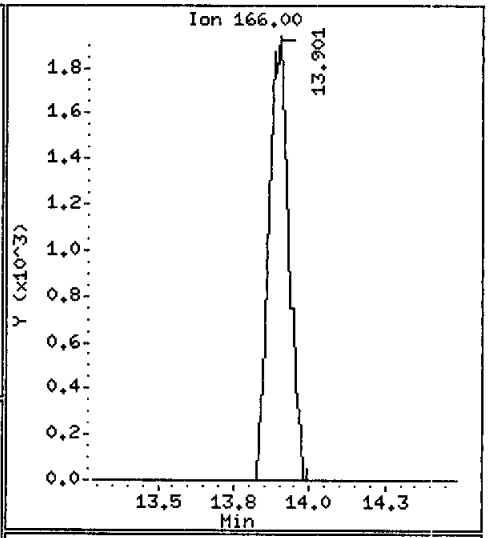
Concentration: 0.6769 ppbv

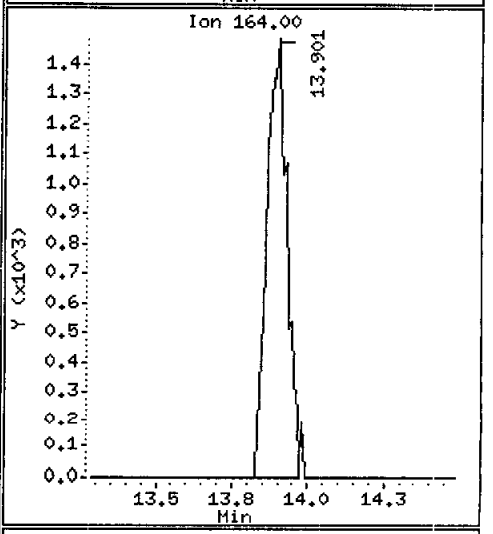


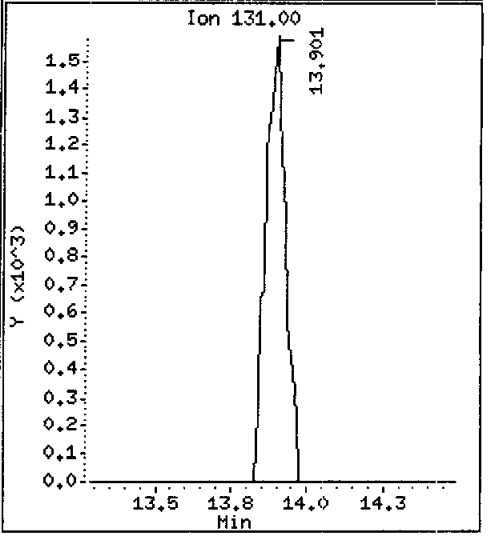












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

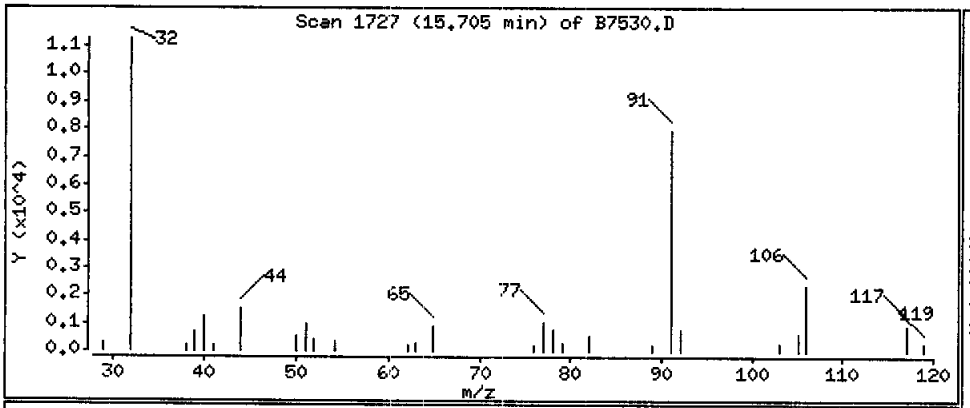
Operator: DLK

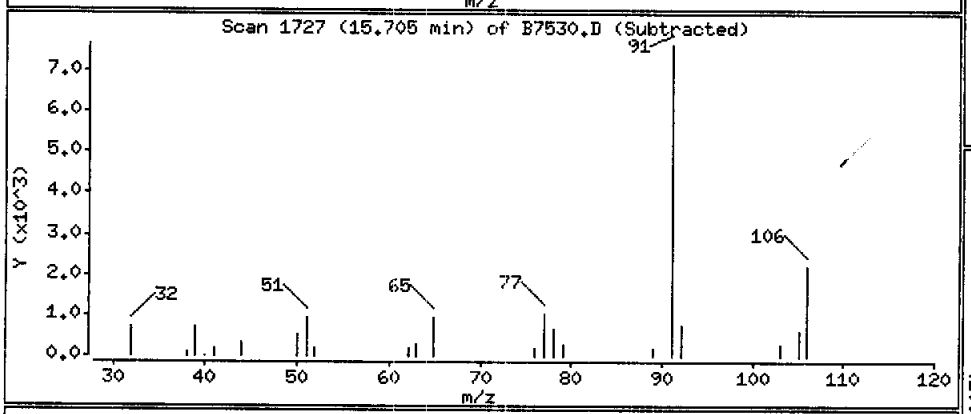
Column phase: J&W DB-624

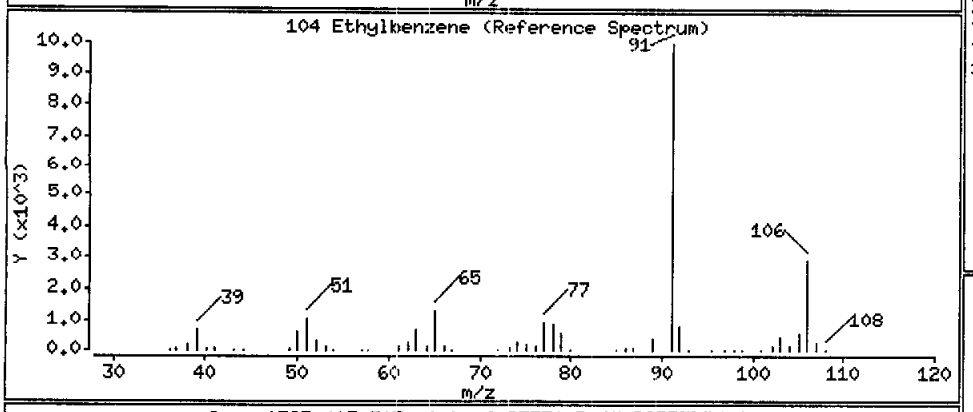
Column diameter: 0.53

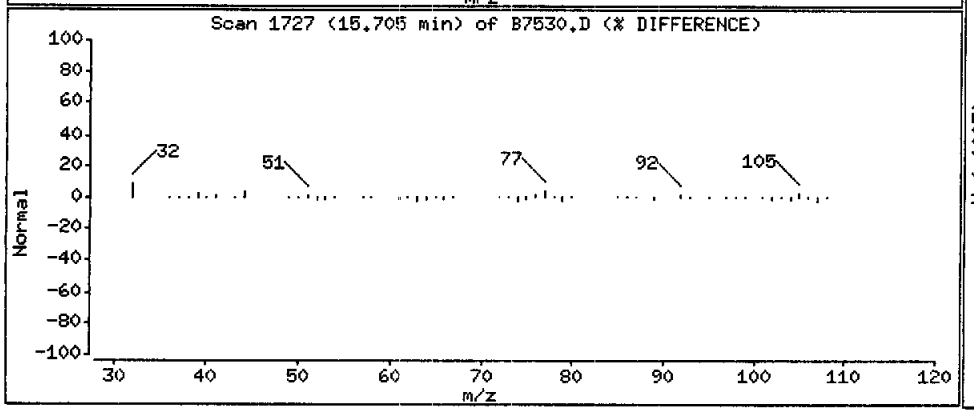
104 Ethylbenzene

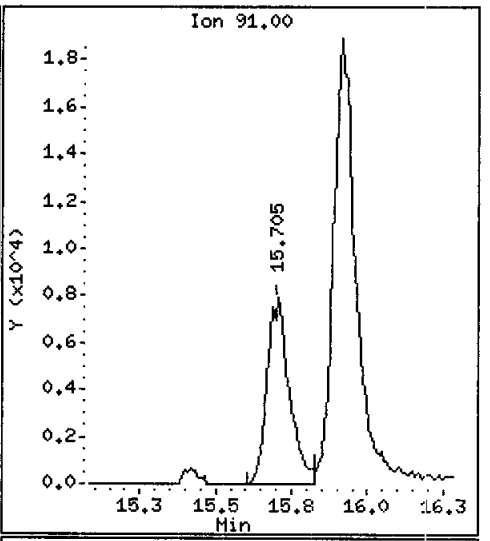
Concentration: 1.705 ppbv

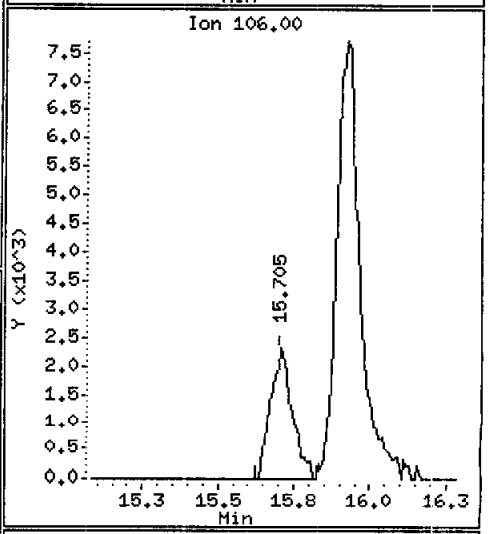


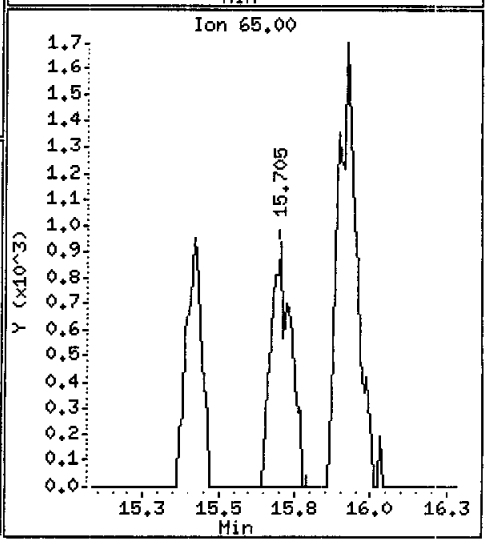












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

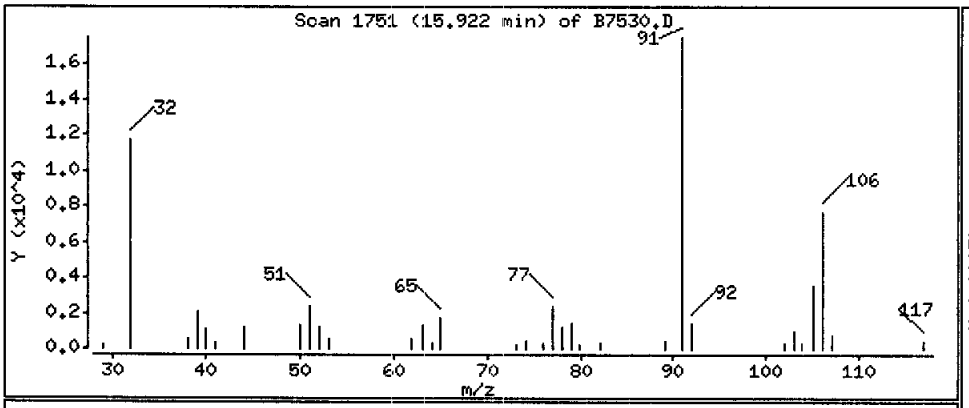
Operator: DLK

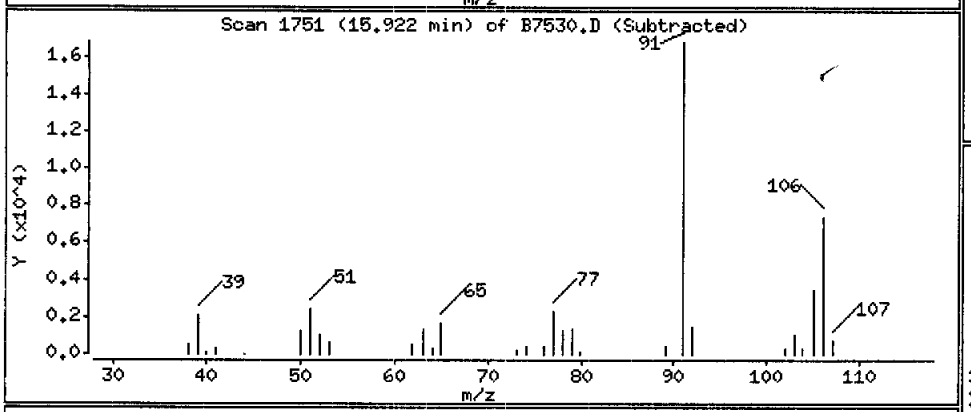
Column phase: J&W DB-624

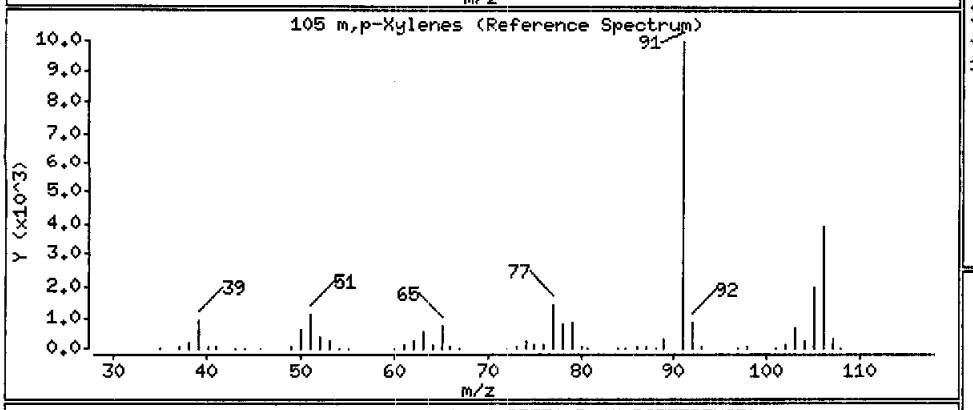
Column diameter: 0.53

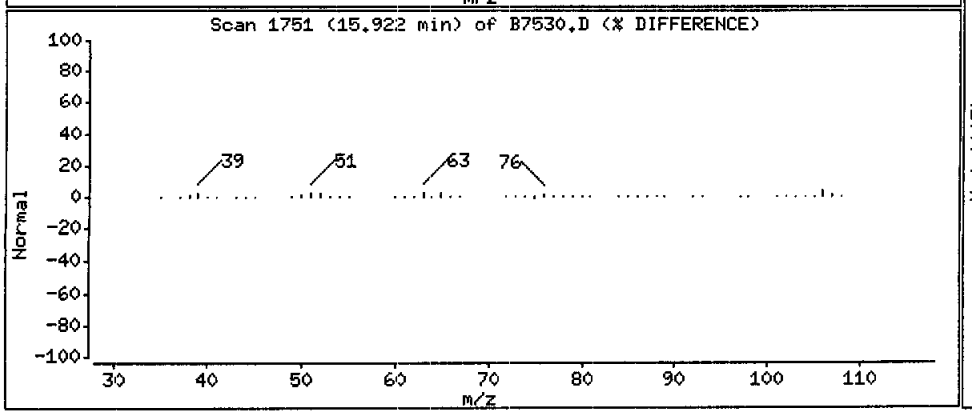
105 m,p-Xylenes

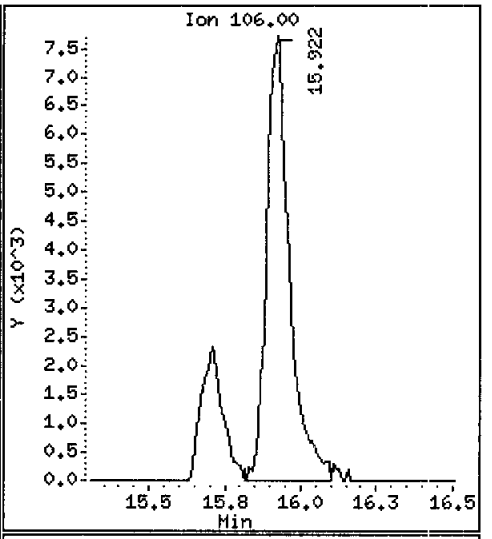
Concentration: 5.865 ppbv

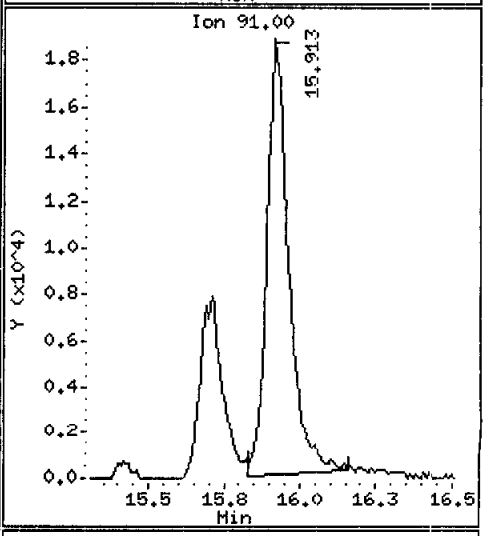


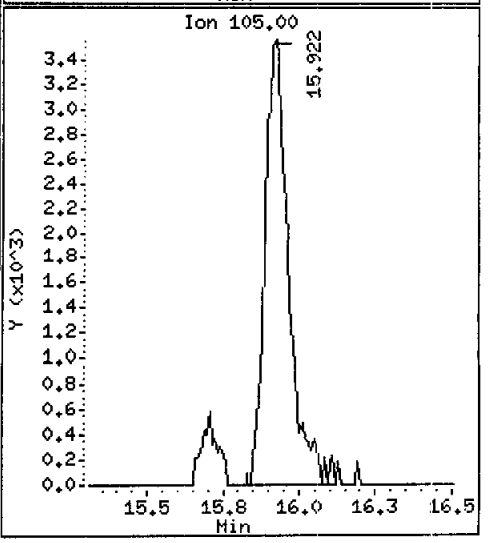












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

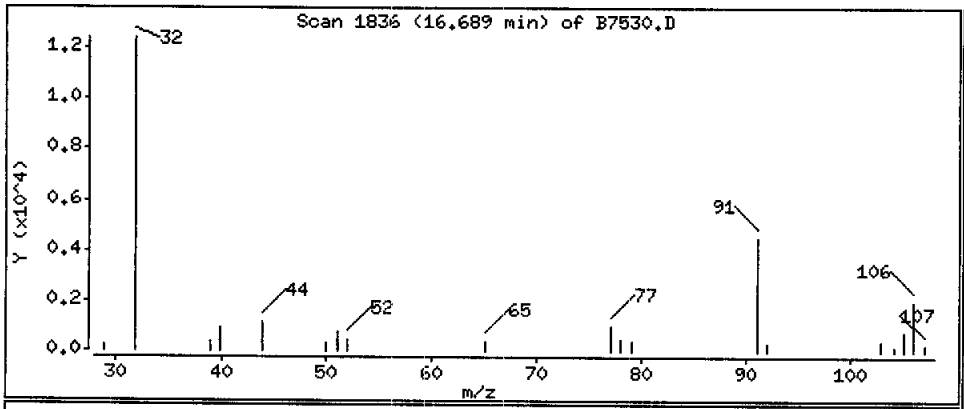
Operator: DLK

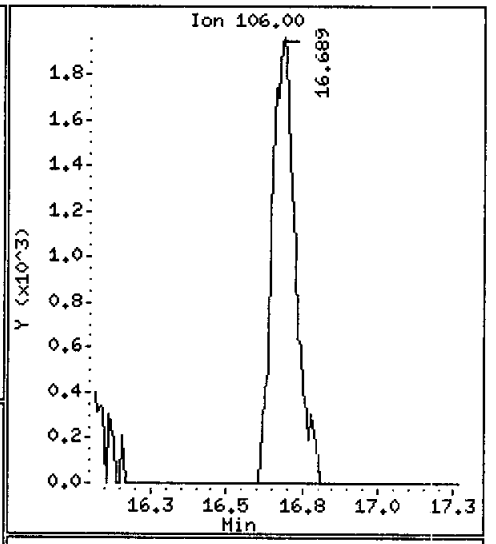
Column phase: J&W DB-624

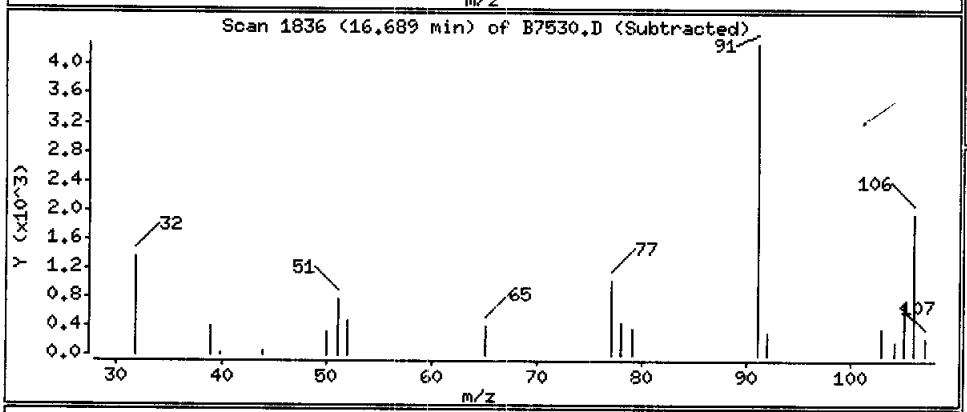
Column diameter: 0.53

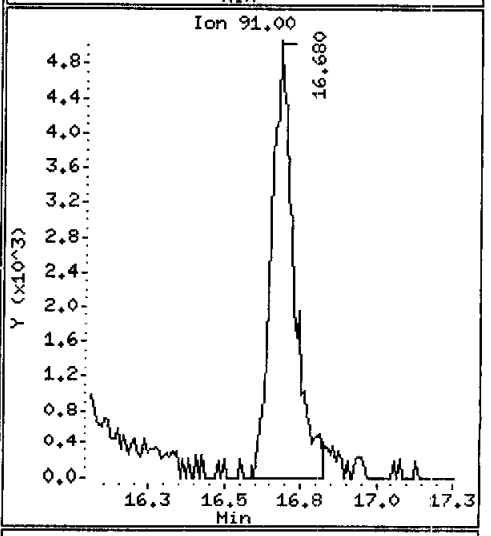
107 o-Xylene

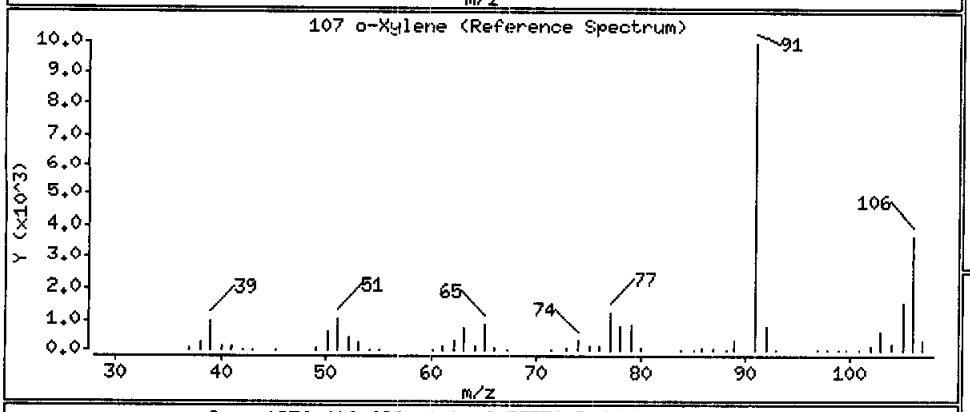
Concentration: 1.580 ppbv

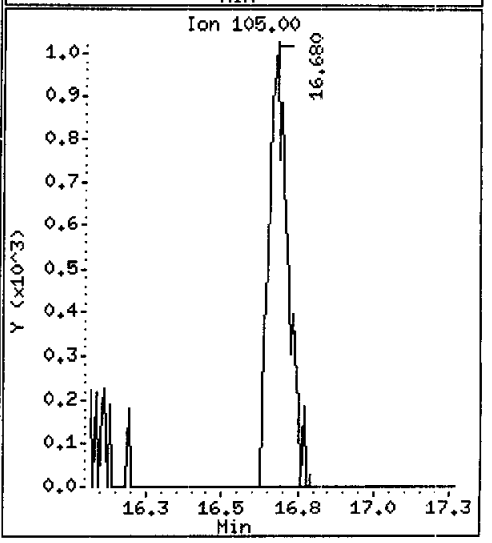


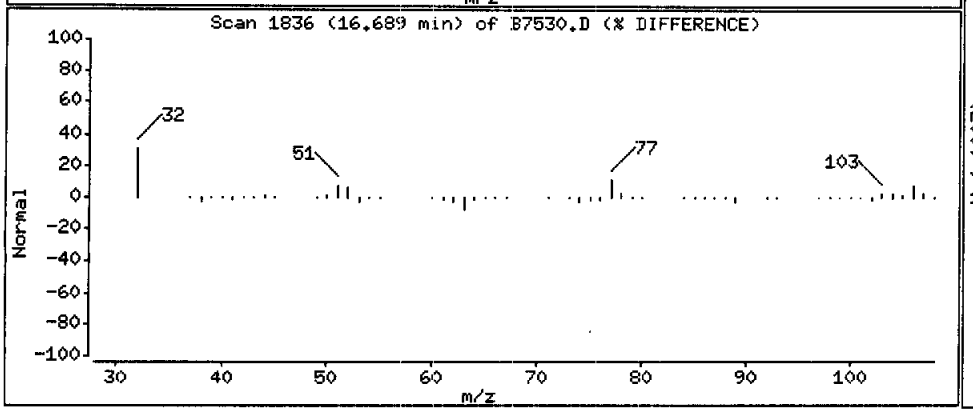












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

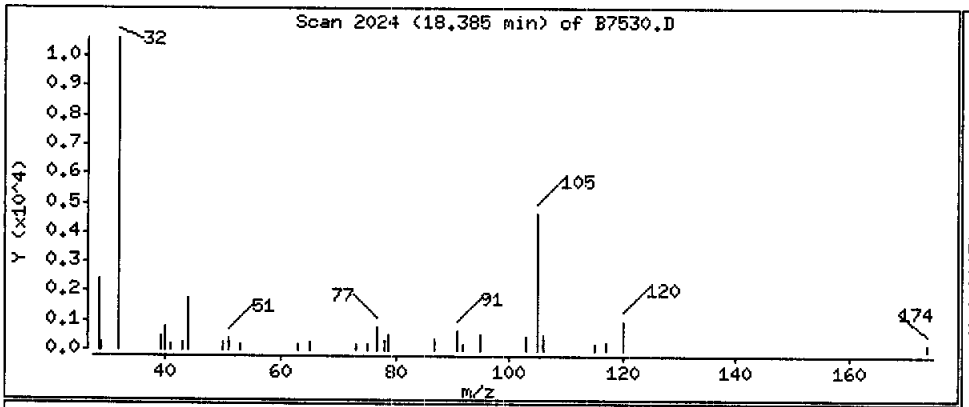
Operator: DLK

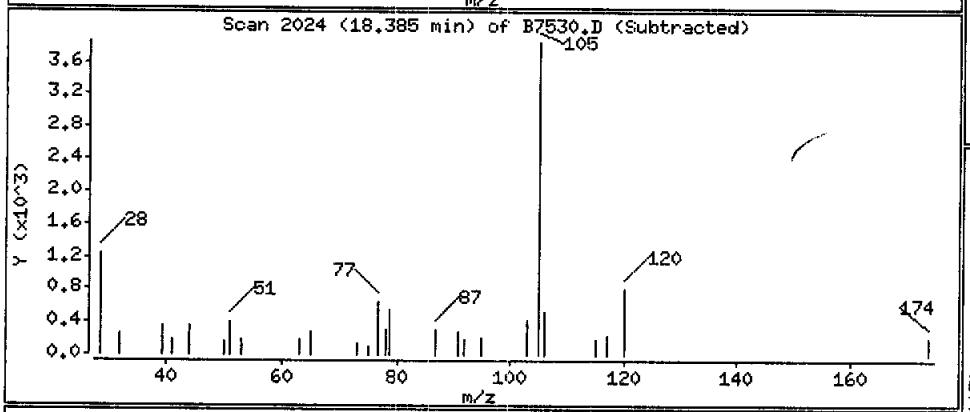
Column phase: J&W DB-624

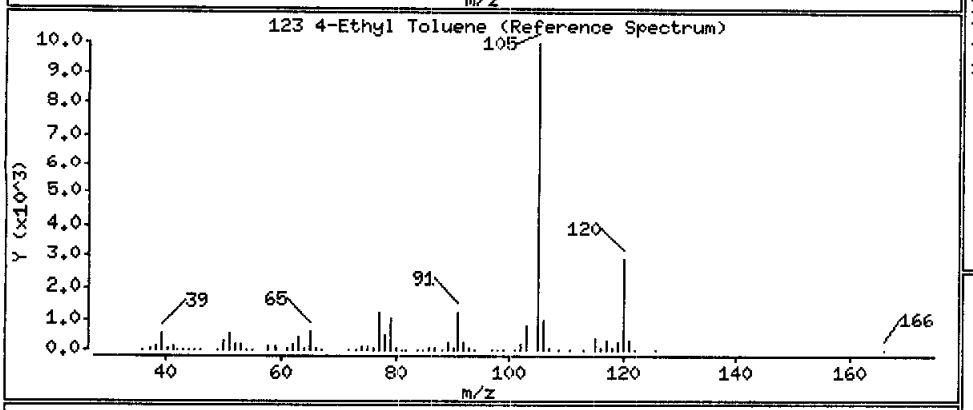
Column diameter: 0.53

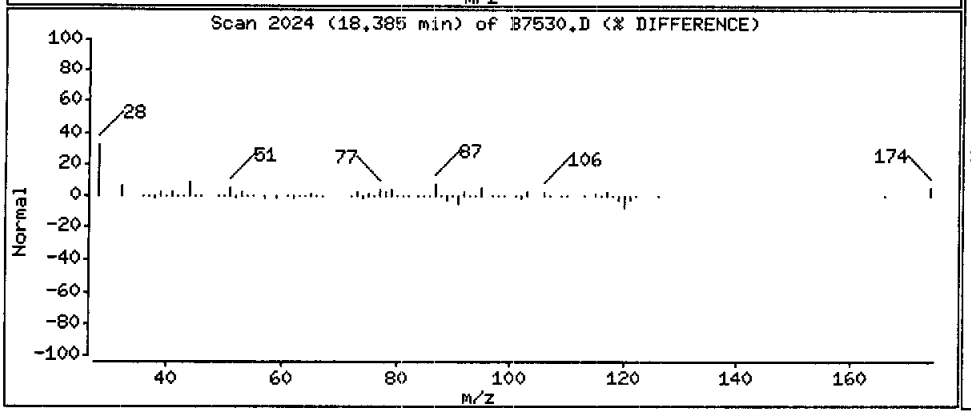
123 4-Ethyl Toluene

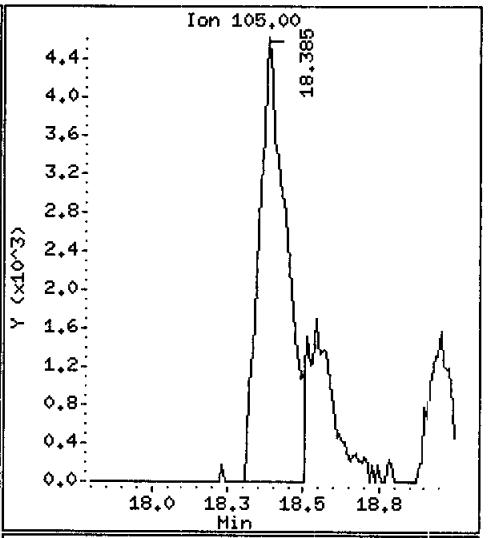
Concentration: 2.023 ppbv

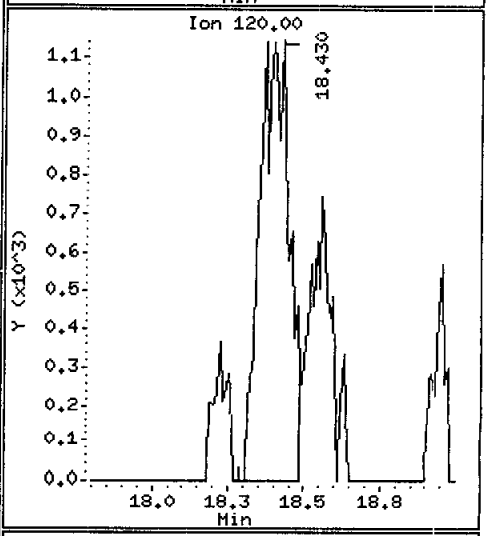


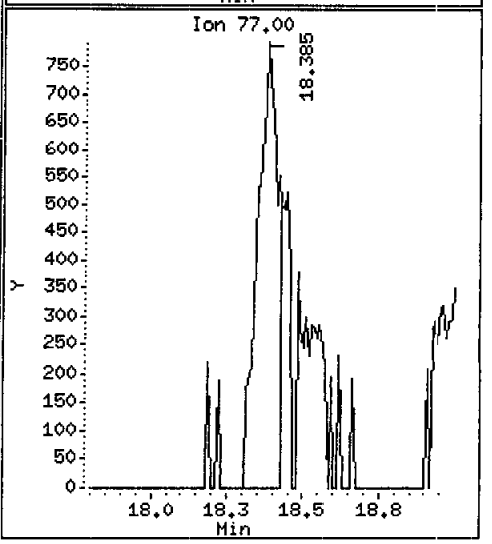












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

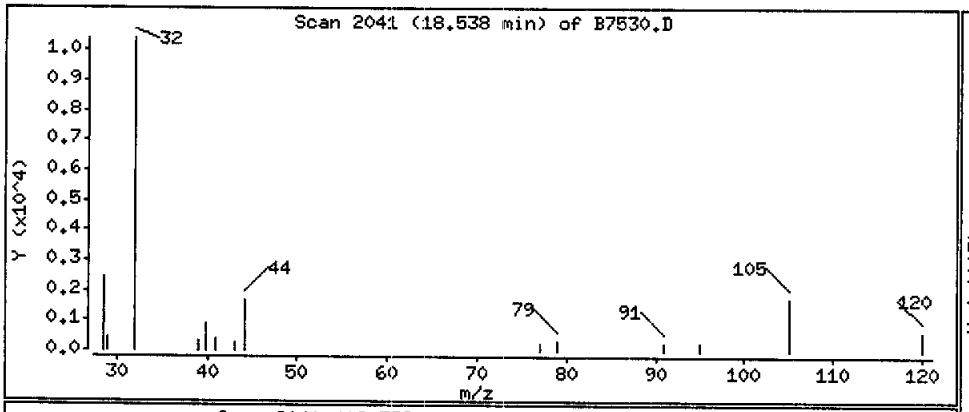
Operator: DLK

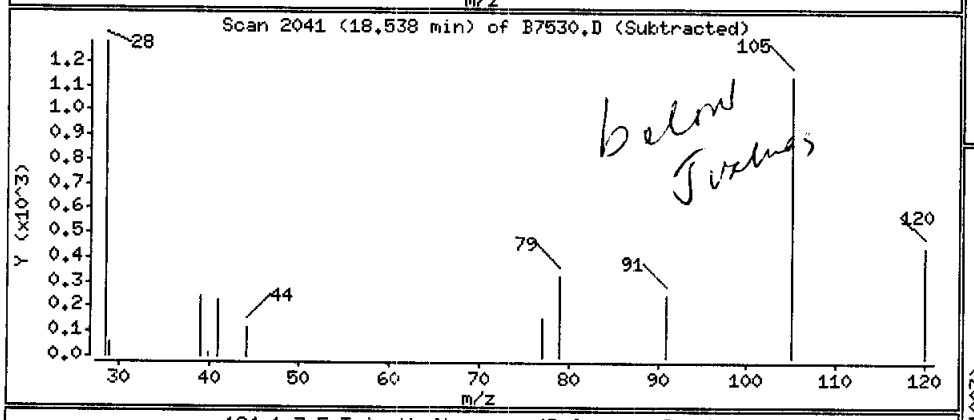
Column phase: J&W DB-624

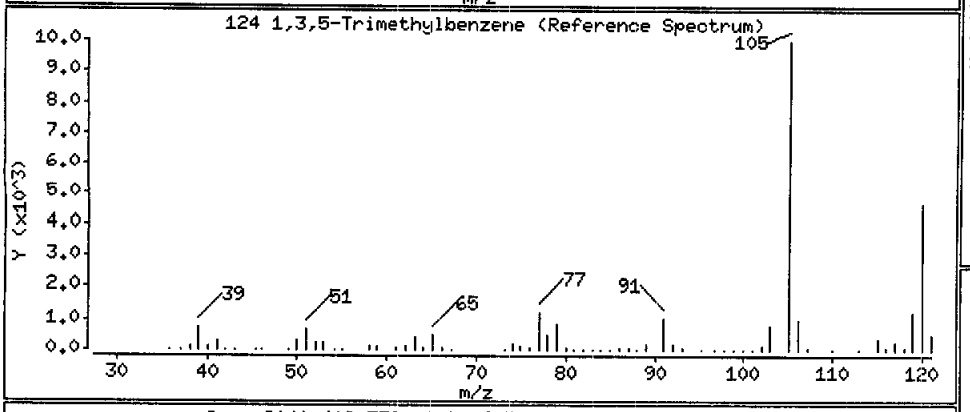
Column diameter: 0.53

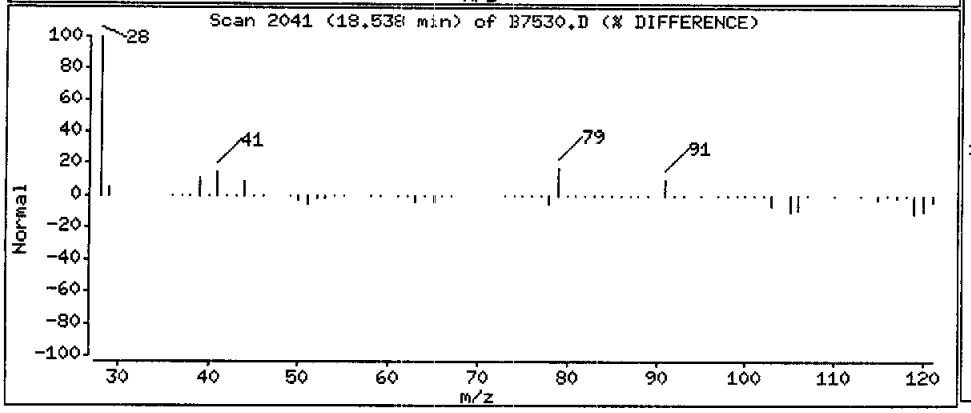
124 1,3,5-Trimethylbenzene

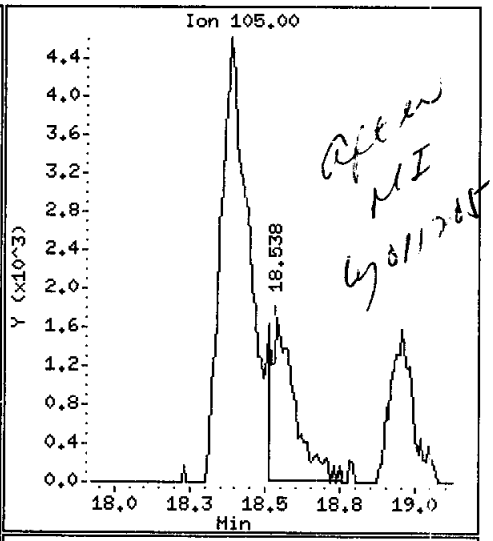
Concentration: 0.5977 ppbv

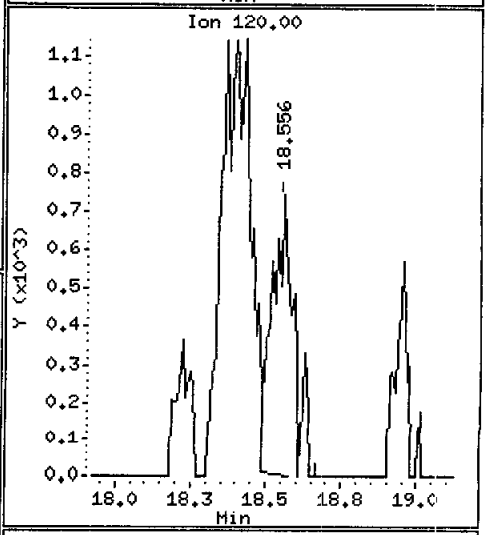


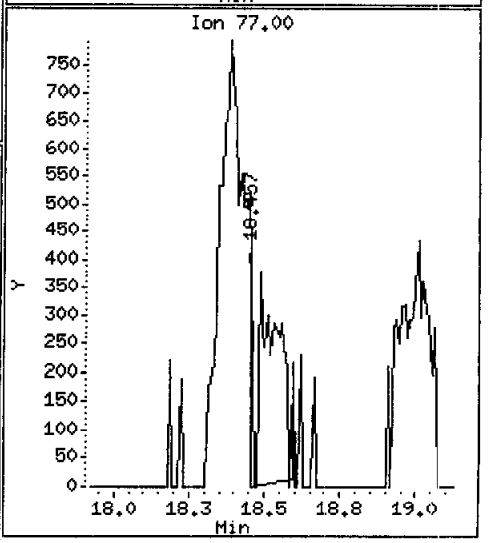












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

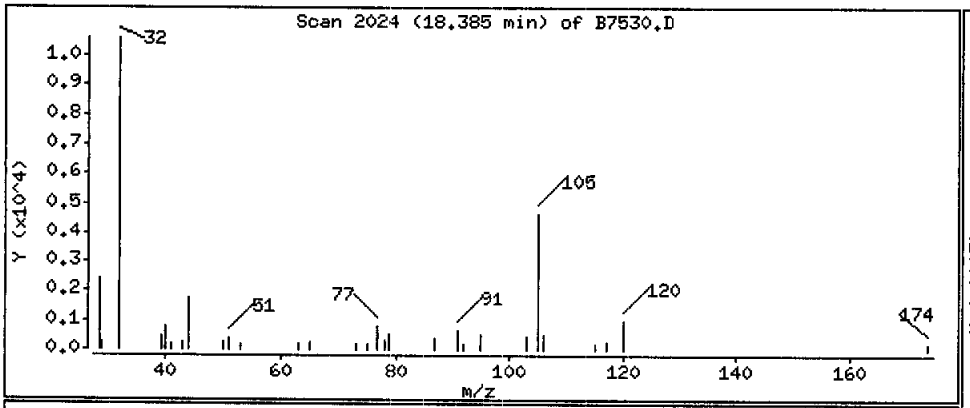
Operator: DLK

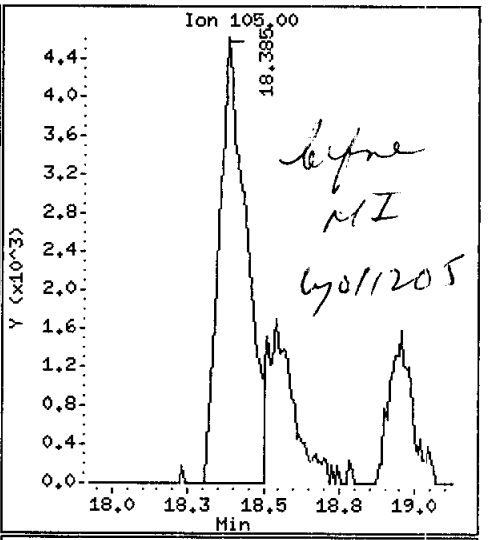
Column phase: J&W DB-624

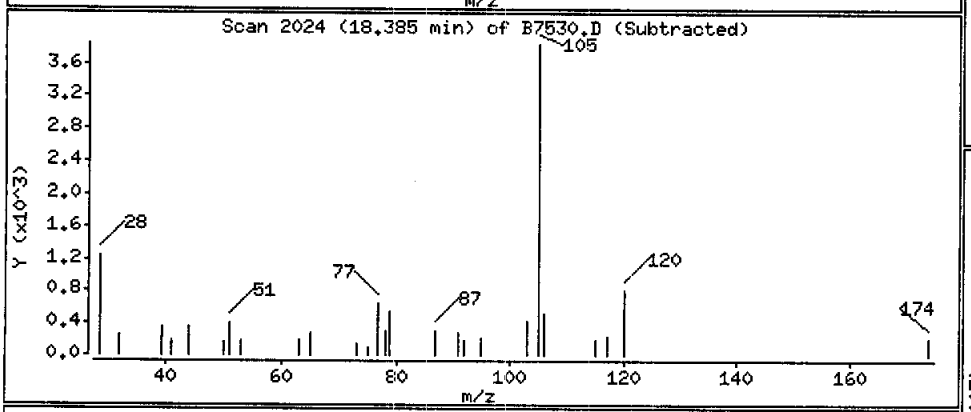
Column diameter: 0.53

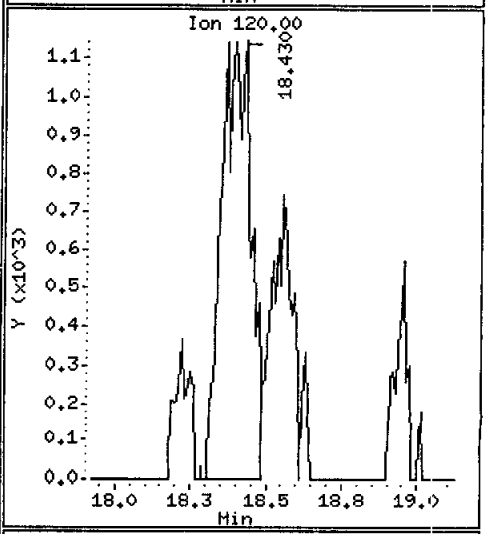
124 1,3,5-Trimethylbenzene

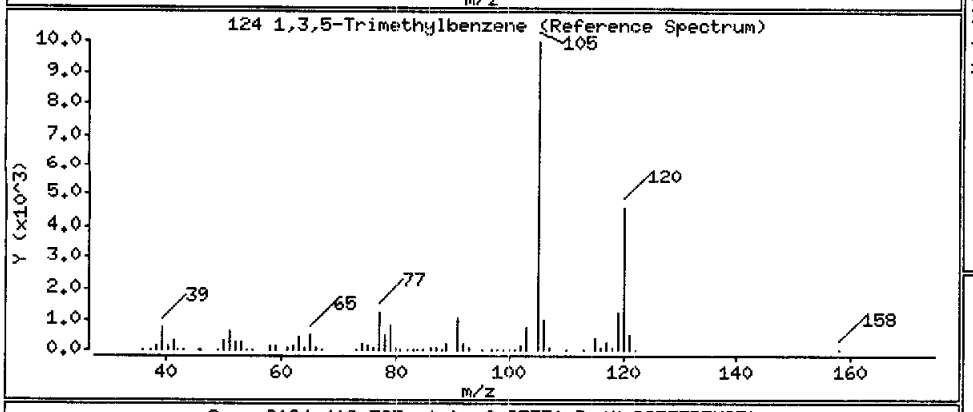
Concentration: 1.811 ppbv

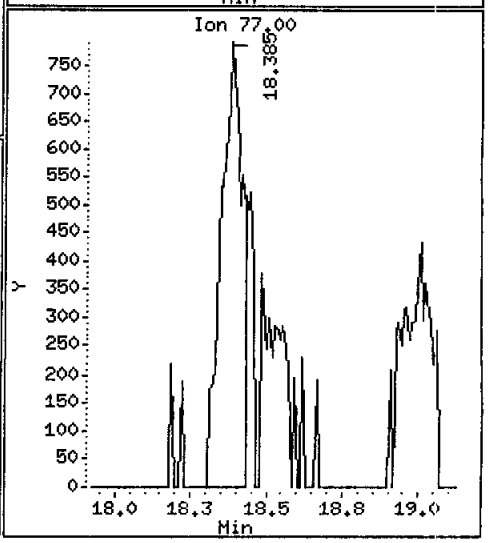


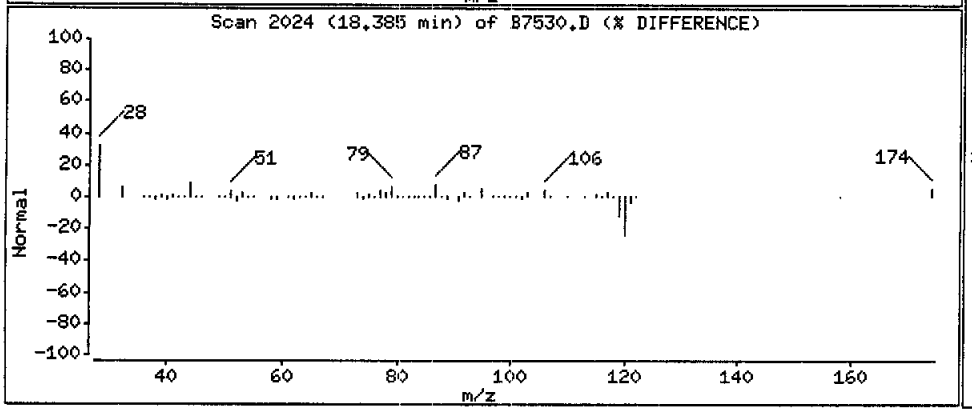












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7530.D

Date : 11-JAN-2005 14:36

Client ID: 066343-0001

Instrument: gcmsb.i

Sample Info: G2DF81AD,066343-0001,SANDIA,E5A100213-1

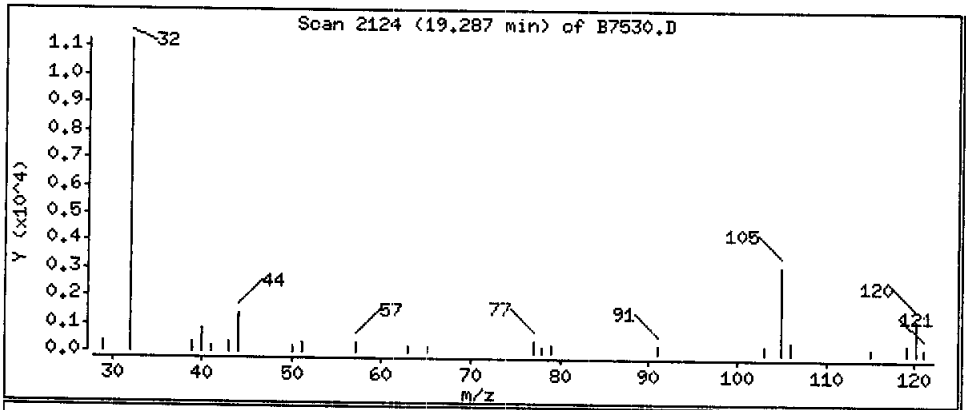
Operator: DLK

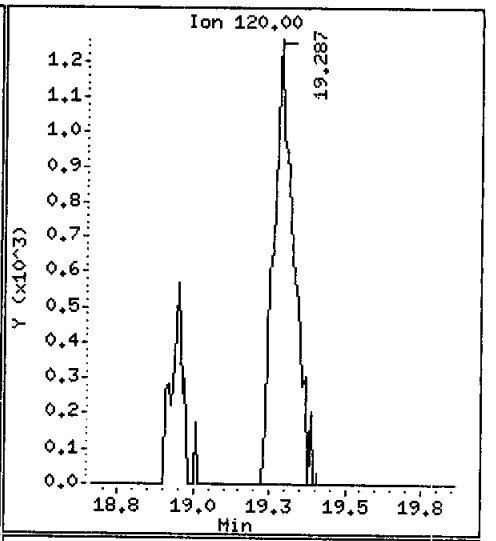
Column phase: J&W DB-624

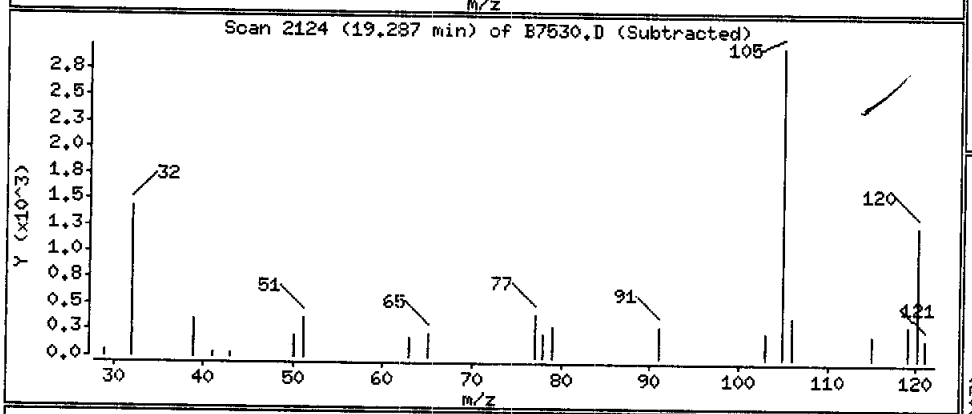
Column diameter: 0.53

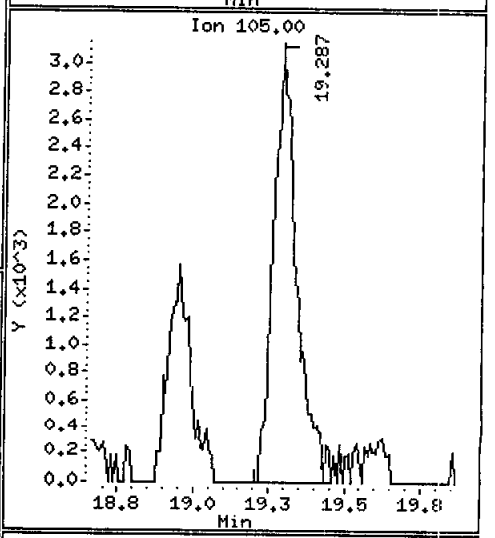
131 1,2,4-Trimethylbenzene

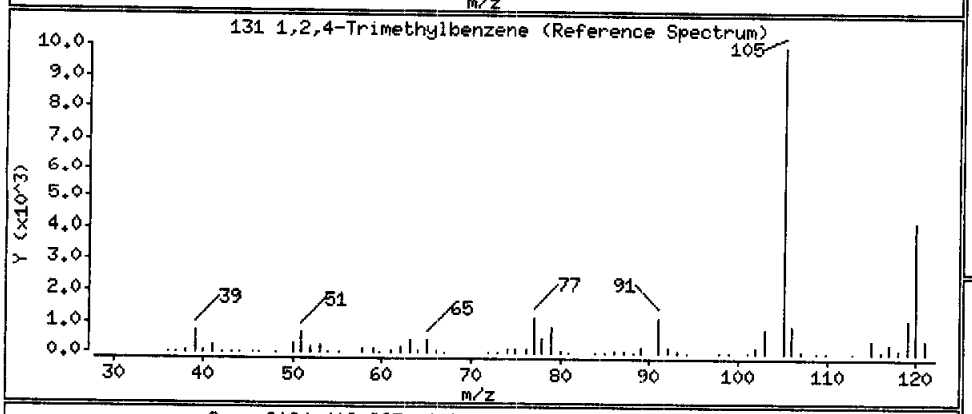
Concentration: 1.258 ppbv

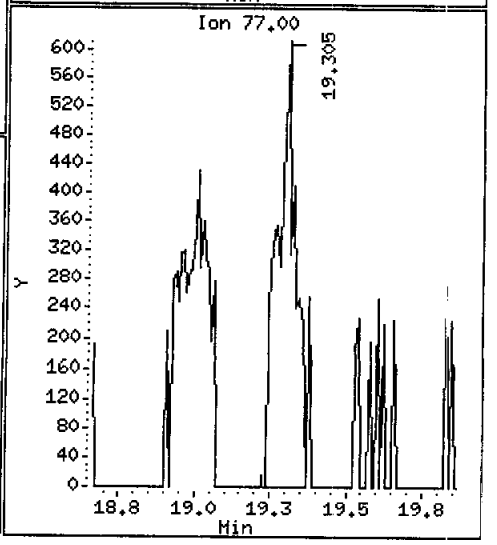


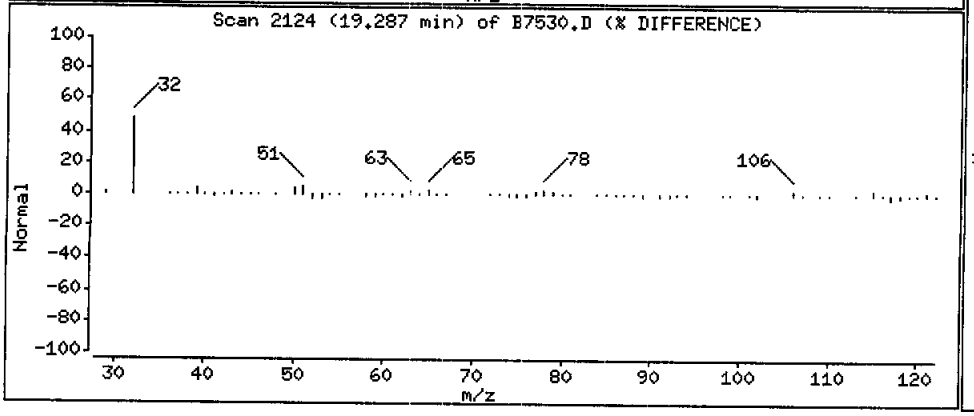












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D
Lab Smp Id: G2DGC1AD Client Smp ID: 066344-0001
Inj Date : 11-JAN-2005 15:07
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGC1AD,066344-0001,SANDIA,E5A100213-2
Misc Info : 24.1,13.0,500,927,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.100	FinalPres
InitPres	13.000	InitPres
CalVol	500.000	CalVol
SmpVol	927.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.159	2.156	(0.259)	28316	1.17512	1.175(a)
21 Trichlorofluoromethane (F11)	101	3.756	3.771	(0.451)	718991	29.5967	29.59
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.739	4.745	(0.569)	18554	0.66476	0.6647(a)
* 58 Bromochloromethane	49	8.331	8.327	(1.000)	570864	50.0000	
60 Chloroform	83	8.493	8.489	(1.019)	171944	9.46723	9.466
$ 66 1,2-Dichloroethane-d4	65	9.359	9.347	(0.921)	480249	49.9339	49.93
* 73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1171946	50.0000	
75 Trichloroethene	130	10.604	10.601	(1.044)	1633169	159.601	159.6
82 Bromodichloromethane	85	11.516	11.485	(1.133)	15216	1.19139	1.191(a)
$ 88 Toluene-d8	100	12.770	12.766	(1.257)	593638	48.3745	48.37
89 Toluene	91	12.887	12.883	(1.268)	13548	0.65656	0.6565(a)
95 Tetrachloroethene	166	13.907	13.885	(0.902)	16111	1.33338	1.333(a)
* 101 Chlorobenzene-d5	117	15.422	15.419	(1.000)	771769	50.0000	
$ 114 4-Bromofluorobenzene	95	17.678	17.675	(1.146)	582008	42.2154	42.21

QC Flag Legend

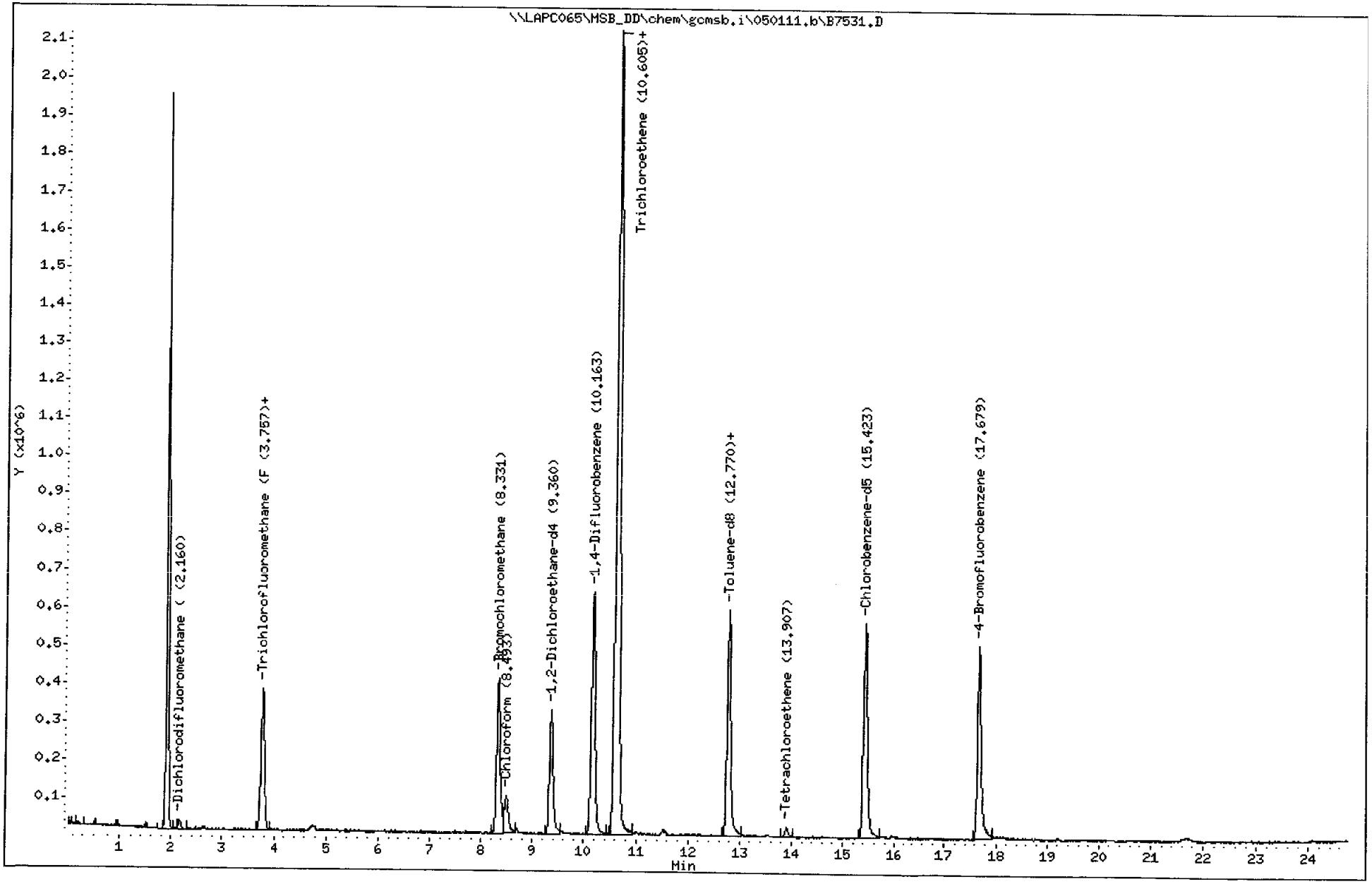
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D
Date : 11 JAN-2005 15:07
Client ID: 066344-0001
Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

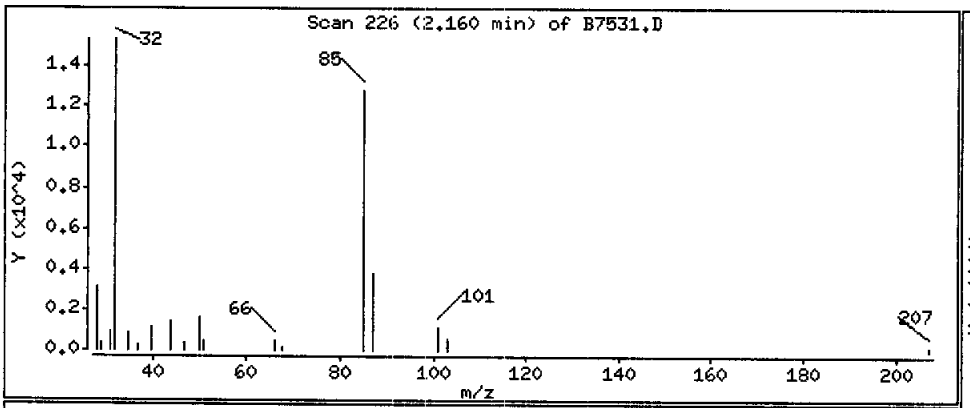
Operator: DLK

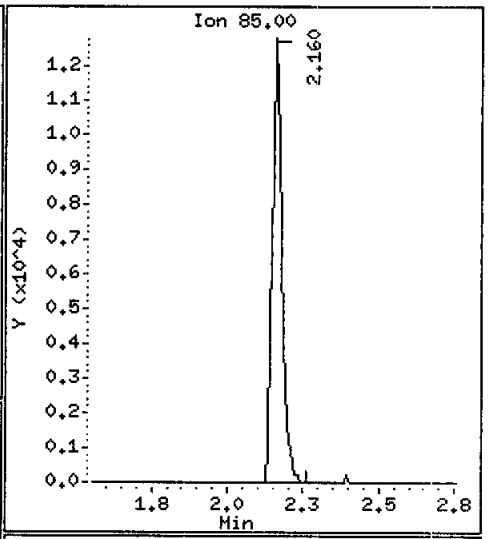
Column phase: J&W DB-624

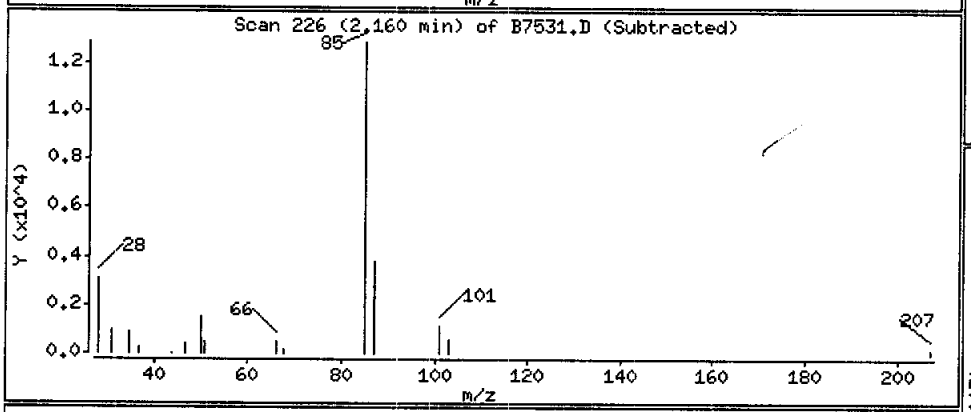
Column diameter: 0.53

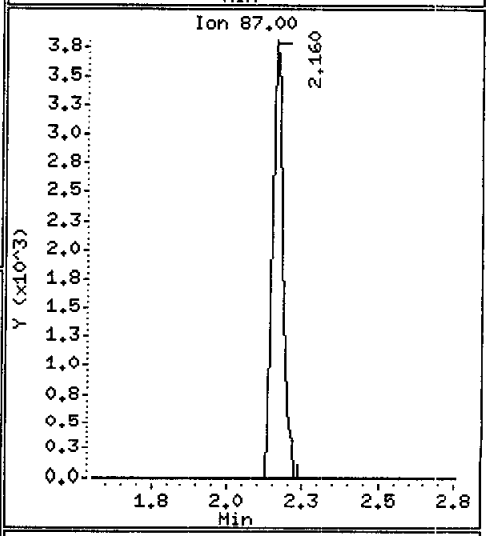
3 Dichlorodifluoromethane (F12)

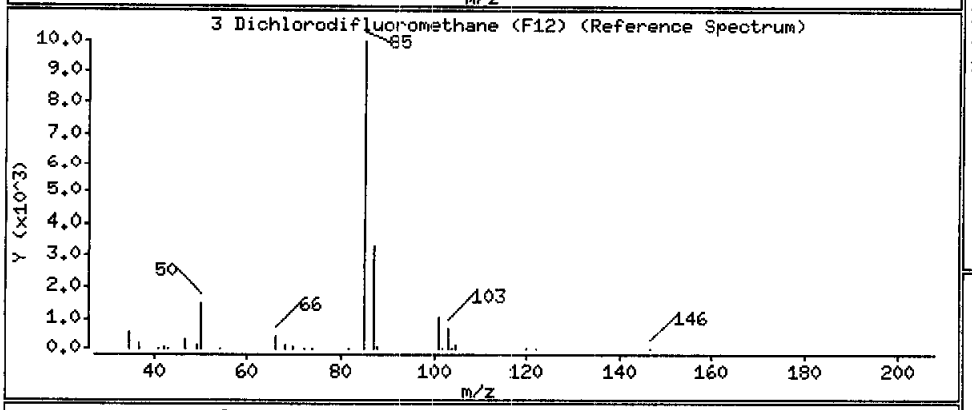
Concentration: 1.175 ppbv

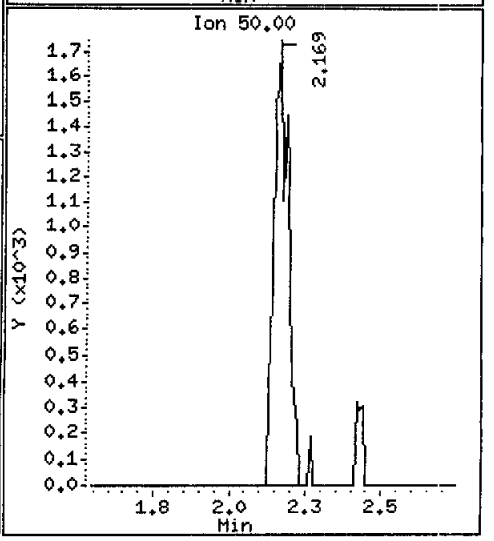


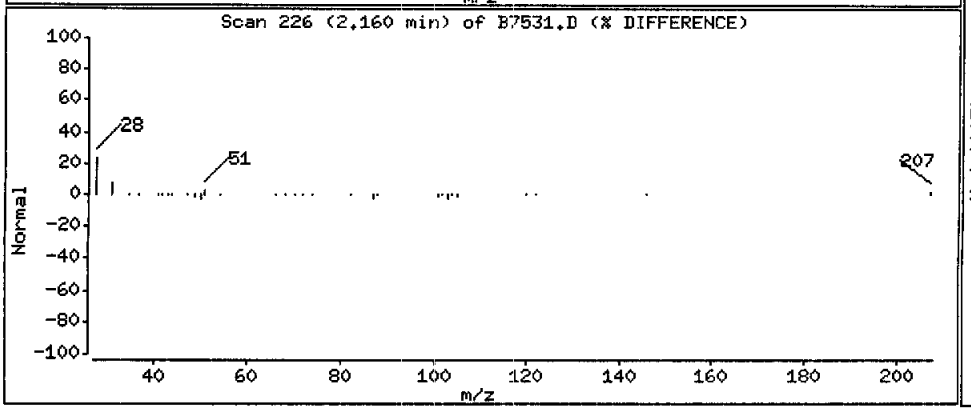












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

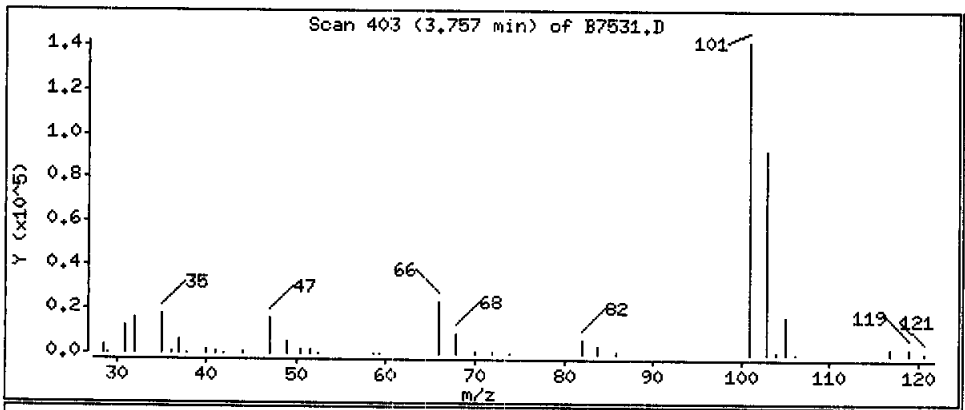
Operator: DLK

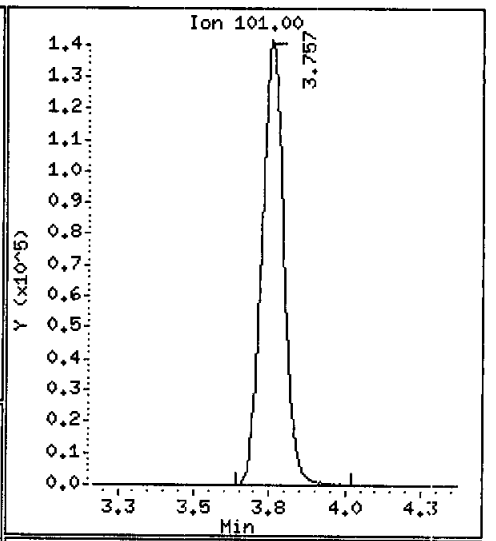
Column phase: J&W DB-624

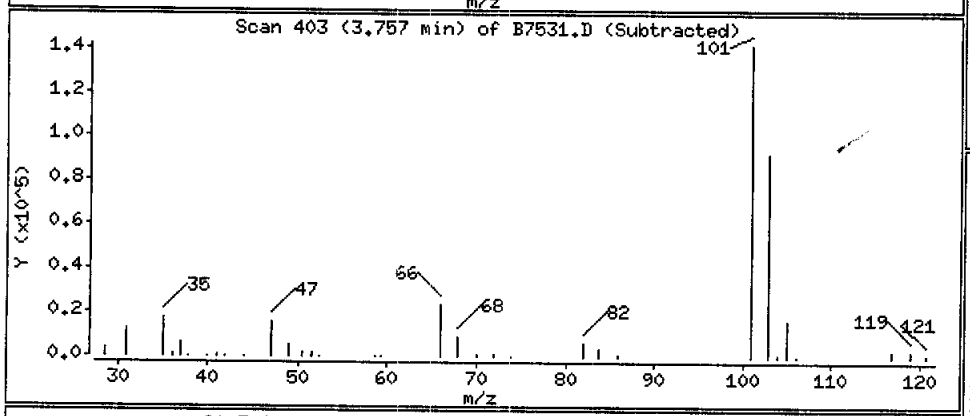
Column diameter: 0.53

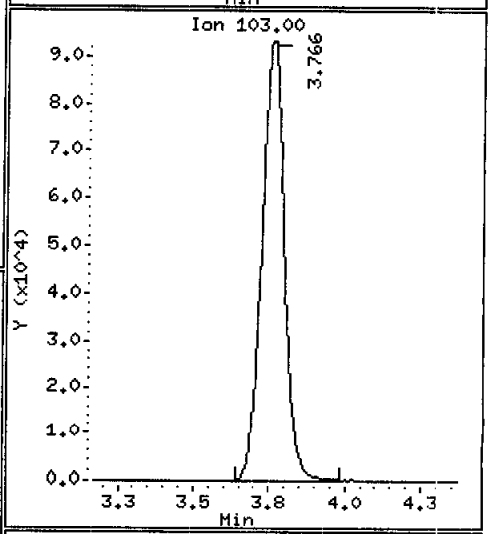
21 Trichlorofluoromethane (F11)

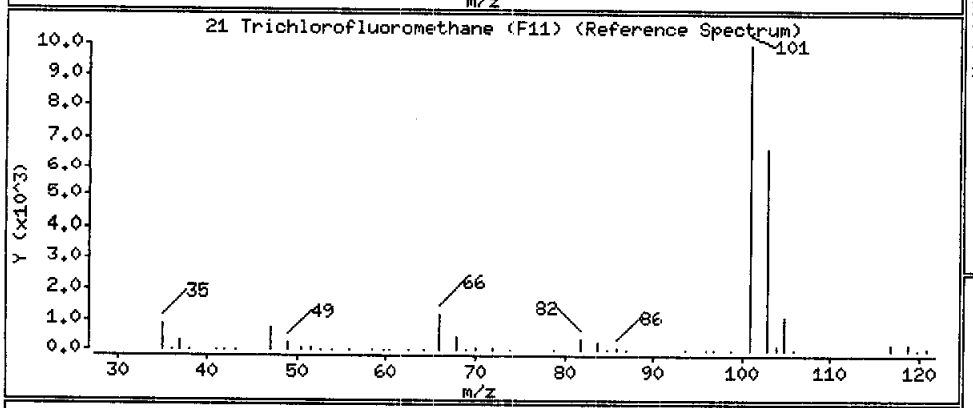
Concentration: 29.59 ppbv

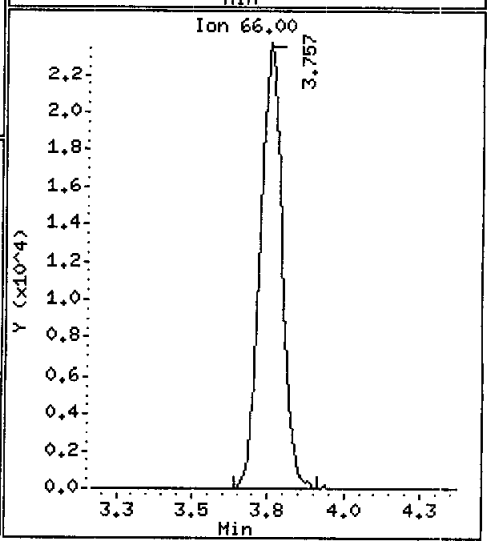


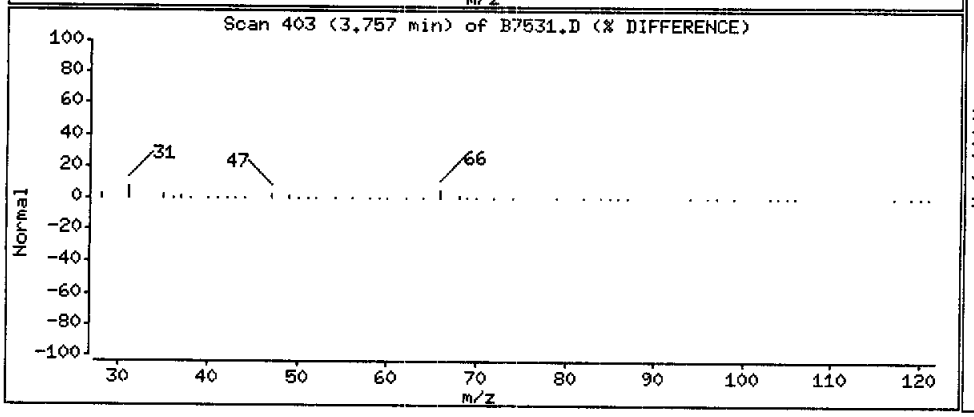












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

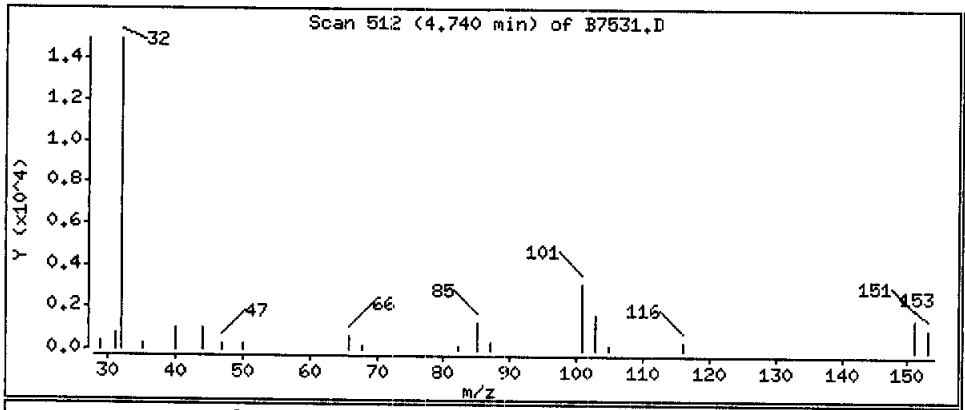
Operator: DLK

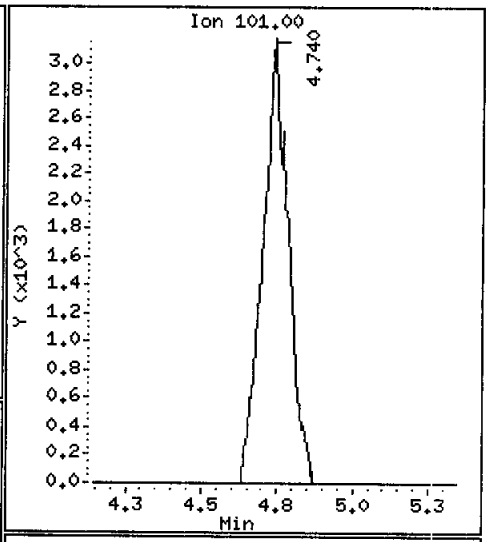
Column phase: J&W DB-624

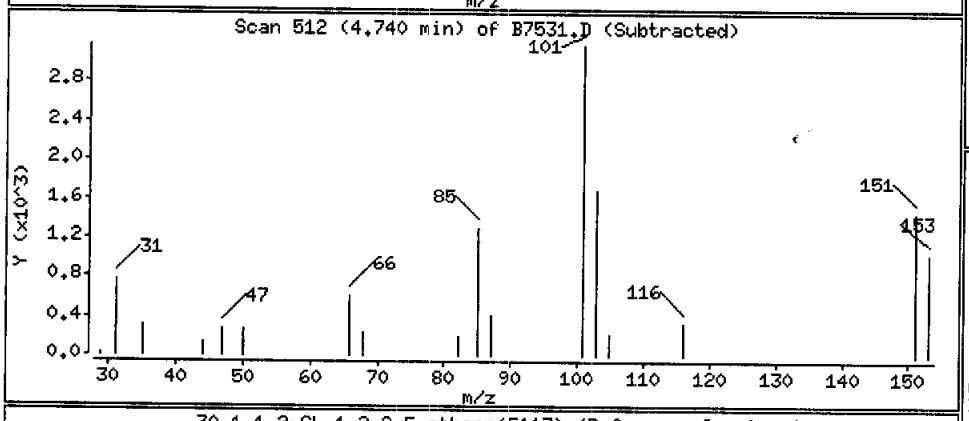
Column diameter: 0.53

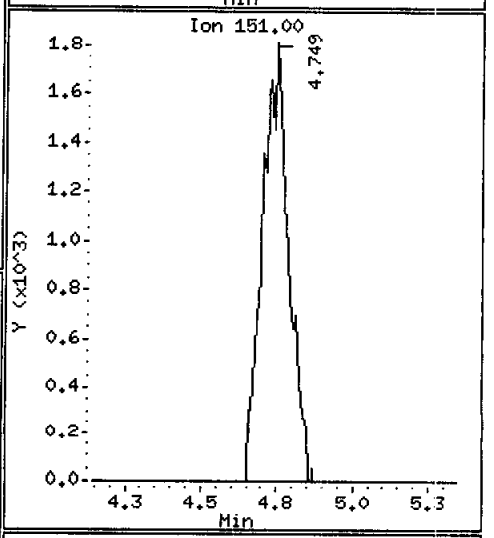
30 1,1,2-CL 1,2,2-F ethane(F113)

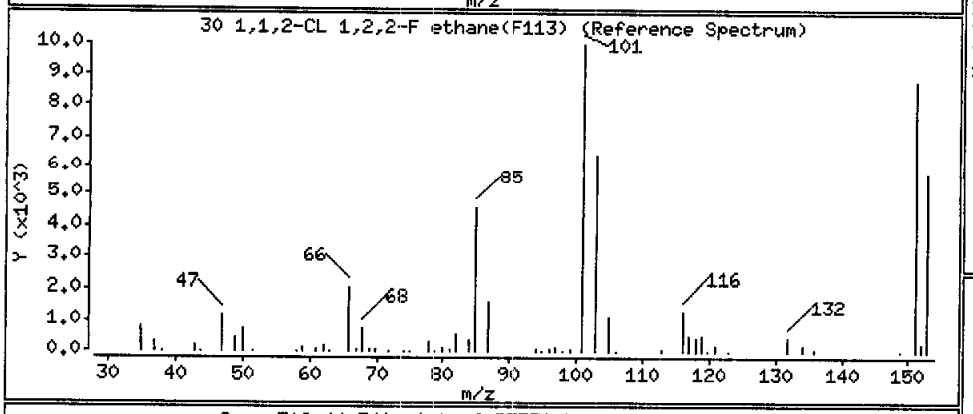
Concentration: 0.6647 ppbv

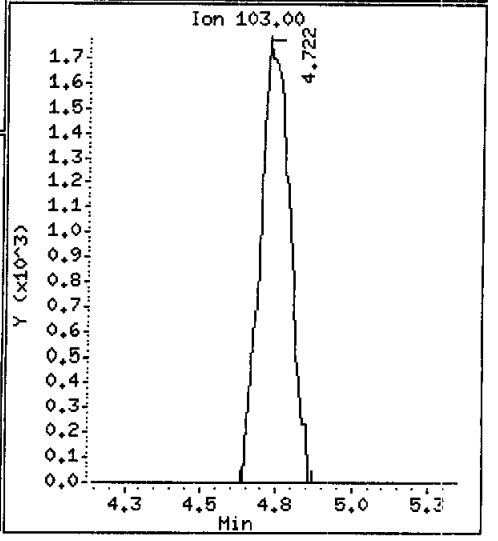


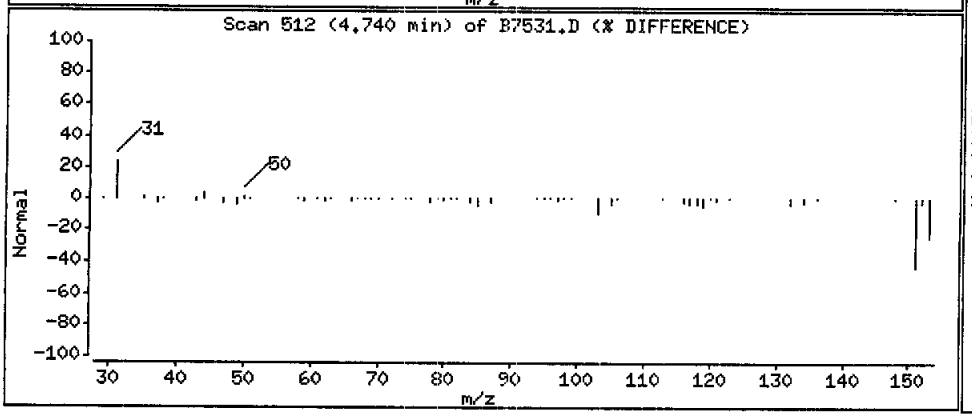












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

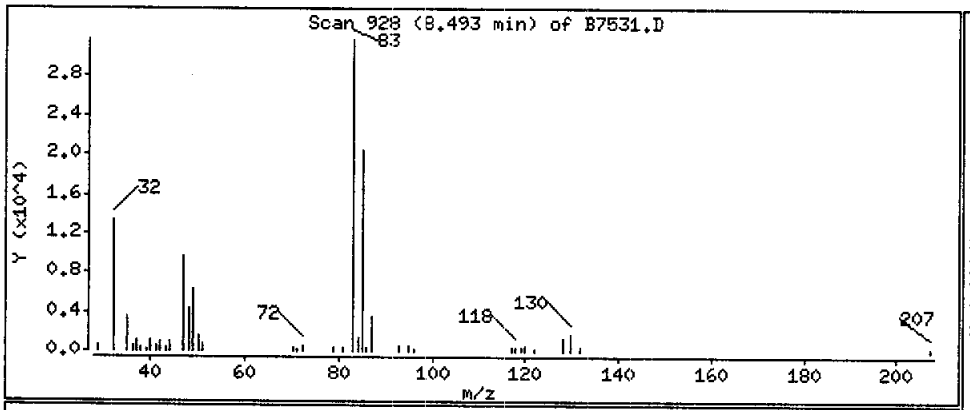
Operator: DLK

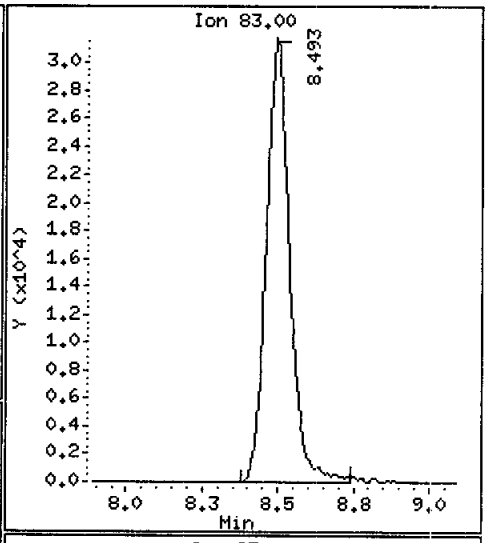
Column phase: J&W DB-624

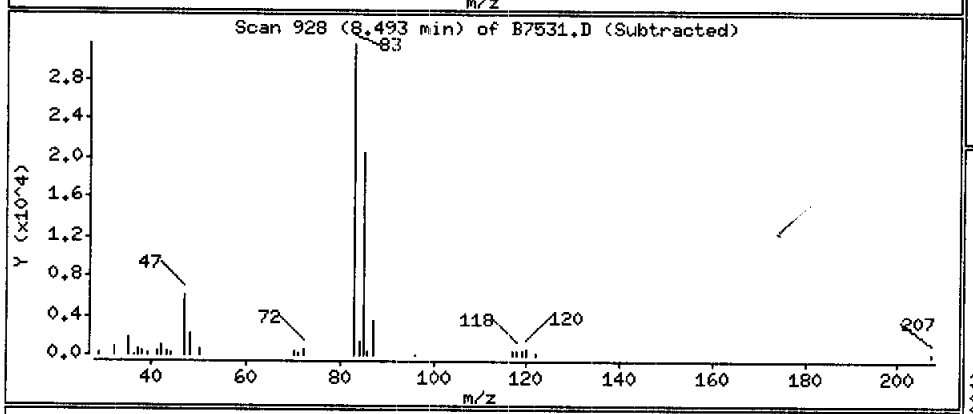
Column diameter: 0.53

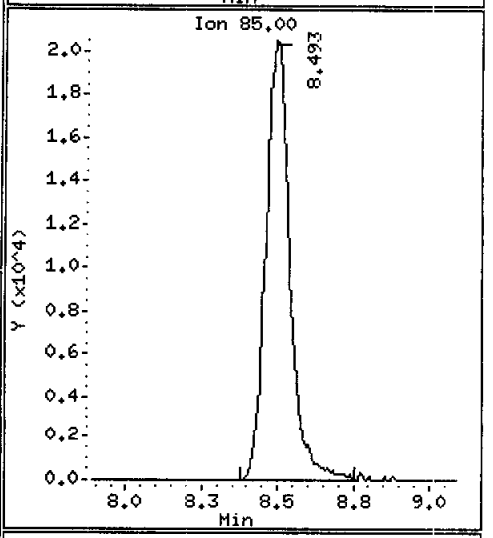
60 Chloroform

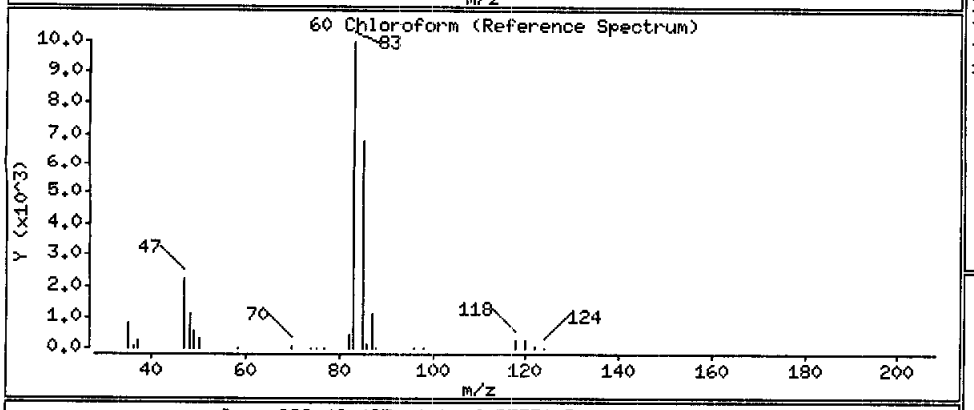
Concentration: 9.466 ppbv

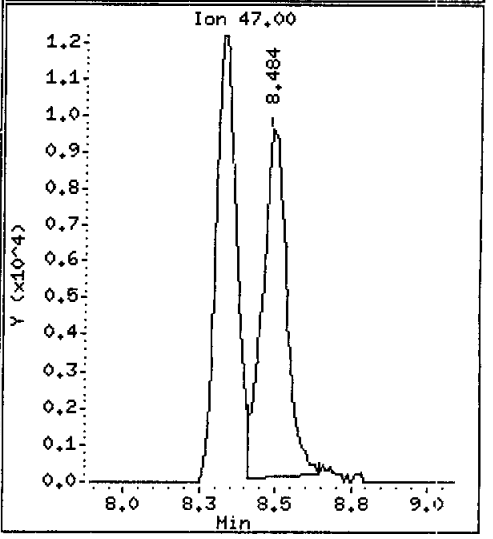


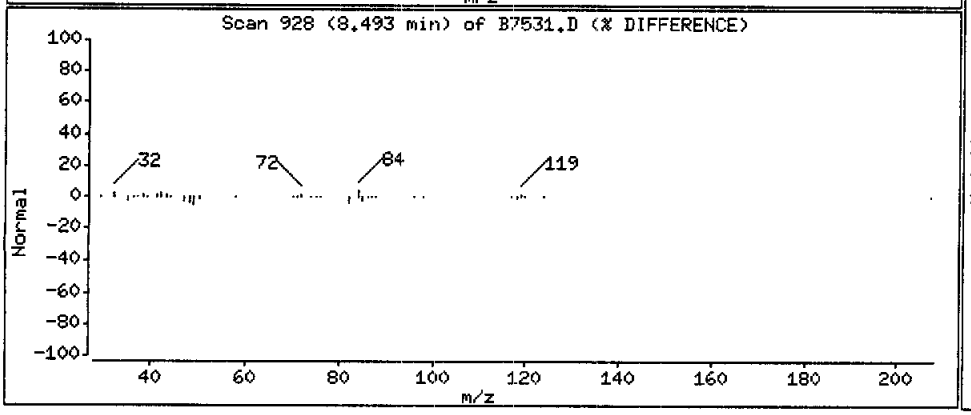












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

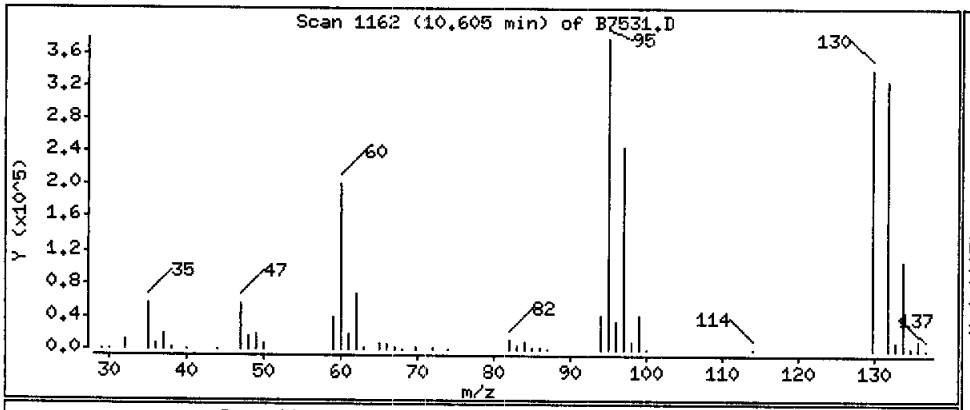
Operator: DLK

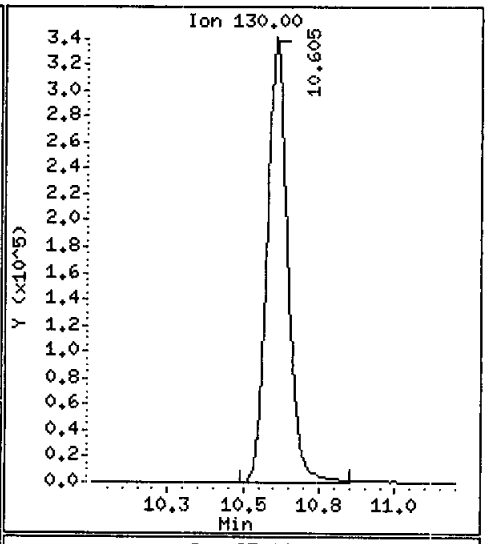
Column phase: J&W DB-624

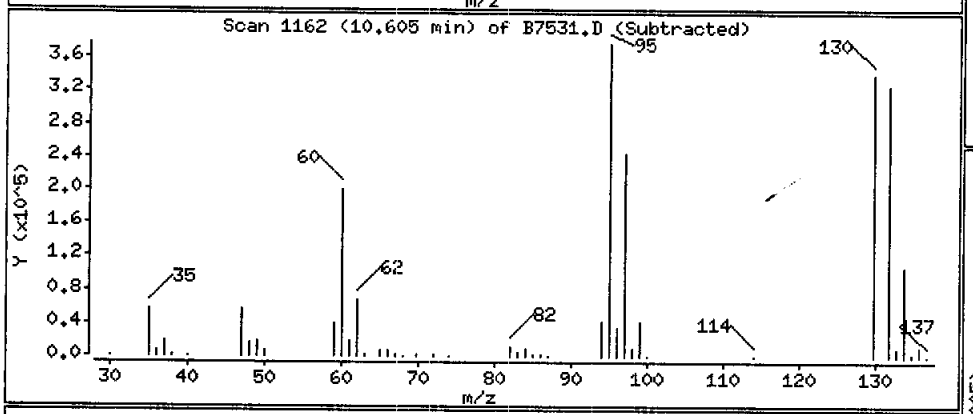
Column diameter: 0.53

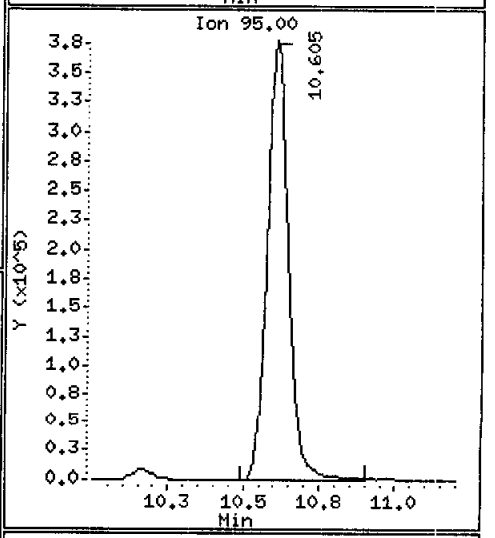
75 Trichloroethene

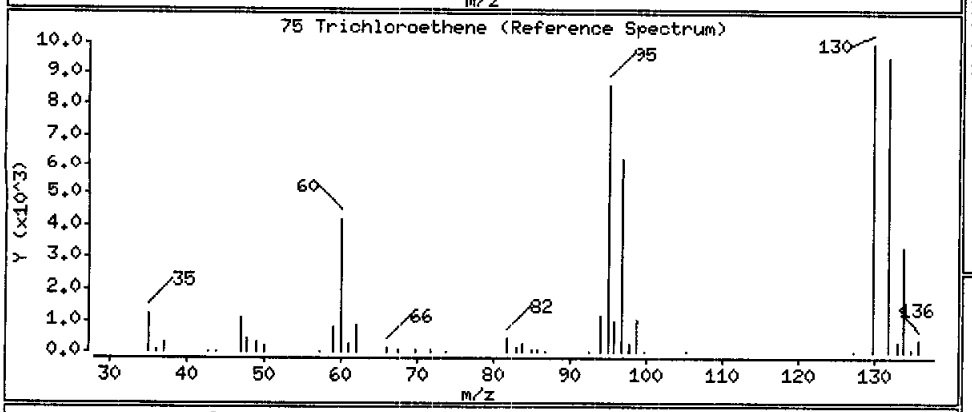
Concentration: 159.6 ppbv

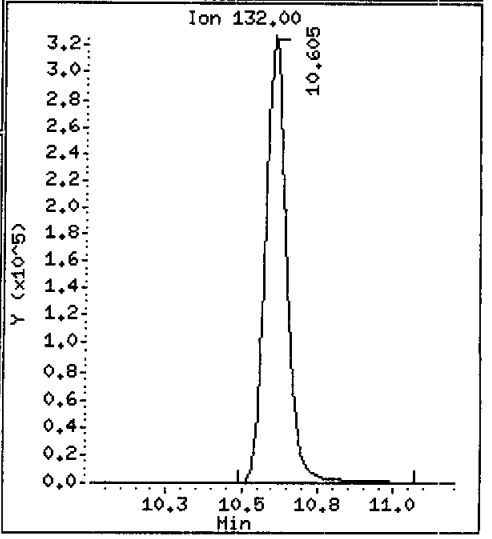


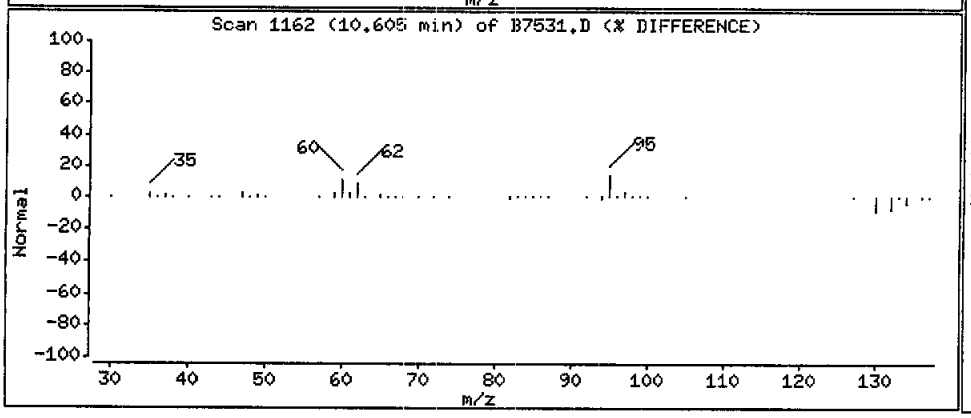












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

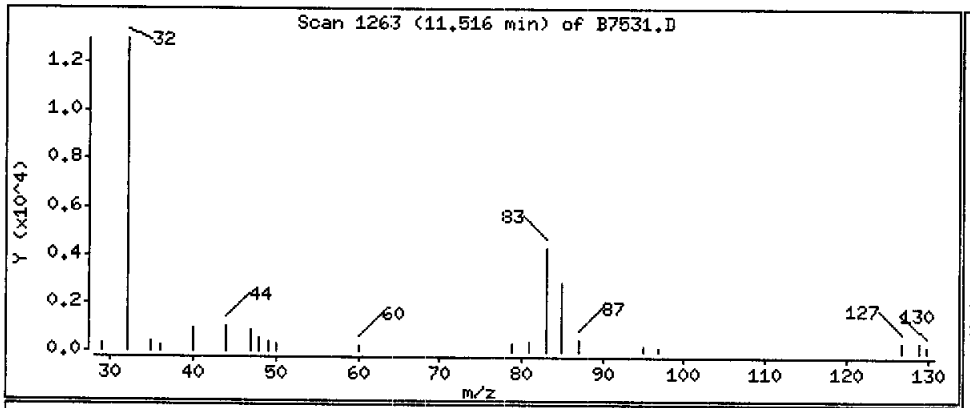
Operator: DLK

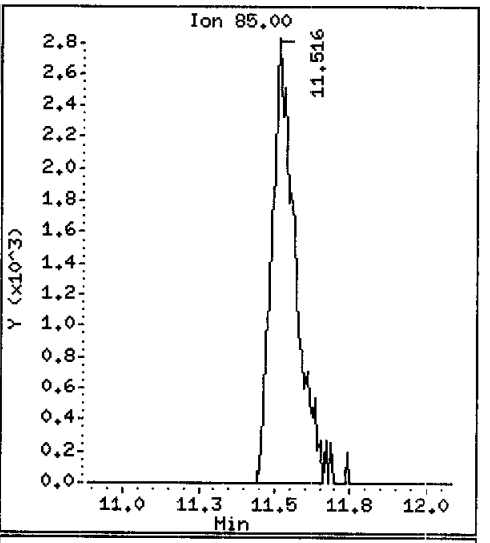
Column phase: J&W DB-624

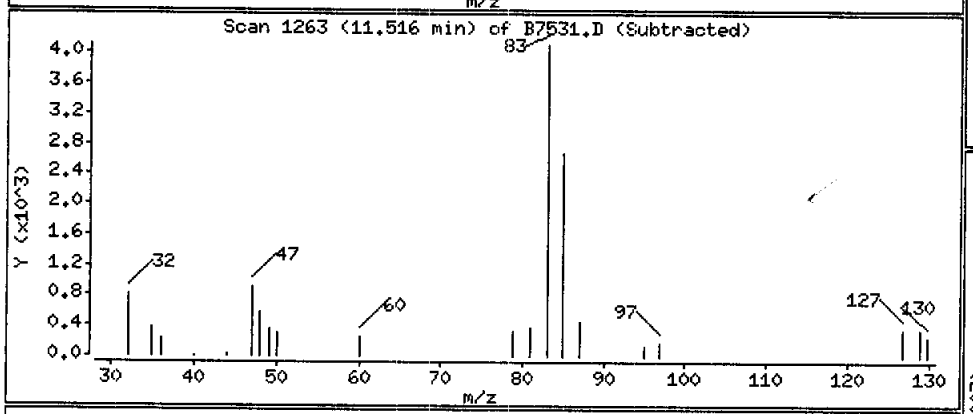
Column diameter: 0.53

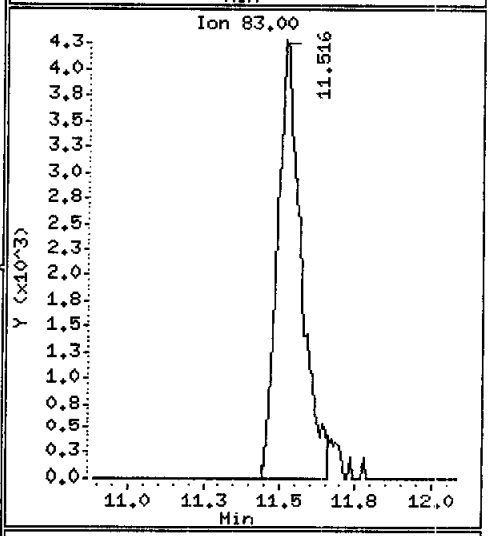
82 Bromodichloromethane

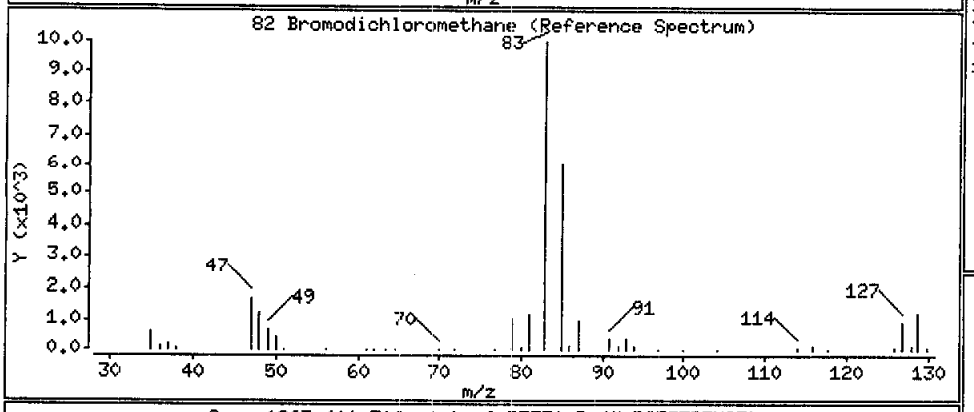
Concentration: 1.191 ppbv

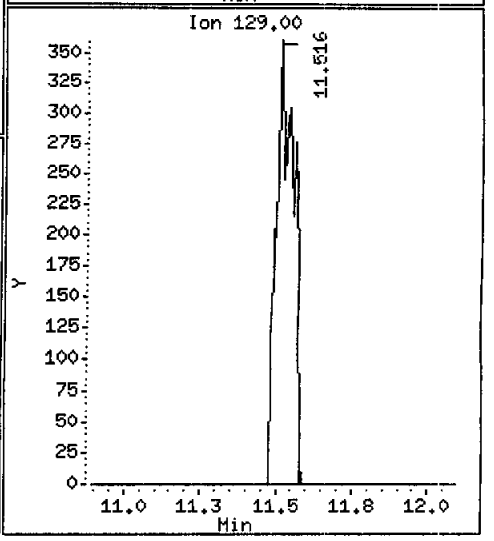


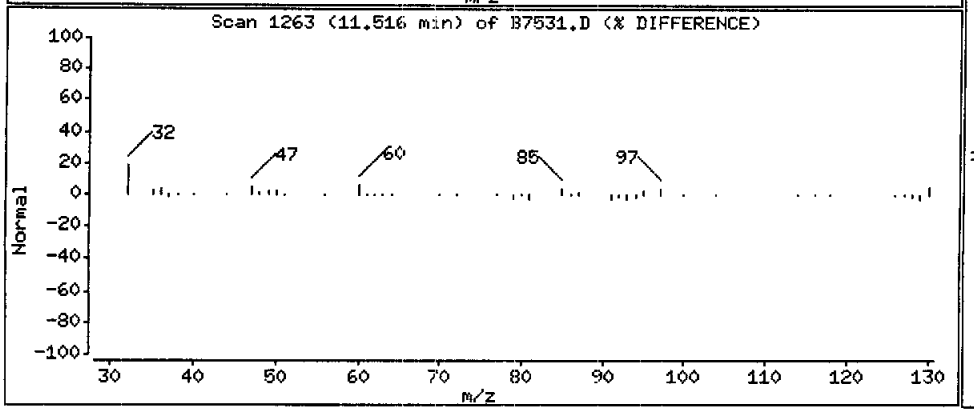












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

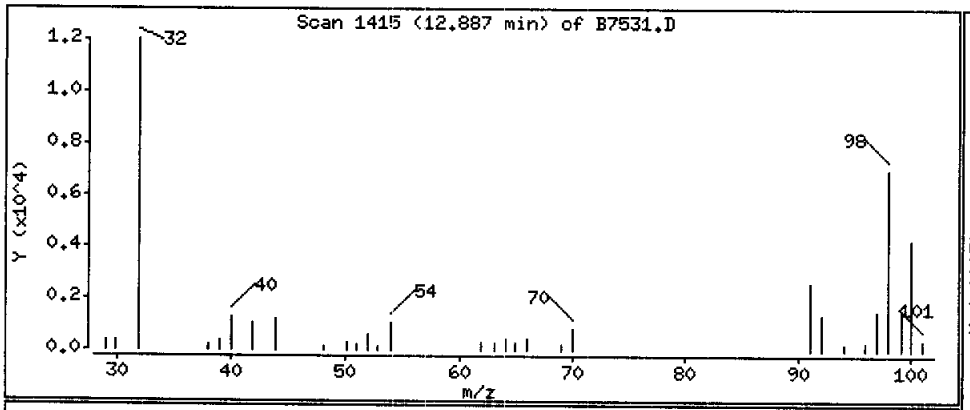
Operator: DLK

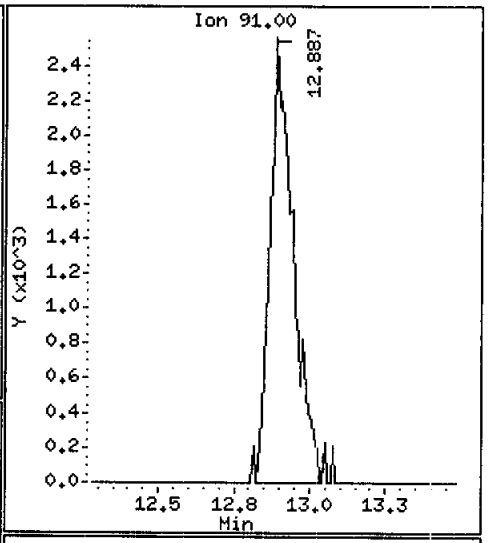
Column phase: J&W DB-624

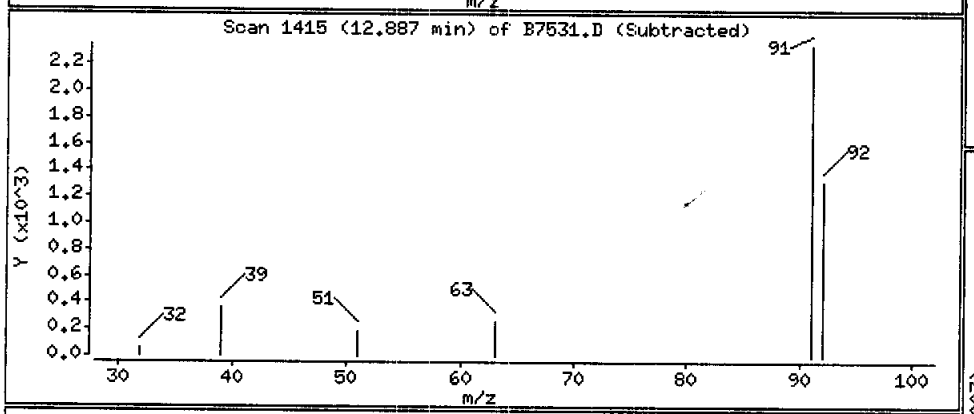
Column diameter: 0.53

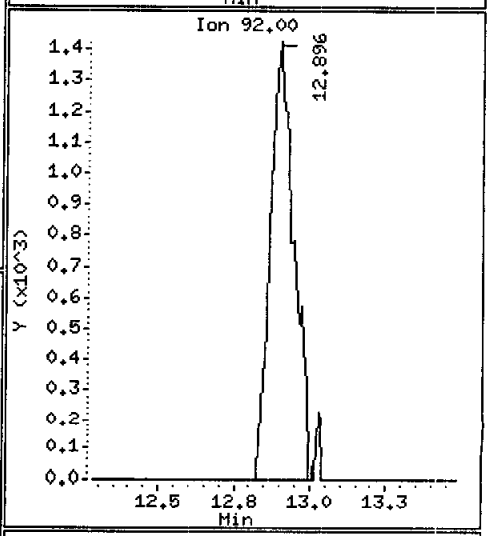
89 Toluene

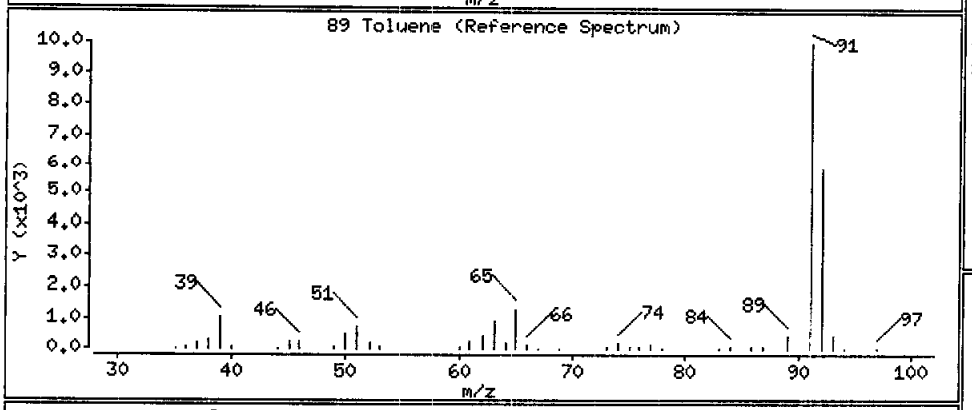
Concentration: 0.6565 ppbv

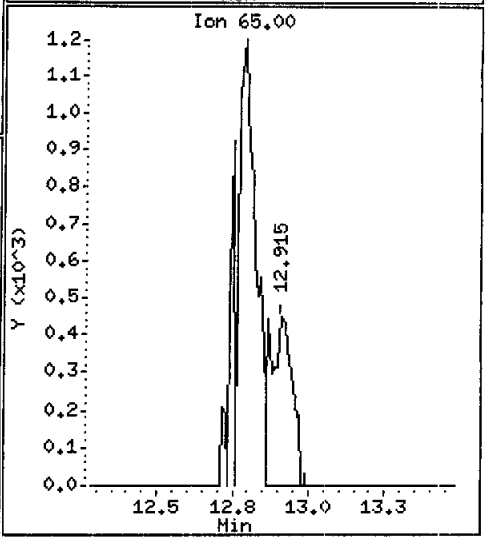


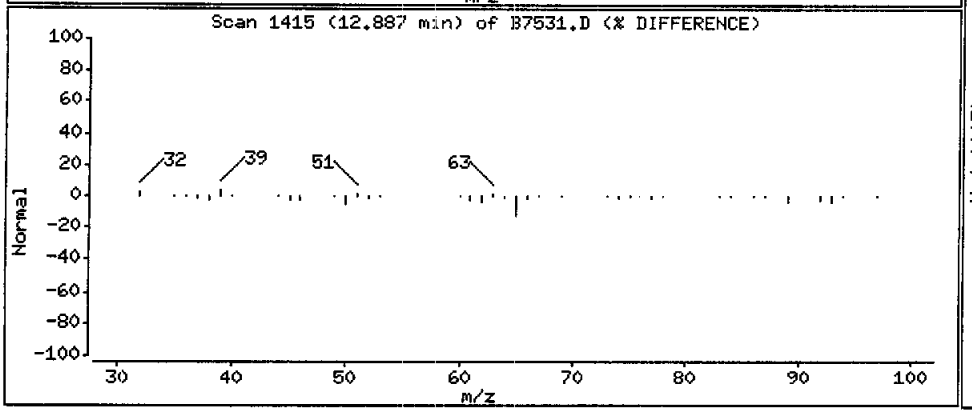












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7531.D

Date : 11-JAN-2005 15:07

Client ID: 066344-0001

Instrument: gcmsb.i

Sample Info: G2DGC1AD,066344-0001,SANDIA,E5A100213-2

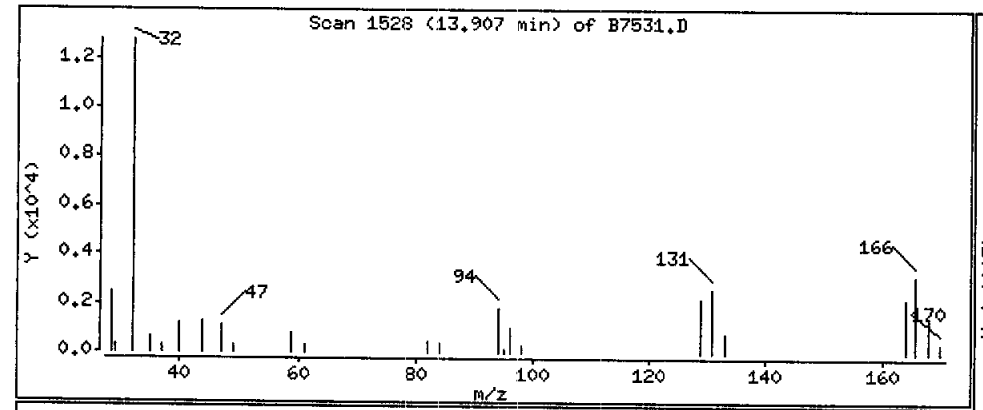
Operator: DLK

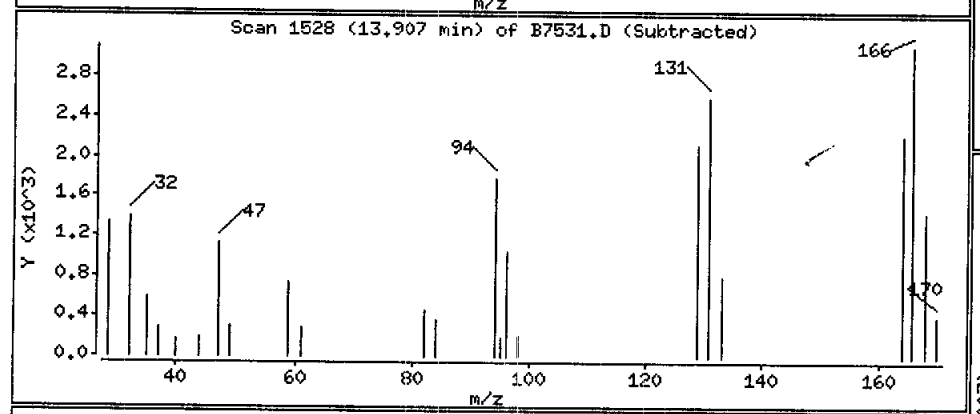
Column phase: J&W DB-624

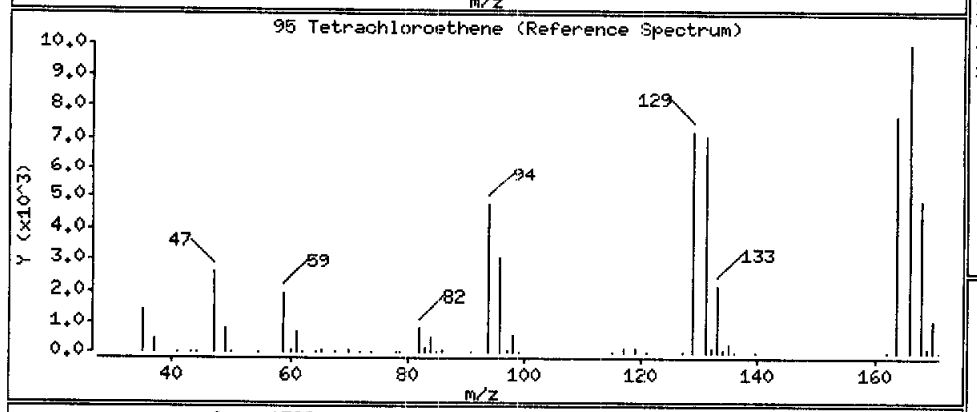
Column diameter: 0.53

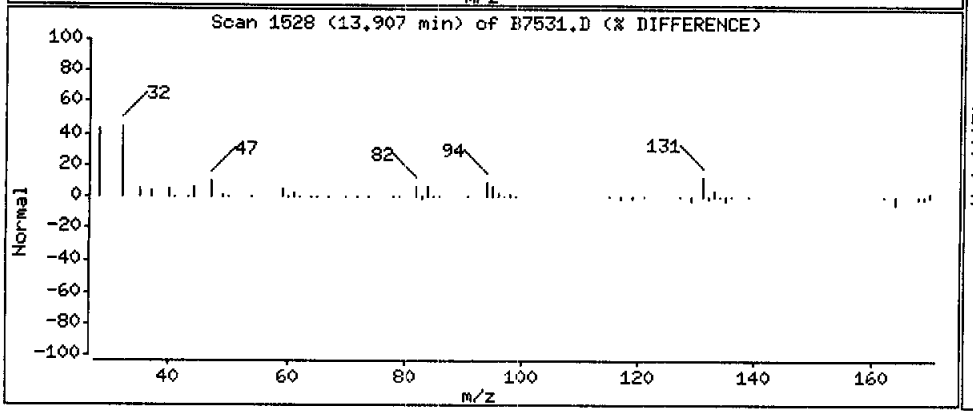
95 Tetrachloroethene

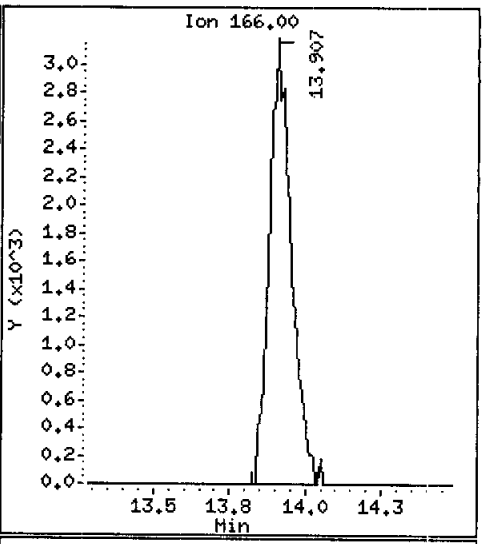
Concentration: 1.333 ppbv

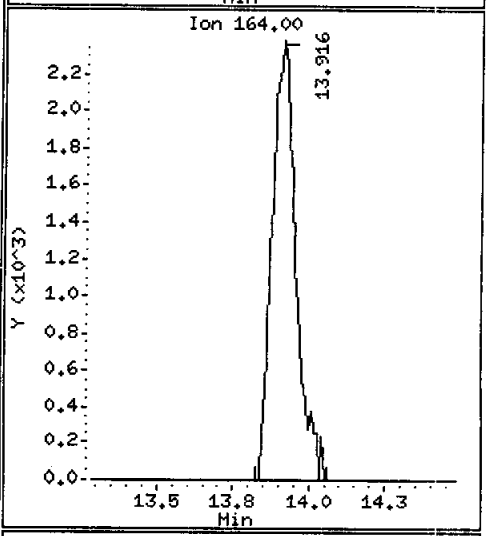


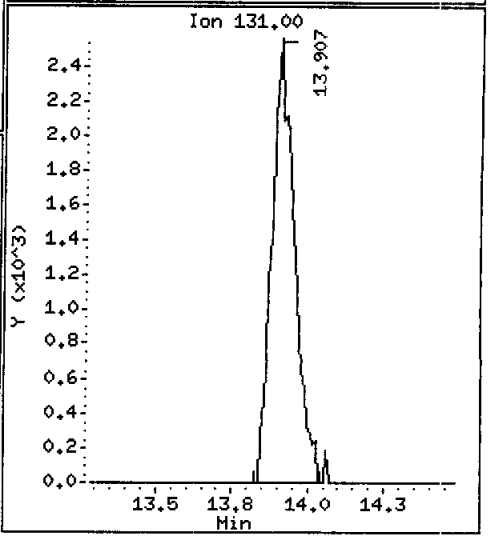












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D
Lab Smp Id: G2DGE1AD Client Smp ID: 066345-0001
Inj Date : 11-JAN-2005 15:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGE1AD,066345-0001,SANDIA,E5A100213-3
Misc Info : 24.2,13.0,500,931,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	13.000	InitPres
CalVol	500.000	CalVol
SmpVol	931.000	SmpVol

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	3 Dichlorodifluoromethane (F12)	85	2.147	2.156	(0.262)	19660	0.81388	0.8137(a)
	8 Chloromethane	52	2.156	2.426	(0.263)	1332	1.24212	1.242(aQ)
	21 Trichlorofluoromethane (F11)	101	3.654	3.771	(0.446)	40412	1.65939	1.659(a)
	28 1,1-Dichloroethene	61	4.565	4.700	(0.557)	18410	1.42517	1.425(a)
	30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.601	4.745	(0.561)	36942	1.32025	1.320(a)
	31 Acetone	58	4.791	4.853	(0.584)	4269	2.33108	2.330(a)
	37 Methylene Chloride	49	5.467	5.593	(0.667)	27506	3.44857	3.448
*	58 Bromochloromethane	49	8.201	8.327	(1.000)	572298	50.0000	
	60 Chloroform	83	8.364	8.489	(1.020)	115698	6.35439	6.353
$	66 1,2-Dichloroethane-d4	65	9.239	9.347	(0.918)	499789	51.7238	51.71
*	73 1,4-Difluorobenzene	114	10.060	10.159	(1.000)	1177424	50.0000	
	75 Trichloroethene	130	10.502	10.601	(1.044)	2636022	256.406	256.3
$	88 Toluene-d8	100	12.703	12.766	(1.263)	597757	48.4835	48.47
	89 Toluene	91	12.821	12.883	(1.274)	11716	0.56517	0.5650(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
95 Tetrachloroethene	166	13.849	13.885	(0.900)	23510	1.91950	1.919(a)
* 101 Chlorobenzene-d5	117	15.383	15.419	(1.000)	782311	50.0000	
$ 114 4-Bromofluorobenzene	95	17.648	17.675	(1.147)	588703	42.1256	42.12

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

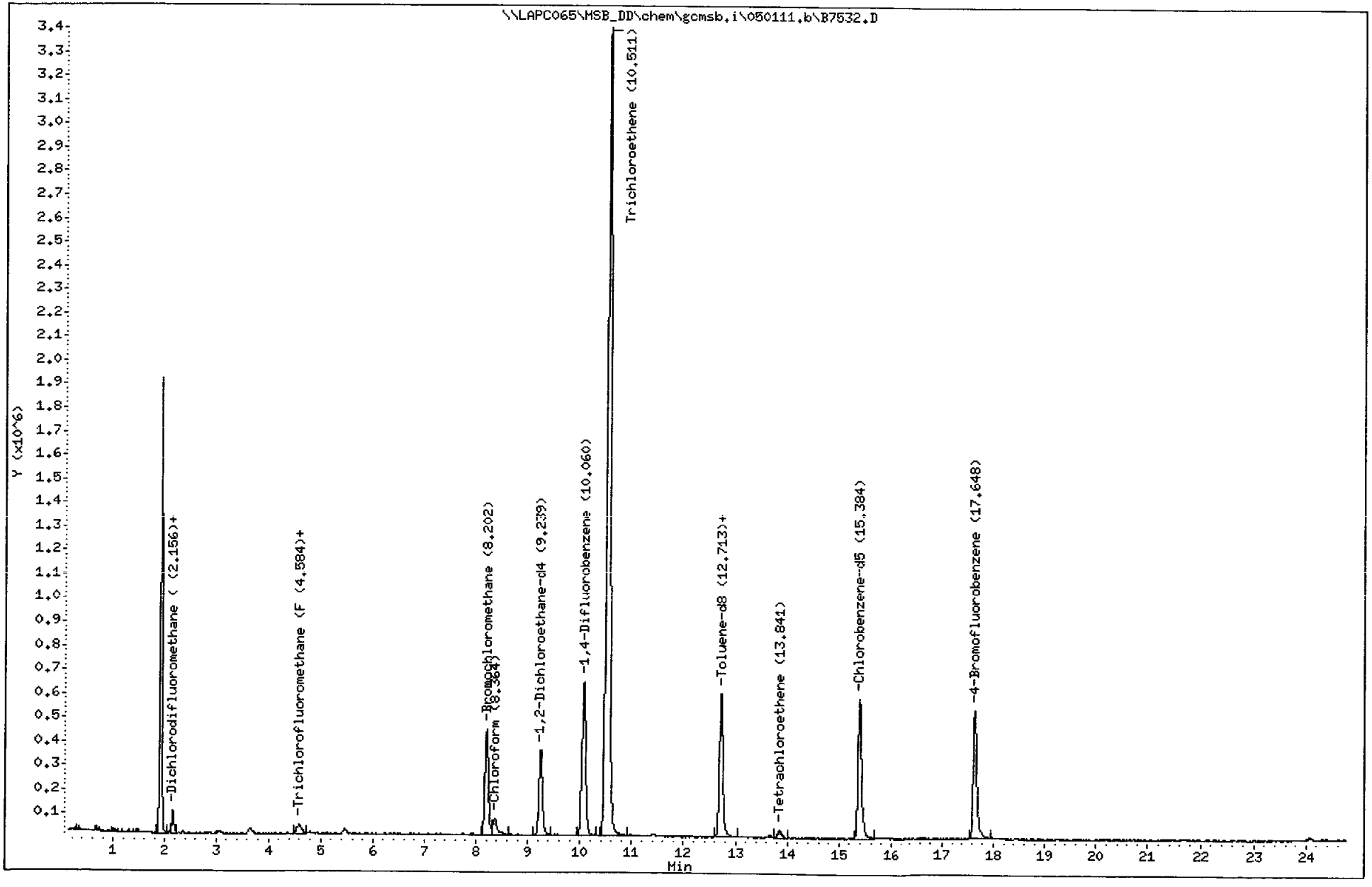
Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

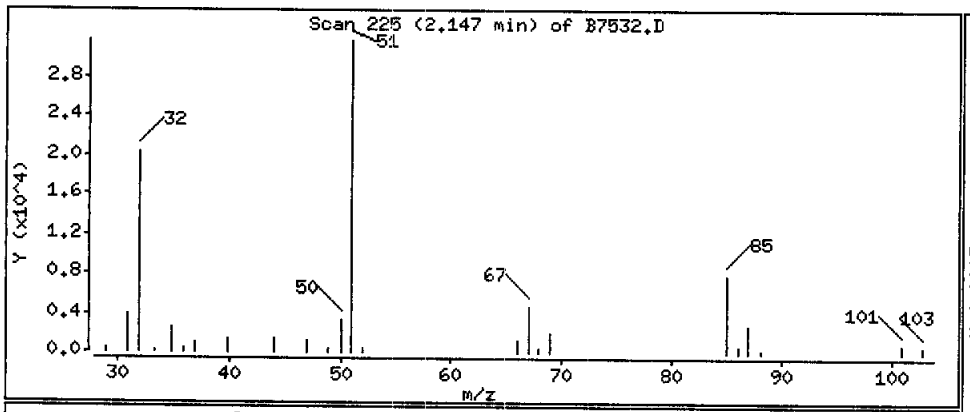
Operator: DLK

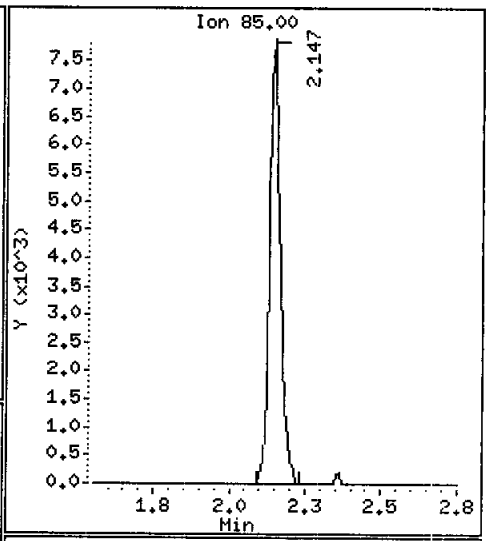
Column phase: J&W DB-624

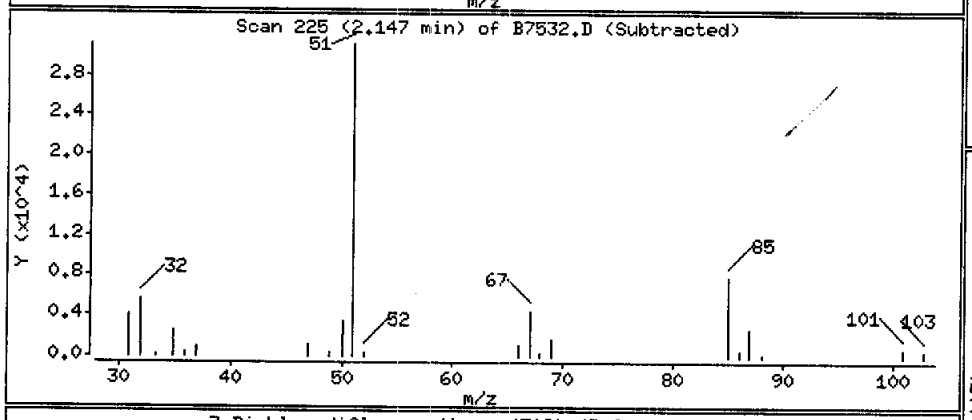
Column diameter: 0.53

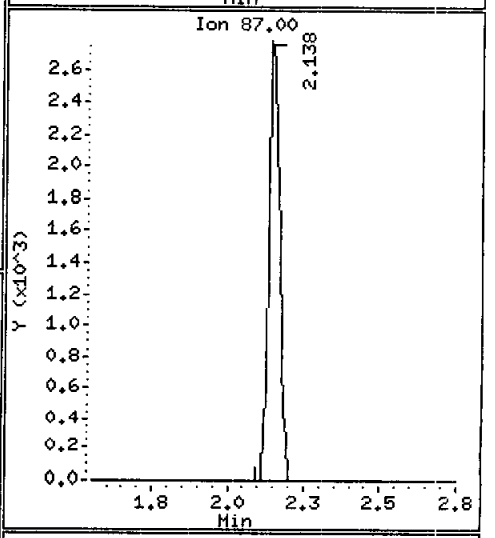
3 Dichlorodifluoromethane (F12)

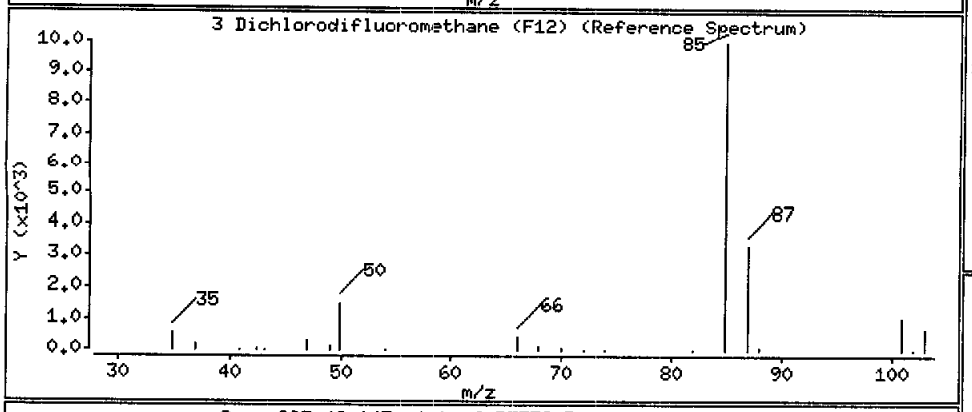
Concentration: 0.8137 ppbv

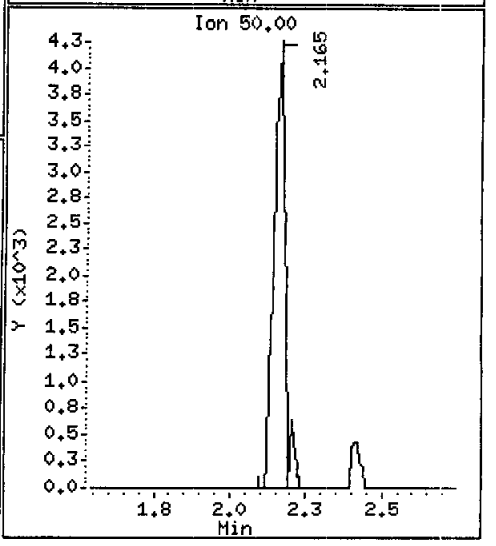


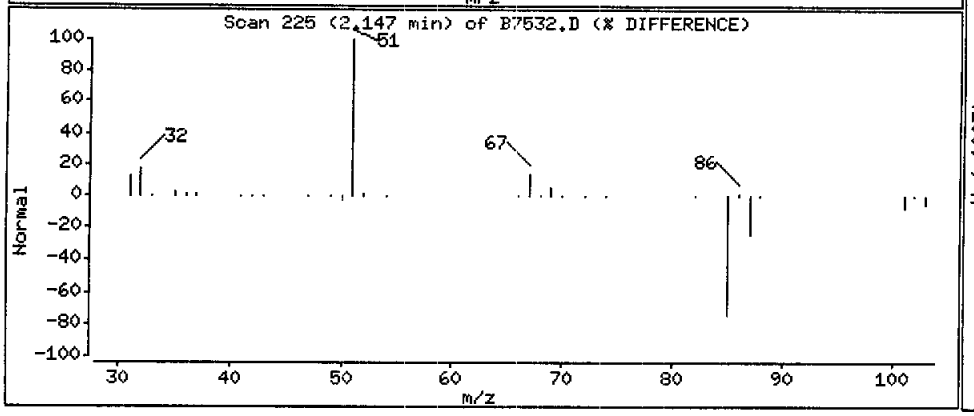












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

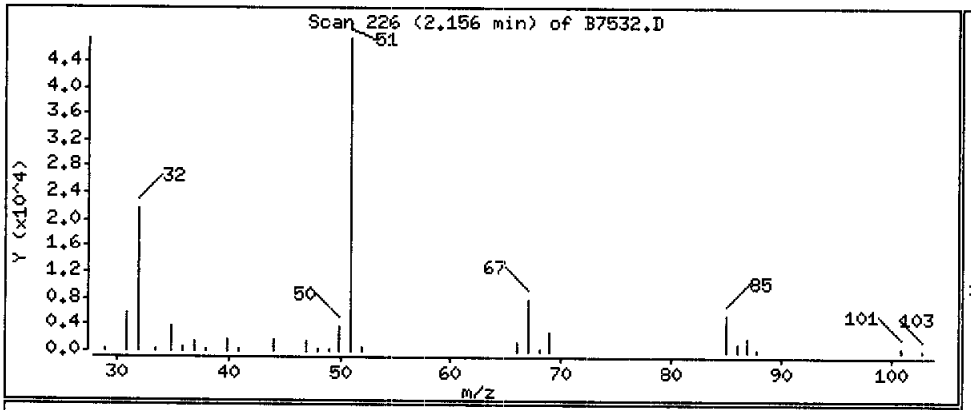
Operator: DLK

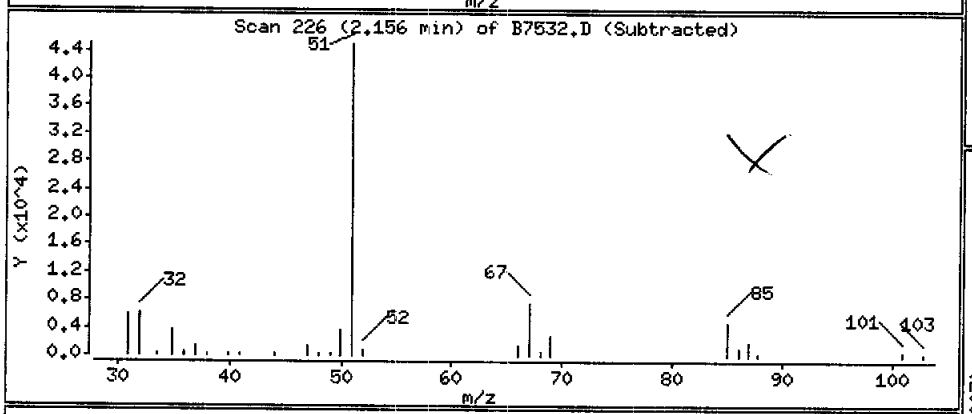
Column phase: J&W DB-624

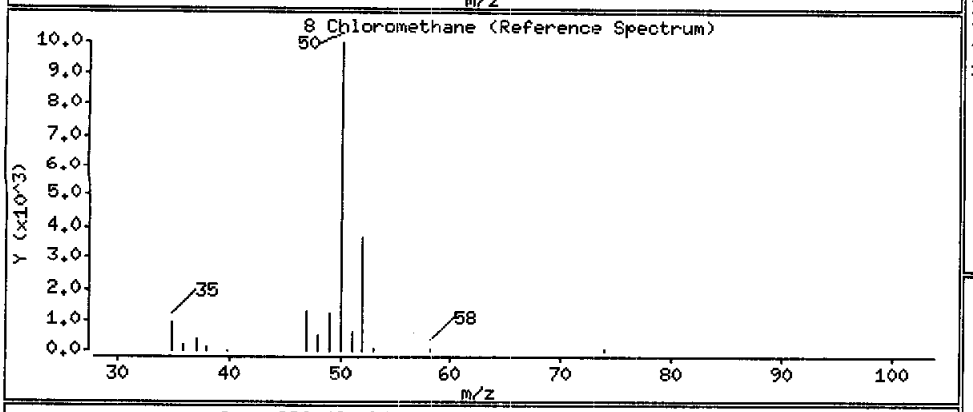
Column diameter: 0.53

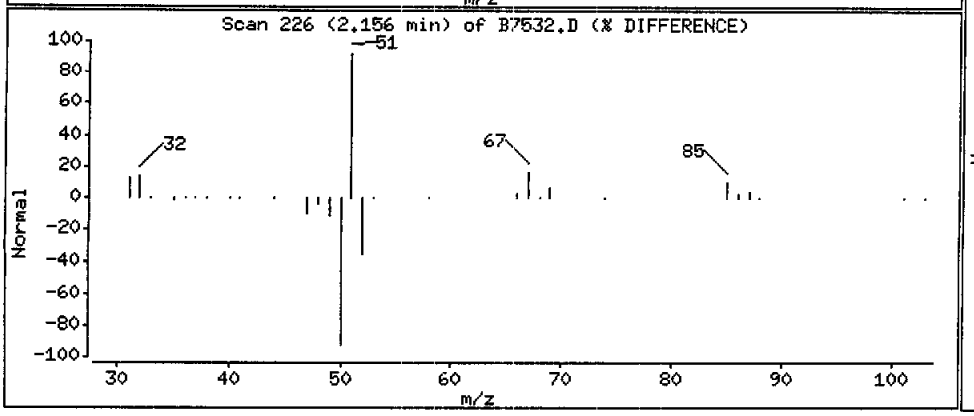
8 Chloromethane

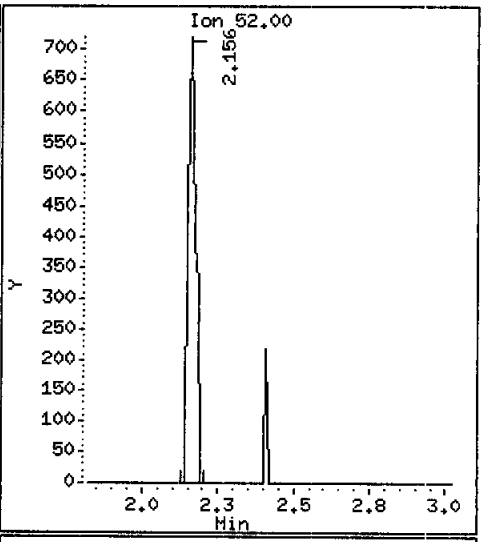
Concentration: 1.242 ppbv

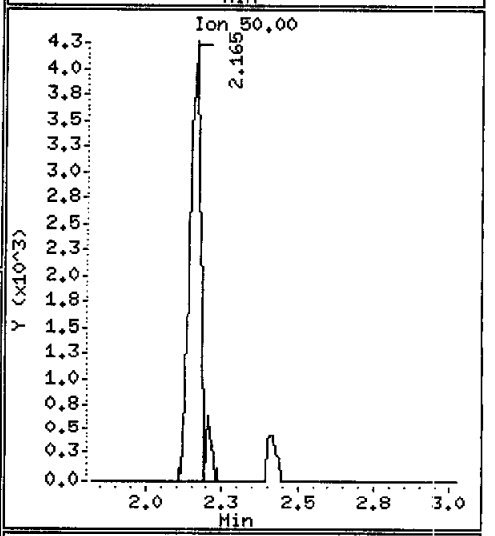


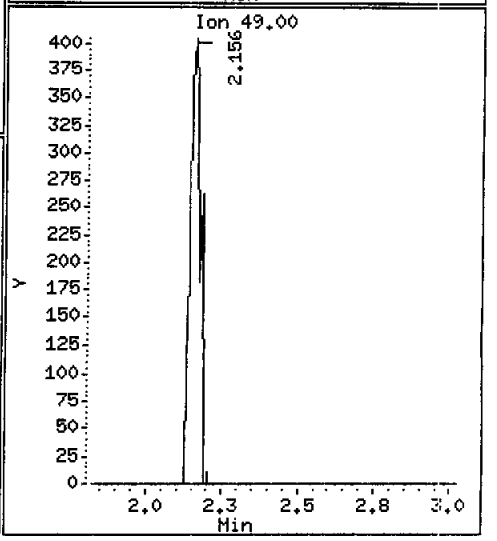












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

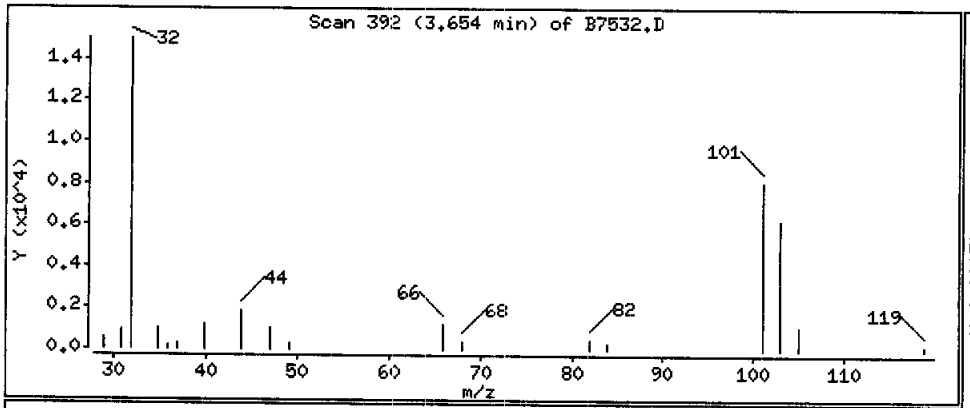
Operator: DLK

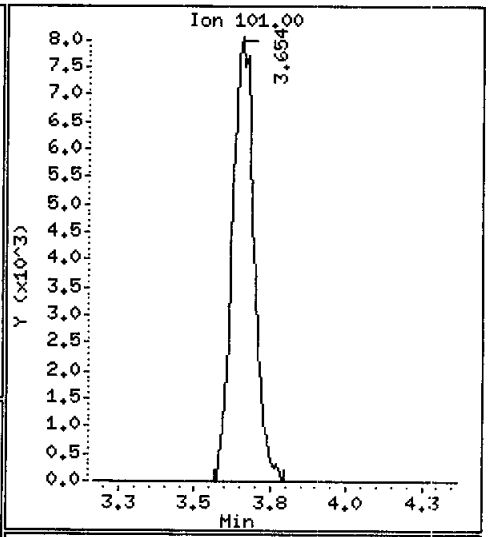
Column phase: J&W DB-624

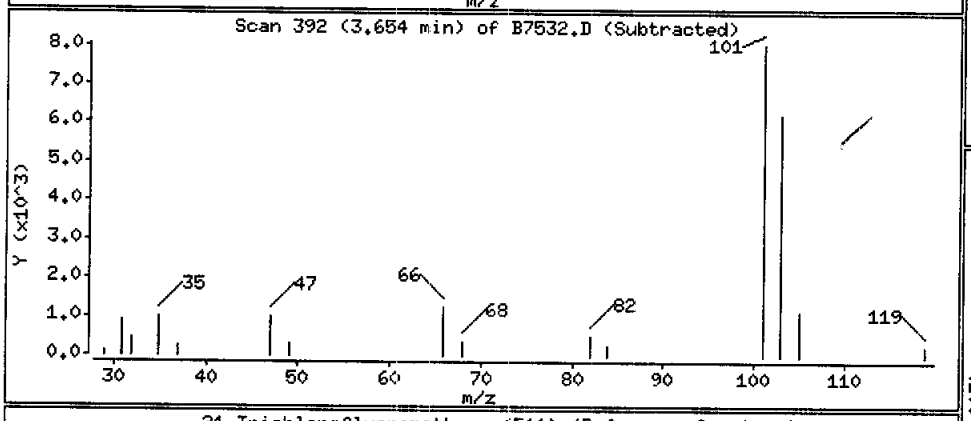
Column diameter: 0.53

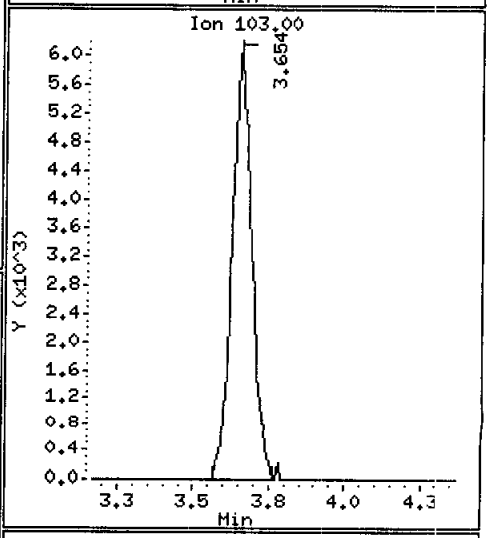
21 Trichlorofluoromethane (F11)

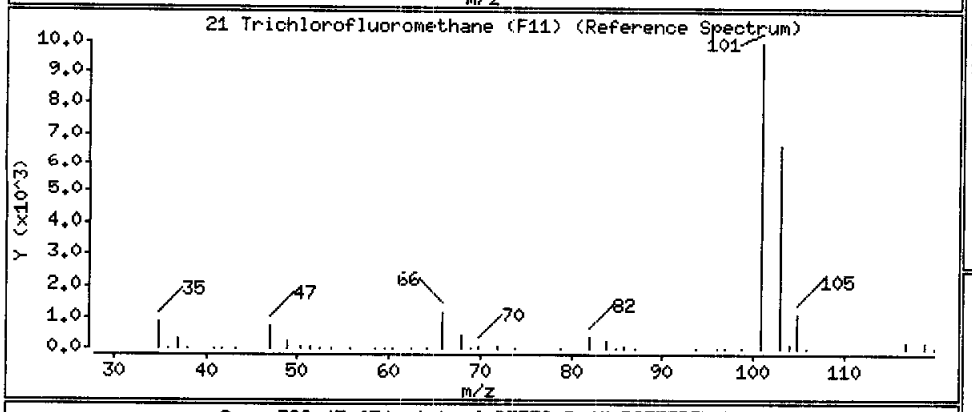
Concentration: 1.659 ppbv

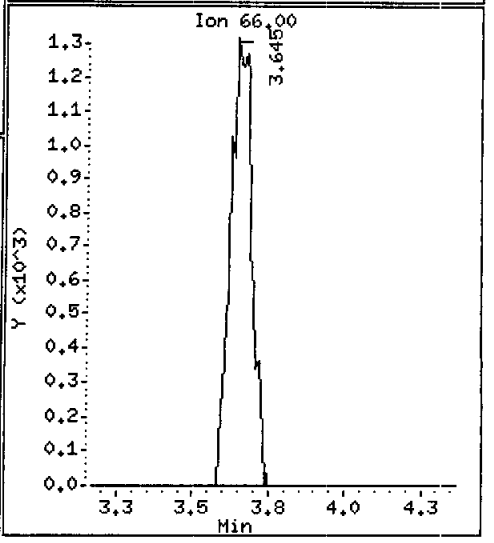


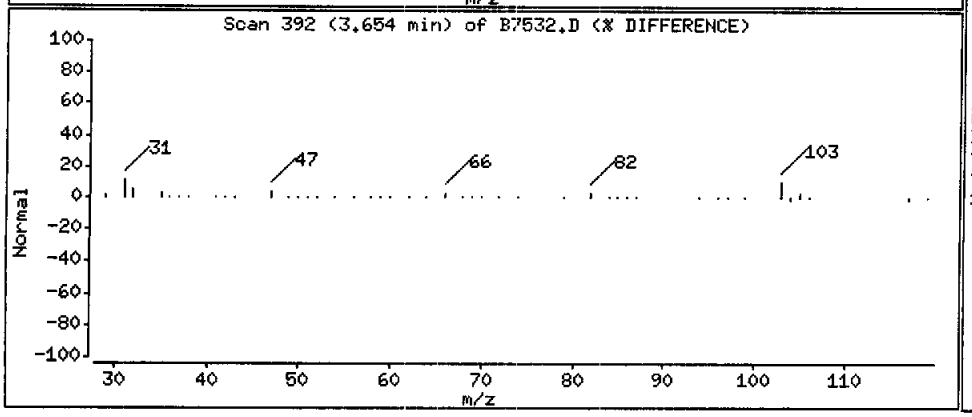












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

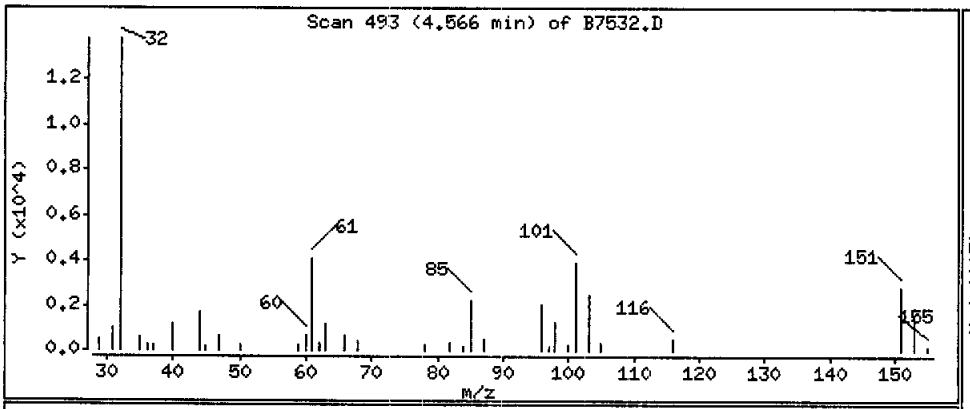
Operator: DLK

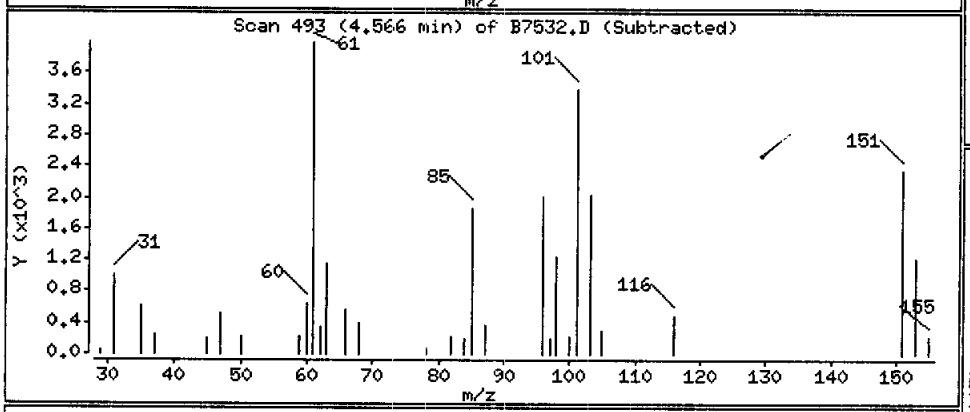
Column phase: J&W DB-624

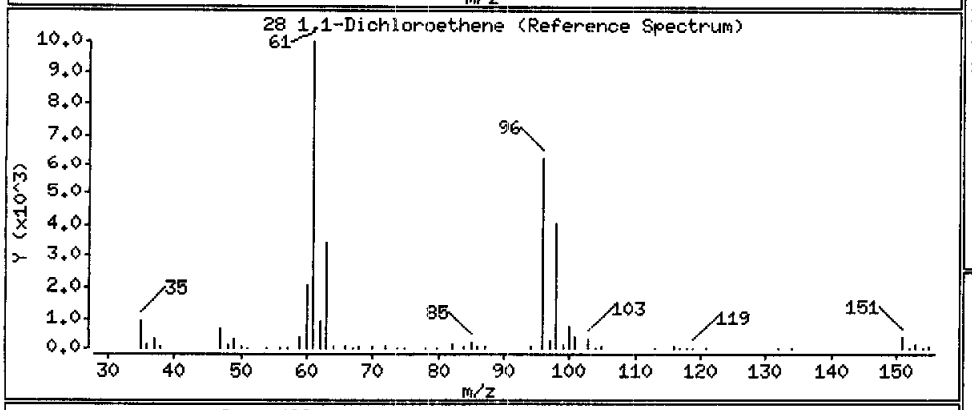
Column diameter: 0.53

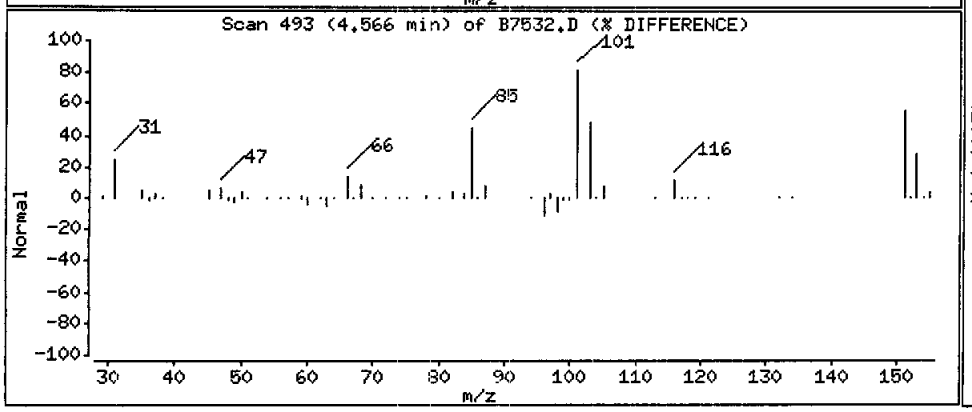
28 1,1-Dichloroethene

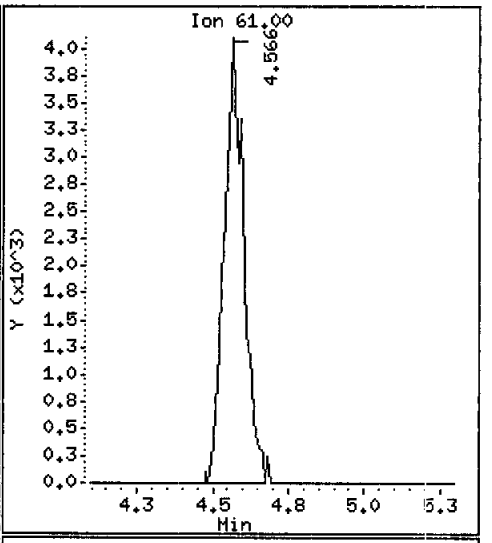
Concentration: 1.425 ppbv

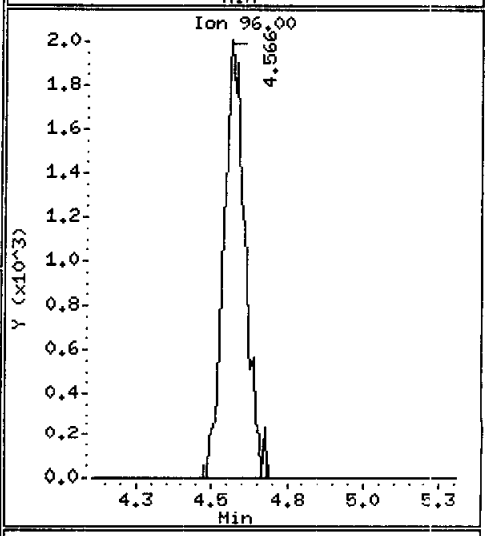


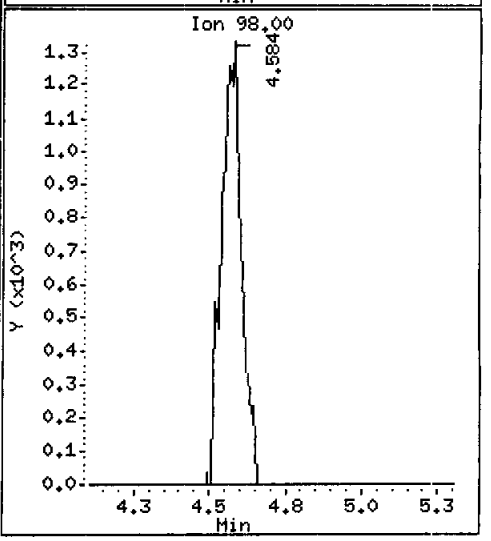












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

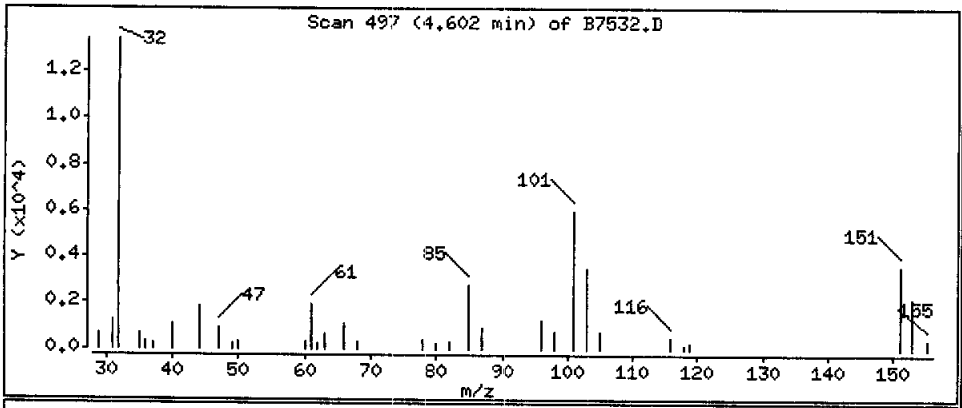
Operator: DLK

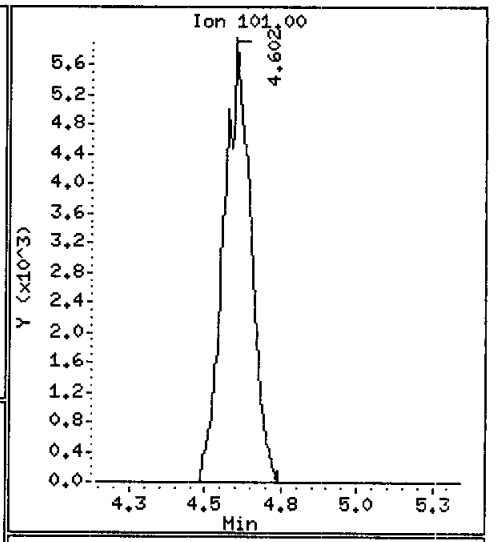
Column phase: J&W DB-624

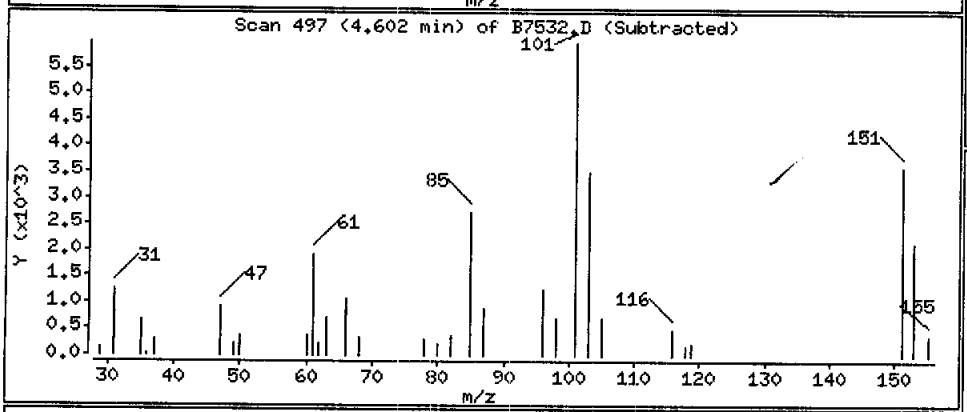
Column diameter: 0.53

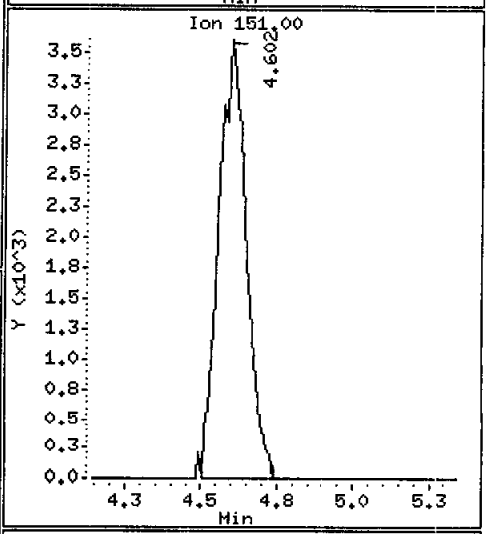
30 1,1,2-CL 1,2,2-F ethane(F113)

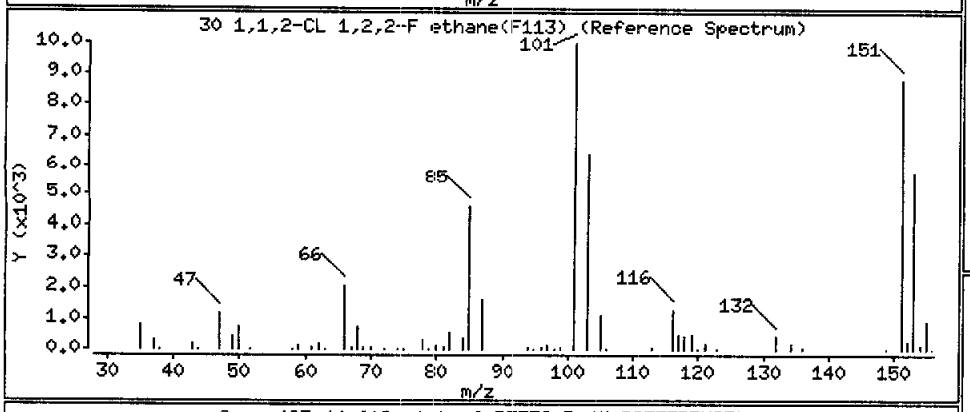
Concentration: 1.320 ppbv

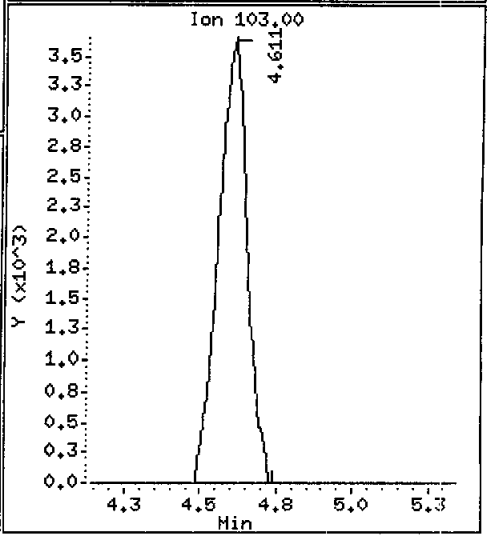


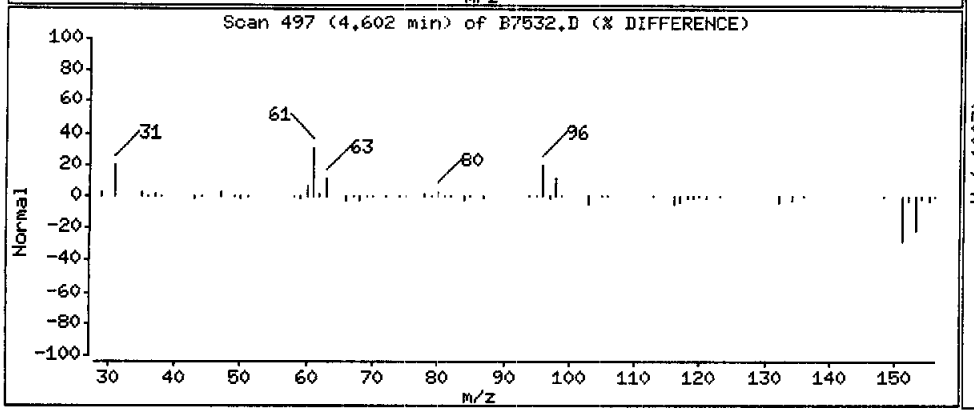












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

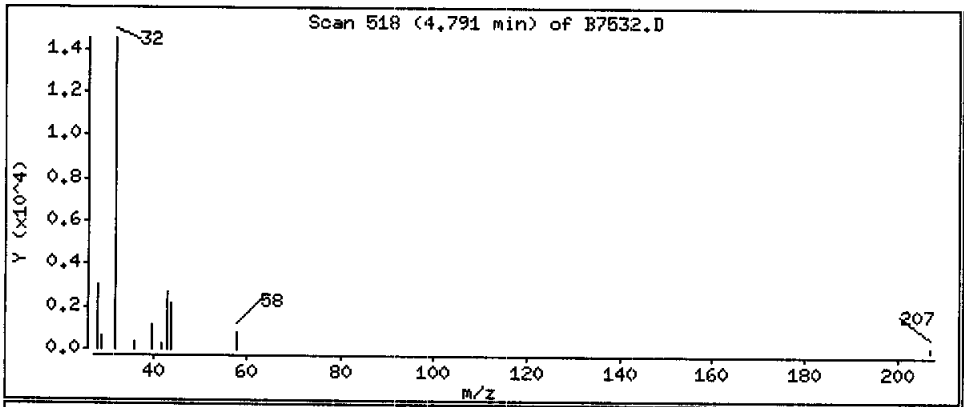
Operator: DLK

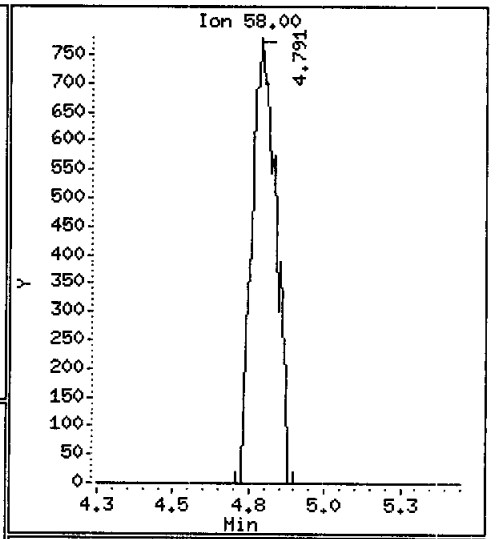
Column phase: J&W DB-624

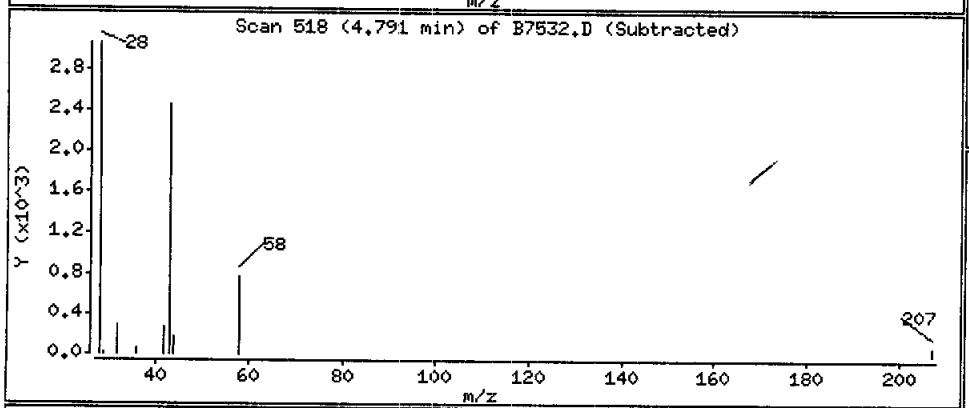
Column diameter: 0.53

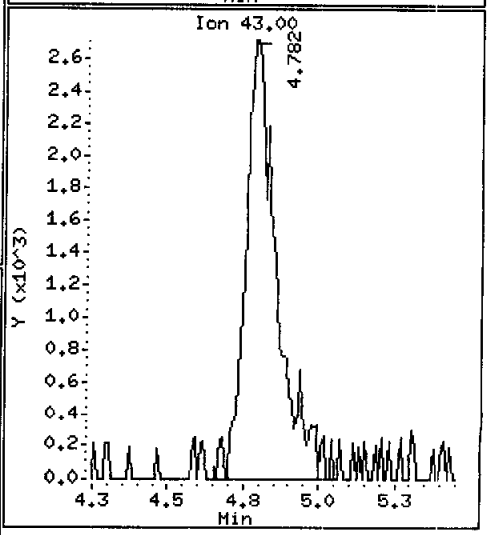
31 Acetone

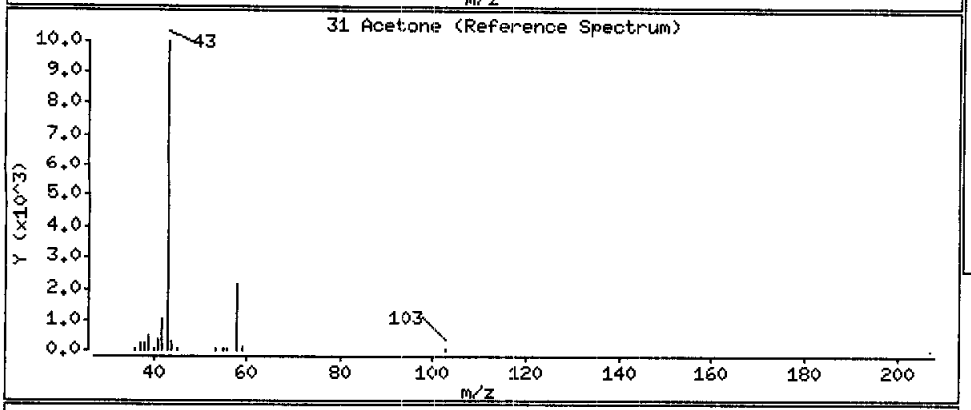
Concentration: 2.330 ppbv

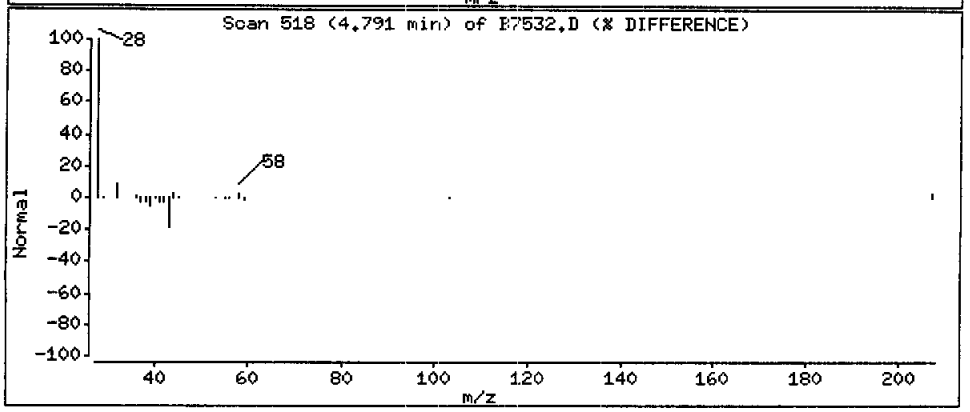












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

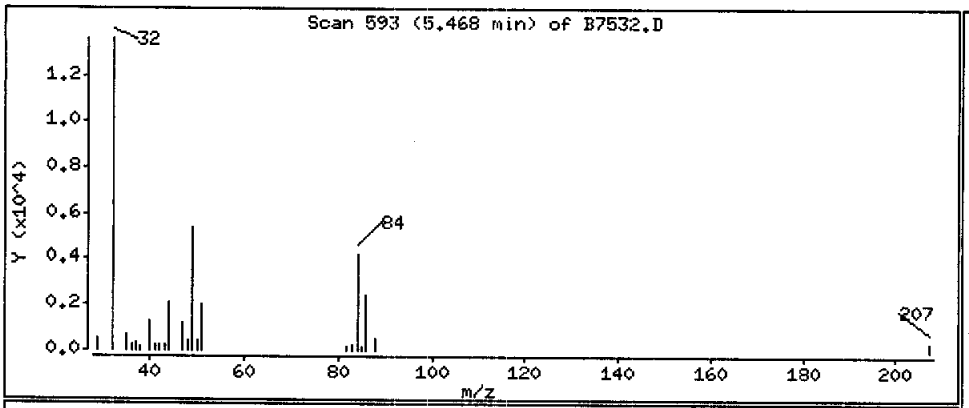
Operator: DLK

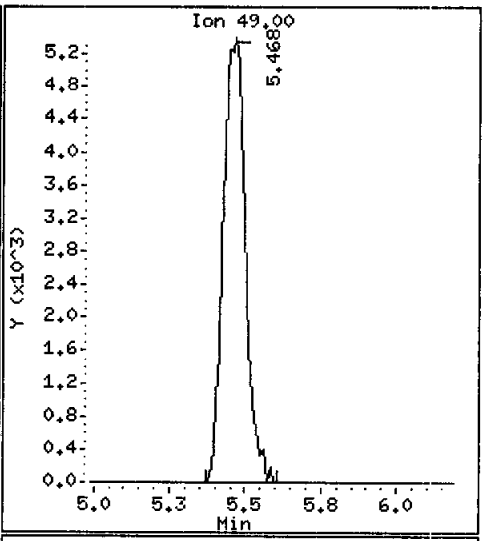
Column phase: J&W DB-624

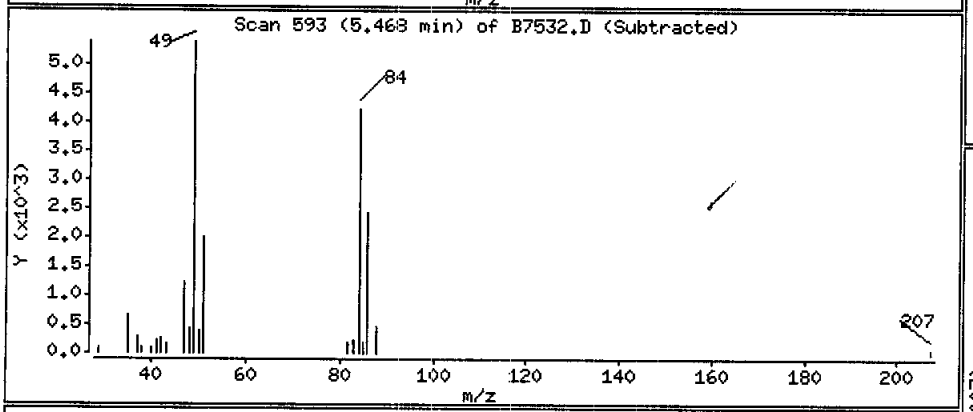
Column diameter: 0.53

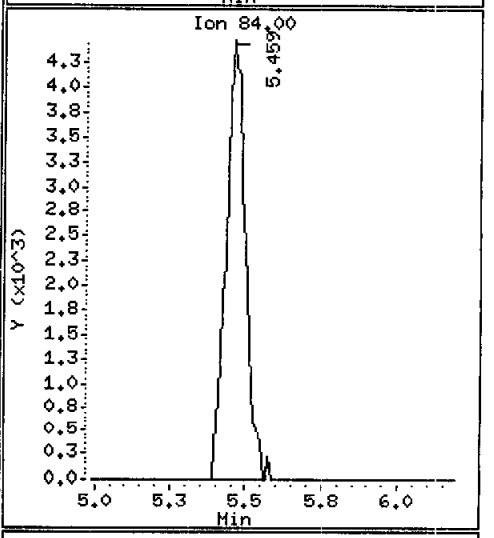
37 Methylene Chloride

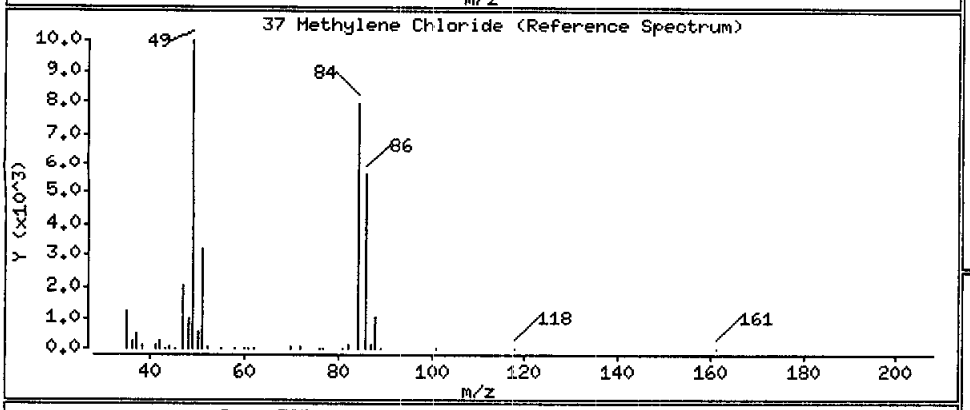
Concentration: 3.448 ppbv

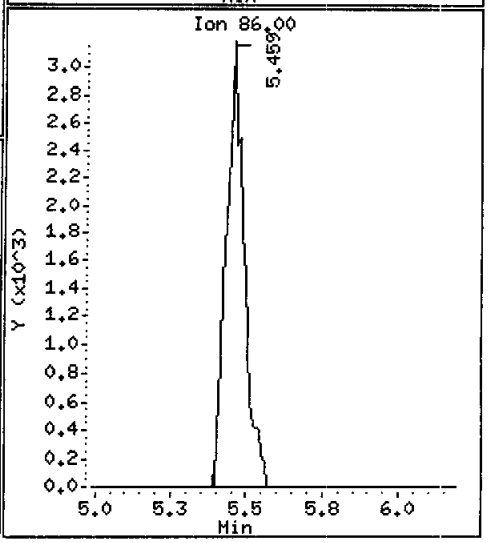


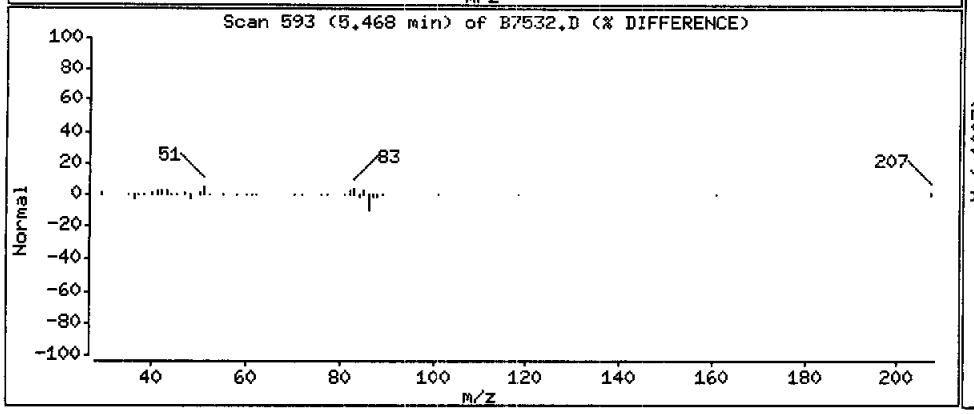












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

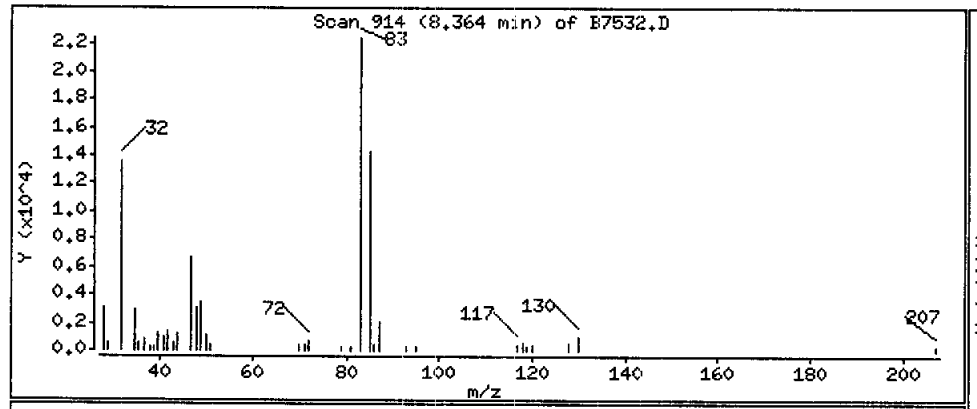
Operator: DLK

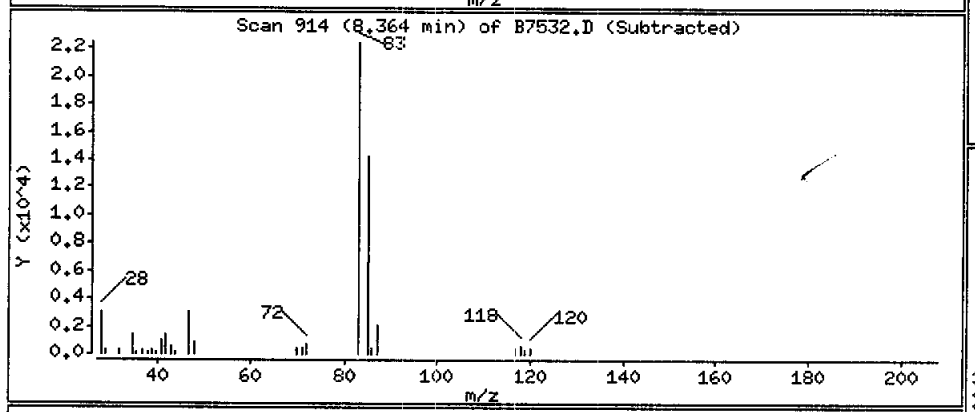
Column phase: J&W DB-624

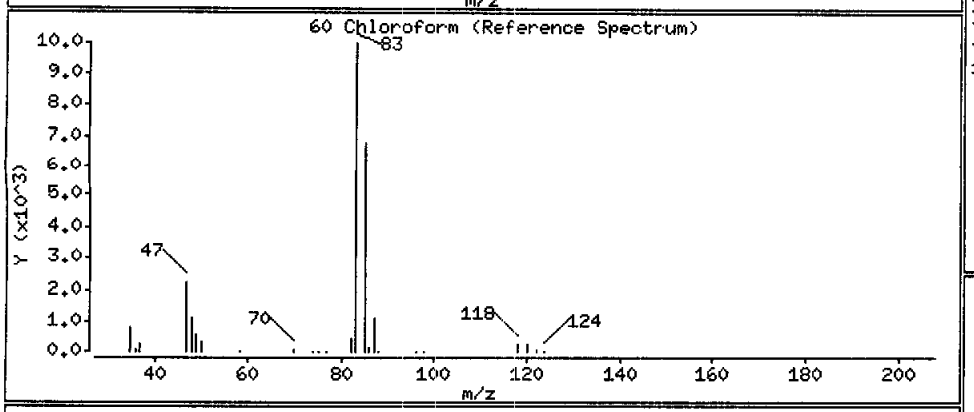
Column diameter: 0.53

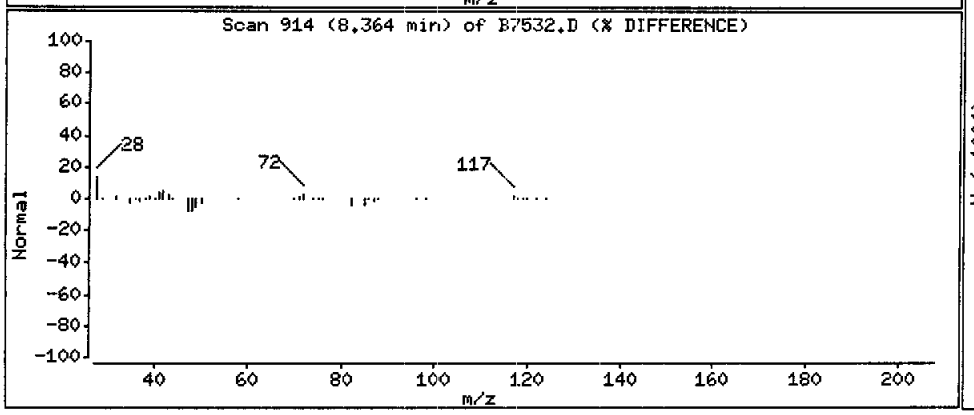
60 Chloroform

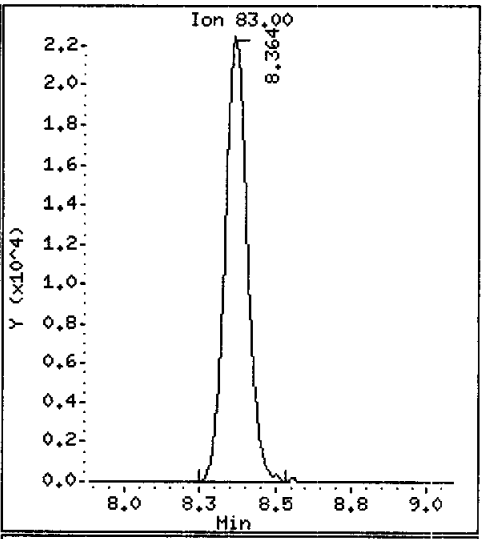
Concentration: 6.353 ppbv

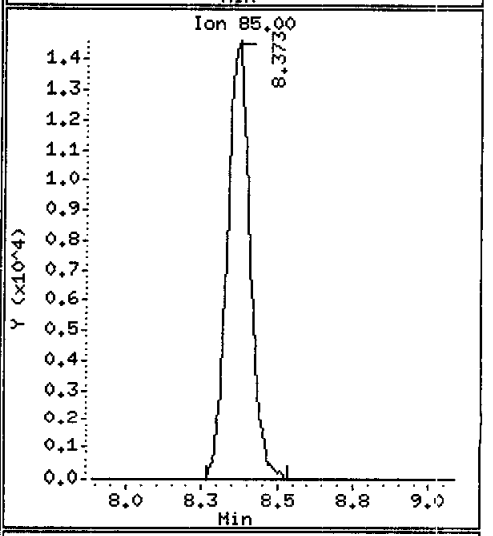


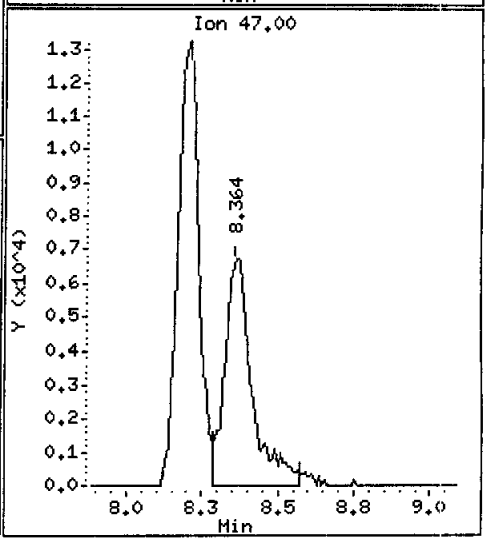












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

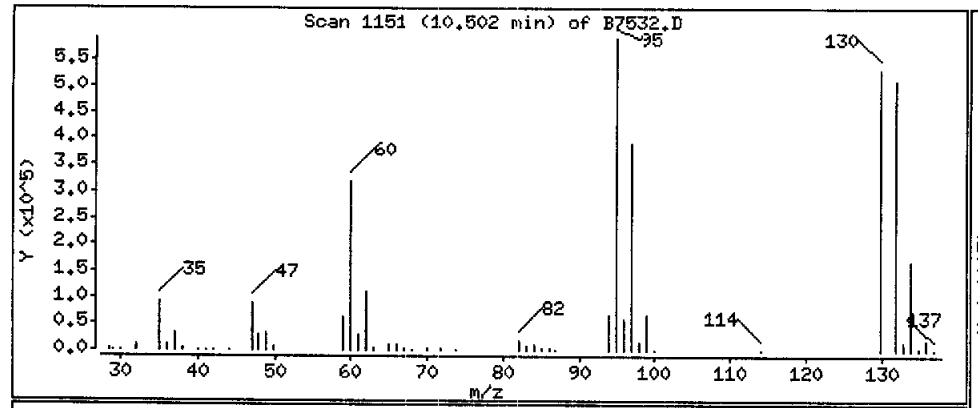
Operator: DLK

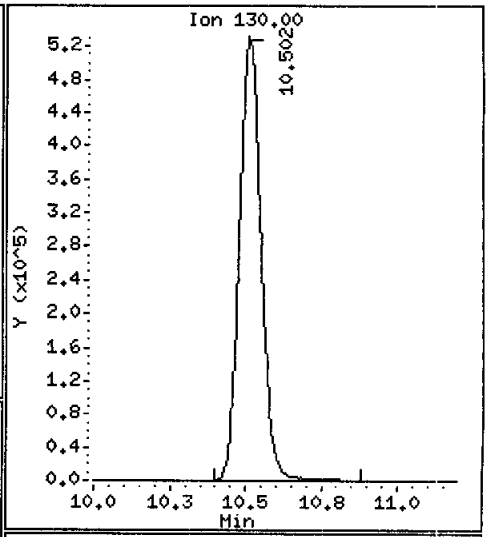
Column phase: J&W DB-624

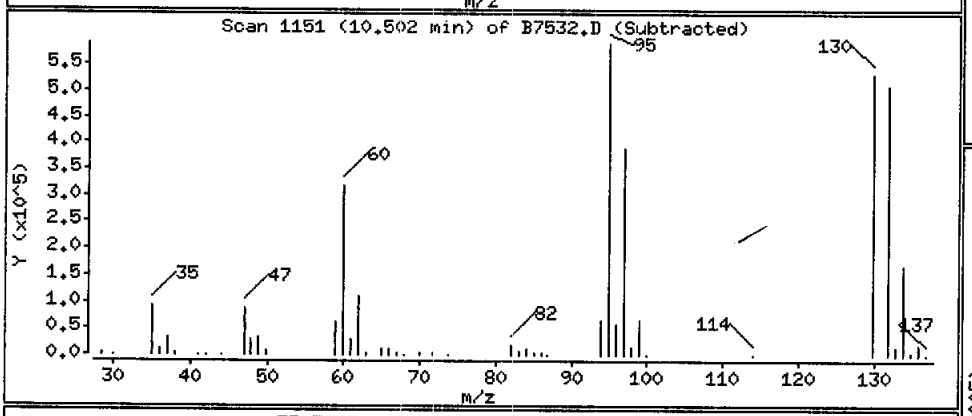
Column diameter: 0.53

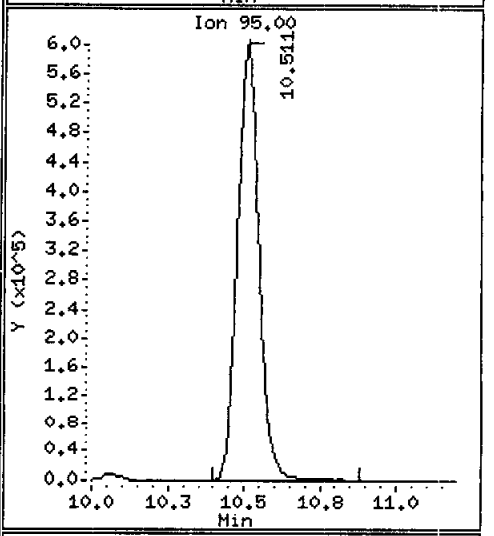
75 Trichloroethene

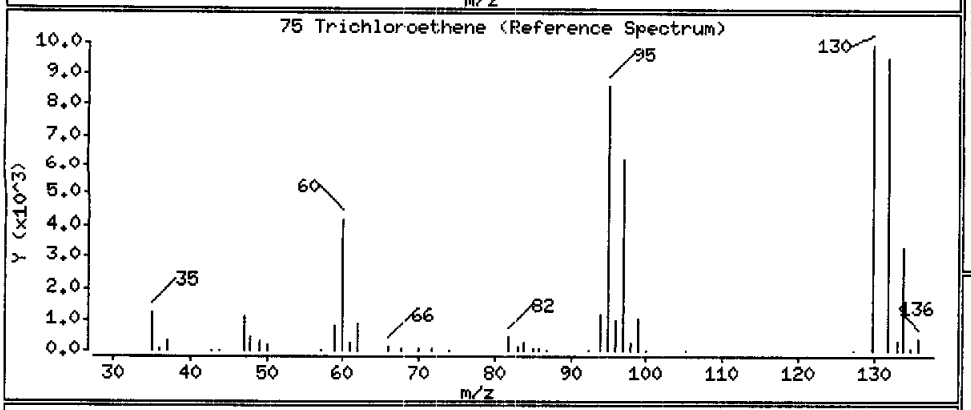
Concentration: 256.3 ppbv

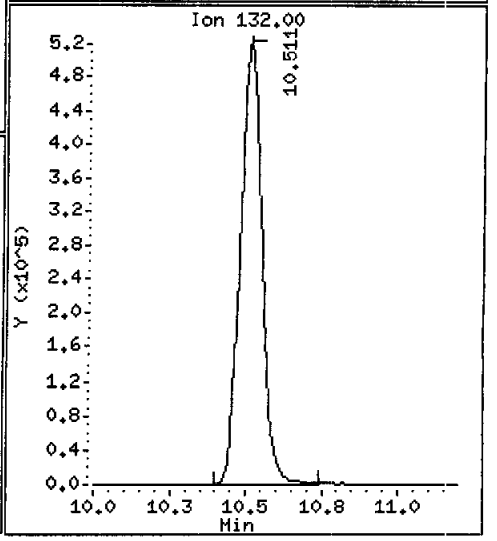


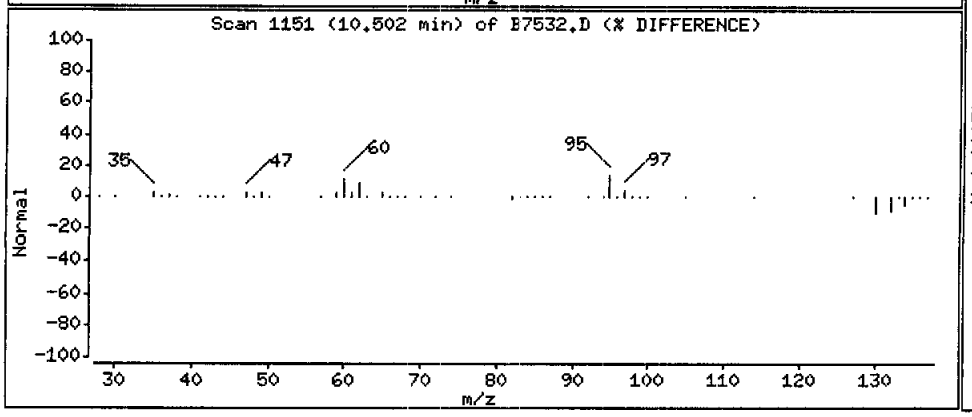












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

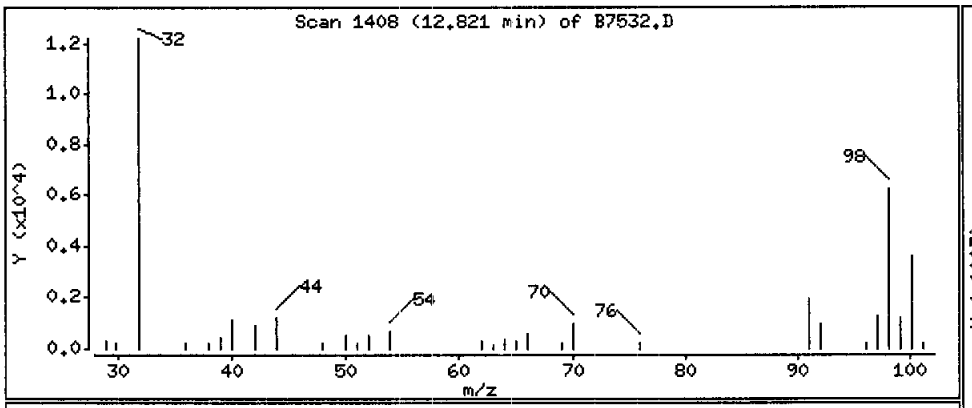
Operator: DLK

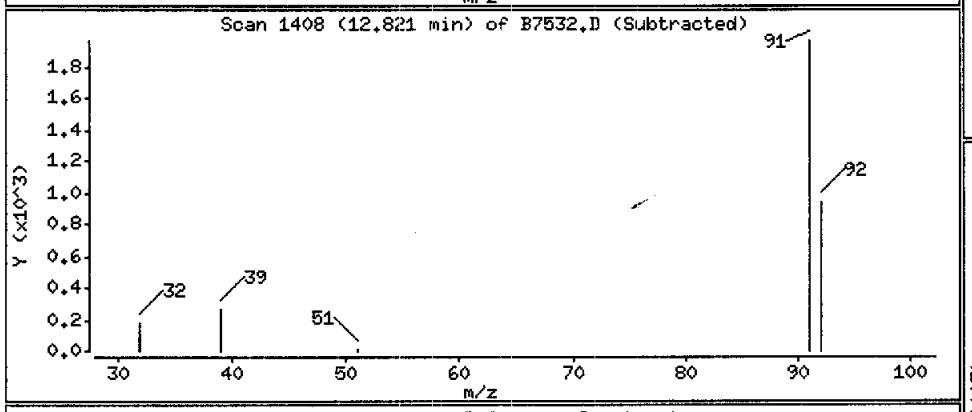
Column phase: J&W DB-624

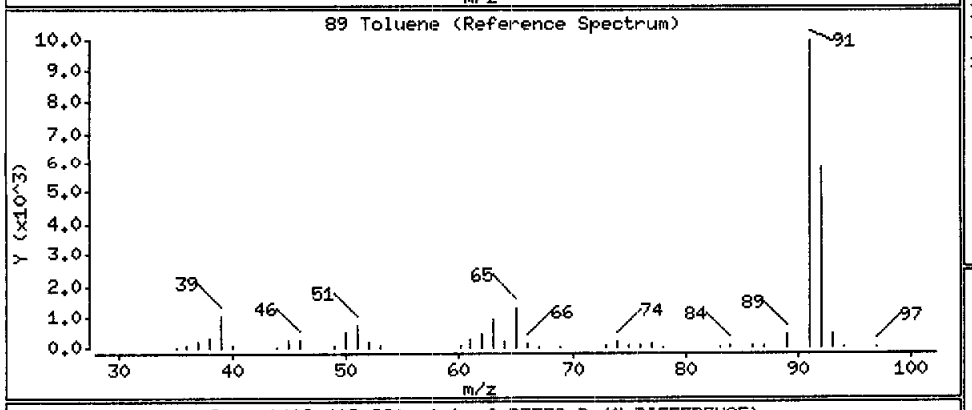
Column diameter: 0.53

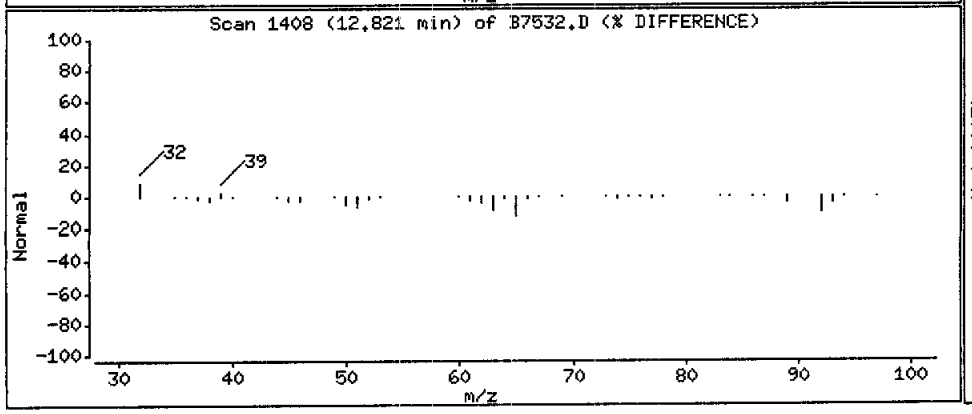
89 Toluene

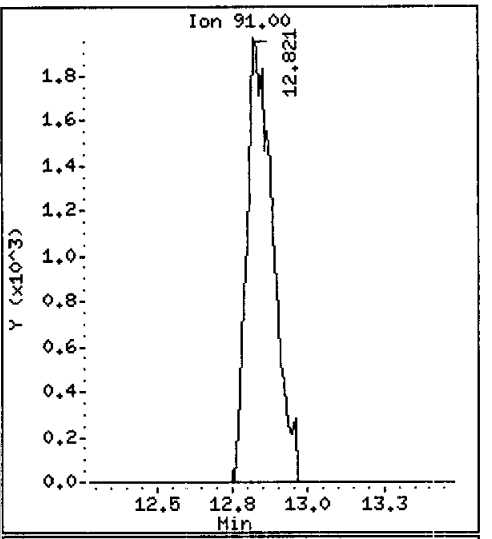
Concentration: 0.5650 ppbv

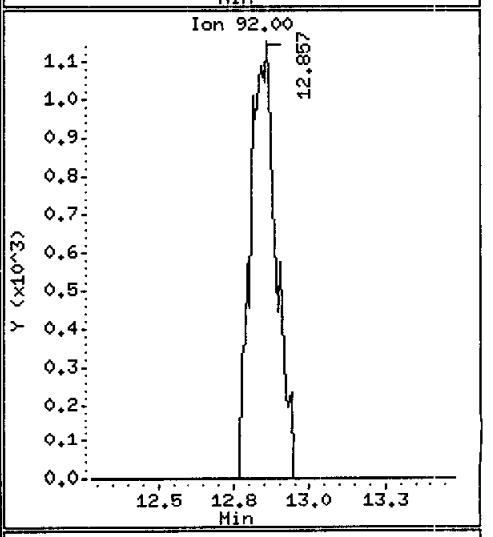


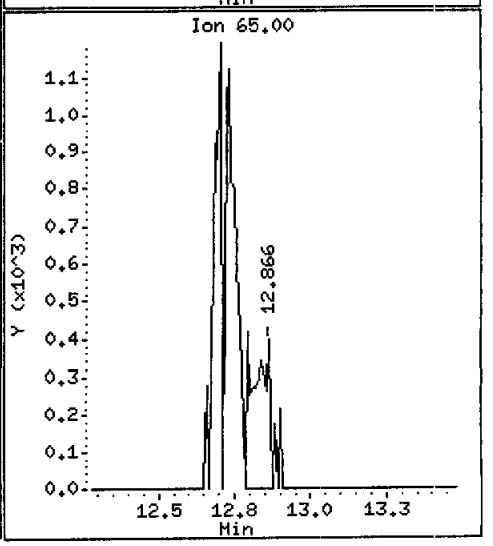












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7532.D

Date : 11-JAN-2005 15:34

Client ID: 066345-0001

Instrument: gcmsb.i

Sample Info: G2DGE1AD,066345-0001,SANDIA,E5A100213-3

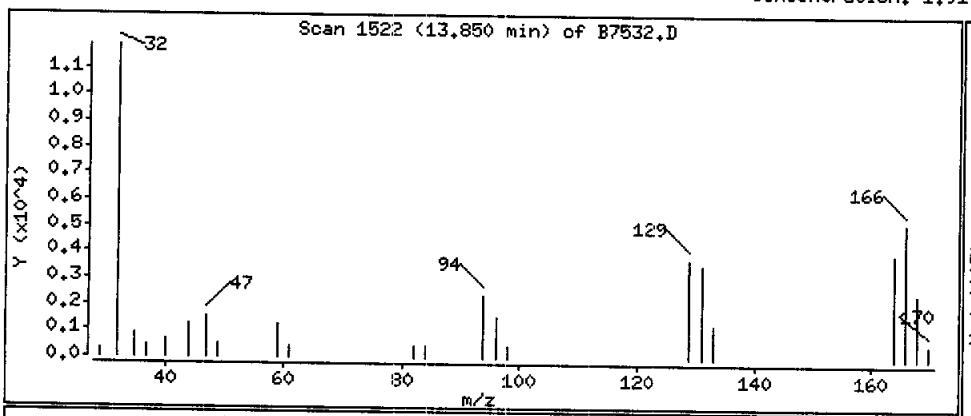
Operator: DLK

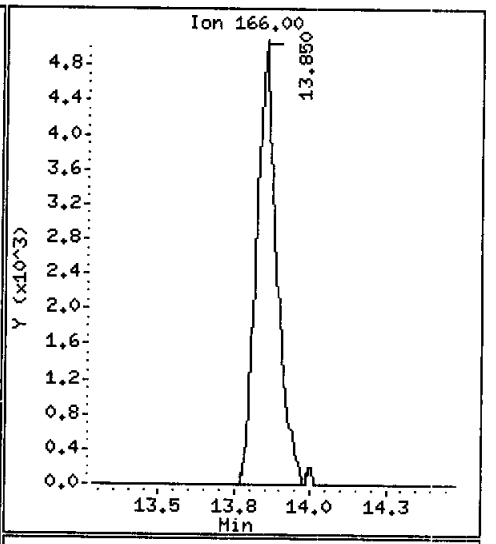
Column phase: J&W DB-624

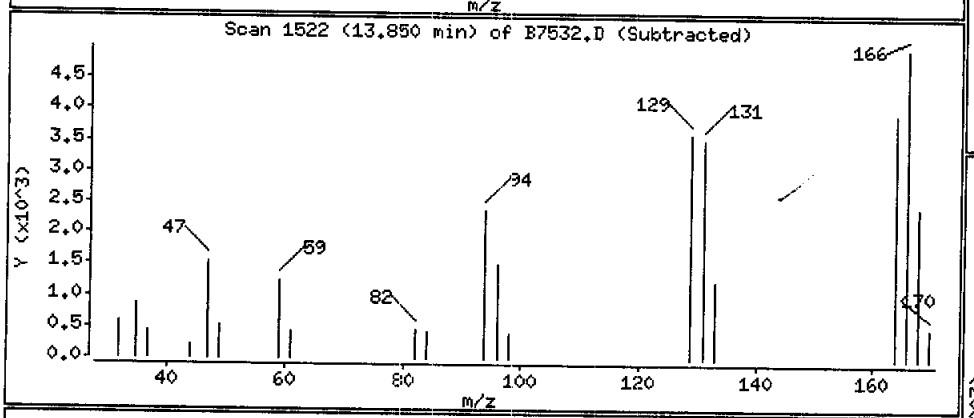
Column diameter: 0.53

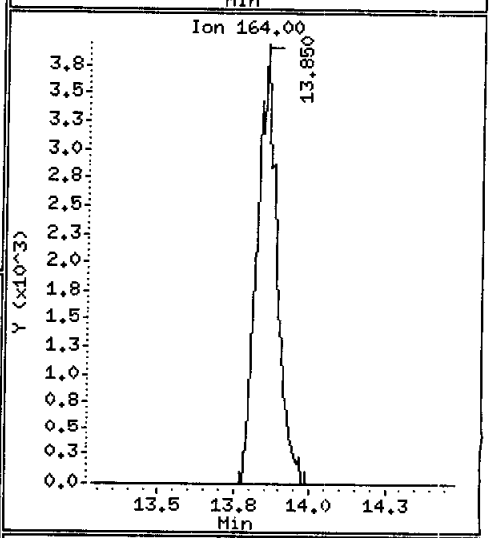
95 Tetrachloroethene

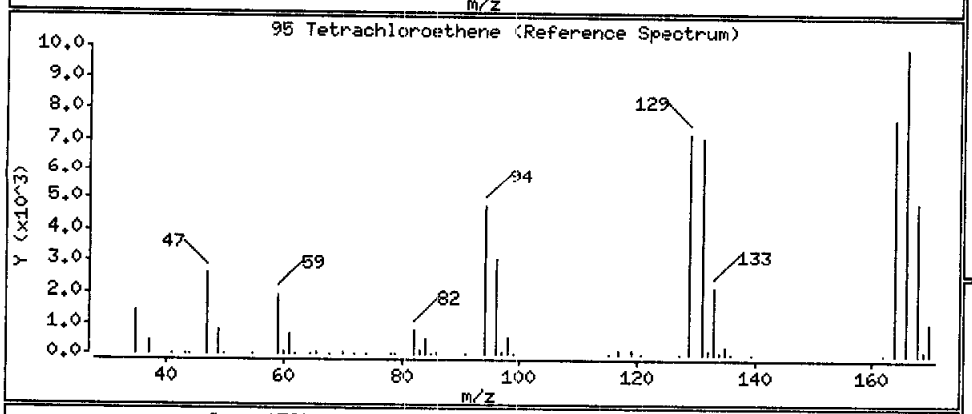
Concentration: 1.919 ppbv

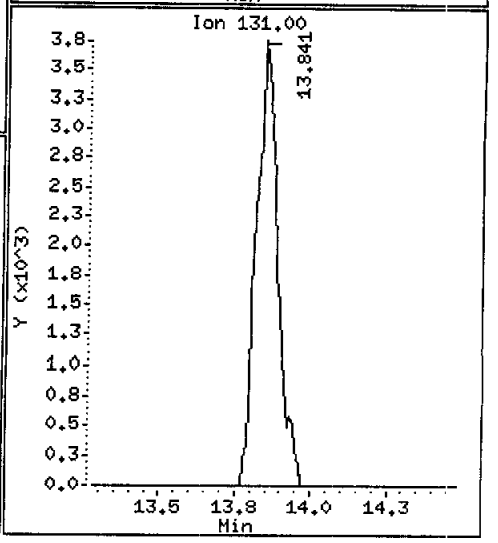


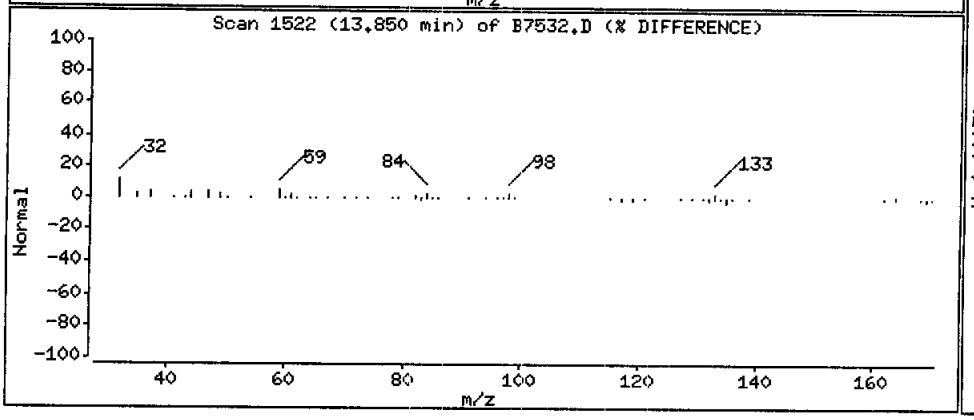












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD: Herrera
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608034	STCA	E5A100218		2/4/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	L. Herrera		02.07.05	
FINAL TRANSMITTED TO/DATE:	~~T. Jackson~~ Skelly		02.07.05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO (ERDMS) OR RECORDS CENTER BY/DATE:	R. Kallanay		2-7-05	

COMMENTS:

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC 608034

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SEE BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO) ESA 100218

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
✓ 066352-001	46-VW-02-SV-046	46		1/3/2005 0935	SG	SC	6L	none	G	SA	TO-14 summa# GL-0161	
✓ 066353-001	46-VW-02-SV-096	96		1/3/2005 0940	SG	SC	6L	none	G	SA	TO-14 summa# A-263	
✓ 066354-001	46-VW-02-SV-146	146		1/3/2005 0947	SG	SC	6L	none	G	SA	TO-14 summa# GL-0054	
✓ 066355-001	46-VW-02-SV-196	196		1/3/2005 0954	SG	SC	6L	none	G	SA	TO-14 summa# 04736	
✓ 066356-001	46-VW-02-SV-246	246		1/3/2005 1000	SG	SC	6L	none	G	SA	TO-14 summa# 9313-B	
✓ 066357-001	46-VW-02-SV-296	296		1/3/2005 1008	SG	SC	6L	none	G	SA	TO-14 summa# GL-0113	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/07/05
Entered by: JAC
QC inits. WJP

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Contract Verification Review (CVR)

Project Leader Collins | Project Name TAG Vapor Well Sampling | Case No. 7222_01.05

AR/COC No. 608034 | Analytical Lab STCA | SDG No. E5A100218

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted_____

Reviewed by: Ulm Date: 02/07/05 Closed by:_____ Date:_____

Cover Letter 2
Case Narrative 2
Analytical Report 17
QA/QC 35
STL Los Angeles Raw Data 41
Raw Data: TO-14A 42

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 2, 2005

STL LOT NUMBER: **E5A100218**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

000178

This report contains _____ pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100218

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

E5A100218

nal Lab

h No. N/A

SMO Use

AR/COC 608034

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	SB
ect Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
rd Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
ation	Tech Area 2				
ling	Room				

SEE BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066352-001	46-VW-02-SV-046	46		1/3/2005 0935	SG	SC	6L	none	G	SA	TO-14 summa# GL-0161	
066353-001	46-VW-02-SV-096	96		1/3/2005 0940	SG	SC	6L	none	G	SA	TO-14 summa# A-263	
066354-001	46-VW-02-SV-146	146		1/3/2005 0947	SG	SC	6L	none	G	SA	TO-14 summa# GL-0054	
066355-001	46-VW-02-SV-196	196		1/3/2005 0954	SG	SC	6L	none	G	SA	TO-14 summa# 04736	
066356-001	46-VW-02-SV-246	246		1/3/2005 1000	SG	SC	6L	none	G	SA	TO-14 summa# 9313-B	
066357-001	46-VW-02-SV-296	296		1/3/2005 1008	SG	SC	6L	none	G	SA	TO-14 summa# GL-0113	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

rn Samples By: ☐ **Negotiated TAT** QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch			Weston Solutions 6146 (505-250-7090)
nbers	W Gibson			Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

linquished by	Org 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by	Org 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
linquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
linquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by	Org.	Date	Time	6. Received by	Org.	Date	Time

E5A100218

4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 6L0161
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/8/04A, 12/2/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	13.50	1-11-05	[illegible]
FINAL PRESSURE (PSIA)	24.23	1-11-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: A-263
DATE CLEANED: 12/1/04A, 12/1/04C, 10/28/04A, 12/6/04A, 12/2/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.90	1-11-05	TM
FINAL PRESSURE (PSIA)	23.76	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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3

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: GL0054
DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 12/2/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.87	1-11-05	TP
FINAL PRESSURE (PSIA)	23.90	1-11-05	TP

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL 4

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 04736
DATE CLEANED: 12/1/04A, 12/1/04C, 12/21/04A, 12/6/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.86	1-11-05	TM
FINAL PRESSURE (PSIA)	24.51	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 9313B
DATE CLEANED: 12/1/04A, 12/1/04C, 12/3/04A, 12/3/04A, 12/3/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.89	1-11-05	[illegible]
FINAL PRESSURE (PSIA)	24.57	1-11-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: GL0113
DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 12/7/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.92	1-11-05	TB
FINAL PRESSURE (PSIA)	25.42	1-11-05	TB

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch 12.2.04 C

Date of QC 12.3.04

Data File Number MB12032 (MSB)

Canister ID Numbers

*03322	G10161
04398	A-263
92040	0117
93273	93148
A-272	G10054
93036	04736

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12.3.04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:46
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,03322
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

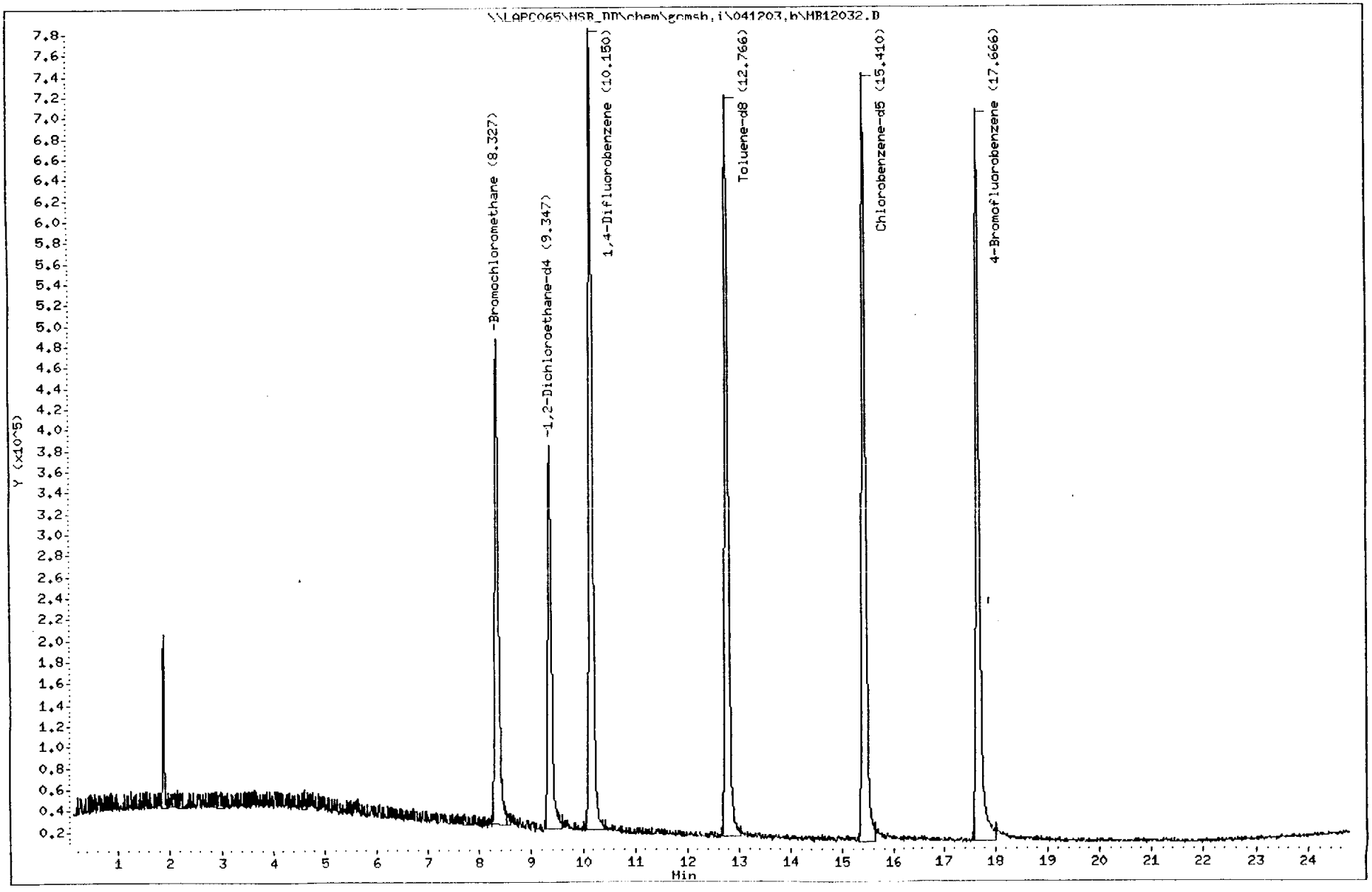
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.327	8.324	(1.000)	480472	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.346	9.352	(0.921)	580377	47.9120	47.91
* 72 1,4-Difluorobenzene	114	10.149	10.155	(1.000)	1546149	50.0000	
$ 87 Toluene-d8	100	12.766	12.763	(1.258)	726802	47.9524	47.95
* 99 Chlorobenzene-d5	117	15.419	15.406	(1.000)	1096086	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.662	(1.146)	755239	38.6021	38.60

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Date : 03-DEC-2004 12:46
Client ID: BLANK
Sample Info: BLANK,BLANK,03322

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12·1·04 A

Date of QC: 12-2-04

Data File Number: MB12022(MSB)

Canister ID Numbers

* A-286	93043
11341	11372
GL0113	93111
A-295	9313B
A-173	12652
11201	12177

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: _____ Date: 12-2-04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:54
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,A286
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.299	8.326	(1.000)	479142	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.319	9.345	(0.920)	573397	48.6689	48.67
* 72 1,4-Difluorobenzene	114	10.131	10.157	(1.000)	1503796	50.0000	
$ 87 Toluene-d8	100	12.748	12.765	(1.258)	688728	46.7202	46.72
* 99 Chlorobenzene-d5	117	15.409	15.418	(1.000)	979431	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.664	(1.146)	692624	39.6182	39.62

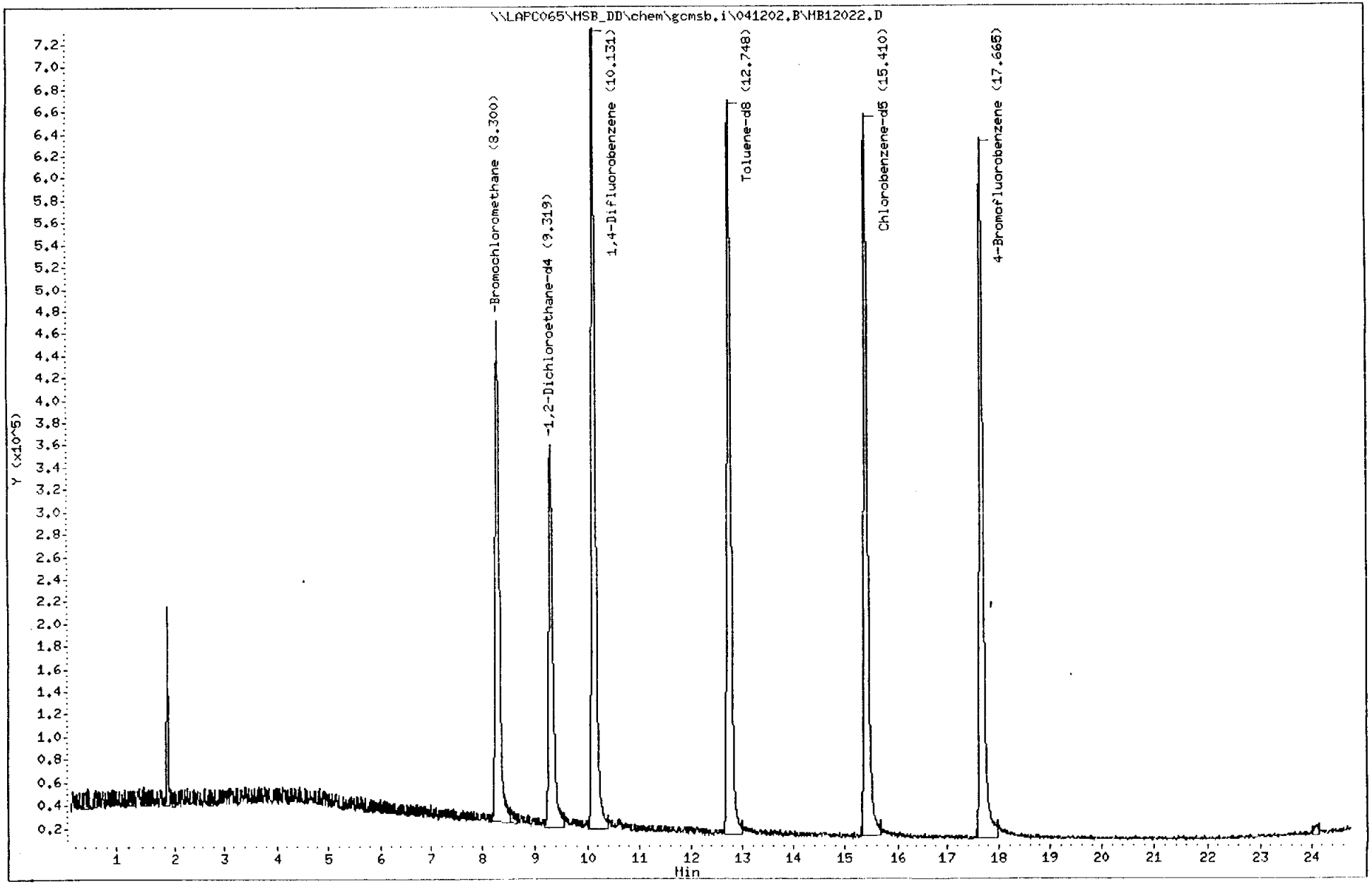
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D
Date : 02-DEC-2004 13:54
Client ID: BLANK
Sample Info: BLANK,BLANK,A286

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100218

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100218

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066352-001/46-VW-02-SV-046 01/03/05 09:35 001				
Dichlorodifluoromethane	0.62 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	0.54 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	6.4 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.5 J	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	7.7 J	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	0.97 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	160	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	2.2	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	12	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	0.71 J	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
066353-001/46-VW-02-SV-096 01/03/05 09:40 002				
Dichlorodifluoromethane	0.60 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.5 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	1.8 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	360	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	8.7	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	0.86 J	2.0	ppb(v/v)	EPA-21 TO-14A
066354-001/46-VW-02-SV-146 01/03/05 09:47 003				
Dichlorodifluoromethane	0.59 J	2.0	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	79	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.5 J	2.0	ppb(v/v)	EPA-21 TO-14A
066355-001/46-VW-02-SV-196 01/03/05 09:54 004				
Dichlorodifluoromethane	0.52 J	2.0	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	240	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	0.73 J	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

E5A100218

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066356-001/46-VW-02-SV-246 01/03/05 10:00 005				
Methylene chloride	7.2	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	0.98 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	490	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	5.3	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	1.6 J	2.0	ppb(v/v)	EPA-21 TO-14A
066357-001/46-VW-02-SV-296 01/03/05 10:08 006				
Dichlorodifluoromethane	0.60 J	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	5.2	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	3.0	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	1.7 J	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100218

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100218

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DGP	001	066352-001/46-VW-02-SV-046	01/03/05	09:35
G2DGQ	002	066353-001/46-VW-02-SV-096	01/03/05	09:40
G2DGR	003	066354-001/46-VW-02-SV-146	01/03/05	09:47
G2DGT	004	066355-001/46-VW-02-SV-196	01/03/05	09:54
G2DGV	005	066356-001/46-VW-02-SV-246	01/03/05	10:00
G2DGW	006	066357-001/46-VW-02-SV-296	01/03/05	10:08

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066352-001/46-VW-02-SV-046

GC/MS Volatiles

Lot-Sample #...: E5A100218-001 **Work Order #...:** G2DGP1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 09:35 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 04:03
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.62 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.54 J**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**6.4 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**1.5 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**7.7 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	**0.97 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**160**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	**2.2**	**2.0**	**ppb(v/v)**	**0.80**
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**12**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066352-001/46-VW-02-SV-046

GC/MS Volatiles

Lot-Sample #...: E5A100218-001 **Work Order #...:** G2DGP1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	**0.71 J**	**2.0**	**ppb(v/v)**	**0.50**
m-Xylene & p-Xylene	**1.3 J**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066353-001/46-VW-02-SV-096

GC/MS Volatiles

Lot-Sample #...: E5A100218-002 **Work Order #...:** G2DGQ1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 09:40 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 04:39
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.60 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**1.0 J**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**2.5 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**1.3 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**1.8 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**360**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	**8.7**	**2.0**	**ppb(v/v)**	**0.80**
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.86 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066353-001/46-VW-02-SV-096

GC/MS Volatiles

Lot-Sample #...: E5A100218-002 **Work Order #...:** G2DGQ1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066354-001/46-VW-02-SV-146

GC/MS Volatiles

Lot-Sample #...: E5A100218-003 **Work Order #...:** G2DGR1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 09:47 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 05:14
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.59 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	**1.4 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**79**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.5 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066354-001/46-VW-02-SV-146

GC/MS Volatiles

Lot-Sample #...: E5A100218-003 **Work Order #...:** G2DGR1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066355-001/46-VW-02-SV-196

GC/MS Volatiles

Lot-Sample #...: E5A100218-004 **Work Order #...:** G2DGT1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 09:54 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 05:48
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.52 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	**1.0 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**240**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**0.73 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066355-001/46-VW-02-SV-196

GC/MS Volatiles

Lot-Sample #...: E5A100218-004 **Work Order #...:** G2DGT1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066356-001/46-VW-02-SV-246

GC/MS Volatiles

Lot-Sample #...: E5A100218-005 **Work Order #...:** G2DGV1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 10:00 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 06:16
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	**7.2**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**0.98 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**490**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	**5.3**	**2.0**	**ppb(v/v)**	**0.80**
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**1.6 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066356-001/46-VW-02-SV-246

GC/MS Volatiles

Lot-Sample #...: E5A100218-005 **Work Order #...:** G2DGV1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066357-001/46-VW-02-SV-296

GC/MS Volatiles

Lot-Sample #...: E5A100218-006 **Work Order #...:** G2DGW1AD **Matrix.....:** AE
Date Sampled...: 01/03/05 10:08 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 06:45
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.60 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**5.2**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**3.0**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

(Continued on next page)

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066357-001/46-VW-02-SV-296

GC/MS Volatiles

Lot-Sample #...: E5A100218-006 **Work Order #...:** G2DGW1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	**1.0 J**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	**1.7 J**	**2.0**	**ppb(v/v)**	**0.80**
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100218

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5012180	
002	AE	EPA-21 TO-14A		5012180	
003	AE	EPA-21 TO-14A		5012180	
004	AE	EPA-21 TO-14A		5012180	
005	AE	EPA-21 TO-14A		5012180	
006	AE	EPA-21 TO-14A		5012180	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100218
MB Lot-Sample #: M5A120000-180
Analysis Date..: 01/11/05
Dilution Factor: 1

Work Order #...: G2F241AA
Prep Date.....: 01/11/05
Prep Batch #...: 5012180
Analyst ID.....: 101605

Matrix.....: AIR
Analysis Time..: 20:21
Instrument ID..: MSB

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100218 **Work Order #...:** G2F241AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100218 **Work Order #...:** G2F241AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-180 G2F241AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 16:33
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	103	**(70 - 125)**	**1.1**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**103**	**(75 - 120)**			**EPA-21 TO-14A**
	104	**(75 - 120)**	**0.81**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	102	**(70 - 125)**	**0.33**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**100**	**(75 - 125)**			**EPA-21 TO-14A**
	100	**(75 - 125)**	**0.16**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**110**	**(65 - 130)**			**EPA-21 TO-14A**
	109	**(65 - 130)**	**0.40**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100218 **Work Order #...:** G2F241AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-180 G2F241AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 16:33
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**51.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	50.5	**52.2**	**ppb(v/v)**	**103**	**1.1**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**56.2**	**ppb(v/v)**	**103**		**EPA-21 TO-14A**
	54.5	**56.6**	**ppb(v/v)**	**104**	**0.81**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**50.7**	**ppb(v/v)**	**102**	**0.33**	**EPA-21 TO-14A**
Toluene	**49.5**	**49.6**	**ppb(v/v)**	**100**		**EPA-21 TO-14A**
	49.5	**49.5**	**ppb(v/v)**	**100**	**0.16**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**54.9**	**ppb(v/v)**	**110**		**EPA-21 TO-14A**
	50.0	**54.7**	**ppb(v/v)**	**109**	**0.40**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100218

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: Cy 011305

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
18 1,1-Difluoroethane	+++++ +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372
19 Vinyl Bromide	0.62278 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391
20 Dichlorofluoromethane (F21)	1.78533 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446
21 Trichlorofluoromethane (F11)	2.44228 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083
22 n-Pentane	1.21122 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395
23 1,1-DC-1-flouroethane(F141b)	2.58910 +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444
24 Ethanol	+++++ 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705
25 Ether (Diethyl ether)	0.49364 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284
26 Acrolein	0.20601 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263 <-
27 Propionaldehyde (Propanal)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
28 1,1-Dichloroethene	1.26790 1.06973	1.17864	1.08330	1.12535	1.10018	1.07502	1.12859	6.381	
29 2,2-Dimethylbutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715 2.22085	2.59937	2.38876	2.40025	2.34655	2.25977	2.44467	9.559	
31 Acetone	+++++ 0.20458	0.12242	0.14598	0.16090	0.16041	0.16574	0.16001	16.836	
32 Iodomethane	1.11548 1.87248	1.03774	1.38752	1.40857	2.82193	2.47154	1.73075	39.751	<-
33 Carbon Disulfide	0.84200 1.35974	0.90775	0.92884	1.06258	1.12947	1.19849	1.06127	17.279	
34 2-Propanol	+++++ 0.71716	0.45343	0.48827	0.55577	0.58306	0.59777	0.56591	16.380	
35 Acetonitrile	0.04928 0.15546	0.08266	0.12149	0.13210	0.18434	0.18610	0.13021	39.137	<-
36 Allyl Chloride	0.54011 0.71567	0.56312	0.52171	0.54469	0.60226	0.61352	0.58587	11.302	
37 Methylene Chloride	0.81147 0.69121	0.73641	0.65629	0.67719	0.66235	0.64310	0.69686	8.458	

STL Los Angeles

INITIAL CALIBRATION DATA

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Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384	1.84557	1.78175	1.69840	1.73692	1.68874		
	1.43818						1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680	0.92384	0.86786	0.85814	1.07070	0.99994		
	0.81576						0.93758	10.283
72 n-Heptane	0.65292	0.59087	0.57809	0.57044	0.59474	0.58371		
	0.52727						0.58544	6.367
74 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Trichloroethene	0.49675	0.44912	0.44758	0.42160	0.43287	0.42172		
	0.38637						0.43657	7.756
76 Methylcyclohexane	0.42140	0.36653	0.33095	0.30891	0.38179	0.35467		
	0.29346						0.35110	12.546
77 1-Butanol	+++++	0.02081	0.01680	0.01594	0.01842	0.01675		
	0.01390						0.01710	13.662
78 1,2-Dichloropropane	0.16774	0.15879	0.17082	0.16553	0.16628	0.16412		
	0.15399						0.16390	3.481
79 Dibromomethane	0.53415	0.48041	0.44691	0.42596	0.54917	0.51576		
	0.44421						0.48522	9.991
80 Methyl methacrylate	+++++	0.23366	0.24181	+++++	0.31202	0.30819		
	0.31492						0.28212	14.422

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++ / 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014	
82 Bromodichloromethane	0.49808 / 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427 / 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++ / 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414 / 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++ / 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270	
87 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Toluene	1.01334 / 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491	
90 n-Octane	0.59003 / 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058 / 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201	

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924	
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318	
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62887	10.012	
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629	
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442	<-
97 Dibromochloromethane	0.78993 / 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682	
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882	
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871	
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341	
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759	

STL Los Angeles

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
113 Cyclohexanone	+++++	0.16737	0.13623	0.16986	0.30769	0.30915		
	0.31380						0.23402	36.036 <-
115 Bromobenzene	0.62810	0.54939	0.53490	0.56999	0.74532	0.71345		
	0.64313						0.62633	12.953
116 1,1,2,2-Tetrachloroethane	1.35006	1.36835	1.40167	1.40654	1.41590	1.37850		
	1.15903						1.35429	6.584
117 1,2,3-Trichloropropane	0.40312	0.37856	0.36846	0.35405	0.43674	0.40744		
	0.33139						0.38282	9.311
118 trans-1,4-Dichloro-2-butene	+++++	0.03166	0.04163	0.05764	0.09751	0.10698		
	+++++						0.06708	50.055 <-
119 n-Propylbenzene	1.28187	1.16227	1.17752	1.29846	1.76716	1.67802		
	1.44875						1.40201	17.097
120 2-Chlorotoluene	0.34395	0.31308	0.29196	0.31871	0.42215	0.39436		
	0.36367						0.34970	13.365
121 4-Chlorotoluene	0.34395	0.31308	0.29196	0.31871	0.42215	0.39436		
	0.36367						0.34970	13.365
122 3-Ethyltoluene	1.05354	0.92205	0.91423	1.00617	1.36657	1.29121		
	1.17775						1.10450	16.139
123 4-Ethyl Toluene	0.81519	0.81347	0.65696	0.67163	0.91104	0.97223		
	1.08888						0.84706	18.497

STL Los Angeles

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558 +++++	1.21368	0.81082	0.65064	0.83940	0.78774	0.94631	29.818
125 n-Decane	0.46267 0.32620	0.34922	0.25520	0.27626	0.36839	0.34720	0.34073	19.844
126 .beta.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Ethyltoluene	1.11542 1.16620	0.94881	0.85458	0.95853	1.30303	1.23402	1.08294	15.307
128 .alpha.-Methylstyrene	0.43803 0.54809	0.36069	0.33804	0.37867	0.54465	0.52825	0.44806	20.459
129 tert-Butylbenzene	0.80994 0.87914	0.73130	0.67470	0.76818	1.05286	1.00081	0.84528	16.570
130 Pentachloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955 +++++	0.35806	0.23173	0.19988	0.25825	0.25412	0.27527	23.368
132 sec-Butylbenzene	1.53068 1.68519	1.27842	1.22547	1.37218	1.91352	1.87496	1.55435	17.948
133 D-Limonene	0.56335 0.43408	0.44070	0.33104	0.35410	0.48917	0.46237	0.43926	17.978

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030			
	0.69853						0.52632	18.610	
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222			
	1.26479						1.14477	17.565	
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895			
	0.67222						0.54141	18.711	
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417			
	0.67804						0.64142	16.131	
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209			
	1.02647						0.56325	55.511	<-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348			
	0.55025						0.48440	18.904	
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253			
	0.64790						0.53798	14.023	
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416			
	0.23934						0.27636	17.206	
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159			
	0.79399						0.72730	19.989	
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136			
	0.17470						0.37429	42.157	<-

STL Los Angeles

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144 1,2,4-Trichlorobenzene	+++++ / 0.27629	0.26338	0.25799	0.22180	0.31565	0.26332	0.26641	11.388
145 Hexachlorobutadiene	0.56644 / 0.51820	0.58610	0.42156	0.35251	0.47676	0.47942	0.48586	16.727
146 Naphthalene	+++++ / 0.49153	0.70441	0.53060	0.46537	0.55710	0.47106	0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850 / 0.25906	0.48714	0.49598	+++++	0.42244	0.27752	0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014 / 0.39572	0.40234	0.40611	0.41316	0.41851	0.44633	0.41033	4.531
$ 88 Toluene-d8	0.51061 / 0.54926	0.50803	0.52649	0.50915	0.52457	0.53681	0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642 / 1.09717	0.79382	0.81777	0.80936	0.95153	0.96622	0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0

MA 01/04/05

E5A100218

STL Los Angeles
Air Toxics Lab GC/MS Run Log

Instrument ID: GCMS-B	Data Directory: D:\GCMSB\ 050103A-B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3 05
	Method File: TO14A	Daily Standard: MSL04011028	SOP: CQI-MS-013
Logbook ID: R-AMS-041	Tune File: BF041123	LCS Standard: MSL04011043	MDL Date: 01-28-01
		I.S. Standard: PSL9911283	Blank Lot No. G050301-00

	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
	1305	1909	BF01032	-	-	-	BFB	28	-	-	-	m	OK	A	
		1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL0571
		2002	IL01031	-	-	-	2.0 PIBV STD	40	-	-	-	m	OK	10	MSL04011043
		2037	IL01032	-	-	-	4.0	80	-	-	-	m	OK	10	
		2112	IL01033	-	-	-	10	200	-	-	-	m	OK	10	
		2148	IL01034	-	-	-	25	500	-	-	-	m	OK	10	
		2223	IL01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
		2258	IL01036	-	-	-	100	250	-	-	-	m	OK	11	
		2334	IL01037	-	-	-	500	1250	-	-	-	m	OK	11	
0	1405	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 c/o.?
1		0014	LL01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
2		0119	LL01034	-	-	-	LCSD	500	-	-	-	m	OK	13	
3		0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
4		0342	B7371	G1P4S1AA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EYL220306-1
5		0417	B7372	G1P4T1AA			002	872	24.4/14.0	-		m	OK	1	-2
6		0452	B7373	G1P4U1AA			003	1130	24.4/10.9	-		m	OK	2	-3
7		0527	B7374	G1P4E1AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
8		0602	B7375	G1P4G1AA			005	1600	24.5/11.6	-	1.00	m	O/R	4	-5

Reviewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

strument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
gbook ID:	Tune File:	LCS Standard: 1.4.05	MDL Date:
-AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1.4.05	0637	B7376	G1PA11AA	CCS	CRA	A 17178-BW-CCC	1150	244/1.07	—	1.00	W	OK	5	E4L22063-6
↓	0712	B7377	G1Q191AD	↓	TAST	LG1SVE0071B 0750	40	244/1.1	100/10	2730	W	O/R	6	E4L230156-1
↓	0741	B7378	G1Q241AD	↓	↓	LG1SVD0051B 1030	40	244/1.2	100/10	2720	W	OK	7	↓ -2

Reviewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

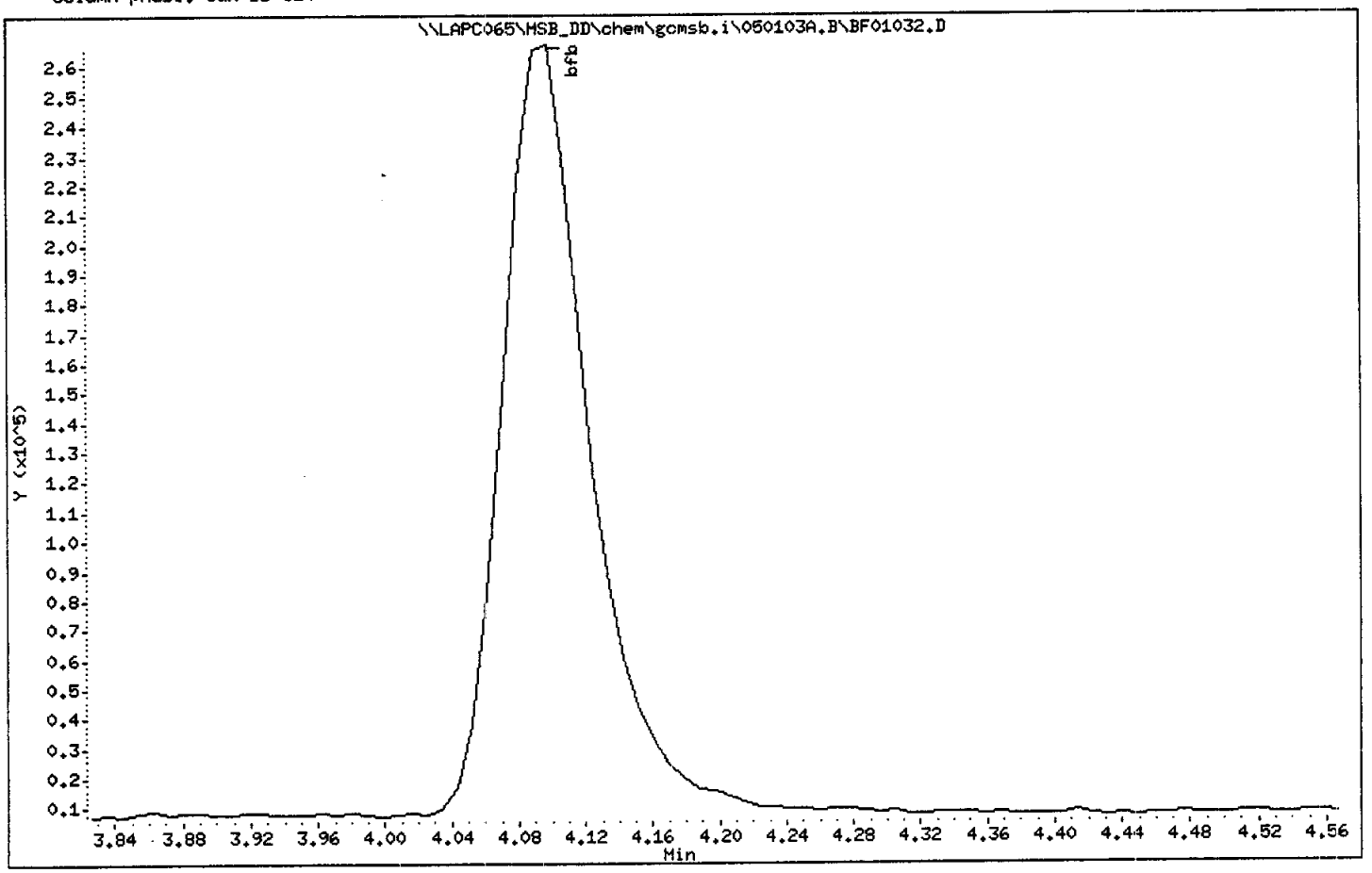
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

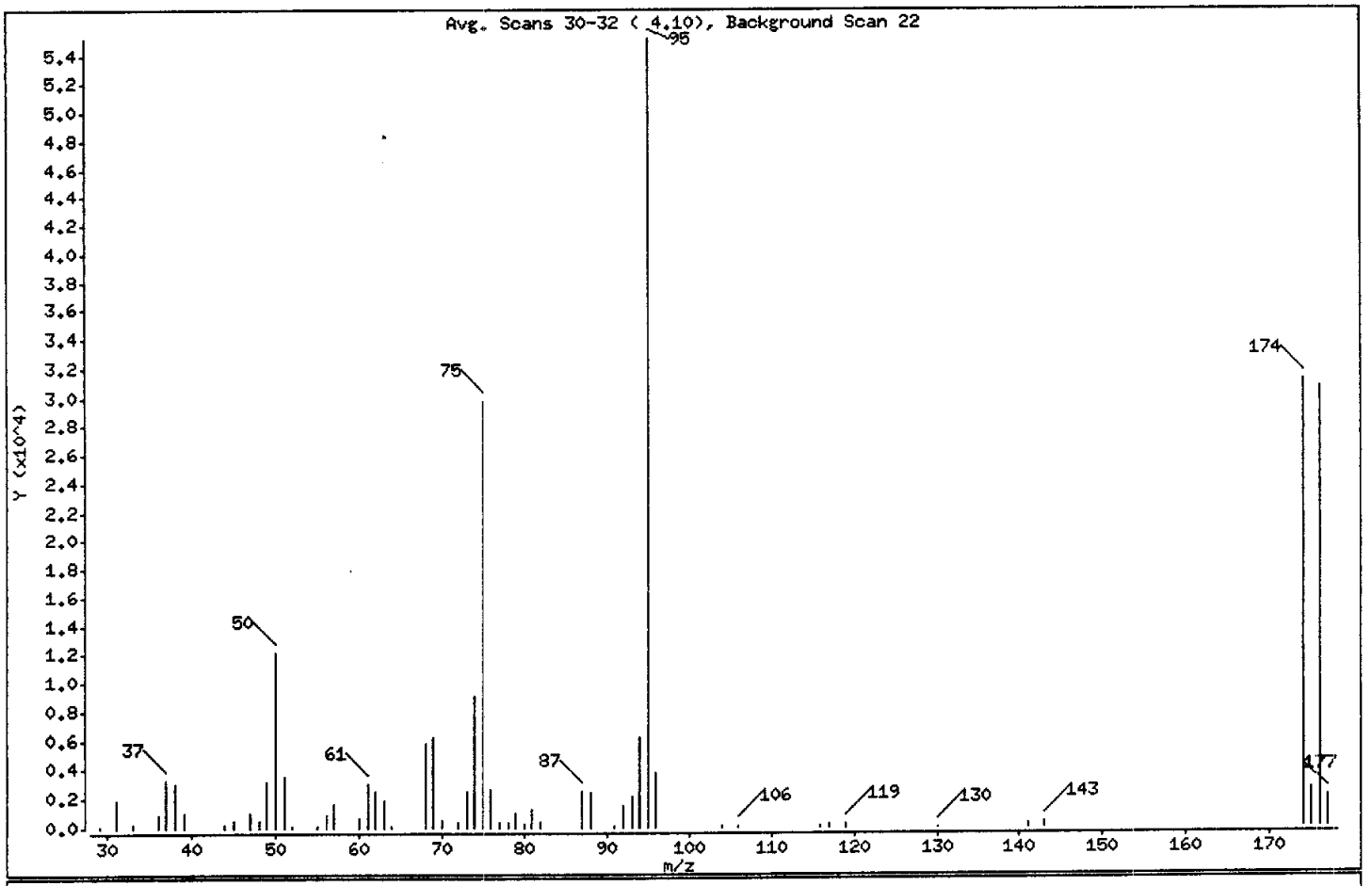
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

AA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether(MTBE)	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

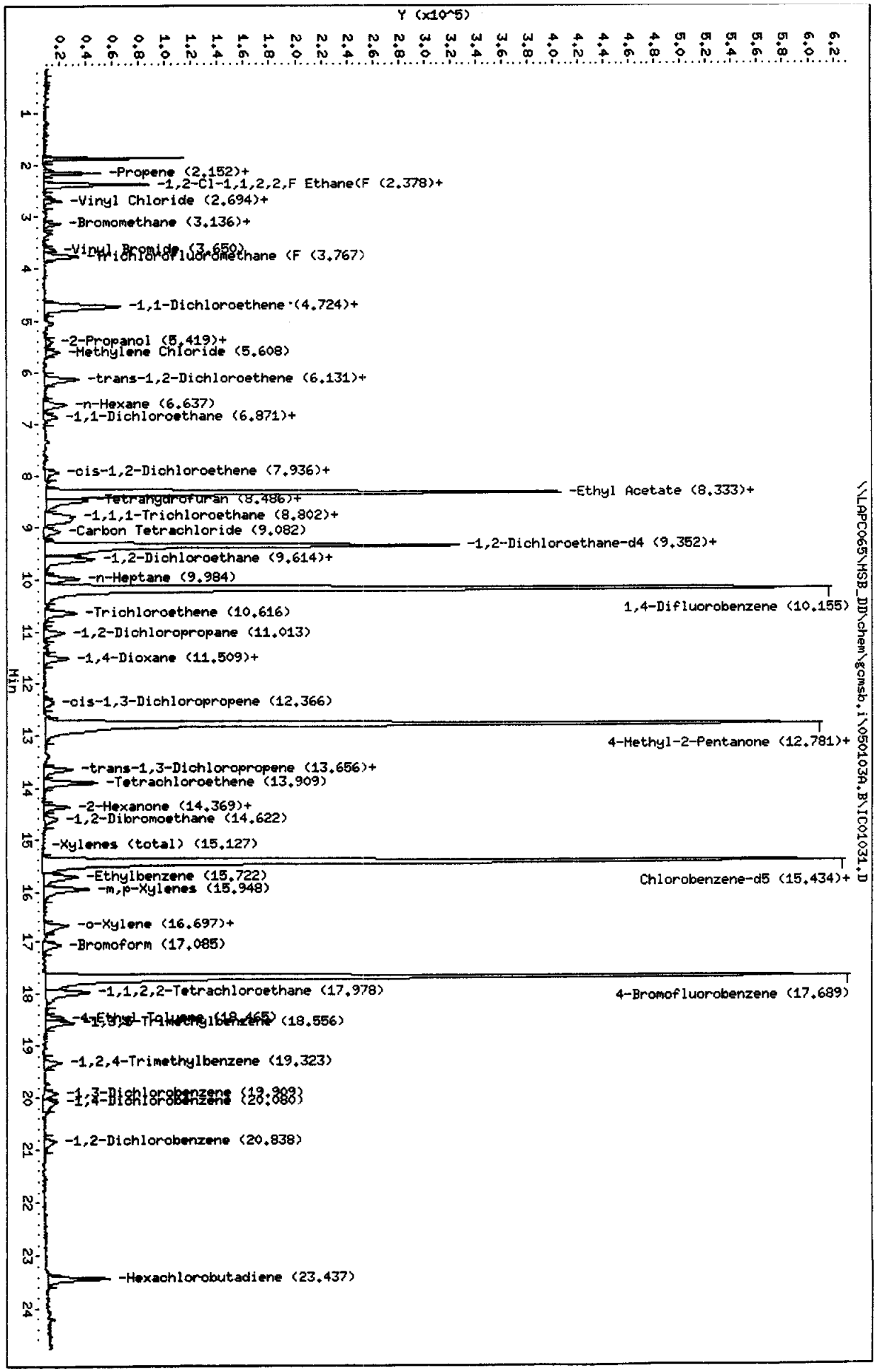
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\0501030.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.305
42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.319(a)
43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
* 58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$ 66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
* 73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$ 88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
* 101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M 99 Xylenes (total)	106				75671	12.0000	11.14
104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$ 114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

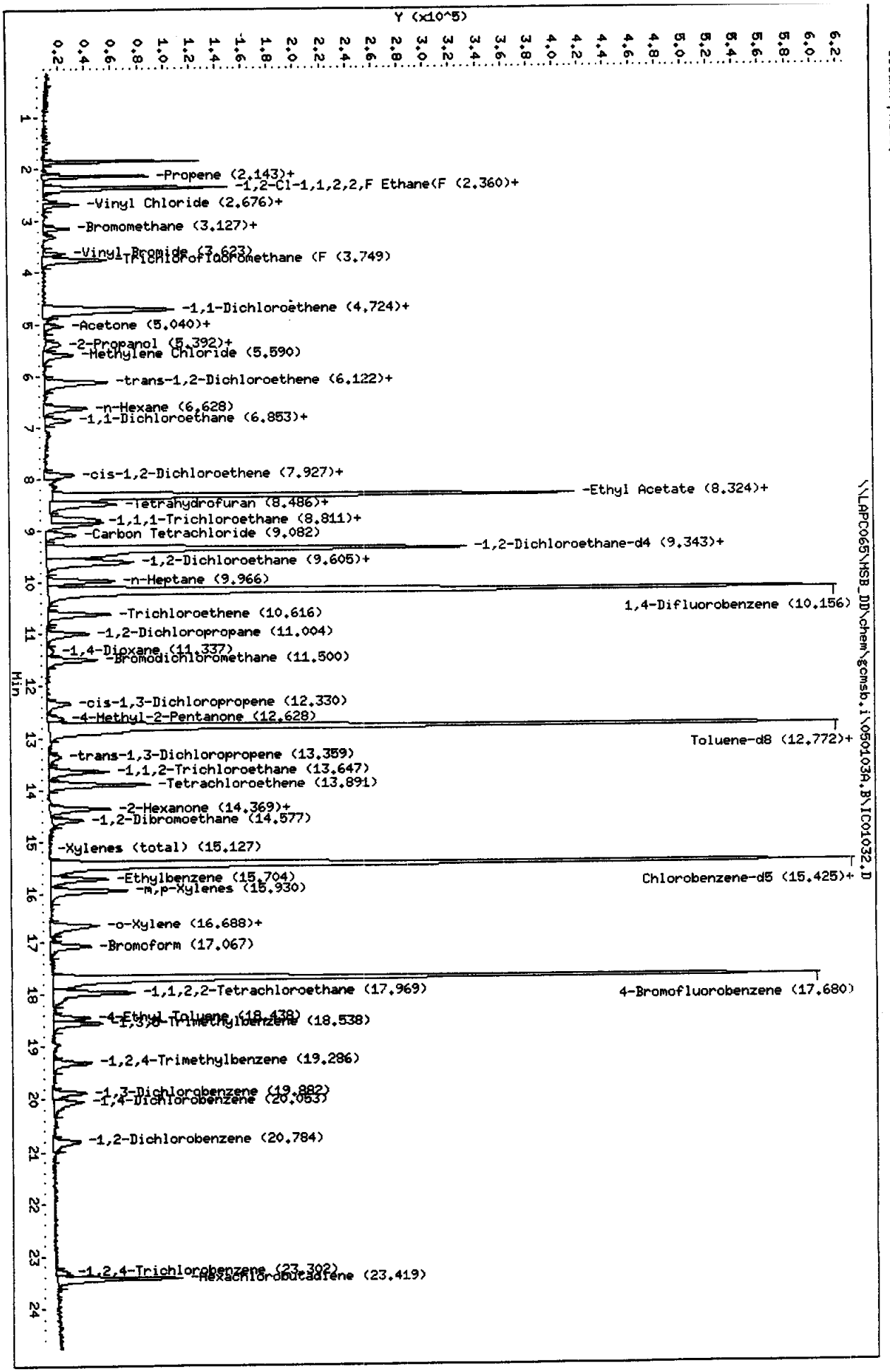
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
	36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
	37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
	40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
	41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
	43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
	45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
	53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
	54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
	56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
*	58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
	59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
	60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
	62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
	64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
	68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
	69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
	72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
	81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
	82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
	85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
	89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
	91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
	93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
	95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
	96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
	98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
*	101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
	102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M	99 Xylenes (total)	106				196706	30.0000	28.63
	104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
	105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
	107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
	108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
	110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
	116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

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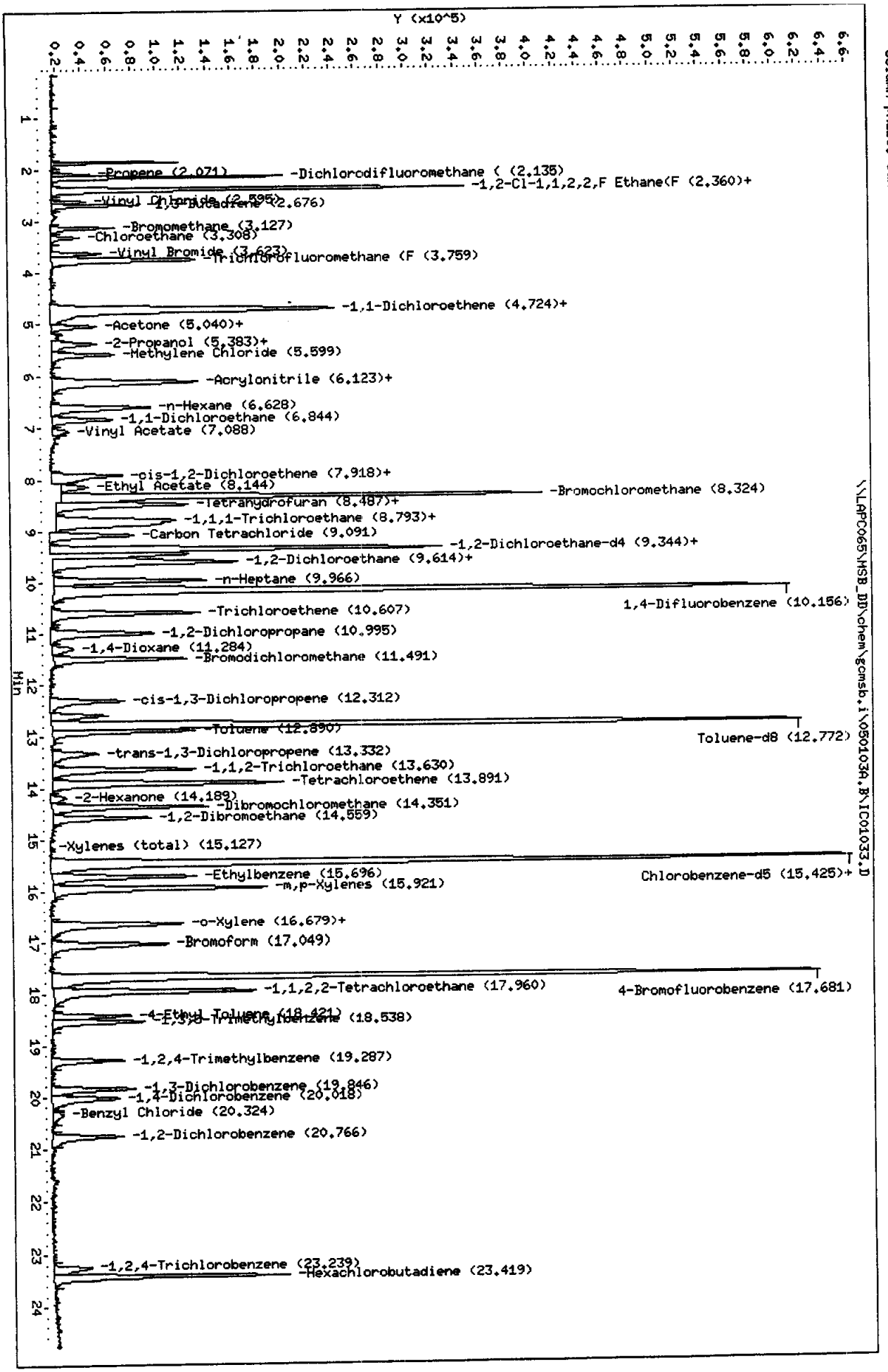
Sample Info: 10 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
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Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
* 58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$ 66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
* 73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$ 88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
* 101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M 99 Xylenes (total)	106				477975	75.0000	68.20
104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$ 114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

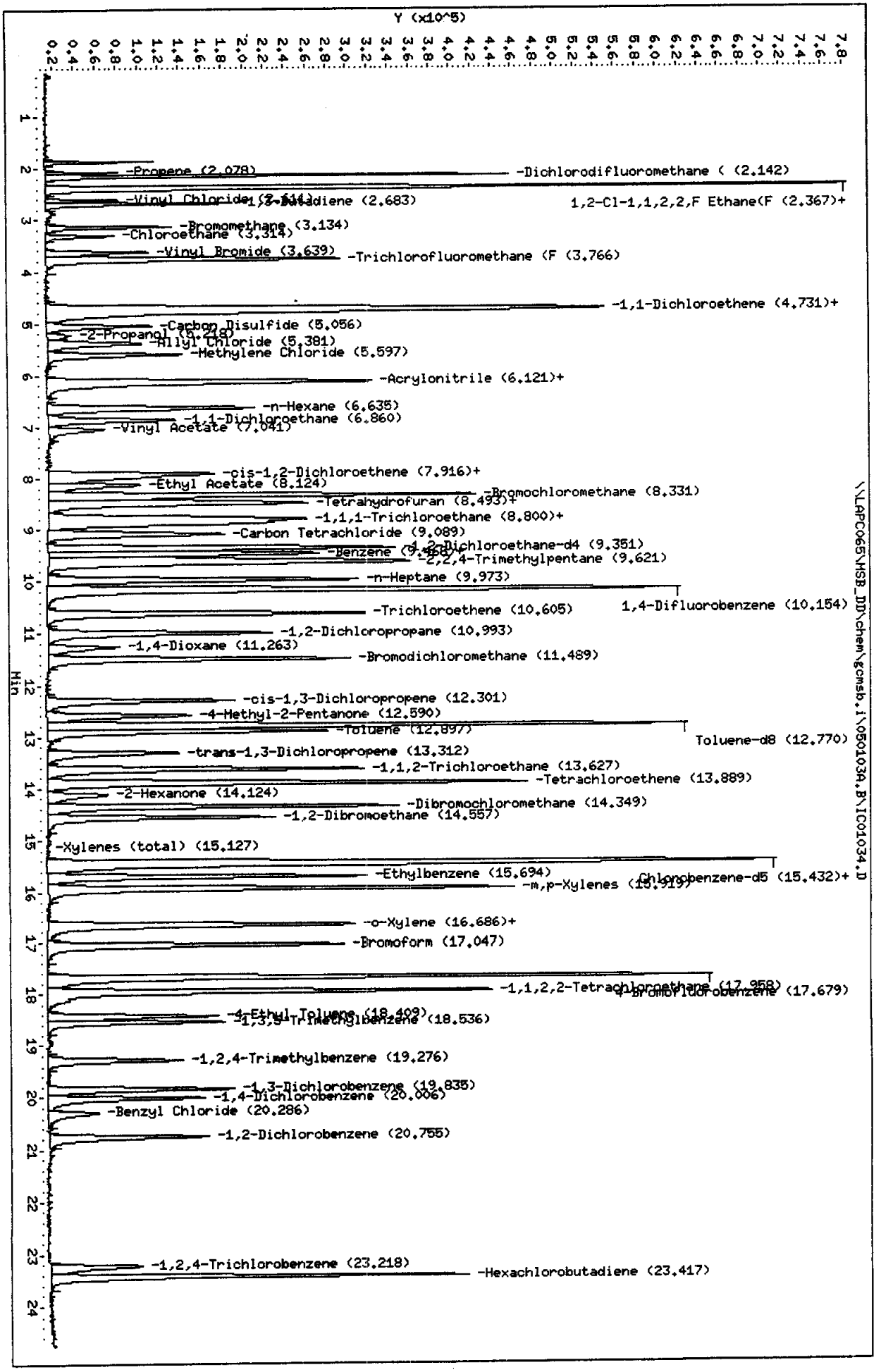
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
* 58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$ 66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
* 73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$ 88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
* 101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M 99 Xylenes (total)	106				1168928	150.000	161.6
104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$ 114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

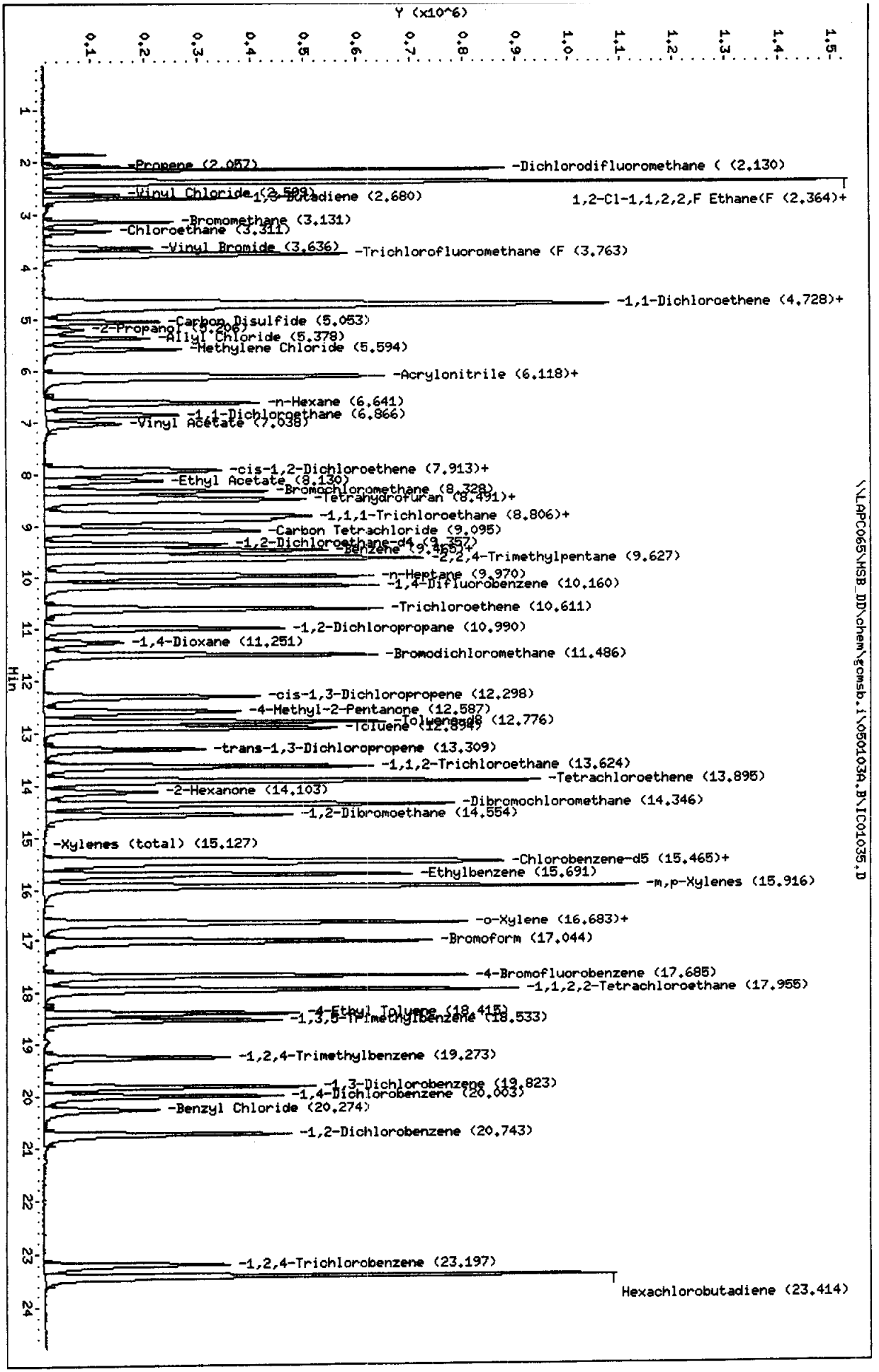
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
* 58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$ 66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
* 73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$ 88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
* 101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M 99 Xylenes (total)	106				2384108	300.000	320.3
104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$ 114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

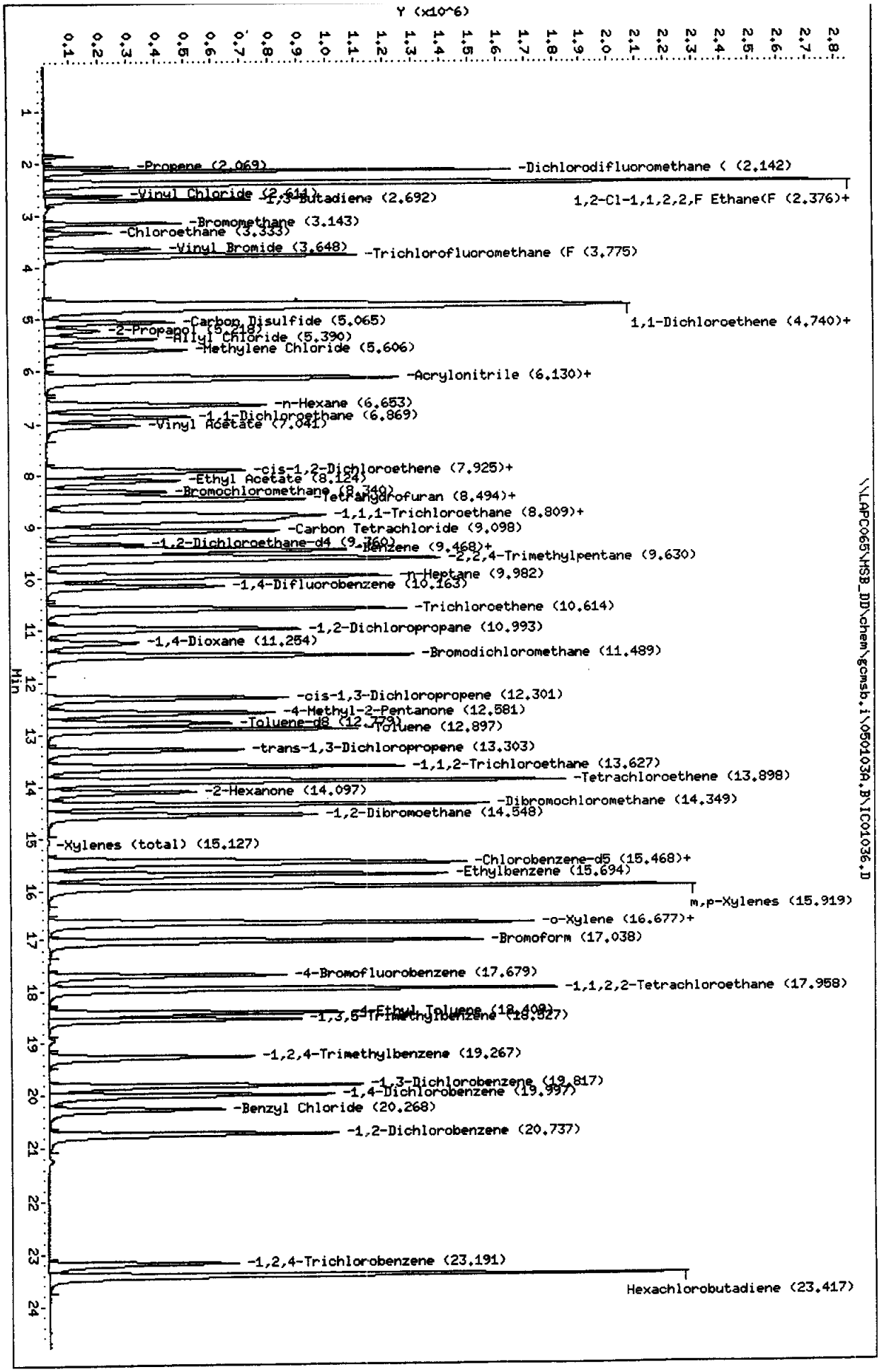
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Lab Smp Id: 500 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
* 58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$ 66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
* 73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$ 88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
* 101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M 99 Xylenes (total)	106				11979064	1500.00	1564
104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$ 114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

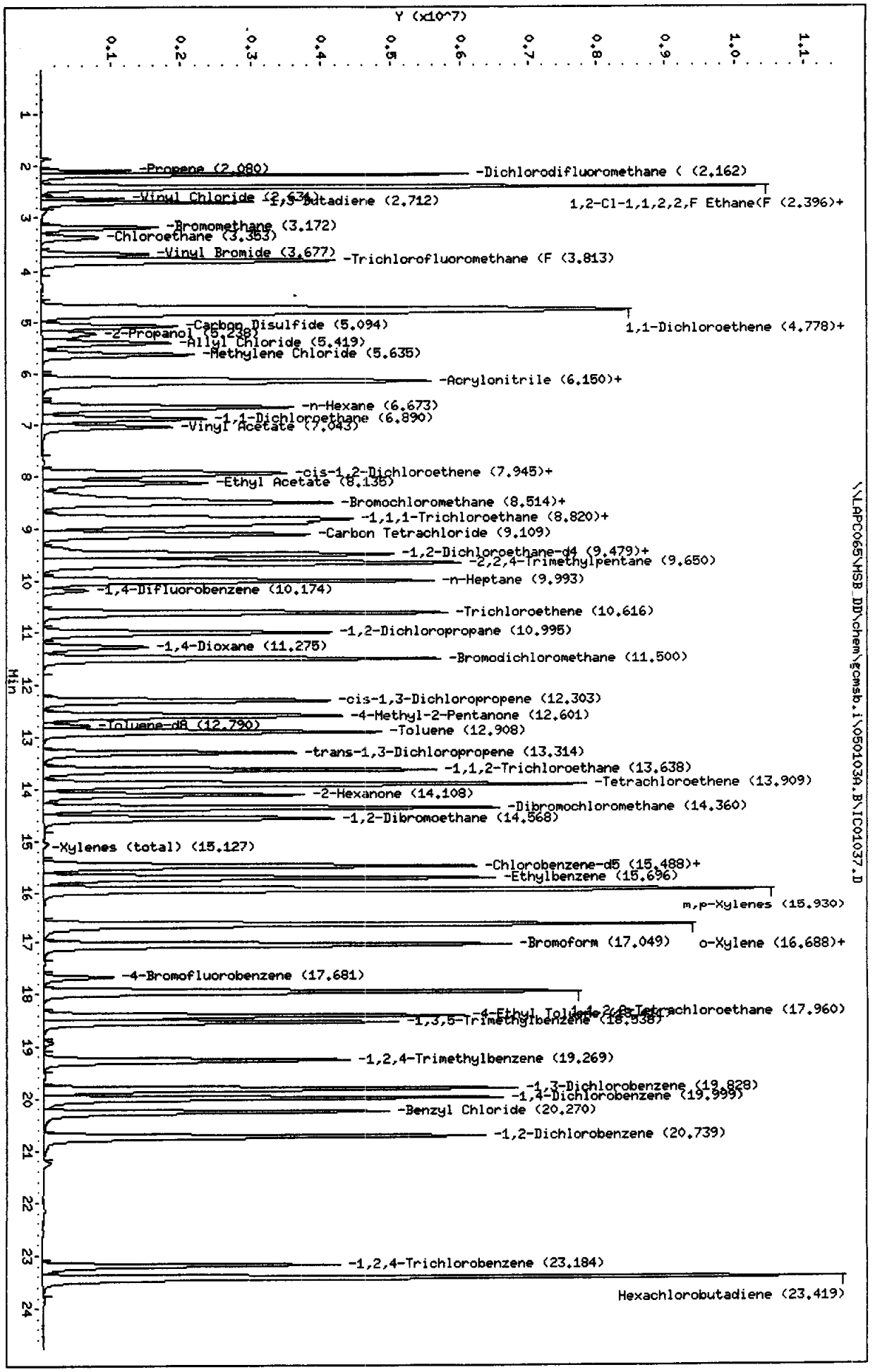
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ıment ID:	Data Directory: D:\GCMSB\ 050111.B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3 05
MS-B	Method File: TO14A	Daily Standard: MSLL9911026	SOP: [illegible]
ook ID:	Tune File:	LCS Standard: PSL9911352	MDL Date: 12-8-01
MS-041	BF041123.m	I.S. Standard: PSL9911283	Blank Lot No. G050301.00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1105	0751	BF0111	-	-		BFB	38	-	-	-	m	[illegible]	A	
	0802	BF0112	-	-	-	BFB	28	-	-	-	m	OK	A	
	0820	LC0111	-	-	-	CW	125	-	-	-	m	NO	B	
	0849	LC0112	-	-	-	LCS	250	-	-	-	m	NA	C	
	0933	LC0112	-	-	-	CW	125	-	-	-	m	OK	B	
	1016	LC0112	-	-	-	LCS	250	-	-	-	m	OK	C	
	1045	LC0113	-	-	-	LCSD	250	-	-		m	OK	C	
	1124	MB0111	-	-	-	Method Blank	500	-	-	-	AA	OK	15	Filt "J"
	1152	B7525	G2CWK2AC	0.1	WMI	GP9A	20	24.2/12.7	-	47.6	AA	OK	16	ESA100153-2
	1[illegible]	B7526	G2CWL2AC			GP9B	40	24.4/12.6	-	12.2	AA	OK	1	-3
	1259	B7527	G2CWV2AC			G13A	40	24.2/12.8	100/50	47.3	AA	OK	2	-6
	1335	B7528	G2CWW2AC			GP13B	20	24.4/12.3	-	48.8	AA	OK	3	-7
	1403	B7529	G141L1AC	0.1	ERM	LB IN-16	20	22.9/13.6	-	42.1	AA	O/R	4	ESA040240-2
	1430	B7530	G2DFG1AD	0.1	SANDIA	066343 0.1	949	24.1/12.7	-	1	AA	OK	5	ESA100213-1
	1507	B7531	G2DGC1AD	0.1		066344-0.1	927	24.1/13.1	-	1	AA	OK	6	2
	1534	B7532	G2DGE1AD	0.1		066345-0.1	931	24.2/13.1	-	1	AA	OK	7	3
	1603	B7533	G141L2AD	0.1	ERM	LB IN-16	20	22.9/13.6	100/50	42.1	AA	OK	4	ESA040240-2
	1633	LC0114	—	—	—	LCS	250	—	—	-	AA	OK	C	

ewed: _____

E5A100218

96

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
MS-B	Method File:	Daily Standard:	SOP:
ook ID:	Tune File:	LCS Standard:	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/11	1711	LC01115	-	-	-	LCSD	250	-	-	-	AA	OK	C	
	1737	CC01113	-	-	-	Cellosolve Ace	50	-	-	-	AA	No	7	Low?
	1800	CC01114	-	-	-	USER CCV	250	-	-	-	AA	OK	8	MSL0501060
	1834	CC01115	-	-	-	Methyl Meth.	250	-	-	-	AA	OK	8	MSL0501039
	1910	CC01116	-	-	-	CELLOSOLVE ACE.	50	-	-	-	AA	OK	9	MSL0501074
	1945	CC01117	-	-	-	FINAL CCV	250	-	-	-	AA	No	10	MSL0401990
	2021	MB01112	-	-	-	METHOD BLANK	500	-	-	-	AA	OK	11	
	2057	B7534	G18CIAD	001	GZA	SAMS 8 HR	108.0	24.1/12.8	-	1.00	AA	OK	12	E4L300284-1 SD
	2132	B7535	G2EDPIAA		KONTEX	V3-IN-011005	40	23.9/12.8	-	23.2	AA	OK	13	ESA110183-1
	2208	B7536	G2EDRIIAA			V3 OUT	300	23.9/12.8	-	3.10	AA	OK	14	-2
	2243	B7537	G2EDUIAA			V1-OUT	964 300	23.9/12.8	23.4/12.4 -	3.10 1.0	AA	OK	15	-3
	2319	B7538	G2DGFIAA		SANDEA	CX6546-0001	300	23.8/12.8	-	3.10	AA	OK	16	ESA100214-1
	2355	B7539	G2DGGIAD			CC6547	25	24.8/12.8	-	38.8	AA	OK	1	-2
1/12 05	0030	B7540	G2DGHIAD			CC6548	50	24.3/12.8	100/100	94.9	AA	OK	2	-3
	0106	B7541	G2DGKIAD			CC6549	20	24.3/12.8	-	47.5	AA	OK	3	-4
	0142	B7542	G2DGLIAD			CC6550	250	24.4/12.7	-	3.94	AA	OK	4	-5
	0217	B7543	G2DGMIAD			CC6551	934	23.9/12.8	-	1.00	AA	OK	5	-6
	0253	B7544	G2ENRIAA		SHAW	FP60044	50	TENTAT	100/10	1000	AA	OK	6	ESA110247-1

iewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ment ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
MS-B	Method File:	Daily Standard: See Previous Page	SOP:
ok ID:	Tune File:	LCS Standard: 1-12-05	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
12/5	0328	B7545	G2ENTIAA	001	SHAW	FQLCCK2	250	TEPLAB	-	200	[illegible]	OK	7	ESA110247 2
	0403	B7546	G2DGPIAD		SANDIA	066352-0001	597	24.2/13.5	-	100	[illegible]	OK	8	ESA100218-1
	0429	B7547	G2DGQIAD			066353	923	23.9/12.9	-		[illegible]	OK	9	-2
	0514	B7548	G2DGRIAD			066354	927	23.9/12.9	-		[illegible]	OK	10	-3
	0548	B7549	G2DGTIAD			066355	950	24.5/12.9	-		[illegible]	OK	11	-4
	0616	B7550	G2DGVIAD			066356	954	24.6/12.9	-		[illegible]	OK	12	-5
	0645	B7551	G2DGWIAD			066357	985	25.4/12.9	-		[illegible]	OK	13	-6
	0714	B7552	G2DG3IAD			066361	50	25.4/12.8	-	19.5	[illegible]	OK	14	ESA100219-4
	0742	B7553	G2DG4IAD			066362	25	24.7/12.8	-	38.6	[illegible]	OK	15	-5

[illegible] 1-12-05

iewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	LCS	605430	8.33	1300958	10.16	858989	15.42
02	LCSD	601083	8.34	1250526	10.16	867984	15.43
03	BLANK	572958	8.32	1219937	10.16	740051	15.42
04	GP9A	593130	8.29	1218775	10.12	812797	15.41
05	GP9B	596256	8.34	1213989	10.16	801292	15.42
06	GP13A	589247	8.32	1206323	10.15	746218	15.42
07	GP13B	587312	8.32	1177970	10.16	741573	15.43
08	LB-IN-16	578407	8.29	1223565	10.13	991223	15.43
09	066343-0001	582886	8.32	1231816	10.16	846746	15.42
10	066344-0001	570864	8.33	1171946	10.16	771769	15.42
11	066345-0001	572298	8.20	1177424	10.06	782311	15.38
12	LB-IN-16	556681	8.33	1192709	10.16	892002	15.42
13	LCS	567294	8.34	1169230	10.16	809704	15.42
14	LCSD	561973	8.30	1176185	10.13	817623	15.42
15	BLANK	555301	8.32	1148790	10.16	769229	15.42
16	SAM'S 8 HR 1	579780	8.36	1152084	10.17	790955	15.42
17	V3-IN 011005	570338	8.32	1161203	10.16	790597	15.42
18	V3-OUT 01100	583371	8.32	1145557	10.15	797949	15.42
19	V1-OUT 01100	535847	8.31	1137317	10.14	785434	15.41
20	066346-0001	522369	8.32	1087705	10.16	657329	15.42
21	066347-0001	545543	8.32	1110011	10.16	726842	15.42
22	066348-0001	537458	8.32	1105439	10.15	769715	15.41

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	066349-0001	544629	8.33	1096053	10.16	754907	15.42
02	066350-0001	535837	8.32	1084269	10.15	721181	15.41
03	066351-0001	535855	8.32	1095897	10.15	723587	15.41
04	FD60044	554825	8.32	1128856	10.15	798570	15.41
05	FD60062	562180	8.32	1140823	10.15	867571	15.41
06	066352-001	540916	8.30	1147952	10.14	804454	15.40
07	066353-001	540953	8.32	1132528	10.15	785812	15.41
08	066354-001	530687	8.31	1116997	10.15	765404	15.40
09	066355-001	546225	8.31	1123284	10.14	779205	15.40
10	066356-001	538046	8.31	1122921	10.14	770855	15.39
11	066357-001	535908	8.31	1104823	10.13	766786	15.39
12	066361-001	554218	8.31	1137553	10.13	788983	15.39
13	066362-001	553034	8.31	1143685	10.13	699702	15.39
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII VOA 1/87 Rev.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D
Lab Smp Id:
Inj Date : 11-JAN-2005 08:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.083	4.200	(0.000)	95	61389			0.00- 100.00	100.00
4.083	4.200	(0.000)	50	14311			15.00- 40.00	23.31
4.083	4.200	(0.000)	75	33800			30.00- 60.00	55.06
4.083	4.200	(0.000)	96	4414			5.00- 9.00	7.19
4.083	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.083	4.200	(0.000)	174	34714			50.00- 120.00	56.55
4.083	4.200	(0.000)	175	2883			5.00- 9.00	8.31
4.083	4.200	(0.000)	176	33896			95.00- 101.00	97.64
4.083	4.200	(0.000)	177	2457			5.00- 9.00	7.25

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

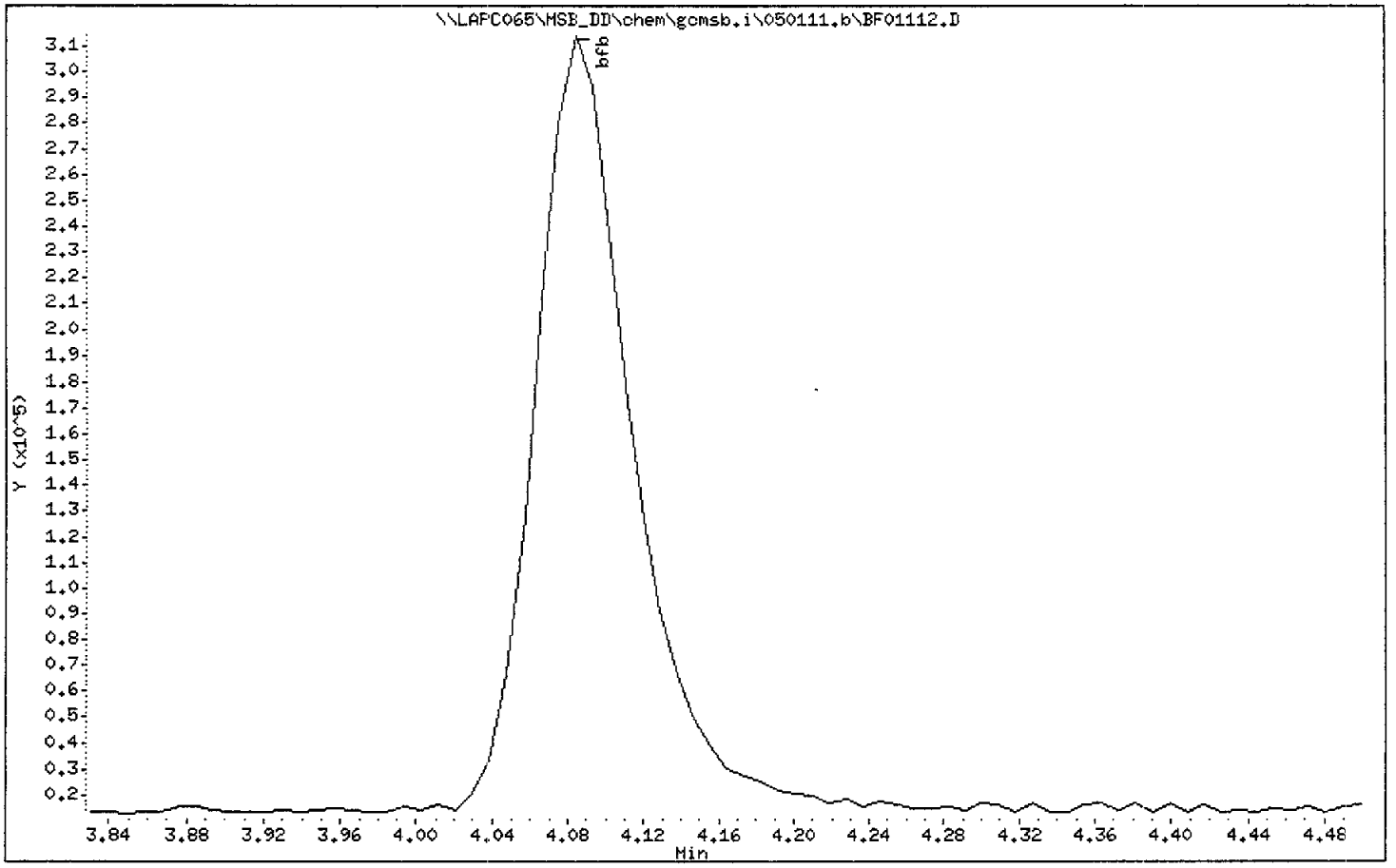
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

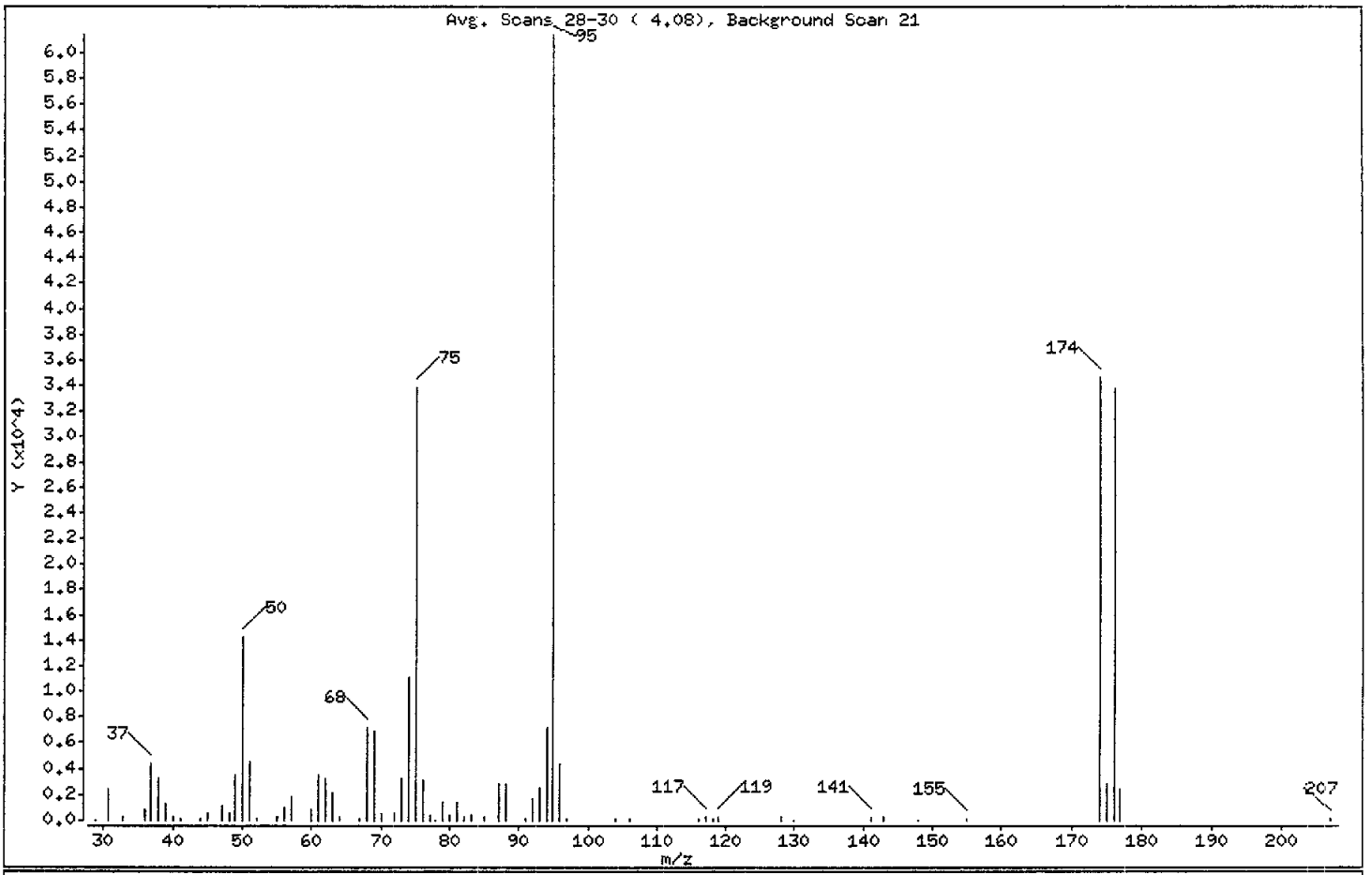
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.31
75	30.00 - 60.00% of mass 95	55.06
96	5.00 - 9.00% of mass 95	7.19
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.55
175	5.00 - 9.00% of mass 174	4.70 (8.31)
176	95.00 - 101.00% of mass 174	55.22 (97.64)
177	5.00 - 9.00% of mass 176	4.00 (7.25)

1/11/05

1/11/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01112.D
Spectrum: Avg. Scans 28-30 (4.08), Background Scan 21
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	49	56.00	1041	79.00	1354	117.00	309
31.00	2469	57.00	1799	80.00	435	118.00	72
33.00	306	60.00	819	81.00	1455	119.00	261
36.00	815	61.00	3492	82.00	343	128.00	244
37.00	4317	62.00	3302	83.00	416	130.00	64
38.00	3306	63.00	2183	85.00	222	141.00	328
39.00	1329	64.00	243	87.00	2778	143.00	288
40.00	218	67.00	79	88.00	2844	148.00	61
41.00	75	68.00	7171	91.00	173	155.00	73
44.00	151	69.00	6921	92.00	1757	174.00	34712
45.00	557	70.00	534	93.00	2514	175.00	2883
47.00	1063	72.00	615	94.00	7253	176.00	33896
48.00	603	73.00	3214	95.00	61384	177.00	2457
49.00	3532	74.00	11218	96.00	4414	207.00	147
50.00	14311	75.00	33800	97.00	128		
51.00	4552	76.00	3160	104.00	170		
52.00	210	77.00	457	106.00	82		
55.00	238	78.00	49	116.00	157		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 11-JAN-2005 09:33
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.083	2.083	(0.250)	117930	50.0000	51.33
3 Dichlorodifluoromethane (F12)	85	2.156	2.156	(0.259)	1335764	50.0000	50.53
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.381	2.381	(0.286)	1100999	50.0000	51.22
8 Chloromethane	52	2.426	2.426	(0.291)	63714	50.0000	54.30
9 Vinyl Chloride	62	2.616	2.616	(0.314)	261876	50.0000	51.42
12 1,3-Butadiene	39	2.688	2.688	(0.323)	363774	100.000	105.4
15 Bromomethane	94	3.148	3.148	(0.378)	326505	50.0000	51.57
16 Chloroethane	64	3.328	3.328	(0.400)	169618	50.0000	52.59
19 Vinyl Bromide	106	3.644	3.644	(0.438)	382508	50.0000	52.74
21 Trichlorofluoromethane (F11)	101	3.771	3.771	(0.453)	1341408	50.0000	50.34
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	711253	50.0000	50.32
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.745	4.745	(0.570)	1516275	50.0000	49.52
31 Acetone	58	4.853	4.853	(0.583)	107056	50.0000	53.42(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	780141	50.0000	58.69

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.214	5.214	(0.626)	364415	50.0000	51.42
	36 Allyl Chloride	41	5.386	5.386	(0.647)	393313	50.0000	53.60
	37 Methylene Chloride	49	5.593	5.593	(0.672)	426041	50.0000	48.82
	40 Acrylonitrile	53	6.089	6.089	(0.731)	129782	50.0000	55.14
	41 trans-1,2-Dichloroethene	61	6.107	6.107	(0.733)	630975	50.0000	51.30
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	1051552	50.0000	50.39
	43 n-Hexane	41	6.640	6.640	(0.797)	479458	50.0000	49.66
	44 1,1-Dichloroethane	63	6.865	6.865	(0.824)	774211	50.0000	49.98
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	800344	50.0000	53.69
	53 cis-1,2-Dichloroethene	96	7.912	7.912	(0.950)	407276	50.0000	50.88
	54 2-Butanone	72	7.975	7.975	(0.958)	142440	50.0000	53.43
	56 Ethyl Acetate	43	8.120	8.120	(0.975)	831706	50.0000	57.75
*	58 Bromochloromethane	49	8.327	8.327	(1.000)	626211	50.0000	
	59 Tetrahydrofuran	42	8.426	8.426	(1.012)	346205	50.0000	50.08
	60 Chloroform	83	8.489	8.489	(1.020)	983891	50.0000	49.38
	61 1,1,1-Trichloroethane	97	8.787	8.787	(1.055)	1008479	50.0000	50.63
	62 Cyclohexane	84	8.886	8.886	(1.067)	495362	50.0000	49.57
	64 Carbon Tetrachloride	117	9.085	9.085	(1.091)	891656	50.0000	67.37
$	66 1,2-Dichloroethane-d4	65	9.347	9.347	(0.920)	574558	50.0000	51.69
	68 Benzene	78	9.446	9.446	(0.930)	926438	50.0000	50.26
	69 1,2-Dichloroethane	62	9.482	9.482	(0.933)	599238	50.0000	49.91
	70 2,2,4-Trimethylpentane	57	9.617	9.617	(0.947)	2400722	50.0000	50.71
	72 n-Heptane	43	9.969	9.969	(0.981)	804793	50.0000	50.74
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1354487	50.0000	
	75 Trichloroethene	130	10.601	10.601	(1.044)	598705	50.0000	50.62
	78 1,2-Dichloropropane	76	10.980	10.980	(1.081)	232636	50.0000	52.40
	81 1,4-Dioxane	88	11.250	11.250	(1.107)	238899	50.0000	55.83
	82 Bromodichloromethane	85	11.485	11.485	(1.131)	836676	50.0000	56.68
	85 cis-1,3-Dichloropropene	75	12.297	12.297	(1.210)	708701	50.0000	58.22
	86 4-Methyl-2-Pentanone	58	12.577	12.577	(1.238)	324482	50.0000	52.15(Q)
$	88 Toluene-d8	100	12.766	12.766	(1.257)	729149	50.0000	51.41
	89 Toluene	91	12.883	12.883	(1.268)	1196268	50.0000	50.16
	91 trans-1,3-Dichloropropene	75	13.299	13.299	(0.862)	531738	50.0000	60.66
	93 1,1,2-Trichloroethane	97	13.614	13.614	(0.883)	584963	50.0000	50.02
	95 Tetrachloroethene	166	13.885	13.885	(0.901)	799613	50.0000	49.27
	96 2-Hexanone	58	14.102	14.102	(0.915)	299445	50.0000	57.23(Q)
	97 Dibromochloromethane	129	14.336	14.336	(0.930)	1180268	50.0000	60.14
	98 1,2-Dibromoethane	107	14.544	14.544	(0.943)	1064031	50.0000	54.28
*	101 Chlorobenzene-d5	117	15.419	15.419	(1.000)	1036663	50.0000	
	102 Chlorobenzene	112	15.473	15.473	(1.004)	963820	50.0000	50.64
M	99 Xylenes (total)	106				1339965	150.000	158.5
	104 Ethylbenzene	91	15.681	15.681	(1.017)	1553375	50.0000	52.72
	105 m,p-Xylenes	106	15.906	15.906	(1.032)	899918	100.000	105.2
	107 o-Xylene	106	16.664	16.664	(1.081)	440047	50.0000	53.37
	108 Styrene	104	16.691	16.691	(1.083)	578818	50.0000	56.03
	110 Bromoform	173	17.034	17.034	(1.105)	1027616	50.0000	66.57
$	114 4-Bromofluorobenzene	95	17.675	17.675	(1.146)	949556	50.0000	51.28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1513781	50.0000	53.91
123 4-Ethyl Toluene	105	18.396	18.396	(1.193)	981084	50.0000	55.86
124 1,3,5-Trimethylbenzene	105	18.523	18.523	(1.201)	858186	50.0000	43.74
131 1,2,4-Trimethylbenzene	120	19.263	19.263	(1.249)	268525	50.0000	47.05
134 1,3-Dichlorobenzene	146	19.813	19.813	(1.285)	604990	50.0000	55.44
136 1,4-Dichlorobenzene	146	19.993	19.993	(1.297)	553651	50.0000	49.32
138 Benzyl Chloride	91	20.255	20.255	(1.314)	697827	50.0000	59.76
140 1,2-Dichlorobenzene	146	20.724	20.724	(1.344)	562107	50.0000	50.39
144 1,2,4-Trichlorobenzene	180	23.187	23.187	(1.504)	338601	50.0000	61.30
145 Hexachlorobutadiene	225	23.404	23.404	(1.518)	457511	50.0000	45.42

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	1 Propene	0.18345	0.18832	0.010	2.7	30.0	
	3 Dichlorodifluoromethane (F1	2.11052	2.13309	0.010	1.1	30.0	
	5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.75819	0.010	2.5	30.0	
	8 Chloromethane	0.09369	0.10175	0.100	8.6	30.0	
	9 Vinyl Chloride	0.40660	0.41819	0.010	2.8	30.0	
	12 1,3-Butadiene	0.27551	0.29046	0.010	5.4	30.0	
	15 Bromomethane	0.50552	0.52140	0.010	3.1	30.0	
	16 Chloroethane	0.25753	0.27087	0.010	5.2	30.0	
	19 Vinyl Bromide	0.57915	0.61083	0.010	5.5	30.0	
	21 Trichlorofluoromethane (F11	2.12773	2.14210	0.010	0.7	30.0	
	28 1,1-Dichloroethene	1.12859	1.13580	0.010	0.6	30.0	
	30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.42135	0.010	-1.0	30.0	
	31 Acetone	0.16001	0.17096	0.010	6.8	30.0	
	33 Carbon Disulfide	1.06127	1.24581	0.010	17.4	30.0	
	34 2-Propanol	0.56591	0.58194	0.010	2.8	30.0	
	36 Allyl Chloride	0.58587	0.62808	0.010	7.2	30.0	
	37 Methylene Chloride	0.69686	0.68035	0.010	-2.4	30.0	
	40 Acrylonitrile	0.18791	0.20725	0.010	10.3	30.0	
	41 trans-1,2-Dichloroethene	0.98199	1.00761	0.010	2.6	30.0	
	42 Methyl-tert-butyl ether(MTB	1.66607	1.67923	0.010	0.8	30.0	
	43 n-Hexane	0.77083	0.76565	0.010	-0.7	30.0	
	44 1,1-Dichloroethane	1.23672	1.23634	0.100	-0.0	30.0	
	45 Vinyl Acetate	1.19013	1.27807	0.010	7.4	30.0	
	53 cis-1,2-Dichloroethene	0.63910	0.65038	0.010	1.8	30.0	
	54 2-Butanone	0.21287	0.22746	0.010	6.9	30.0	
	56 Ethyl Acetate	1.14995	1.32816	0.010	15.5	30.0	
	59 Tetrahydrofuran	0.55193	0.55286	0.010	0.2	30.0	
	60 Chloroform	1.59075	1.57118	0.010	-1.2	30.0	
	61 1,1,1-Trichloroethane	1.59033	1.61045	0.010	1.3	30.0	
	62 Cyclohexane	0.79797	0.79105	0.010	-0.9	30.0	
	64 Carbon Tetrachloride	1.05674	1.42389	0.010	34.7	30.0	<-
$	66 1,2-Dichloroethane-d4	0.41033	0.42419	0.010	3.4	30.0	
	68 Benzene	0.68038	0.68398	0.010	0.5	30.0	
	69 1,2-Dichloroethane	0.44323	0.44241	0.010	-0.2	30.0	
	70 2,2,4-Trimethylpentane	1.74763	1.77242	0.010	1.4	30.0	

AA 1/11/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	72 n-Heptane	0.58544	0.59417	0.010	1.5	30.0	
	75 Trichloroethene	0.43657	0.44202	0.010	1.2	30.0	
	78 1,2-Dichloropropane	0.16390	0.17175	0.010	4.8	30.0	
	81 1,4-Dioxane	0.15796	0.17638	0.010	11.7	30.0	
	82 Bromodichloromethane	0.54492	0.61771	0.010	13.4	30.0	
	85 cis-1,3-Dichloropropene	0.44931	0.52323	0.010	16.5	30.0	
	86 4-Methyl-2-Pentanone	0.22967	0.23956	0.010	4.3	30.0	
$	88 Toluene-d8	0.52356	0.53832	0.010	2.8	30.0	
	89 Toluene	0.88039	0.88319	0.010	0.3	30.0	
	91 trans-1,3-Dichloropropene	0.42279	0.51293	0.010	21.3	30.0	
	93 1,1,2-Trichloroethane	0.56403	0.56427	0.010	0.0	30.0	
	95 Tetrachloroethene	0.78282	0.77133	0.010	-1.5	30.0	
	96 2-Hexanone	0.25237	0.28886	0.010	14.5	30.0	
	97 Dibromochloromethane	0.94658	1.13853	0.010	20.3	30.0	
	98 1,2-Dibromoethane	0.94544	1.02640	0.010	8.6	30.0	
	102 Chlorobenzene	0.91801	0.92973	0.300	1.3	30.0	
M	99 Xylenes (total)	0.40771	0.43086	0.010	5.7	30.0	
	104 Ethylbenzene	1.42124	1.49844	0.010	5.4	30.0	
	105 m,p-Xylenes	0.41273	0.43405	0.010	5.2	30.0	
	107 o-Xylene	0.39767	0.42448	0.010	6.7	30.0	
	108 Styrene	0.49829	0.55835	0.010	12.1	30.0	
	110 Bromoform	0.74450	0.99127	0.100	33.1	30.0	<-
$	114 4-Bromofluorobenzene	0.89318	0.91597	0.010	2.6	30.0	
	116 1,1,2,2-Tetrachloroethane	1.35429	1.46024	0.300	7.8	30.0	
	123 4-Ethyl Toluene	0.84706	0.94639	0.010	11.7	30.0	
	124 1,3,5-Trimethylbenzene	0.94631	0.82783	0.010	-12.5	30.0	
	131 1,2,4-Trimethylbenzene	0.27527	0.25903	0.010	-5.9	30.0	
	134 1,3-Dichlorobenzene	0.52632	0.58359	0.010	10.9	30.0	
	136 1,4-Dichlorobenzene	0.54141	0.53407	0.010	-1.4	30.0	
	138 Benzyl Chloride	0.56325	0.67315	0.010	19.5	30.0	
	140 1,2-Dichlorobenzene	0.53798	0.54223	0.010	0.8	30.0	
	144 1,2,4-Trichlorobenzene	0.26641	0.32663	0.010	22.6	30.0	
	145 Hexachlorobutadiene	0.48586	0.44133	0.010	-9.2	30.0	

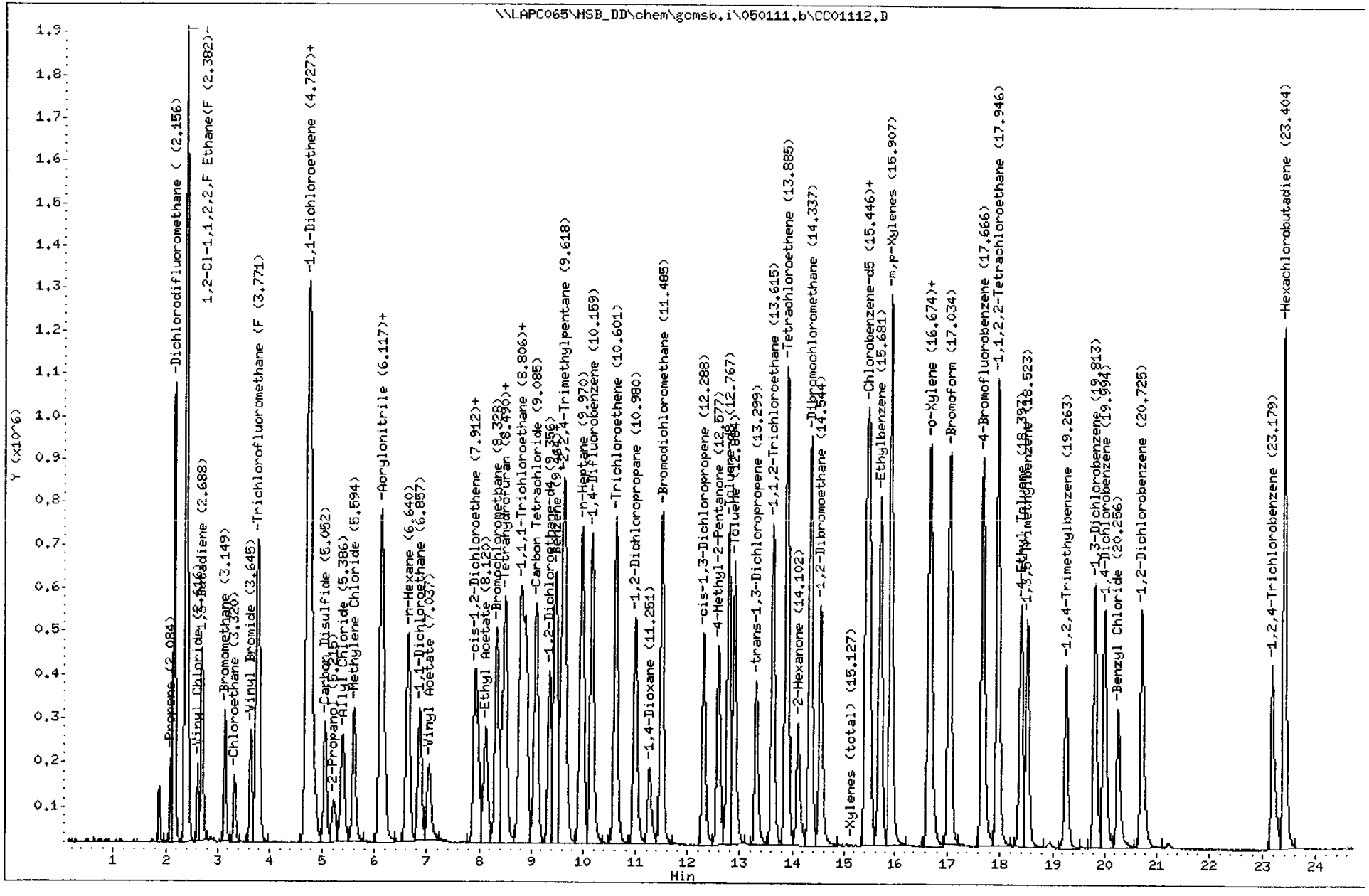
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D
Date : 11-JAN-2005 09:33
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



E5A100218

Reduced By: AA Date: 1/11/05 LCSD Report
Reviewed By: [illegible] Date: 1/13/05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01114.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 11-JAN-2005 16:33

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01115.D
Samp Info : LCSD,LCSD,PSL9911359
Inj Date : 11-JAN-2005 17:01

	Concentration								
	Mass Spiked		Measured			%Recovery			RPD	
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	51.6	52.2	51.9	102.8	70	125	1	20
Methylene Chloride									
54.5	188.95	56.1	56.6	56.4	103.4	75	120	1	20
Trichloroethene									
49.5	265.47	50.6	50.7	50.6	102.3	70	125	0	20
Toluene									
49.5	186.17	49.6	49.5	49.6	100.1	75	125	0	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	54.9	54.7	54.8	109.6	65	130	0	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01114.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 11-JAN-2005 16:33
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

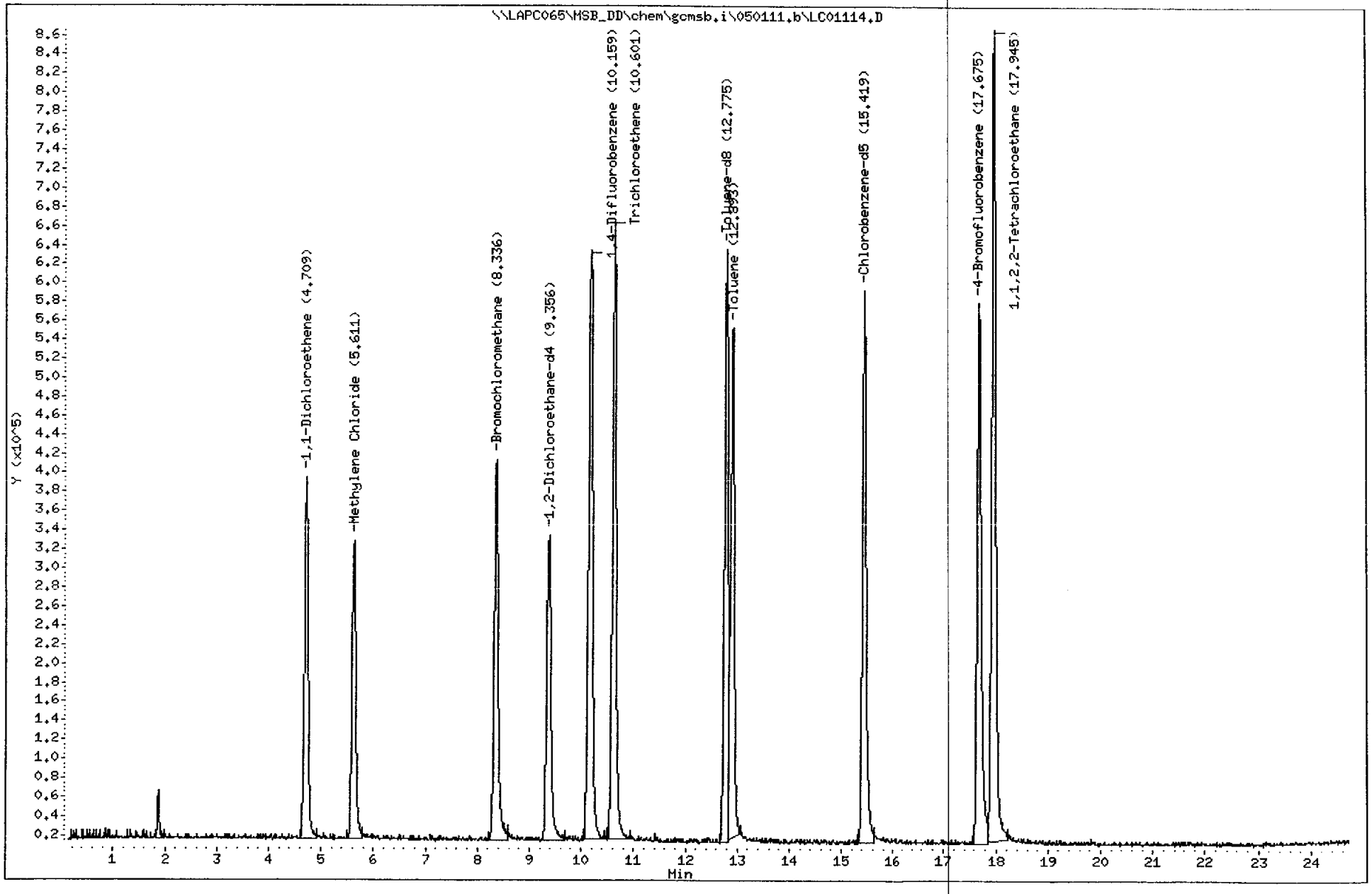
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.709	4.700	(0.565)	660751	51.6016	51.60
37 Methylene Chloride	49	5.611	5.593	(0.673)	443926	56.1470	56.15
* 58 Bromochloromethane	49	8.336	8.327	(1.000)	567294	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.355	9.347	(0.921)	475234	49.5273	49.53
* 73 1,4-Difluorobenzene	114	10.158	10.159	(1.000)	1169230	50.0000	
75 Trichloroethene	130	10.609	10.601	(1.044)	516211	50.5639	50.56
$ 88 Toluene-d8	100	12.775	12.766	(1.258)	604253	49.3539	49.35
89 Toluene	91	12.892	12.883	(1.269)	1021086	49.5973	49.60
* 101 Chlorobenzene-d5	117	15.418	15.419	(1.000)	809704	50.0000	
$ 114 4-Bromofluorobenzene	95	17.674	17.675	(1.146)	626220	43.2942	43.29
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1204258	54.9099	54.91

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01114.D
Date : 11-JAN-2005 16:33
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01115.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 11-JAN-2005 17:01
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,PSL9911359
Misc Info : 1,1,100,100,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.671	4.700	(0.563)	661872	52.1785	52.18
37 Methylene Chloride	49	5.565	5.593	(0.671)	443391	56.6104	56.61
* 58 Bromochloromethane	49	8.299	8.327	(1.000)	561973	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.327	9.347	(0.921)	484228	50.1662	50.17
* 73 1,4-Difluorobenzene	114	10.130	10.159	(1.000)	1176185	50.0000	
75 Trichloroethene	130	10.590	10.601	(1.045)	520987	50.7299	50.73
$ 88 Toluene-d8	100	12.756	12.766	(1.259)	610586	49.5762	49.58
89 Toluene	91	12.873	12.883	(1.271)	1025678	49.5258	49.52
* 101 Chlorobenzene-d5	117	15.417	15.419	(1.000)	817623	50.0000	
$ 114 4-Bromofluorobenzene	95	17.673	17.675	(1.146)	629536	43.1019	43.10
116 1,1,2,2-Tetrachloroethane	83	17.944	17.945	(1.164)	1211176	54.6904	54.69

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01115.D

Date : 11-JAN-2005 17:01

Client ID: LCSD

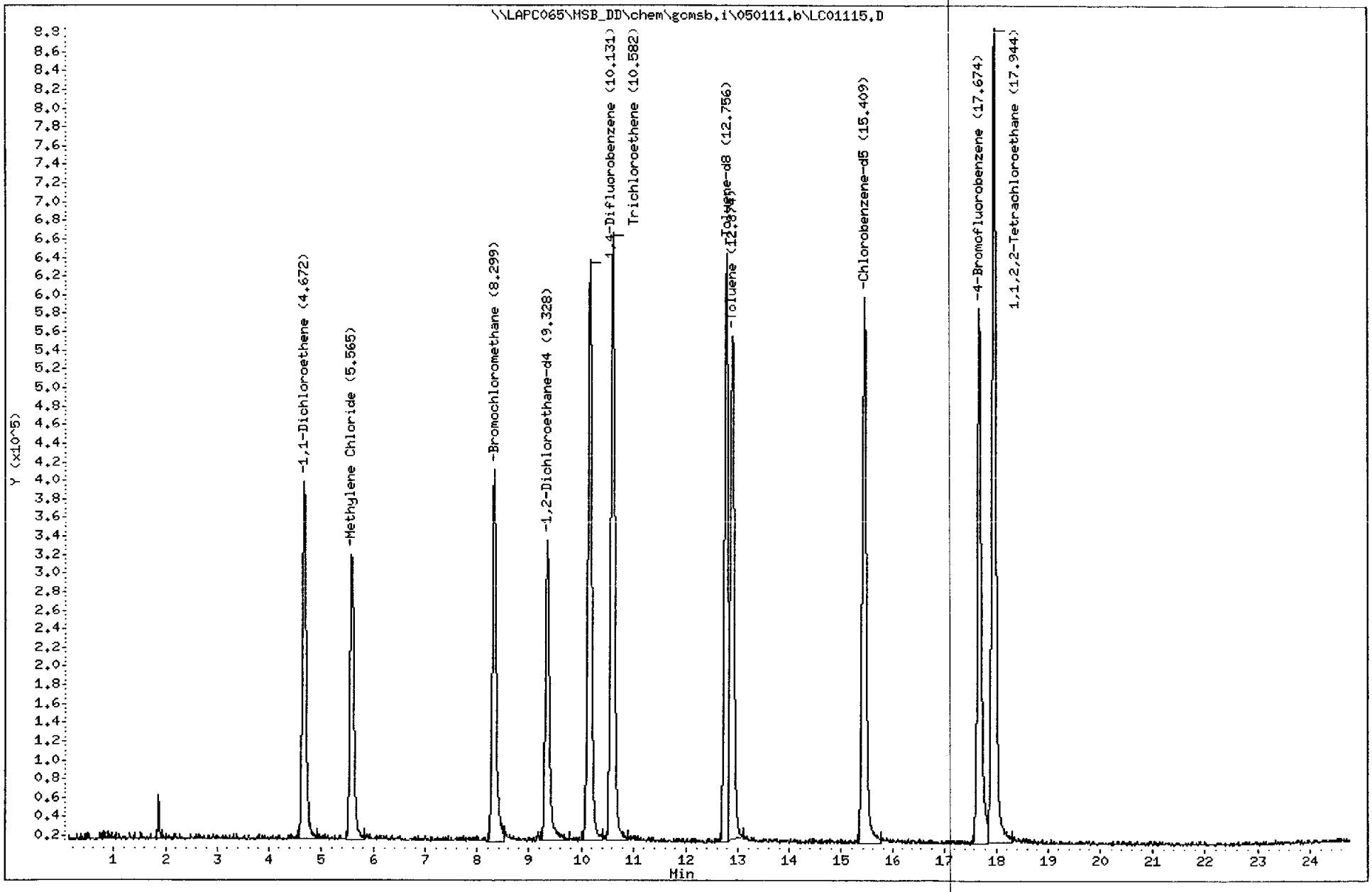
Sample Info: LCSD,LCSD,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 11-JAN-2005 20:21
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,BLANK.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BLANK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.324	8.318	(1.000)	555301	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.347	(0.920)	489223	51.8923	51.89
71 tert-Amyl methyl ether (TAME)	73	10.155	9.671	(1.000)	17637	0.81879	0.8188 (~~a~~Q) ND
* 73 1,4-Difluorobenzene	114	10.155	10.149	(1.000)	1148790	50.0000	
$ 88 Toluene-d8	100	12.772	12.766	(1.258)	591136	49.1416	49.14
* 101 Chlorobenzene-d5	117	15.415	15.419	(1.000)	769229	50.0000	
$ 114 4-Bromofluorobenzene	95	17.680	17.675	(1.147)	542017	39.4445	39.44

AA 1/12/05

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

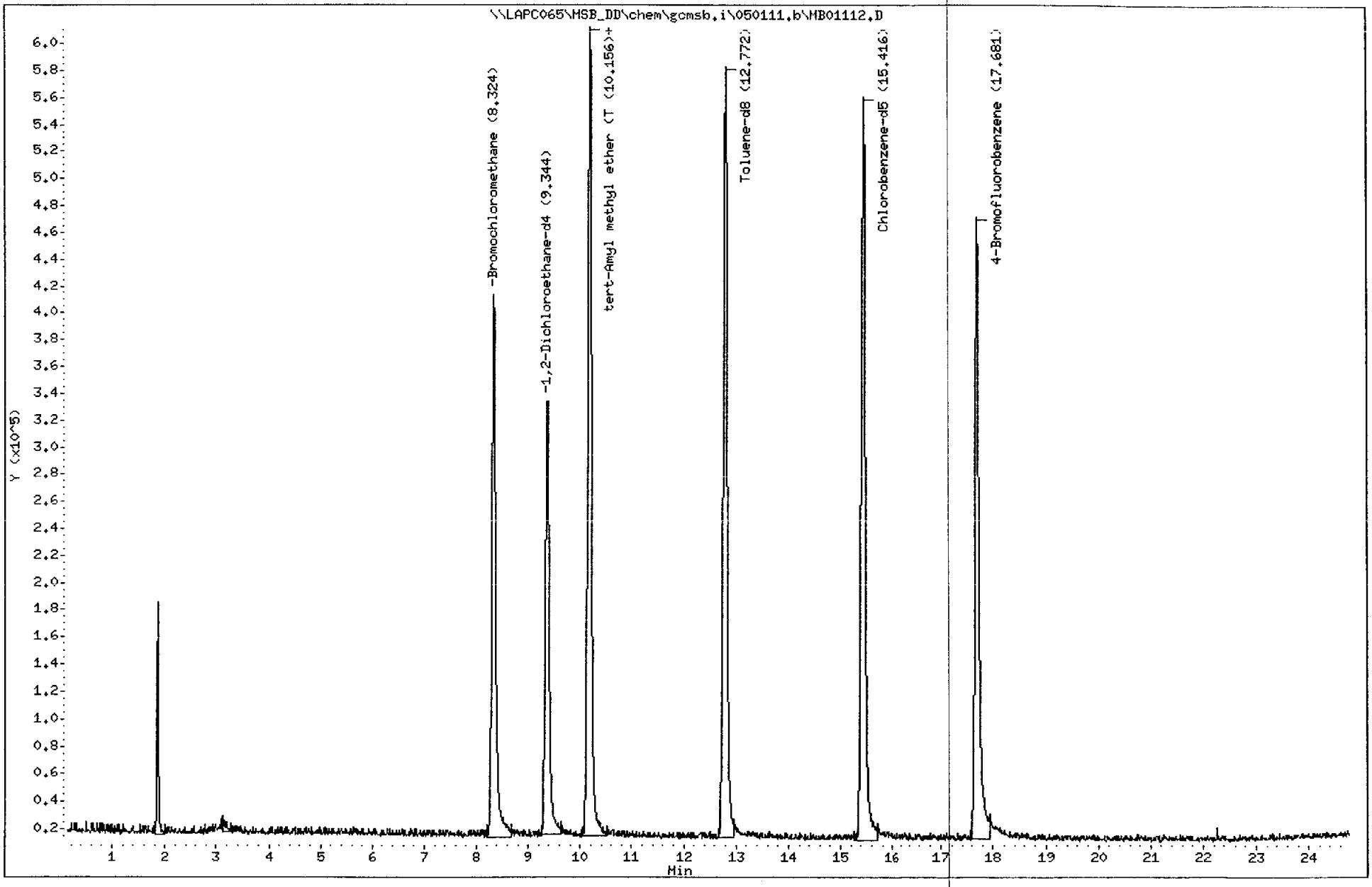
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D
Date : 11-JAN-2005 20:21
Client ID: BLANK
Sample Info: BLANK,BLANK,

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D

Date : 11-JAN-2005 20:21

Client ID: BLANK

Instrument: gcmsb.i

Sample Info: BLANK,BLANK,

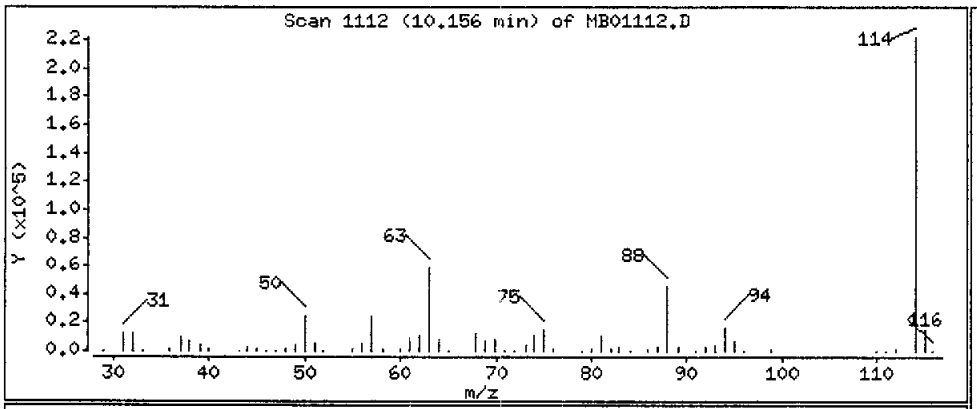
Operator: DLK

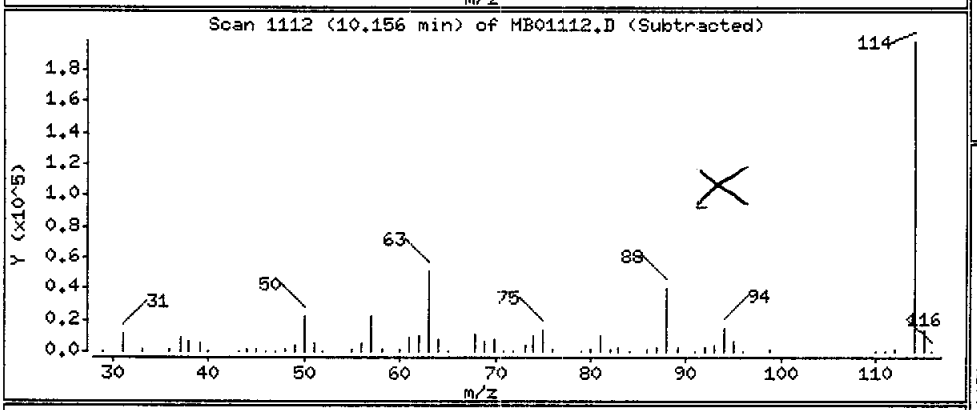
Column phase: J&W DB-624

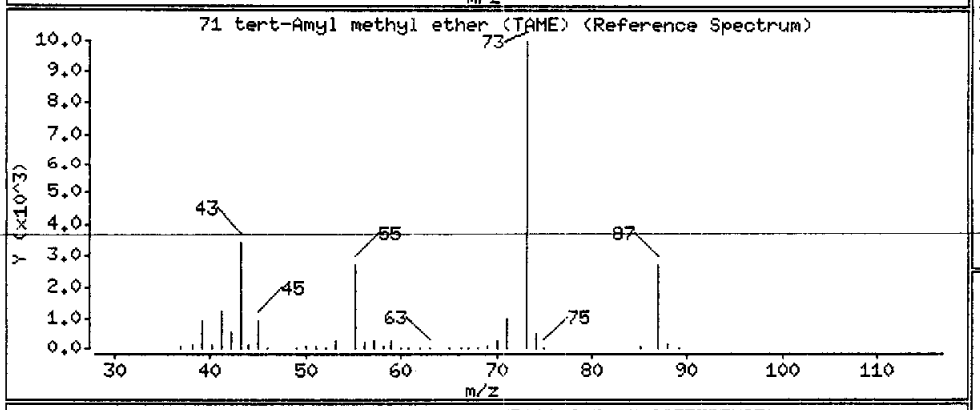
Column diameter: 0.53

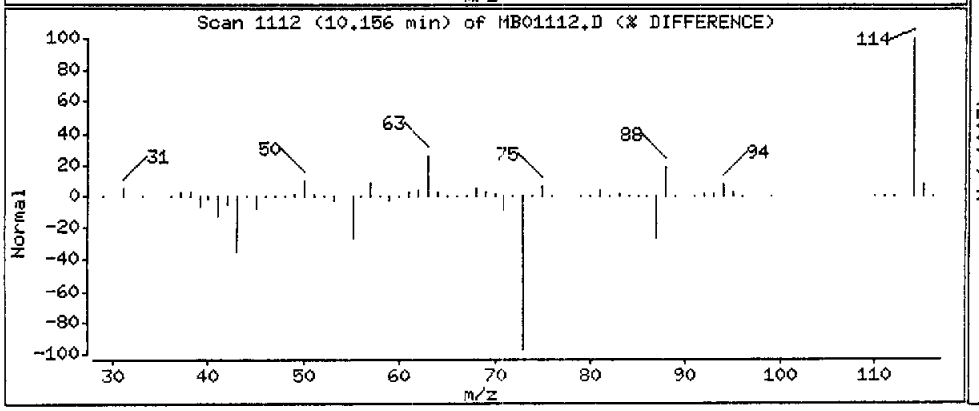
71 tert-Amyl methyl ether (TAME)

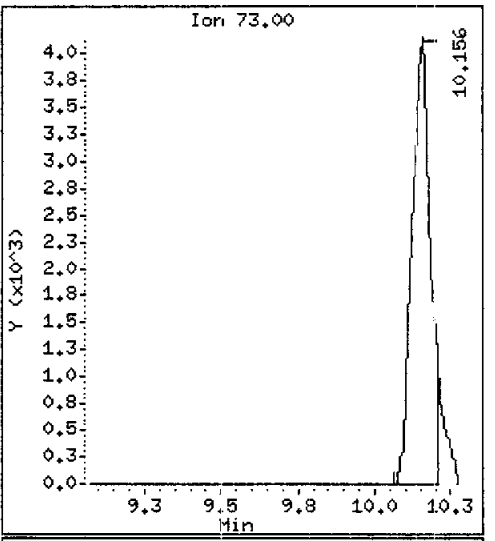
Concentration: 0.8188 ppbv

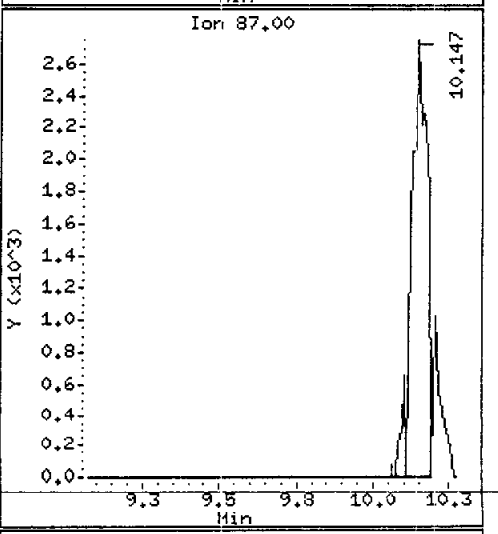


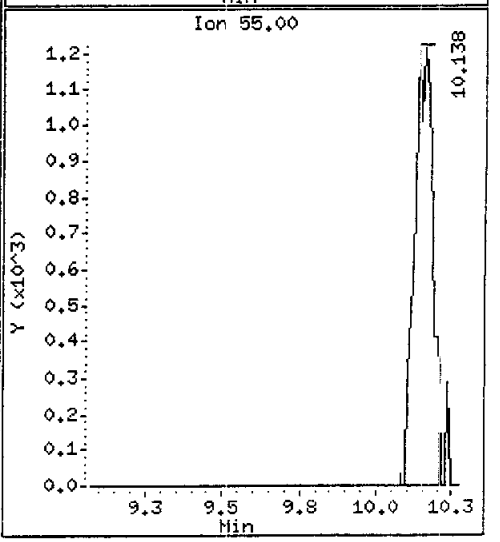












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D
Lab Smp Id: G2DGP1AD Client Smp ID: 066352-001
Inj Date : 12-JAN-2005 04:03
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGP1AD,066352-001,SANDIA,E5A110218-1
Misc Info : 24.2,13.5,500,897,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	13.500	InitPres
CalVol	500.000	CalVol
SmpVol	897.000	SmpVol

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	3 Dichlorodifluoromethane (F12)	85	2.119	2.156	(0.255)	14198	0.62185	0.6214(a)
	8 Chloromethane	52	2.345	2.426	(0.283)	1076	1.06184	1.061(aQ)
	30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.709	4.745	(0.567)	14247	0.53870	0.5383(a)
	31 Acetone	58	4.862	4.853	(0.586)	11083	6.40275	6.398(a)
	37 Methylene Chloride	49	5.593	5.593	(0.674)	11048	1.46555	1.464(a)
	54 2-Butanone	72	8.020	7.975	(0.966)	17733	7.70055	7.694(aQ)
*	58 Bromochloromethane	49	8.300	8.318	(1.000)	540916	50.0000	
	60 Chloroform	83	8.489	8.489	(1.023)	16686	0.96965	0.9689(a)
$	66 1,2-Dichloroethane-d4	65	9.328	9.347	(0.920)	485265	51.5101	51.47
*	73 1,4-Difluorobenzene	114	10.140	10.149	(1.000)	1147952	50.0000	
	75 Trichloroethene	130	10.583	10.601	(1.044)	1651513	164.767	164.6
	78 1,2-Dichloropropane	76	10.989	10.980	(1.084)	8373	2.22517	2.223
$	88 Toluene-d8	100	12.748	12.766	(1.257)	595256	49.5202	49.48
	89 Toluene	91	12.874	12.883	(1.270)	242381	11.9915	11.98

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
M 99 Xylenes (total)	106				8842	1.33165	1.331(a)
* 101 Chlorobenzene-d5	117	15.401	15.419	(1.000)	804454	50.0000	
104 Ethylbenzene	91	15.707	15.681	(1.020)	16346	0.71486	0.7143(a)
105 m,p-Xylenes	106	15.942	15.906	(1.035)	8842	1.33165	1.331(aQ)
$ 114 4-Bromofluorobenzene	95	17.656	17.675	(1.146)	646158	44.9641	44.93

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

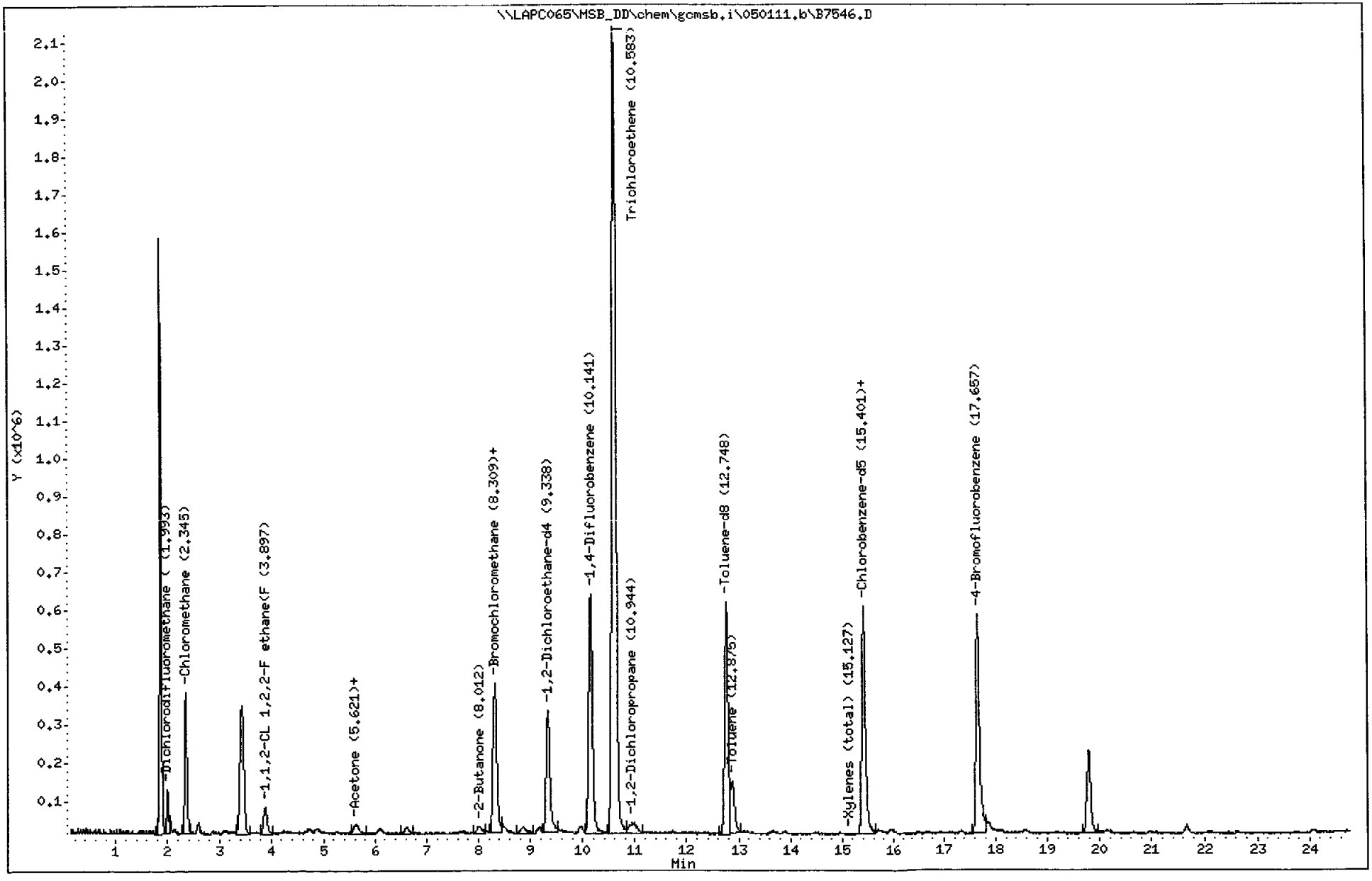
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D
Date : 12-JAN-2005 04:03
Client ID: 066352-001
Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

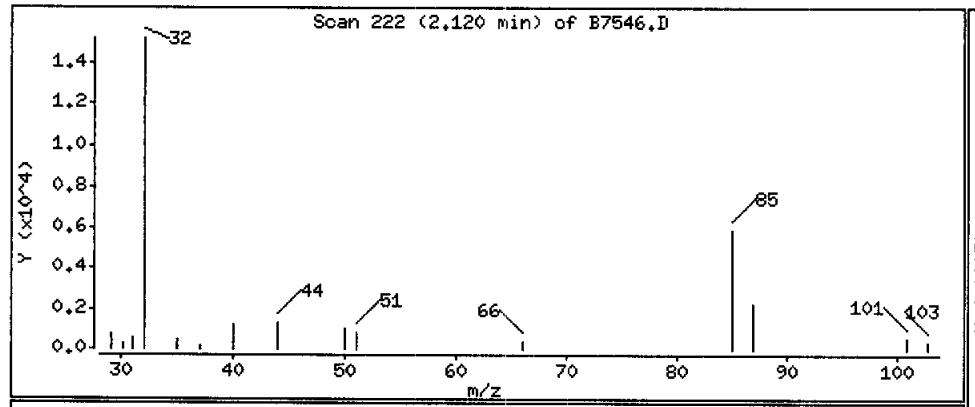
Operator: DLK

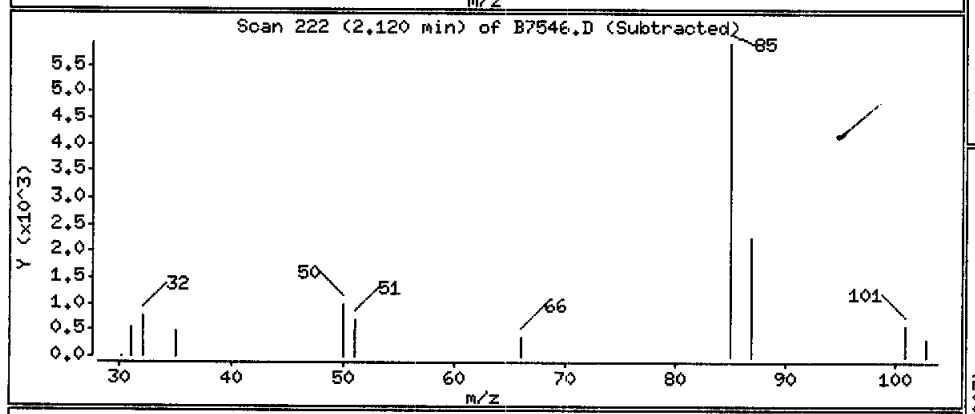
Column phase: J&W DB-624

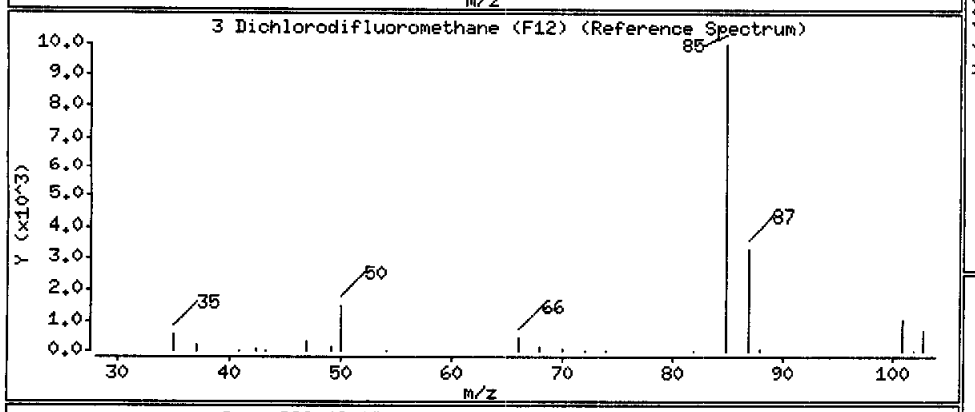
Column diameter: 0.53

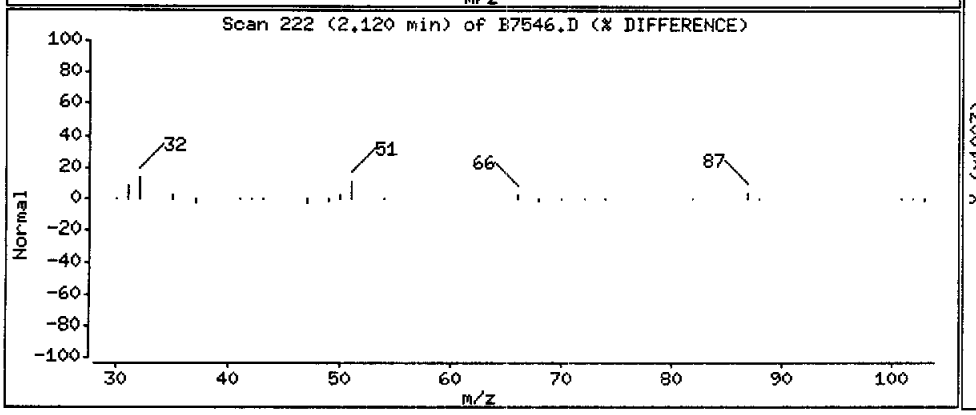
3 Dichlorodifluoromethane (F12)

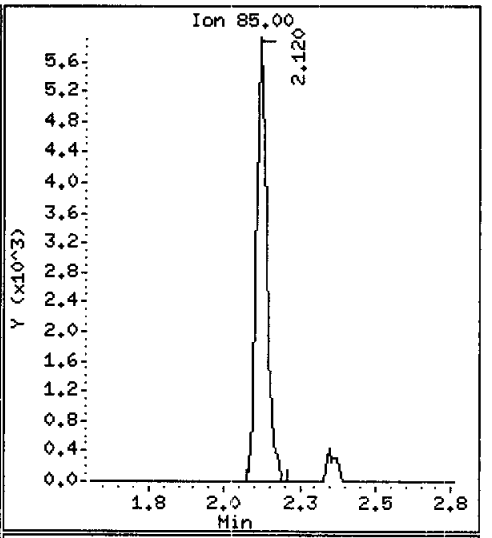
Concentration: 0.6214 ppbv

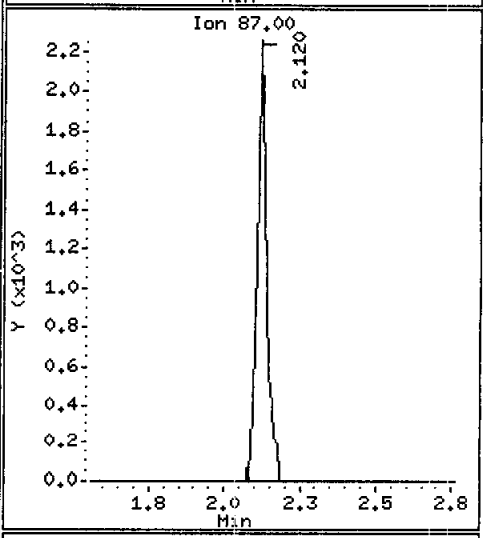


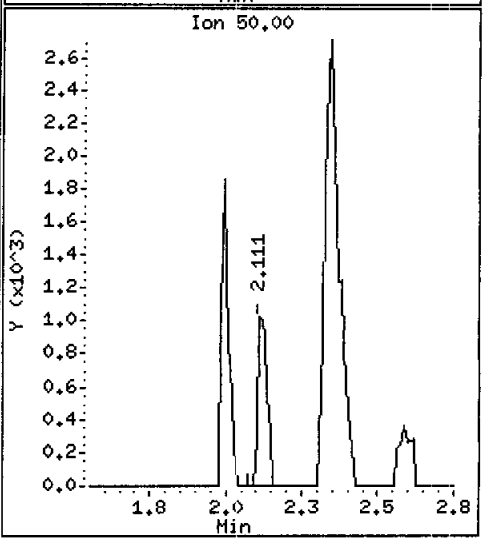












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

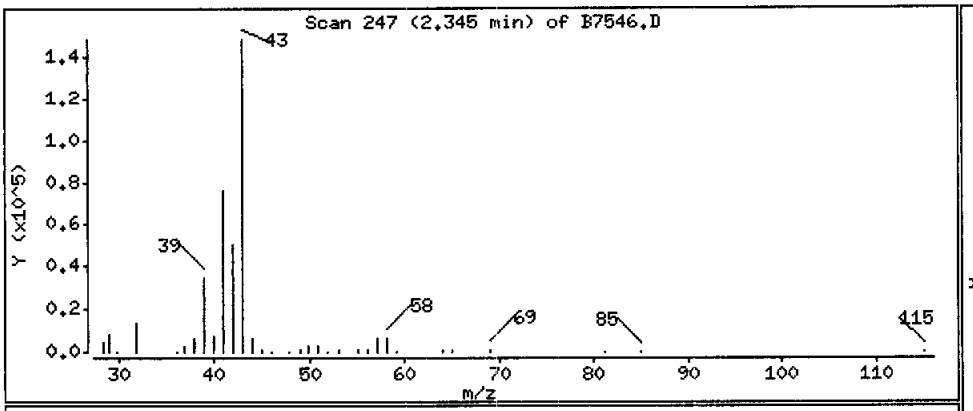
Operator: DLK

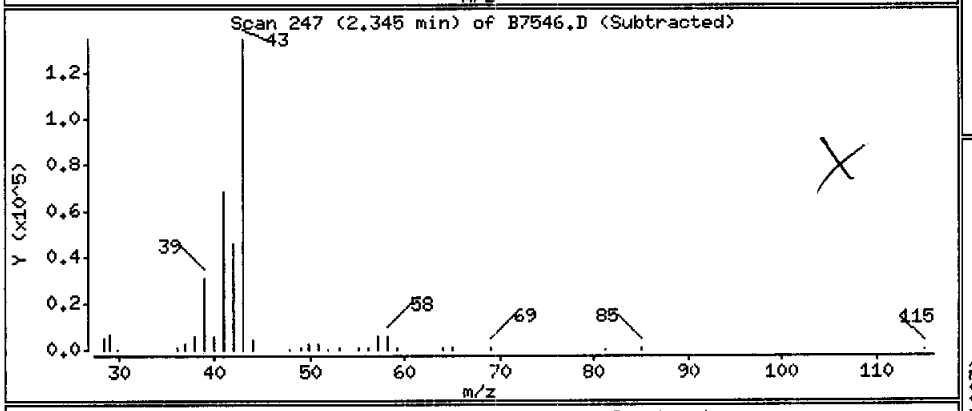
Column phase: J&W DB-624

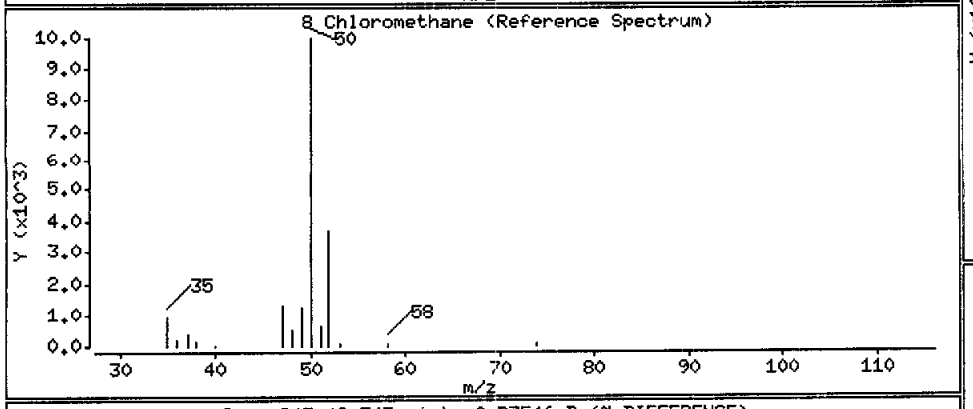
Column diameter: 0.53

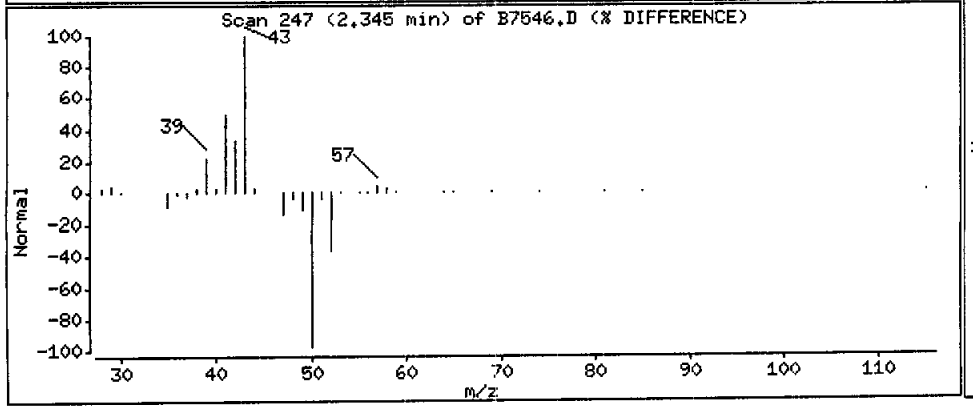
8 Chloromethane

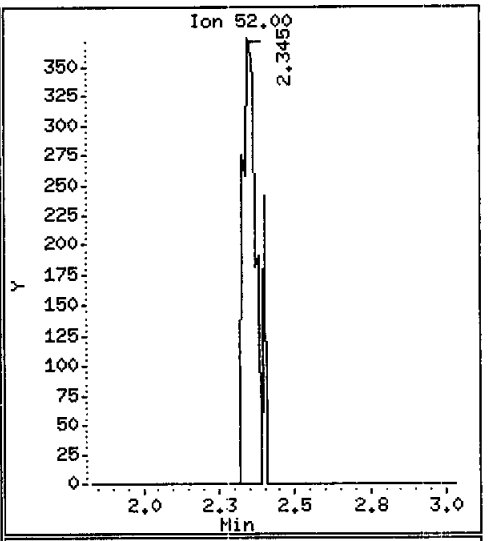
Concentration: 1.061 ppbv

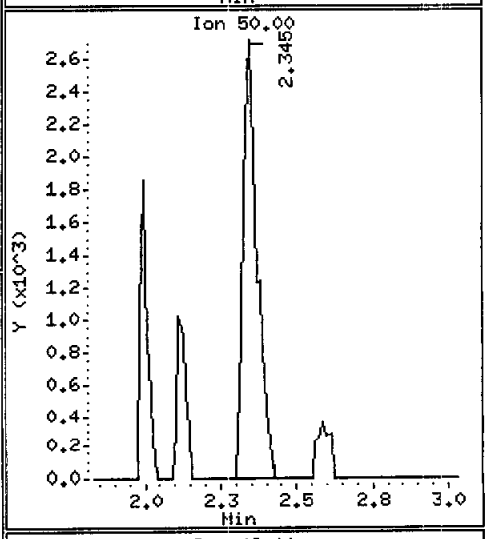


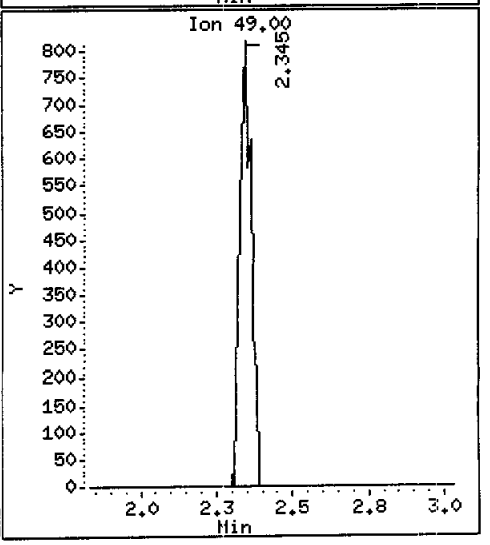












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

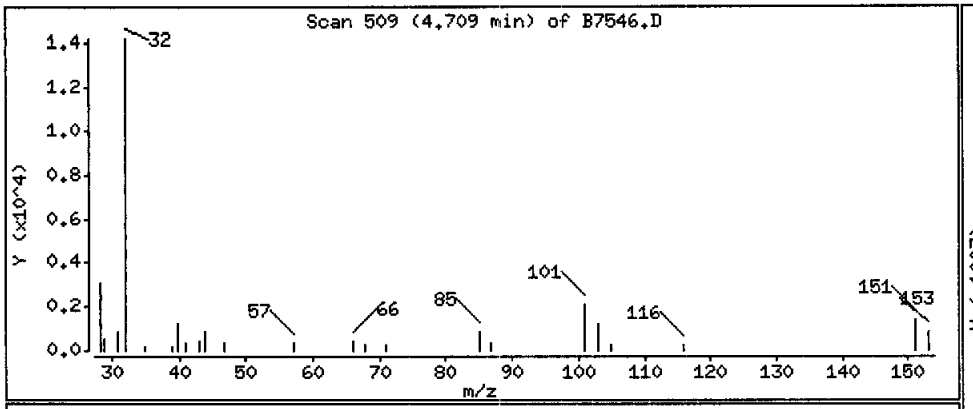
Operator: DLK

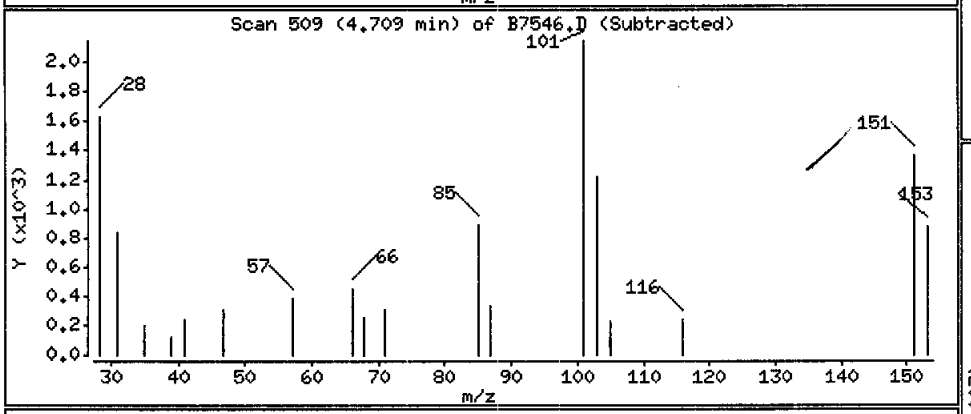
Column phase: J&W DB-624

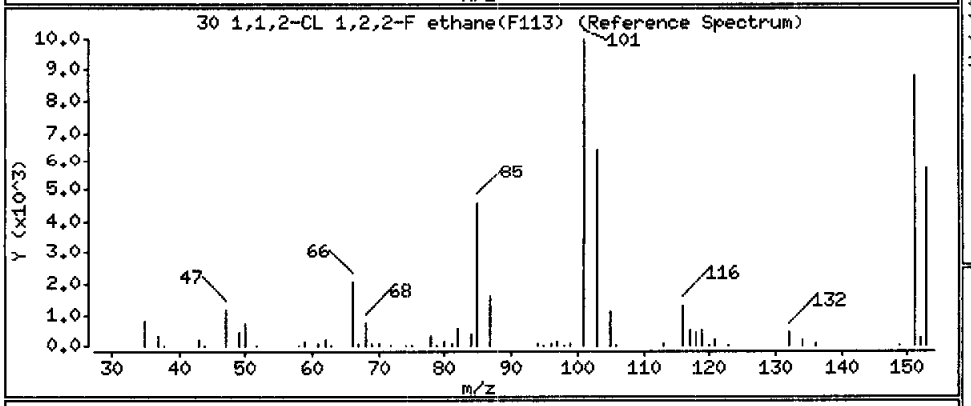
Column diameter: 0.53

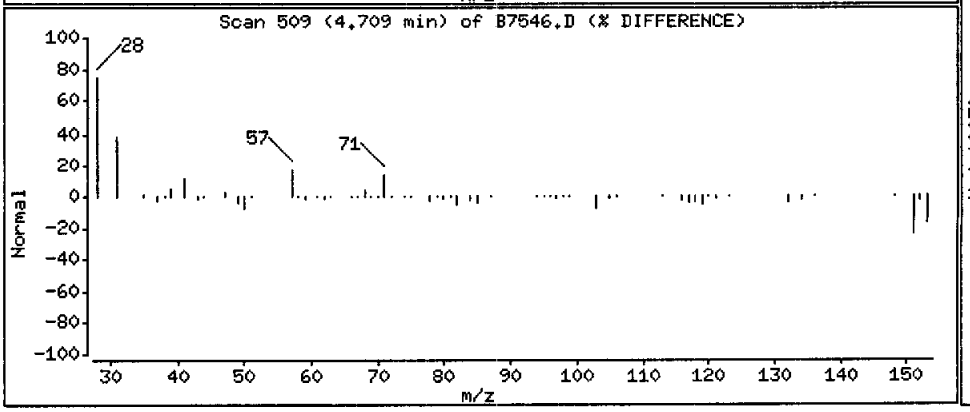
30 1,1,2-CL 1,2,2-F ethane(F113)

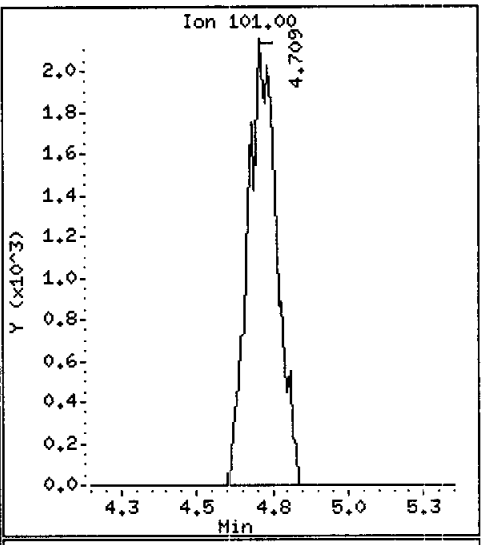
Concentration: 0.5383 ppbv

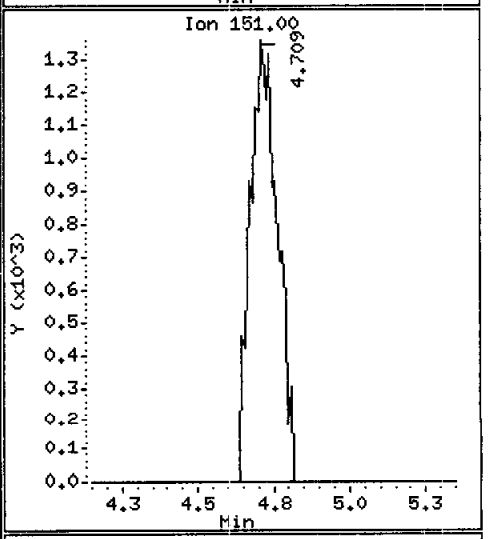


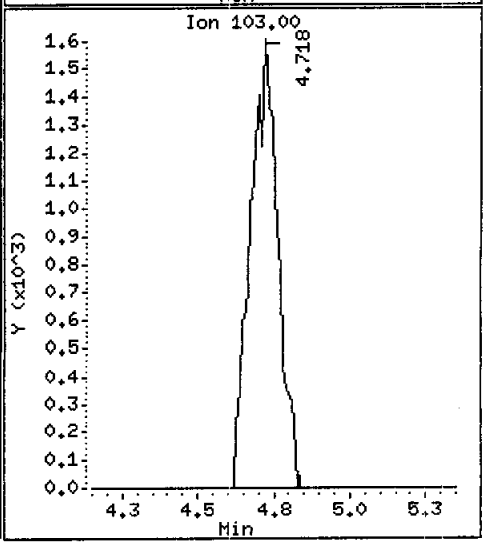












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

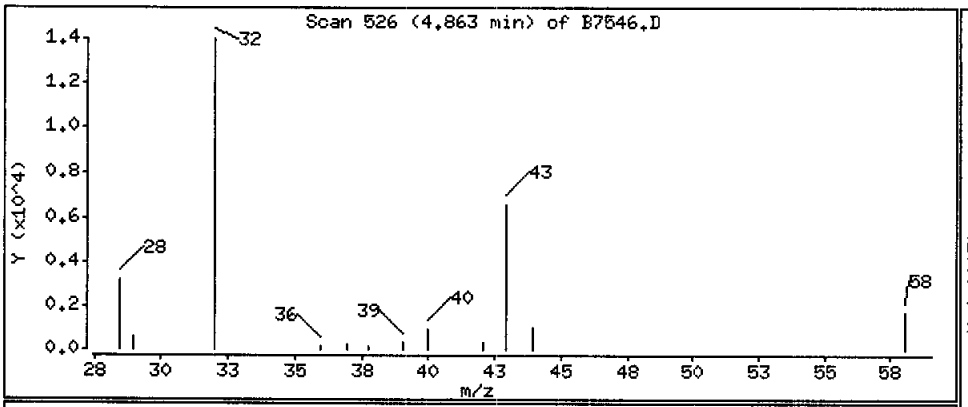
Operator: DLK

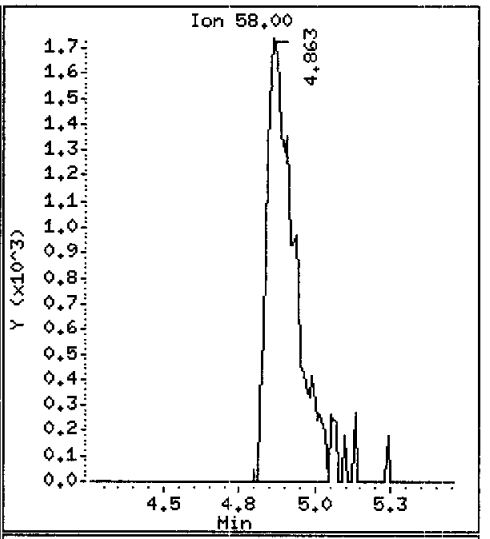
Column phase: J&W DB-624

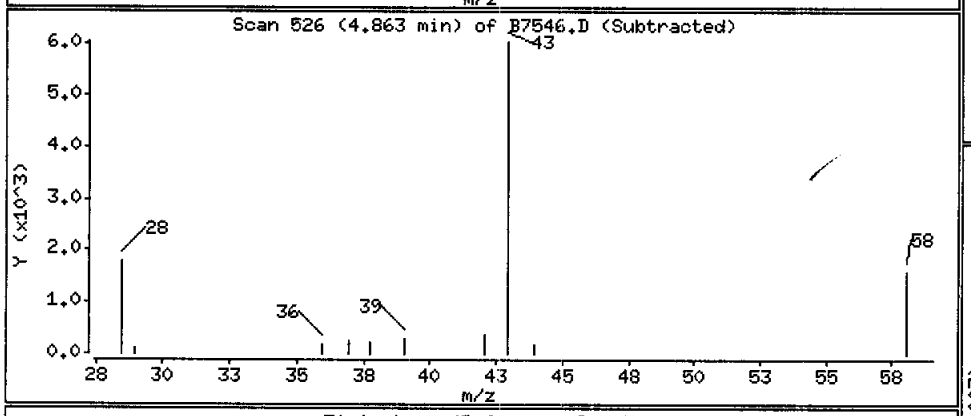
Column diameter: 0.53

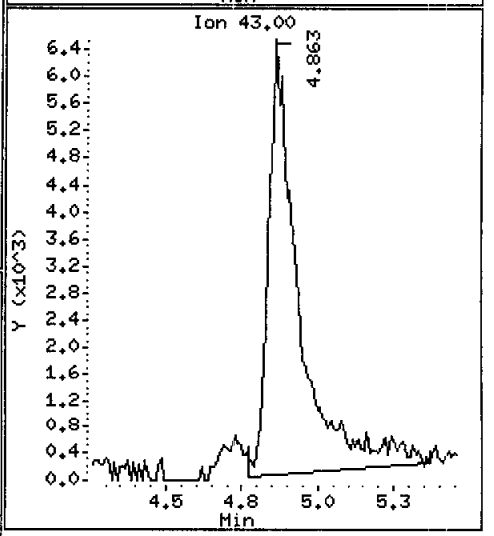
31 Acetone

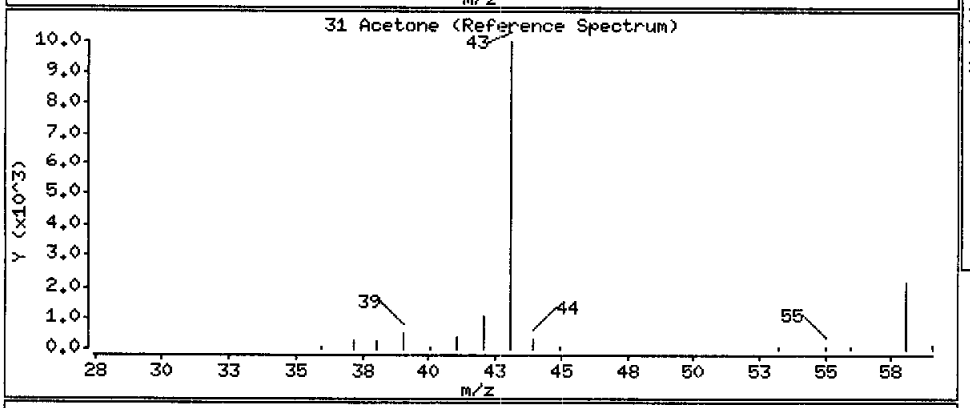
Concentration: 6.398 ppbv

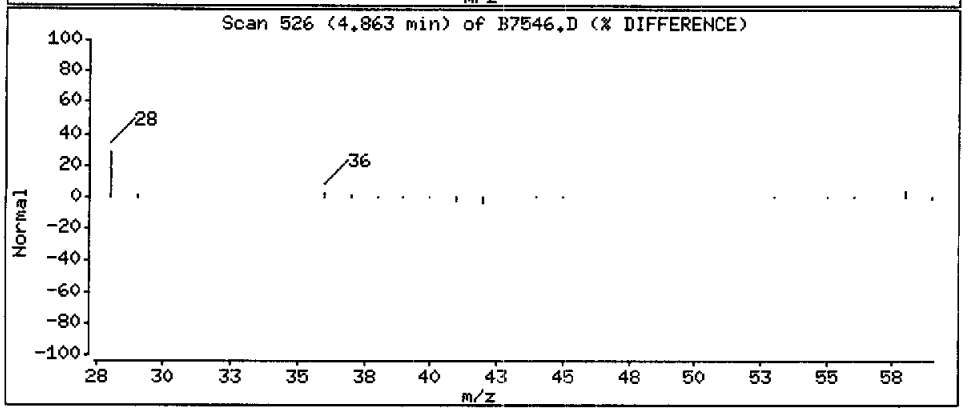












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Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

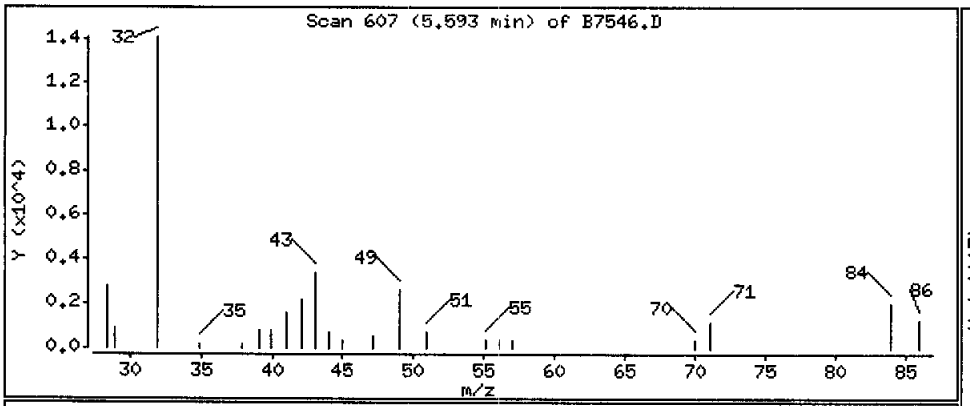
Operator: DLK

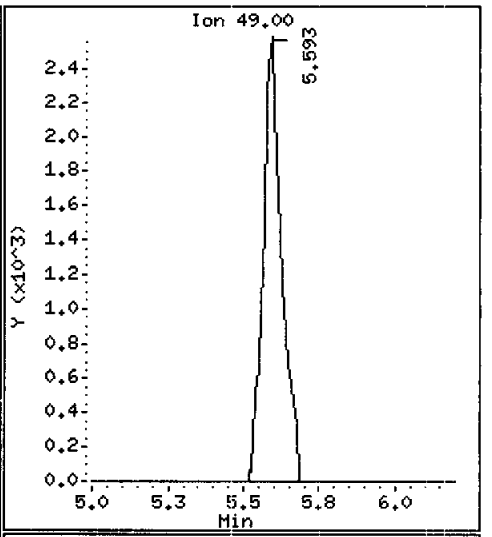
Column phase: J&W DB-624

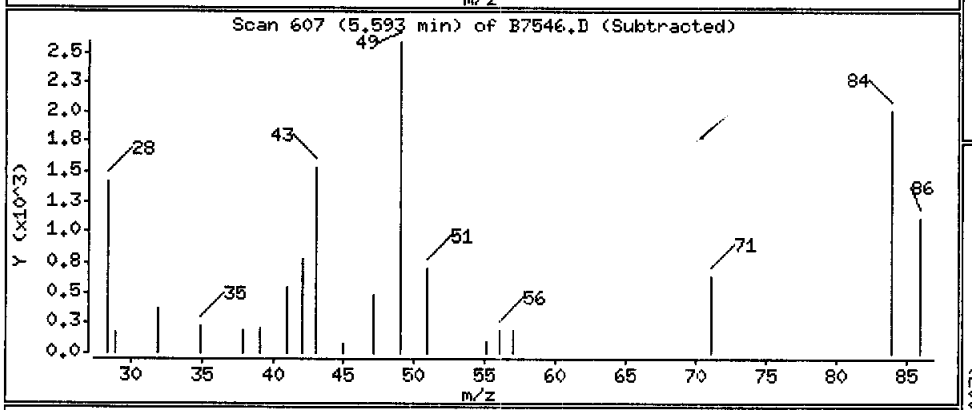
Column diameter: 0.53

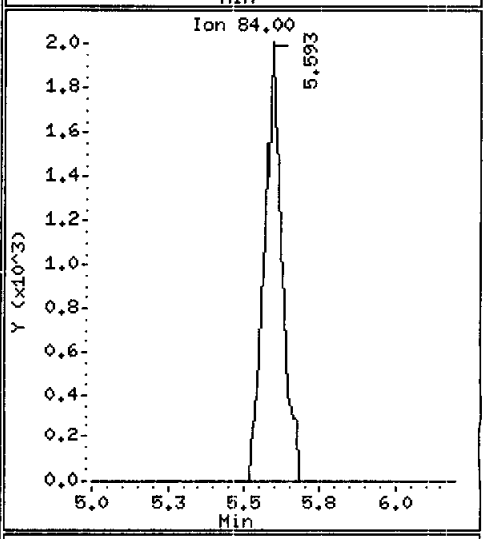
37 Methylene Chloride

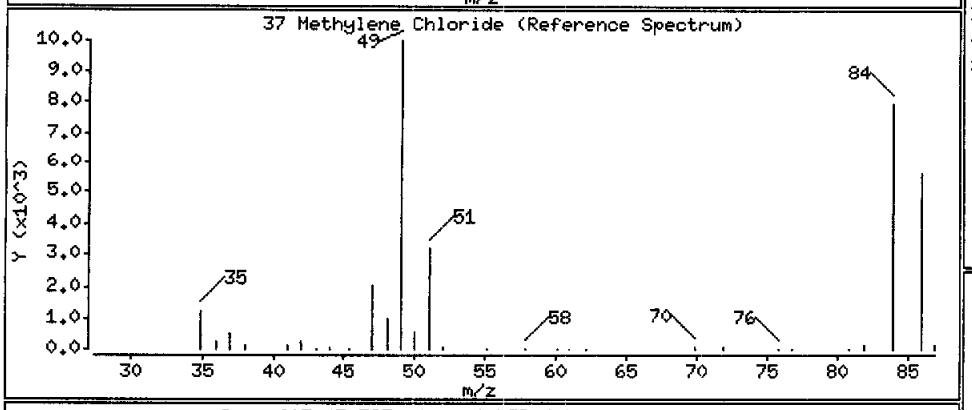
Concentration: 1.464 ppbv

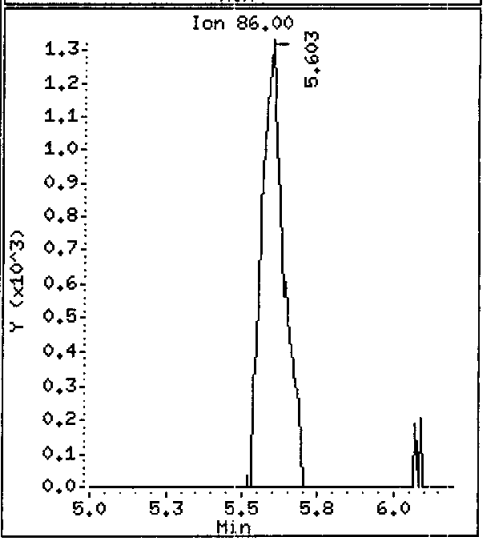


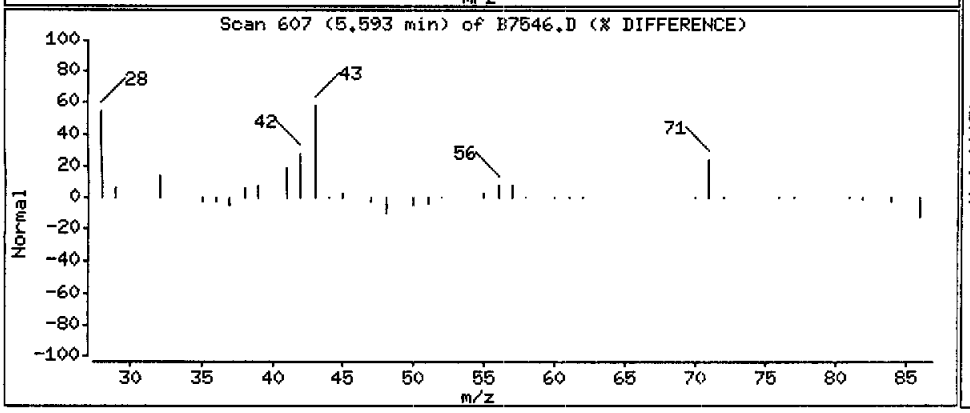












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

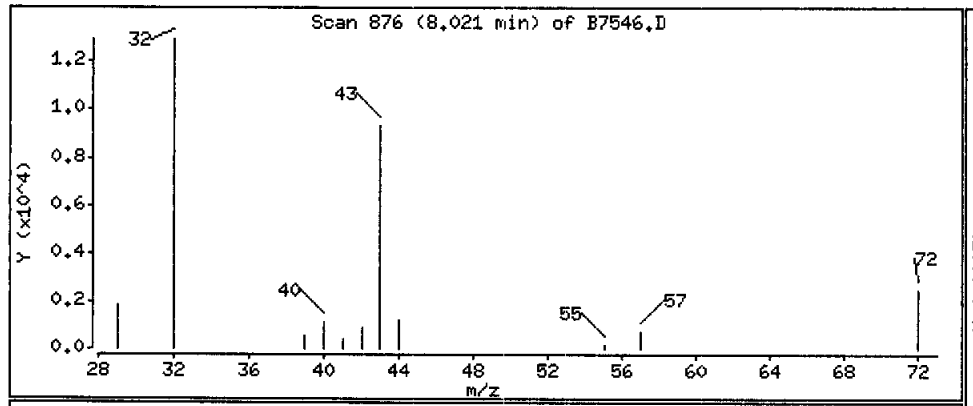
Operator: DLK

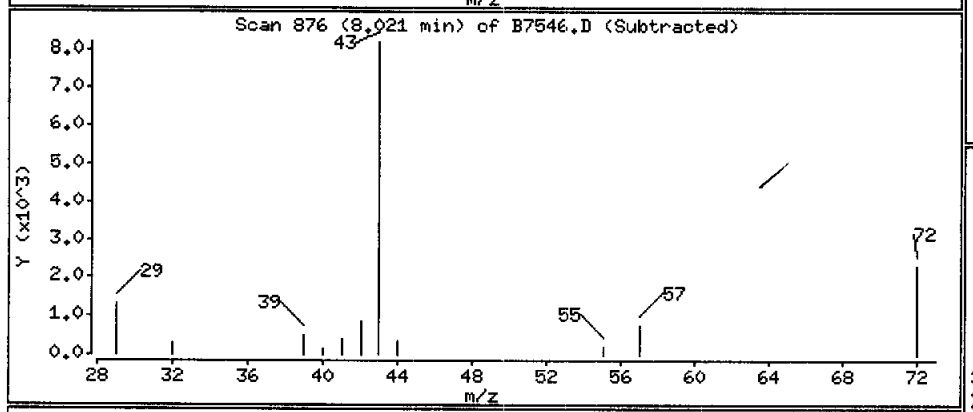
Column phase: J&W DB-624

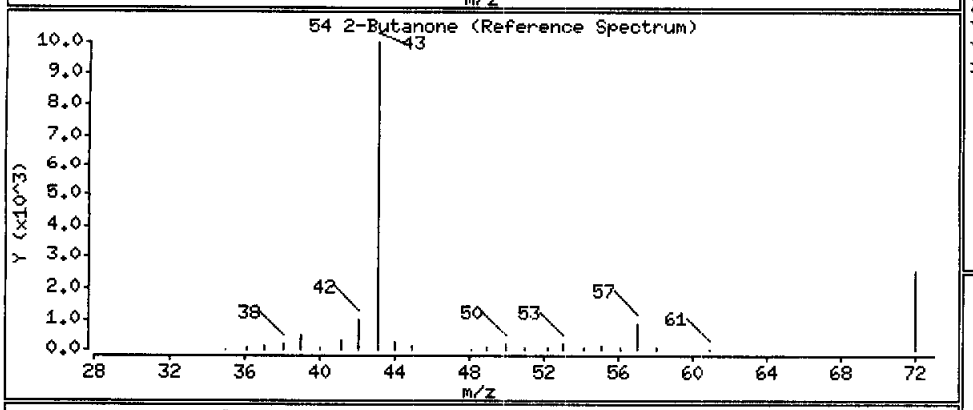
Column diameter: 0.53

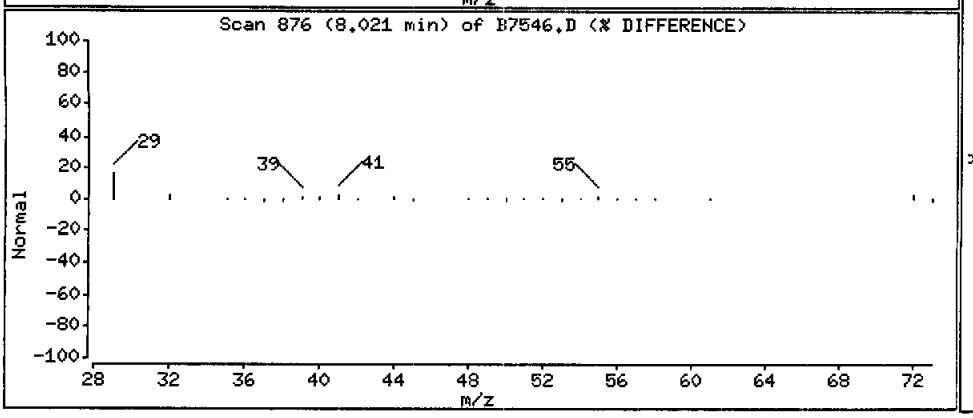
54 2-Butanone

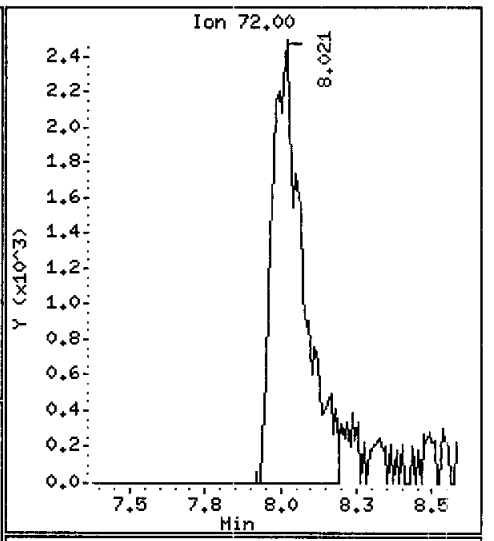
Concentration: 7.694 ppbv

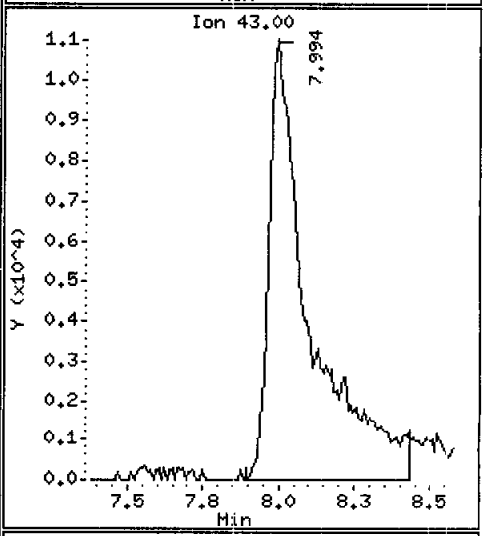


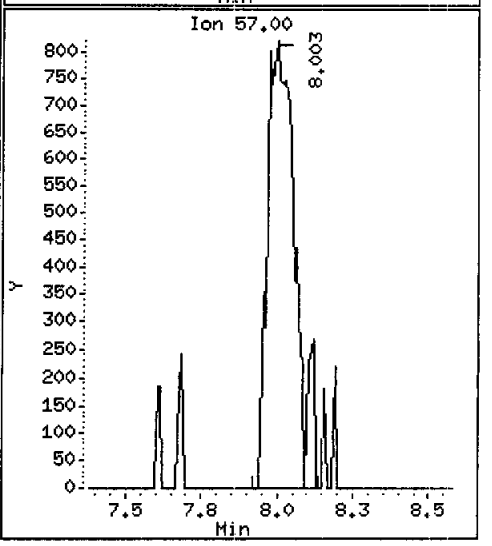












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Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

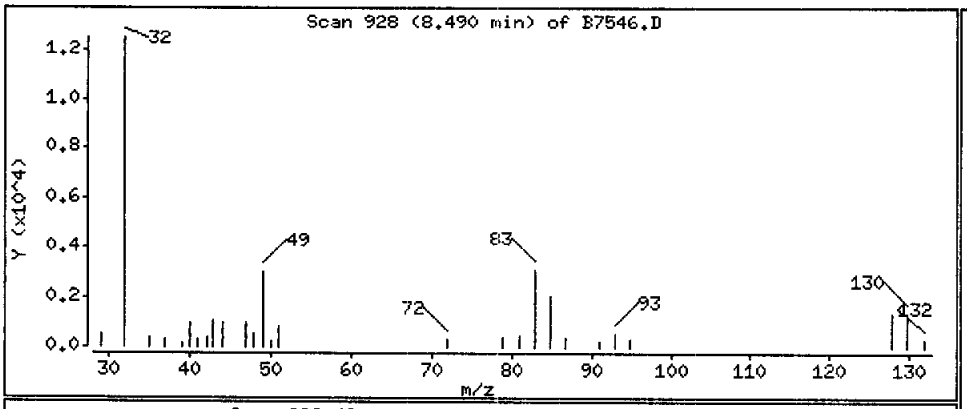
Operator: DLK

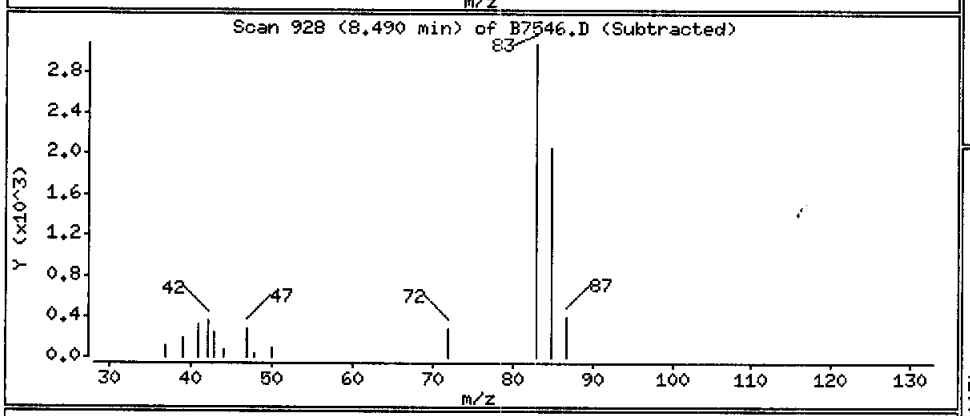
Column phase: J&W DB-624

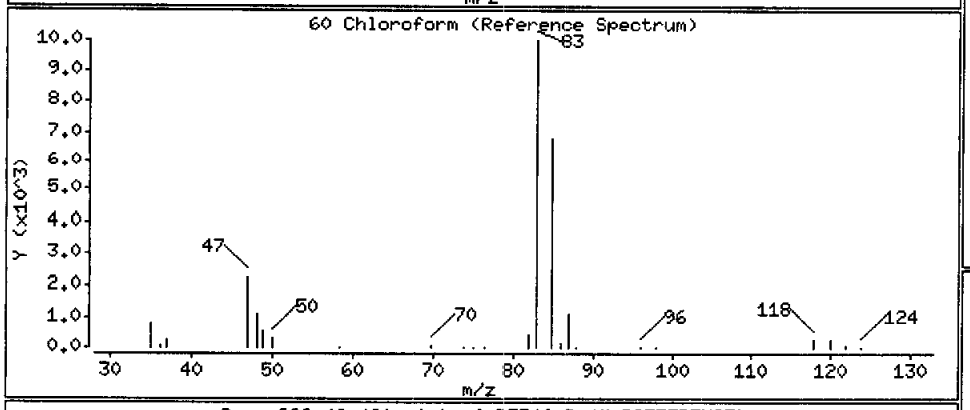
Column diameter: 0.53

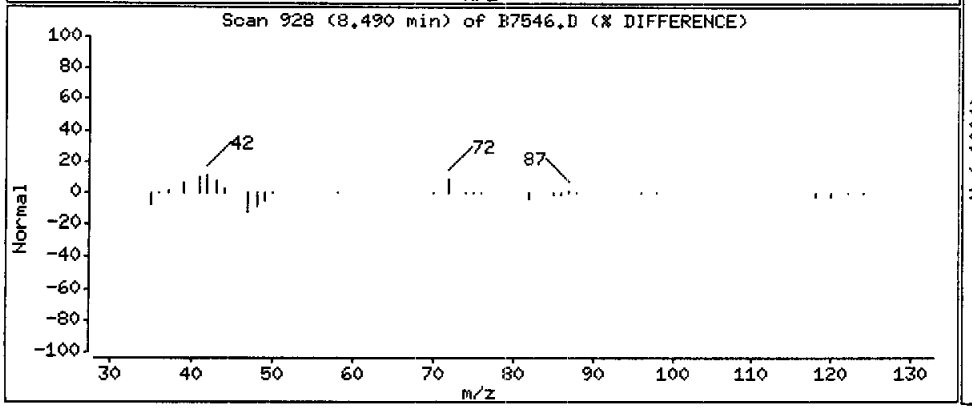
60 Chloroform

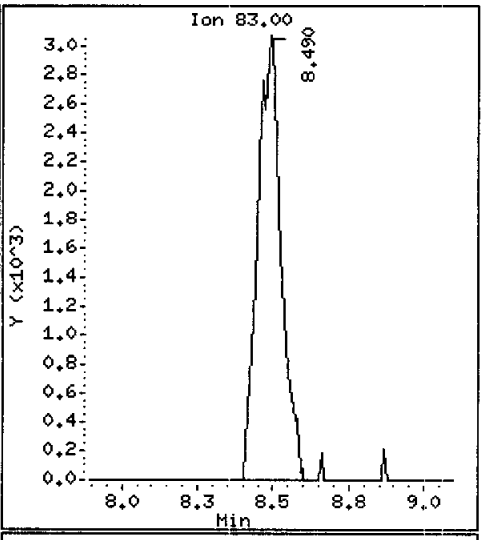
Concentration: 0.9689 ppbv

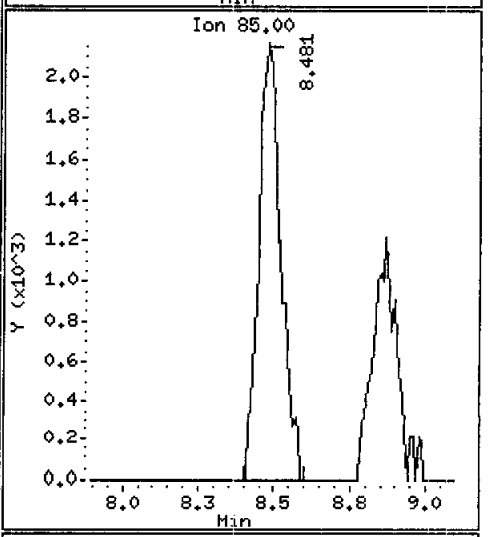


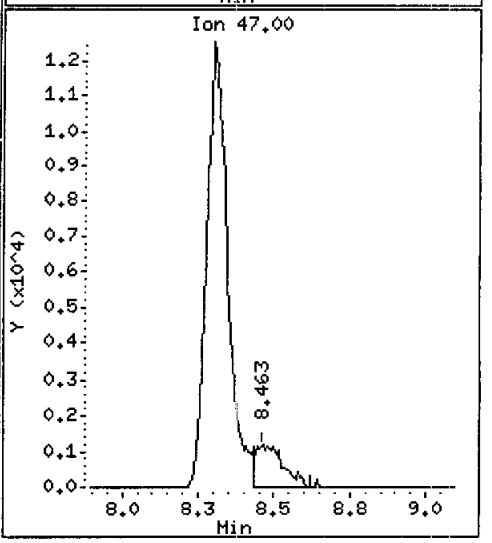












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

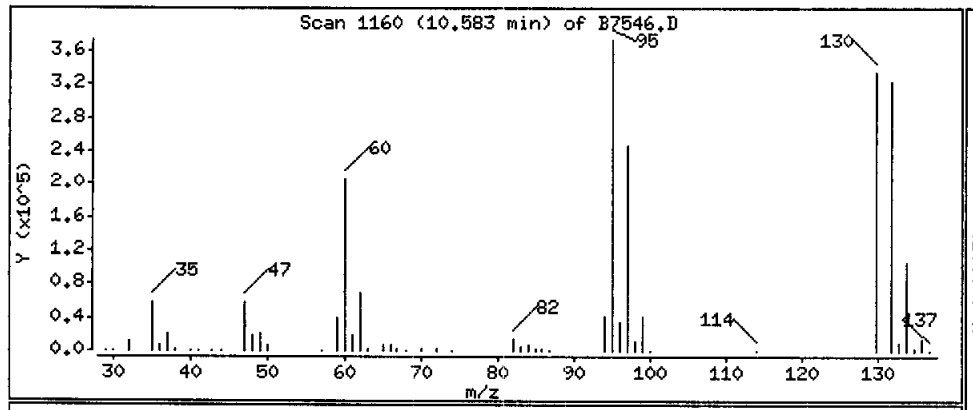
Operator: DLK

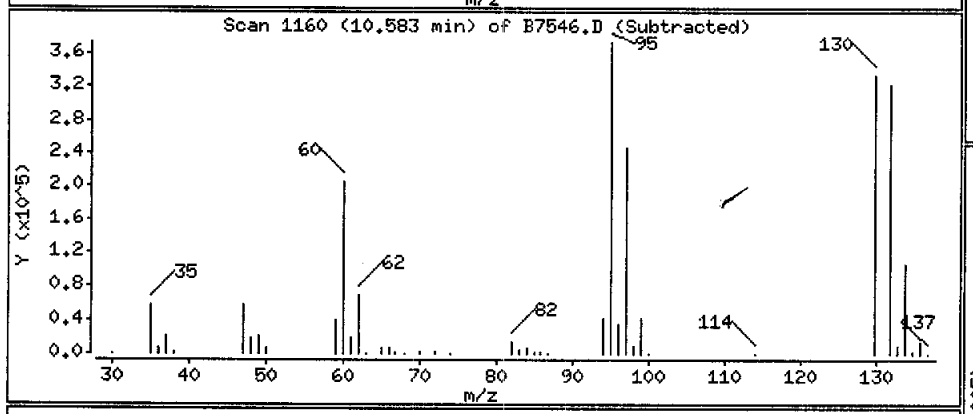
Column phase: J&W DB-624

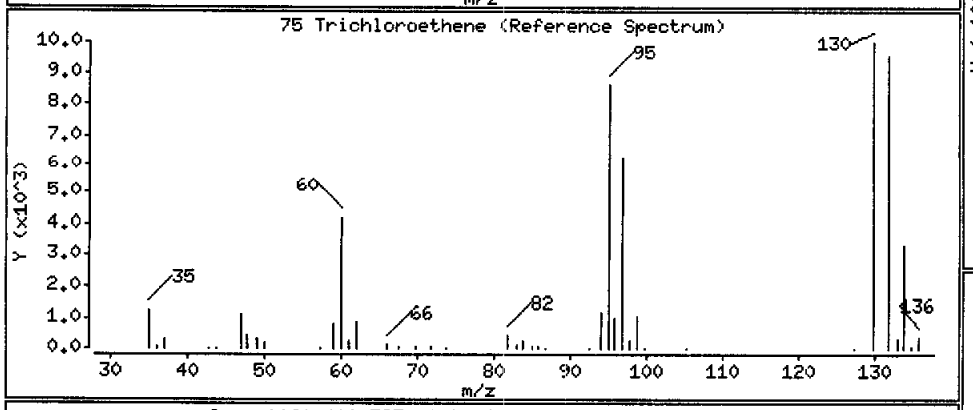
Column diameter: 0.53

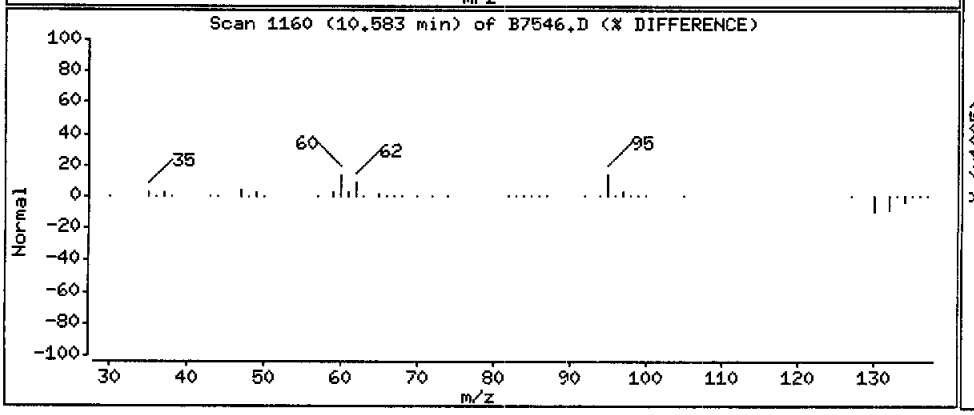
75 Trichloroethene

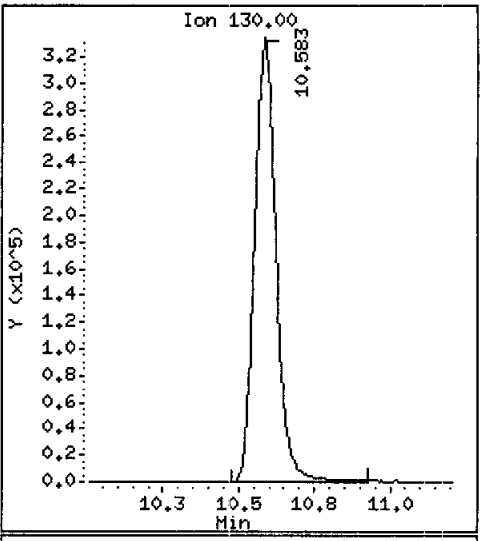
Concentration: 164.6 ppbv

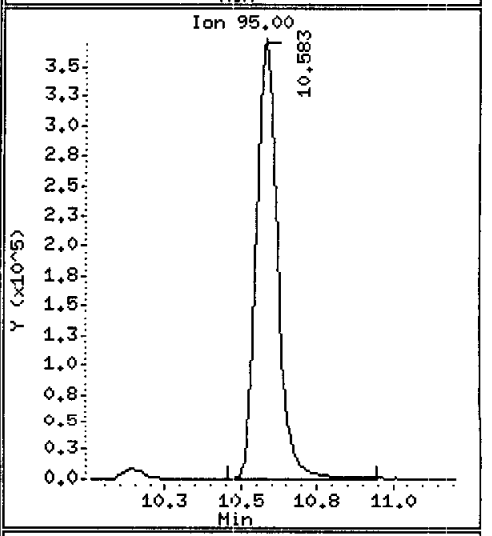


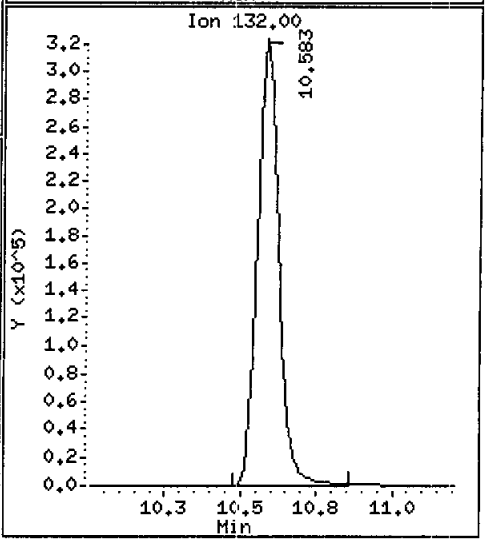












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

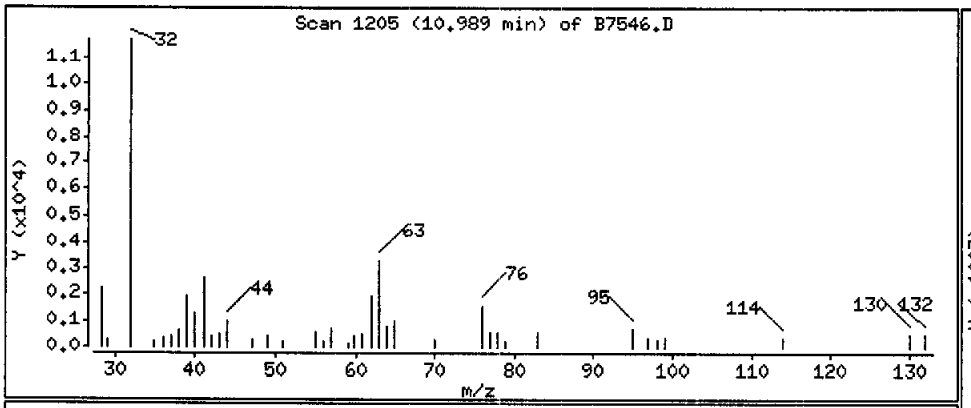
Operator: DLK

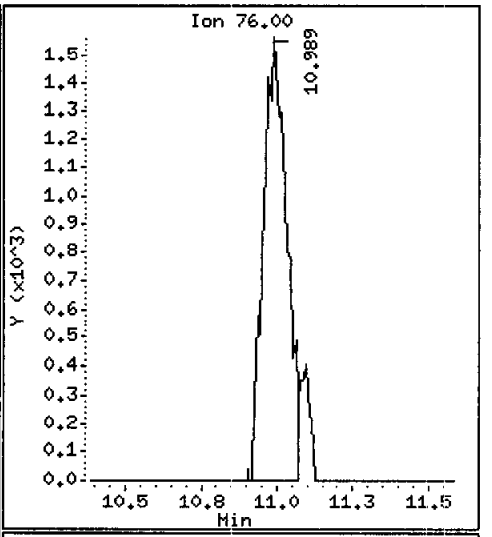
Column phase: J&W DB-624

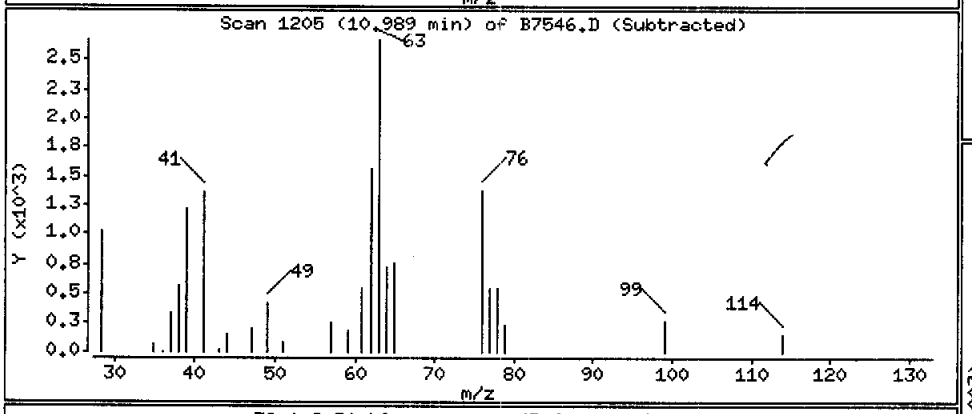
Column diameter: 0.53

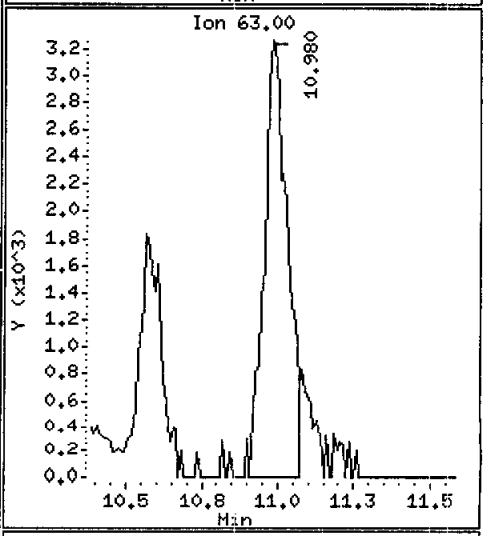
78 1,2-Dichloropropane

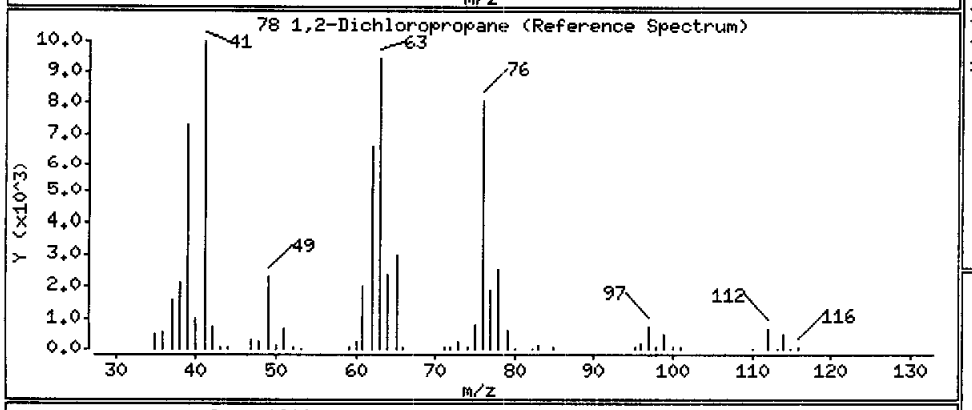
Concentration: 2.223 ppbv

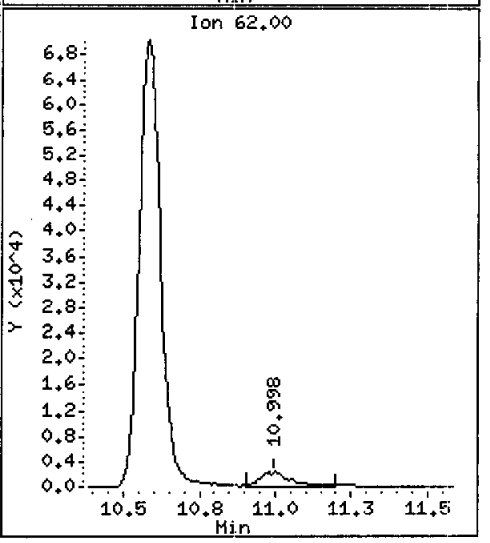


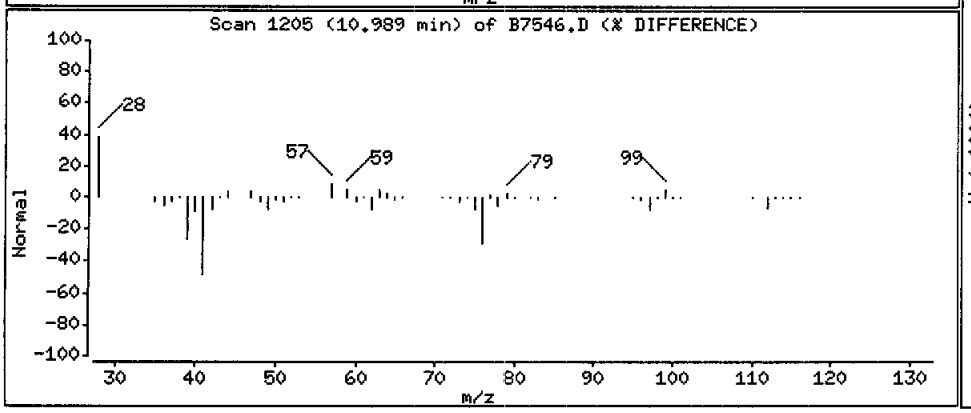












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

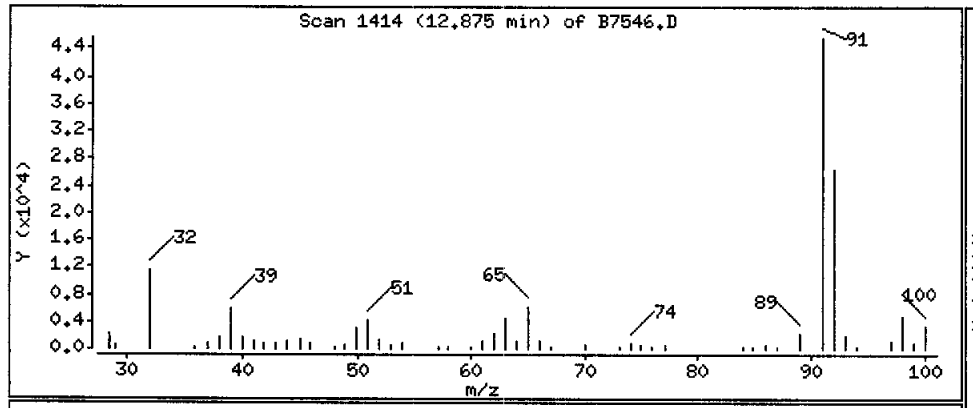
Operator: DLK

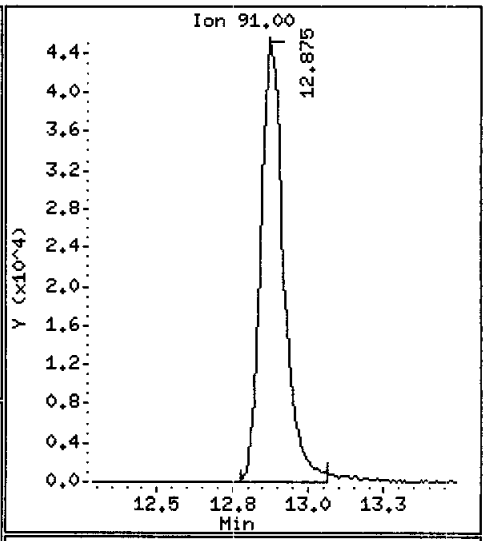
Column phase: J&W DB-624

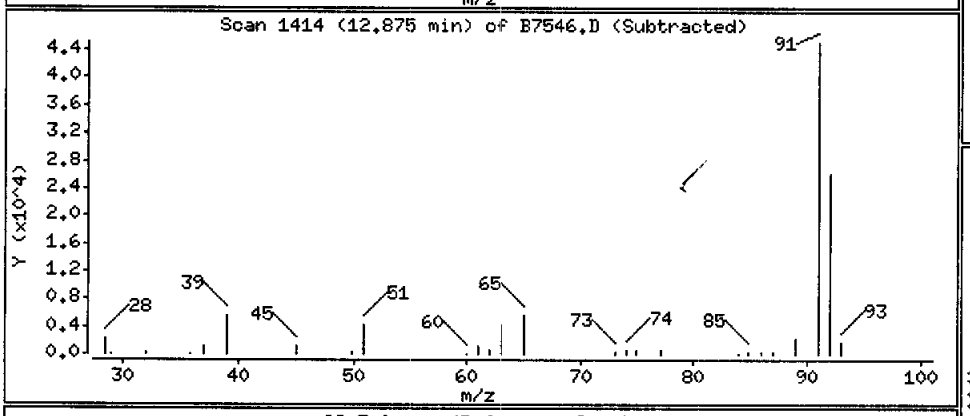
Column diameter: 0.53

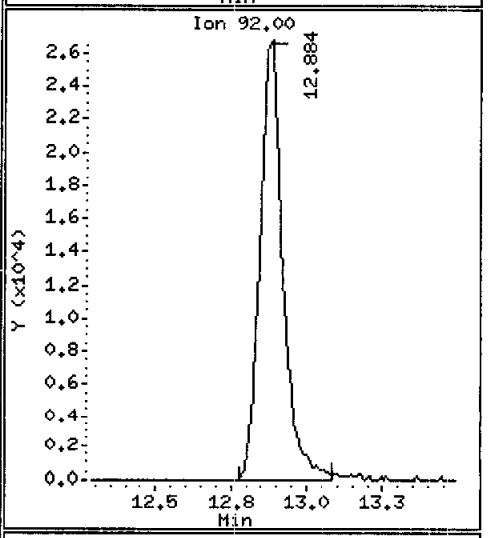
89 Toluene

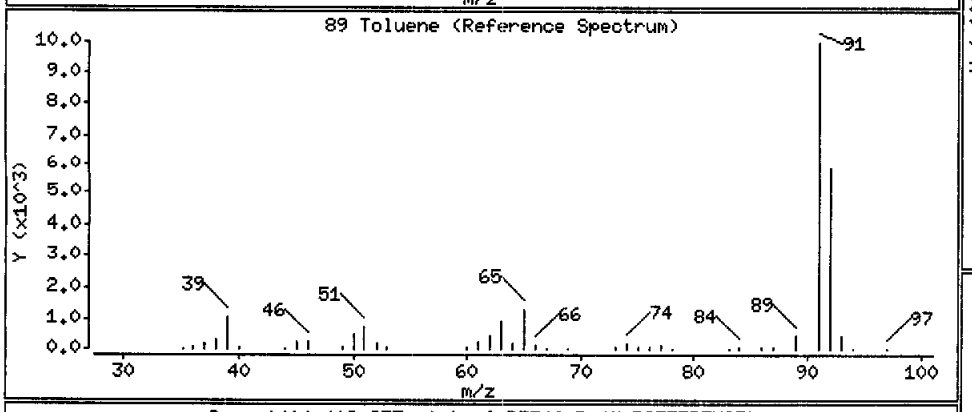
Concentration: 11.98 ppbv

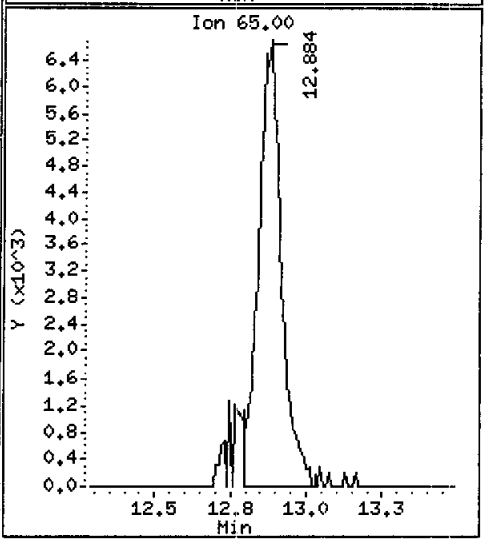


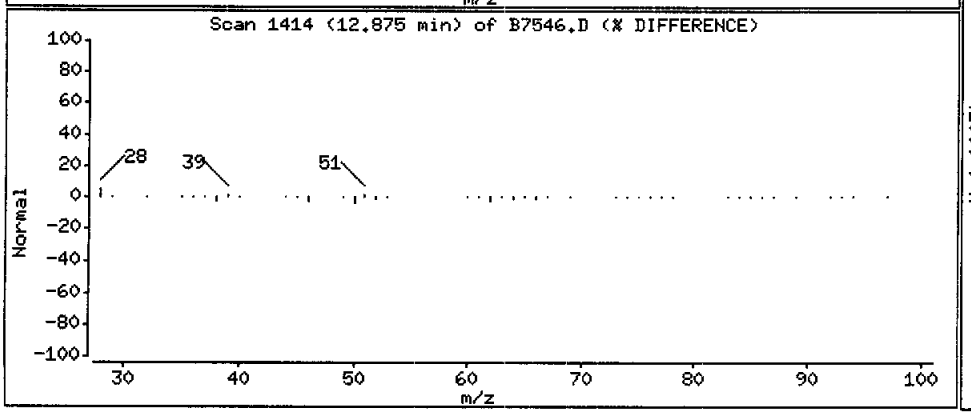












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

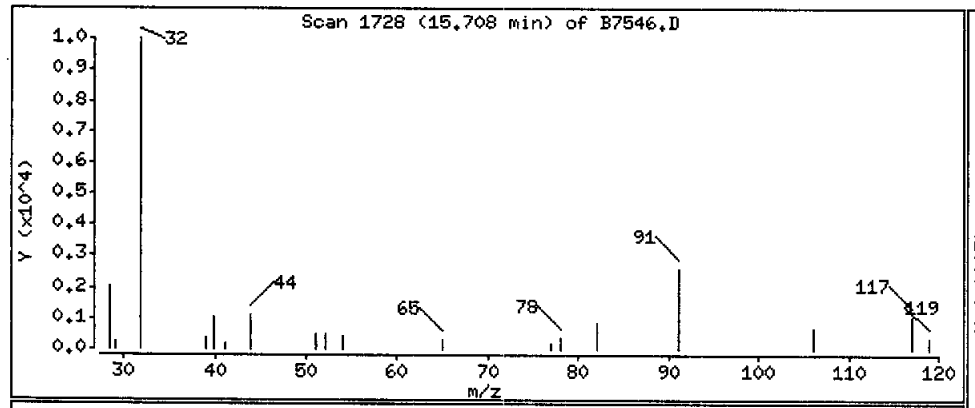
Operator: DLK

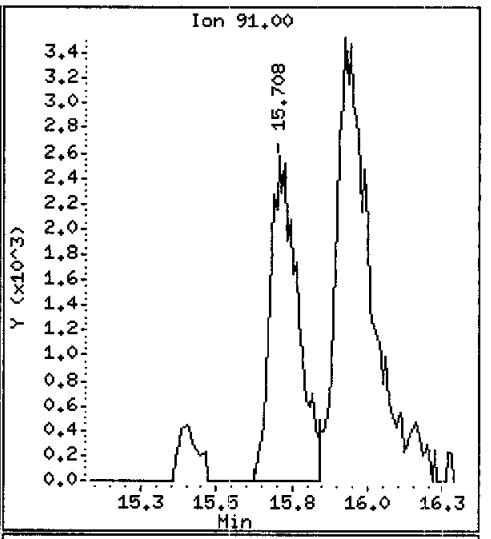
Column phase: J&W DB-624

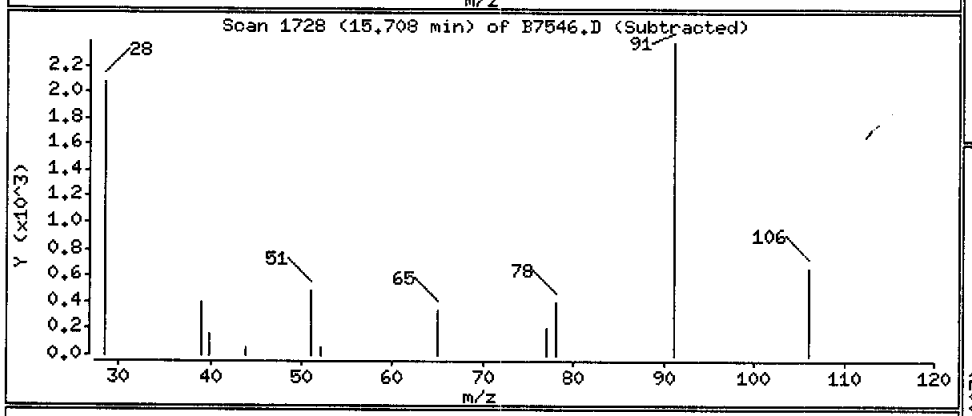
Column diameter: 0.53

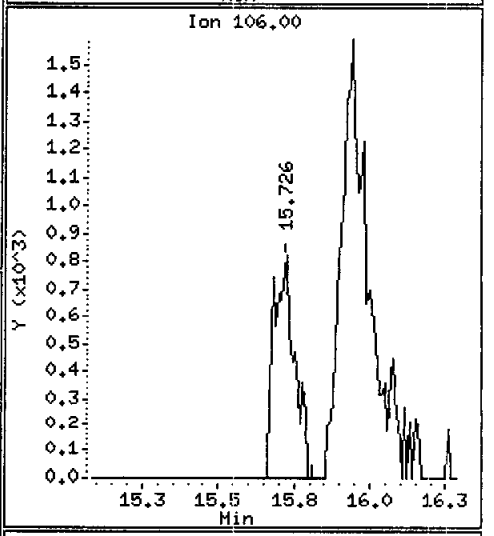
104 Ethylbenzene

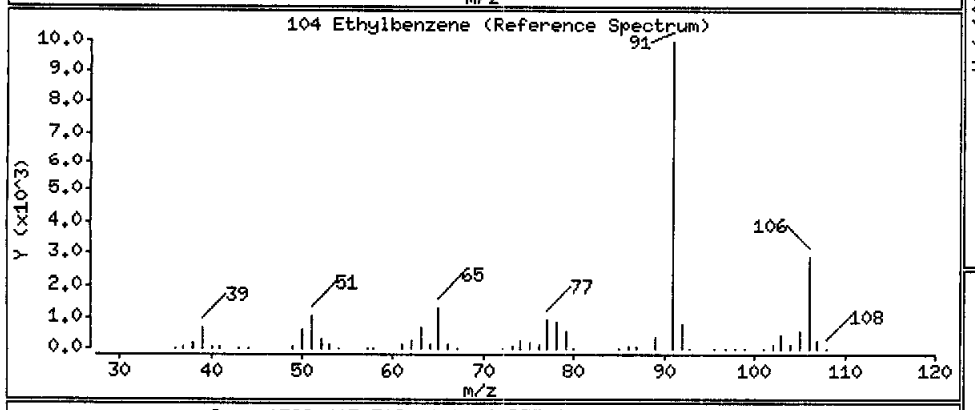
Concentration: 0.7143 ppbv

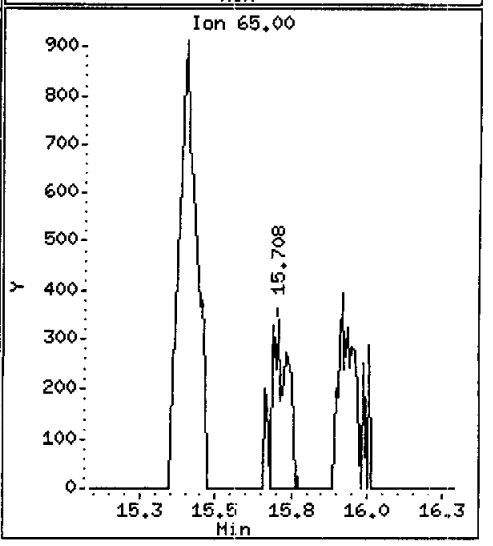


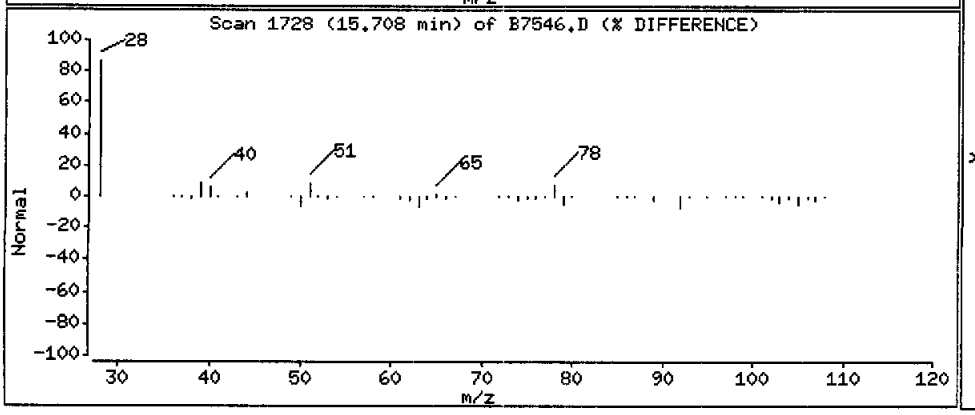












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7546.D

Date : 12-JAN-2005 04:03

Client ID: 066352-001

Instrument: gcmsb.i

Sample Info: G2DGP1AD,066352-001,SANDIA,E5A110218-1

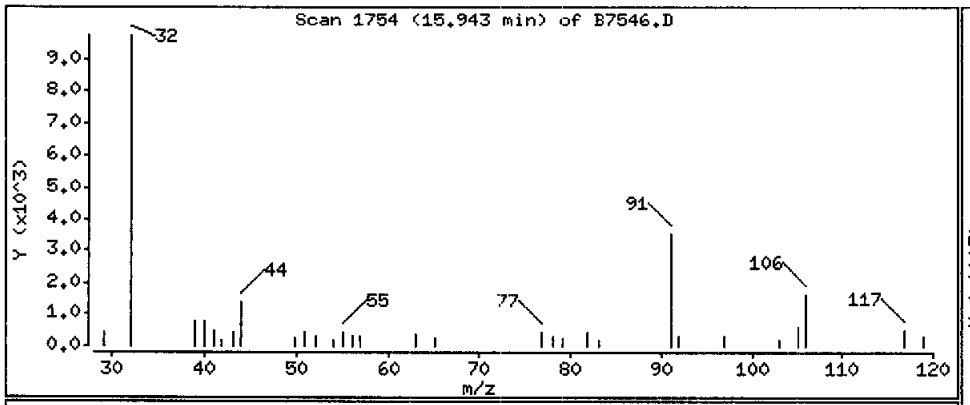
Operator: DLK

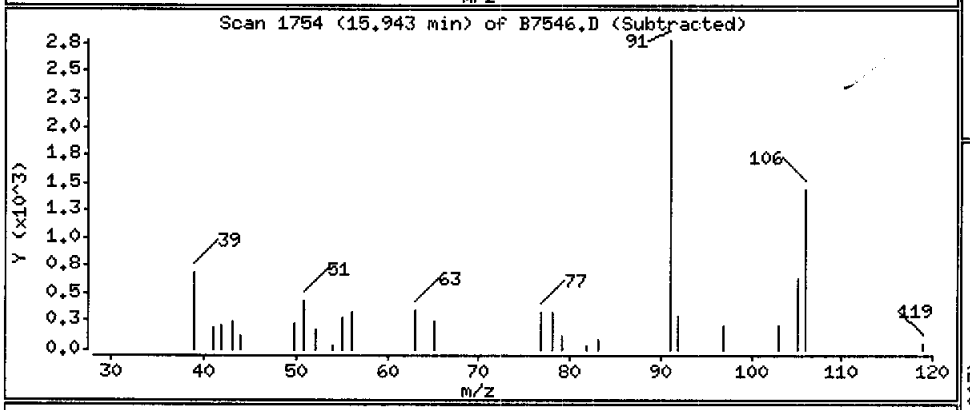
Column phase: J&W DB-624

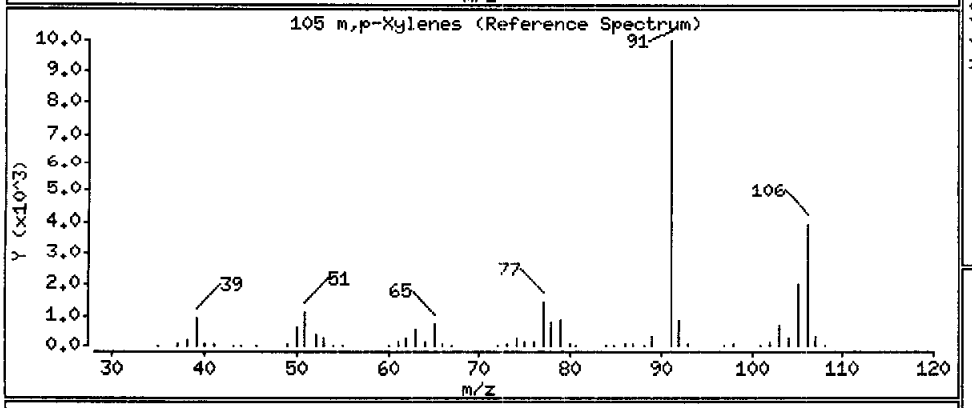
Column diameter: 0.53

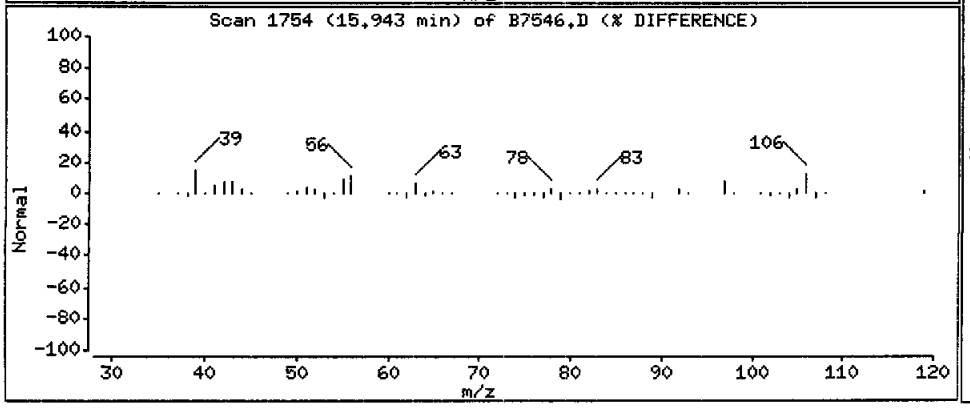
105 m,p-Xylenes

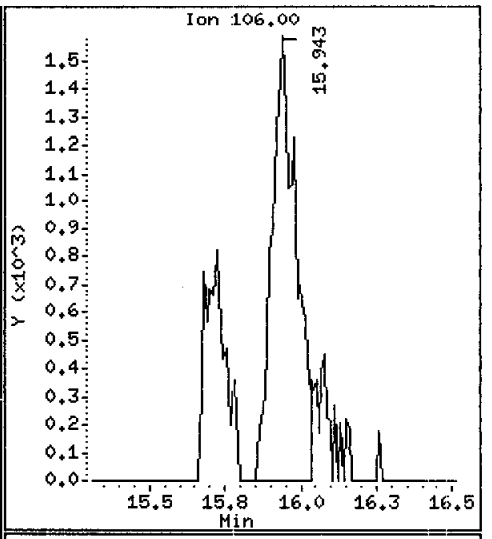
Concentration: 1.331 ppbv

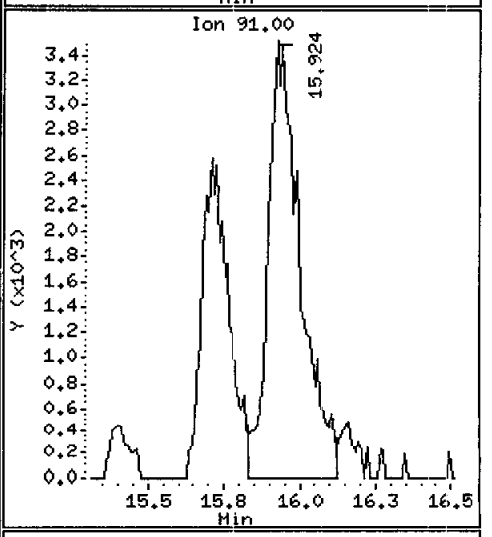


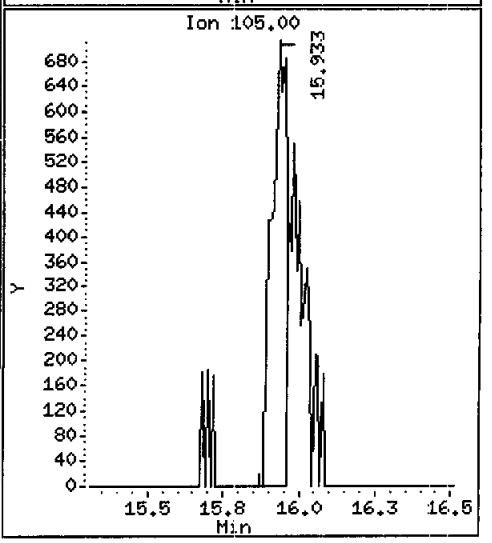












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D
Lab Smp Id: G2DGQ1AD Client Smp ID: 066353-001
Inj Date : 12-JAN-2005 04:39
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGQ1AD,066353-001,SANDIA,E5A110218-2
Misc Info : 23.8,12.9,500,923,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.800	FinalPres
InitPres	12.900	InitPres
CalVol	500.000	CalVol
SmpVol	923.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.137	2.156	(0.257)	13802	0.60449	0.6042(a)
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.726	4.745	(0.568)	26332	0.99560	0.9950(a)
31 Acetone	58	4.916	4.853	(0.591)	4372	2.52567	2.524(aQ)
37 Methylene Chloride	49	5.593	5.593	(0.672)	9852	1.30674	1.306(a)
* 58 Bromochloromethane	49	8.317	8.318	(1.000)	540953	50.0000	
60 Chloroform	83	8.498	8.489	(1.022)	30253	1.75787	1.757(a)
$ 66 1,2-Dichloroethane-d4	65	9.346	9.347	(0.921)	486425	52.3364	52.31
* 73 1,4-Difluorobenzene	114	10.149	10.149	(1.000)	1132528	50.0000	
75 Trichloroethene	130	10.591	10.601	(1.044)	3539087	357.894	357.7
78 1,2-Dichloropropane	76	10.988	10.980	(1.083)	32463	8.74475	8.740
$ 88 Toluene-d8	100	12.757	12.766	(1.257)	593674	50.0613	50.03
89 Toluene	91	12.874	12.883	(1.268)	17204	0.86274	0.8622(a)
* 101 Chlorobenzene-d5	117	15.409	15.419	(1.000)	785812	50.0000	
$ 114 4-Bromofluorobenzene	95	17.656	17.675	(1.146)	589667	42.0066	41.98

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

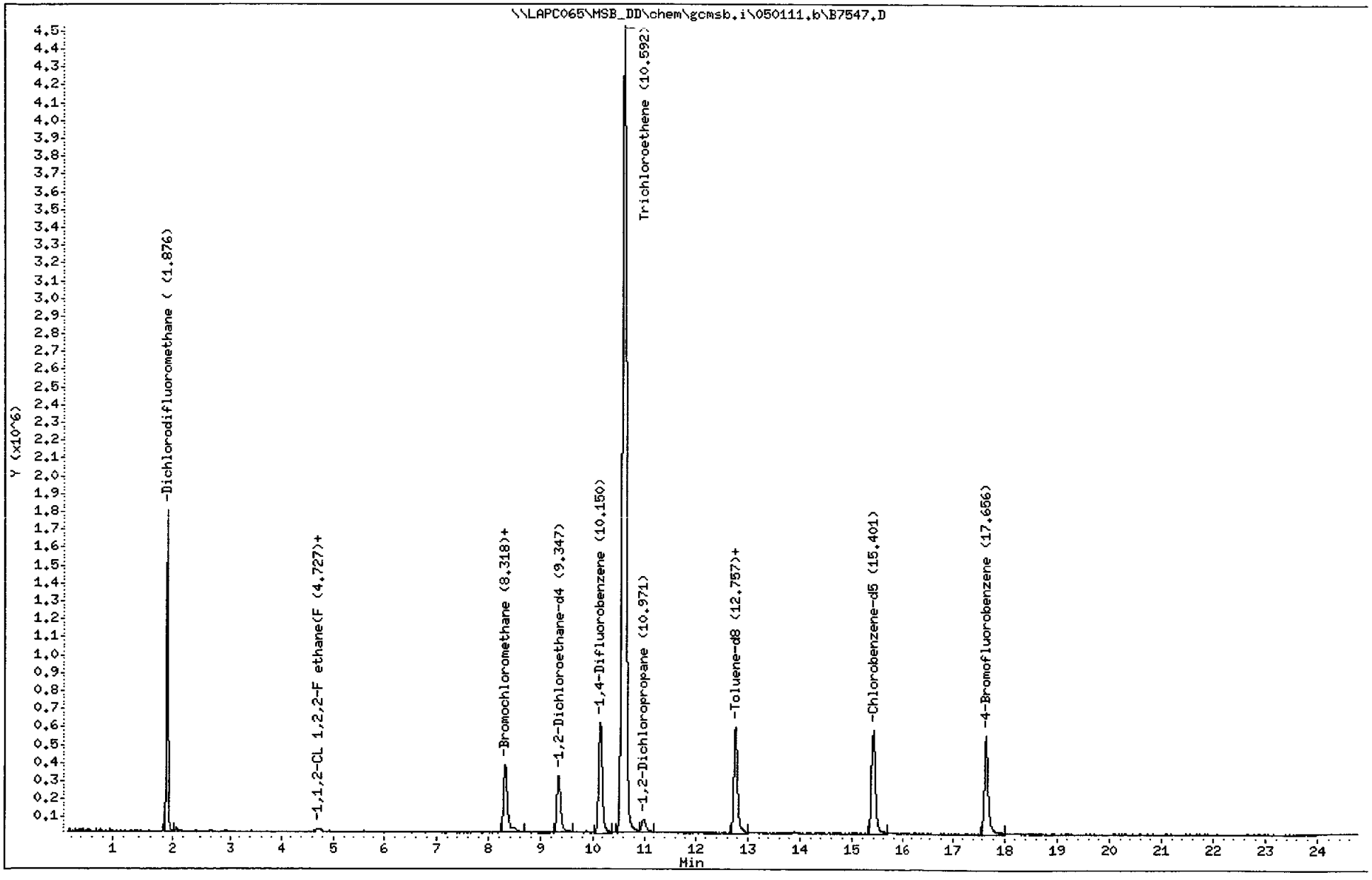
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D
Date : 12-JAN-2005 04:39
Client ID: 066353-001
Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

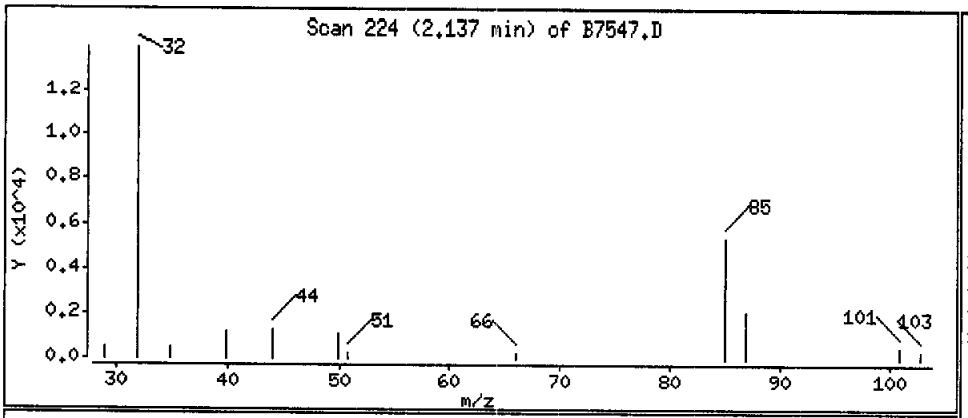
Operator: DLK

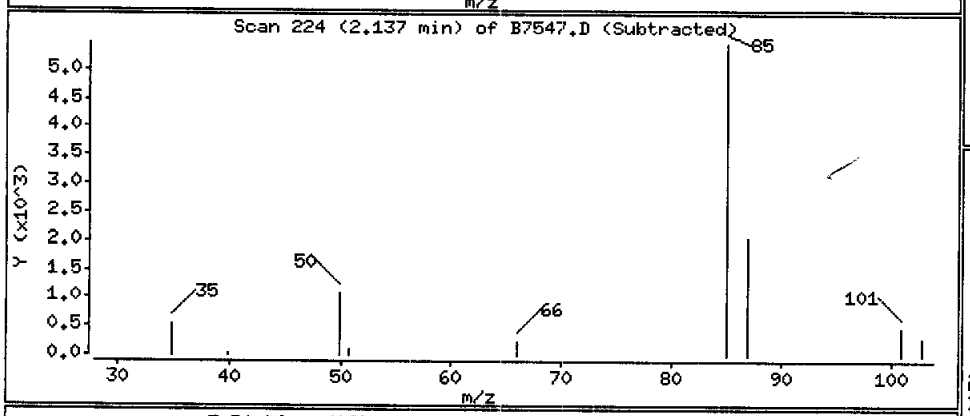
Column phase: J&W DB-624

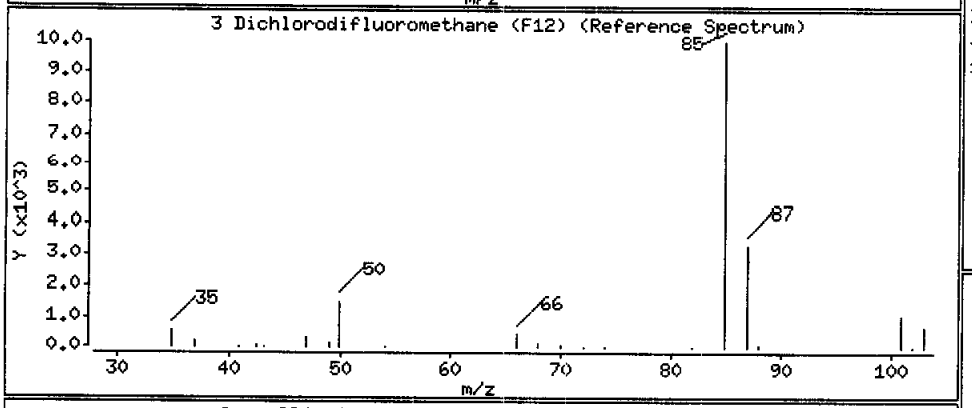
Column diameter: 0.53

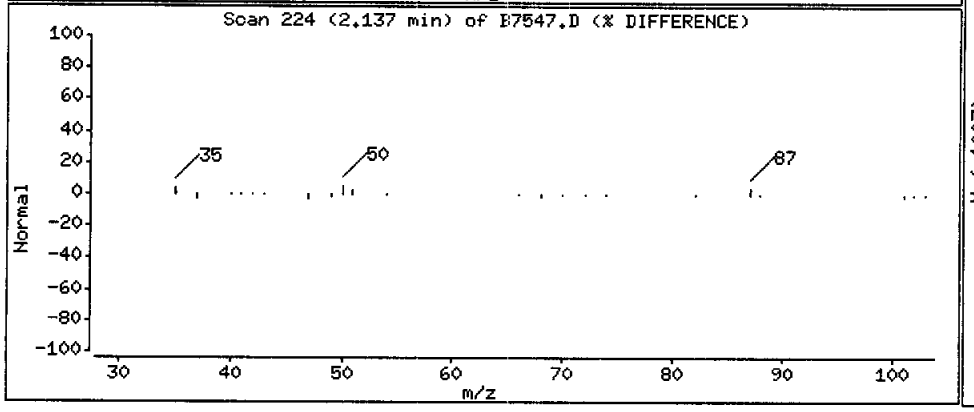
3 Dichlorodifluoromethane (F12)

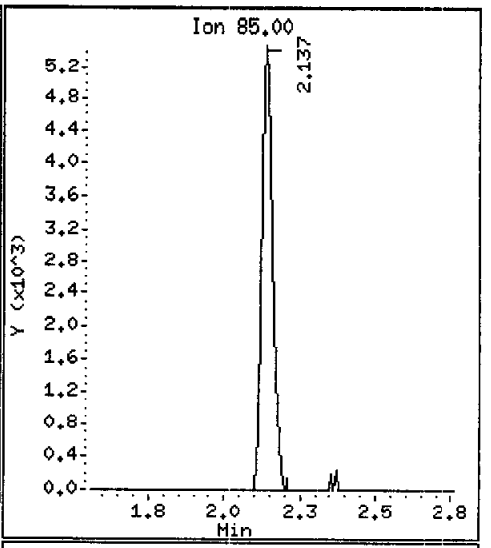
Concentration: 0.6042 ppbv

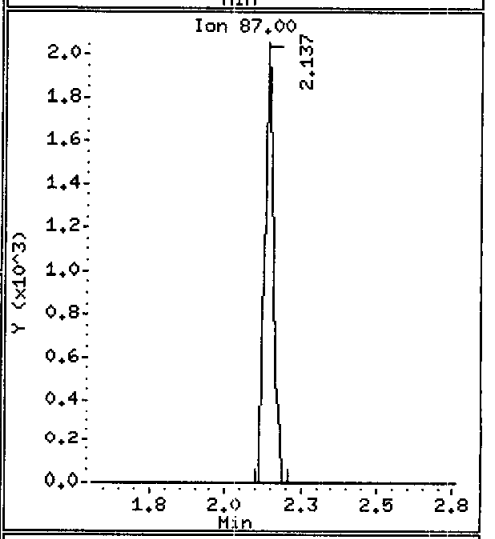


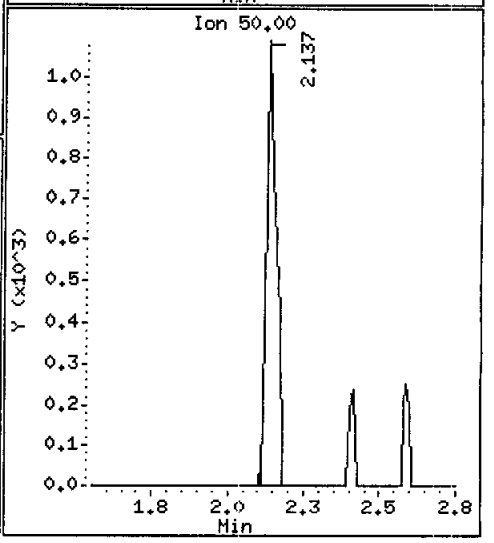












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

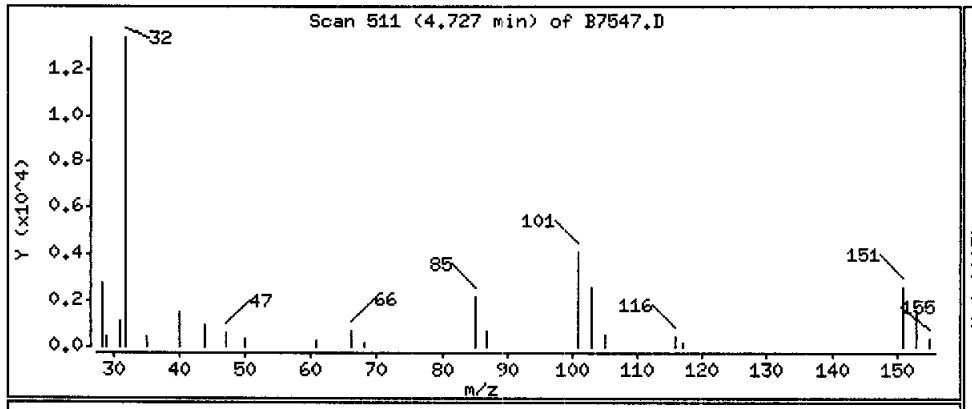
Operator: DLK

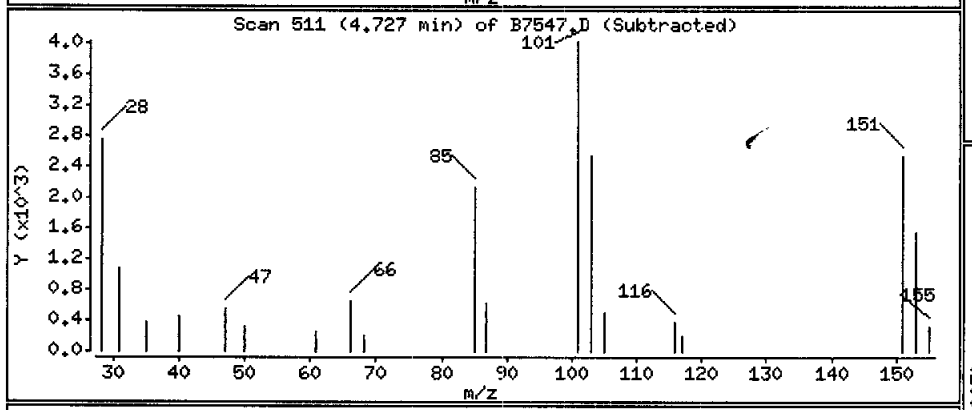
Column phase: J&W DB-624

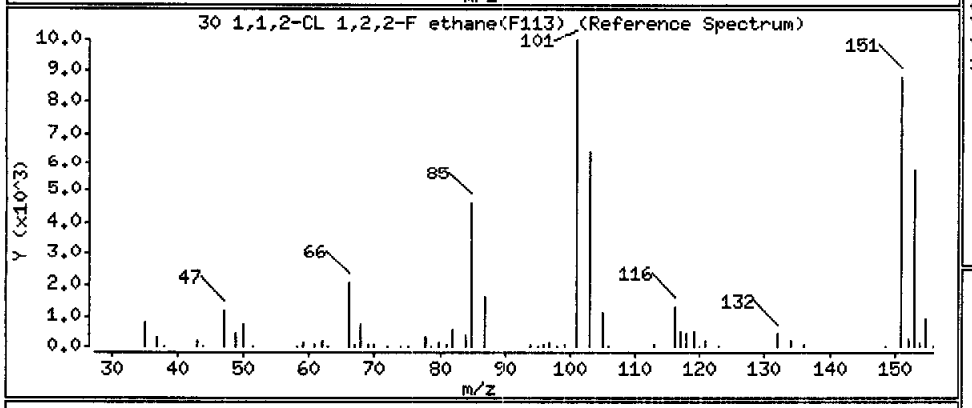
Column diameter: 0.53

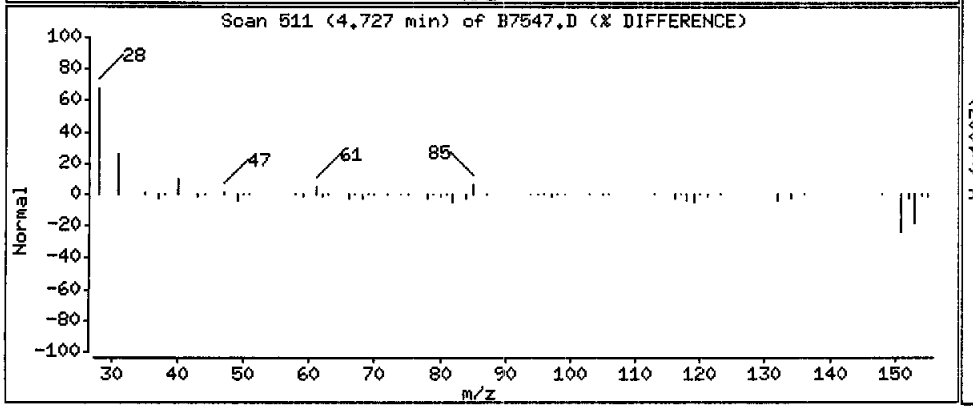
30 1,1,2-CL 1,2,2-F ethane(F113)

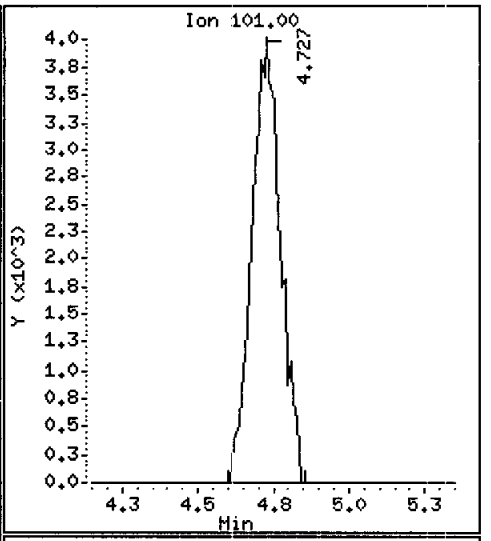
Concentration: 0.9950 ppbv

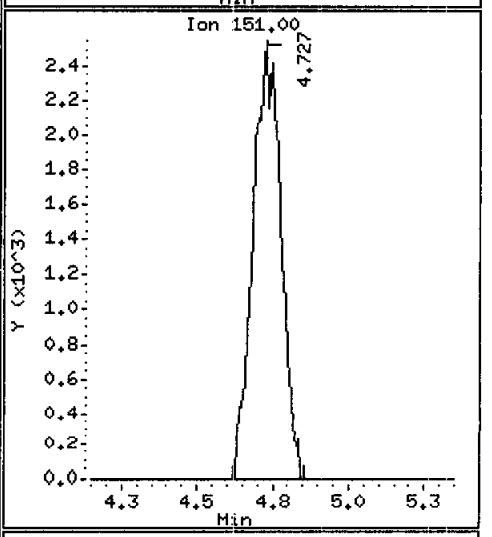


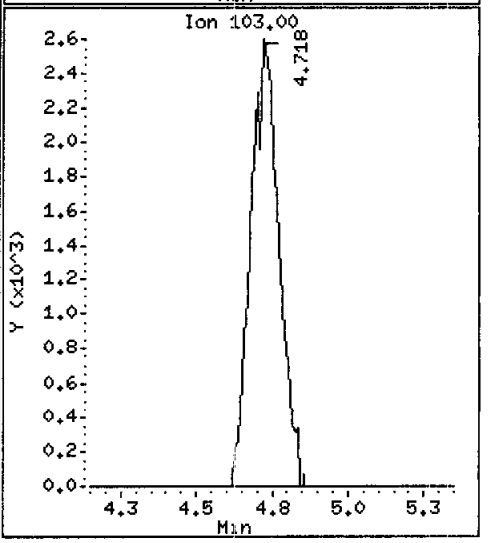












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

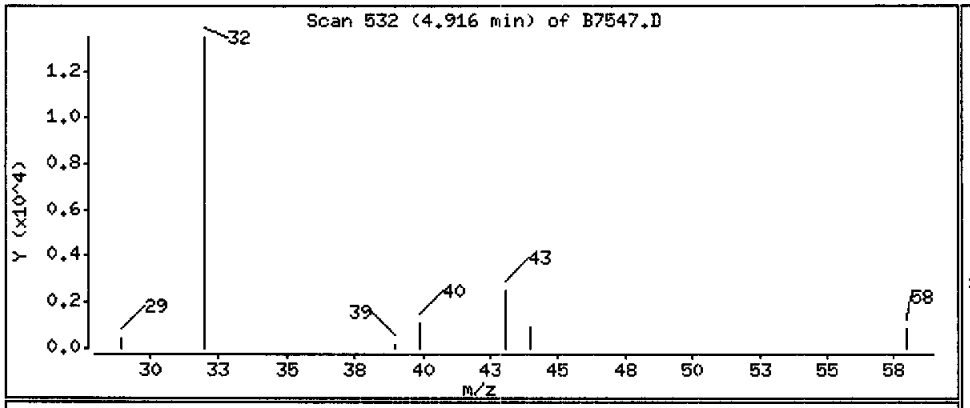
Operator: DLK

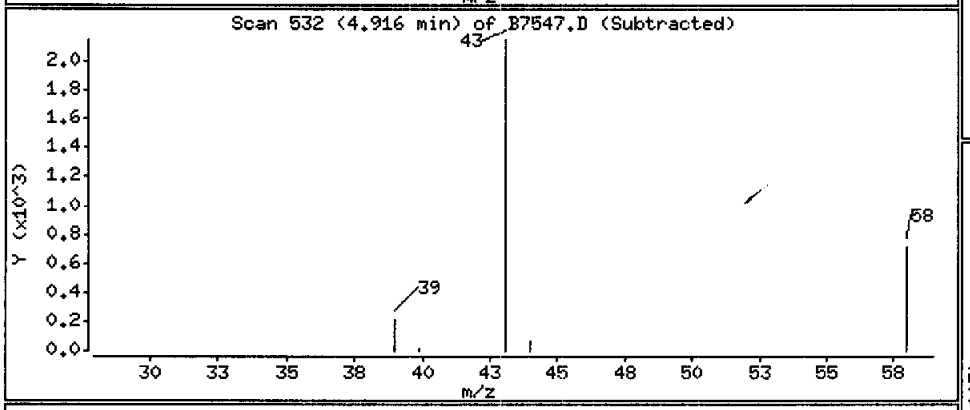
Column phase: J&W DB-624

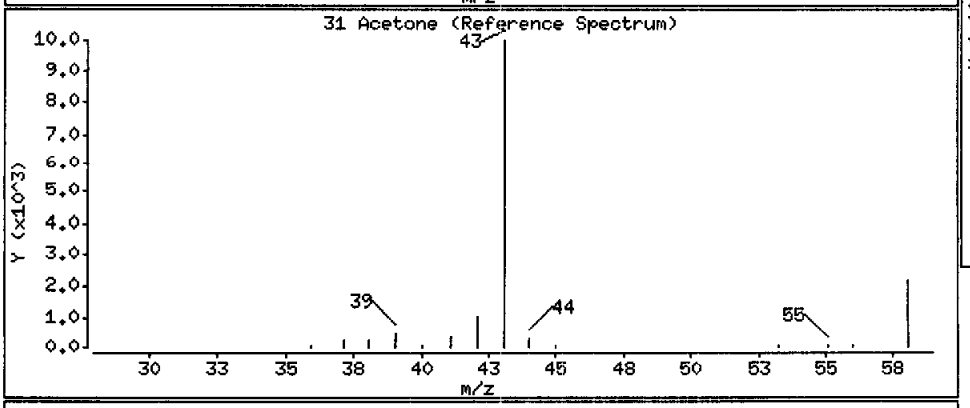
Column diameter: 0.53

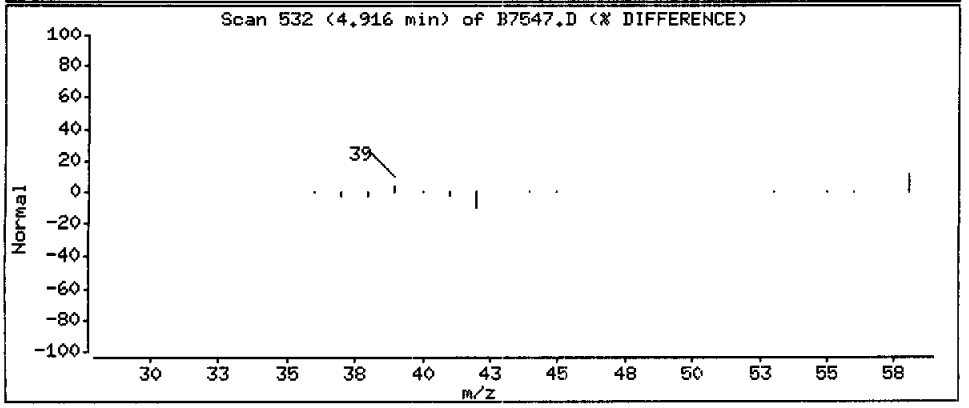
31 Acetone

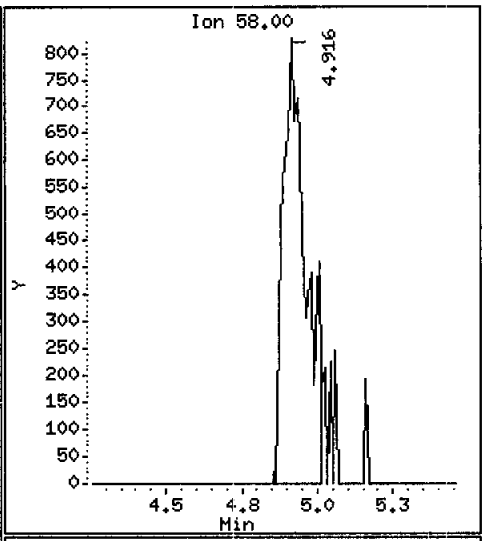
Concentration: 2.524 ppbv

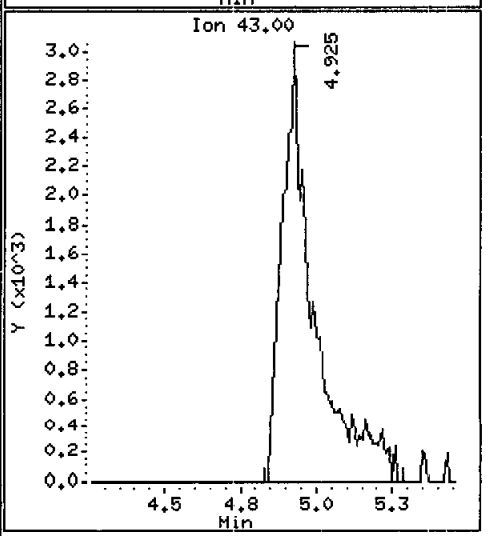












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

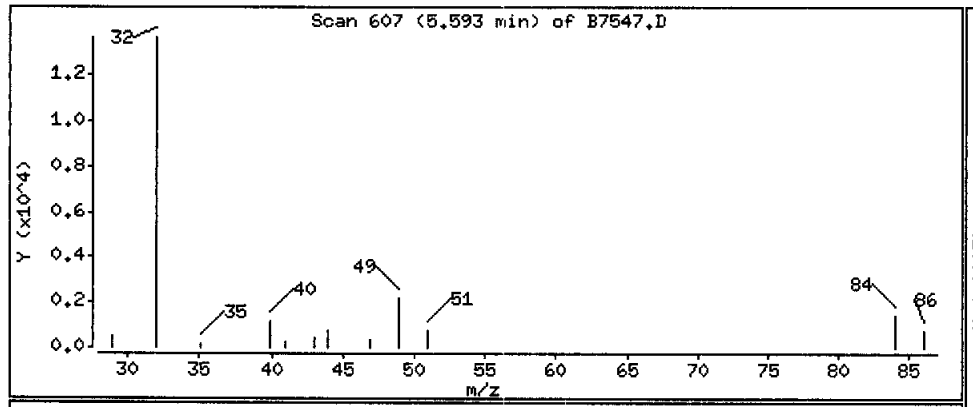
Operator: DLK

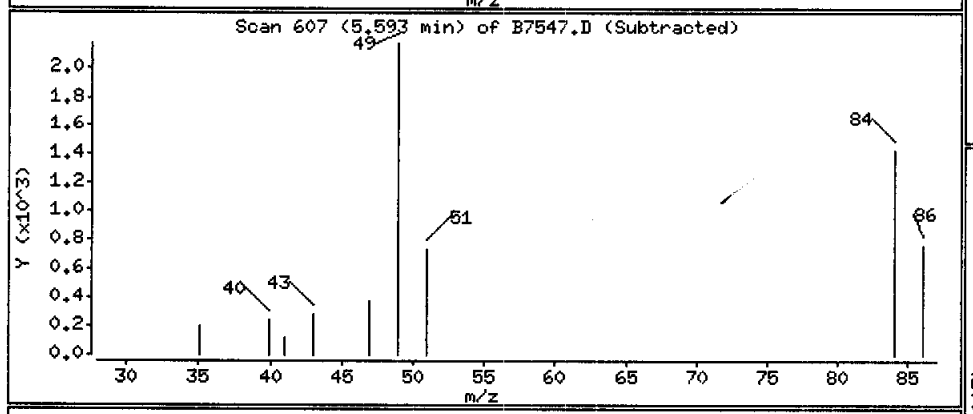
Column phase: J&W DB-624

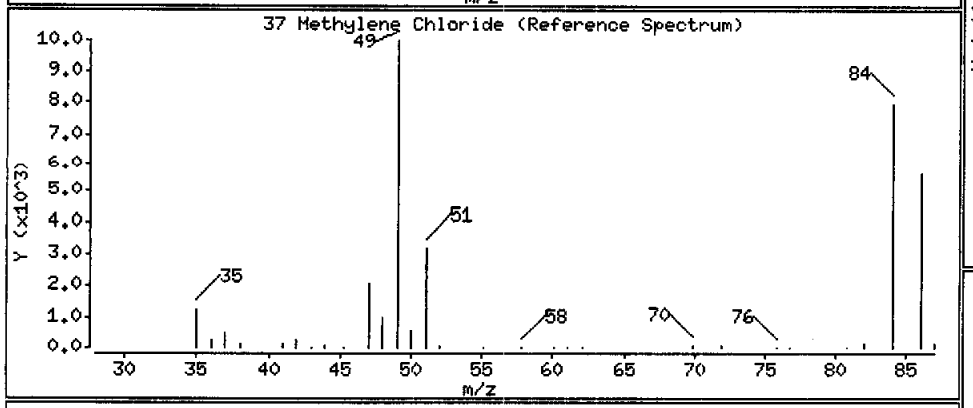
Column diameter: 0.53

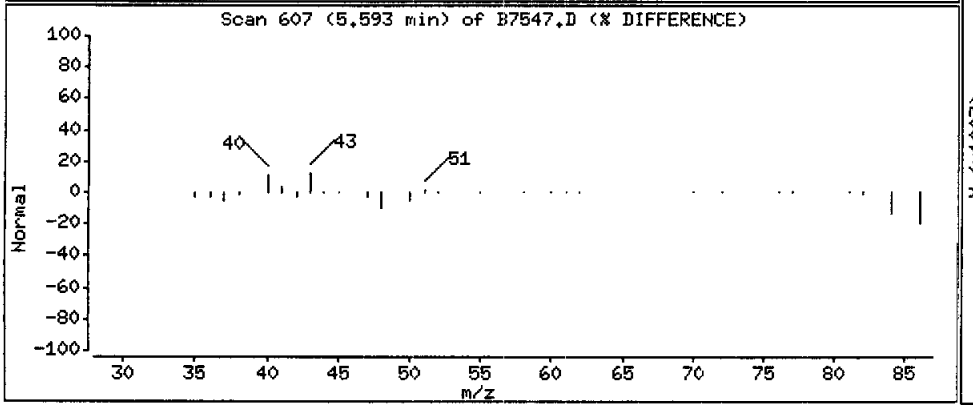
37 Methylene Chloride

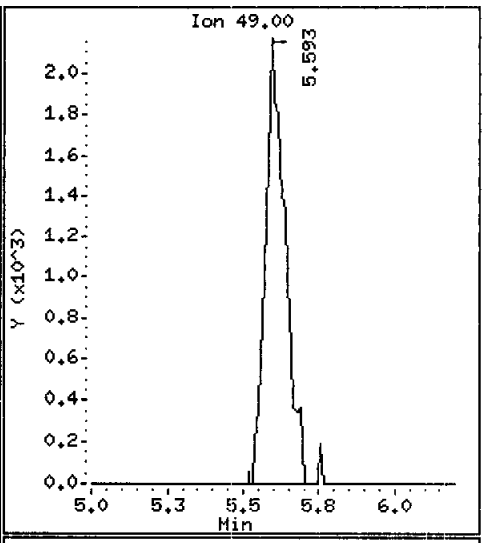
Concentration: 1.306 ppbv

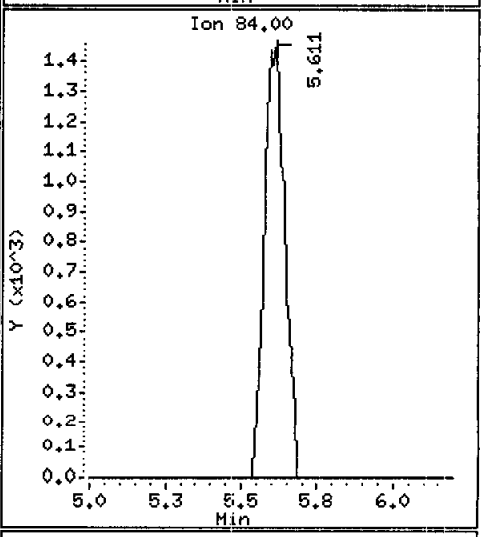


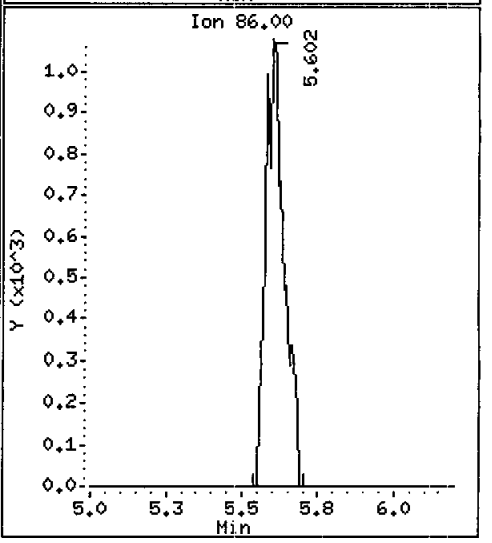












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

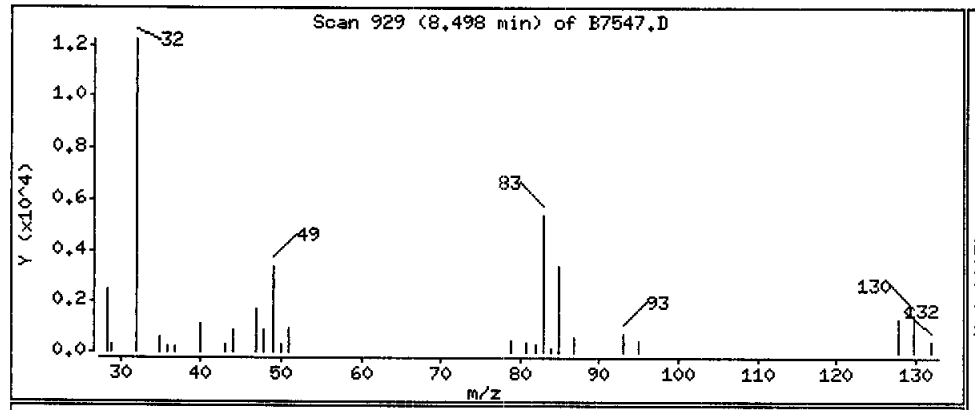
Operator: DLK

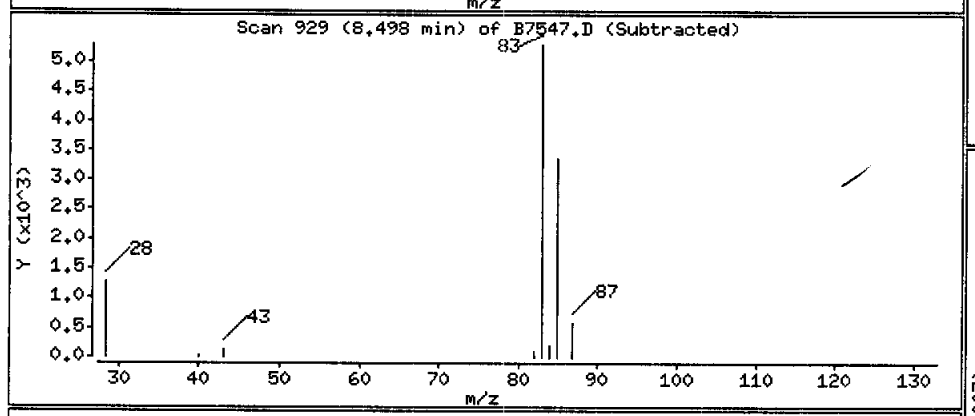
Column phase: J&W DB-624

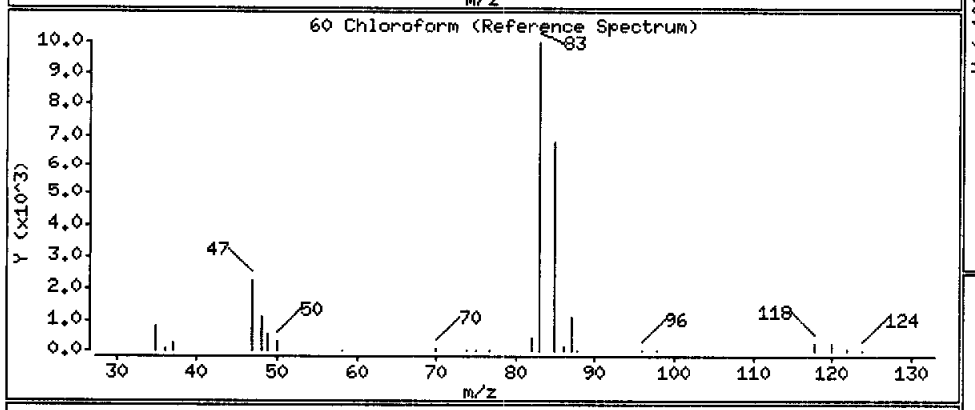
Column diameter: 0.53

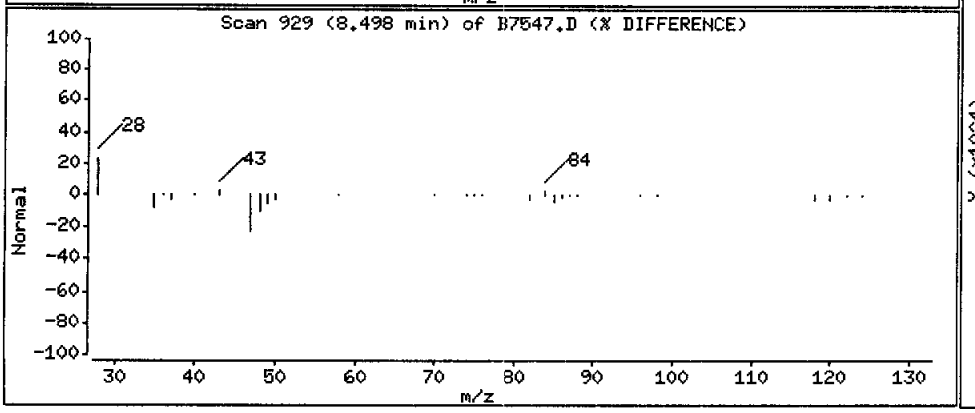
60 Chloroform

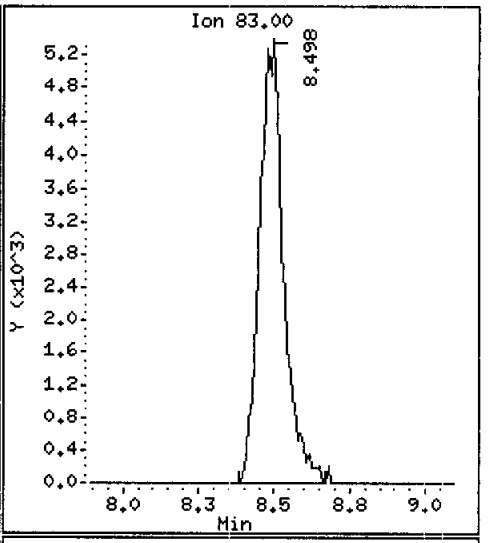
Concentration: 1.757 ppbv

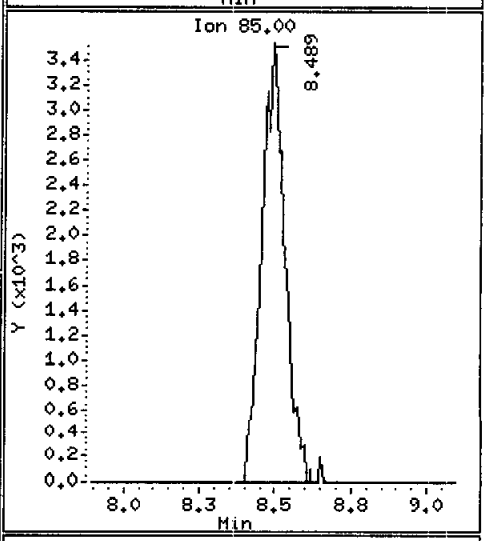


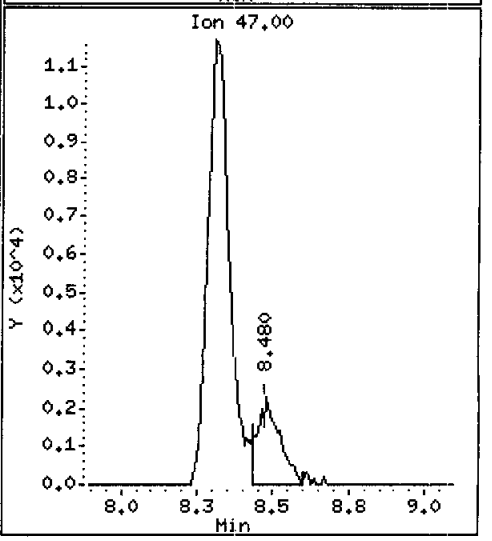












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

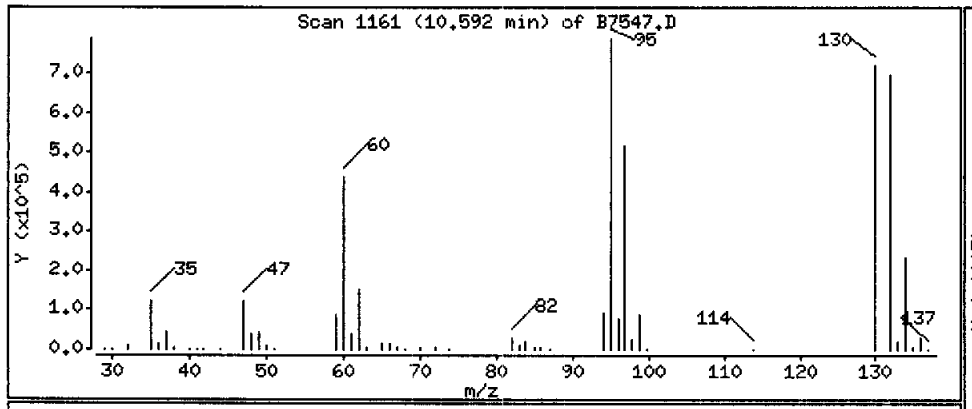
Operator: DLK

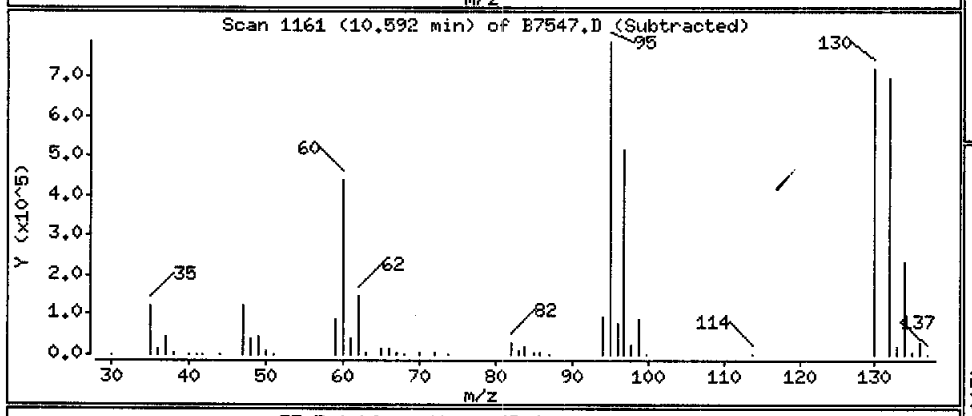
Column phase: J&W DB-624

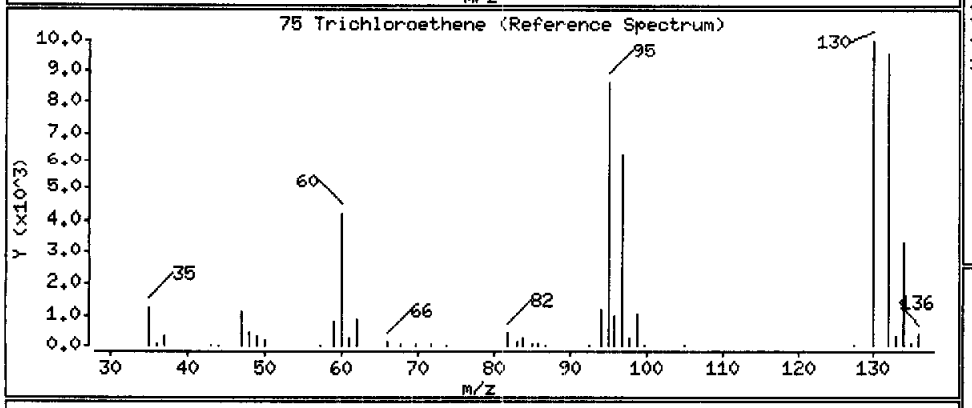
Column diameter: 0.53

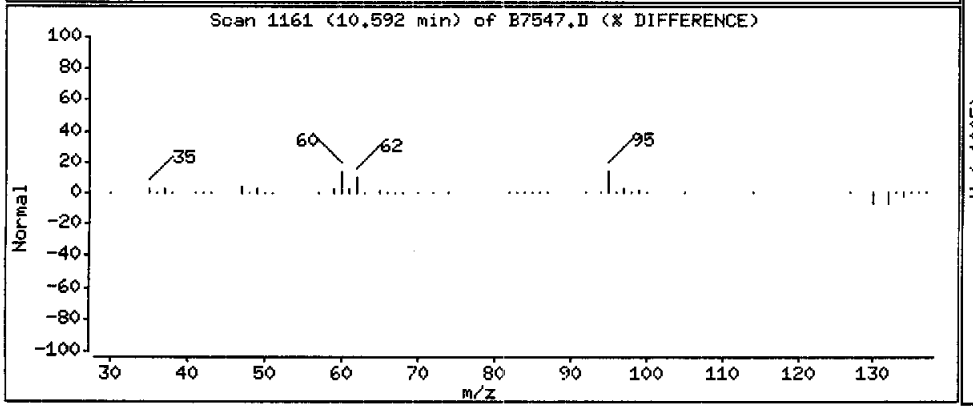
75 Trichloroethene

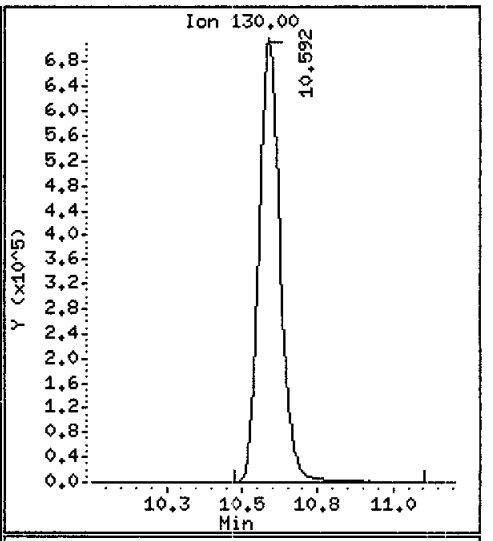
Concentration: 357.7 ppbv

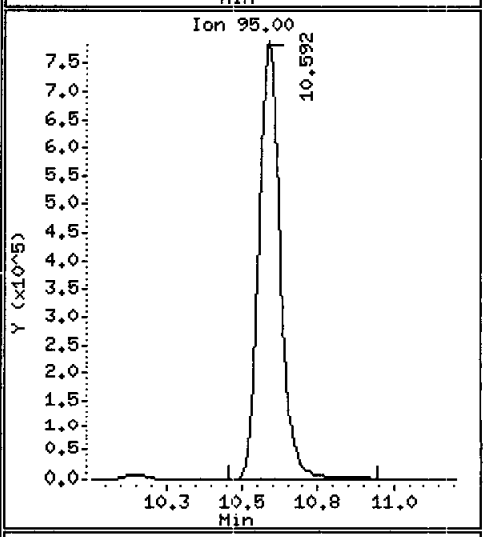


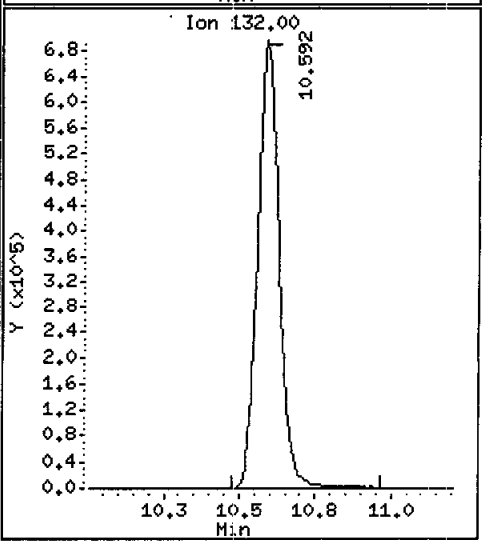












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

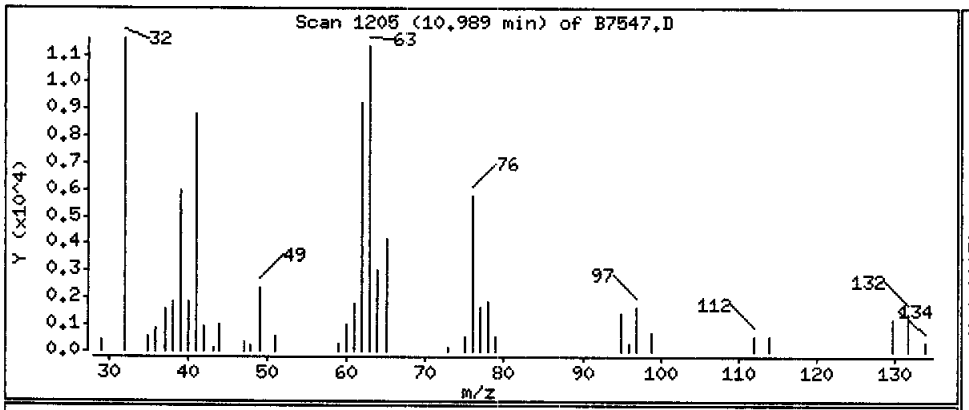
Operator: DLK

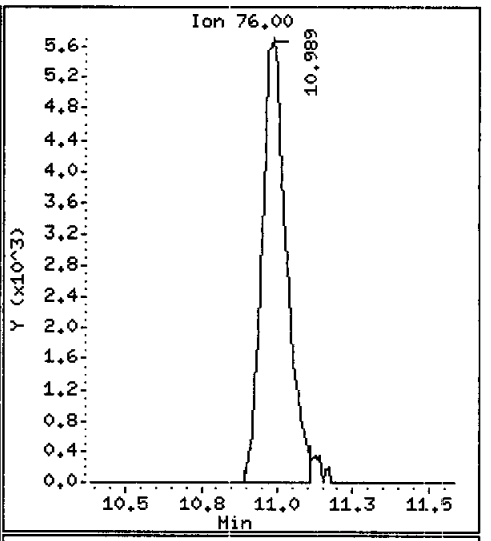
Column phase: J&W DB-624

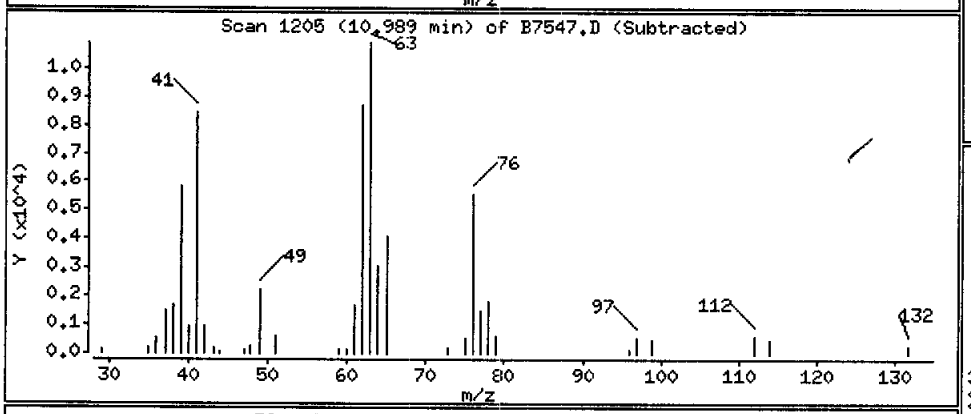
Column diameter: 0.53

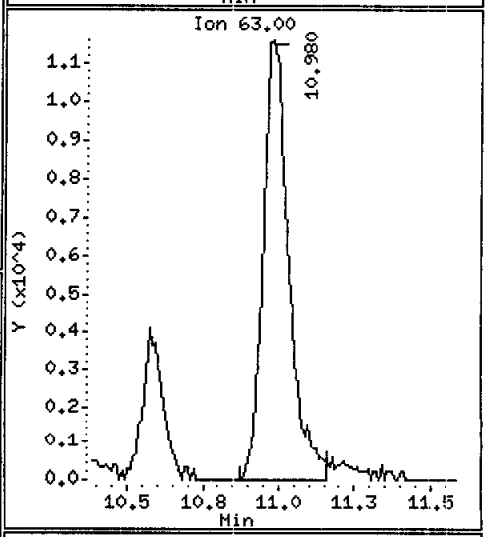
78 1,2-Dichloropropane

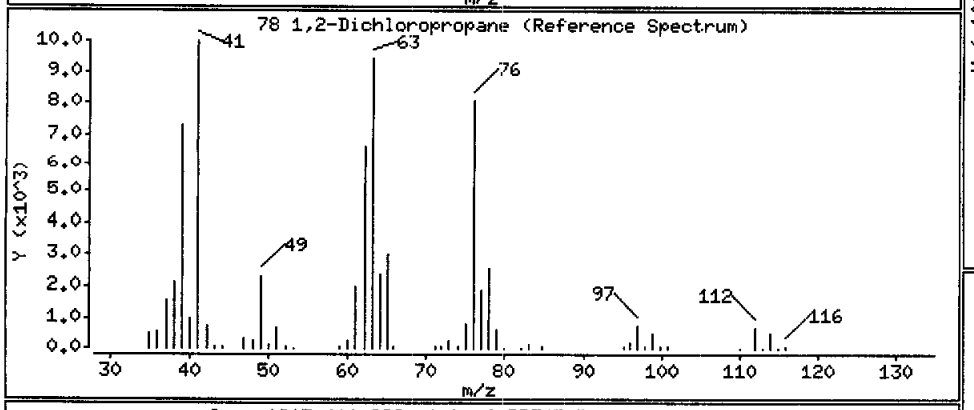
Concentration: 8.740 ppbv

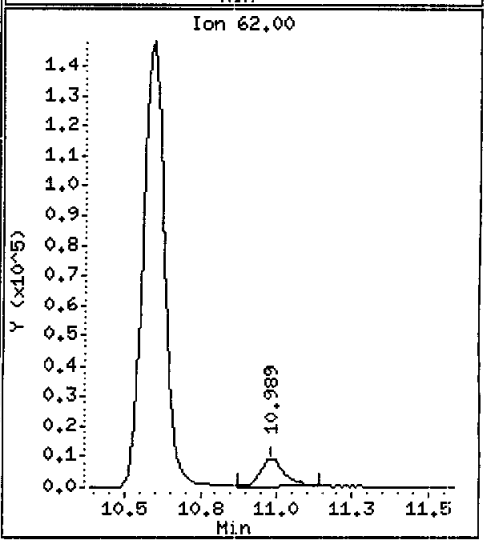


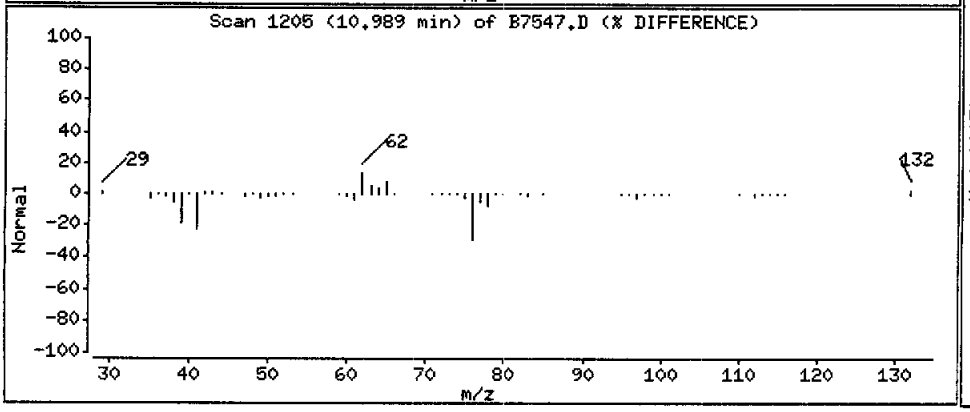












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7547.D

Date : 12-JAN-2005 04:39

Client ID: 066353-001

Instrument: gcmsb.i

Sample Info: G2DGQ1AD,066353-001,SANDIA,E5A110218-2

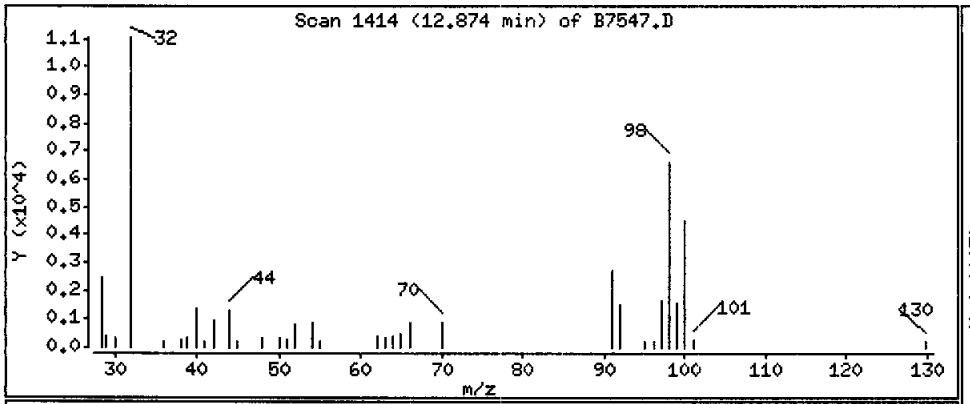
Operator: DLK

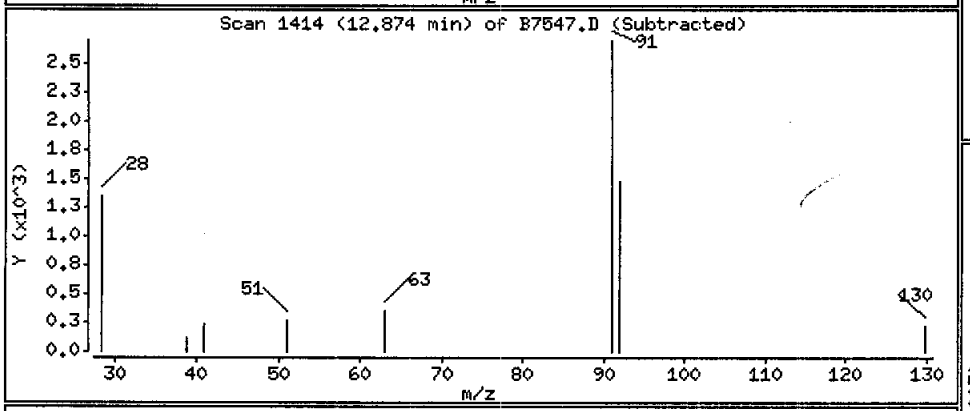
Column phase: J&W DB-624

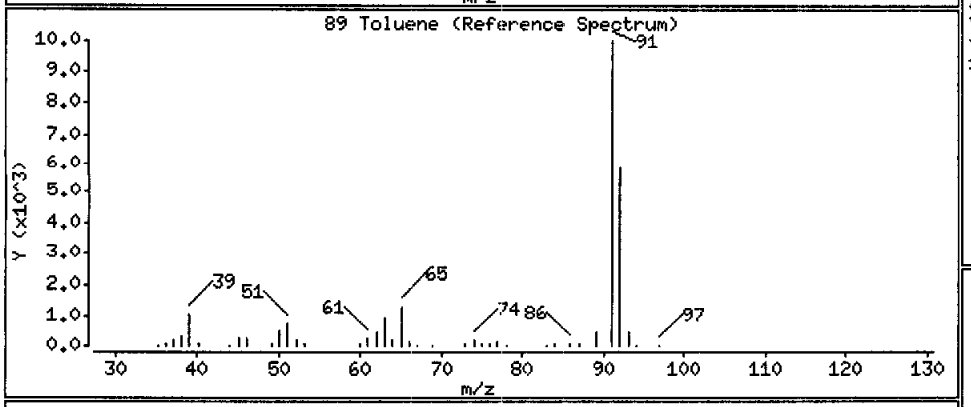
Column diameter: 0.53

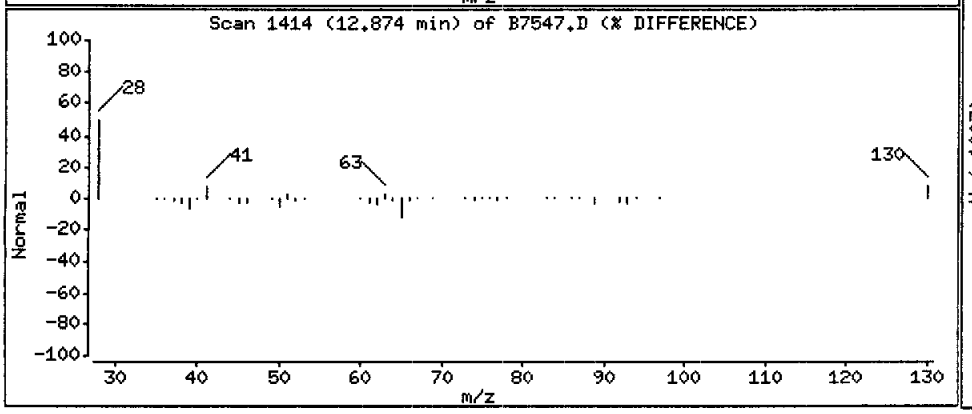
89 Toluene

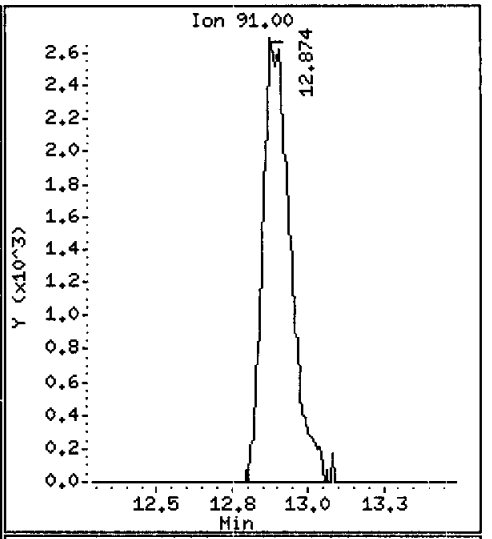
Concentration: 0.8622 ppbv

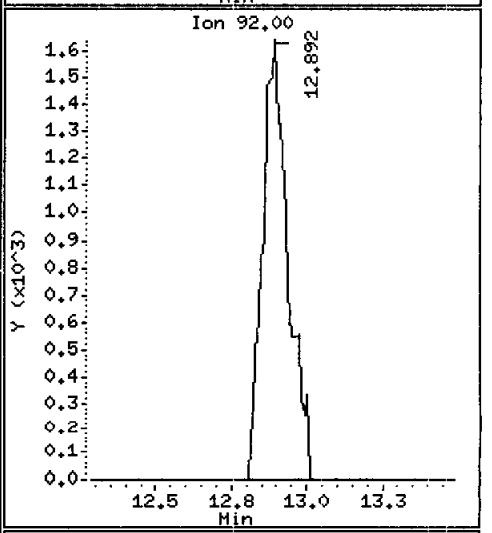


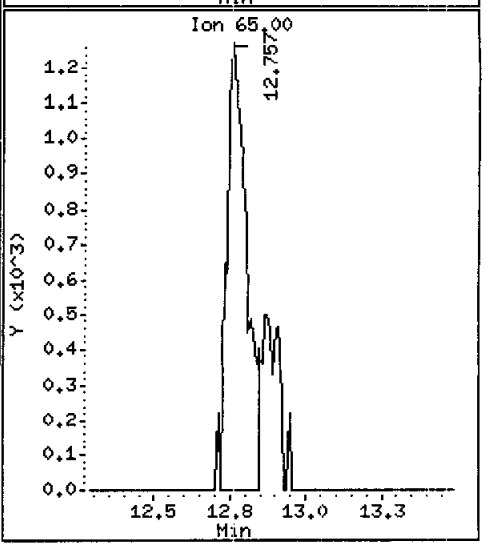












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7548.D
Lab Smp Id: G2DGR1AD Client Smp ID: 066354-001
Inj Date : 12-JAN-2005 05:14
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGR1AD,066354-001,SANDIA,E5A110218-3
Misc Info : 23.9,12.9,500,927,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 05:27 kammererd Quant Type: ISTD
Cal Date : 11-JAN-2005 19:10 Cal File: CC01116.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.900	FinalPres
InitPres	12.900	InitPres
CalVol	500.000	CalVol
SmpVol	927.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.134	2.156	(0.257)	13186	0.58866	0.5882(a)
37 Methylene Chloride	49	5.616	5.593	(0.676)	10088	1.36394	1.363(a)
* 58 Bromochloromethane	49	8.305	8.317	(1.000)	530687	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.334	9.347	(0.920)	479302	52.2871	52.25
* 73 1,4-Difluorobenzene	114	10.146	10.149	(1.000)	1116997	50.0000	
75 Trichloroethene	130	10.588	10.601	(1.044)	774904	79.4529	79.40
$ 88 Toluene-d8	100	12.744	12.766	(1.256)	574593	49.1260	49.09
89 Toluene	91	12.880	12.883	(1.269)	29875	1.51900	1.518(a)
* 101 Chlorobenzene-d5	117	15.397	15.418	(1.000)	765404	50.0000	
$ 114 4-Bromofluorobenzene	95	17.653	17.675	(1.146)	597728	43.7161	43.68

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7548.D

Date : 12-JAN-2005 05:14

Client ID: 066354-001

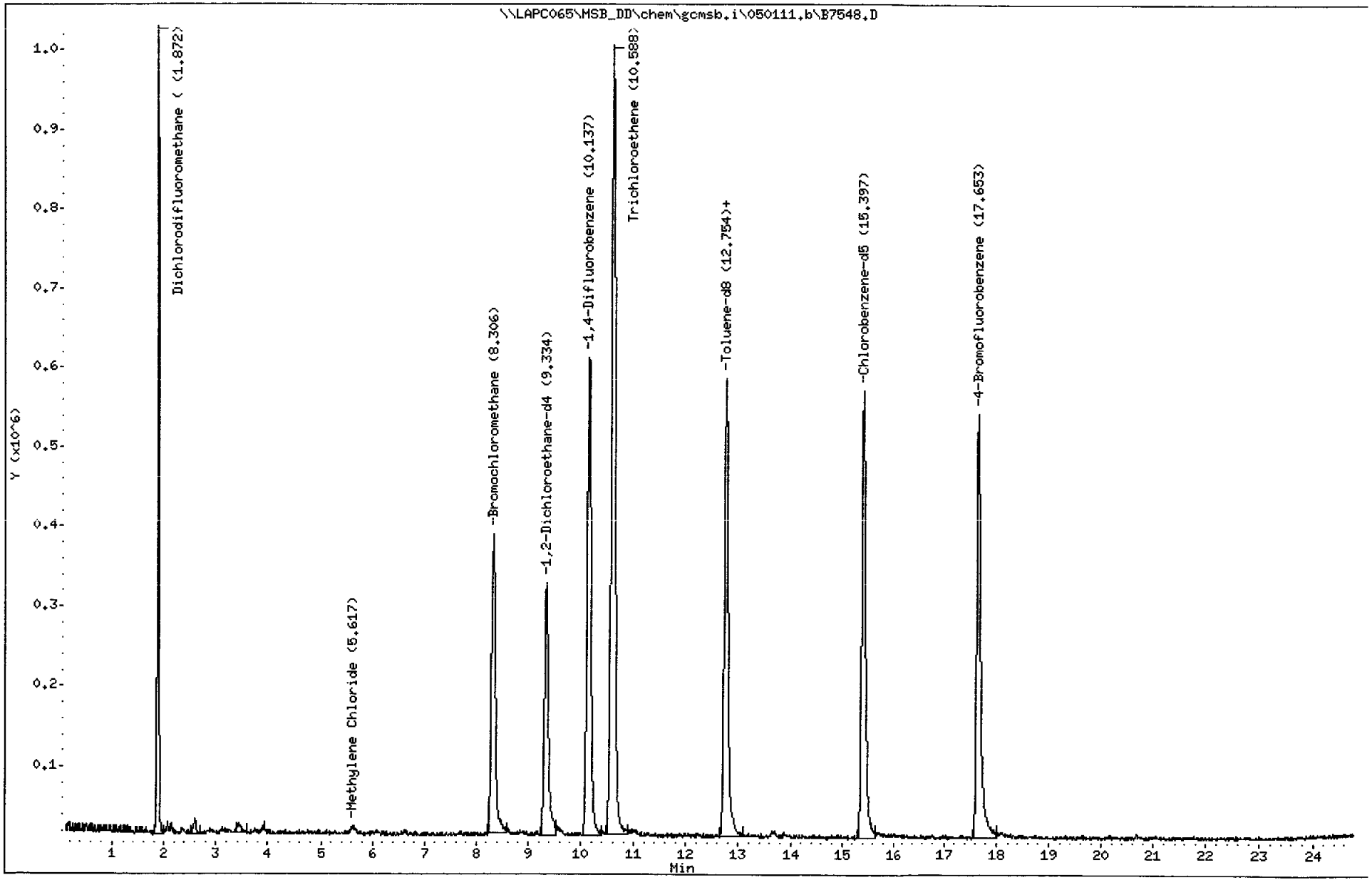
Sample Info: G2DGR1AD,066354-001,SANDIA,E5A110218-3

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



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Date : 12-JAN-2005 05:14

Client ID: 066354-001

Instrument: gcmsb.i

Sample Info: G2DGR1AD,066354-001,SANDIA,E5A110218-3

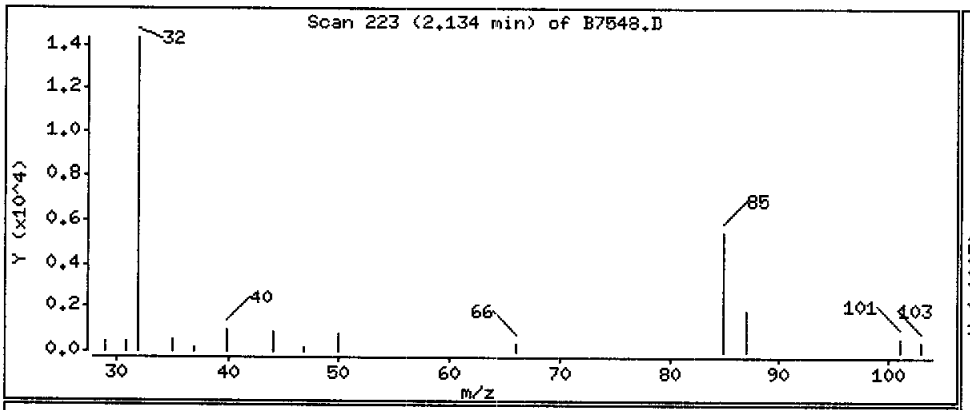
Operator: DLK

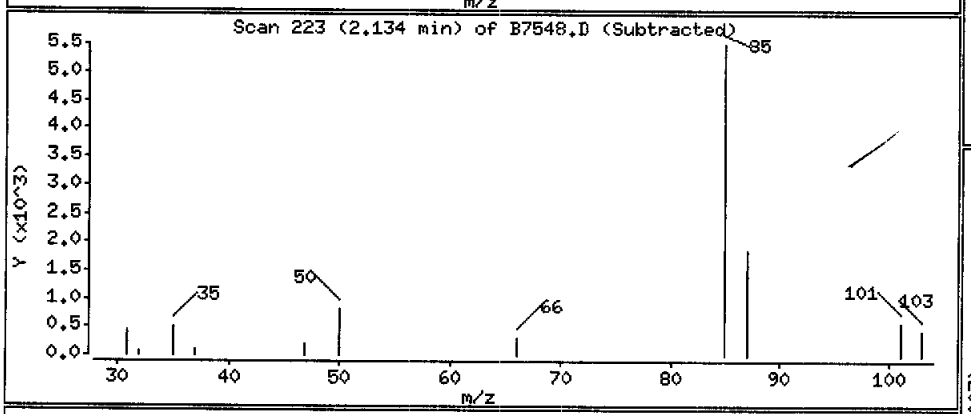
Column phase: J&W DB-624

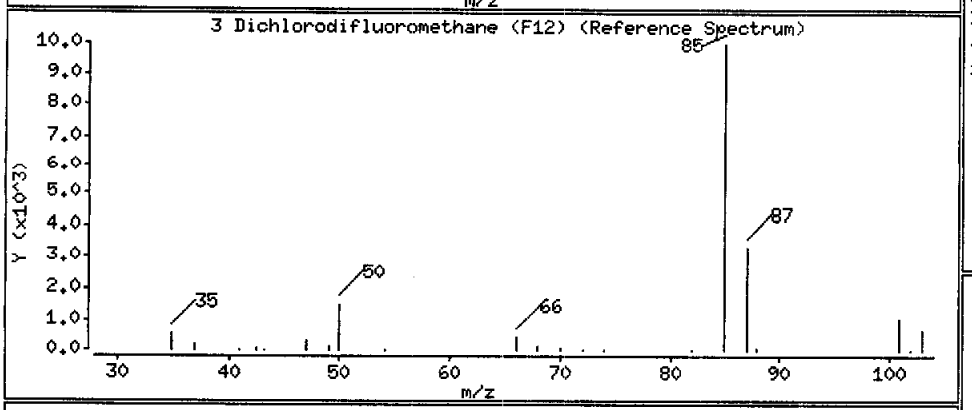
Column diameter: 0.53

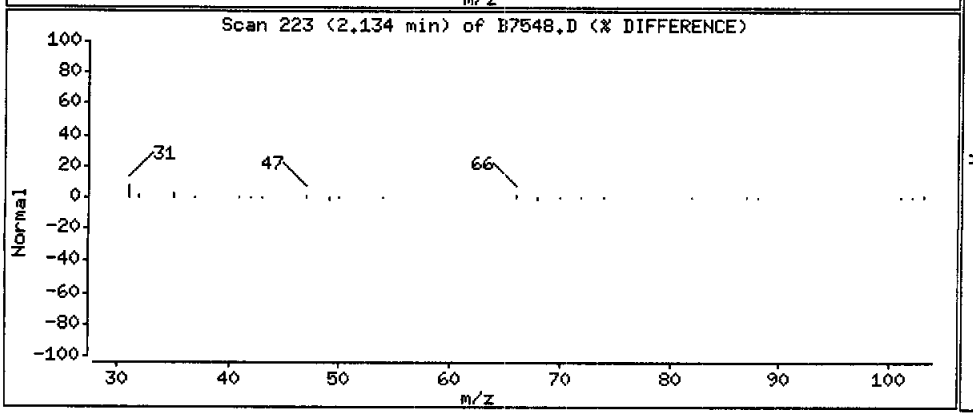
3 Dichlorodifluoromethane (F12)

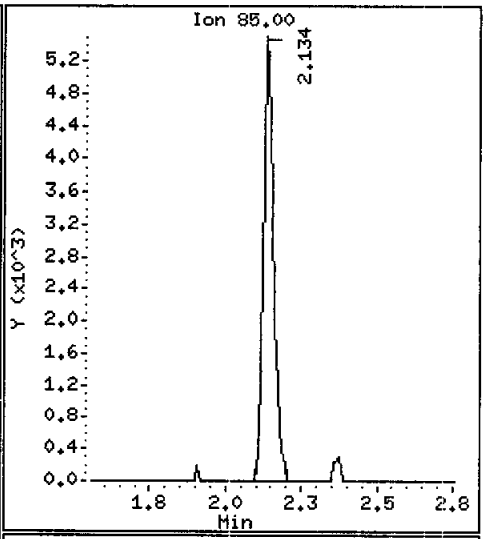
Concentration: 0.5882 ppbv

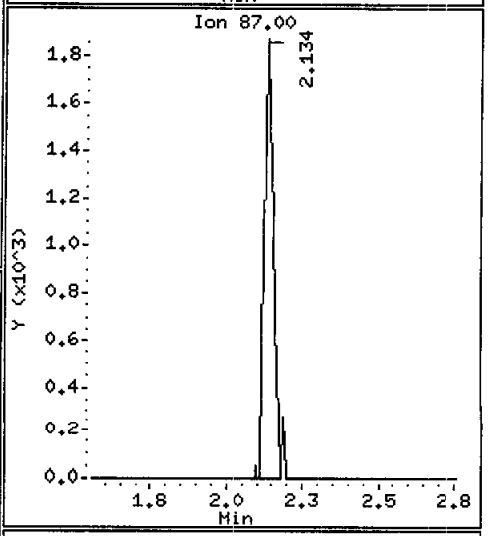


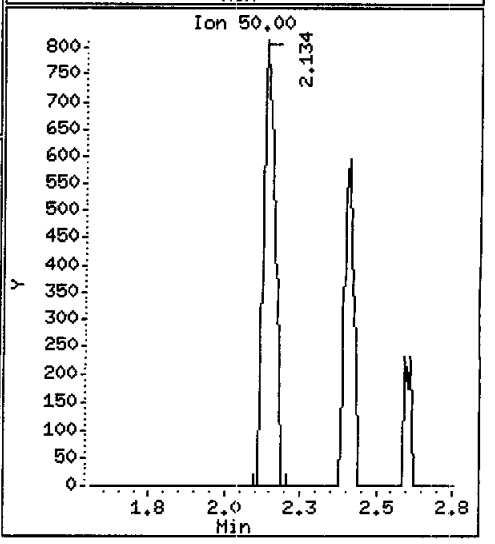












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Date : 12-JAN-2005 05:14

Client ID: 066354-001

Instrument: gcmsb.i

Sample Info: G2DGR1AD,066354-001,SANDIA,E5A110218-3

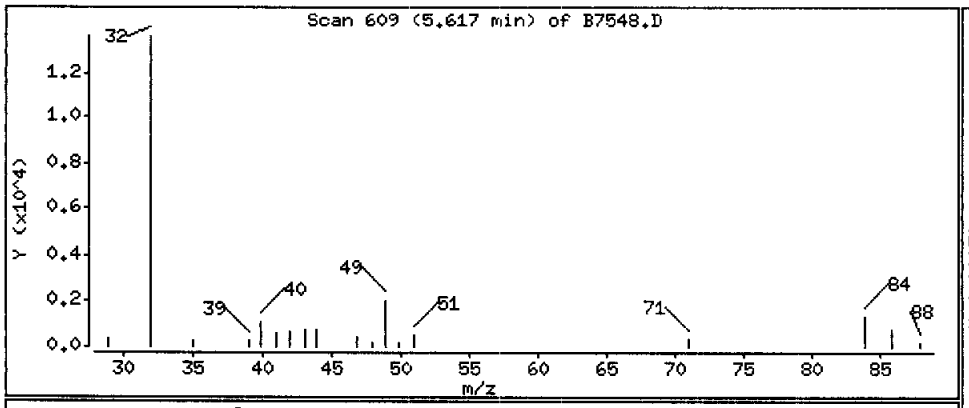
Operator: DLK

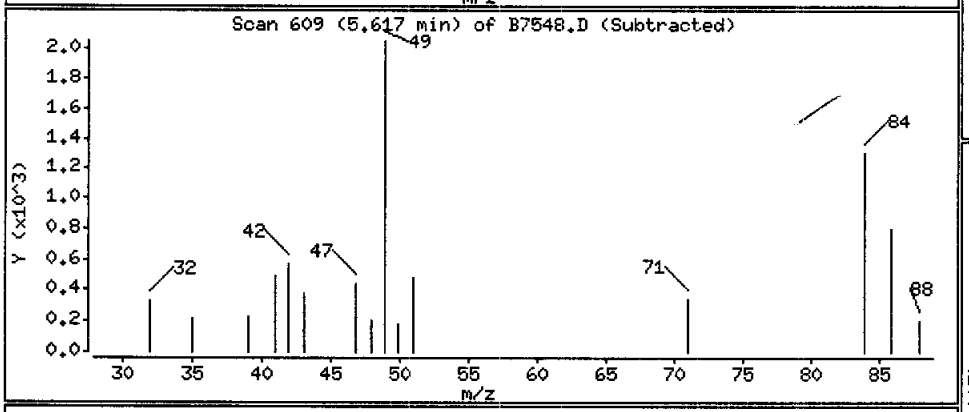
Column phase: J&W DB-624

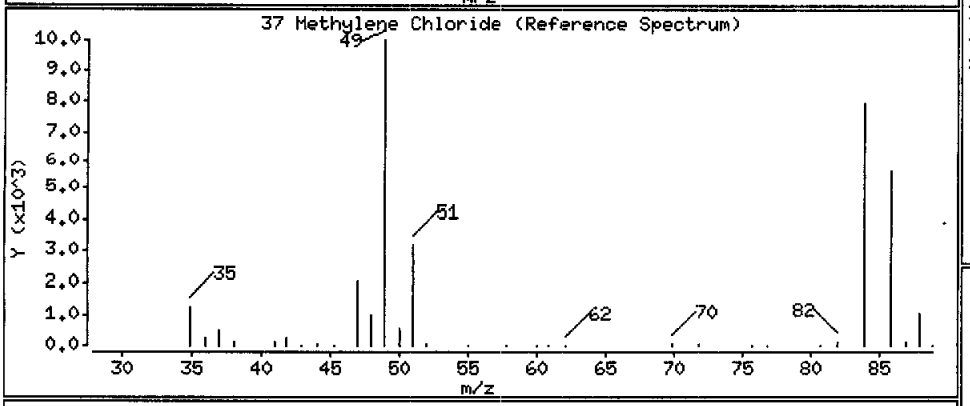
Column diameter: 0.53

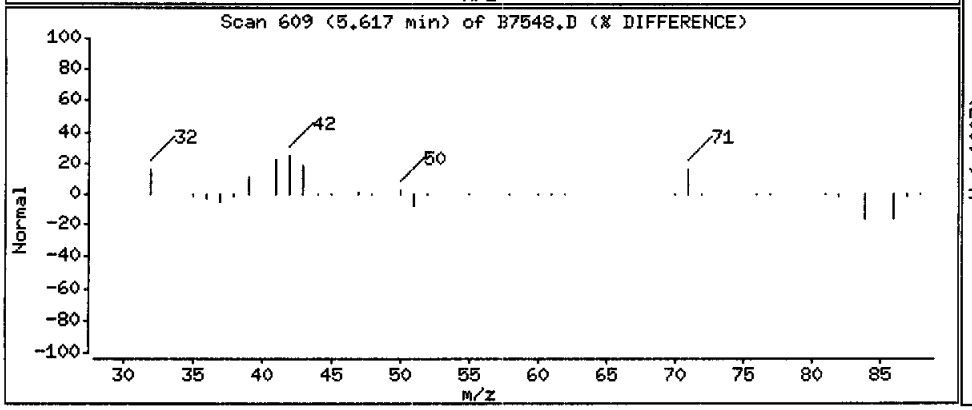
37 Methylene Chloride

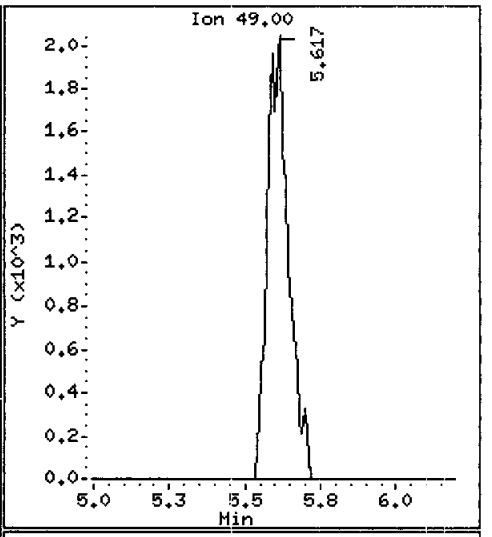
Concentration: 1.363 ppbv

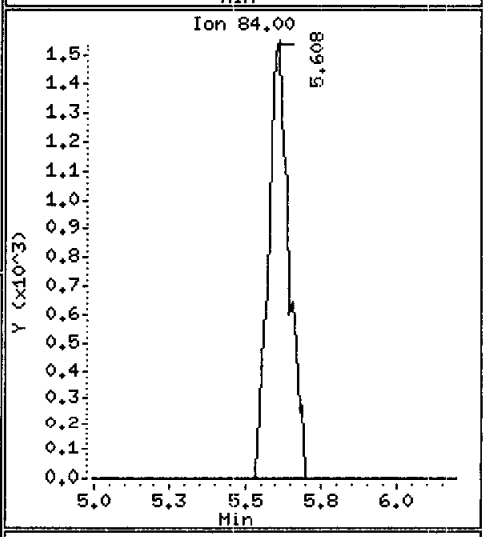


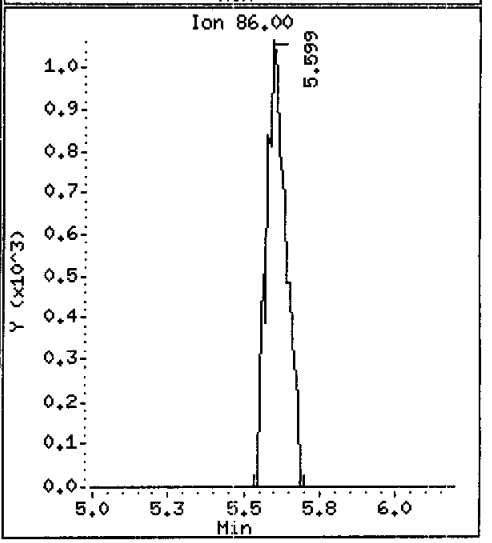












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7548.D

Date : 12-JAN-2005 05:14

Client ID: 066354-001

Instrument: gcmsb.i

Sample Info: G2DGR1AD,066354-001,SANDIA,E5A110218-3

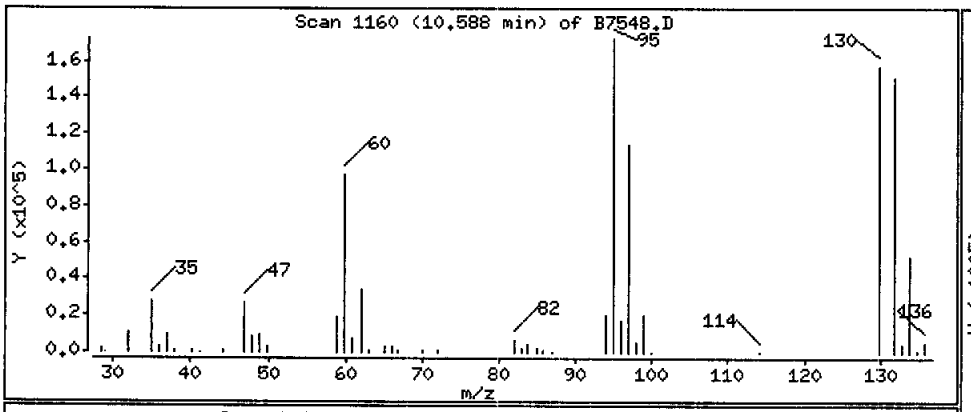
Operator: DLK

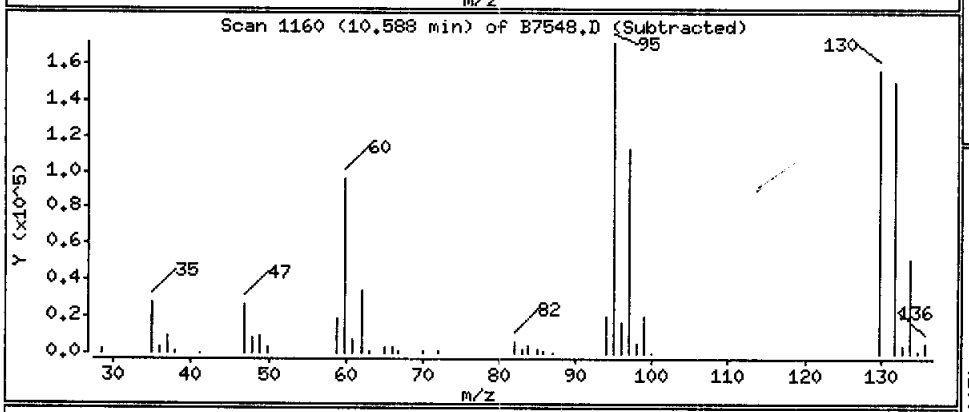
Column phase: J&W DB-624

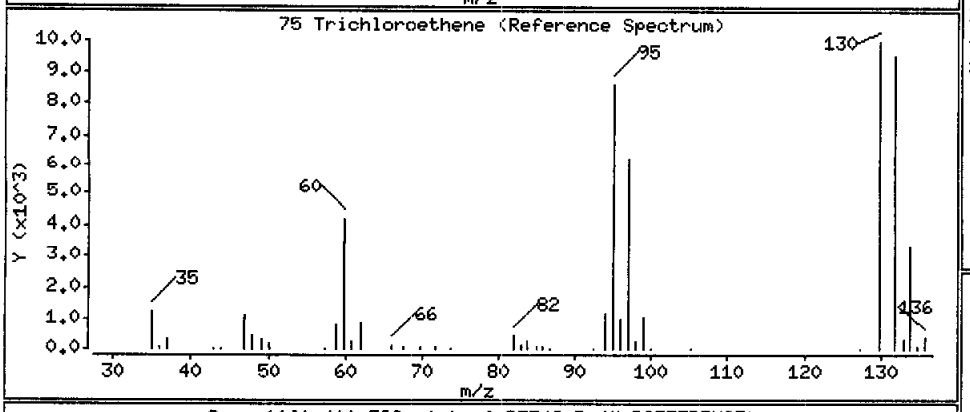
Column diameter: 0.53

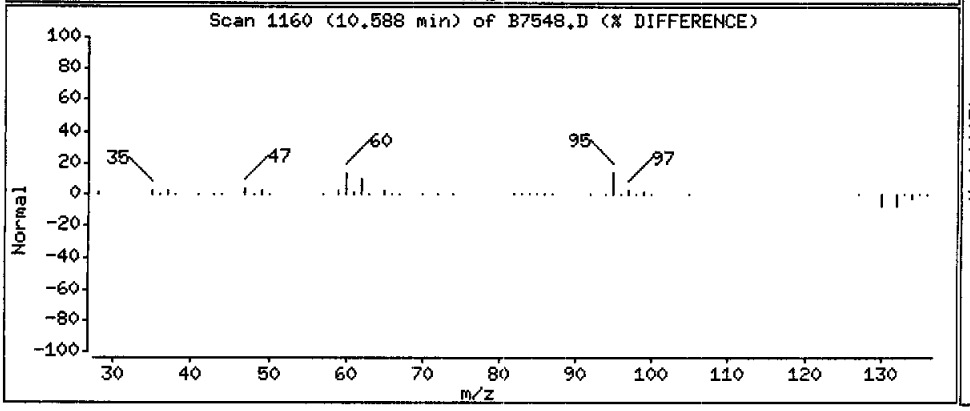
75 Trichloroethene

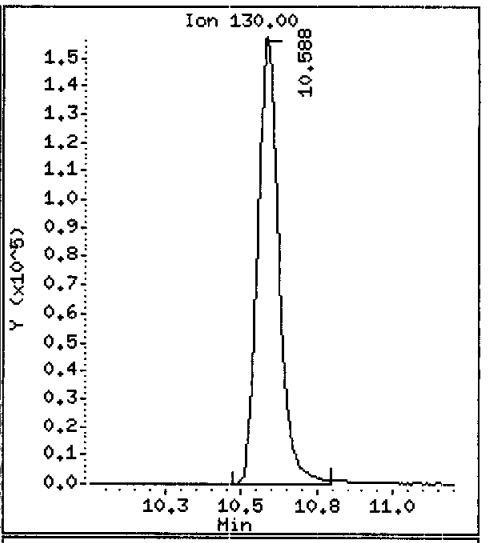
Concentration: 79.40 ppbv

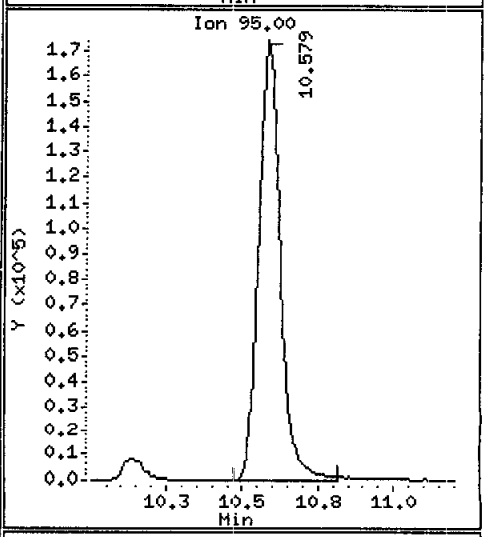


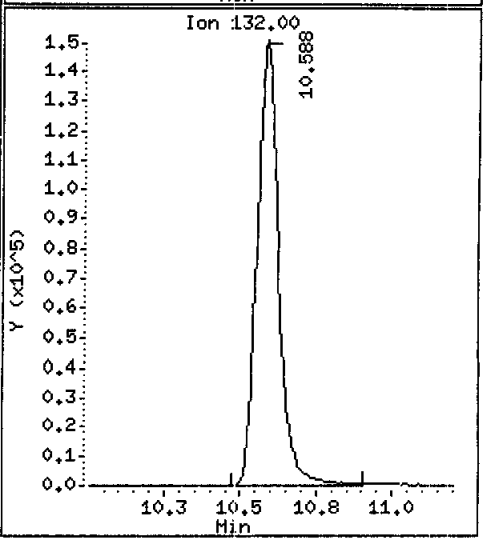












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7548.D

Date : 12-JAN-2005 05:14

Client ID: 066354-001

Instrument: gcmsb.i

Sample Info: G2DGR1AD,066354-001,SANDIA,E5A110218-3

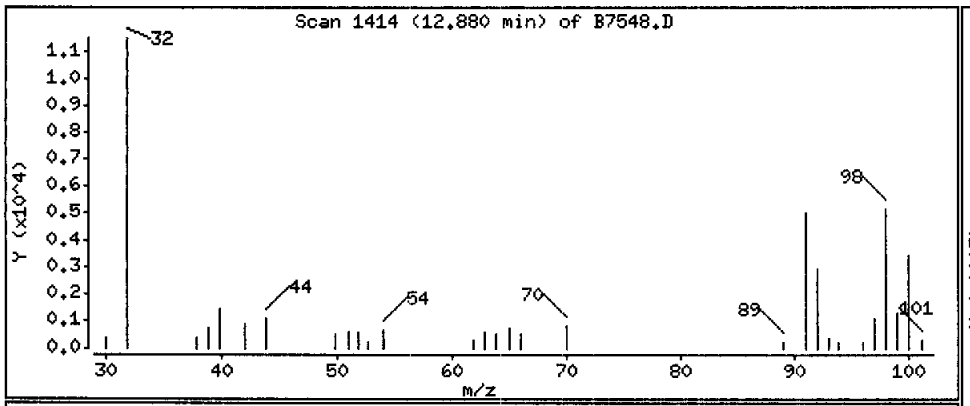
Operator: DLK

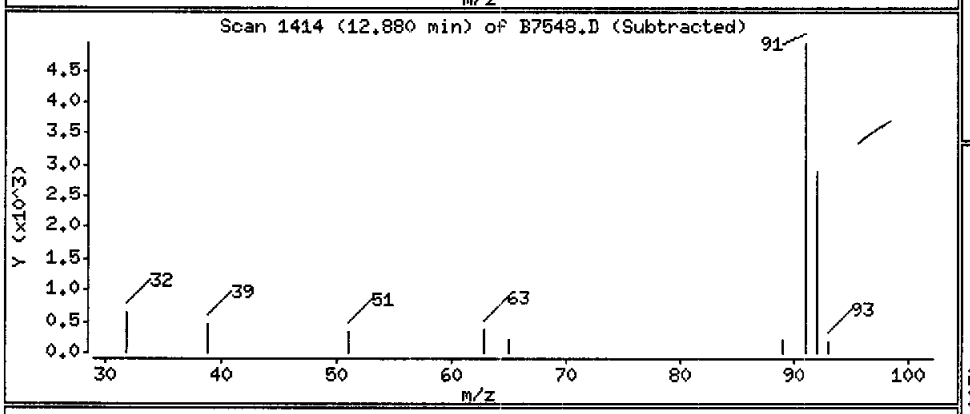
Column phase: J&W DB-624

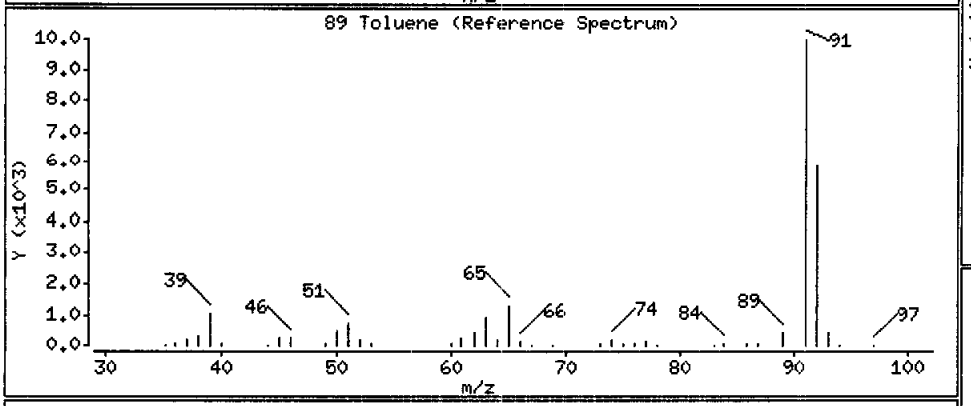
Column diameter: 0.53

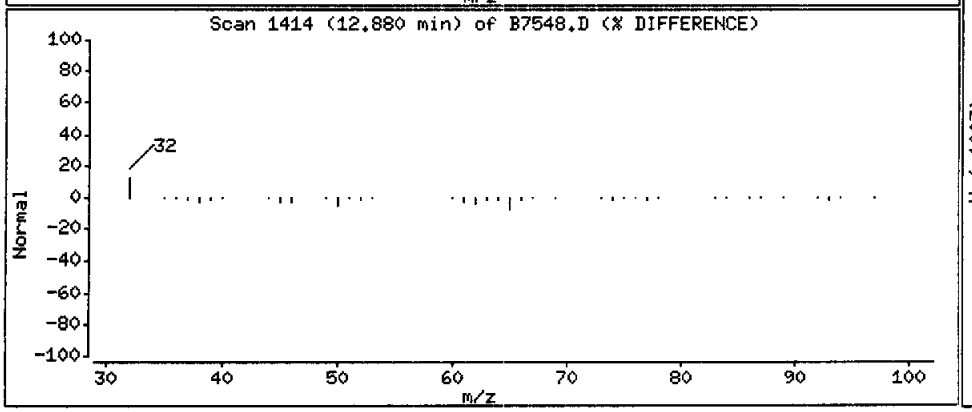
89 Toluene

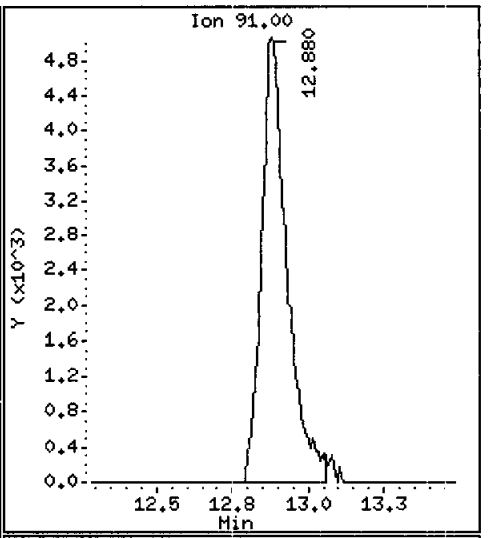
Concentration: 1.518 ppbv

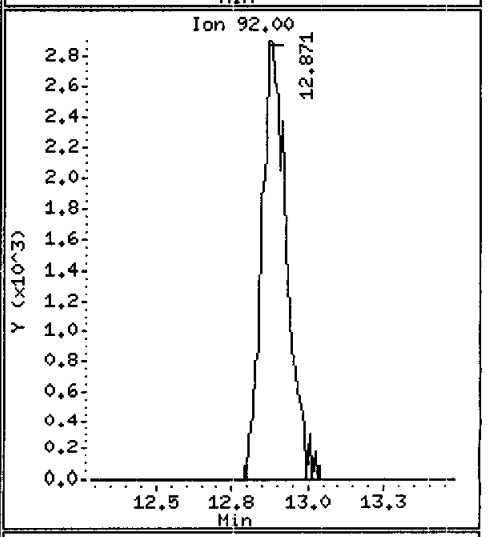


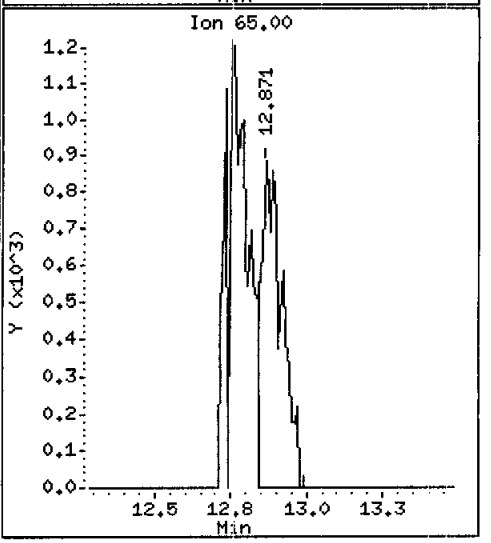












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D
Lab Smp Id: G2DGT1AD Client Smp ID: 066355-001
Inj Date : 12-JAN-2005 05:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGT1AD,066355-001,SANDIA,E5A110218-4
Misc Info : 24.5,12.9,500,950,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 05:27 kammererd Quant Type: ISTD
Cal Date : 11-JAN-2005 19:10 Cal File: CC01116.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.500	FinalPres
InitPres	12.900	InitPres
CalVol	500.000	CalVol
SmpVol	950.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.136	2.156	(0.257)	12017	0.52120	0.5210(a)
37 Methylene Chloride	49	5.592	5.593	(0.673)	7704	1.01201	1.012(a)
* 58 Bromochloromethane	49	8.308	8.317	(1.000)	546225	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.336	9.347	(0.921)	487161	52.8470	52.82
* 73 1,4-Difluorobenzene	114	10.139	10.149	(1.000)	1123284	50.0000	
75 Trichloroethene	130	10.581	10.601	(1.044)	2383944	243.064	243.0
$ 88 Toluene-d8	100	12.756	12.766	(1.258)	585311	49.7622	49.74
89 Toluene	91	12.873	12.883	(1.270)	22310	1.12801	1.128(a)
95 Tetrachloroethene	166	13.893	13.885	(0.902)	8908	0.73021	0.7299(a)
* 101 Chlorobenzene-d5	117	15.400	15.418	(1.000)	779205	50.0000	
$ 114 4-Bromofluorobenzene	95	17.655	17.675	(1.146)	601396	43.2054	43.19

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D

Date : 12-JAN-2005 05:48

Client ID: 066355-001

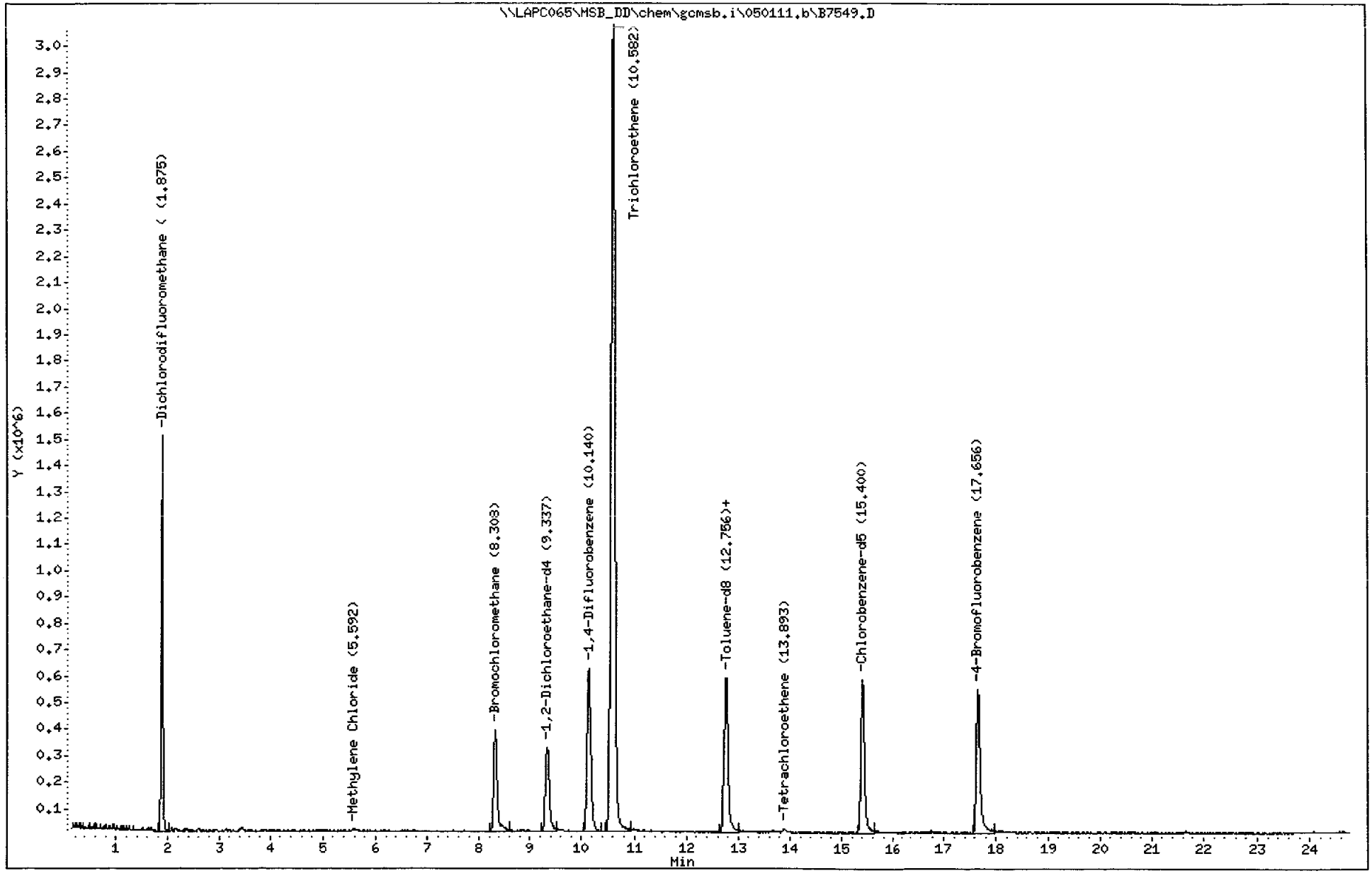
Sample Info: G2DGT1AD,066355-001,SANDIA,E5A110218-4

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D

Date : 12-JAN-2005 05:48

Client ID: 066355-001

Instrument: gcmsb.i

Sample Info: G2DGT1AD,066355-001,SANDIA,E5A110218-4

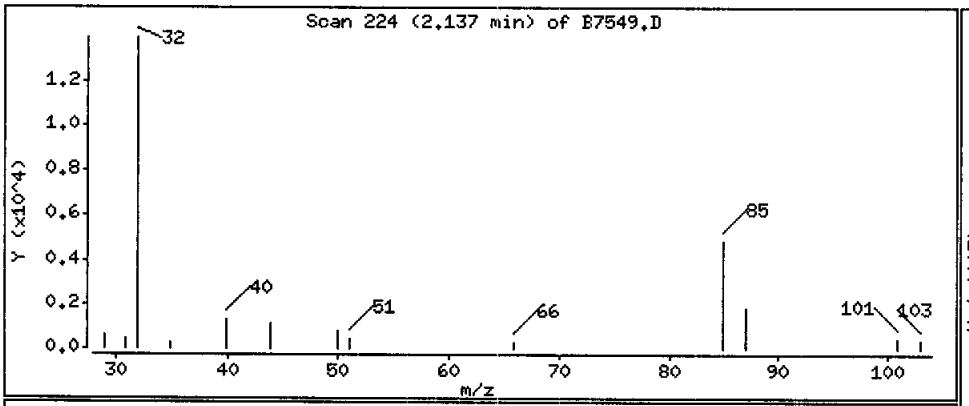
Operator: DLK

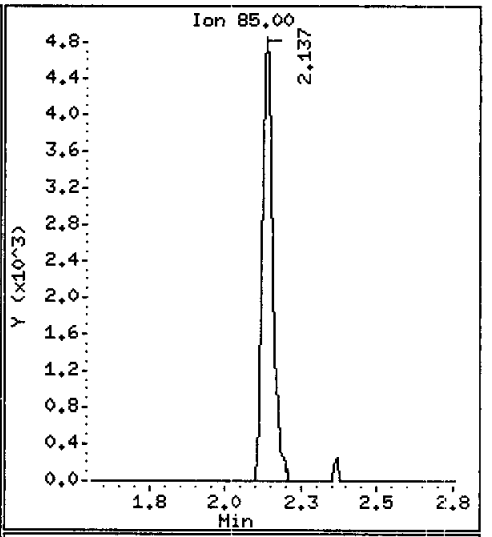
Column phase: J&W DB-624

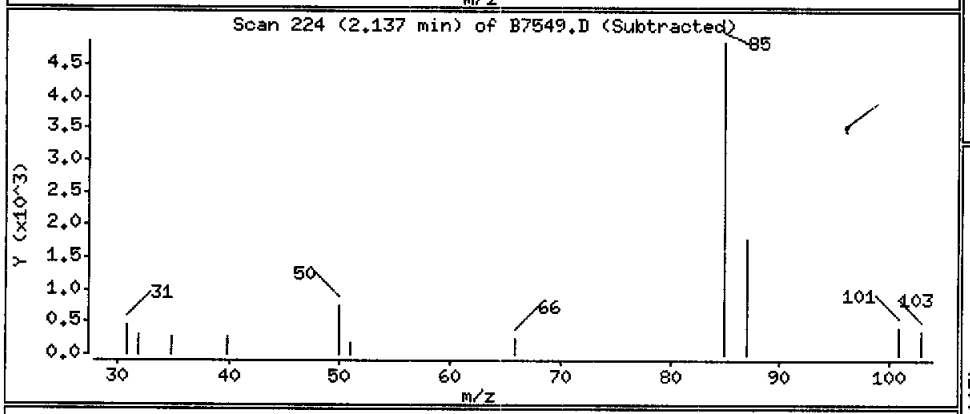
Column diameter: 0.53

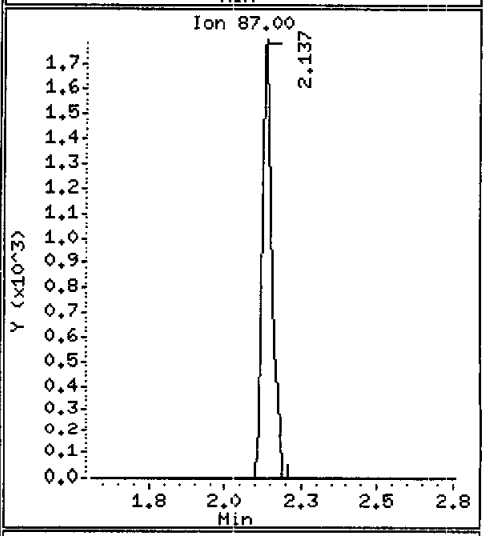
3 Dichlorodifluoromethane (F12)

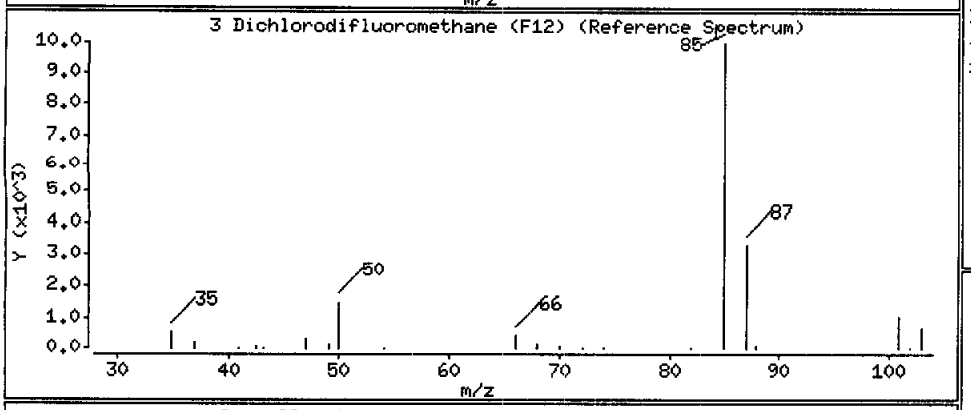
Concentration: 0.5210 ppbv

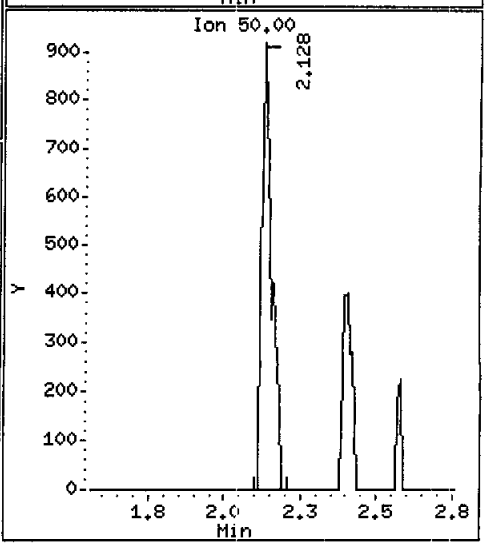


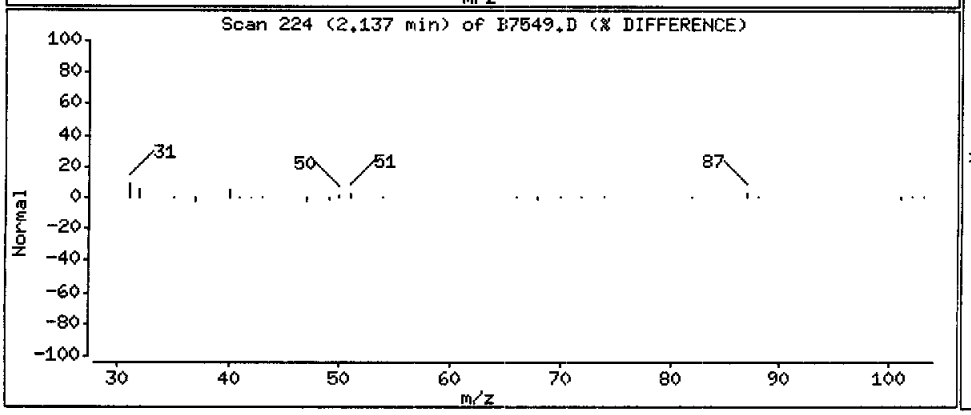












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D

Date : 12-JAN-2005 05:48

Client ID: 066355-001

Instrument: gcmsb.i

Sample Info: G2DGT1AD,066355-001,SANDIA,E5A110218-4

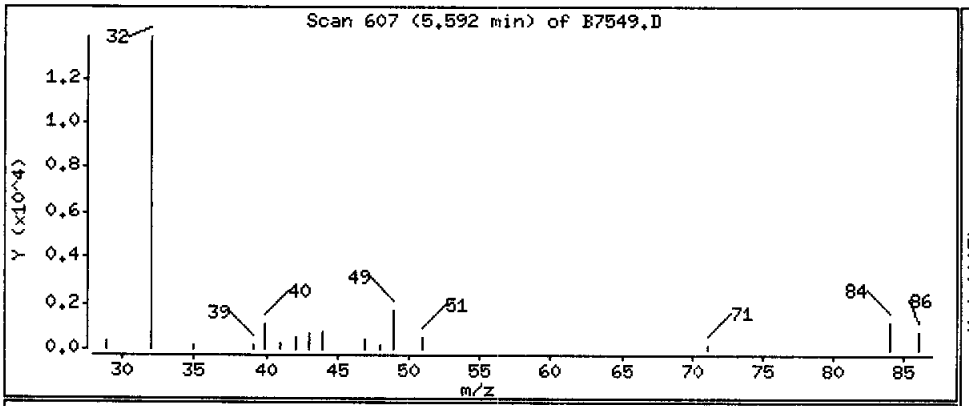
Operator: DLK

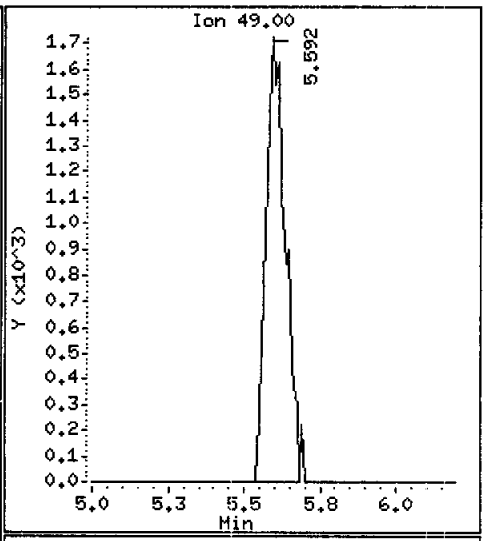
Column phase: J&W DB-624

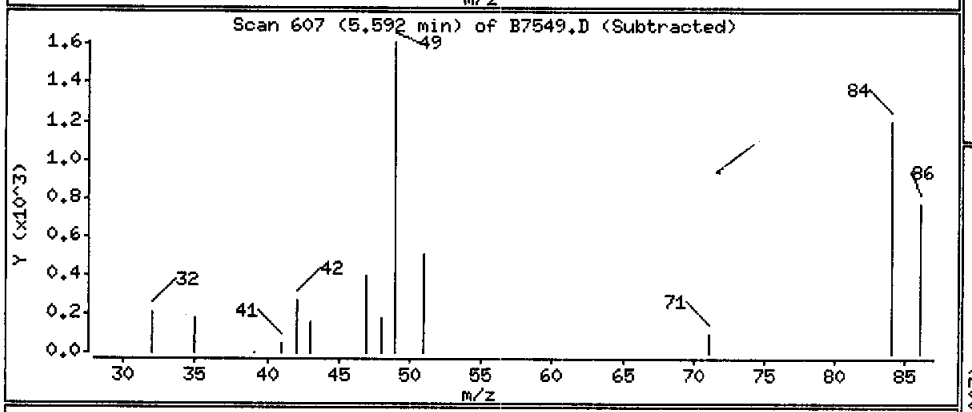
Column diameter: 0.53

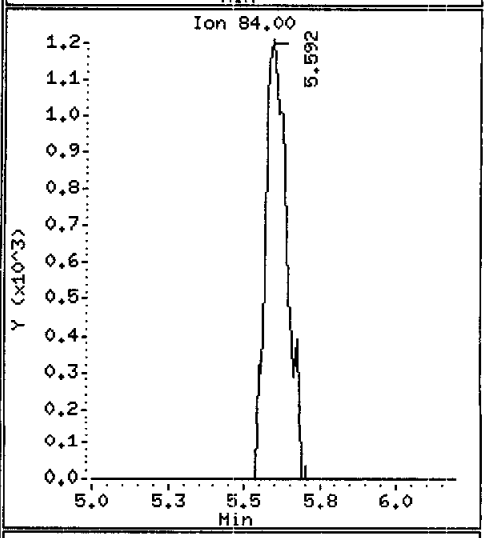
37 Methylene Chloride

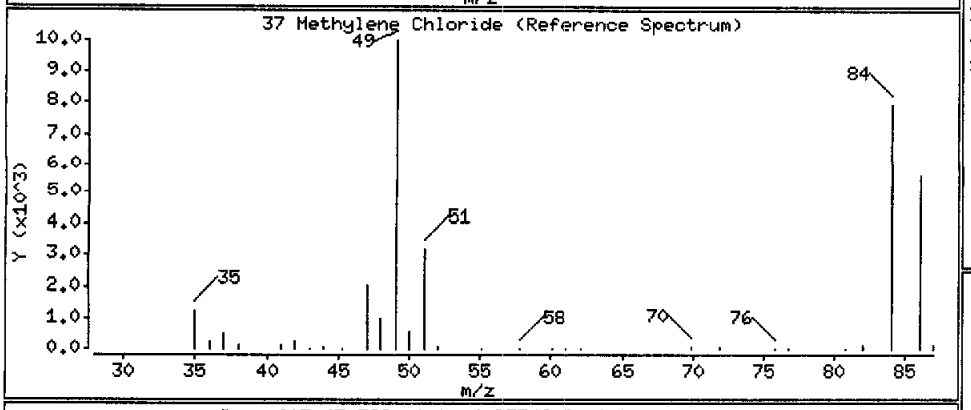
Concentration: 1.012 ppbv

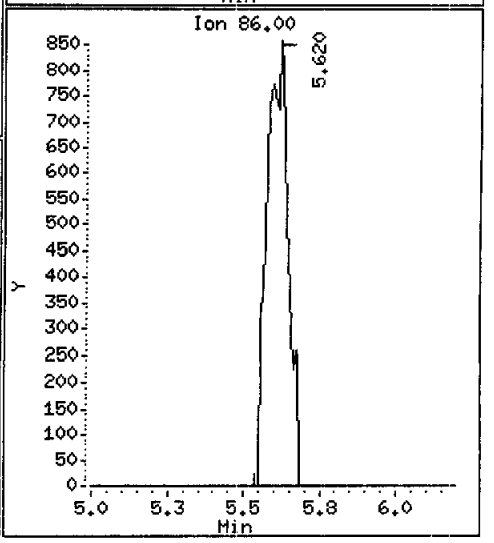


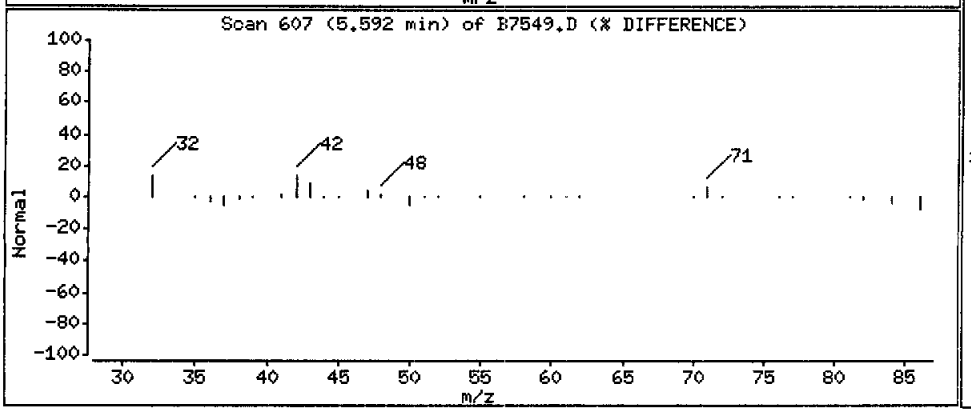












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D

Date : 12-JAN-2005 05:48

Client ID: 066355-001

Instrument: gcmsb.i

Sample Info: G2DGT1AD,066355-001,SANDIA,E5A110218-4

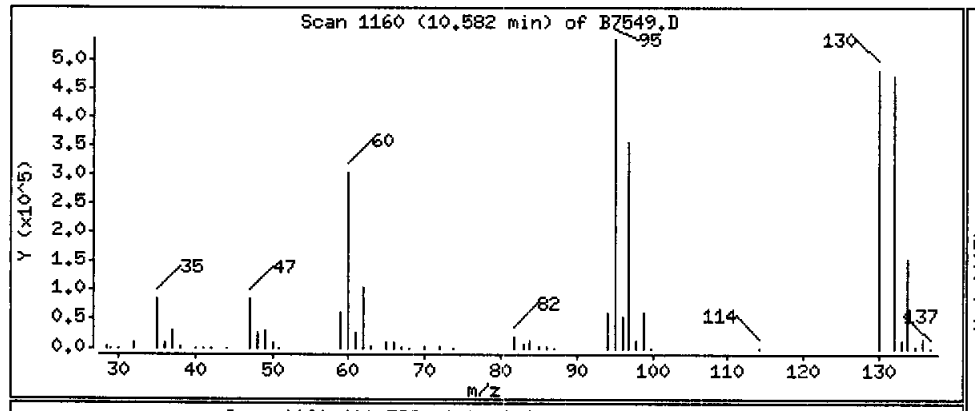
Operator: DLK

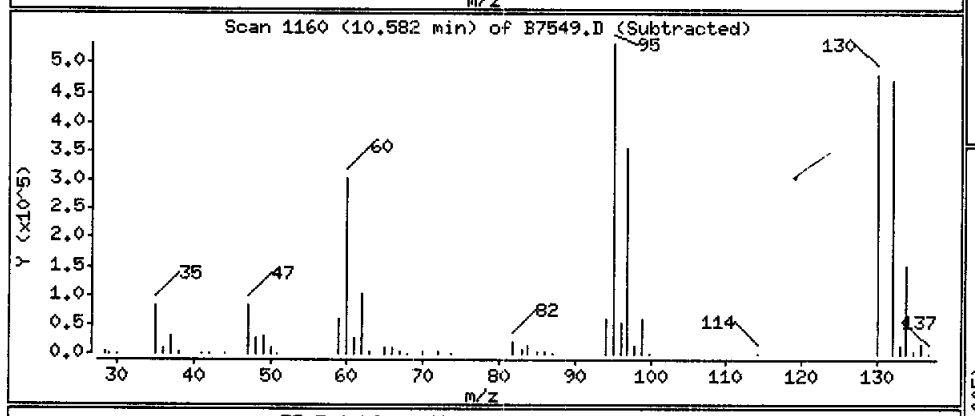
Column phase: J&W DB-624

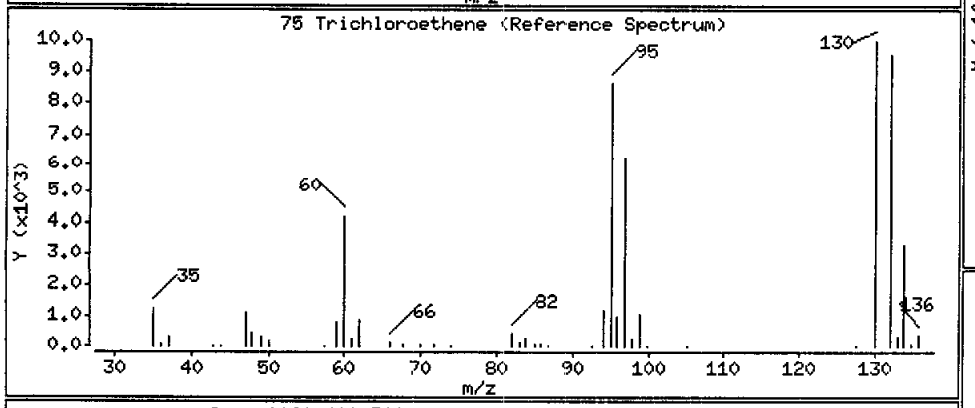
Column diameter: 0.53

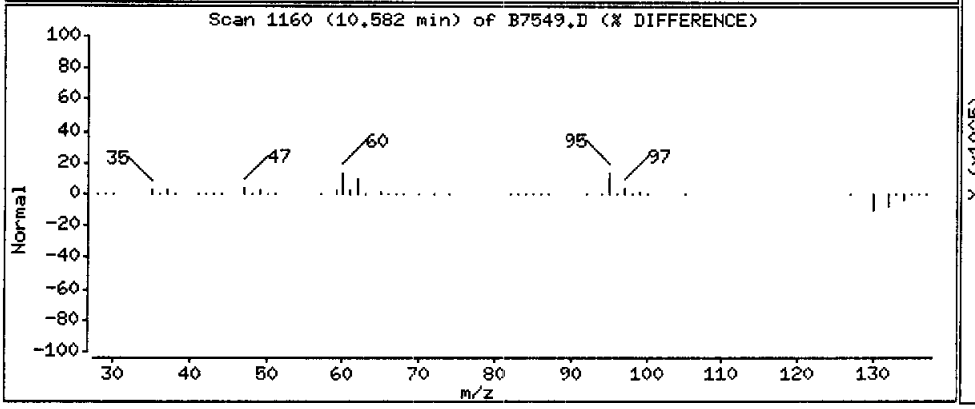
75 Trichloroethene

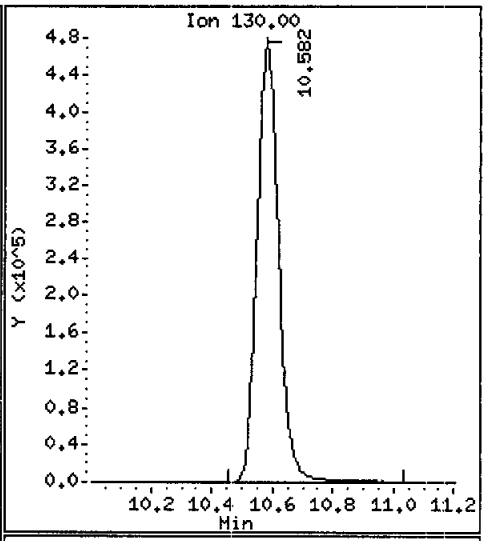
Concentration: 243.0 ppbv

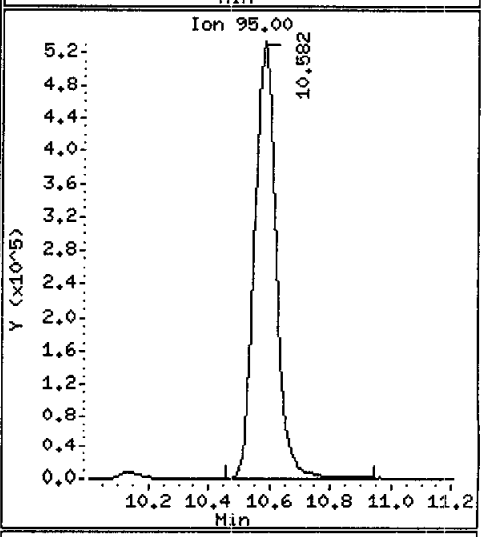


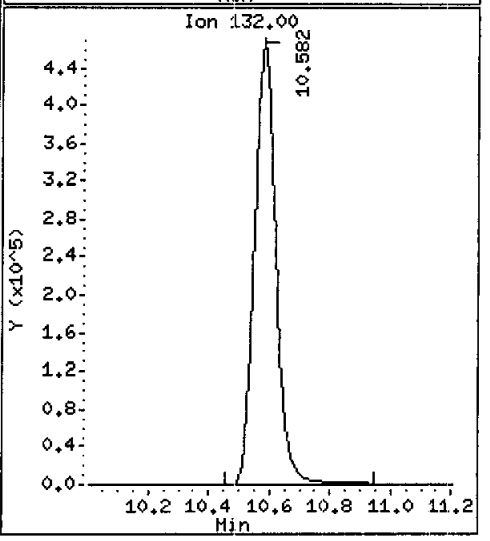












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D

Date : 12-JAN-2005 05:48

Client ID: 066355-001

Instrument: gcmsb.i

Sample Info: G2DGT1AD,066355-001,SANDIA,E5A110218-4

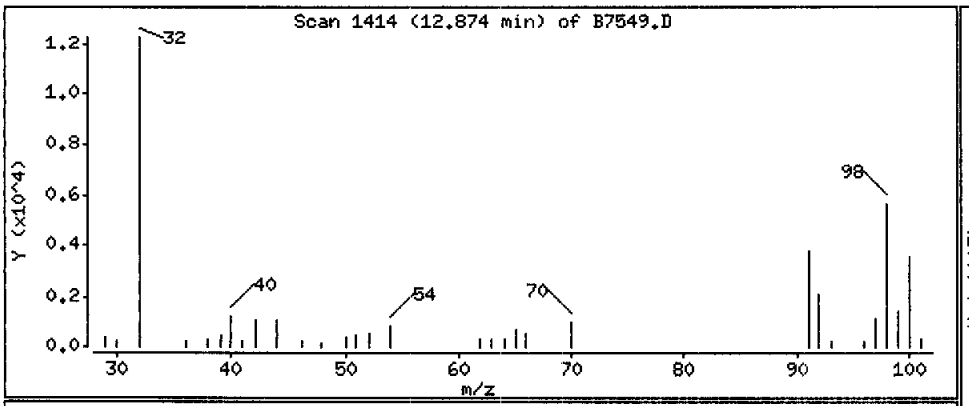
Operator: DLK

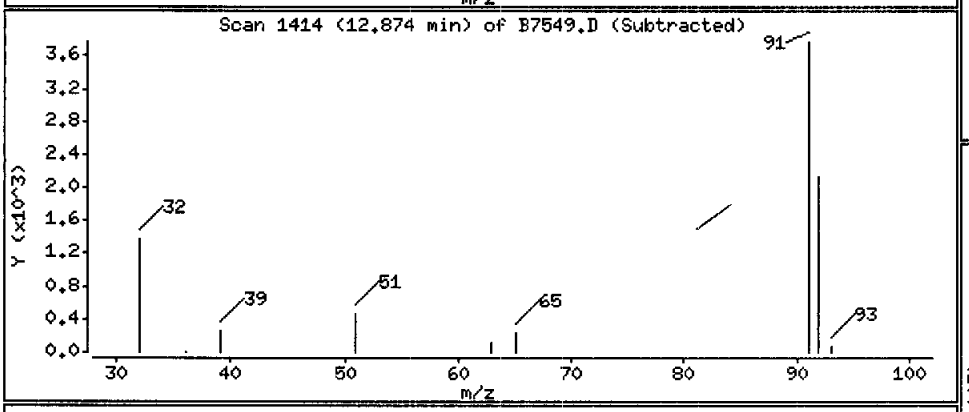
Column phase: J&W DB-624

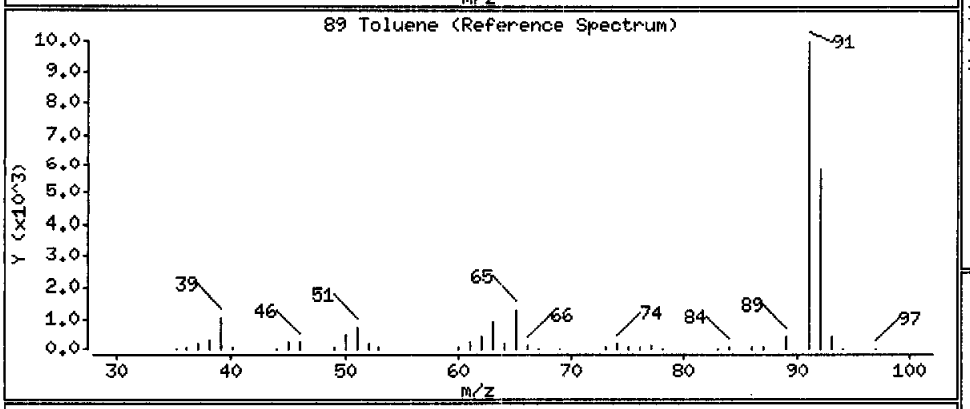
Column diameter: 0.53

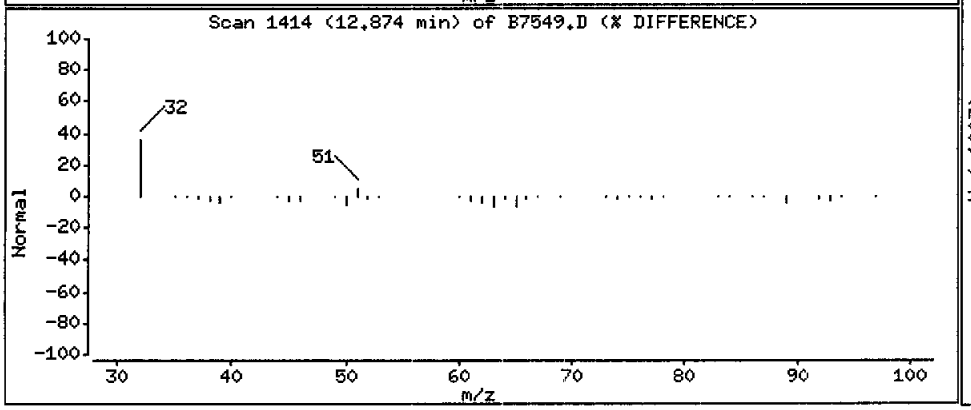
89 Toluene

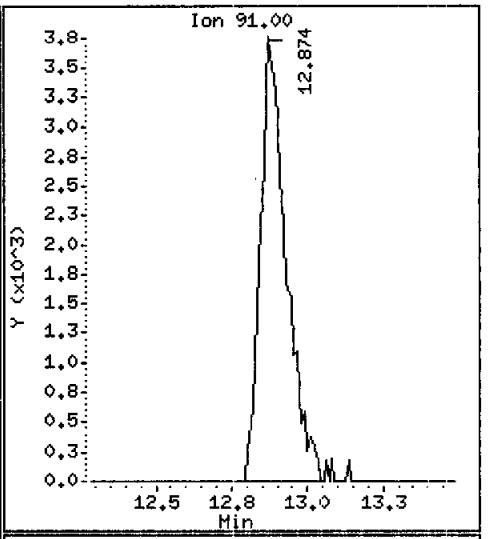
Concentration: 1.128 ppbv

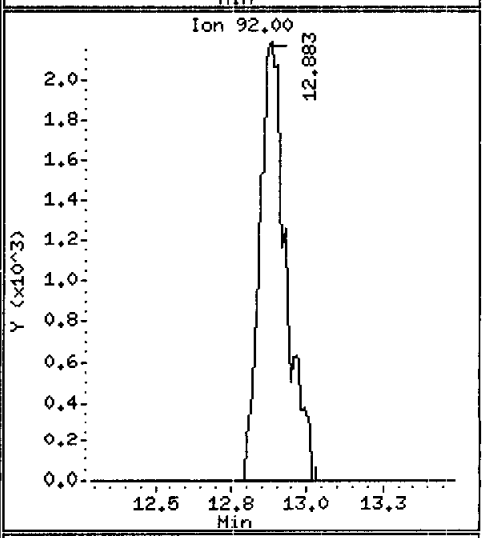


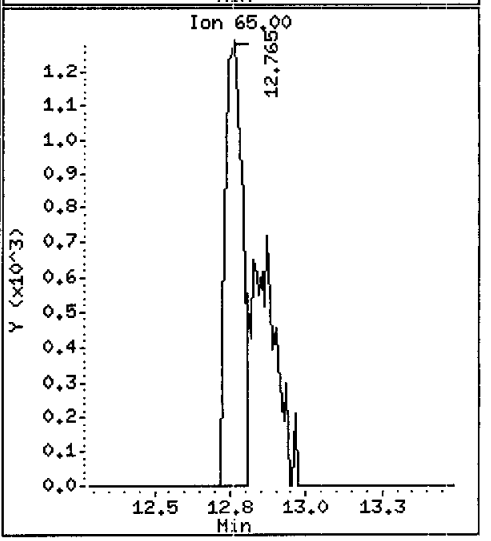












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7549.D

Date : 12-JAN-2005 05:48

Client ID: 066355-001

Instrument: gcmsb.i

Sample Info: G2DGT1AD,066355-001,SANDIA,E5A110218-4

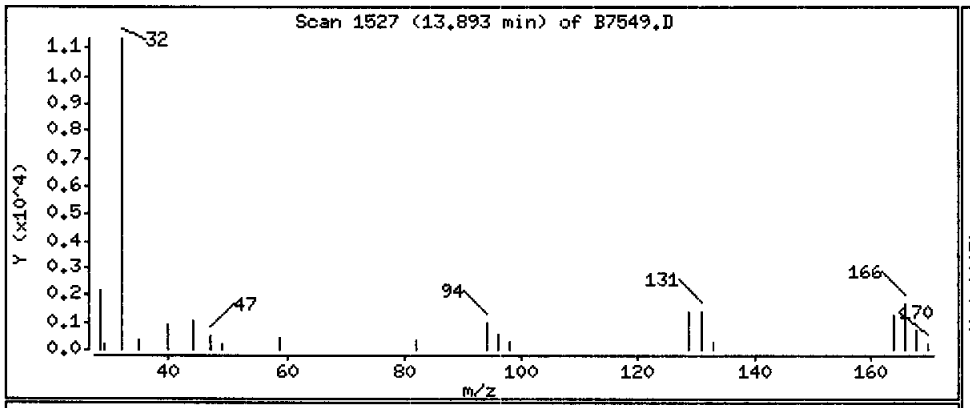
Operator: DLK

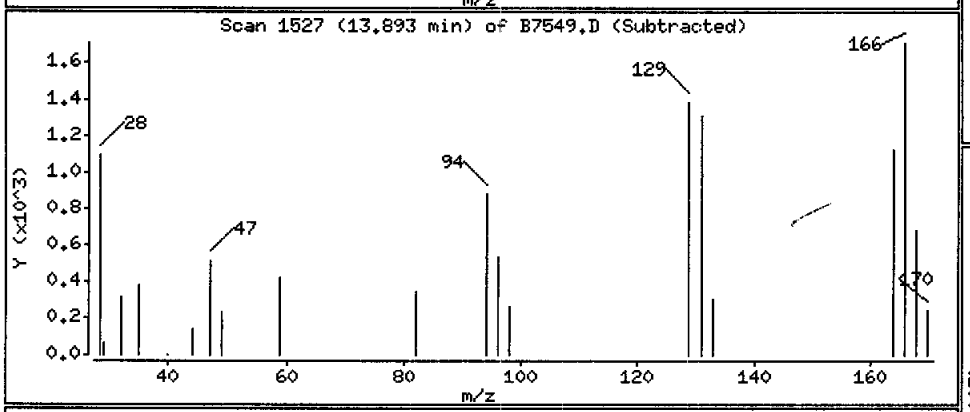
Column phase: J&W DB-624

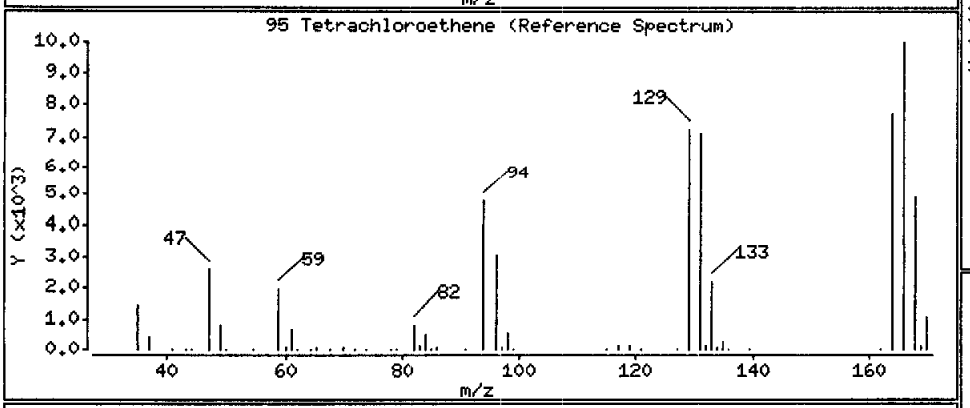
Column diameter: 0.53

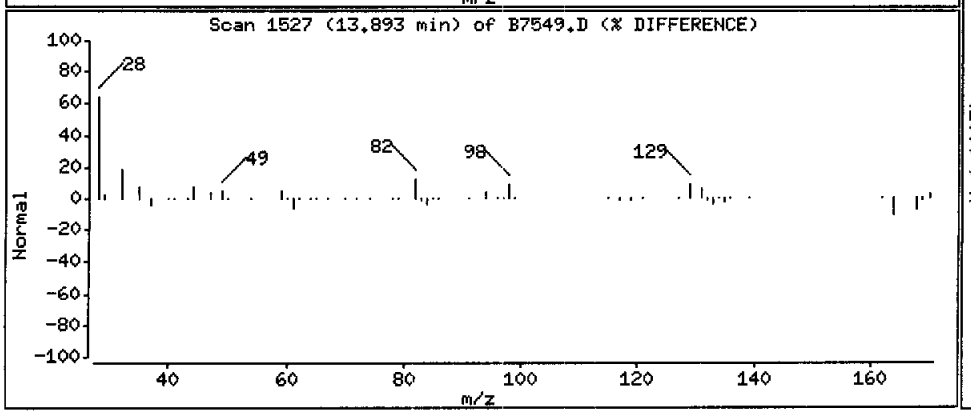
95 Tetrachloroethene

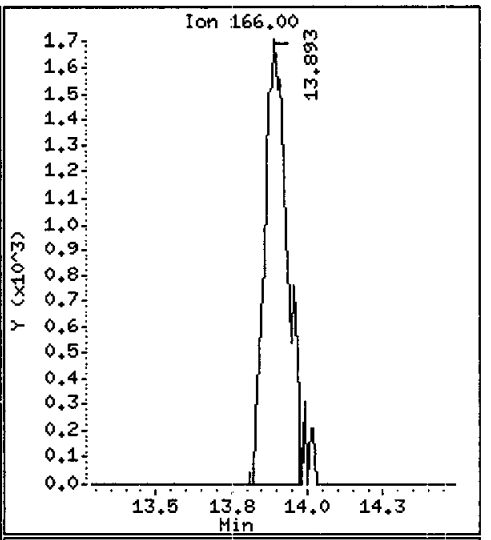
Concentration: 0.7299 ppbv

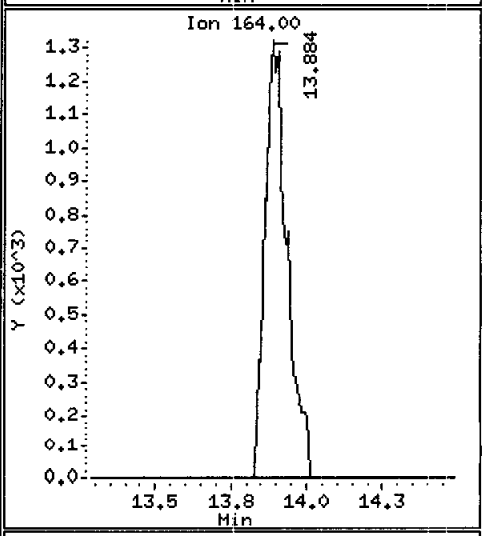


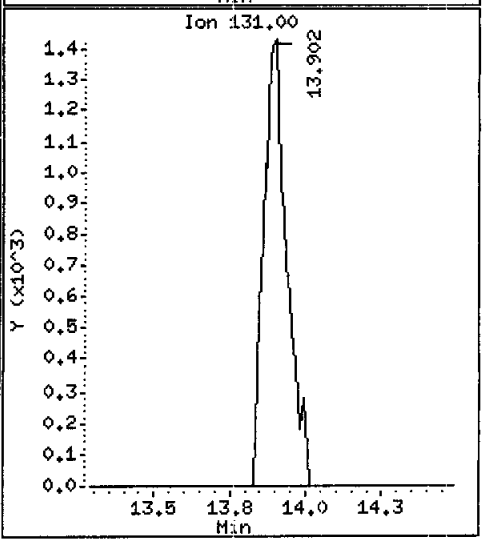












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D
Lab Smp Id: G2DGV1AD Client Smp ID: 066356-001
Inj Date : 12-JAN-2005 06:16
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGV1AD,066356-001,SANDIA,E5A110218-5
Misc Info : 24.6,12.9,500,954,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 05:27 kammererd Quant Type: ISTD
Cal Date : 11-JAN-2005 19:10 Cal File: CC01116.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.600	FinalPres
InitPres	12.900	InitPres
CalVol	500.000	CalVol
SmpVol	954.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
37 Methylene Chloride	49	5.593	5.593	(0.673)	54118	7.21693	7.213
53 cis-1,2-Dichloroethene	96	7.921	7.912	(0.953)	7708	1.12081	1.120(a)
* 58 Bromochloromethane	49	8.309	8.317	(1.000)	538046	50.0000	
60 Chloroform	83	8.489	8.489	(1.022)	16763	0.97931	0.9788(a)
$ 66 1,2-Dichloroethane-d4	65	9.337	9.347	(0.921)	484094	52.5313	52.50
* 73 1,4-Difluorobenzene	114	10.140	10.149	(1.000)	1122921	50.0000	
75 Trichloroethene	130	10.582	10.601	(1.044)	4808451	490.421	490.2
78 1,2-Dichloropropane	76	10.979	10.980	(1.083)	19606	5.32661	5.324(Q)
$ 88 Toluene-d8	100	12.748	12.766	(1.257)	574835	48.8874	48.86
89 Toluene	91	12.883	12.883	(1.270)	21113	1.06785	1.067(a)
95 Tetrachloroethene	166	13.876	13.885	(0.902)	19194	1.59046	1.590(a)
* 101 Chlorobenzene-d5	117	15.392	15.418	(1.000)	770855	50.0000	
$ 114 4-Bromofluorobenzene	95	17.647	17.675	(1.147)	539943	39.2107	39.19

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

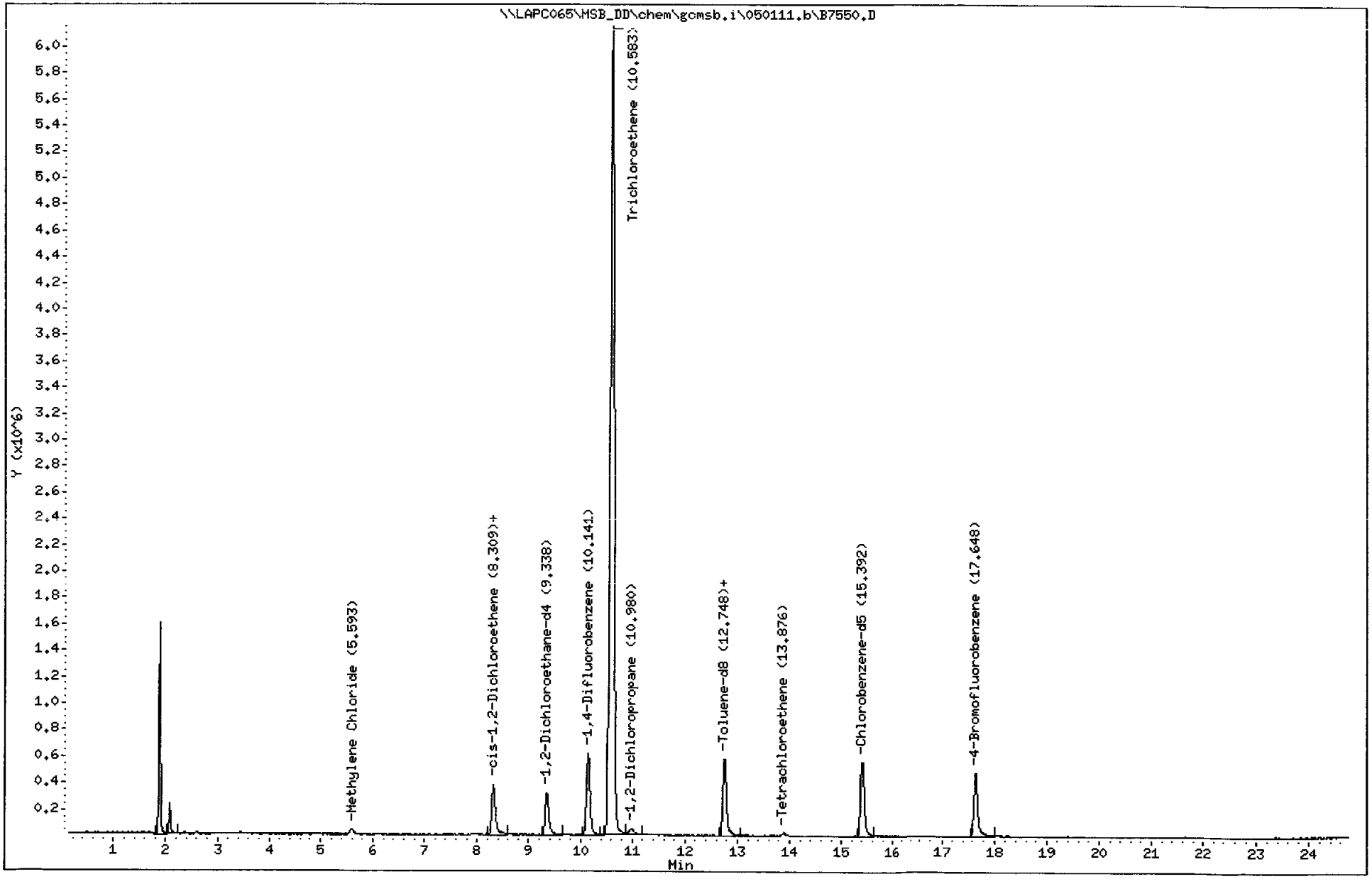
Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

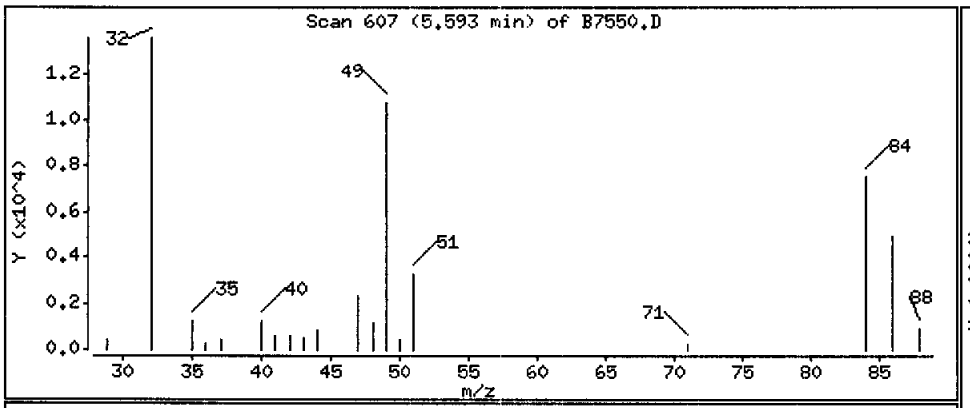
Operator: DLK

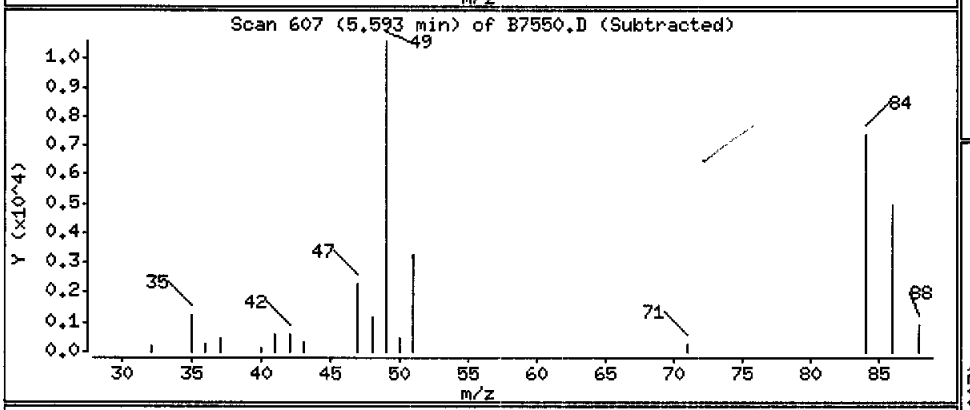
Column phase: J&W DB-624

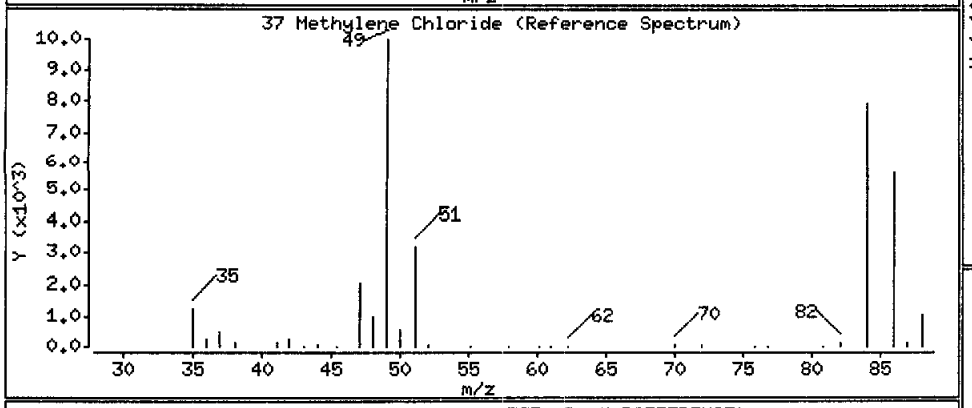
Column diameter: 0.53

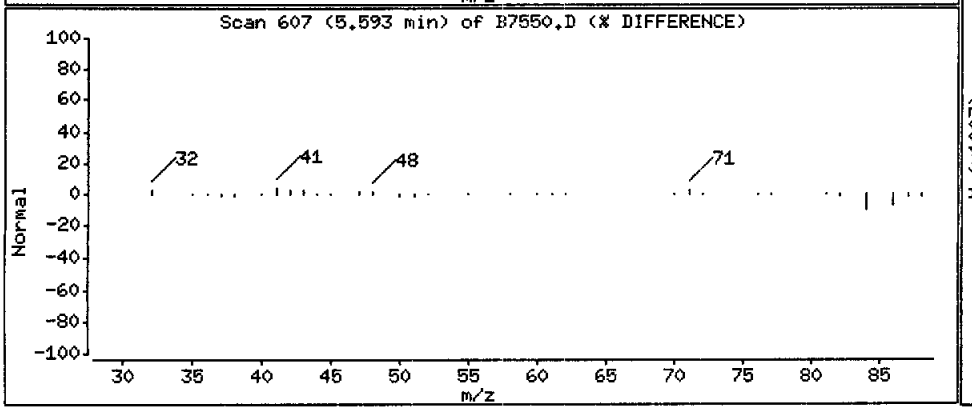
37 Methylene Chloride

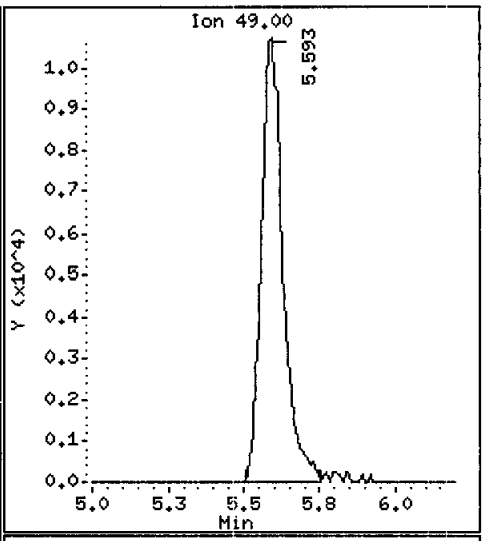
Concentration: 7.213 ppbv

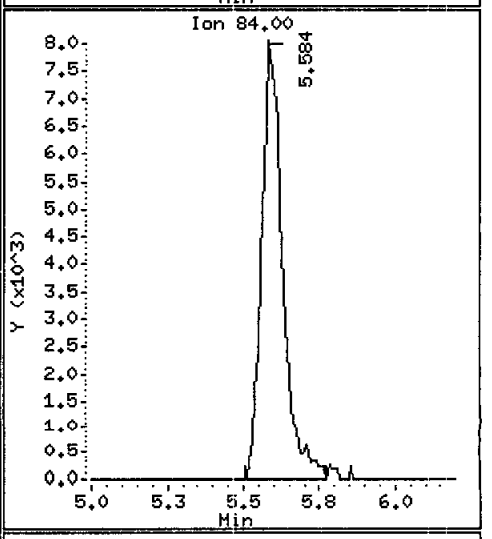


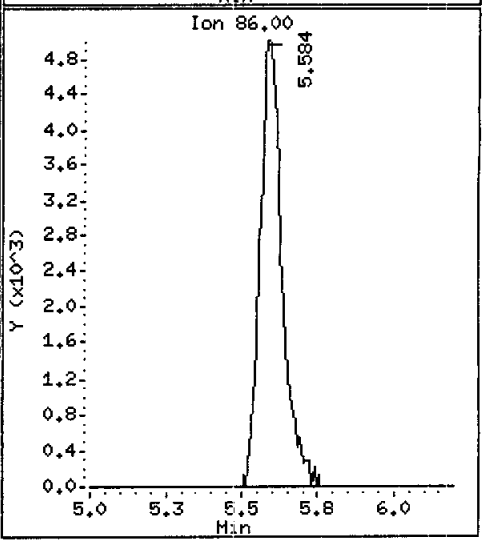












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

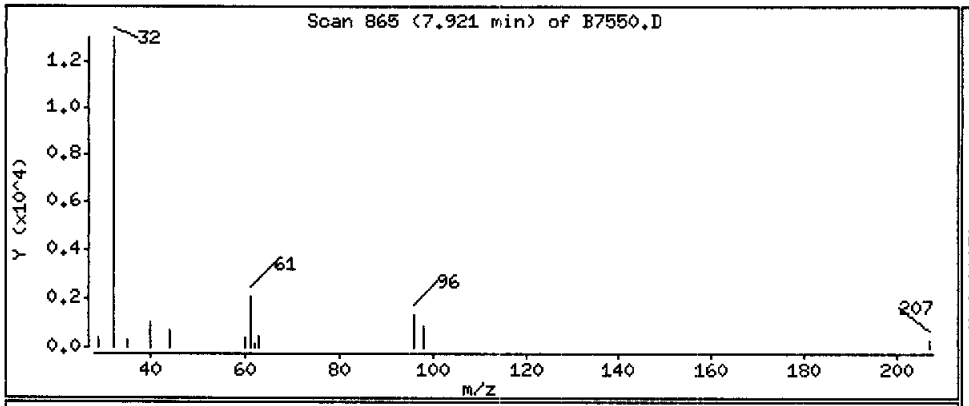
Operator: DLK

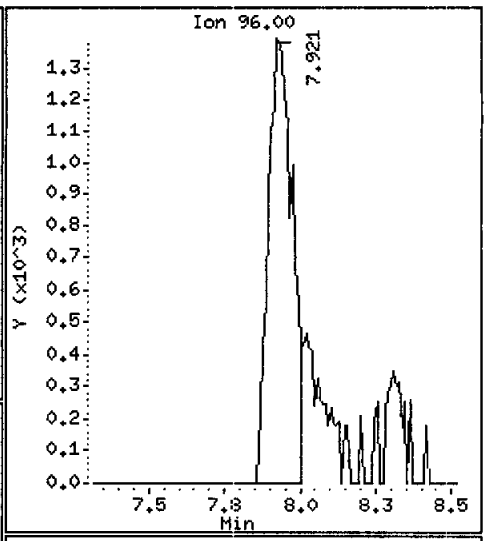
Column phase: J&W DB-624

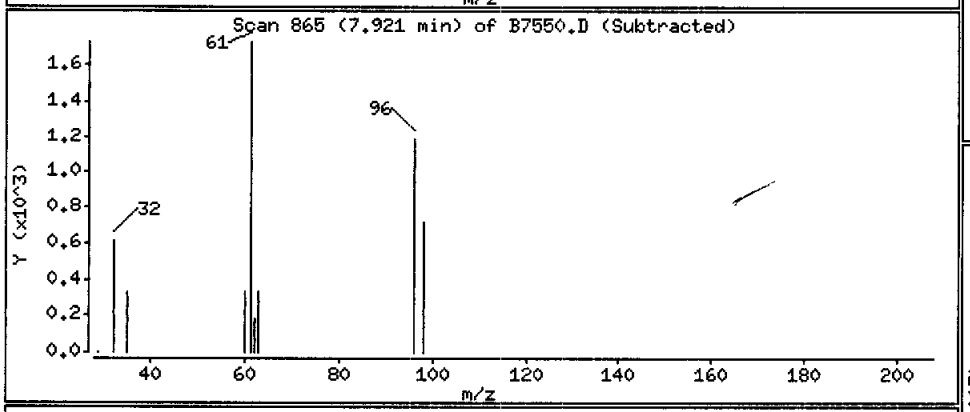
Column diameter: 0.53

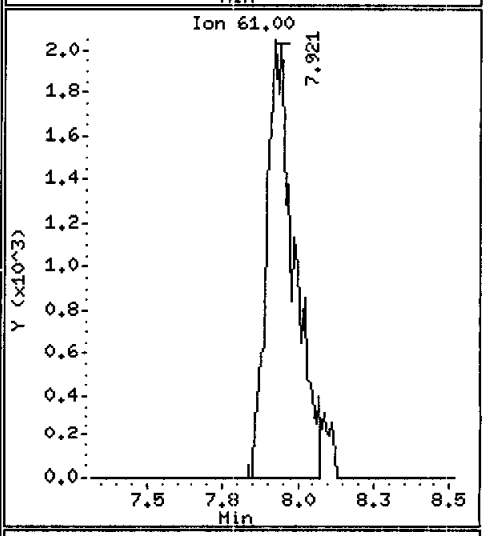
53 cis-1,2-Dichloroethene

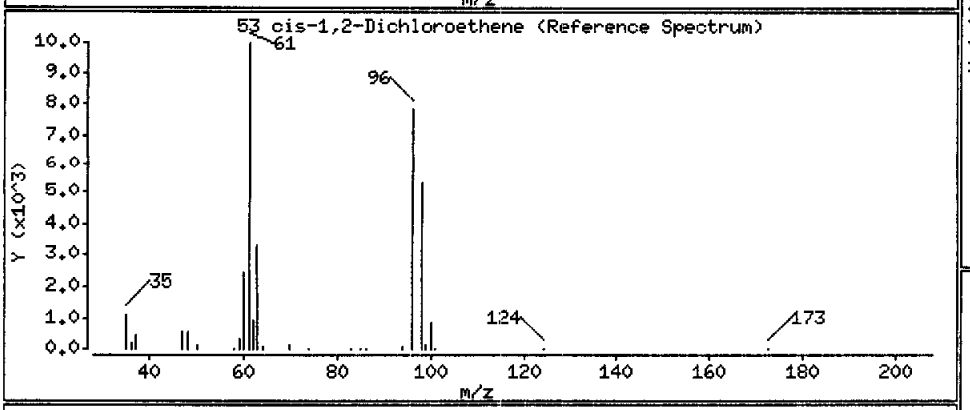
Concentration: 1.120 ppbv

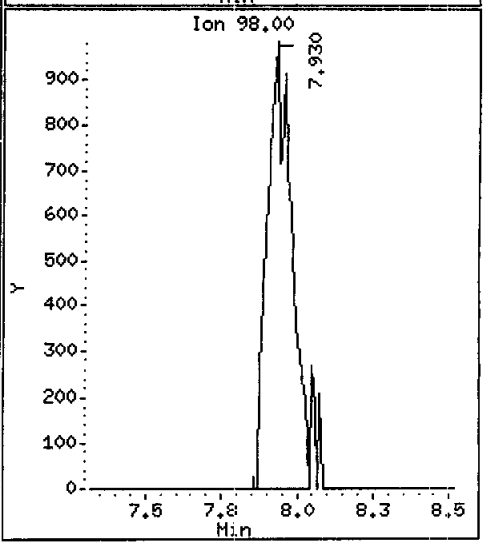


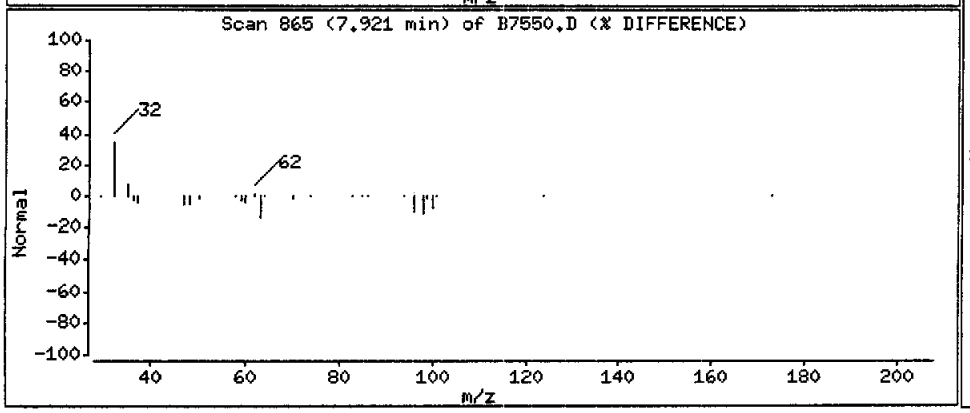












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

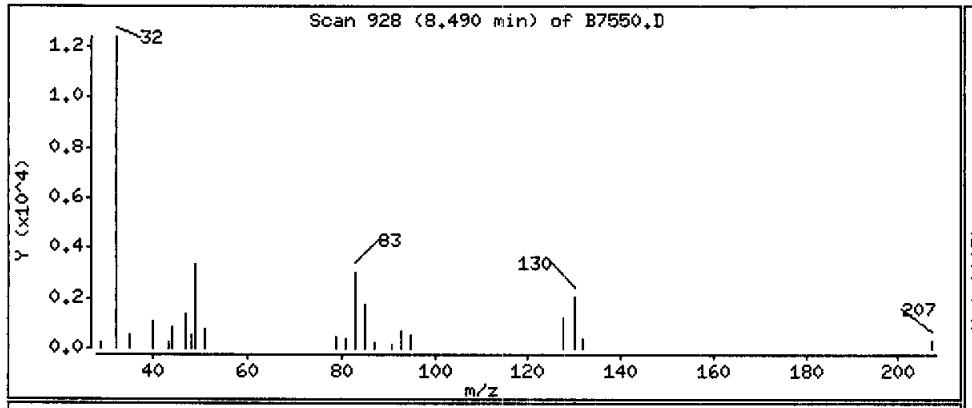
Operator: DLK

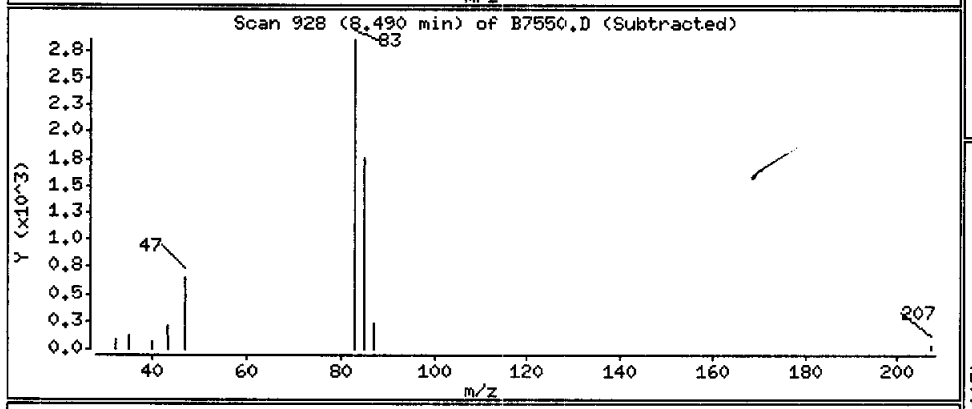
Column phase: J&W DB-624

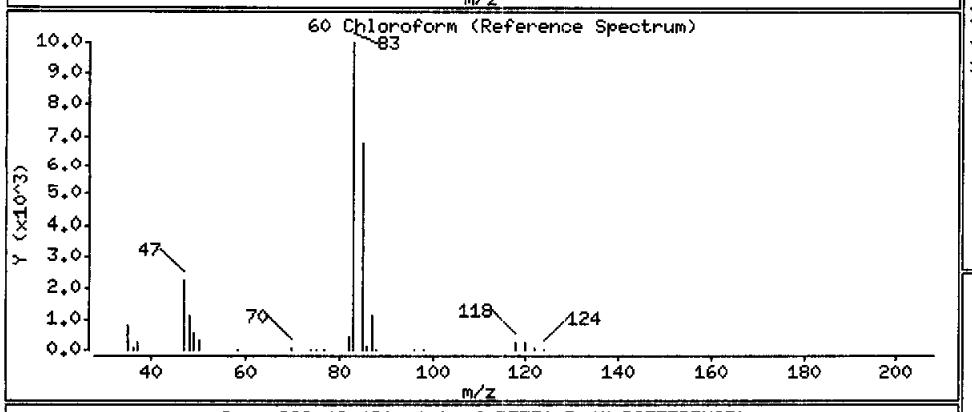
Column diameter: 0.53

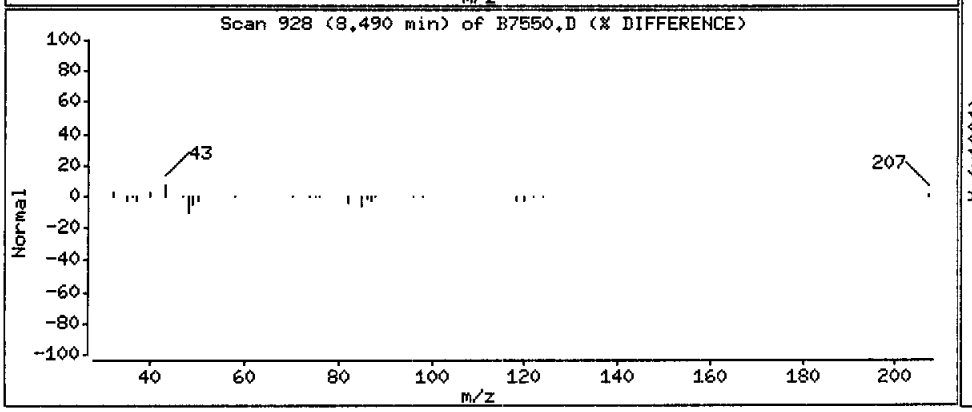
60 Chloroform

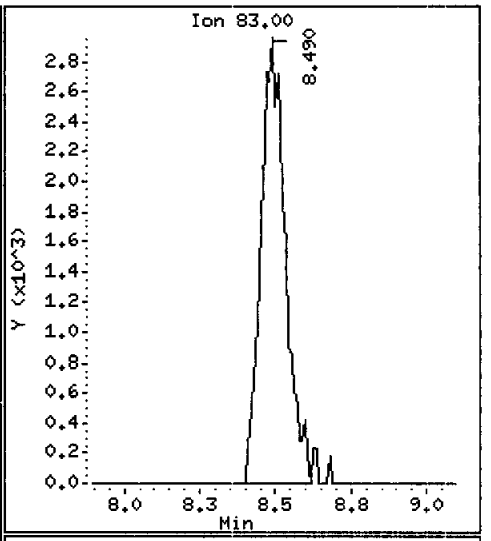
Concentration: 0.9788 ppbv

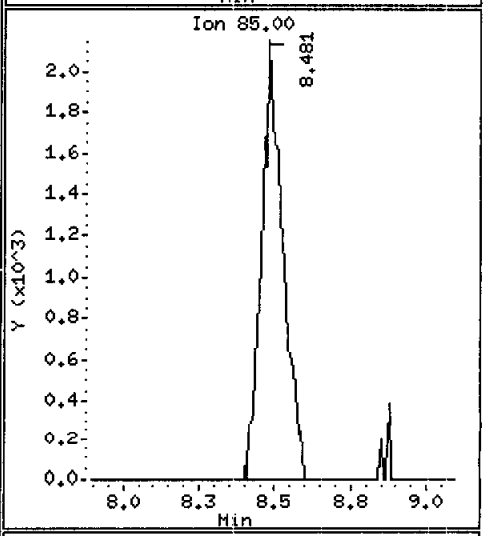


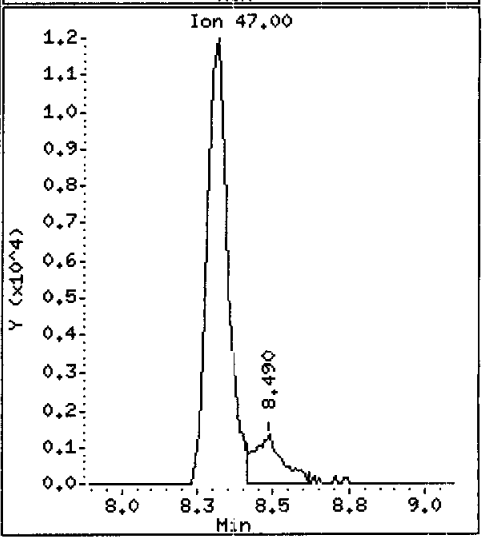












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

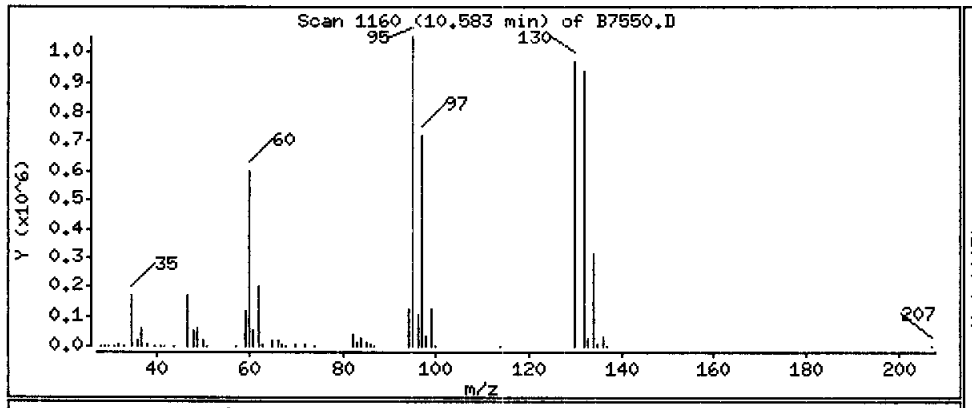
Operator: DLK

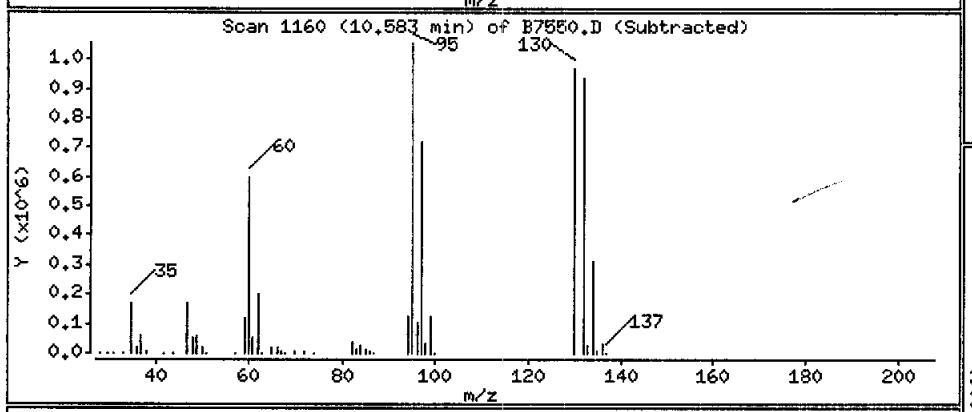
Column phase: J&W DB-624

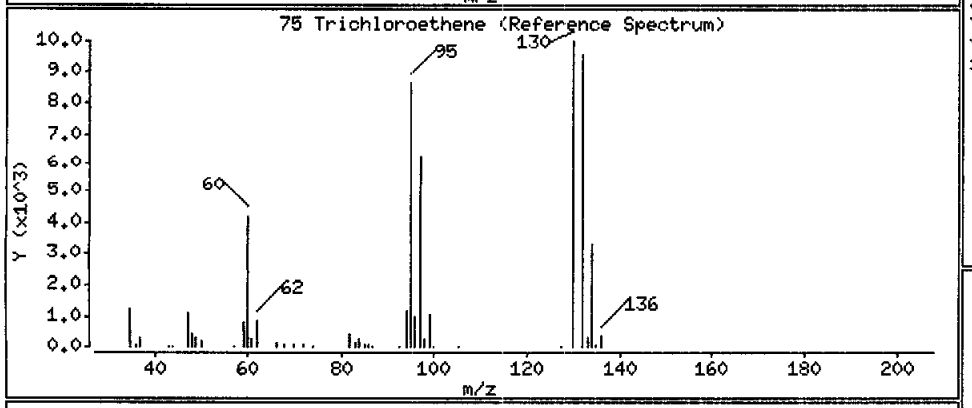
Column diameter: 0.53

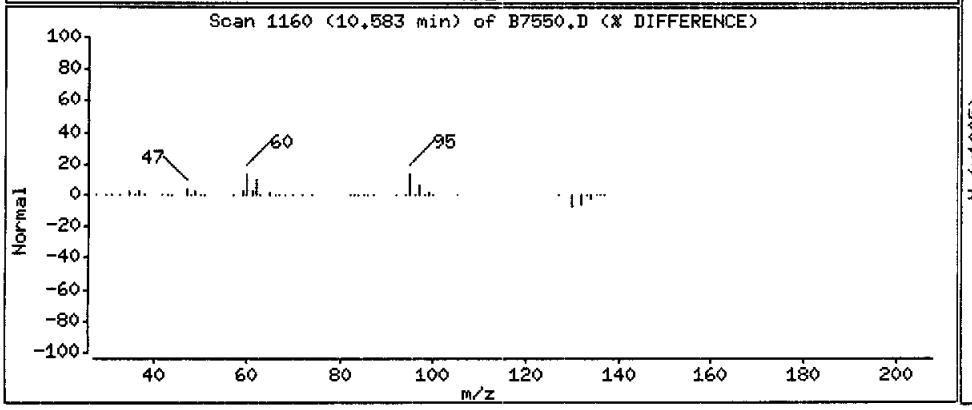
75 Trichloroethene

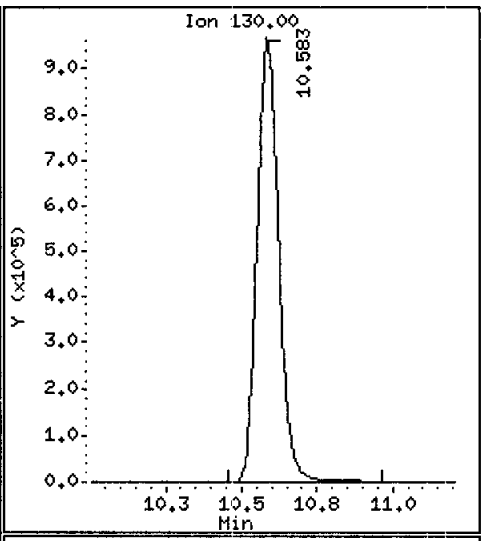
Concentration: 490.2 ppbv

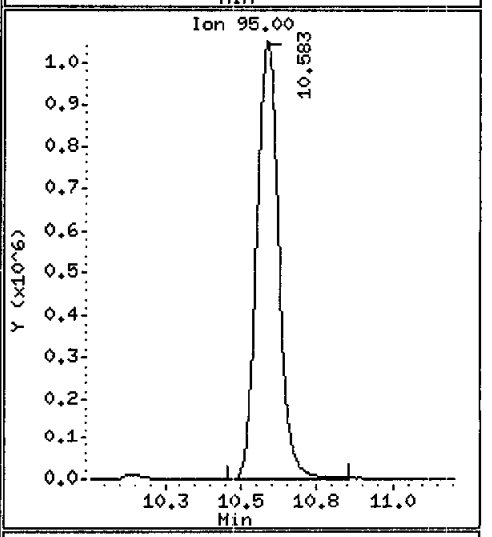


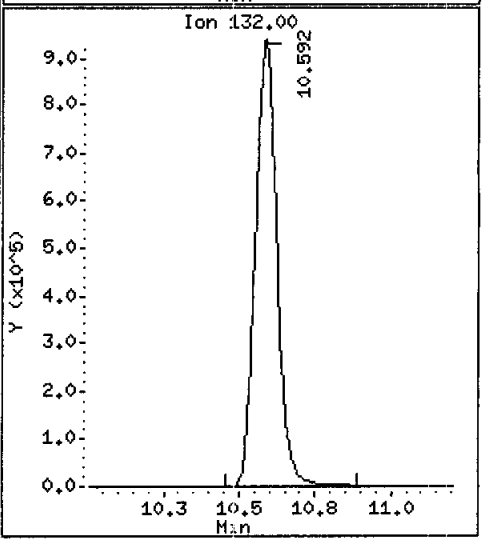












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

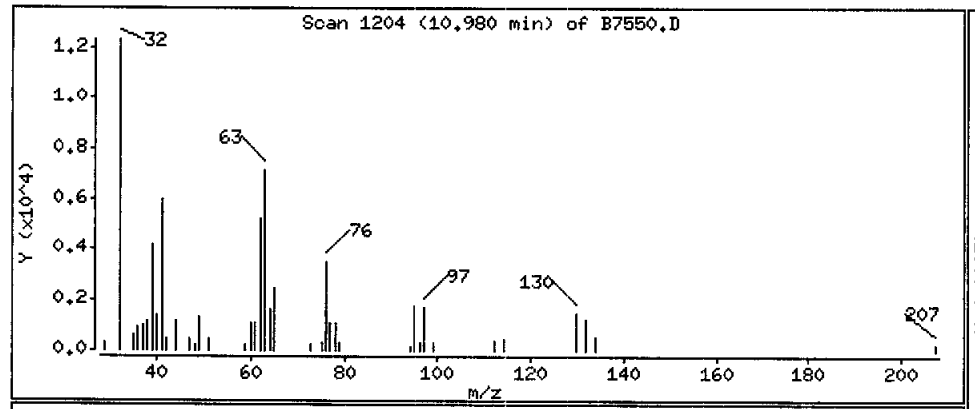
Operator: DLK

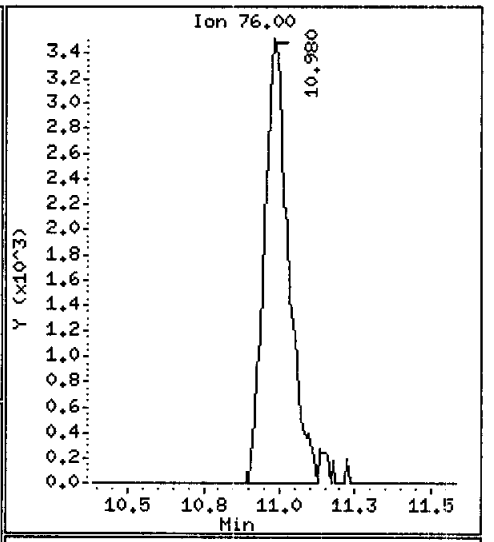
Column phase: J&W DB-624

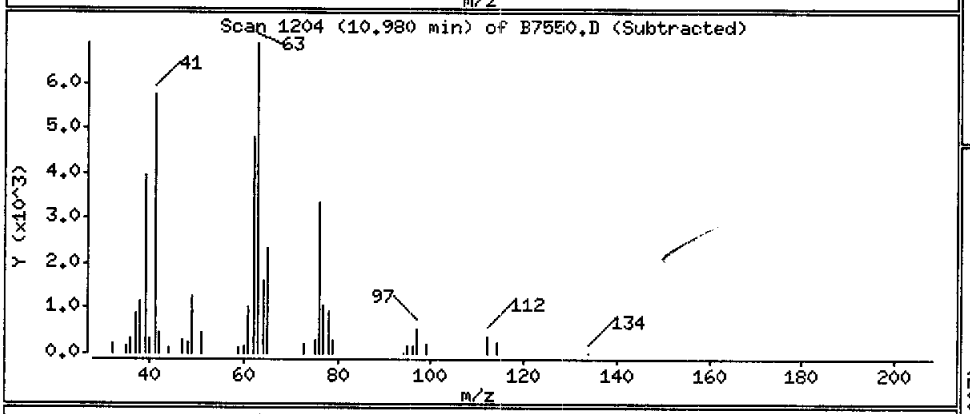
Column diameter: 0.53

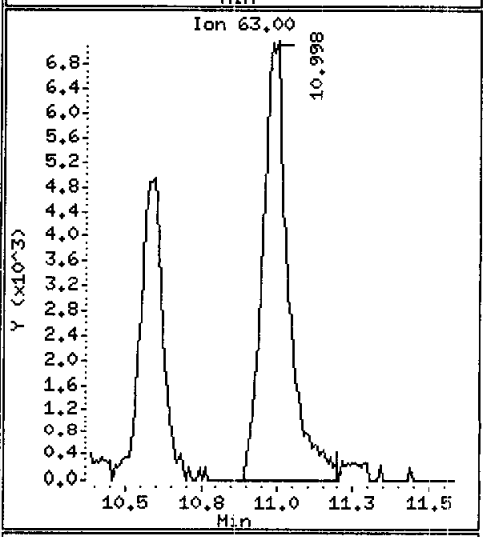
78 1,2-Dichloropropane

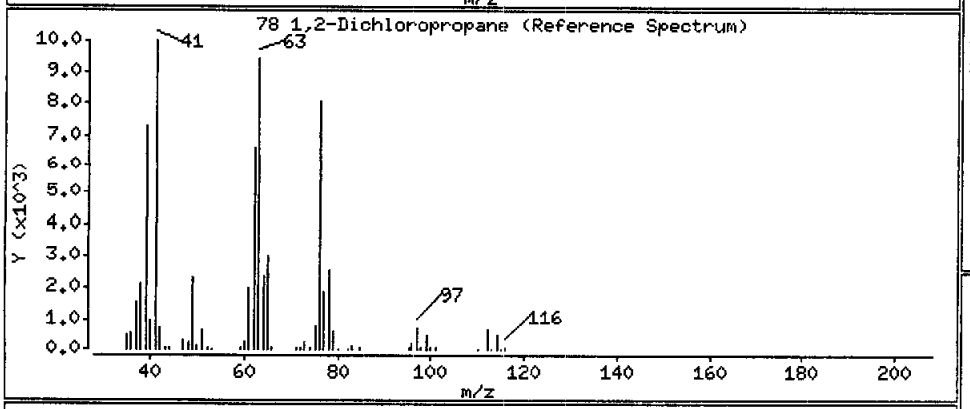
Concentration: 5.324 ppbv

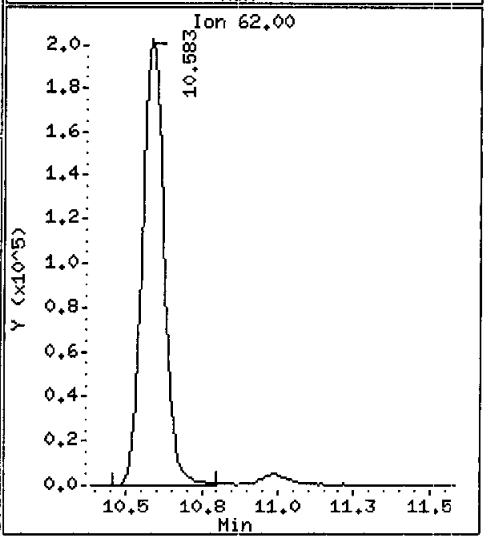


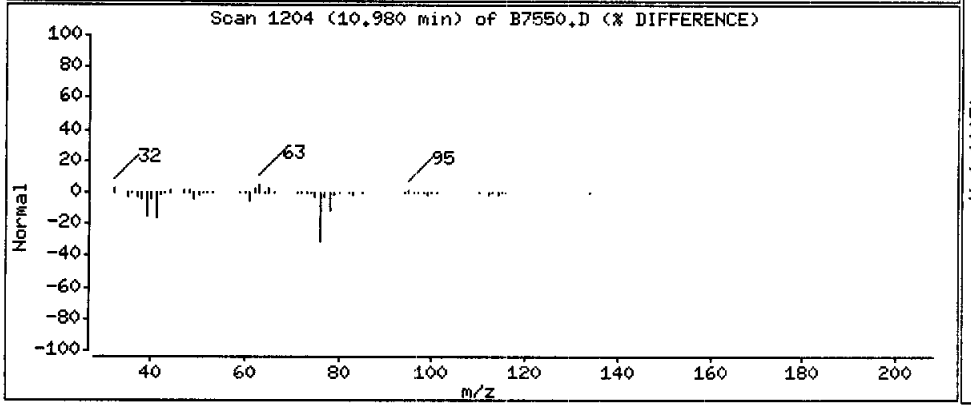












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

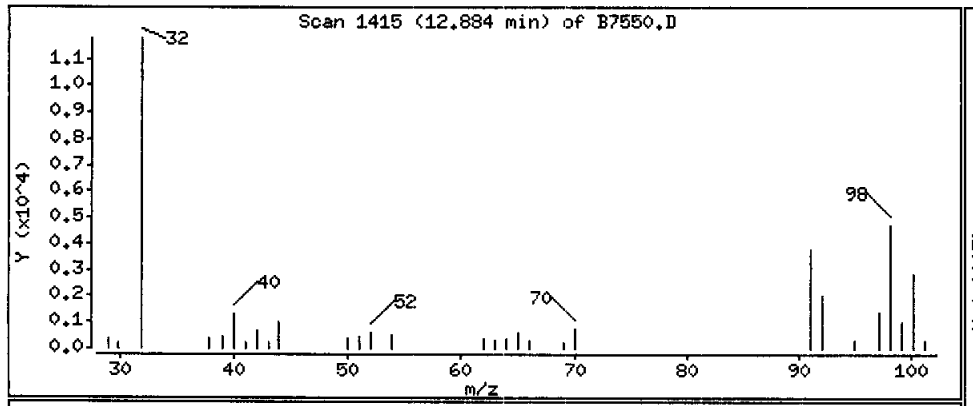
Operator: DLK

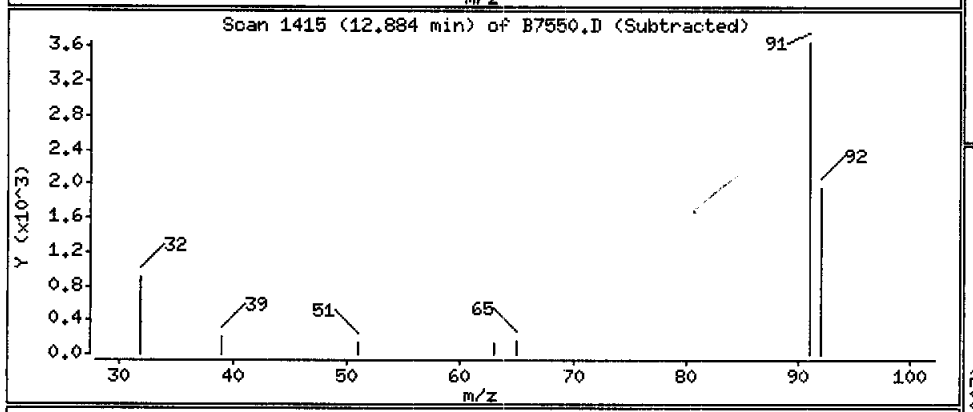
Column phase: J&W DB-624

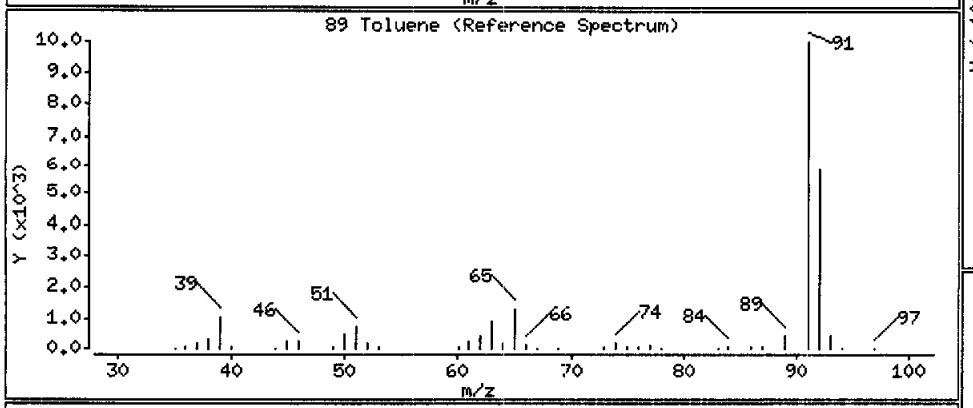
Column diameter: 0.53

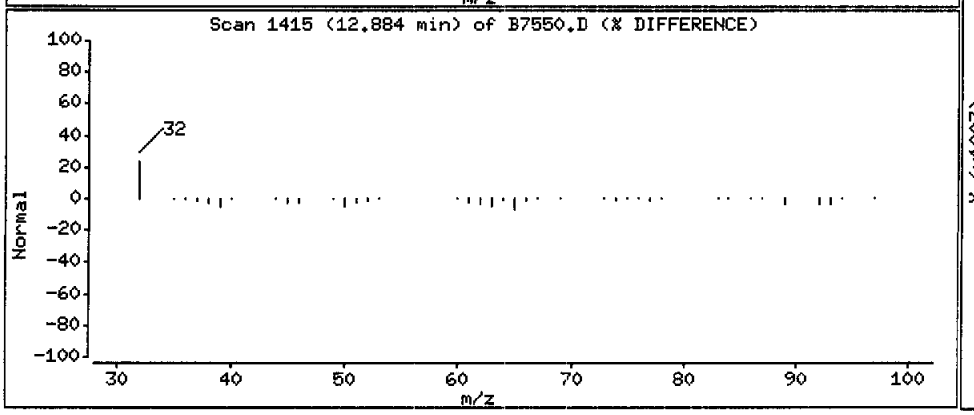
89 Toluene

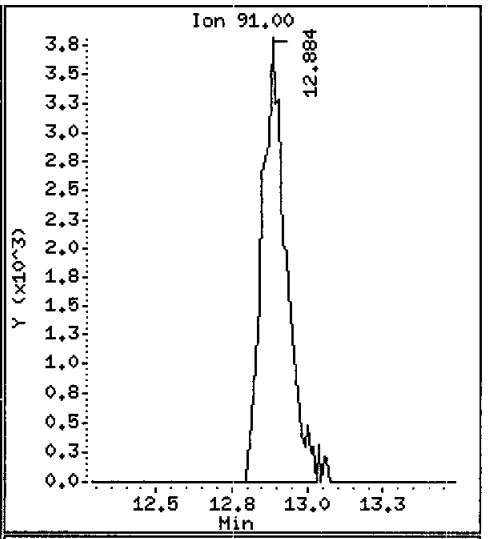
Concentration: 1.067 ppbv

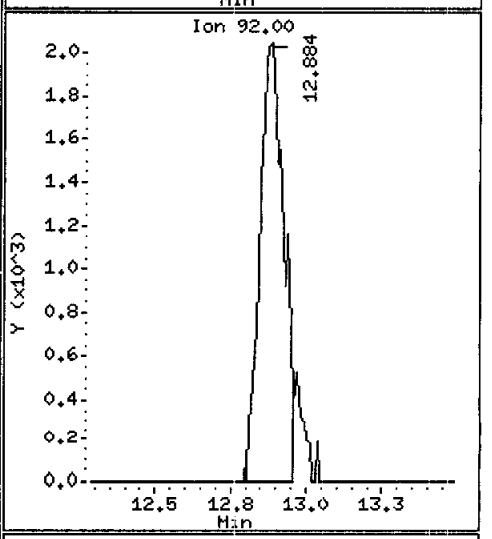


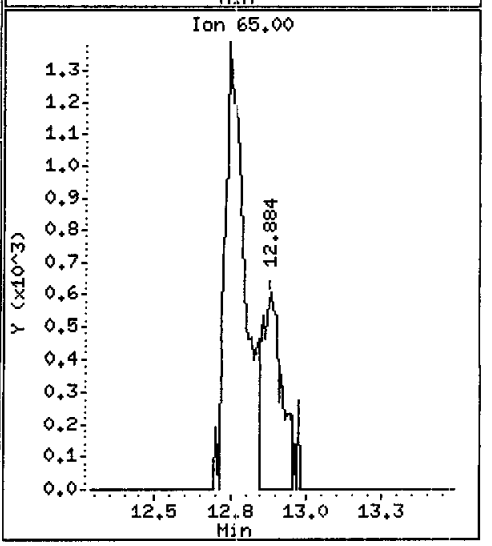












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7550.D

Date : 12-JAN-2005 06:16

Client ID: 066356-001

Instrument: gcmsb.i

Sample Info: G2DGV1AD,066356-001,SANDIA,E5A110218-5

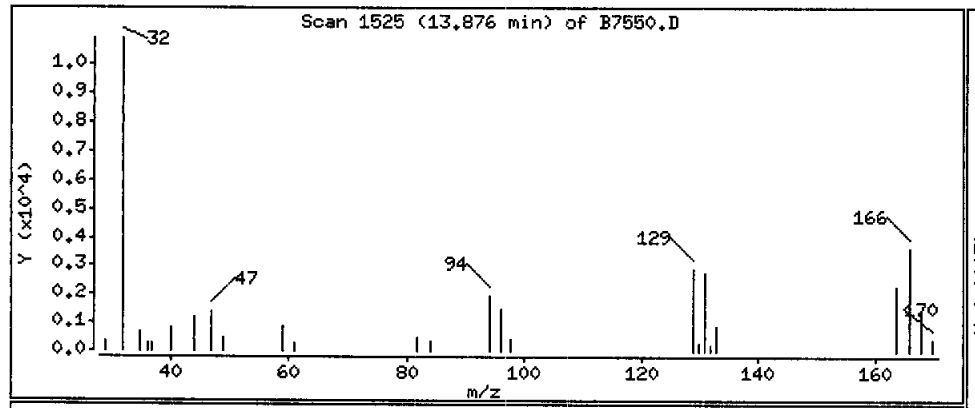
Operator: DLK

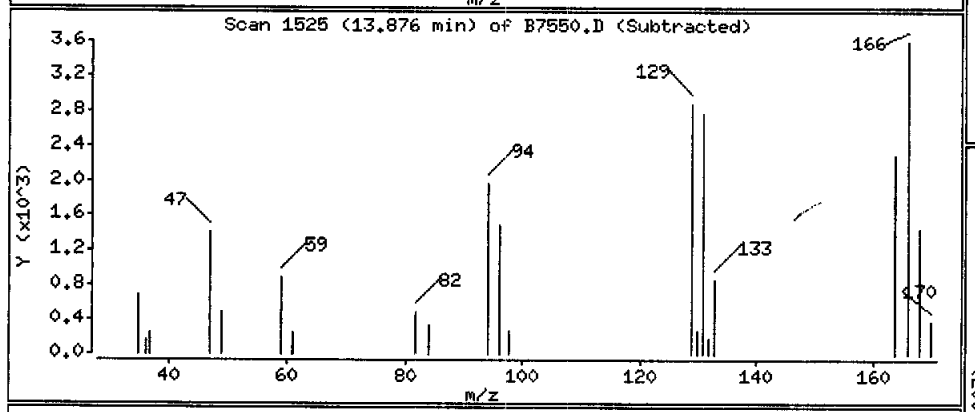
Column phase: J&W DB-624

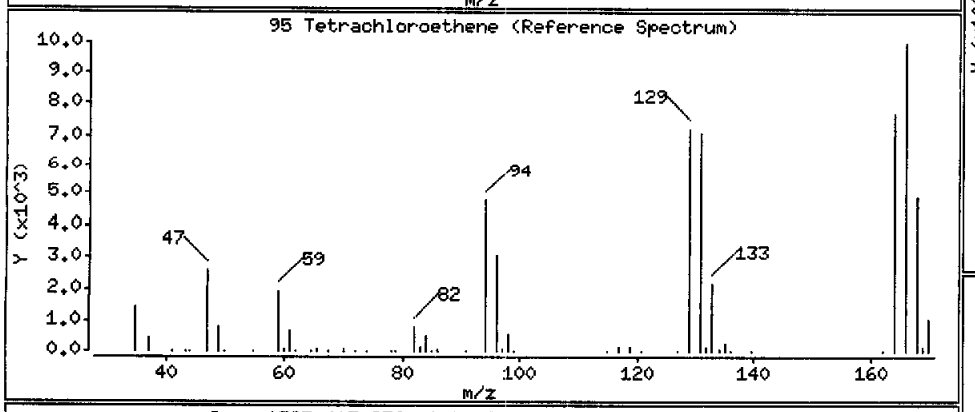
Column diameter: 0.53

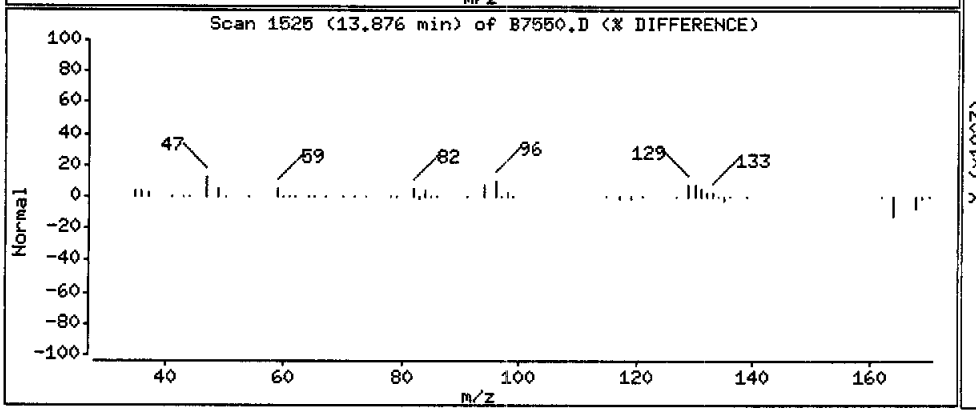
95 Tetrachloroethene

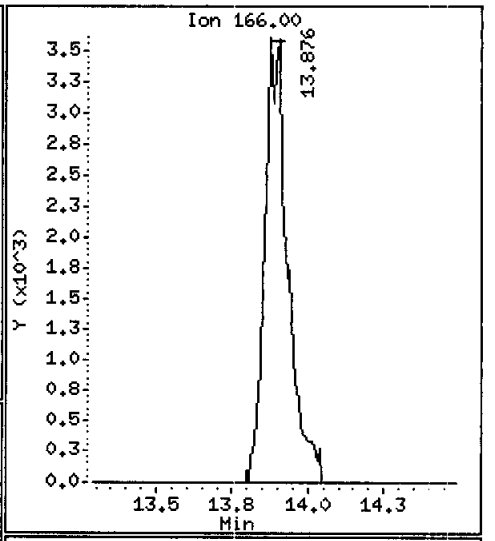
Concentration: 1.590 ppbv

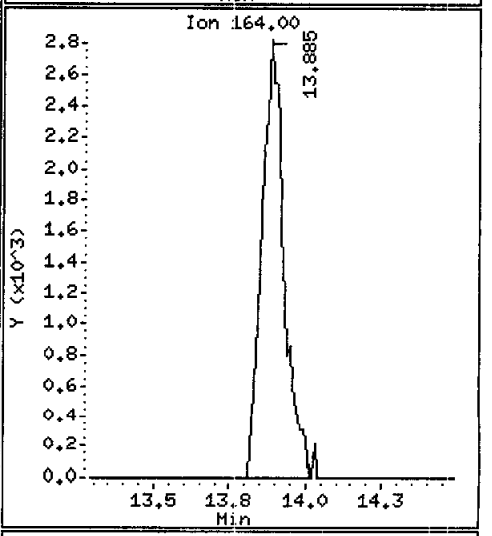


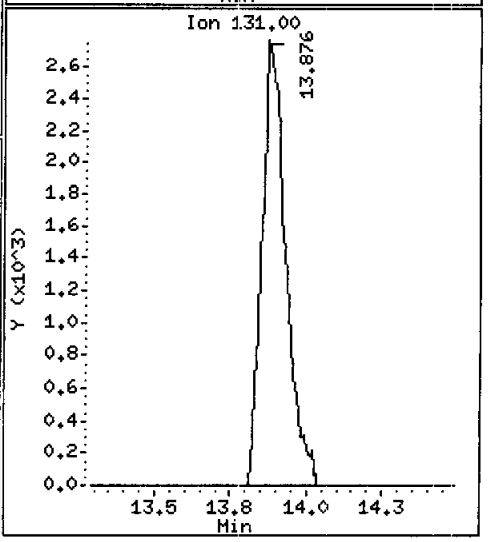












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D
Lab Smp Id: G2DGW1AD Client Smp ID: 066357-001
Inj Date : 12-JAN-2005 06:45
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGW1AD,066357-001,SANDIA,E5A110218-6
Misc Info : 25.4,12.9,500,985,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 05:27 kammererd Quant Type: ISTD
Cal Date : 11-JAN-2005 19:10 Cal File: CC01116.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	25.400	FinalPres
InitPres	12.900	InitPres
CalVol	500.000	CalVol
SmpVol	985.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.134	2.156	(0.257)	13518	0.59762	0.5973(a)
* 58 Bromochloromethane	49	8.306	8.317	(1.000)	535908	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.325	9.347	(0.921)	479367	52.8704	52.84
68 Benzene	78	9.424	9.446	(0.930)	20700	1.37694	1.376(a)
* 73 1,4-Difluorobenzene	114	10.128	10.149	(1.000)	1104823	50.0000	
75 Trichloroethene	130	10.597	10.601	(1.046)	49855	5.16810	5.165
$ 88 Toluene-d8	100	12.736	12.766	(1.257)	584620	50.5340	50.51
89 Toluene	91	12.862	12.883	(1.270)	57480	2.95479	2.953
M 99 Xylenes (total)	106				6335	1.00088	1.000(a)
* 101 Chlorobenzene-d5	117	15.388	15.418	(1.000)	766786	50.0000	
105 m,p-Xylenes	106	15.939	15.906	(1.036)	6335	1.00088	1.000(aQ)
$ 114 4-Bromofluorobenzene	95	17.644	17.675	(1.147)	569839	41.6013	41.58
131 1,2,4-Trimethylbenzene	120	19.277	19.263	(1.253)	7134	1.69015	1.689(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

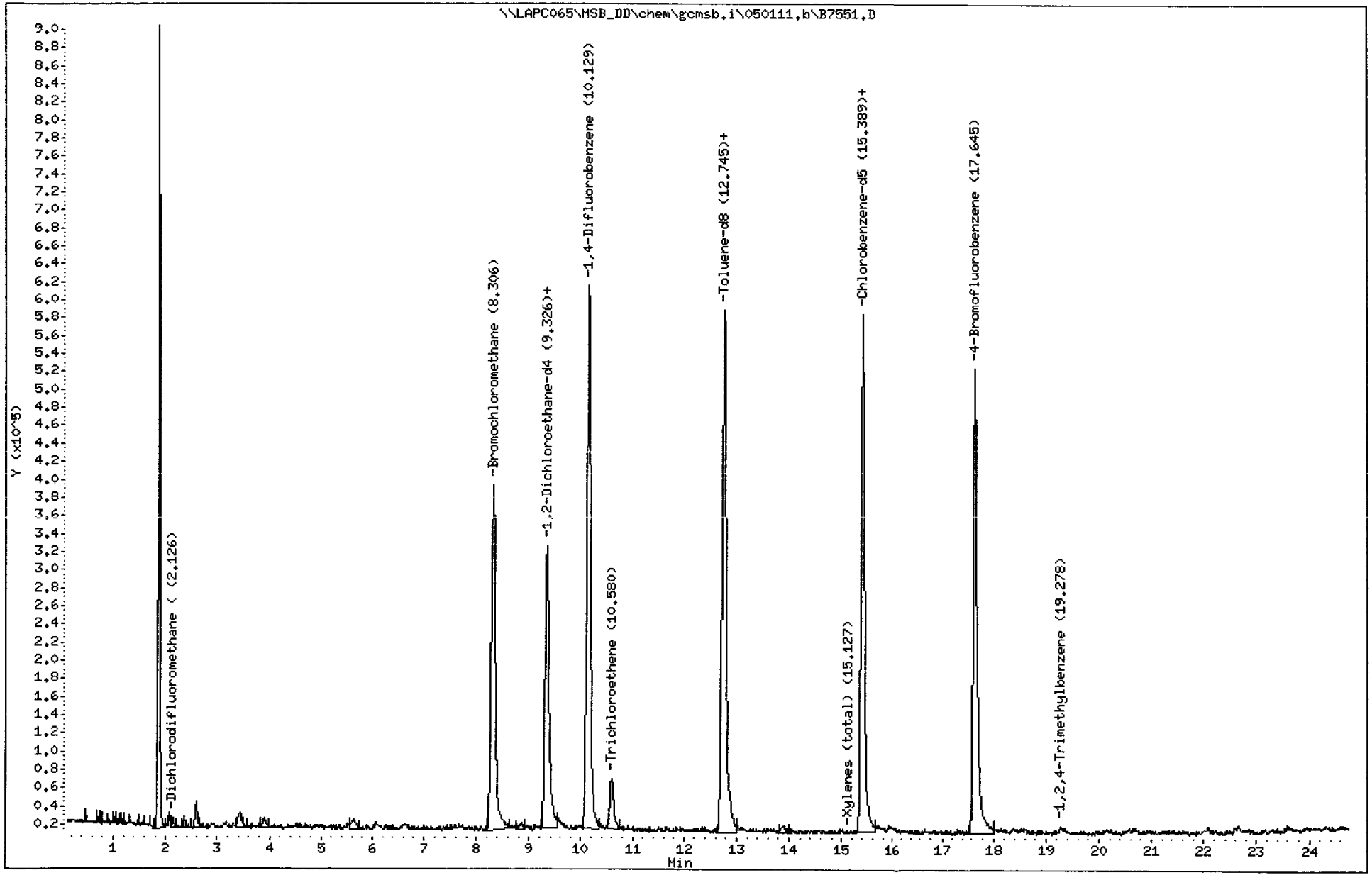
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D
Date : 12-JAN-2005 06:45
Client ID: 066357-001
Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D

Date : 12-JAN-2005 06:45

Client ID: 066357-001

Instrument: gcmsb.i

Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

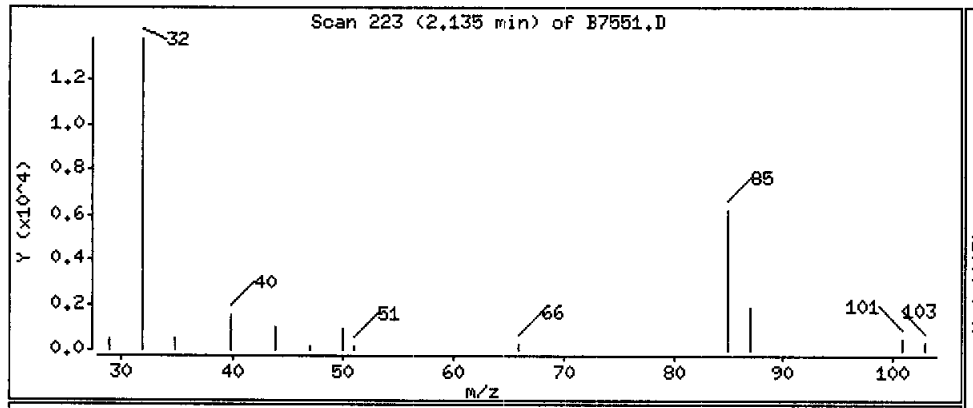
Operator: DLK

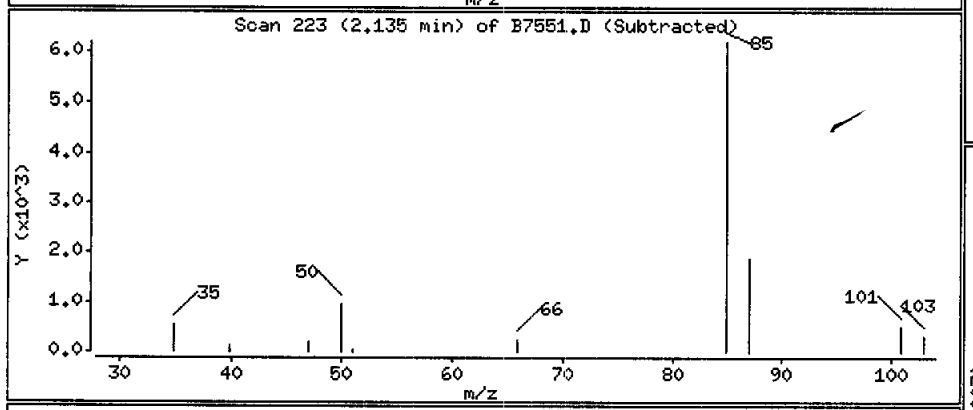
Column phase: J&W DB-624

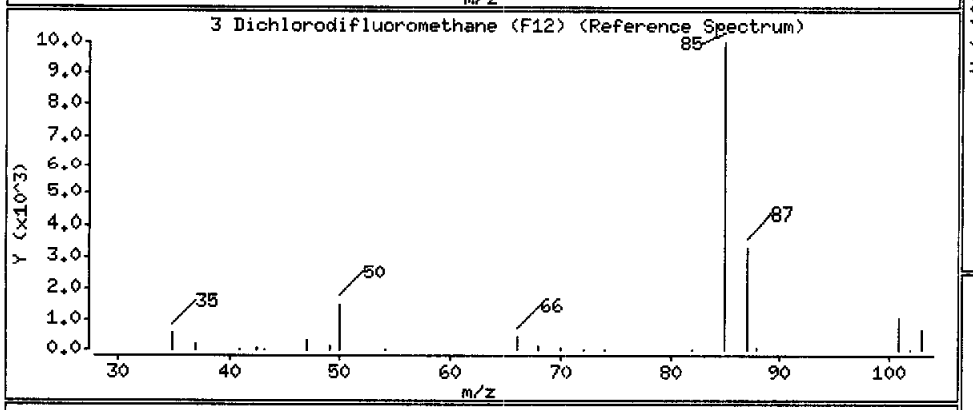
Column diameter: 0.53

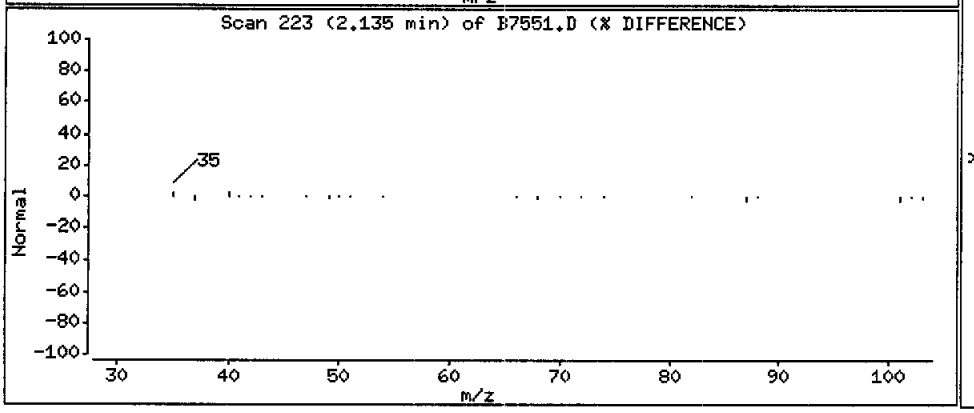
3 Dichlorodifluoromethane (F12)

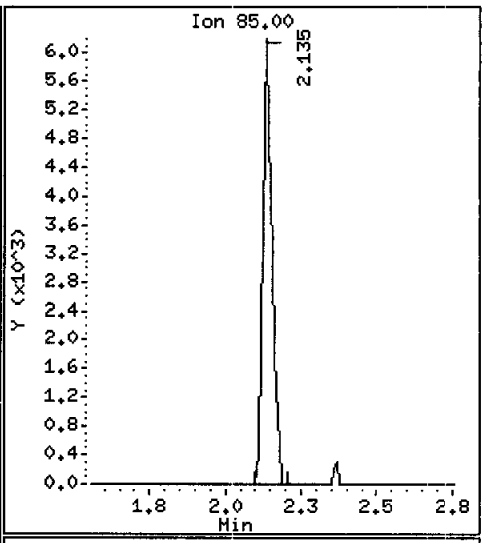
Concentration: 0.5973 ppbv

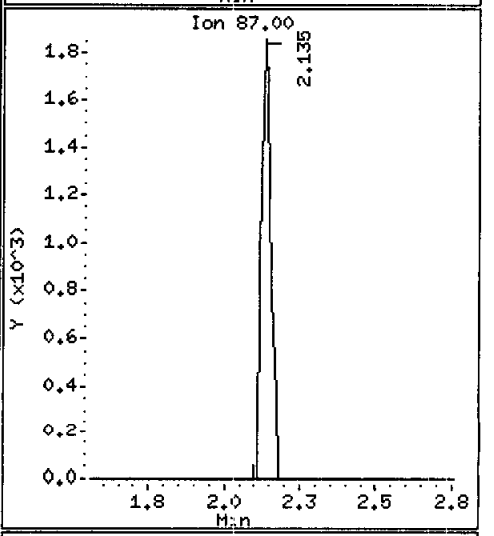


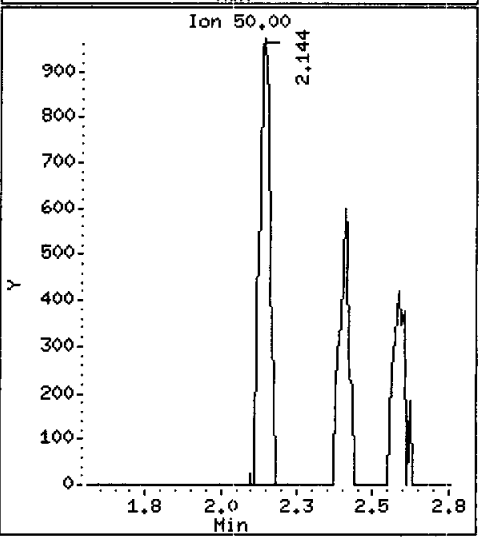












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D

Date : 12-JAN-2005 06:45

Client ID: 066357-001

Instrument: gcmsb.i

Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

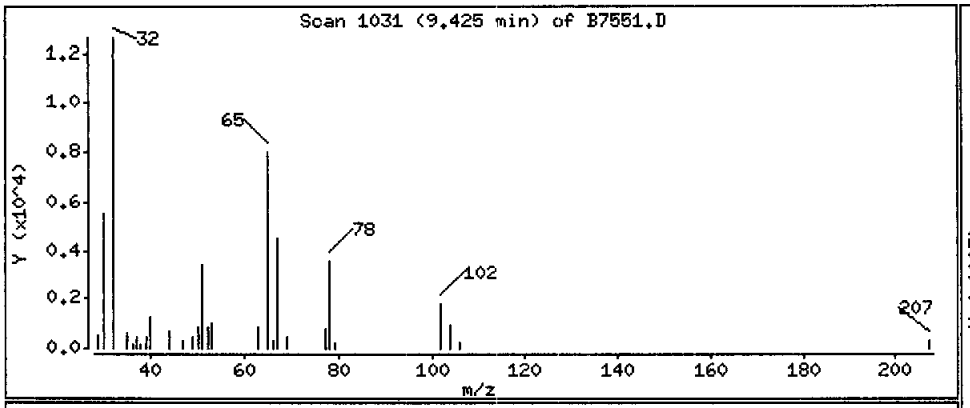
Operator: DLK

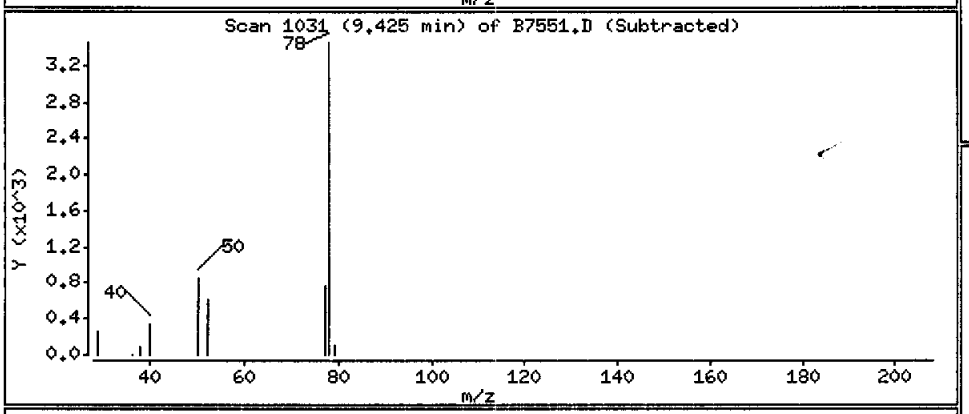
Column phase: J&W DB-624

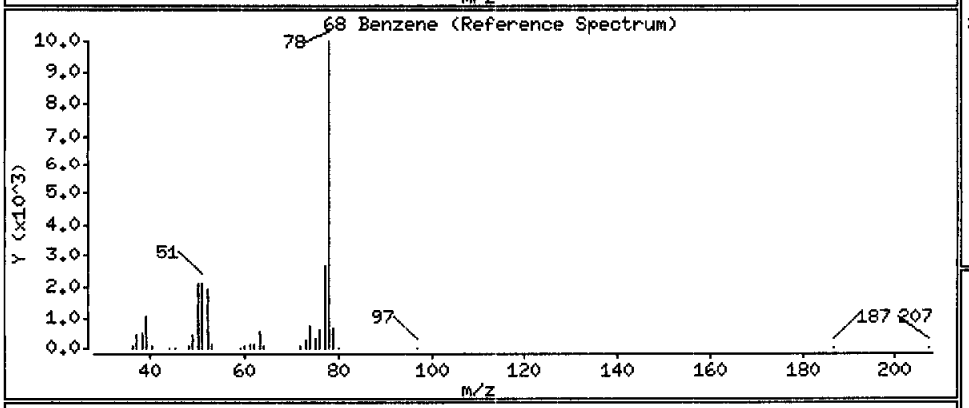
Column diameter: 0.53

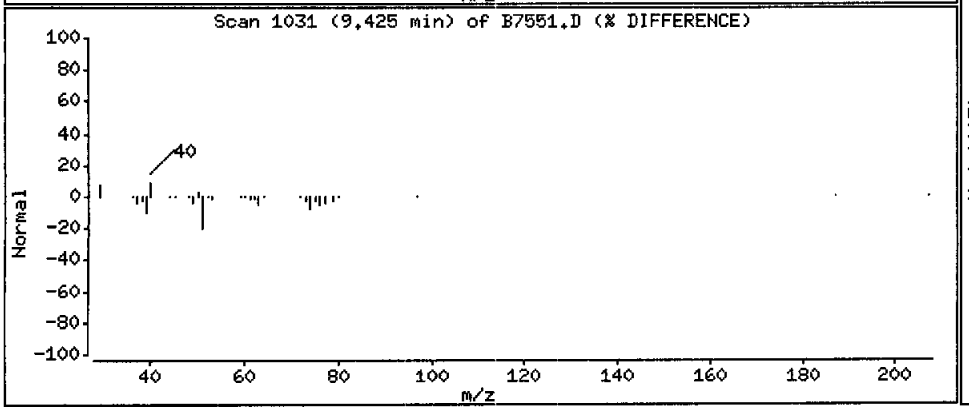
68 Benzene

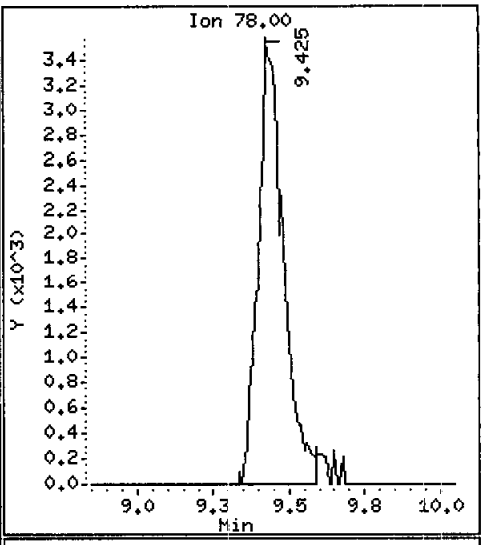
Concentration: 1.376 ppbv

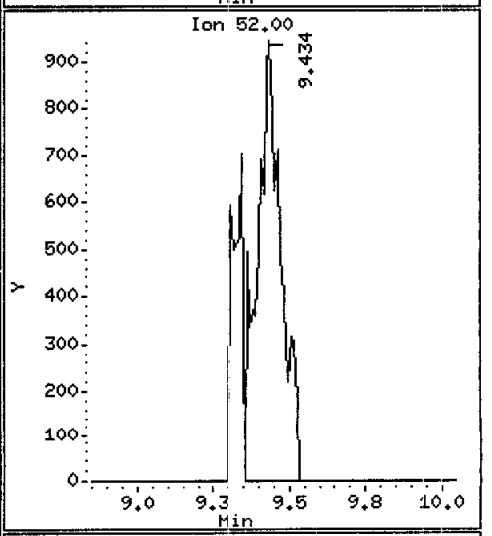


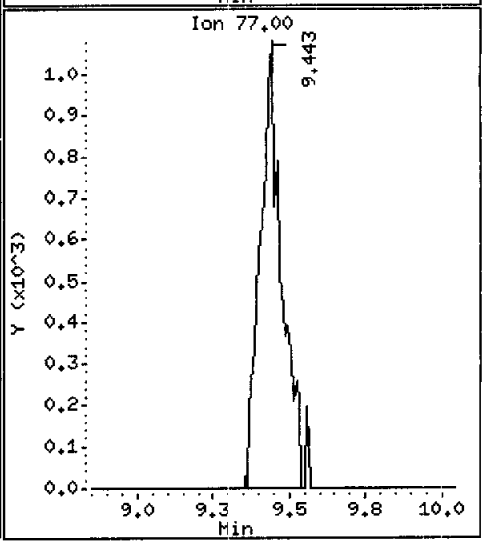












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D

Date : 12-JAN-2005 06:45

Client ID: 066357-001

Instrument: gcmsb.i

Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

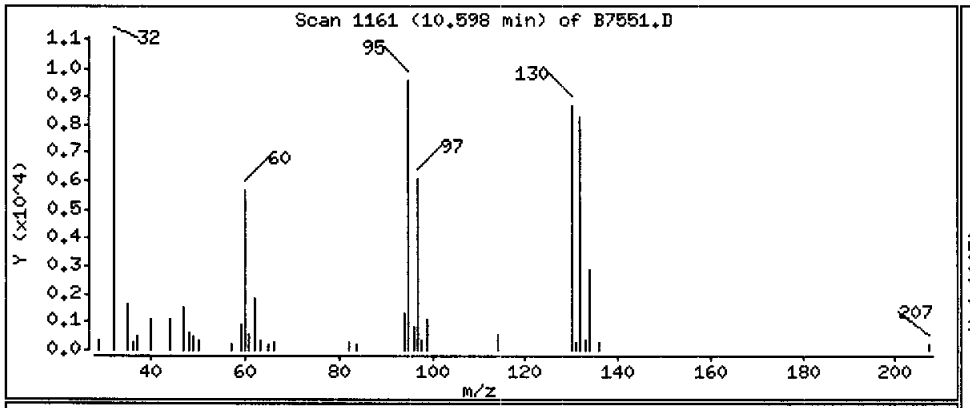
Operator: DLK

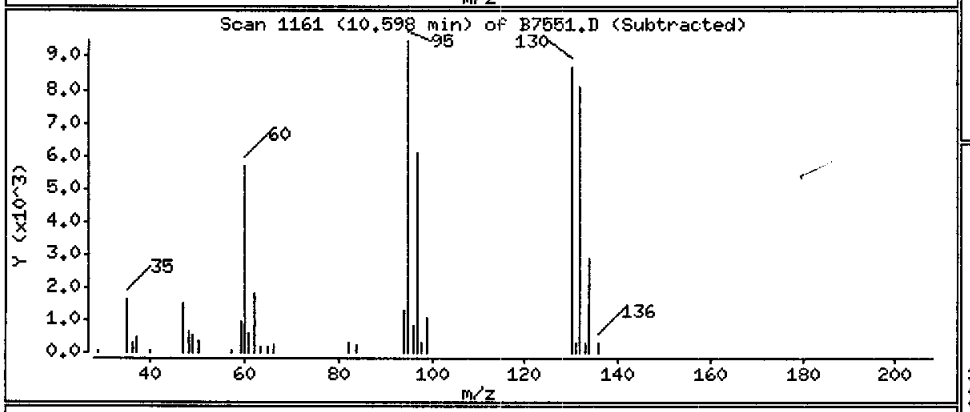
Column phase: J&W DB-624

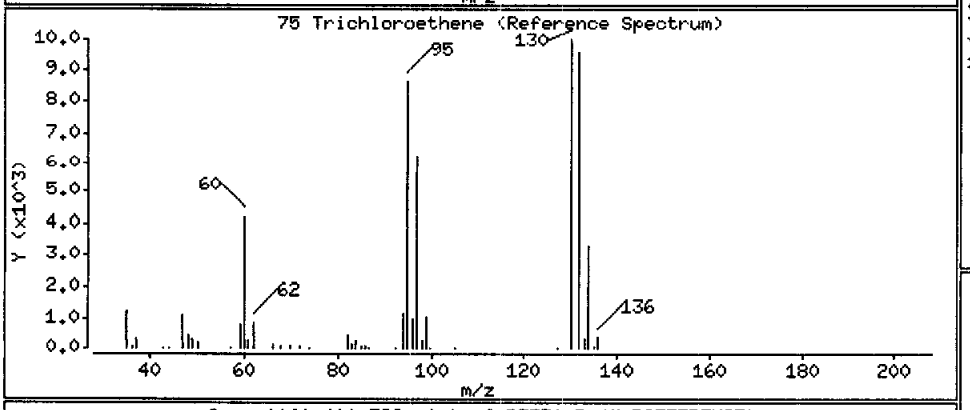
Column diameter: 0.53

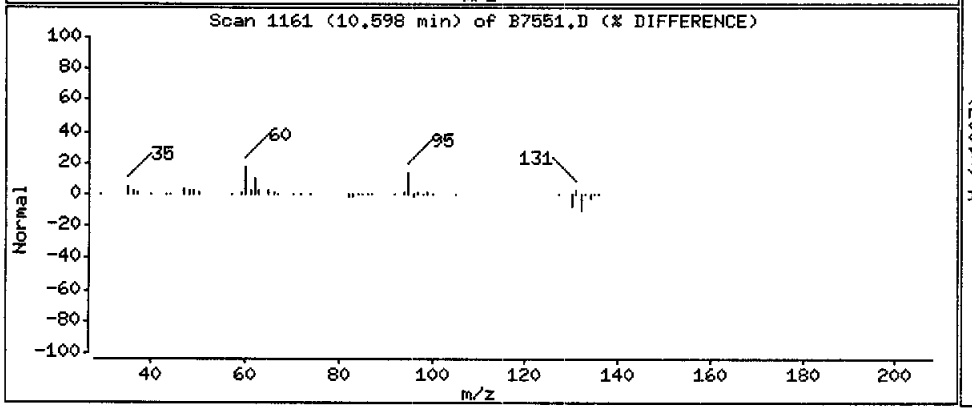
75 Trichloroethene

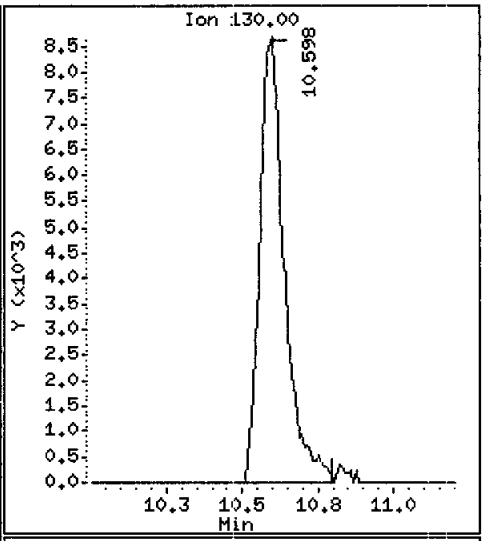
Concentration: 5.165 ppbv

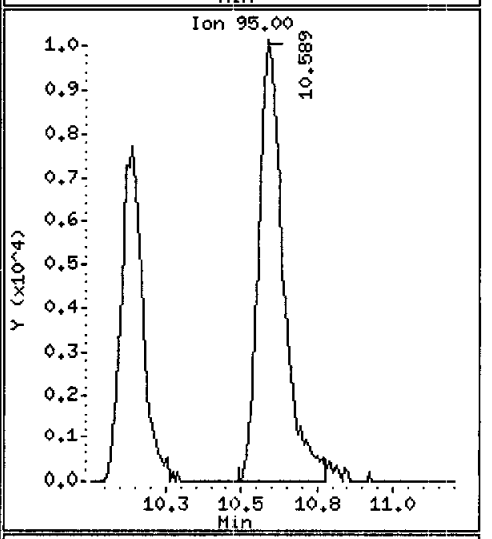


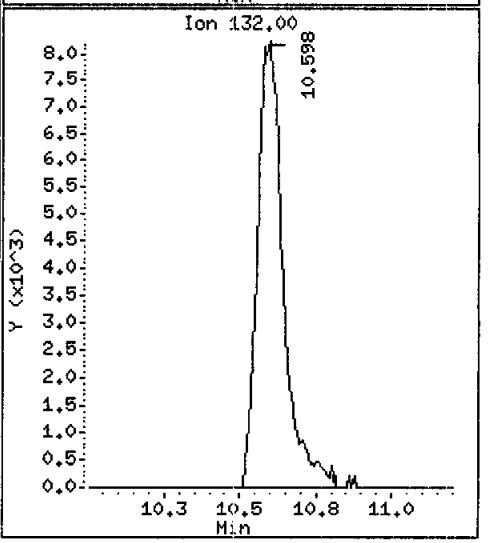












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D

Date : 12-JAN-2005 06:45

Client ID: 066357-001

Instrument: gcmsb.i

Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

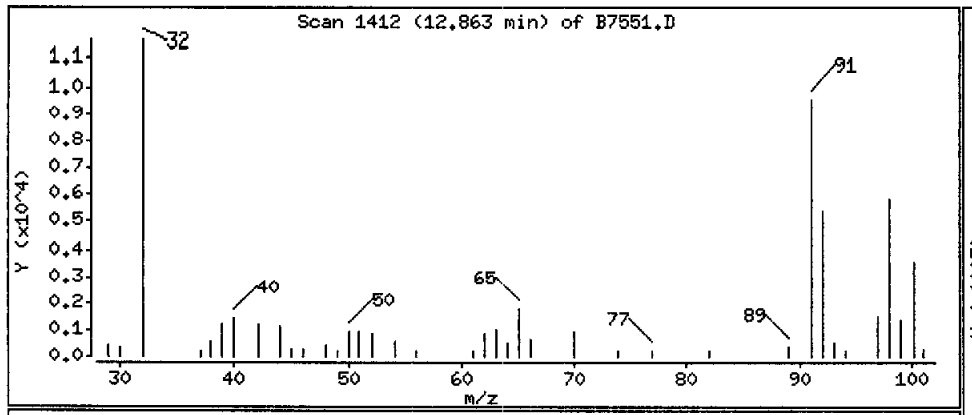
Operator: DLK

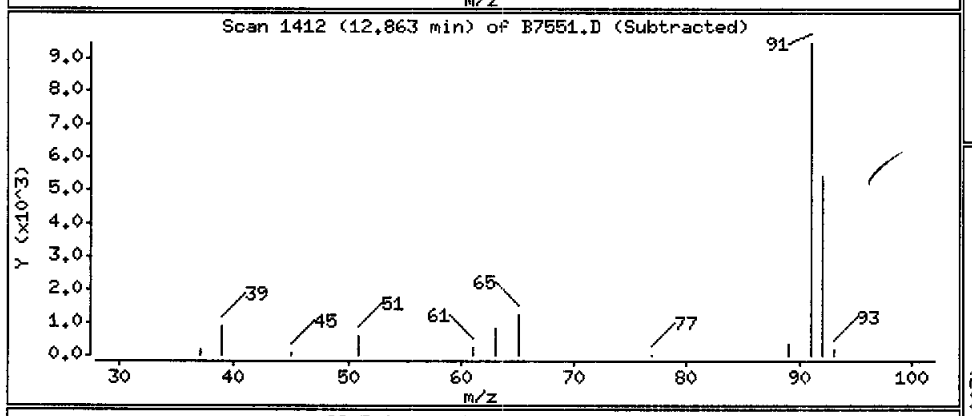
Column phase: J&W DB-624

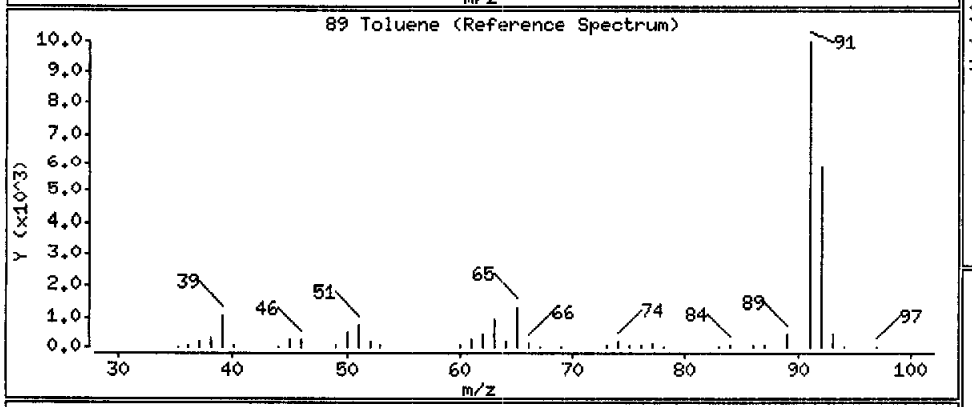
Column diameter: 0.53

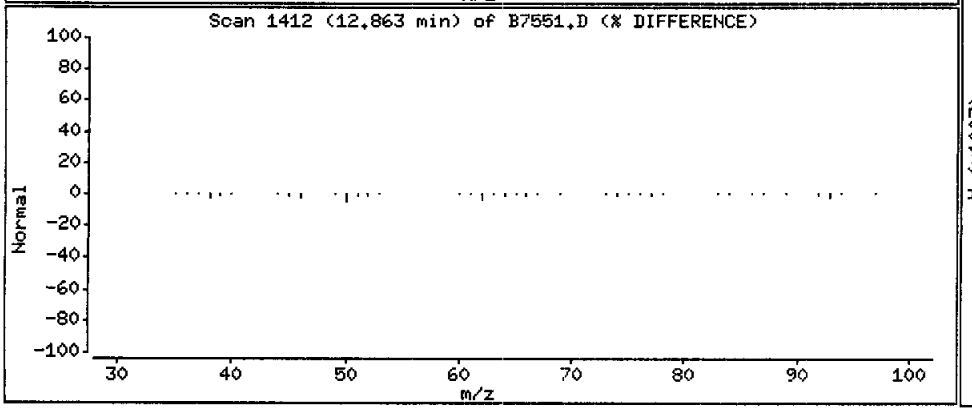
89 Toluene

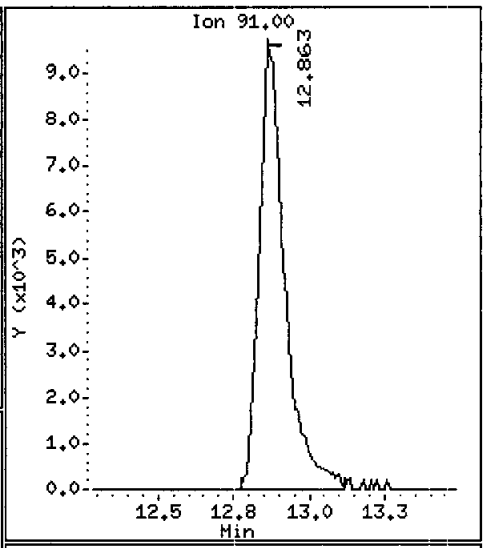
Concentration: 2.953 ppbv

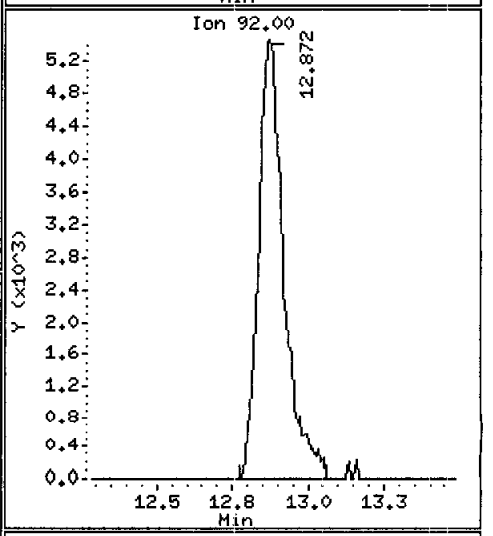


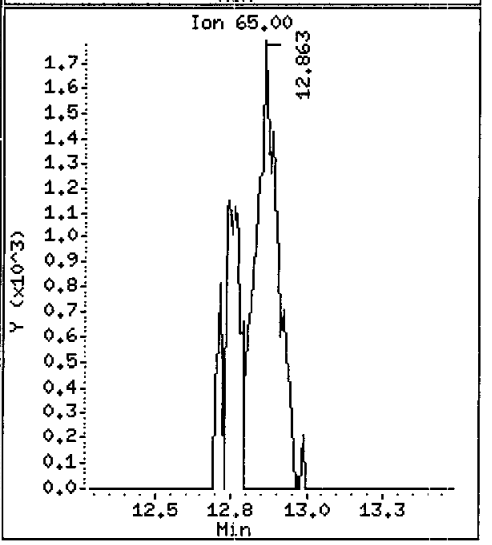












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D

Date : 12-JAN-2005 06:45

Client ID: 066357-001

Instrument: gcmsb.i

Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

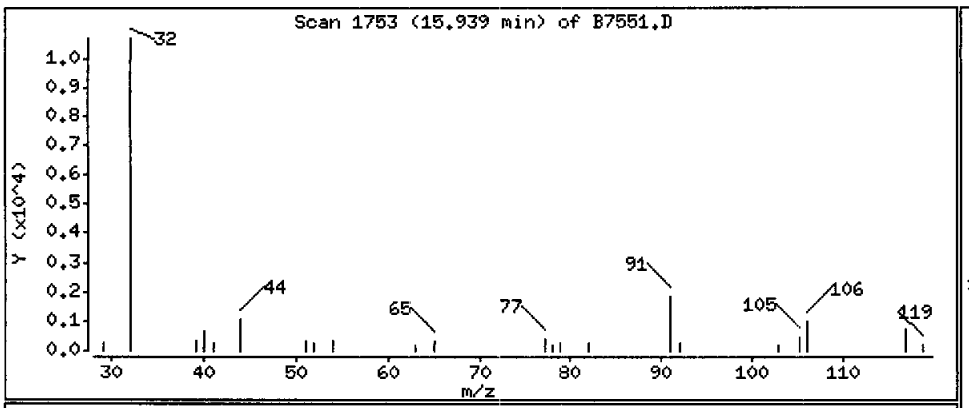
Operator: DLK

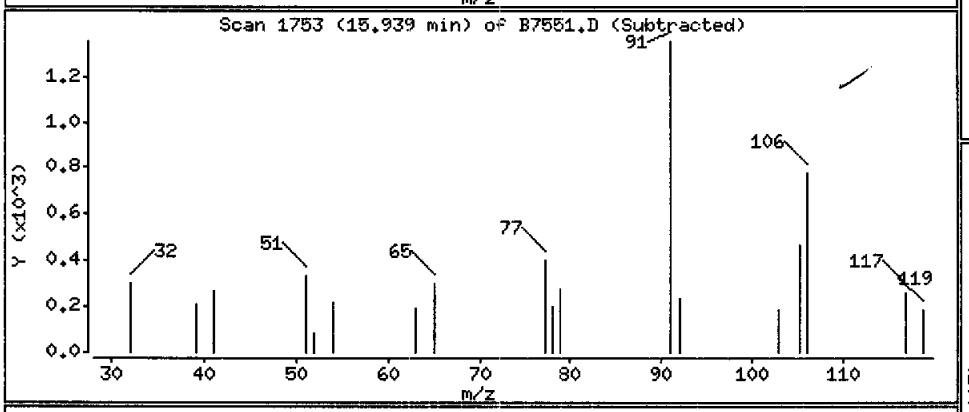
Column phase: J&W DB-624

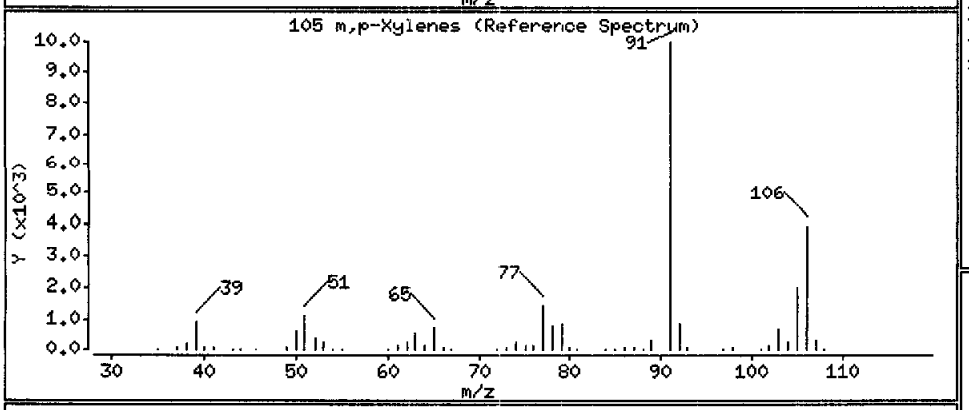
Column diameter: 0.53

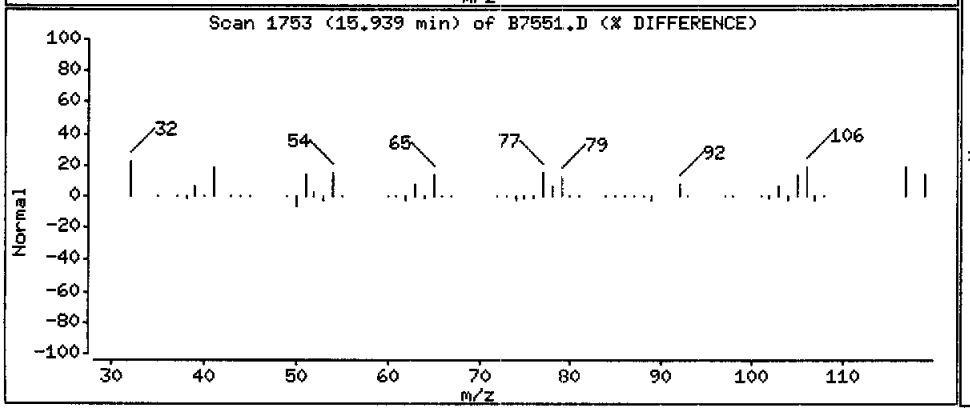
105 m,p-Xylenes

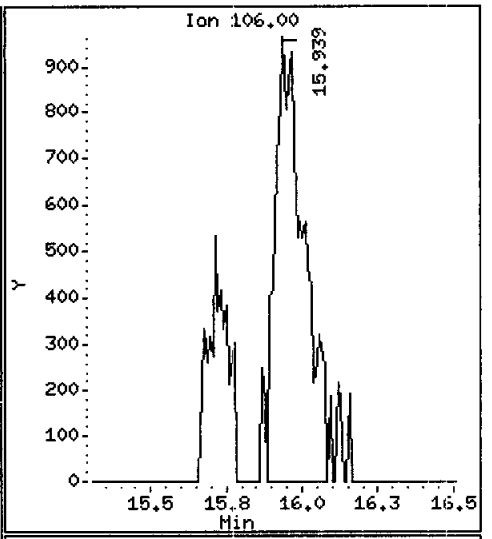
Concentration: 1.000 ppbv

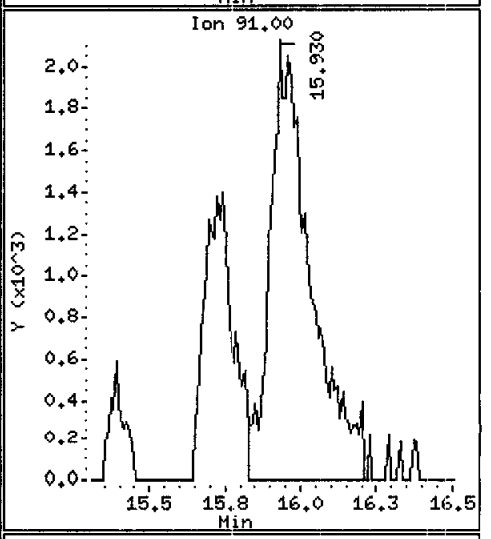


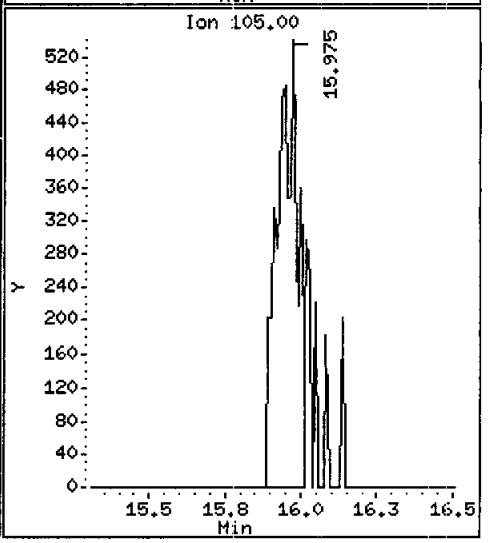












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7551.D

Date : 12-JAN-2005 06:45

Client ID: 066357-001

Instrument: gcmsb.i

Sample Info: G2DGW1AD,066357-001,SANDIA,E5A110218-6

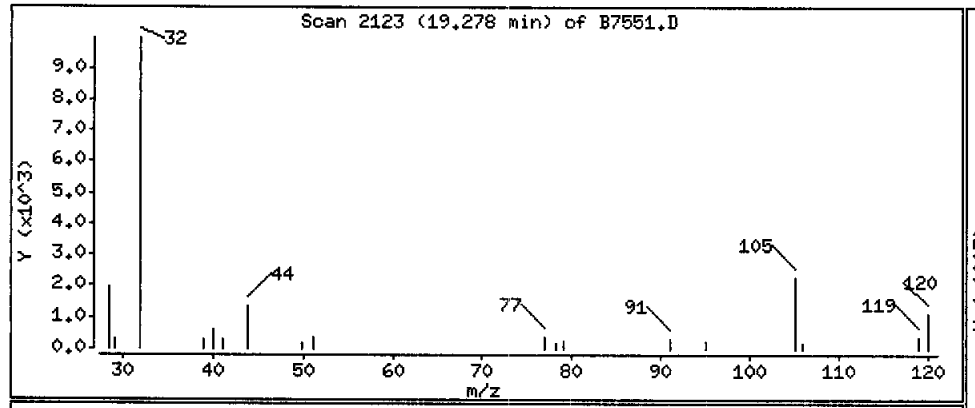
Operator: DLK

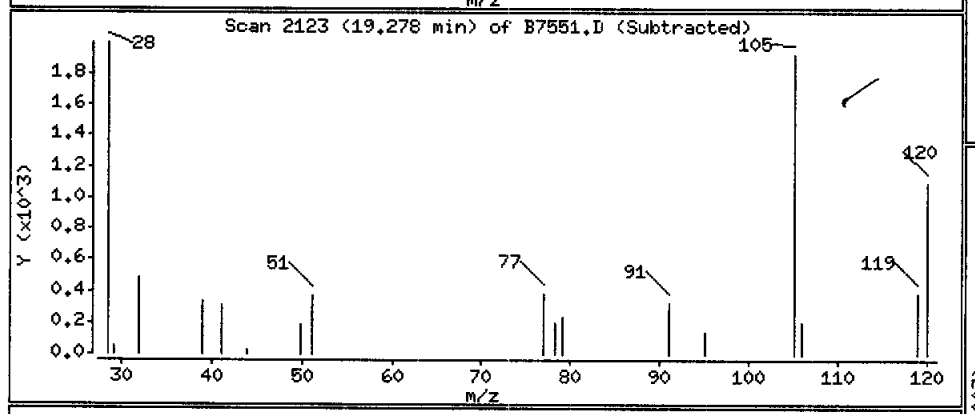
Column phase: J&W DB-624

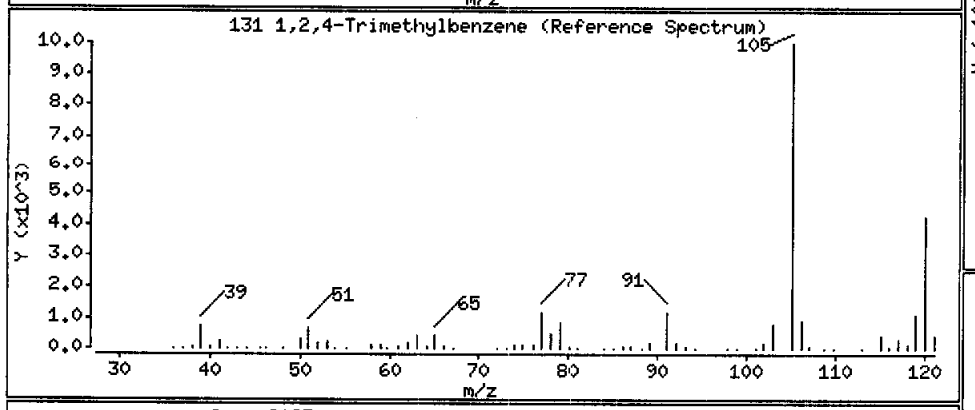
Column diameter: 0.53

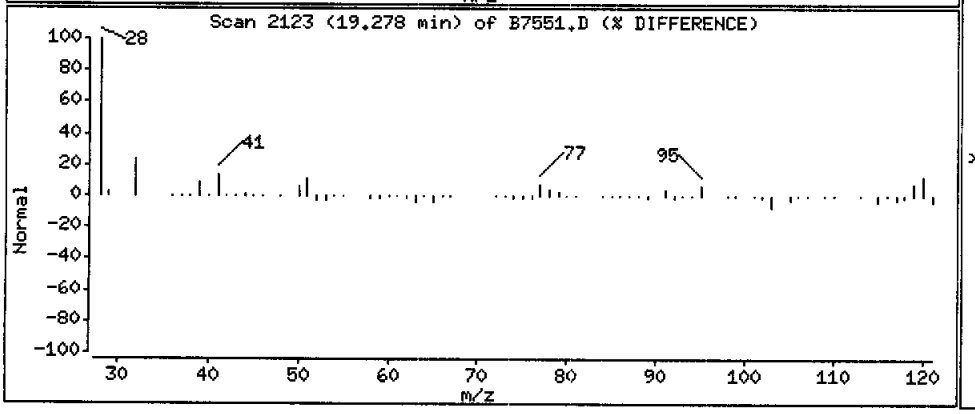
131 1,2,4-Trimethylbenzene

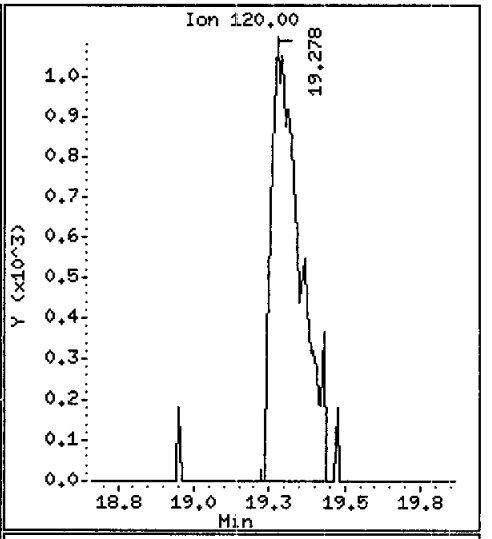
Concentration: 1.689 ppbv

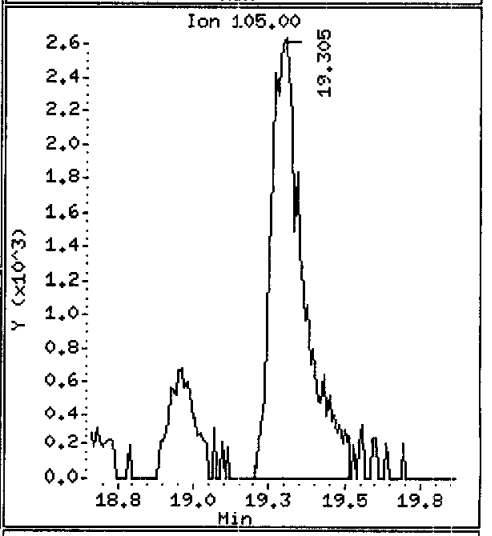


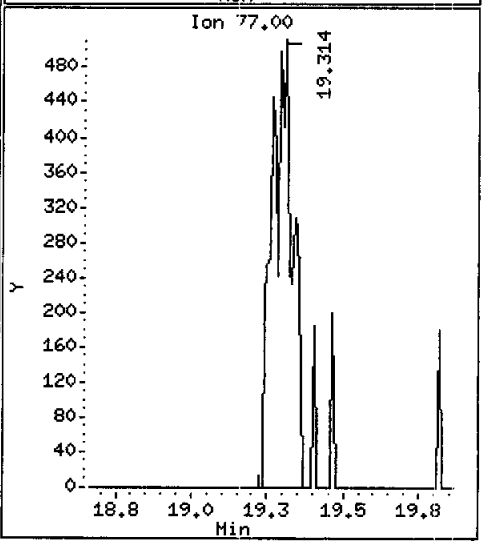












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD:
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608033	STCA	E5A100214		2/1/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	W. Palencia		2-1-05	
FINAL TRANSMITTED TO/DATE:	Skelly		2-1-05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO ERDMS OR RECORDS CENTER BY/DATE:	R. Kavanaugh		2-1-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader COLLINS | Project Name TAG VAPOR WELL SAMPLING | Case No. 7222_01.05

AR/COC No. 608033 | Analytical Lab SEVERN TRENT | SDG No. E5A100214

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted:_____

Reviewed by: W. Palencia Date:_____ Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of 1

AR/COC 608033

Batch No. N/A

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	4469	SMO Authorization:	DB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PC21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SEE BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066346-001	46-VW-01-SV-015	15		12/30/2004 0915	SG	SC	6L	none	G	SA	TO-14 summa# 12625	
066347-001	46-VW-01-SV-065	65		12/30/2004 0922	SG	SC	6L	none	G	SA	TO-14 summa# 12620	
066348-001	46-VW-01-SV-115	115		12/30/2004 0928	SG	SC	6L	none	G	SA	TO-14 summa# 11203	
066349-001	46-VW-01-SV-165	165		12/30/2004 0935	SG	SC	6L	none	G	SA	TO-14 summa# 92056	
066350-001	46-VW-01-SV-215	215		12/30/2004 0940	SG	SC	6L	none	G	SA	TO-14 summa# 93154	
066351-001	46-VW-01-SV-265	265		12/30/2004 0945	SG	SC	6L	none	G	SA	TO-14 summa# 11201	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/07/05
Entered by: JAC
QC inits. WJP

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members

Name	Signature	Init	Company/Organization/Phone/Cellular
J Lee		JDL	Weston Solutions 6146 (505-284-3309)
R Lynch		RL	Weston Solutions 6146 (505-250-7090)
W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER 44649

Commercial Invoice
Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination;
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES

				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

[illegible]

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED-EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

RK 1-19-05

ESA100214

ESA100214

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC **608033**

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	4649	SMO Authorization: SB	-Send preliminary/copy report to:
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21673	
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Released by COC No.:
Logbook Ref. No.:		SMO Contact/Phone:	Pam Pulssant(505)844-3185		☐ Validation Required
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To:Sandia National Labs (Accounts Payable)
Location	Tech Area 2				P.O. Box 5800 MS 0154
Building	Room				Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066346-001	46-VW-01-SV-015	15		12/30/2004 0915	SG	SC	6L	none	G	SA	TO-14 summa# 12625 -1	
066347-001	46-VW-01-SV-065	65		12/30/2004 0922	SG	SC	6L	none	G	SA	TO-14 summa# 12620 -2	
066348-001	46-VW-01-SV-115	115		12/30/2004 0928	SG	SC	6L	none	G	SA	TO-14 summa# 11203 -3	
066349-001	46-VW-01-SV-165	165		12/30/2004 0935	SG	SC	6L	none	G	SA	TO-14 summa# 92056 -4	
066350-001	46-VW-01-SV-215	215		12/30/2004 0940	SG	SC	6L	none	G	SA	TO-14 summa# 93154 -5	
066351-001	46-VW-01-SV-265	265		12/30/2004 0945	SG	SC	6L	none	G	SA	TO-14 summa# 11201 -6	

RMMA	☐ Yes ☑ No Ref. No.	Sample Tracking	Smo Use
Sample Disposal	☐ Return to Client ☑ Disposal by lab	Date Entered(mm/dd/yy)	
Turnaround Time	☐ 7 Day ☐ 15 Day ☑ 30 Day	Entered by:	
Return Samples By:	☐ Negotiated TAT	QC Inits.	

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

*Please list as separate report.

1.Relinquished by		Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by		Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by		Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by		Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by		Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by		Org.	Date	Time	6. Received by	Org.	Date	Time

E5A100214 COC 608033

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/17/05
Page : 1
Time : 14:23:19

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066346-001/46-VW-01-SV-015
Date Sampled: 12/30/04 Time Sampled: 9:15
LAB ID: E5A100214-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066347-001/46-VW-01-SV-065
Date Sampled: 12/30/04 Time Sampled: 9:22
LAB ID: E5A100214-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066348-001/46-VW-01-SV-115
Date Sampled: 12/30/04 Time Sampled: 9:28
LAB ID: E5A100214-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066349-001/46-VW-01-SV-165
Date Sampled: 12/30/04 Time Sampled: 9:35
LAB ID: E5A100214-004 Matrix: AIR

Parameter	Method	Rep

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066349-001/46-VW-01-SV-165
Date Sampled: 12/30/04 Time Sampled: 9:35
LAB ID: E5A100214-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066350-001/46-VW-01-SV-215
Date Sampled: 12/30/04 Time Sampled: 9:40
LAB ID: E5A100214-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066351-001/46-VW-01-SV-265
Date Sampled: 12/30/04 Time Sampled: 9:45
LAB ID: E5A100214-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 2
Case Narrative 2
Chain of Custody 3
Analytical Report 20
QA/QC 38
STL Los Angeles Raw Data 44
Raw Data: TO-14A 45

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

January 28, 2005

STL LOT NUMBER: **E5A100214**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

000166

This report contains _____ pages.

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100214

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

ESA100214

nal Lab

h No. N/A

SMO Use

AR/COC **608033**

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	#449	SMO Authorization:	JB
ect Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO21673
rd Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
ation	Tech Area 2				
ling	Room				

SEE BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066346-001	46-VW-01-SV-015	15		12/30/2004 0915	SG	SC	6L	none	G	SA	TO-14 summa# 12625	
066347-001	46-VW-01-SV-065	65		12/30/2004 0922	SG	SC	6L	none	G	SA	TO-14 summa# 12620	
066348-001	46-VW-01-SV-115	115		12/30/2004 0928	SG	SC	6L	none	G	SA	TO-14 summa# 11203	
066349-001	46-VW-01-SV-165	165		12/30/2004 0935	SG	SC	6L	none	G	SA	TO-14 summa# 92056	
066350-001	46-VW-01-SV-215	215		12/30/2004 0940	SG	SC	6L	none	G	SA	TO-14 summa# 93154	
066351-001	46-VW-01-SV-265	265		12/30/2004 0945	SG	SC	6L	none	G	SA	TO-14 summa# 11201	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

Abnormal Conditions on Receipt

Lab Use

rn Samples By: ☐ **Negotiated TAT** QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
nbers	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

linquished by		Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by		Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
linquished by		Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by		Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
linquished by		Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by		Org.	Date	Time	6. Received by	Org.	Date	Time

4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 12625
DATE CLEANED: 12/1/04A, 12/1/04C, 10/21/04A, 12/6/04A, 12/7/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.85	1-11-05	[illegible]
FINAL PRESSURE (PSIA)	23.85	1-11-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

N:\COM\DOCS\CANISTER FIELD DATA RECORD(012103).doc

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 12620
DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 12/6/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.85	1-11-05	[illegible]
FINAL PRESSURE (PSIA)	21.77	1-11-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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3

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 11203
DATE CLEANED: 12/1/04 A, 12/1/04 C, 12/29/04 A, 12/30/04 A, 1/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.18	1-11-05	TR
FINAL PRESSURE (PSIA)	21.39	1-11-05	TR

Pressurization Gas: N2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 92056
DATE CLEANED: 12/1/04A, 12/1/04B, 10/29/04A, 12/3/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.81	1-11-05	TM
FINAL PRESSURE (PSIA)	24.33	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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7

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 73154
DATE CLEANED: ~~12/1/04 A, 12/1/04 C, 12/9/04 A, 12/9/04 A, 12/2/04 C~~
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.74	1-11-05	TD
FINAL PRESSURE (PSIA)	24.41	1-11-05	TD

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 11201
DATE CLEANED: 12/1/04 A, 12/1/04C, 10/29/04A, 12/2/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.19	1-11-05	TD
FINAL PRESSURE (PSIA)	23.94	1-11-05	TD

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12·2·04A

Date of QC: 12-3-04

Data File Number: MB12031(MSB)

Canister ID Numbers

*G6041	12625 ✓
9243 B	9145 B
02471	0041
93012	03855
04340	92012
93257	9631 B

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-3-04

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12031.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:18
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,GL0141
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.311	8.324	(1.000)	498682	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.340	9.352	(0.921)	590663	47.4850	47.48
* 72 1,4-Difluorobenzene	114	10.143	10.155	(1.000)	1587702	50.0000	
$ 87 Toluene-d8	100	12.760	12.763	(1.258)	730243	46.9185	46.92
* 99 Chlorobenzene-d5	117	15.412	15.406	(1.000)	1098670	50.0000	
$ 113 4-Bromofluorobenzene	95	17.668	17.662	(1.146)	726403	37.0409	37.04

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12031.D

Date : 03-DEC-2004 12:18

Client ID: BLANK

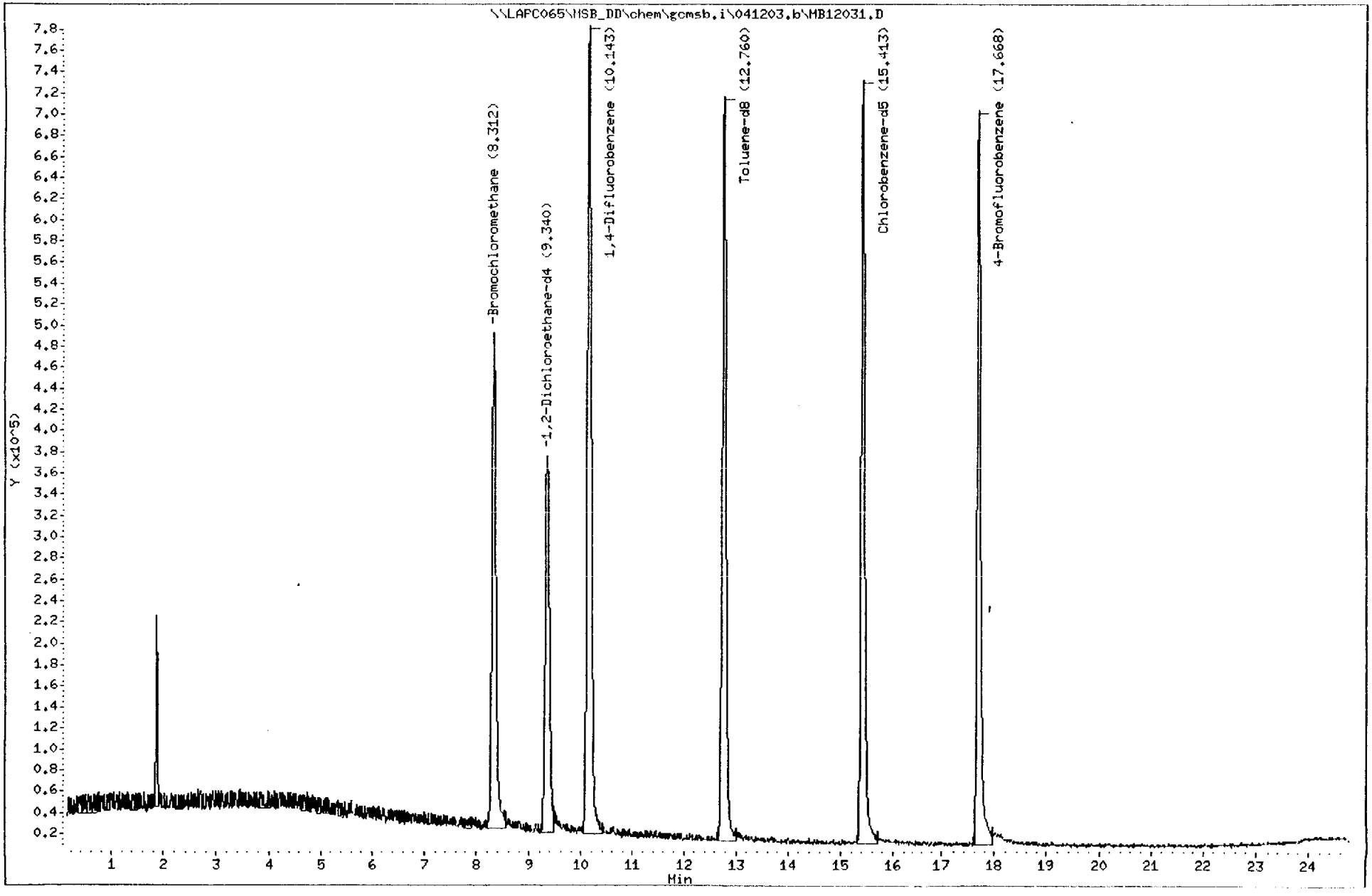
Instrument: gcmsb.i

Sample Info: BLANK,BLANK,GL0141

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15ML

Date Cleaned/Batch: 12-1-04C

Date of QC: 12-2-04

Data File Number: MB12021(MSB)

Canister ID Numbers

* 02803	11203 ✓
93110	12166
0142	12620 ✓
DL115	9413 BB
12211	12876
92056 ✓	93154 ✓

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-2-04

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:25
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,02803
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.314	8.326	(1.000)	503233	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.343	9.345	(0.921)	561863	47.6517	47.65
* 72 1,4-Difluorobenzene	114	10.146	10.157	(1.000)	1505004	50.0000	
$ 87 Toluene-d8	100	12.762	12.765	(1.258)	647801	43.9086	43.91
* 99 Chlorobenzene-d5	117	15.415	15.418	(1.000)	829144	50.0000	
$ 113 4-Bromofluorobenzene	95	17.670	17.664	(1.146)	411537	27.8068	27.81(R)

QC Flag Legend

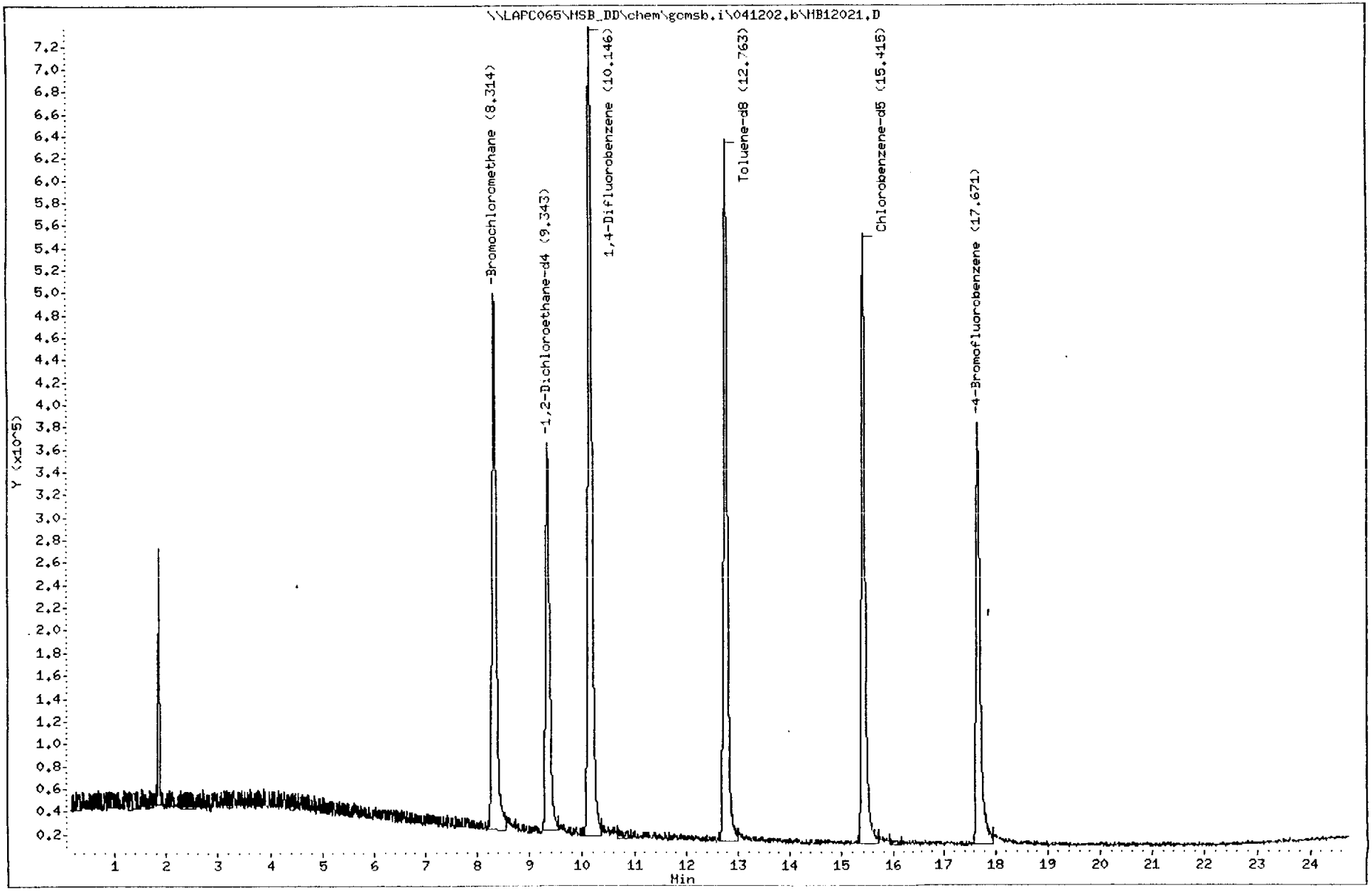
R - Spike/Surrogate failed recovery limits.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Date : 02-DEC-2004 13:25
Client ID: BLANK
Sample Info: BLANK,BLANK,02803

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12·1·04 A

Date of QC: 12-2-04

Data File Number: MB12022(MSB)

Canister ID Numbers

* A-286	93043
11341	11372
GL0113	93111
A-295	9313B
A-173	12652
11201 ✓	12177

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-2-04

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:54
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,A286
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.299	8.326	(1.000)	479142	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.319	9.345	(0.920)	573397	48.6689	48.67
* 72 1,4-Difluorobenzene	114	10.131	10.157	(1.000)	1503796	50.0000	
$ 87 Toluene-d8	100	12.748	12.765	(1.258)	688728	46.7202	46.72
* 99 Chlorobenzene-d5	117	15.409	15.418	(1.000)	979431	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.664	(1.146)	692624	39.6182	39.62

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D

Date : 02-DEC-2004 13:54

Client ID: BLANK

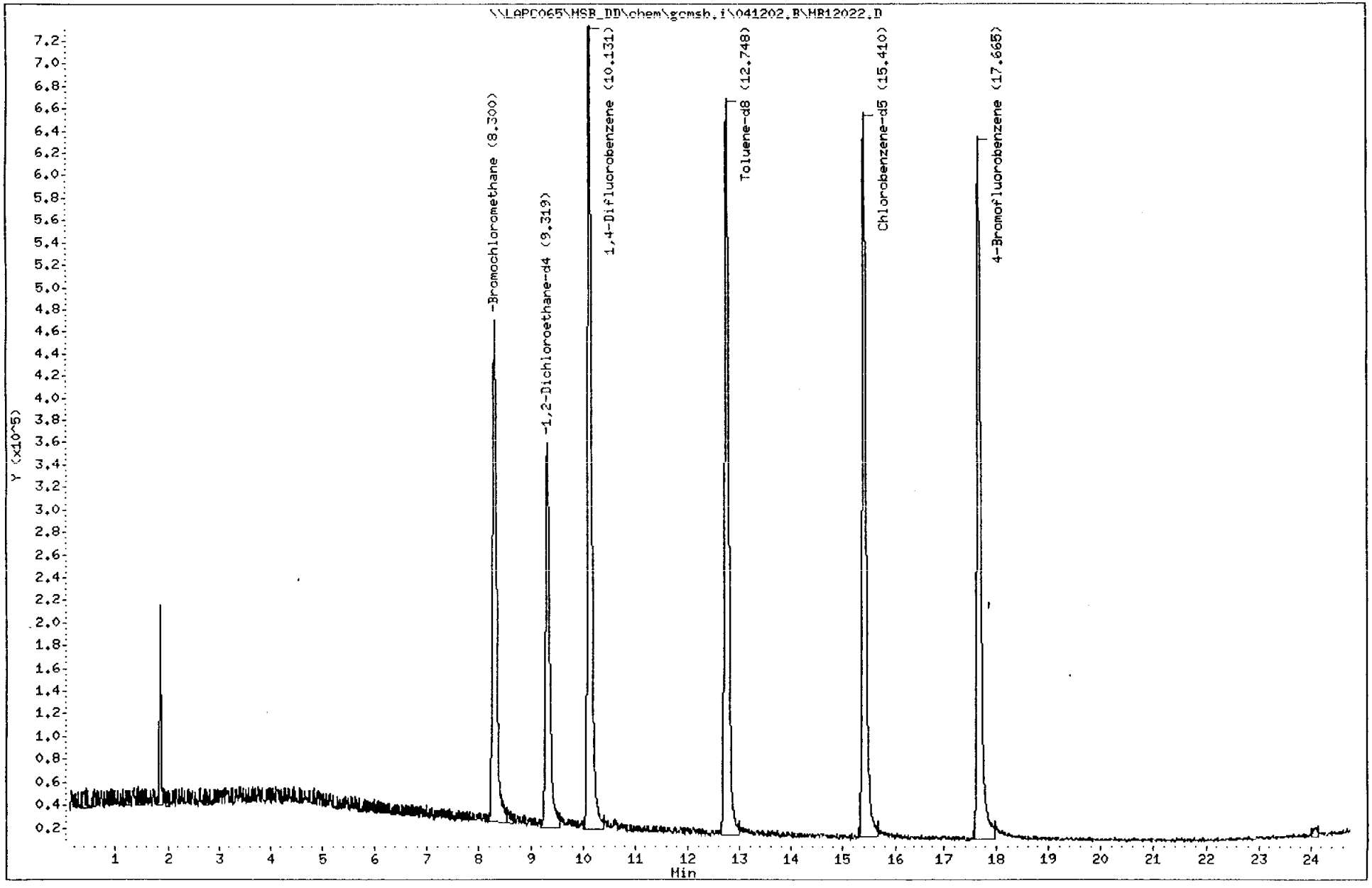
Instrument: gcmsb.i

Sample Info: BLANK,BLANK,A286

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100214

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100214

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066346-001/46-VW-01-SV-015 12/30/04 09:15 001				
1,1-Dichloroethene	2.4 J	6.2	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	3.8 J	6.2	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	8.4	6.2	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	960	6.2	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	11	6.2	ppb(v/v)	EPA-21 TO-14A
066347-001/46-VW-01-SV-065 12/30/04 09:22 002				
1,1-Dichloroethene	47 J	78	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	130	78	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	8700	78	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	120	78	ppb(v/v)	EPA-21 TO-14A
066348-001/46-VW-01-SV-115 12/30/04 09:28 003				
1,1-Dichloroethene	210	190	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	380	190	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	210	190	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	30000	190	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	360	190	ppb(v/v)	EPA-21 TO-14A
066349-001/46-VW-01-SV-165 12/30/04 09:35 004				
1,1-Dichloroethene	77 J	95	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	260	95	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	110	95	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	14000	95	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	180	95	ppb(v/v)	EPA-21 TO-14A
066350-001/46-VW-01-SV-215 12/30/04 09:40 005				
1,1-Dichloroethene	5.9 J	7.7	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	18	7.7	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	11	7.7	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	1200	7.7	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	6.8 J	7.7	ppb(v/v)	EPA-21 TO-14A
066351-001/46-VW-01-SV-265 12/30/04 09:45 006				
Acetone	2.5 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	220	2.0	ppb(v/v)	EPA-21 TO-14A

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EXECUTIVE SUMMARY - Detection Highlights

E5A100214

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066351-001/46-VW-01-SV-265 12/30/04 09:45 006				
1,2-Dichloropropane	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100214

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100214

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DGF	001	066346-001/46-VW-01-SV-015	12/30/04	09:15
G2DGG	002	066347-001/46-VW-01-SV-065	12/30/04	09:22
G2DGH	003	066348-001/46-VW-01-SV-115	12/30/04	09:28
G2DGK	004	066349-001/46-VW-01-SV-165	12/30/04	09:35
G2DGL	005	066350-001/46-VW-01-SV-215	12/30/04	09:40
G2DGM	006	066351-001/46-VW-01-SV-265	12/30/04	09:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066346-001/46-VW-01-SV-015

GC/MS Volatiles

Lot-Sample #...: E5A100214-001 **Work Order #...:** G2DGF1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 09:15 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 23:19
Dilution Factor: 3.09
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	6.2	ppb(v/v)	1.5
Chloromethane	ND	12	ppb(v/v)	3.1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6.2	ppb(v/v)	2.5
Vinyl chloride	ND	6.2	ppb(v/v)	2.5
Bromomethane	ND	6.2	ppb(v/v)	3.1
Chloroethane	ND	12	ppb(v/v)	2.5
Trichlorofluoromethane	ND	6.2	ppb(v/v)	1.5
1,1-Dichloroethene	**2.4 J**	**6.2**	**ppb(v/v)**	**1.5**
Carbon disulfide	ND	31	ppb(v/v)	6.2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.2	ppb(v/v)	1.5
Acetone	ND	31	ppb(v/v)	6.2
Methylene chloride	**3.8 J**	**6.2**	**ppb(v/v)**	**2.5**
1,1-Dichloroethane	ND	6.2	ppb(v/v)	1.5
Vinyl acetate	ND	31	ppb(v/v)	6.2
cis-1,2-Dichloroethene	**8.4**	**6.2**	**ppb(v/v)**	**2.5**
2-Butanone (MEK)	ND	31	ppb(v/v)	6.2
Chloroform	ND	6.2	ppb(v/v)	2.5
1,1,1-Trichloroethane	ND	6.2	ppb(v/v)	1.5
Carbon tetrachloride	ND	6.2	ppb(v/v)	1.5
Benzene	ND	6.2	ppb(v/v)	2.5
1,2-Dichloroethane	ND	6.2	ppb(v/v)	2.5
Trichloroethene	**960**	**6.2**	**ppb(v/v)**	**1.5**
1,2-Dichloropropane	**11**	**6.2**	**ppb(v/v)**	**2.5**
Bromodichloromethane	ND	6.2	ppb(v/v)	2.5
cis-1,3-Dichloropropene	ND	6.2	ppb(v/v)	1.5
4-Methyl-2-pentanone (MIBK)	ND	31	ppb(v/v)	6.2
Toluene	ND	6.2	ppb(v/v)	1.5
trans-1,3-Dichloropropene	ND	6.2	ppb(v/v)	2.5
1,1,2-Trichloroethane	ND	6.2	ppb(v/v)	1.9
Tetrachloroethene	ND	6.2	ppb(v/v)	1.9
2-Hexanone	ND	31	ppb(v/v)	3.1
Dibromochloromethane	ND	6.2	ppb(v/v)	1.5
1,2-Dibromoethane (EDB)	ND	6.2	ppb(v/v)	1.5
Chlorobenzene	ND	6.2	ppb(v/v)	1.5

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066346-001/46-VW-01-SV-015

GC/MS Volatiles

Lot-Sample #...: E5A100214-001 **Work Order #...:** G2DGF1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	6.2	ppb(v/v)	1.5
m-Xylene & p-Xylene	ND	6.2	ppb(v/v)	3.1
o-Xylene	ND	6.2	ppb(v/v)	1.9
Styrene	ND	6.2	ppb(v/v)	1.9
Bromoform	ND	6.2	ppb(v/v)	1.5
1,1,2,2-Tetrachloroethane	ND	6.2	ppb(v/v)	1.5
Benzyl chloride	ND	31	ppb(v/v)	2.5
4-Ethyltoluene	ND	6.2	ppb(v/v)	2.2
1,3,5-Trimethylbenzene	ND	6.2	ppb(v/v)	2.5
1,2,4-Trimethylbenzene	ND	6.2	ppb(v/v)	2.5
1,3-Dichlorobenzene	ND	6.2	ppb(v/v)	2.2
1,4-Dichlorobenzene	ND	6.2	ppb(v/v)	2.5
1,2-Dichlorobenzene	ND	6.2	ppb(v/v)	2.5
1,2,4-Trichloro-benzene	ND	15	ppb(v/v)	3.1
Hexachlorobutadiene	ND	12	ppb(v/v)	3.1

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066347-001/46-VW-01-SV-065

GC/MS Volatiles

Lot-Sample #...: E5A100214-002 **Work Order #...:** G2DGG1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 09:22 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 23:55
Dilution Factor: 38.75
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	78	ppb(v/v)	19
Chloromethane	ND	160	ppb(v/v)	39
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	78	ppb(v/v)	31
Vinyl chloride	ND	78	ppb(v/v)	31
Bromomethane	ND	78	ppb(v/v)	39
Chloroethane	ND	160	ppb(v/v)	31
Trichlorofluoromethane	ND	78	ppb(v/v)	19
1,1-Dichloroethene	**47 J**	**78**	**ppb(v/v)**	**19**
Carbon disulfide	ND	390	ppb(v/v)	78
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	78	ppb(v/v)	19
Acetone	ND	390	ppb(v/v)	78
Methylene chloride	ND	78	ppb(v/v)	31
1,1-Dichloroethane	ND	78	ppb(v/v)	19
Vinyl acetate	ND	390	ppb(v/v)	78
cis-1,2-Dichloroethene	**130**	**78**	**ppb(v/v)**	**31**
2-Butanone (MEK)	ND	390	ppb(v/v)	78
Chloroform	ND	78	ppb(v/v)	31
1,1,1-Trichloroethane	ND	78	ppb(v/v)	19
Carbon tetrachloride	ND	78	ppb(v/v)	19
Benzene	ND	78	ppb(v/v)	31
1,2-Dichloroethane	ND	78	ppb(v/v)	31
Trichloroethene	**8700**	**78**	**ppb(v/v)**	**19**
1,2-Dichloropropane	**120**	**78**	**ppb(v/v)**	**31**
Bromodichloromethane	ND	78	ppb(v/v)	31
cis-1,3-Dichloropropene	ND	78	ppb(v/v)	19
4-Methyl-2-pentanone (MIBK)	ND	390	ppb(v/v)	78
Toluene	ND	78	ppb(v/v)	19
trans-1,3-Dichloropropene	ND	78	ppb(v/v)	31
1,1,2-Trichloroethane	ND	78	ppb(v/v)	23
Tetrachloroethene	ND	78	ppb(v/v)	23
2-Hexanone	ND	390	ppb(v/v)	39
Dibromochloromethane	ND	78	ppb(v/v)	19
1,2-Dibromoethane (EDB)	ND	78	ppb(v/v)	19
Chlorobenzene	ND	78	ppb(v/v)	19

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066347-001/46-VW-01-SV-065

GC/MS Volatiles

Lot-Sample #...: E5A100214-002 **Work Order #...:** G2DGG1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	78	ppb(v/v)	19
m-Xylene & p-Xylene	ND	78	ppb(v/v)	39
o-Xylene	ND	78	ppb(v/v)	23
Styrene	ND	78	ppb(v/v)	23
Bromoform	ND	78	ppb(v/v)	19
1,1,2,2-Tetrachloroethane	ND	78	ppb(v/v)	19
Benzyl chloride	ND	390	ppb(v/v)	31
4-Ethyltoluene	ND	78	ppb(v/v)	27
1,3,5-Trimethylbenzene	ND	78	ppb(v/v)	31
1,2,4-Trimethylbenzene	ND	78	ppb(v/v)	31
1,3-Dichlorobenzene	ND	78	ppb(v/v)	27
1,4-Dichlorobenzene	ND	78	ppb(v/v)	31
1,2-Dichlorobenzene	ND	78	ppb(v/v)	31
1,2,4-Trichloro-benzene	ND	190	ppb(v/v)	39
Hexachlorobutadiene	ND	160	ppb(v/v)	39

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066348-001/46-VW-01-SV-115

GC/MS Volatiles

Lot-Sample #...: E5A100214-003 **Work Order #...:** G2DGH1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 09:28 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 00:30
Dilution Factor: 94.92
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	190	ppb(v/v)	47
Chloromethane	ND	380	ppb(v/v)	95
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	190	ppb(v/v)	76
Vinyl chloride	ND	190	ppb(v/v)	76
Bromomethane	ND	190	ppb(v/v)	95
Chloroethane	ND	380	ppb(v/v)	76
Trichlorofluoromethane	ND	190	ppb(v/v)	47
1,1-Dichloroethene	**210**	**190**	**ppb(v/v)**	**47**
Carbon disulfide	ND	950	ppb(v/v)	190
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	190	ppb(v/v)	47
Acetone	ND	950	ppb(v/v)	190
Methylene chloride	**380**	**190**	**ppb(v/v)**	**76**
1,1-Dichloroethane	ND	190	ppb(v/v)	47
Vinyl acetate	ND	950	ppb(v/v)	190
cis-1,2-Dichloroethene	**210**	**190**	**ppb(v/v)**	**76**
2-Butanone (MEK)	ND	950	ppb(v/v)	190
Chloroform	ND	190	ppb(v/v)	76
1,1,1-Trichloroethane	ND	190	ppb(v/v)	47
Carbon tetrachloride	ND	190	ppb(v/v)	47
Benzene	ND	190	ppb(v/v)	76
1,2-Dichloroethane	ND	190	ppb(v/v)	76
Trichloroethene	**30000**	**190**	**ppb(v/v)**	**47**
1,2-Dichloropropane	**360**	**190**	**ppb(v/v)**	**76**
Bromodichloromethane	ND	190	ppb(v/v)	76
cis-1,3-Dichloropropene	ND	190	ppb(v/v)	47
4-Methyl-2-pentanone (MIBK)	ND	950	ppb(v/v)	190
Toluene	ND	190	ppb(v/v)	47
trans-1,3-Dichloropropene	ND	190	ppb(v/v)	76
1,1,2-Trichloroethane	ND	190	ppb(v/v)	57
Tetrachloroethene	ND	190	ppb(v/v)	57
2-Hexanone	ND	950	ppb(v/v)	95
Dibromochloromethane	ND	190	ppb(v/v)	47
1,2-Dibromoethane (EDB)	ND	190	ppb(v/v)	47
Chlorobenzene	ND	190	ppb(v/v)	47

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066348-001/46-VW-01-SV-115

GC/MS Volatiles

Lot-Sample #...: E5A100214-003 **Work Order #...:** G2DGH1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	190	ppb(v/v)	47
m-Xylene & p-Xylene	ND	190	ppb(v/v)	95
o-Xylene	ND	190	ppb(v/v)	57
Styrene	ND	190	ppb(v/v)	57
Bromoform	ND	190	ppb(v/v)	47
1,1,2,2-Tetrachloroethane	ND	190	ppb(v/v)	47
Benzyl chloride	ND	950	ppb(v/v)	76
4-Ethyltoluene	ND	190	ppb(v/v)	66
1,3,5-Trimethylbenzene	ND	190	ppb(v/v)	76
1,2,4-Trimethylbenzene	ND	190	ppb(v/v)	76
1,3-Dichlorobenzene	ND	190	ppb(v/v)	66
1,4-Dichlorobenzene	ND	190	ppb(v/v)	76
1,2-Dichlorobenzene	ND	190	ppb(v/v)	76
1,2,4-Trichloro-benzene	ND	470	ppb(v/v)	95
Hexachlorobutadiene	ND	380	ppb(v/v)	95

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066349-001/46-VW-01-SV-165

GC/MS Volatiles

Lot-Sample #...: E5A100214-004 **Work Order #...:** G2DGK1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 09:35 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 01:06
Dilution Factor: 47.46
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	95	ppb(v/v)	24
Chloromethane	ND	190	ppb(v/v)	47
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	95	ppb(v/v)	38
Vinyl chloride	ND	95	ppb(v/v)	38
Bromomethane	ND	95	ppb(v/v)	47
Chloroethane	ND	190	ppb(v/v)	38
Trichlorofluoromethane	ND	95	ppb(v/v)	24
1,1-Dichloroethene	**77 J**	**95**	**ppb(v/v)**	**24**
Carbon disulfide	ND	470	ppb(v/v)	95
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	95	ppb(v/v)	24
Acetone	ND	470	ppb(v/v)	95
Methylene chloride	**260**	**95**	**ppb(v/v)**	**38**
1,1-Dichloroethane	ND	95	ppb(v/v)	24
Vinyl acetate	ND	470	ppb(v/v)	95
cis-1,2-Dichloroethene	**110**	**95**	**ppb(v/v)**	**38**
2-Butanone (MEK)	ND	470	ppb(v/v)	95
Chloroform	ND	95	ppb(v/v)	38
1,1,1-Trichloroethane	ND	95	ppb(v/v)	24
Carbon tetrachloride	ND	95	ppb(v/v)	24
Benzene	ND	95	ppb(v/v)	38
1,2-Dichloroethane	ND	95	ppb(v/v)	38
Trichloroethene	**14000**	**95**	**ppb(v/v)**	**24**
1,2-Dichloropropane	**180**	**95**	**ppb(v/v)**	**38**
Bromodichloromethane	ND	95	ppb(v/v)	38
cis-1,3-Dichloropropene	ND	95	ppb(v/v)	24
4-Methyl-2-pentanone (MIBK)	ND	470	ppb(v/v)	95
Toluene	ND	95	ppb(v/v)	24
trans-1,3-Dichloropropene	ND	95	ppb(v/v)	38
1,1,2-Trichloroethane	ND	95	ppb(v/v)	28
Tetrachloroethene	ND	95	ppb(v/v)	28
2-Hexanone	ND	470	ppb(v/v)	47
Dibromochloromethane	ND	95	ppb(v/v)	24
1,2-Dibromoethane (EDB)	ND	95	ppb(v/v)	24
Chlorobenzene	ND	95	ppb(v/v)	24

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066349-001/46-VW-01-SV-165

GC/MS Volatiles

Lot-Sample #...: E5A100214-004 **Work Order #...:** G2DGK1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	95	ppb(v/v)	24
m-Xylene & p-Xylene	ND	95	ppb(v/v)	47
o-Xylene	ND	95	ppb(v/v)	28
Styrene	ND	95	ppb(v/v)	28
Bromoform	ND	95	ppb(v/v)	24
1,1,2,2-Tetrachloroethane	ND	95	ppb(v/v)	24
Benzyl chloride	ND	470	ppb(v/v)	38
4-Ethyltoluene	ND	95	ppb(v/v)	33
1,3,5-Trimethylbenzene	ND	95	ppb(v/v)	38
1,2,4-Trimethylbenzene	ND	95	ppb(v/v)	38
1,3-Dichlorobenzene	ND	95	ppb(v/v)	33
1,4-Dichlorobenzene	ND	95	ppb(v/v)	38
1,2-Dichlorobenzene	ND	95	ppb(v/v)	38
1,2,4-Trichloro-benzene	ND	240	ppb(v/v)	47
Hexachlorobutadiene	ND	190	ppb(v/v)	47

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066350-001/46-VW-01-SV-215

GC/MS Volatiles

Lot-Sample #...: E5A100214-005 **Work Order #...:** G2DGL1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 09:40 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 01:42
Dilution Factor: 3.84
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	7.7	ppb(v/v)	1.9
Chloromethane	ND	15	ppb(v/v)	3.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.7	ppb(v/v)	3.1
Vinyl chloride	ND	7.7	ppb(v/v)	3.1
Bromomethane	ND	7.7	ppb(v/v)	3.8
Chloroethane	ND	15	ppb(v/v)	3.1
Trichlorofluoromethane	ND	7.7	ppb(v/v)	1.9
1,1-Dichloroethene	**5.9 J**	**7.7**	**ppb(v/v)**	**1.9**
Carbon disulfide	ND	38	ppb(v/v)	7.7
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	7.7	ppb(v/v)	1.9
Acetone	ND	38	ppb(v/v)	7.7
Methylene chloride	**18**	**7.7**	**ppb(v/v)**	**3.1**
1,1-Dichloroethane	ND	7.7	ppb(v/v)	1.9
Vinyl acetate	ND	38	ppb(v/v)	7.7
cis-1,2-Dichloroethene	**11**	**7.7**	**ppb(v/v)**	**3.1**
2-Butanone (MEK)	ND	38	ppb(v/v)	7.7
Chloroform	ND	7.7	ppb(v/v)	3.1
1,1,1-Trichloroethane	ND	7.7	ppb(v/v)	1.9
Carbon tetrachloride	ND	7.7	ppb(v/v)	1.9
Benzene	ND	7.7	ppb(v/v)	3.1
1,2-Dichloroethane	ND	7.7	ppb(v/v)	3.1
Trichloroethene	**1200**	**7.7**	**ppb(v/v)**	**1.9**
1,2-Dichloropropane	**6.8 J**	**7.7**	**ppb(v/v)**	**3.1**
Bromodichloromethane	ND	7.7	ppb(v/v)	3.1
cis-1,3-Dichloropropene	ND	7.7	ppb(v/v)	1.9
4-Methyl-2-pentanone (MIBK)	ND	38	ppb(v/v)	7.7
Toluene	ND	7.7	ppb(v/v)	1.9
trans-1,3-Dichloropropene	ND	7.7	ppb(v/v)	3.1
1,1,2-Trichloroethane	ND	7.7	ppb(v/v)	2.3
Tetrachloroethene	ND	7.7	ppb(v/v)	2.3
2-Hexanone	ND	38	ppb(v/v)	3.8
Dibromochloromethane	ND	7.7	ppb(v/v)	1.9
1,2-Dibromoethane (EDB)	ND	7.7	ppb(v/v)	1.9
Chlorobenzene	ND	7.7	ppb(v/v)	1.9

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066350-001/46-VW-01-SV-215

GC/MS Volatiles

Lot-Sample #...: E5A100214-005 **Work Order #...:** G2DGL1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	7.7	ppb(v/v)	1.9
m-Xylene & p-Xylene	ND	7.7	ppb(v/v)	3.8
o-Xylene	ND	7.7	ppb(v/v)	2.3
Styrene	ND	7.7	ppb(v/v)	2.3
Bromoform	ND	7.7	ppb(v/v)	1.9
1,1,2,2-Tetrachloroethane	ND	7.7	ppb(v/v)	1.9
Benzyl chloride	ND	38	ppb(v/v)	3.1
4-Ethyltoluene	ND	7.7	ppb(v/v)	2.7
1,3,5-Trimethylbenzene	ND	7.7	ppb(v/v)	3.1
1,2,4-Trimethylbenzene	ND	7.7	ppb(v/v)	3.1
1,3-Dichlorobenzene	ND	7.7	ppb(v/v)	2.7
1,4-Dichlorobenzene	ND	7.7	ppb(v/v)	3.1
1,2-Dichlorobenzene	ND	7.7	ppb(v/v)	3.1
1,2,4-Trichloro-benzene	ND	19	ppb(v/v)	3.8
Hexachlorobutadiene	ND	15	ppb(v/v)	3.8

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066351-001/46-VW-01-SV-265

GC/MS Volatiles

Lot-Sample #...: E5A100214-006 **Work Order #...:** G2DGM1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 09:45 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 02:17
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**2.5 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**1.3 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**220**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	**1.1 J**	**2.0**	**ppb(v/v)**	**0.80**
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	ND	2.0	ppb(v/v)	0.50
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066351-001/46-VW-01-SV-265

GC/MS Volatiles

Lot-Sample #...: E5A100214-006 **Work Order #...:** G2DGM1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100214

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5012180	
002	AE	EPA-21 TO-14A		5012180	
003	AE	EPA-21 TO-14A		5012180	
004	AE	EPA-21 TO-14A		5012180	
005	AE	EPA-21 TO-14A		5012180	
006	AE	EPA-21 TO-14A		5012180	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100214 **Work Order #...:** G2F241AA **Matrix.....:** AIR
MB Lot-Sample #: M5A120000-180

Prep Date.....: 01/11/05 **Analysis Time..:** 20:21
Analysis Date..: 01/11/05 **Prep Batch #...:** 5012180 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 101605

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100214 **Work Order #...:** G2F241AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100214 **Work Order #...:** G2F241AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-180 G2F241AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 16:33
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	103	**(70 - 125)**	**1.1**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**103**	**(75 - 120)**			**EPA-21 TO-14A**
	104	**(75 - 120)**	**0.81**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	102	**(70 - 125)**	**0.33**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**100**	**(75 - 125)**			**EPA-21 TO-14A**
	100	**(75 - 125)**	**0.16**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**110**	**(65 - 130)**			**EPA-21 TO-14A**
	109	**(65 - 130)**	**0.40**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100214 **Work Order #...:** G2F241AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-180 G2F241AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 16:33
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**51.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	50.5	**52.2**	**ppb(v/v)**	**103**	**1.1**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**56.2**	**ppb(v/v)**	**103**		**EPA-21 TO-14A**
	54.5	**56.6**	**ppb(v/v)**	**104**	**0.81**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**50.7**	**ppb(v/v)**	**102**	**0.33**	**EPA-21 TO-14A**
Toluene	**49.5**	**49.6**	**ppb(v/v)**	**100**		**EPA-21 TO-14A**
	49.5	**49.5**	**ppb(v/v)**	**100**	**0.16**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**54.9**	**ppb(v/v)**	**110**		**EPA-21 TO-14A**
	50.0	**54.7**	**ppb(v/v)**	**109**	**0.40**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100214

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: G 011305

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

VE 1/4/05

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
18 1,1-Difluoroethane	+++++ / +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372
19 Vinyl Bromide	0.62278 / 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391
20 Dichlorofluoromethane (F21)	1.78533 / 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446
21 Trichlorofluoromethane (F11)	2.44228 / 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083
22 n-Pentane	1.21122 / 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395
23 1,1-DC-1-flouroethane(F141b)	2.58910 / +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444
24 Ethanol	+++++ / 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705
25 Ether (Diethyl ether)	0.49364 / 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284
26 Acrolein	0.20601 / 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263 <-
27 Propionaldehyde (Propanal)	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
28 1,1-Dichloroethene	1.26790 1.06973	1.17864	1.08330	1.12535	1.10018	1.07502	1.12859	6.381
29 2,2-Dimethylbutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715 2.22085	2.59937	2.38876	2.40025	2.34655	2.25977	2.44467	9.559
31 Acetone	+++++ 0.20458	0.12242	0.14598	0.16090	0.16041	0.16574	0.16001	16.836
32 Iodomethane	1.11548 1.87248	1.03774	1.38752	1.40857	2.82193	2.47154	1.73075	39.751 <-
33 Carbon Disulfide	0.84200 1.35974	0.90775	0.92884	1.06258	1.12947	1.19849	1.06127	17.279
34 2-Propanol	+++++ 0.71716	0.45343	0.48827	0.55577	0.58306	0.59777	0.56591	16.380
35 Acetonitrile	0.04928 0.15546	0.08266	0.12149	0.13210	0.18434	0.18610	0.13021	39.137 <-
36 Allyl Chloride	0.54011 0.71567	0.56312	0.52171	0.54469	0.60226	0.61352	0.58587	11.302
37 Methylene Chloride	0.81147 0.69121	0.73641	0.65629	0.67719	0.66235	0.64310	0.69686	8.458

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.75494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

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Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
70 2,2,4-Trimethylpentane	2.04384	1.84557	1.78175	1.69840	1.73692	1.68874		
	1.43818						1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680	0.92384	0.86786	0.85814	1.07070	0.99994		
	0.81576						0.93758	10.283
72 n-Heptane	0.65292	0.59087	0.57809	0.57044	0.59474	0.58371		
	0.52727						0.58544	6.367
74 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Trichloroethene	0.49675	0.44912	0.44758	0.42160	0.43287	0.42172		
	0.38637						0.43657	7.756
76 Methylcyclohexane	0.42140	0.36653	0.33095	0.30891	0.38179	0.35467		
	0.29346						0.35110	12.546
77 1-Butanol	+++++	0.02081	0.01680	0.01594	0.01842	0.01675		
	0.01390						0.01710	13.662
78 1,2-Dichloropropane	0.16774	0.15879	0.17082	0.16553	0.16628	0.16412		
	0.15399						0.16390	3.481
79 Dibromomethane	0.53415	0.48041	0.44691	0.42596	0.54917	0.51576		
	0.44421						0.48522	9.991
80 Methyl methacrylate	+++++	0.23366	0.24181	+++++	0.31202	0.30819		
	0.31492						0.28212	14.422

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++ / 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014	
82 Bromodichloromethane	0.49808 / 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427 / 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++ / 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414 / 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++ / 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270	
87 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Toluene	1.01334 / 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491	
90 n-Octane	0.59003 / 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058 / 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201	

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
92 Ethyl methacrylate	+++++ 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924	
93 1,1,2-Trichloroethane	0.61878 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318	
94 1,3-Dichloropropane	0.69617 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62387	10.012	
95 Tetrachloroethene	0.91266 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629	
96 2-Hexanone	+++++ 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442	<-
97 Dibromochloromethane	0.78993 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682	
98 1,2-Dibromoethane	0.91324 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882	
M 99 Xylenes (total)	0.41650 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871	
100 1-Chlorohexane	0.67959 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341	
102 Chlorobenzene	1.04688 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759	

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49329	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

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113 Cyclohexanone	+++++ / 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036	<-
115 Bromobenzene	0.62810 / 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953	
116 1,1,2,2-Tetrachloroethane	1.35006 / 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.38429	6.584	
117 1,2,3-Trichloropropane	0.40312 / 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311	
118 trans-1,4-Dichloro-2-butene	+++++ / +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055	<-
119 n-Propylbenzene	1.28187 / 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097	
120 2-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
121 4-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
122 3-Ethyltoluene	1.05354 / 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139	
123 4-Ethyl Toluene	0.81519 / 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497	

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124 1,3,5-Trimethylbenzene	1.37558 +++++	1.21368	0.81082	0.65064	0.83940	0.78774	0.94631	29.818
125 n-Decane	0.46267 0.32620	0.34922	0.25520	0.27626	0.36839	0.34720	0.34073	19.844
126 .beta.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Ethyltoluene	1.11542 1.16620	0.94881	0.85458	0.95853	1.30303	1.23402	1.08294	15.307
128 .alpha.-Methylstyrene	0.43803 0.54809	0.36069	0.33804	0.37867	0.54465	0.52825	0.44806	20.459
129 tert-Butylbenzene	0.80994 0.87914	0.73130	0.67470	0.76818	1.05286	1.00081	0.84528	16.570
130 Pentachloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955 +++++	0.35806	0.23173	0.19988	0.25825	0.25412	0.27527	23.368
132 sec-Butylbenzene	1.53068 1.68519	1.27842	1.22547	1.37218	1.91352	1.87496	1.55435	17.948
133 D-Limonene	0.56335 0.43408	0.44070	0.33104	0.35410	0.48917	0.46237	0.43926	17.978

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134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030			
	0.69853						0.52632	18.610	
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222			
	1.26479						1.14477	17.565	
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895			
	0.67222						0.54141	18.711	
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417			
	0.67804						0.64142	16.131	
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209			
	1.02647						0.56325	55.511	<-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348			
	0.55025						0.48440	18.904	
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253			
	0.64790						0.53798	14.023	
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416			
	0.23934						0.27616	17.206	
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159			
	0.79399						0.72730	19.989	
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136			
	0.17470						0.37429	42.157	<-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++ / 0.27629	0.26338	0.25799	0.22180	0.31565	0.26332	0.26641	11.388
145 Hexachlorobutadiene	0.56644 / 0.51820	0.58610	0.42156	0.35251	0.47676	0.47942	0.48586	16.727
146 Naphthalene	+++++ / 0.49153	0.70441	0.53060	0.46537	0.55710	0.47106	0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850 / 0.25906	0.48714	0.49598	+++++	0.42244	0.27752	0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014 / 0.39572	0.40234	0.40611	0.41316	0.41851	0.44633	0.41033	4.531
$ 88 Toluene-d8	0.51061 / 0.54926	0.50803	0.52649	0.50915	0.52457	0.53681	0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642 / 1.09717	0.79382	0.81777	0.80936	0.95153	0.96622	0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0

MA 01/04/05

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ent ID:	Data Directory: D:\GCMSB\ 050103A-B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3 05
S-B	Method File: TO14A	Daily Standard: MSL0401102B	SOP: CO1-MS-003
k ID:	Tune File:	LCS Standard: MSL0401104B	MDL Date: 01-28-01
S-041	BF041123	I.S. Standard: PSL9911283	Blank Lot No. G050301.00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
05	1909	BF01032	-	-	-	BFB	20	-	-	-	m	OK	A	
	1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL00571
	2002	IC01031	-	-	-	2.0 PPBV STD	40	-	-	-	m	OK	10	MSL0401043
	2037	IC01032	-	-	-	4.0	80	-	-	-	m	OK	10	
	2112	IC01033	-	-	-	10	200	-	-	-	m	OK	10	
	2148	IC01034	-	-	-	25	500	-	-	-	m	OK	10	
	2223	IC01035	-	-	-	50	125	-	-	-	m	OK	11	MSL0401102B
	2258	IC01036	-	-	-	100	250	-	-	-	m	OK	11	
	2334	IC01037	-	-	-	500	1250	-	-	-	m	OK	11	
05	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 <1.0?
	0014	LC01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL0401104B
	0119	LC01034	-	-	-	LCSD	500	-	-	-	m	OK	13	
	0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
	0342	B7371	G1PG5IAA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EGL220306-1
	0417	B7372	G1PG7IAA			002	872	24.4/14.0	-		m	OK	1	-2
	0452	B7373	G1PH1IAA			003	1130	24.4/10.9	-		m	OK	2	-3
	0527	B7374	G1PH2IAA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
	0602	B7375	G1PH4IAA			005	1000	24.5/11.6	-	1.00	m	O/R	4	-5

ved: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ent ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
S-B	Method File:	Daily Standard: See Previous Run	SOP:
(ID:	Tune File:	LCS Standard: w 1-4-05	MDL Date:
S-041		I.S. Standard:	Blank Lot No.

ate	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
-05	0637	B7576	G1P4M1AA	CCA	CRA	A 1717A-BW CCC	1150	244/1.2	–	1.00	w	OK	5	EYL22036-6
	0712	B7577	G1Q191AD	↓	TAST	LLSVOCMSB 0730	40	242/1.1	100/10	2730	w	O/R	6	EYL23056-1 w 0.1
✓	0741	B7578	G1R2A1AD	↓	↓	LLSVOCMSB 1030	40	244/1.2	100/10	2720	w	OK	7	↓ -2

ved: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

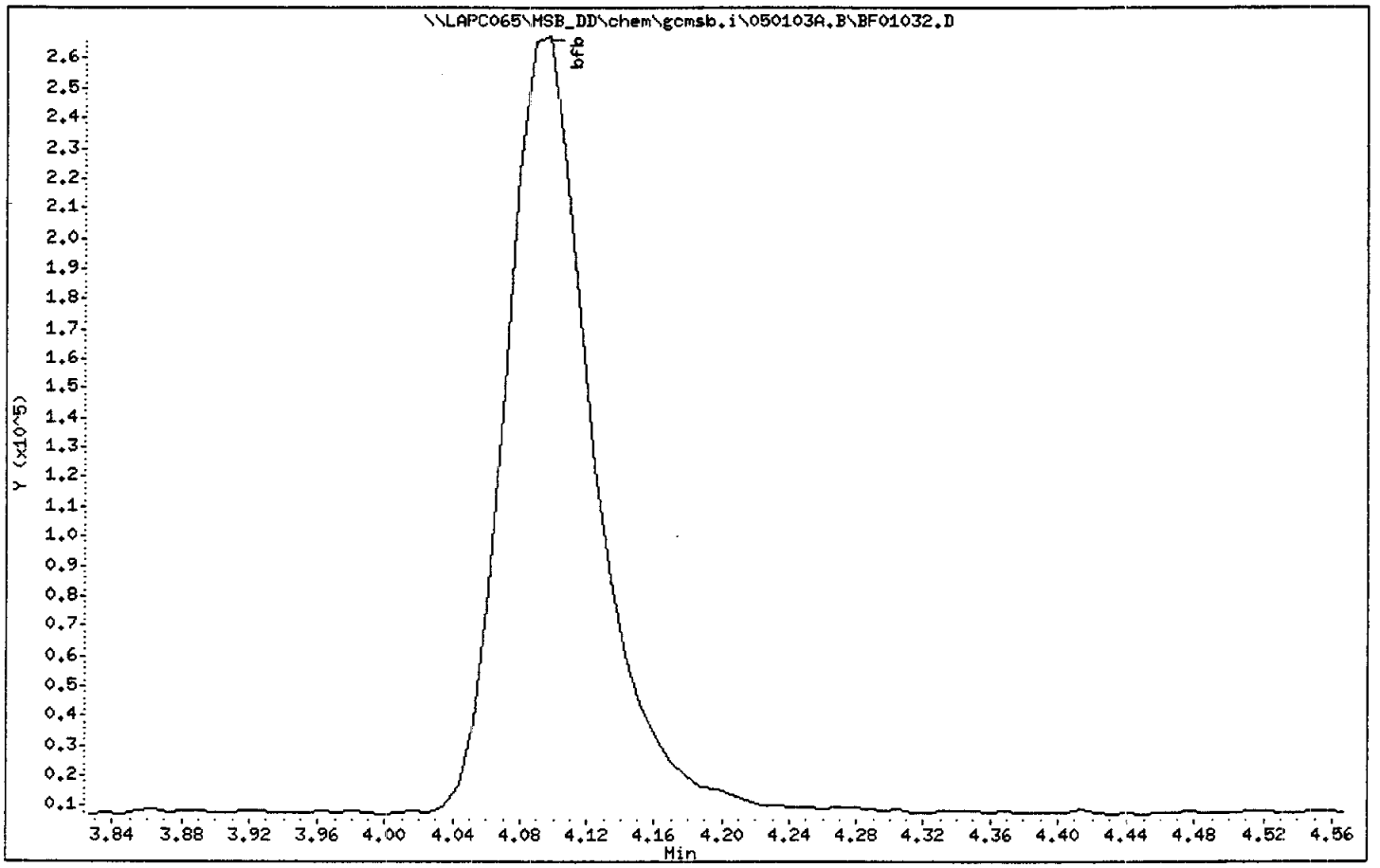
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

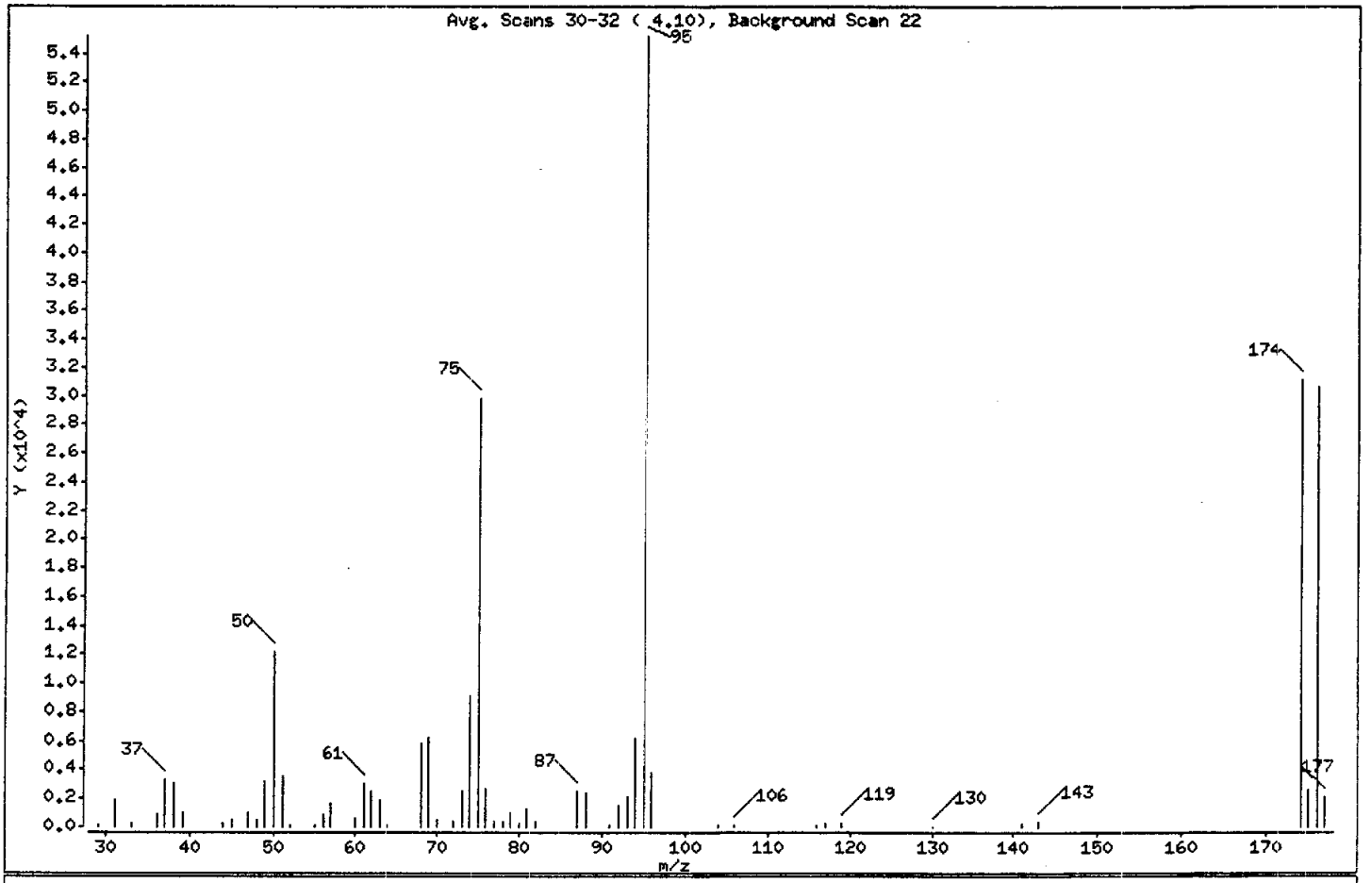
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

KA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

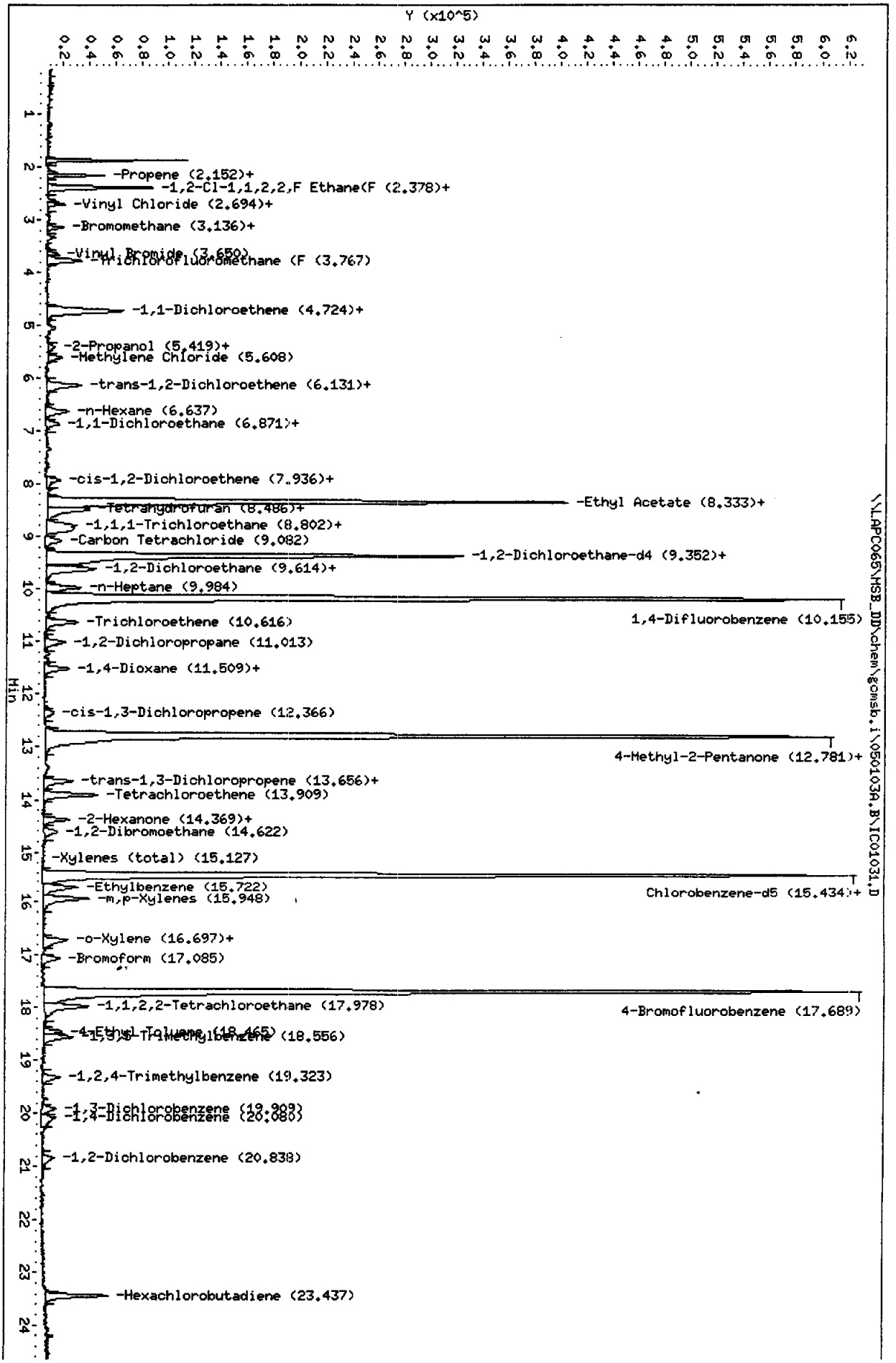
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

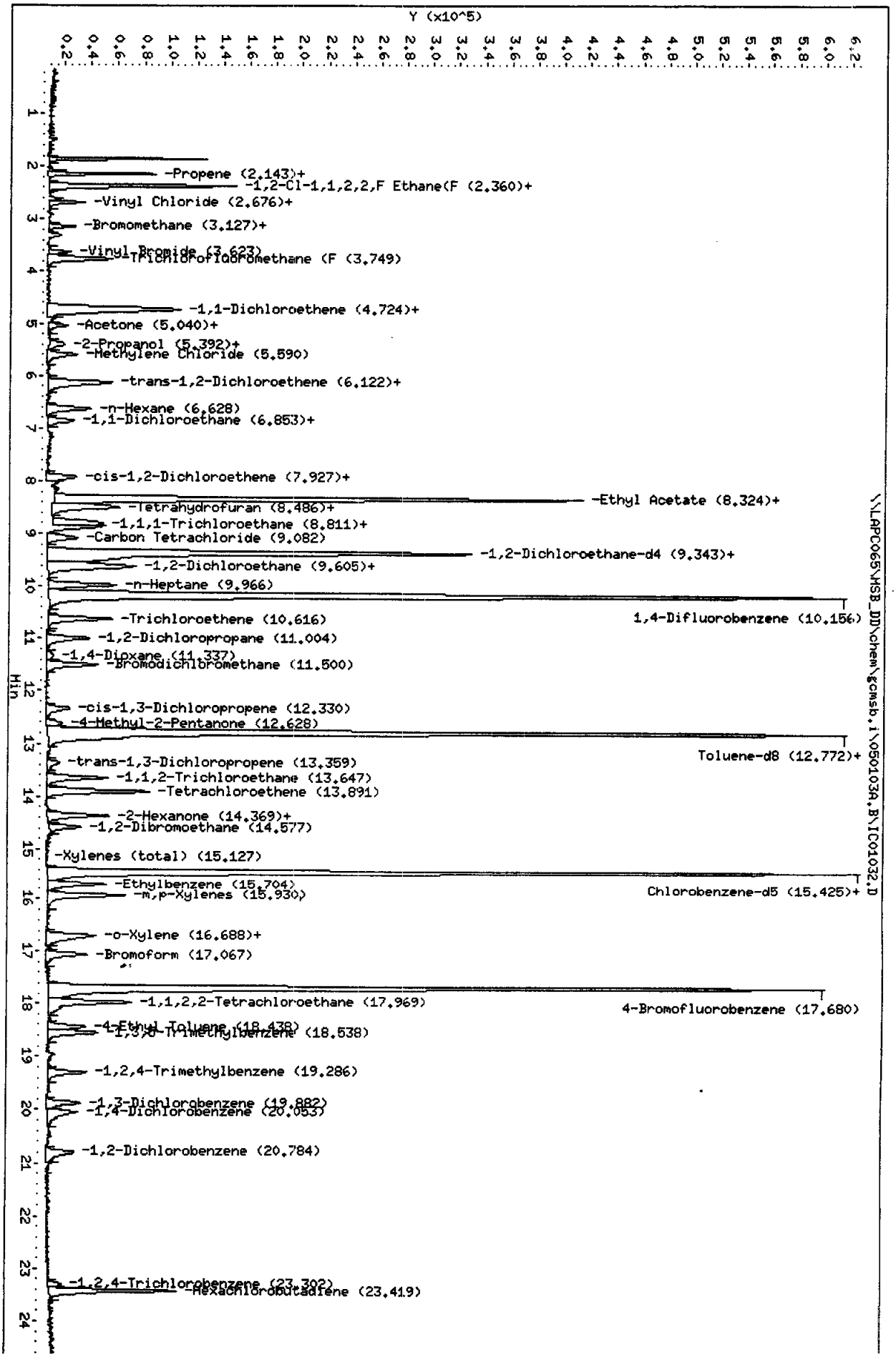
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
	36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
	37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
	40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
	41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
	43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
	45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
	53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
	54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
	56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
*	58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
	59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
	60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
	62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
	64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
	68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
	69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
	72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
	81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
	82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
	85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
	89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
	91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
	93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
	95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
	96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
	98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
*	101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
	102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M	99 Xylenes (total)	106				196706	30.0000	28.63
	104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
	105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
	107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
	108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
	110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
	116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

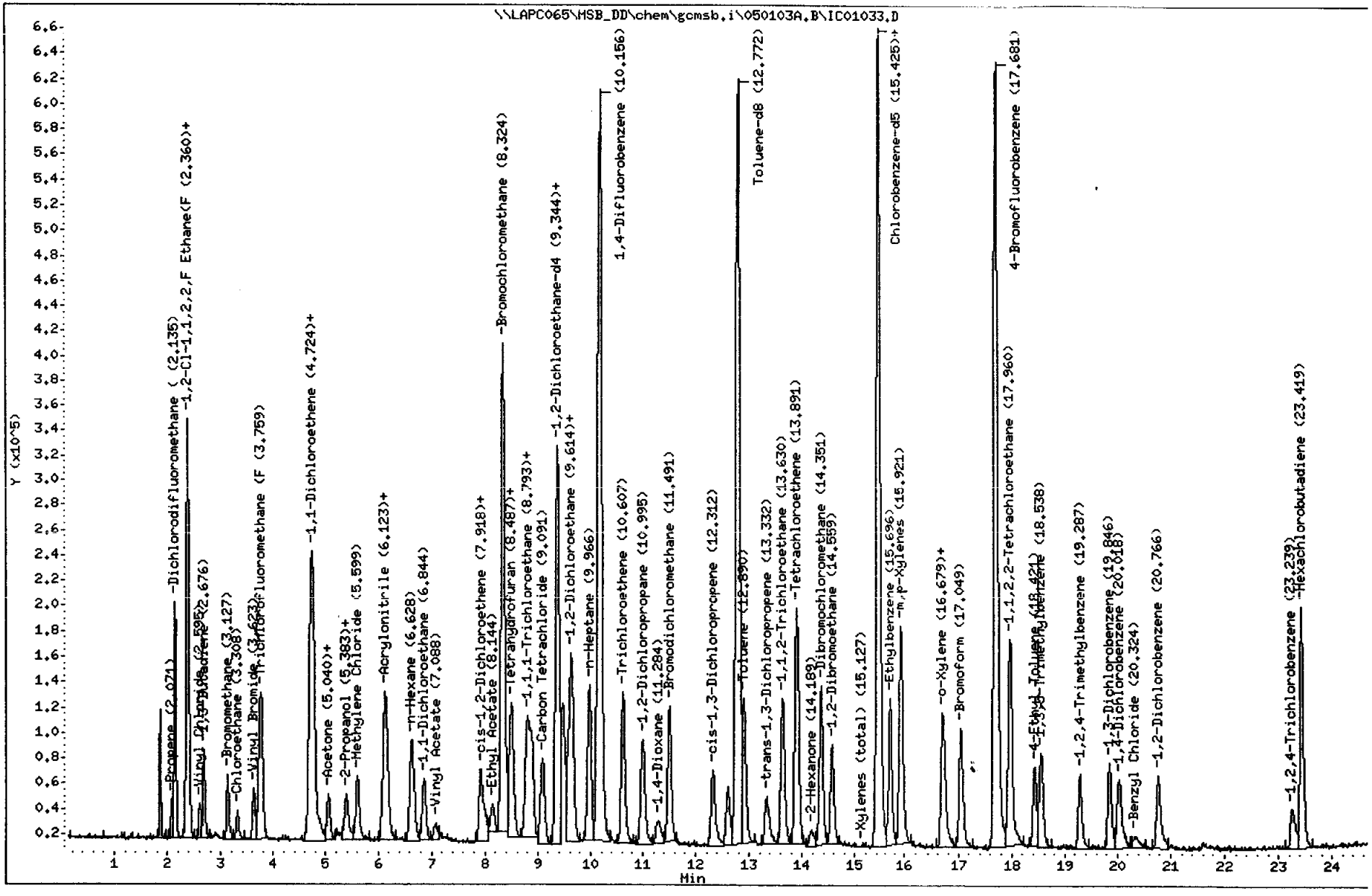
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
	36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
	37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
	40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
	41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
	43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
	44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
	45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
	53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
	54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
	56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
*	58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
	59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
	60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
	61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
	62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
	64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$	66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
	68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
	69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
	70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
	72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
*	73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
	75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
	78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
	81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
	82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
	85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
	86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$	88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
	89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
	91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
	93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
	95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
	96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
	97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
	98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
*	101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
	102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M	99 Xylenes (total)	106				477975	75.0000	68.20
	104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
	105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
	107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
	108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
	110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$	114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D

Date : 03-JAN-2005 21:48

Client ID: MSL04011026

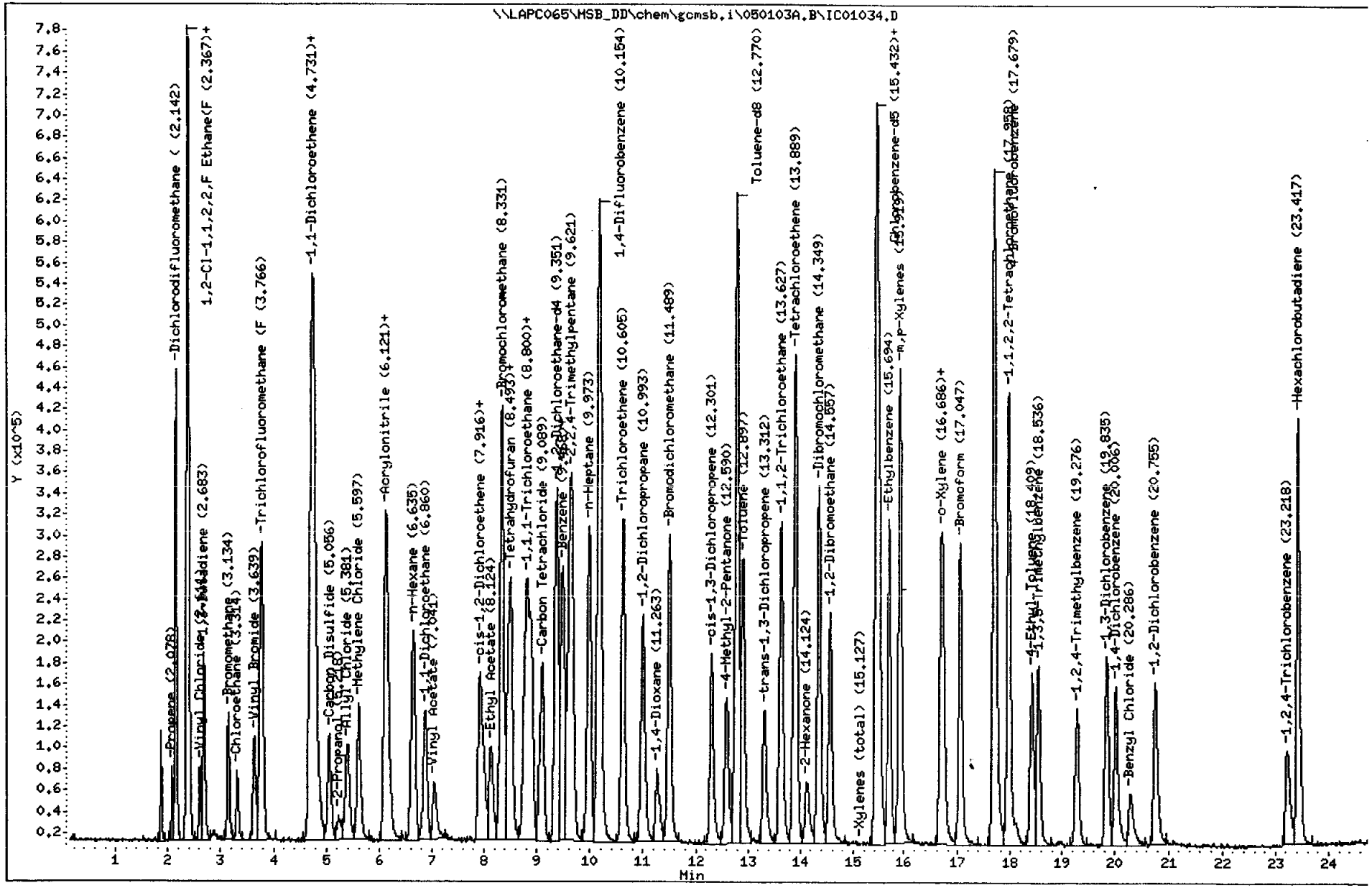
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



E5A100214

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

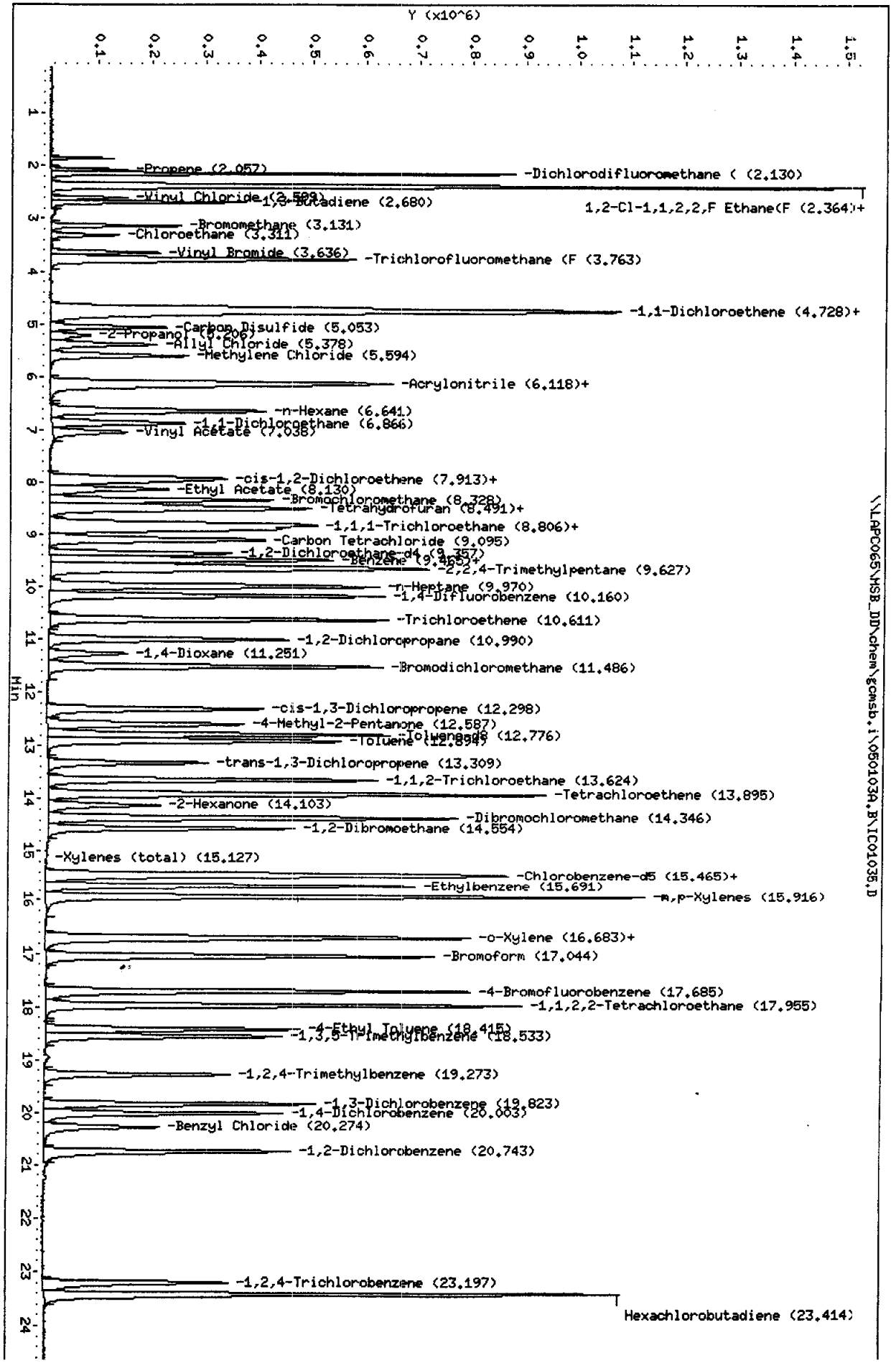
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: HSL04011028
Sample Info: 50 PPBV STD,HSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
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Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
	36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
	37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
	40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
	41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
	43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
	44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
	45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
	53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
	54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
	56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
*	58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
	59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
	60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
	61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
	62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
	64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$	66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
	68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
	69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
	70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
	72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
*	73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
	75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
	78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
	81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
	82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
	85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
	86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$	88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
	89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
	91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
	93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
	95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
	96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
	97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
	98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
*	101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
	102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M	99 Xylenes (total)	106				2384108	300.000	320.3
	104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
	105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
	107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
	108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
	110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$	114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

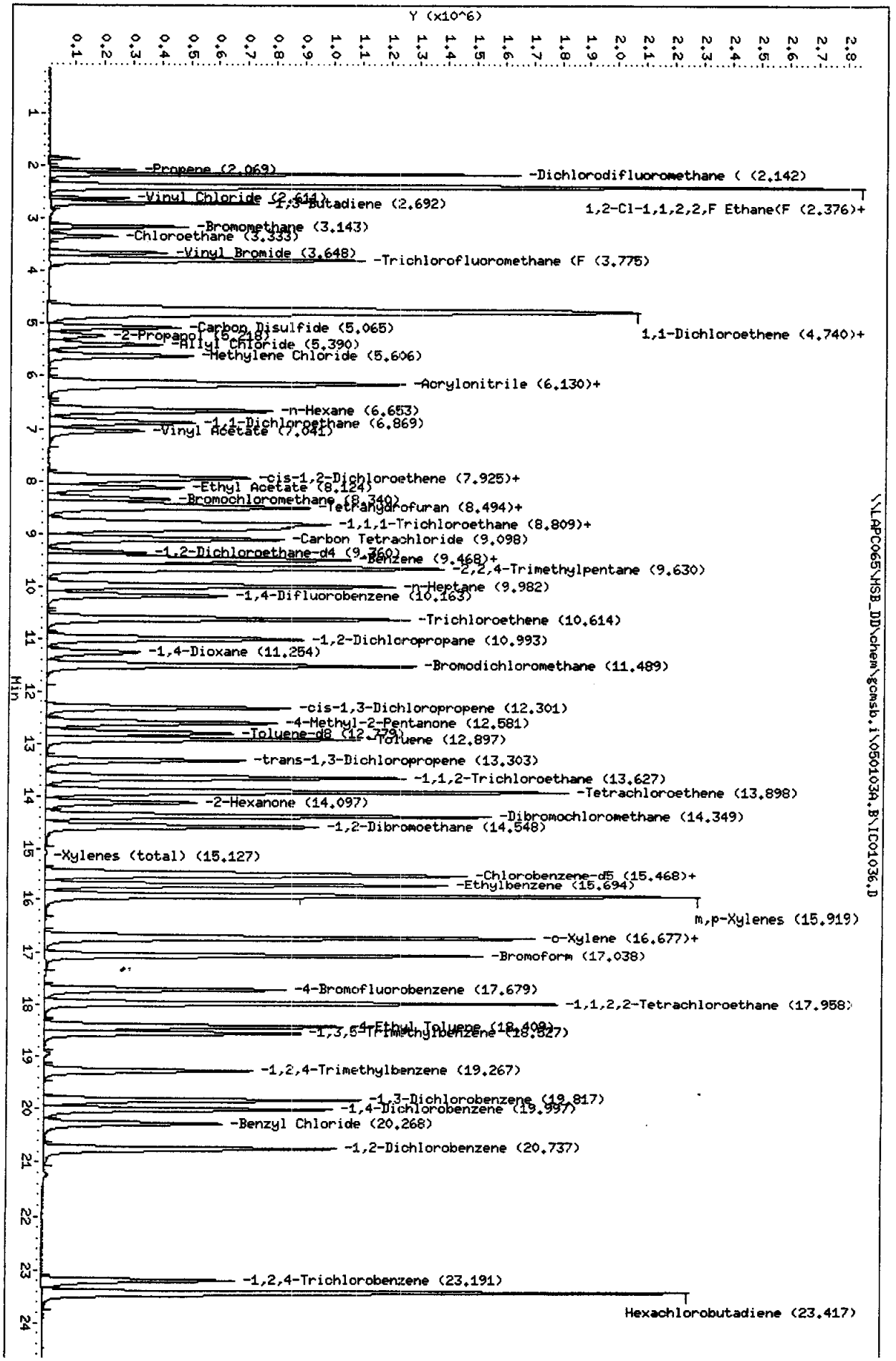
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\0501036A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Lab Smp Id: 500 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

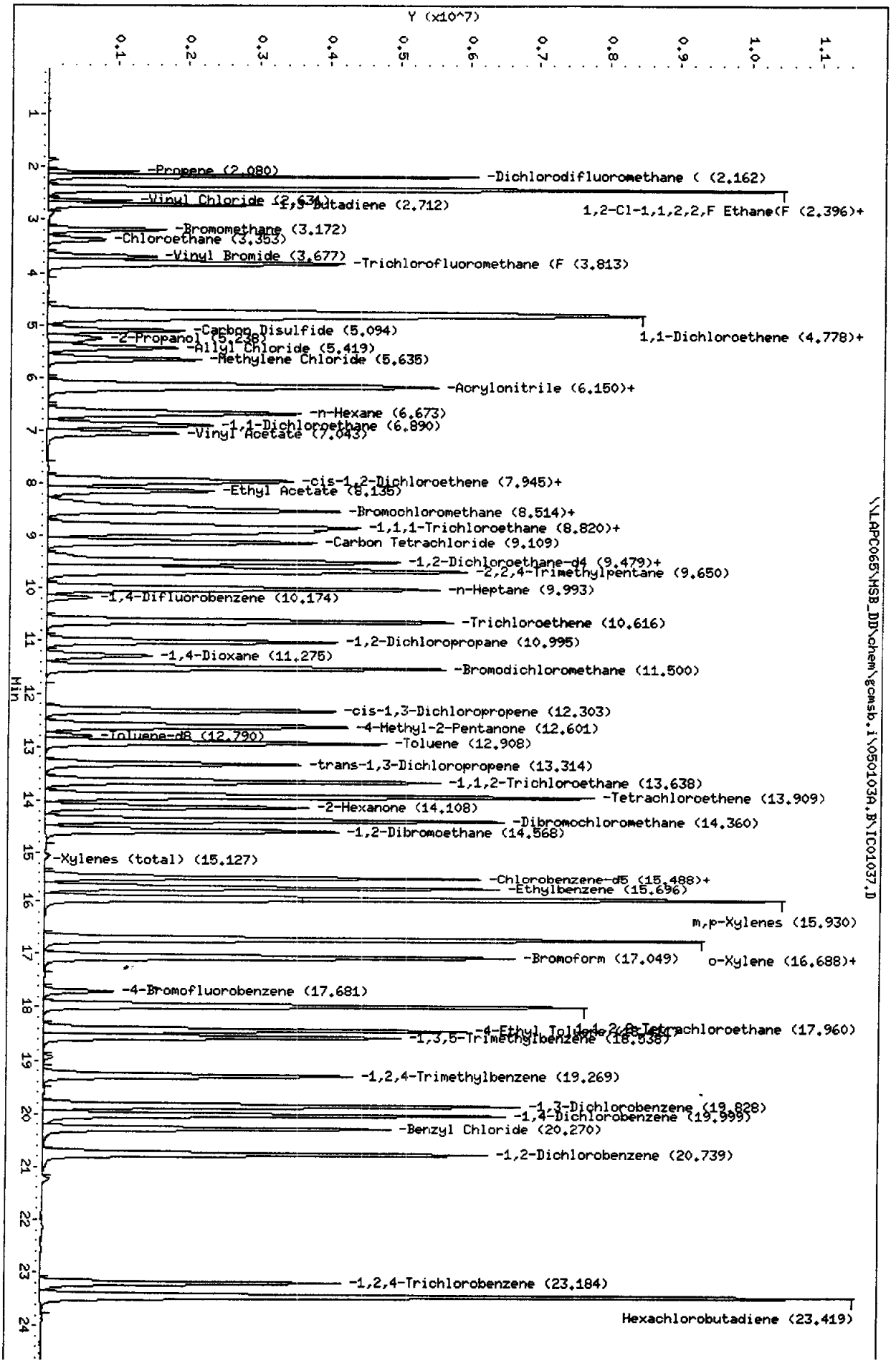
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011105 / 501280

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\ 050111.B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3-05
MS-B	Method File: TO14A	Daily Standard: LMSLEAD110702	SOP: [illegible]
ook ID:	Tune File:	LCS Standard: PSL9911357	MDL Date: 1-28-01
MS-041	BF041123.m	I.S. Standard: PSL9911283	Blank Lot No. 910503[illegible]

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
-1105	0751	BF0111	-	-		BFB	28	-	-	-	[illegible]	[illegible]	A	
	0802	BF0112	-	-	-	BFB	28	-	-	-	[illegible]	[illegible]	A	
	0820	CC0111	-			CCV	125	-	-	-	[illegible]	NO	B	
	0849	LC0112	-	-	-	LCS	250	-	-	-	[illegible]	[illegible]	C	
	0933	CC0112	-	-	-	CCV	125	-	-	-	[illegible]	OK	B	
	1016	LC0112	-	-	-	LCS	250	-	-	-	[illegible]	OK	C	
	1045	LC0123	-			LCSD	250	-			[illegible]	OK	C	
	1124	MB0111	-	-	-	Method Blank	500	-	-	-	AA	OK	15	F113 "J"
	1152	B7525	G2CWK2AC	0.1	WMI	GP9A	20	24.3/12.7	-	47.6	AA	OK	16	ESA100153-2
	1[illegible]	B7526	G2CWL2AC			GP9B	40	24.4/12.6	-	12.2	AA	OK	1	-3
	1259	B7527	G2CWV2AC			G13A	40	24.2/12.8	100/50	47.3	AA	OK	2	-6
	1335	B7528	G2CWI2AC			GP13B	20	24.4/12.3	-	48.8	AA	OK	3	-7
	1403	B7529	G141L1AC	0.1	ERM	LB IN-16	20	22.9/13.6	-	42.1	AA	O/R	4	ESA040240-2
	1430	B7530	G2DFG1AD	0.1	SANDIA	066343 0.1	949	24.1/12.7	-	1	AA	OK	5	ESA100213-1
	1507	B7531	G2DGCWD	0.1		066344-0.1	927	24.1/13.4	-	1	AA	OK	6	2
	1534	B7532	G2DGEWD	0.1		066345-0.1	931	24.2/13.4	-	1	AA	OK	7	3
	1603	B7533	G141L2AD	0.1	ERM	LB IN-16	20	22.9/13.6	100/100	42.1	AA	OK	4	ESA040240-2
	1633	LC0114	—	—	-	LCS	250	—	—	-	AA	OK	C	

iewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
:MS-B	Method File:	Daily Standard:	SOP:
ook ID:	Tune File:	LCS Standard:	MDL Date:
\MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/11	1714	LC01115	-	-	-	LCSD	250	-	-	-	MA	OK	C	
	1737	CC01113	-	-	-	Cellosolve Ace	50	-	-	-	MA	No	7	low?
	1806	CC01114	-	-	-	UBER CCV	250	-	-	-	MA	OK	8	MSLO501060
	1834	CC01115	-	-	-	Methyl Meth.	250	-	-	-	MA	OK	8	MSLO501039
	1910	CC01116	-	-	-	CELLOSOLVE ACE	50	-	-	-	MA	OK	9	MSLO501074
	1945	CC01117	-	-	-	FINAL CCV	250	-	-	-	MA	No	10	MSLO401990
	2021	MB01112	-	-	-	METHOD BLANK	500	-	-	-	MA	OK	11	
	2057	B7534	G18GIAD	001	GZA	SAMS 8 HR	108.0	24.1/12	-	1.00	MA	O/R	12	E4L300284-1 MA SO
	2132	B7535	G2EDPIAA		KONTEX	V3-IN-011005	40	23.2/12.8	-	23.2	MA	OK	13	ESA110183-1
	2208	B7536	G2EDRIAA			V3-OUT	300	23.8/12.8	-	3.10	MA	OK	14	-2
	2243	B7537	G2EDUIAA			V1-OUT	96.4 300	23.8/12.8 23.4/12.4	-MA	3.10 1.0	MA	OK	15	-3
	2319	B7538	G2DGFIAA		SANDEA	CC6346 0001	300	23.8/12.8	-	3.10	MA	OK	16	ESA100214-1
	2355	B7539	G2DGGIAD			CC6347	25	24.8/12.8	-	38.8	MA	OK	1	-2
1-12-05	0030	B7540	G2DGHIAD			CC6348	50	24.3/12.8	100/200	94.9	MA	OK	2	-3
	0106	B7541	G2DGIIAD			CC6349	20	24.3/12.8	-	47.5	MA	OK	3	-4
	0142	B7542	G2DGJIAD			CC6350	250	24.4/12.7	-	3.94	MA	OK	4	-5
	0217	B7543	G2DGMIAD			CC6351	934	23.9/12.8	-	1.05	MA	OK	5	-6
	0253	B7544	G2ENRIAA		SHAW	F060044	50	FULLAP	100/10	1000	MA	OK	6	ESA110247-1

Viewed: _____

ESA100214

100

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ment ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
MS-B	Method File:	Daily Standard: See Previous Page	SOP:
ook ID:	Tune File:	LCS Standard: 1-12-05	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
12-x	0328	B7545	G2LENTIAA	001	SHAW	FDLCCC2	250	TOPLAN	-	2.00	m	ok	7	ESA1102472
	0403	B7546	G2DGPIAD		SANDIA	CC6352-C001	587	24.2/13.5	-	1.00	m	ok	8	ESA100218-1
	0439	B7547	G2DGQIAD			CC6353	923	23.9/12.9	-		m	ok	9	-2
	0514	B7548	G2DGRIAD			CC6354	927	23.9/12.9	-		m	ok	10	-3
	0548	B7549	G2DGTIAD			CC6355	950	24.5/12.9	-		m	ok	11	-4
	0616	B7550	G2DGVIAD			CC6356	954	24.6/12.9	-		m	ok	12	-5
	0645	B7551	G2DGWIAD			CC6357	985	25.4/12.9	-		m	ok	13	-6
	0714	B7552	G2DG3IAD			CC6361	50	25.9/12.8	-	19.5	m	ok	14	ESA100219-4
	0742	B7553	G2DG4IAD			CC6362	25	22.7/12.8	-	38.6	m	ok	15	-5

m 1-12-05

ewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	LCS	605430	8.33	1300958	10.16	858989	15.42
02	LCSD	601083	8.34	1250526	10.16	867984	15.43
03	BLANK	572958	8.32	1219937	10.16	740051	15.42
04	GP9A	593130	8.29	1218775	10.12	812797	15.41
05	GP9B	596256	8.34	1213989	10.16	801292	15.42
06	GP13A	589247	8.32	1206323	10.15	746218	15.42
07	GP13B	587312	8.32	1177970	10.16	741573	15.43
08	LB-IN-16	578407	8.29	1223565	10.13	991223	15.43
09	066343-0001	582886	8.32	1231816	10.16	846746	15.42
10	066344-0001	570864	8.33	1171946	10.16	771769	15.42
11	066345-0001	572298	8.20	1177424	10.06	782311	15.38
12	LB-IN-16	556681	8.33	1192709	10.16	892002	15.42
13	LCS	567294	8.34	1169230	10.16	809704	15.42
14	LCSD	561973	8.30	1176185	10.13	817623	15.42
15	BLANK	555301	8.32	1148790	10.16	769229	15.42
16	SAM'S 8 HR 1	579780	8.36	1152084	10.17	790955	15.42
17	V3-IN 011005	570338	8.32	1161203	10.16	790597	15.42
18	V3-OUT 01100	583371	8.32	1145557	10.15	797949	15.42
19	V1-OUT 01100	535847	8.31	1137317	10.14	785434	15.41
20	066346-0001	522369	8.32	1087705	10.16	657329	15.42
21	066347-0001	545543	8.32	1110011	10.16	726842	15.42
22	066348-0001	537458	8.32	1105439	10.15	769715	15.41

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	066349-0001	544629	8.33	1096053	10.16	754907	15.42
02	066350-0001	535837	8.32	1084269	10.15	721181	15.41
03	066351-0001	535855	8.32	1095897	10.15	723587	15.41
04	FD60044	554825	8.32	1128856	10.15	798570	15.41
05	FD60062	562180	8.32	1140823	10.15	867571	15.41
06	066352-001	540916	8.30	1147952	10.14	804454	15.40
07	066353-001	540953	8.32	1132528	10.15	785812	15.41
08	066354-001	530687	8.31	1116997	10.15	765404	15.40
09	066355-001	546225	8.31	1123284	10.14	779205	15.40
10	066356-001	538046	8.31	1122921	10.14	770855	15.39
11	066357-001	535908	8.31	1104823	10.13	766786	15.39
12	066361-001	554218	8.31	1137553	10.13	788983	15.39
13	066362-001	553034	8.31	1143685	10.13	699702	15.39
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII VOA 1/87 Rev.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D
Lab Smp Id:
Inj Date : 11-JAN-2005 08:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.083	4.200	(0.000)	95	61389			0.00- 100.00	100.00
4.083	4.200	(0.000)	50	14311			15.00- 40.00	23.31
4.083	4.200	(0.000)	75	33800			30.00- 60.00	55.06
4.083	4.200	(0.000)	96	4414			5.00- 9.00	7.19
4.083	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.083	4.200	(0.000)	174	34714			50.00- 120.00	56.55
4.083	4.200	(0.000)	175	2383			5.00- 9.00	8.31
4.083	4.200	(0.000)	176	33896			95.00- 101.00	97.64
4.083	4.200	(0.000)	177	2457			5.00- 9.00	7.25

Data File: \\LAPC065\MSE_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

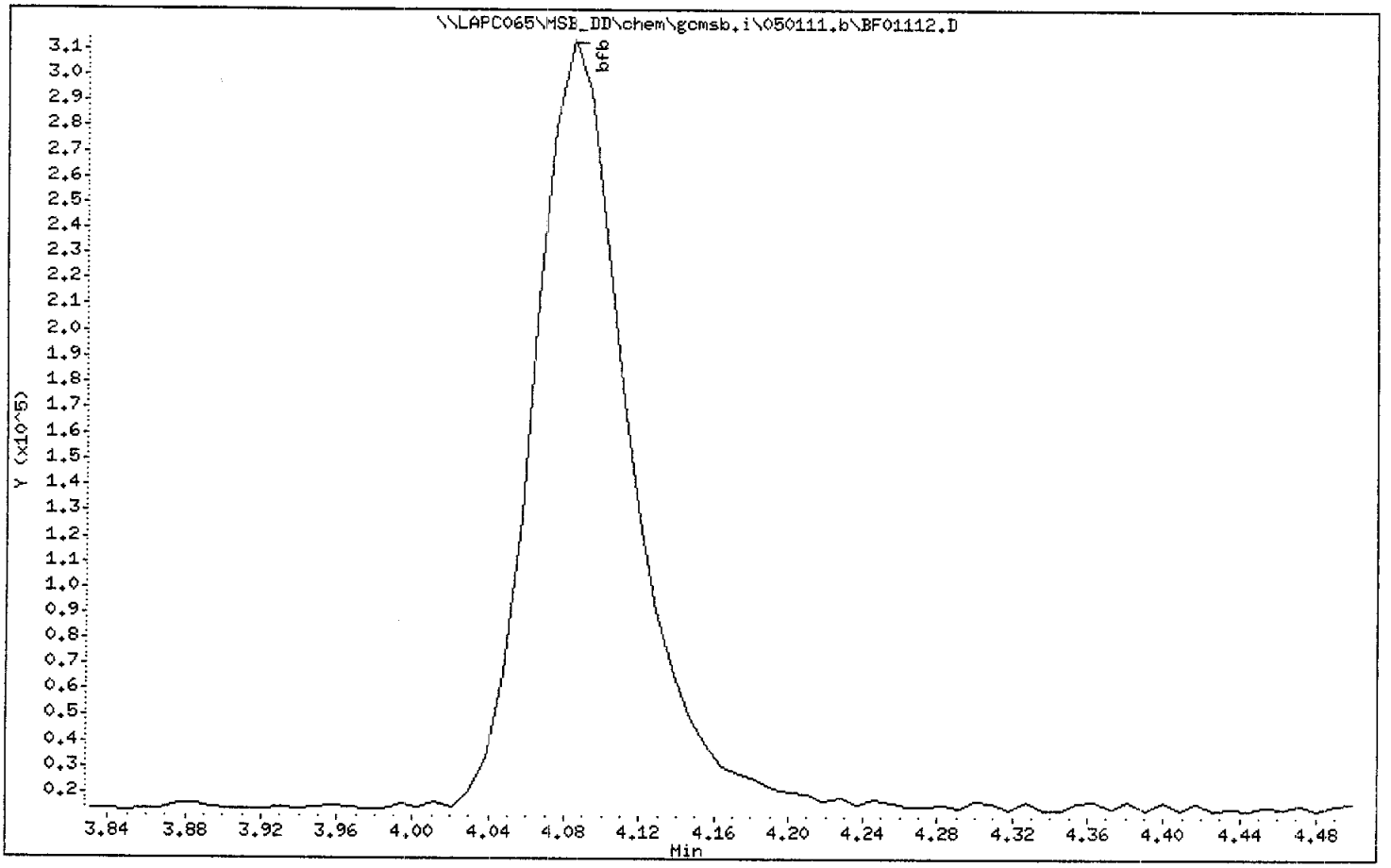
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

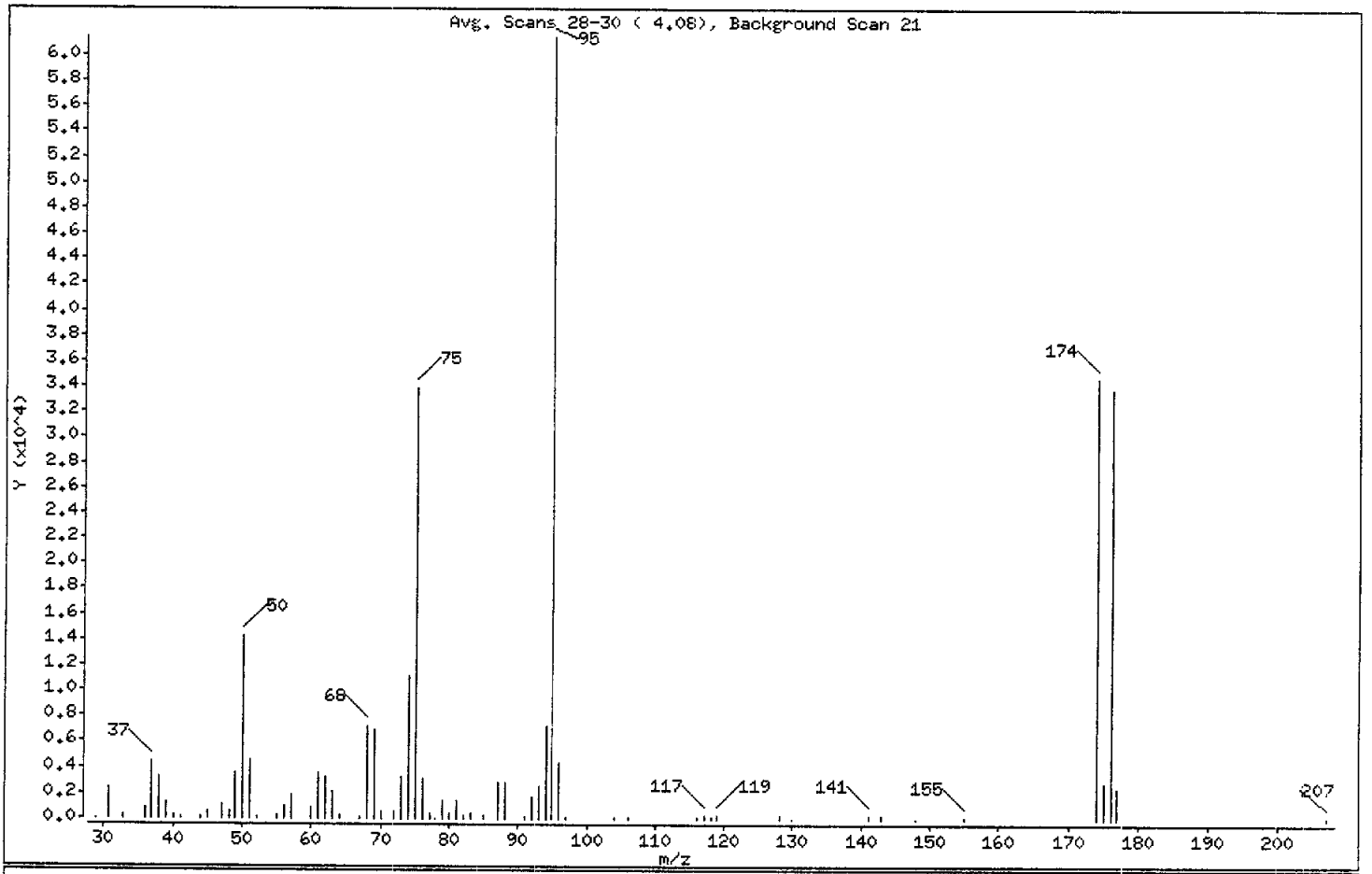
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.31
75	30.00 - 60.00% of mass 95	55.06
96	5.00 - 9.00% of mass 95	7.19
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.55
175	5.00 - 9.00% of mass 174	4.70 (8.31)
176	95.00 - 101.00% of mass 174	55.22 (97.64)
177	5.00 - 9.00% of mass 176	4.00 (7.25)

LA 1/11/05

AA 1/11/05

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 11-JAN-2005 09:33
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.083	2.083	(0.250)	117930	50.0000	51.33
3 Dichlorodifluoromethane (F12)	85	2.156	2.156	(0.259)	1335764	50.0000	50.53
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.381	2.381	(0.286)	1100999	50.0000	51.22
8 Chloromethane	52	2.426	2.426	(0.291)	63714	50.0000	54.30
9 Vinyl Chloride	62	2.616	2.616	(0.314)	261876	50.0000	51.42
12 1,3-Butadiene	39	2.688	2.688	(0.323)	363774	100.000	105.4
15 Bromomethane	94	3.148	3.148	(0.378)	326505	50.0000	51.57
16 Chloroethane	64	3.328	3.328	(0.400)	169618	50.0000	52.59
19 Vinyl Bromide	106	3.644	3.644	(0.438)	382508	50.0000	52.74
21 Trichlorofluoromethane (F11)	101	3.771	3.771	(0.453)	1341408	50.0000	50.34
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	711253	50.0000	50.32
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.745	4.745	(0.570)	1516275	50.0000	49.52
31 Acetone	58	4.853	4.853	(0.583)	107056	50.0000	53.42(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	780141	50.0000	58.69

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.214	5.214	(0.626)	364415	50.0000	51.42
	36 Allyl Chloride	41	5.386	5.386	(0.647)	393313	50.0000	53.60
	37 Methylene Chloride	49	5.593	5.593	(0.672)	426041	50.0000	48.82
	40 Acrylonitrile	53	6.089	6.089	(0.731)	129782	50.0000	55.14
	41 trans-1,2-Dichloroethene	61	6.107	6.107	(0.733)	630975	50.0000	51.30
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	1051552	50.0000	50.39
	43 n-Hexane	41	6.640	6.640	(0.797)	479458	50.0000	49.66
	44 1,1-Dichloroethane	63	6.865	6.865	(0.824)	774211	50.0000	49.98
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	800344	50.0000	53.69
	53 cis-1,2-Dichloroethene	96	7.912	7.912	(0.950)	407276	50.0000	50.88
	54 2-Butanone	72	7.975	7.975	(0.958)	142440	50.0000	53.43
	56 Ethyl Acetate	43	8.120	8.120	(0.975)	831706	50.0000	57.75
*	58 Bromochloromethane	49	8.327	8.327	(1.000)	626211	50.0000	
	59 Tetrahydrofuran	42	8.426	8.426	(1.012)	346205	50.0000	50.08
	60 Chloroform	83	8.489	8.489	(1.020)	983891	50.0000	49.38
	61 1,1,1-Trichloroethane	97	8.787	8.787	(1.055)	1008479	50.0000	50.63
	62 Cyclohexane	84	8.886	8.886	(1.067)	495362	50.0000	49.57
	64 Carbon Tetrachloride	117	9.085	9.085	(1.091)	891656	50.0000	67.37
$	66 1,2-Dichloroethane-d4	65	9.347	9.347	(0.920)	574558	50.0000	51.69
	68 Benzene	78	9.446	9.446	(0.930)	926438	50.0000	50.26
	69 1,2-Dichloroethane	62	9.482	9.482	(0.933)	599238	50.0000	49.91
	70 2,2,4-Trimethylpentane	57	9.617	9.617	(0.947)	2400722	50.0000	50.71
	72 n-Heptane	43	9.969	9.969	(0.981)	804793	50.0000	50.74
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1354487	50.0000	
	75 Trichloroethene	130	10.601	10.601	(1.044)	598705	50.0000	50.62
	78 1,2-Dichloropropane	76	10.980	10.980	(1.081)	232636	50.0000	52.40
	81 1,4-Dioxane	88	11.250	11.250	(1.107)	238899	50.0000	55.83
	82 Bromodichloromethane	85	11.485	11.485	(1.131)	836676	50.0000	56.68
	85 cis-1,3-Dichloropropene	75	12.297	12.297	(1.210)	708701	50.0000	58.22
	86 4-Methyl-2-Pentanone	58	12.577	12.577	(1.238)	324482	50.0000	52.15(Q)
$	88 Toluene-d8	100	12.766	12.766	(1.257)	729149	50.0000	51.41
	89 Toluene	91	12.883	12.883	(1.268)	1196268	50.0000	50.16
	91 trans-1,3-Dichloropropene	75	13.299	13.299	(0.862)	531738	50.0000	60.66
	93 1,1,2-Trichloroethane	97	13.614	13.614	(0.883)	584963	50.0000	50.02
	95 Tetrachloroethene	166	13.885	13.885	(0.901)	799613	50.0000	49.27
	96 2-Hexanone	58	14.102	14.102	(0.915)	299445	50.0000	57.23(Q)
	97 Dibromochloromethane	129	14.336	14.336	(0.930)	1180268	50.0000	60.14
	98 1,2-Dibromoethane	107	14.544	14.544	(0.943)	1064031	50.0000	54.28
*	101 Chlorobenzene-d5	117	15.419	15.419	(1.000)	1036663	50.0000	
	102 Chlorobenzene	112	15.473	15.473	(1.004)	963820	50.0000	50.64
M	99 Xylenes (total)	106				1339965	150.000	158.5
	104 Ethylbenzene	91	15.681	15.681	(1.017)	1553375	50.0000	52.72
	105 m,p-Xylenes	106	15.906	15.906	(1.032)	899918	100.000	105.2
	107 o-Xylene	106	16.664	16.664	(1.081)	440047	50.0000	53.37
	108 Styrene	104	16.691	16.691	(1.083)	578818	50.0000	56.03
	110 Bromoform	173	17.034	17.034	(1.105)	1027616	50.0000	66.57
$	114 4-Bromofluorobenzene	95	17.675	17.675	(1.146)	949556	50.0000	51.28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1513781	50.0000	53.91
123 4-Ethyl Toluene	105	18.396	18.396	(1.193)	981084	50.0000	55.86
124 1,3,5-Trimethylbenzene	105	18.523	18.523	(1.201)	858186	50.0000	43.74
131 1,2,4-Trimethylbenzene	120	19.263	19.263	(1.249)	268525	50.0000	47.05
134 1,3-Dichlorobenzene	146	19.813	19.813	(1.285)	604990	50.0000	55.44
136 1,4-Dichlorobenzene	146	19.993	19.993	(1.297)	553651	50.0000	49.32
138 Benzyl Chloride	91	20.255	20.255	(1.314)	697827	50.0000	59.76
140 1,2-Dichlorobenzene	146	20.724	20.724	(1.344)	562107	50.0000	50.39
144 1,2,4-Trichlorobenzene	180	23.187	23.187	(1.504)	338601	50.0000	61.30
145 Hexachlorobutadiene	225	23.404	23.404	(1.518)	457511	50.0000	45.42

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
1 Propene	0.18345	0.18832	0.010	2.7	30.0
3 Dichlorodifluoromethane (F1	2.11052	2.13309	0.010	1.1	30.0
5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.75819	0.010	2.5	30.0
8 Chloromethane	0.09369	0.10175	0.100	8.6	30.0
9 Vinyl Chloride	0.40660	0.41819	0.010	2.8	30.0
12 1,3-Butadiene	0.27551	0.29046	0.010	5.4	30.0
15 Bromomethane	0.50552	0.52140	0.010	3.1	30.0
16 Chloroethane	0.25753	0.27087	0.010	5.2	30.0
19 Vinyl Bromide	0.57915	0.61083	0.010	5.5	30.0
21 Trichlorofluoromethane (F11	2.12773	2.14210	0.010	0.7	30.0
28 1,1-Dichloroethene	1.12859	1.13580	0.010	0.6	30.0
30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.42135	0.010	-1.0	30.0
31 Acetone	0.16001	0.17096	0.010	6.8	30.0
33 Carbon Disulfide	1.06127	1.24581	0.010	17.4	30.0
34 2-Propanol	0.56591	0.58194	0.010	2.8	30.0
36 Allyl Chloride	0.58587	0.62808	0.010	7.2	30.0
37 Methylene Chloride	0.69686	0.68035	0.010	-2.4	30.0
40 Acrylonitrile	0.18791	0.20725	0.010	10.3	30.0
41 trans-1,2-Dichloroethene	0.98199	1.00761	0.010	2.6	30.0
42 Methyl-tert-butyl ether[MTB	1.66607	1.67923	0.010	0.8	30.0
43 n-Hexane	0.77083	0.76565	0.010	-0.7	30.0
44 1,1-Dichloroethane	1.23672	1.23634	0.100	-0.0	30.0
45 Vinyl Acetate	1.19013	1.27807	0.010	7.4	30.0
53 cis-1,2-Dichloroethene	0.63910	0.65038	0.010	1.8	30.0
54 2-Butanone	0.21287	0.22746	0.010	6.9	30.0
56 Ethyl Acetate	1.14995	1.32816	0.010	15.5	30.0
59 Tetrahydrofuran	0.55193	0.55286	0.010	0.2	30.0
60 Chloroform	1.59075	1.57118	0.010	-1.2	30.0
61 1,1,1-Trichloroethane	1.59033	1.61045	0.010	1.3	30.0
62 Cyclohexane	0.79797	0.79105	0.010	-0.9	30.0
64 Carbon Tetrachloride	1.05674	1.42389	0.010	34.7	30.0 <-
$ 66 1,2-Dichloroethane-d4	0.41033	0.42419	0.010	3.4	30.0
68 Benzene	0.68038	0.68398	0.010	0.5	30.0
69 1,2-Dichloroethane	0.44323	0.44241	0.010	-0.2	30.0
70 2,2,4-Trimethylpentane	1.74763	1.77242	0.010	1.4	30.0

MA 1/11/05

1/14/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	72 n-Heptane	0.58544	0.59417	0.010	1.5	30.0	
	75 Trichloroethene	0.43657	0.44202	0.010	1.2	30.0	
	78 1,2-Dichloropropane	0.16390	0.17175	0.010	4.8	30.0	
	81 1,4-Dioxane	0.15796	0.17638	0.010	11.7	30.0	
	82 Bromodichlcromethane	0.54492	0.61771	0.010	13.4	30.0	
	85 cis-1,3-Dichloropropene	0.44931	0.52323	0.010	16.5	30.0	
	86 4-Methyl-2-Pentanone	0.22967	0.23956	0.010	4.3	30.0	
$	88 Toluene-d8	0.52356	0.53832	0.010	2.8	30.0	
	89 Toluene	0.88039	0.88319	0.010	0.3	30.0	
	91 trans-1,3-Dichloropropene	0.42279	0.51293	0.010	21.3	30.0	
	93 1,1,2-Trichloroethane	0.56403	0.56427	0.010	0.0	30.0	
	95 Tetrachloroethene	0.78282	0.77133	0.010	-1.5	30.0	
	96 2-Hexanone	0.25237	0.28886	0.010	14.5	30.0	
	97 Dibromochloromethane	0.94658	1.13853	0.010	20.3	30.0	
	98 1,2-Dibromoethane	0.94544	1.02640	0.010	8.6	30.0	
	102 Chlorobenzene	0.91801	0.92973	0.300	1.3	30.0	
M	99 Xylenes (total)	0.40771	0.43086	0.010	5.7	30.0	
	104 Ethylbenzene	1.42124	1.49844	0.010	5.4	30.0	
	105 m,p-Xylenes	0.41273	0.43405	0.010	5.2	30.0	
	107 o-Xylene	0.39767	0.42448	0.010	6.7	30.0	
	108 Styrene	0.49829	0.55835	0.010	12.1	30.0	
	110 Bromoform	0.74450	0.99127	0.100	33.1	30.0	<-
$	114 4-Bromofluorobenzene	0.89318	0.91597	0.010	2.6	30.0	
	116 1,1,2,2-Tetrachloroethane	1.35429	1.46024	0.300	7.8	30.0	
	123 4-Ethyl Toluene	0.84706	0.94639	0.010	11.7	30.0	
	124 1,3,5-Trimethylbenzene	0.94631	0.82783	0.010	-12.5	30.0	
	131 1,2,4-Trimethylbenzene	0.27527	0.25903	0.010	-5.9	30.0	
	134 1,3-Dichlorobenzene	0.52632	0.58359	0.010	10.9	30.0	
	136 1,4-Dichlorobenzene	0.54141	0.53407	0.010	-1.4	30.0	
	138 Benzyl Chloride	0.56325	0.67315	0.010	19.5	30.0	
	140 1,2-Dichlorobenzene	0.53798	0.54223	0.010	0.8	30.0	
	144 1,2,4-Trichlorobenzene	0.26641	0.32663	0.010	22.6	30.0	
	145 Hexachlorobutadiene	0.48586	0.44133	0.010	-9.2	30.0	

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D

Date : 11-JAN-2005 09:33

Client ID: MSL04011028

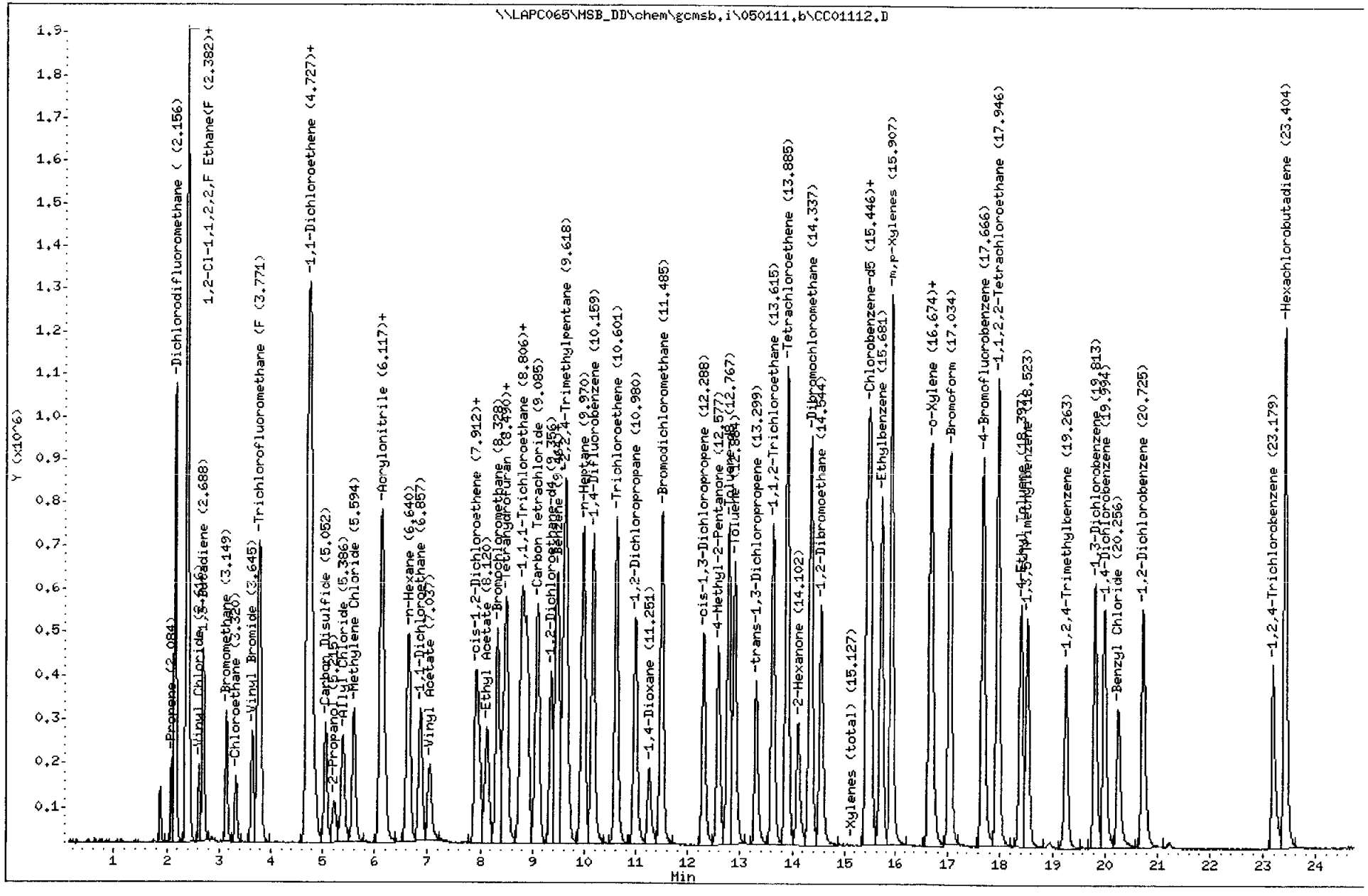
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Reduced By: XA Date: 1/11/05
Reviewed By: Cy Date: 6/13/01

LCSD Report

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01114.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 11-JAN-2005 16:33

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01115.D
Samp Info : LCSD,LCSD,PSL9911359
Inj Date : 11-JAN-2005 17:01

	Concentration								
	Mass Spiked		Measured			%Recovery			RPD	
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	51.6	52.2	51.9	102.8	70	125	1	20
Methylene Chloride									
54.5	188.95	56.1	56.6	56.4	103.4	75	120	1	20
Trichloroethene									
49.5	265.47	50.6	50.7	50.6	102.3	70	125	0	20
Toluene									
49.5	186.17	49.6	49.5	49.6	100.1	75	125	0	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	54.9	54.7	54.8	109.6	65	130	0	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01114.D
Lab Smp Id: LCS
Client Smp ID: LCS
Inj Date : 11-JAN-2005 16:33
Operator : DLK
Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd
Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31
Cal File: IC11016.D
Als bottle: 4
QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

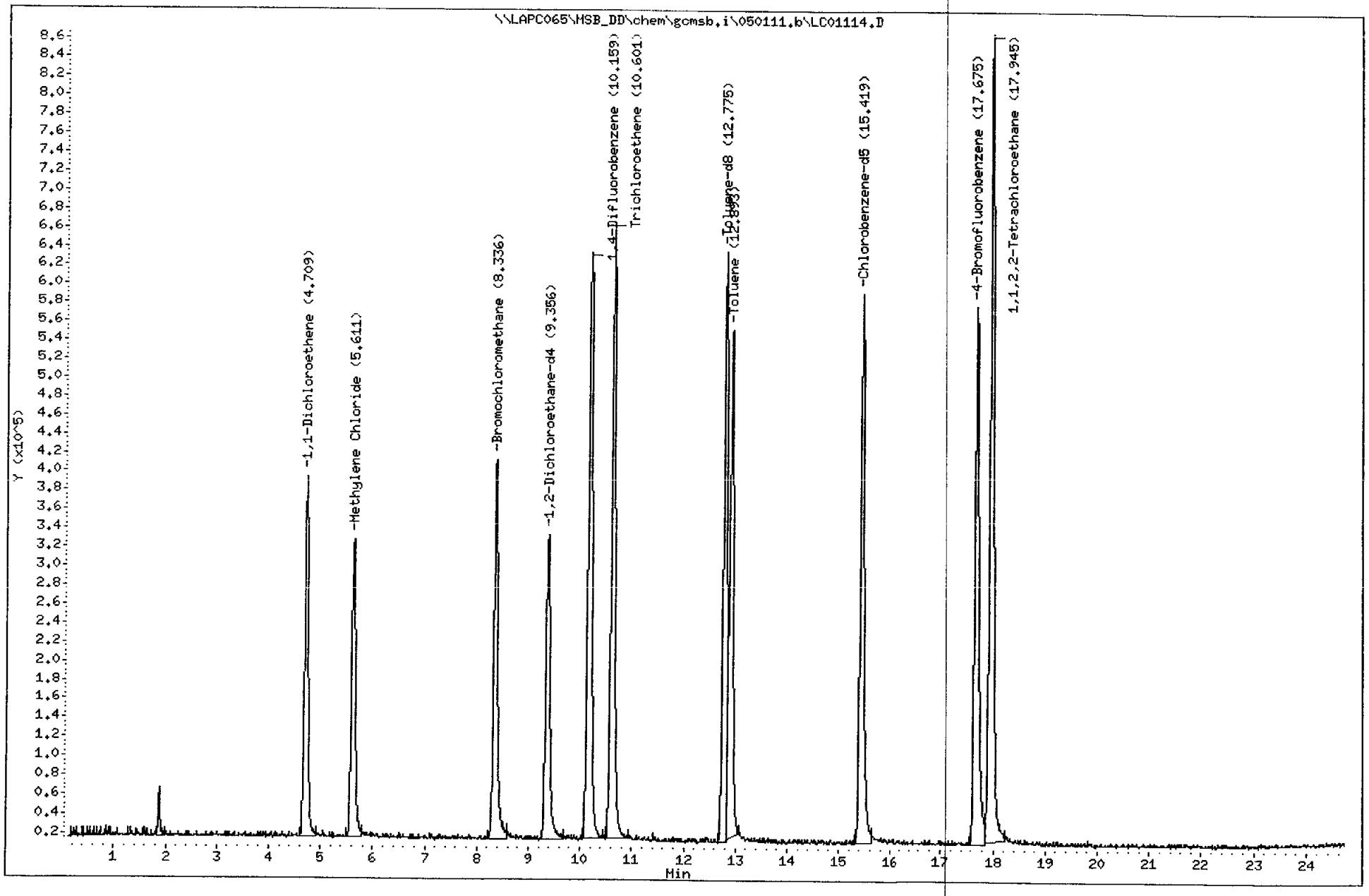
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.709	4.700	(0.565)	660751	51.6016	51.60
37 Methylene Chloride	49	5.611	5.593	(0.673)	443926	56.1470	56.15
* 58 Bromochloromethane	49	8.336	8.327	(1.000)	567294	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.355	9.347	(0.921)	475234	49.5273	49.53
* 73 1,4-Difluorobenzene	114	10.158	10.159	(1.000)	1169230	50.0000	
75 Trichloroethene	130	10.609	10.601	(1.044)	516211	50.5639	50.56
$ 88 Toluene-d8	100	12.775	12.766	(1.258)	604253	49.3539	49.35
89 Toluene	91	12.892	12.883	(1.269)	1021086	49.5973	49.60
* 101 Chlorobenzene-d5	117	15.418	15.419	(1.000)	809704	50.0000	
$ 114 4-Bromofluorobenzene	95	17.674	17.675	(1.146)	626220	43.2942	43.29
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1204258	54.9099	54.91

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01114.D
Date : 11-JAN-2005 16:33
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01115.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 11-JAN-2005 17:01
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,PSL9911359
Misc Info : 1,1,100,100,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.671	4.700	(0.563)	661872	52.1785	52.18
37 Methylene Chloride	49	5.565	5.593	(0.671)	443391	56.6104	56.61
* 58 Bromochloromethane	49	8.299	8.327	(1.000)	561973	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.327	9.347	(0.921)	484228	50.1662	50.17
* 73 1,4-Difluorobenzene	114	10.130	10.159	(1.000)	1176185	50.0000	
75 Trichloroethene	130	10.590	10.601	(1.045)	520987	50.7299	50.73
$ 88 Toluene-d8	100	12.756	12.766	(1.259)	610586	49.5762	49.58
89 Toluene	91	12.873	12.883	(1.271)	1025678	49.5258	49.52
* 101 Chlorobenzene-d5	117	15.417	15.419	(1.000)	817623	50.0000	
$ 114 4-Bromofluorobenzene	95	17.673	17.675	(1.146)	629536	43.1019	43.10
116 1,1,2,2-Tetrachloroethane	83	17.944	17.945	(1.164)	1211176	54.6904	54.69

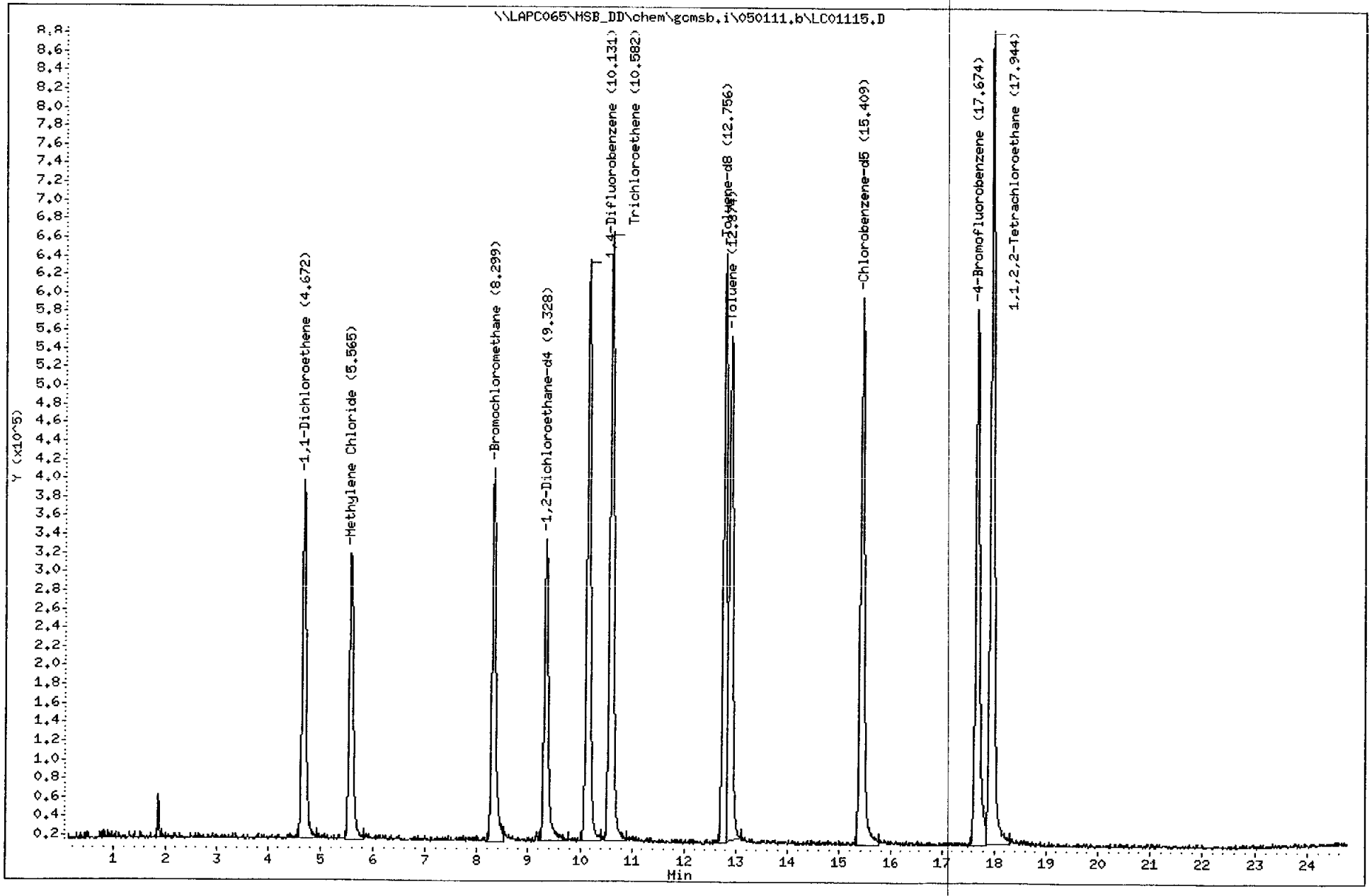
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01115.D
Date : 11-JAN-2005 17:01
Client ID: LCSD
Sample Info: LCSD,LCSD,PSL9911359

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 11-JAN-2005 20:21
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,BLANK.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BLANK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.324	8.318	(1.000)	555301	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.347	(0.920)	489223	51.8923	51.89
71 tert-Amyl methyl ether (TAME)	73	10.155	9.671	(1.000)	17637	0.81879	0.3188(~~a~~Q) ND
* 73 1,4-Difluorobenzene	114	10.155	10.149	(1.000)	1148790	50.0000	
$ 88 Toluene-d8	100	12.772	12.766	(1.258)	591136	49.1416	49.14
* 101 Chlorobenzene-d5	117	15.415	15.419	(1.000)	769229	50.0000	
$ 114 4-Bromofluorobenzene	95	17.680	17.675	(1.147)	542017	39.4445	39.44

1/12/05

QC Flag Legend

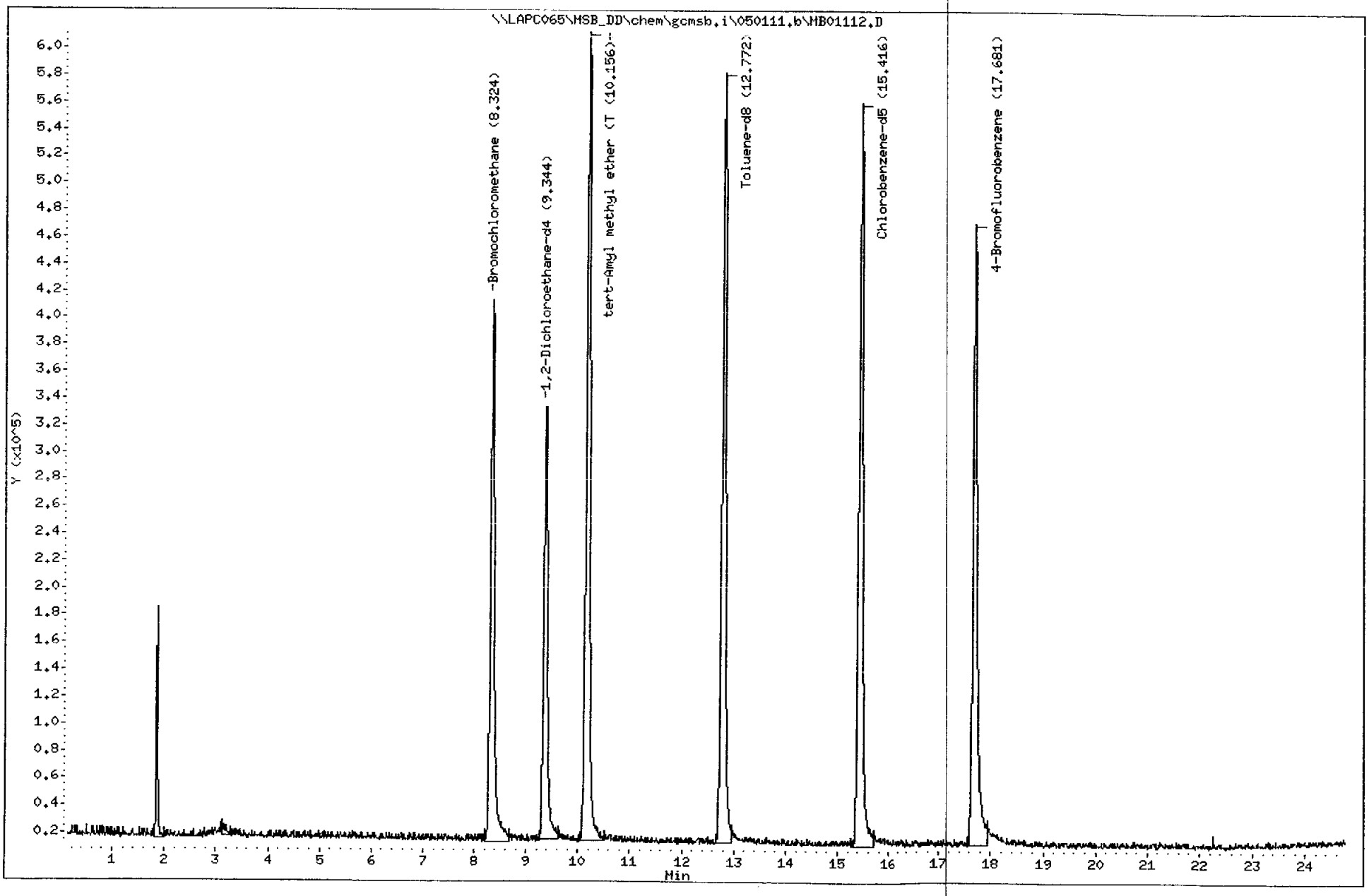
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D
Date : 11-JAN-2005 20:21
Client ID: BLANK
Sample Info: BLANK,BLANK,

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D

Date : 11-JAN-2005 20:21

Client ID: BLANK

Instrument: gcmsb.i

Sample Info: BLANK,BLANK,

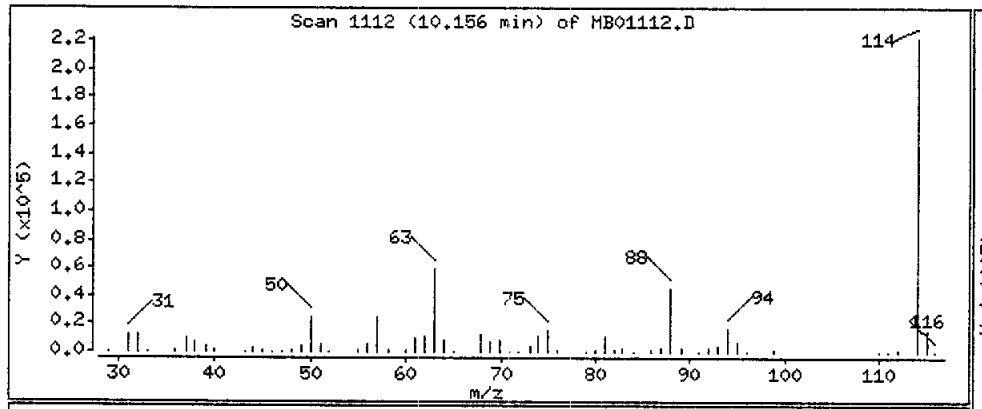
Operator: DLK

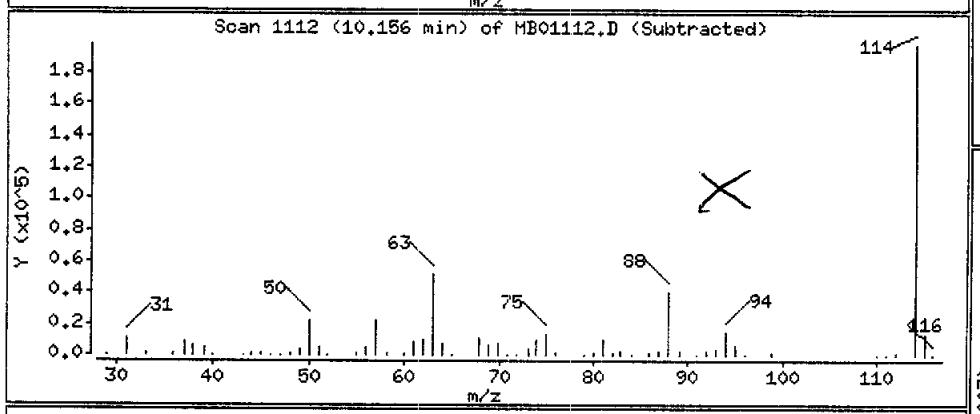
Column phase: J&W DB-624

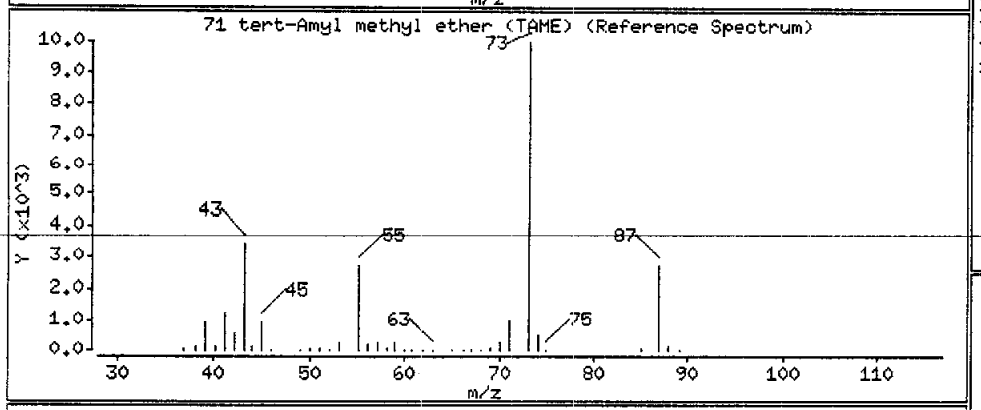
Column diameter: 0.53

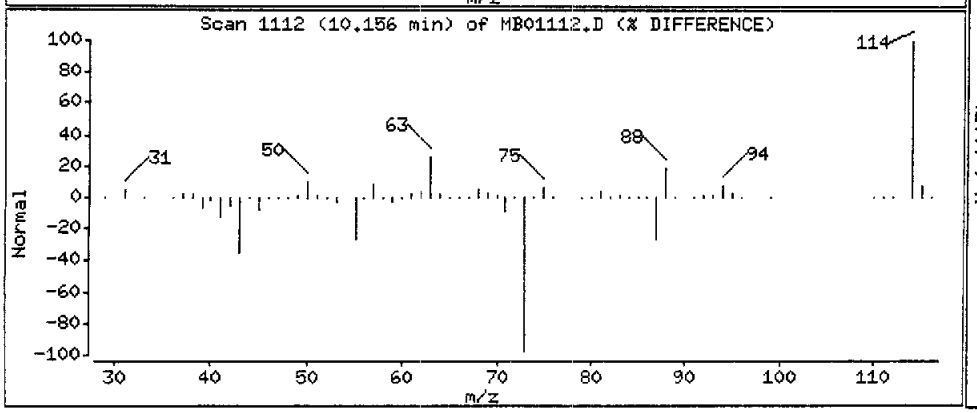
71 tert-Amyl methyl ether (TAME)

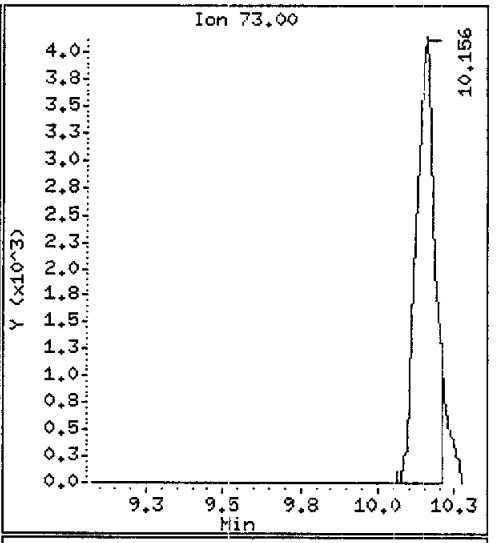
Concentration: 0.8188 ppbv

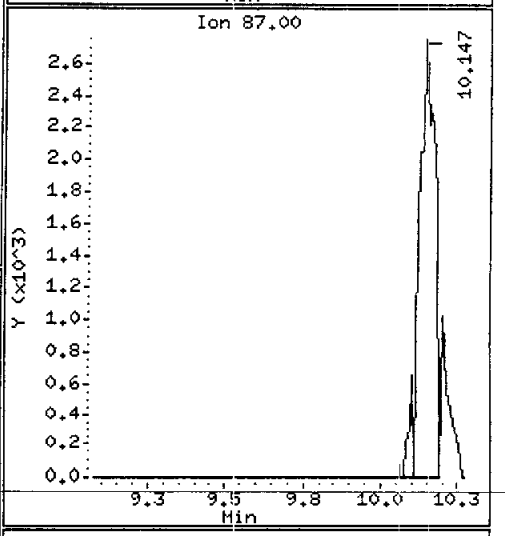


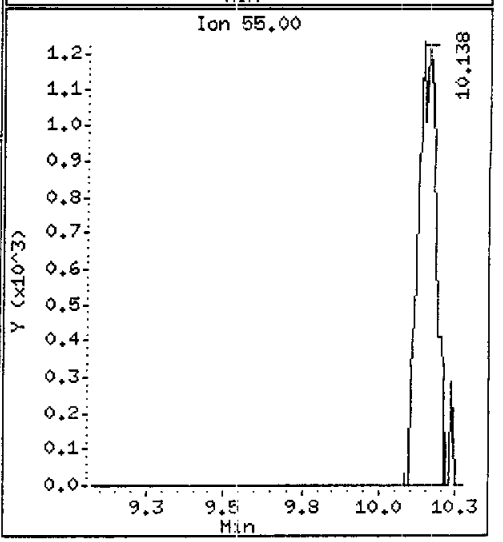












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D
Lab Smp Id: G2DGF1AD Client Smp ID: 066346-0001
Inj Date : 11-JAN-2005 23:19
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGF1AD,066346-0001,SANDIA,E5A100214-1
Misc Info : 23.8,12.8,500,300,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.800	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	300.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.705	4.700	(0.565)	9281	0.78717	2.439(a)
37 Methylene Chloride	49	5.625	5.593	(0.676)	8972	1.23249	3.819(a)
53 cis-1,2-Dichloroethene	96	7.935	7.912	(0.953)	18136	2.71624	8.418
* 58 Bromochloromethane	49	8.323	8.318	(1.000)	522369	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.352	9.347	(0.921)	467633	52.3879	162.3
* 73 1,4-Difluorobenzene	114	10.155	10.149	(1.000)	1087705	50.0000	
75 Trichloroethene	130	10.597	10.601	(1.044)	2950774	310.697	962.8
78 1,2-Dichloropropane	76	10.994	10.980	(1.083)	12088	3.39053	10.51
$ 88 Toluene-d8	100	12.762	12.766	(1.257)	532988	46.7960	145.0
* 101 Chlorobenzene-d5	117	15.415	15.419	(1.000)	657329	50.0000	
$ 114 4-Bromofluorobenzene	95	17.671	17.675	(1.146)	438496	37.3433	115.7

QC Flag Legend

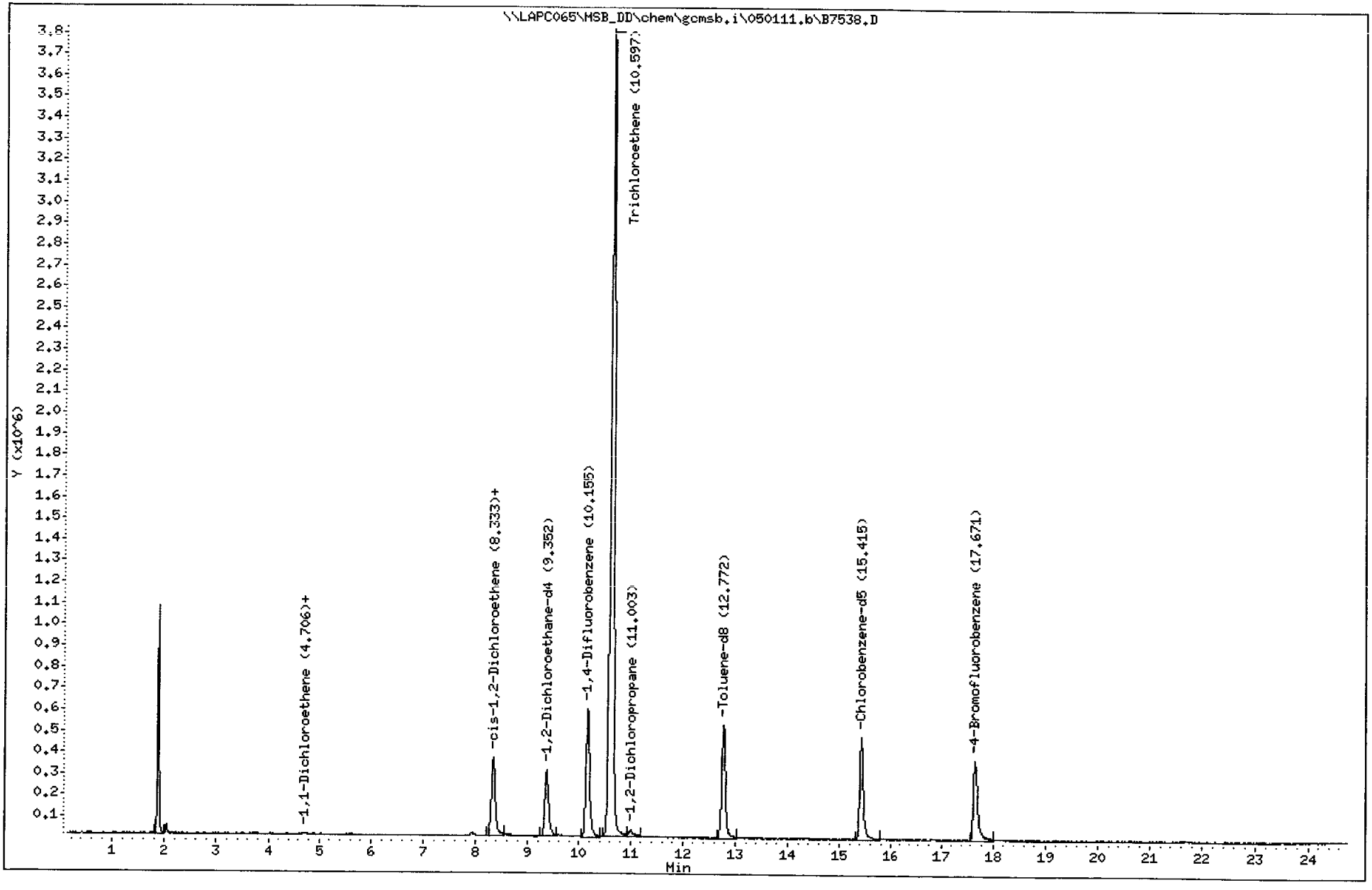
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D
Date : 11-JAN-2005 23:19
Client ID: 066346-0001
Sample Info: G2DGF1AD,066346-0001,SANDIA,E5A100214-1

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D

Date : 11-JAN-2005 23:19

Client ID: 066346-0001

Instrument: gcmsb.i

Sample Info: G2DGF1AD,066346-0001,SANDIA,E5A100214-1

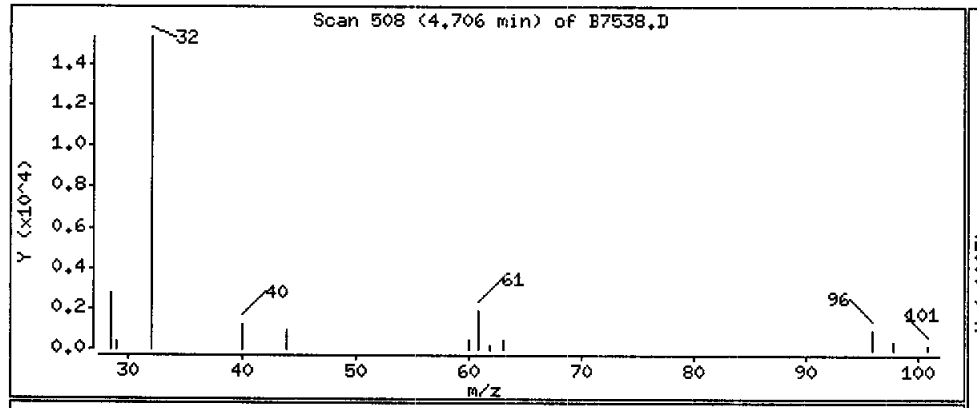
Operator: DLK

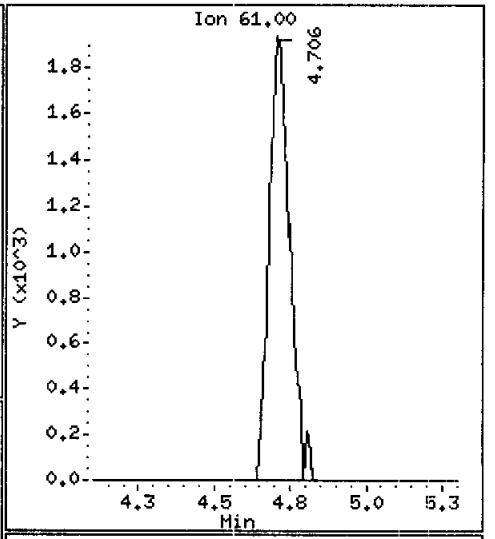
Column phase: J&W DB-624

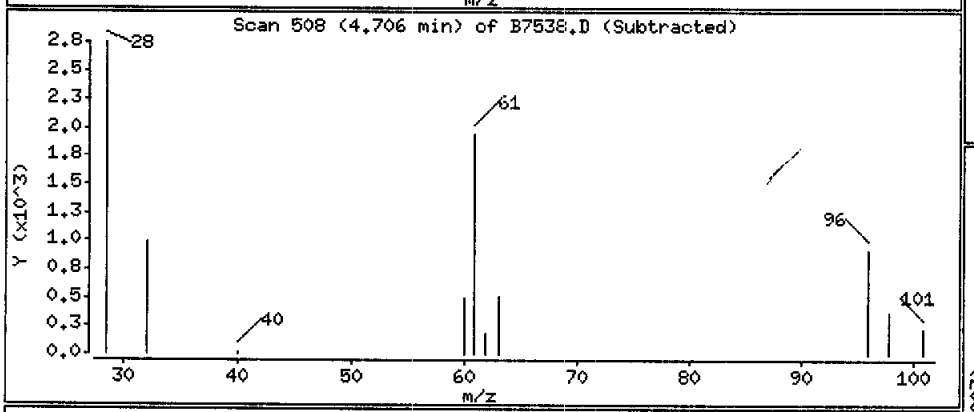
Column diameter: 0.53

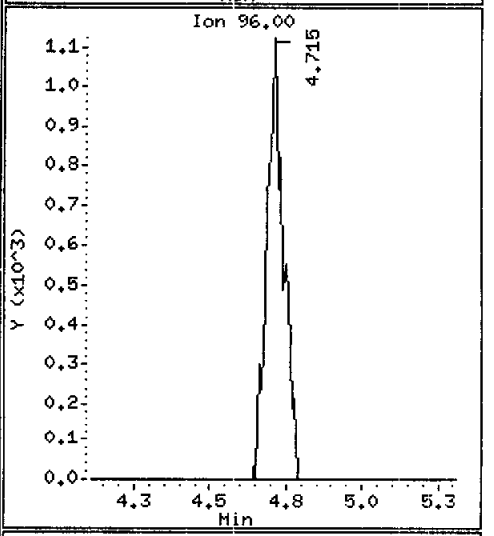
28 1,1-Dichloroethene

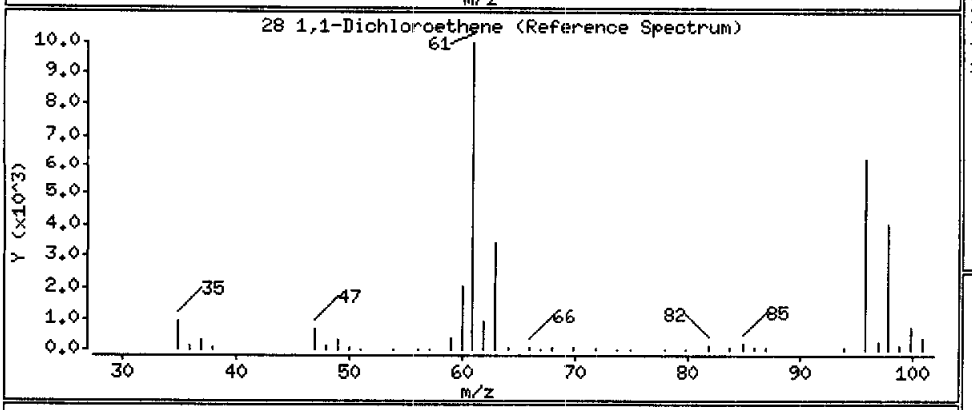
Concentration: 2.439 ppbv

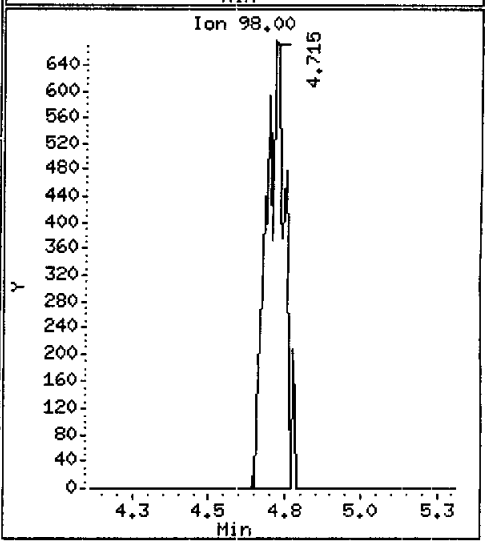


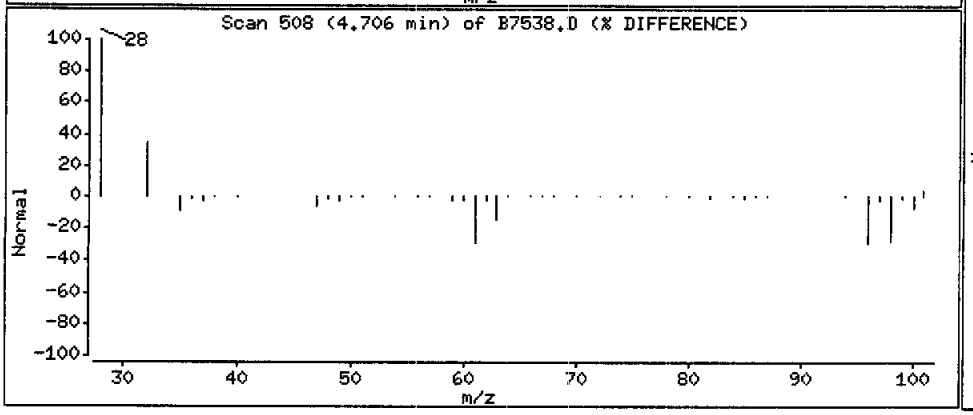












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D

Date : 11-JAN-2005 23:19

Client ID: 066346-0001

Instrument: gcmsb.i

Sample Info: G2DGF1AD,066346-0001,SANDIA,E5A100214-1

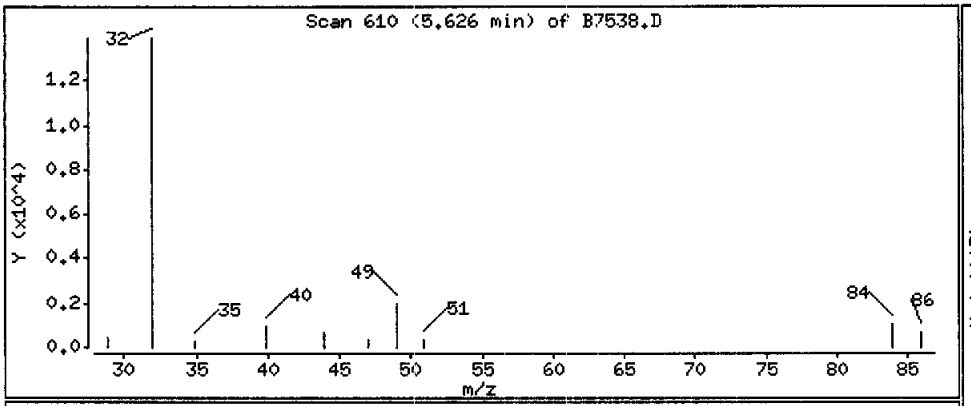
Operator: DLK

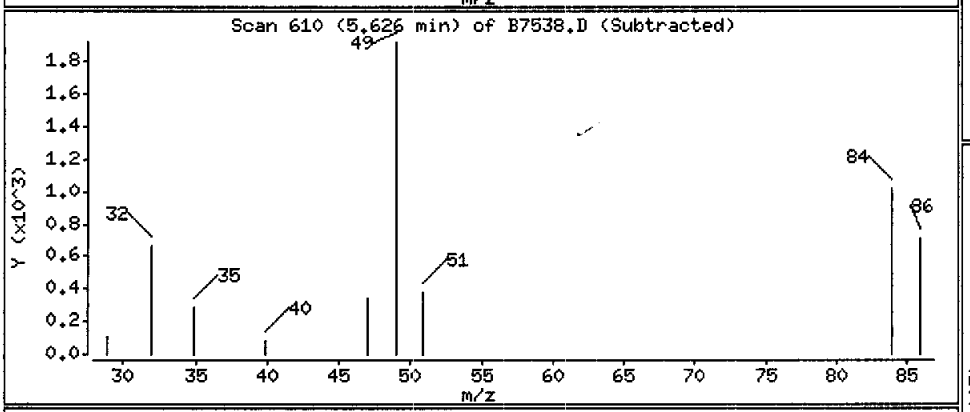
Column phase: J&W DB-624

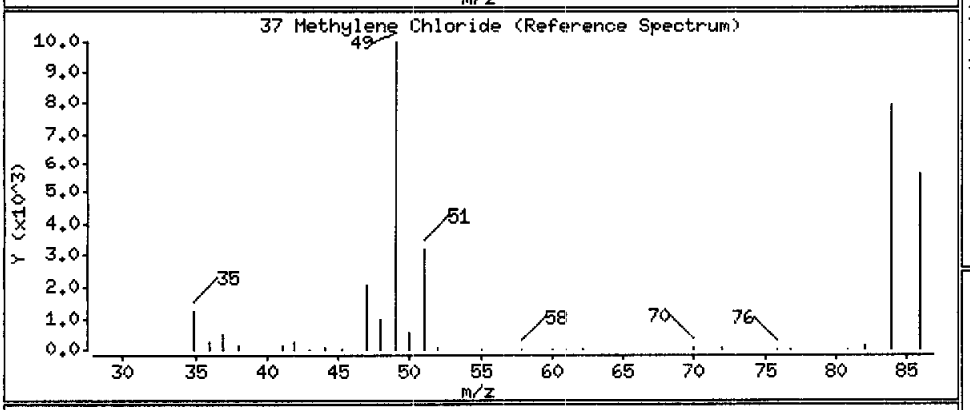
Column diameter: 0.53

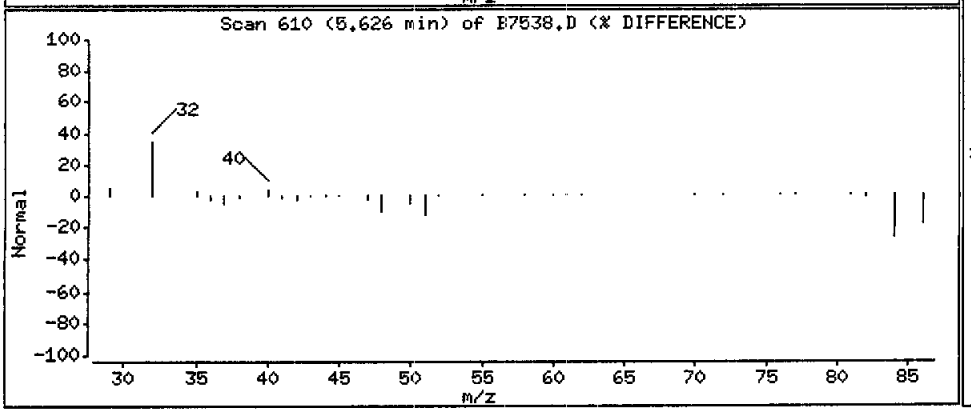
37 Methylene Chloride

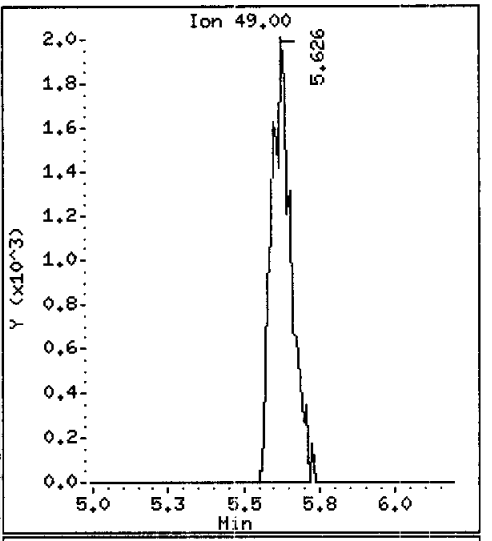
Concentration: 3.819 ppbv

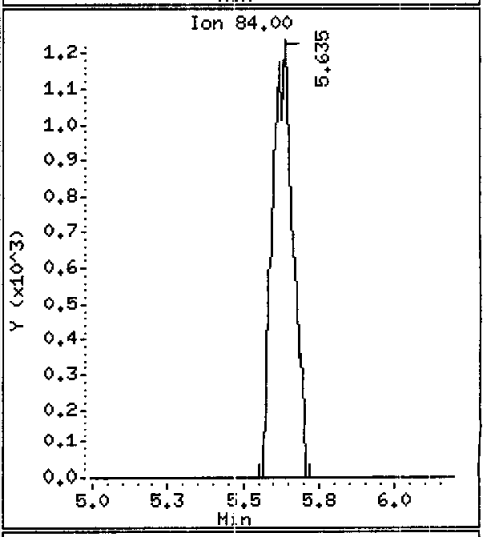


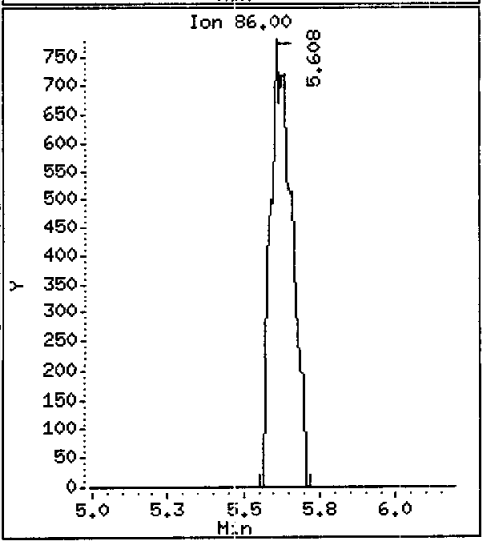












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D

Date : 11-JAN-2005 23:19

Client ID: 066346-0001

Instrument: gcmsb.i

Sample Info: G2DGF1AD,066346-0001,SANDIA,E5A100214-1

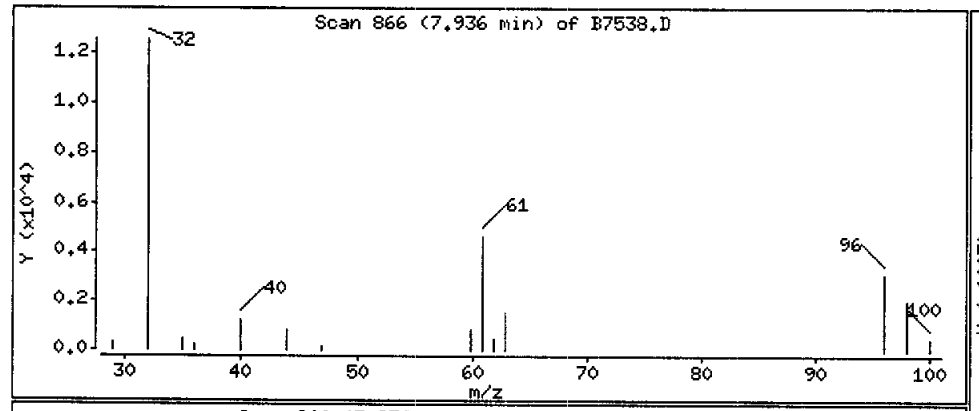
Operator: DLK

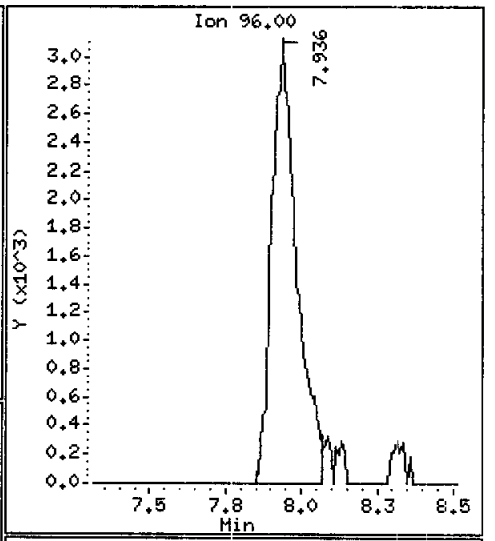
Column phase: J&W DB-624

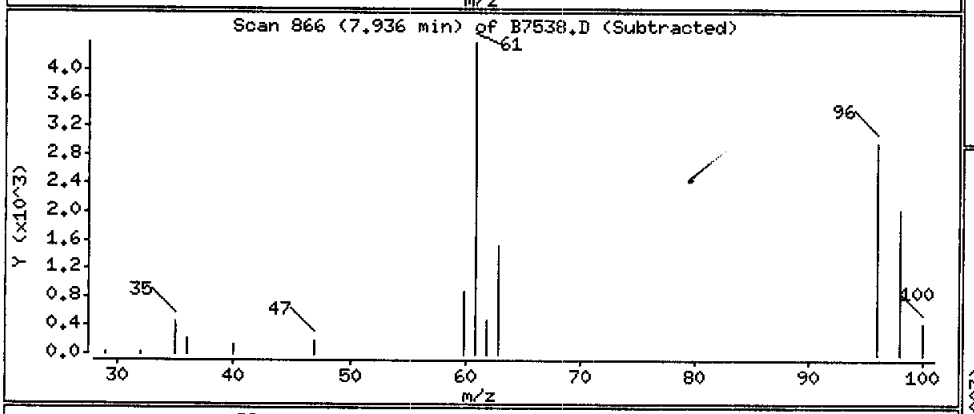
Column diameter: 0.53

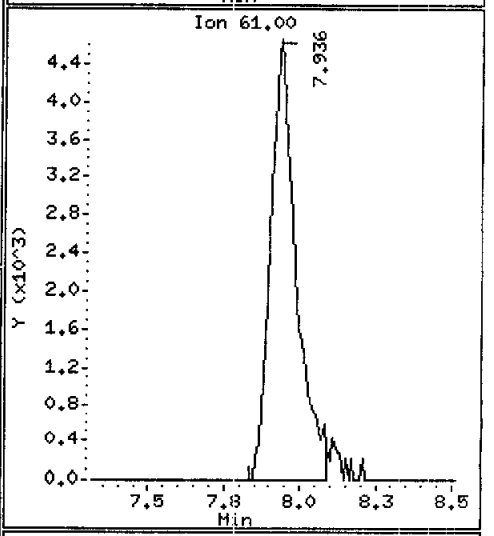
53 cis-1,2-Dichloroethene

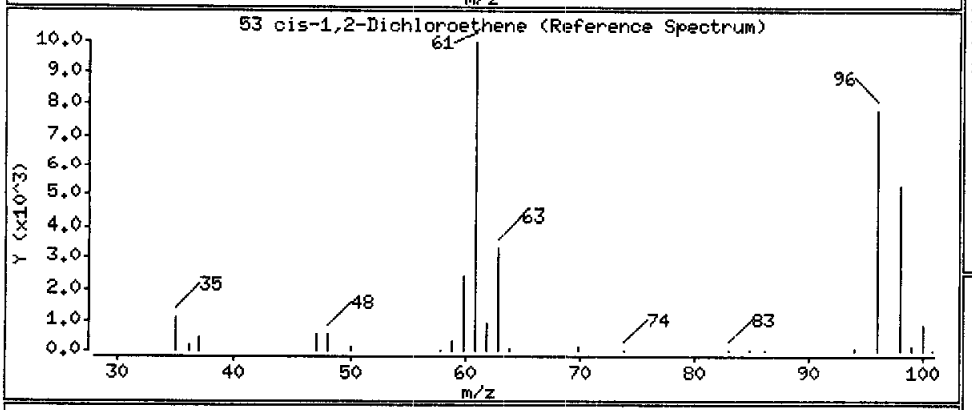
Concentration: 8.418 ppbv

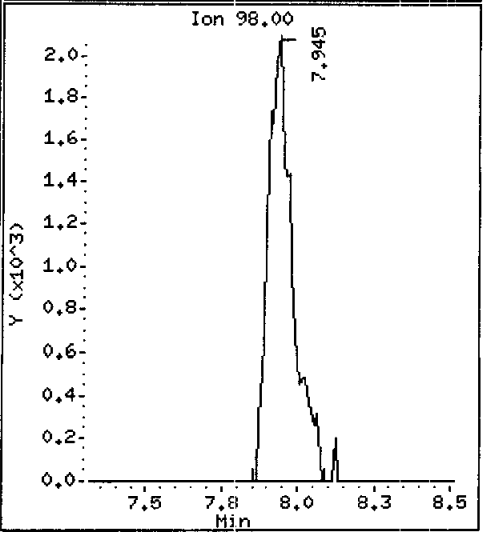


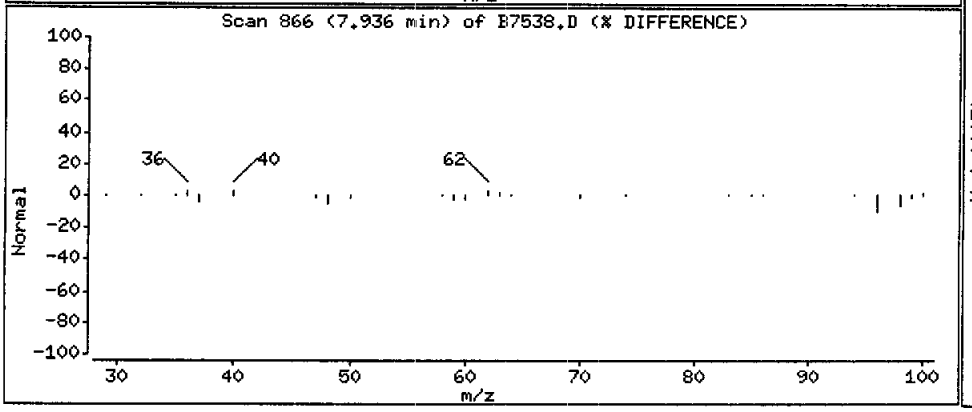












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D

Date : 11-JAN-2005 23:19

Client ID: 066346-0001

Instrument: gcmsb.i

Sample Info: G2DGF1AD,066346-0001,SANDIA,E5A100214-1

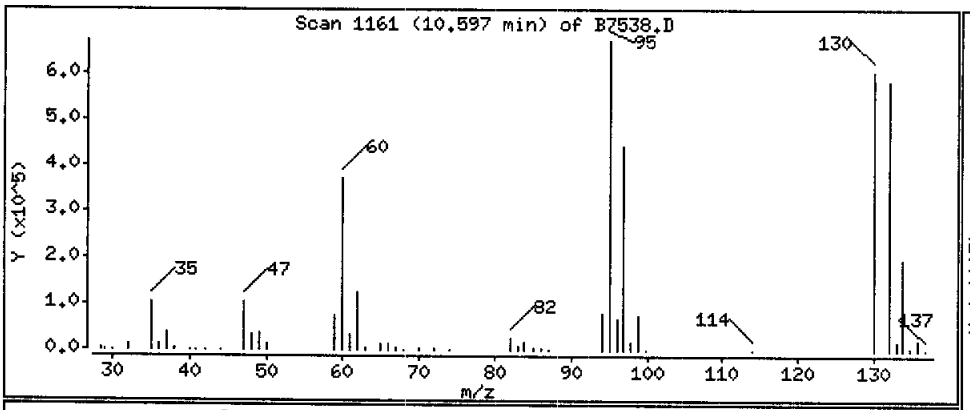
Operator: DLK

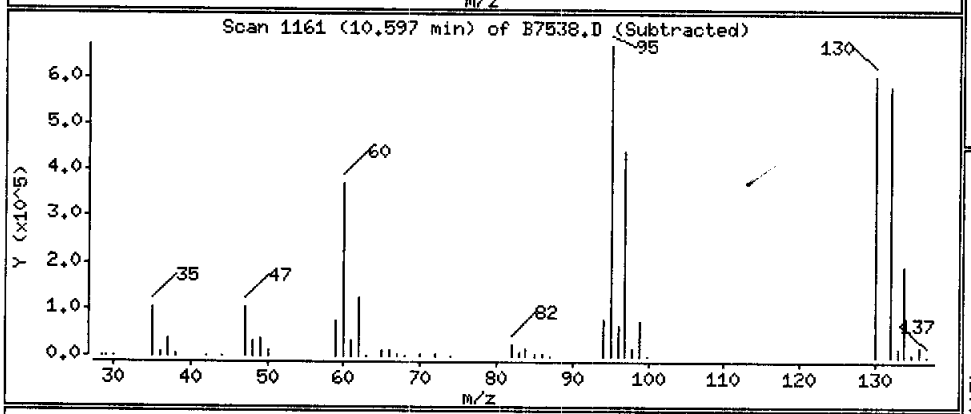
Column phase: J&W DB-624

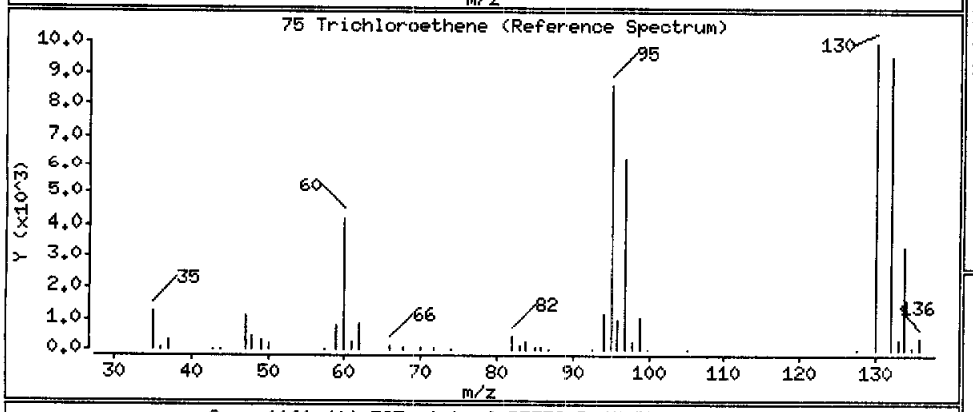
Column diameter: 0.53

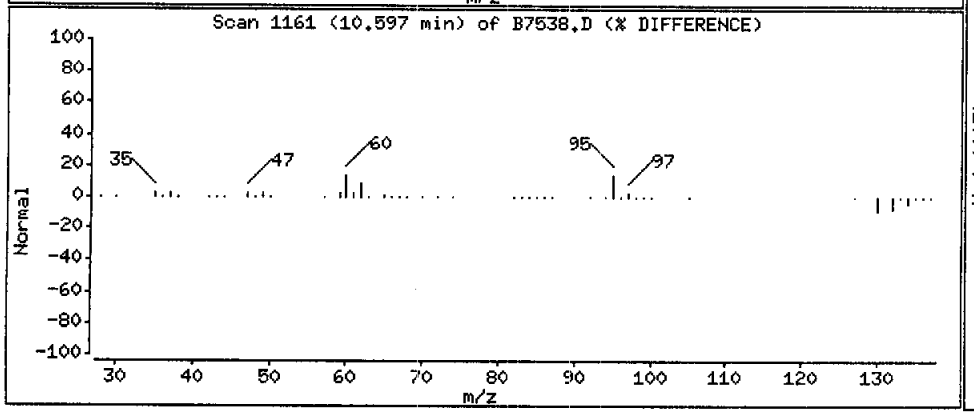
75 Trichloroethene

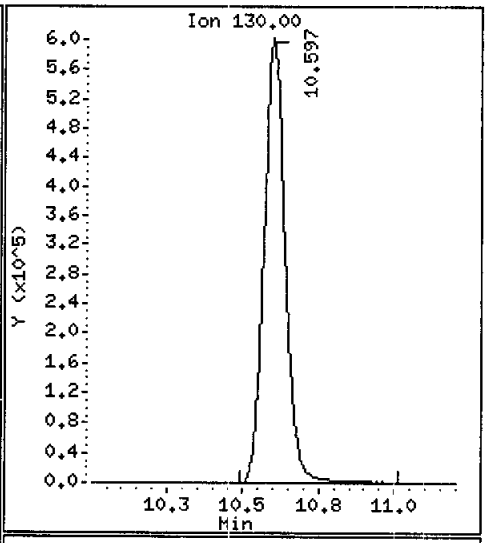
Concentration: 962.8 ppbv

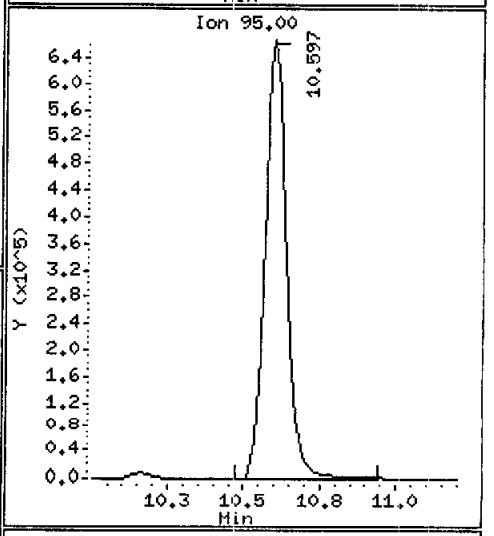


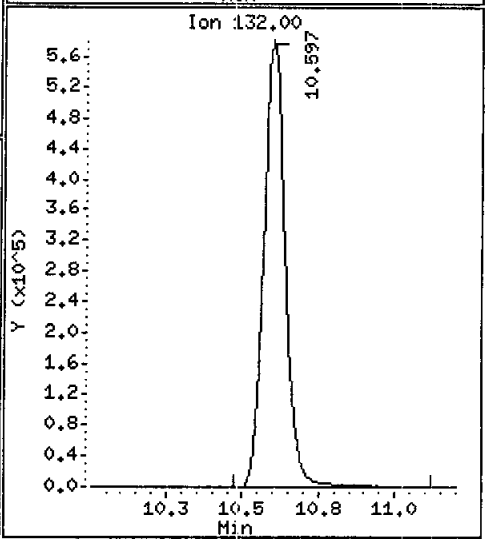












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7538.D

Date : 11-JAN-2005 23:19

Client ID: 066346-0001

Instrument: gcmsb.i

Sample Info: G2DGF1AD,066346-0001,SANDIA,E5A100214-1

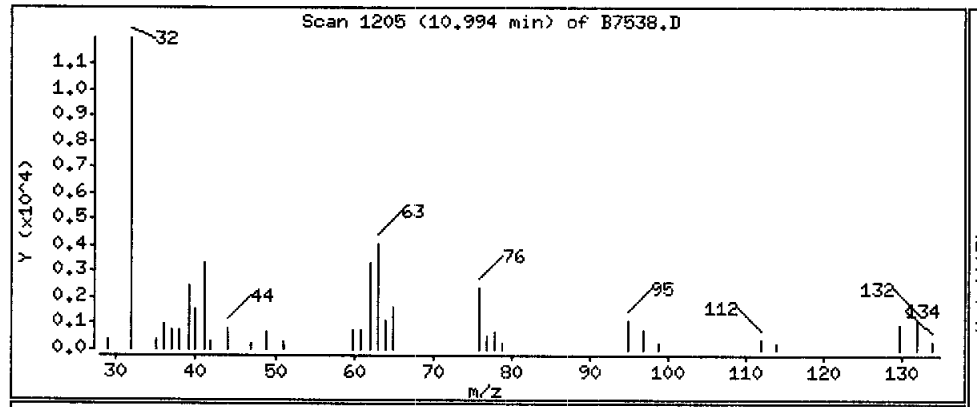
Operator: DLK

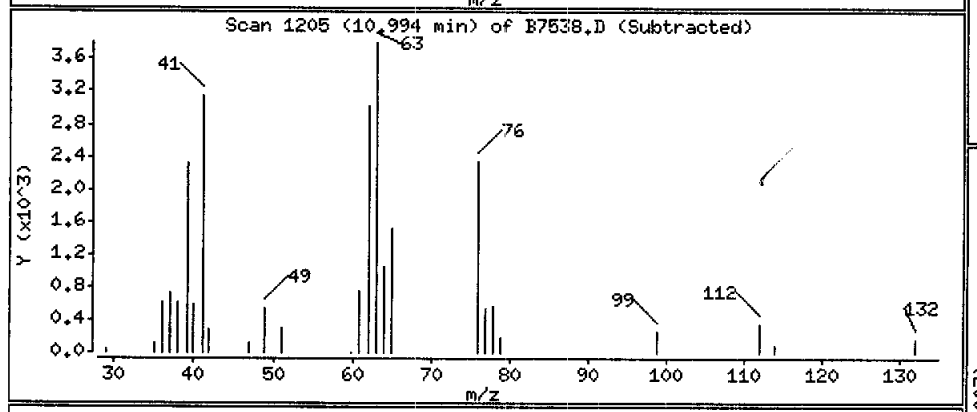
Column phase: J&W DB-624

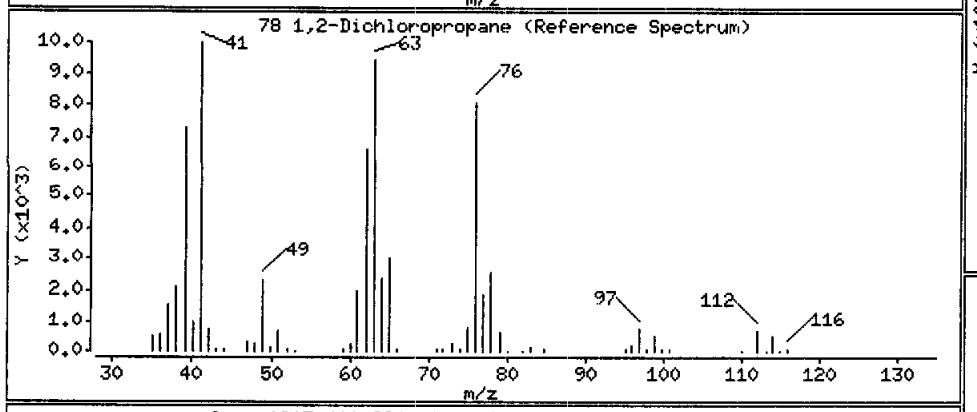
Column diameter: 0.53

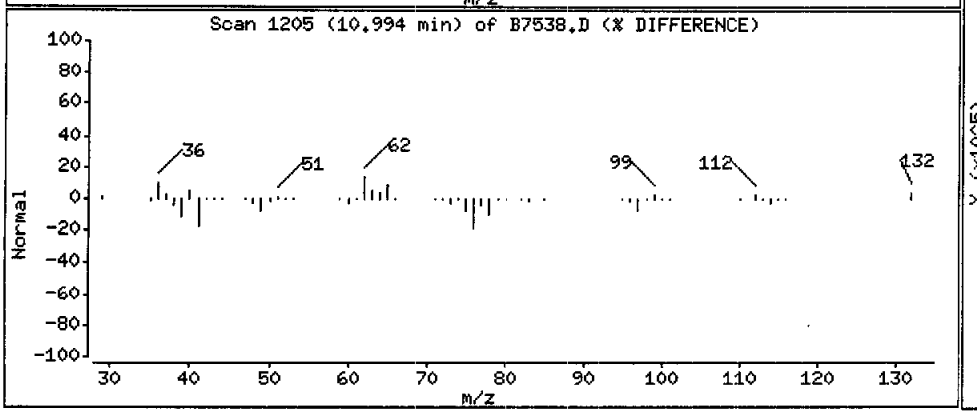
78 1,2-Dichloropropane

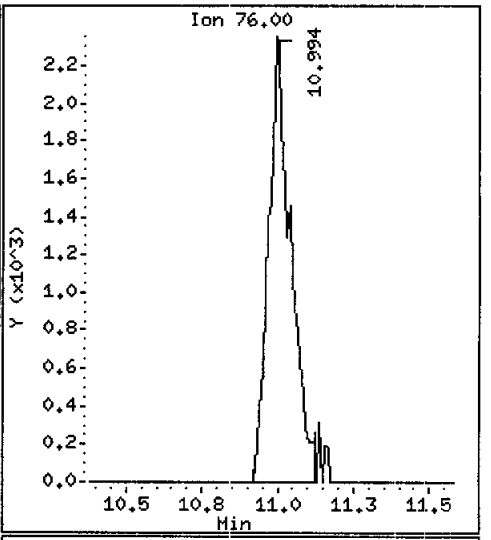
Concentration: 10.51 ppbv

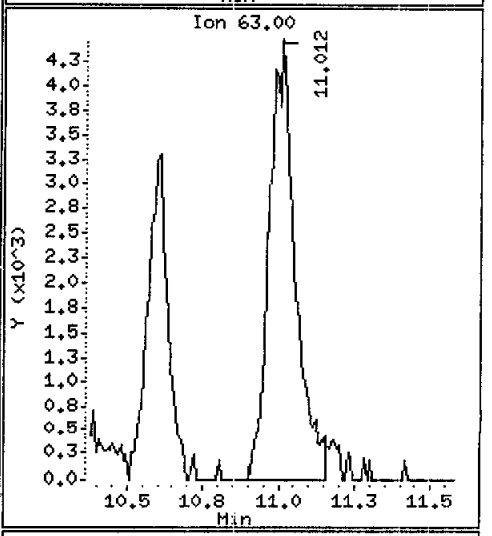


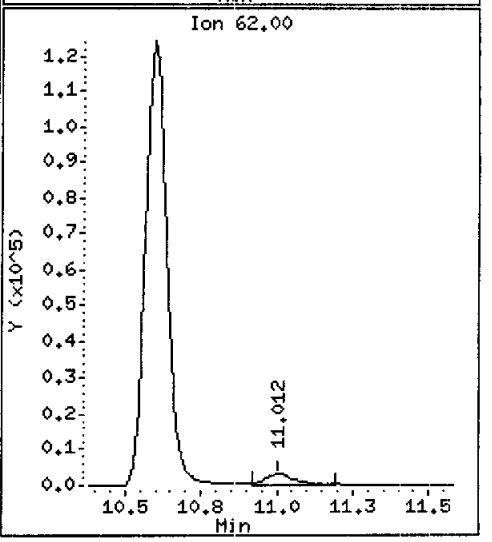












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7539.D
Lab Smp Id: G2DGG1AD Client Smp ID: 066347-0001
Inj Date : 11-JAN-2005 23:55
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGG1AD,066347-0001,SANDIA,E5A100214-2
Misc Info : 24.8,12.8,500,25,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.800	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	25.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.724	4.700	(0.568)	15080	1.22467	47.46(a)
53 cis-1,2-Dichloroethene	96	7.945	7.912	(0.954)	23041	3.30430	128.0
* 58 Bromochloromethane	49	8.324	8.318	(1.000)	545543	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.353	9.347	(0.921)	485825	53.3322	2067
* 73 1,4-Difluorobenzene	114	10.156	10.149	(1.000)	1110011	50.0000	
75 Trichloroethene	130	10.598	10.601	(1.044)	2178085	224.730	8708
78 1,2-Dichloropropane	76	11.013	10.980	(1.084)	11281	3.10047	120.1
$ 88 Toluene-d8	100	12.763	12.766	(1.257)	559651	48.1496	1866
* 101 Chlorobenzene-d5	117	15.416	15.419	(1.000)	726842	50.0000	
$ 114 4-Bromofluorobenzene	95	17.672	17.675	(1.146)	580629	44.7186	1733

QC Flag Legend

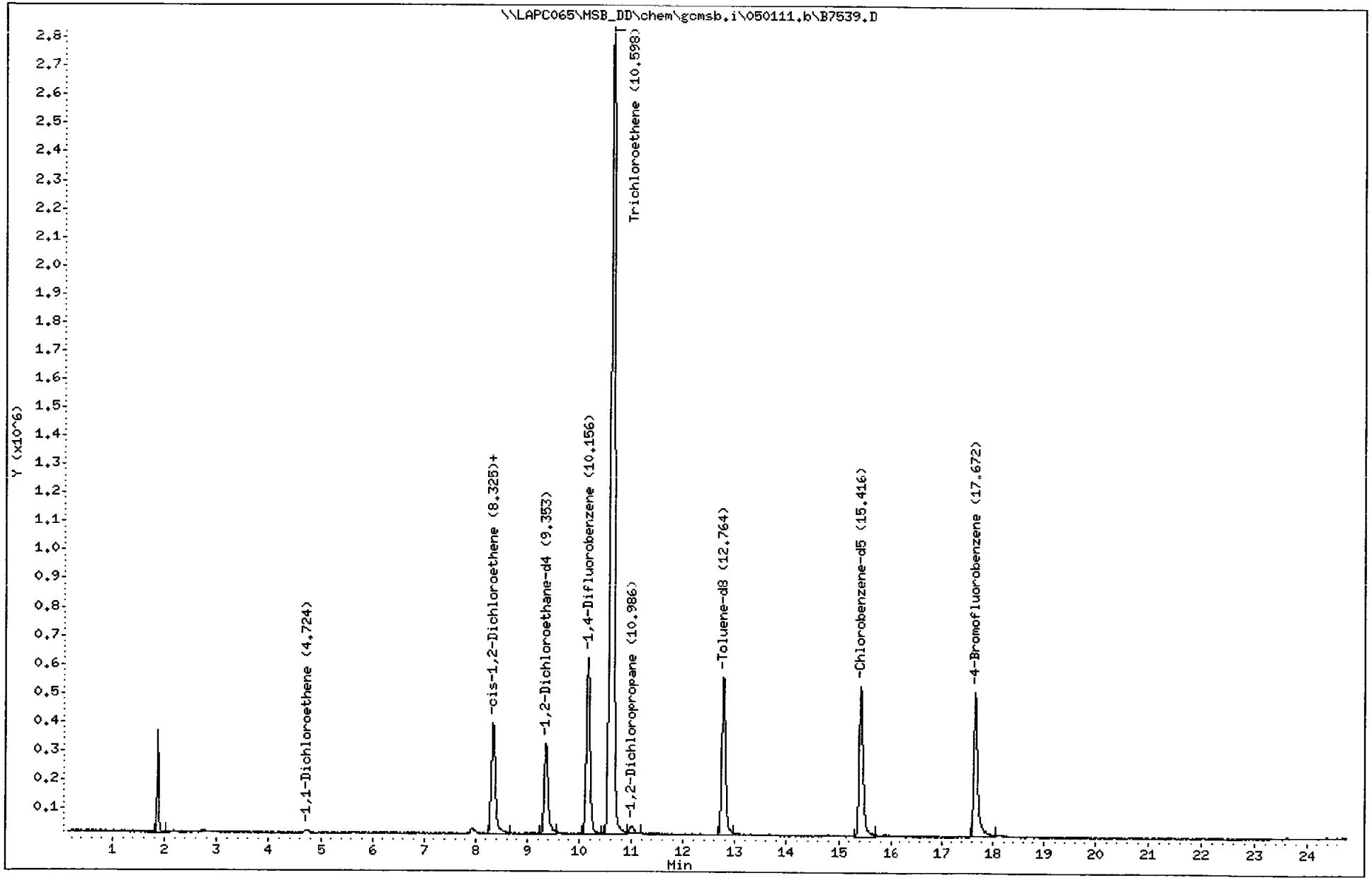
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7539.D
Date : 11-JAN-2005 23:55
Client ID: 066347-0001
Sample Info: G2DGG1AD,066347-0001,SANDIA,E5A100214-2

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7539.D

Date : 11-JAN-2005 23:55

Client ID: 066347-0001

Instrument: gcmsb.i

Sample Info: G2DGG1AD,066347-0001,SANDIA,E5A100214-2

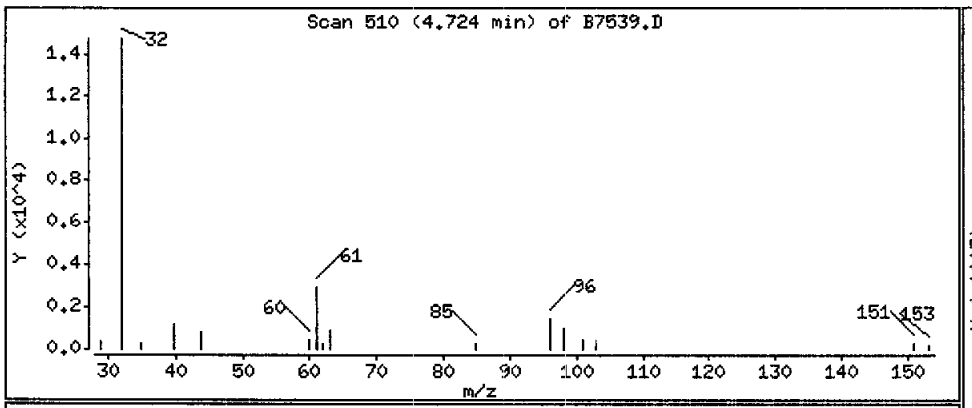
Operator: DLK

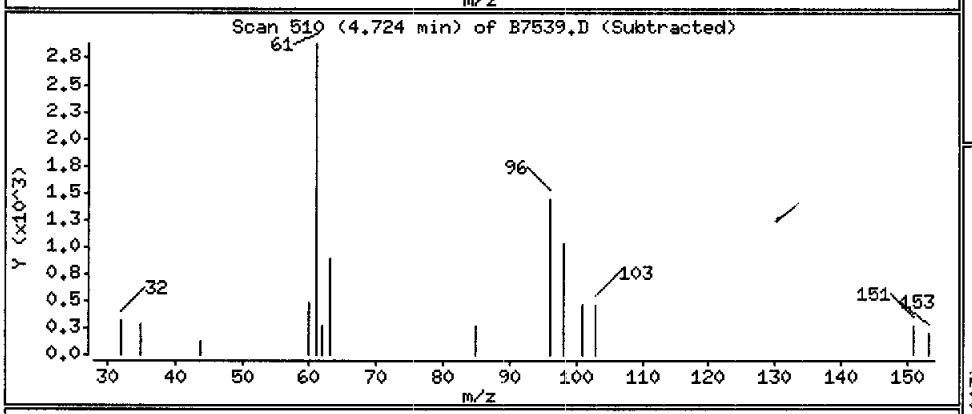
Column phase: J&W DB-624

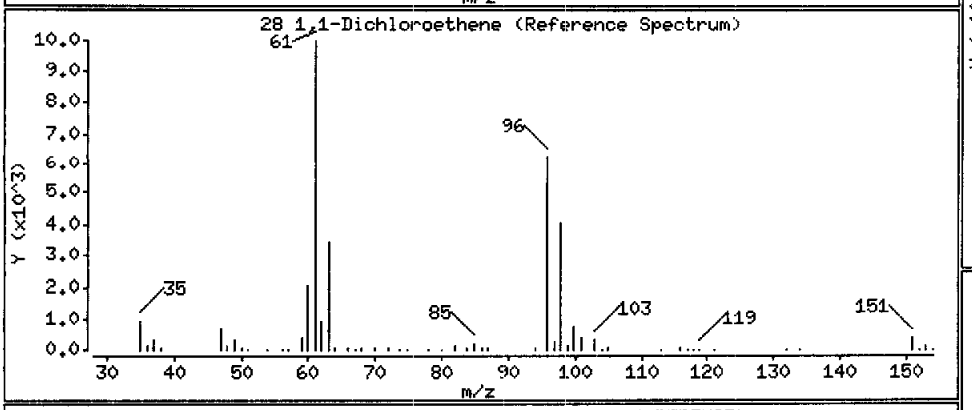
Column diameter: 0.53

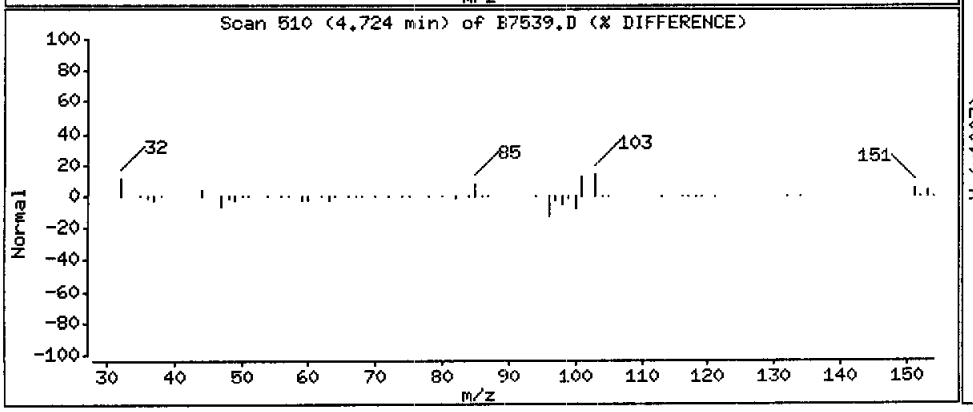
28 1,1-Dichloroethene

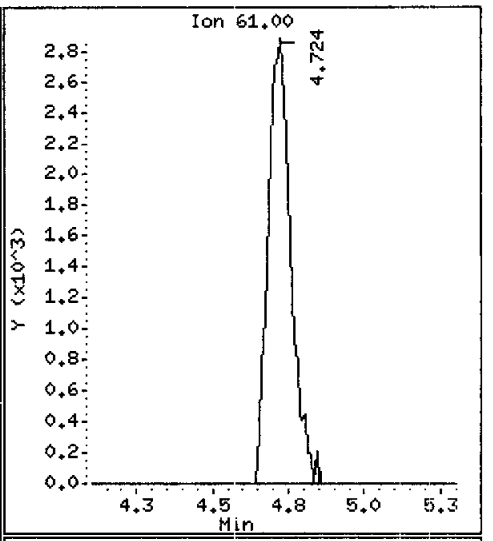
Concentration: 47.46 ppbv

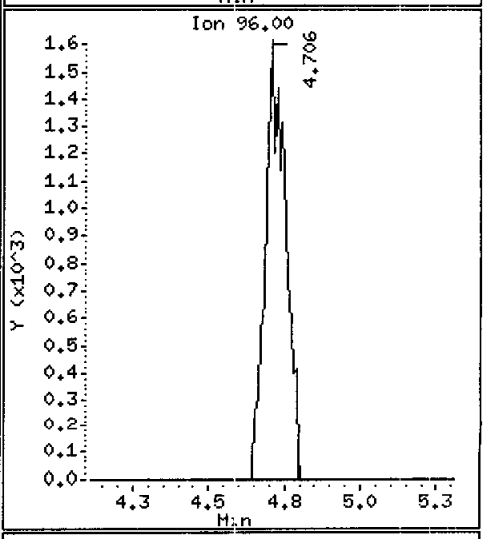


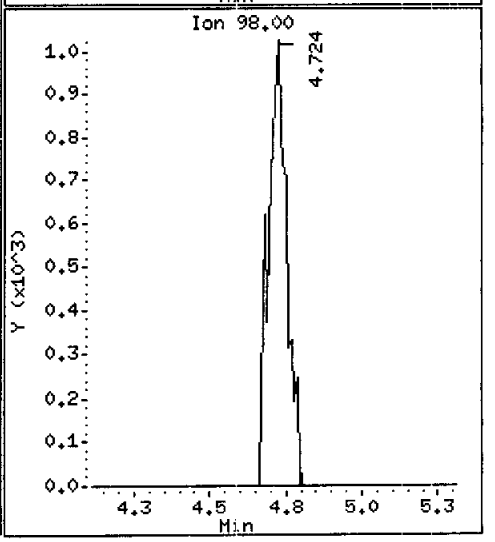












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7539.D

Date : 11-JAN-2005 23:55

Client ID: 066347-0001

Instrument: gcmsb.i

Sample Info: G2DGG1AD,066347-0001,SANDIA,E5A100214-2

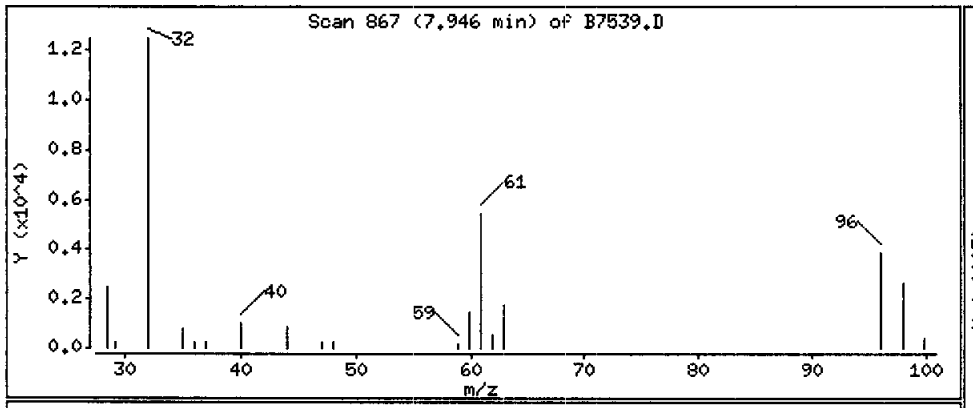
Operator: DLK

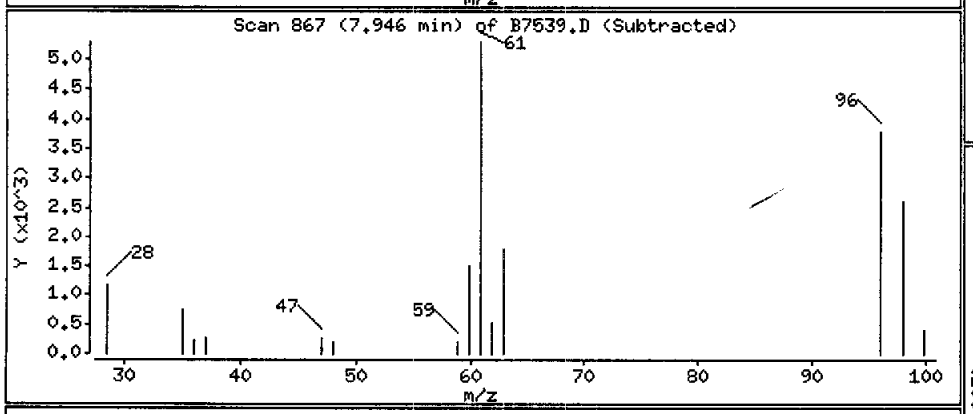
Column phase: J&W DB-624

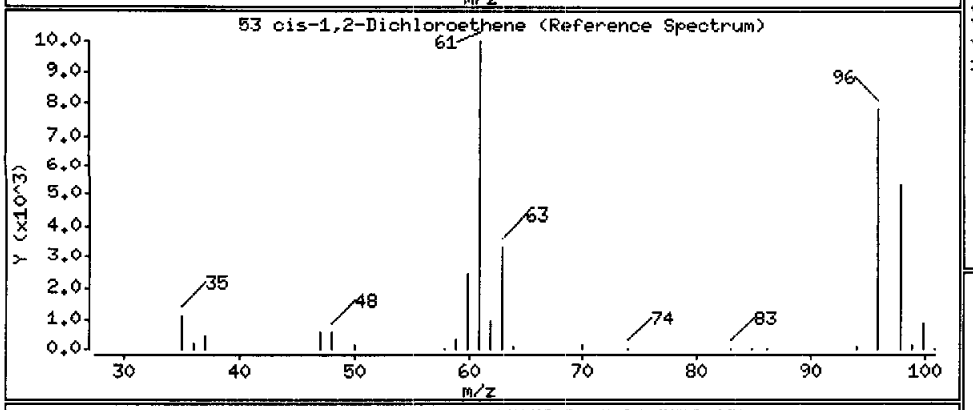
Column diameter: 0.53

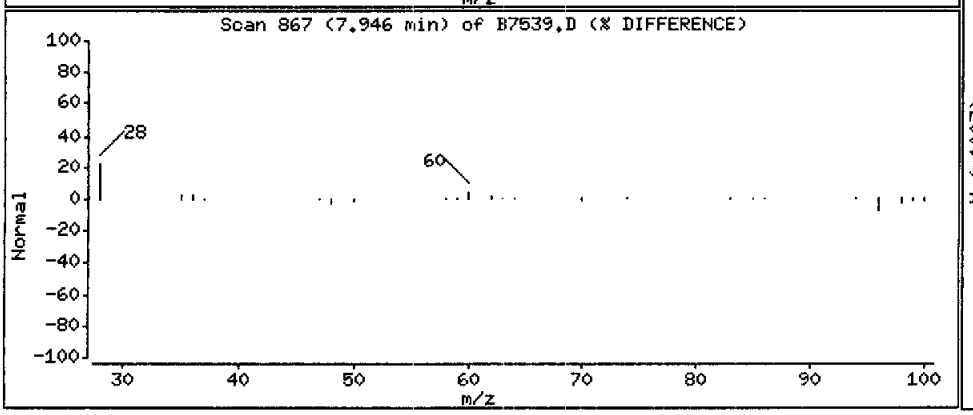
53 cis-1,2-Dichloroethene

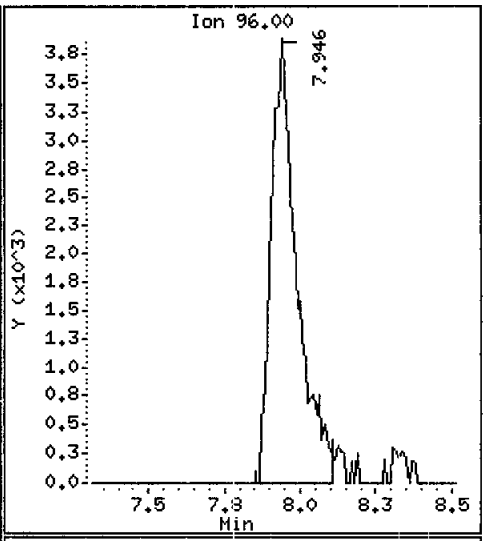
Concentration: 128.0 ppbv

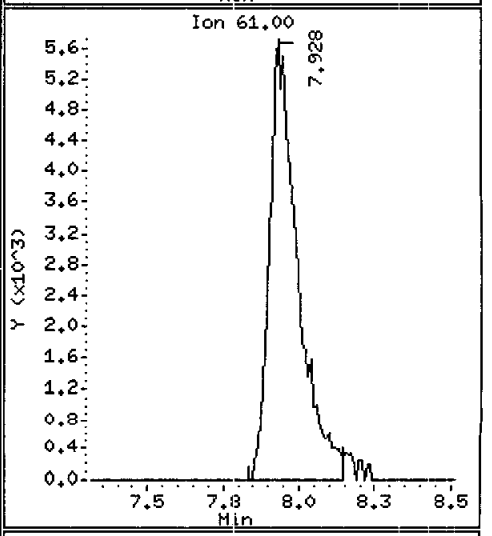


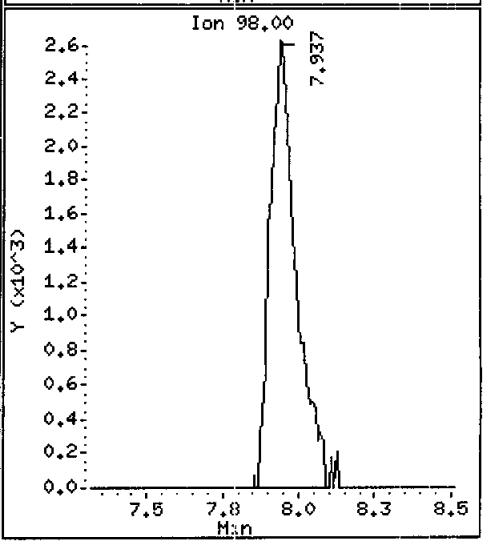












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7539.D

Date : 11-JAN-2005 23:55

Client ID: 066347-0001

Instrument: gcmsb.i

Sample Info: G2DGG1AD,066347-0001,SANDIA,E5A100214-2

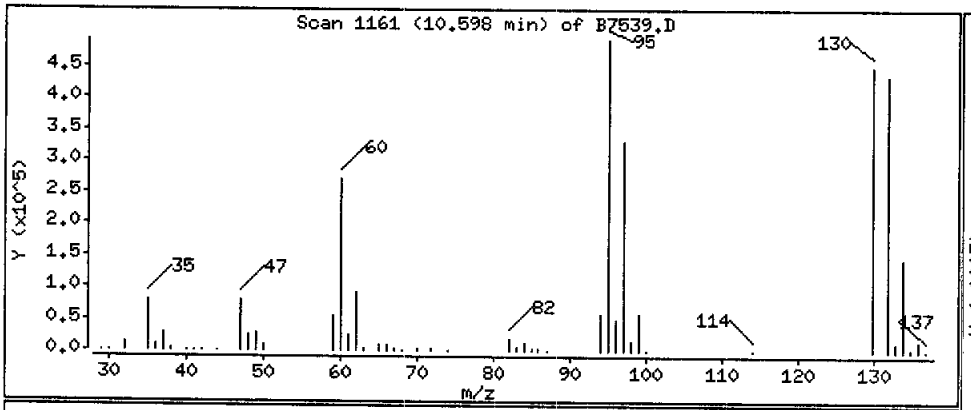
Operator: DLK

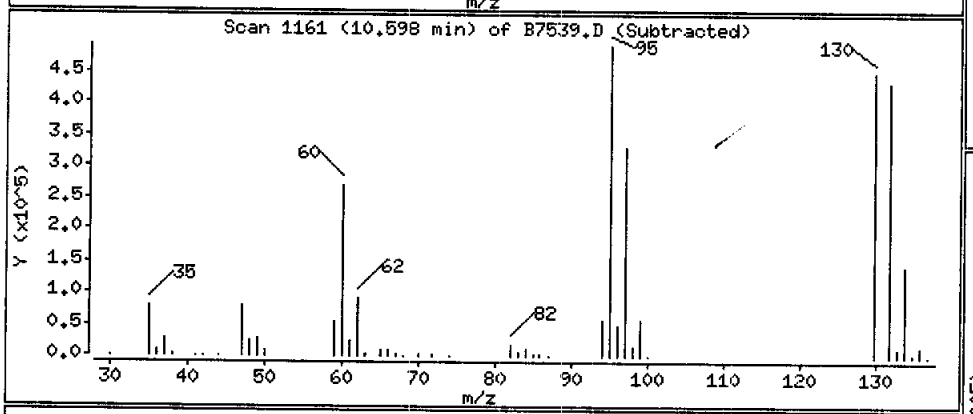
Column phase: J&W DB-624

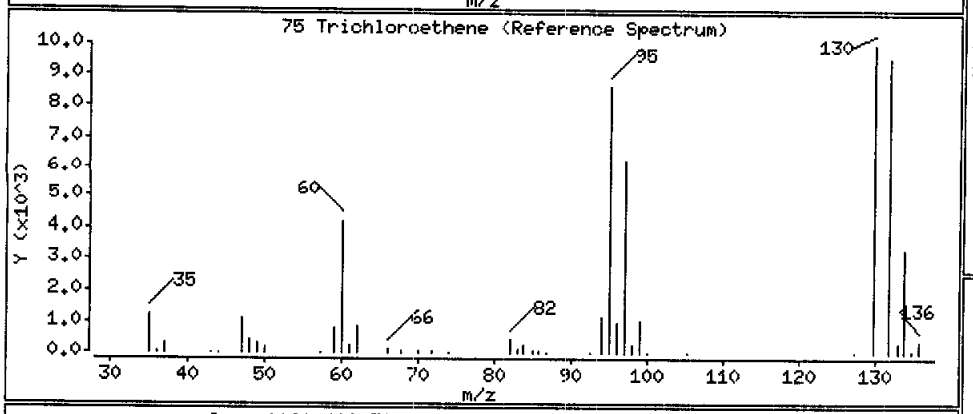
Column diameter: 0.53

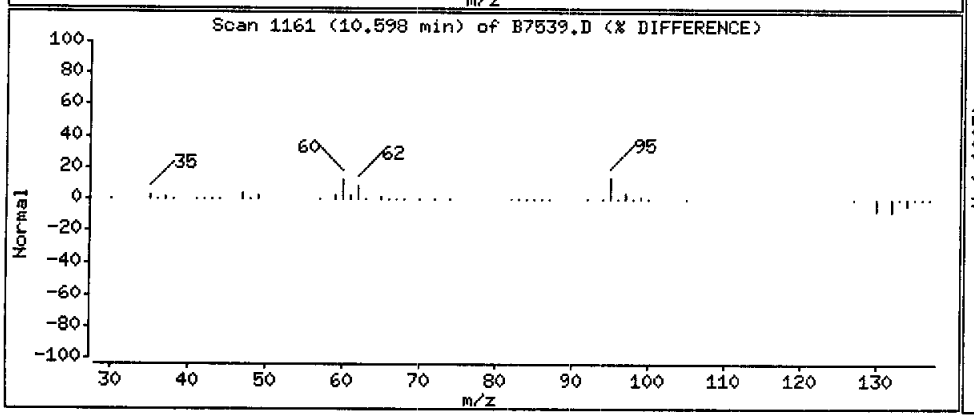
75 Trichloroethene

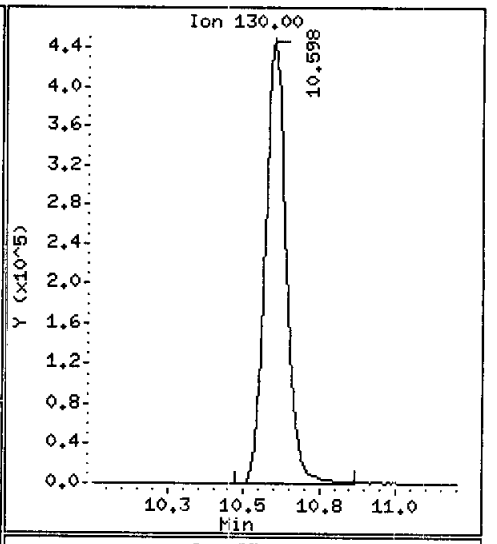
Concentration: 8708 ppbv

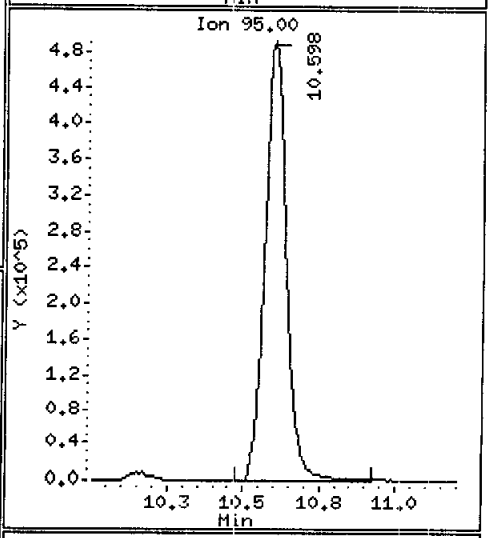


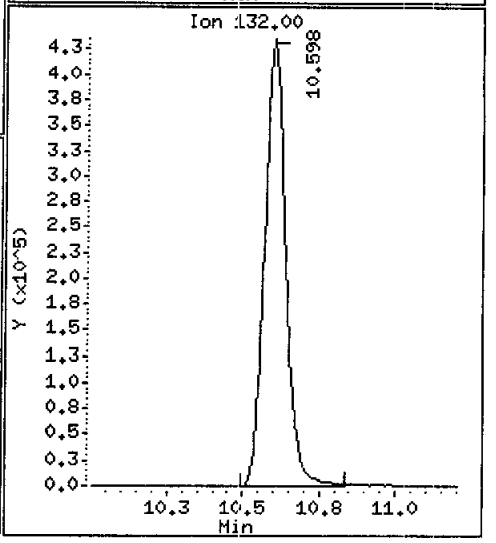












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Date : 11-JAN-2005 23:55

Client ID: 066347-0001

Instrument: gcmsb.i

Sample Info: G2DGG1AD,066347-0001,SANDIA,E5A100214-2

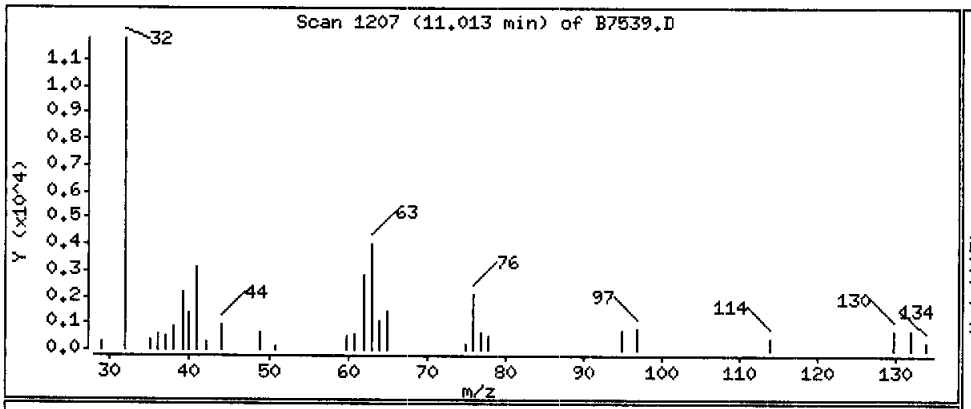
Operator: DLK

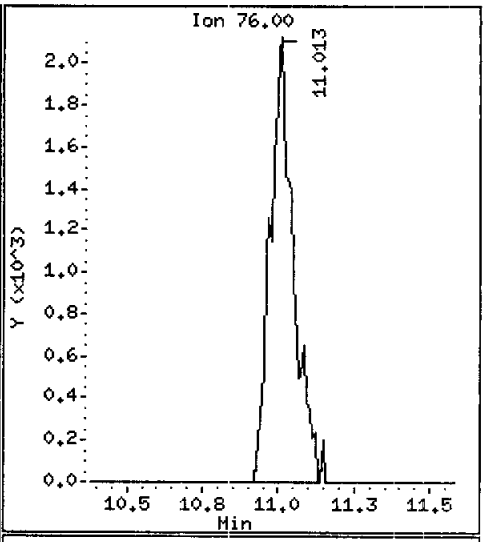
Column phase: J&W DB-624

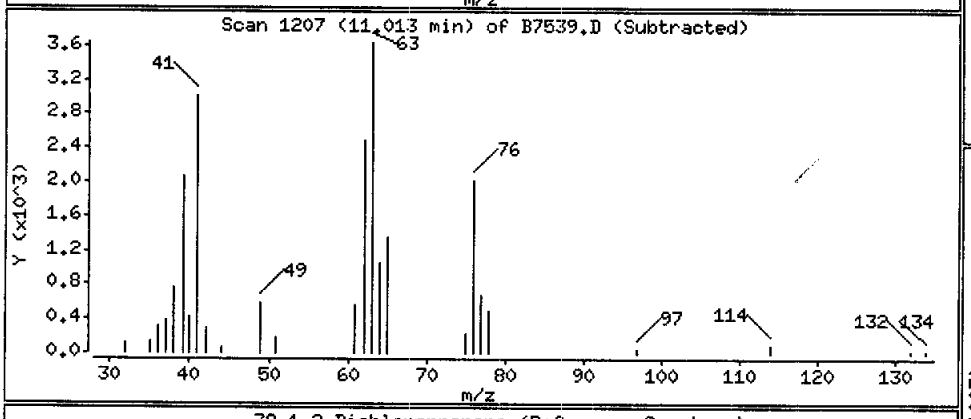
Column diameter: 0.53

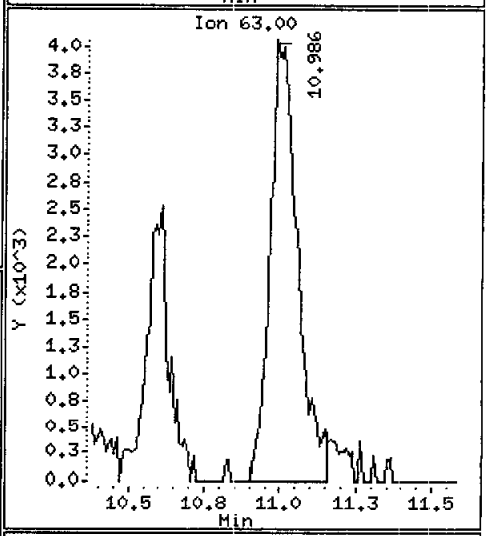
78 1,2-Dichloropropane

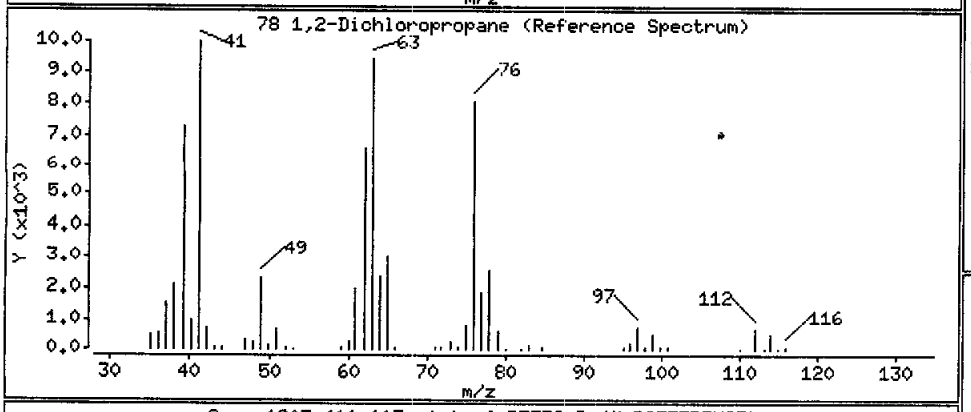
Concentration: 120.1 ppbv

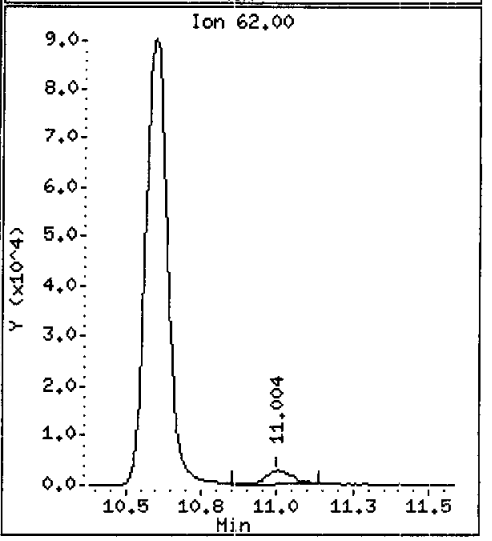


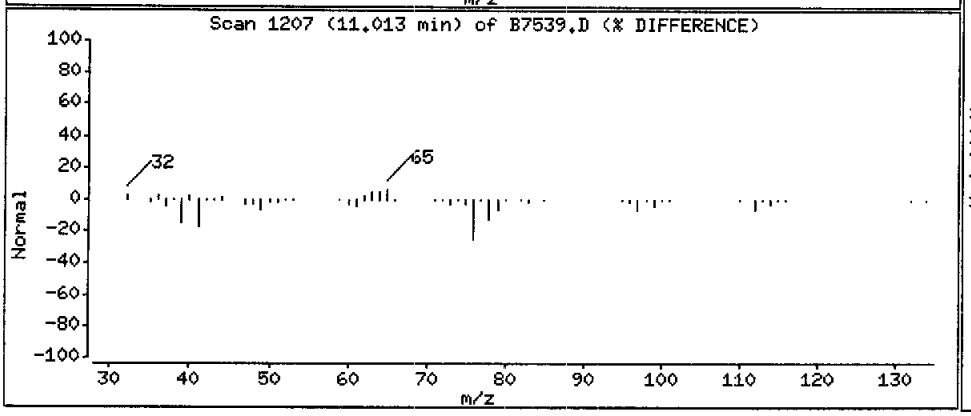












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D
Lab Smp Id: G2DGH1AD Client Smp ID: 066348-0001
Inj Date : 12-JAN-2005 00:30
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGH1AD,066348-0001,SANDIA,E5A100214-3
Misc Info : 24.3,12.8,500,10,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	10.000	SmpVol

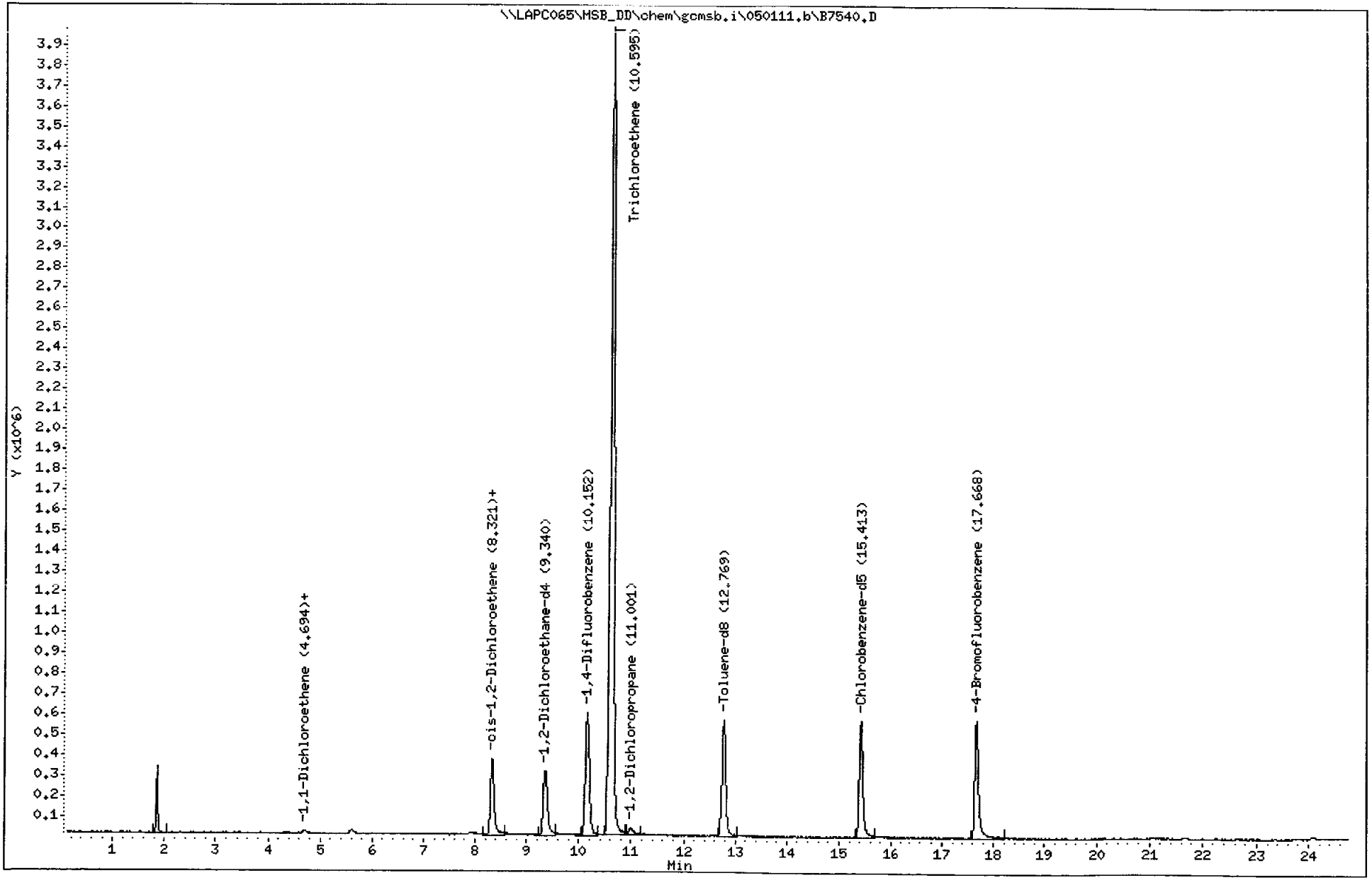
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.693	4.700	(0.564)	26579	2.19095	208.0
37 Methylene Chloride	49	5.596	5.593	(0.673)	30217	4.03405	382.9
53 cis-1,2-Dichloroethene	96	7.932	7.912	(0.953)	15295	2.22650	211.3
* 58 Bromochloromethane	49	8.320	8.318	(1.000)	537458	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.340	9.347	(0.920)	486612	53.6396	5092
* 73 1,4-Difluorobenzene	114	10.152	10.149	(1.000)	1105439	50.0000	
75 Trichloroethene	130	10.594	10.601	(1.044)	3086093	319.732	30350
78 1,2-Dichloropropane	76	11.000	10.980	(1.084)	13567	3.74432	355.4
$ 88 Toluene-d8	100	12.769	12.766	(1.258)	579479	50.0617	4752
* 101 Chlorobenzene-d5	117	15.412	15.419	(1.000)	769715	50.0000	
$ 114 4-Bromofluorobenzene	95	17.668	17.675	(1.146)	637401	46.3566	4400

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D
Date : 12-JAN-2005 00:30
Client ID: 066348-0001
Sample Info: G2DGH1AD,066348-0001,SANDIA,E5A100214-3

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53

Column phase: J&W DB-624



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D

Date : 12-JAN-2005 00:30

Client ID: 066348-0001

Instrument: gcmsb.i

Sample Info: G2DGH1AD,066348-0001,SANDIA,E5A100214-3

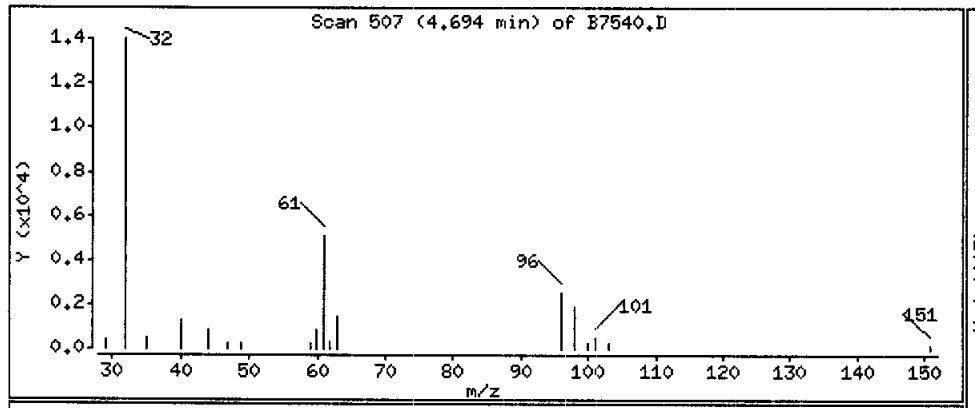
Operator: DLK

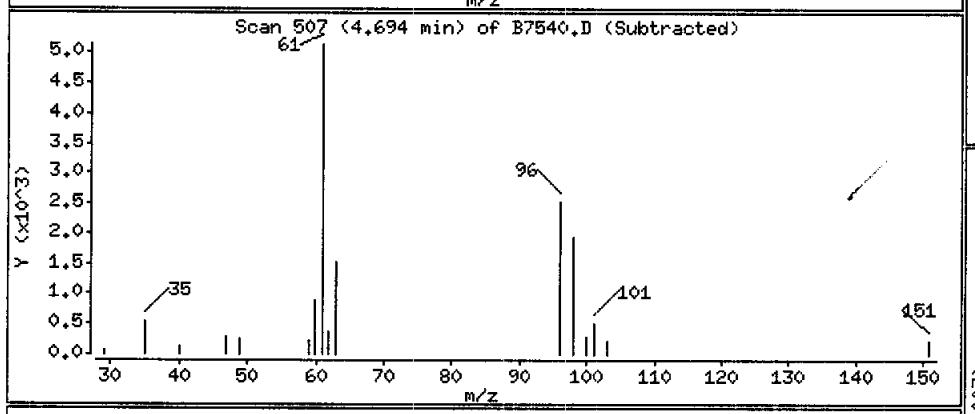
Column phase: J&W DB-624

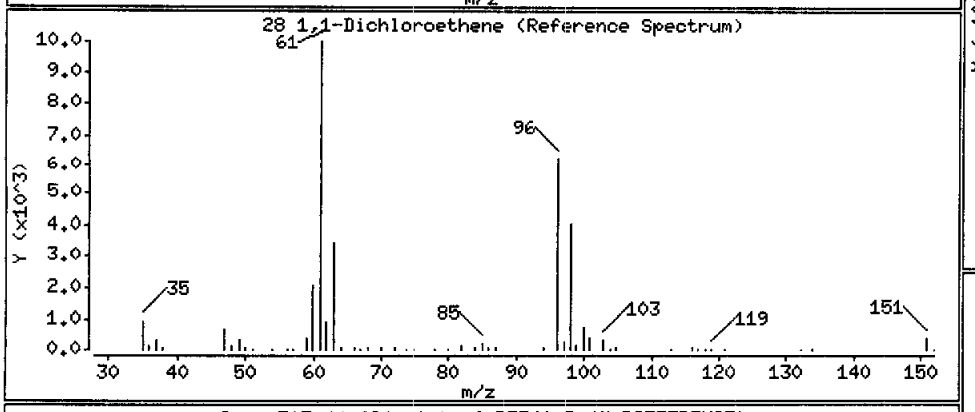
Column diameter: 0.53

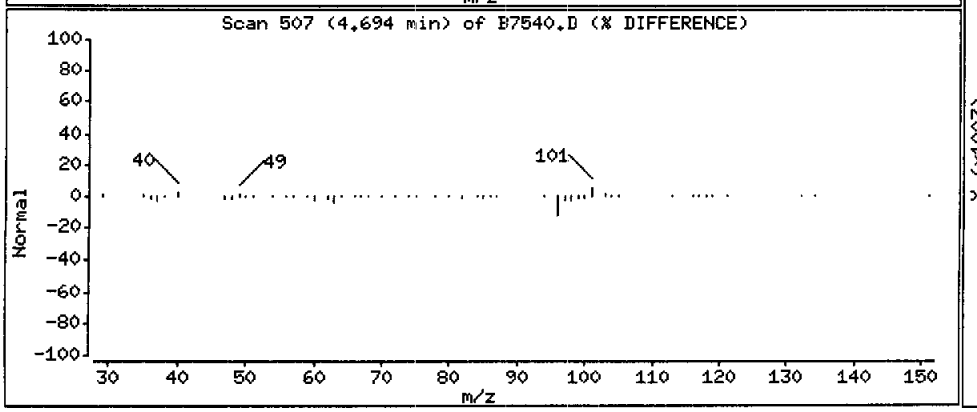
28 1,1-Dichloroethene

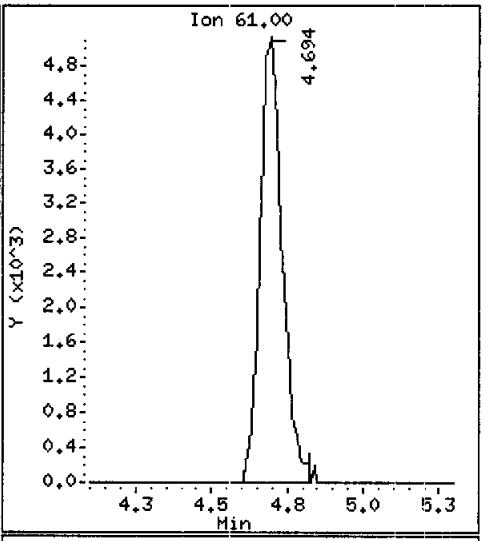
Concentration: 208.0 ppbv

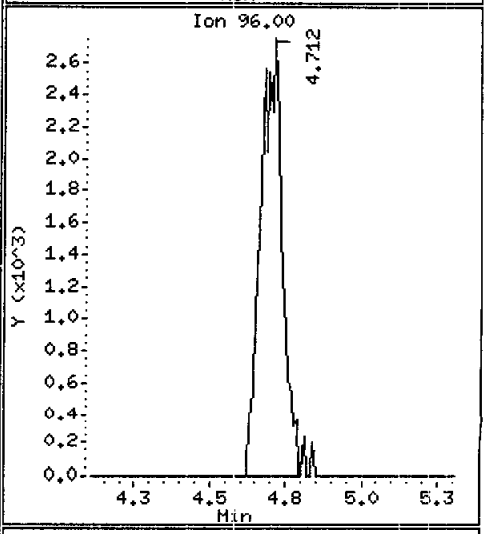


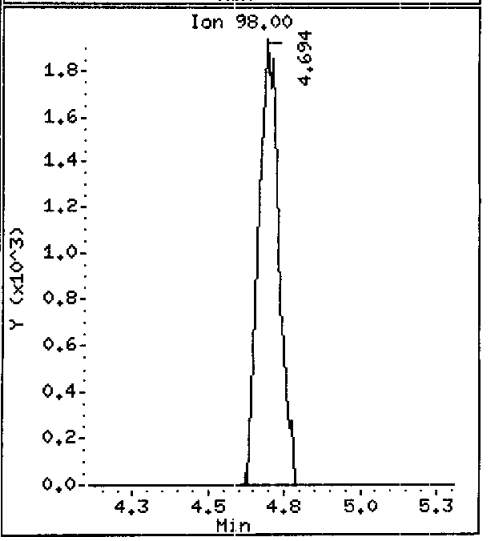












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D

Date : 12-JAN-2005 00:30

Client ID: 066348-0001

Instrument: gcmsb.i

Sample Info: G2DGH1AD,066348-0001,SANDIA,E5A100214-3

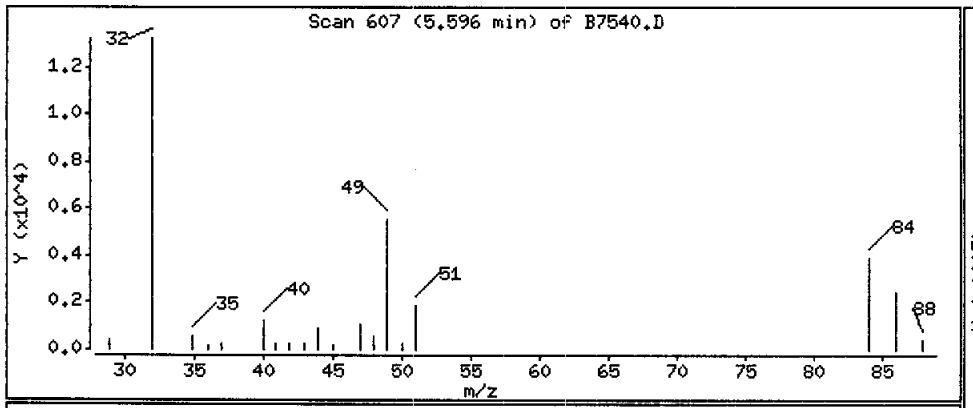
Operator: DLK

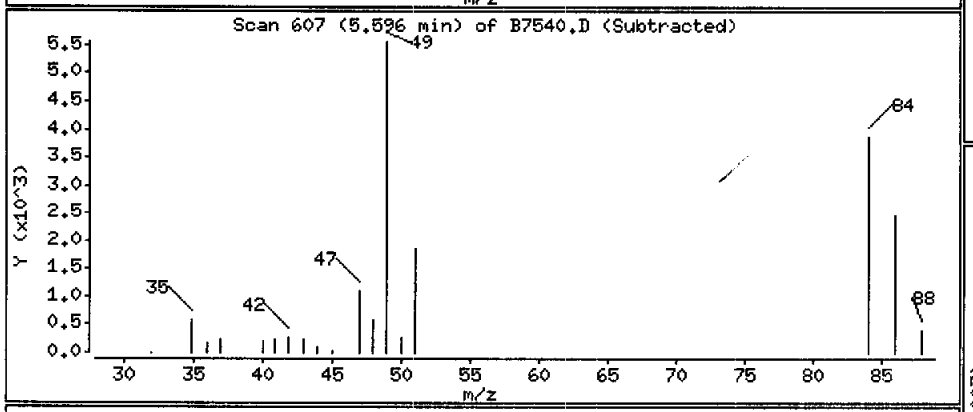
Column phase: J&W DB-624

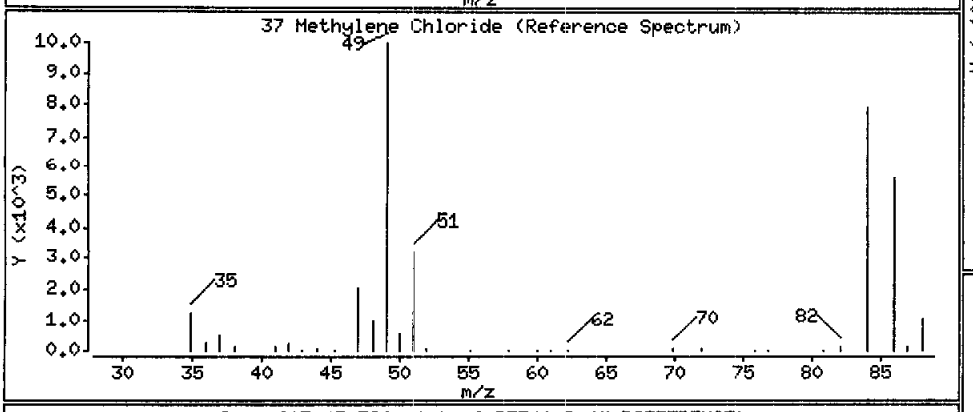
Column diameter: 0.53

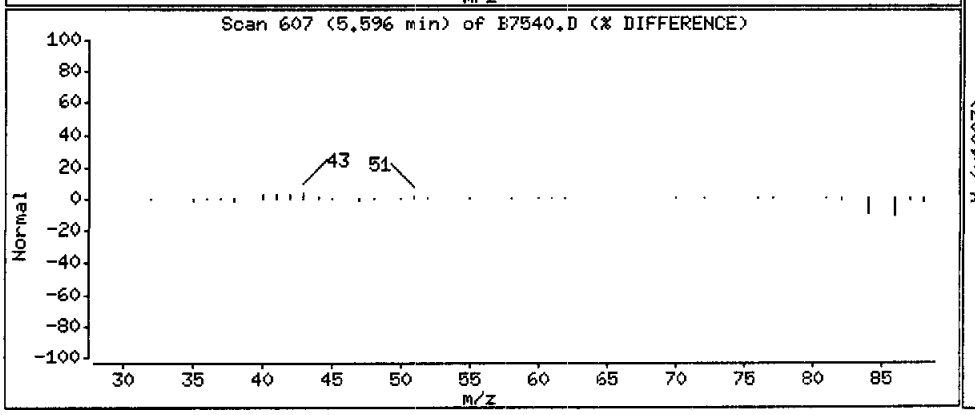
37 Methylene Chloride

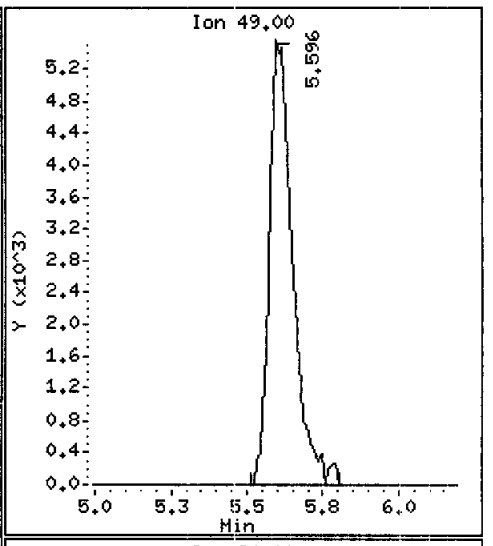
Concentration: 382.9 ppbv

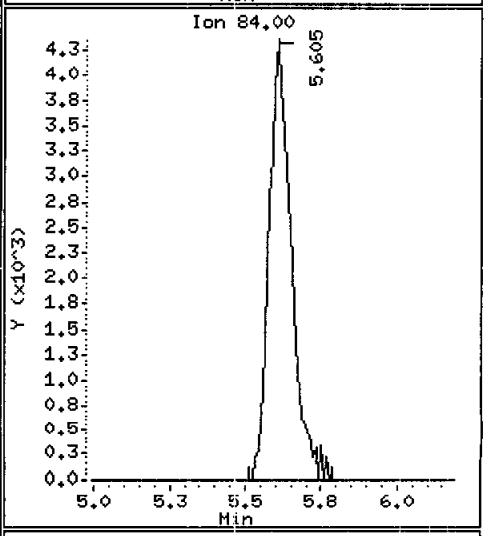


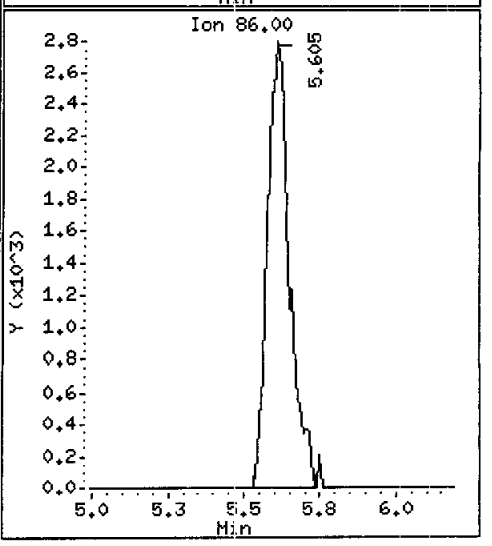












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D

Date : 12-JAN-2005 00:30

Client ID: 066348-0001

Instrument: gcmsb.i

Sample Info: G2DGH1AD,066348-0001,SANDIA,E5A100214-3

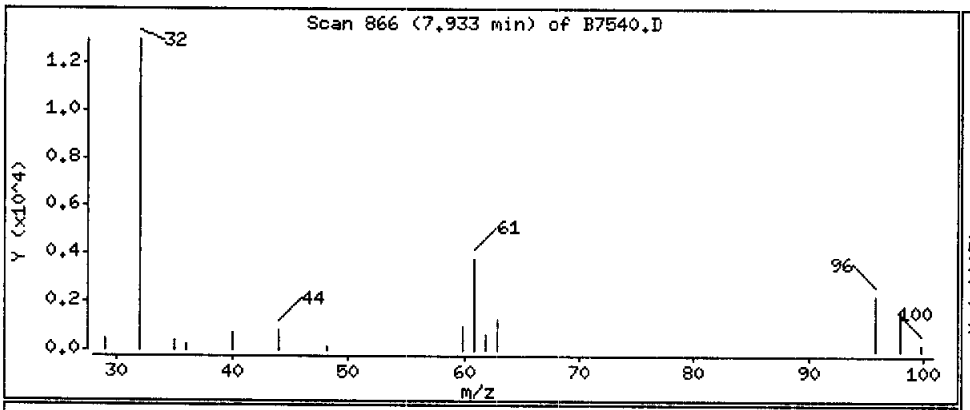
Operator: DLK

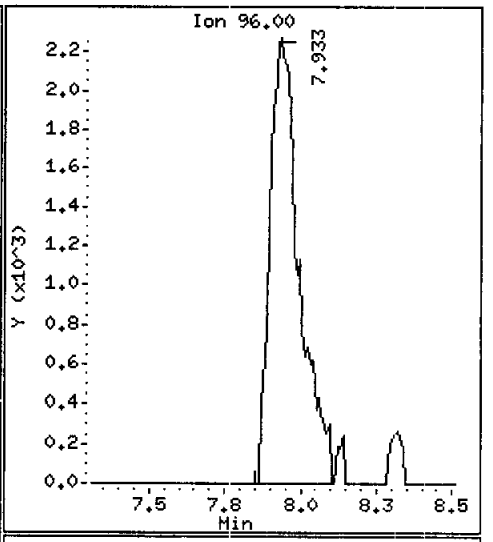
Column phase: J&W DB-624

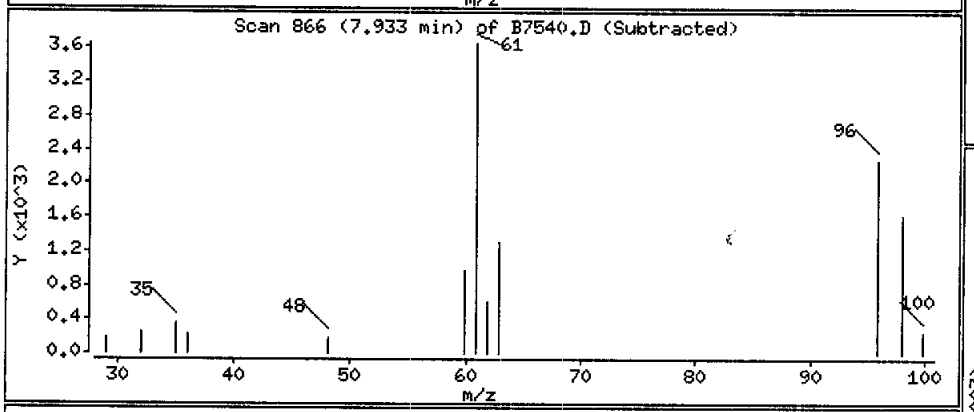
Column diameter: 0.53

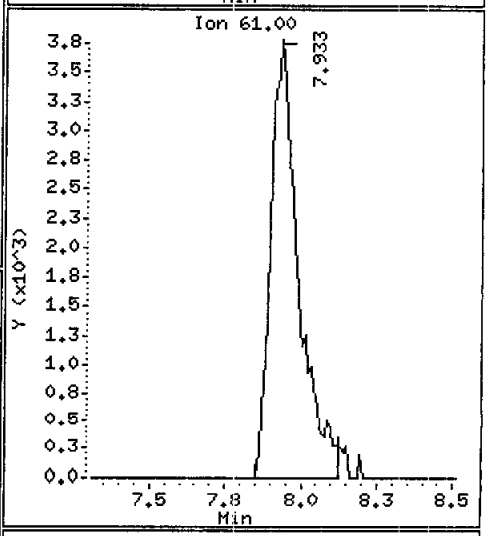
53 cis-1,2-Dichloroethene

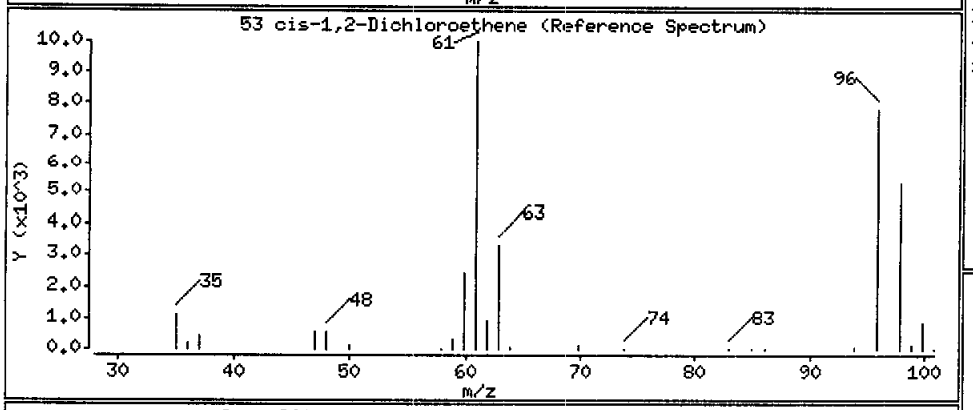
Concentration: 211.3 ppbv

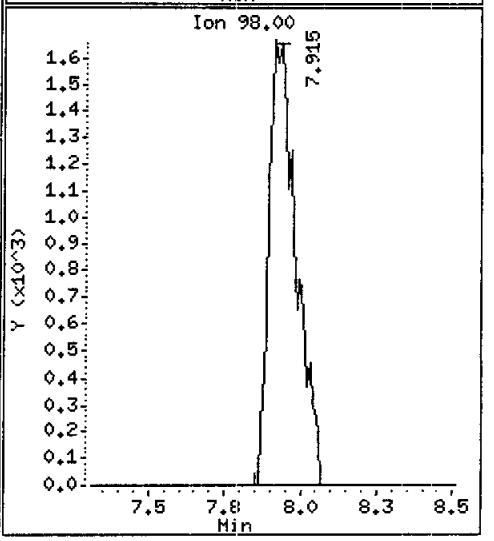


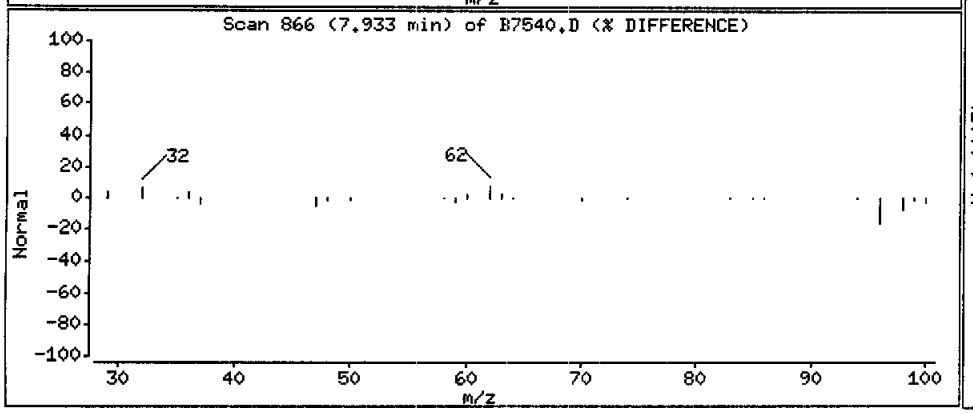












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D

Date : 12-JAN-2005 00:30

Client ID: 066348-0001

Instrument: gcmsb.i

Sample Info: G2DGH1AD,066348-0001,SANDIA,E5A100214-3

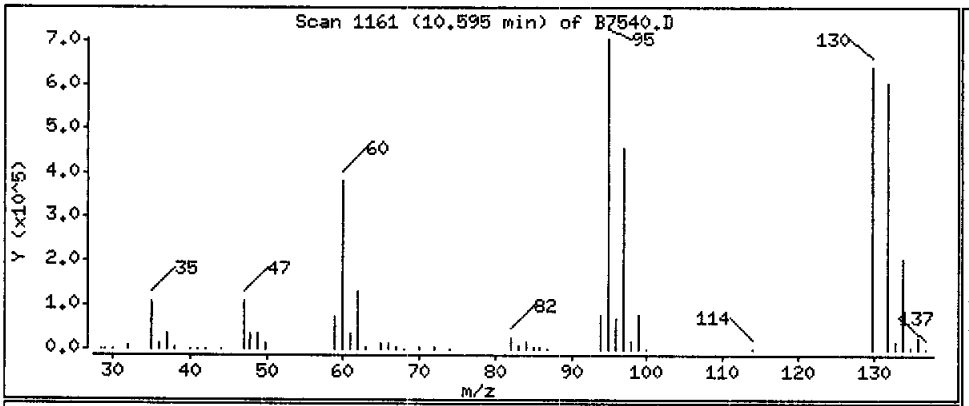
Operator: DLK

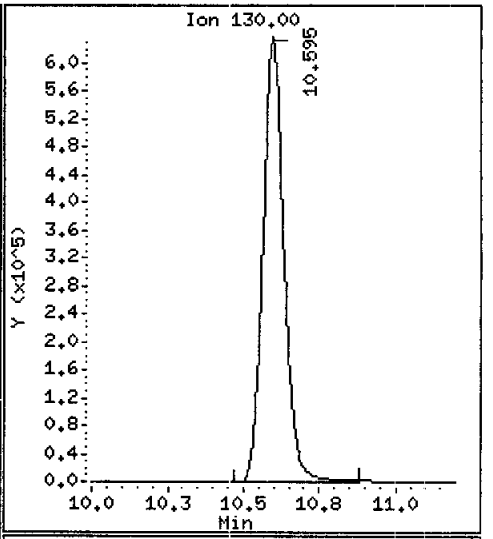
Column phase: J&W DB-624

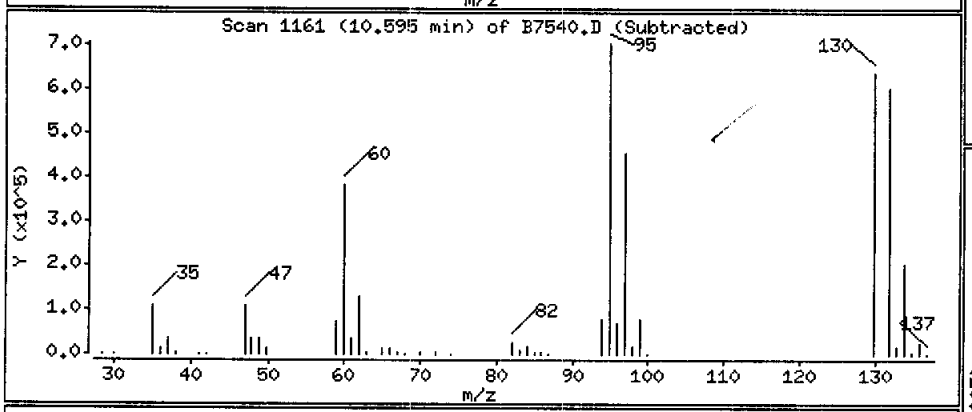
Column diameter: 0.53

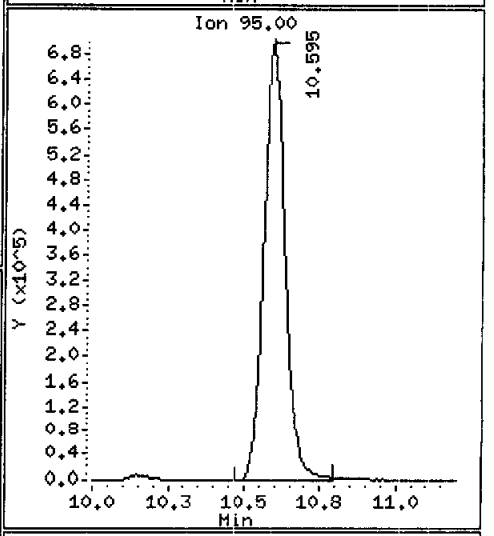
75 Trichloroethene

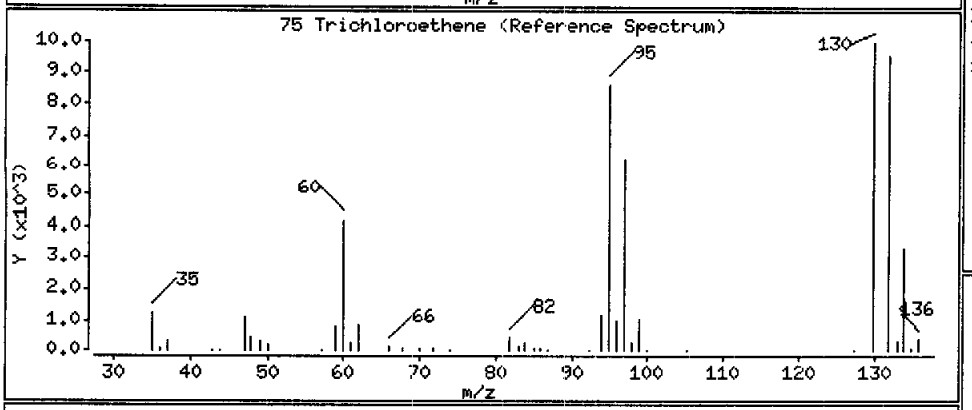
Concentration: 30350 ppbv

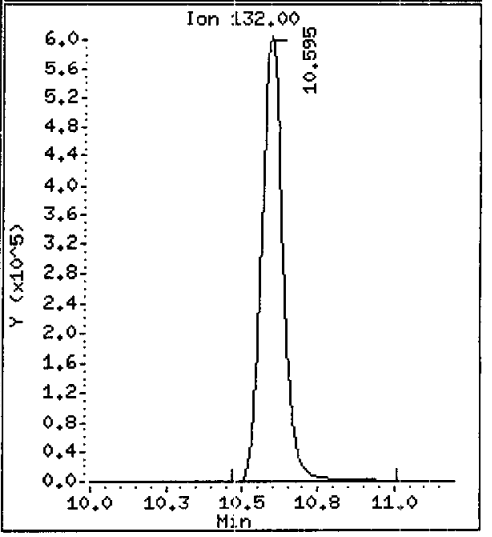


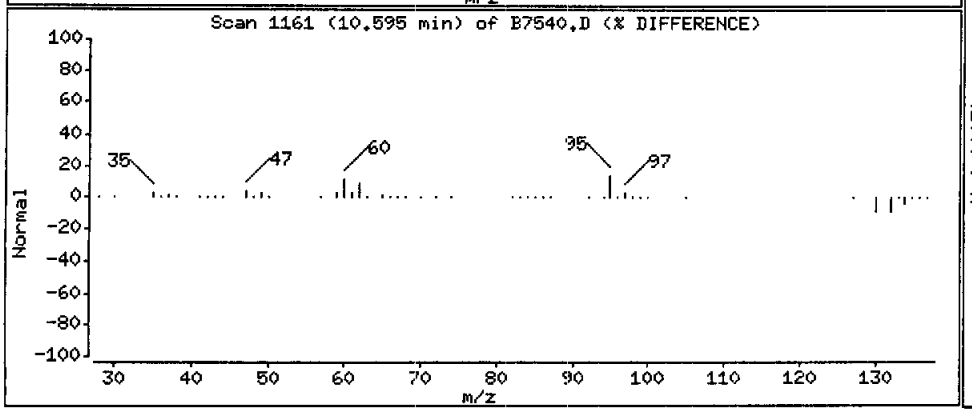












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7540.D

Date : 12-JAN-2005 00:30

Client ID: 066348-0001

Instrument: gcmsb.i

Sample Info: G2DGH1AD,066348-0001,SANDIA,E5A100214-3

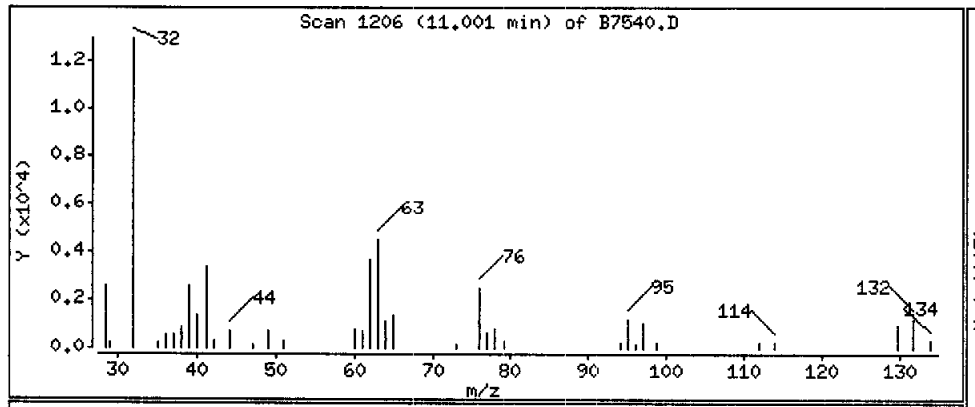
Operator: DLK

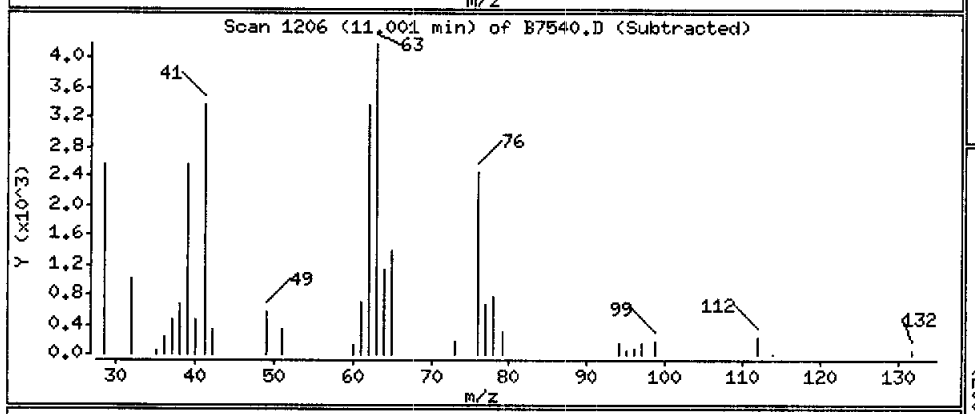
Column phase: J&W DB-624

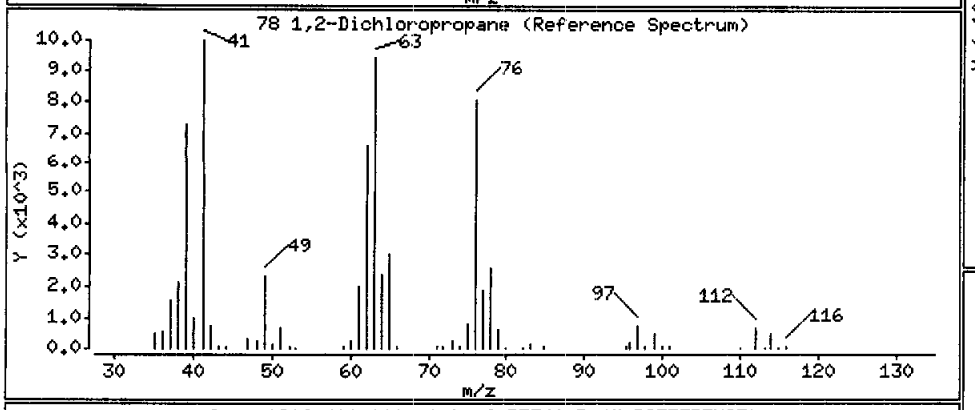
Column diameter: 0.53

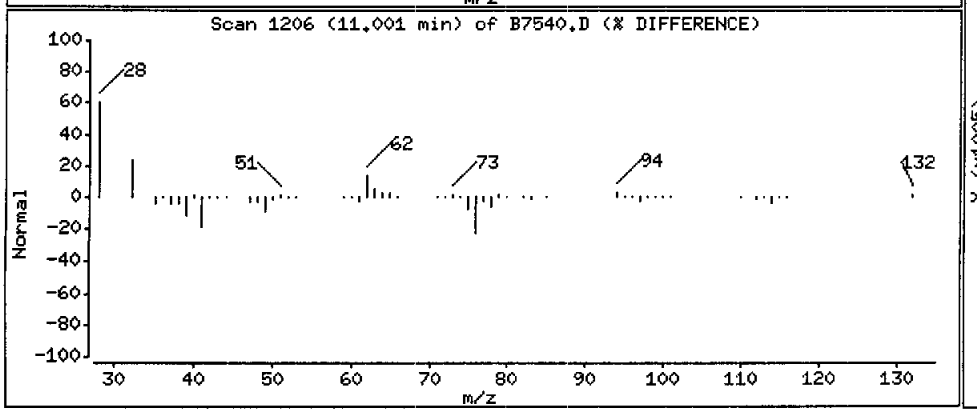
78 1,2-Dichloropropane

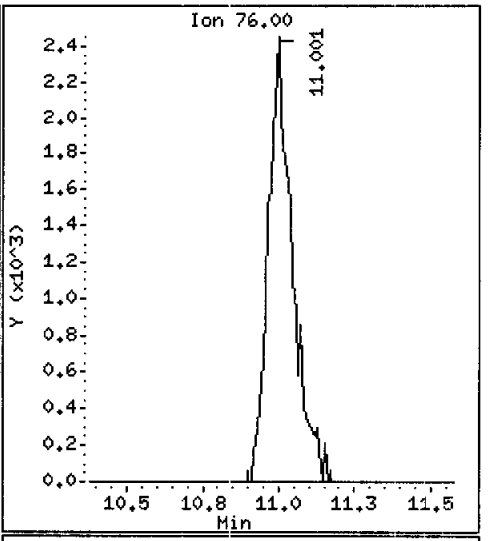
Concentration: 355.4 ppbv

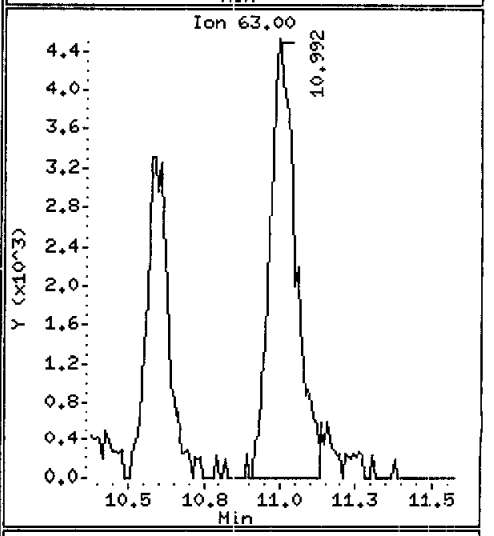


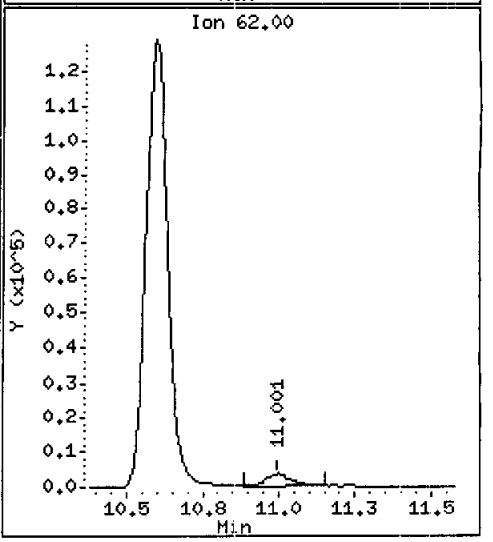












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D
Lab Smp Id: G2DGK1AD Client Smp ID: 066349-0001
Inj Date : 12-JAN-2005 01:06
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGK1AD,066349-0001,SANDIA,E5A100214-4
Misc Info : 24.3,12.8,500,20,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	20.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	20032	1.62955	77.34(a)
37 Methylene Chloride	49	5.611	5.593	(0.674)	41809	5.50802	261.4
53 cis-1,2-Dichloroethene	96	7.939	7.912	(0.953)	16651	2.39193	113.5
* 58 Bromochloromethane	49	8.327	8.318	(1.000)	544629	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.347	9.347	(0.920)	469607	52.2083	2478
* 73 1,4-Difluorobenzene	114	10.159	10.149	(1.000)	1096053	50.0000	
75 Trichloroethene	130	10.592	10.601	(1.043)	2796723	292.234	13870
78 1,2-Dichloropropane	76	11.007	10.980	(1.083)	13937	3.87928	184.1
$ 88 Toluene-d8	100	12.766	12.766	(1.257)	569842	49.6507	2356
* 101 Chlorobenzene-d5	117	15.419	15.419	(1.000)	754907	50.0000	
$ 114 4-Bromofluorobenzene	95	17.666	17.675	(1.146)	625810	46.4064	2202

QC Flag Legend

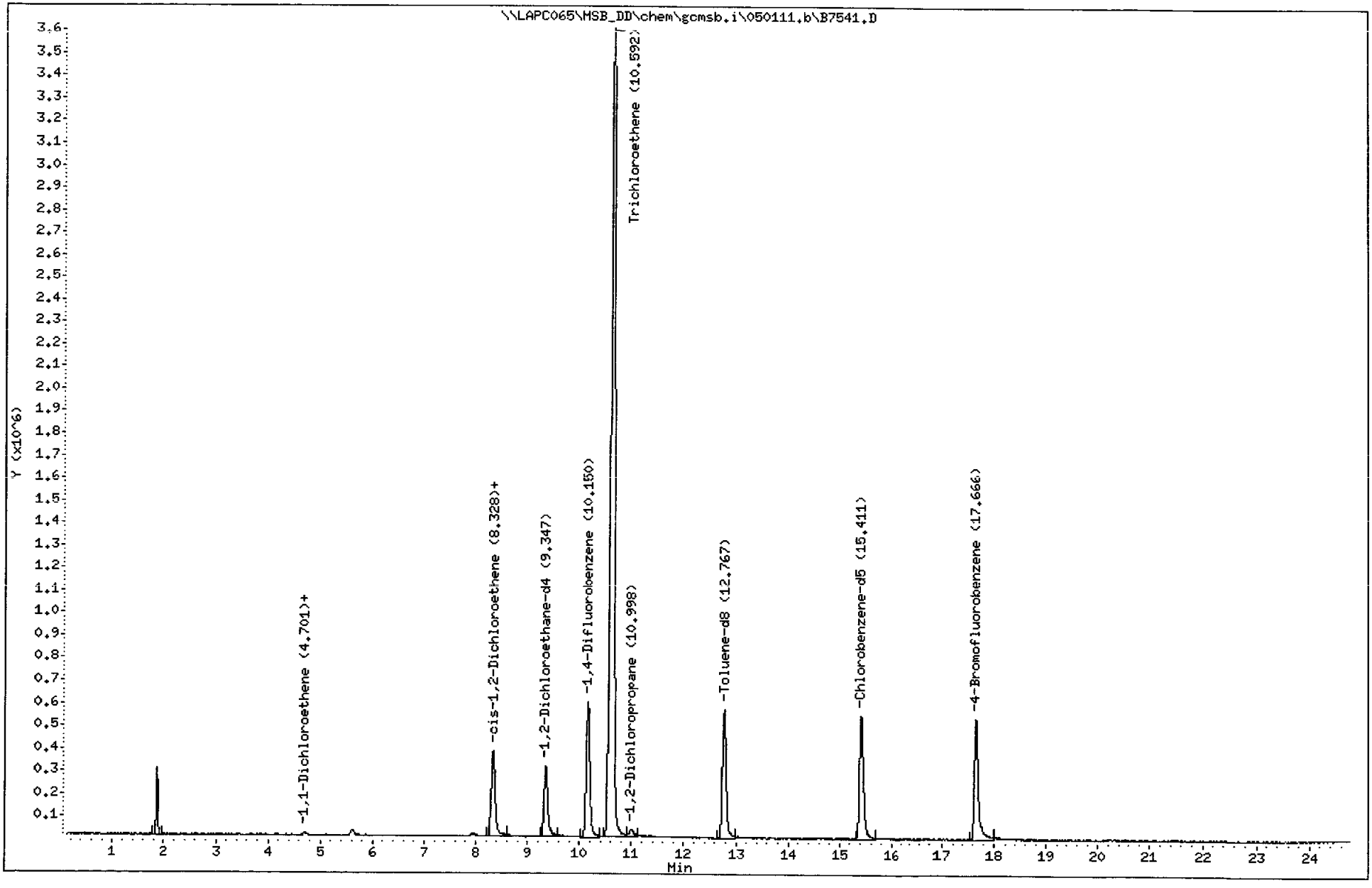
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D
Date : 12-JAN-2005 01:06
Client ID: 066349-0001
Sample Info: G2DGK1AD,066349-0001,SANDIA,E5A100214-4

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D

Date : 12-JAN-2005 01:06

Client ID: 066349-0001

Instrument: gcmsb.i

Sample Info: G2DGK1AD,066349-0001,SANDIA,E5A100214-4

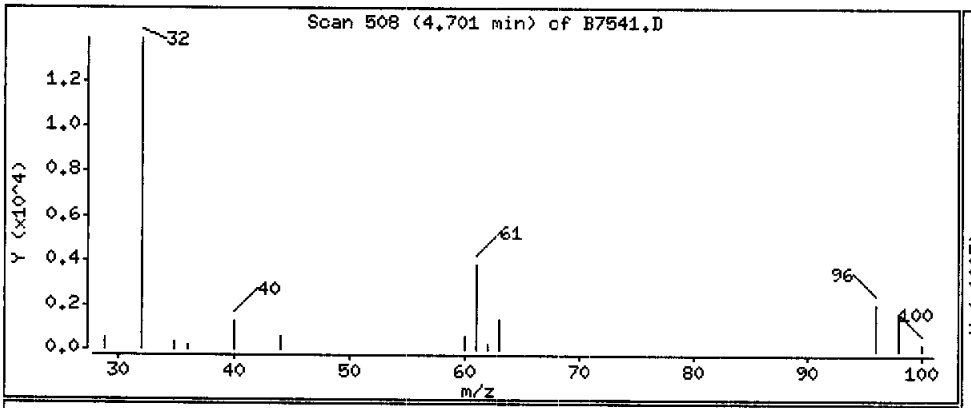
Operator: DLK

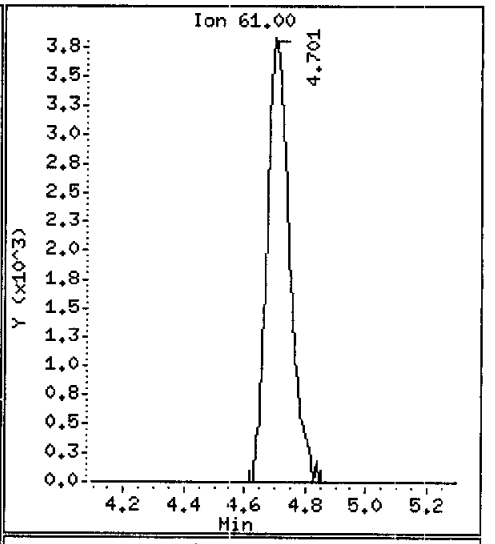
Column phase: J&W DB-624

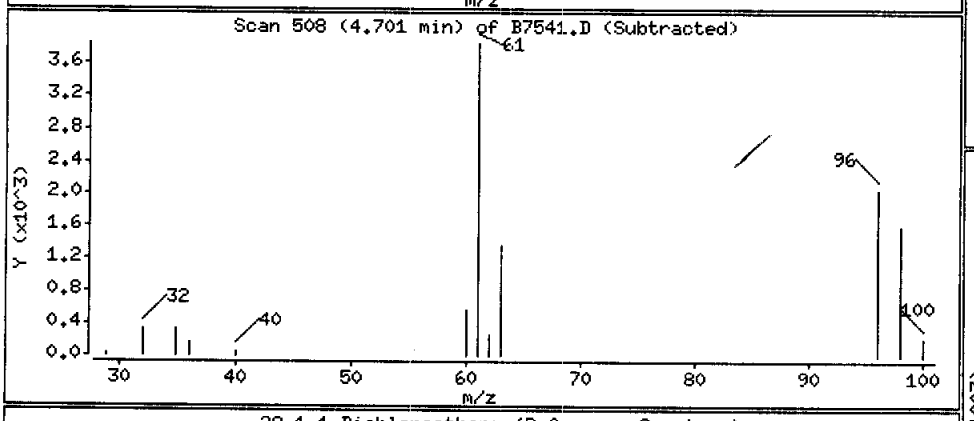
Column diameter: 0.53

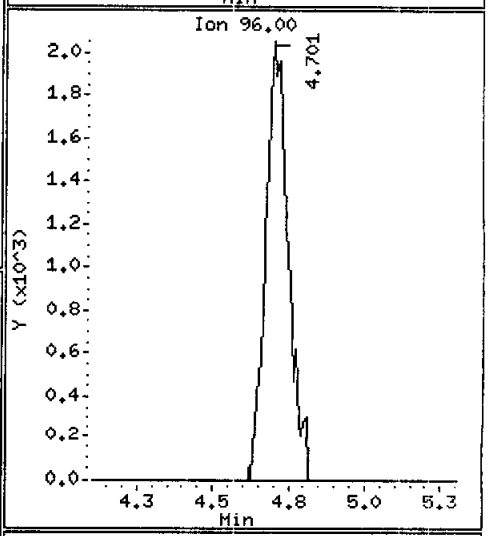
28 1,1-Dichloroethene

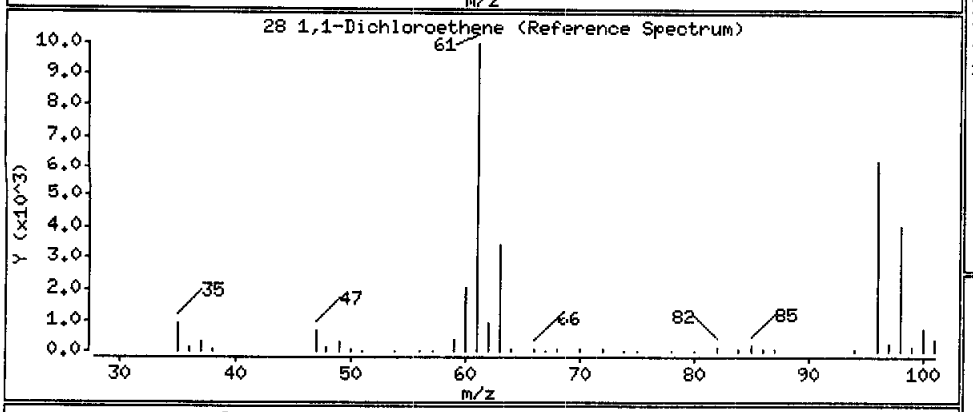
Concentration: 77.34 ppbv

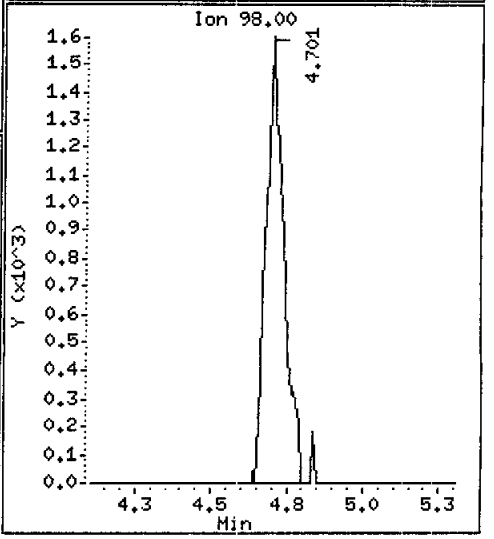


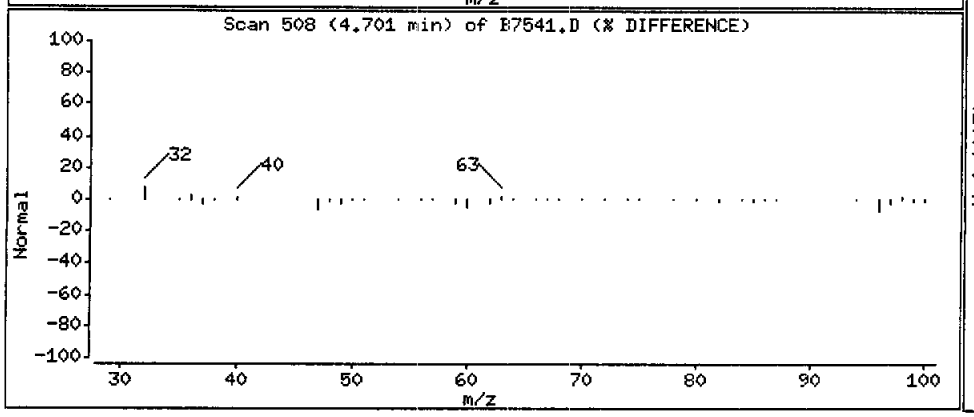












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D

Date : 12-JAN-2005 01:06

Client ID: 066349-0001

Instrument: gcmsb.i

Sample Info: G2DGK1AD,066349-0001,SANDIA,E5A100214-4

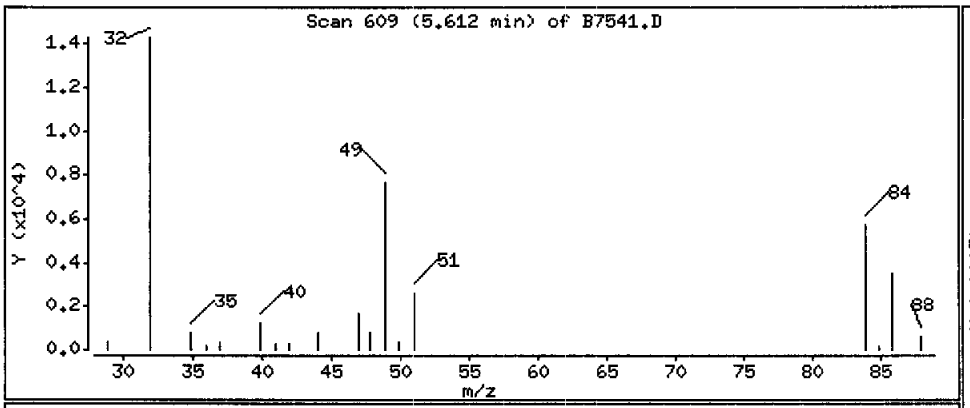
Operator: DLK

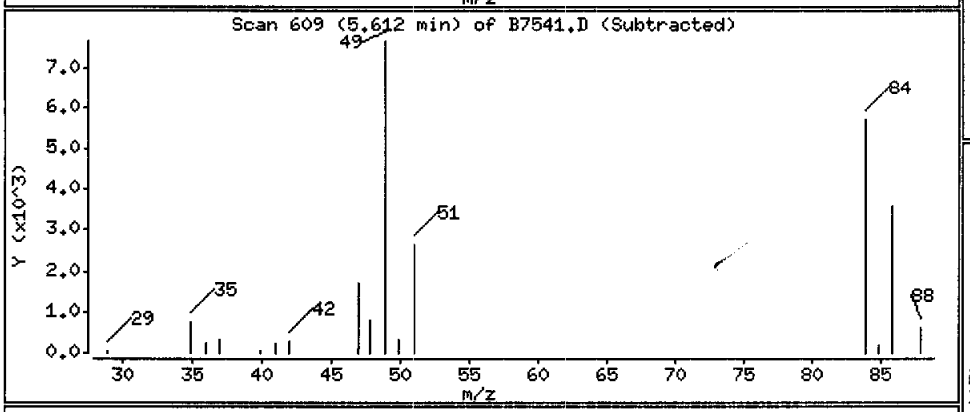
Column phase: J&W DB-624

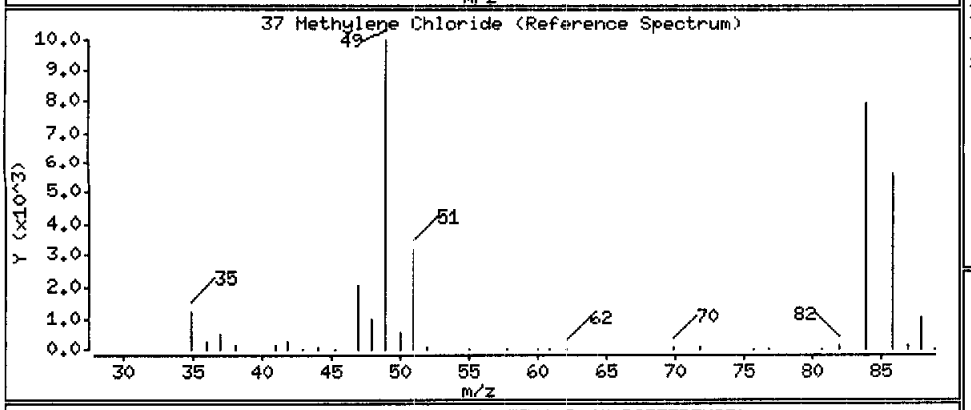
Column diameter: 0.53

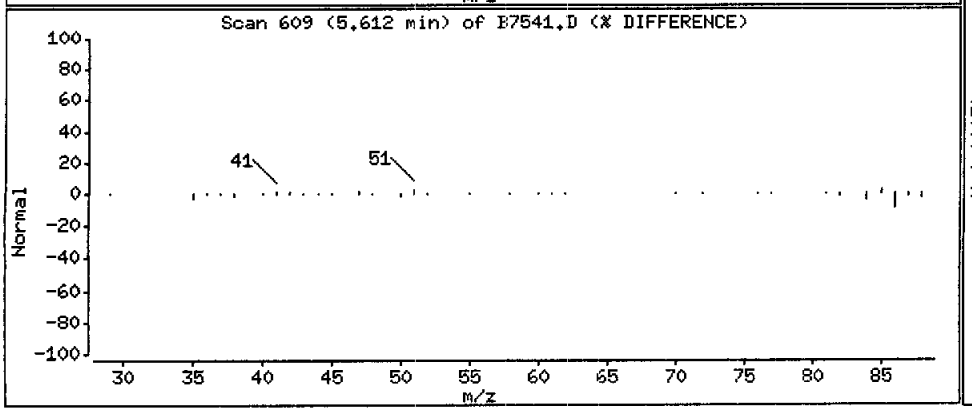
37 Methylene Chloride

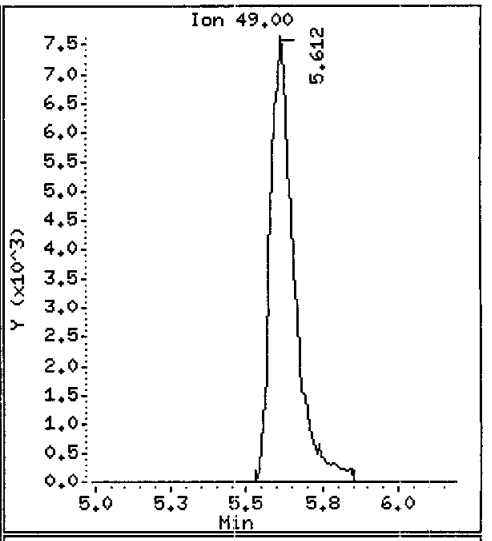
Concentration: 261.4 ppbv

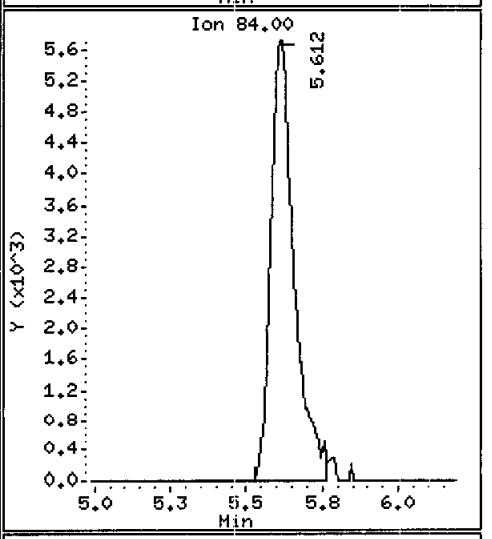


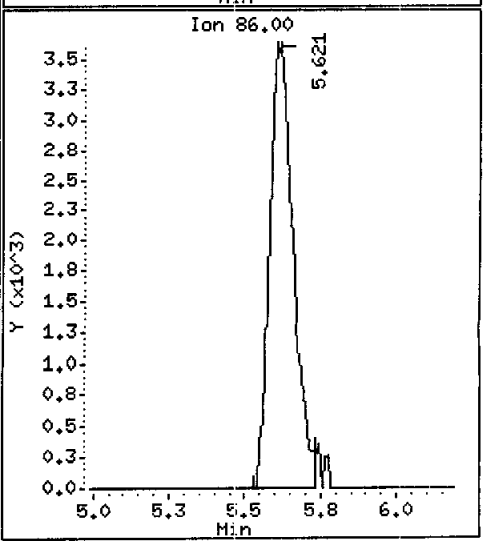












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D

Date : 12-JAN-2005 01:06

Client ID: 066349-0001

Instrument: gcmsb.i

Sample Info: G2DGK1AD,066349-0001,SANDIA,E5A100214-4

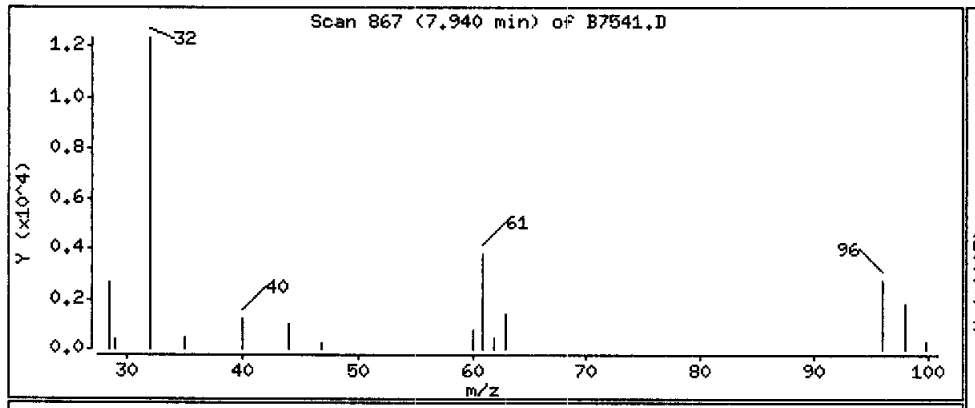
Operator: DLK

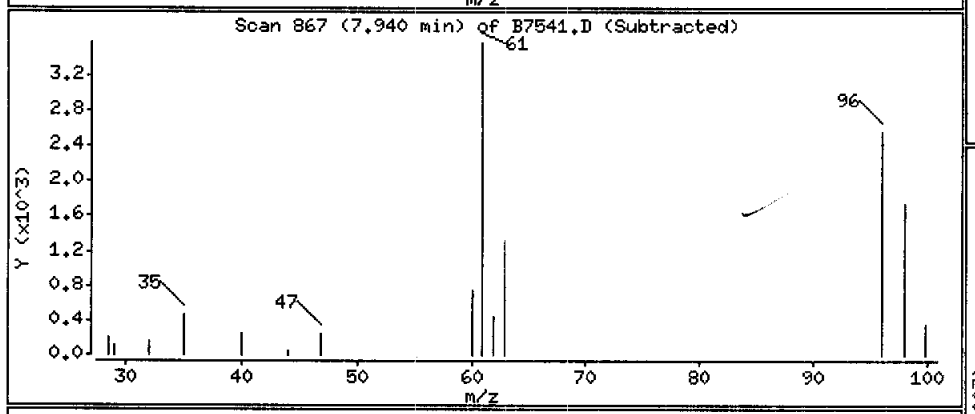
Column phase: J&W DB-624

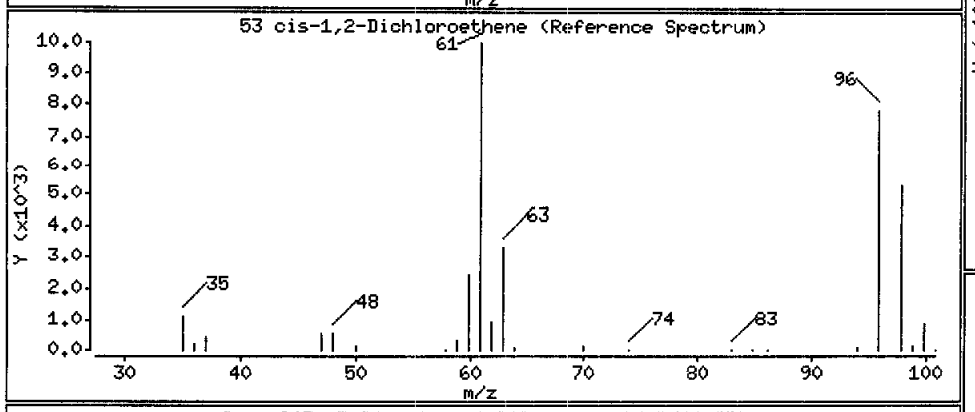
Column diameter: 0.53

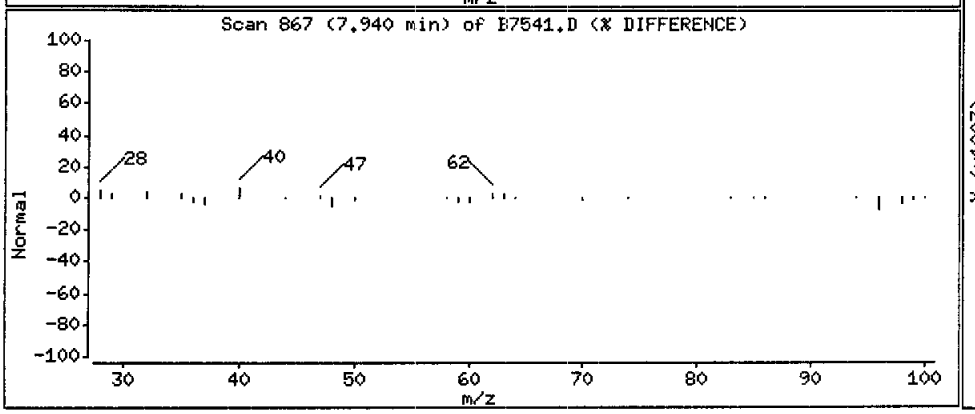
53 cis-1,2-Dichloroethene

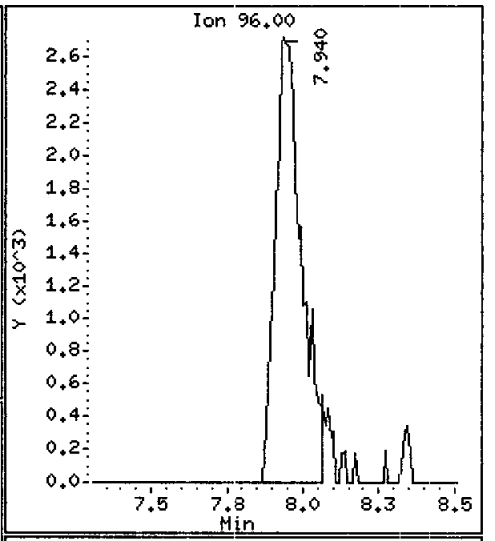
Concentration: 113.5 ppbv

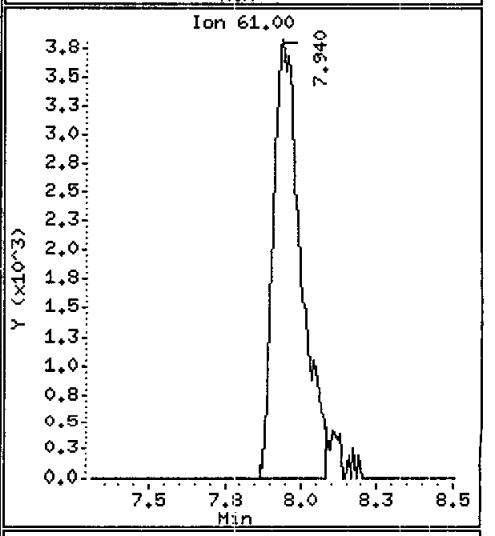


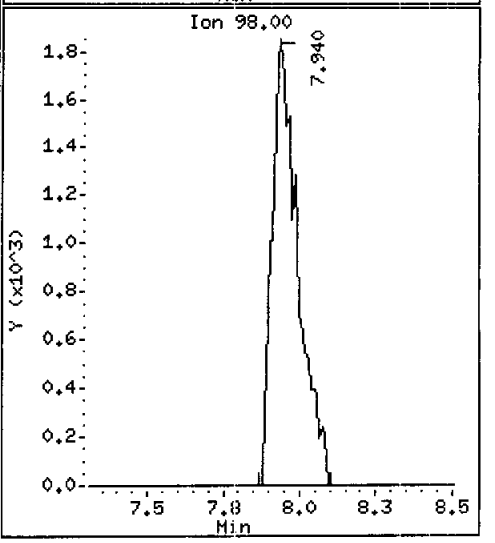












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D

Date : 12-JAN-2005 01:06

Client ID: 066349-0001

Instrument: gcmsb.i

Sample Info: G2DGK1AD,066349-0001,SANDIA,E5A100214-4

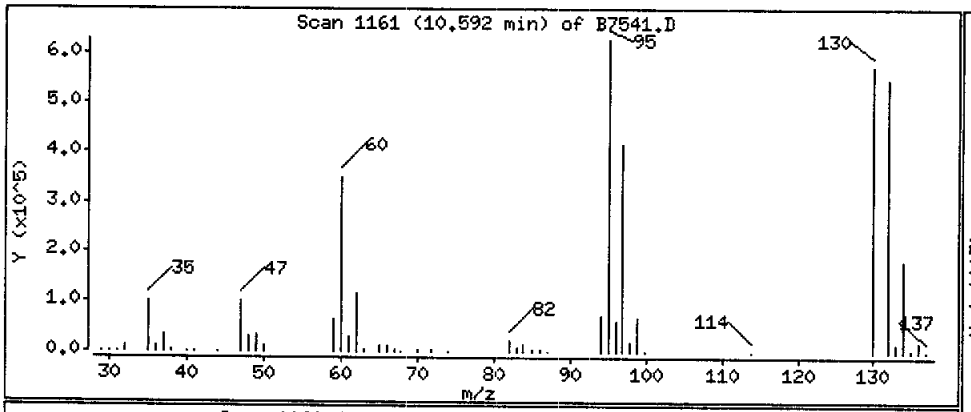
Operator: DLK

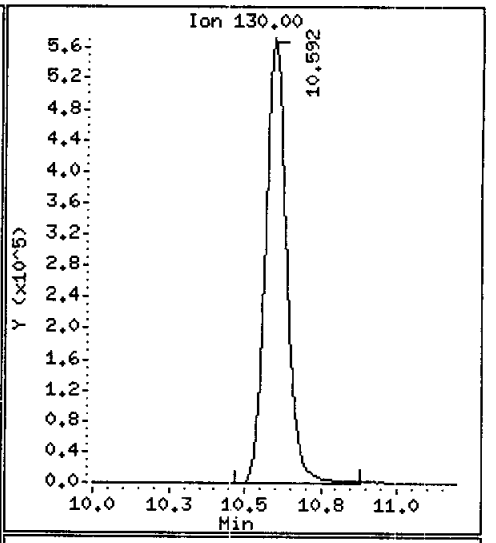
Column phase: J&W DB-624

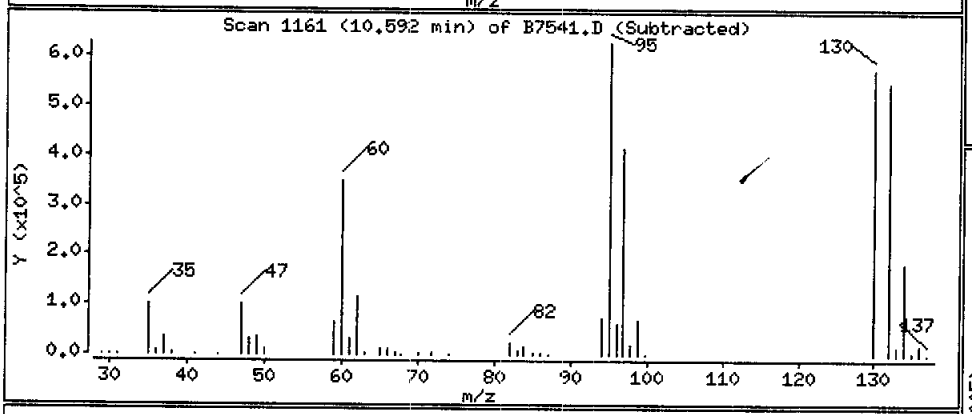
Column diameter: 0.53

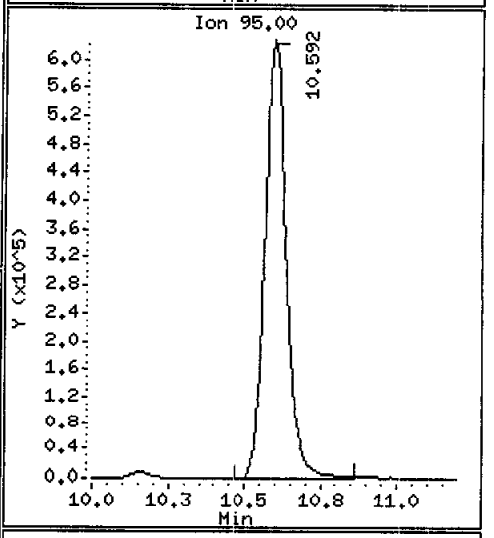
75 Trichloroethene

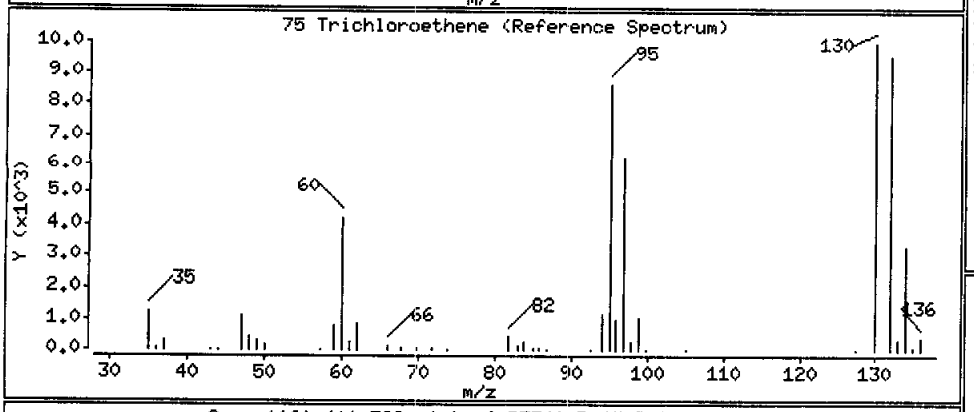
Concentration: 13870 ppbv

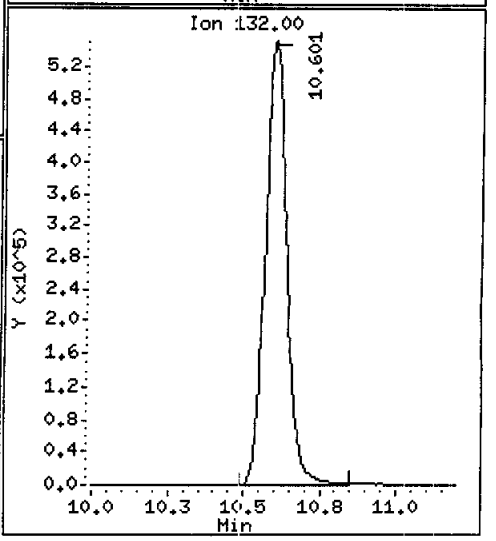


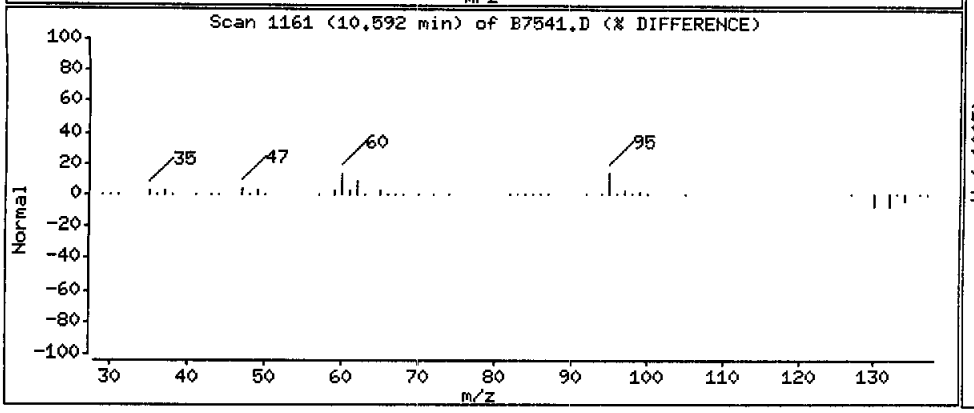












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7541.D

Date : 12-JAN-2005 01:06

Client ID: 066349-0001

Instrument: gcmsb.i

Sample Info: G2DGK1AD,066349-0001,SANDIA,E5A100214-4

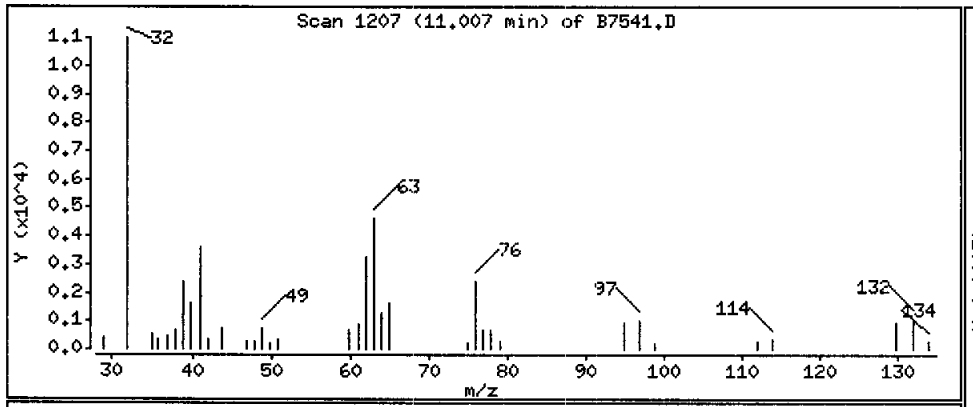
Operator: DLK

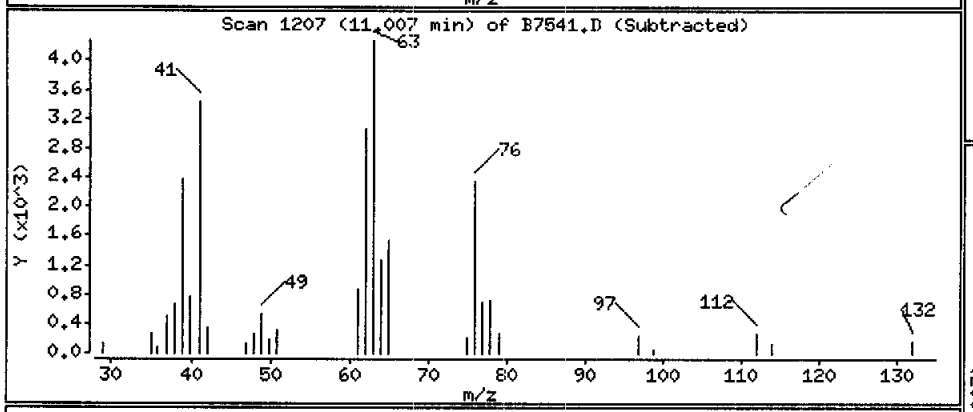
Column phase: J&W DB-624

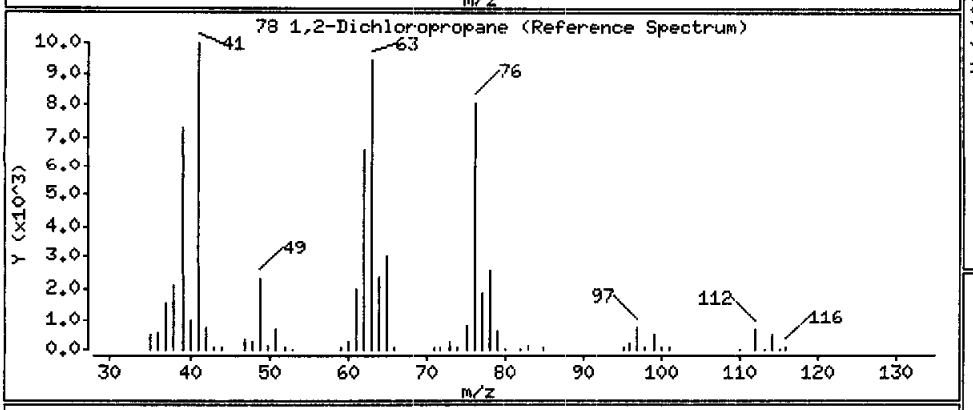
Column diameter: 0.53

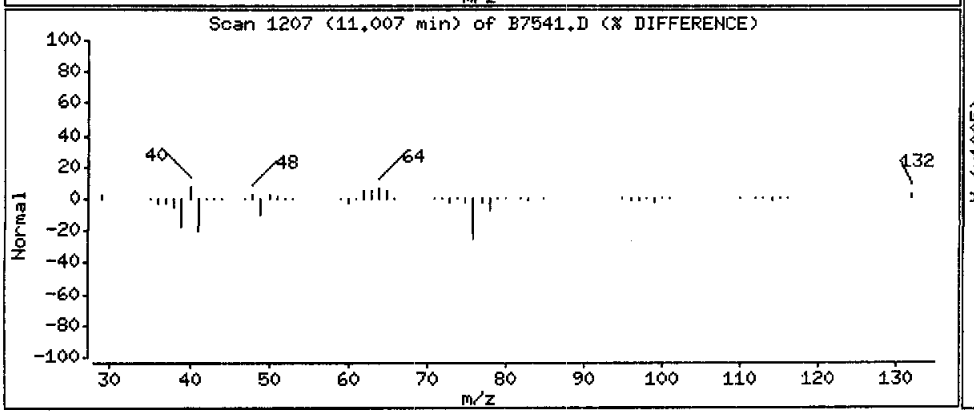
78 1,2-Dichloropropane

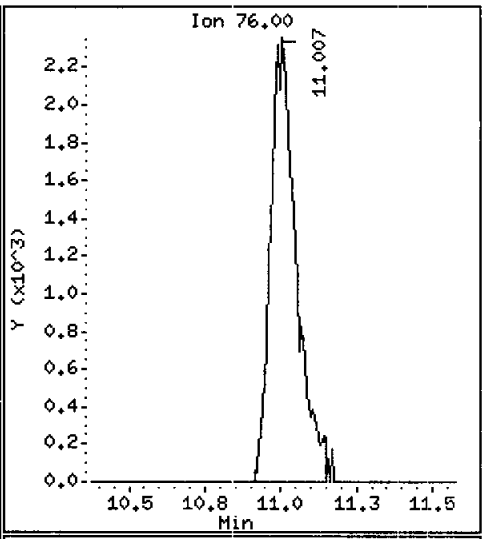
Concentration: 184.1 ppbv

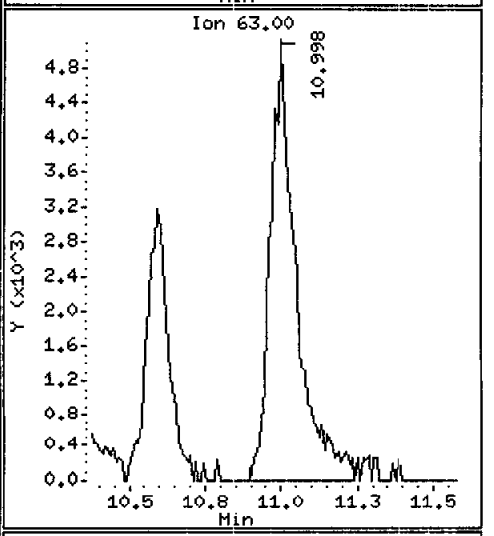


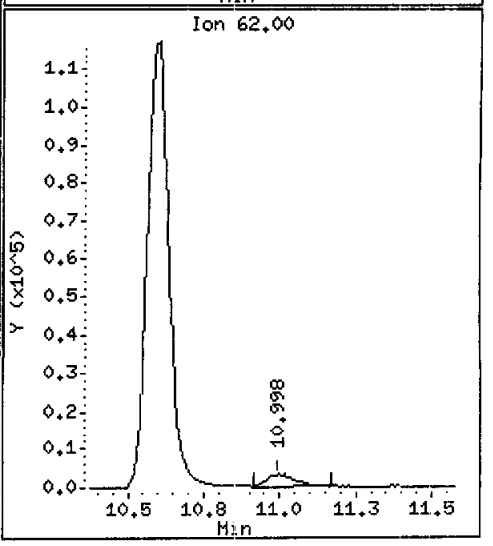












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D
Lab Smp Id: G2DGL1AD Client Smp ID: 066350-0001
Inj Date : 12-JAN-2005 01:42
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGL1AD,066350-0001,SANDIA,E5A100214-5
Misc Info : 24.4,12.7,500,250,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.681	4.700	(0.563)	18693	1.54555	5.939(a)
37 Methylene Chloride	49	5.601	5.593	(0.673)	34140	4.57146	17.56
53 cis-1,2-Dichloroethene	96	7.929	7.912	(0.953)	19240	2.80919	10.79
* 58 Bromochloromethane	49	8.317	8.318	(1.000)	535837	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.345	9.347	(0.921)	474492	53.3248	204.9
* 73 1,4-Difluorobenzene	114	10.148	10.149	(1.000)	1084269	50.0000	
75 Trichloroethene	130	10.590	10.601	(1.044)	2907450	307.106	1180
78 1,2-Dichloropropane	76	10.996	10.980	(1.084)	6300	1.77265	6.811(aQ)
$ 88 Toluene-d8	100	12.765	12.766	(1.258)	559180	49.2512	189.2
* 101 Chlorobenzene-d5	117	15.409	15.419	(1.000)	721181	50.0000	
$ 114 4-Bromofluorobenzene	95	17.664	17.675	(1.146)	548783	42.5976	163.7

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

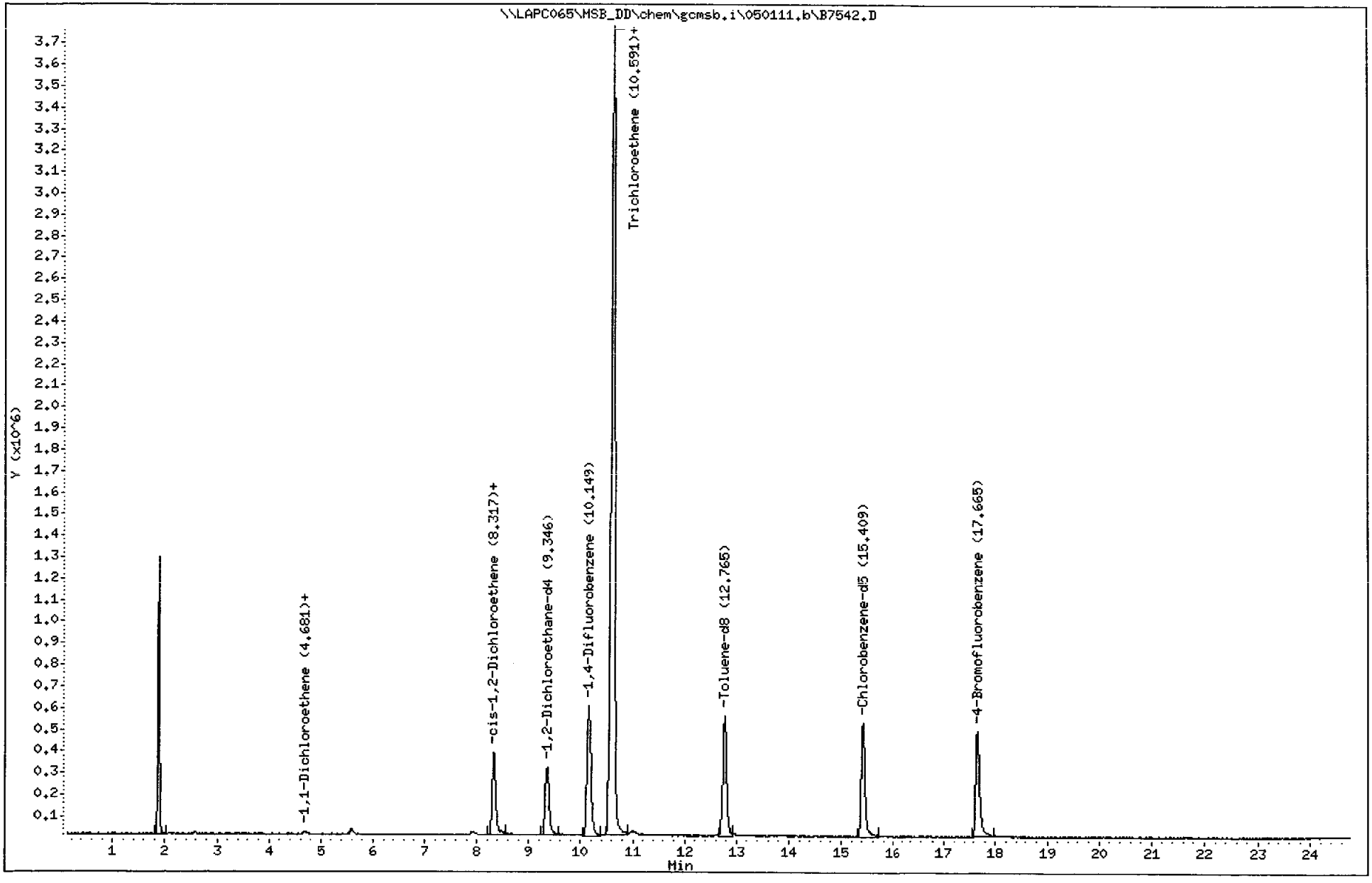
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D
Date : 12-JAN-2005 01:42
Client ID: 066350-0001
Sample Info: G2DGL1AD,066350-0001,SANDIA,E5A100214-5

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D

Date : 12-JAN-2005 01:42

Client ID: 066350-0001

Instrument: gcmsb.i

Sample Info: G2DGL1AD,066350-0001,SANDIA,E5A100214-5

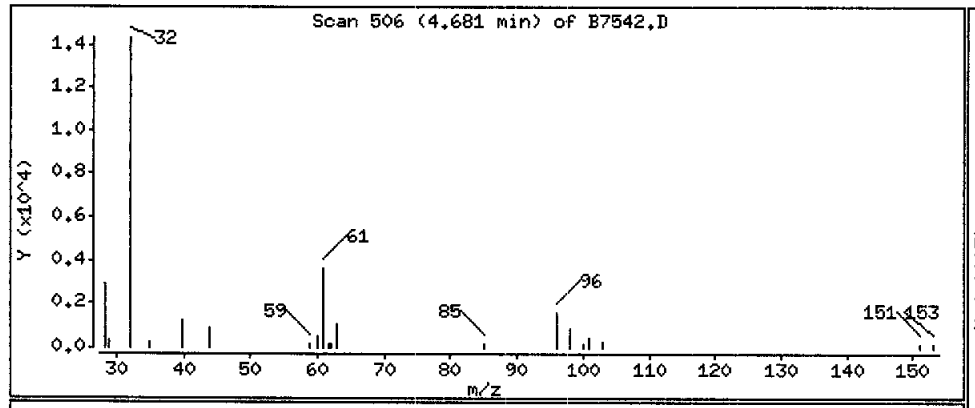
Operator: DLK

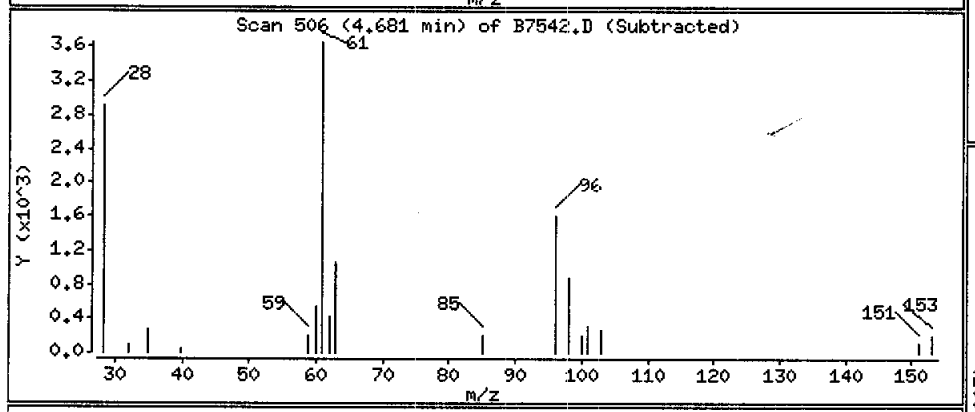
Column phase: J&W DB-624

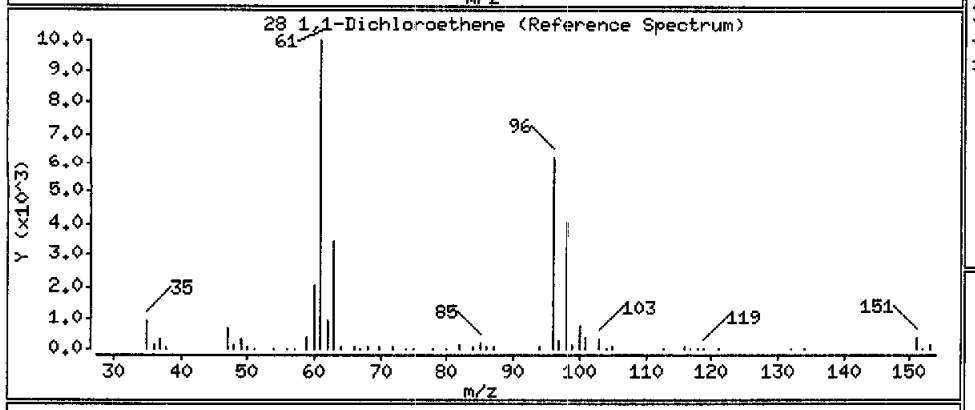
Column diameter: 0.53

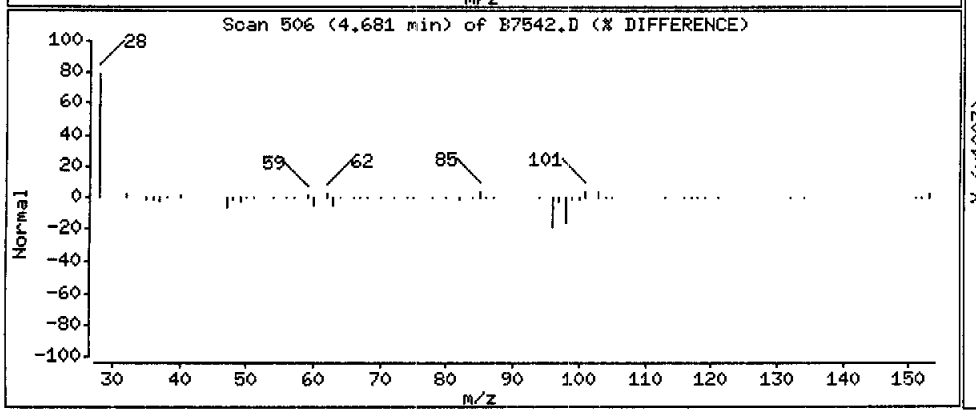
28 1,1-Dichloroethene

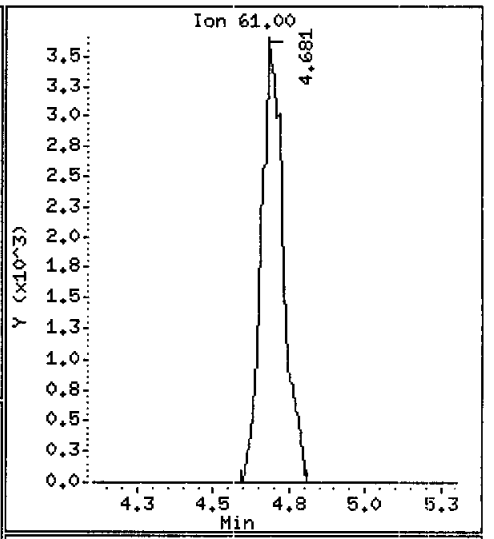
Concentration: 5.939 ppbv

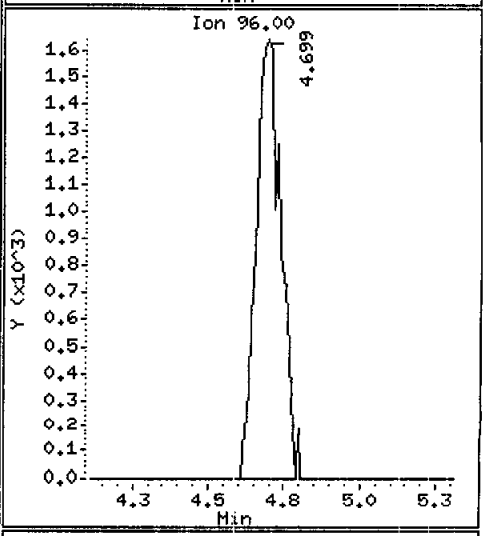


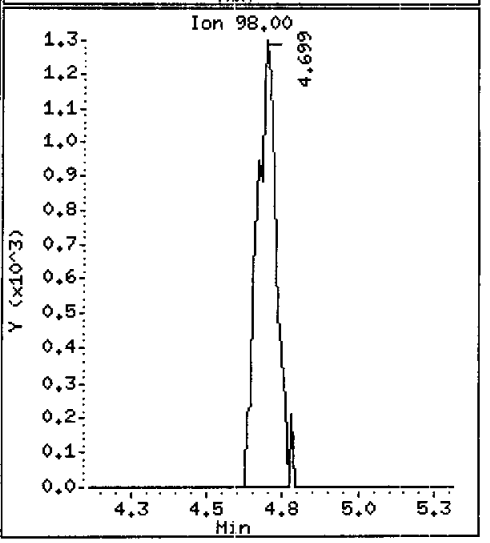












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D

Date : 12-JAN-2005 01:42

Client ID: 066350-0001

Instrument: gcmsb.i

Sample Info: G2DGL1AD,066350-0001,SANDIA,E5A100214-5

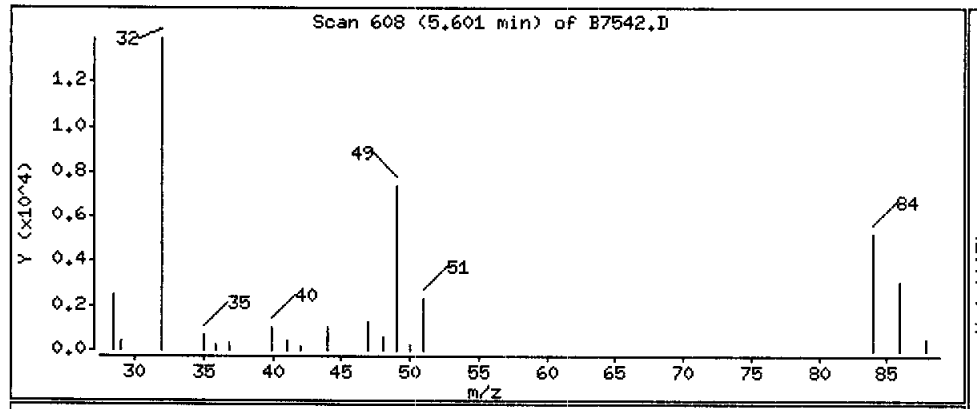
Operator: DLK

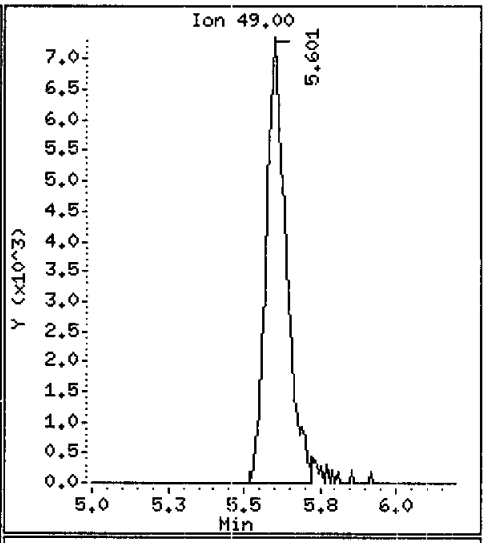
Column phase: J&W DB-624

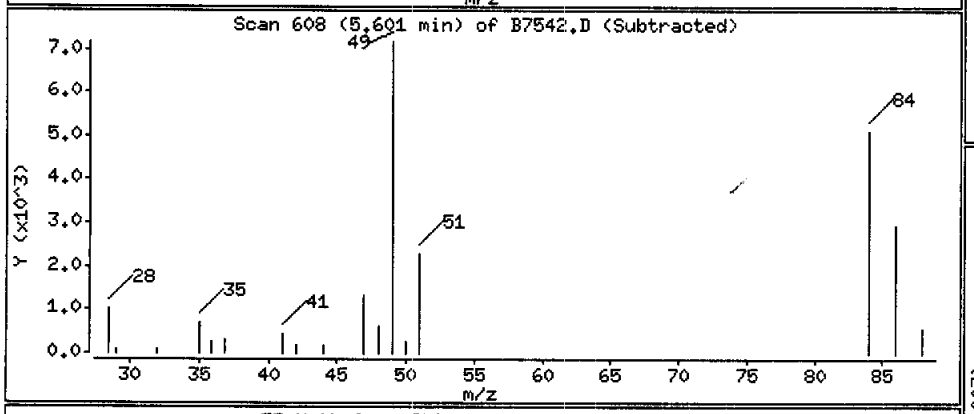
Column diameter: 0.53

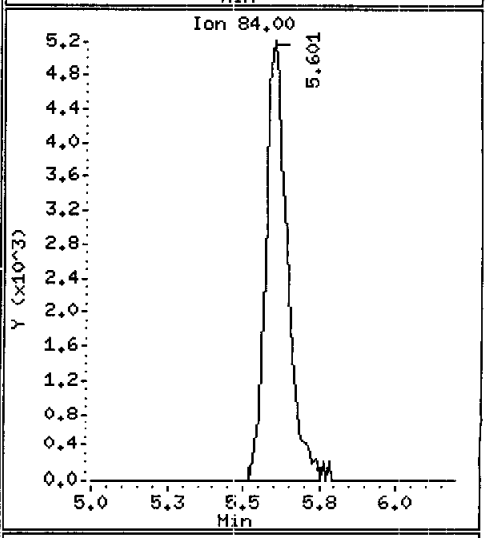
37 Methylene Chloride

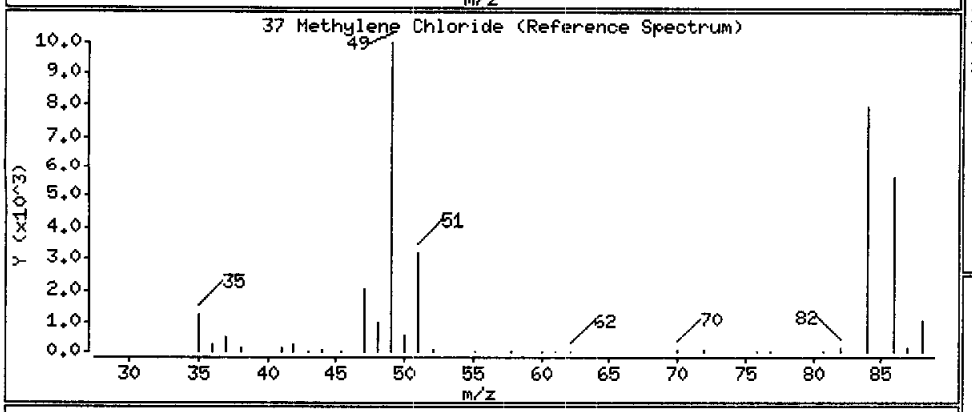
Concentration: 17.56 ppbv

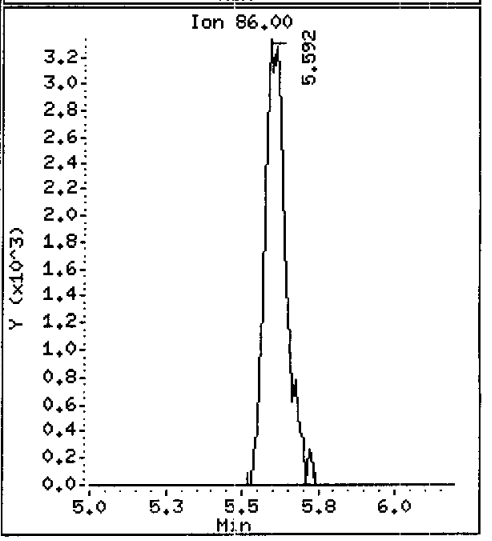


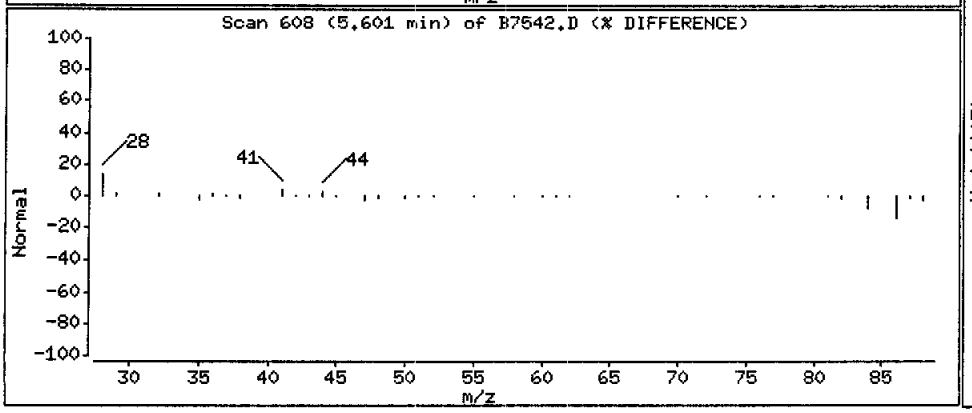












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D

Date : 12-JAN-2005 01:42

Client ID: 066350-0001

Instrument: gcmsb.i

Sample Info: G2DGL1AD,066350-0001,SANDIA,E5A100214-5

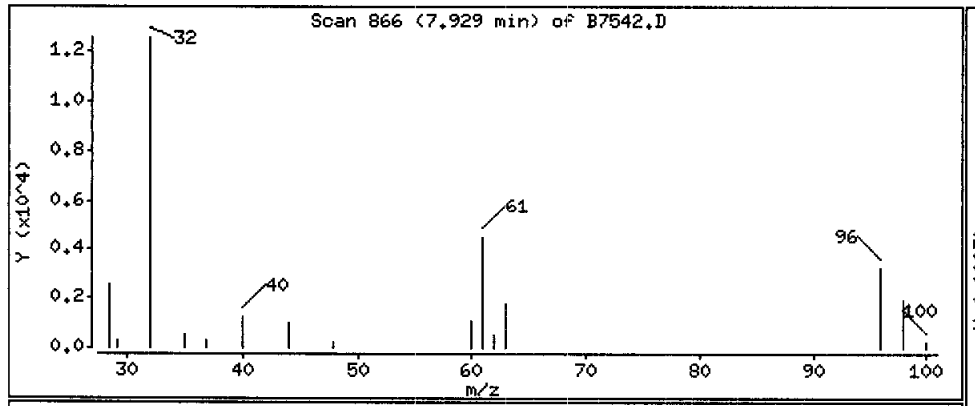
Operator: DLK

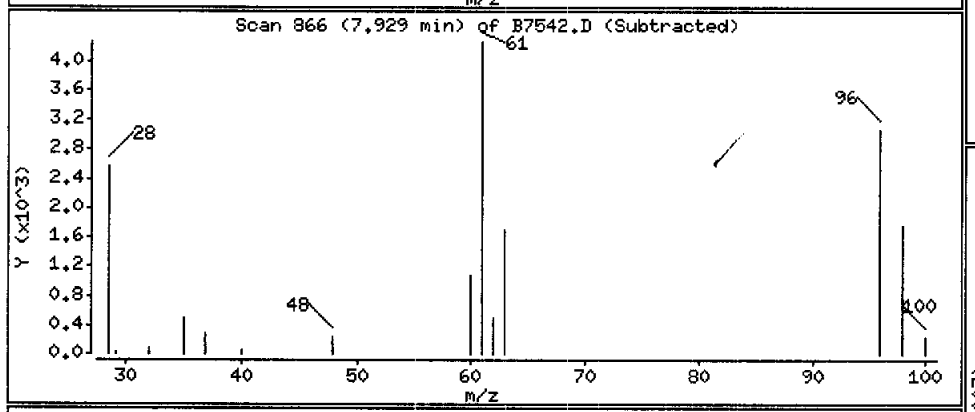
Column phase: J&W DB-624

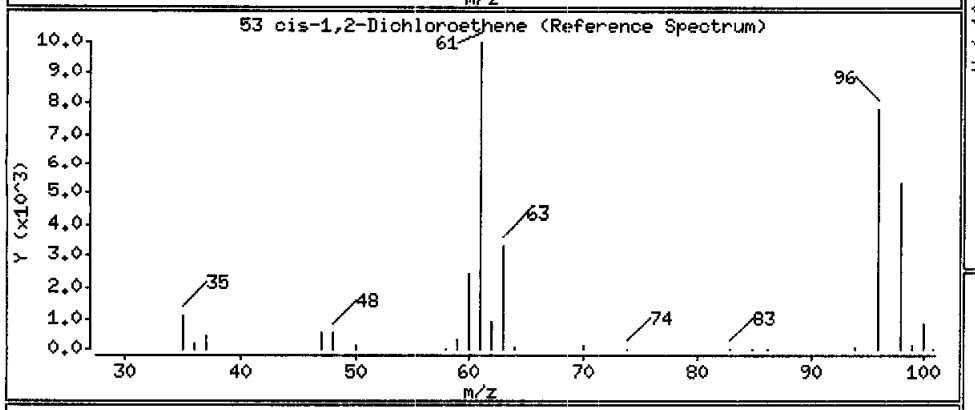
Column diameter: 0.53

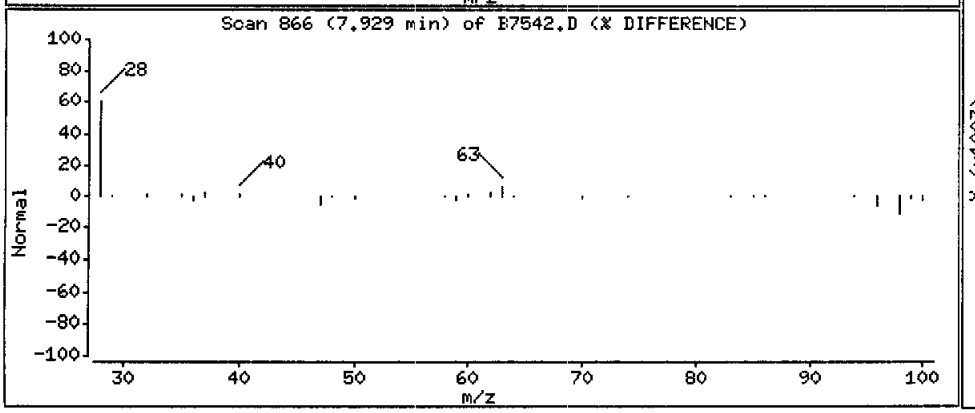
53 cis-1,2-Dichloroethene

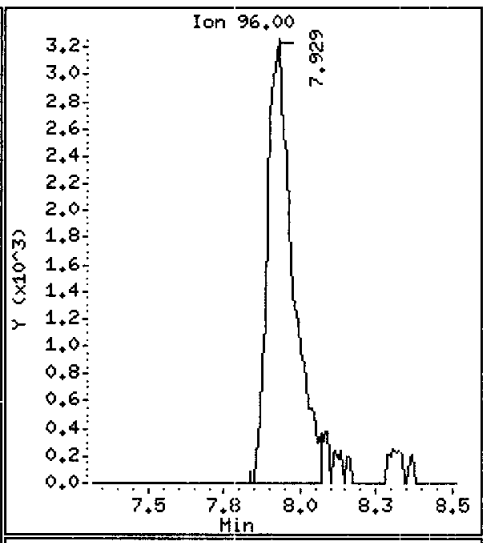
Concentration: 10.79 ppbv

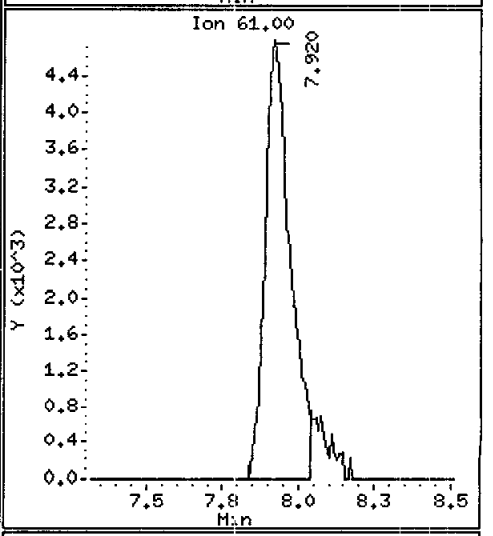


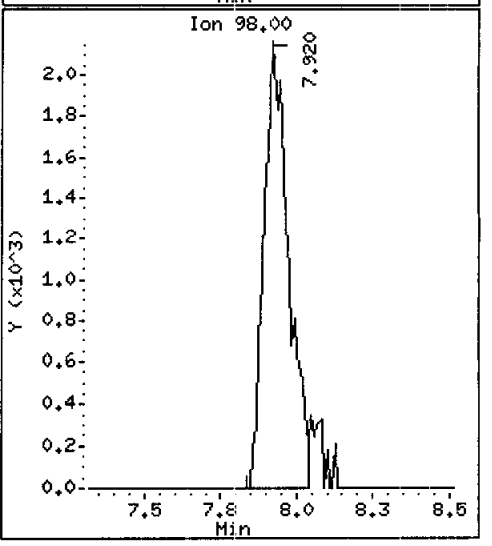












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D

Date : 12-JAN-2005 01:42

Client ID: 066350-0001

Instrument: gcmsb.i

Sample Info: G2DGL1AD,066350-0001,SANDIA,E5A100214-5

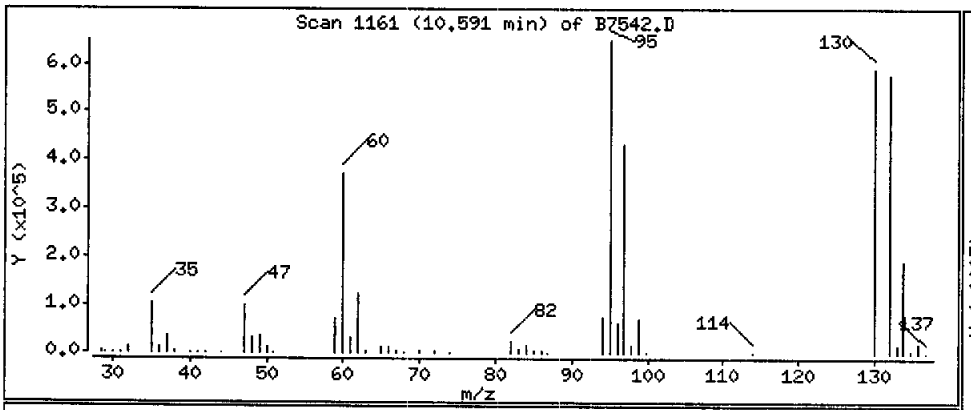
Operator: DLK

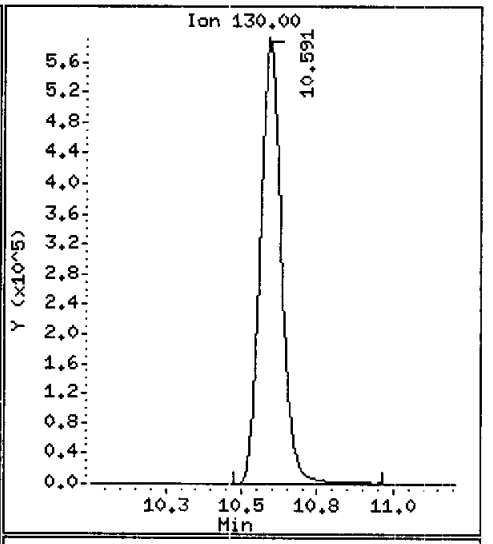
Column phase: J&W DB-624

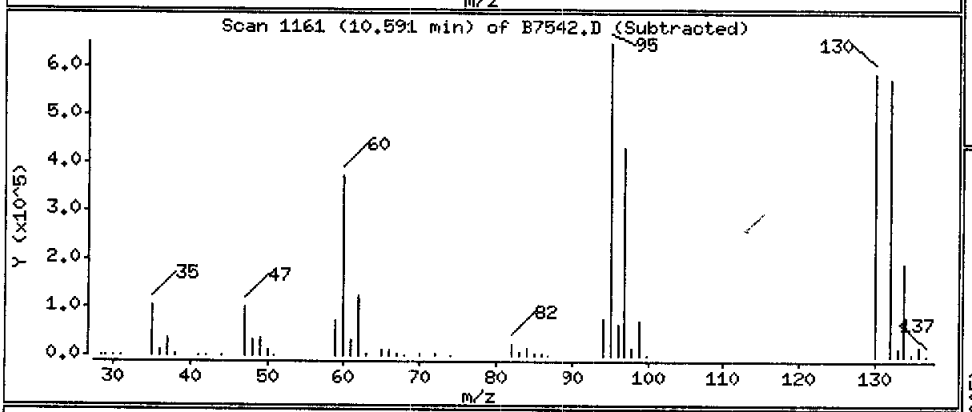
Column diameter: 0.53

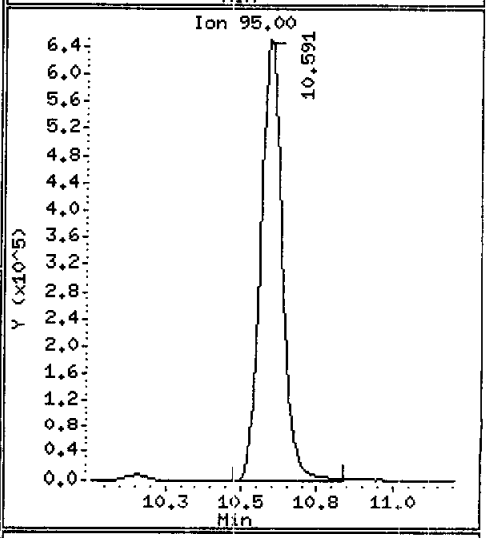
75 Trichloroethene

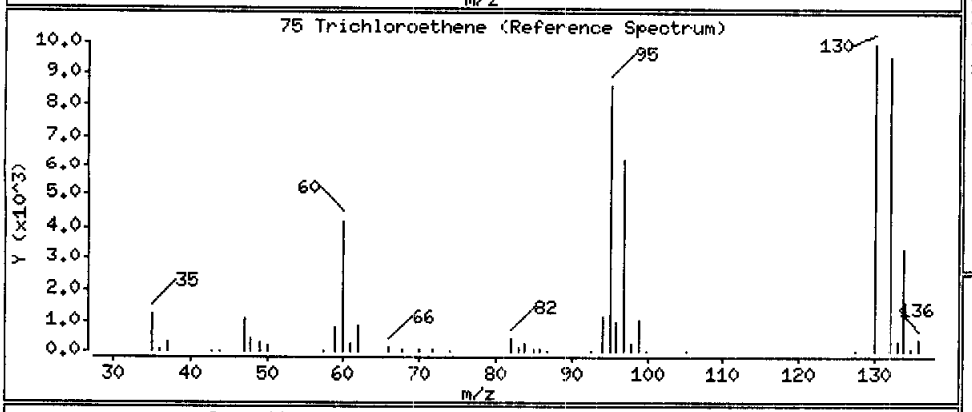
Concentration: 1180 ppbv

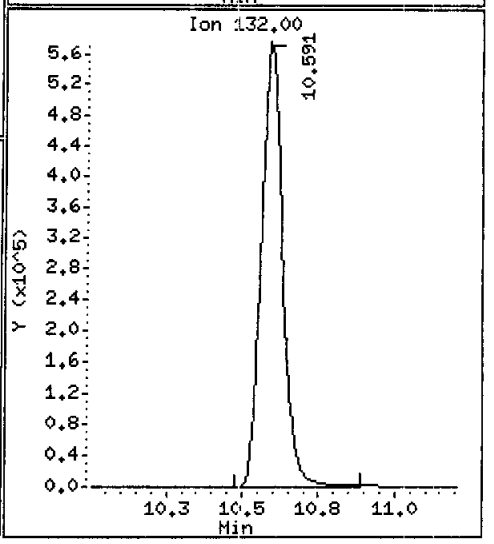


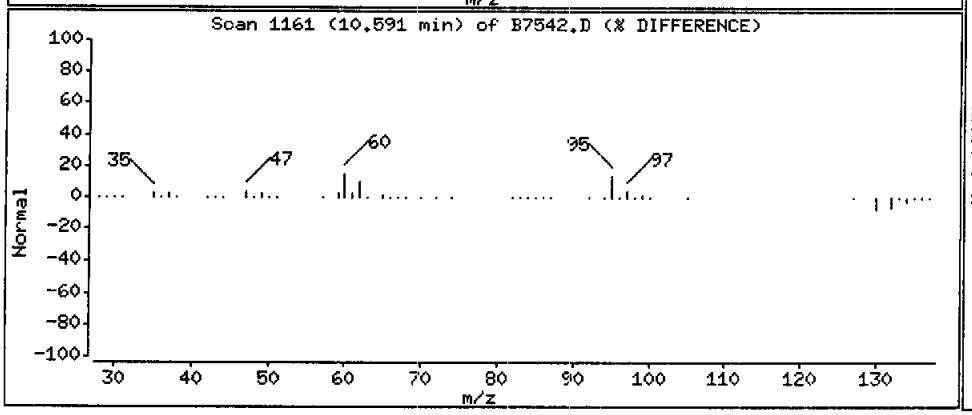












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7542.D

Date : 12-JAN-2005 01:42

Client ID: 066350-0001

Instrument: gcmsb.i

Sample Info: G2DGL1AD,066350-0001,SANDIA,E5A100214-5

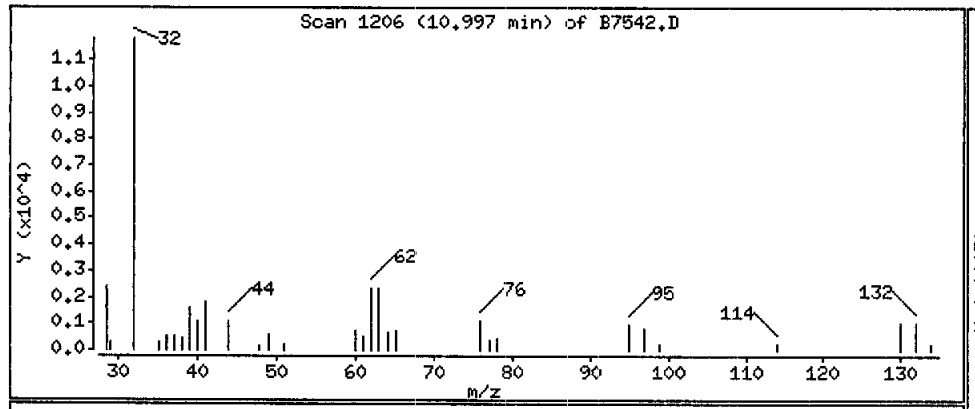
Operator: DLK

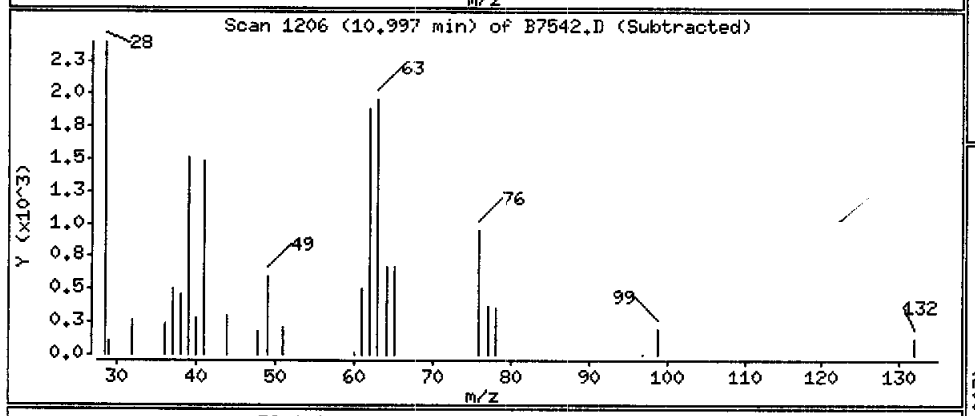
Column phase: J&W DB-624

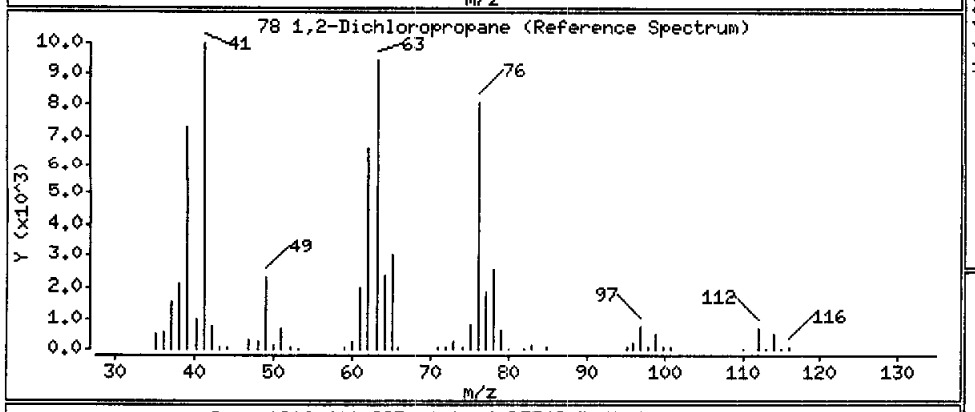
Column diameter: 0.53

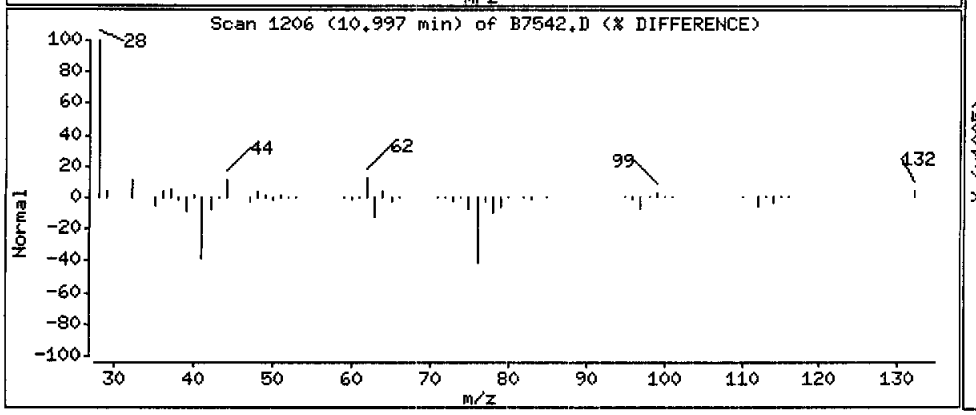
78 1,2-Dichloropropane

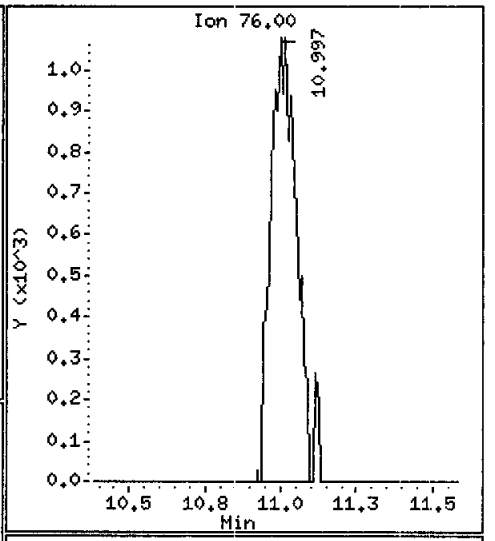
Concentration: 6.811 ppbv

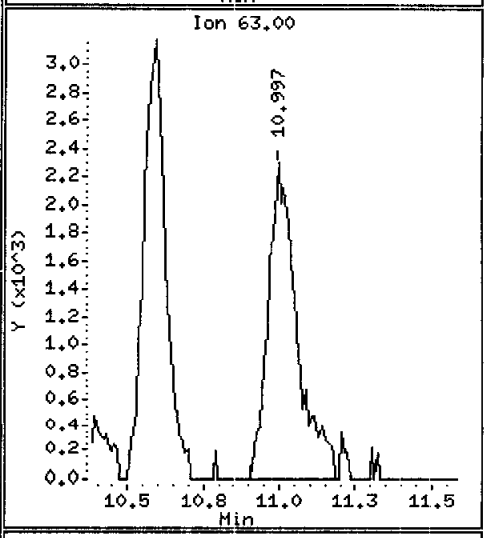


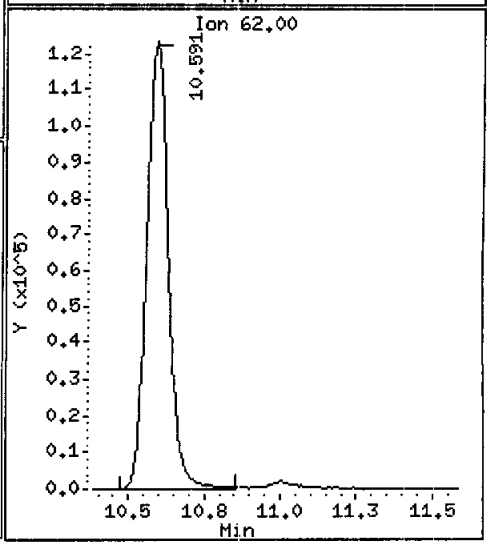












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7543.D
Lab Smp Id: G2DGM1AD Client Smp ID: 066351-0001
Inj Date : 12-JAN-2005 02:17
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DGM1AD,066351-0001,SANDIA,E5A100214-6
Misc Info : 23.9,12.8,500,934,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.900	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	934.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
31 Acetone	58	4.907	4.853	(0.590)	4273	2.49193	2.491(a)
37 Methylene Chloride	49	5.601	5.593	(0.673)	10079	1.34968	1.349(a)
53 cis-1,2-Dichloroethene	96	7.911	7.912	(0.951)	9530	1.39152	1.391(a)
* 58 Bromochloromethane	49	8.317	8.318	(1.000)	535855	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.346	9.347	(0.921)	478559	53.2112	53.19
* 73 1,4-Difluorobenzene	114	10.149	10.149	(1.000)	1095897	50.0000	
75 Trichloroethene	130	10.591	10.601	(1.044)	2125165	222.093	222.0
78 1,2-Dichloropropane	76	10.997	10.980	(1.084)	3823	1.06443	1.064(aQ)
$ 88 Toluene-d8	100	12.756	12.766	(1.257)	561953	48.9703	48.95
* 101 Chlorobenzene-d5	117	15.409	15.419	(1.000)	723587	50.0000	
$ 114 4-Bromofluorobenzene	95	17.665	17.675	(1.146)	572925	44.3237	44.30

QC Flag Legend

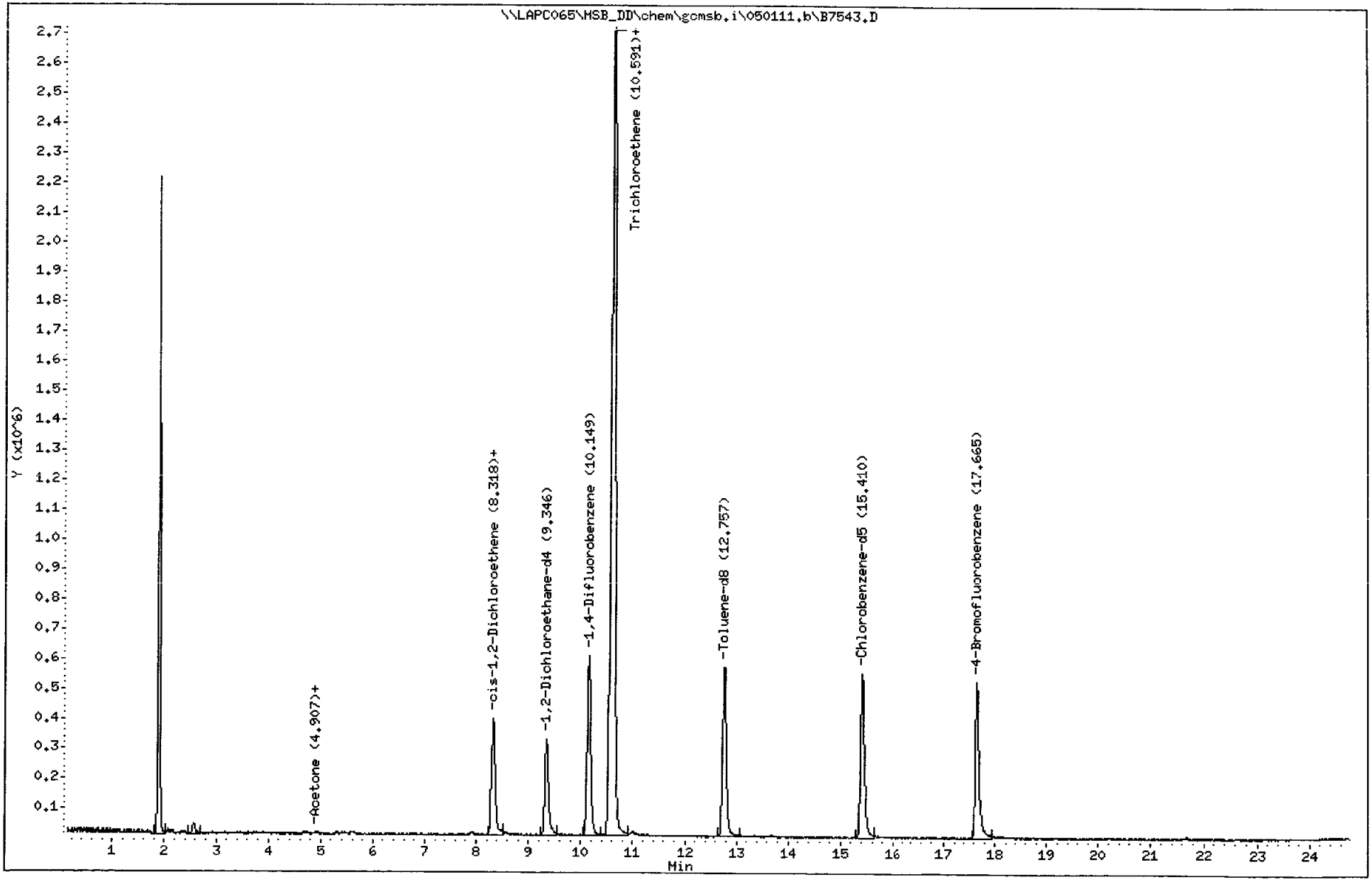
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7543.D
Date : 12-JAN-2005 02:17
Client ID: 066351-0001
Sample Info: G2DGM1AD,066351-0001,SANDIA,E5A100214-6

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7543.D

Date : 12-JAN-2005 02:17

Client ID: 066351-0001

Instrument: gcmsb.i

Sample Info: G2DGM1AD,066351-0001,SANDIA,E5A100214-6

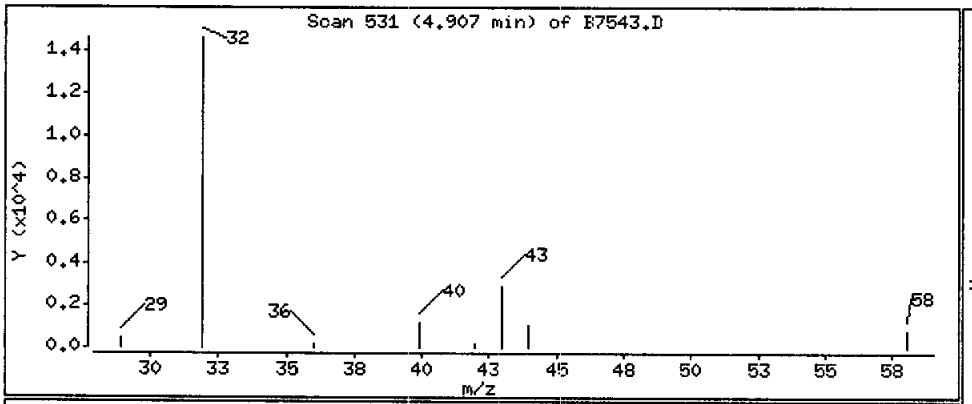
Operator: DLK

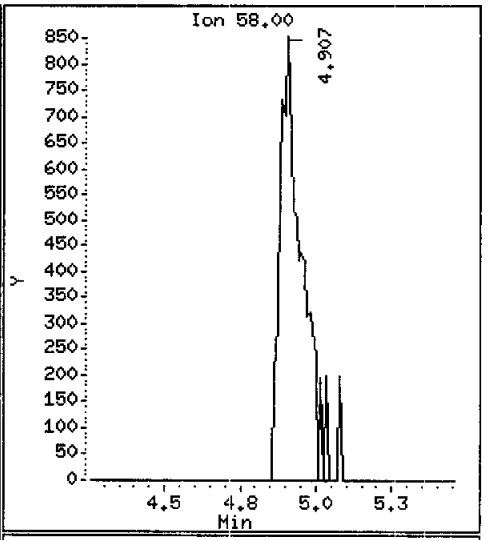
Column phase: J&W DB-624

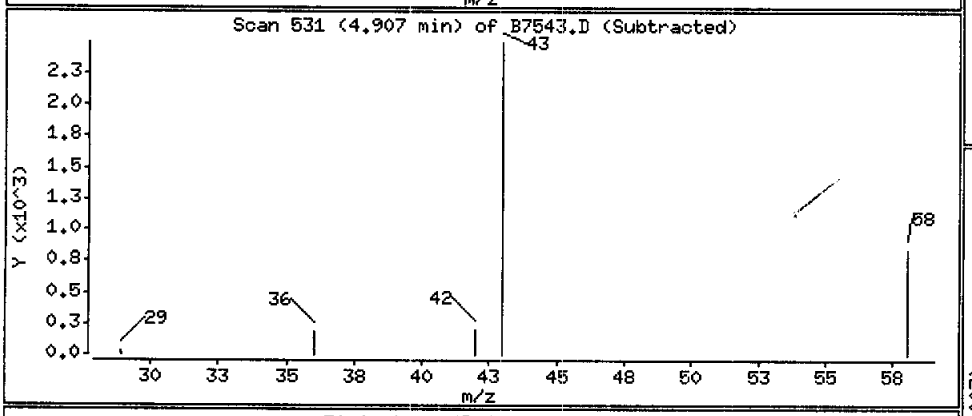
Column diameter: 0.53

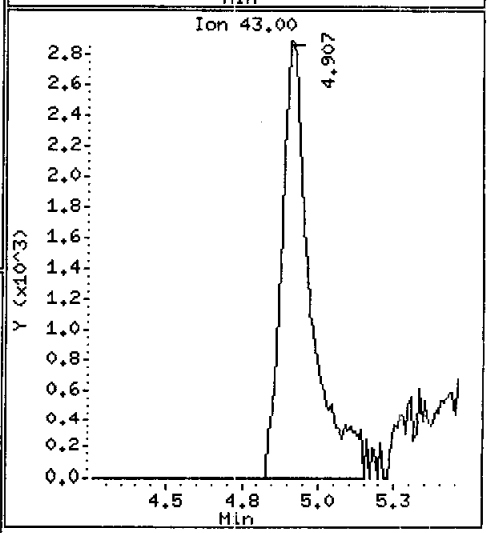
31 Acetone

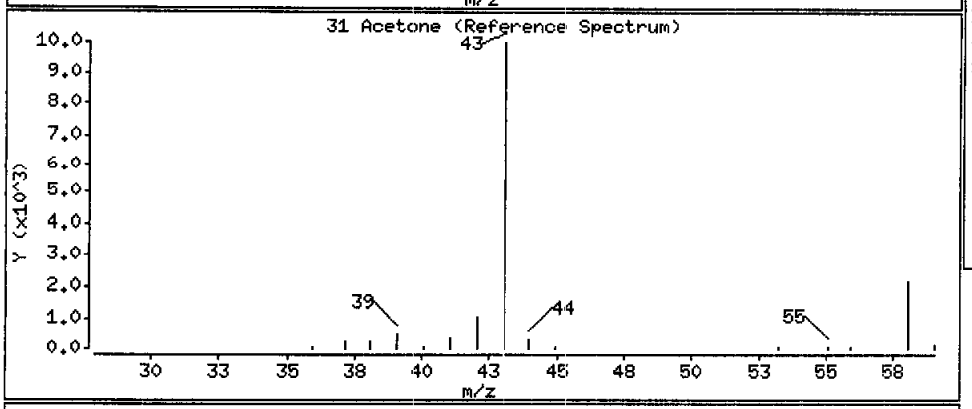
Concentration: 2.491 ppbv

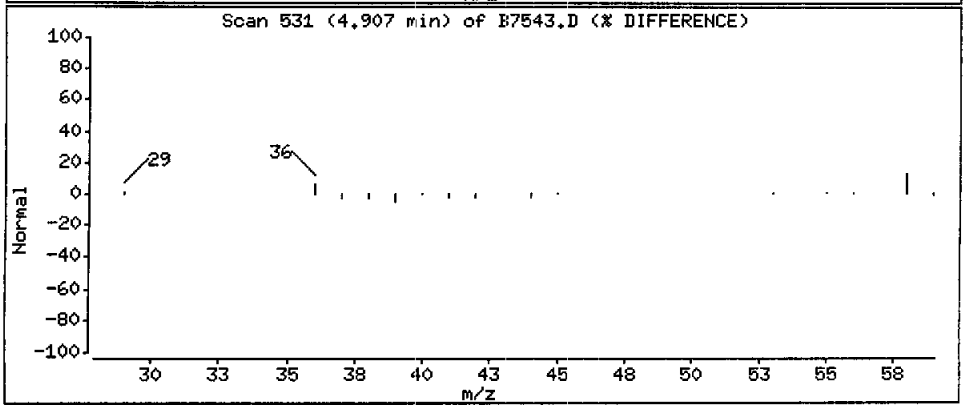












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7543.D

Date : 12-JAN-2005 02:17

Client ID: 066351-0001

Instrument: gcmsb.i

Sample Info: G2DGM1AD,066351-0001,SANDIA,E5A100214-6

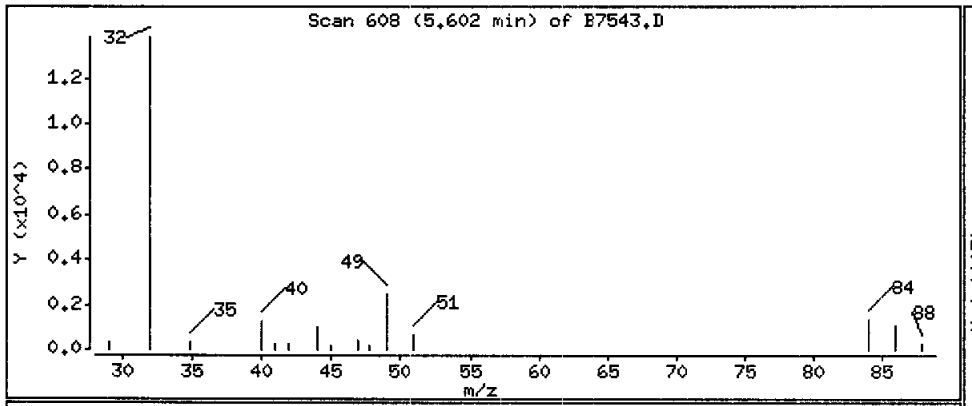
Operator: DLK

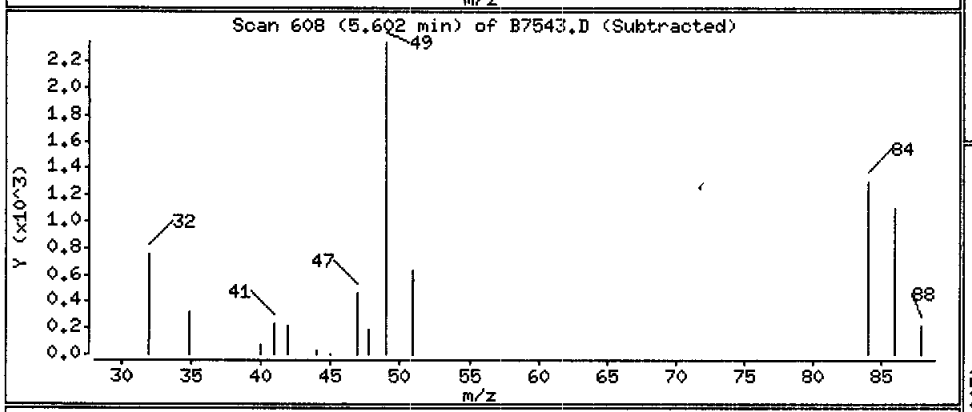
Column phase: J&W DB-624

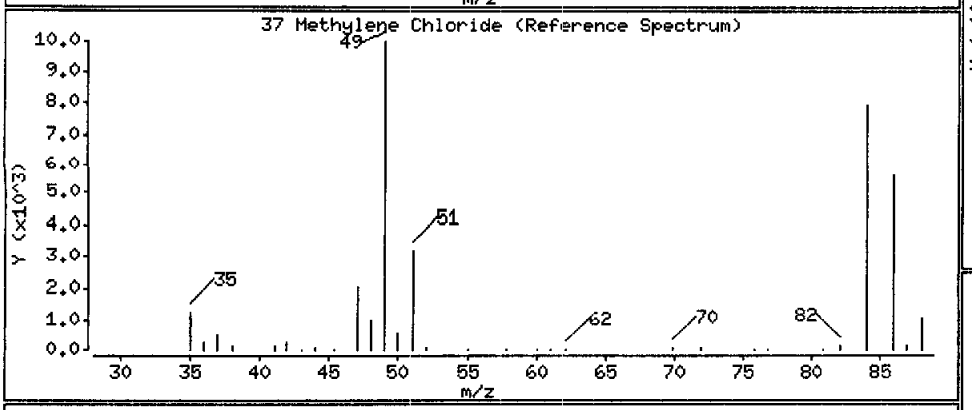
Column diameter: 0.53

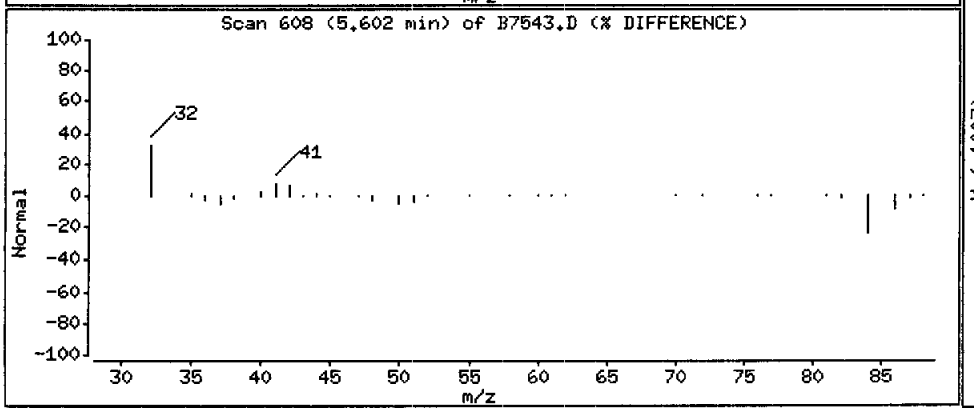
37 Methylene Chloride

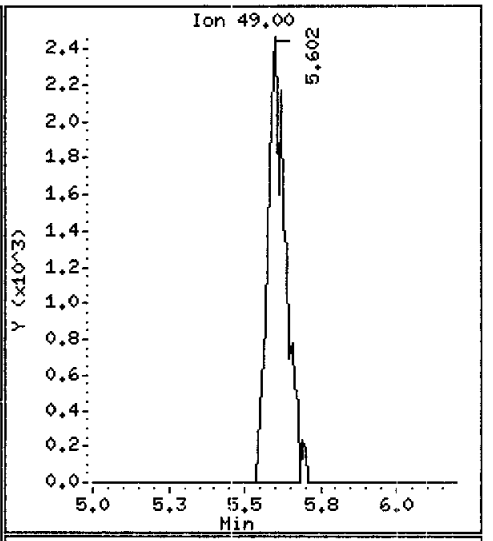
Concentration: 1.349 ppbv

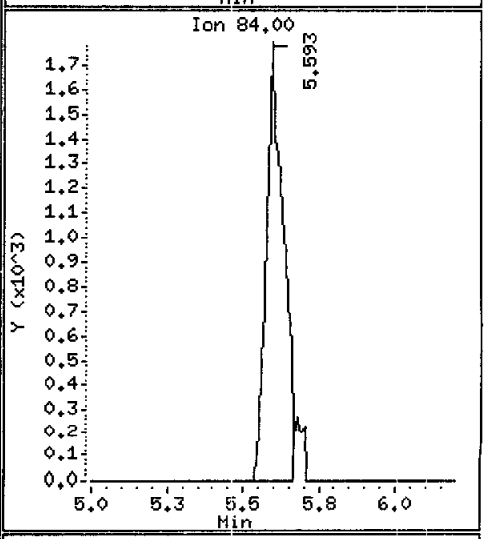


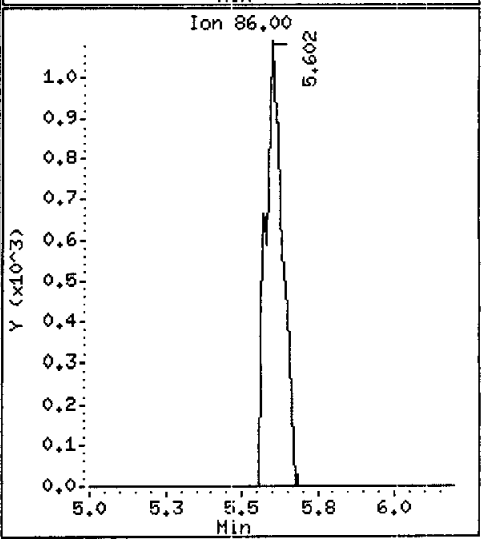












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7543.D

Date : 12-JAN-2005 02:17

Client ID: 066351-0001

Instrument: gcmsb.i

Sample Info: G2DGM1AD,066351-0001,SANDIA,E5A100214-6

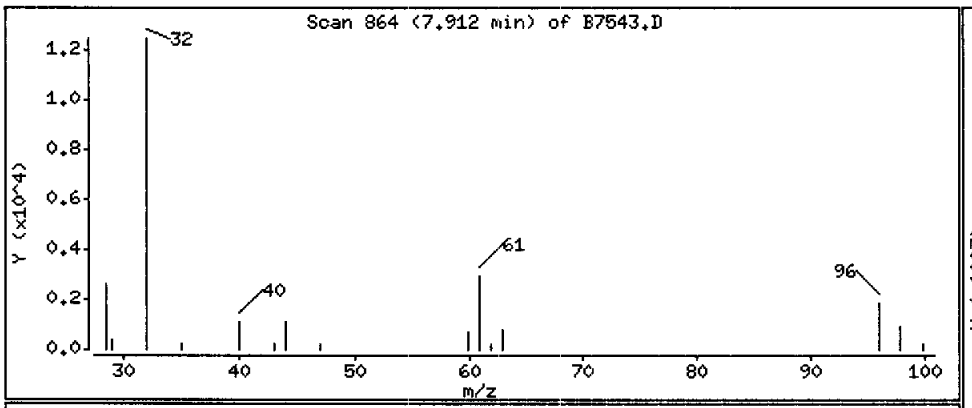
Operator: DLK

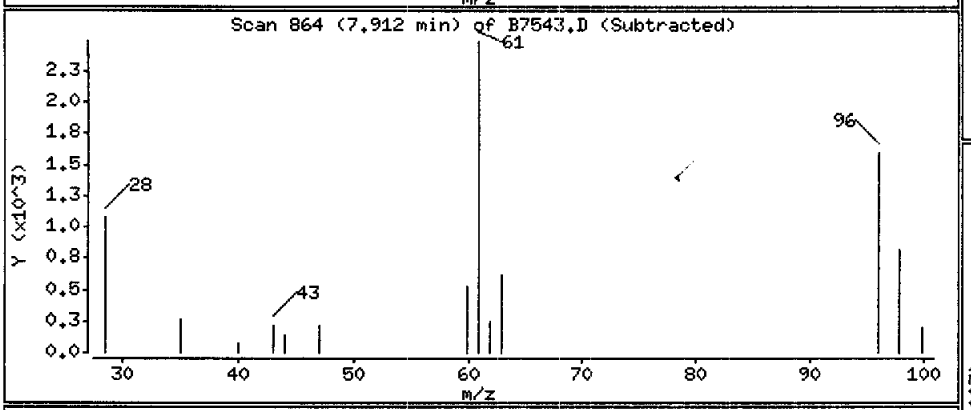
Column phase: J&W DB-624

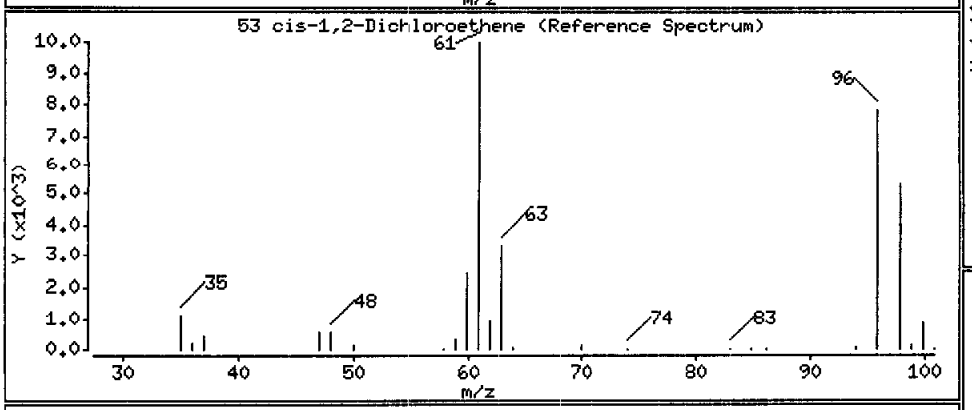
Column diameter: 0.53

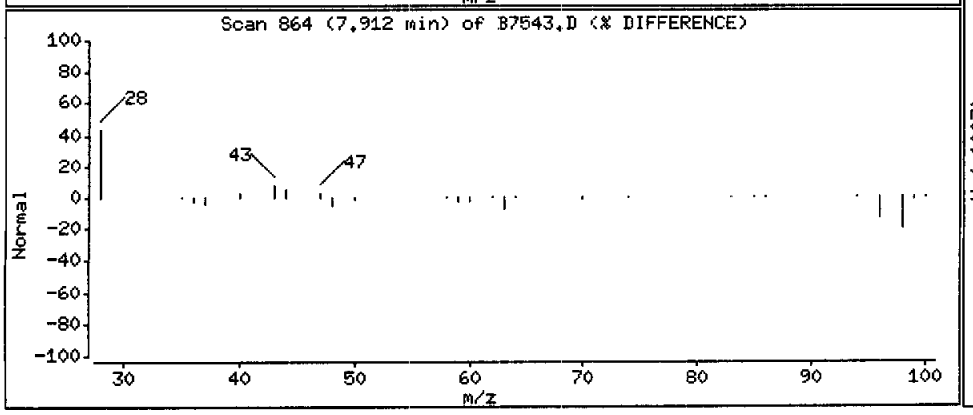
53 cis-1,2-Dichloroethene

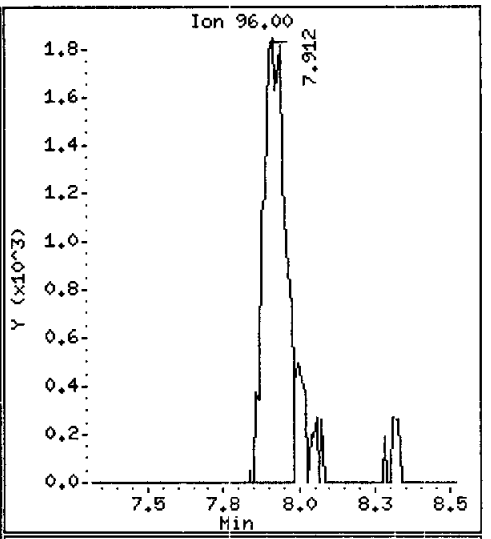
Concentration: 1.391 ppbv

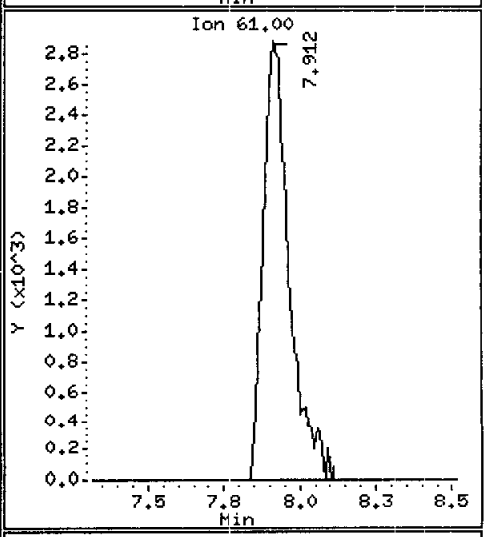


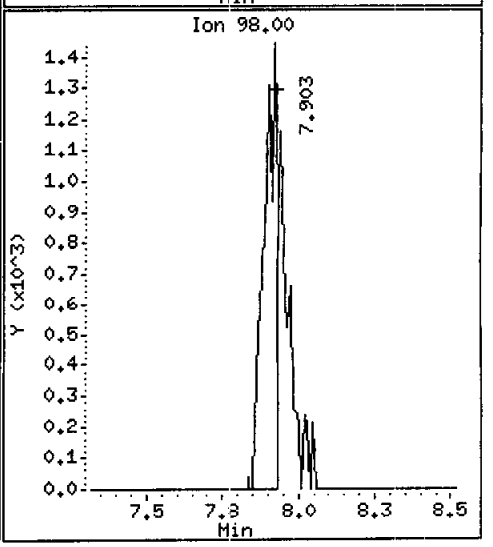












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Date : 12-JAN-2005 02:17

Client ID: 066351-0001

Instrument: gcmsb.i

Sample Info: G2DGM1AD,066351-0001,SANDIA,E5A100214-6

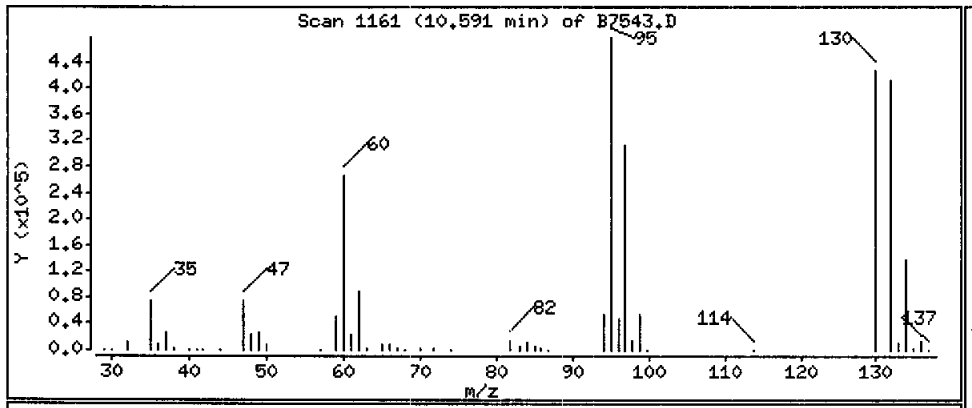
Operator: DLK

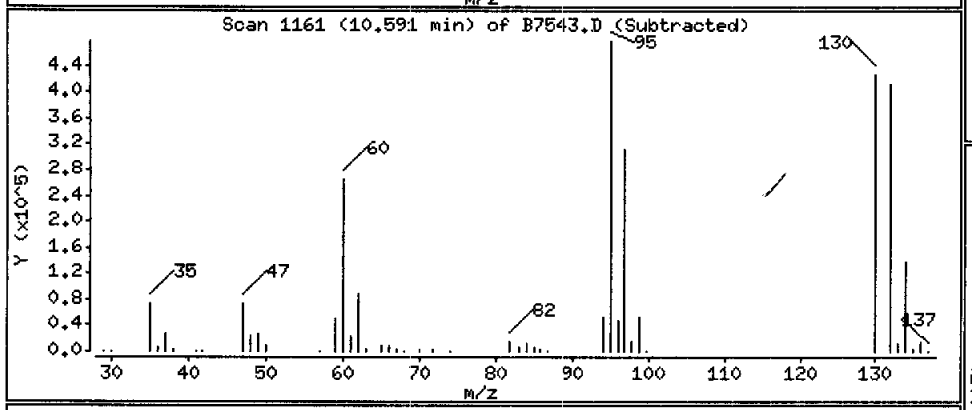
Column phase: J&W DB-624

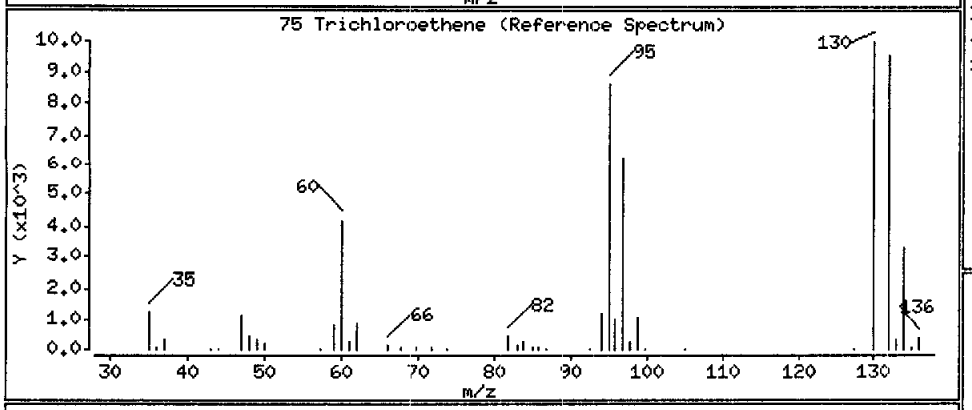
Column diameter: 0.53

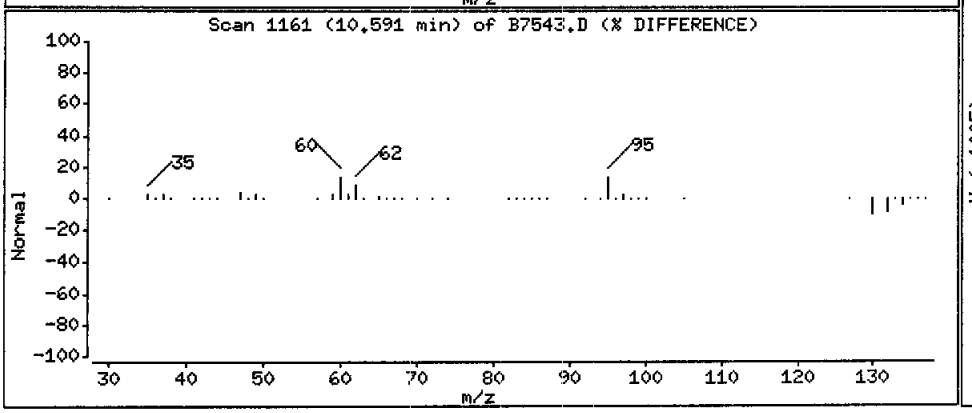
75 Trichloroethene

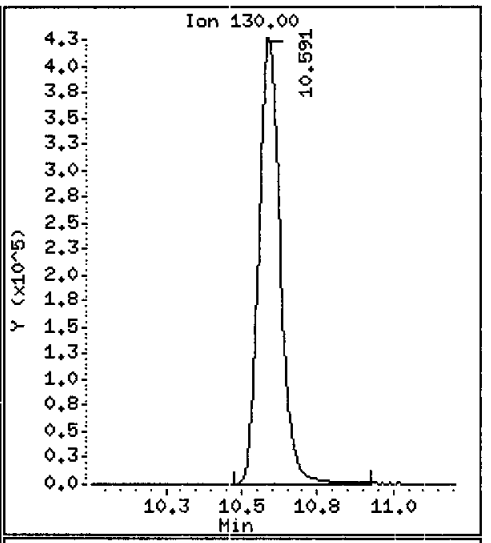
Concentration: 222.0 ppbv

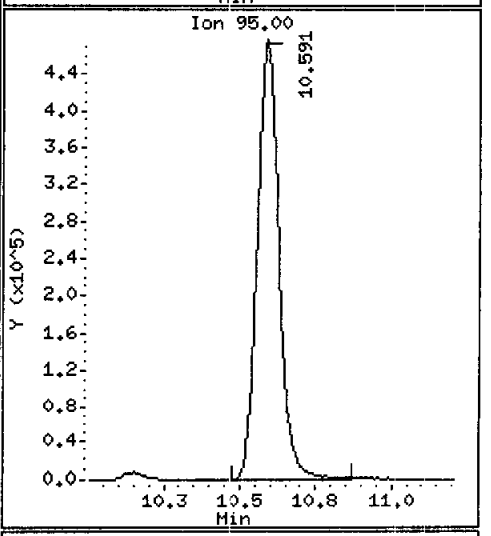


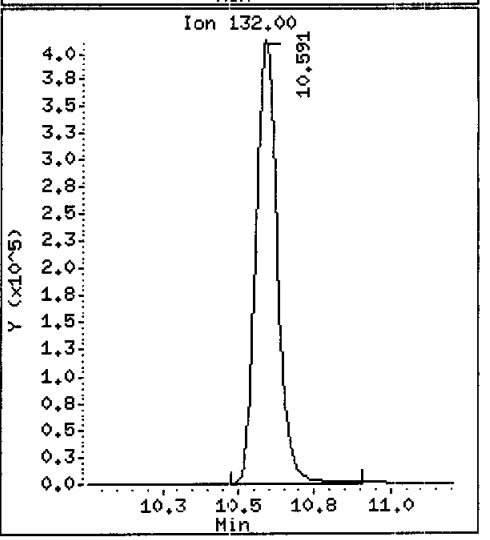












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7543.D

Date : 12-JAN-2005 02:17

Client ID: 066351-0001

Instrument: gcmsb.i

Sample Info: G2DGM1AD,066351-0001,SANDIA,E5A100214-6

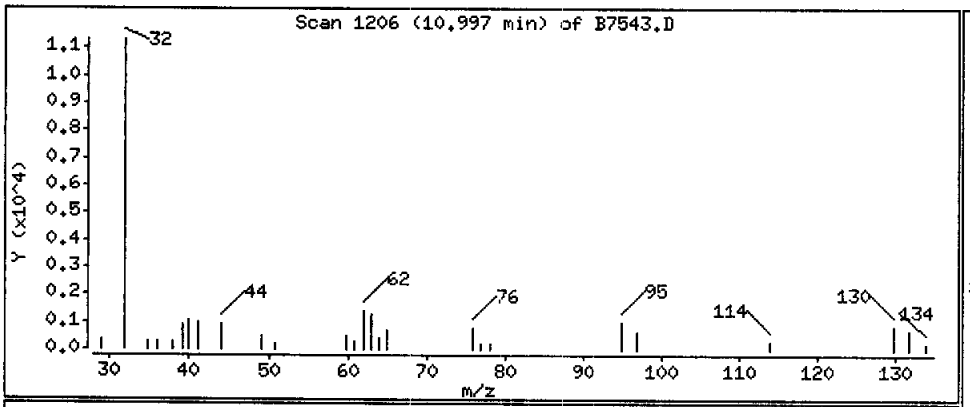
Operator: DLK

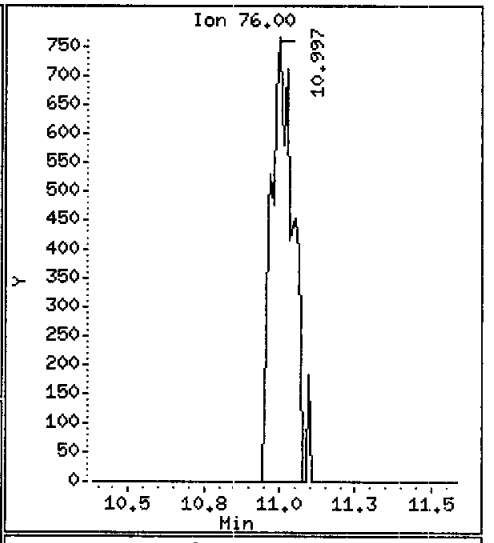
Column phase: J&W DB-624

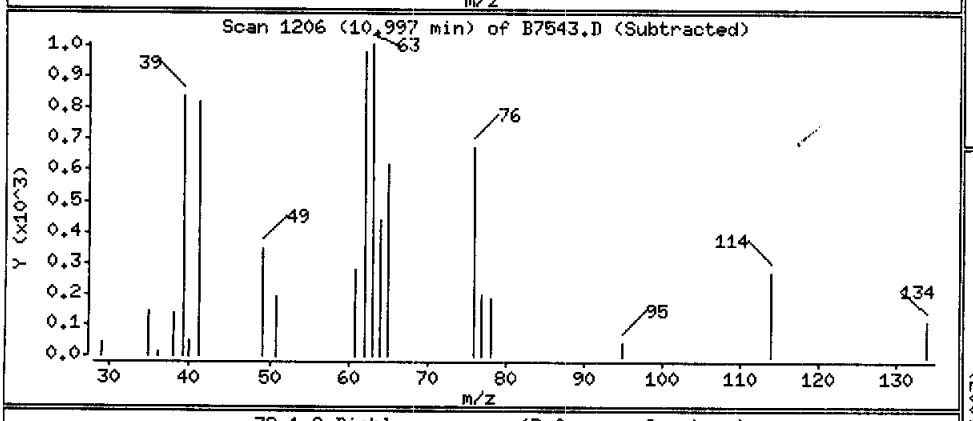
Column diameter: 0.53

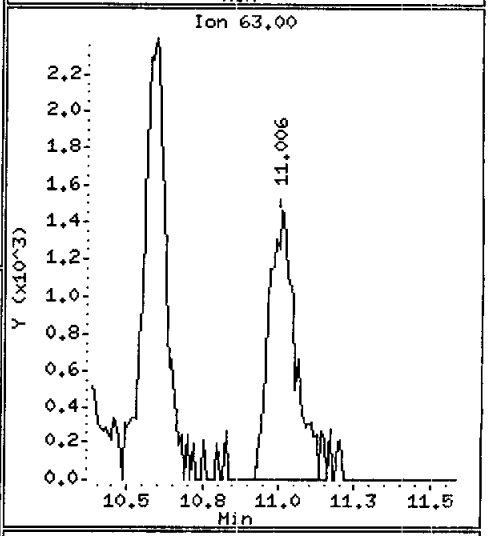
78 1,2-Dichloropropane

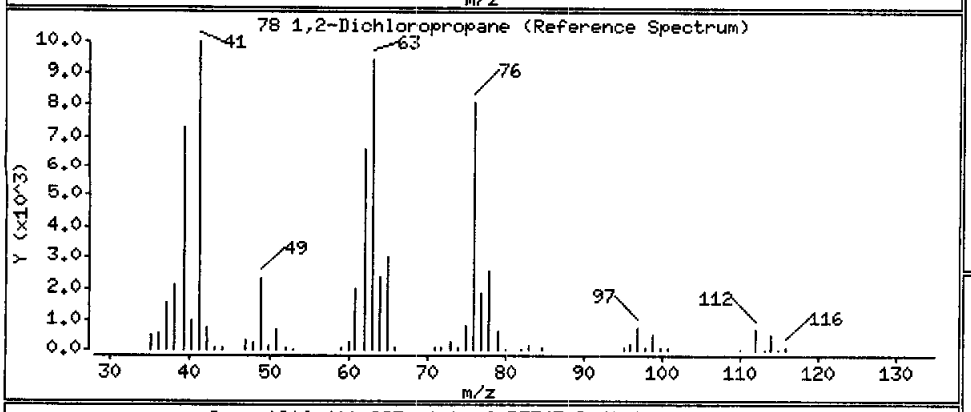
Concentration: 1.064 ppbv

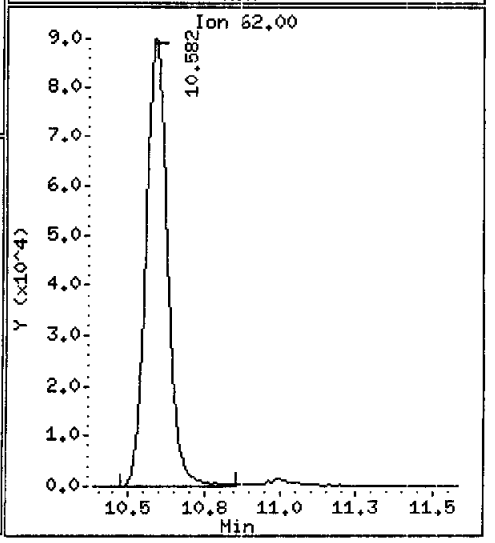


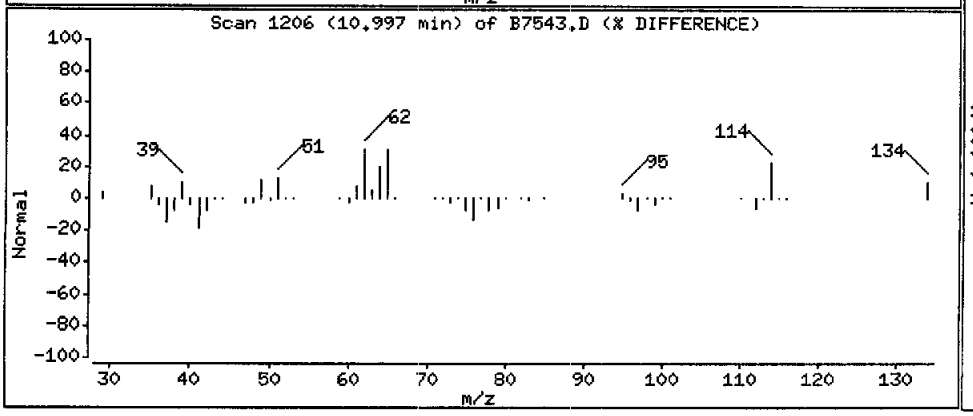












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD: Herrera
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608036	STCA	E5A100222		2/4/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	L. Herrera		02-07-05	
FINAL TRANSMITTED TO/DATE:	M. Sluty		02-07-05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO (ERDMS) OR RECORDS CENTER BY/DATE:	R. Kavenaugh		2-7-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader Collins | Project Name TAG Vapor Well Sampling | Case No. 7222_01.05

AR/COC No. 608036 | Analytical Lab STCA | SDG No. E5A100222

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided: PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted_____

Reviewed by: [signature] Date: 02/07/05 Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of 1

AR/COC 608036

Batch No. N/A

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: SB	
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21673	☐ Released by COC No.:
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		☐ Validation Required
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185	See Battle order	Bill To: Sandia National Labs (Accounts Payable) P.O. Box 5800 MS 0154 Albuquerque, NM 87185-0154
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

Reference LOV(available at SMO) ESA 100222

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
✓ 066364-001	TAG-SV01-48	48.5		12/30/2004 0830	SG	SC	6L	none	G	SA	TO-14 summa# 92012	
✓ 066365-001	TAG-SV01-98	98.5		12/30/2004 0835	SG	SC	6L	none	G	SA	TO-14 summa# 04340	
✓ 066366-001	TAG-SV01-148	148.5		12/30/2004 0840	SG	SC	6L	none	G	SA	TO-14 summa# 0041	
✓ 066367-001	TAG-SV01-148-SD	148.5		12/30/2004 0840	SG	SC	6L	none	G	SD	TO-14 summa# GL-0141	
✓ 066368-001	TAG-SV01-198	198.5		12/30/2004 0848	SG	SC	6L	none	G	SA	TO-14 summa# 9631-B	
✓ 066369-001	TAG-SV01-248	248		12/30/2004 0855	SG	SC	6L	none	G	SA	TO-14 summa# 93257	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day ☐ Negotiated TAT

Return Samples By:

Sample Team Members

Name	Signature	Init	Company/Organization/Phone/Cellular
J Lee		JDL	Weston Solutions 6146 (505-284-3309)
R Lynch			Weston Solutions 6146 (505-250-7090)
W Gibson		WJP	Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use

Date Entered(mm/dd/yy) 01/12/05

Entered by: JAC

QC Inits. WJP

Special Instructions/QC Requirements

EDD ☑ Yes ☐ No

Level C Package ☑ Yes ☐ No

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER **44649**

Commercial Invoice

Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination;
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES									
				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 537	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

[illegible]

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED-EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

1-24-

ESA100222

ESA100222

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

AR/COC 608036

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	LB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SMO Use

See Bottle order

☐ Waste Characterization
-Send preliminary/copy report to:

☐ Released by COC No.:
☐ Validation Required

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066364-001	TAG-SV01-48	48.5		12/30/2004 0830	SG	SC	6L	none	G	SA	TO-14 summa# 92012 -1	
066365-001	TAG-SV01-98	98.5		12/30/2004 0835	SG	SC	6L	none	G	SA	TO-14 summa# 04340 -2	
066366-001	TAG-SV01-148	148.5		12/30/2004 0840	SG	SC	6L	none	G	SA	TO-14 summa# 0041 -3	
066367-001	TAG-SV01-148-SD	148.5		12/30/2004 0840	SG	SC	6L	none	G	SD	TO-14 summa# GL-0141 -4	
066368-001	TAG-SV01-198	198.5		12/30/2004 0848	SG	SC	6L	none	G	SA	TO-14 summa# 9631-B -5	
066369-001	TAG-SV01-248	248		12/30/2004 0855	SG	SC	6L	none	G	SA	TO-14 summa# 93257 -6	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ Negotiated TAT

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No
*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Abnormal Conditions on Receipt

Lab Use

QC Inits.

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch			Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

*Please list as separate report.

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1308	5.Relinquished by	Org.	Date	Time
2. Received by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

COC 608036 E5A100222

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/21/05
Page : 1
Time : 19:04:12

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066364-001/TAG-SV01-48
Date Sampled: 12/30/04 Time Sampled: 8:30
LAB ID: E5A100222-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066365-001/TAG-SV01-98
Date Sampled: 12/30/04 Time Sampled: 8:35
LAB ID: E5A100222-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066366-001/TAG-SV01-148
Date Sampled: 12/30/04 Time Sampled: 8:40
LAB ID: E5A100222-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066367-001/TAG-SV01-148-SD
Date Sampled: 12/30/04 Time Sampled: 8:40
LAB ID: E5A100222-004 Matrix: AIR

Parameter	Method	Rep

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066367-001/TAG-SV01-148-SD
Date Sampled: 12/30/04 Time Sampled: 8:40
LAB ID: E5A100222-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066368-001/TAG-SV01-198
Date Sampled: 12/30/04 Time Sampled: 8:48
LAB ID: E5A100222-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066369-001/TAG-SV01-248
Date Sampled: 12/30/04 Time Sampled: 8:55
LAB ID: E5A100222-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 2
Case Narrative 2
Chain of Custody 3
Analytical Report 14
QA/QC 32
STL Los Angeles Raw Data 38
Raw Data: TO-14A 39

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 3, 2005

STL LOT NUMBER: **E5A100222**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

000160

This report contains _____ pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100222

E5A100222

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

nal Lab

h No. N/A

SMO Use

AR/COC 608036

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: AB	-Send preliminary/copy report to:
ect Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21673	
rd Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		☐ Released by COC No.:
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185	See Bottle Order	☐ Validation Required
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To: Sandia National Labs (Accounts Payable)
ation	Tech Area 2				P.O. Box 5800 MS 0154
ling	Room				Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066364-001	TAG-SV01-48	48.5		12/30/2004 0830	SG	SC	6L	none	G	SA	TO-14 summa# 92012	
066365-001	TAG-SV01-98	98.5		12/30/2004 0835	SG	SC	6L	none	G	SA	TO-14 summa# 04340	
066366-001	TAG-SV01-148	148.5		12/30/2004 0840	SG	SC	6L	none	G	SA	TO-14 summa# 0041	
066367-001	TAG-SV01-148-SD	148.5		12/30/2004 0840	SG	SC	6L	none	G	SD	TO-14 summa# GL-0141	
066368-001	TAG-SV01-198	198.5		12/30/2004 0848	SG	SC	6L	none	G	SA	TO-14 summa# 9631-B	
066369-001	TAG-SV01-248	248		12/30/2004 0855	SG	SC	6L	none	G	SA	TO-14 summa# 93257	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

rn Samples By: ☐ **Negotiated TAT** QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch			Weston Solutions 6146 (505-250-7090)
mbers	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use

Date Entered(mm/dd/yy)

Entered by:

Special Instructions/QC Requirements

EDD ☑ **Yes** ☐ **No**

Level C Package ☑ **Yes** ☐ **No**

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

elinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
elinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by	Org. STL	Date 1-6-05	Time 1000	5. Received by	Org.	Date	Time
elinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by	Org.	Date	Time	6. Received by	Org.	Date	Time

E5A100222

4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 92012
DATE CLEANED: 12/1/04 A, 12/1/04 C, 10/29/04 A, 12/2/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.95	1-11-05	
FINAL PRESSURE (PSIA)	24.35	1-11-05	

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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2

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 04340
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/8/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.96	1-11-05	[illegible]
FINAL PRESSURE (PSIA)	23.83	1-11-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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5

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 00041
DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 6/28/04A, 3/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.97	1-11-05	TM
FINAL PRESSURE (PSIA)	24.31	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: G6014
DATE CLEANED: 12/1/04 A, 12/1/04C, [redacted] 2/2/04A, 2/2/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	[redacted]	30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.57	1-12-05	~
FINAL PRESSURE (PSIA)	24.32	1-12-05	~

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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5

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 9631B
DATE CLEANED: 12/1/04 A, 12/1/04 C, 12/9/04 A, 12/20/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.57	1-12-05	~
FINAL PRESSURE (PSIA)	24.29	1-12-05	~

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

6

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93257
DATE CLEANED: 12/1/04A, 12/1/04C, 10/28/04A, 2/26/04A, 1/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	[redacted]	30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.60	1-12-05	"
FINAL PRESSURE (PSIA)	24.62	1-12-05	"

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12·2·04A

Date of QC: 12-3-04

Data File Number: MB12031(MSB)

Canister ID Numbers

*G6141	12625
9243 B	9145 B
02471	0041
93012	03855
04340	92012
93257	9631 B

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-3-04

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12031.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:18
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,GL0141
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.311	8.324	(1.000)	498682	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.340	9.352	(0.921)	590663	47.4850	47.48
* 72 1,4-Difluorobenzene	114	10.143	10.155	(1.000)	1587702	50.0000	
$ 87 Toluene-d8	100	12.760	12.763	(1.258)	730243	46.9185	46.92
* 99 Chlorobenzene-d5	117	15.412	15.406	(1.000)	1098670	50.0000	
$ 113 4-Bromofluorobenzene	95	17.668	17.662	(1.146)	726403	37.0409	37.04

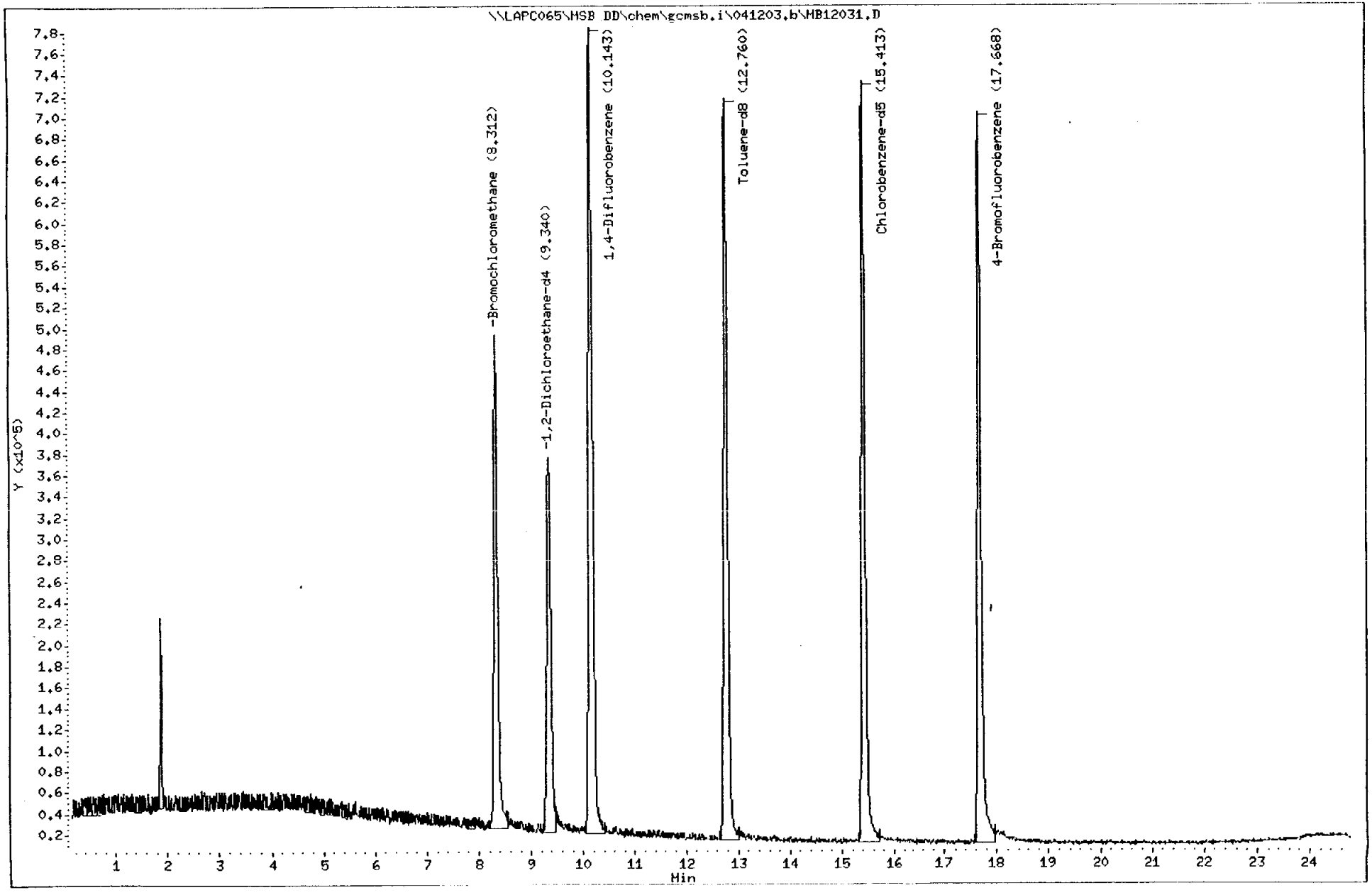
Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\041203.b\HB12031.D
Date : 03-DEC-2004 12:18
Client ID: BLANK
Sample Info: BLANK,BLANK,GL0141

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100222

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100222

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066364-001/TAG-SV01-48 12/30/04 08:30 001				
Dichlorodifluoromethane	0.59 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	5.0	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
066365-001/TAG-SV01-98 12/30/04 08:35 002				
1,1-Dichloroethene	0.71 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	1.6 J	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	2.0	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	15	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.8 J	2.0	ppb(v/v)	EPA-21 TO-14A
066366-001/TAG-SV01-148 12/30/04 08:40 003				
1,1-Dichloroethane	0.66 J	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	12	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	2.4	2.0	ppb(v/v)	EPA-21 TO-14A
066367-001/TAG-SV01-148-SD 12/30/04 08:40 004				
1,1-Dichloroethane	0.70 J	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	12	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	4.4	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	0.61 J	2.0	ppb(v/v)	EPA-21 TO-14A
066368-001/TAG-SV01-198 12/30/04 08:48 005				
1,1-Dichloroethane	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	2.7	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	22	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	0.58 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	0.73 J	2.0	ppb(v/v)	EPA-21 TO-14A
066369-001/TAG-SV01-248 12/30/04 08:55 006				
1,1-Dichloroethene	4.3	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	9.3	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	17	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	110	2.0	ppb(v/v)	EPA-21 TO-14A

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EXECUTIVE SUMMARY - Detection Highlights

E5A100222

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066369-001/TAG-SV01-248 12/30/04 08:55 006				
Toluene	0.70 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	4.4	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100222

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100222

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DHE	001	066364-001/TAG-SV01-48	12/30/04	08:30
G2DHF	002	066365-001/TAG-SV01-98	12/30/04	08:35
G2DHG	003	066366-001/TAG-SV01-148	12/30/04	08:40
G2DHJ	004	066367-001/TAG-SV01-148-SD	12/30/04	08:40
G2DHK	005	066368-001/TAG-SV01-198	12/30/04	08:48
G2DHL	006	066369-001/TAG-SV01-248	12/30/04	08:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066364-001/TAG-SV01-48

GC/MS Volatiles

Lot-Sample #...: E5A100222-001 **Work Order #...:** G2DHE1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 08:30 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 13:02
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.59 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**5.0**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066364-001/TAG-SV01-48

GC/MS Volatiles

Lot-Sample #...: E5A100222-001 **Work Order #...:** G2DHE1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066365-001/TAG-SV01-98

GC/MS Volatiles

Lot-Sample #...: E5A100222-002 **Work Order #...:** G2DHF1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 08:35 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 13:38
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	**0.71 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**1.6 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**2.0**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**15**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.8 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066365-001/TAG-SV01-98

GC/MS Volatiles

Lot-Sample #...: E5A100222-002 **Work Order #...:** G2DHF1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066366-001/TAG-SV01-148

GC/MS Volatiles

Lot-Sample #...: E5A100222-003 **Work Order #...:** G2DHG1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 08:40 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 14:07
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**0.66 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**12**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**2.4**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066366-001/TAG-SV01-148

GC/MS Volatiles

Lot-Sample #...: E5A100222-003 **Work Order #...:** G2DHG1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066367-001/TAG-SV01-148-SD

GC/MS Volatiles

Lot-Sample #...: E5A100222-004 **Work Order #...:** G2DHJ1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 08:40 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 14:39
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**0.70 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.2 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**12**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**4.4**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066367-001/TAG-SV01-148-SD

GC/MS Volatiles

Lot-Sample #...: E5A100222-004 **Work Order #...:** G2DHJ1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	**0.61 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066368-001/TAG-SV01-198

GC/MS Volatiles

Lot-Sample #...: E5A100222-005 **Work Order #...:** G2DHK1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 08:48 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 15:08
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**2.7**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**22**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.58 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**0.73 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066368-001/TAG-SV01-198

GC/MS Volatiles

Lot-Sample #...: E5A100222-005 **Work Order #...:** G2DHK1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066369-001/TAG-SV01-248

GC/MS Volatiles

Lot-Sample #...: E5A100222-006 **Work Order #...:** G2DHL1AD **Matrix.....:** AE
Date Sampled...: 12/30/04 08:55 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 15:43
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	**4.3**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**9.3**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**17**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**1.0 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**110**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.70 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**4.4**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066369-001/TAG-SV01-248

GC/MS Volatiles

Lot-Sample #...: E5A100222-006 **Work Order #...:** G2DHL1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100222

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5012238	
002	AE	EPA-21 TO-14A		5012238	
003	AE	EPA-21 TO-14A		5012238	
004	AE	EPA-21 TO-14A		5012238	
005	AE	EPA-21 TO-14A		5012238	
006	AE	EPA-21 TO-14A		5012238	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100222 **Work Order #...:** G2F7X1AA **Matrix.....:** AIR
MB Lot-Sample #: M5A120000-238

Prep Date.....: 01/12/05 **Analysis Time..:** 09:52
Analysis Date..: 01/12/05 **Prep Batch #...:** 5012238 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 117751

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100222 **Work Order #...:** G2F7X1AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100222 **Work Order #...:** G2F7X1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-238 G2F7X1AD-LCSD
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 08:55
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**106**	**(70 - 125)**			**EPA-21 TO-14A**
	106	**(70 - 125)**	**0.15**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**106**	**(75 - 120)**			**EPA-21 TO-14A**
	104	**(75 - 120)**	**1.5**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	104	**(70 - 125)**	**2.1**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**101**	**(75 - 125)**			**EPA-21 TO-14A**
	104	**(75 - 125)**	**2.6**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**110**	**(65 - 130)**			**EPA-21 TO-14A**
	112	**(65 - 130)**	**1.7**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100222 **Work Order #...:** G2F7X1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-238 G2F7X1AD-LCSD
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 08:55
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**53.4**	**ppb(v/v)**	**106**		**EPA-21 TO-14A**
	50.5	**53.4**	**ppb(v/v)**	**106**	**0.15**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**57.5**	**ppb(v/v)**	**106**		**EPA-21 TO-14A**
	54.5	**56.7**	**ppb(v/v)**	**104**	**1.5**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**51.7**	**ppb(v/v)**	**104**	**2.1**	**EPA-21 TO-14A**
Toluene	**49.5**	**50.1**	**ppb(v/v)**	**101**		**EPA-21 TO-14A**
	49.5	**51.4**	**ppb(v/v)**	**104**	**2.6**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**55.0**	**ppb(v/v)**	**110**		**EPA-21 TO-14A**
	50.0	**55.9**	**ppb(v/v)**	**112**	**1.7**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A 100222

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: Cy 011305

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
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Quant Method : ISTD
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Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
18 1,1-Difluoroethane	+++++ / +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372
19 Vinyl Bromide	0.62278 / 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391
20 Dichlorofluoromethane (F21)	1.78533 / 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446
21 Trichlorofluoromethane (F11)	2.44228 / 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083
22 n-Pentane	1.21122 / 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395
23 1,1-DC-1-flouroethane(F141b)	2.58910 / +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444
24 Ethanol	+++++ / 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705
25 Ether (Diethyl ether)	0.49364 / 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284
26 Acrolein	0.20601 / 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263 <-
27 Propionaldehyde (Propanal)	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD	
28 1,1-Dichloroethene	1.26790 1.06973	1.17864	1.08330	1.12535	1.10018	1.07502	1.12859	6.381	
29 2,2-Dimethylbutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715 2.22085	2.59937	2.38876	2.40025	2.34655	2.25977	2.44467	9.559	
31 Acetone	+++++ 0.20458	0.12242	0.14598	0.16090	0.16041	0.16574	0.16001	16.836	
32 Iodomethane	1.11548 1.87248	1.03774	1.38752	1.40857	2.82193	2.47154	1.73075	39.751	<-
33 Carbon Disulfide	0.84200 1.35974	0.90775	0.92884	1.06258	1.12947	1.19849	1.06127	17.279	
34 2-Propanol	+++++ 0.71716	0.45343	0.48827	0.55577	0.58306	0.59777	0.56591	16.380	
35 Acetonitrile	0.04928 0.15546	0.08266	0.12149	0.13210	0.18434	0.18610	0.13021	39.137	<-
36 Allyl Chloride	0.54011 0.71567	0.56312	0.52171	0.54469	0.60226	0.61352	0.58587	11.302	
37 Methylene Chloride	0.81147 0.69121	0.73641	0.65629	0.67719	0.66235	0.64310	0.69686	8.458	

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

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Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
70 2,2,4-Trimethylpentane	2.04384	1.84557	1.78175	1.69840	1.73692	1.68874		
	1.43818						1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680	0.92384	0.86786	0.85814	1.07070	0.99994		
	0.81576						0.93758	10.283
72 n-Heptane	0.65292	0.59087	0.57809	0.57044	0.59474	0.58371		
	0.52727						0.58544	6.367
74 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Trichloroethene	0.49675	0.44912	0.44758	0.42160	0.43287	0.42172		
	0.38637						0.43657	7.756
76 Methylcyclohexane	0.42140	0.36653	0.33095	0.30891	0.38179	0.35467		
	0.29346						0.35110	12.546
77 1-Butanol	+++++	0.02081	0.01680	0.01594	0.01842	0.01675		
	0.01390						0.01710	13.662
78 1,2-Dichloropropane	0.16774	0.15879	0.17082	0.16553	0.16628	0.16412		
	0.15399						0.16390	3.481
79 Dibromomethane	0.53415	0.48041	0.44691	0.42596	0.54917	0.51576		
	0.44421						0.48522	9.991
80 Methyl methacrylate	+++++	0.23366	0.24181	+++++	0.31202	0.30819		
	0.31492						0.28212	14.422

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++ / 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014	
82 Bromodichloromethane	0.49808 / 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427 / 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++ / 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414 / 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++ / 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270	
87 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Toluene	1.01334 / 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491	
90 n-Octane	0.59003 / 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058 / 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201	

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62887	10.012
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442 <-
97 Dibromochloromethane	0.78993 / 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399 0.63674	0.67808	0.65687	0.64348	0.83647	0.77817	0.70912	10.747
104 Ethylbenzene	1.48707 1.32506	1.34401	1.41692	1.38759	1.49715	1.49088	1.42124	5.083
105 m,p-Xylenes	0.43284 0.42199	0.38311	0.39595	0.37173	0.44264	0.44083	0.41273	7.004
106 n-Nonane	0.33479 0.48463	0.34111	0.32217	0.36948	0.52167	0.50256	0.41092	21.391
107 o-Xylene	0.38382 0.43040	0.36883	0.37541	0.36844	0.43243	0.42433	0.39767	7.519
108 Styrene	0.44849 0.63806	0.44593	0.42772	0.43223	0.53258	0.56302	0.49829	16.276
109 Cellosolve Acetate	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Bromoform	0.49988 0.83533	0.55334	0.68024	0.76140	0.93008	0.95119	0.74450	23.663
111 .alpha.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369 0.44192	0.39983	0.39673	0.42797	0.55736	0.52118	0.45552	13.391

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
113 Cyclohexanone	+++++ / 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036 <-
115 Bromobenzene	0.62810 / 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953
116 1,1,2,2-Tetrachloroethane	1.35006 / 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.35429	6.584
117 1,2,3-Trichloropropane	0.40312 / 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311
118 trans-1,4-Dichloro-2-butene	+++++ / +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055 <-
119 n-Propylbenzene	1.28187 / 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097
120 2-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365
121 4-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365
122 3-Ethyltoluene	1.05354 / 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139
123 4-Ethyl Toluene	0.81519 / 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558 +++++	1.21368	0.81082	0.65064	0.83940	0.78774	0.94631	29.818
125 n-Decane	0.46267 0.32620	0.34922	0.25520	0.27626	0.36839	0.34720	0.34073	19.844
126 .beta.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Ethyltoluene	1.11542 1.16620	0.94881	0.85458	0.95853	1.30303	1.23402	1.08294	15.307
128 .alpha.-Methylstyrene	0.43803 0.54809	0.36069	0.33804	0.37867	0.54465	0.52825	0.44806	20.459
129 tert-Butylbenzene	0.80994 0.87914	0.73130	0.67470	0.76818	1.05286	1.00081	0.84528	16.570
130 Pentachloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955 +++++	0.35806	0.23173	0.19988	0.25825	0.25412	0.27527	23.368
132 sec-Butylbenzene	1.53068 1.68519	1.27842	1.22547	1.37218	1.91352	1.87496	1.55435	17.948
133 D-Limonene	0.56335 0.43408	0.44070	0.33104	0.35410	0.48917	0.46237	0.43926	17.978

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030			
	0.69853						0.52632	18.610	
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222			
	1.26479						1.14477	17.565	
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895			
	0.67222						0.54141	18.711	
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417			
	0.67804						0.64142	16.131	
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209			
	1.02647						0.56325	55.511	<-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348			
	0.55025						0.48440	18.904	
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253			
	0.64790						0.53798	14.023	
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416			
	0.23934						0.27616	17.206	
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159			
	0.79399						0.72730	19.989	
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136			
	0.17470						0.37429	42.157	<-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++	0.26338	0.25799	0.22180	0.31565	0.26332		
	0.27629						0.26641	11.388
145 Hexachlorobutadiene	0.56644	0.58610	0.42156	0.35251	0.47676	0.47942		
	0.51820						0.48586	16.727
146 Naphthalene	+++++	0.70441	0.53060	0.46537	0.55710	0.47106		
	0.49153						0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850	0.48714	0.49598	+++++	0.42244	0.27752		
	0.25906						0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014	0.40234	0.40611	0.41316	0.41851	0.44633		
	0.39572						0.41033	4.531
$ 88 Toluene-d8	0.51061	0.50803	0.52649	0.50915	0.52457	0.53681		
	0.54926						0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642	0.79382	0.81777	0.80936	0.95153	0.96622		
	1.09717						0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0 MA 01/04/05

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ent ID:	Data Directory: D:\GCMSB\ 050103A-B	BFB Standard: PSL99112B3	Initial Calibration ID: 1-3 05
S-B	Method File: TO14A	Daily Standard: MSL04011028	SOP: CDI-MS-013
k ID:	Tune File:	LCS Standard: MSL04011043	MDL Date: 01-28-01
S-041	BF041123	I.S. Standard: PSL99112B3	Blank Lot No. 9050301-00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
05	1909	BF01032	-	-	-	BFB	28	-	-	-	m	OK	A	
	1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL00571
	2002	IC01031	-	-	-	2.0 PIBU STD	40	-	-		m	OK	10	MSL04011043
	2037	IC01032	-	-	-	4.0	80	-	-	-	m	OK	10	
	2112	IC01033	-	-	-	10	200	-	-	-	m	OK	10	
	2148	IC01034	-	-	-	25	500	-	-	-	m	OK	10	
	2223	IC01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
	2258	IC01036	-	-	-	100	250	-	-	-	m	OK	11	
	2334	IC01037	-	-	-	500	1250	-	-	-	m	OK	11	
05	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 c/o?
	0014	LC01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
	0119	LC01034	-	-	-	LCSD	500	-	-	-	m	OK	13	2
	0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
	0342	B7371	G1P4S1AA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EYL220306-1
	0417	B7372	G1P4T1AA			002	872	24.4/14.0	-		m	OK	1	-2
	0452	B7373	G1P4U1AA			003	1130	24.4/10.9	-		m	OK	2	-3
	0527	B7374	G1P4E1AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4 ~20L
	0602	B7375	G1P4G1AA			005	1000	24.4/11.6	-	1.00	m	O/R	4	-5 ~100L

ved: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ıent ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
IS-B	Method File:	Daily Standard: See Previous Page	SOP:
ɔk ID:	Tune File:	LCS Standard: w 1.4.05	MDL Date:
IS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
4-05	0637	B7376	G1P4M1AA	ccs	CRA	A 17178-RW ccc	1150	244/10.2	–	1.00	w	OK	5	EYL22031-6
↓	0712	B7377	G1Q191AD	↓	TAIT	LGSVLCC75B 0730	40	244/11.1	1000/10	2730	w	O/R	6	EYL230156-1 w 0.1
↓	0741	B7378	G1R2A1AD	↓	↓	LGSVCC75B 1030	40	244/11.2	1000/10	2720	w	OK	7	↓ -2

ewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200*	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

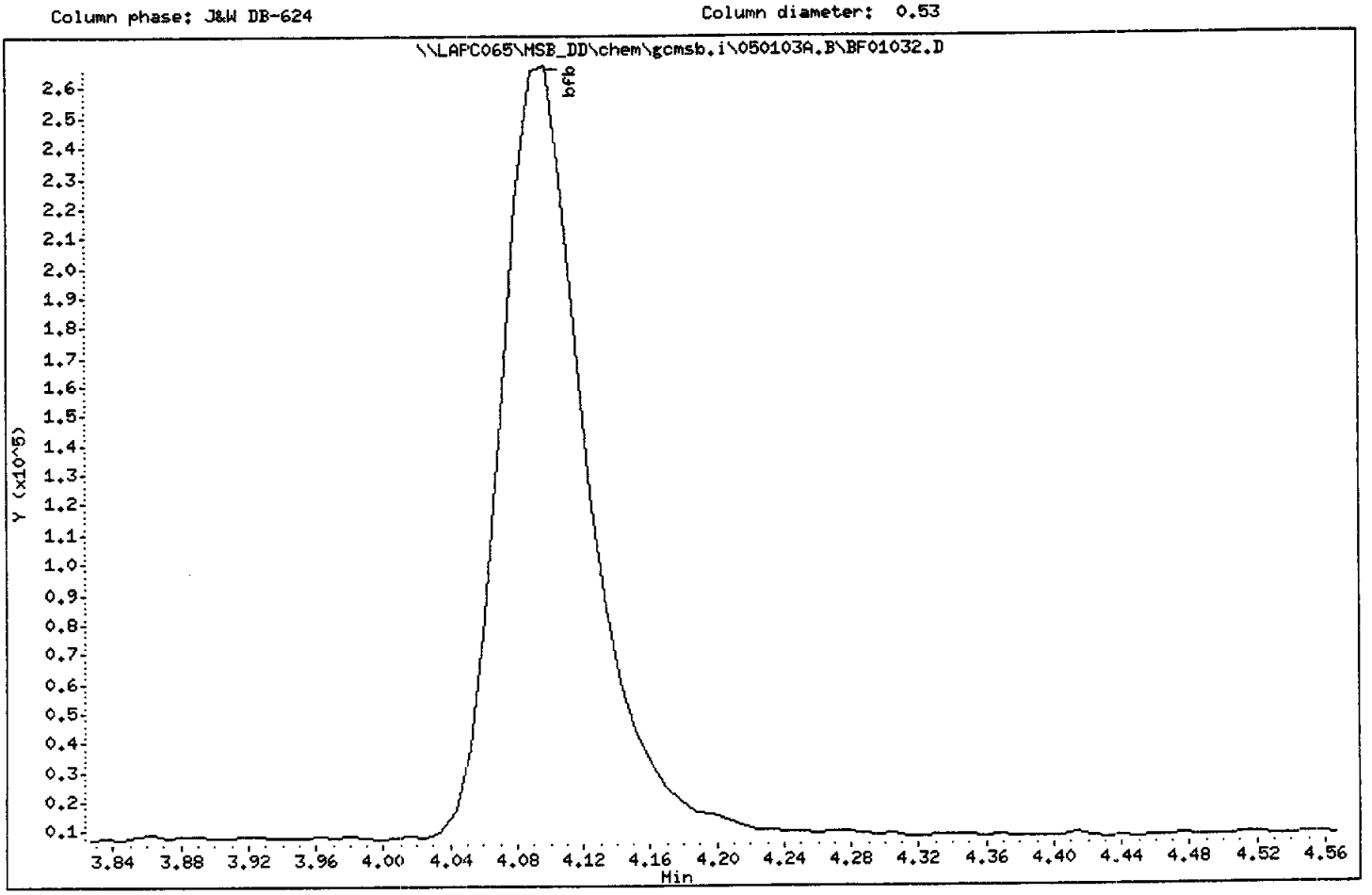
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

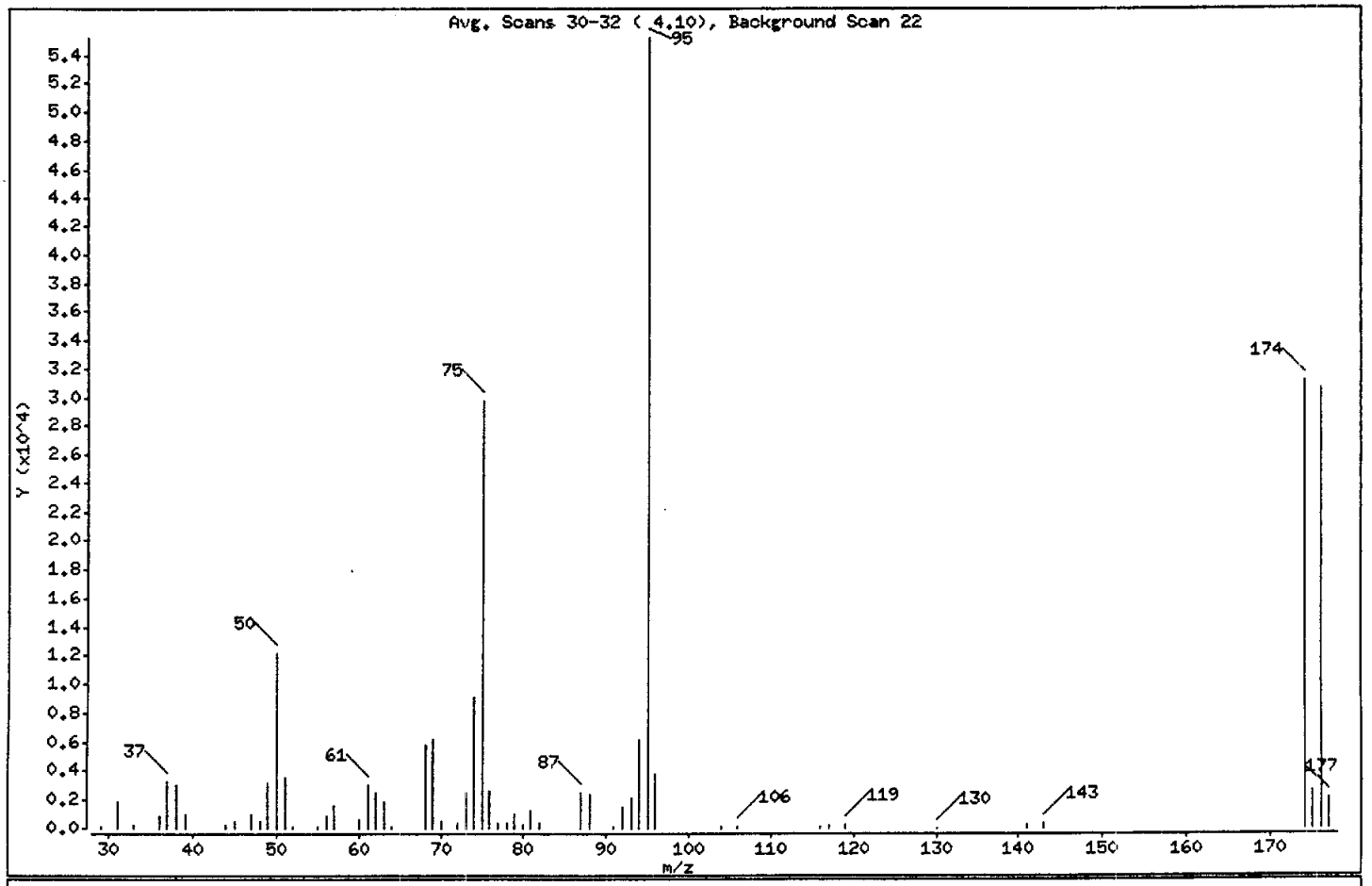
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

KA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.3537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

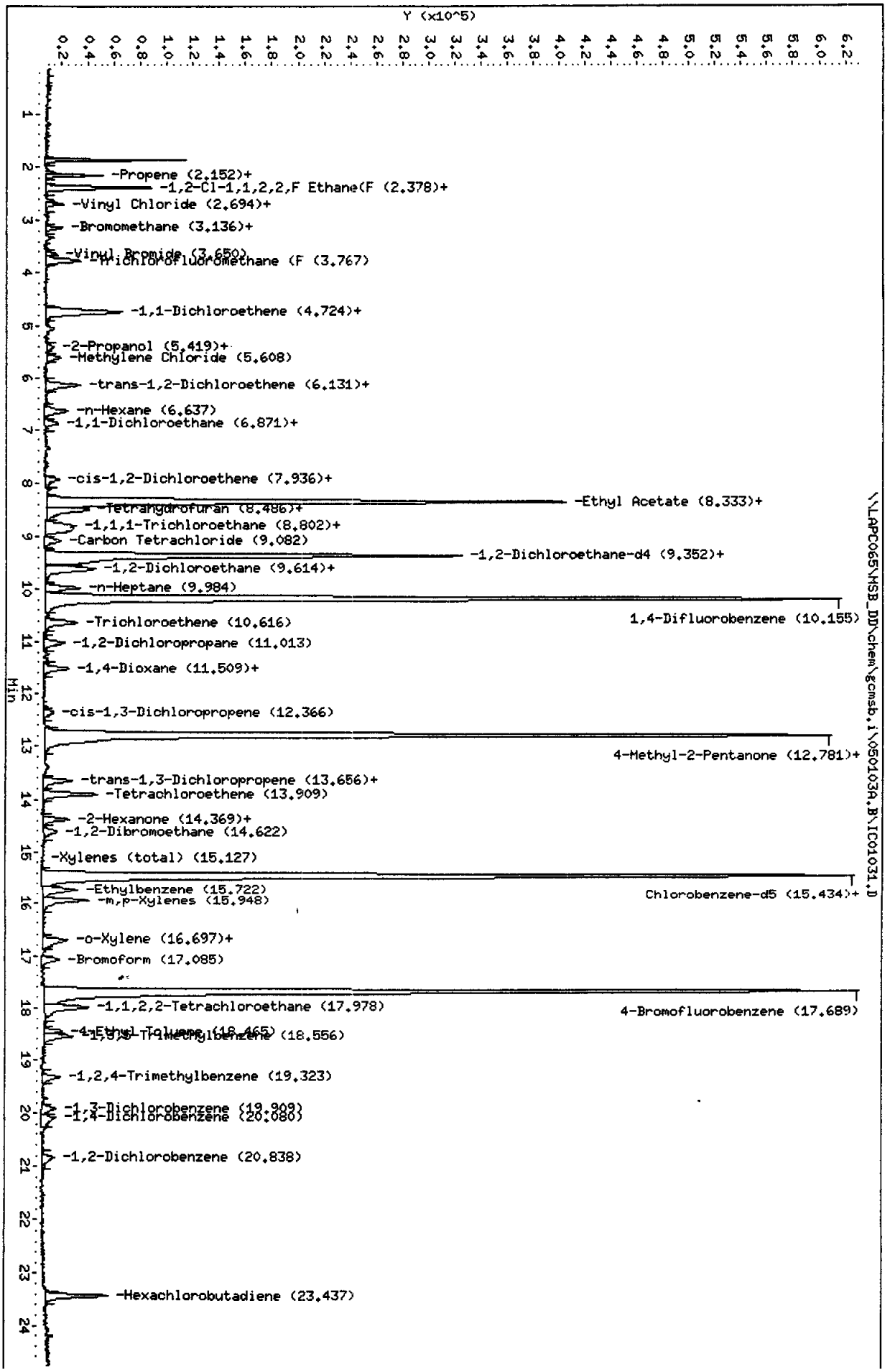
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

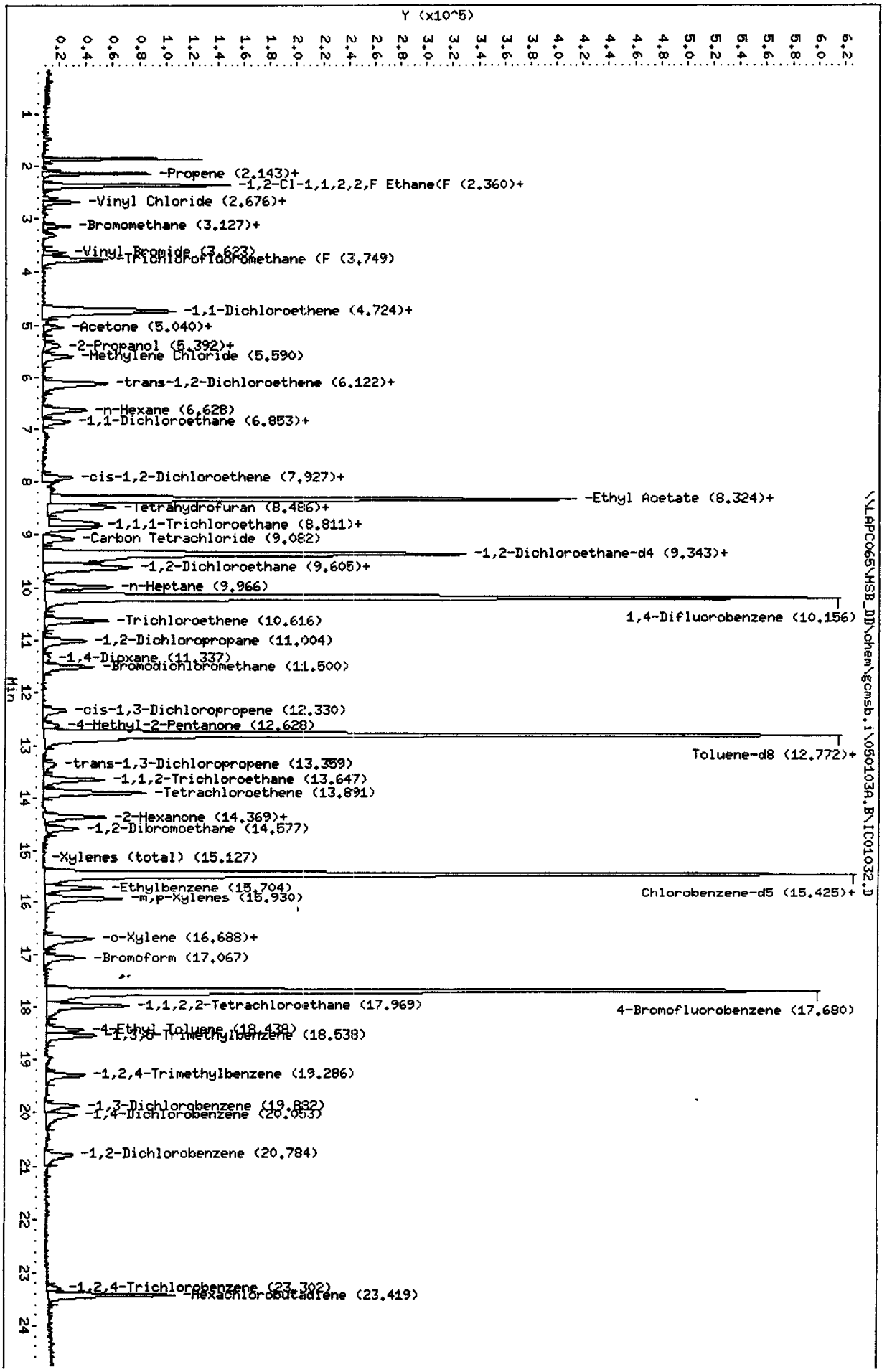
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: HSL0501043
Sample Info: 4.0 PPBV STD,HSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
	36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
	37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
	40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
	41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
	43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
	45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
	53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
	54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
	56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
*	58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
	59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
	60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
	62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
	64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
	68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
	69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
	72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
	81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
	82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
	85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
	89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
	91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
	93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
	95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
	96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
	98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
*	101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
	102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M	99 Xylenes (total)	106				196706	30.0000	28.63
	104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
	105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
	107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
	108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
	110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
	116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

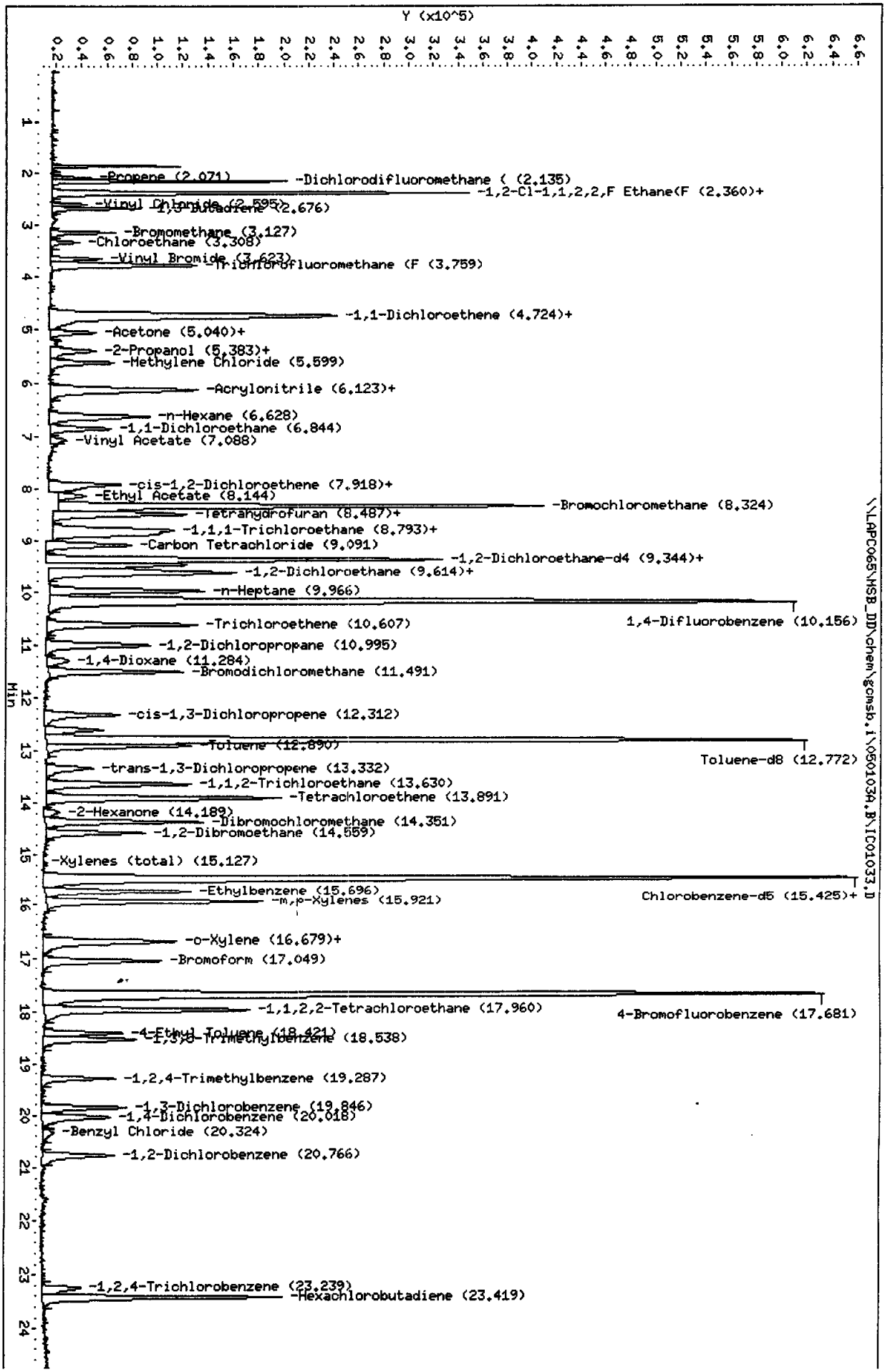
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\0501033A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: HSL0501043
Sample Info: 10 PPBV STD,HSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
	36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
	37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
	40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
	41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
	43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
	44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
	45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
	53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
	54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
	56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
*	58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
	59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
	60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
	61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
	62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
	64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$	66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
	68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
	69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
	70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
	72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
*	73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
	75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
	78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
	81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
	82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
	85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
	86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$	88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
	89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
	91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
	93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
	95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
	96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
	97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
	98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
*	101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
	102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M	99 Xylenes (total)	106				477975	75.0000	68.20
	104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
	105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
	107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
	108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
	110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$	114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

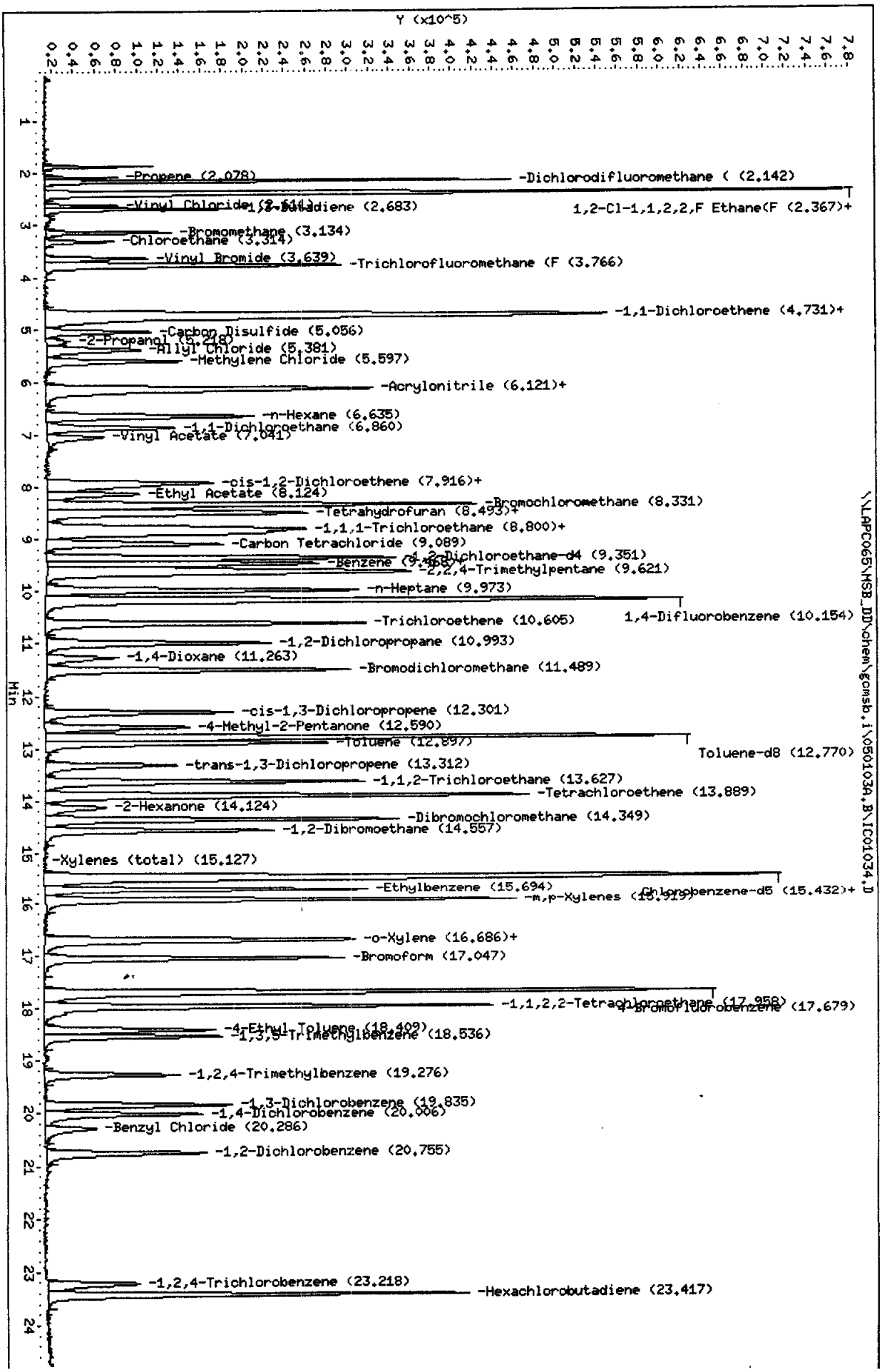
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

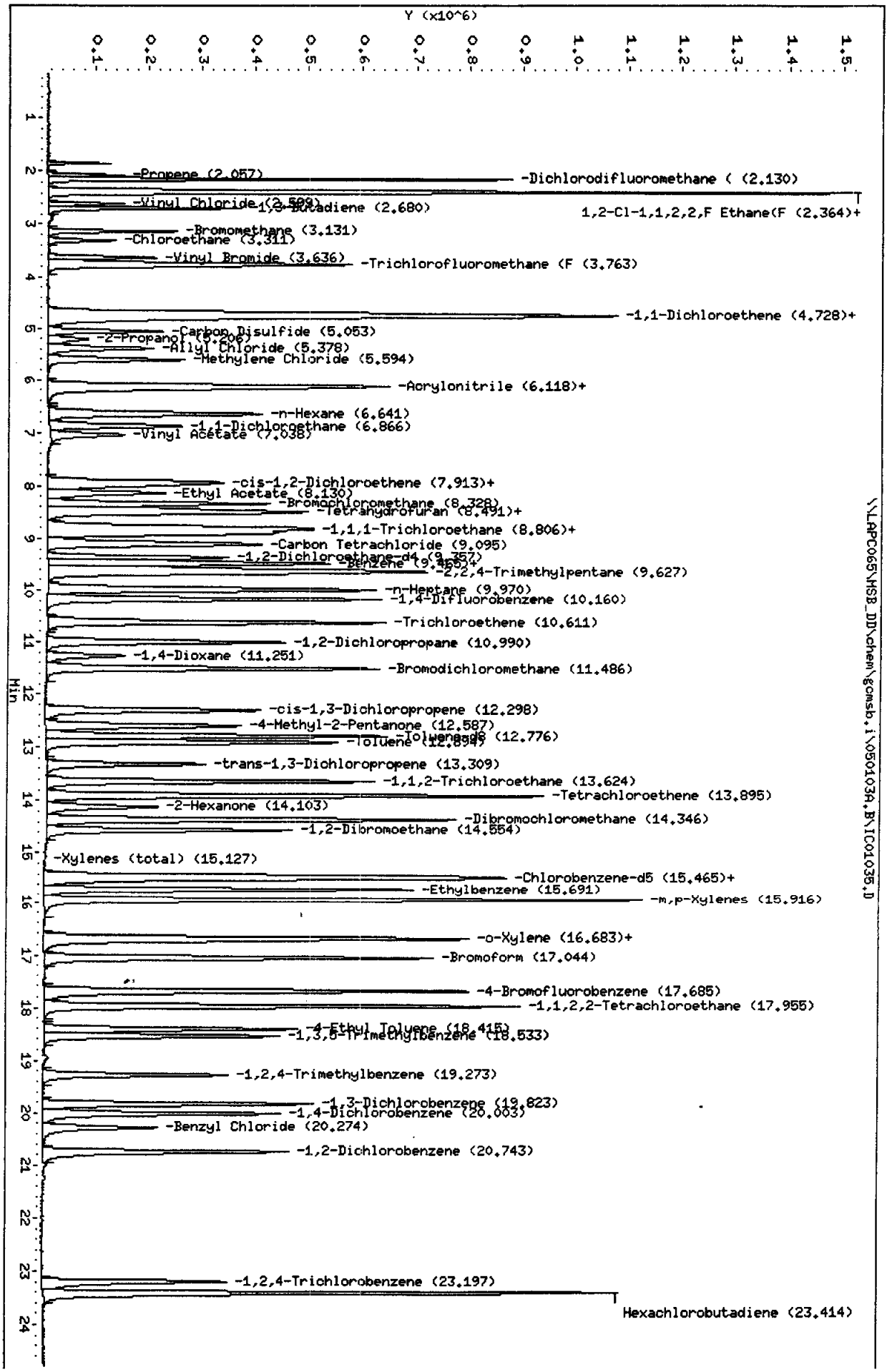
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
	36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
	37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
	40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
	41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
	43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
	44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
	45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
	53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
	54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
	56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
*	58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
	59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
	60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
	61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
	62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
	64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$	66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
	68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
	69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
	70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
	72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
*	73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
	75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
	78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
	81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
	82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
	85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
	86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$	88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
	89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
	91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
	93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
	95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
	96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
	97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
	98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
*	101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
	102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M	99 Xylenes (total)	106				2384108	300.000	320.3
	104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
	105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
	107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
	108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
	110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$	114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

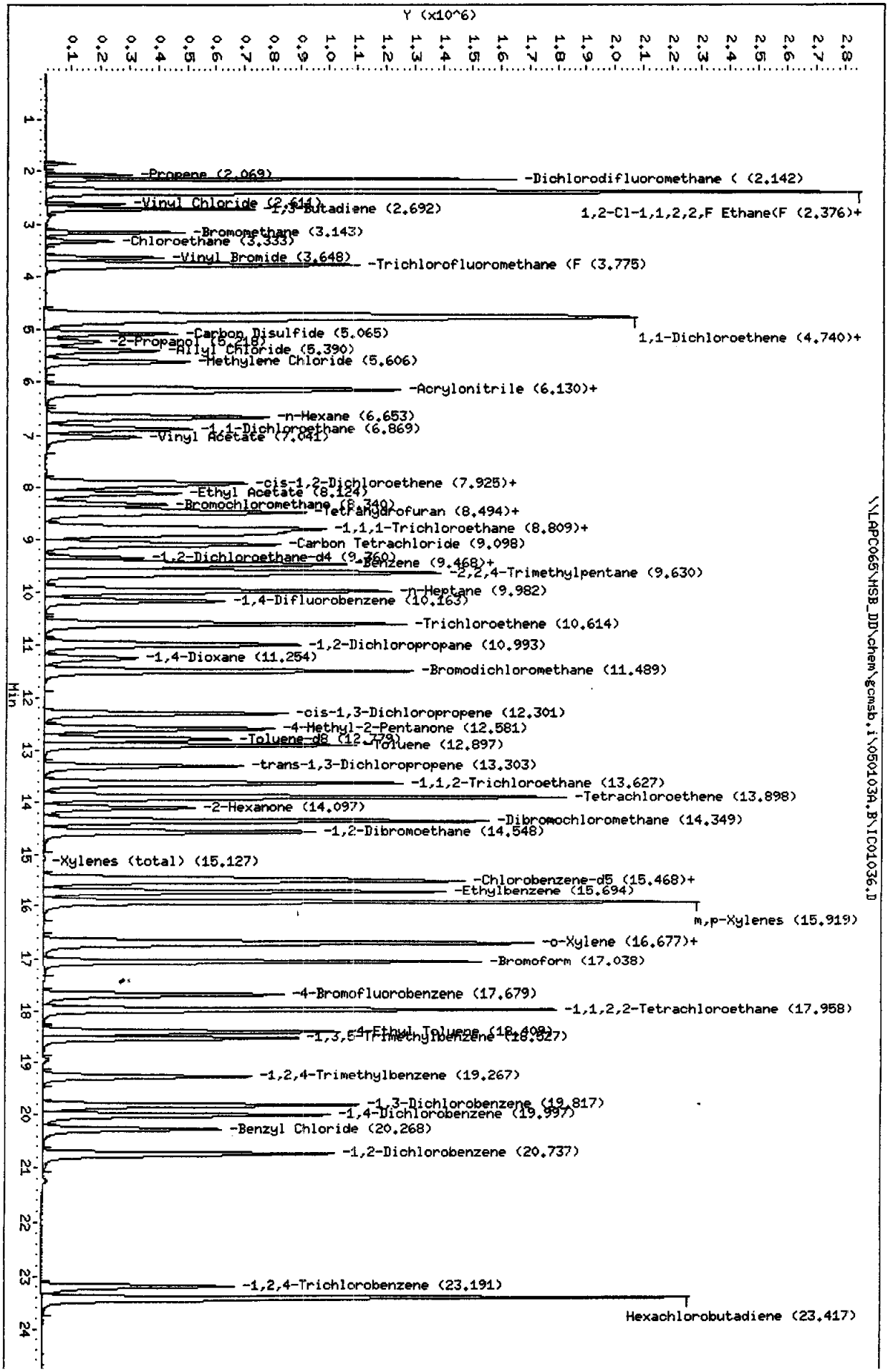
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: HSL04011028
Sample Info: 100 PPBV STD,HSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Lab Smp Id: 500 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

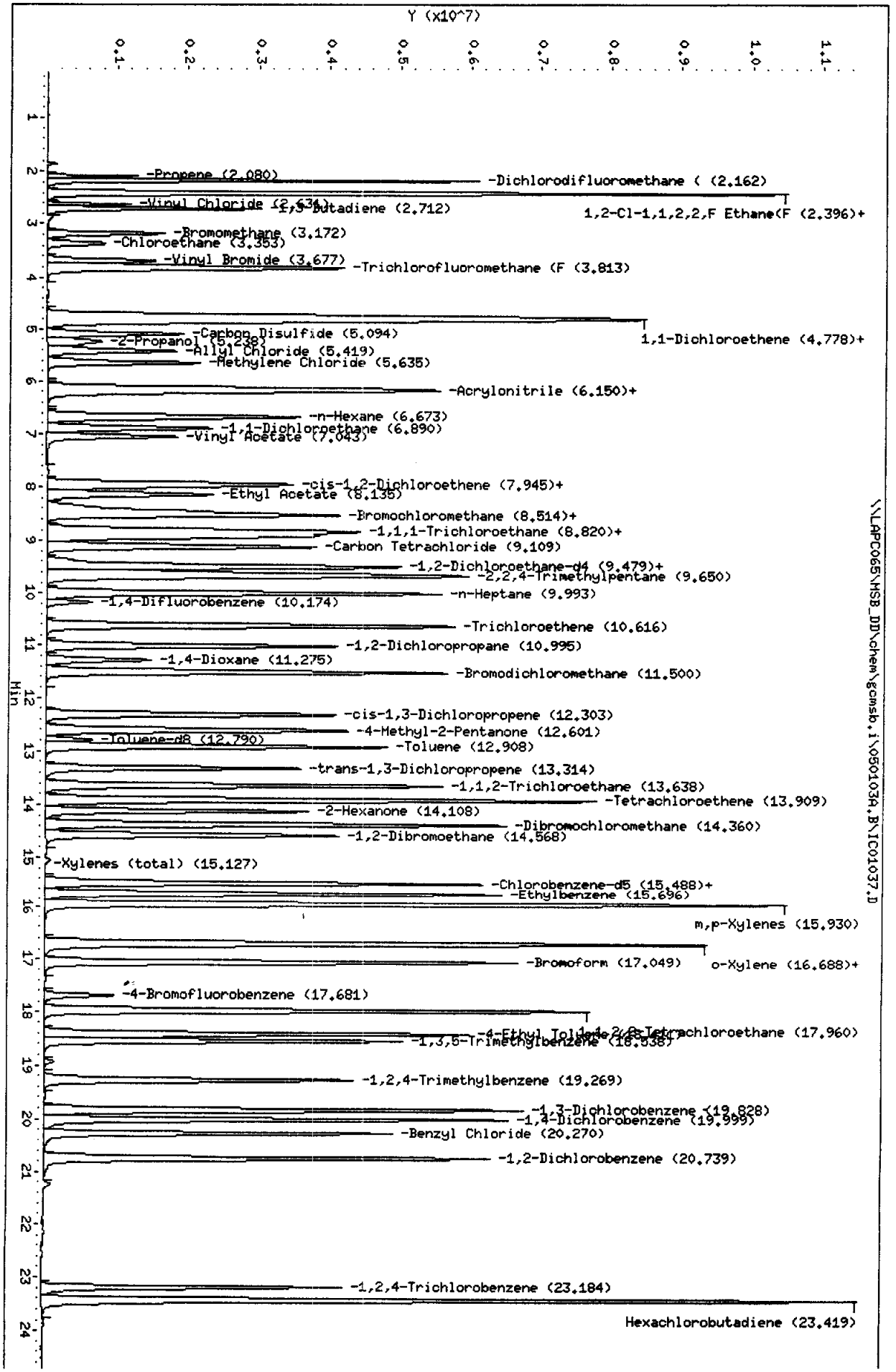
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\0501030.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



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SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011205/501223B

STL Los Angeles
Air Toxics Lab GC/MS Run Log

Instrument ID: CMS-B	Data Directory: D:\GCMSB\ 050112.B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3-05
	Method File: TO14A	Daily Standard: MSL0401 1028	SOP: COF-MS-003
Logbook ID: AMS-041	Tune File: BFO1123.m	LCS Standard: PSL9911359	MDL Date: 1-28-05
		I.S. Standard: PSL9911283	Blank Lot No. 9050301.00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-12-05	0811	BFO1121	–	–	–	BFB	28	–	–	–	m	OK	A	
	0827	CCO1121	–	–	–	CCV	125	–	–	–	m	OK	B	
	0855	LCO1121	–	–	–	LCS	250	–	–	–	m	OK	C	
	0923	LCO1122	–	–	–	LCSD	250	–	–	–	m	OK	C	
	0952	MB01121	–	–	–	Method Blank	500	–	–	–	AA	OK	16	
	1021	B7554	G11 8C2AD	001	G2A	Sam's 8 HR	50	24.1/11.2	–	21.5	AA	OK	1	E4L300234-1
	1053	B7555	G2DG0	↓	SANDIA	066358-001	958	24.5/12.8	–	1	AA	OK	2	ESA100219-1
	1121	B7556	G2DG1	↓	↓	066359-001	500	24.2/12.7	–	1.91	AA	OK	3	↓ -2
	1151	B7557	G2DG2	↓	↓	066360-001	100	24.4/12.8	–	9.53	AA	OK	4	↓ -3
	1226	B7558	G2DG5	↓	↓	066363-001	942	24.1/12.8	–	1	AA	OK	5	↓ -6
	1302	B7559	G2DHE	↓	↓	066364-001	942	24.3/12.9	–	1	AA	OK	6	ESA100222-1
	1338	B7560	G2DHF	↓	↓	066365-001	916	23.8/13.0	–	1	AA	OK	7	↓ -2
	1407	B7561	G2DHG	001	↓	066366-001	935	24.3/13.0	–	1	AA	OK	8	↓ -3
	1439	B7562	G2DHJ	↓	↓	066367-001	965	24.3/12.6	–	1	AA	OK	9	↓ -4
	1508	B7563	G2DHK	↓	↓	066368-001	965	24.3/12.6	–	1	AA	OK	10	↓ -5
	1543	B7564	G2DHL	↓	↓	066369-001	977	24.6/12.6	–	1	AA	OK	11	↓ -6
	1619	CCO1122	–	–	–	ADD-ON CCV	250	–	–	–	AA	OK	12	MSL0501060
	1649	LCO1123	–	–	–	Full LCS	250	–	–	–	m	OK	13	MSL0401 1043

viewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

trument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Prior Page	SOP:
gbook ID:	Tune File:	LCS Standard: 1-12-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-12-05	1723	LL01124	-	-	-	LCSD	250	-	-	-	LL	OK	13	LMSLOY011043
	1753	LL01125	-	-	-	ADD-ON LCS	250		-	-	LL	NO	14	LMSLOS01045
	1828	LL01126	-	-	-		250	-	-	-	LL	NO	14	
	1904	LL01127	-	-	-		250	-	-	-	LL	NO	14	
	1949	MB01122	-	-	-	METHOD BLANK	500	-	-	-	LL	OK	15	
	2015	B7565	G2EN31AC	001	SEROR	SYS INF	25	SEROR	-	20.0	LL	NO	16	ESA110252-1
	2050	B7566	G2EN51AC			SYS EFF	500		-	1.00	LL	NO	1	-2
	2126	B7567	G2FPA1AC			VE-SRC	15		-	33.3	LL	OK	2	ESA120143-1
	2201	B7568	G2FPL1AC			PROC	15		-	33.3	LL	OK	3	-2
	2237	B7569	G2FPM1AC			EFF	500		-	1.00	LL	OK	4	-3
	2312	B7570	G2FR81AC			VE-SRC	50		-	10.0	LL	OK	5	ESA120150-1
	2347	B7571	G2FTC1AC			PROC	120		-	4.17	LL	OK	6	-2
1-13-05	0022	B7572	G2FTG1AC			EFF	500		-	1.00	LL	OK	7	-3
	0107	B7573	G2FTJ1AC			VE-SRC	20		-	25.0	LL	OK	8	ESA120154-1
	0132	B7574	G2FTK1AC			PROC	20		-	25.0	LL	OK	9	-2
	0207	B7575	G2FTM1AC			EFF	500		-	1.00	LL	O/R	10	-3
	0241	B7576	G2FTV1AC			VE-SRC	50		100/20	100	LL	OK	11	ESA120158-1
	0315	B7577	G2FT21AC			EFF	500		-	1.00	LL	OK	12	-2

viewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
MS-B	Method File:	Daily Standard: See Running Log	SOP:
book ID:	Tune File:	LCS Standard: w 1-13-05	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-13-05	0848	37577	G2F75IAL	CO	SECOR	VE-SRC	20	TOUNA	-	250	w	OK	13	ESA120162-1
	0921	37579	G2F76IAL			PROC	100		-	200	w	OK	14	-2
	0954	37580	G2F77IAL			EFF	500		-	100	w	OK	15	-3
	0527	37581	G2F6X1IAL			SYS INF	20		-	250	w	NO	16	ESA120206-1
	0600	37582	G2F7R1AL			EFF	500		-	500	w	NO	1	-2
	0633	37583	G17TM1AE		MITREM	C1616-06A	100	23 5/14.6	-	2.05	w	ND	2	ESA060248-6

w 1-13-05

iewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100222-6

Lab File ID (Standard): CC01121 Date Analyzed: 01/12/05

Instrument ID: GCMSB Time Analyzed: 0827

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	570903	8.30	1208970	10.13	914291	15.38
	UPPER LIMIT	799264	8.80	1692558	10.63	1280007	15.88
	LOWER LIMIT	342542	7.80	725382	9.63	548575	14.88
	EPA SAMPLE NO.						
01	LCS	541957	8.30	1125806	10.12	789091	15.39
02	LCS	535513	8.29	1105628	10.12	791590	15.38
03	BLANK	527252	8.31	1084473	10.13	752511	15.39
04	066358-001	514937	8.29	1094050	10.12	767958	15.39
05	066359-001	506696	8.25	1112436	10.10	777671	15.38
06	066360-001	519702	8.30	1113706	10.12	771221	15.39
07	066363-001	524700	8.29	1093304	10.13	776692	15.39
08	066364-001	501211	8.31	1088273	10.13	744297	15.40
09	066365-001	511634	8.31	1077243	10.14	746163	15.41
10	066366-001	523448	8.32	1081481	10.15	741801	15.40
11	066367-001	513566	8.31	1075961	10.14	769625	15.40
12	066368-001	531894	8.31	1070156	10.14	747466	15.40
13	066369-001	523786	8.31	1081203	10.14	618620	15.41
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII VOA 1/87 Rev.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D
Lab Smp Id:
Inj Date : 12-JAN-2005 08:11
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.060	4.200	(0.000)	95	50530			0.00- 100.00	100.00
4.060	4.200	(0.000)	50	12312			15.00- 40.00	24.37
4.060	4.200	(0.000)	75	29272			30.00- 60.00	57.93
4.060	4.200	(0.000)	96	3591			5.00- 9.00	7.11
4.060	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.060	4.200	(0.000)	174	27037			50.00- 120.00	53.51
4.060	4.200	(0.000)	175	2052			5.00- 9.00	7.59
4.060	4.200	(0.000)	176	26213			95.00- 101.00	96.95
4.060	4.200	(0.000)	177	1787			5.00- 9.00	6.82

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D

Date : 12-JAN-2005 08:11

Client ID:

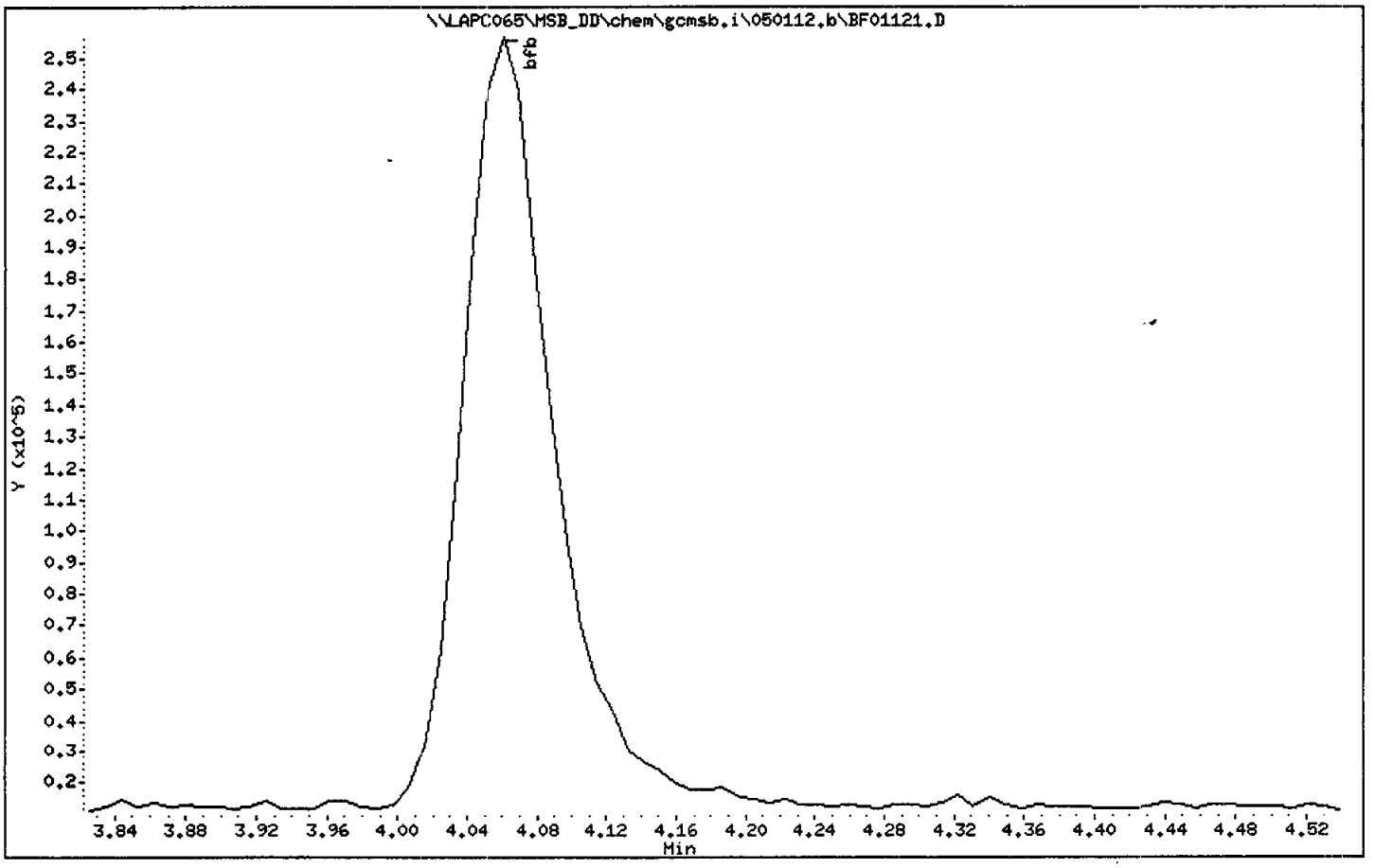
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D

Date : 12-JAN-2005 08:11

Client ID:

Instrument: gcmsb.i

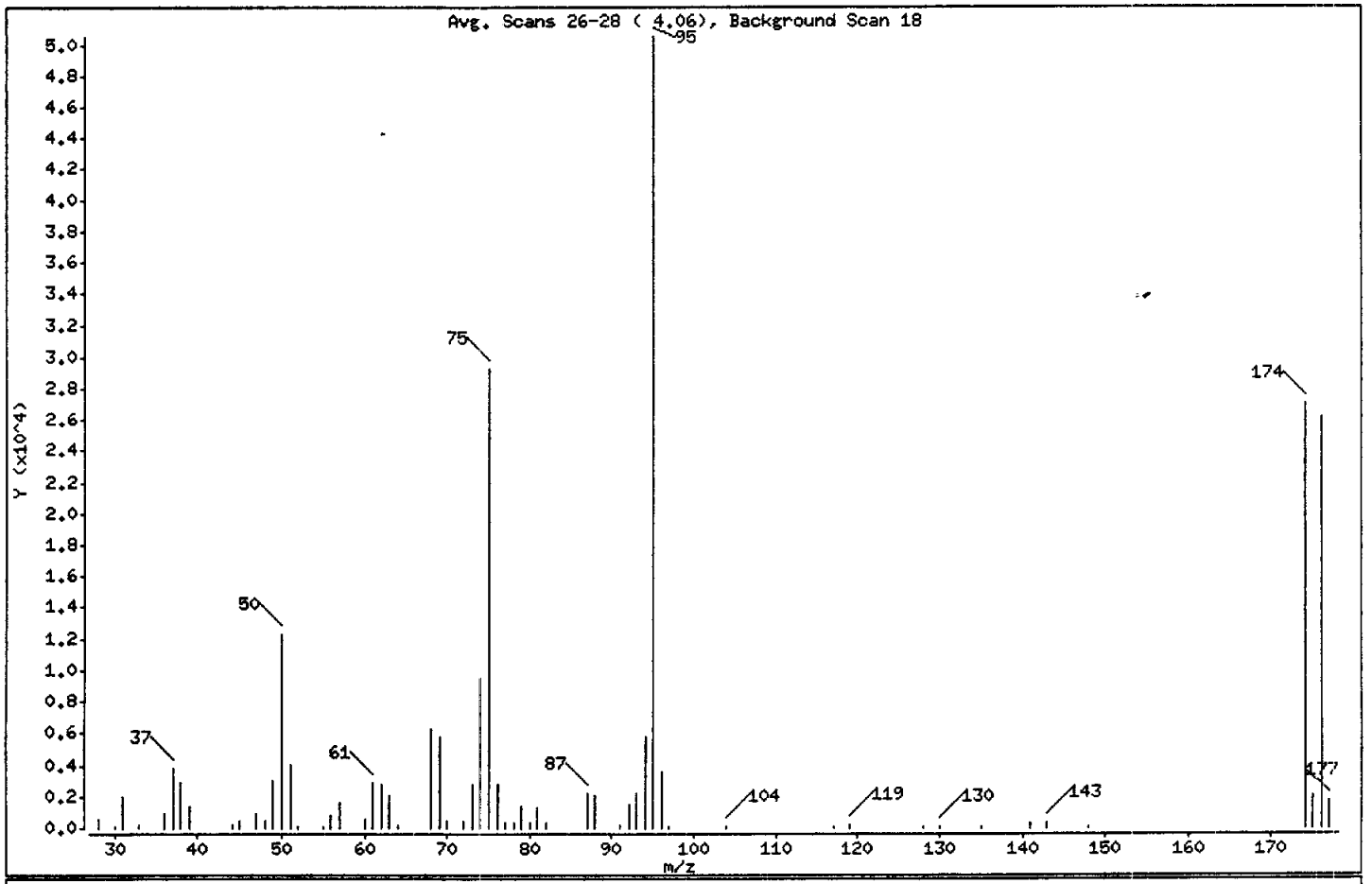
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.37
75	30.00 - 60.00% of mass 95	57.93
96	5.00 - 9.00% of mass 95	7.11
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	53.51
175	5.00 - 9.00% of mass 174	4.06 (7.59)
176	95.00 - 101.00% of mass 174	51.88 (96.95)
177	5.00 - 9.00% of mass 176	3.54 (6.82)

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D

Date : 12-JAN-2005 08:11

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01121.D
Spectrum: Avg. Scans 26-28 (4.06), Background Scan 18
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	626	55.00	63	77.00	398	117.00	169
30.00	81	56.00	828	78.00	299	119.00	275
31.00	1966	57.00	1646	79.00	1381	128.00	62
33.00	264	60.00	621	80.00	355	130.00	63
36.00	921	61.00	2898	81.00	1302	135.00	59
37.00	3856	62.00	2774	82.00	344	141.00	325
38.00	2894	63.00	2073	87.00	2186	143.00	358
39.00	1353	64.00	245	88.00	2115	148.00	74
44.00	188	68.00	6329	91.00	225	174.00	27032
45.00	511	69.00	5817	92.00	1503	175.00	2052
47.00	880	70.00	417	93.00	2187	176.00	26208
48.00	435	72.00	457	94.00	5760	177.00	1787
49.00	3052	73.00	2742	95.00	50528		
50.00	12312	74.00	9488	96.00	3591		
51.00	4100	75.00	29272	97.00	132		
52.00	64	76.00	2740	104.00	66		

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 12-JAN-2005 08:27
Lab File ID: CC01121.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	1 Propene	0.18345	0.17886	0.010	-2.5	30.0	
	3 Dichlorodifluoromethane (F1	2.11052	2.11972	0.010	0.4	30.0	
	5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.63184	0.010	-4.9	30.0	
	8 Chloromethane	0.09369	0.09627	0.100	2.8	30.0	
	9 Vinyl Chloride	0.40660	0.39457	0.010	-3.0	30.0	
	12 1,3-Butadiene	0.27551	0.27833	0.010	1.0	30.0	
	15 Bromomethane	0.50552	0.47173	0.010	-6.7	30.0	
	16 Chloroethane	0.25753	0.25479	0.010	-1.1	30.0	
	19 Vinyl Bromide	0.57915	0.57152	0.010	-1.3	30.0	
	21 Trichlorofluoromethane (F11	2.12773	2.19168	0.010	3.0	30.0	
	28 1,1-Dichloroethene	1.12859	1.11830	0.010	-0.9	30.0	
	30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.37477	0.010	-2.9	30.0	
	31 Acetone	0.16001	0.15019	0.010	-6.1	30.0	
	33 Carbon Disulfide	1.06127	1.12062	0.010	5.6	30.0	
	34 2-Propanol	0.56591	0.53342	0.010	-5.7	30.0	
	36 Allyl Chloride	0.58587	0.60583	0.010	3.4	30.0	
	37 Methylene Chloride	0.69686	0.66467	0.010	-4.6	30.0	
	40 Acrylonitrile	0.18791	0.20079	0.010	6.9	30.0	
	41 trans-1,2-Dichloroethene	0.98199	1.00196	0.010	2.0	30.0	
	42 Methyl-tert-butyl ether[MTB	1.66607	1.58298	0.010	-5.0	30.0	
	43 n-Hexane	0.77083	0.76473	0.010	-0.8	30.0	
	44 1,1-Dichloroethane	1.23672	1.19562	0.100	-3.3	30.0	
	45 Vinyl Acetate	1.19013	1.20564	0.010	1.3	30.0	
	53 cis-1,2-Dichloroethene	0.63910	0.61468	0.010	-3.8	30.0	
	54 2-Butanone	0.21287	0.21435	0.010	0.7	30.0	
	56 Ethyl Acetate	1.14995	1.22635	0.010	6.6	30.0	
	59 Tetrahydrofuran	0.55193	0.52700	0.010	-4.5	30.0	
	60 Chloroform	1.59075	1.58651	0.010	-0.3	30.0	
	61 1,1,1-Trichloroethane	1.59033	1.60058	0.010	0.6	30.0	
	62 Cyclohexane	0.79797	0.76721	0.010	-3.9	30.0	
	64 Carbon Tetrachloride	1.05674	1.49565	0.010	41.5	30.0	<-
$	66 1,2-Dichloroethane-d4	0.41033	0.44342	0.010	8.1	30.0	
	68 Benzene	0.68038	0.67539	0.010	-0.7	30.0	
	69 1,2-Dichloroethane	0.44323	0.46864	0.010	5.7	30.0	
	70 2,2,4-Trimethylpentane	1.74763	1.78282	0.010	2.0	30.0	

AA 1/12/05

1/13/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 12-JAN-2005 08:27
Lab File ID: CC01121.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	72 n-Heptane	0.58544	0.59118	0.010	1.0	30.0
	75 Trichloroethene	0.43657	0.43898	0.010	0.6	30.0
	78 1,2-Dichloropropane	0.16390	0.18000	0.010	9.8	30.0
	81 1,4-Dioxane	0.15796	0.16978	0.010	7.5	30.0
	82 Bromodichloromethane	0.54492	0.62894	0.010	15.4	30.0
	85 cis-1,3-Dichloropropene	0.44931	0.50433	0.010	12.2	30.0
	86 4-Methyl-2-Pentanone	0.22967	0.24241	0.010	5.5	30.0
$	88 Toluene-d8	0.52356	0.53094	0.010	1.4	30.0
	89 Toluene	0.88039	0.87393	0.010	-0.7	30.0
	91 trans-1,3-Dichloropropene	0.42279	0.50011	0.010	18.3	30.0
	93 1,1,2-Trichloroethane	0.56403	0.56280	0.010	-0.2	30.0
	95 Tetrachloroethene	0.78282	0.76056	0.010	-2.8	30.0
	96 2-Hexanone	0.25237	0.25361	0.010	0.5	30.0
	97 Dibromochloromethane	0.94658	1.14732	0.010	21.2	30.0
	98 1,2-Dibromoethane	0.94544	1.01604	0.010	7.5	30.0
	102 Chlorobenzene	0.91801	0.91797	0.300	-0.0	30.0
M	99 Xylenes (total)	0.40771	0.44285	0.010	8.6	30.0
	104 Ethylbenzene	1.42124	1.51983	0.010	6.9	30.0
	105 m,p-Xylenes	0.41273	0.45042	0.010	9.1	30.0
	107 o-Xylene	0.39767	0.42771	0.010	7.6	30.0
	108 Styrene	0.49829	0.56203	0.010	12.8	30.0
	110 Bromoform	0.74450	0.94632	0.100	27.1	30.0
$	114 4-Bromofluorobenzene	0.89318	0.92837	0.010	3.9	30.0
	116 1,1,2,2-Tetrachloroethane	1.35429	1.40140	0.300	3.5	30.0
	123 4-Ethyl Toluene	0.84706	0.99624	0.010	17.6	30.0
	124 1,3,5-Trimethylbenzene	0.94631	0.87217	0.010	-7.8	30.0
	131 1,2,4-Trimethylbenzene	0.27527	0.27526	0.010	-0.0	30.0
	134 1,3-Dichlorobenzene	0.52632	0.58040	0.010	10.3	30.0
	136 1,4-Dichlorobenzene	0.54141	0.53805	0.010	-0.6	30.0
	138 Benzyl Chloride	0.56325	0.57952	0.010	2.9	30.0
	140 1,2-Dichlorobenzene	0.53798	0.54667	0.010	1.6	30.0
	144 1,2,4-Trichlorobenzene	0.26641	0.31026	0.010	16.5	30.0
	145 Hexachlorobutadiene	0.48586	0.45687	0.010	-6.0	30.0

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\CC01121.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 12-JAN-2005 08:27
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.056	2.056	(0.248)	102112	50.0000	48.75
3 Dichlorodifluoromethane (F12)	85	2.128	2.128	(0.256)	1210156	50.0000	50.22
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.353	2.353	(0.284)	931621	50.0000	47.54
8 Chloromethane	52	2.398	2.398	(0.289)	54962	50.0000	51.38
9 Vinyl Chloride	62	2.588	2.588	(0.312)	225263	50.0000	48.52
12 1,3-Butadiene	39	2.660	2.660	(0.321)	317803	100.000	101.0
15 Bromomethane	94	3.120	3.120	(0.376)	269314	50.0000	46.66
16 Chloroethane	64	3.301	3.301	(0.398)	145462	50.0000	49.47
19 Vinyl Bromide	106	3.616	3.616	(0.436)	326285	50.0000	49.34
21 Trichlorofluoromethane (F11)	101	3.743	3.743	(0.451)	1251239	50.0000	51.50
28 1,1-Dichloroethene	61	4.672	4.672	(0.563)	638439	50.0000	49.54
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.717	4.717	(0.568)	1355765	50.0000	48.57
31 Acetone	58	4.825	4.825	(0.581)	85743	50.0000	46.93(Q)
33 Carbon Disulfide	76	5.024	5.024	(0.605)	639763	50.0000	52.80

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.195	5.195	(0.626)	304533	50.0000	47.13
	36 Allyl Chloride	41	5.358	5.358	(0.646)	345868	50.0000	51.70
	37 Methylene Chloride	49	5.565	5.565	(0.671)	379464	50.0000	47.69
	40 Acrylonitrile	53	6.080	6.080	(0.733)	114632	50.0000	53.43
	41 trans-1,2-Dichloroethene	61	6.080	6.080	(0.733)	572024	50.0000	51.02
	42 Methyl-tert-butyl ether[MTBE]	73	6.125	6.125	(0.738)	903730	50.0000	47.51
	43 n-Hexane	41	6.612	6.612	(0.797)	436585	50.0000	49.60
	44 1,1-Dichloroethane	63	6.838	6.838	(0.824)	682580	50.0000	48.34
	45 Vinyl Acetate	43	7.009	7.009	(0.845)	688301	50.0000	50.65
	53 cis-1,2-Dichloroethene	96	7.893	7.893	(0.951)	350925	50.0000	48.09
	54 2-Butanone	72	7.947	7.947	(0.958)	122375	50.0000	50.35
	56 Ethyl Acetate	43	8.092	8.092	(0.975)	700124	50.0000	53.32
*	58 Bromochloromethane	49	8.299	8.299	(1.000)	570903	50.0000	
	59 Tetrahydrofuran	42	8.407	8.407	(1.013)	300865	50.0000	47.74
	60 Chloroform	83	8.471	8.471	(1.021)	905740	50.0000	49.87
	61 1,1,1-Trichloroethane	97	8.768	8.768	(1.057)	913774	50.0000	50.32
	62 Cyclohexane	84	8.868	8.868	(1.068)	438003	50.0000	48.07
	64 Carbon Tetrachloride	117	9.057	9.057	(1.091)	853869	50.0000	70.77
$	66 1,2-Dichloroethane-d4	65	9.319	9.319	(0.920)	536078	50.0000	54.03
	68 Benzene	78	9.418	9.418	(0.930)	816530	50.0000	49.63
	69 1,2-Dichloroethane	62	9.454	9.454	(0.933)	566568	50.0000	52.86
	70 2,2,4-Trimethylpentane	57	9.589	9.589	(0.947)	2155383	50.0000	51.01
	72 n-Heptane	43	9.941	9.941	(0.981)	714717	50.0000	50.49
*	73 1,4-Difluorobenzene	114	10.131	10.131	(1.000)	1208970	50.0000	
	75 Trichloroethene	130	10.573	10.573	(1.044)	530718	50.0000	50.28
	78 1,2-Dichloropropane	76	10.961	10.961	(1.082)	217611	50.0000	54.91
	81 1,4-Dioxane	88	11.223	11.223	(1.108)	205255	50.0000	53.74
	82 Bromodichloromethane	85	11.457	11.457	(1.131)	760372	50.0000	57.71
	85 cis-1,3-Dichloropropene	75	12.260	12.260	(1.210)	609714	50.0000	56.12
	86 4-Methyl-2-Pentanone	58	12.549	12.549	(1.239)	293065	50.0000	52.77(Q)
$	88 Toluene-d8	100	12.738	12.738	(1.257)	641885	50.0000	50.70
	89 Toluene	91	12.856	12.856	(1.269)	1056552	50.0000	49.63
	91 trans-1,3-Dichloropropene	75	13.271	13.271	(0.863)	457242	50.0000	59.14
	93 1,1,2-Trichloroethane	97	13.586	13.586	(0.883)	514560	50.0000	49.89
	95 Tetrachloroethene	166	13.857	13.857	(0.901)	695374	50.0000	48.58
	96 2-Hexanone	58	14.074	14.074	(0.915)	231872	50.0000	50.24(Q)
	97 Dibromochloromethane	129	14.308	14.308	(0.930)	1048983	50.0000	60.60
	98 1,2-Dibromoethane	107	14.516	14.516	(0.944)	928952	50.0000	53.73
*	101 Chlorobenzene-d5	117	15.382	15.382	(1.000)	914291	50.0000	
	102 Chlorobenzene	112	15.436	15.436	(1.004)	839287	50.0000	50.00
M	99 Xylenes (total)	106				1214688	150.000	162.9
	104 Ethylbenzene	91	15.653	15.653	(1.018)	1389567	50.0000	53.47
	105 m,p-Xylenes	106	15.878	15.878	(1.032)	823635	100.000	109.1
	107 o-Xylene	106	16.627	16.627	(1.081)	391053	50.0000	53.78
	108 Styrene	104	16.663	16.663	(1.083)	513856	50.0000	56.40
	110 Bromoform	173	16.997	16.997	(1.105)	865213	50.0000	63.55
$	114 4-Bromofluorobenzene	95	17.638	17.638	(1.147)	848801	50.0000	51.97

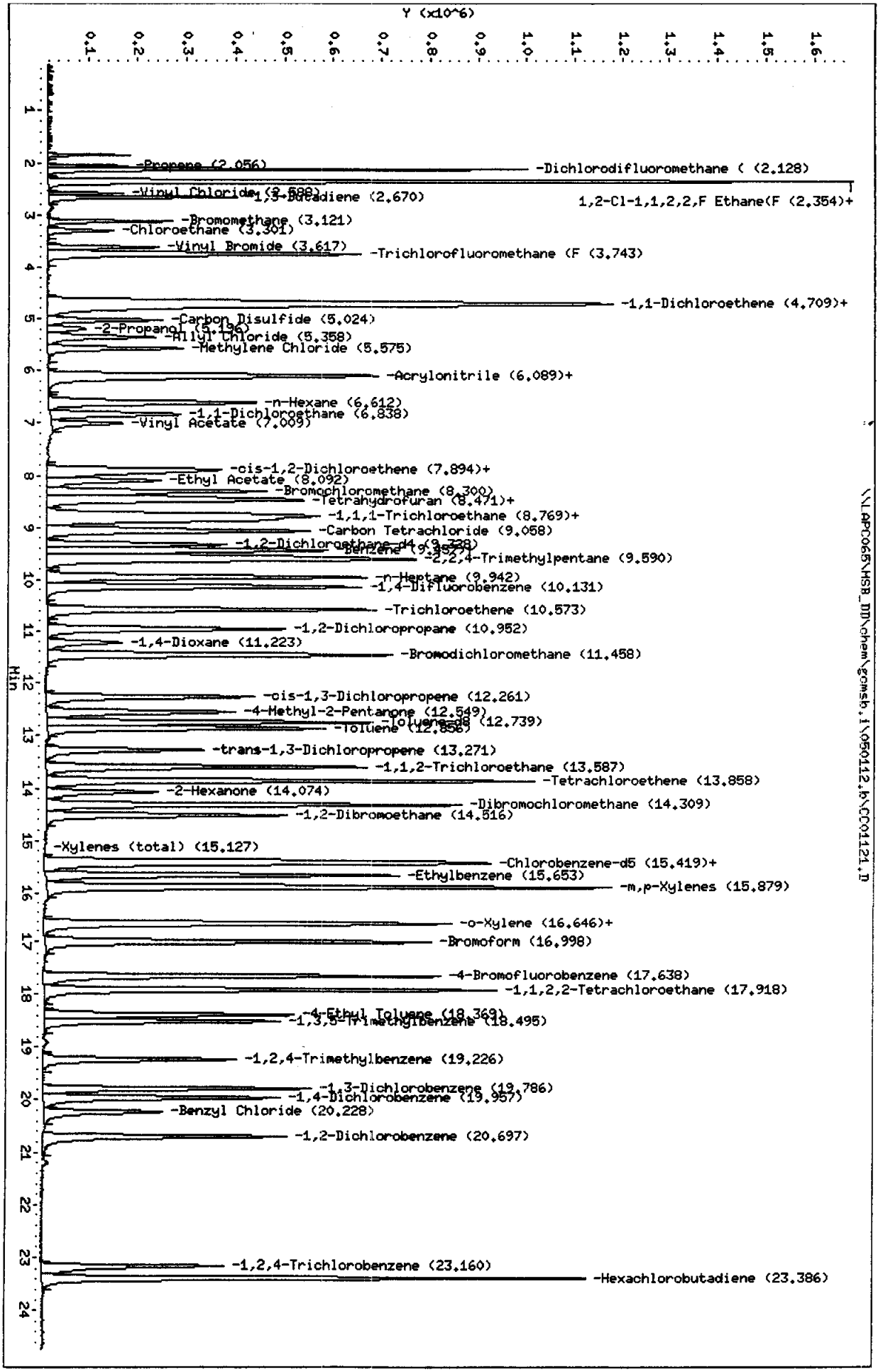
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.917	17.917	(1.165)	1281292	50.0000	51.74
123 4-Ethyl Toluene	105	18.369	18.369	(1.194)	910856	50.0000	58.81
124 1,3,5-Trimethylbenzene	105	18.495	18.495	(1.202)	797418	50.0000	46.08
131 1,2,4-Trimethylbenzene	120	19.226	19.226	(1.250)	251671	50.0000	50.00
134 1,3-Dichlorobenzene	146	19.776	19.776	(1.286)	530654	50.0000	55.14
136 1,4-Dichlorobenzene	146	19.957	19.957	(1.297)	491930	50.0000	49.69
138 Benzyl Chloride	91	20.227	20.227	(1.315)	529852	50.0000	51.44
140 1,2-Dichlorobenzene	146	20.696	20.696	(1.345)	499817	50.0000	50.81
144 1,2,4-Trichlorobenzene	180	23.160	23.160	(1.506)	283666	50.0000	58.23
145 Hexachlorobutadiene	225	23.385	23.385	(1.520)	417713	50.0000	47.02

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\CC01121.D
Date : 12-JAN-2005 08:27
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



Reviewed By: ZY Date: 1/13/05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.B/LC01121.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 12-JAN-2005 08:55

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.B/LC01122.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 12-JAN-2005 09:23

	Concentration				%Recovery			RPD	
	Mass Spiked		Measured						
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	53.4	53.4	53.4	105.7	70	125	0	20
Methylene Chloride									
54.5	188.95	57.5	56.7	57.1	104.8	75	120	1	20
Trichloroethene									
49.5	265.47	50.6	51.7	51.2	103.4	70	125	2	20
Toluene									
49.5	186.17	50.1	51.4	50.7	102.5	75	125	3	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	55.0	55.9	55.4	110.9	65	130	2	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01121.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 12-JAN-2005 08:55
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.670	4.672	(0.563)	653620	53.4310	53.43
37 Methylene Chloride	49	5.572	5.565	(0.672)	434382	57.5084	57.51
* 58 Bromochloromethane	49	8.297	8.299	(1.000)	541957	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.325	9.319	(0.922)	480027	51.9564	51.96
* 73 1,4-Difluorobenzene	114	10.119	10.131	(1.000)	1125806	50.0000	
75 Trichloroethene	130	10.570	10.573	(1.045)	497825	50.6438	50.64
$ 88 Toluene-d8	100	12.736	12.738	(1.259)	585805	49.6926	49.69
89 Toluene	91	12.862	12.856	(1.271)	992320	50.0593	50.06
* 101 Chlorobenzene-d5	117	15.388	15.382	(1.000)	789091	50.0000	
$ 114 4-Bromofluorobenzene	95	17.644	17.638	(1.147)	615271	43.6484	43.65
116 1,1,2,2-Tetrachloroethane	83	17.915	17.917	(1.164)	1174692	54.9609	54.96

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01121.D

Date : 12-JAN-2005 08:55

Client ID: LCS

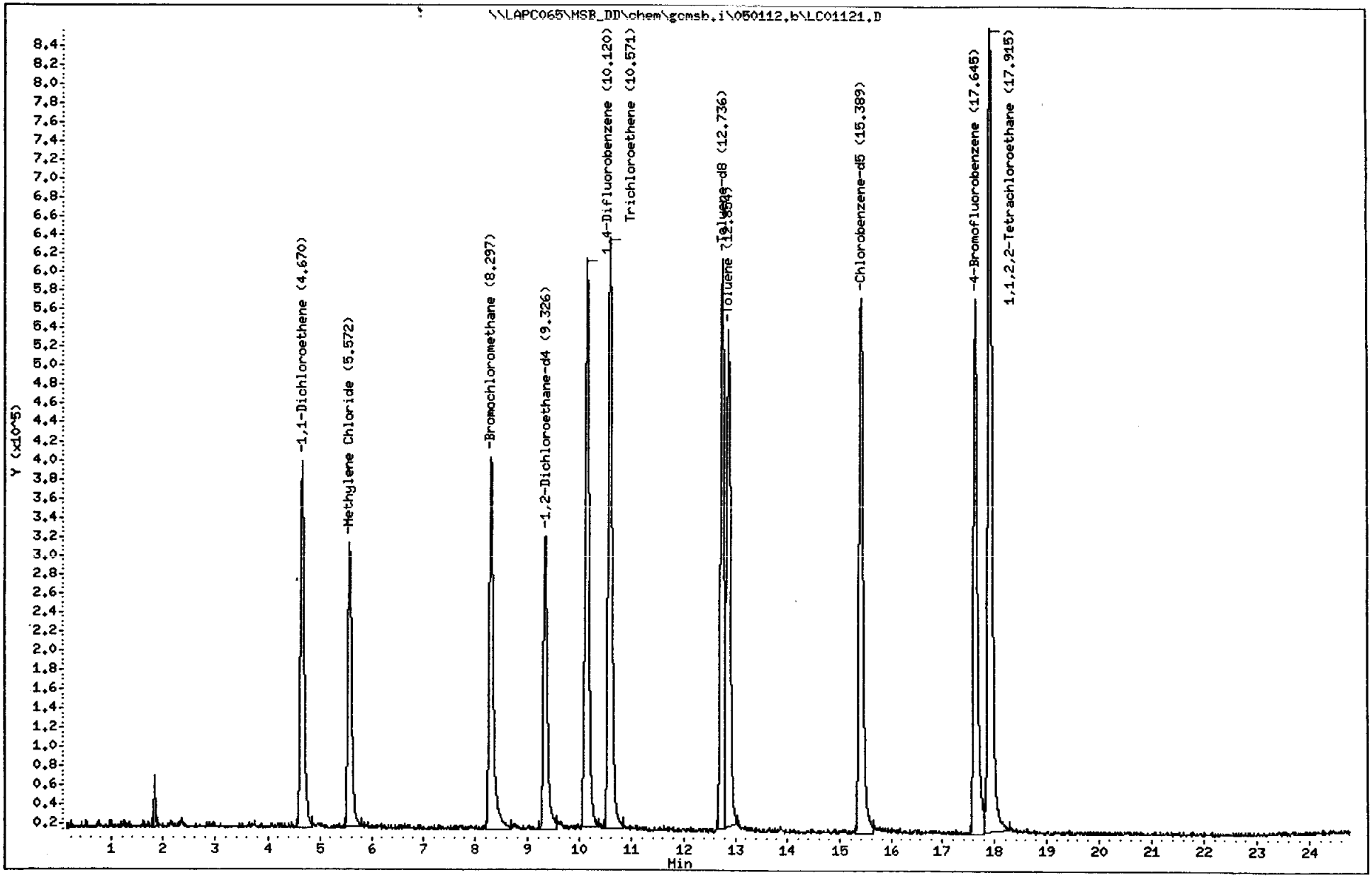
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01122.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 12-JAN-2005 09:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.663	4.672	(0.563)	644867	53.3498	53.35
37 Methylene Chloride	49	5.565	5.565	(0.671)	422992	56.6744	56.67
* 58 Bromochloromethane	49	8.290	8.299	(1.000)	535513	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.319	9.319	(0.921)	471819	52.0000	52.00
* 73 1,4-Difluorobenzene	114	10.122	10.131	(1.000)	1105628	50.0000	
75 Trichloroethene	130	10.564	10.573	(1.044)	499117	51.7019	51.70
$ 88 Toluene-d8	100	12.738	12.738	(1.258)	581811	50.2545	50.25
89 Toluene	91	12.847	12.856	(1.269)	1000109	51.3729	51.37
* 101 Chlorobenzene-d5	117	15.382	15.382	(1.000)	791590	50.0000	
$ 114 4-Bromofluorobenzene	95	17.638	17.638	(1.147)	638591	45.1598	45.16
116 1,1,2,2-Tetrachloroethane	83	17.908	17.917	(1.164)	1198822	55.9129	55.91

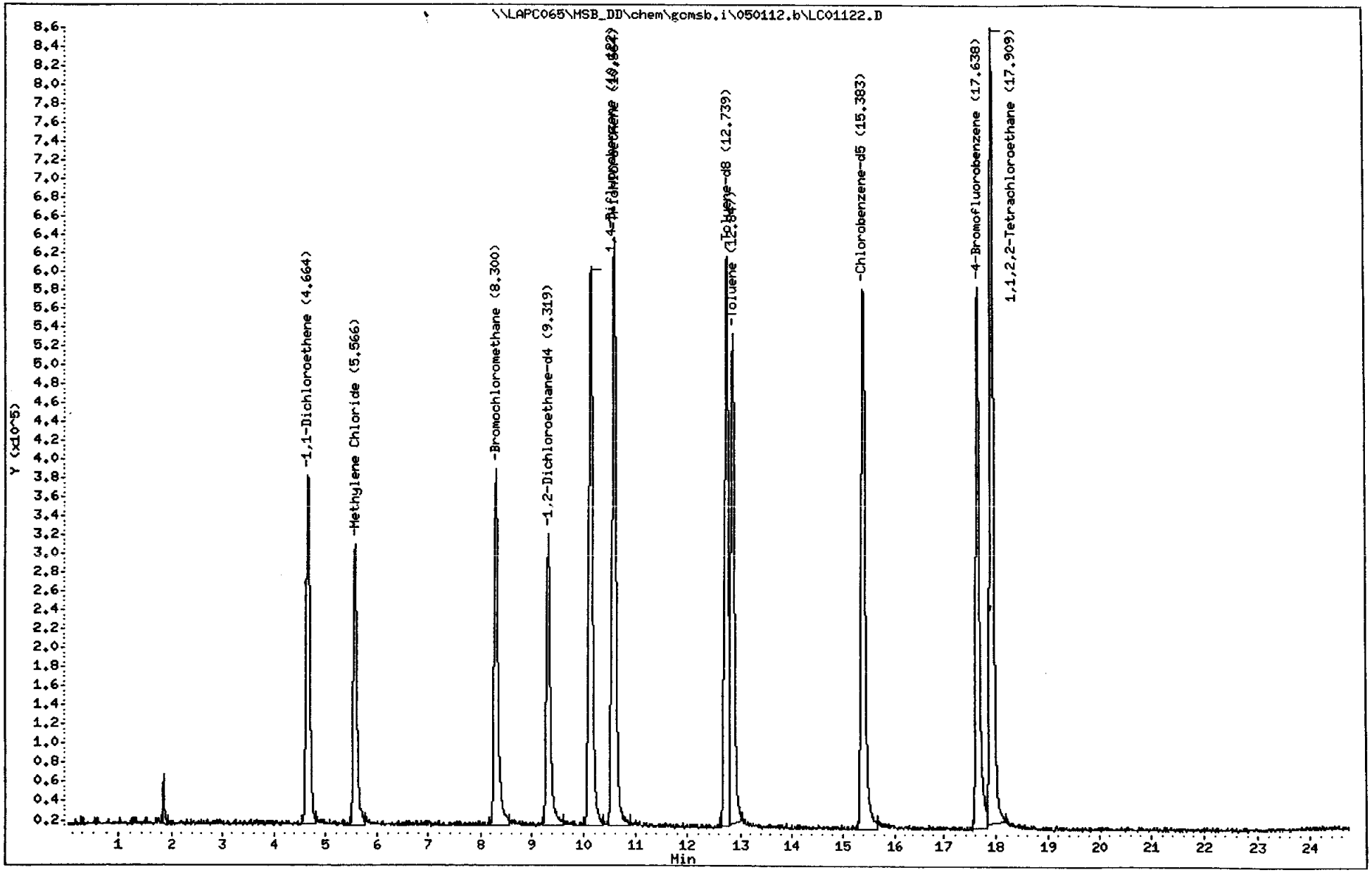
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01122.D
Date : 12-JAN-2005 09:23
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\MB01121.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 12-JAN-2005 09:52
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.307	8.299	(1.000)	527252	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.326	9.319	(0.921)	460336	51.7241	51.72
* 73 1,4-Difluorobenzene	114	10.129	10.131	(1.000)	1084473	50.0000	
$ 88 Toluene-d8	100	12.737	12.738	(1.257)	553873	48.7746	48.77
* 101 Chlorobenzene-d5	117	15.389	15.382	(1.000)	752511	50.0000	
$ 114 4-Bromofluorobenzene	95	17.645	17.638	(1.147)	545640	40.5903	40.59

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\MB01121.D

Date : 12-JAN-2005 09:52

Client ID: BLANK

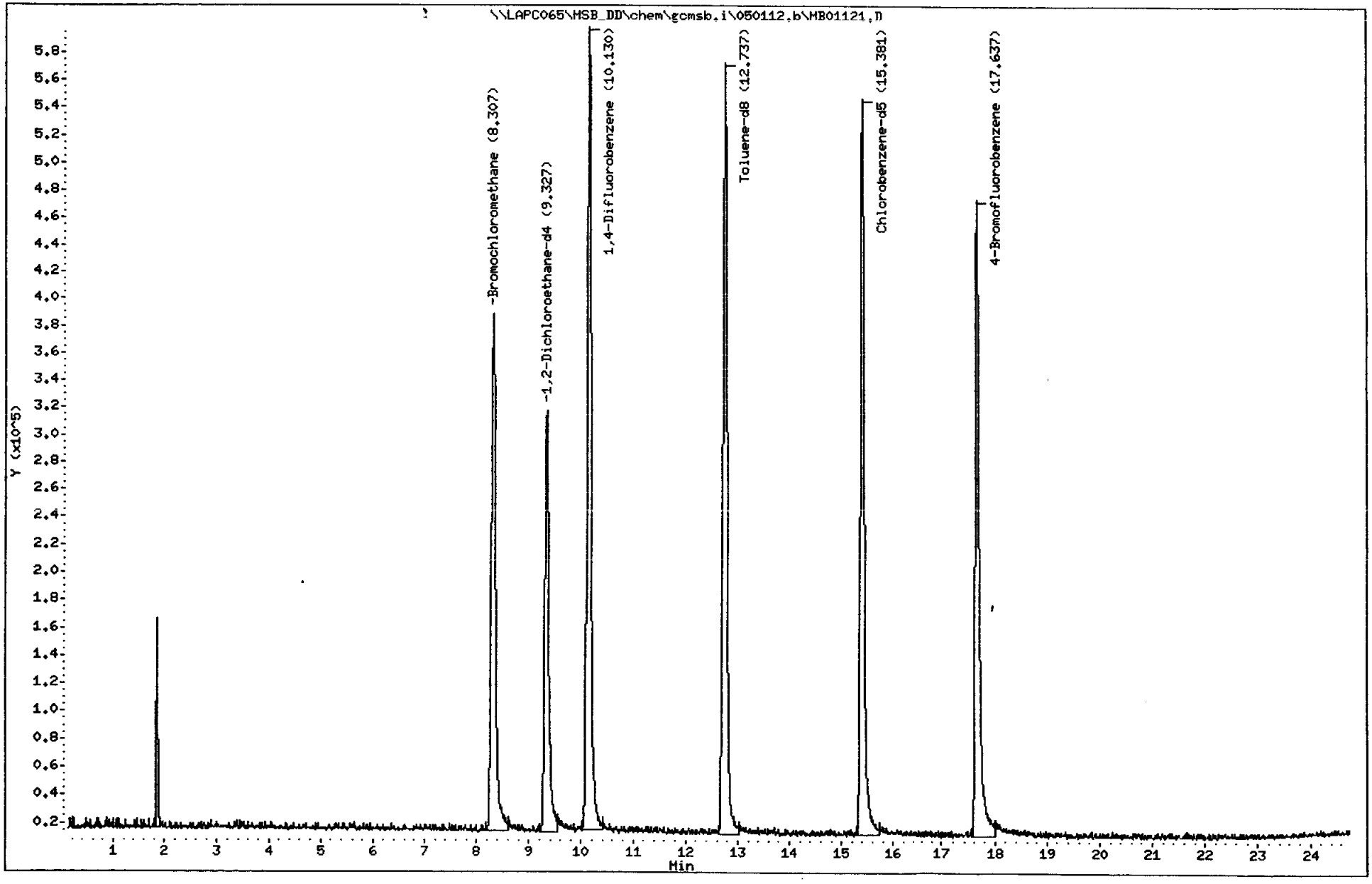
Sample Info: BLANK,BLANK,

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7559.D
Lab Smp Id: G2DHE1AD Client Smp ID: 066364-001
Inj Date : 12-JAN-2005 13:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHE1AD,066364-001,SANDIA,E5A100222-1
Misc Info : 24.3,12.9,500,942,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.900	InitPres
CalVol	500.000	CalVol
SmpVol	942.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.134	2.128	(0.257)	12493	0.59052	0.5904(a)
* 58 Bromochloromethane	49	8.306	8.299	(1.000)	501211	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.325	9.319	(0.921)	462641	51.8016	51.79
* 73 1,4-Difluorobenzene	114	10.128	10.131	(1.000)	1088273	50.0000	
75 Trichloroethene	130	10.588	10.573	(1.045)	47605	5.00990	5.009
$ 88 Toluene-d8	100	12.745	12.738	(1.258)	559552	49.1026	49.10
89 Toluene	91	12.880	12.856	(1.272)	21351	1.11424	1.114(a)
* 101 Chlorobenzene-d5	117	15.398	15.382	(1.000)	744297	50.0000	
$ 114 4-Bromofluorobenzene	95	17.653	17.638	(1.146)	554082	41.6732	41.67

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7559.D

Date : 12-JAN-2005 13:02

Client ID: 066364-001

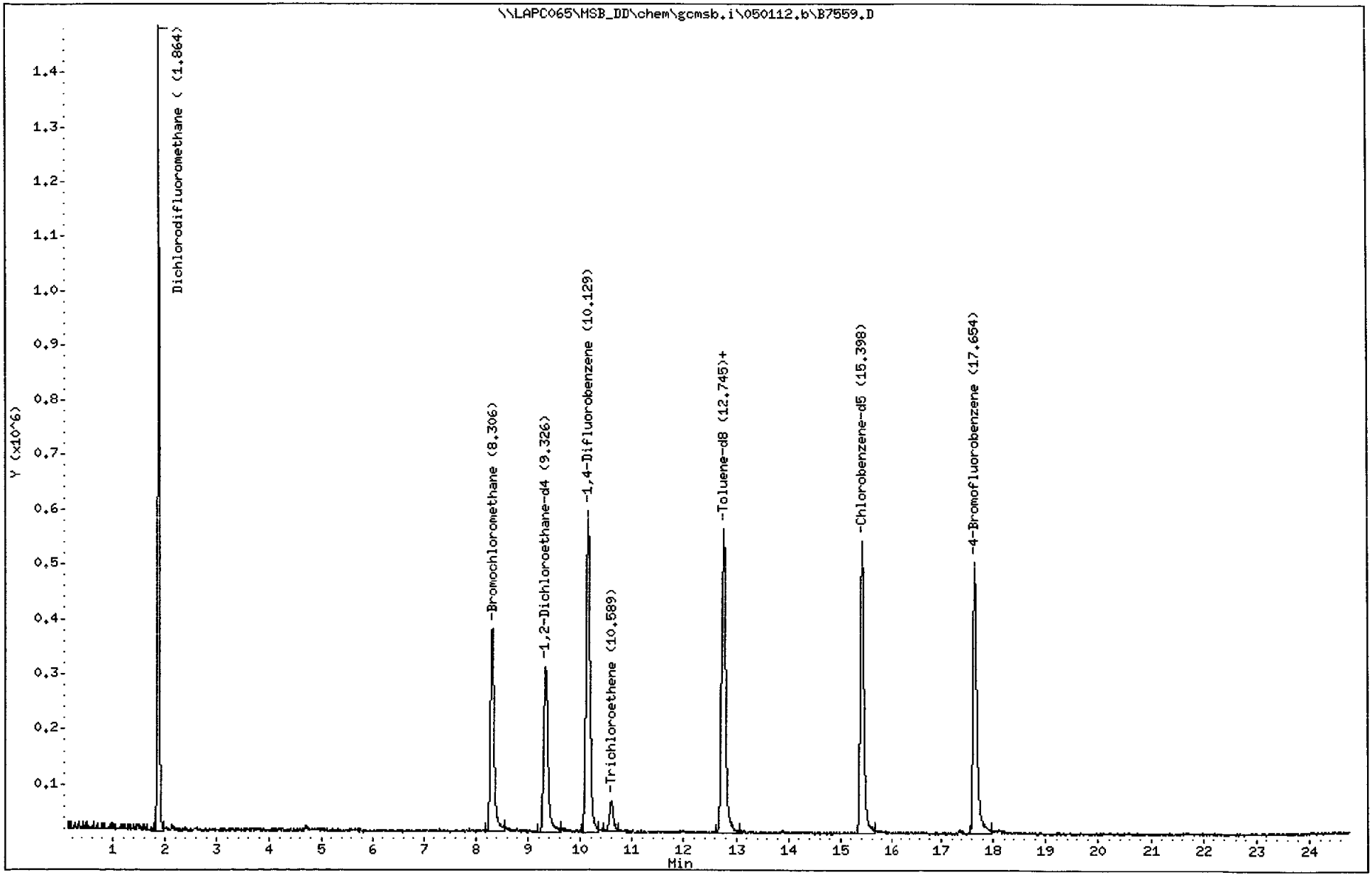
Sample Info: G2DHE1AD,066364-001,SANDIA,E5A100222-1

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7559.D

Date : 12-JAN-2005 13:02

Client ID: 066364-001

Instrument: gcmsb.i

Sample Info: G2DHE1AD,066364-001,SANDIA,E5A100222-1

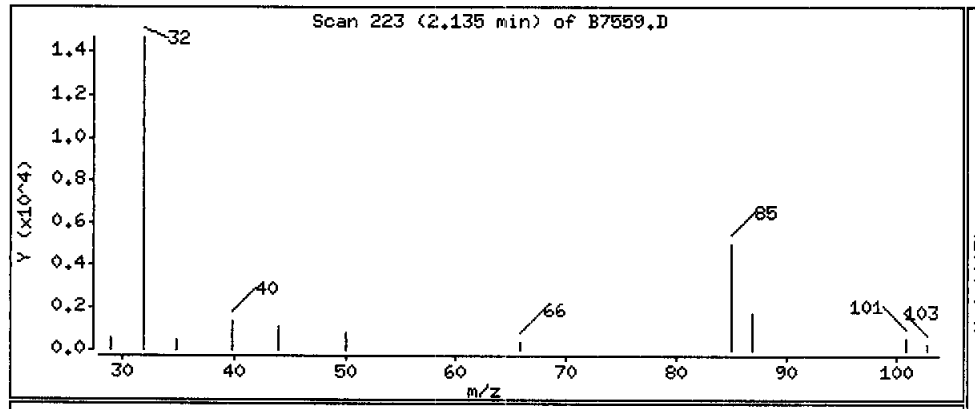
Operator: DLK

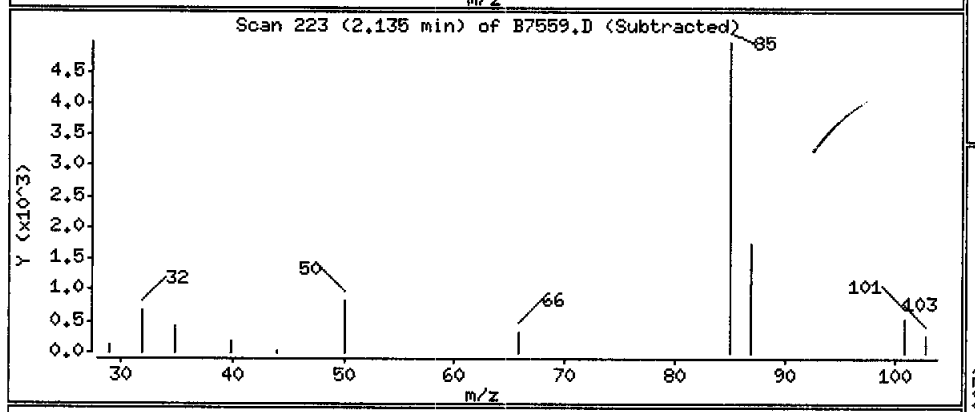
Column phase: J&W DB-624

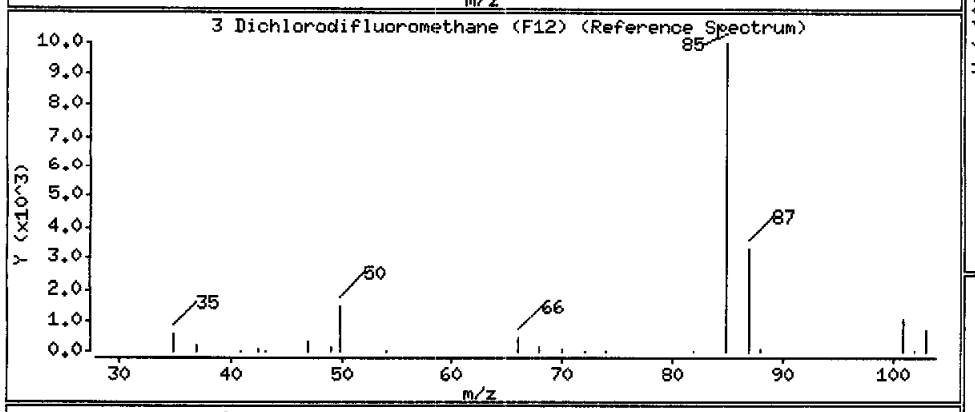
Column diameter: 0.53

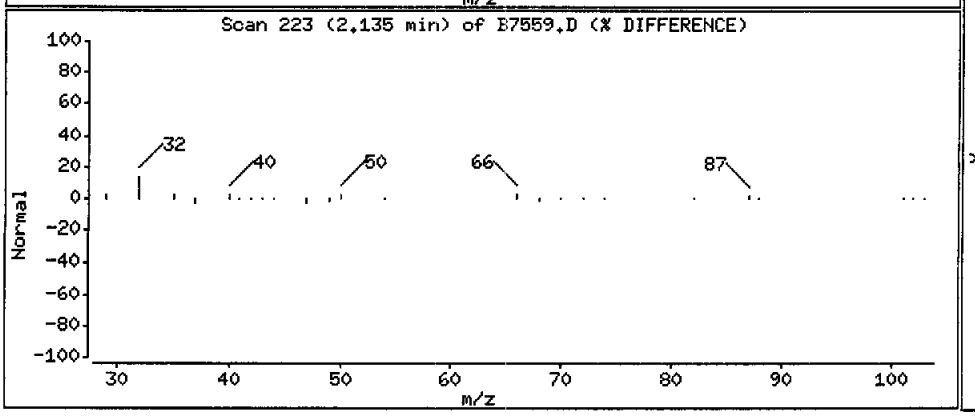
3 Dichlorodifluoromethane (F12)

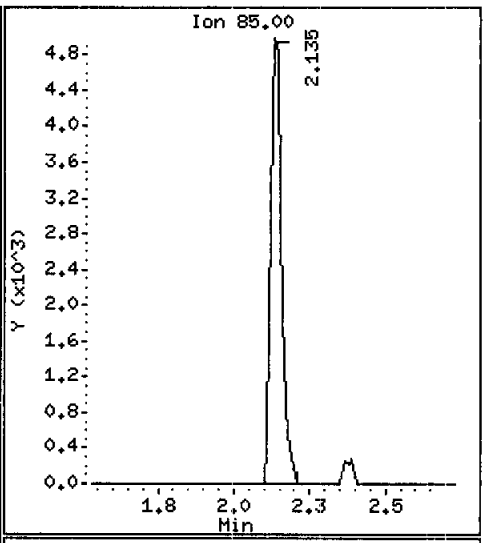
Concentration: 0.5904 ppbv

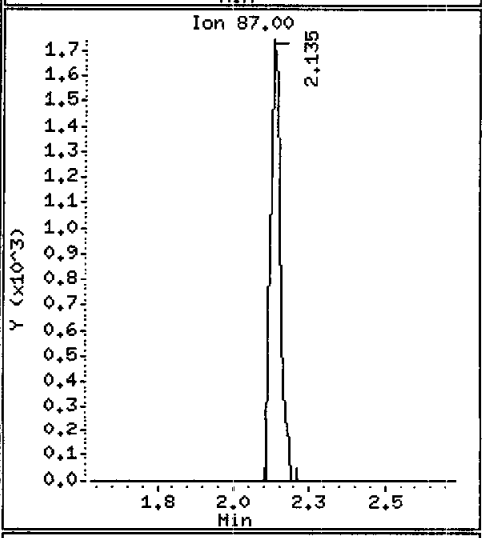


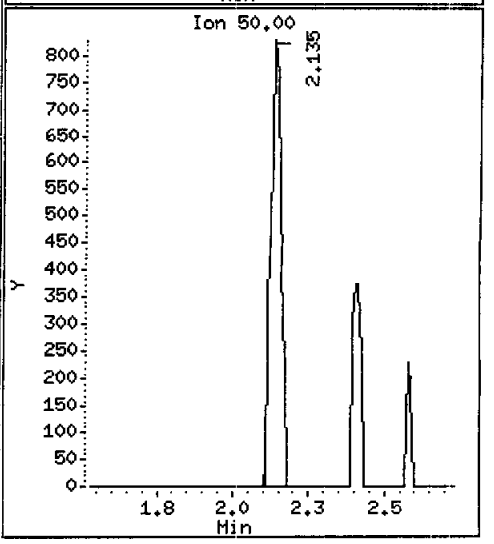












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7559.D

Date : 12-JAN-2005 13:02

Client ID: 066364-001

Instrument: gcmsb.i

Sample Info: G2DHE1AD,066364-001,SANDIA,E5A100222-1

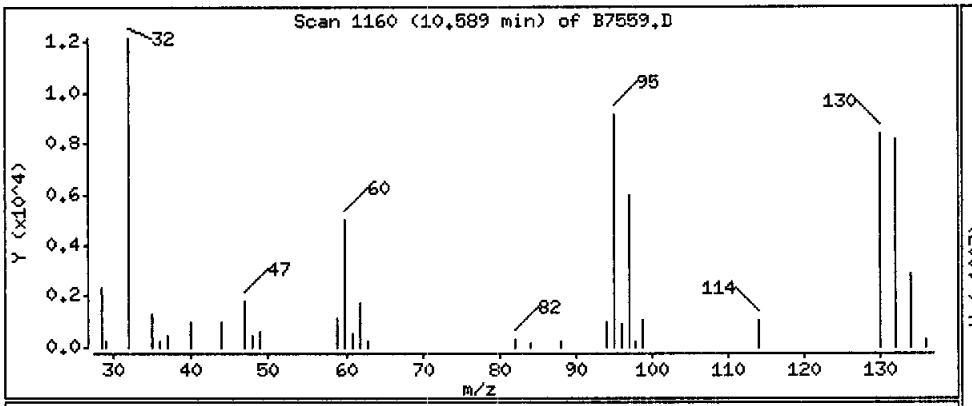
Operator: DLK

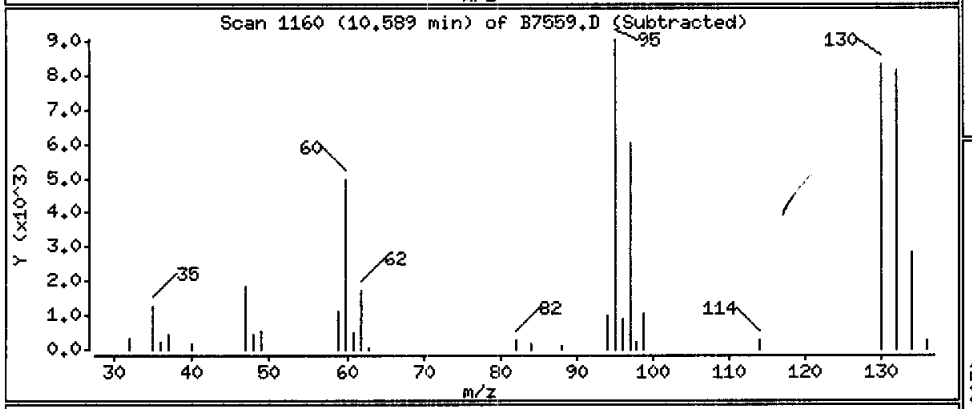
Column phase: J&W DB-624

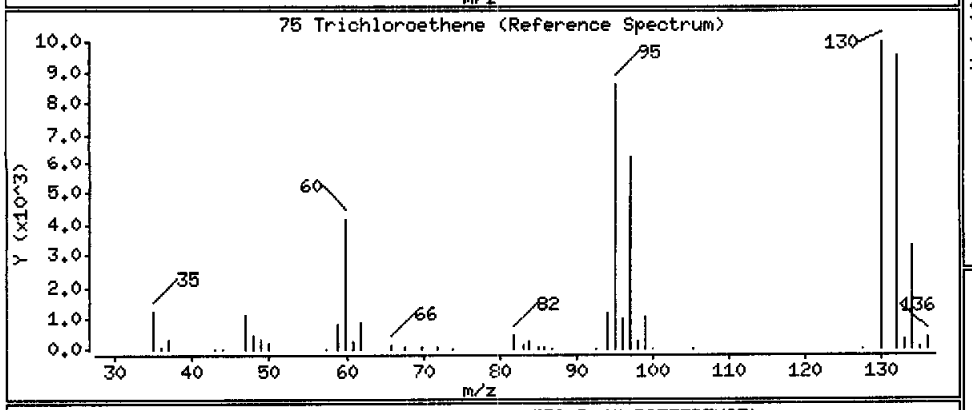
Column diameter: 0.53

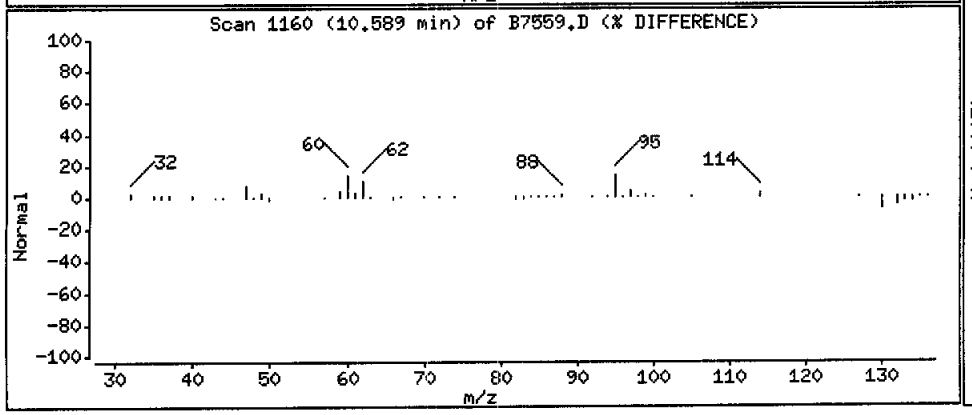
75 Trichloroethene

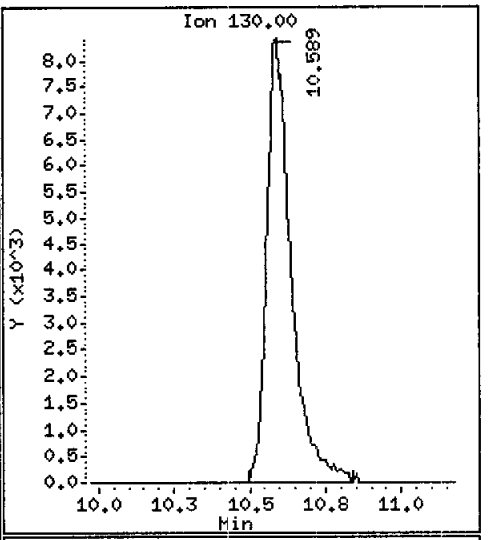
Concentration: 5.009 ppbv

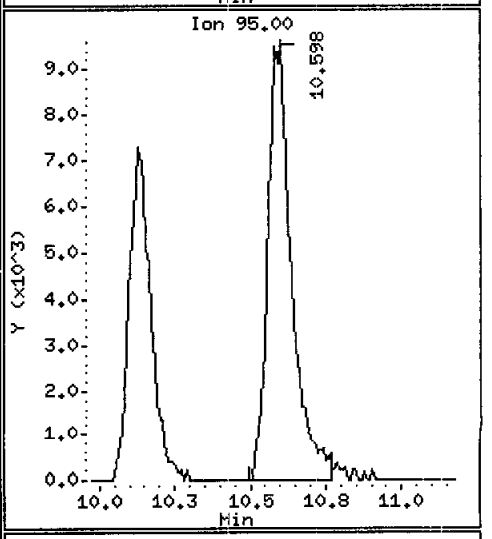


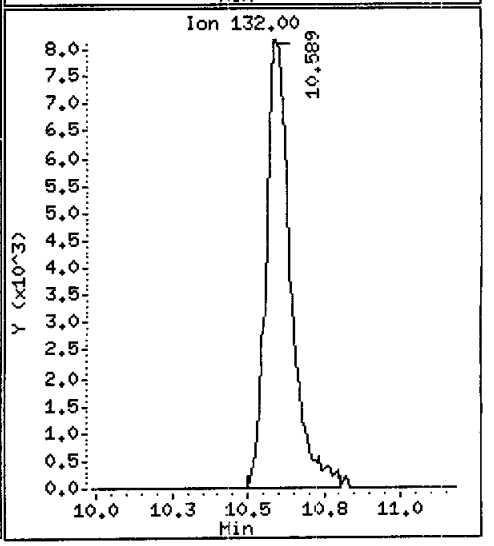












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7559.D

Date : 12-JAN-2005 13:02

Client ID: 066364-001

Instrument: gcmsb.i

Sample Info: G2DHE1AD,066364-001,SANDIA,E5A100222-1

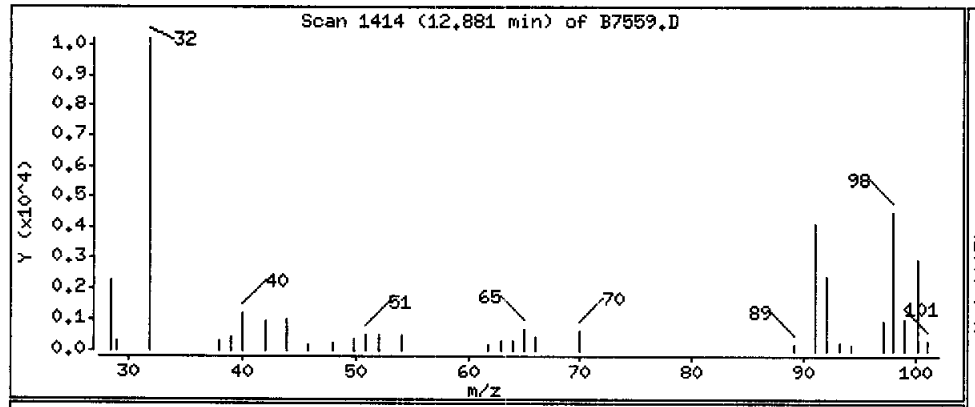
Operator: DLK

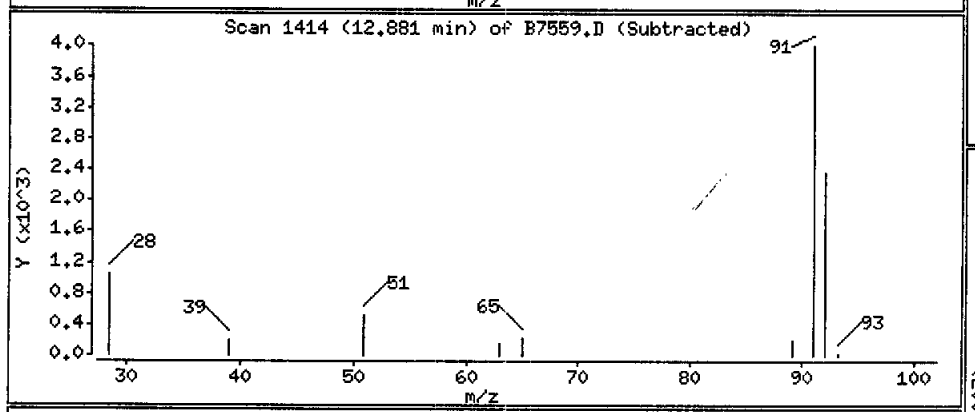
Column phase: J&W DB-624

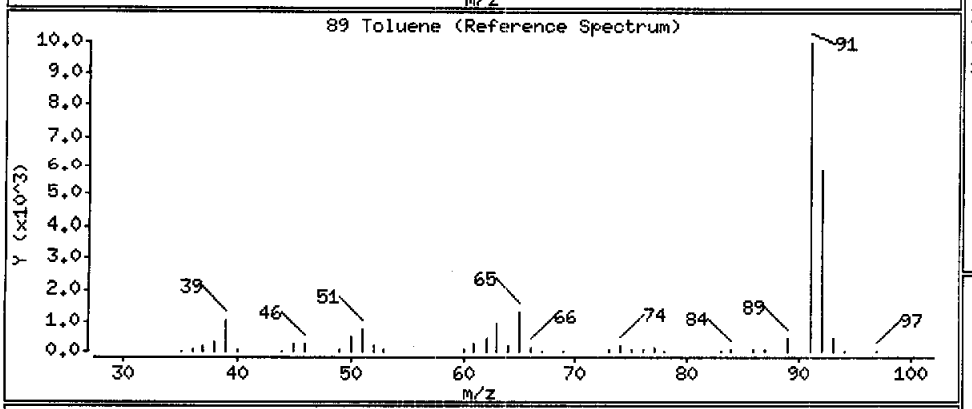
Column diameter: 0.53

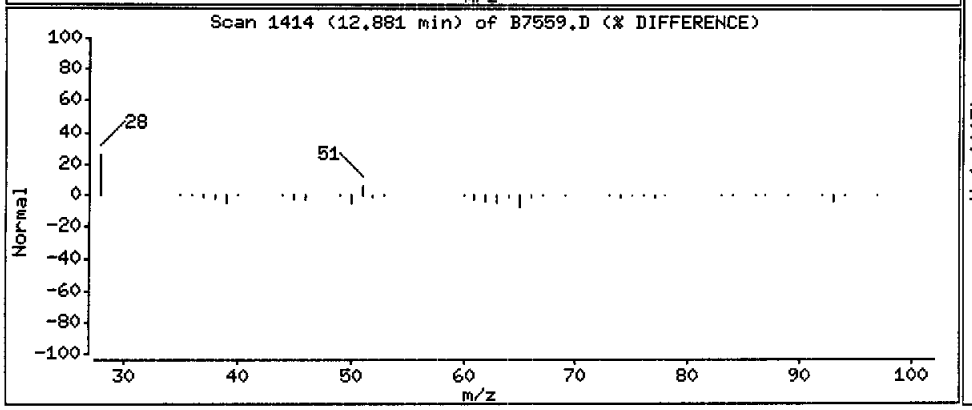
89 Toluene

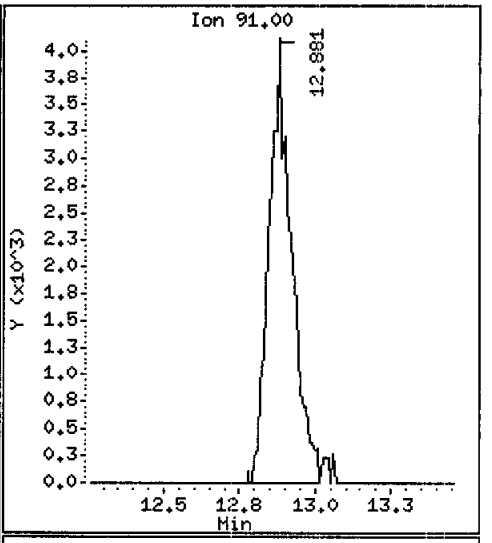
Concentration: 1.114 ppbv

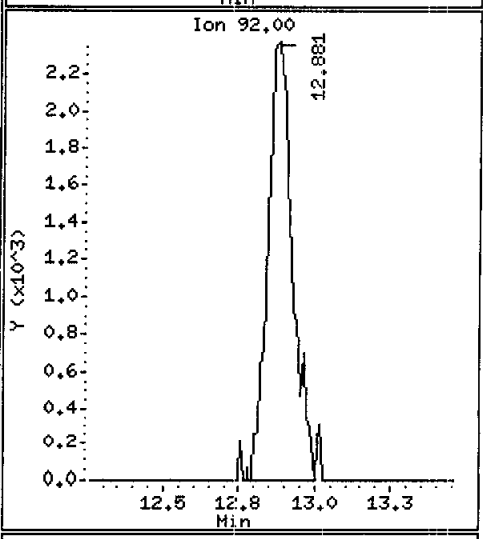


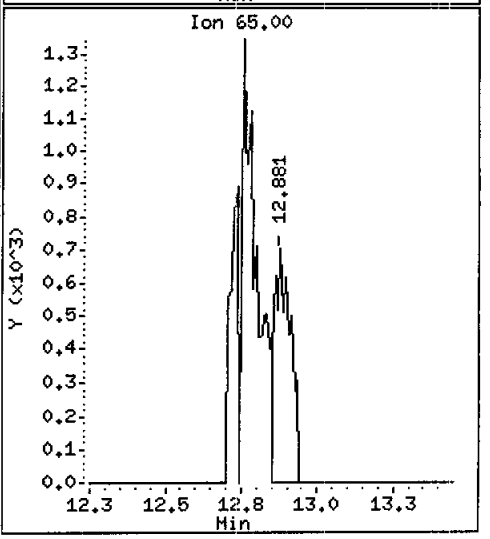












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D
Lab Smp Id: G2DHF1AD Client Smp ID: 066365-001
Inj Date : 12-JAN-2005 13:38
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHF1AD,066365-001,SANDIA,E5A100222-2
Misc Info : 23.8,13.0,500,916,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.800	FinalPres
InitPres	13.000	InitPres
CalVol	500.000	CalVol
SmpVol	916.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.699	4.672	(0.566)	8200	0.71010	0.7096(a)
44 1,1-Dichloroethane	63	6.847	6.838	(0.824)	20832	1.64620	1.645(a)
53 cis-1,2-Dichloroethene	96	7.911	7.893	(0.952)	13232	2.02337	2.022
* 58 Bromochloromethane	49	8.308	8.299	(1.000)	511634	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.337	9.319	(0.921)	465559	52.6621	52.63
* 73 1,4-Difluorobenzene	114	10.140	10.131	(1.000)	1077243	50.0000	
75 Trichloroethene	130	10.600	10.573	(1.045)	138614	14.7369	14.73
$ 88 Toluene-d8	100	12.757	12.738	(1.258)	570844	50.6064	50.57
89 Toluene	91	12.883	12.856	(1.270)	33291	1.75513	1.754(a)
* 101 Chlorobenzene-d5	117	15.409	15.382	(1.000)	746163	50.0000	
$ 114 4-Bromofluorobenzene	95	17.665	17.638	(1.146)	571636	42.8859	42.86

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D

Date : 12-JAN-2005 13:38

Client ID: 066365-001

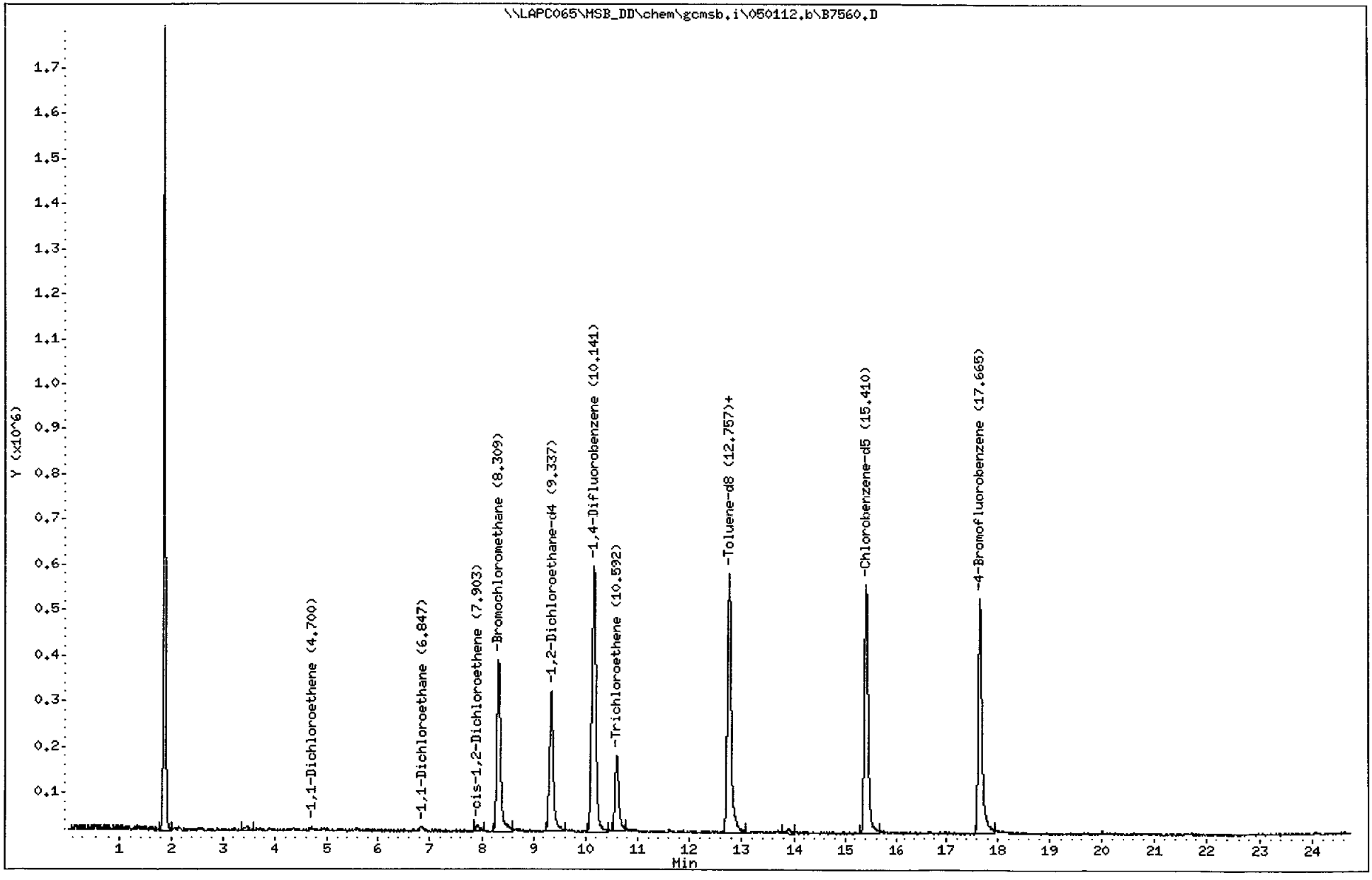
Instrument: gcmsb.i

Sample Info: G2DHF1AD,066365-001,SANDIA,E5A100222-2

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D

Date : 12-JAN-2005 13:38

Client ID: 066365-001

Instrument: gcmsb.i

Sample Info: G2DHF1AD,066365-001,SANDIA,E5A100222-2

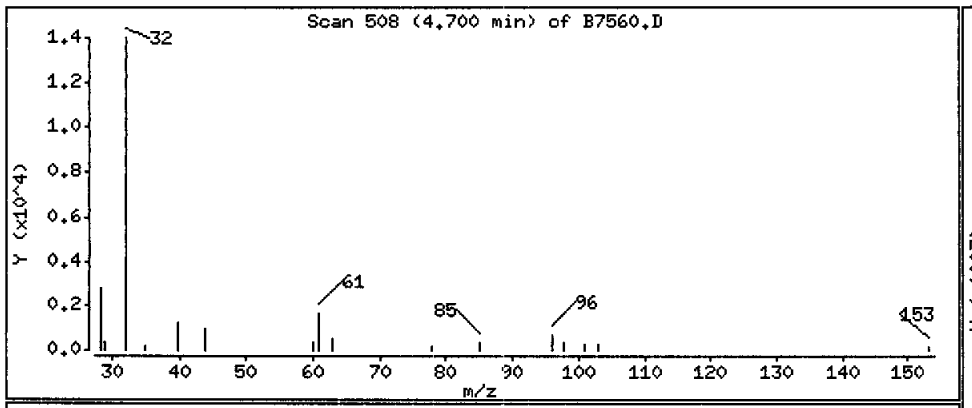
Operator: DLK

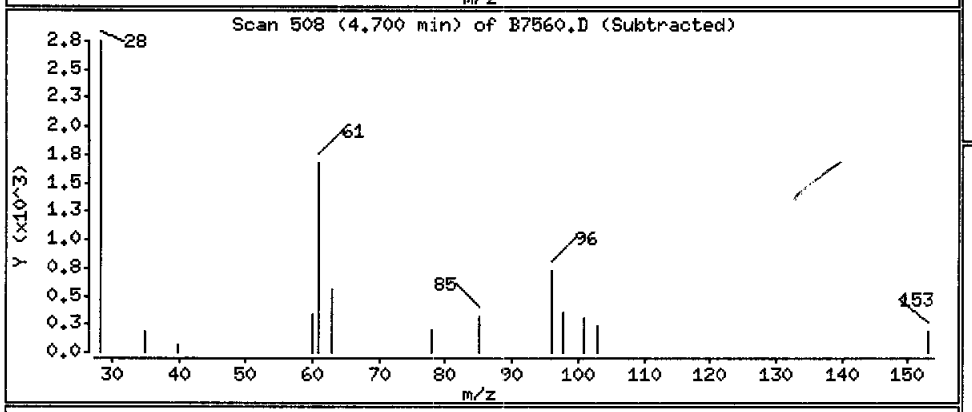
Column phase: J&W DB-624

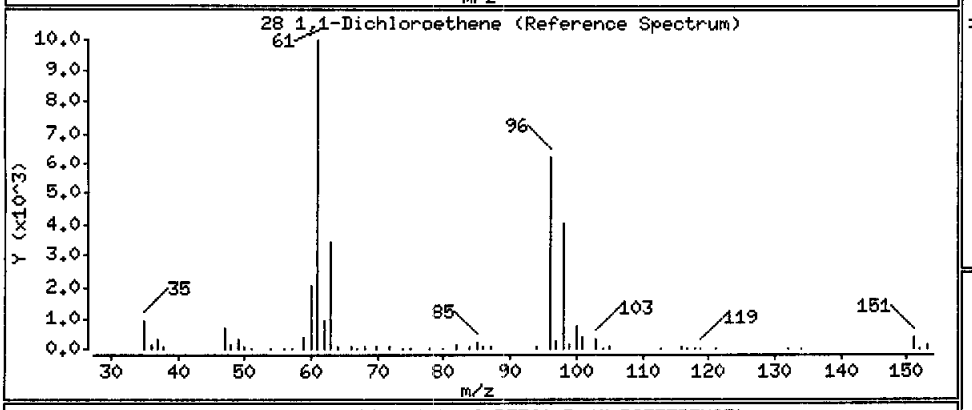
Column diameter: 0.53

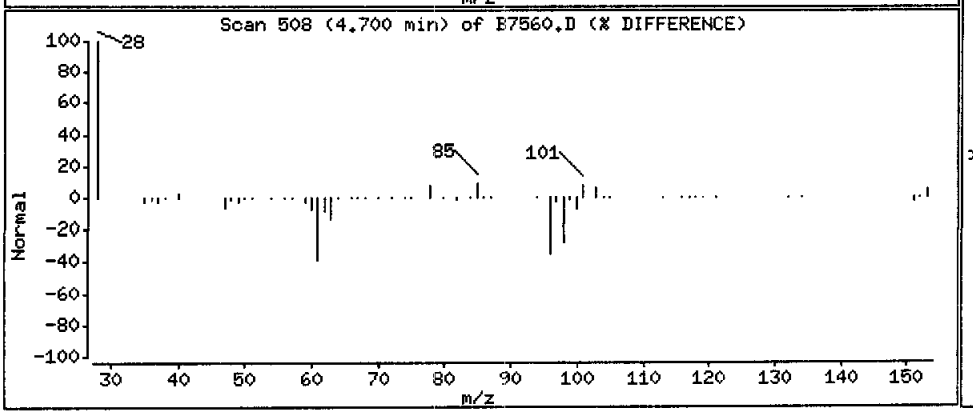
28 1,1-Dichloroethene

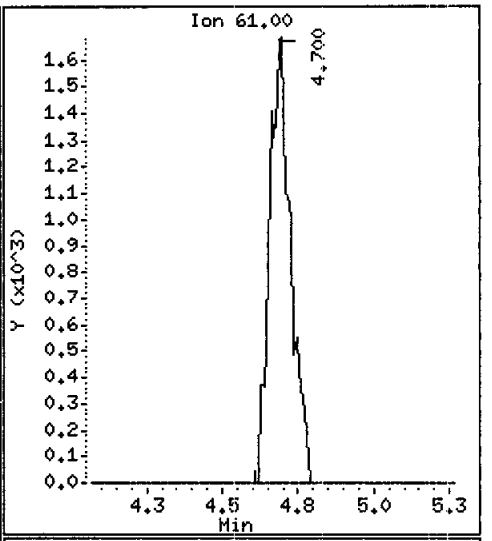
Concentration: 0.7096 ppbv

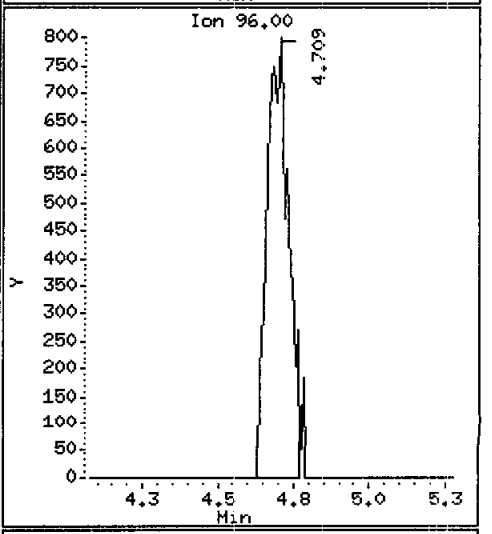


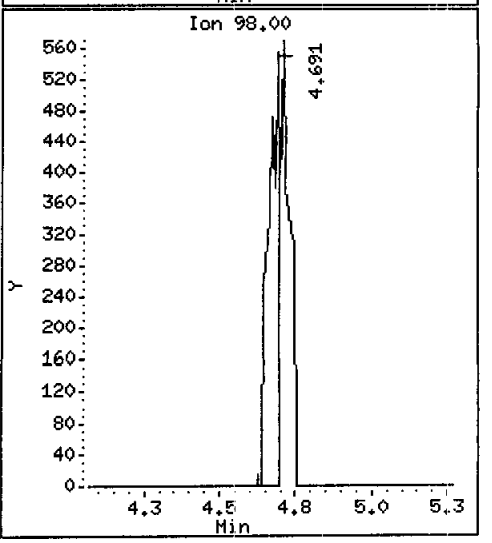












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D

Date : 12-JAN-2005 13:38

Client ID: 066365-001

Instrument: gcmsb.i

Sample Info: G2DHF1AD,066365-001,SANDIA,E5A100222-2

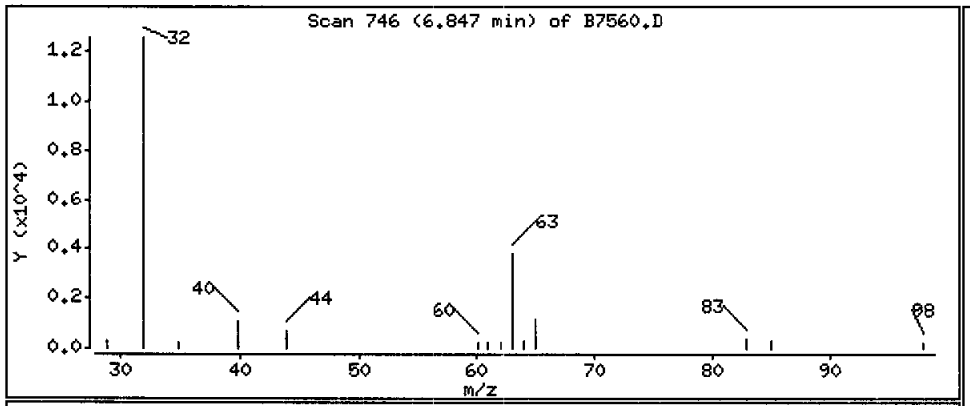
Operator: DLK

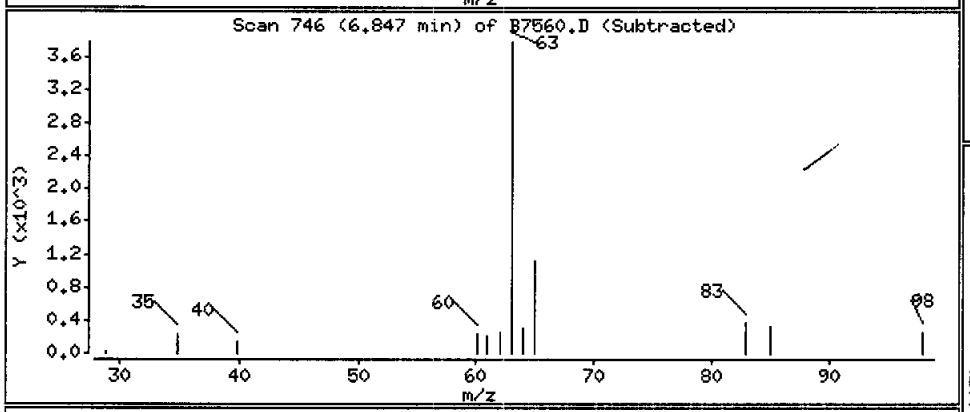
Column phase: J&W DB-624

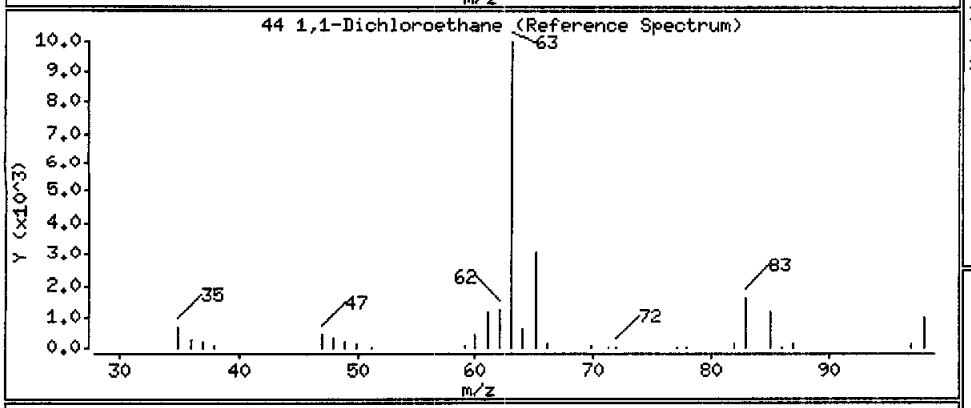
Column diameter: 0.53

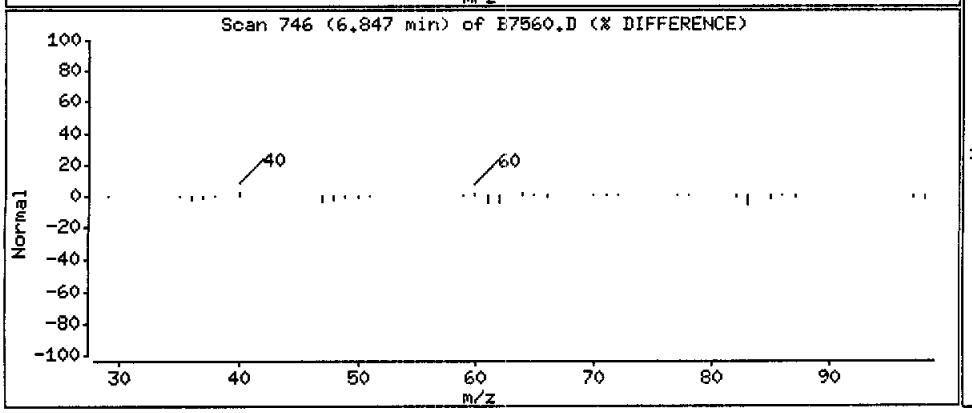
44 1,1-Dichloroethane

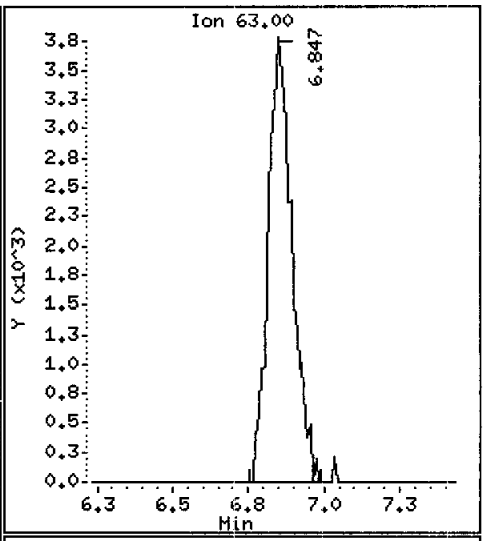
Concentration: 1.645 ppbv

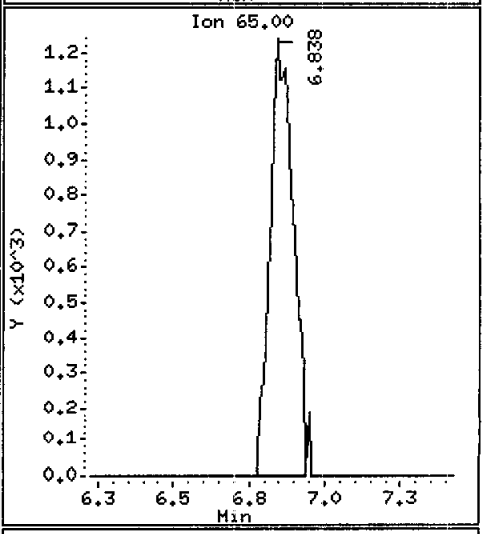


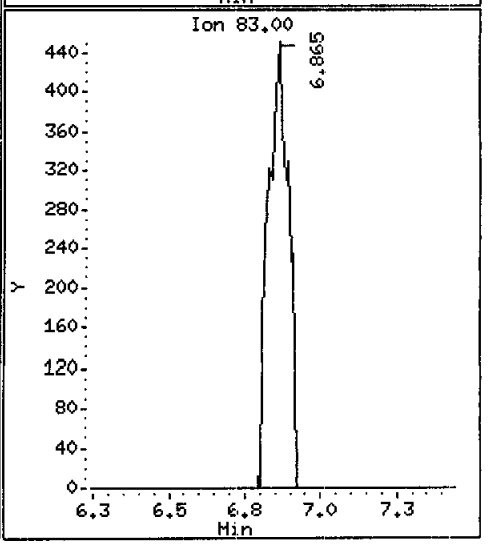












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D

Date : 12-JAN-2005 13:38

Client ID: 066365-001

Instrument: gcmsb.i

Sample Info: G2DHF1AD,066365-001,SANDIA,E5A100222-2

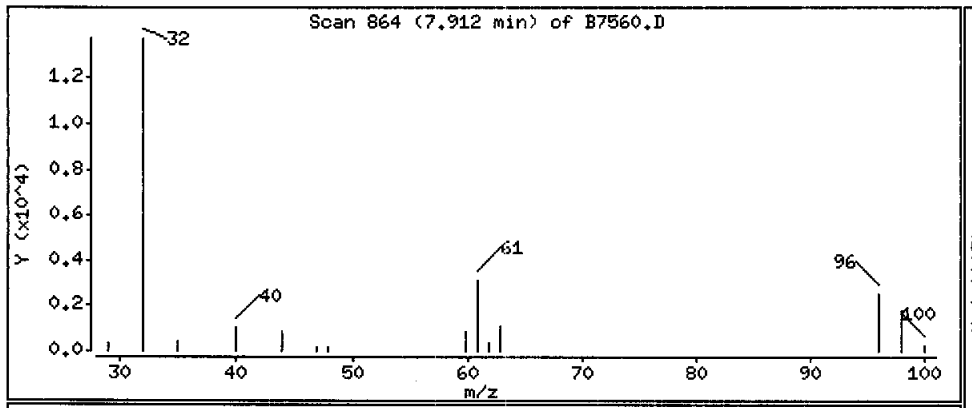
Operator: DLK

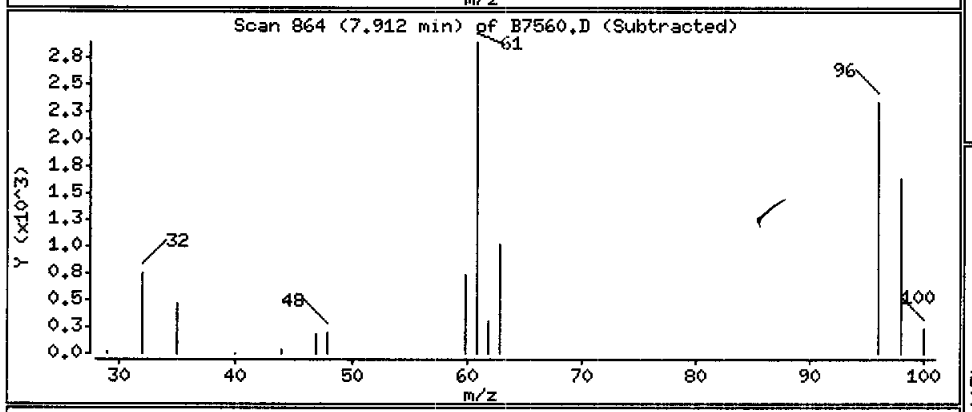
Column phase: J&W DB-624

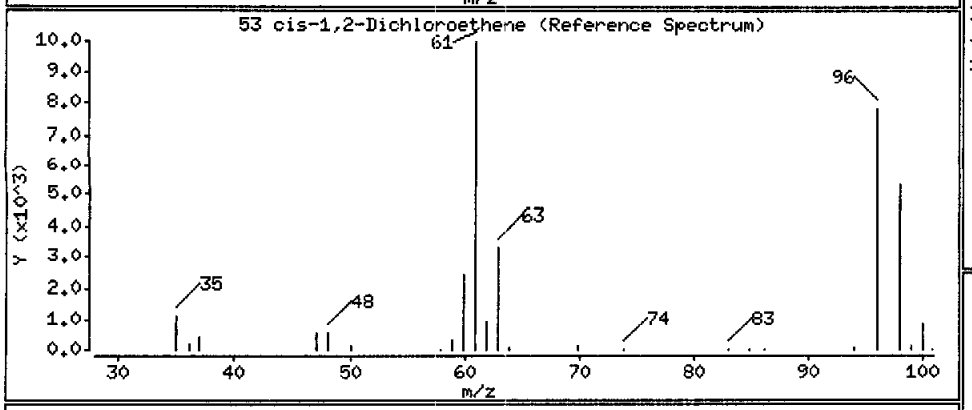
Column diameter: 0.53

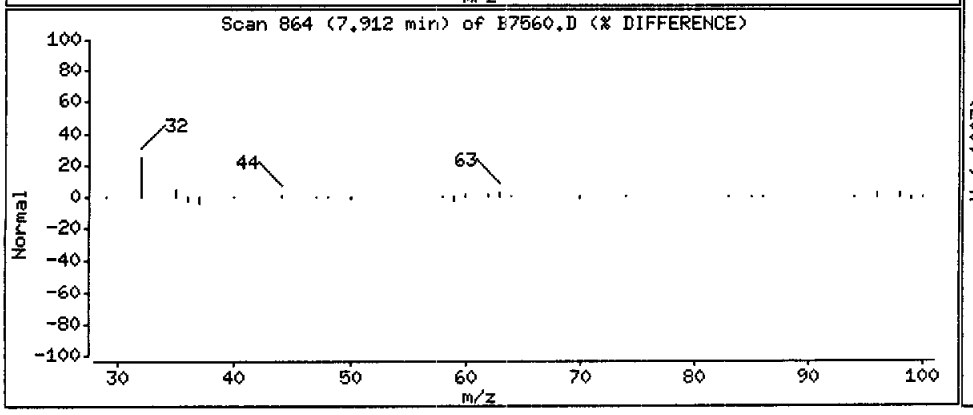
53 cis-1,2-Dichloroethene

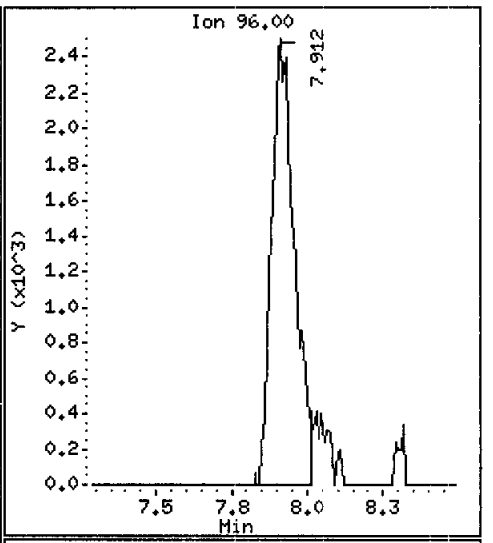
Concentration: 2.022 ppbv

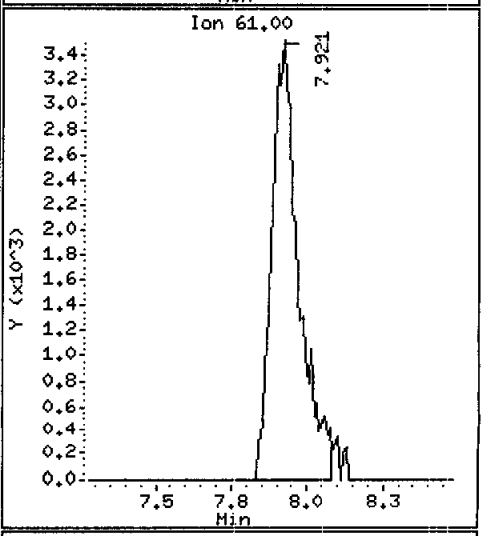


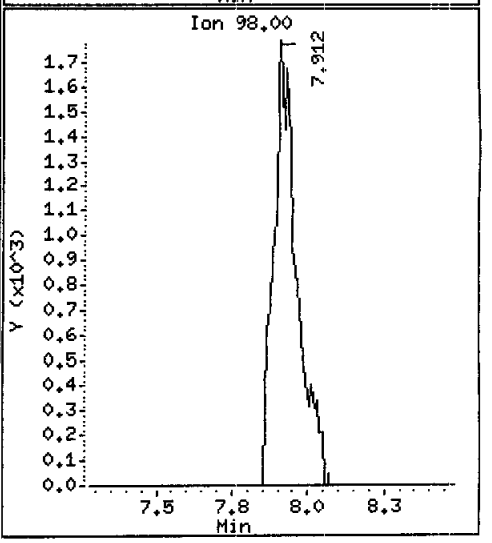












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D

Date : 12-JAN-2005 13:38

Client ID: 066365-001

Instrument: gcmsb.i

Sample Info: G2DHF1AD,066365-001,SANDIA,E5A100222-2

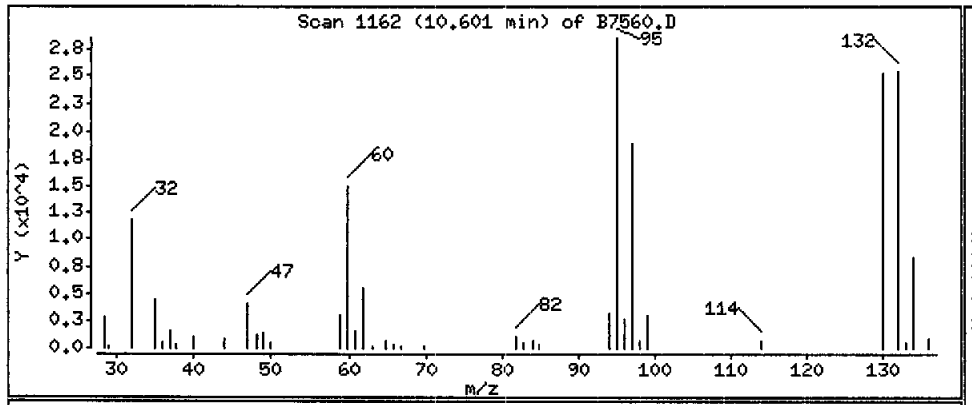
Operator: DLK

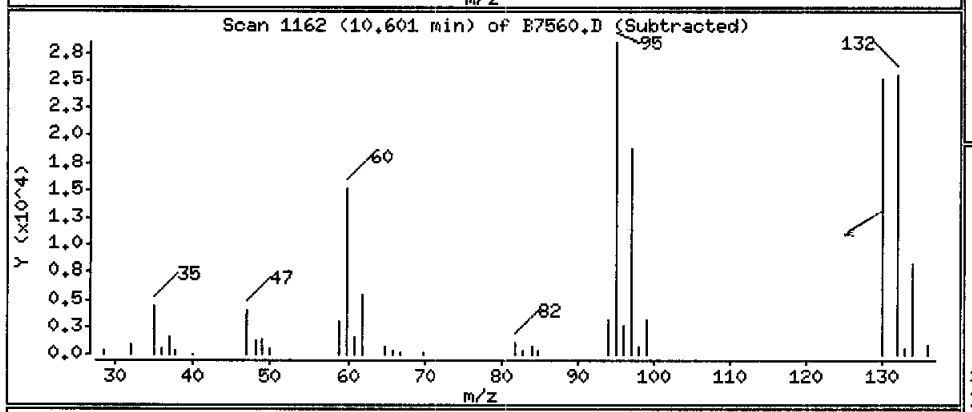
Column phase: J&W DB-624

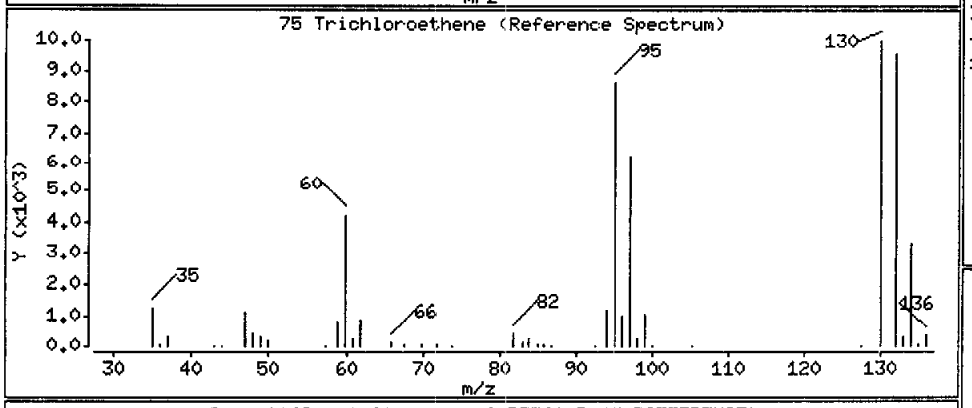
Column diameter: 0.53

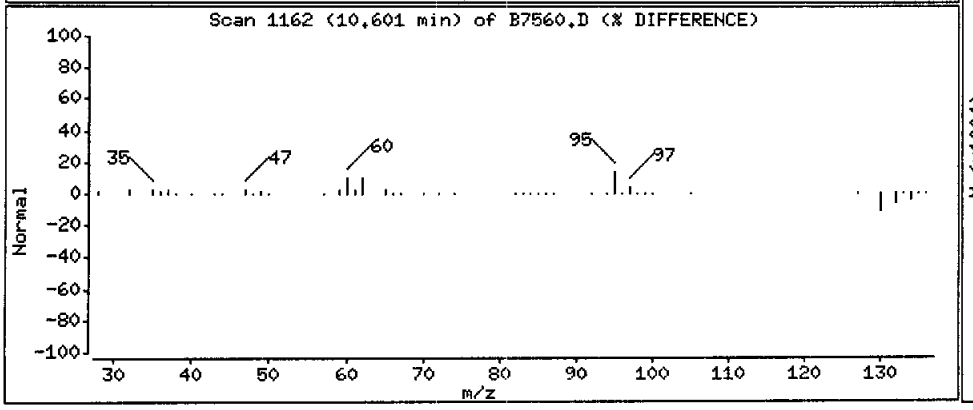
75 Trichloroethene

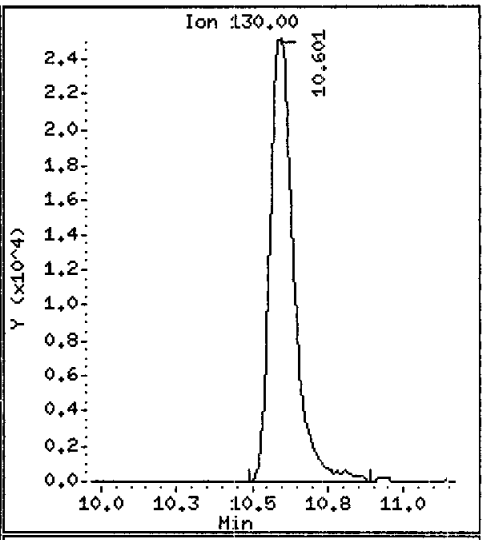
Concentration: 14.73 ppbv

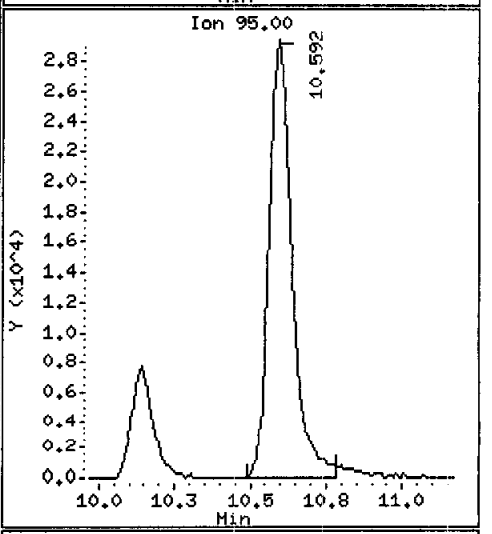


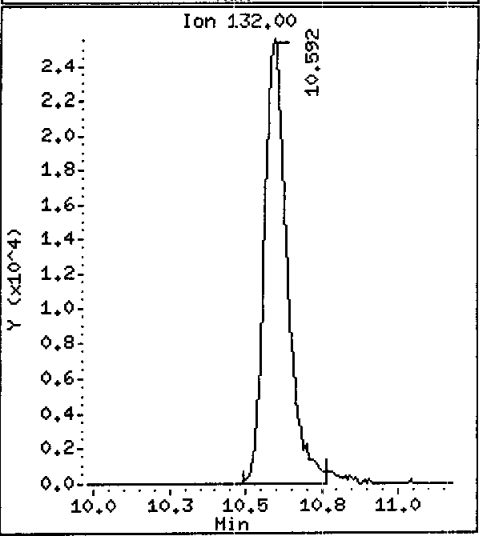












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7560.D

Date : 12-JAN-2005 13:38

Client ID: 066365-001

Instrument: gcmsb.i

Sample Info: G2DHF1AD,066365-001,SANDIA,E5A100222-2

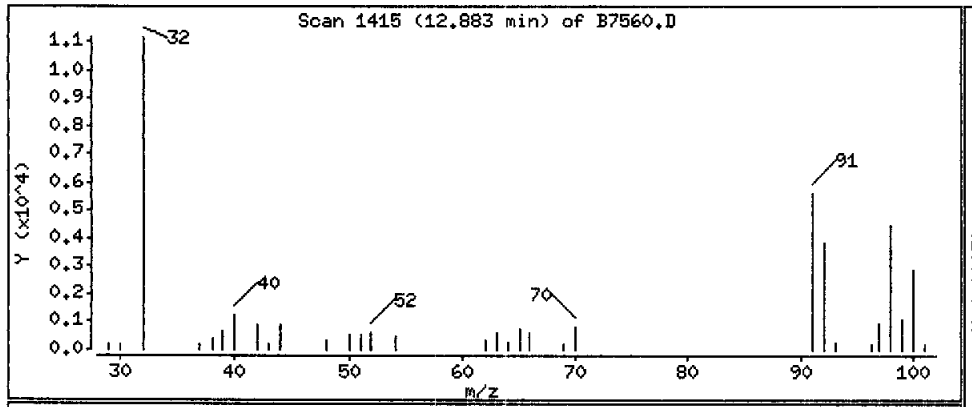
Operator: DLK

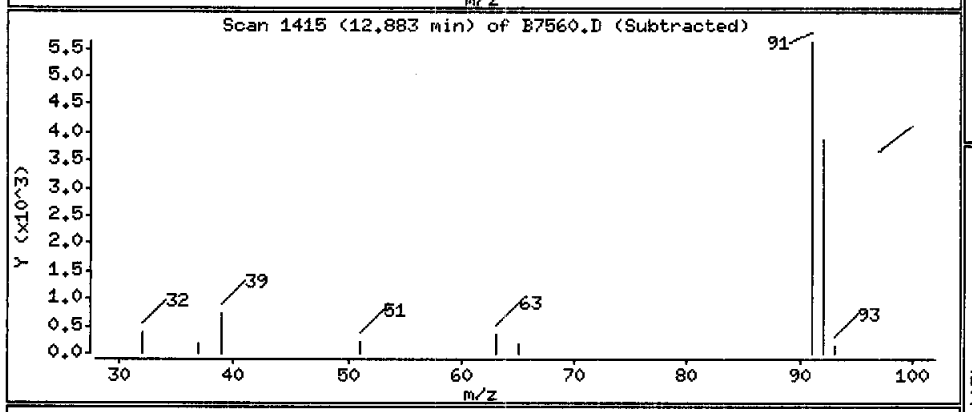
Column phase: J&W DB-624

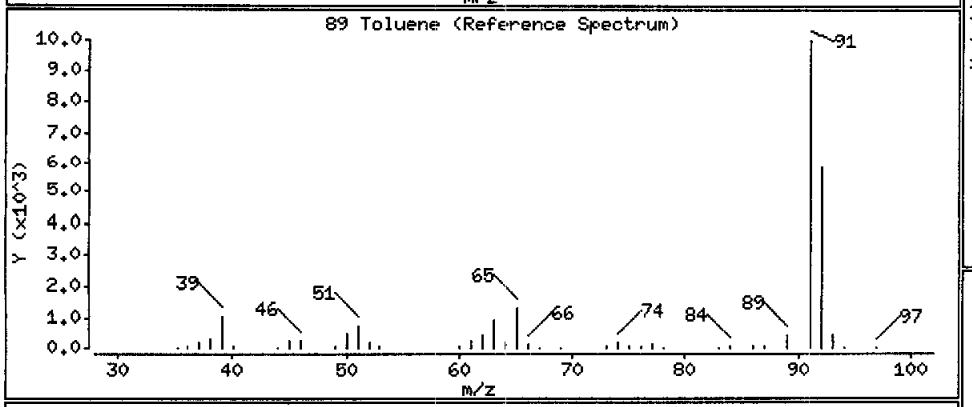
Column diameter: 0.53

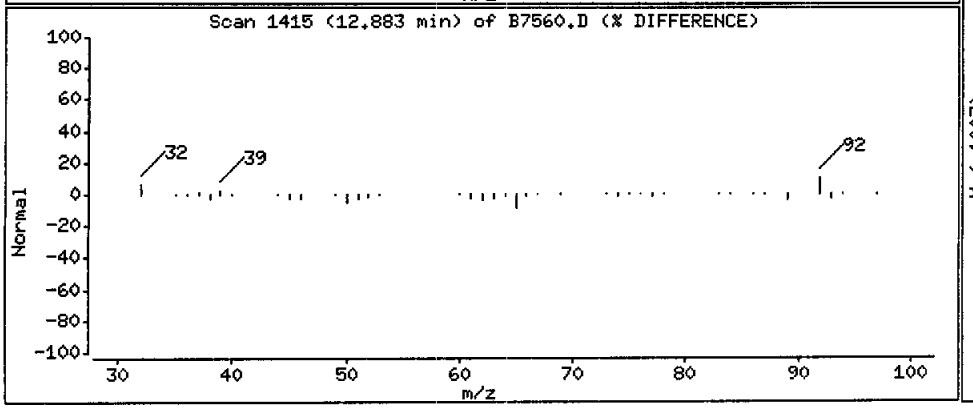
89 Toluene

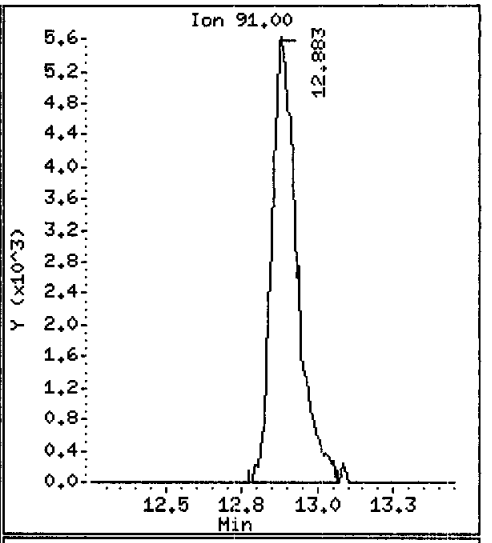
Concentration: 1.754 ppbv

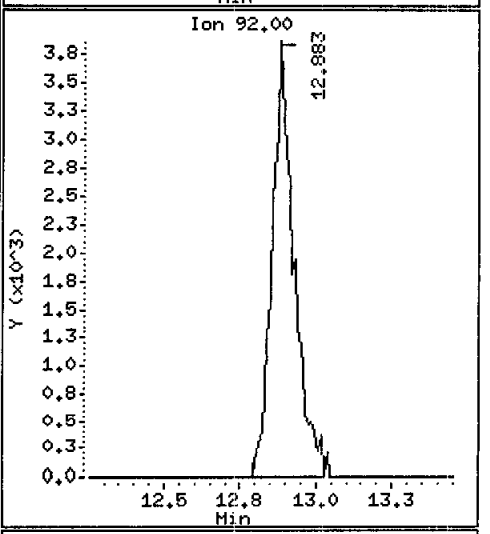


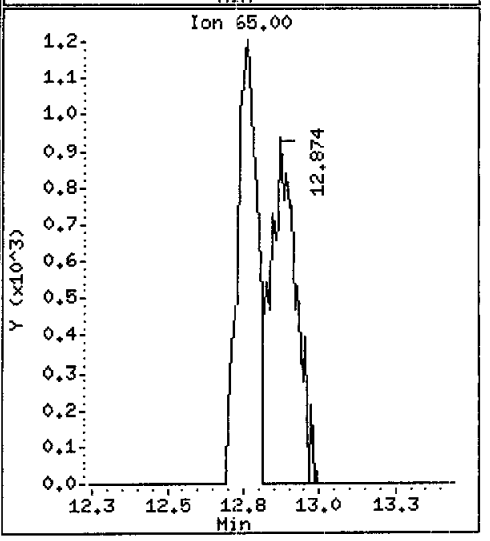












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7561.D
Lab Smp Id: G2DHG1AD Client Smp ID: 066366-001
Inj Date : 12-JAN-2005 14:07
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHG1AD,066366-001,SANDIA,E5A100222-3
Misc Info : 24.3,13.0,500,935,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	13.000	InitPres
CalVol	500.000	CalVol
SmpVol	935.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
44 1,1-Dichloroethane	63	6.869	6.838	(0.825)	8490	0.65576	0.6555(a)
53 cis-1,2-Dichloroethene	96	7.934	7.893	(0.953)	9447	1.41201	1.411(a)
* 58 Bromochloromethane	49	8.322	8.299	(1.000)	523448	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.342	9.319	(0.921)	459626	51.7872	51.76
* 73 1,4-Difluorobenzene	114	10.145	10.131	(1.000)	1081481	50.0000	
75 Trichloroethene	130	10.596	10.573	(1.044)	110030	11.6522	11.65
$ 88 Toluene-d8	100	12.752	12.738	(1.257)	561804	49.6099	49.59
89 Toluene	91	12.878	12.856	(1.269)	45059	2.36628	2.365
* 101 Chlorobenzene-d5	117	15.396	15.382	(1.000)	741801	50.0000	
$ 114 4-Bromofluorobenzene	95	17.651	17.638	(1.147)	580797	43.8294	43.81

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7561.D

Date : 12-JAN-2005 14:07

Client ID: 066366-001

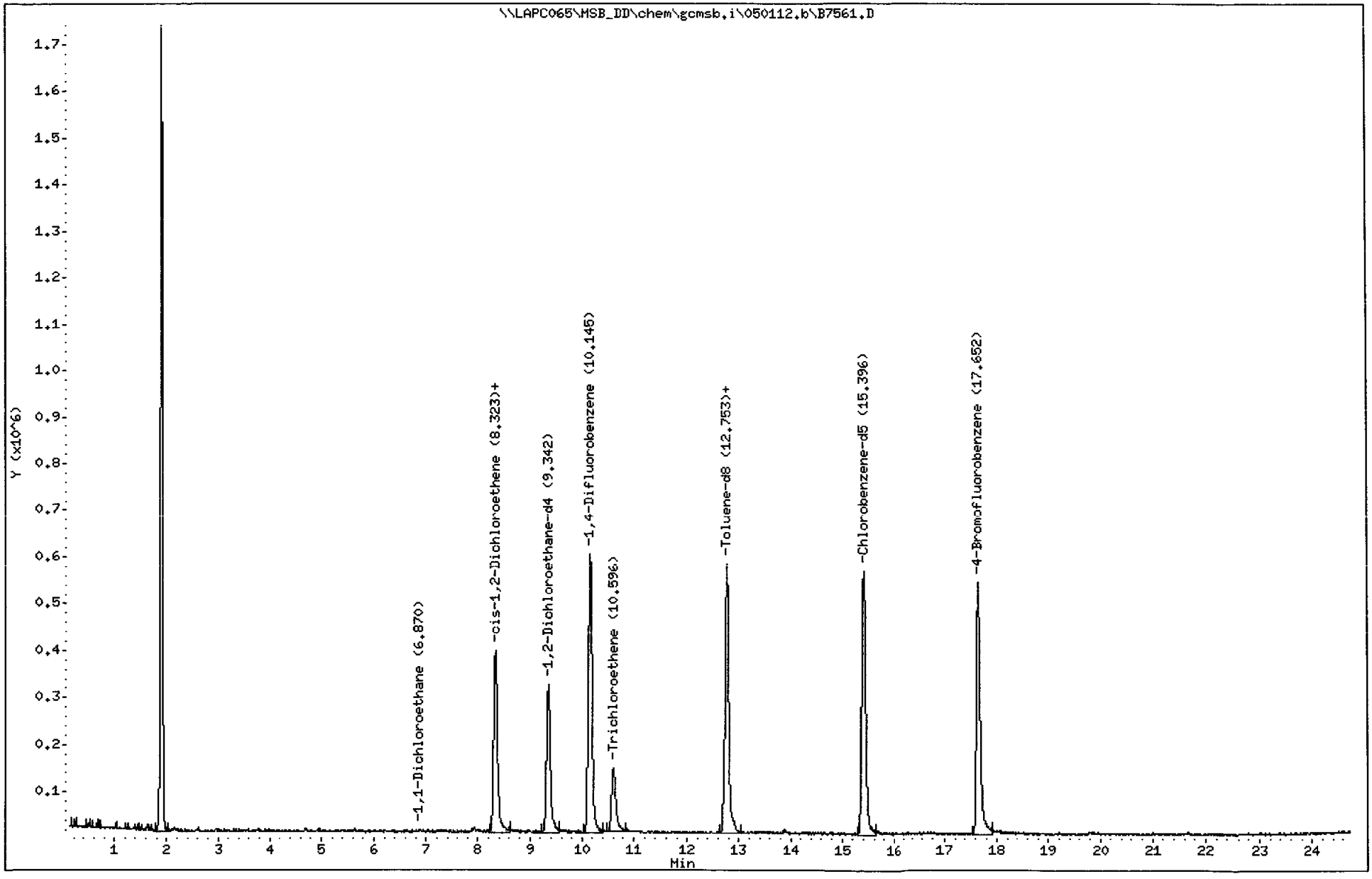
Instrument: gcmsb.i

Sample Info: G2DHG1AD,066366-001,SANDIA,E5A100222-3

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7561.D

Date : 12-JAN-2005 14:07

Client ID: 066366-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066366-001,SANDIA,E5A100222-3

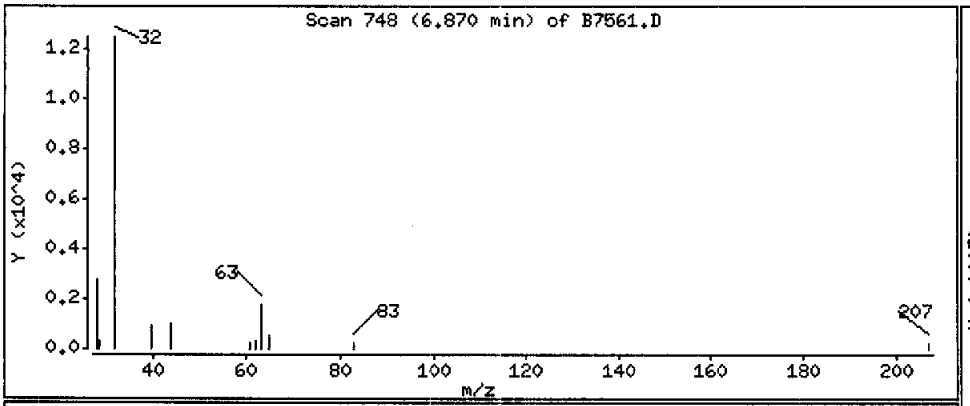
Operator: DLK

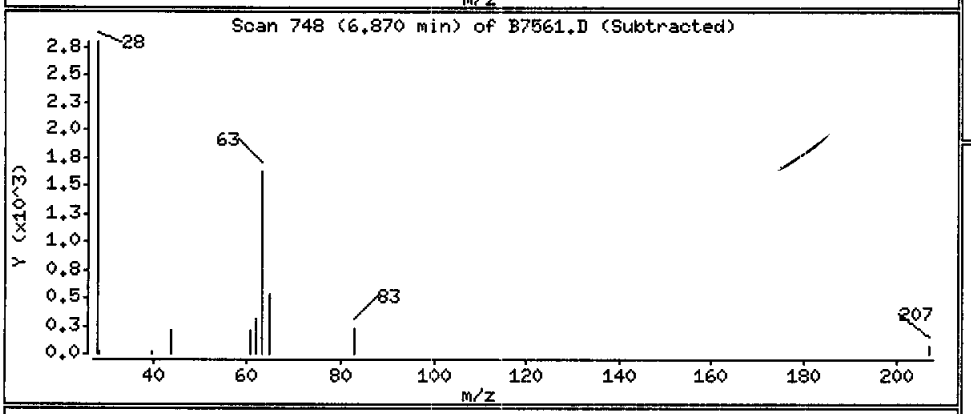
Column phase: J&W DB-624

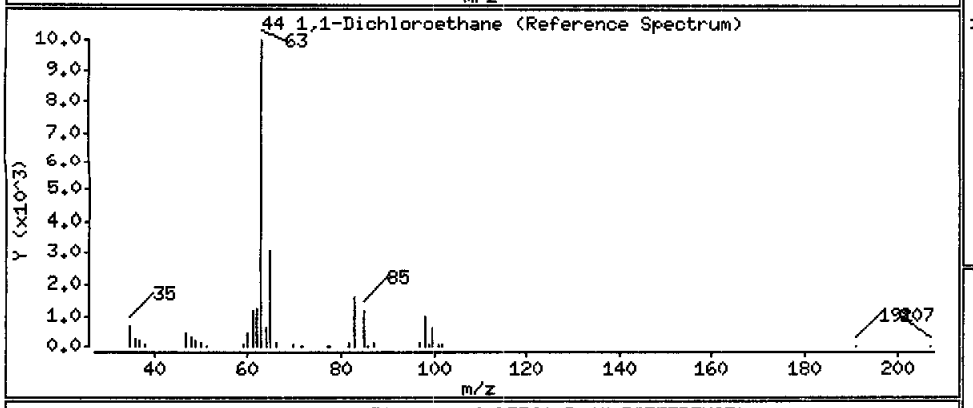
Column diameter: 0.53

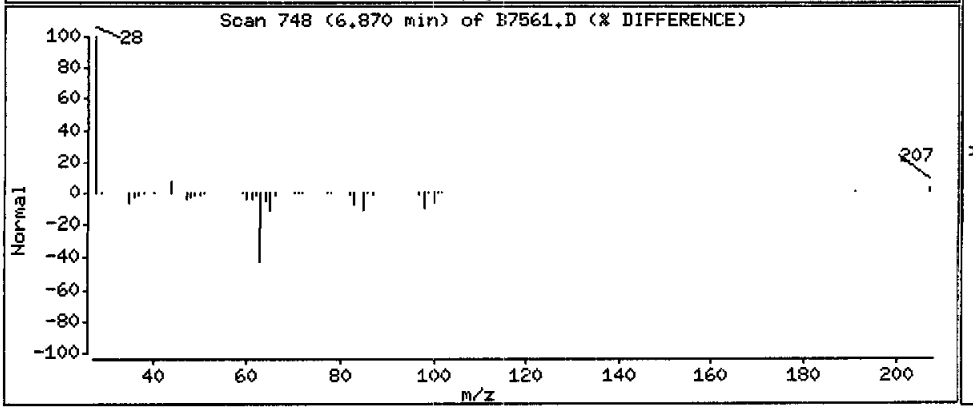
44 1,1-Dichloroethane

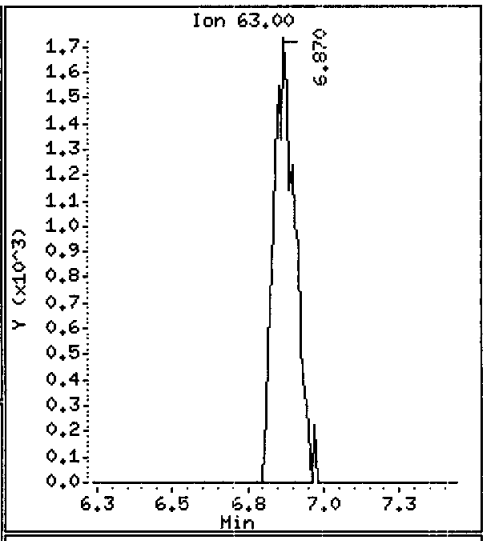
Concentration: 0.6555 ppbv

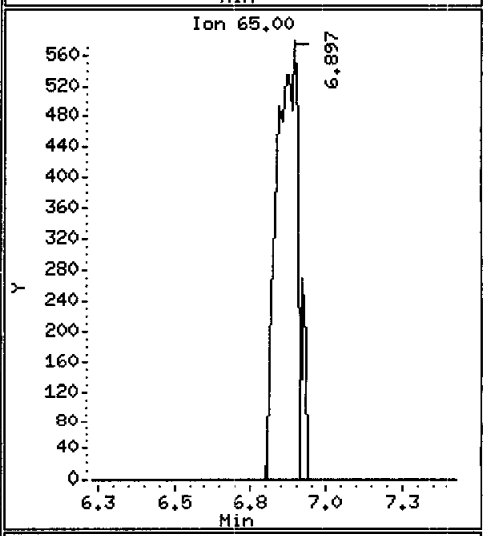


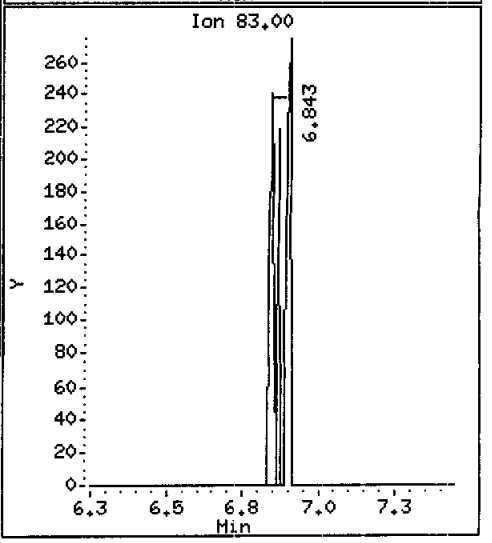












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7561.D

Date : 12-JAN-2005 14:07

Client ID: 066366-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066366-001,SANDIA,E5A100222-3

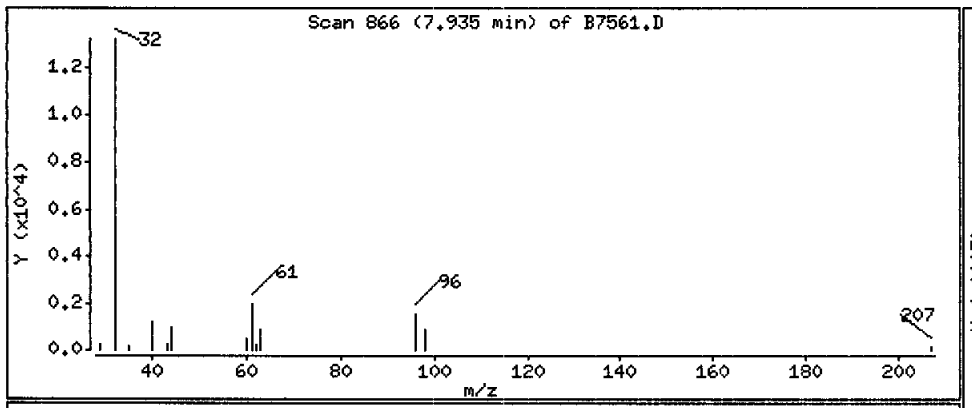
Operator: DLK

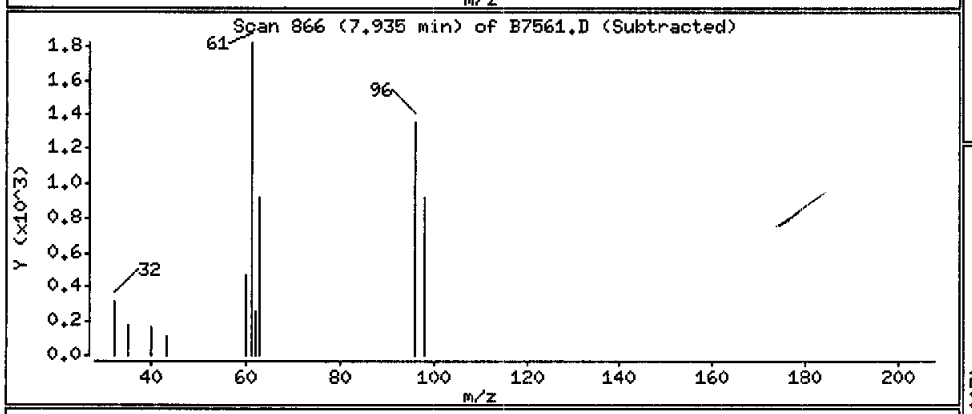
Column phase: J&W DB-624

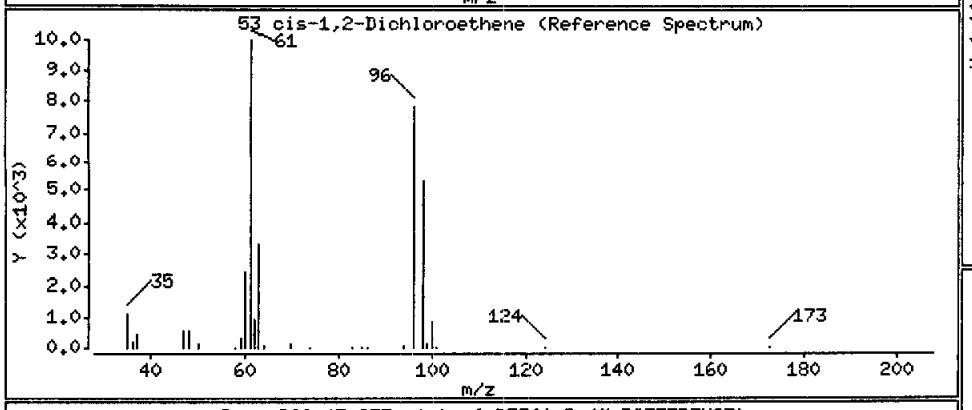
Column diameter: 0.53

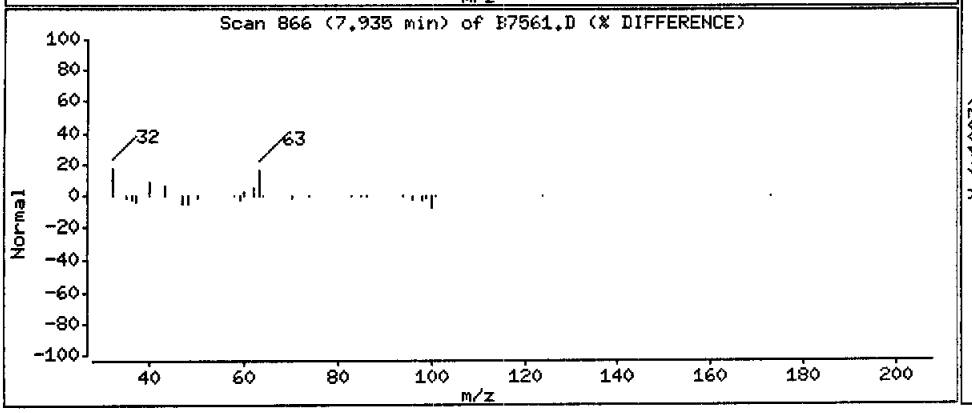
53 cis-1,2-Dichloroethene

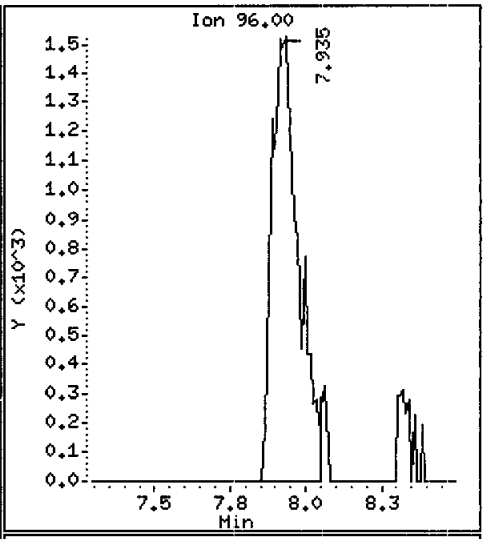
Concentration: 1.411 ppbv

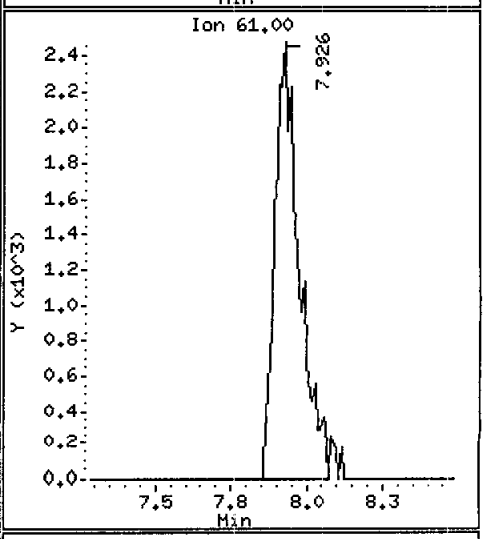


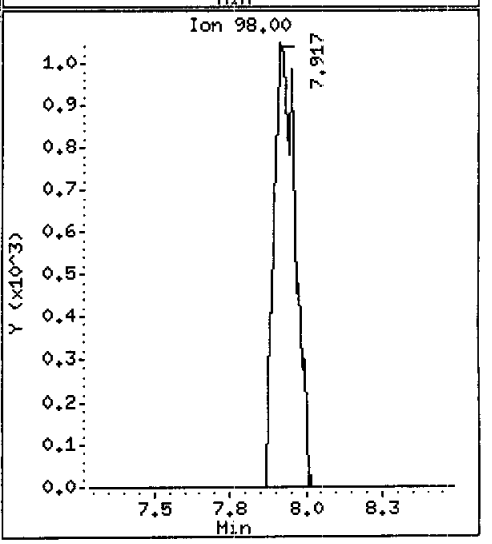












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7561.D

Date : 12-JAN-2005 14:07

Client ID: 066366-001

Instrument: gcmsb.i

Sample Info: G2DHC1AD,066366-001,SANDIA,E5A100222-3

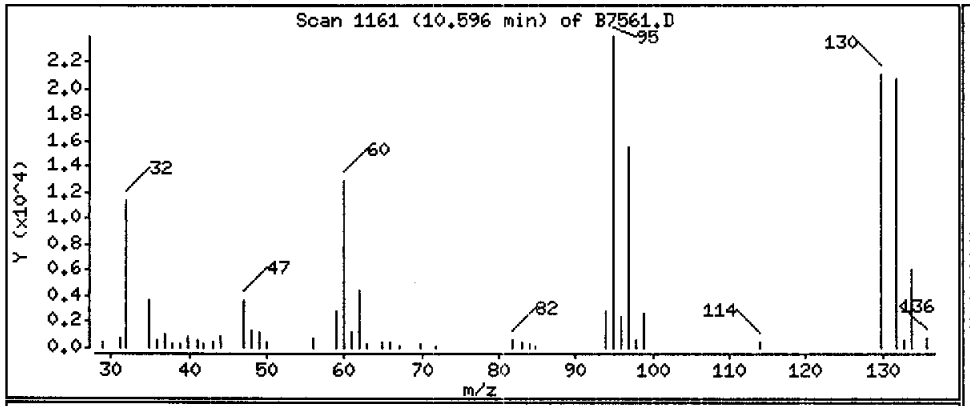
Operator: DLK

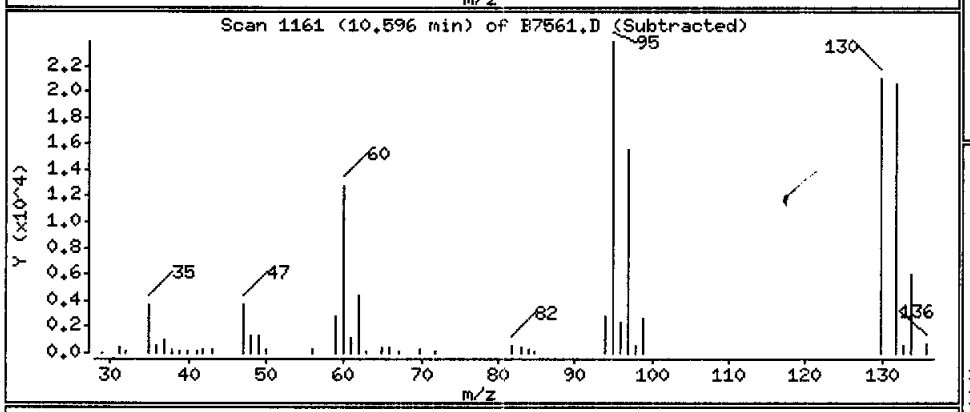
Column phase: J&W DB-624

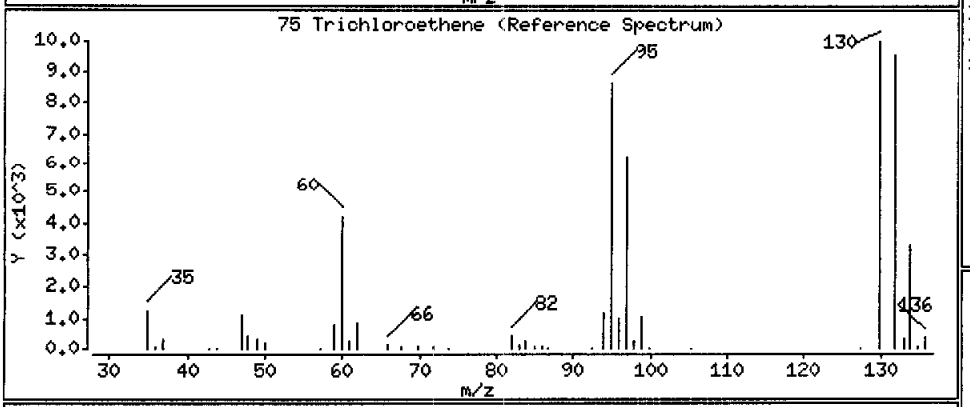
Column diameter: 0.53

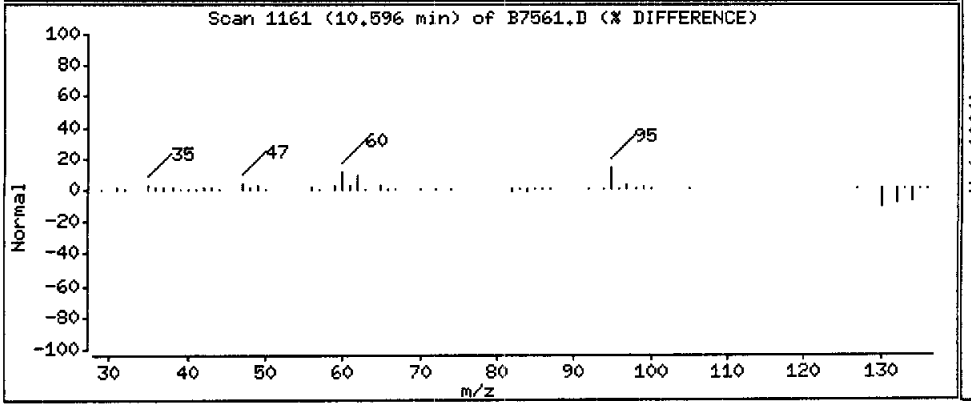
75 Trichloroethene

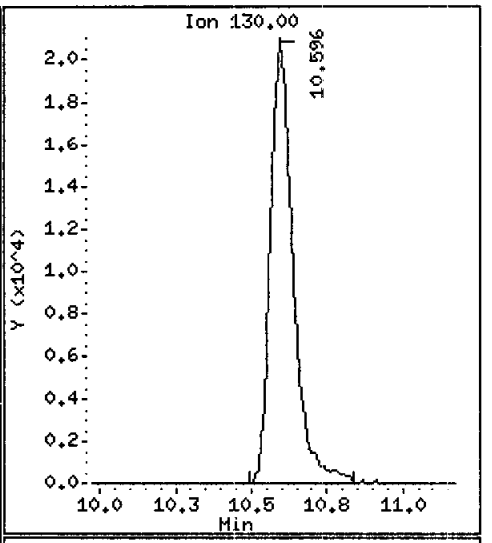
Concentration: 11.65 ppbv

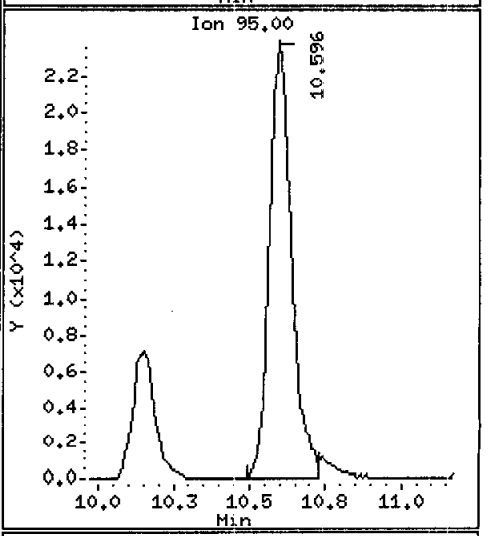


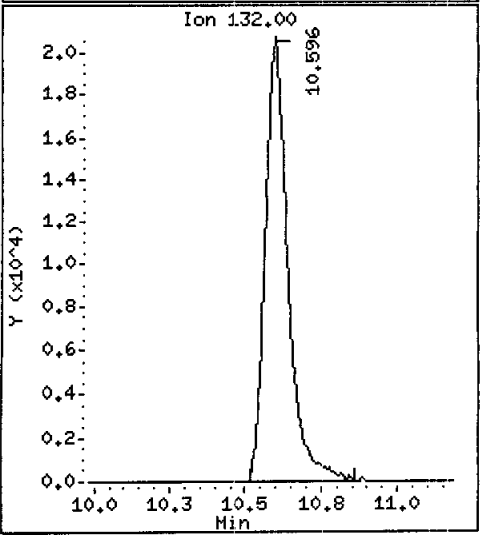












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7561.D

Date : 12-JAN-2005 14:07

Client ID: 066366-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066366-001,SANDIA,E5A100222-3

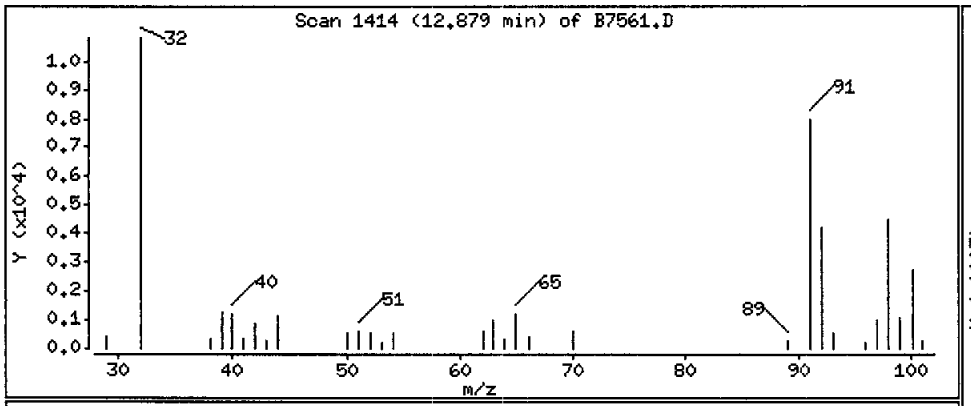
Operator: DLK

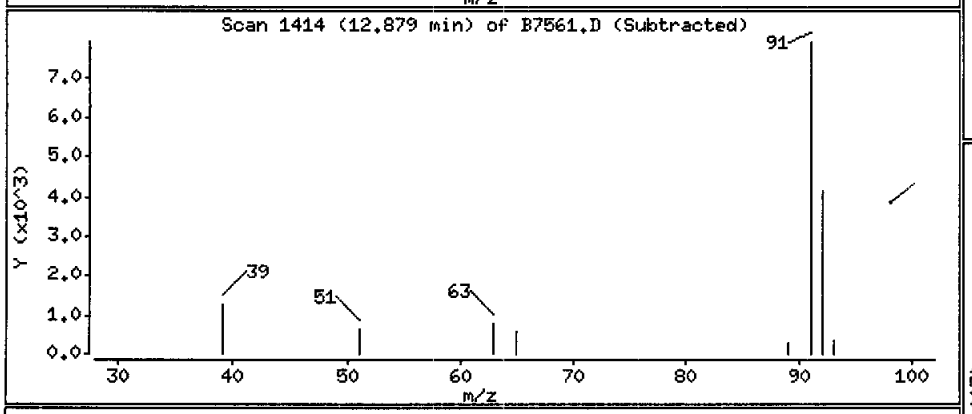
Column phase: J&W DB-624

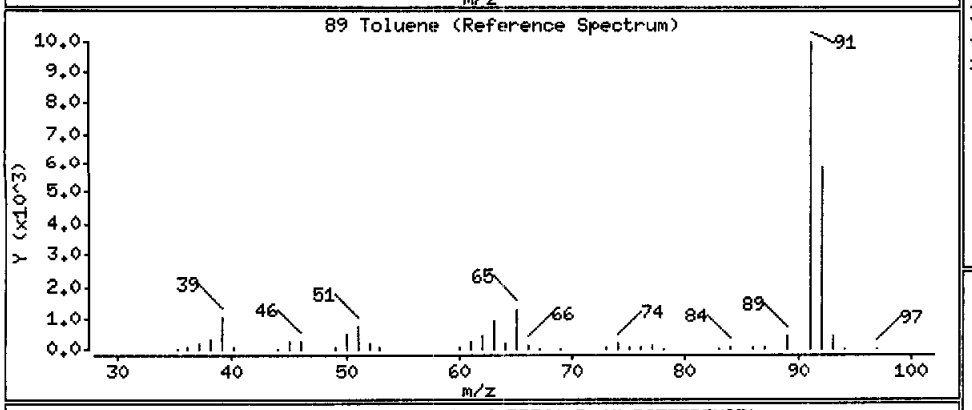
Column diameter: 0.53

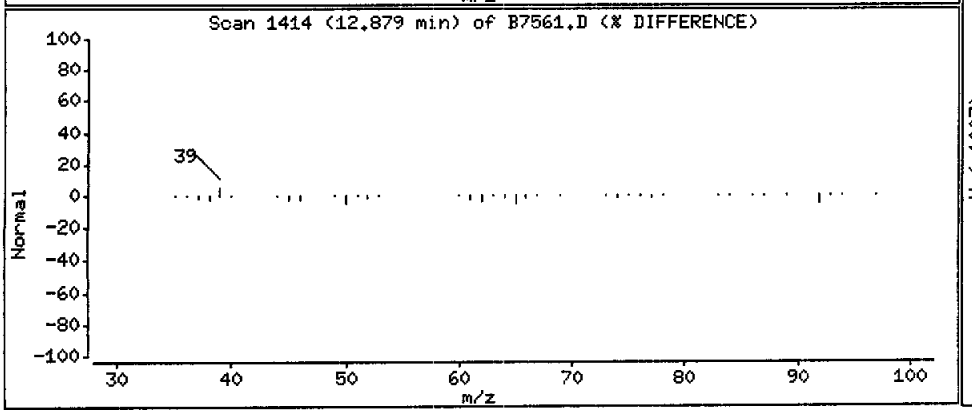
89 Toluene

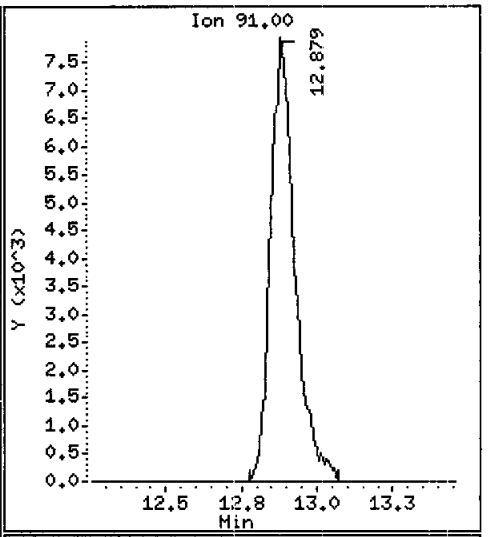
Concentration: 2.365 ppbv

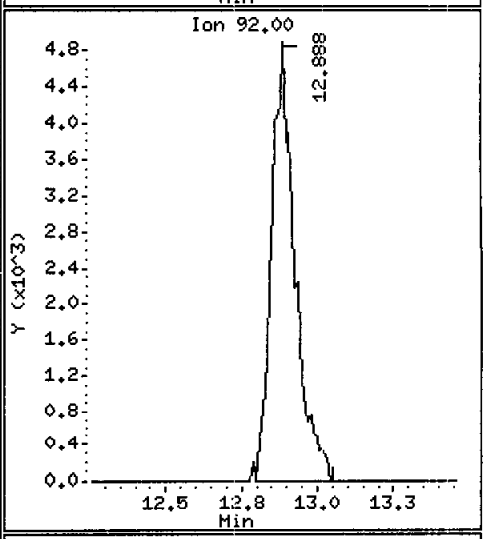


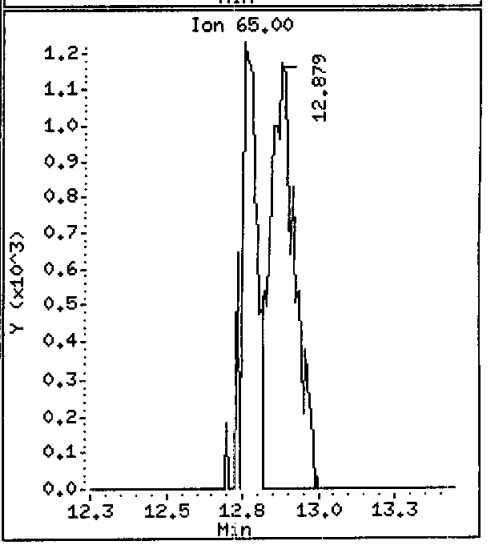












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D
Lab Smp Id: G2DHG1AD Client Smp ID: 066367-001
Inj Date : 12-JAN-2005 14:39
Operator : DLK J AA 1/12/05 Inst ID: gcmsb.i
Smp Info : G2DHG1AD,066367-001,SANDIA,E5A100222-4
Misc Info : 24.3,12.6,500,965,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	965.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
44 1,1-Dichloroethane	63	6.846	6.838	(0.824)	8930	0.70306	0.7025(a)
53 cis-1,2-Dichloroethene	96	7.920	7.893	(0.953)	8408	1.28090	1.280(a)
* 58 Bromochloromethane	49	8.308	8.299	(1.000)	513566	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.337	9.319	(0.921)	467190	52.9096	52.87
68 Benzene	78	9.436	9.418	(0.931)	17905	1.22297	1.222(a)
* 73 1,4-Difluorobenzene	114	10.140	10.131	(1.000)	1075961	50.0000	
75 Trichloroethene	130	10.591	10.573	(1.044)	110828	11.7969	11.79
$ 88 Toluene-d8	100	12.747	12.738	(1.257)	556443	49.3886	49.35
89 Toluene	91	12.865	12.856	(1.269)	82752	4.36800	4.365
M 99 Xylenes (total)	106				3710	0.60613	0.6057(a)
* 101 Chlorobenzene-d5	117	15.400	15.382	(1.000)	769625	50.0000	
107 o-Xylene	106	16.681	16.627	(1.083)	3710	0.60613	0.6057(a)
$ 114 4-Bromofluorobenzene	95	17.656	17.638	(1.146)	606659	44.1260	44.09

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

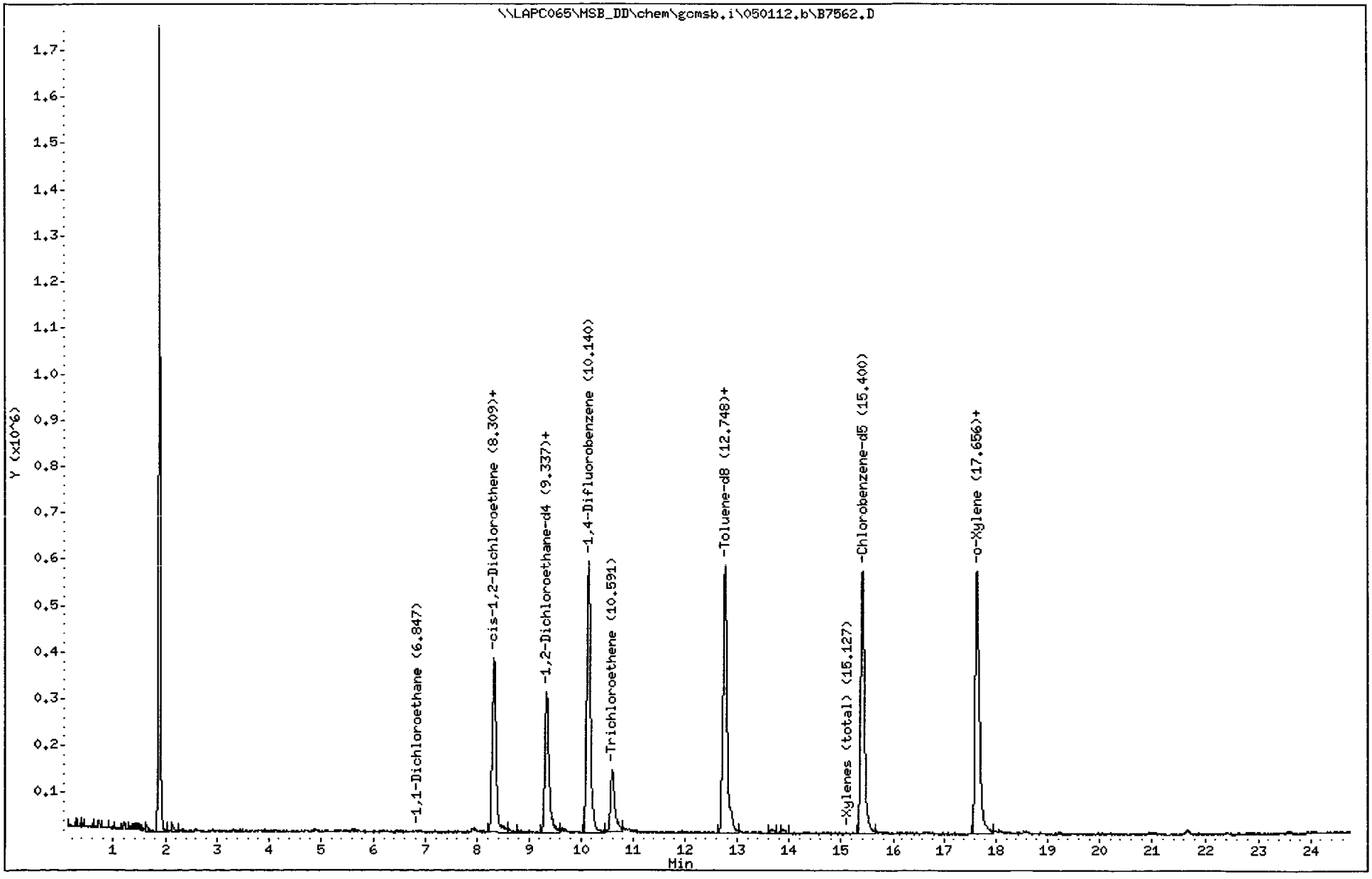
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D
Date : 12-JAN-2005 14:39
Client ID: 066367-001
Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D

Date : 12-JAN-2005 14:39

Client ID: 066367-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

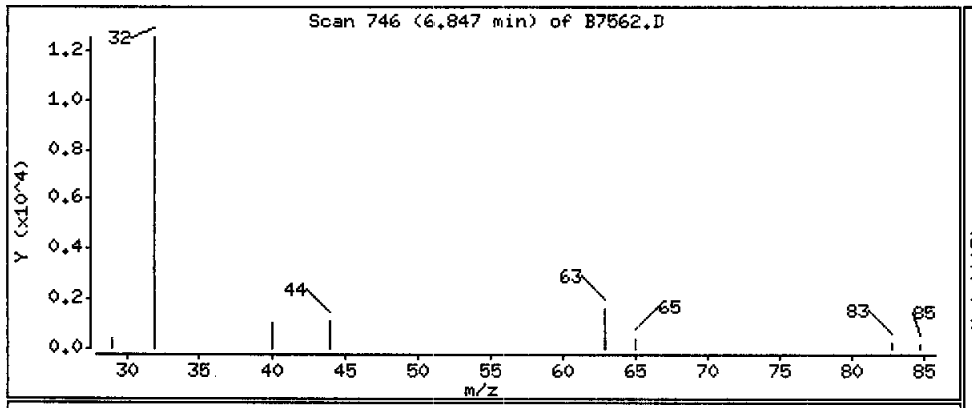
Operator: DLK

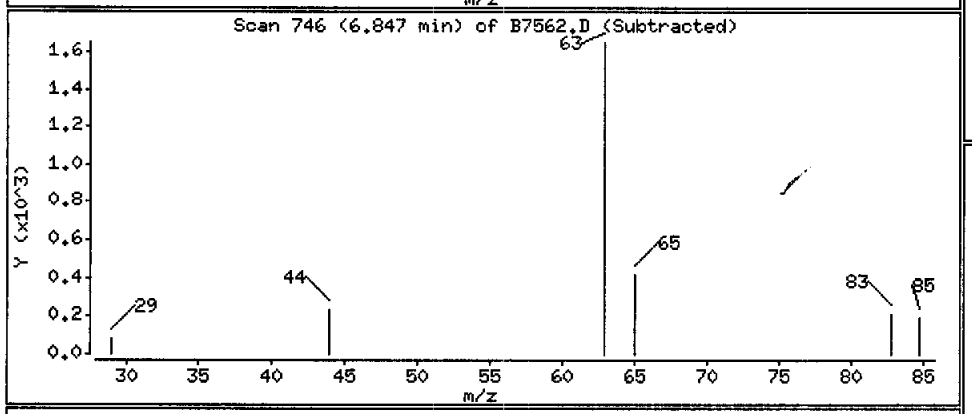
Column phase: J&W DB-624

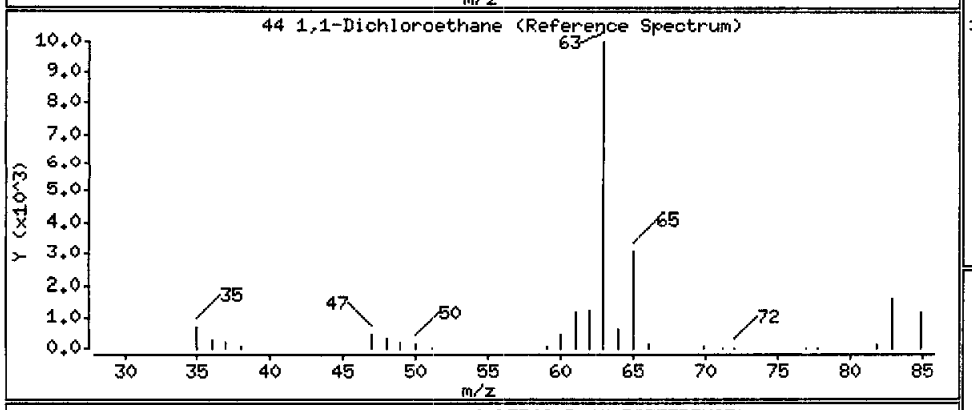
Column diameter: 0.53

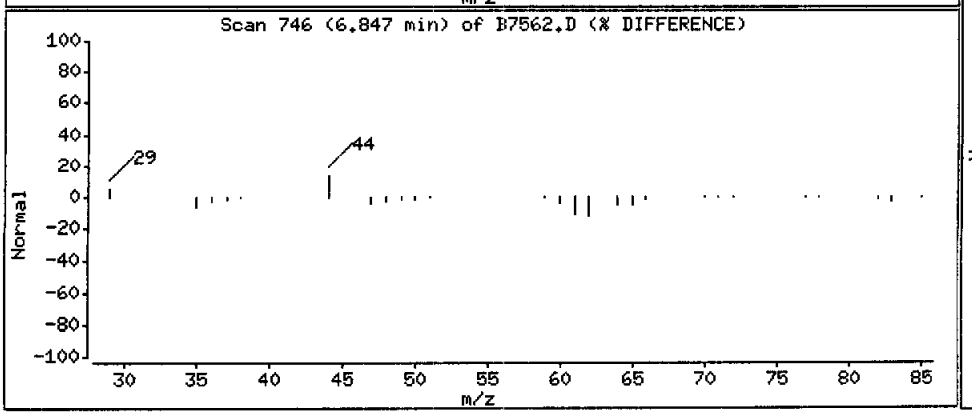
44 1,1-Dichloroethane

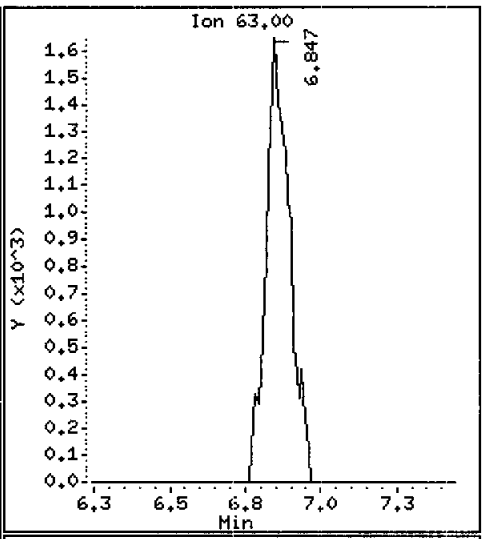
Concentration: 0.7025 ppbv

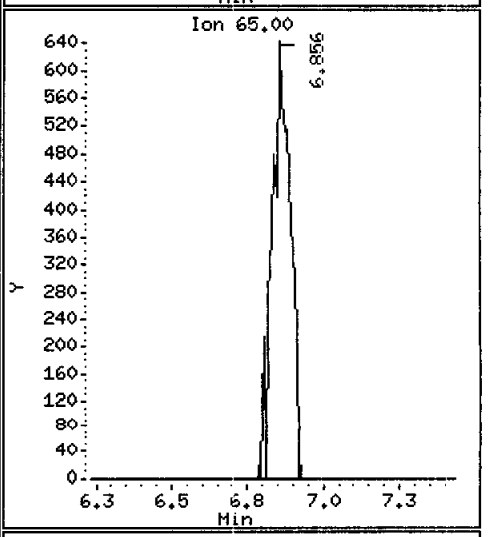


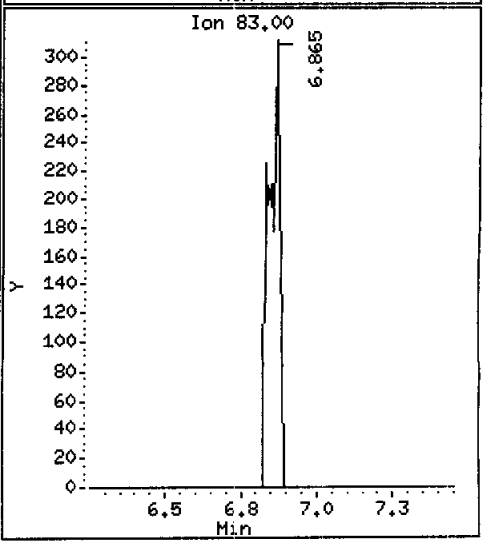












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D

Date : 12-JAN-2005 14:39

Client ID: 066367-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

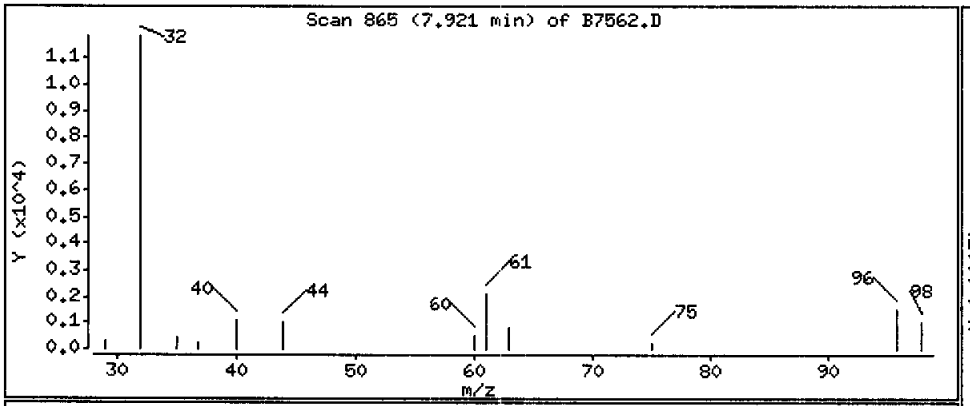
Operator: DLK

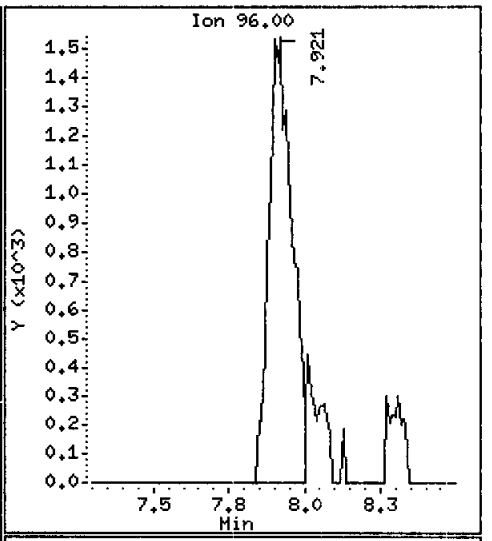
Column phase: J&W DB-624

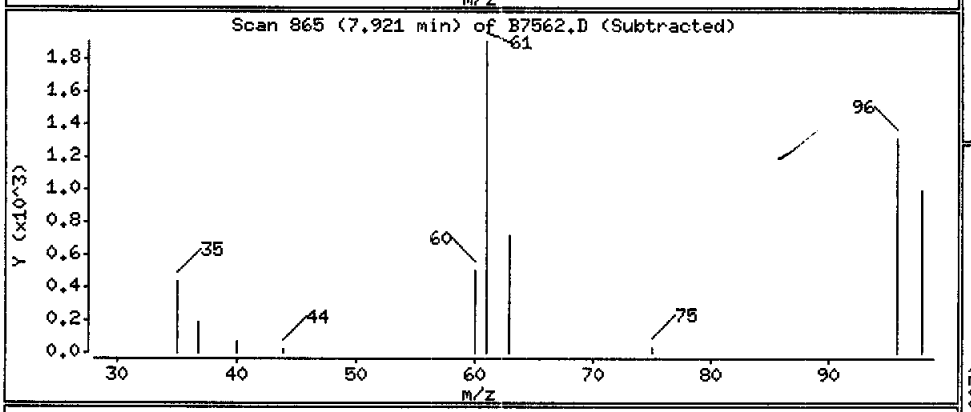
Column diameter: 0.53

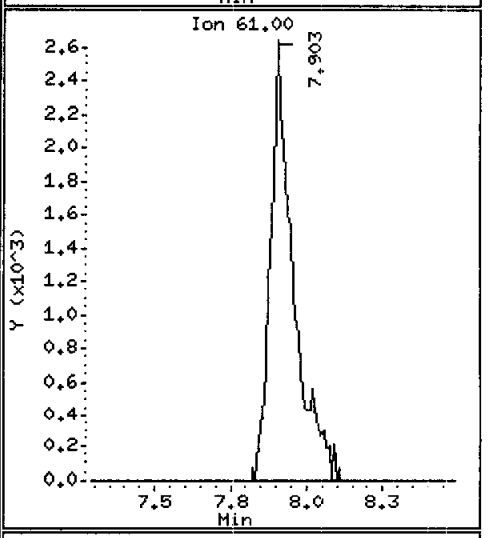
53 cis-1,2-Dichloroethene

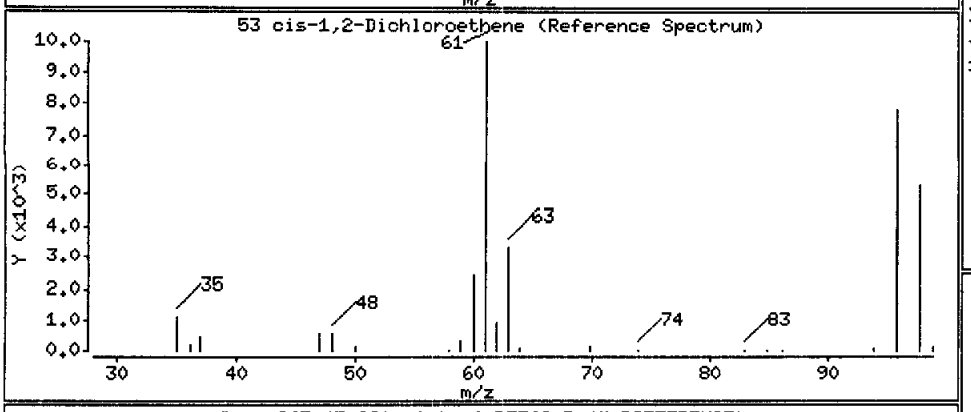
Concentration: 1.280 ppbv

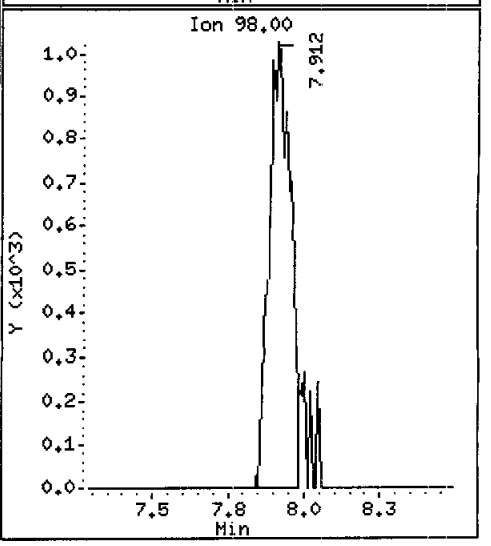


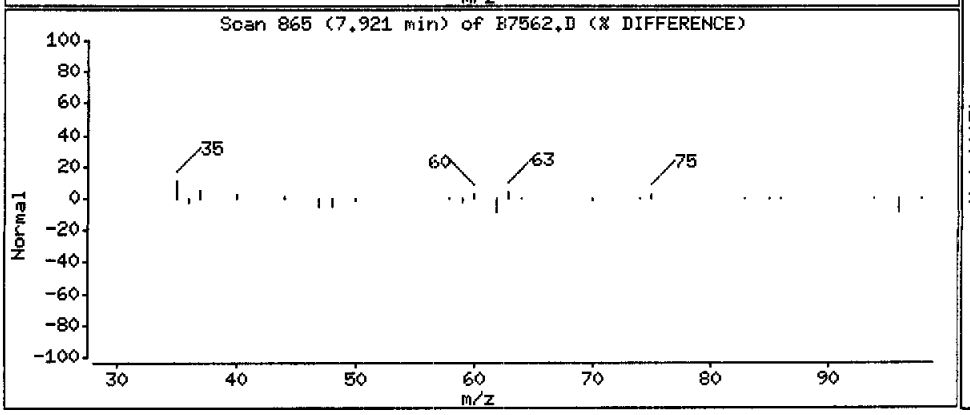












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D

Date : 12-JAN-2005 14:39

Client ID: 066367-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

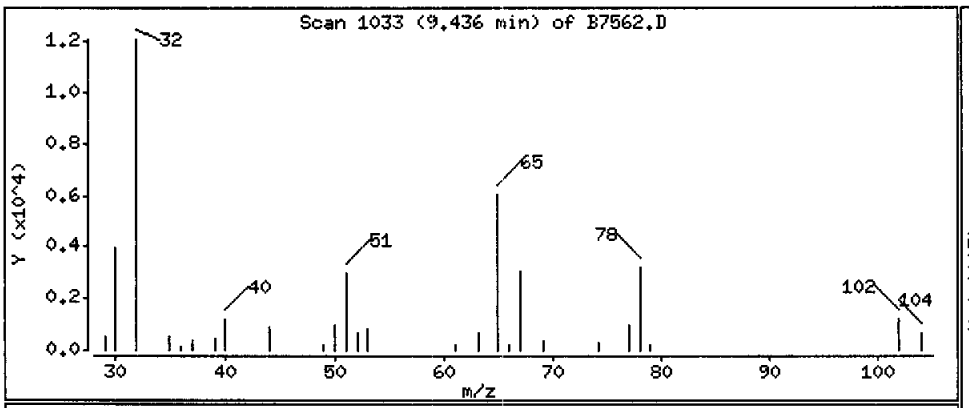
Operator: DLK

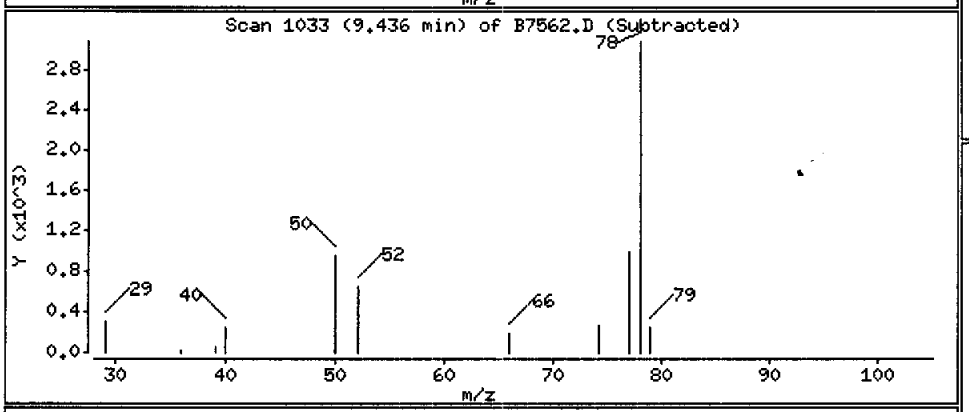
Column phase: J&W DB-624

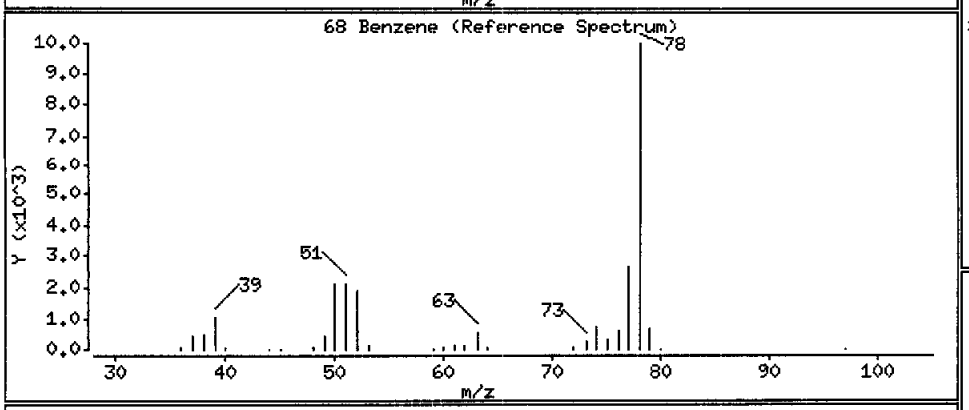
Column diameter: 0.53

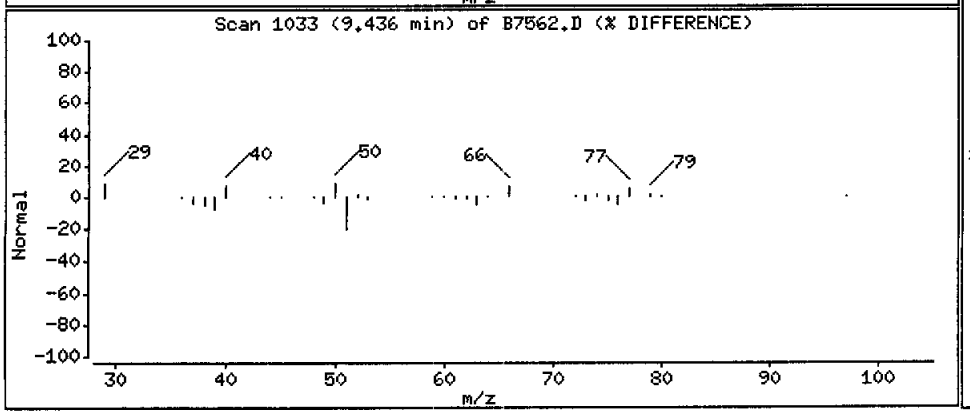
68 Benzene

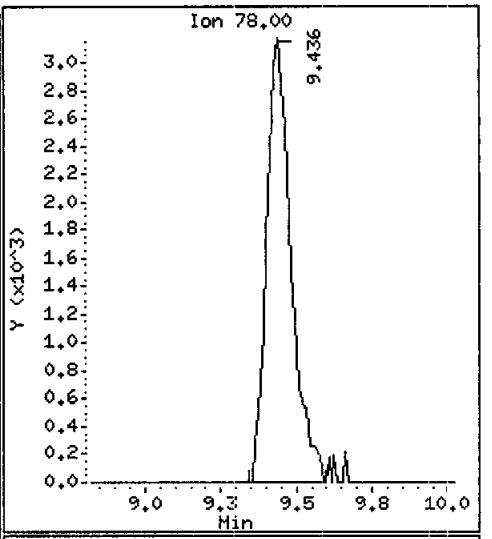
Concentration: 1.222 ppbv

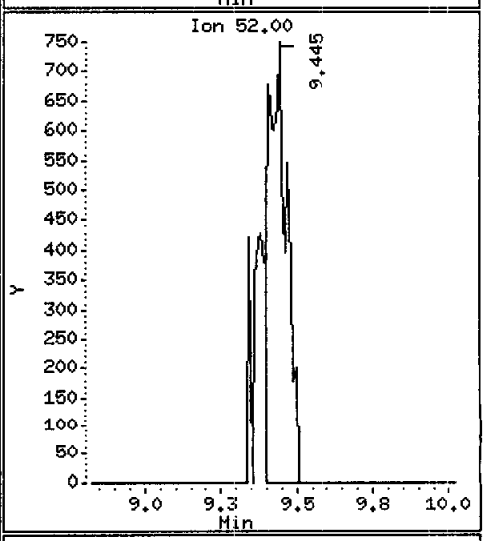


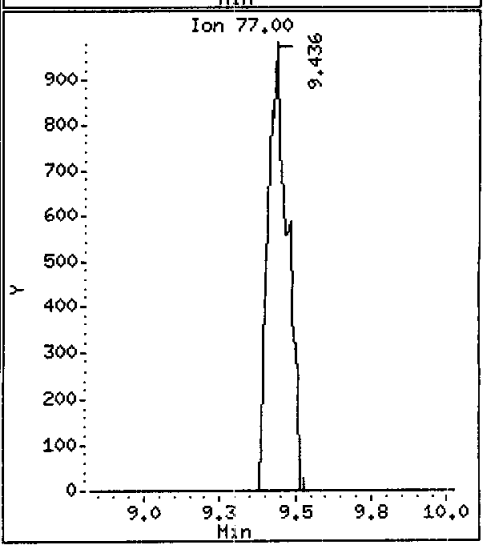












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D

Date : 12-JAN-2005 14:39

Client ID: 066367-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

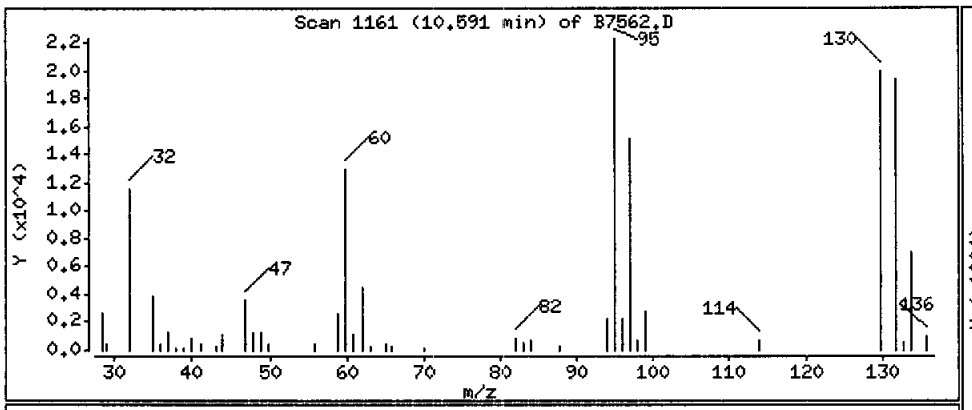
Operator: DLK

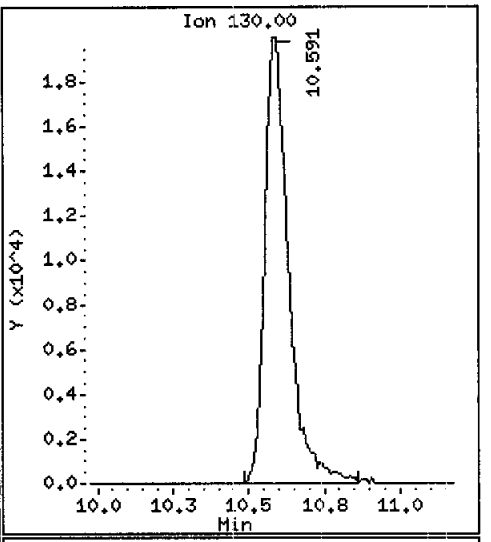
Column phase: J&W DB-624

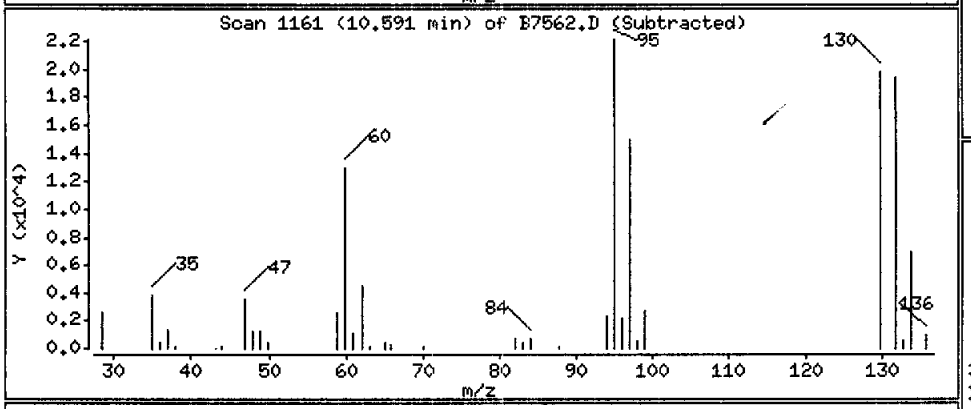
Column diameter: 0.53

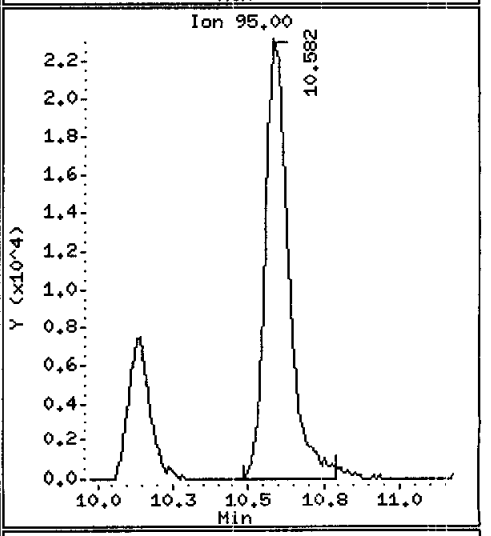
75 Trichloroethene

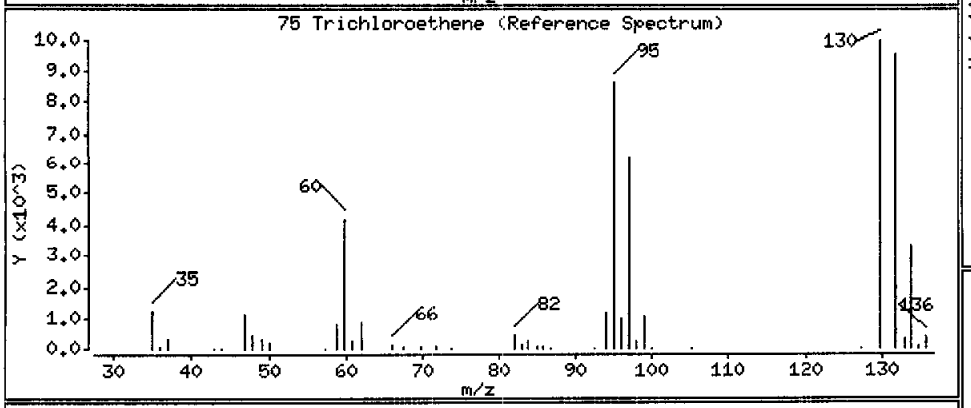
Concentration: 11.79 ppbv

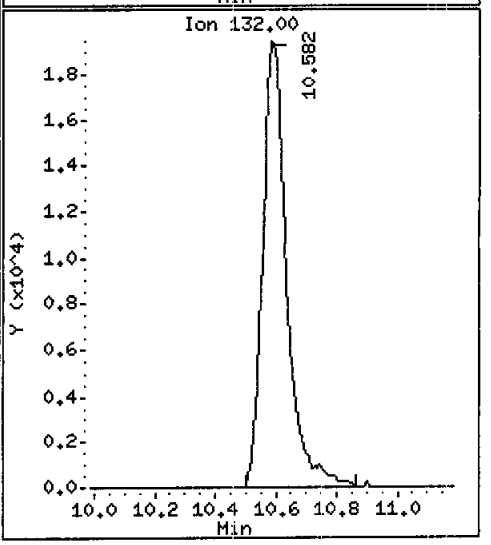


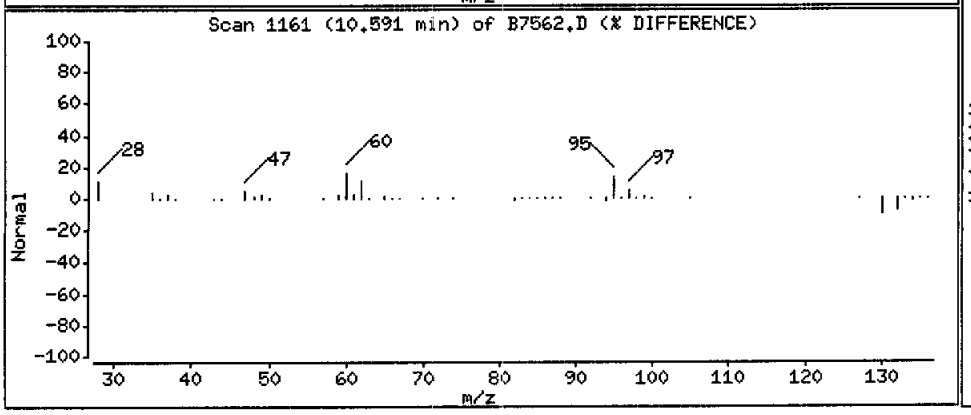












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D

Date : 12-JAN-2005 14:39

Client ID: 066367-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

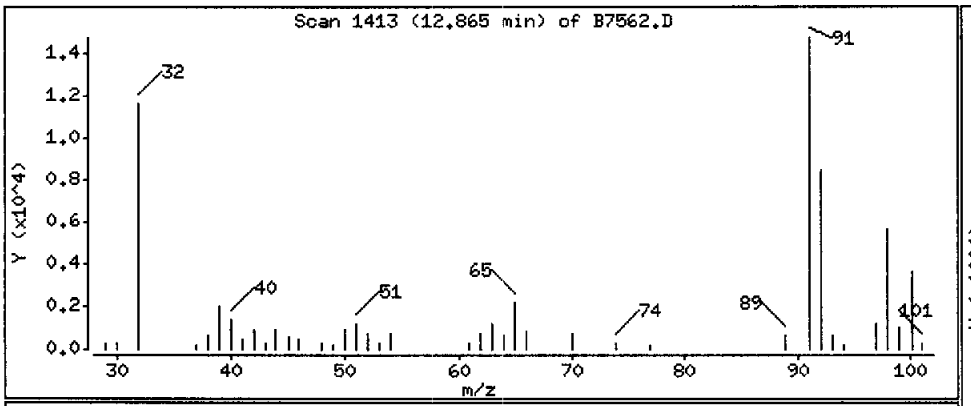
Operator: DLK

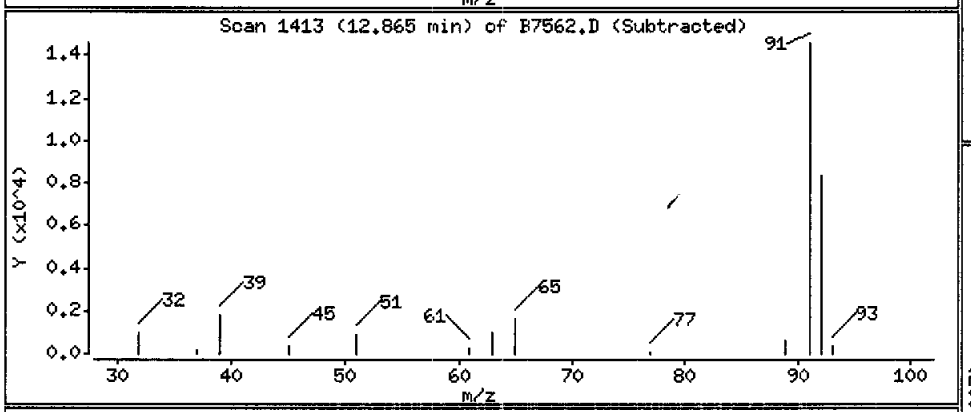
Column phase: J&W DB-624

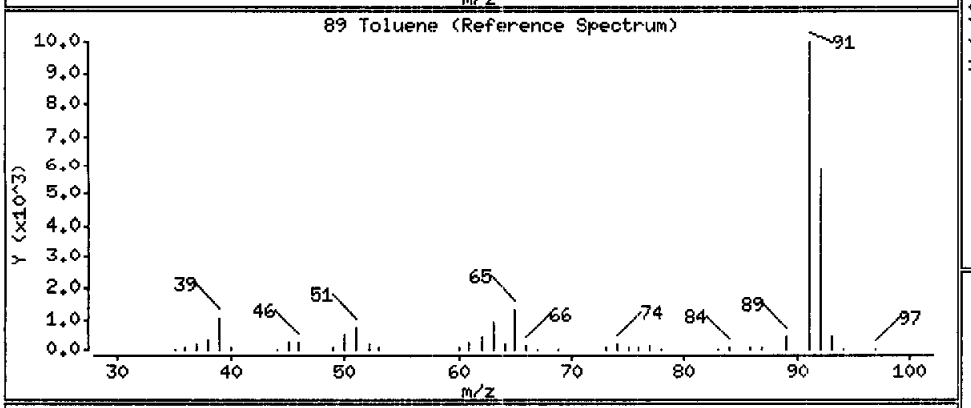
Column diameter: 0.53

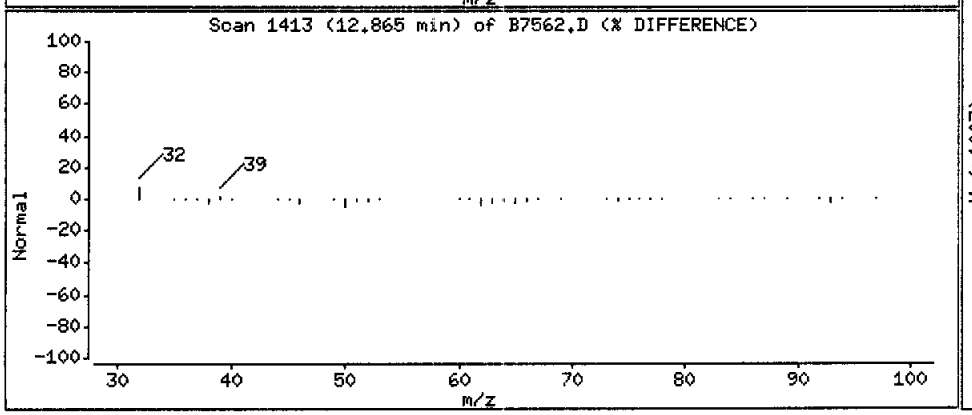
89 Toluene

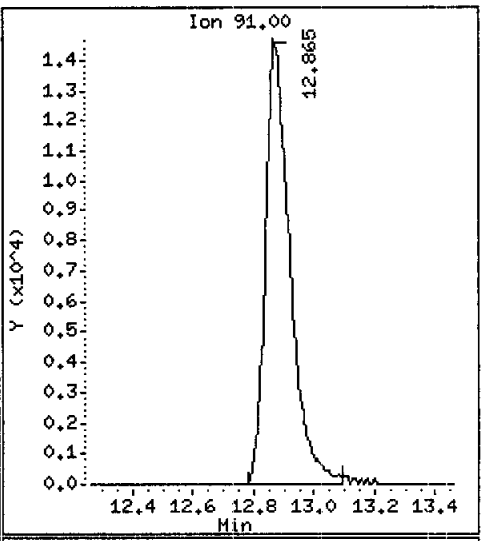
Concentration: 4.365 ppbv

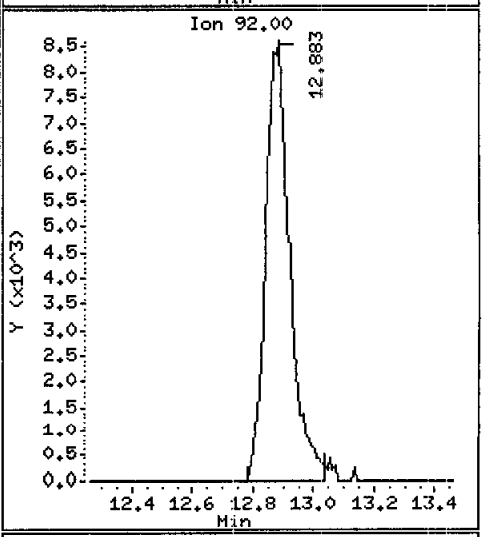


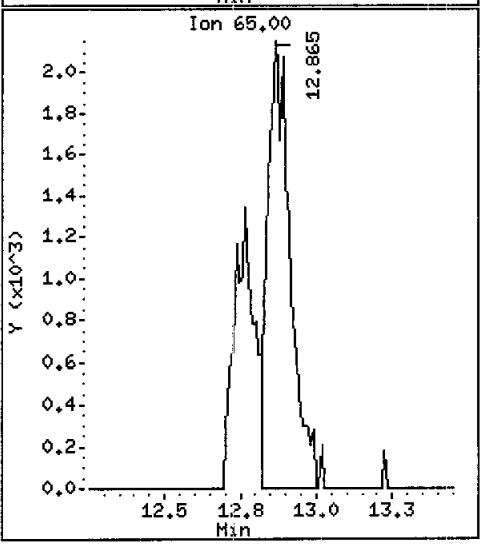












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7562.D

Date : 12-JAN-2005 14:39

Client ID: 066367-001

Instrument: gcmsb.i

Sample Info: G2DHG1AD,066367-001,SANDIA,E5A100222-4

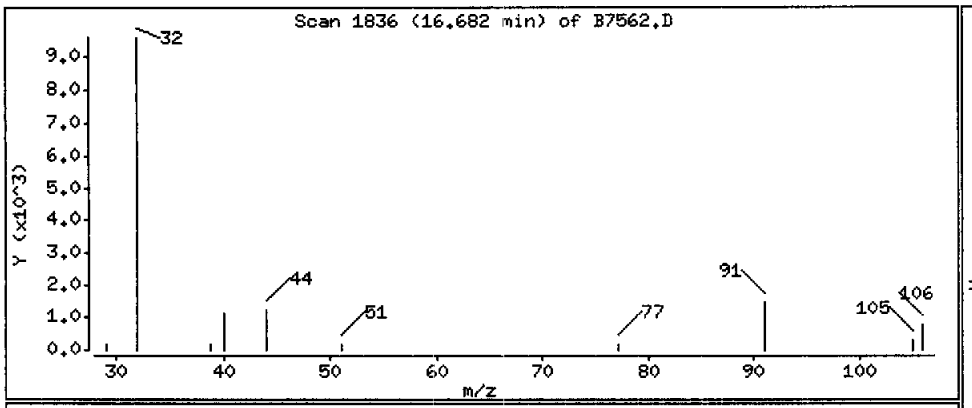
Operator: DLK

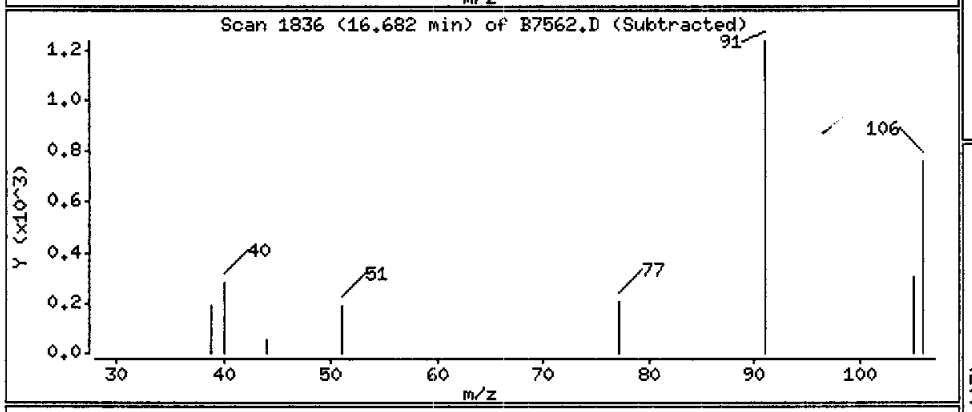
Column phase: J&W DB-624

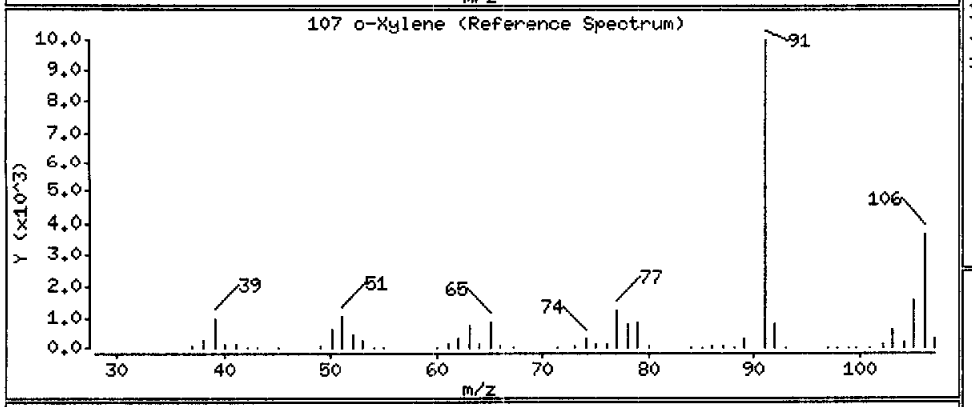
Column diameter: 0.53

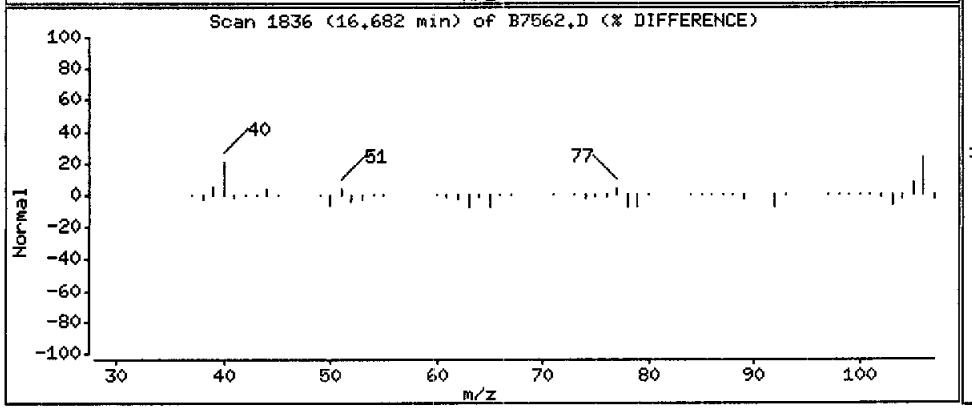
107 o-Xylene

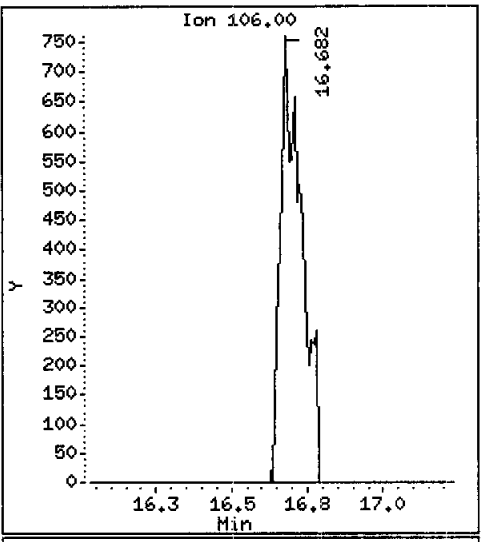
Concentration: 0.6057 ppbv

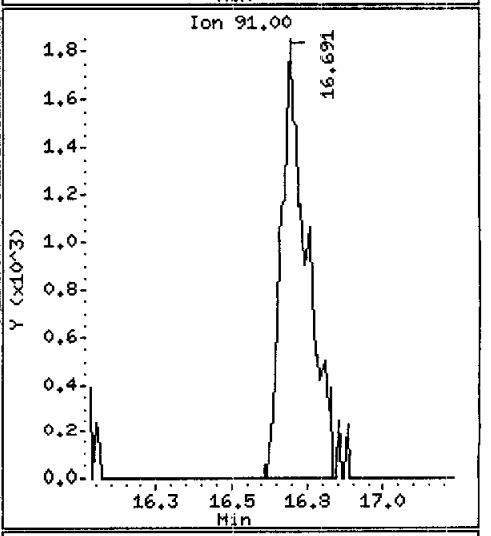


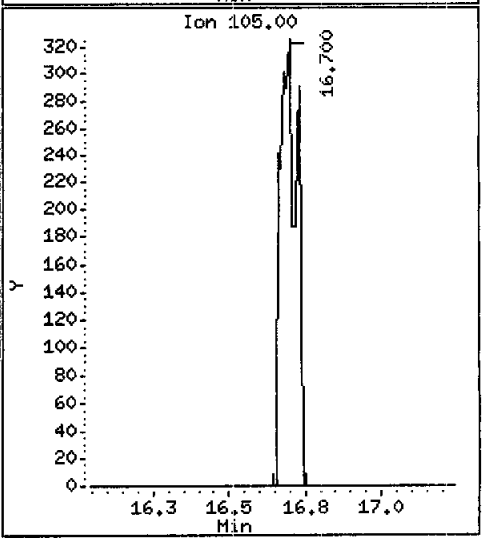












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D
Lab Smp Id: G2DHK1AD Client Smp ID: 066368-001
Inj Date : 12-JAN-2005 15:08
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHK1AD,066368-001,SANDIA,E5A100222-5
Misc Info : 24.3,12.6,500,965,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	965.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
44 1,1-Dichloroethane	63	6.835	6.838	(0.823)	14452	1.09853	1.098(a)
53 cis-1,2-Dichloroethene	96	7.891	7.893	(0.950)	18454	2.71447	2.712
* 58 Bromochloromethane	49	8.306	8.299	(1.000)	531894	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.325	9.319	(0.920)	470449	53.5676	53.53
* 73 1,4-Difluorobenzene	114	10.137	10.131	(1.000)	1070156	50.0000	
75 Trichloroethene	130	10.579	10.573	(1.044)	206289	22.0772	22.06
$ 88 Toluene-d8	100	12.745	12.738	(1.257)	563052	50.2463	50.21
89 Toluene	91	12.880	12.856	(1.271)	10997	0.58366	0.5832(a)
95 Tetrachloroethene	166	13.882	13.857	(0.902)	8529	0.72886	0.7283(a)
* 101 Chlorobenzene-d5	117	15.397	15.382	(1.000)	747466	50.0000	
$ 114 4-Bromofluorobenzene	95	17.644	17.638	(1.146)	590773	44.2445	44.21

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D

Date : 12-JAN-2005 15:08

Client ID: 066368-001

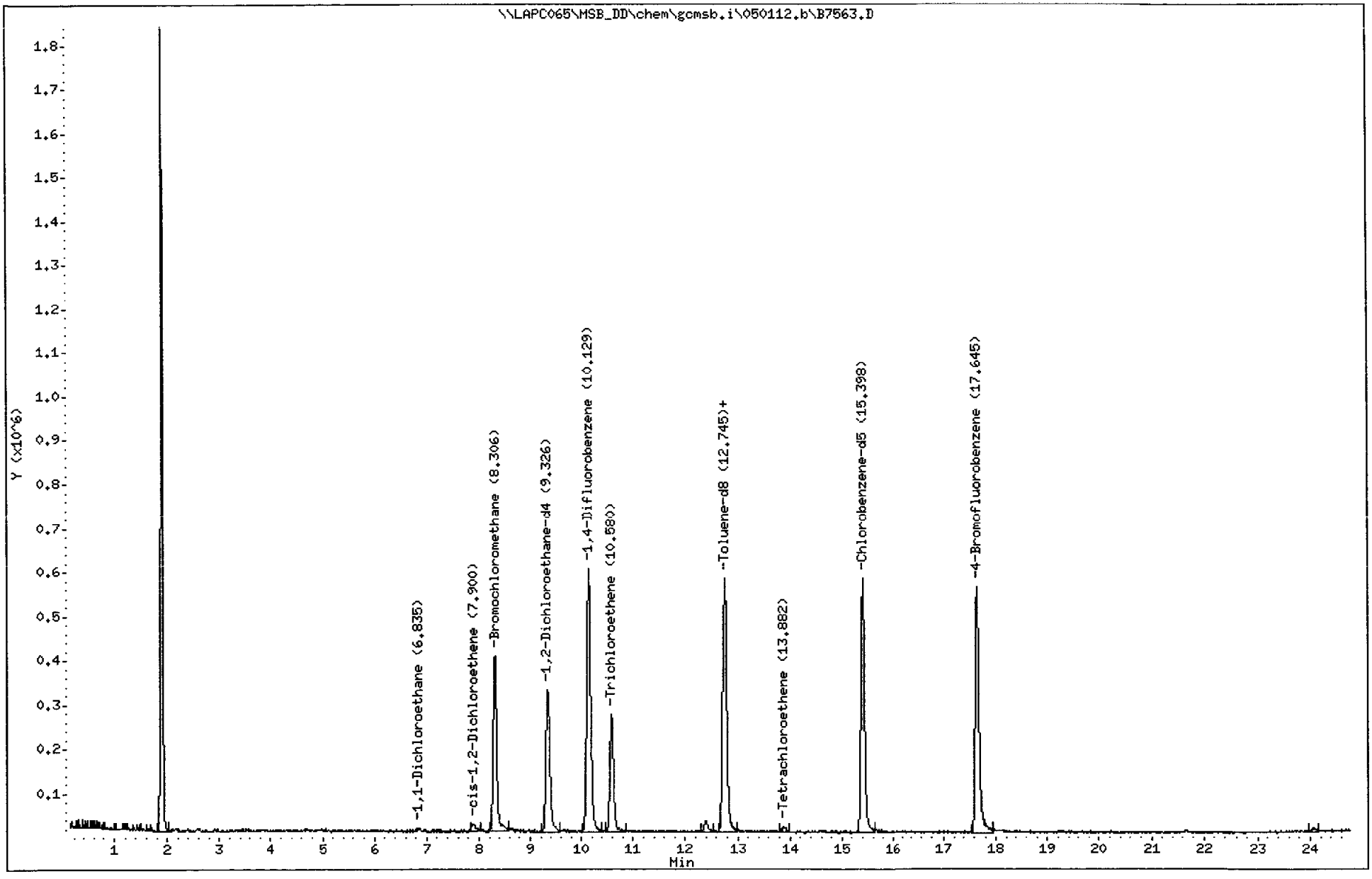
Sample Info: G2DHK1AD,066368-001,SANDIA,E5A100222-5

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D

Date : 12-JAN-2005 15:08

Client ID: 066368-001

Instrument: gcmsb.i

Sample Info: G2DHK1AD,066368-001,SANDIA,E5A100222-5

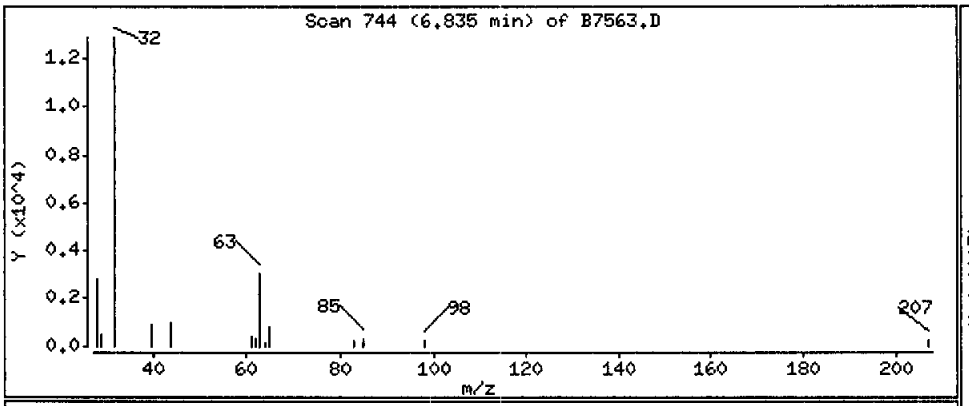
Operator: DLK

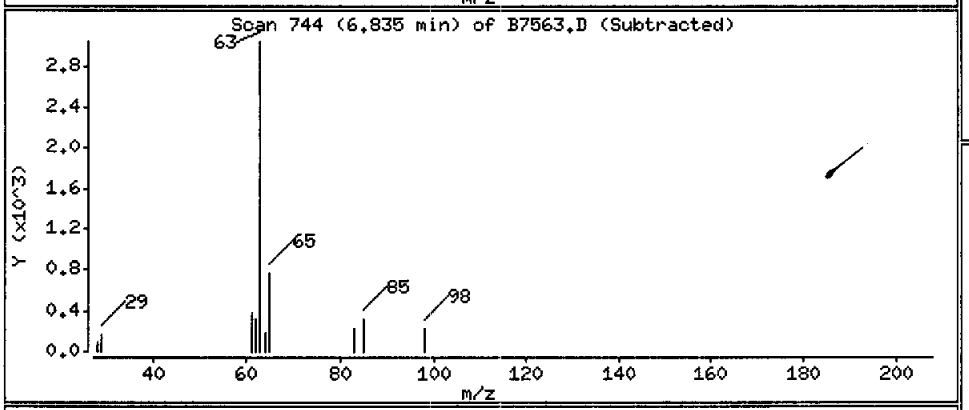
Column phase: J&W DB-624

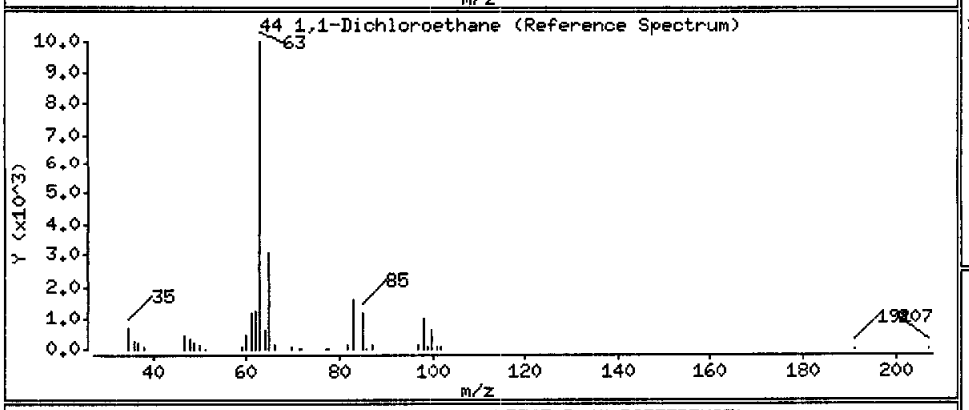
Column diameter: 0.53

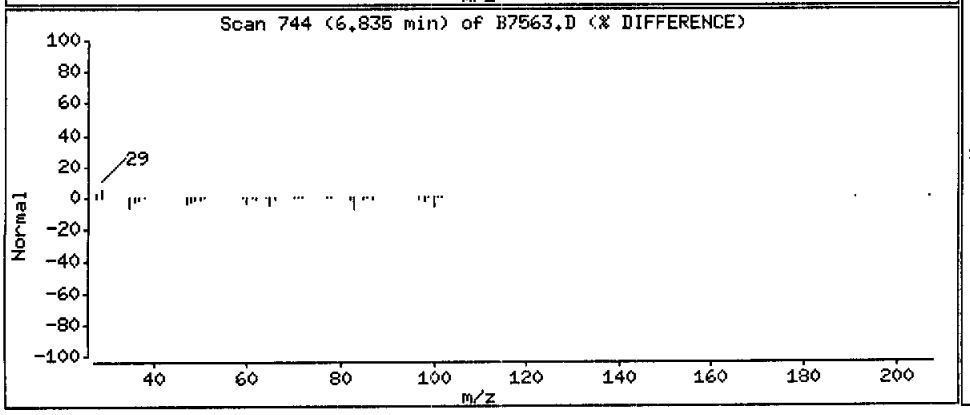
44 1,1-Dichloroethane

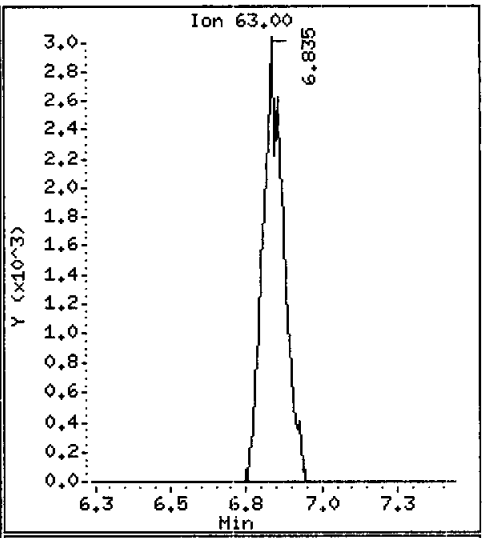
Concentration: 1.098 ppbv

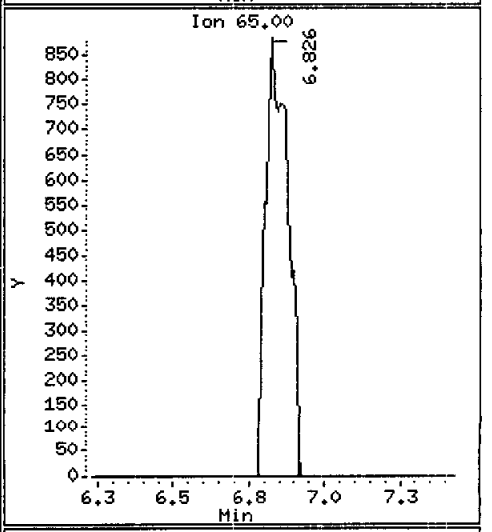


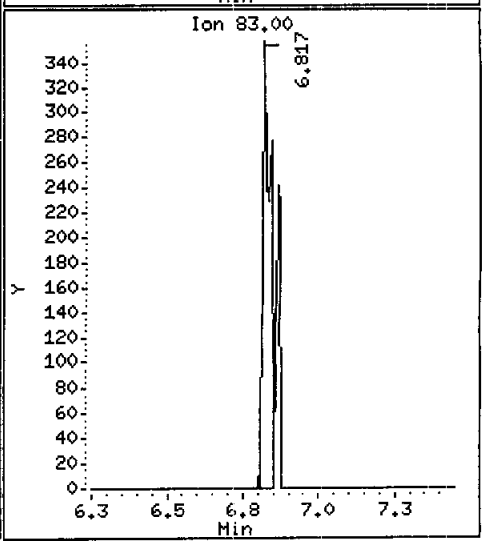












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D

Date : 12-JAN-2005 15:08

Client ID: 066368-001

Instrument: gcmsb.i

Sample Info: G2DHK1AD,066368-001,SANDIA,E5A100222-5

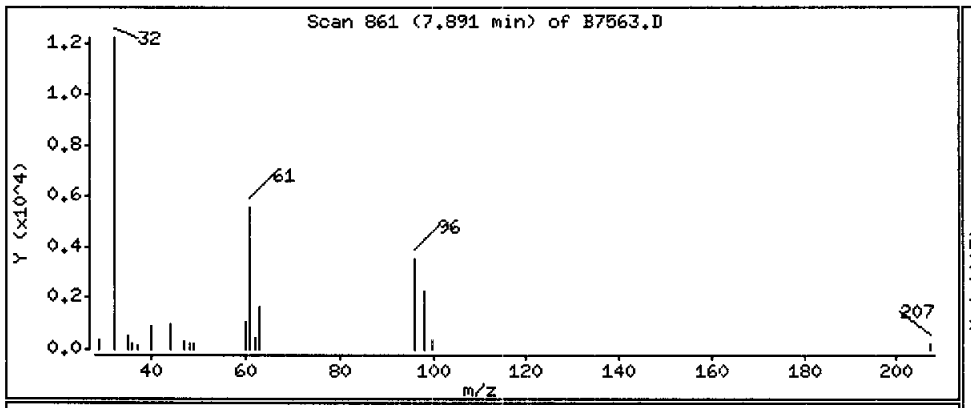
Operator: DLK

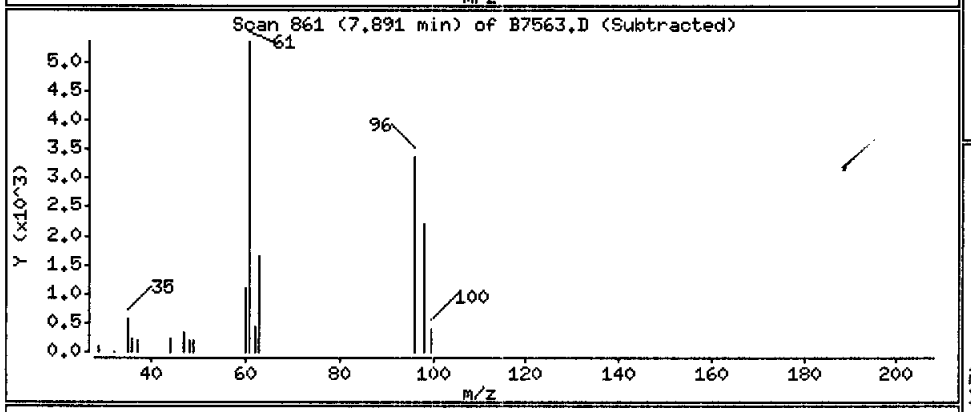
Column phase: J&W DB-624

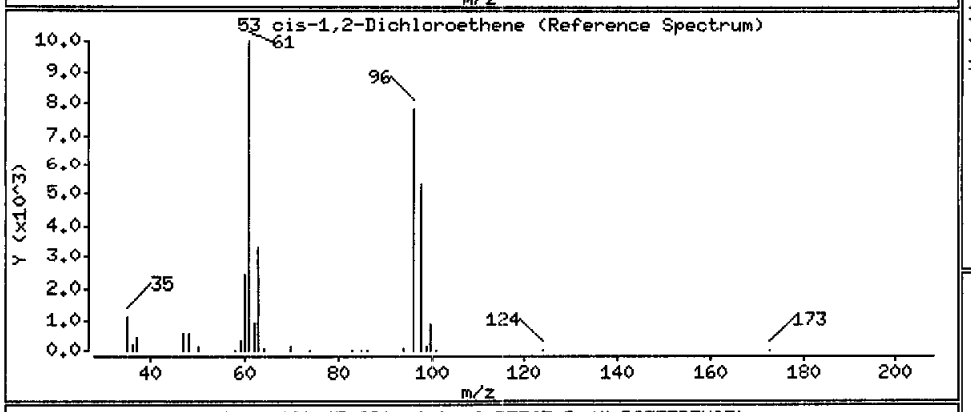
Column diameter: 0.53

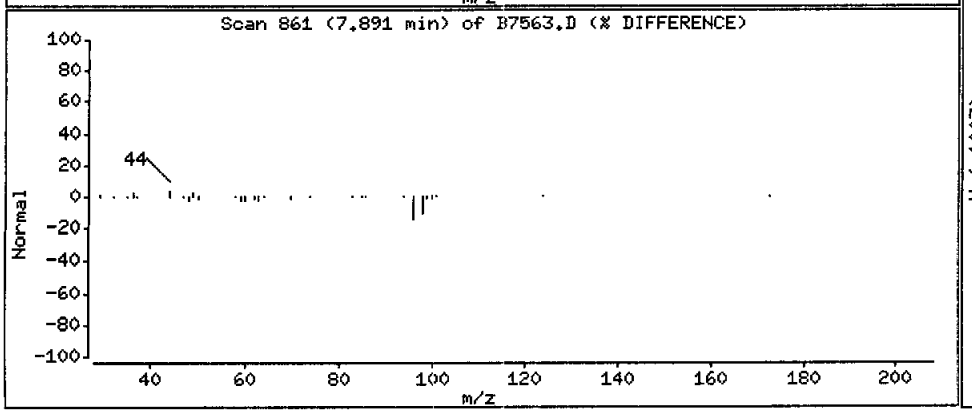
53 cis-1,2-Dichloroethene

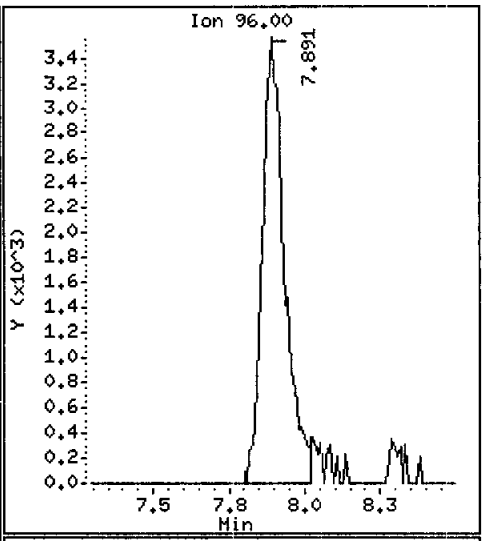
Concentration: 2.712 ppbv

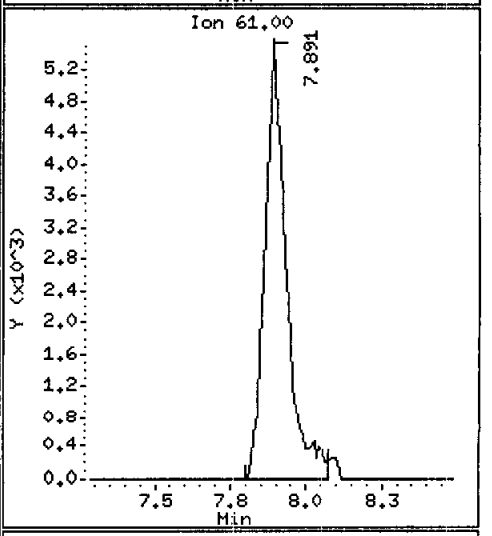


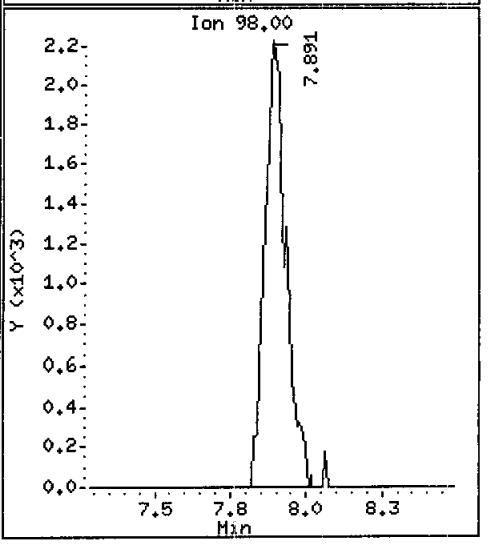












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D

Date : 12-JAN-2005 15:08

Client ID: 066368-001

Instrument: gcmsb.i

Sample Info: G2DHK1AD,066368-001,SANDIA,E5A100222-5

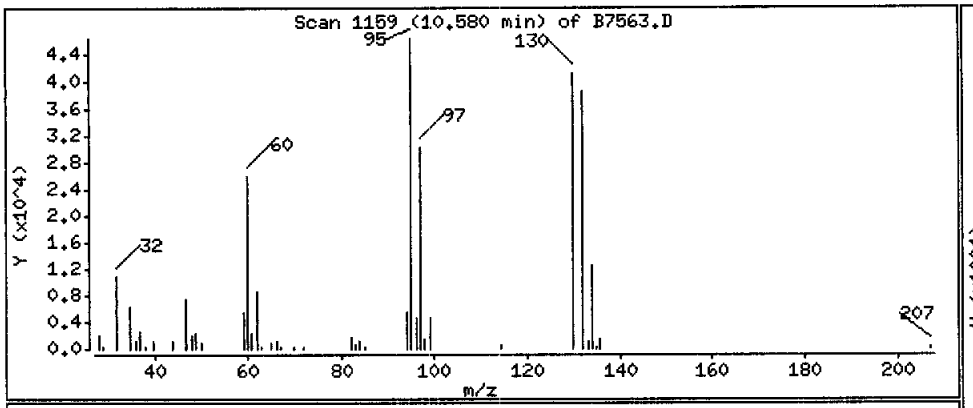
Operator: DLK

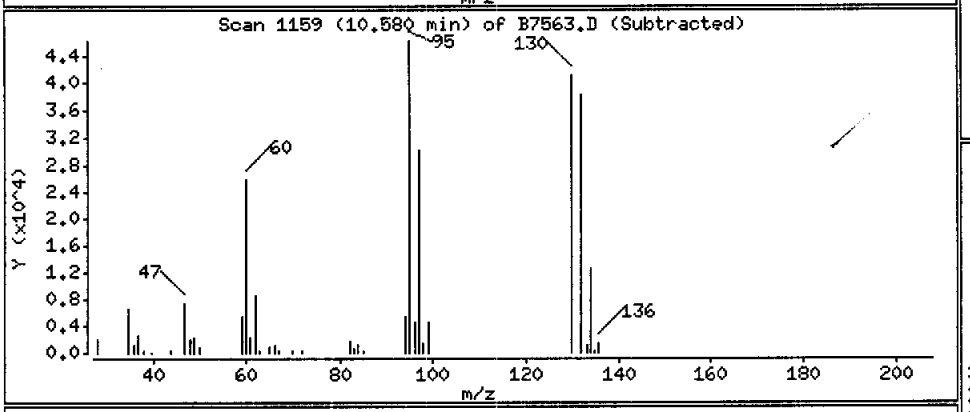
Column phase: J&W DB-624

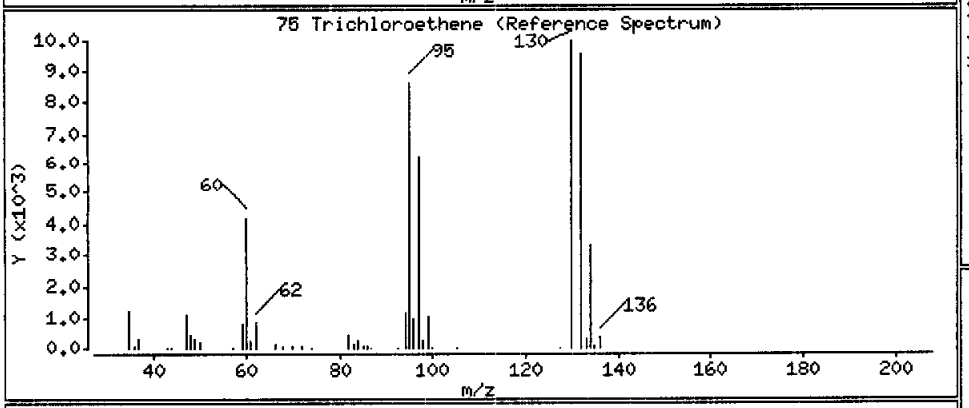
Column diameter: 0.53

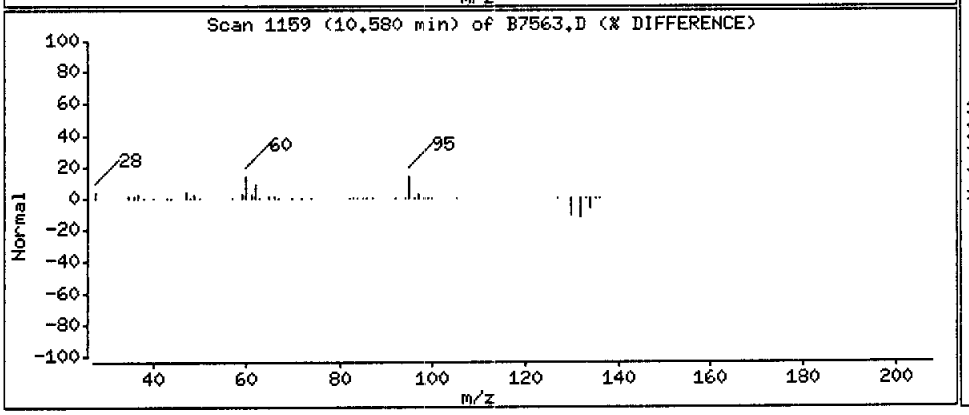
75 Trichloroethene

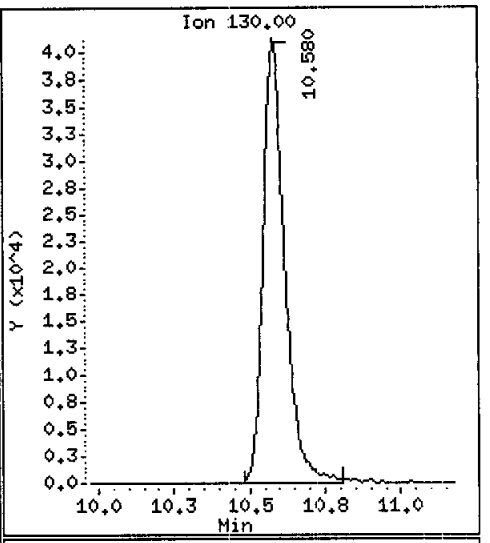
Concentration: 22.06 ppbv

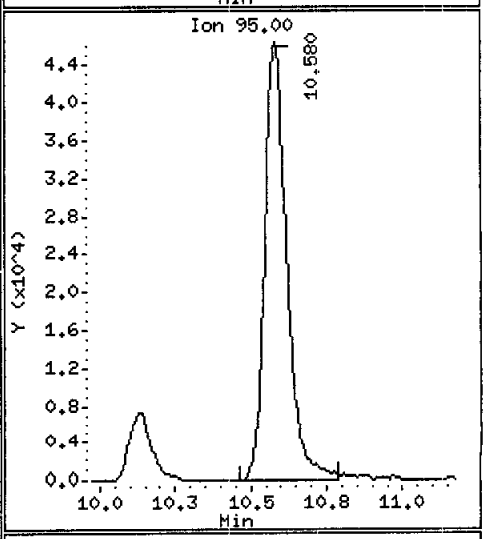


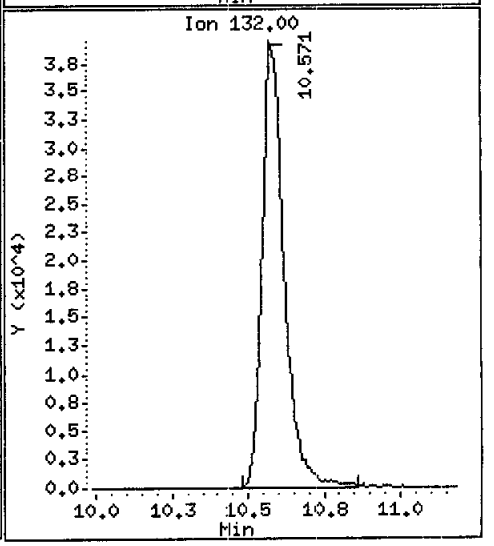












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D

Date : 12-JAN-2005 15:08

Client ID: 066368-001

Instrument: gcmsb.i

Sample Info: G2DHK1AD,066368-001,SANDIA,E5A100222-5

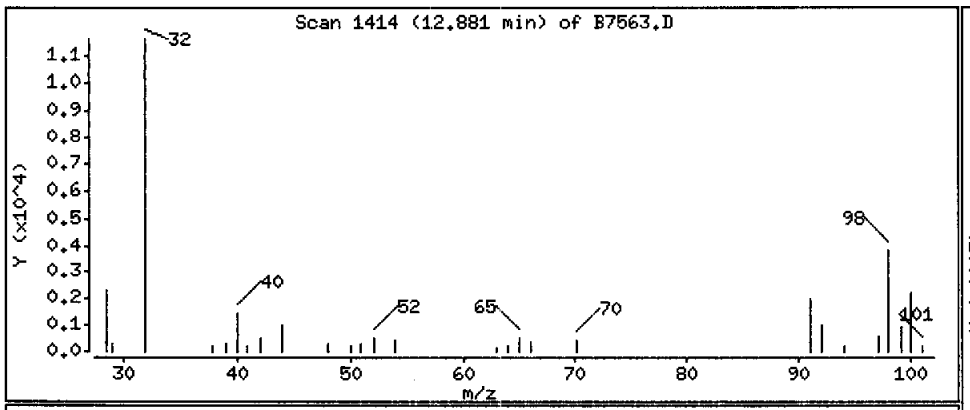
Operator: DLK

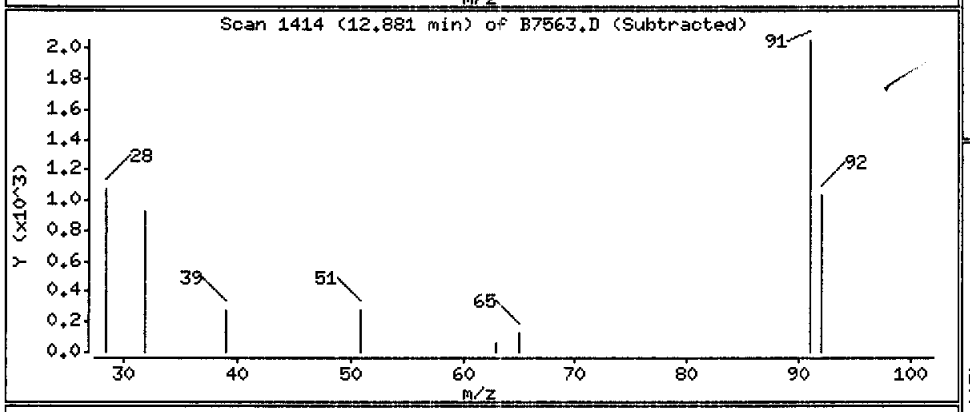
Column phase: J&W DB-624

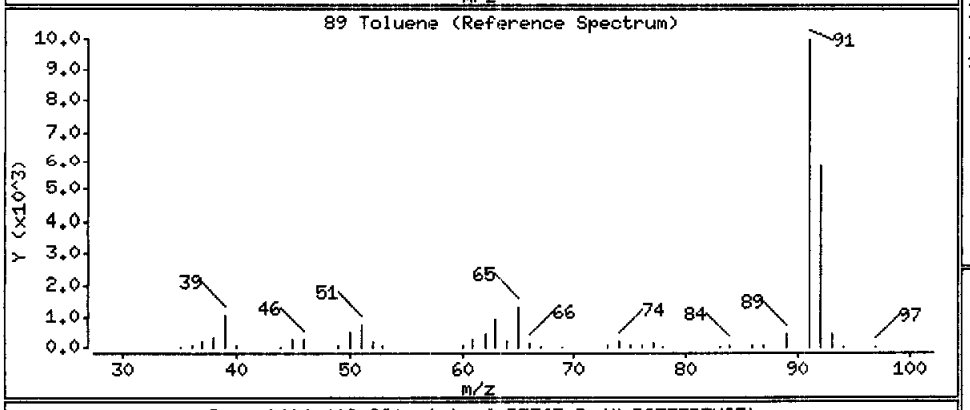
Column diameter: 0.53

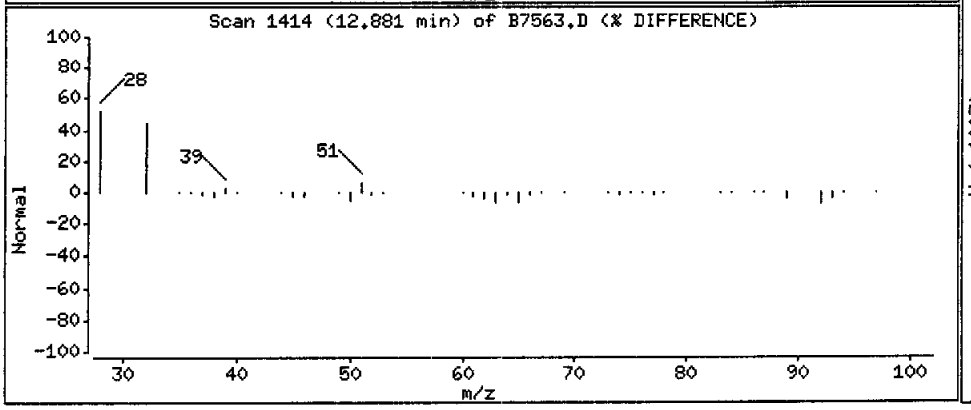
89 Toluene

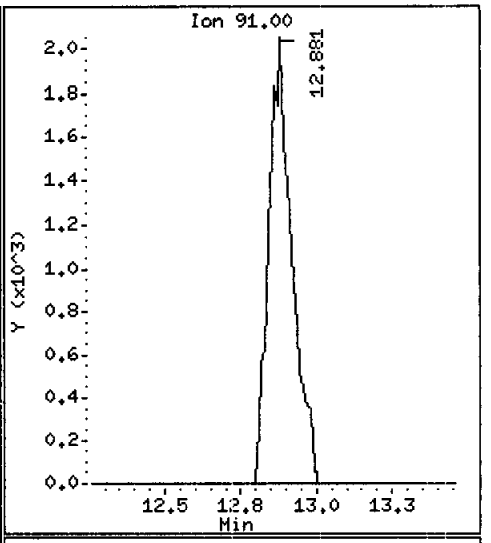
Concentration: 0.5832 ppbv

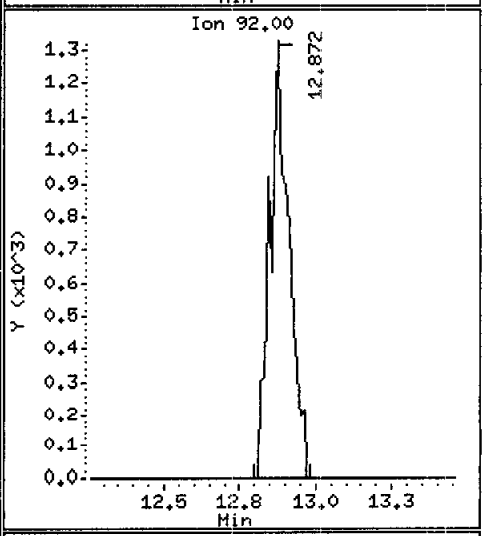


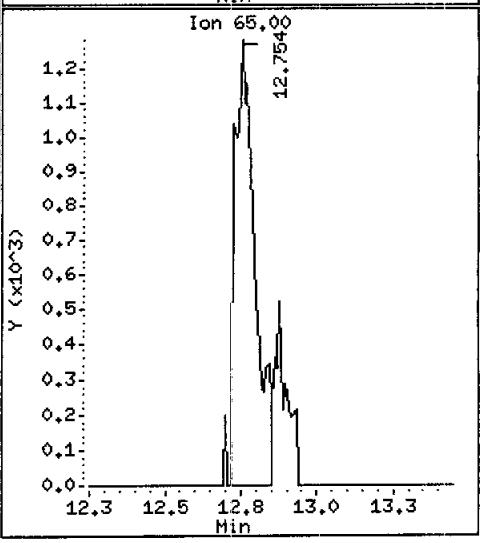












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7563.D

Date : 12-JAN-2005 15:08

Client ID: 066368-001

Instrument: gcmsb.i

Sample Info: G2DHK1AD,066368-001,SANDIA,E5A100222-5

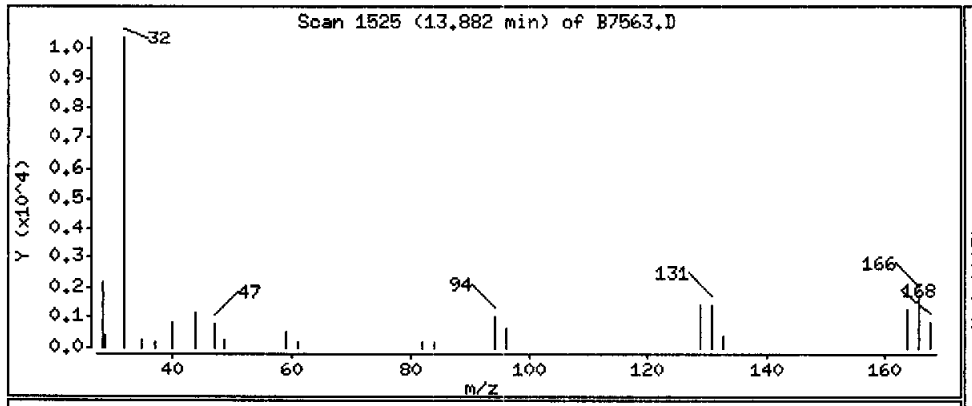
Operator: DLK

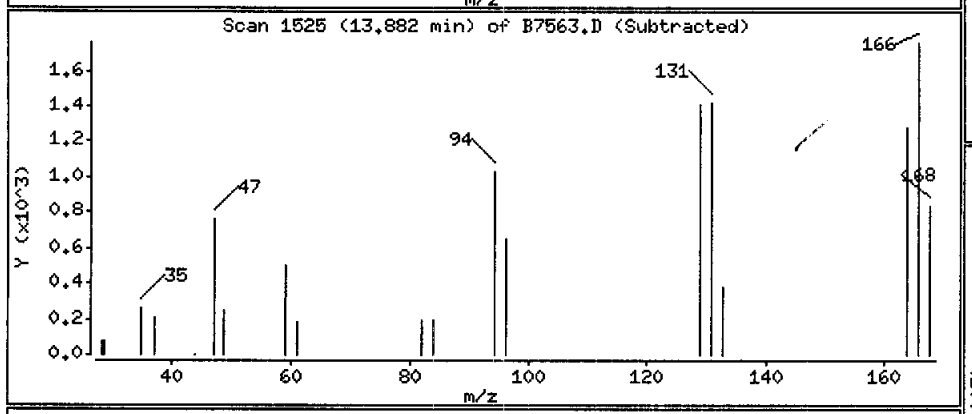
Column phase: J&W DB-624

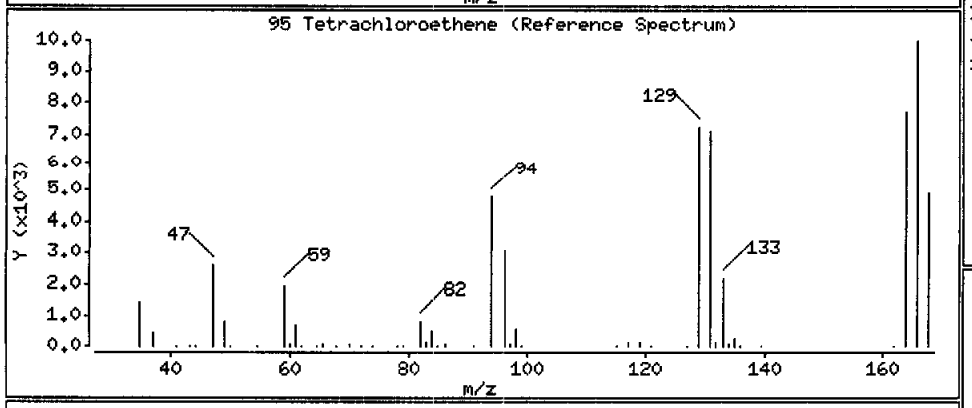
Column diameter: 0.53

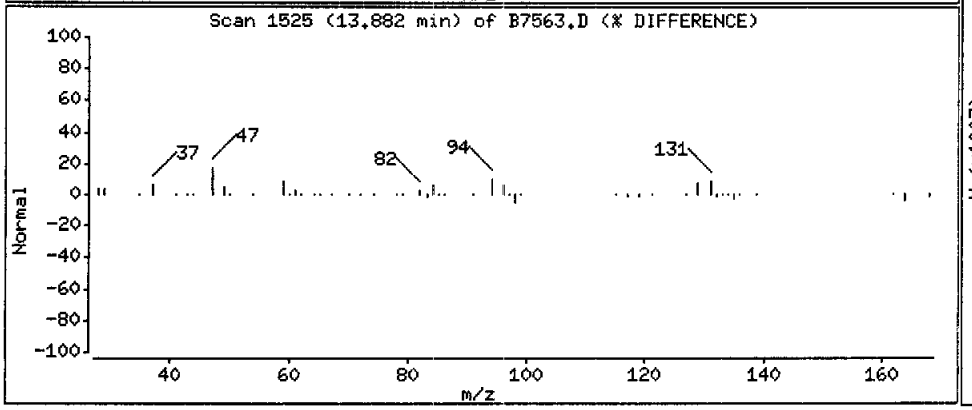
95 Tetrachloroethene

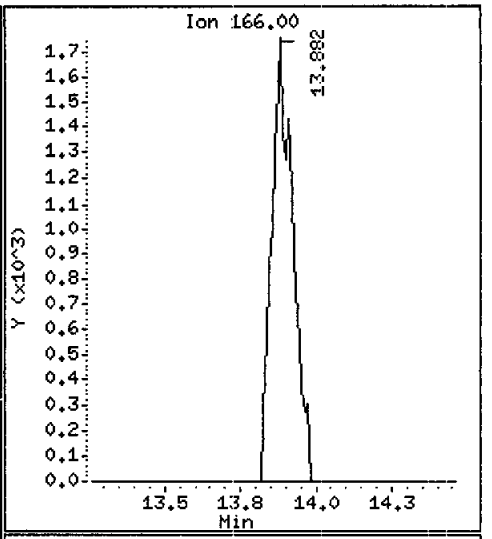
Concentration: 0.7283 ppbv

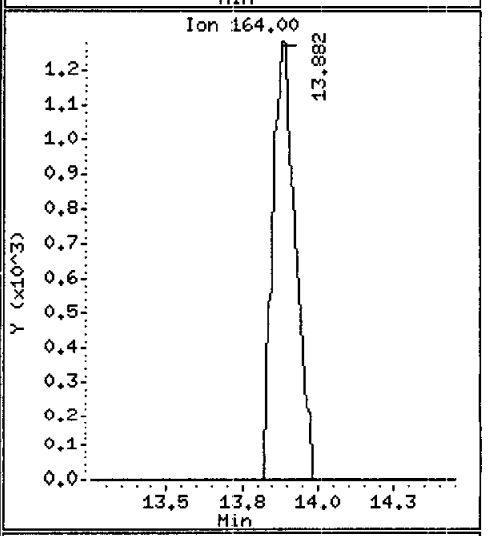


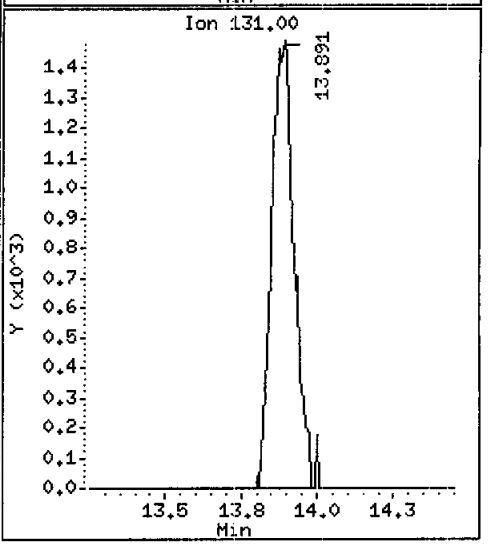












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D
Lab Smp Id: G2DHL1AD Client Smp ID: 066369-001
Inj Date : 12-JAN-2005 15:43
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHL1AD,066369-001,SANDIA,E5A100222-6
Misc Info : 24.6,12.6,500,977,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.600	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	977.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.678	4.672	(0.563)	51424	4.34959	4.346
44 1,1-Dichloroethane	63	6.834	6.838	(0.823)	121177	9.35333	9.346
53 cis-1,2-Dichloroethene	96	7.899	7.893	(0.951)	111488	16.6525	16.64
* 58 Bromochloromethane	49	8.305	8.299	(1.000)	523786	50.0000	
60 Chloroform	83	8.476	8.471	(1.021)	16811	1.00882	1.008(a)
$ 66 1,2-Dichloroethane-d4	65	9.334	9.319	(0.921)	465105	52.4180	52.37
* 73 1,4-Difluorobenzene	114	10.137	10.131	(1.000)	1081203	50.0000	
75 Trichloroethene	130	10.579	10.573	(1.044)	1083054	114.724	114.6
$ 88 Toluene-d8	100	12.744	12.738	(1.257)	533551	47.1271	47.09
89 Toluene	91	12.898	12.856	(1.272)	13340	0.70073	0.7002(a)
95 Tetrachloroethene	166	13.881	13.857	(0.901)	42385	4.37622	4.372
* 101 Chlorobenzene-d5	117	15.406	15.382	(1.000)	618620	50.0000	
$ 114 4-Bromofluorobenzene	95	17.662	17.638	(1.146)	330539	29.9107	29.88(R)

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

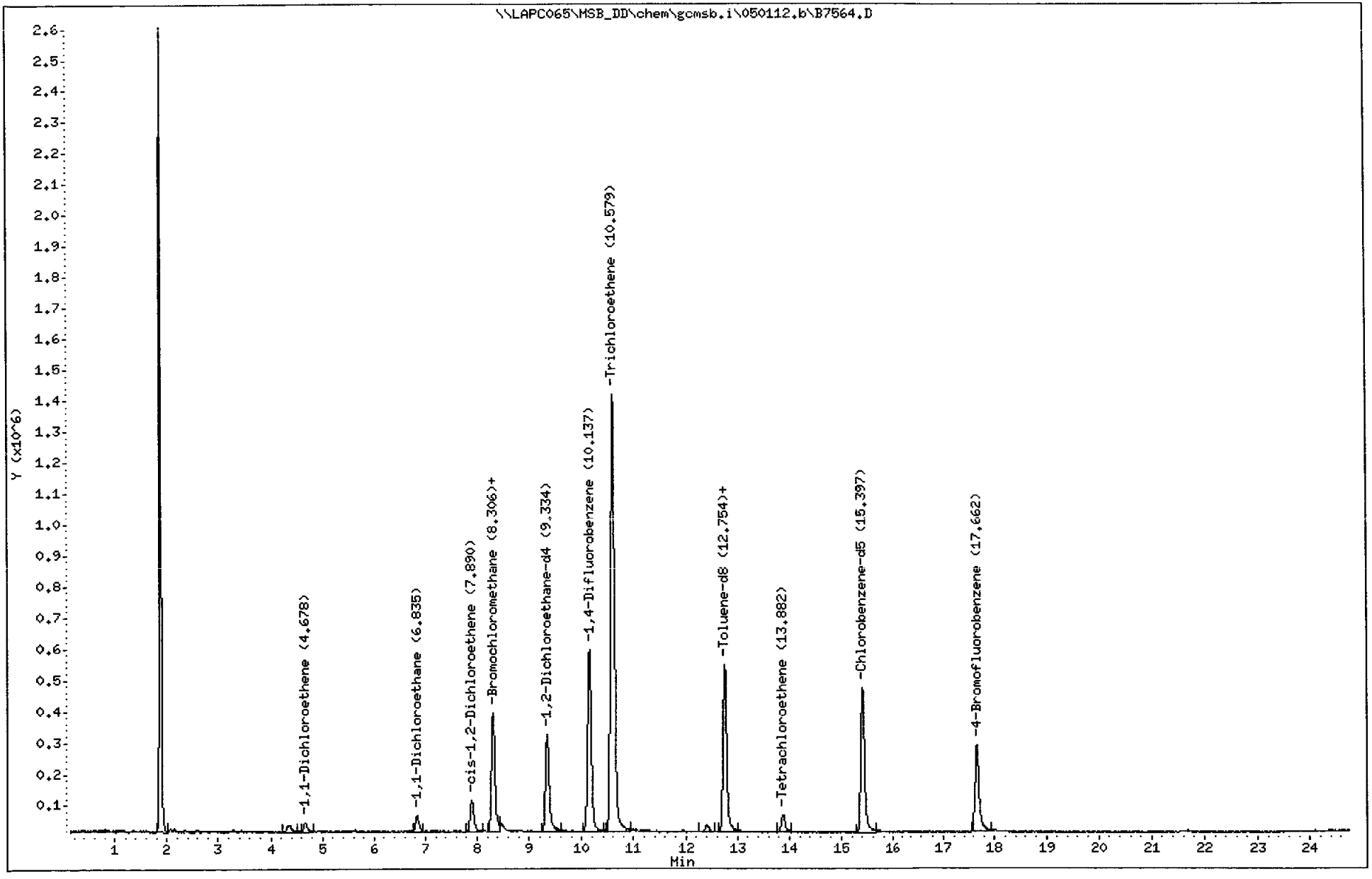
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D
Date : 12-JAN-2005 15:43
Client ID: 066369-001
Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D

Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

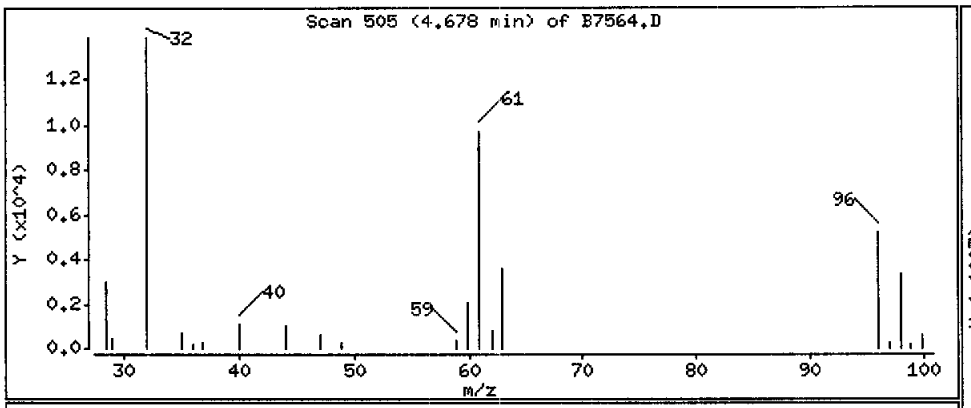
Operator: DLK

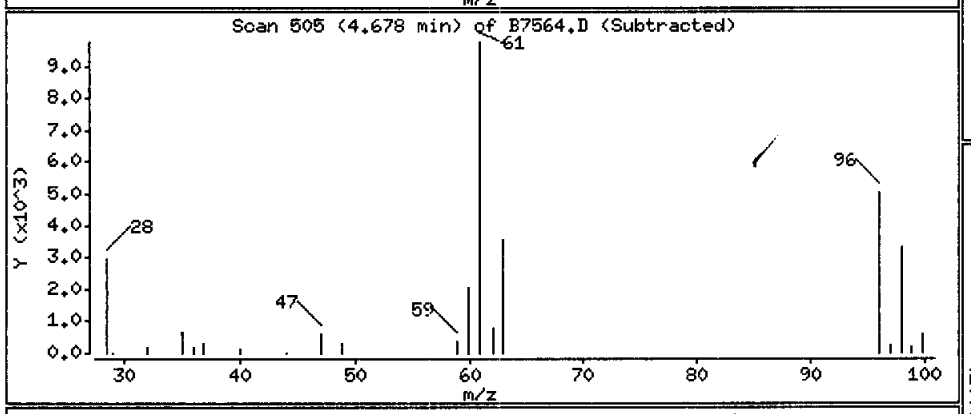
Column phase: J&W DB-624

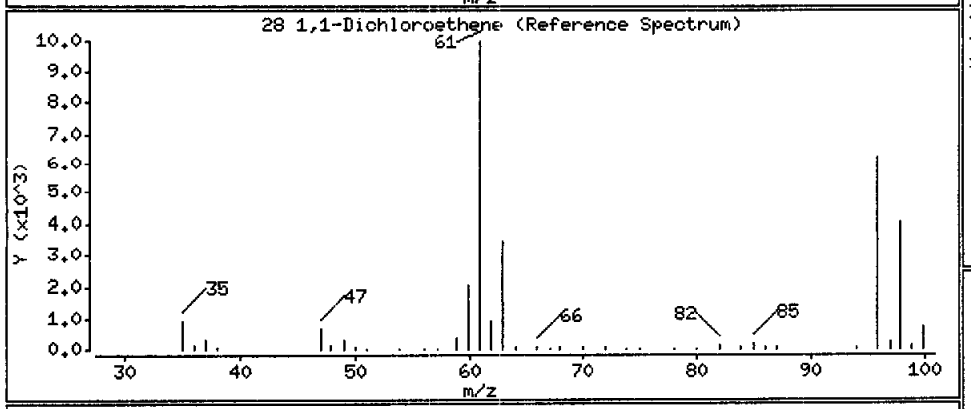
Column diameter: 0.53

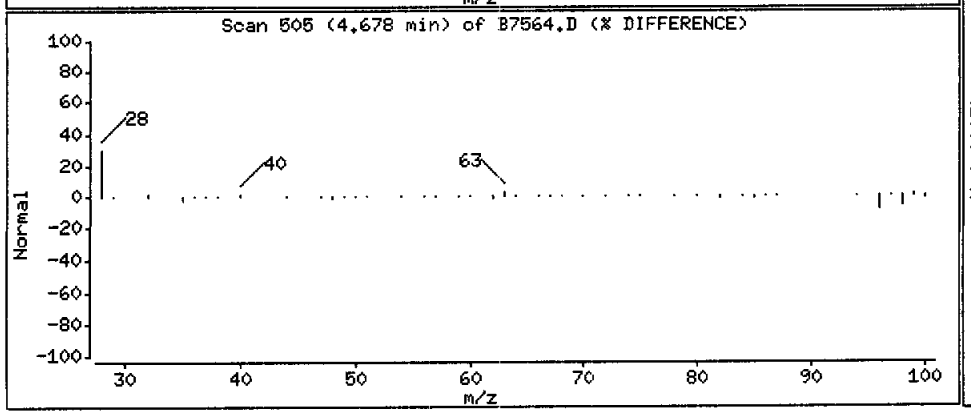
28 1,1-Dichloroethene

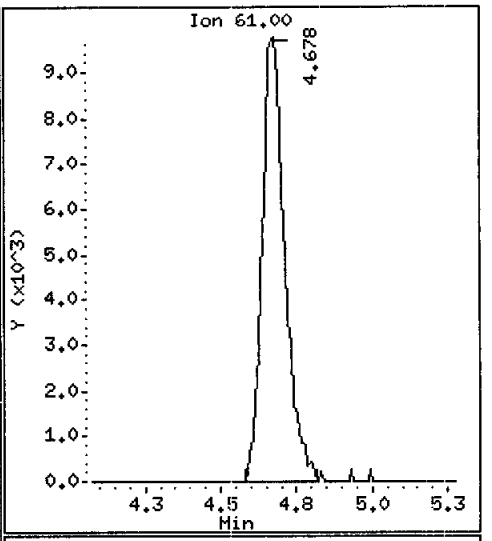
Concentration: 4.346 ppbv

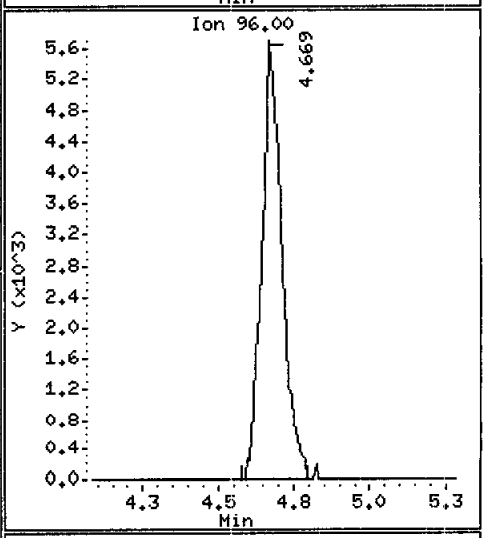


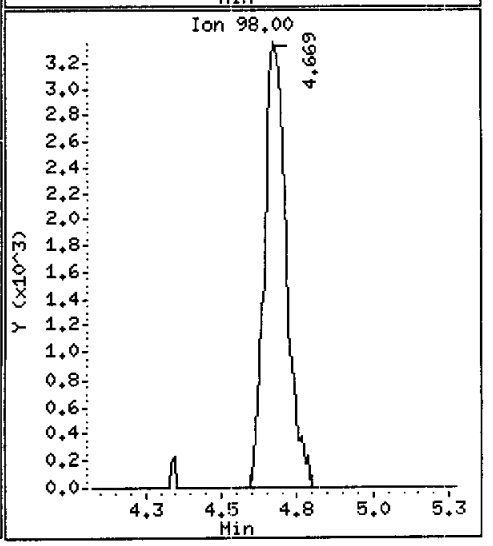












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D

Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

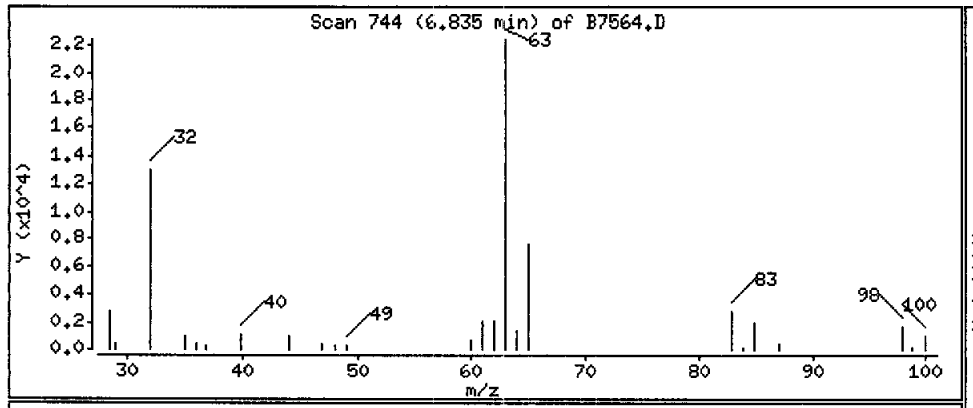
Operator: DLK

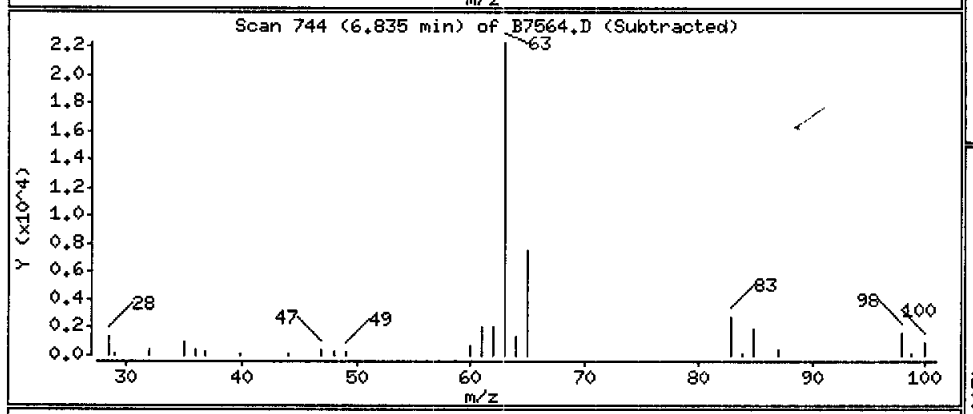
Column phase: J&W DB-624

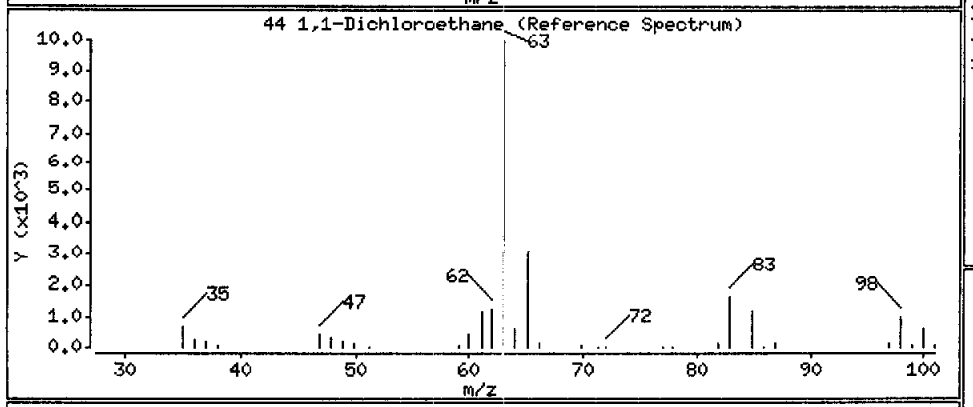
Column diameter: 0.53

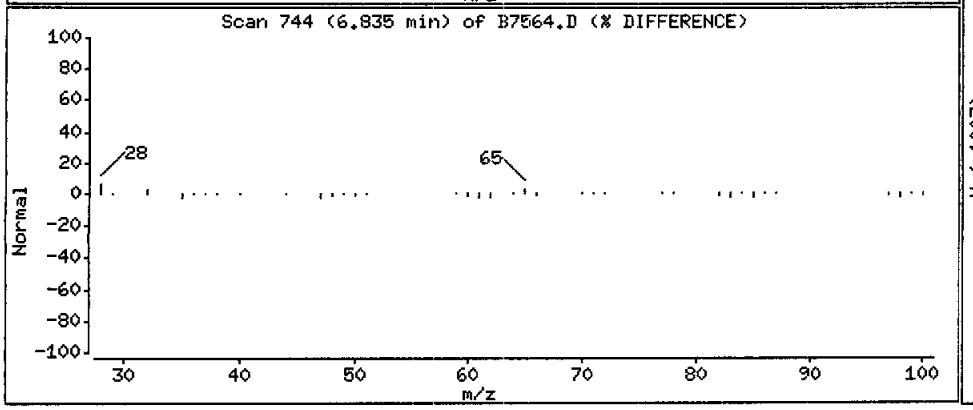
44 1,1-Dichloroethane

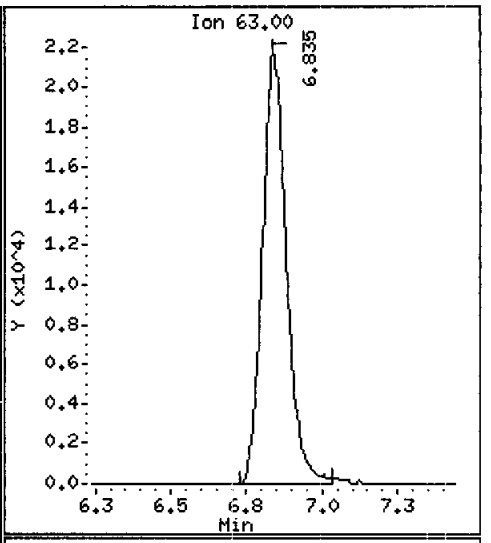
Concentration: 9.346 ppbv

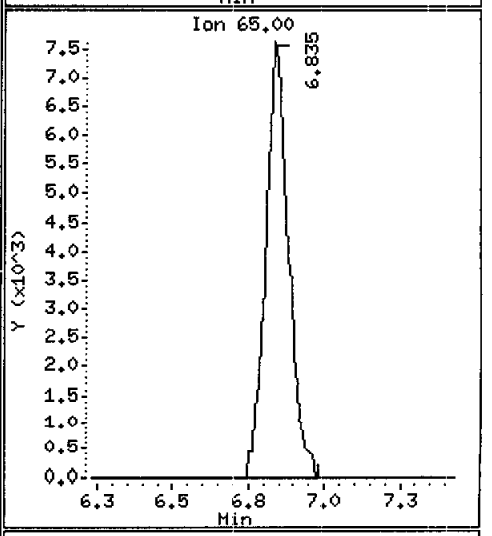


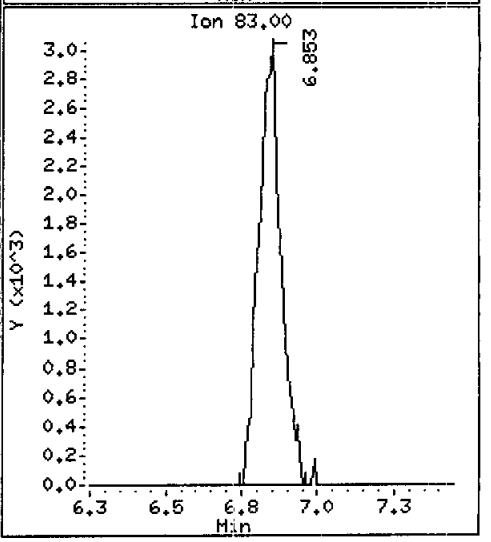












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D

Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

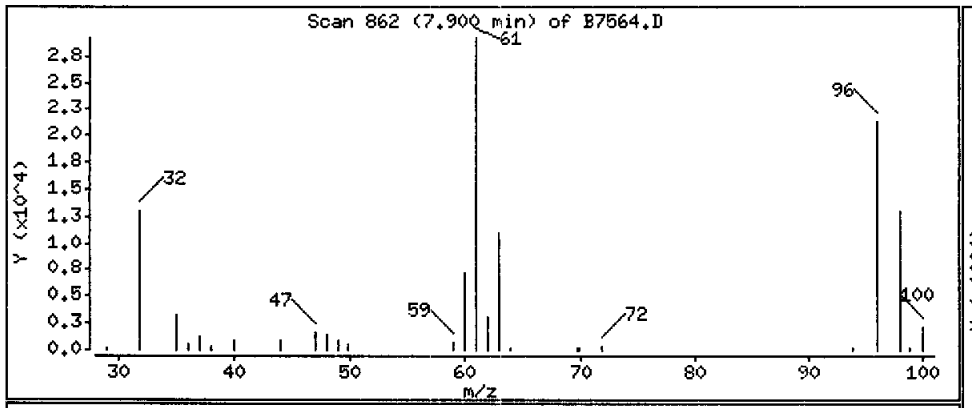
Operator: DLK

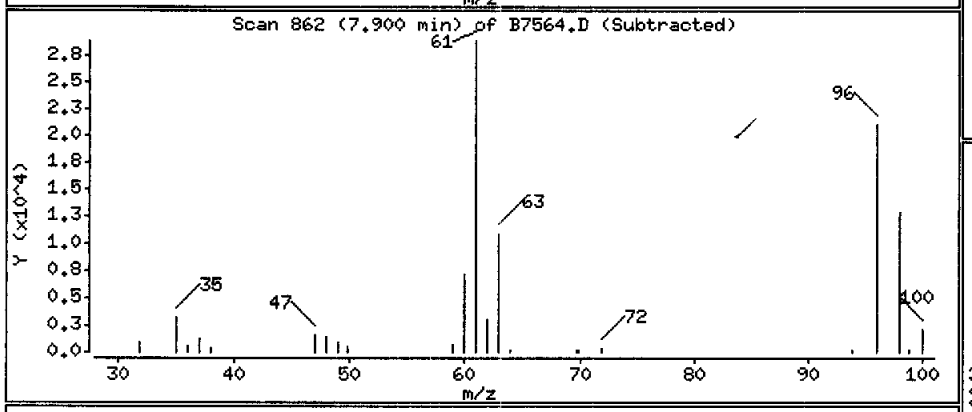
Column phase: J&W DB-624

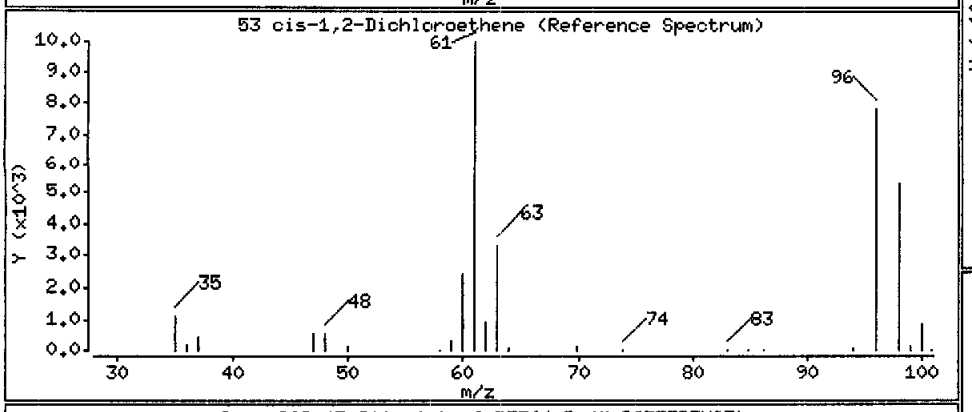
Column diameter: 0.53

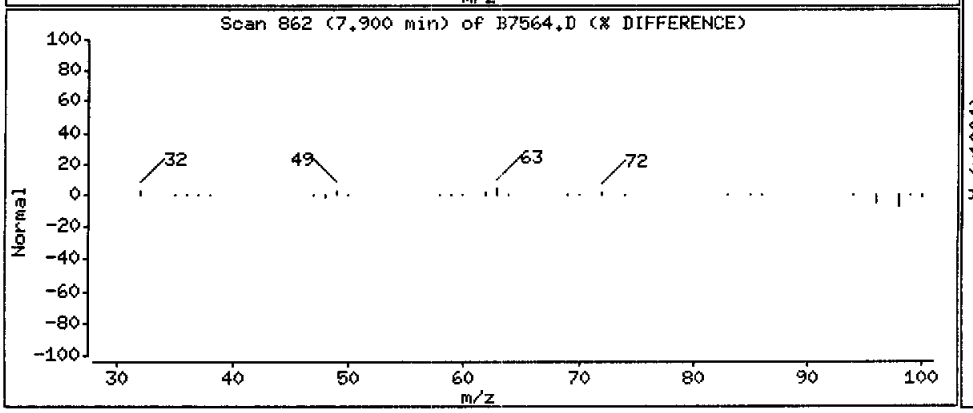
53 cis-1,2-Dichloroethene

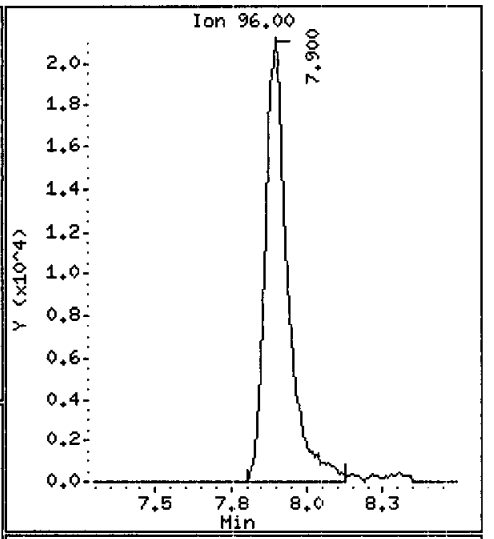
Concentration: 16.64 ppbv

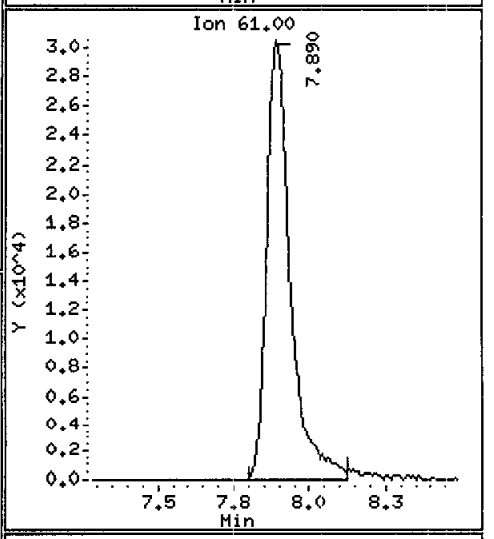


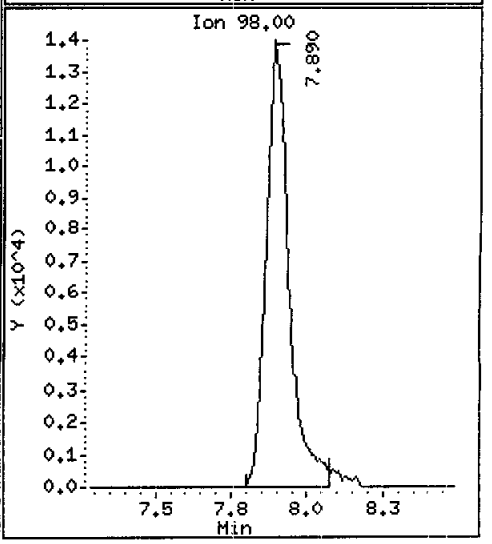












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D

Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

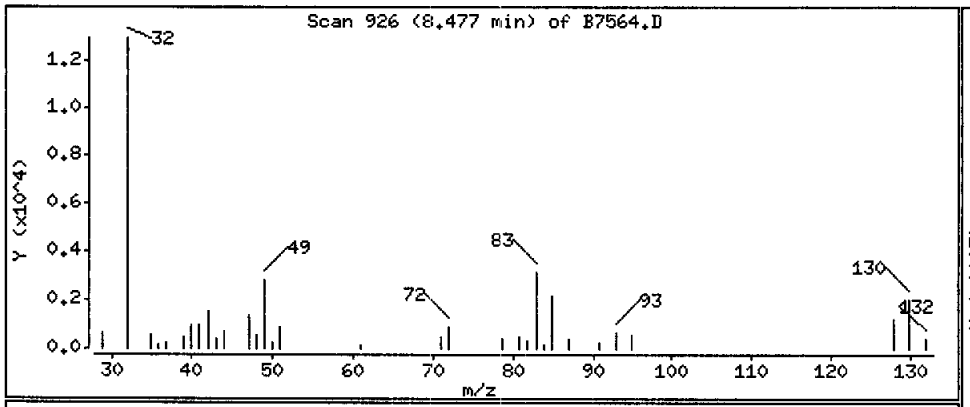
Operator: DLK

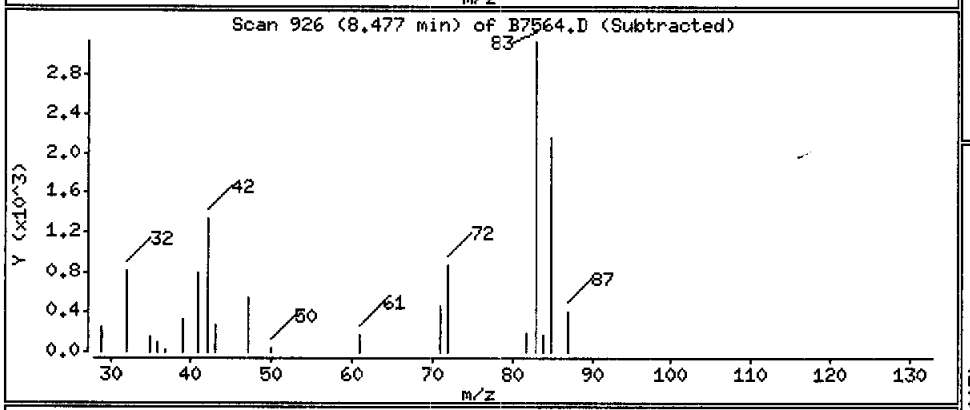
Column phase: J&W DB-624

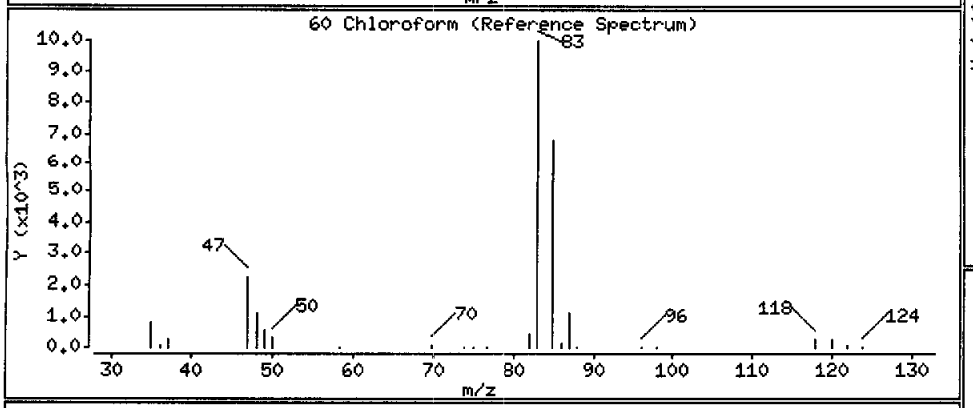
Column diameter: 0.53

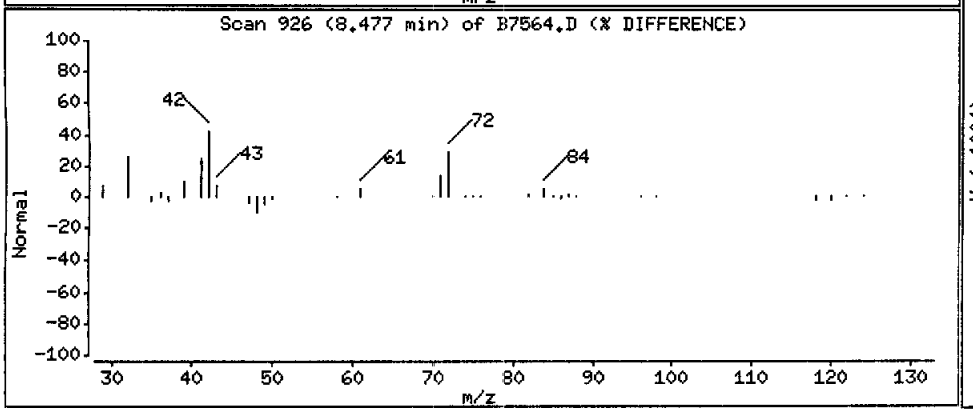
60 Chloroform

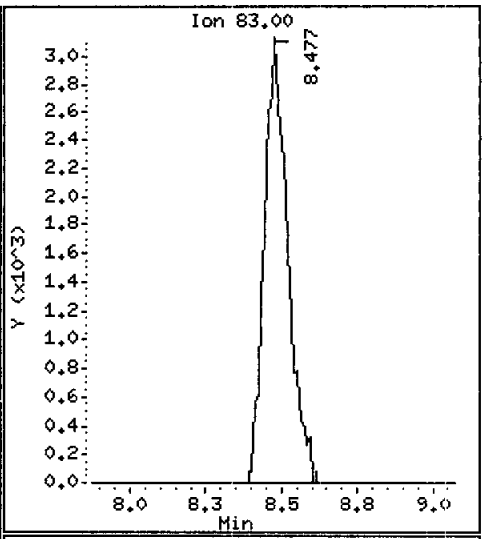
Concentration: 1.008 ppbv

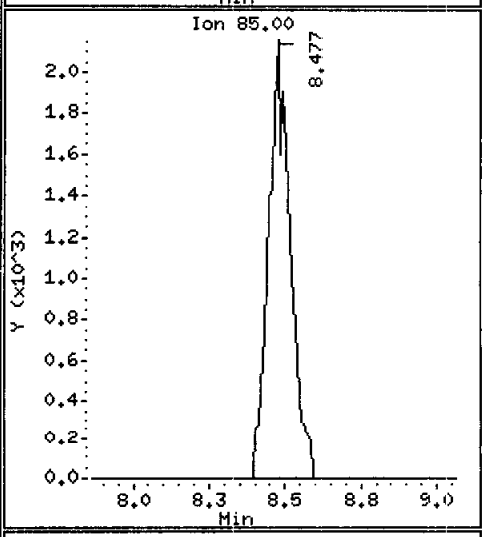


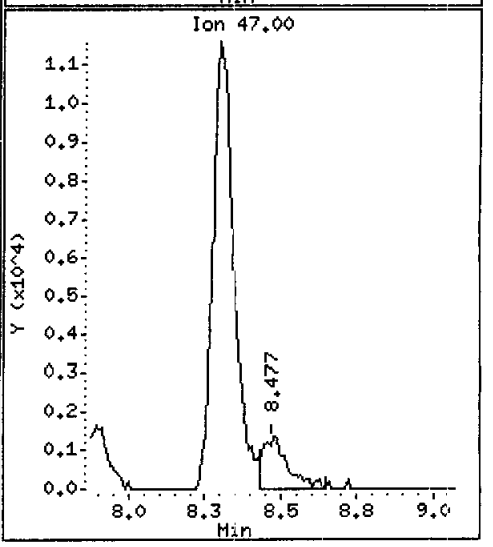












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Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

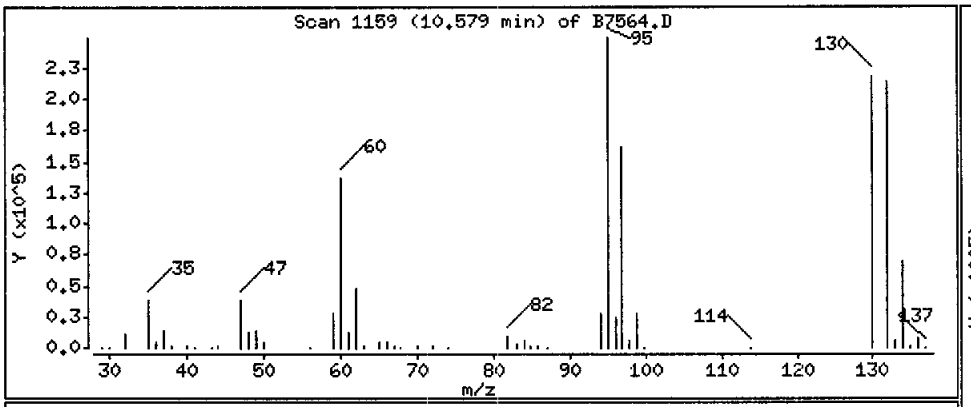
Operator: DLK

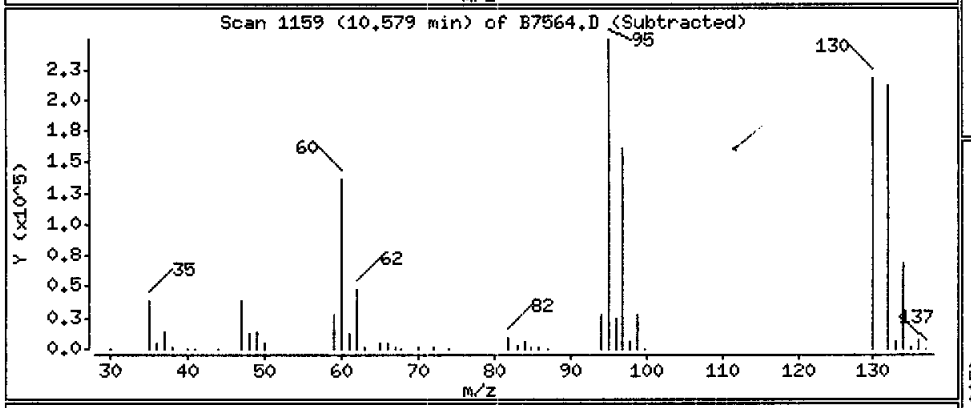
Column phase: J&W DB-624

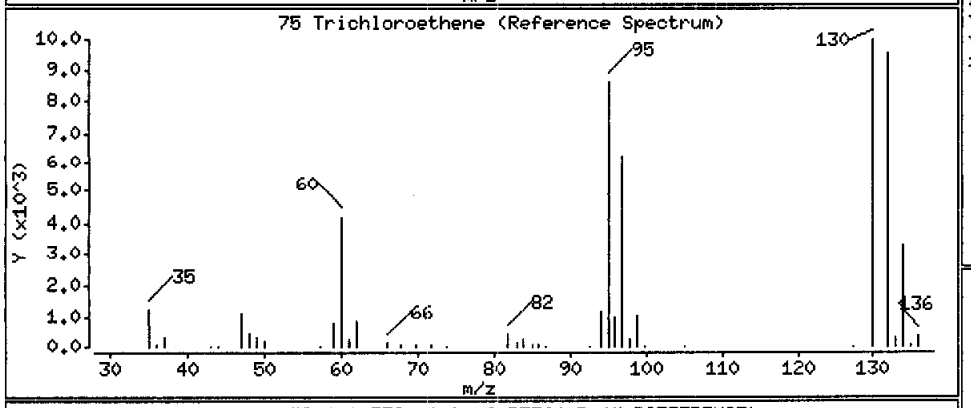
Column diameter: 0.53

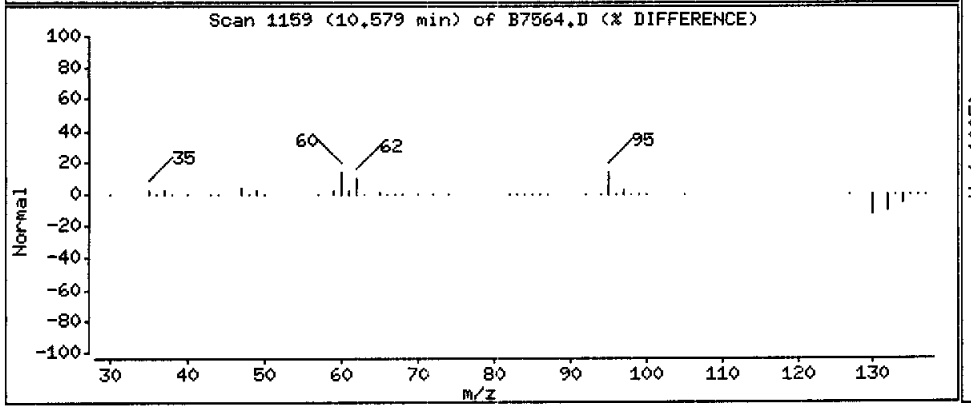
75 Trichloroethene

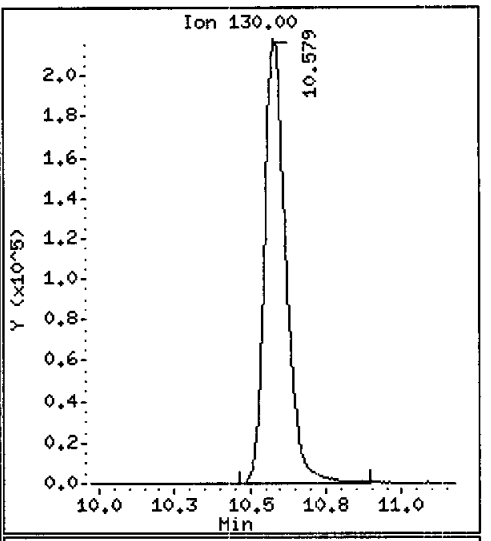
Concentration: 114.6 ppbv

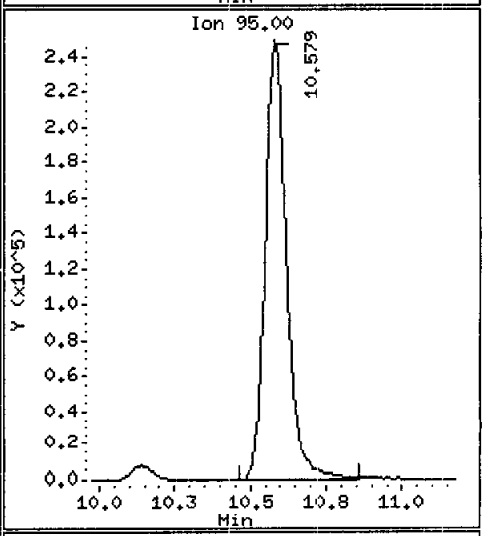


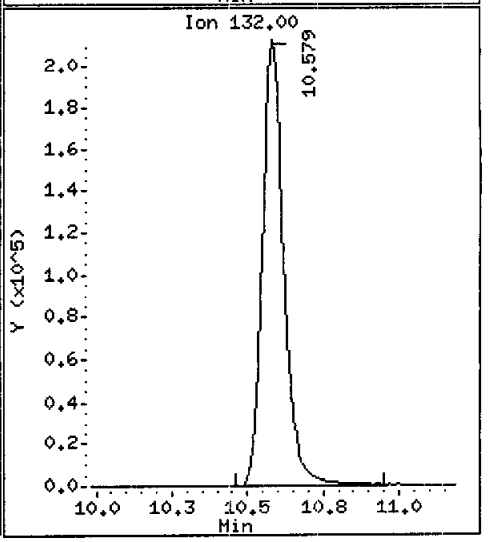












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D

Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

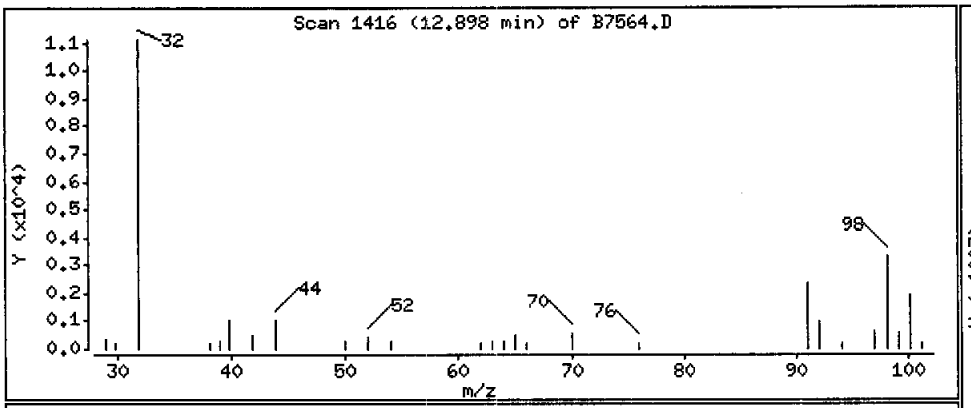
Operator: DLK

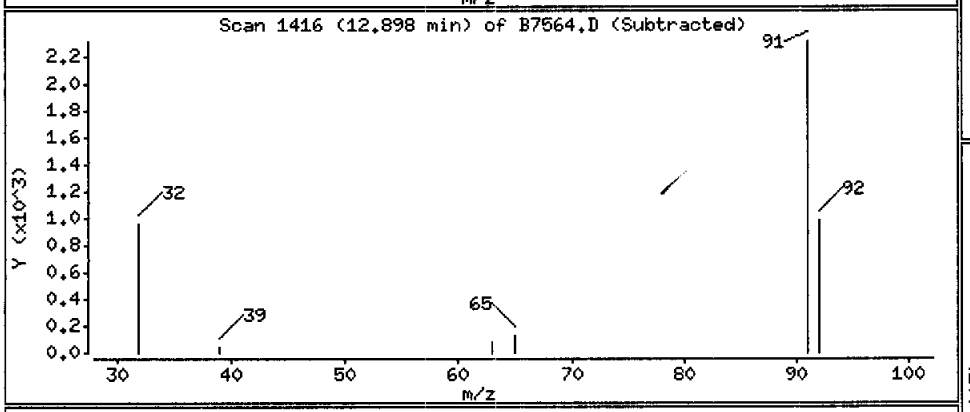
Column phase: J&W DB-624

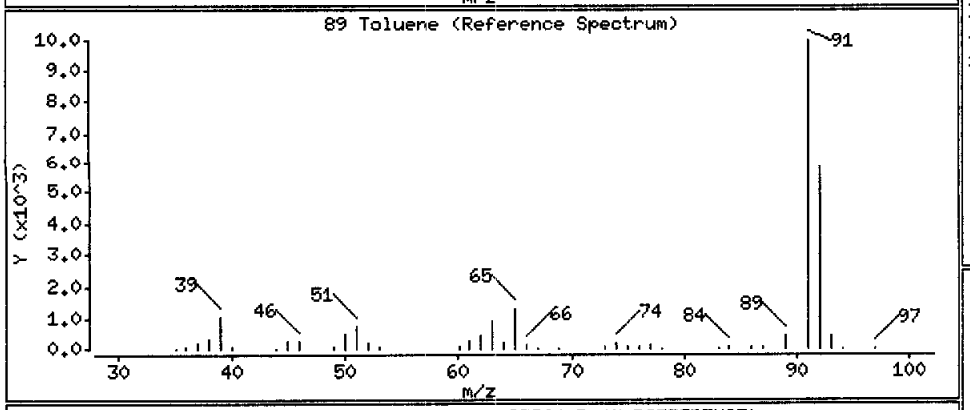
Column diameter: 0.53

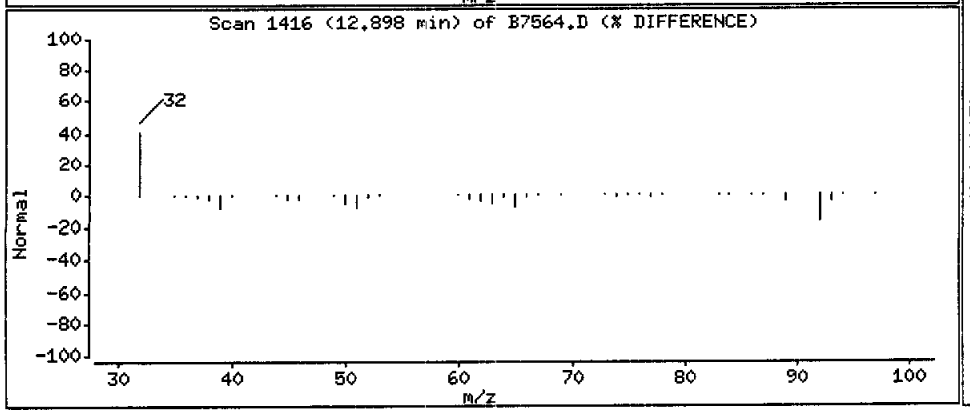
89 Toluene

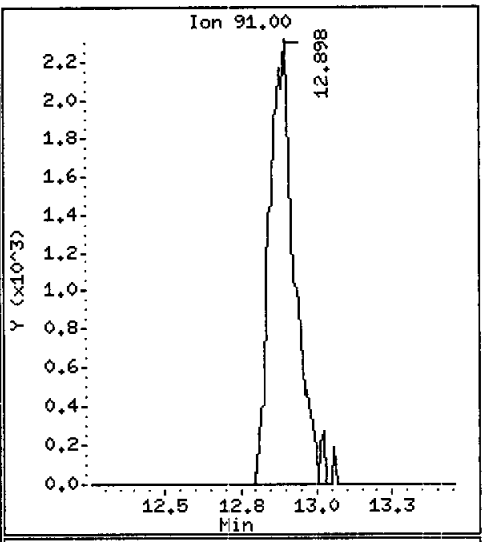
Concentration: 0.7002 ppbv

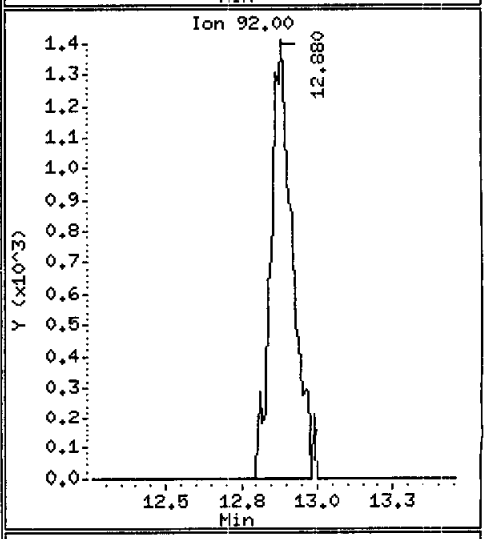


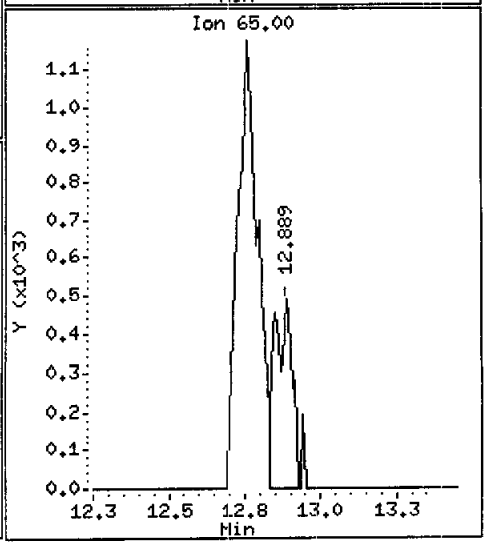












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7564.D

Date : 12-JAN-2005 15:43

Client ID: 066369-001

Instrument: gcmsb.i

Sample Info: G2DHL1AD,066369-001,SANDIA,E5A100222-6

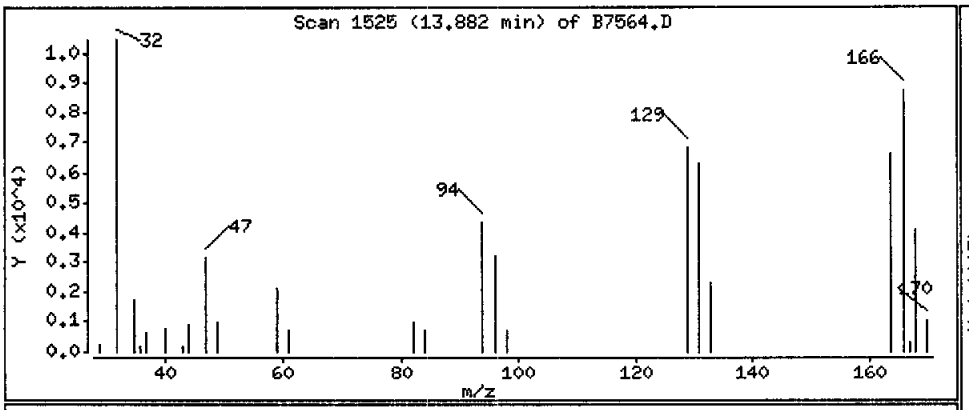
Operator: DLK

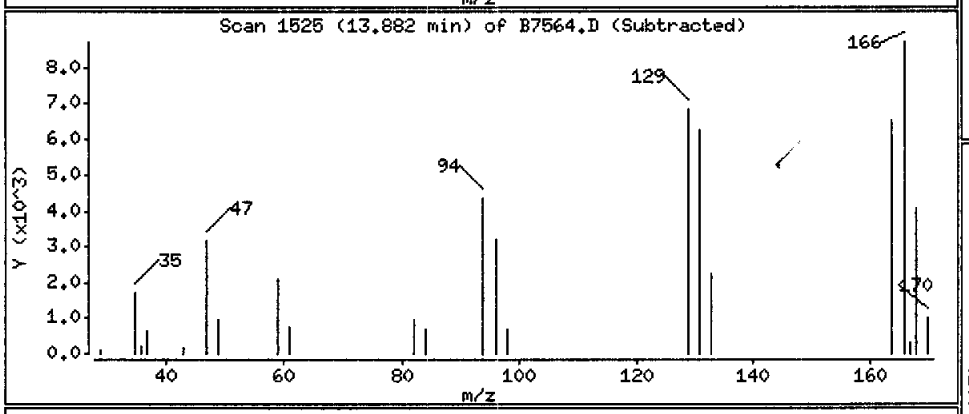
Column phase: J&W DB-624

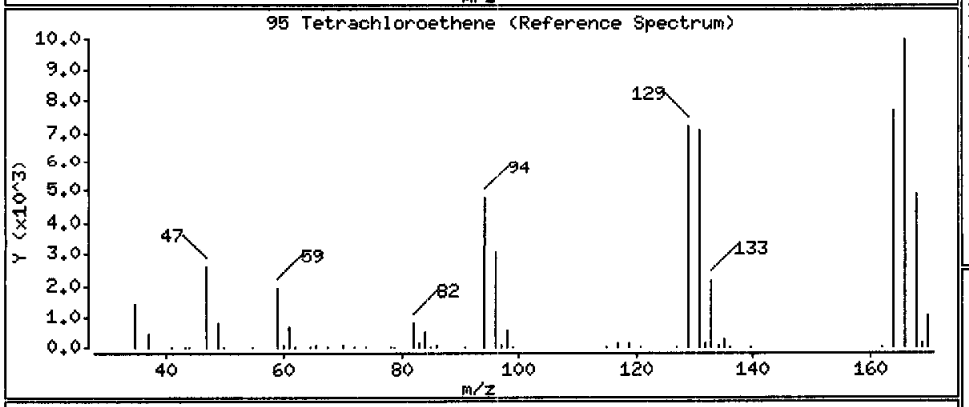
Column diameter: 0.53

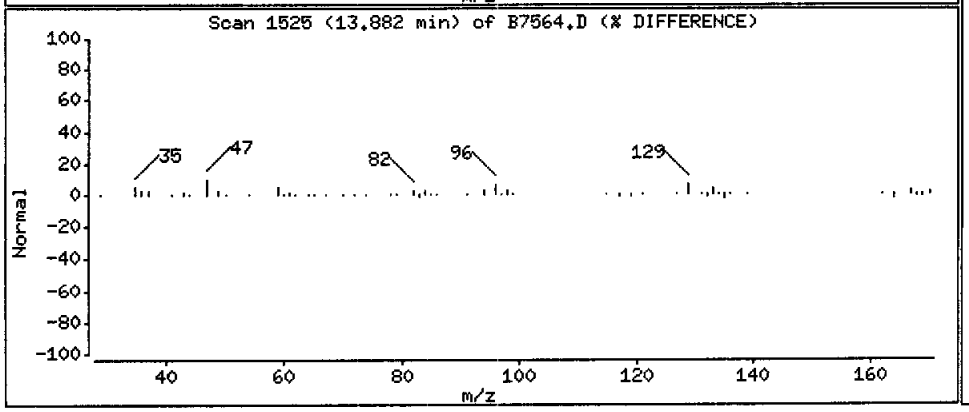
95 Tetrachloroethene

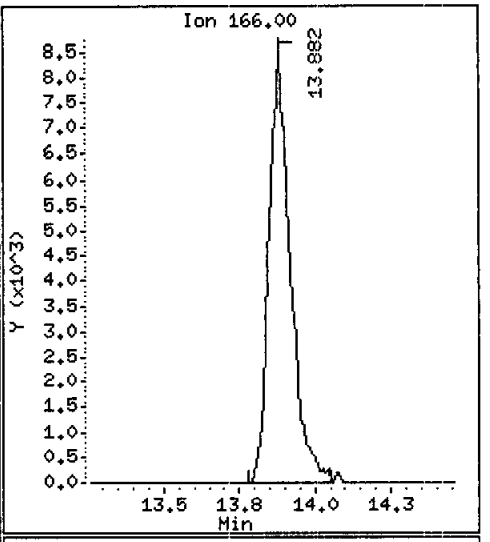
Concentration: 4.372 ppbv

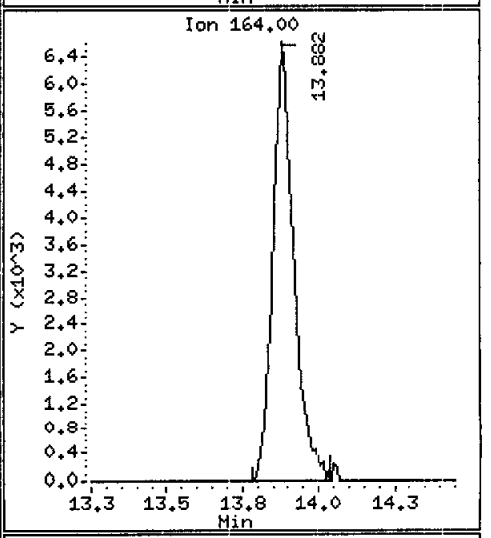


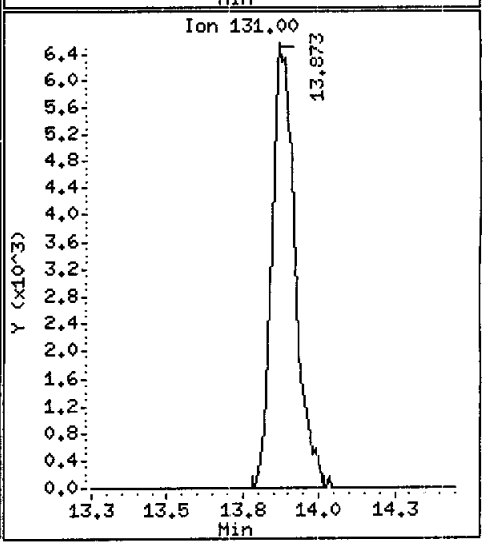












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD: Herrera
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608035	STCA	E5A100219		2/4/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	W. Palencia		2-7-05	
FINAL TRANSMITTED TO/DATE:	S Kelly		2-7-05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO (ERDMS) OR RECORDS CENTER BY/DATE:	R. Kavanaugh		2-7-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader COLLINS | Project Name (TAG) VAPOR WELL SAMPLING | Case No. 7222_01.05

AR/COC No. 608035 | Analytical Lab SEVERN TRENT | SDG No. E5A100219

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted:-_____

Reviewed by: W. Palencia Date: 2-7-05 Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of ___

AR/COC 608035

Batch No. R 12

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: SB	
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21623	☐ Released by COC No.: ___
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Validation Required
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		Bill To:Sandia National Labs (Accounts Payable)
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		P.O. Box 5800 MS 0154
Location	Tech Area 2				Albuquerque, NM 87185-0154
Building	Room				

Reference LOV(available at SMO) ESA 100219

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066358-001	227-VW-01-SV-025	25		1/3/2005 1037	SG	SC	6L	none	G	SA	TO-14 summa# A-295	
066359-001	227-VW-01-SV-075	75		1/3/2005 1044	SG	SC	6L	none	G	SA	TO-14 summa# 12652	
066360-001	227-VW-01-SV-125	125		1/3/2005 1050	SG	SC	6L	none	G	SA	TO-14 summa# 11341	
066361-001	227-VW-01-SV-175	175		1/3/2005 1100	SG	SC	6L	none	G	SA	TO-14 summa# A-173	
066362-001	227-VW-01-SV-225	225		1/3/2005 1109	SG	SC	6L	none	G	SA	TO-14 summa# A-286	
066363-001	227-VW-01-SV-275	275		1/3/2005 1120	SG	SC	6L	none	G	SA	TO-14 summa# 11372	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day ☐ Negotiated TAT

Return Samples By:

Sample Team Members

Name	Signature	Init	Company/Organization/Phone/Cellular
J Lee		JDL	Weston Solutions 6146 (505-284-3309)
R Lynch		RL	Weston Solutions 6146 (505-250-7090)
W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use

Date Entered(mm/dd/yy) 01/12/05

Entered by: JAC

QC Inits. WJG

Special Instructions/QC Requirements

EDD ☑ Yes ☐ No

Level C Package ☑ Yes ☐ No

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER 44649

Commercial Invoice
Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination:
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES

				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

38710440300 50

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED-EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

P4-05
RK

ESA100219

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

ESA100219

Page 1 of 1

Internal Lab

AR/COC 608035

Batch No. N/A

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		SEE BOTTLE ORDER
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preservative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066358-001	227-VW-01-SV-025	25		1/3/2005 1037	SG	SC	6L	none	G	SA	TO-14 summa# A-295 -1	
066359-001	227-VW-01-SV-075	75		1/3/2005 1044	SG	SC	6L	none	G	SA	TO-14 summa# 12652 -2	
066360-001	227-VW-01-SV-125	125		1/3/2005 1050	SG	SC	6L	none	G	SA	TO-14 summa# 11341 -3	
066361-001	227-VW-01-SV-175	175		1/3/2005 1100	SG	SC	6L	none	G	SA	TO-14 summa# A-173 -4	
066362-001	227-VW-01-SV-225	225		1/3/2005 1109	SG	SC	6L	none	G	SA	TO-14 summa# A-286 -5	
066363-001	227-VW-01-SV-275	275		1/3/2005 1120	SG	SC	6L	none	G	SA	TO-14 summa# 11372 -6	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:
QC Inits.

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

*Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

	Name	Signature	Init	Company/Organization/Phone/Cellular
Sample Team Members	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066358-001/227-VW-01-SV-025
Date Sampled: 1/03/05 Time Sampled: 10:37
LAB ID: E5A100219-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066359-001/227-VW-01-SV-075
Date Sampled: 1/03/05 Time Sampled: 10:44
LAB ID: E5A100219-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066360-001/227-VW-01-SV-125
Date Sampled: 1/03/05 Time Sampled: 10:50
LAB ID: E5A100219-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066361-001/227-VW-01-SV-175
Date Sampled: 1/03/05 Time Sampled: 11:00
LAB ID: E5A100219-004 Matrix: AIR

Parameter	Method	Rep

COC 608035 E5A100219

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/21/05
Page : 2
Time : 18:29:47

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066361-001/227-VW-01-SV-175
Date Sampled: 1/03/05 Time Sampled: 11:00
LAB ID: E5A100219-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066362-001/227-VW-01-SV-225
Date Sampled: 1/03/05 Time Sampled: 11:09
LAB ID: E5A100219-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066363-001/227-VW-01-SV-275
Date Sampled: 1/03/05 Time Sampled: 11:20
LAB ID: E5A100219-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 2
Case Narrative 2
Chain of Custody 3
Analytical Report 14
QA/QC 31
STL Los Angeles Raw Data 41
Raw Data: TO-14A 42

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 2, 2005

STL LOT NUMBER: **E5A100219**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

This report contains 000164 pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100219

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

ESA100219

Page 1 of ___

nal Lab

h No. N/A

SMO Use

AR/COC 608035

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: SB	-Send preliminary/copy report to:
ect Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21673	
rd Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Released by COC No.:
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		☐ Validation Required
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To: Sandia National Labs (Accounts Payable)
ation	Tech Area 2				P.O. Box 5800 MS 0154
ling	Room				Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066358-001	227-VW-01-SV-025	25		1/3/2005 1037	SG	SC	6L	none	G	SA	TO-14 summa# A-295	
066359-001	227-VW-01-SV-075	75		1/3/2005 1044	SG	SC	6L	none	G	SA	TO-14 summa# 12652	
066360-001	227-VW-01-SV-125	125		1/3/2005 1050	SG	SC	6L	none	G	SA	TO-14 summa# 11341	
066361-001	227-VW-01-SV-175	175		1/3/2005 1100	SG	SC	6L	none	G	SA	TO-14 summa# A-173	
066362-001	227-VW-01-SV-225	225		1/3/2005 1109	SG	SC	6L	none	G	SA	TO-14 summa# A-286	
066363-001	227-VW-01-SV-275	275		1/3/2005 1120	SG	SC	6L	none	G	SA	TO-14 summa# 11372	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Sample Tracking Smo Use

Date Entered(mm/dd/yy)

Entered by:

Special Instructions/QC Requirements

EDD ☑ Yes ☐ No

Level C Package ☑ Yes ☐ No

Abnormal Conditions on Receipt

rn Samples By: ☐ **Negotiated TAT** QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
mbers	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Lab Use

linquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
linquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
linquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by	Org.	Date	Time	6. Received by	Org.	Date	Time

4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: A-295
DATE CLEANED: 12/1/04 A, 12/1/04C, 10/29/04A, 12/6/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.82	1-11-05	TY
FINAL PRESSURE (PSIA)	24.46	1-11-05	TY

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 12652
DATE CLEANED: 12/1/04A, 12/1/04C, 12/2/04A, 12/2/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.67	1-11-05	TM
FINAL PRESSURE (PSIA)	24.25	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 11341
DATE CLEANED: 12/1/04A, 12/1/04C, ~~12/8/04A, 12/20/04A, 12/22/04C~~
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.83	1-11-05	TM
FINAL PRESSURE (PSIA)	29.45	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: A-173
DATE CLEANED: 12/1/04 A, 12/1/04C, 12/3/04A, 12/6/04A, 12/7/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.78	1-11-05	B
FINAL PRESSURE (PSIA)	21.95	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL 5

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: A-286
DATE CLEANED: 12/1/04 A, 12/1/04C, 10/29/04A, 12/20/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.78	1-11-05	TM
FINAL PRESSURE (PSIA)	21.68	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL 6

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 11372
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/8/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.78	1-11-05	TD
FINAL PRESSURE (PSIA)	24.10	1-11-05	TM

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12·1·04 A

Date of QC: 12-2-04

Data File Number: MB12022(MSB)

Canister ID Numbers

* A-286	93043
11341	11372
GL0113	93111
A-295	9313B
A-173	12652
11201	12177

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte-concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-2-04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:54
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,A286
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

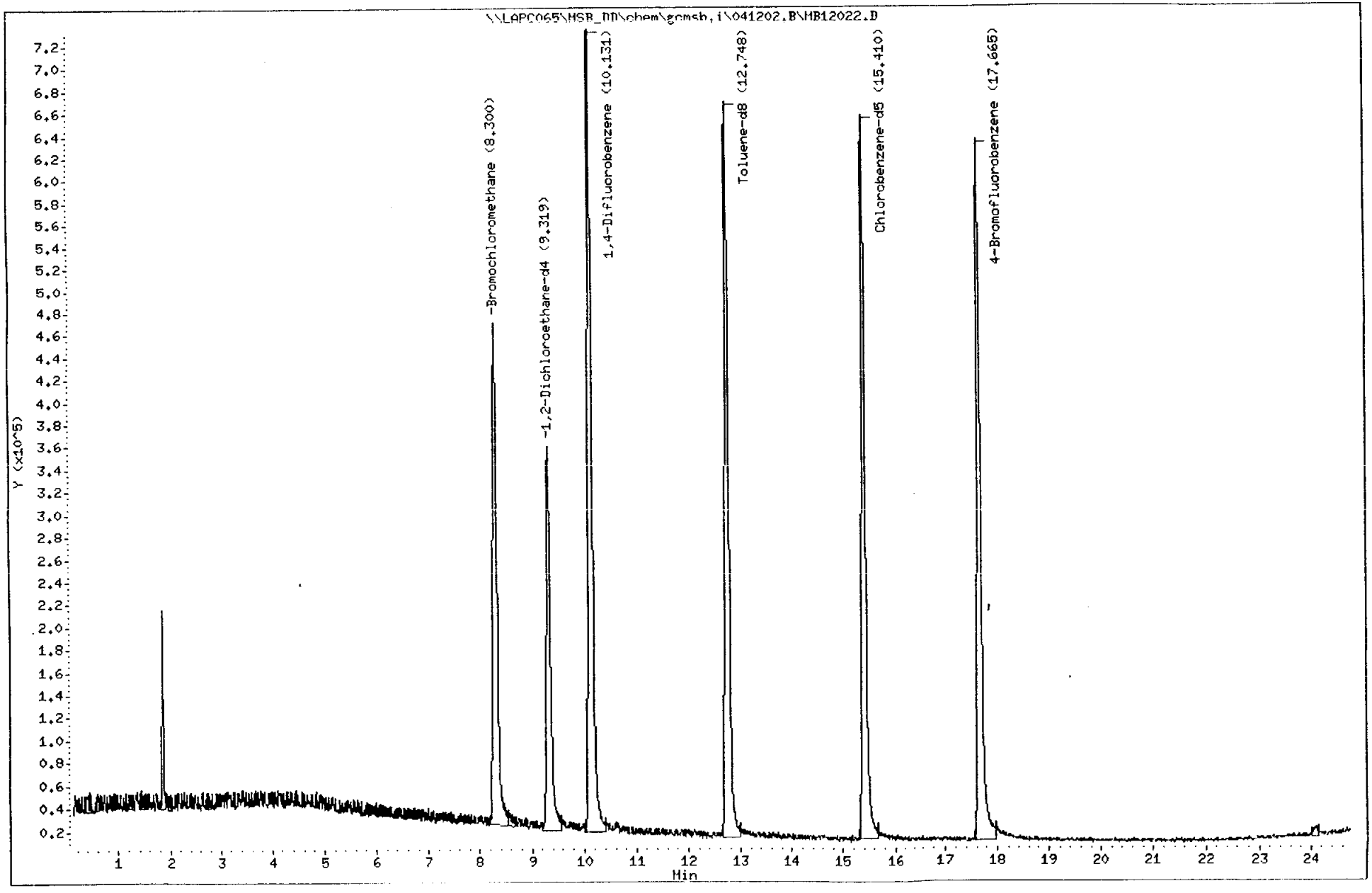
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.299	8.326	(1.000)	479142	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.319	9.345	(0.920)	573397	48.6689	48.67
* 72 1,4-Difluorobenzene	114	10.131	10.157	(1.000)	1503796	50.0000	
$ 87 Toluene-d8	100	12.748	12.765	(1.258)	688728	46.7202	46.72
* 99 Chlorobenzene-d5	117	15.409	15.418	(1.000)	979431	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.664	(1.146)	692624	39.6182	39.62

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.B\MB12022.D
Date : 02-DEC-2004 13:54
Client ID: BLANK
Sample Info: BLANK,BLANK,A286

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100219

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100219

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066358-001/227-VW-01-SV-025 01/03/05 10:37 001				
Dichlorodifluoromethane	0.59 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	14	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	0.72 J	2.0	ppb(v/v)	EPA-21 TO-14A
066359-001/227-VW-01-SV-075 01/03/05 10:44 002				
Chloroform	2.5 J	3.8	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	690	3.8	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	3.6 J	3.8	ppb(v/v)	EPA-21 TO-14A
066360-001/227-VW-01-SV-125 01/03/05 10:50 003				
Trichloroethene	2900	19	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	7.9 J	19	ppb(v/v)	EPA-21 TO-14A
066361-001/227-VW-01-SV-175 01/03/05 11:00 004				
Trichloroethene	5000	39	ppb(v/v)	EPA-21 TO-14A
066362-001/227-VW-01-SV-225 01/03/05 11:09 005				
Trichloroethene	9000	77	ppb(v/v)	EPA-21 TO-14A
066363-001/227-VW-01-SV-275 01/03/05 11:20 006				
Dichlorodifluoromethane	0.58 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	19	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100219

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100219

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DG0	001	066358-001/227-VW-01-SV-025	01/03/05	10:37
G2DG1	002	066359-001/227-VW-01-SV-075	01/03/05	10:44
G2DG2	003	066360-001/227-VW-01-SV-125	01/03/05	10:50
G2DG3	004	066361-001/227-VW-01-SV-175	01/03/05	11:00
G2DG4	005	066362-001/227-VW-01-SV-225	01/03/05	11:09
G2DG5	006	066363-001/227-VW-01-SV-275	01/03/05	11:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066358-001/227-VW-01-SV-025

GC/MS Volatiles

Lot-Sample #...: E5A100219-001 **Work Order #...:** G2DG01AD **Matrix.....:** AE
Date Sampled...: 01/03/05 10:37 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 10:53
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.59 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**14**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.72 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066358-001/227-VW-01-SV-025

GC/MS Volatiles

Lot-Sample #...: E5A100219-001 **Work Order #...:** G2DG01AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066359-001/227-VW-01-SV-075

GC/MS Volatiles

Lot-Sample #...: E5A100219-002 **Work Order #...:** G2DG11AD **Matrix.....:** AE
Date Sampled...: 01/03/05 10:44 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 11:21
Dilution Factor: 1.9
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	3.8	ppb(v/v)	0.95
Chloromethane	ND	7.6	ppb(v/v)	1.9
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.8	ppb(v/v)	1.5
Vinyl chloride	ND	3.8	ppb(v/v)	1.5
Bromomethane	ND	3.8	ppb(v/v)	1.9
Chloroethane	ND	7.6	ppb(v/v)	1.5
Trichlorofluoromethane	ND	3.8	ppb(v/v)	0.95
1,1-Dichloroethene	ND	3.8	ppb(v/v)	0.95
Carbon disulfide	ND	19	ppb(v/v)	3.8
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.8	ppb(v/v)	0.95
Acetone	ND	19	ppb(v/v)	3.8
Methylene chloride	ND	3.8	ppb(v/v)	1.5
1,1-Dichloroethane	ND	3.8	ppb(v/v)	0.95
Vinyl acetate	ND	19	ppb(v/v)	3.8
cis-1,2-Dichloroethene	ND	3.8	ppb(v/v)	1.5
2-Butanone (MEK)	ND	19	ppb(v/v)	3.8
Chloroform	**2.5 J**	**3.8**	**ppb(v/v)**	**1.5**
1,1,1-Trichloroethane	ND	3.8	ppb(v/v)	0.95
Carbon tetrachloride	ND	3.8	ppb(v/v)	0.95
Benzene	ND	3.8	ppb(v/v)	1.5
1,2-Dichloroethane	ND	3.8	ppb(v/v)	1.5
Trichloroethene	**690**	**3.8**	**ppb(v/v)**	**0.95**
1,2-Dichloropropane	ND	3.8	ppb(v/v)	1.5
Bromodichloromethane	ND	3.8	ppb(v/v)	1.5
cis-1,3-Dichloropropene	ND	3.8	ppb(v/v)	0.95
4-Methyl-2-pentanone (MIBK)	ND	19	ppb(v/v)	3.8
Toluene	ND	3.8	ppb(v/v)	0.95
trans-1,3-Dichloropropene	ND	3.8	ppb(v/v)	1.5
1,1,2-Trichloroethane	ND	3.8	ppb(v/v)	1.1
Tetrachloroethene	**3.6 J**	**3.8**	**ppb(v/v)**	**1.1**
2-Hexanone	ND	19	ppb(v/v)	1.9
Dibromochloromethane	ND	3.8	ppb(v/v)	0.95
1,2-Dibromoethane (EDB)	ND	3.8	ppb(v/v)	0.95
Chlorobenzene	ND	3.8	ppb(v/v)	0.95

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066359-001/227-VW-01-SV-075

GC/MS Volatiles

Lot-Sample #...: E5A100219-002 **Work Order #...:** G2DG11AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	3.8	ppb(v/v)	0.95
m-Xylene & p-Xylene	ND	3.8	ppb(v/v)	1.9
o-Xylene	ND	3.8	ppb(v/v)	1.1
Styrene	ND	3.8	ppb(v/v)	1.1
Bromoform	ND	3.8	ppb(v/v)	0.95
1,1,2,2-Tetrachloroethane	ND	3.8	ppb(v/v)	0.95
Benzyl chloride	ND	19	ppb(v/v)	1.5
4-Ethyltoluene	ND	3.8	ppb(v/v)	1.3
1,3,5-Trimethylbenzene	ND	3.8	ppb(v/v)	1.5
1,2,4-Trimethylbenzene	ND	3.8	ppb(v/v)	1.5
1,3-Dichlorobenzene	ND	3.8	ppb(v/v)	1.3
1,4-Dichlorobenzene	ND	3.8	ppb(v/v)	1.5
1,2-Dichlorobenzene	ND	3.8	ppb(v/v)	1.5
1,2,4-Trichloro-benzene	ND	9.5	ppb(v/v)	1.9
Hexachlorobutadiene	ND	7.6	ppb(v/v)	1.9

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066360-001/227-VW-01-SV-125

GC/MS Volatiles

Lot-Sample #...: E5A100219-003 **Work Order #...:** G2DG21AD **Matrix.....:** AE
Date Sampled...: 01/03/05 10:50 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 11:51
Dilution Factor: 9.53
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	19	ppb(v/v)	4.8
Chloromethane	ND	38	ppb(v/v)	9.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	19	ppb(v/v)	7.6
Vinyl chloride	ND	19	ppb(v/v)	7.6
Bromomethane	ND	19	ppb(v/v)	9.5
Chloroethane	ND	38	ppb(v/v)	7.6
Trichlorofluoromethane	ND	19	ppb(v/v)	4.8
1,1-Dichloroethene	ND	19	ppb(v/v)	4.8
Carbon disulfide	ND	95	ppb(v/v)	19
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	19	ppb(v/v)	4.8
Acetone	ND	95	ppb(v/v)	19
Methylene chloride	ND	19	ppb(v/v)	7.6
1,1-Dichloroethane	ND	19	ppb(v/v)	4.8
Vinyl acetate	ND	95	ppb(v/v)	19
cis-1,2-Dichloroethene	ND	19	ppb(v/v)	7.6
2-Butanone (MEK)	ND	95	ppb(v/v)	19
Chloroform	ND	19	ppb(v/v)	7.6
1,1,1-Trichloroethane	ND	19	ppb(v/v)	4.8
Carbon tetrachloride	ND	19	ppb(v/v)	4.8
Benzene	ND	19	ppb(v/v)	7.6
1,2-Dichloroethane	ND	19	ppb(v/v)	7.6
Trichloroethene	**2900**	**19**	**ppb(v/v)**	**4.8**
1,2-Dichloropropane	ND	19	ppb(v/v)	7.6
Bromodichloromethane	ND	19	ppb(v/v)	7.6
cis-1,3-Dichloropropene	ND	19	ppb(v/v)	4.8
4-Methyl-2-pentanone (MIBK)	ND	95	ppb(v/v)	19
Toluene	ND	19	ppb(v/v)	4.8
trans-1,3-Dichloropropene	ND	19	ppb(v/v)	7.6
1,1,2-Trichloroethane	ND	19	ppb(v/v)	5.7
Tetrachloroethene	**7.9 J**	**19**	**ppb(v/v)**	**5.7**
2-Hexanone	ND	95	ppb(v/v)	9.5
Dibromochloromethane	ND	19	ppb(v/v)	4.8
1,2-Dibromoethane (EDB)	ND	19	ppb(v/v)	4.8
Chlorobenzene	ND	19	ppb(v/v)	4.8

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066360-001/227-VW-01-SV-125

GC/MS Volatiles

Lot-Sample #...: E5A100219-003 **Work Order #...:** G2DG21AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	19	ppb(v/v)	4.8
m-Xylene & p-Xylene	ND	19	ppb(v/v)	9.5
o-Xylene	ND	19	ppb(v/v)	5.7
Styrene	ND	19	ppb(v/v)	5.7
Bromoform	ND	19	ppb(v/v)	4.8
1,1,2,2-Tetrachloroethane	ND	19	ppb(v/v)	4.8
Benzyl chloride	ND	95	ppb(v/v)	7.6
4-Ethyltoluene	ND	19	ppb(v/v)	6.7
1,3,5-Trimethylbenzene	ND	19	ppb(v/v)	7.6
1,2,4-Trimethylbenzene	ND	19	ppb(v/v)	7.6
1,3-Dichlorobenzene	ND	19	ppb(v/v)	6.7
1,4-Dichlorobenzene	ND	19	ppb(v/v)	7.6
1,2-Dichlorobenzene	ND	19	ppb(v/v)	7.6
1,2,4-Trichloro-benzene	ND	48	ppb(v/v)	9.5
Hexachlorobutadiene	ND	38	ppb(v/v)	9.5

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066361-001/227-VW-01-SV-175

GC/MS Volatiles

Lot-Sample #...: E5A100219-004 **Work Order #...:** G2DG31AD **Matrix.....:** AE
Date Sampled...: 01/03/05 11:00 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 07:14
Dilution Factor: 19.53
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	39	ppb(v/v)	9.8
Chloromethane	ND	78	ppb(v/v)	20
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	39	ppb(v/v)	16
Vinyl chloride	ND	39	ppb(v/v)	16
Bromomethane	ND	39	ppb(v/v)	20
Chloroethane	ND	78	ppb(v/v)	16
Trichlorofluoromethane	ND	39	ppb(v/v)	9.8
1,1-Dichloroethene	ND	39	ppb(v/v)	9.8
Carbon disulfide	ND	200	ppb(v/v)	39
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	39	ppb(v/v)	9.8
Acetone	ND	200	ppb(v/v)	39
Methylene chloride	ND	39	ppb(v/v)	16
1,1-Dichloroethane	ND	39	ppb(v/v)	9.8
Vinyl acetate	ND	200	ppb(v/v)	39
cis-1,2-Dichloroethene	ND	39	ppb(v/v)	16
2-Butanone (MEK)	ND	200	ppb(v/v)	39
Chloroform	ND	39	ppb(v/v)	16
1,1,1-Trichloroethane	ND	39	ppb(v/v)	9.8
Carbon tetrachloride	ND	39	ppb(v/v)	9.8
Benzene	ND	39	ppb(v/v)	16
1,2-Dichloroethane	ND	39	ppb(v/v)	16
Trichloroethene	**5000**	**39**	**ppb(v/v)**	**9.8**
1,2-Dichloropropane	ND	39	ppb(v/v)	16
Bromodichloromethane	ND	39	ppb(v/v)	16
cis-1,3-Dichloropropene	ND	39	ppb(v/v)	9.8
4-Methyl-2-pentanone (MIBK)	ND	200	ppb(v/v)	39
Toluene	ND	39	ppb(v/v)	9.8
trans-1,3-Dichloropropene	ND	39	ppb(v/v)	16
1,1,2-Trichloroethane	ND	39	ppb(v/v)	12
Tetrachloroethene	ND	39	ppb(v/v)	12
2-Hexanone	ND	200	ppb(v/v)	20
Dibromochloromethane	ND	39	ppb(v/v)	9.8
1,2-Dibromoethane (EDB)	ND	39	ppb(v/v)	9.8
Chlorobenzene	ND	39	ppb(v/v)	9.8

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066361-001/227-VW-01-SV-175

GC/MS Volatiles

Lot-Sample #...: E5A100219-004 **Work Order #...:** G2DG31AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	39	ppb(v/v)	9.8
m-Xylene & p-Xylene	ND	39	ppb(v/v)	20
o-Xylene	ND	39	ppb(v/v)	12
Styrene	ND	39	ppb(v/v)	12
Bromoform	ND	39	ppb(v/v)	9.8
1,1,2,2-Tetrachloroethane	ND	39	ppb(v/v)	9.8
Benzyl chloride	ND	200	ppb(v/v)	16
4-Ethyltoluene	ND	39	ppb(v/v)	14
1,3,5-Trimethylbenzene	ND	39	ppb(v/v)	16
1,2,4-Trimethylbenzene	ND	39	ppb(v/v)	16
1,3-Dichlorobenzene	ND	39	ppb(v/v)	14
1,4-Dichlorobenzene	ND	39	ppb(v/v)	16
1,2-Dichlorobenzene	ND	39	ppb(v/v)	16
1,2,4-Trichloro-benzene	ND	98	ppb(v/v)	20
Hexachlorobutadiene	ND	78	ppb(v/v)	20

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066362-001/227-VW-01-SV-225

GC/MS Volatiles

Lot-Sample #...: E5A100219-005 **Work Order #...:** G2DG41AD **Matrix.....:** AE
Date Sampled...: 01/03/05 11:09 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012180 **Analysis Time..:** 07:42
Dilution Factor: 38.59
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	77	ppb(v/v)	19
Chloromethane	ND	150	ppb(v/v)	39
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	77	ppb(v/v)	31
Vinyl chloride	ND	77	ppb(v/v)	31
Bromomethane	ND	77	ppb(v/v)	39
Chloroethane	ND	150	ppb(v/v)	31
Trichlorofluoromethane	ND	77	ppb(v/v)	19
1,1-Dichloroethene	ND	77	ppb(v/v)	19
Carbon disulfide	ND	390	ppb(v/v)	77
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	77	ppb(v/v)	19
Acetone	ND	390	ppb(v/v)	77
Methylene chloride	ND	77	ppb(v/v)	31
1,1-Dichloroethane	ND	77	ppb(v/v)	19
Vinyl acetate	ND	390	ppb(v/v)	77
cis-1,2-Dichloroethene	ND	77	ppb(v/v)	31
2-Butanone (MEK)	ND	390	ppb(v/v)	77
Chloroform	ND	77	ppb(v/v)	31
1,1,1-Trichloroethane	ND	77	ppb(v/v)	19
Carbon tetrachloride	ND	77	ppb(v/v)	19
Benzene	ND	77	ppb(v/v)	31
1,2-Dichloroethane	ND	77	ppb(v/v)	31
Trichloroethene	**9000**	**77**	**ppb(v/v)**	**19**
1,2-Dichloropropane	ND	77	ppb(v/v)	31
Bromodichloromethane	ND	77	ppb(v/v)	31
cis-1,3-Dichloropropene	ND	77	ppb(v/v)	19
4-Methyl-2-pentanone (MIBK)	ND	390	ppb(v/v)	77
Toluene	ND	77	ppb(v/v)	19
trans-1,3-Dichloropropene	ND	77	ppb(v/v)	31
1,1,2-Trichloroethane	ND	77	ppb(v/v)	23
Tetrachloroethene	ND	77	ppb(v/v)	23
2-Hexanone	ND	390	ppb(v/v)	39
Dibromochloromethane	ND	77	ppb(v/v)	19
1,2-Dibromoethane (EDB)	ND	77	ppb(v/v)	19
Chlorobenzene	ND	77	ppb(v/v)	19

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066362-001/227-VW-01-SV-225

GC/MS Volatiles

Lot-Sample #...: E5A100219-005 **Work Order #...:** G2DG41AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	77	ppb(v/v)	19
m-Xylene & p-Xylene	ND	77	ppb(v/v)	39
o-Xylene	ND	77	ppb(v/v)	23
Styrene	ND	77	ppb(v/v)	23
Bromoform	ND	77	ppb(v/v)	19
1,1,2,2-Tetrachloroethane	ND	77	ppb(v/v)	19
Benzyl chloride	ND	390	ppb(v/v)	31
4-Ethyltoluene	ND	77	ppb(v/v)	27
1,3,5-Trimethylbenzene	ND	77	ppb(v/v)	31
1,2,4-Trimethylbenzene	ND	77	ppb(v/v)	31
1,3-Dichlorobenzene	ND	77	ppb(v/v)	27
1,4-Dichlorobenzene	ND	77	ppb(v/v)	31
1,2-Dichlorobenzene	ND	77	ppb(v/v)	31
1,2,4-Trichloro-benzene	ND	190	ppb(v/v)	39
Hexachlorobutadiene	ND	150	ppb(v/v)	39

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066363-001/227-VW-01-SV-275

GC/MS Volatiles

Lot-Sample #...: E5A100219-006 **Work Order #...:** G2DG51AD **Matrix.....:** AE
Date Sampled...: 01/03/05 11:20 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 12:26
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.58 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**19**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	ND	2.0	ppb(v/v)	0.50
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066363-001/227-VW-01-SV-275

GC/MS Volatiles

Lot-Sample #...: E5A100219-006 **Work Order #...:** G2DG51AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100219

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5012238	
002	AE	EPA-21 TO-14A		5012238	
003	AE	EPA-21 TO-14A		5012238	
004	AE	EPA-21 TO-14A		5012180	
005	AE	EPA-21 TO-14A		5012180	
006	AE	EPA-21 TO-14A		5012238	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F241AA **Matrix.....:** AIR
MB Lot-Sample #: M5A120000-180

Prep Date.....: 01/11/05 **Analysis Time..:** 20:21
Analysis Date..: 01/11/05 **Prep Batch #...:** 5012180 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 101605

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F241AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F7X1AA **Matrix.....:** AIR
MB Lot-Sample #: M5A120000-238

Prep Date.....: 01/12/05 **Analysis Time..:** 09:52
Analysis Date..: 01/12/05 **Prep Batch #...:** 5012238 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 117751

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F7X1AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F241AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-180 G2F241AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 16:33
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	103	**(70 - 125)**	**1.1**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**103**	**(75 - 120)**			**EPA-21 TO-14A**
	104	**(75 - 120)**	**0.81**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	102	**(70 - 125)**	**0.33**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**100**	**(75 - 125)**			**EPA-21 TO-14A**
	100	**(75 - 125)**	**0.16**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**110**	**(65 - 130)**			**EPA-21 TO-14A**
	109	**(65 - 130)**	**0.40**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F241AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-180 G2F241AD-LCSD
Prep Date.....: 01/11/05 **Analysis Date..:** 01/11/05
Prep Batch #...: 5012180 **Analysis Time..:** 16:33
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**51.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	50.5	**52.2**	**ppb(v/v)**	**103**	**1.1**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**56.2**	**ppb(v/v)**	**103**		**EPA-21 TO-14A**
	54.5	**56.6**	**ppb(v/v)**	**104**	**0.81**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**50.7**	**ppb(v/v)**	**102**	**0.33**	**EPA-21 TO-14A**
Toluene	**49.5**	**49.6**	**ppb(v/v)**	**100**		**EPA-21 TO-14A**
	49.5	**49.5**	**ppb(v/v)**	**100**	**0.16**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**54.9**	**ppb(v/v)**	**110**		**EPA-21 TO-14A**
	50.0	**54.7**	**ppb(v/v)**	**109**	**0.40**	**EPA-21 TO-14A**

NOTE(S):

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Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F7X1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-238 G2F7X1AD-LCSD
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 08:55
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**106**	**(70 - 125)**			**EPA-21 TO-14A**
	106	**(70 - 125)**	**0.15**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**106**	**(75 - 120)**			**EPA-21 TO-14A**
	104	**(75 - 120)**	**1.5**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	104	**(70 - 125)**	**2.1**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**101**	**(75 - 125)**			**EPA-21 TO-14A**
	104	**(75 - 125)**	**2.6**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**110**	**(65 - 130)**			**EPA-21 TO-14A**
	112	**(65 - 130)**	**1.7**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100219 **Work Order #...:** G2F7X1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A120000-238 G2F7X1AD-LCSD
Prep Date.....: 01/12/05 **Analysis Date..:** 01/12/05
Prep Batch #...: 5012238 **Analysis Time..:** 08:55
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**53.4**	**ppb(v/v)**	**106**		**EPA-21 TO-14A**
	50.5	**53.4**	**ppb(v/v)**	**106**	**0.15**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**57.5**	**ppb(v/v)**	**106**		**EPA-21 TO-14A**
	54.5	**56.7**	**ppb(v/v)**	**104**	**1.5**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**51.7**	**ppb(v/v)**	**104**	**2.1**	**EPA-21 TO-14A**
Toluene	**49.5**	**50.1**	**ppb(v/v)**	**101**		**EPA-21 TO-14A**
	49.5	**51.4**	**ppb(v/v)**	**104**	**2.6**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**55.0**	**ppb(v/v)**	**110**		**EPA-21 TO-14A**
	50.0	**55.9**	**ppb(v/v)**	**112**	**1.7**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100219

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: 01/3/05

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
18 1,1-Difluoroethane	+++++	0.83932	0.68757	0.62197	0.58987	0.54653		
	+++++						0.65705	17.372
19 Vinyl Bromide	0.62278	0.56455	0.53870	0.56539	0.57273	0.56881		
	0.62107						0.57915	5.391
20 Dichlorofluoromethane (F21)	1.78533	1.50223	1.39821	1.34166	1.65446	1.49514		
	1.13113						1.47259	14.446
21 Trichlorofluoromethane (F11)	2.44228	2.19307	2.04879	2.09644	2.05197	2.00515		
	2.05644						2.12773	7.083
22 n-Pentane	1.21122	0.91843	0.83705	0.76734	0.91893	0.83317		
	0.63205						0.87403	20.395
23 1,1-DC-1-flouroethane(F141b)	2.58910	2.46384	2.73685	2.65312	2.66299	2.44988		
	+++++						2.59263	4.444
24 Ethanol	+++++	0.03096	0.04049	0.04678	0.06130	0.05751		
	0.04475						0.04697	23.705
25 Ether (Diethyl ether)	0.49364	0.50122	0.46318	0.44008	0.54085	0.49061		
	0.37446						0.47201	11.284
26 Acrolein	0.20601	0.05556	0.08013	0.08246	0.09423	0.10125		
	0.10903						0.10410	46.263 <-
27 Propionaldehyde (Propanal)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
28 1,1-Dichloroethene	1.26790	1.17864	1.08330	1.12535	1.10018	1.07502			
	1.06973						1.12859	6.381	
29 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715	2.59937	2.38876	2.40025	2.34655	2.25977			
	2.22085						2.44467	9.559	
31 Acetone	+++++	0.12242	0.14598	0.16090	0.16041	0.16574			
	0.20458						0.16001	16.836	
32 Iodomethane	1.11548	1.03774	1.38752	1.40857	2.82193	2.47154			
	1.87248						1.73075	39.751	<-
33 Carbon Disulfide	0.84200	0.90775	0.92884	1.06258	1.12947	1.19849			
	1.35974						1.06127	17.279	
34 2-Propanol	+++++	0.45343	0.48827	0.55577	0.58306	0.59777			
	0.71716						0.56591	16.380	
35 Acetonitrile	0.04928	0.08266	0.12149	0.13210	0.18434	0.18610			
	0.15546						0.13021	39.137	<-
36 Allyl Chloride	0.54011	0.56312	0.52171	0.54469	0.60226	0.61352			
	0.71567						0.58587	11.302	
37 Methylene Chloride	0.81147	0.73641	0.65629	0.67719	0.66235	0.64310			
	0.69121						0.69686	8.458	

STL Los Angeles

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384 1.43818	1.84557	1.78175	1.69840	1.73692	1.68874	1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680 0.81576	0.92384	0.86786	0.85814	1.07070	0.99994	0.93758	10.283
72 n-Heptane	0.65292 0.52727	0.59087	0.57809	0.57044	0.59474	0.58371	0.58544	6.367
74 2,3,4-Trimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Trichloroethene	0.49675 0.38637	0.44912	0.44758	0.42160	0.43287	0.42172	0.43657	7.756
76 Methylcyclohexane	0.42140 0.29346	0.36653	0.33095	0.30891	0.38179	0.35467	0.35110	12.546
77 1-Butanol	+++++ 0.01390	0.02081	0.01680	0.01594	0.01842	0.01675	0.01710	13.662
78 1,2-Dichloropropane	0.16774 0.15399	0.15879	0.17082	0.16553	0.16628	0.16412	0.16390	3.481
79 Dibromomethane	0.53415 0.44421	0.48041	0.44691	0.42596	0.54917	0.51576	0.48522	9.991
80 Methyl methacrylate	+++++ 0.31492	0.23366	0.24181	+++++	0.31202	0.30819	0.28212	14.422

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++	0.12593	0.15230	0.15893	0.16896	0.17203			
	0.16962						0.15796	11.014	
82 Bromodichloromethane	0.49808	0.50550	0.52561	0.54819	0.59184	0.59358			
	0.55167						0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427	0.08575	0.08922	0.08796	0.10824	0.10176			
	0.08679						0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++	+++++	0.00529	0.00839	0.01628	0.02467			
	0.04137						0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414	0.37747	0.43712	0.47488	0.49476	0.51468			
	0.50210						0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++	+++++	+++++	0.17847	0.22374	0.24354			
	0.27292						0.22967	17.270	
87 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	
89 Toluene	1.01334	0.91538	0.88423	0.85555	0.87314	0.85627			
	0.76479						0.88039	8.491	
90 n-Octane	0.59003	0.53603	0.54695	0.55948	0.73478	0.68532			
	0.56563						0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058	0.33347	0.38018	0.44019	0.49187	0.50533			
	0.51792						0.42279	21.201	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924	
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318	
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62887	10.012	
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629	
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442	<-
97 Dibromochloromethane	0.78993 / 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682	
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882	
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871	
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341	
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
113 Cyclohexanone	+++++	0.16737	0.13623	0.16986	0.30769	0.30915			
	0.31380						0.23402	36.036	<-
115 Bromobenzene	0.62810	0.54939	0.53490	0.56999	0.74532	0.71345			
	0.64313						0.62633	12.953	
116 1,1,2,2-Tetrachloroethane	1.35006	1.36835	1.40167	1.40654	1.41590	1.37850			
	1.15903						1.35429	6.584	
117 1,2,3-Trichloropropane	0.40312	0.37856	0.36846	0.35405	0.43674	0.40744			
	0.33139						0.38282	9.311	
118 trans-1,4-Dichloro-2-butene	+++++	0.03166	0.04163	0.05764	0.09751	0.10698			
	+++++						0.06708	50.055	<-
119 n-Propylbenzene	1.28187	1.16227	1.17752	1.29846	1.76716	1.67802			
	1.44875						1.40201	17.097	
120 2-Chlorotoluene	0.34395	0.31308	0.29196	0.31871	0.42215	0.39436			
	0.36367						0.34970	13.365	
121 4-Chlorotoluene	0.34395	0.31308	0.29196	0.31871	0.42215	0.39436			
	0.36367						0.34970	13.365	
122 3-Ethyltoluene	1.05354	0.92205	0.91423	1.00617	1.36657	1.29121			
	1.17775						1.10450	16.139	
123 4-Ethyl Toluene	0.81519	0.81347	0.65696	0.67163	0.91104	0.97223			
	1.08888						0.84706	18.497	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558 +++++	1.21368	0.81082	0.65064	0.83940	0.78774	0.94631	29.818
125 n-Decane	0.46267 0.32620	0.34922	0.25520	0.27626	0.36839	0.34720	0.34073	19.844
126 .beta.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Ethyltoluene	1.11542 1.16620	0.94881	0.85458	0.95853	1.30303	1.23402	1.08294	15.307
128 .alpha.-Methylstyrene	0.43803 0.54809	0.36069	0.33804	0.37867	0.54465	0.52825	0.44806	20.459
129 tert-Butylbenzene	0.80994 0.87914	0.73130	0.67470	0.76818	1.05286	1.00081	0.84528	16.570
130 Pentachloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955 +++++	0.35806	0.23173	0.19988	0.25825	0.25412	0.27527	23.368
132 sec-Butylbenzene	1.53068 1.68519	1.27842	1.22547	1.37218	1.91352	1.87496	1.55435	17.948
133 D-Limonene	0.56335 0.43408	0.44070	0.33104	0.35410	0.48917	0.46237	0.43926	17.978

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
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Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030		
	0.69853						0.52632	18.610
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222		
	1.26479						1.14477	17.565
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895		
	0.67222						0.54141	18.711
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417		
	0.67804						0.64142	16.131
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209		
	1.02647						0.56325	55.511 <-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348		
	0.55025						0.48440	18.904
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253		
	0.64790						0.53798	14.023
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416		
	0.23934						0.27616	17.206
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159		
	0.79399						0.72730	19.989
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136		
	0.17470						0.37429	42.157 <-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++	0.26338	0.25799	0.22180	0.31565	0.26332		
	0.27629						0.26641	11.388
145 Hexachlorobutadiene	0.56644	0.58610	0.42156	0.35251	0.47676	0.47942		
	0.51820						0.48586	16.727
146 Naphthalene	+++++	0.70441	0.53060	0.46537	0.55710	0.47106		
	0.49153						0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850	0.48714	0.49598	+++++	0.42244	0.27752		
	0.25906						0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014	0.40234	0.40611	0.41316	0.41851	0.44633		
	0.39572						0.41033	4.531
$ 88 Toluene-d8	0.51061	0.50803	0.52649	0.50915	0.52457	0.53681		
	0.54926						0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642	0.79382	0.81777	0.80936	0.95153	0.96622		
	1.09717						0.89318	12.833

Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0

MA 01/04/05

E5A100219

STL Los Angeles
Air Toxics Lab GC/MS Run Log

Instrument ID:	Data Directory: D:\GCMSB\ 050103A.M	BFB Standard: PSL991283	Initial Calibration ID: 1-3 05
GCMS-B	Method File: TO14A	Daily Standard: MSL040110028	SOP: CQI-MS-013
Logbook ID:	Tune File:	LCS Standard: MSL040110043	MDL Date: 01-28-01
R-AMS-041	BF041123.M	I.S. Standard: PSL991283	Blank Lot No. G050301.00

#	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1	13 05	1909	BF01032	-	-	-	BFB	20	-	-	-	M	OK	A	
2		1927	MB01032	-	-	-	BLANK	500	-	-	-	M.	OK.	9	GL0071
3		2002	IC01031	-	-	-	2 ~ PIBU STD	40	-	-	-	M	OK	10	MSL050101043
4		2037	IC01032	-	-	-	4.0	80	-	-	-	M	OK	10	
5		2112	IC01033	-	-	-	10	200	-	-	-	M.	OK	10	
6		2148	IC01034	-	-	-	25	500	-	-	-	M	OK	10	
7		2223	IC01035	"	-	-	50	125	"	-	-	M	OK	11	MSL040110028
8		2258	IC01036	-	-	-	100	250	-	-	-	M	OK	11	
9		2334	IC01037	-	-	-	500	1250	-	-	-	M	OK	11	
10	14 05	0009	MB01033	-	-	-	BLANK	500	-	-	-	M	NO	12	02311 c/o?
11		0014	IC01033	-	-	-	ICV/LCS	500	-	-	-	M	OK	13	MSL040110043
12		0119	IC01034	-	-	-	LCSD	500	-	-	-	M	OK	13	
13		0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	M	OK.	15	
14		0342	B7371	G1PG5IAA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	M	OK	16	EYL220306-1
15		0417	B7372	G1PG7IAA			002	872	24.4/14.0	-		M	OK	1	-2
16		0452	B7373	G1PH1IAA			003	1130	24.4/10.9	-		M	OK	2	-3
17		0527	B7374	G1PH3IAA			004	100	24.4/10.5	-	11.6	M	O/R	3	-4
18		0602	B7375	G1PH4IAA			005	1000	24.5/11.0	-	1.00	M	O/R	4	-5

Reviewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

strument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
GCMS-B	Method File:	Daily Standard: See Previous Page	SOP:
ogbook ID:	Tune File:	LCS Standard: 1.4.05	MDL Date:
-AMS-041		I.S. Standard:	Blank Lot No.

	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
	1.4.05	0637	B7376	G1P4M1AA	CCA	CRA	A 17778-NW CCA	1150	244/1.2	—	1.00	W	OK	5	E4L22063-6
	↓	0712	B7377	G1Q191AD	↓	TAIT	LGSVECX15B 0730	40	244/1.1	100/10	2730	W	O/R	6	E4L230156-1
		0741	B7378	G1R2A1AD	↓	↓	LGSVOCX15B 1030	40	244/1.2	100/10	2720	W	OK	7	↓ -2
0															
1															
2															
3															
4															
5															
6															
7															
8															

Reviewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

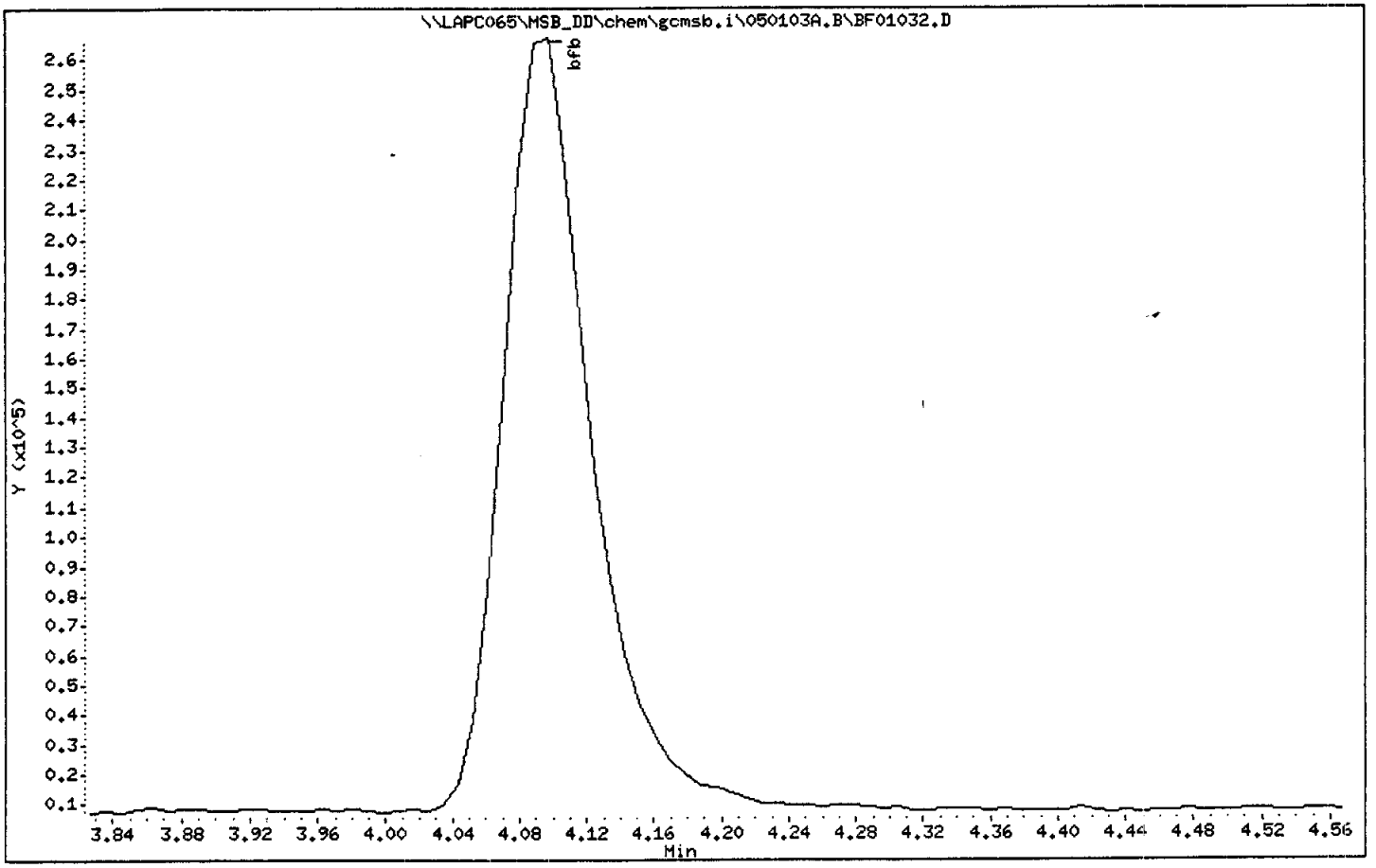
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

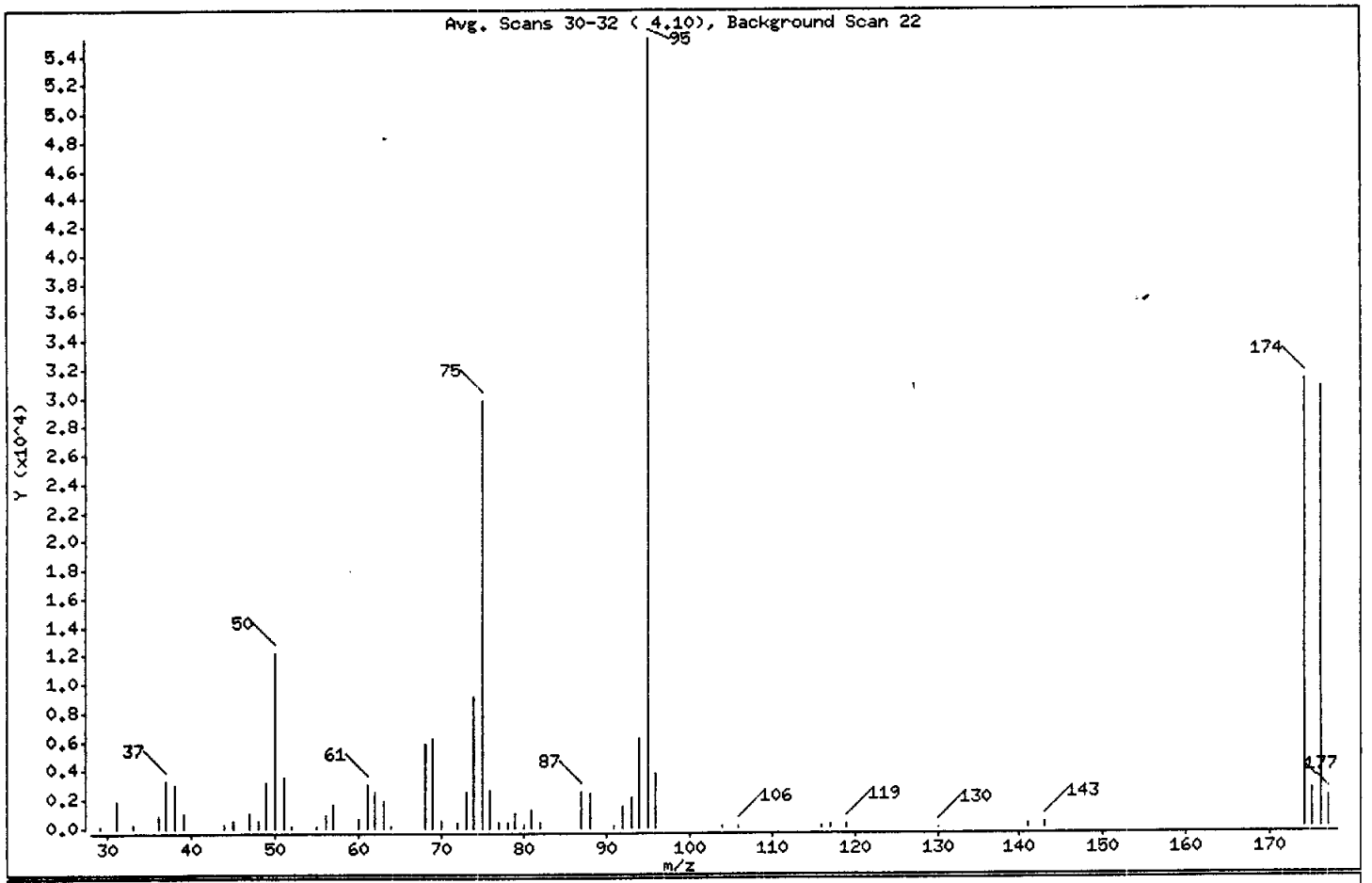
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

KA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.344(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

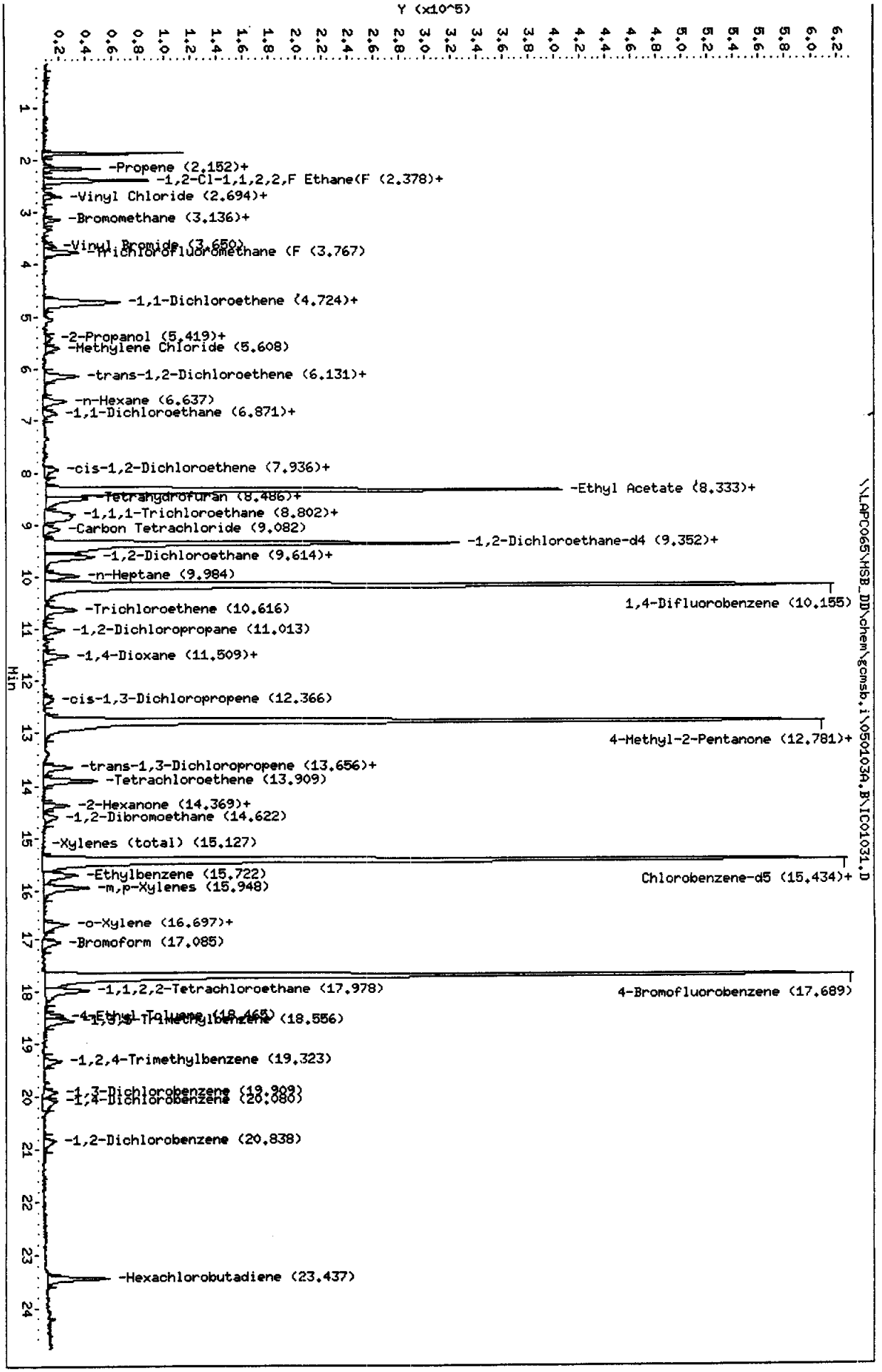
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.399
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

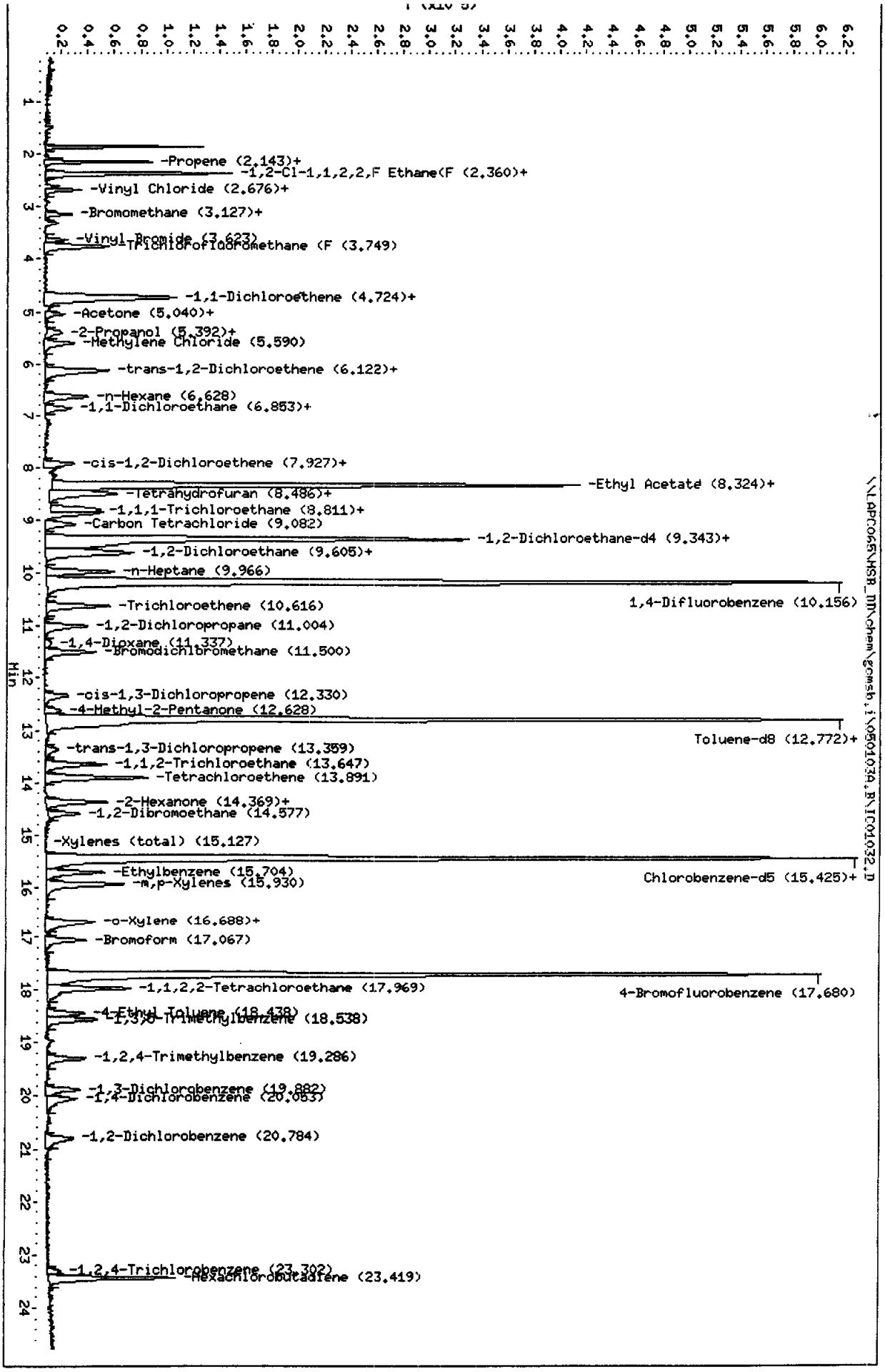
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
	36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
	37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
	40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
	41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
	43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
	45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
	53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
	54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
	56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
*	58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
	59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
	60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
	62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
	64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
	68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
	69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
	72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
	81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
	82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
	85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
	89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
	91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
	93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
	95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
	96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
	98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
*	101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
	102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M	99 Xylenes (total)	106				196706	30.0000	28.63
	104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
	105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
	107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
	108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
	110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
	116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

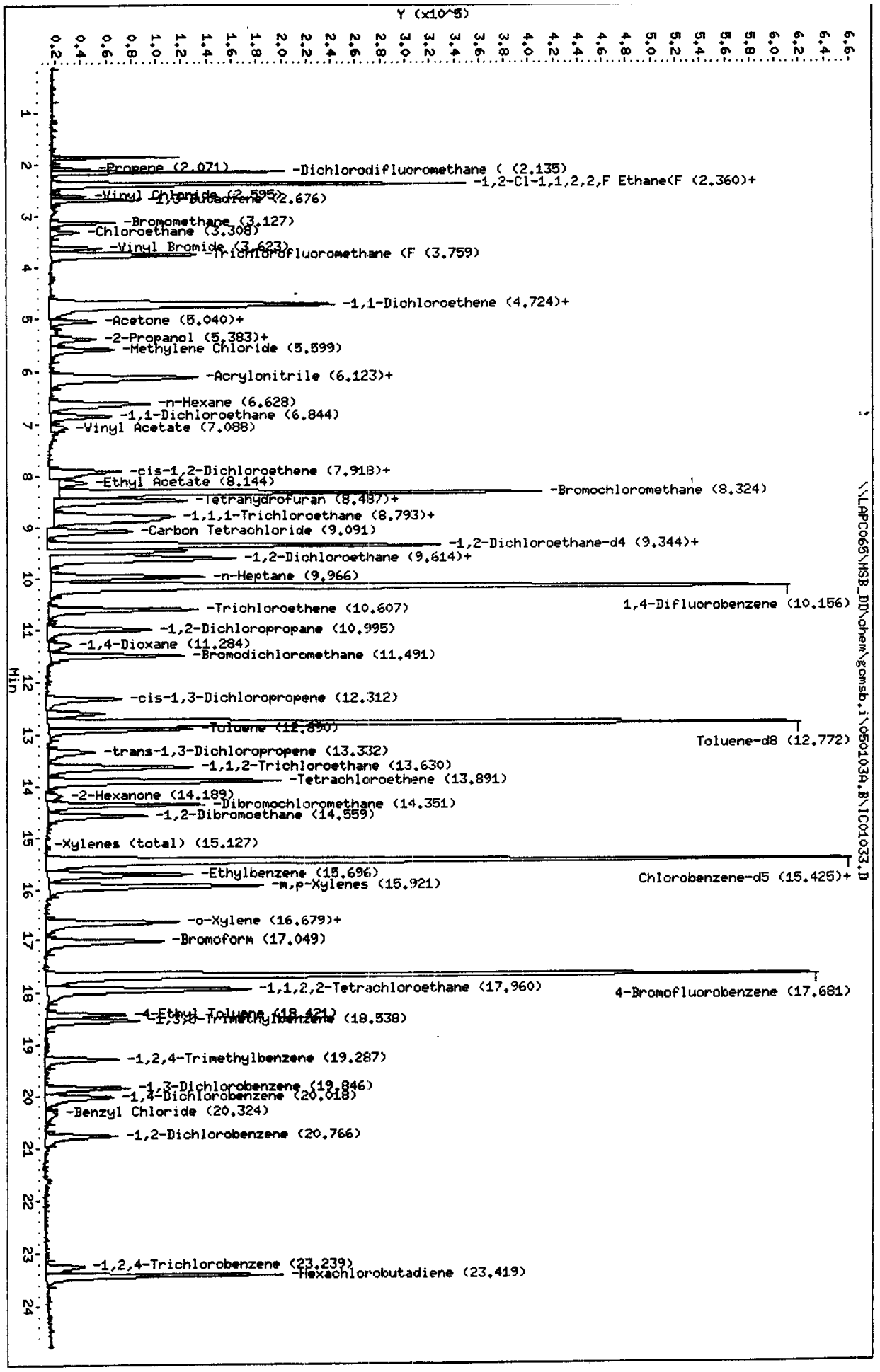
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
	36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
	37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
	40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
	41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
	42 Methyl-tert-butyl ether[MTBE].	73	6.147	6.131	(0.738)	423737	25.0000	24.31
	43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
	44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
	45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
	53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
	54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
	56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
*	58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
	59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
	60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
	61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
	62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
	64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$	66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
	68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
	69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
	70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
	72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
*	73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
	75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
	78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
	81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
	82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
	85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
	86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$	88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
	89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
	91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
	93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
	95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
	96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
	97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
	98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
*	101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
	102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M	99 Xylenes (total)	106				477975	75.0000	68.20
	104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
	105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
	107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
	108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
	110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$	114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

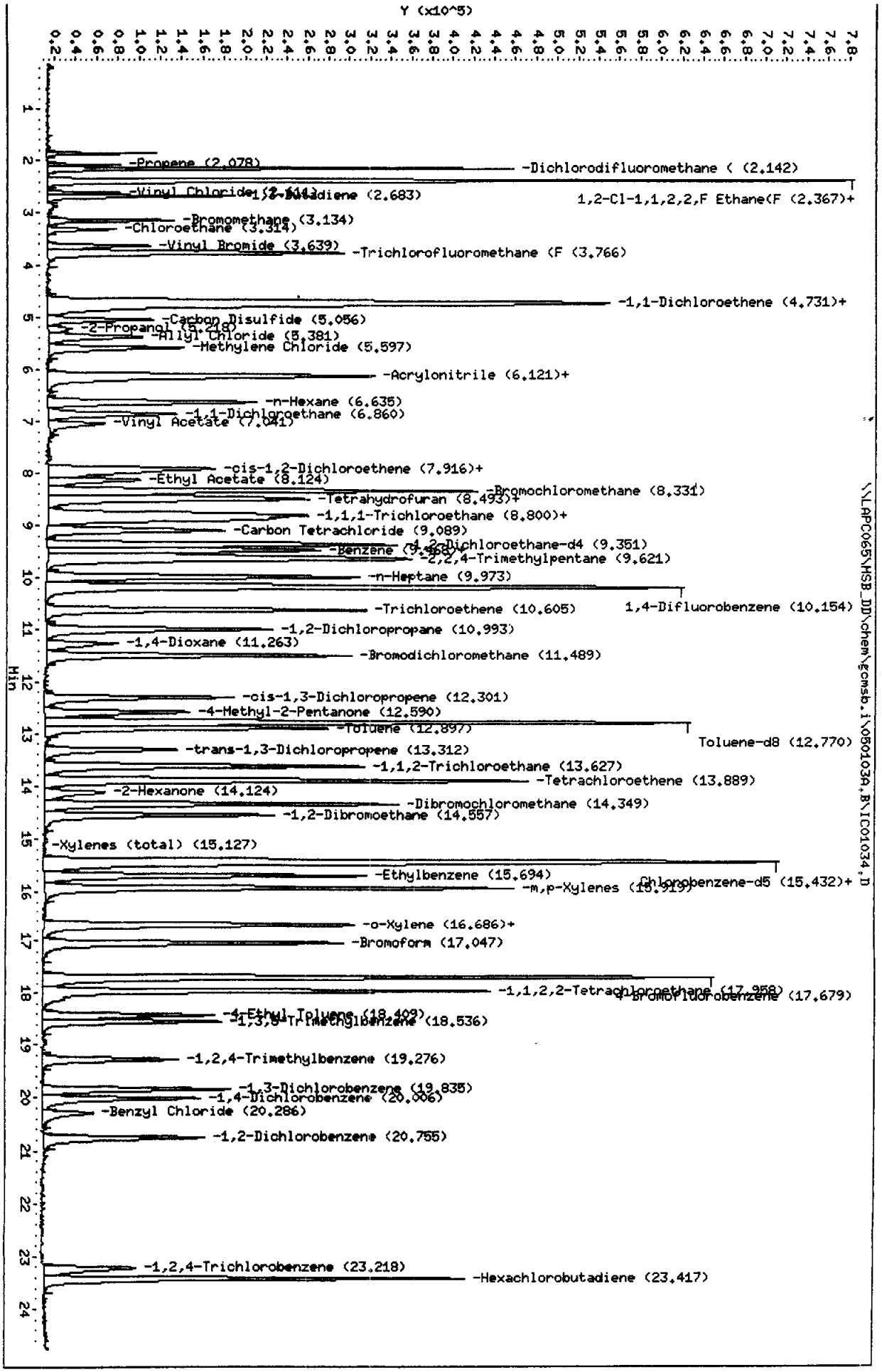
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

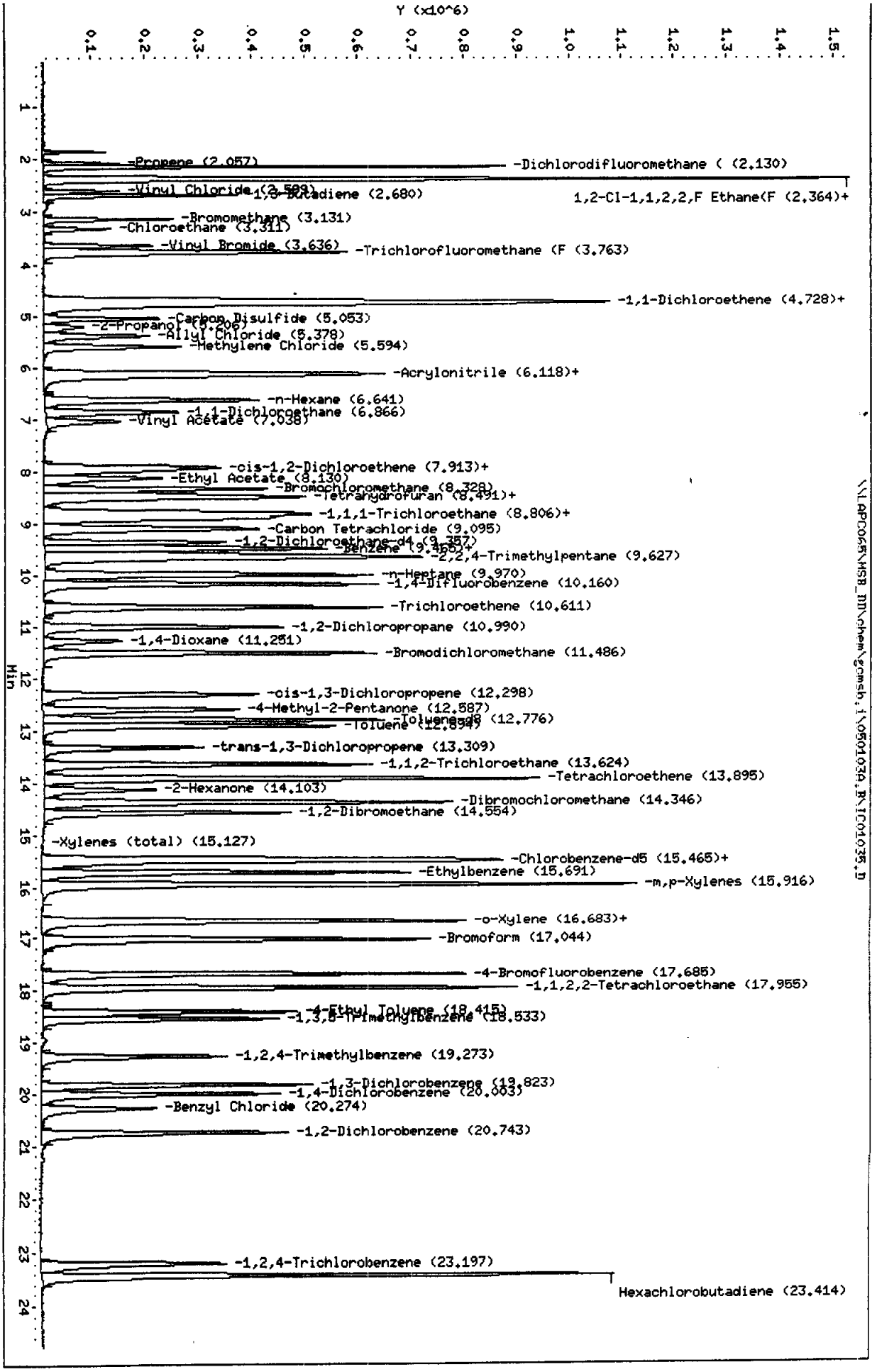
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
* 58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$ 66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
* 73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$ 88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
* 101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M 99 Xylenes (total)	106				2384108	300.000	320.3
104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$ 114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
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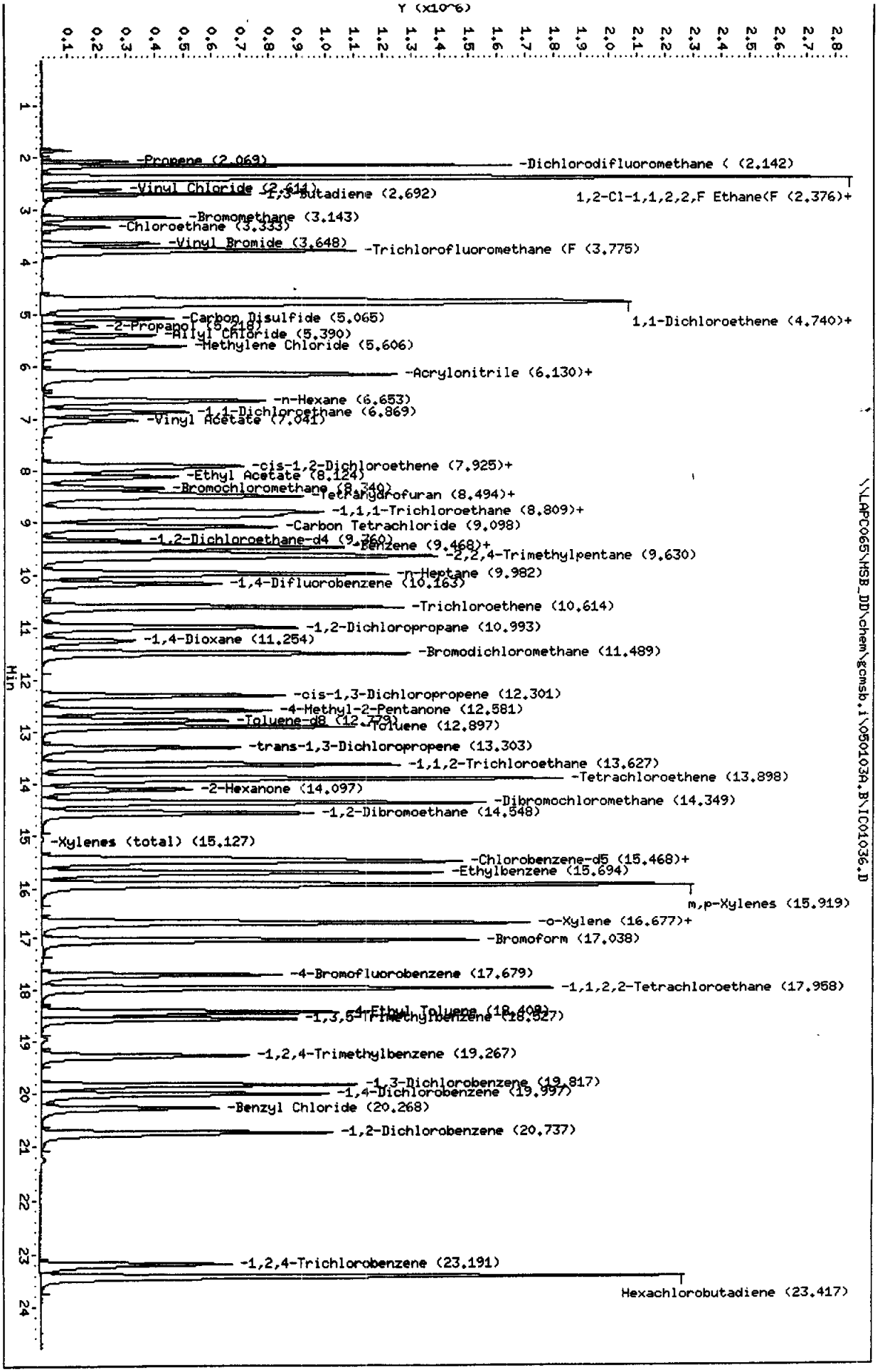
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
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Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE].	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	553.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	542.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	562.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

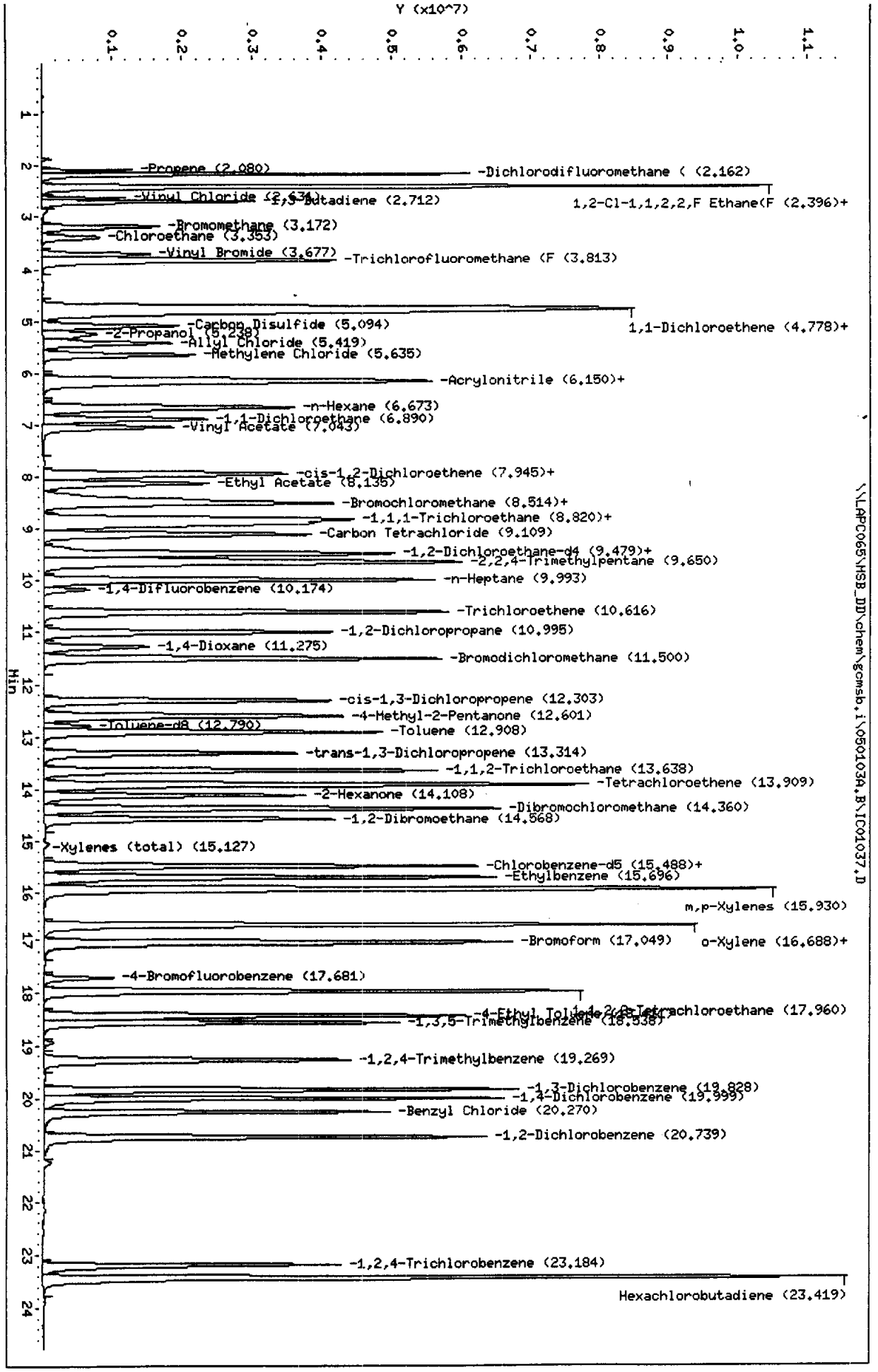
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



Page 7

SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011205 / 5012180

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\ 050111.B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3 05
MS-B	Method File: T014A	Daily Standard: LHSLEAC011026	SOP: GC-MS.003
ook ID:	Tune File:	LCS Standard: PSL9911355	MDL Date: 1-28-01
MS-041	BF041123.m	I.S. Standard: PSL9911283	Blank Lot No. 9050301.00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
-11-05	0751	BF0111	-	-		BFB	38	-	-	-	m	OK	A	
	0802	BF0112	-	-	-	BFB	23	-	-	-	m	OK	A	
	0820	LC0111	-	-	-	LCW	125	-	-	-	m	NO	B	
	0844	LC0112	-	-	-	LCS	250	-	-	-	m	NA	C	
	0933	LC0112	-	-	-	LCW	125	-	-	-	m	OK	B	
	1016	LC0112	-	-	-	LCS	250	-	-	-	m	OK	C	
	1045	LC0112	-	-	-	LCSD	250	-	-		m	OK	C	
	1124	MB0111	-	-	-	Method Blank	500	-	-	-	AA	OK	15	File "J"
	1152	B7525	G2CWK2A	0.1	WMI	GP9A	20	24.2/12.7	-	47.6	AA	OK	16	ESA100153-2
	1[illegible]	B7526	G2CWL2A			GP9B	40	24.4/12.6	-	12.2	AA	OK	1	-3
	1259	B7527	G2CWV2A			G13A	40	24.2/12.8	100/50	47.3	AA	OK	2	-6
	1335	B7528	G2CWI2A			GP13B	20	24.4/12.3	-	48.8	AA	OK	3	-7
	1403	B7529	G141L1A	0.1	ERM	LB IN-16	20	22.9/13.6	-	42.1	AA	O/R	4	ESA040240-2
	1436	B7530	G2DFG1A	0.1	SANDIA	006343-001	949	24.1/12.7	-	1	AA	OK	5	ESA100213-1
	1507	B7531	G2DGC1A	0.1		006344-001	927	24.1/13.4	-	1	AA	OK	6	2
	1534	B7532	G2DGE1A	0.1		006345-001	931	24.2/13.4	-	1	AA	OK	7	3
	1603	B7533	G141L2A	0.1	ERM	LB IN-16	20	22.9/13.6	100/100	42.1	AA	OK	4	ESA040240-2
	1633	LC0114	—	—	—	LCS	250	—	—	-	AA	OK	C	

iewed: _____

ESA100219

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
:MS-B	Method File:	Daily Standard: see previous page	SOP:
ook ID:	Tune File:	LCS Standard:	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
/11	1704	LC01115			-	LCSD	250	-	-	-	AA	OK	C	
	1737	CC01113	-	-	-	Cellosolve Ace	50	-	-	-	AA	No	7	low?
	1806	CC01114	-	-	-	UBER CCV	250	-	-	-	AA	OK	8	MSL0501060
	1834	CC01115	-	-	-	Methyl Meth.	250	-	-	-	AA	OK	8	MSL0501039
	1910	CC01116	-	-	-	CELLOSOLVE ACE	50	-	-	-	AA	OK	9	MSL0501074
	1945	CC01117	-	-	-	FINAL CCV	250	-	-	-	AA	No	10	MSL0401990
	2021	MB01112	-	-	-	METHOD BLANK	500	-	-	-	AA	OK	11	
	2057	B7534	G18GIAD	001	GZA	SAMS 8 HR	108.0	24.1/12	-	1.00	AA	O/R	12	ESA1100284-1
	2132	B7535	G2EDPIAA		KOMEX	V3-IN-011005	40	23.5/12.8	-	23.2	AA	OK	13	ESA110183-1
	2208	B7536	G2EDRIAA			V3-OUT	300	23.5/12.8	-	3.10	AA	OK	14	-2
	2243	B7537	G2EDUIAA			V1-OUT	964 300	23.5/12.8 23.5/12.7	-	3.10	AA	OK	15	-3
	2319	B7538	G2DGFIAA		SANDEA	CC6346-0001	300	23.8/12.8	-	3.10	AA	OK	16	ESA100214-1
	2355	B7539	G2DGGIAD			CC6347	25	24.5/12.8	-	38.8	AA	OK	1	-2
1-12-05	0030	B7540	G2DGHIAD			CC6348	50	24.3/12.8	100/100	94.9	AA	OK	2	-3
	0106	B7541	G2DGIIAD			CC6349	20	24.3/12.8	-	47.5	AA	OK	3	-4
	0142	B7542	G2DGJIAD			CC6350	250	24.4/12.7	-	3.84	AA	OK	4	-5
	0217	B7543	G2DGMIAD			CC6351	934	23.8/12.8	-	1.00	AA	OK	5	-6
	0253	B7544	G2ENRIAA		SAWO	F960044	50	REVIAW	100/10	1000	AA	OK	6	ESA110247-1

Reviewed: _____

E5A100219

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ment ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
MS-B	Method File:	Daily Standard: See Previous Page	SOP:
ook ID:	Tune File:	LCS Standard: 1-12-05	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-12	0328	B7545	G2ENTIAA	001	SHAW	FQ6CCC2	250	TOLAA2	-	2.00	[illegible]	OK	7	ESA110247 2
	0403	B7546	G2DXPIAD		SANDIA	066352-C001	897	24.2/13.5	-	1.00	[illegible]	OK	8	ESA100218-1
	0439	B7547	G2DXQIAD			066353	923	23.5/12.9	-		[illegible]	OK	9	-2
	0514	B7548	G2DXRIAD			066354	927	23.4/12.9	-		[illegible]	OK	10	-3
	0548	B7549	G2DXTIAD			066355	950	24.5/12.9	-		[illegible]	OK	11	-4
	0616	B7550	G2DXVIAD			066356	954	24.6/12.9	-		[illegible]	OK	12	-5
	0645	B7551	G2DXWIAD			066357	985	25.4/12.9	-		[illegible]	OK	13	-6
	0714	B7552	G2DX3IAD			066361	50	25.4/12.8	-	19.5	[illegible]	OK	14	ESA100219-4
	0742	B7553	G2DX4IAD			066362	25	22.7/12.8	-	38.6	[illegible]	OK	15	-5

[illegible] 1-12-05

[illegible]ewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	LCS	605430	8.33	1300958	10.16	858989	15.42
02	LCSD	601083	8.34	1250526	10.16	867984	15.43
03	BLANK	572958	8.32	1219937	10.16	740051	15.42
04	GP9A	593130	8.29	1218775	10.12	812797	15.41
05	GP9B	596256	8.34	1213989	10.16	801292	15.42
06	GP13A	589247	8.32	1206323	10.15	746218	15.42
07	GP13B	587312	8.32	1177970	10.16	741573	15.43
08	LB-IN-16	578407	8.29	1223565	10.13	991223	15.43
09	066343-0001	582886	8.32	1231816	10.16	846746	15.42
10	066344-0001	570864	8.33	1171946	10.16	771769	15.42
11	066345-0001	572298	8.20	1177424	10.06	782311	15.38
12	LB-IN-16	556681	8.33	1192709	10.16	892002	15.42
13	LCS	567294	8.34	1169230	10.16	809704	15.42
14	LCSD	561973	8.30	1176185	10.13	817623	15.42
15	BLANK	555301	8.32	1148790	10.16	769229	15.42
16	SAM'S 8 HR 1	579780	8.36	1152084	10.17	790955	15.42
17	V3-IN 011005	570338	8.32	1161203	10.16	790597	15.42
18	V3-OUT 01100	583371	8.32	1145557	10.15	797949	15.42
19	V1-OUT 01100	535847	8.31	1137317	10.14	785434	15.41
20	066346-0001	522369	8.32	1087705	10.16	657329	15.42
21	066347-0001	545543	8.32	1110011	10.16	726842	15.42
22	066348-0001	537458	8.32	1105439	10.15	769715	15.41

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100219-5

Lab File ID (Standard): CC01112 Date Analyzed: 01/11/05

Instrument ID: GCMSB Time Analyzed: 0933

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	626211	8.33	1354487	10.16	1036663	15.42
	UPPER LIMIT	876695	8.83	1896282	10.66	1451328	15.92
	LOWER LIMIT	375727	7.83	812692	9.66	621998	14.92
	EPA SAMPLE NO.						
01	066349-0001	544629	8.33	1096053	10.16	754907	15.42
02	066350-0001	535837	8.32	1084269	10.15	721181	15.41
03	066351-0001	535855	8.32	1095897	10.15	723587	15.41
04	FD60044	554825	8.32	1128856	10.15	798570	15.41
05	FD60062	562180	8.32	1140823	10.15	867571	15.41
06	066352-001	540916	8.30	1147952	10.14	804454	15.40
07	066353-001	540953	8.32	1132528	10.15	785812	15.41
08	066354-001	530687	8.31	1116997	10.15	765404	15.40
09	066355-001	546225	8.31	1123284	10.14	779205	15.40
10	066356-001	538046	8.31	1122921	10.14	770855	15.39
11	066357-001	535908	8.31	1104823	10.13	766786	15.39
12	066361-001	554218	8.31	1137553	10.13	788983	15.39
13	066362-001	553034	8.31	1143685	10.13	699702	15.39
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII VOA 1/87 Rev.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D
Lab Smp Id:
Inj Date : 11-JAN-2005 08:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.083	4.200	(0.000)	95	61389			0.00- 100.00	100.00
4.083	4.200	(0.000)	50	14311			15.00- 40.00	23.31
4.083	4.200	(0.000)	75	33800			30.00- 60.00	55.06
4.083	4.200	(0.000)	96	4414			5.00- 9.00	7.19
4.083	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.083	4.200	(0.000)	174	34714			50.00- 120.00	56.55
4.083	4.200	(0.000)	175	2883			5.00- 9.00	8.31
4.083	4.200	(0.000)	176	33896			95.00- 101.00	97.64
4.083	4.200	(0.000)	177	2457			5.00- 9.00	7.25

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

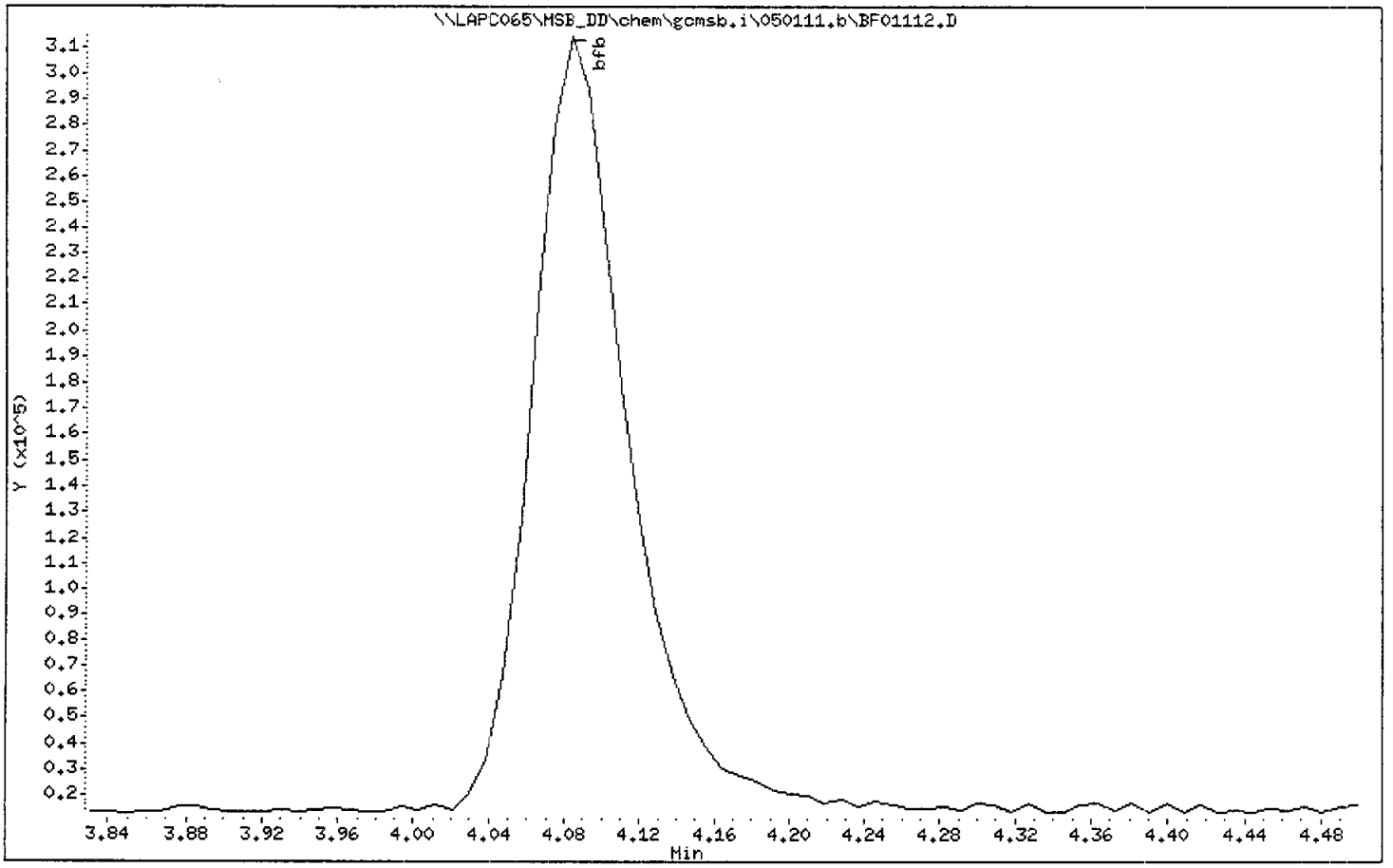
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

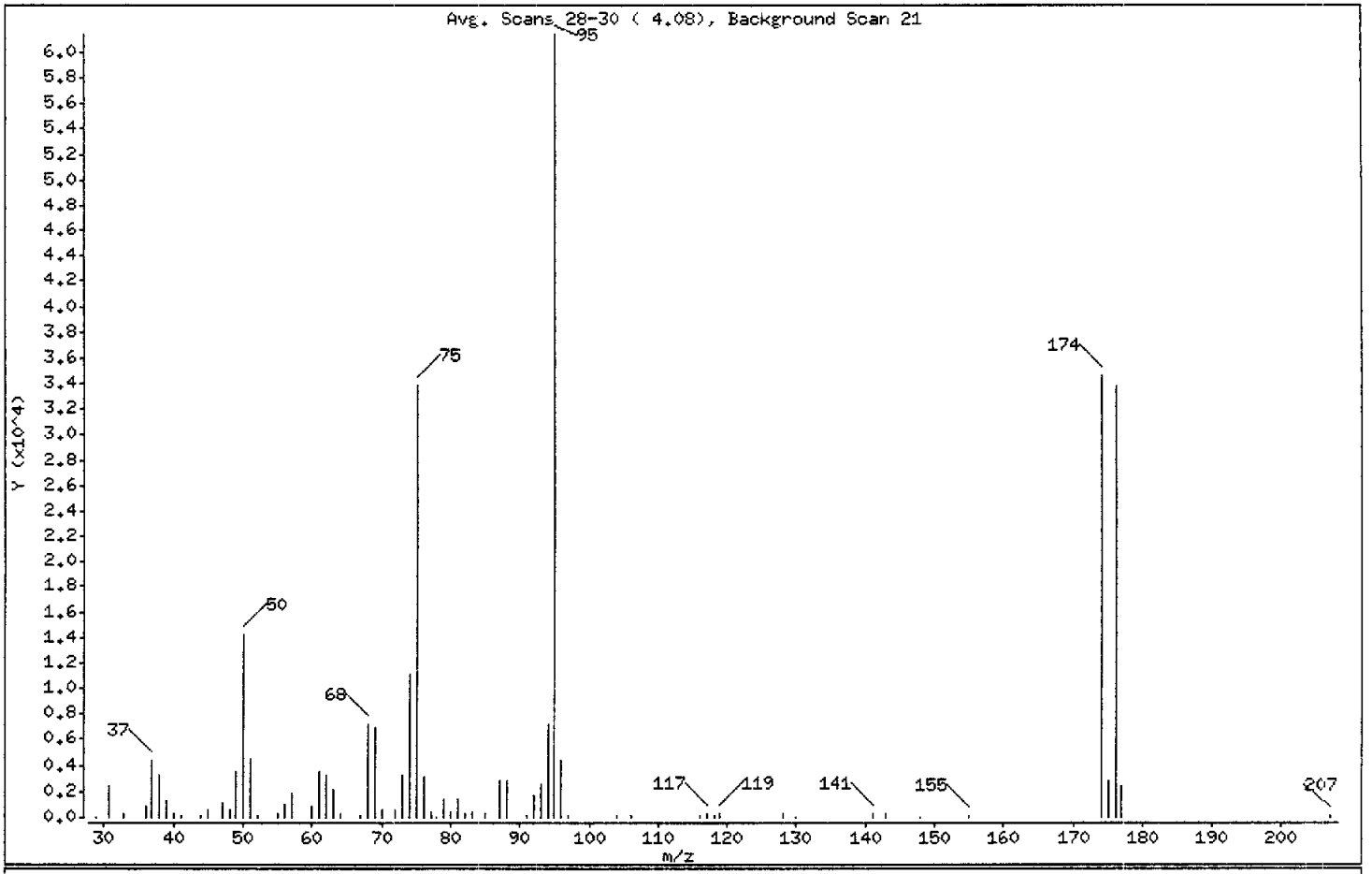
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.31
75	30.00 - 60.00% of mass 95	55.06
96	5.00 - 9.00% of mass 95	7.19
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.55
175	5.00 - 9.00% of mass 174	4.70 (8.31)
176	95.00 - 101.00% of mass 174	55.22 (97.64)
177	5.00 - 9.00% of mass 176	4.00 (7.25)

1/11/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\BF01112.D

Date : 11-JAN-2005 08:02

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01112.D
Spectrum: Avg. Scans 28-30 (4.08), Background Scan 21
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	49	56.00	1041	79.00	1354	117.00	309
31.00	2469	57.00	1799	80.00	435	118.00	72
33.00	306	60.00	819	81.00	1455	119.00	261
36.00	815	61.00	3492	82.00	343	128.00	244
37.00	4317	62.00	3302	83.00	416	130.00	64
38.00	3306	63.00	2183	85.00	222	141.00	328
39.00	1329	64.00	243	87.00	2778	143.00	288
40.00	218	67.00	79	88.00	2844	148.00	61
41.00	75	68.00	7171	91.00	173	155.00	73
44.00	151	69.00	6921	92.00	1757	174.00	34712
45.00	557	70.00	534	93.00	2514	175.00	2883
47.00	1063	72.00	615	94.00	7253	176.00	33896
48.00	603	73.00	3214	95.00	61384	177.00	2457
49.00	3532	74.00	11218	96.00	4414	207.00	147
50.00	14311	75.00	33800	97.00	128		
51.00	4552	76.00	3160	104.00	170		
52.00	210	77.00	457	106.00	82		
55.00	238	78.00	49	116.00	157		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 11-JAN-2005 09:33
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.083	2.083	(0.250)	117930	50.0000	51.33
3 Dichlorodifluoromethane (F12)	85	2.156	2.156	(0.259)	1335764	50.0000	50.53
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.381	2.381	(0.286)	1100999	50.0000	51.22
8 Chloromethane	52	2.426	2.426	(0.291)	63714	50.0000	54.30
9 Vinyl Chloride	62	2.616	2.616	(0.314)	261876	50.0000	51.42
12 1,3-Butadiene	39	2.688	2.688	(0.323)	363774	100.000	105.4
15 Bromomethane	94	3.148	3.148	(0.378)	326505	50.0000	51.57
16 Chloroethane	64	3.328	3.328	(0.400)	169618	50.0000	52.59
19 Vinyl Bromide	106	3.644	3.644	(0.438)	382508	50.0000	52.74
21 Trichlorofluoromethane (F11)	101	3.771	3.771	(0.453)	1341408	50.0000	50.34
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	711253	50.0000	50.32
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.745	4.745	(0.570)	1516275	50.0000	49.52
31 Acetone	58	4.853	4.853	(0.583)	107056	50.0000	53.42(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	780141	50.0000	58.69

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.214	5.214	(0.626)	364415	50.0000	51.42
	36 Allyl Chloride	41	5.386	5.386	(0.647)	393313	50.0000	53.60
	37 Methylene Chloride	49	5.593	5.593	(0.672)	426041	50.0000	48.82
	40 Acrylonitrile	53	6.089	6.089	(0.731)	129782	50.0000	55.14
	41 trans-1,2-Dichloroethene	61	6.107	6.107	(0.733)	630975	50.0000	51.30
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	1051552	50.0000	50.39
	43 n-Hexane	41	6.640	6.640	(0.797)	479458	50.0000	49.66
	44 1,1-Dichloroethane	63	6.865	6.865	(0.824)	774211	50.0000	49.98
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	800344	50.0000	53.69
	53 cis-1,2-Dichloroethene	96	7.912	7.912	(0.950)	407276	50.0000	50.88
	54 2-Butanone	72	7.975	7.975	(0.958)	142440	50.0000	53.43
	56 Ethyl Acetate	43	8.120	8.120	(0.975)	831706	50.0000	57.75
*	58 Bromochloromethane	49	8.327	8.327	(1.000)	626211	50.0000	
	59 Tetrahydrofuran	42	8.426	8.426	(1.012)	346205	50.0000	50.08
	60 Chloroform	83	8.489	8.489	(1.020)	983891	50.0000	49.38
	61 1,1,1-Trichloroethane	97	8.787	8.787	(1.055)	1008479	50.0000	50.63
	62 Cyclohexane	84	8.886	8.886	(1.067)	495362	50.0000	49.57
	64 Carbon Tetrachloride	117	9.085	9.085	(1.091)	891656	50.0000	67.37
$	66 1,2-Dichloroethane-d4	65	9.347	9.347	(0.920)	574558	50.0000	51.69
	68 Benzene	78	9.446	9.446	(0.930)	926438	50.0000	50.26
	69 1,2-Dichloroethane	62	9.482	9.482	(0.933)	599238	50.0000	49.91
	70 2,2,4-Trimethylpentane	57	9.617	9.617	(0.947)	2400722	50.0000	50.71
	72 n-Heptane	43	9.969	9.969	(0.981)	804793	50.0000	50.74
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1354487	50.0000	
	75 Trichloroethene	130	10.601	10.601	(1.044)	598705	50.0000	50.62
	78 1,2-Dichloropropane	76	10.980	10.980	(1.081)	232636	50.0000	52.40
	81 1,4-Dioxane	88	11.250	11.250	(1.107)	238899	50.0000	55.83
	82 Bromodichloromethane	85	11.485	11.485	(1.131)	836676	50.0000	55.68
	85 cis-1,3-Dichloropropene	75	12.297	12.297	(1.210)	708701	50.0000	53.22
	86 4-Methyl-2-Pentanone	58	12.577	12.577	(1.238)	324482	50.0000	52.15(Q)
$	88 Toluene-d8	100	12.766	12.766	(1.257)	729149	50.0000	51.41
	89 Toluene	91	12.883	12.883	(1.268)	1196268	50.0000	50.16
	91 trans-1,3-Dichloropropene	75	13.299	13.299	(0.862)	531738	50.0000	60.66
	93 1,1,2-Trichloroethane	97	13.614	13.614	(0.883)	584963	50.0000	50.02
	95 Tetrachloroethene	166	13.885	13.885	(0.901)	799613	50.0000	49.27
	96 2-Hexanone	58	14.102	14.102	(0.915)	299445	50.0000	57.23(Q)
	97 Dibromochloromethane	129	14.336	14.336	(0.930)	1180268	50.0000	60.14
	98 1,2-Dibromoethane	107	14.544	14.544	(0.943)	1064031	50.0000	54.28
*	101 Chlorobenzene-d5	117	15.419	15.419	(1.000)	1036663	50.0000	
	102 Chlorobenzene	112	15.473	15.473	(1.004)	963820	50.0000	50.64
M	99 Xylenes (total)	106				1339965	150.000	158.5
	104 Ethylbenzene	91	15.681	15.681	(1.017)	1553375	50.0000	52.72
	105 m,p-Xylenes	106	15.906	15.906	(1.032)	899918	100.000	105.2
	107 o-Xylene	106	16.664	16.664	(1.081)	440047	50.0000	53.37
	108 Styrene	104	16.691	16.691	(1.083)	578818	50.0000	56.03
	110 Bromoform	173	17.034	17.034	(1.105)	1027616	50.0000	66.57
$	114 4-Bromofluorobenzene	95	17.675	17.675	(1.146)	949556	50.0000	51.28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1513781	50.0000	53.91
123 4-Ethyl Toluene	105	18.396	18.396	(1.193)	981084	50.0000	55.86
124 1,3,5-Trimethylbenzene	105	18.523	18.523	(1.201)	858186	50.0000	43.74
131 1,2,4-Trimethylbenzene	120	19.263	19.263	(1.249)	268525	50.0000	47.05
134 1,3-Dichlorobenzene	146	19.813	19.813	(1.285)	604990	50.0000	55.44
136 1,4-Dichlorobenzene	146	19.993	19.993	(1.297)	553651	50.0000	49.32
138 Benzyl Chloride	91	20.255	20.255	(1.314)	697827	50.0000	59.76
140 1,2-Dichlorobenzene	146	20.724	20.724	(1.344)	562107	50.0000	50.39
144 1,2,4-Trichlorobenzene	180	23.187	23.187	(1.504)	338601	50.0000	61.30
145 Hexachlorobutadiene	225	23.404	23.404	(1.518)	457511	50.0000	45.42

QC Flag Legend

Q - Qualifier signal failed the ratio test.

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
1 Propene	0.18345	0.18832	0.010	2.7	30.0
3 Dichlorodifluoromethane (F1	2.11052	2.13309	0.010	1.1	30.0
5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.75819	0.010	2.5	30.0
8 Chloromethane	0.09369	0.10175	0.100	8.6	30.0
9 Vinyl Chloride	0.40660	0.41819	0.010	2.8	30.0
12 1,3-Butadiene	0.27551	0.29046	0.010	5.4	30.0
15 Bromomethane	0.50552	0.52140	0.010	3.1	30.0
16 Chloroethane	0.25753	0.27087	0.010	5.2	30.0
19 Vinyl Bromide	0.57915	0.61083	0.010	5.5	30.0
21 Trichlorofluoromethane (F11	2.12773	2.14210	0.010	0.7	30.0
28 1,1-Dichloroethene	1.12859	1.13580	0.010	0.6	30.0
30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.42135	0.010	-1.0	30.0
31 Acetone	0.16001	0.17096	0.010	6.8	30.0
33 Carbon Disulfide	1.06127	1.24581	0.010	17.4	30.0
34 2-Propanol	0.56591	0.58194	0.010	2.8	30.0
36 Allyl Chloride	0.58587	0.62808	0.010	7.2	30.0
37 Methylene Chloride	0.69686	0.68035	0.010	-2.4	30.0
40 Acrylonitrile	0.18791	0.20725	0.010	10.3	30.0
41 trans-1,2-Dichloroethene	0.98199	1.00761	0.010	2.6	30.0
42 Methyl-tert-butyl ether[MTB	1.66607	1.67923	0.010	0.8	30.0
43 n-Hexane	0.77083	0.76565	0.010	-0.7	30.0
44 1,1-Dichloroethane	1.23672	1.23634	0.100	-0.0	30.0
45 Vinyl Acetate	1.19013	1.27807	0.010	7.4	30.0
53 cis-1,2-Dichloroethene	0.63910	0.65038	0.010	1.8	30.0
54 2-Butanone	0.21287	0.22746	0.010	6.9	30.0
56 Ethyl Acetate	1.14995	1.32816	0.010	15.5	30.0
59 Tetrahydrofuran	0.55193	0.55286	0.010	0.2	30.0
60 Chloroform	1.59075	1.57118	0.010	-1.2	30.0
61 1,1,1-Trichloroethane	1.59033	1.61045	0.010	1.3	30.0
62 Cyclohexane	0.79797	0.79105	0.010	-0.9	30.0
64 Carbon Tetrachloride	1.05674	1.42389	0.010	34.7	30.0 <-
$ 66 1,2-Dichloroethane-d4	0.41033	0.42419	0.010	3.4	30.0
68 Benzene	0.68038	0.68398	0.010	0.5	30.0
69 1,2-Dichloroethane	0.44323	0.44241	0.010	-0.2	30.0
70 2,2,4-Trimethylpentane	1.74763	1.77242	0.010	1.4	30.0

AA 1/11/05

4/23/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 11-JAN-2005 09:33
Lab File ID: CC01112.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	72 n-Heptane	0.58544	0.59417	0.010	1.5	30.0	
	75 Trichloroethene	0.43657	0.44202	0.010	1.2	30.0	
	78 1,2-Dichloropropane	0.16390	0.17175	0.010	4.8	30.0	
	81 1,4-Dioxane	0.15796	0.17638	0.010	11.7	30.0	
	82 Bromodichloromethane	0.54492	0.61771	0.010	13.4	30.0	
	85 cis-1,3-Dichloropropene	0.44931	0.52323	0.010	16.5	30.0	
	86 4-Methyl-2-Pentanone	0.22967	0.23956	0.010	4.3	30.0	
$	88 Toluene-d8	0.52356	0.53832	0.010	2.8	30.0	
	89 Toluene	0.88039	0.88319	0.010	0.3	30.0	
	91 trans-1,3-Dichloropropene	0.42279	0.51293	0.010	21.3	30.0	
	93 1,1,2-Trichloroethane	0.56403	0.56427	0.010	0.0	30.0	
	95 Tetrachloroethene	0.78282	0.77133	0.010	-1.5	30.0	
	96 2-Hexanone	0.25237	0.28886	0.010	14.5	30.0	
	97 Dibromochloromethane	0.94658	1.13853	0.010	20.3	30.0	
	98 1,2-Dibromoethane	0.94544	1.02640	0.010	8.6	30.0	
	102 Chlorobenzene	0.91801	0.92973	0.300	1.3	30.0	
M	99 Xylenes (total)	0.40771	0.43086	0.010	5.7	30.0	
	104 Ethylbenzene	1.42124	1.49844	0.010	5.4	30.0	
	105 m,p-Xylenes	0.41273	0.43405	0.010	5.2	30.0	
	107 o-Xylene	0.39767	0.42448	0.010	6.7	30.0	
	108 Styrene	0.49829	0.55835	0.010	12.1	30.0	
	110 Bromoform	0.74450	0.99127	0.100	33.1	30.0	<-
$	114 4-Bromofluorobenzene	0.89318	0.91597	0.010	2.6	30.0	
	116 1,1,2,2-Tetrachloroethane	1.35429	1.46024	0.300	7.8	30.0	
	123 4-Ethyl Toluene	0.84706	0.94639	0.010	11.7	30.0	
	124 1,3,5-Trimethylbenzene	0.94631	0.82783	0.010	-12.5	30.0	
	131 1,2,4-Trimethylbenzene	0.27527	0.25903	0.010	-5.9	30.0	
	134 1,3-Dichlorobenzene	0.52632	0.58359	0.010	10.9	30.0	
	136 1,4-Dichlorobenzene	0.54141	0.53407	0.010	-1.4	30.0	
	138 Benzyl Chloride	0.56325	0.67315	0.010	19.5	30.0	
	140 1,2-Dichlorobenzene	0.53798	0.54223	0.010	0.8	30.0	
	144 1,2,4-Trichlorobenzene	0.26641	0.32663	0.010	22.6	30.0	
	145 Hexachlorobutadiene	0.48586	0.44133	0.010	-9.2	30.0	

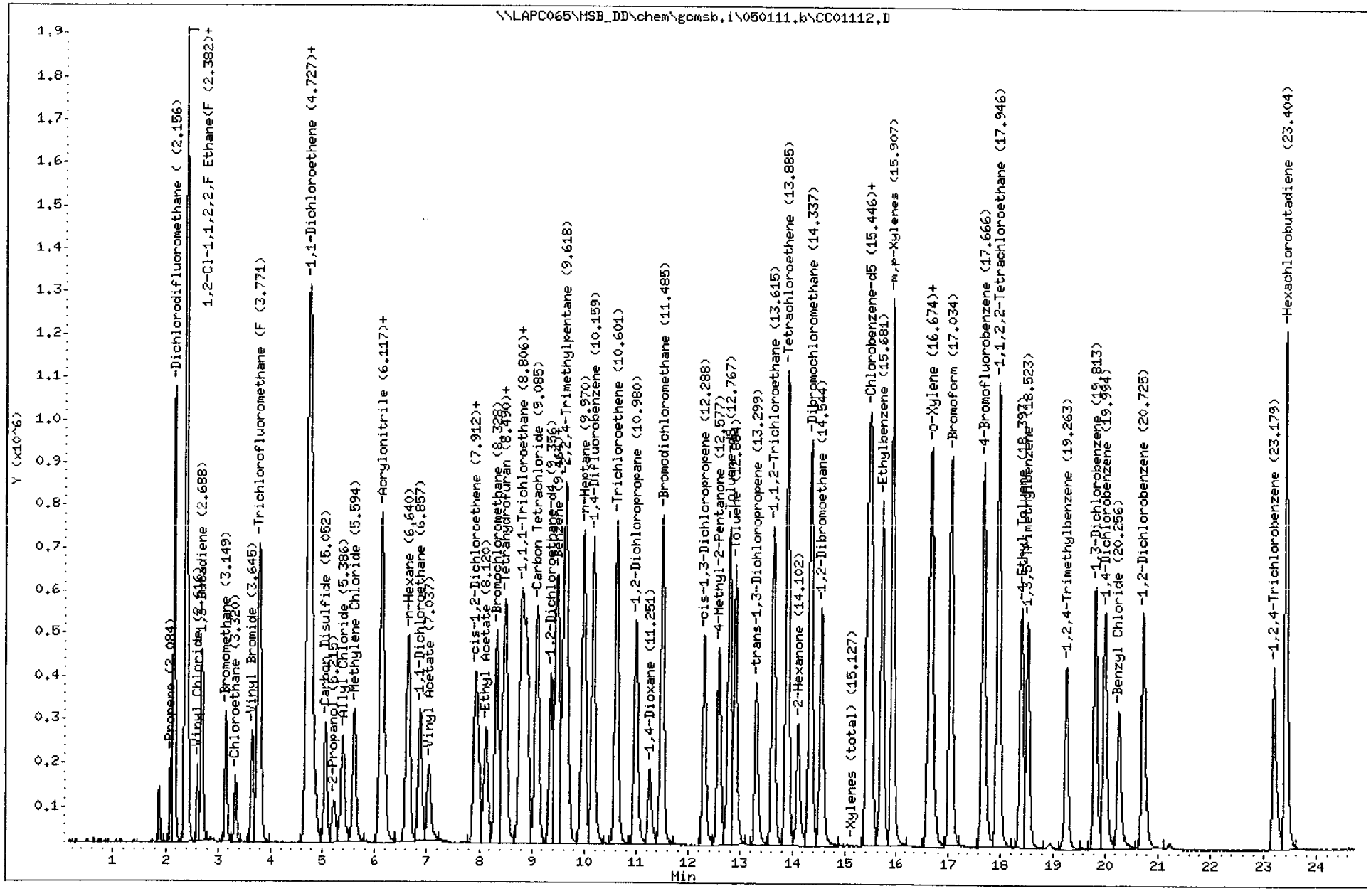
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\CC01112.D
Date : 11-JAN-2005 09:33
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Reduced By: AA Date: 1/11/05
Reviewed By: [illegible] Date: 1/13/05

LCSD Report

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01114.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 11-JAN-2005 16:33

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.B/LC01115.D
Samp Info : LCSD,LCSD,PSL9911359
Inj Date : 11-JAN-2005 17:01

	Concentration								
	Mass Spiked		Measured			%Recovery			RPD	
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	51.6	52.2	51.9	102.8	70	125	1	20
Methylene Chloride									
54.5	188.95	56.1	56.6	56.4	103.4	75	120	1	20
Trichloroethene									
49.5	265.47	50.6	50.7	50.6	102.3	70	125	0	20
Toluene									
49.5	186.17	49.6	49.5	49.6	100.1	75	125	0	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	54.9	54.7	54.8	109.6	65	130	0	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01114.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 11-JAN-2005 16:33
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.709	4.700	(0.565)	660751	51.6016	51.60
37 Methylene Chloride	49	5.611	5.593	(0.673)	443926	56.1470	56.15
* 58 Bromochloromethane	49	8.336	8.327	(1.000)	567294	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.355	9.347	(0.921)	475234	49.5273	49.53
* 73 1,4-Difluorobenzene	114	10.158	10.159	(1.000)	1169230	50.0000	
75 Trichloroethene	130	10.609	10.601	(1.044)	516211	50.5639	50.56
$ 88 Toluene-d8	100	12.775	12.766	(1.258)	604253	49.3539	49.35
89 Toluene	91	12.892	12.883	(1.269)	1021086	49.5973	49.60
* 101 Chlorobenzene-d5	117	15.418	15.419	(1.000)	809704	50.0000	
$ 114 4-Bromofluorobenzene	95	17.674	17.675	(1.146)	626220	43.2942	43.29
116 1,1,2,2-Tetrachloroethane	83	17.945	17.945	(1.164)	1204258	54.9099	54.91

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01114.D

Date : 11-JAN-2005 16:33

Client ID: LCS

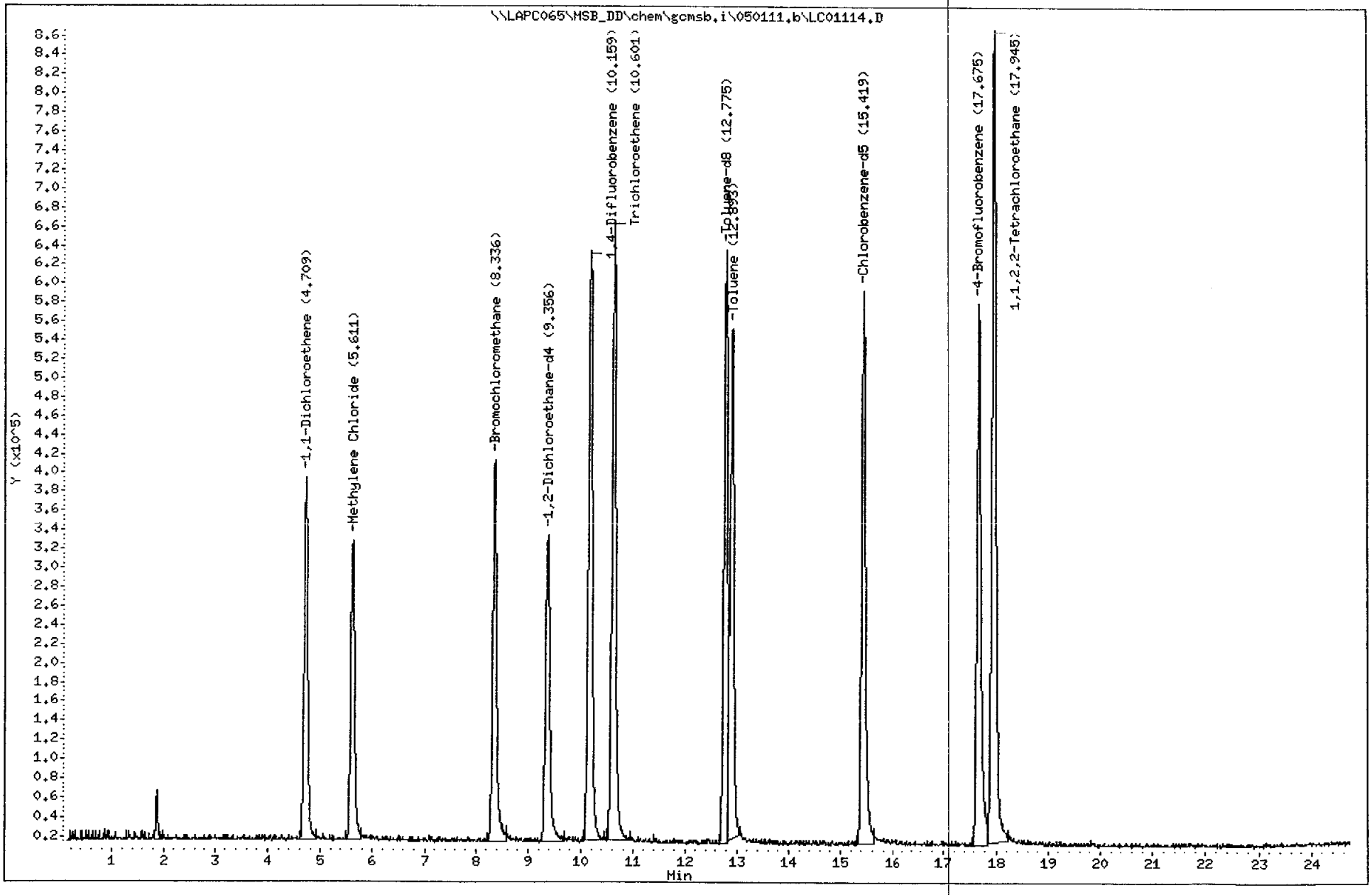
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01115.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 11-JAN-2005 17:01
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,PSL9911359
Misc Info : 1,1,100,100,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 09:58 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.671	4.700	(0.563)	661872	52.1785	52.18
37 Methylene Chloride	49	5.565	5.593	(0.671)	443391	56.6104	56.61
* 58 Bromochloromethane	49	8.299	8.327	(1.000)	561973	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.327	9.347	(0.921)	484228	50.1662	50.17
* 73 1,4-Difluorobenzene	114	10.130	10.159	(1.000)	1176185	50.0000	
75 Trichloroethene	130	10.590	10.601	(1.045)	520987	50.7299	50.73
$ 88 Toluene-d8	100	12.756	12.766	(1.259)	610586	49.5762	49.58
89 Toluene	91	12.873	12.883	(1.271)	1025678	49.5258	49.52
* 101 Chlorobenzene-d5	117	15.417	15.419	(1.000)	817623	50.0000	
$ 114 4-Bromofluorobenzene	95	17.673	17.675	(1.146)	629536	43.1019	43.10
116 1,1,2,2-Tetrachloroethane	83	17.944	17.945	(1.164)	1211176	54.6904	54.69

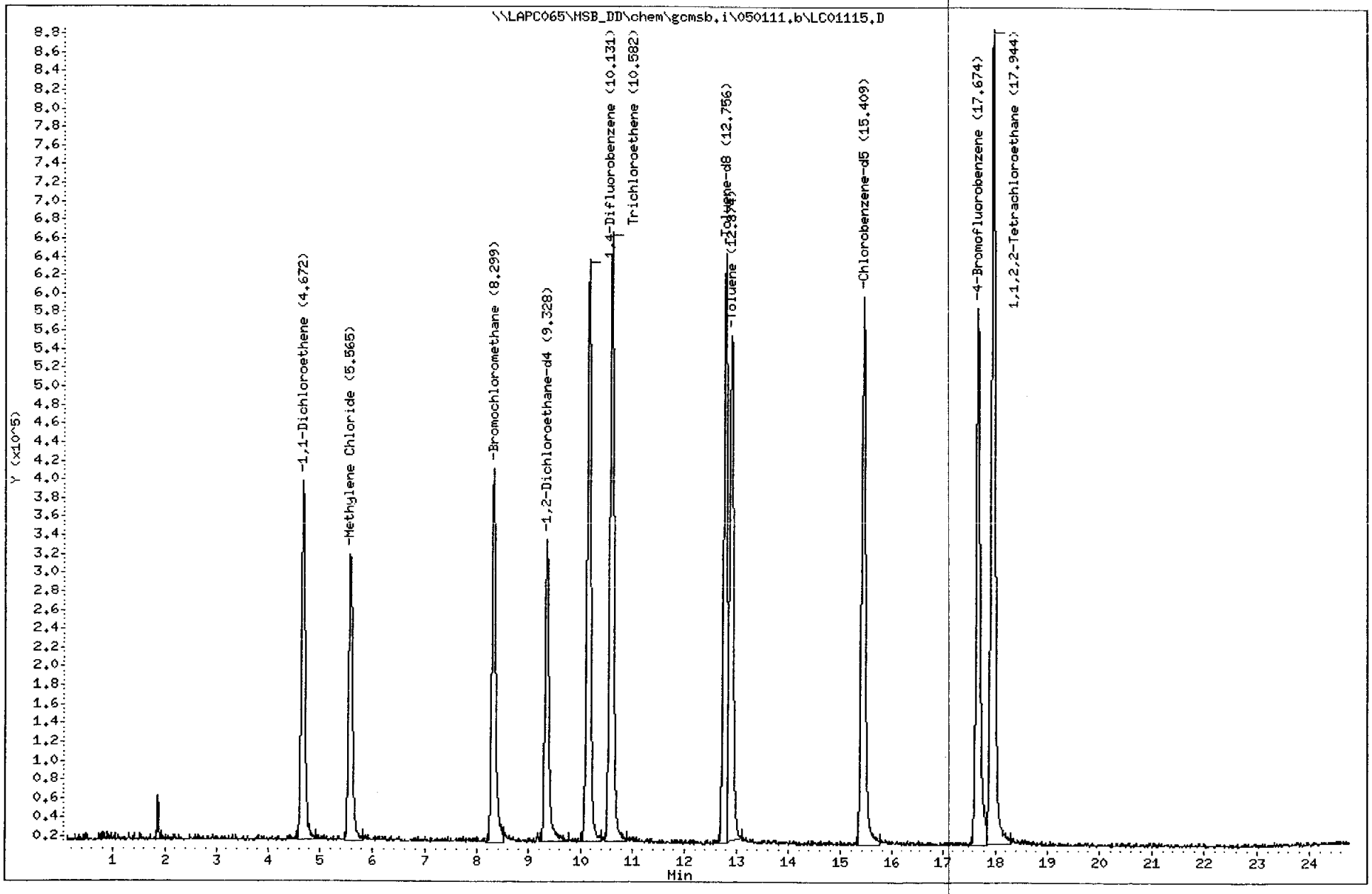
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\LC01115.D
Date : 11-JAN-2005 17:01
Client ID: LCSD
Sample Info: LCSD,LCSD,PSL9911359

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 11-JAN-2005 20:21
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,BLANK.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 11-Jan-2005 20:11 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BLANK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.324	8.318	(1.000)	555301	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.347	(0.920)	489223	51.8923	51.89
71 tert-Amyl methyl ether (TAME)	73	10.155	9.671	(1.000)	17637	0.81879	0.3188 (aQ) ND
* 73 1,4-Difluorobenzene	114	10.155	10.149	(1.000)	1148790	50.0000	
$ 88 Toluene-d8	100	12.772	12.766	(1.258)	591136	49.1416	49.14
* 101 Chlorobenzene-d5	117	15.415	15.419	(1.000)	769229	50.0000	
$ 114 4-Bromofluorobenzene	95	17.680	17.675	(1.147)	542017	39.4445	39.44

1/12/05

QC Flag Legend

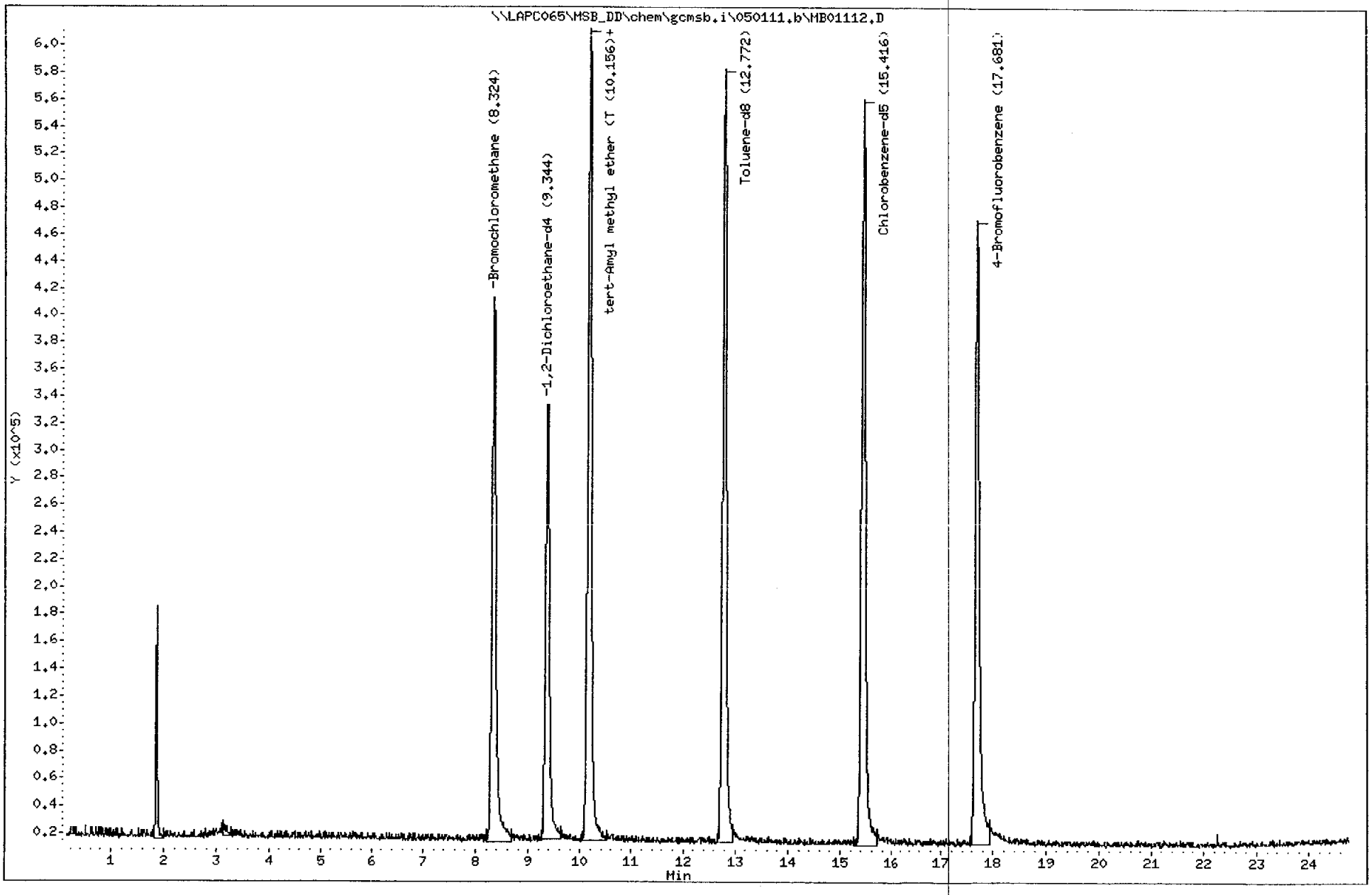
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D
Date : 11-JAN-2005 20:21
Client ID: BLANK
Sample Info: BLANK,BLANK,

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\MB01112.D

Date : 11-JAN-2005 20:21

Client ID: BLANK

Instrument: gcmsb.i

Sample Info: BLANK,BLANK,

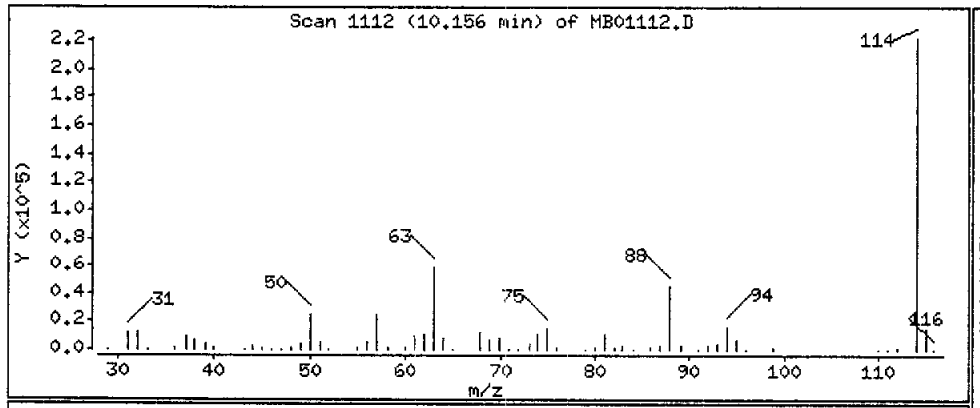
Operator: DLK

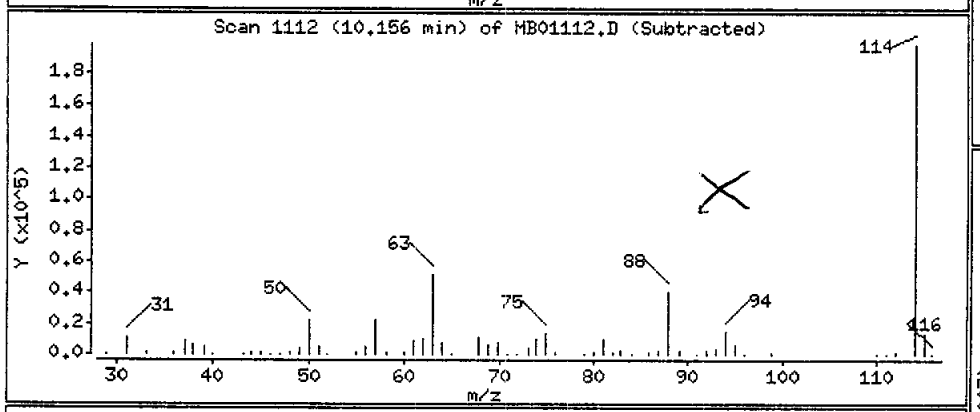
Column phase: J&W DB-624

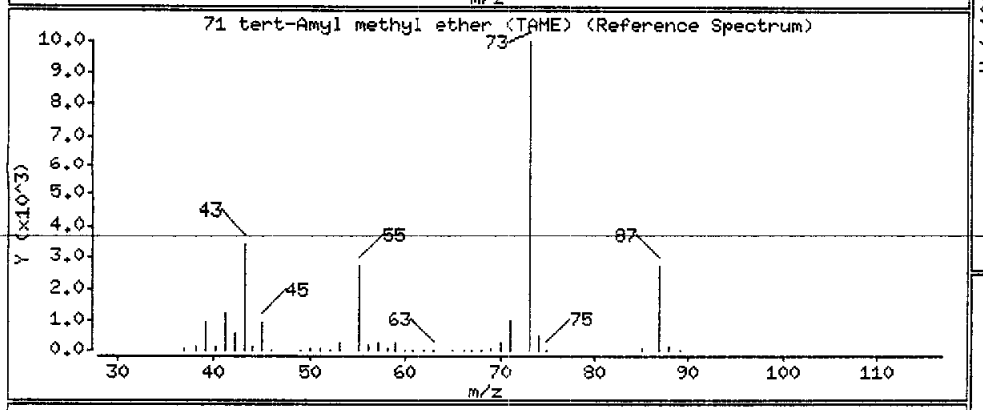
Column diameter: 0.53

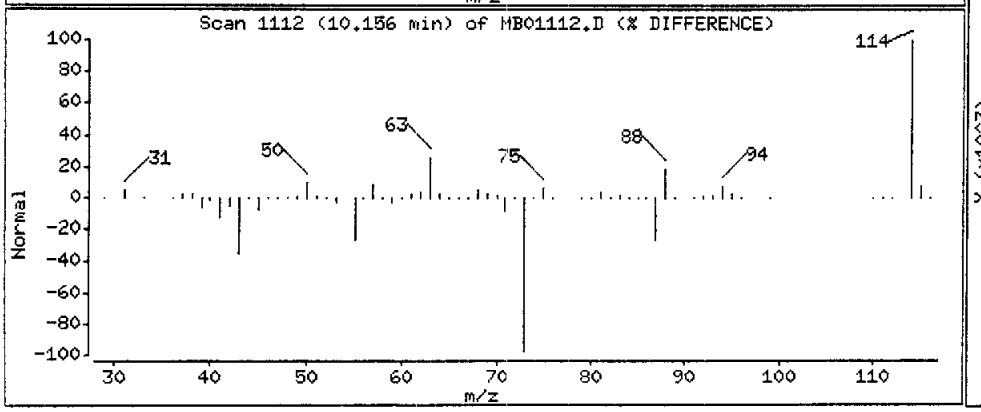
71 tert-Amyl methyl ether (TAME)

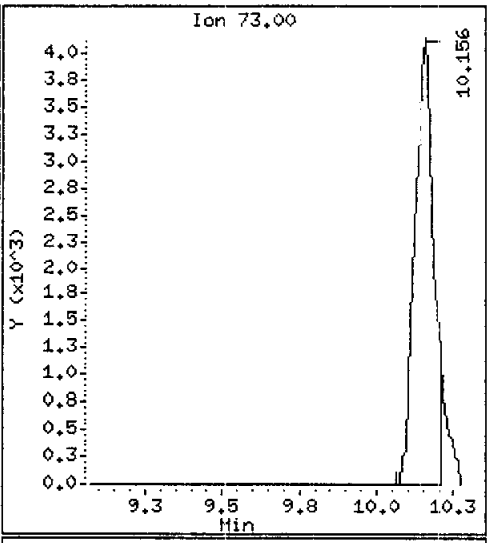
Concentration: 0.8188 ppbv

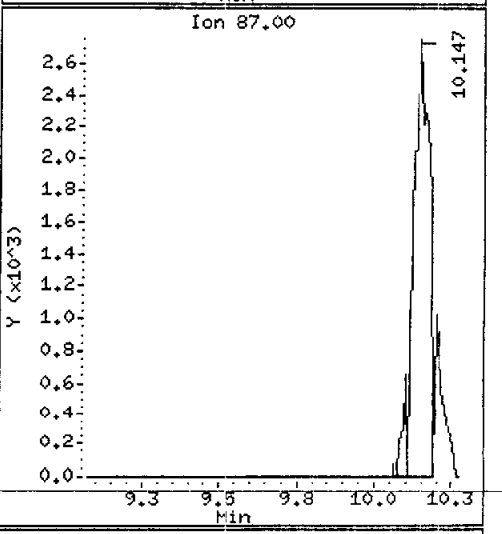


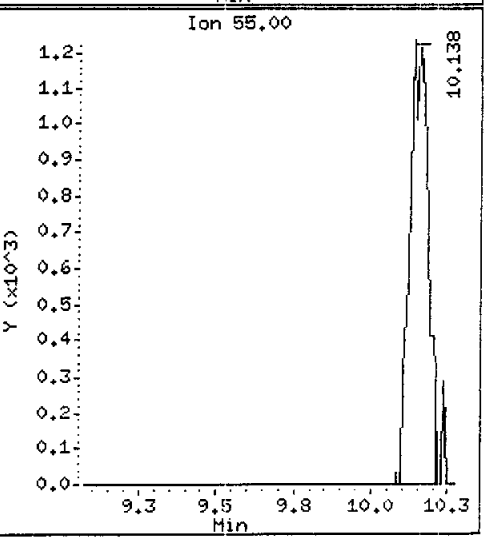












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7552.D
Lab Smp Id: G2DG31AD Client Smp ID: 066361-001
Inj Date : 12-JAN-2005 07:14
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DG31AD,066361-001,SANDIA,E5A100219-4
Misc Info : 25.0,12.8,500,50,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 05:27 kammererd Quant Type: ISTD
Cal Date : 11-JAN-2005 19:10 Cal File: CC01116.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	25.000	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	50.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.311	8.317	(1.000)	554218	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.330	9.347	(0.921)	493992	52.9158	1034
* 73 1,4-Difluorobenzene	114	10.133	10.149	(1.000)	1137553	50.0000	
75 Trichloroethene	130	10.575	10.601	(1.044)	2555347	257.271	5025
$ 88 Toluene-d8	100	12.741	12.766	(1.257)	594390	49.9001	974.6
* 101 Chlorobenzene-d5	117	15.393	15.418	(1.000)	788983	50.0000	
$ 114 4-Bromofluorobenzene	95	17.640	17.675	(1.146)	650331	46.1420	901.2

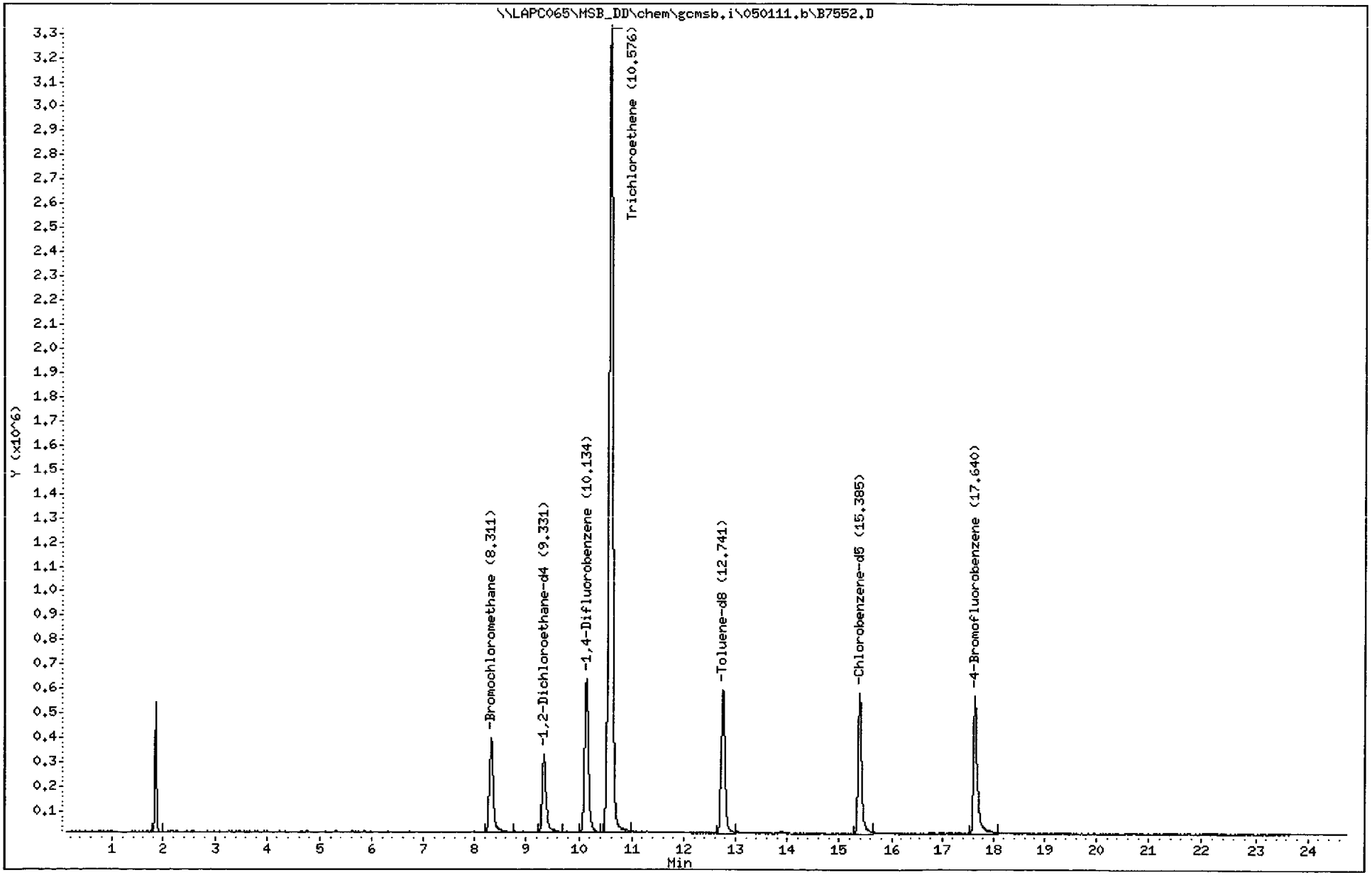
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7552.D
Date : 12-JAN-2005 07:14
Client ID: 066361-001
Sample Info: G2DG31AD,066361-001,SANDIA,E5A100219-4

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7552.D

Date : 12-JAN-2005 07:14

Client ID: 066361-001

Instrument: gcmsb.i

Sample Info: G2DG31AD,066361-001,SANDIA,E5A100219-4

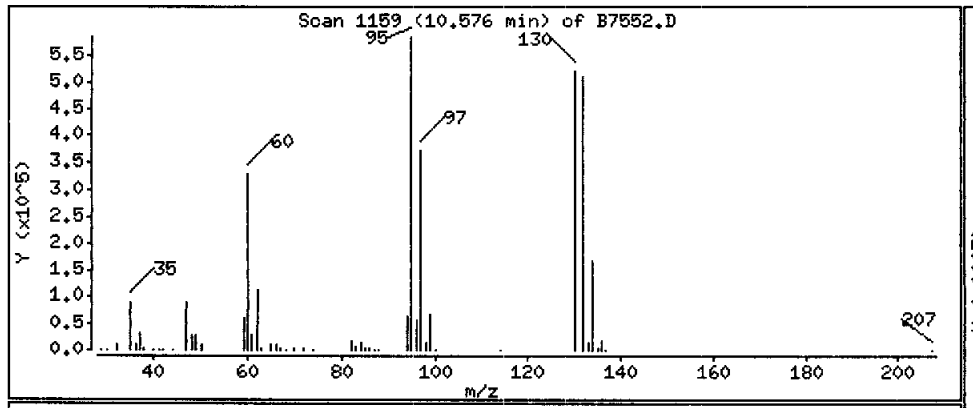
Operator: DLK

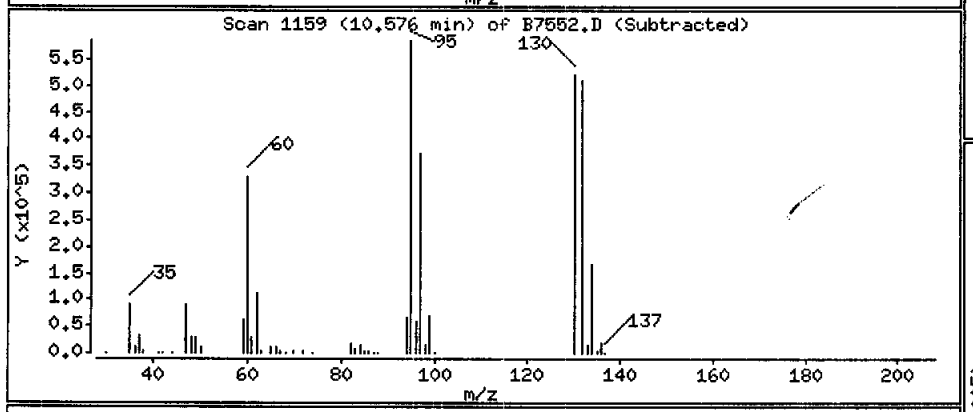
Column phase: J&W DB-624

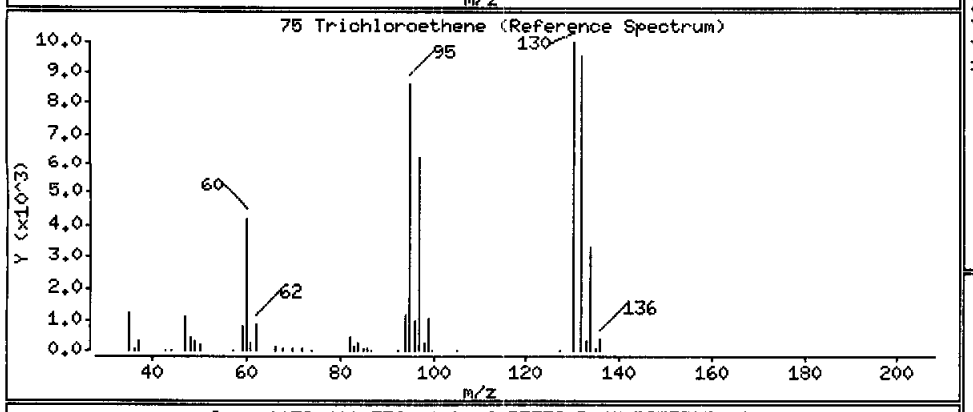
Column diameter: 0.53

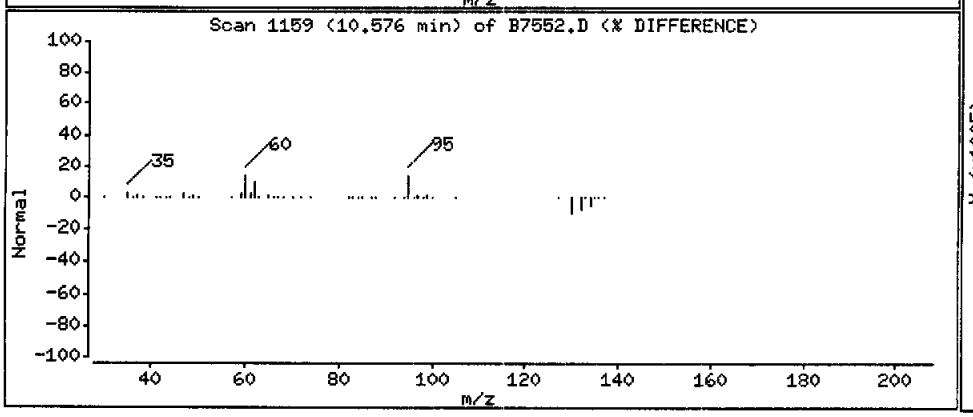
75 Trichloroethene

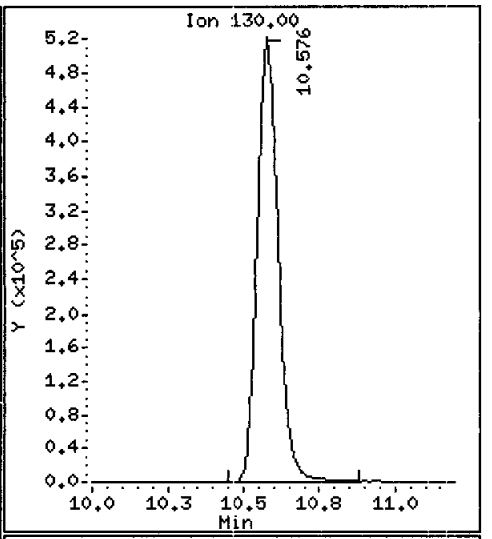
Concentration: 5025 ppbv

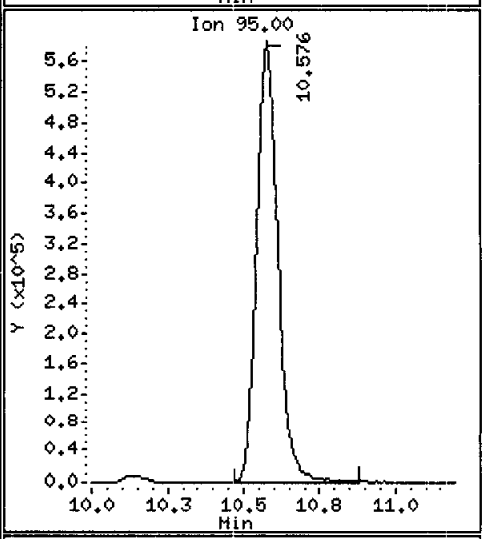


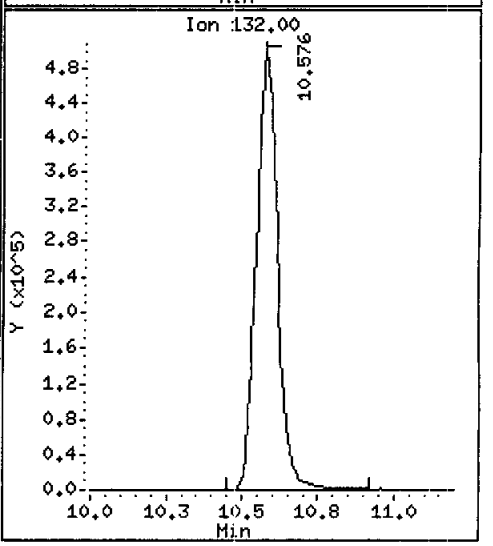












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7553.D
Lab Smp Id: G2DG41AD Client Smp ID: 066362-001
Inj Date : 12-JAN-2005 07:42
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DG41AD,066362-001,SANDIA,E5A100219-5
Misc Info : 24.7,12.8,500,25,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\TO14A.m
Meth Date : 12-Jan-2005 05:27 kammererd Quant Type: ISTD
Cal Date : 11-JAN-2005 19:10 Cal File: CC01116.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.700	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	25.000	SmpVol

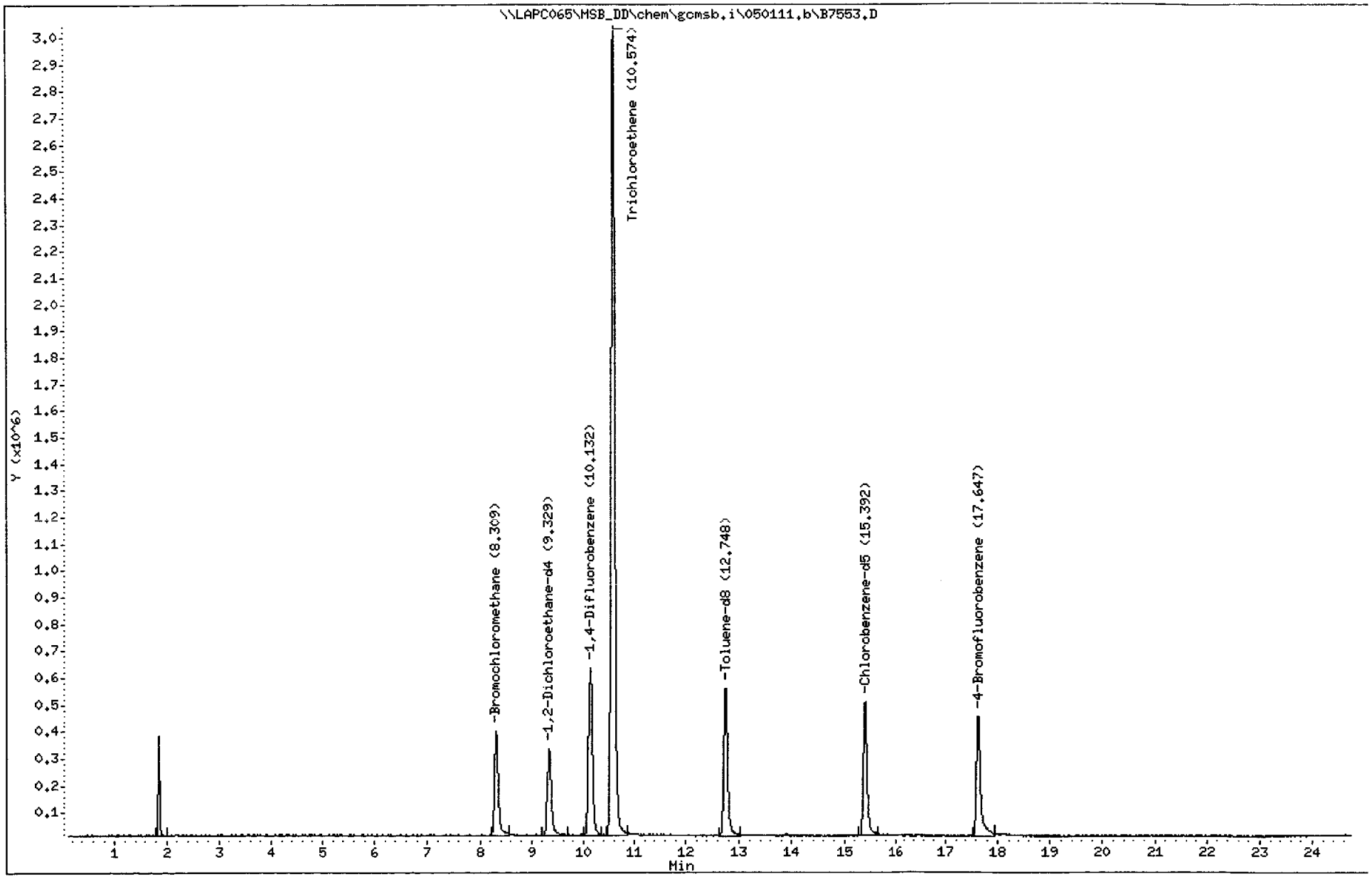
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.308	8.317	(1.000)	553034	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.328	9.347	(0.921)	503386	53.6330	2070
* 73 1,4-Difluorobenzene	114	10.131	10.149	(1.000)	1143685	50.0000	
75 Trichloroethene	130	10.573	10.601	(1.044)	2331575	233.484	9011
$ 88 Toluene-d8	100	12.739	12.766	(1.257)	563050	47.0158	1814
* 101 Chlorobenzene-d5	117	15.391	15.418	(1.000)	699702	50.0000	
$ 114 4-Bromofluorobenzene	95	17.638	17.675	(1.146)	547143	43.7741	1689

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7553.D
Date : 12-JAN-2005 07:42
Client ID: 066362-001
Sample Info: G2DG41AD,066362-001,SANDIA,E5A100219-5

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53

Column phase: J&W DB-624



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050111.b\B7553.D

Date : 12-JAN-2005 07:42

Client ID: 066362-001

Instrument: gcmsb.i

Sample Info: G2DG41AD,066362-001,SANDIA,E5A100219-5

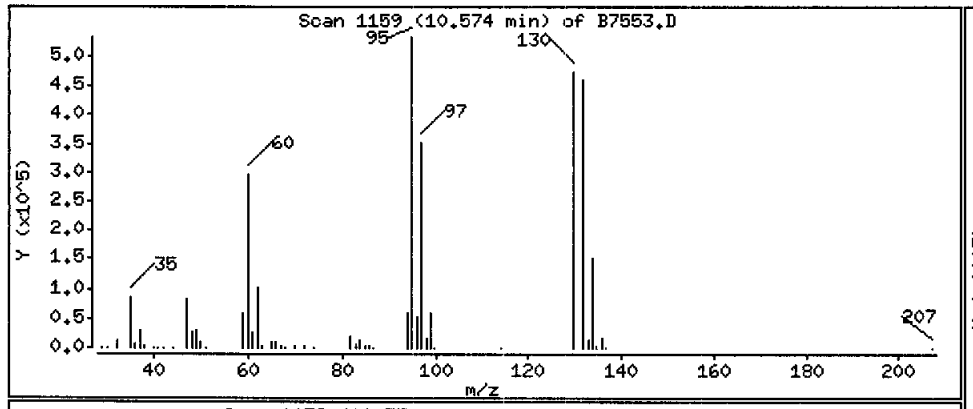
Operator: DLK

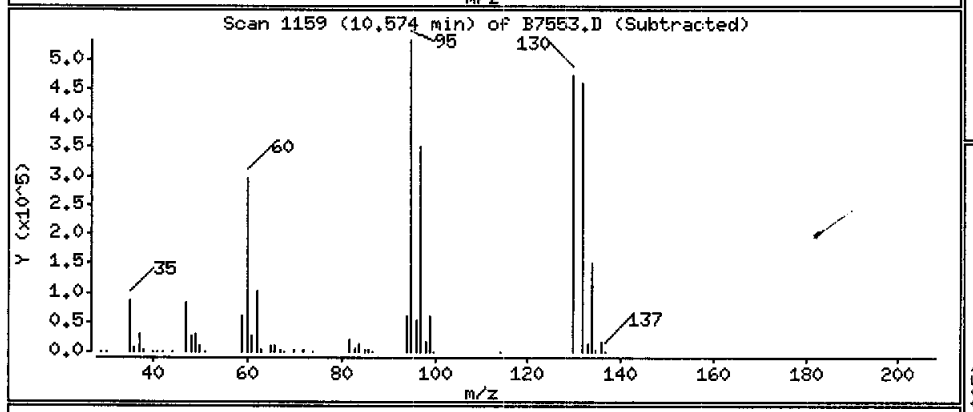
Column phase: J&W DB-624

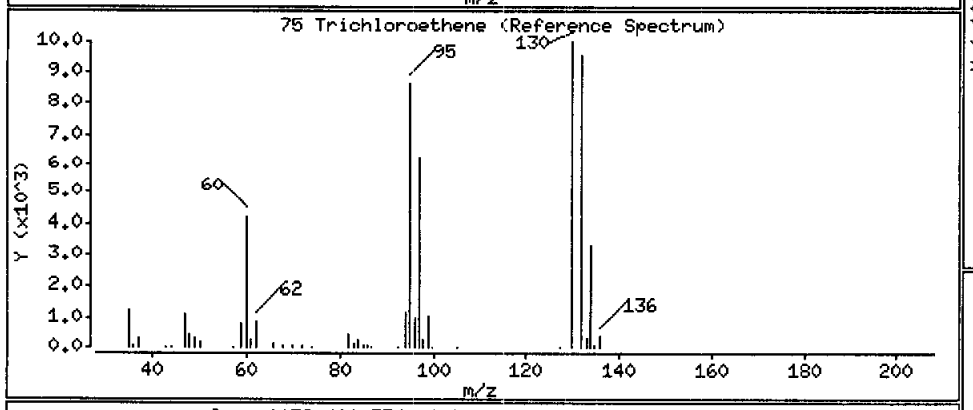
Column diameter: 0.53

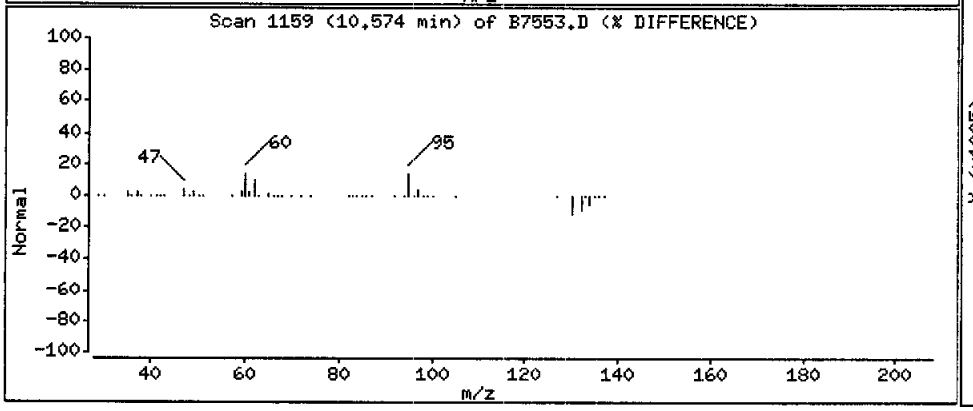
75 Trichloroethene

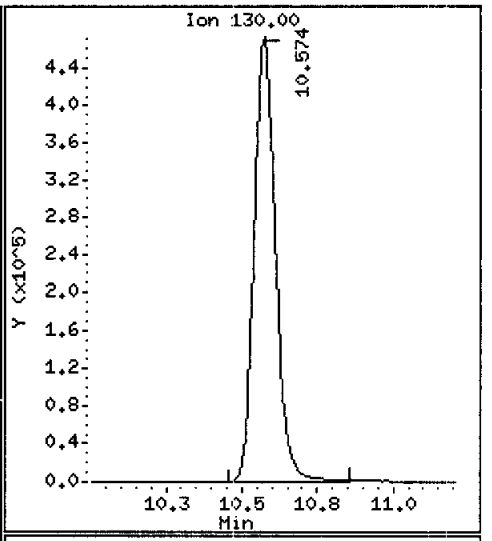
Concentration: 9011 ppbv

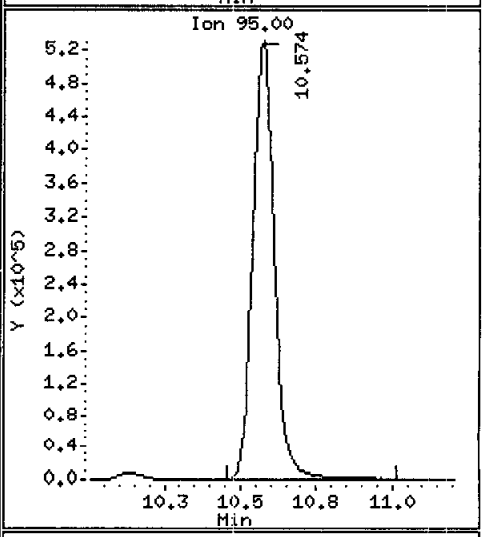


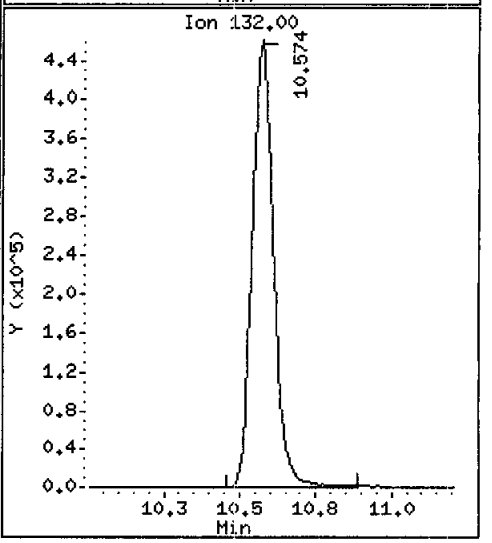












SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011205/5012238

STL Los Angeles
Air Toxics Lab GC/MS Run Log

trument ID:	Data Directory: D:\GCMSB\ 050112-B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3-05
CMS-B	Method File: TO14A	Daily Standard: MSL0401 1078	SOP: COF-MS-003
gbook ID:	Tune File:	LCS Standard: PSL9911359	MDL Date: 1-28-05
AMS-041	BFO11123.m	I.S. Standard: PSL9911283	Blank Lot No. 9050301.00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-12-05	0811	BFO1121	-	-	-	BFB	28	-	-	-	m	OK	A	
	0827	CCO1121	-	-	-	CCV	125	-	-	-	m	OK	B	
	0855	LCO1121	-	-	-	LCS	250	-	-	-	m	OK	C	
	0923	LCO1122	-	-	-	LCSD	250	-	-	-	m	OK	C	
	1052	MB01121	-	-	-	Method Blank	500	-	-	-	AA	OK	16	
	1021	B7554	G118C2AD	001	G2A	Sam's 8 Hr	50	24/11.2	-	21.5	AA	OK	1	E4L300234-1
	1053	B7555	G2DG0		SANDIA	066358-001	958	24.5/12.8	-	1	AA	OK	2	ESA100219-1
	1121	B7556	G2DG1			066359-001	500	24.2/12.7	-	1.91	AA	OK	3	-2
	1151	B7557	G2DG2			066360-001	100	24.4/12.8	-	9.53	AA	OK	4	-3
	1226	B7558	G2DG5			066363_001	942	24.1/12.8	-	1	AA	OK	5	-6
	1302	B7559	G2DHE			066364_001	942	24.3/12.9	-	1	AA	OK	6	ESA100222-1
	1338	B7560	G2DHF			066365_001	916	23.8/13.0	-	1	AA	OK	7	-2
	1407	B7561	G2DHG	001		066366-001	935	24.3/13.0	-	1	AA	OK	8	-3
	1439	B7562	G2DHJ			066367_001	965	24.3/12.6	-	1	AA	OK	9	-4
	1508	B7563	G2DHK			066368_001	965	24.3/12.6	-	1	AA	OK	10	-5
	1543	B7564	G2DHL			066369_001	977	24.6/12.6	-	1	AA	OK	11	-6
	1619	CCO1122	-	-	-	ADD-ON CCV	250	-	-	-	AA	OK	12	MSL050060
	1649	LCO1123	-	-	-	Full LCS	250	-	-	-	m	OK	13	MSL0401 1043

viewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

rument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Prev Page	SOP:
book ID:	Tune File:	LCS Standard: 1-12-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1105	1753	L001124	-	-	-	LCSD	250	-	-	-	m	ok	13	MSLO401104.3
	1753	L001125	-	-	-	ADD-ON LCS	250		-	-	m	NO	14	MSLO501C45
	1828	L001126	-	-	-		250	-	-	-	m	NO	14	
	1904	L001127	-	-	-		250	-	-	-	m	NO	14	
	1949	MB01122	-	-	-	METHOD BLANK	500	-	-	-	m	ok	15	
	2015	B7565	G2EN31AC	001	SEZOR	SYS INF	25	SONAR	-	20.0	m	NO	16	ESA110252-1
	2050	B7566	G2EN51AC			SYS EFF	500		-	1.00	m	NO	1	-2
	2126	B7567	G2FPA1AC			VE-SRC	15		-	33.3	m	ok	2	ESA120143-1
	2201	B7568	G2FPL1AC			PROC	15		-	33.3	m	ok	3	-2
	2237	B7569	G2FPM1AC			EFF	500		-	1.00	m	ok	4	-3
	2312	B7570	G2FR81AC			VE-SRC	50		-	10.0	m	ok	5	ESA120150-1
	2347	B7571	G2FTC1AC			PROC	120		-	4.17	m	ok	6	-2
1305	0022	B7572	G2FTG1AC			EFF	500		-	1.00	m	ok	7	-3
	0117	B7573	G2FTJ1AC			VE-SRC	20		-	25.0	m	ok	8	ESA120154-1
	0132	B7574	G2FTK1AC			PROC	20		-	25.0	m	ok	9	-2
	0207	B7575	G2FTM1AC			EFF	500		-	1.00	m	O/R	10	-3
	0241	B7576	G2FTV1AC			VE-SRC	50		100ug/L	100	m	ok	11	ESA120158-1
	0315	B7577	G2FT21AC			EFF	500		-	1.00	m	ok	12	-2

Reviewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

trument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Review Pg	SOP:
gbook ID:	Tune File:	LCS Standard: w 1-12-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-13-05	0348	V7577	G2FT51AC	00	SECOR	VE-SRC	20	TOXIC	-	250	w	OK	13	ESA120162-1
	0421	B7579	G2FT61AC			PROC	100		-	5.00	w	OK	14	-2
	0454	B7580	G2FT71AC			EFF	500		-	1.00	w	OK	15	-3
	0527	B7581	G2F6X11AC			SYS INF	20		-	25.0	w	OK	16	ESA120206-1
	0600	B7582	G2FT81AC			EFF	500		-	5.00	w	NO	1	-2
	0633	B7583	G17TM1AE		MITREM	C1616-06A	100	23 17/4.6	-	2.05	w	OK	2	ESA060248-6

w 1-13-05

:viewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100222-6

Lab File ID (Standard): CC01121 Date Analyzed: 01/12/05

Instrument ID: GCMSB Time Analyzed: 0827

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	570903	8.30	1208970	10.13	914291	15.38
	UPPER LIMIT	799264	8.80	1692558	10.63	1280007	15.88
	LOWER LIMIT	342542	7.80	725382	9.63	548575	14.88
	EPA SAMPLE NO.						
01	LCS	541957	8.30	1125806	10.12	789091	15.39
02	LCS	535513	8.29	1105628	10.12	791590	15.38
03	BLANK	527252	8.31	1084473	10.13	752511	15.39
04	066358-001	514937	8.29	1094050	10.12	767958	15.39
05	066359-001	506696	8.25	1112436	10.10	777671	15.38
06	066360-001	519702	8.30	1113706	10.12	771221	15.39
07	066363-001	524700	8.29	1093304	10.13	776692	15.39
08	066364-001	501211	8.31	1088273	10.13	744297	15.40
09	066365-001	511634	8.31	1077243	10.14	746163	15.41
10	066366-001	523448	8.32	1081481	10.15	741801	15.40
11	066367-001	513566	8.31	1075961	10.14	769625	15.40
12	066368-001	531894	8.31	1070156	10.14	747466	15.40
13	066369-001	523786	8.31	1081203	10.14	618620	15.41
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII VOA 1/87 Rev.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D
Lab Smp Id:
Inj Date : 12-JAN-2005 08:11
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.060	4.200	(0.000)	95	50530			0.00- 100.00	100.00
4.060	4.200	(0.000)	50	12312			15.00- 40.00	24.37
4.060	4.200	(0.000)	75	29272			30.00- 60.00	57.93
4.060	4.200	(0.000)	96	3591			5.00- 9.00	7.11
4.060	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.060	4.200	(0.000)	174	27037			50.00- 120.00	53.51
4.060	4.200	(0.000)	175	2052			5.00- 9.00	7.59
4.060	4.200	(0.000)	176	26213			95.00- 101.00	96.95
4.060	4.200	(0.000)	177	1787			5.00- 9.00	6.82

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D

Date : 12-JAN-2005 08:11

Client ID:

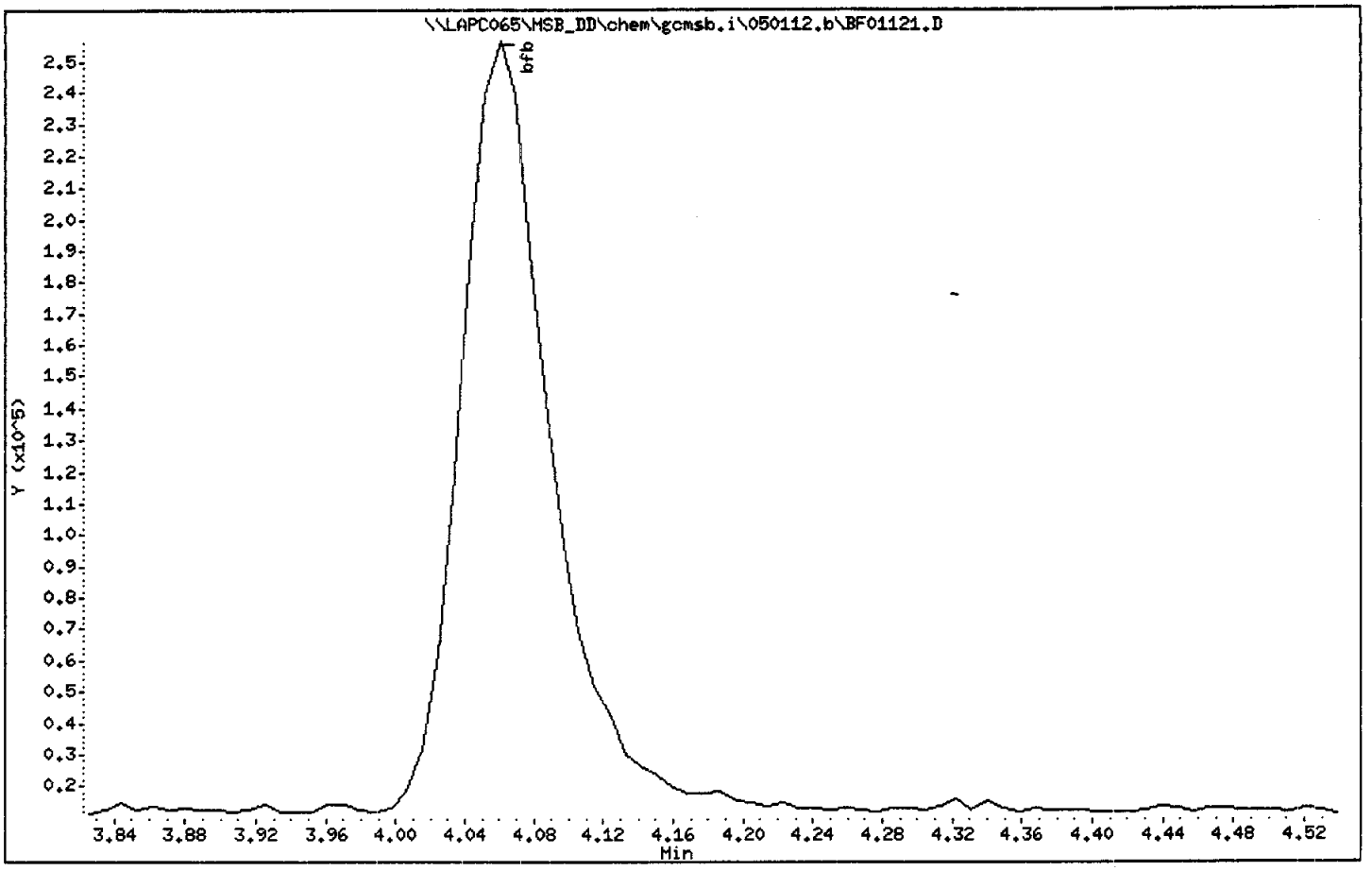
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D

Date : 12-JAN-2005 08:11

Client ID:

Instrument: gcmsb.i

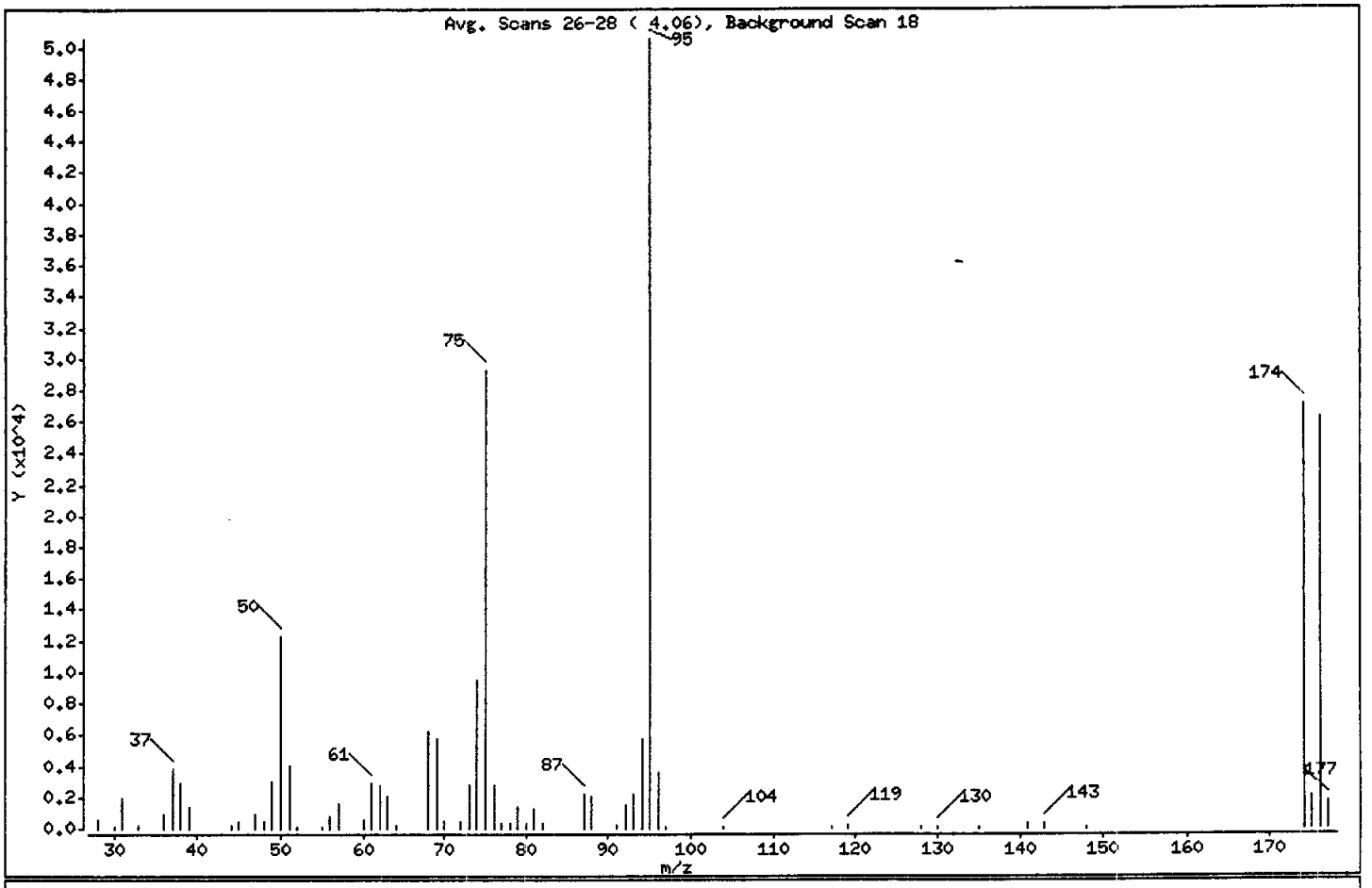
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.37
75	30.00 - 60.00% of mass 95	57.93
96	5.00 - 9.00% of mass 95	7.11
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	53.51
175	5.00 - 9.00% of mass 174	4.06 (7.59)
176	95.00 - 101.00% of mass 174	51.88 (96.95)
177	5.00 - 9.00% of mass 176	3.54 (6.82)

LB 1-11-05

AA 1/12/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01121.D

Date : 12-JAN-2005 08:11

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01121.D
Spectrum: Avg. Scans 26-28 (4.06), Background Scan 18
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	626	55.00	63	77.00	398	117.00	169
30.00	81	56.00	828	78.00	299	119.00	275
31.00	1966	57.00	1646	79.00	1381	128.00	62
33.00	264	60.00	621	80.00	355	130.00	63
36.00	921	61.00	2898	81.00	1302	135.00	59
37.00	3856	62.00	2774	82.00	344	141.00	325
38.00	2894	63.00	2073	87.00	2186	143.00	358
39.00	1353	64.00	245	88.00	2115	148.00	74
44.00	188	68.00	6329	91.00	225	174.00	27032
45.00	511	69.00	5817	92.00	1503	175.00	2052
47.00	880	70.00	417	93.00	2187	176.00	26208
48.00	435	72.00	457	94.00	5760	177.00	1787
49.00	3052	73.00	2742	95.00	50528		
50.00	12312	74.00	9488	96.00	3591		
51.00	4100	75.00	29272	97.00	132		
52.00	64	76.00	2740	104.00	66		

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i
Lab File ID: CC01121.D
Analysis Type: AIR
Lab Sample ID: 50 PPBV STD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m

Injection Date: 12-JAN-2005 08:27
Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Init. Cal. Times: 14:40 23:34
Quant Type: ISTD

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	1 Propene	0.18345	0.17886	0.010	-2.5	30.0	
	3 Dichlorodifluoromethane (F1	2.11052	2.11972	0.010	0.4	30.0	
	5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.63184	0.010	-4.9	30.0	
	8 Chloromethane	0.09369	0.09627	0.100	2.8	30.0	
	9 Vinyl Chloride	0.40660	0.39457	0.010	-3.0	30.0	
	12 1,3-Butadiene	0.27551	0.27833	0.010	1.0	30.0	
	15 Bromomethane	0.50552	0.47173	0.010	-6.7	30.0	
	16 Chloroethane	0.25753	0.25479	0.010	-1.1	30.0	
	19 Vinyl Bromide	0.57915	0.57152	0.010	-1.3	30.0	
	21 Trichlorofluoromethane (F11	2.12773	2.19168	0.010	3.0	30.0	
	28 1,1-Dichloroethene	1.12859	1.11830	0.010	-0.9	30.0	
	30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.37477	0.010	-2.9	30.0	
	31 Acetone	0.16001	0.15019	0.010	-6.1	30.0	
	33 Carbon Disulfide	1.06127	1.12062	0.010	5.6	30.0	
	34 2-Propanol	0.56591	0.53342	0.010	-5.7	30.0	
	36 Allyl Chloride	0.58587	0.60583	0.010	3.4	30.0	
	37 Methylene Chloride	0.69686	0.66467	0.010	-4.6	30.0	
	40 Acrylonitrile	0.18791	0.20079	0.010	6.9	30.0	
	41 trans-1,2-Dichloroethene	0.98199	1.00196	0.010	2.0	30.0	
	42 Methyl-tert-butyl ether[MTB	1.66607	1.58298	0.010	-5.0	30.0	
	43 n-Hexane	0.77083	0.76473	0.010	-0.8	30.0	
	44 1,1-Dichloroethane	1.23672	1.19562	0.100	-3.3	30.0	
	45 Vinyl Acetate	1.19013	1.20564	0.010	1.3	30.0	
	53 cis-1,2-Dichloroethene	0.63910	0.61468	0.010	-3.8	30.0	
	54 2-Butanone	0.21287	0.21435	0.010	0.7	30.0	
	56 Ethyl Acetate	1.14995	1.22635	0.010	6.6	30.0	
	59 Tetrahydrofuran	0.55193	0.52700	0.010	-4.5	30.0	
	60 Chloroform	1.59075	1.58651	0.010	-0.3	30.0	
	61 1,1,1-Trichloroethane	1.59033	1.60058	0.010	0.6	30.0	
	62 Cyclohexane	0.79797	0.76721	0.010	-3.9	30.0	
	64 Carbon Tetrachloride	1.05674	1.49565	0.010	41.5	30.0	<-
$	66 1,2-Dichloroethane-d4	0.41033	0.44342	0.010	8.1	30.0	
	68 Benzene	0.68038	0.67539	0.010	-0.7	30.0	
	69 1,2-Dichloroethane	0.44323	0.46864	0.010	5.7	30.0	
	70 2,2,4-Trimethylpentane	1.74763	1.78282	0.010	2.0	30.0	

AA 1/12/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 12-JAN-2005 08:27
Lab File ID: CC01121.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
72 n-Heptane	0.58544	0.59118	0.010	1.0	30.0
75 Trichloroethene	0.43657	0.43898	0.010	0.6	30.0
78 1,2-Dichloropropane	0.16390	0.18000	0.010	9.8	30.0
81 1,4-Dioxane	0.15796	0.16978	0.010	7.5	30.0
82 Bromodichloromethane	0.54492	0.62894	0.010	15.4	30.0
85 cis-1,3-Dichloropropene	0.44931	0.50433	0.010	12.2	30.0
86 4-Methyl-2-Pentanone	0.22967	0.24241	0.010	5.5	30.0
$ 88 Toluene-d8	0.52356	0.53094	0.010	1.4	30.0
89 Toluene	0.88039	0.87393	0.010	-0.7	30.0
91 trans-1,3-Dichloropropene	0.42279	0.50011	0.010	18.3	30.0
93 1,1,2-Trichloroethane	0.56403	0.56280	0.010	-0.2	30.0
95 Tetrachloroethene	0.78282	0.76056	0.010	-2.8	30.0
96 2-Hexanone	0.25237	0.25361	0.010	0.5	30.0
97 Dibromochloromethane	0.94658	1.14732	0.010	21.2	30.0
98 1,2-Dibromoethane	0.94544	1.01604	0.010	7.5	30.0
102 Chlorobenzene	0.91801	0.91797	0.300	-0.0	30.0
M 99 Xylenes (total)	0.40771	0.44285	0.010	8.6	30.0
104 Ethylbenzene	1.42124	1.51983	0.010	6.9	30.0
105 m,p-Xylenes	0.41273	0.45042	0.010	9.1	30.0
107 o-Xylene	0.39767	0.42771	0.010	7.6	30.0
108 Styrene	0.49829	0.56203	0.010	12.8	30.0
110 Bromoform	0.74450	0.94632	0.100	27.1	30.0
$ 114 4-Bromofluorobenzene	0.89318	0.92837	0.010	3.9	30.0
116 1,1,2,2-Tetrachloroethane	1.35429	1.40140	0.300	3.5	30.0
123 4-Ethyl Toluene	0.84706	0.99624	0.010	17.6	30.0
124 1,3,5-Trimethylbenzene	0.94631	0.87217	0.010	-7.8	30.0
131 1,2,4-Trimethylbenzene	0.27527	0.27526	0.010	-0.0	30.0
134 1,3-Dichlorobenzene	0.52632	0.58040	0.010	10.3	30.0
136 1,4-Dichlorobenzene	0.54141	0.53805	0.010	-0.6	30.0
138 Benzyl Chloride	0.56325	0.57952	0.010	2.9	30.0
140 1,2-Dichlorobenzene	0.53798	0.54667	0.010	1.6	30.0
144 1,2,4-Trichlorobenzene	0.26641	0.31026	0.010	16.5	30.0
145 Hexachlorobutadiene	0.48586	0.45687	0.010	-6.0	30.0

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\CC01121.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 12-JAN-2005 08:27
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.056	2.056	(0.248)	102112	50.0000	48.75
3 Dichlorodifluoromethane (F12)	85	2.128	2.128	(0.256)	1210156	50.0000	50.22
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.353	2.353	(0.284)	931621	50.0000	47.54
8 Chloromethane	52	2.398	2.398	(0.289)	54962	50.0000	51.38
9 Vinyl Chloride	62	2.588	2.588	(0.312)	225263	50.0000	48.52
12 1,3-Butadiene	39	2.660	2.660	(0.321)	317803	100.000	101.0
15 Bromomethane	94	3.120	3.120	(0.376)	269314	50.0000	46.66
16 Chloroethane	64	3.301	3.301	(0.398)	145462	50.0000	49.47
19 Vinyl Bromide	106	3.616	3.616	(0.436)	326285	50.0000	49.34
21 Trichlorofluoromethane (F11)	101	3.743	3.743	(0.451)	1251239	50.0000	51.50
28 1,1-Dichloroethene	61	4.672	4.672	(0.563)	638439	50.0000	49.54
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.717	4.717	(0.568)	1355765	50.0000	48.57
31 Acetone	58	4.825	4.825	(0.581)	85743	50.0000	46.93(Q)
33 Carbon Disulfide	76	5.024	5.024	(0.605)	639763	50.0000	52.80

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.195	5.195	(0.626)	304533	50.0000	47.13
	36 Allyl Chloride	41	5.358	5.358	(0.646)	345868	50.0000	51.70
	37 Methylene Chloride	49	5.565	5.565	(0.671)	379464	50.0000	47.69
	40 Acrylonitrile	53	6.080	6.080	(0.733)	114632	50.0000	53.43
	41 trans-1,2-Dichloroethene	61	6.080	6.080	(0.733)	572024	50.0000	51.02
	42 Methyl-tert-butyl ether[MTBE]	73	6.125	6.125	(0.738)	903730	50.0000	47.51
	43 n-Hexane	41	6.612	6.612	(0.797)	436585	50.0000	49.60
	44 1,1-Dichloroethane	63	6.838	6.838	(0.824)	682580	50.0000	48.34
	45 Vinyl Acetate	43	7.009	7.009	(0.845)	688301	50.0000	50.65
	53 cis-1,2-Dichloroethene	96	7.893	7.893	(0.951)	350925	50.0000	48.09
	54 2-Butanone	72	7.947	7.947	(0.958)	122375	50.0000	50.35
	56 Ethyl Acetate	43	8.092	8.092	(0.975)	700124	50.0000	53.32
*	58 Bromochloromethane	49	8.299	8.299	(1.000)	570903	50.0000	
	59 Tetrahydrofuran	42	8.407	8.407	(1.013)	300865	50.0000	47.74
	60 Chloroform	83	8.471	8.471	(1.021)	905740	50.0000	49.87
	61 1,1,1-Trichloroethane	97	8.768	8.768	(1.057)	913774	50.0000	50.32
	62 Cyclohexane	84	8.868	8.868	(1.068)	438003	50.0000	48.07
	64 Carbon Tetrachloride	117	9.057	9.057	(1.091)	853869	50.0000	70.77
$	66 1,2-Dichloroethane-d4	65	9.319	9.319	(0.920)	536078	50.0000	54.03
	68 Benzene	78	9.418	9.418	(0.930)	816530	50.0000	49.63
	69 1,2-Dichloroethane	62	9.454	9.454	(0.933)	566568	50.0000	52.86
	70 2,2,4-Trimethylpentane	57	9.589	9.589	(0.947)	2155383	50.0000	51.01
	72 n-Heptane	43	9.941	9.941	(0.981)	714717	50.0000	50.49
*	73 1,4-Difluorobenzene	114	10.131	10.131	(1.000)	1208970	50.0000	
	75 Trichloroethene	130	10.573	10.573	(1.044)	530718	50.0000	50.28
	78 1,2-Dichloropropane	76	10.961	10.961	(1.082)	217611	50.0000	54.91
	81 1,4-Dioxane	88	11.223	11.223	(1.108)	205255	50.0000	53.74
	82 Bromodichloromethane	85	11.457	11.457	(1.131)	760372	50.0000	57.71
	85 cis-1,3-Dichloropropene	75	12.260	12.260	(1.210)	609714	50.0000	56.12
	86 4-Methyl-2-Pentanone	58	12.549	12.549	(1.239)	293065	50.0000	52.77(Q)
$	88 Toluene-d8	100	12.738	12.738	(1.257)	641885	50.0000	50.70
	89 Toluene	91	12.856	12.856	(1.269)	1056552	50.0000	49.63
	91 trans-1,3-Dichloropropene	75	13.271	13.271	(0.863)	457242	50.0000	59.14
	93 1,1,2-Trichloroethane	97	13.586	13.586	(0.883)	514560	50.0000	49.89
	95 Tetrachloroethene	166	13.857	13.857	(0.901)	695374	50.0000	48.58
	96 2-Hexanone	58	14.074	14.074	(0.915)	231872	50.0000	50.24(Q)
	97 Dibromochloromethane	129	14.308	14.308	(0.930)	1048983	50.0000	60.60
	98 1,2-Dibromoethane	107	14.516	14.516	(0.944)	928952	50.0000	53.73
*	101 Chlorobenzene-d5	117	15.382	15.382	(1.000)	914291	50.0000	
	102 Chlorobenzene	112	15.436	15.436	(1.004)	839287	50.0000	50.00
M	99 Xylenes (total)	106				1214688	150.000	162.9
	104 Ethylbenzene	91	15.653	15.653	(1.018)	1389567	50.0000	53.47
	105 m,p-Xylenes	106	15.878	15.878	(1.032)	823635	100.000	109.1
	107 o-Xylene	106	16.627	16.627	(1.081)	391053	50.0000	53.78
	108 Styrene	104	16.663	16.663	(1.083)	513856	50.0000	56.40
	110 Bromoform	173	16.997	16.997	(1.105)	865213	50.0000	63.55
$	114 4-Bromofluorobenzene	95	17.638	17.638	(1.147)	848801	50.0000	51.97

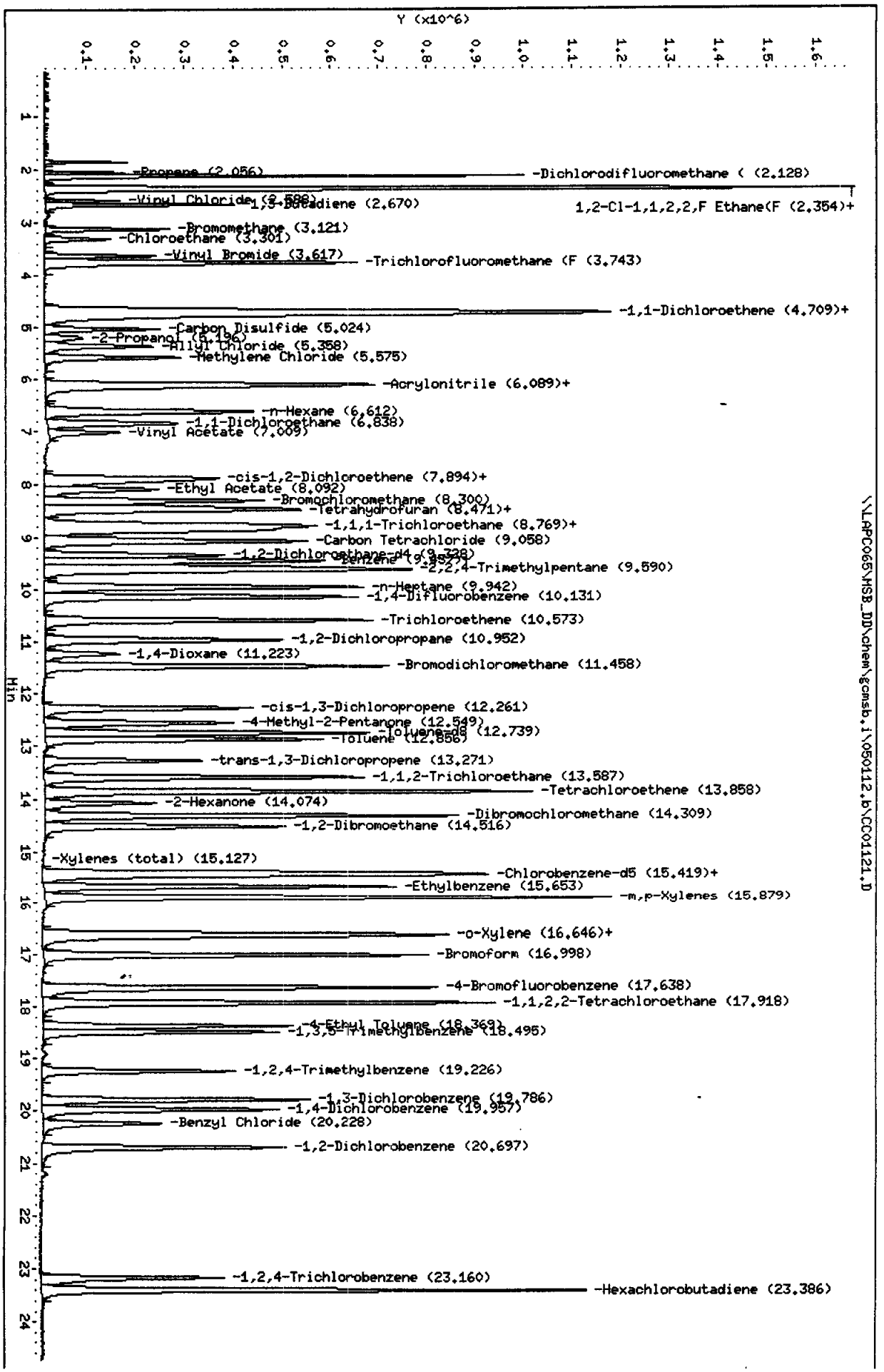
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.917	17.917	(1.165)	1281292	50.0000	51.74
123 4-Ethyl Toluene	105	18.369	18.369	(1.194)	910856	50.0000	58.81
124 1,3,5-Trimethylbenzene	105	18.495	18.495	(1.202)	797418	50.0000	46.08
131 1,2,4-Trimethylbenzene	120	19.226	19.226	(1.250)	251671	50.0000	50.00
134 1,3-Dichlorobenzene	146	19.776	19.776	(1.286)	530654	50.0000	55.14
136 1,4-Dichlorobenzene	146	19.957	19.957	(1.297)	491930	50.0000	49.69
138 Benzyl Chloride	91	20.227	20.227	(1.315)	529852	50.0000	51.44
140 1,2-Dichlorobenzene	146	20.696	20.696	(1.345)	499817	50.0000	50.81
144 1,2,4-Trichlorobenzene	180	23.160	23.160	(1.506)	283666	50.0000	58.23
145 Hexachlorobutadiene	225	23.385	23.385	(1.520)	417713	50.0000	47.02

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\CC01121.D
Date : 12-JAN-2005 08:27
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



Reduced By: MA Date: 1/12/05 LCSD Report
Reviewed By: [illegible] Date: 01/13/05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.B/LC01121.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 12-JAN-2005 08:55

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.B/LC01122.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 12-JAN-2005 09:23

	Concentration				%Recovery			RPD	
	Mass Spiked	Measured							
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	53.4	53.4	53.4	105.7	70	125	0	20
Methylene Chloride									
54.5	188.95	57.5	56.7	57.1	104.8	75	120	1	20
Trichloroethene									
49.5	265.47	50.6	51.7	51.2	103.4	70	125	2	20
Toluene									
49.5	186.17	50.1	51.4	50.7	102.5	75	125	3	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	55.0	55.9	55.4	110.9	65	130	2	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01121.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 12-JAN-2005 08:55
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.670	4.672	(0.563)	653620	53.4310	53.43
37 Methylene Chloride	49	5.572	5.565	(0.672)	434382	57.5084	57.51
* 58 Bromochloromethane	49	8.297	8.299	(1.000)	541957	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.325	9.319	(0.922)	480027	51.9564	51.96
* 73 1,4-Difluorobenzene	114	10.119	10.131	(1.000)	1125806	50.0000	
75 Trichloroethene	130	10.570	10.573	(1.045)	497825	50.6438	50.64
$ 88 Toluene-d8	100	12.736	12.738	(1.259)	585805	49.6926	49.69
89 Toluene	91	12.862	12.856	(1.271)	992320	50.0593	50.06
* 101 Chlorobenzene-d5	117	15.388	15.382	(1.000)	789091	50.0000	
$ 114 4-Bromofluorobenzene	95	17.644	17.638	(1.147)	615271	43.6484	43.65
116 1,1,2,2-Tetrachloroethane	83	17.915	17.917	(1.164)	1174692	54.9609	54.96

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01121.D

Date : 12-JAN-2005 08:55

Client ID: LCS

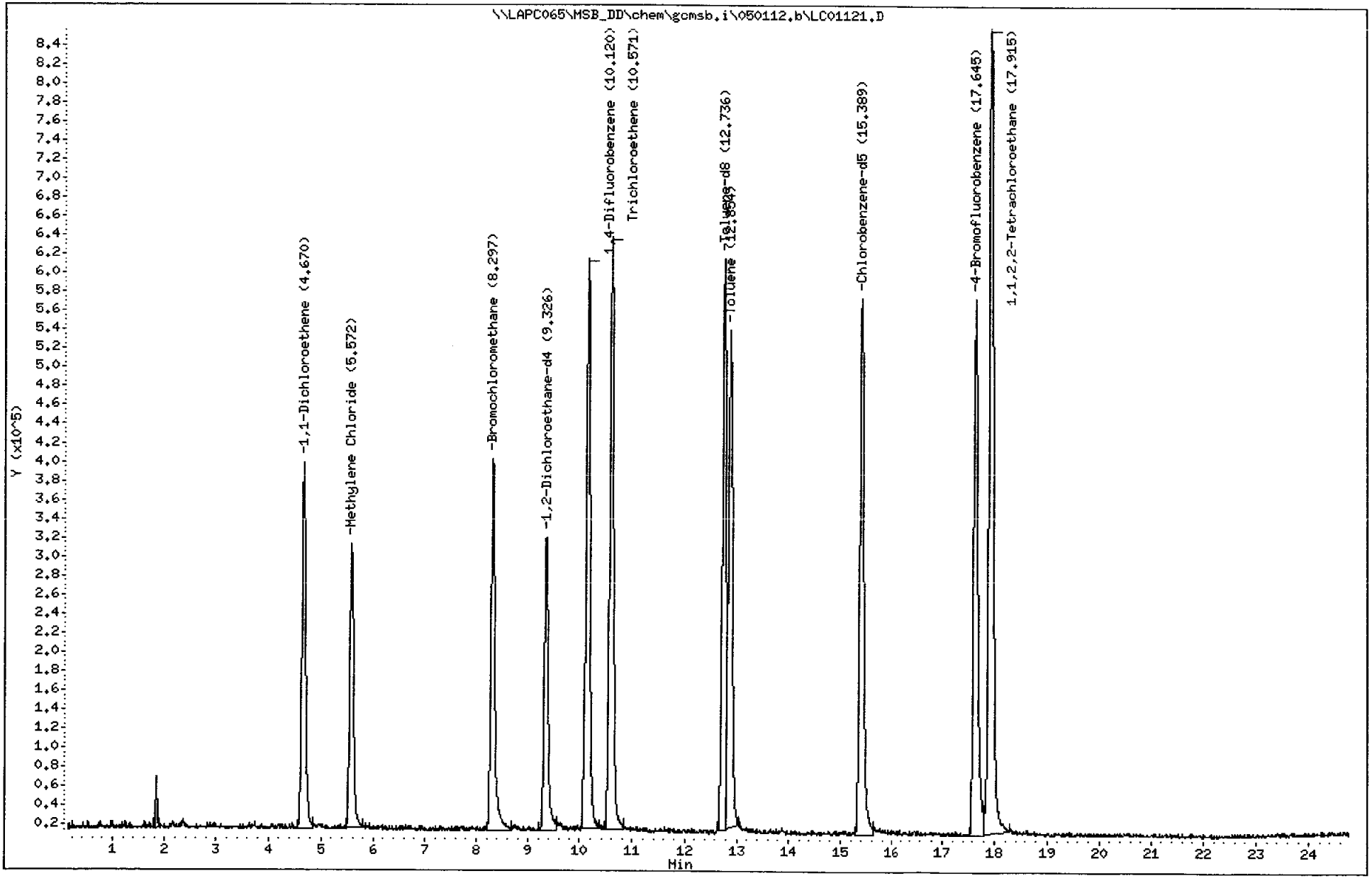
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01122.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 12-JAN-2005 09:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,100,100,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	100.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.663	4.672	(0.563)	644867	53.3498	53.35
37 Methylene Chloride	49	5.565	5.565	(0.671)	422992	56.6744	56.67
* 58 Bromochloromethane	49	8.290	8.299	(1.000)	535513	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.319	9.319	(0.921)	471819	52.0000	52.00
* 73 1,4-Difluorobenzene	114	10.122	10.131	(1.000)	1105628	50.0000	
75 Trichloroethene	130	10.564	10.573	(1.044)	499117	51.7019	51.70
$ 88 Toluene-d8	100	12.738	12.738	(1.258)	581811	50.2545	50.25
89 Toluene	91	12.847	12.856	(1.269)	1000109	51.3729	51.37
* 101 Chlorobenzene-d5	117	15.382	15.382	(1.000)	791590	50.0000	
$ 114 4-Bromofluorobenzene	95	17.638	17.638	(1.147)	638591	45.1598	45.16
116 1,1,2,2-Tetrachloroethane	83	17.908	17.917	(1.164)	1198822	55.9129	55.91

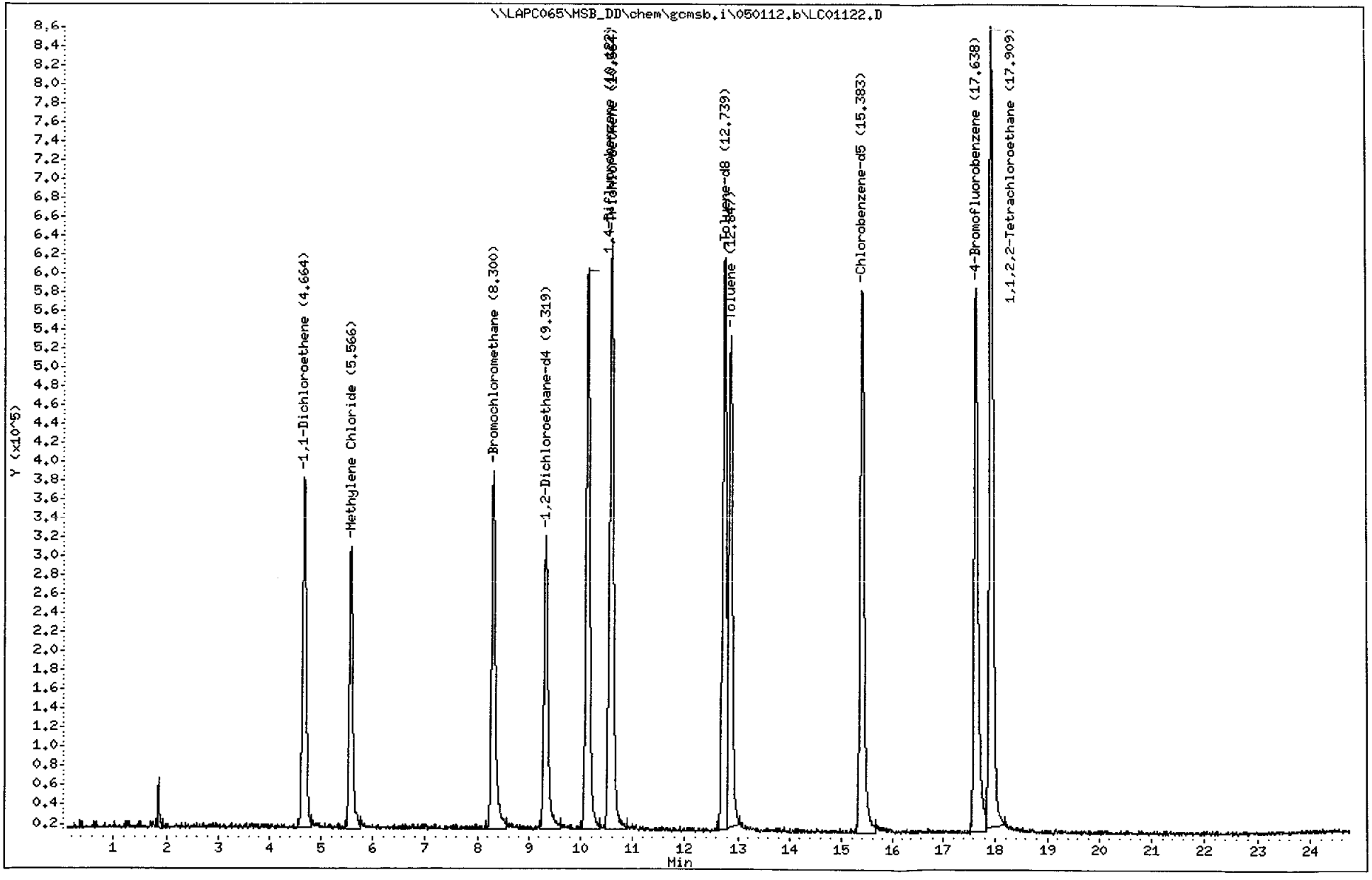
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\LC01122.D
Date : 12-JAN-2005 09:23
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\MB01121.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 12-JAN-2005 09:52
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.307	8.299	(1.000)	527252	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.326	9.319	(0.921)	460336	51.7241	51.72
* 73 1,4-Difluorobenzene	114	10.129	10.131	(1.000)	1084473	50.0000	
$ 88 Toluene-d8	100	12.737	12.738	(1.257)	553873	48.7746	48.77
* 101 Chlorobenzene-d5	117	15.389	15.382	(1.000)	752511	50.0000	
$ 114 4-Bromofluorobenzene	95	17.645	17.638	(1.147)	545640	40.5903	40.59

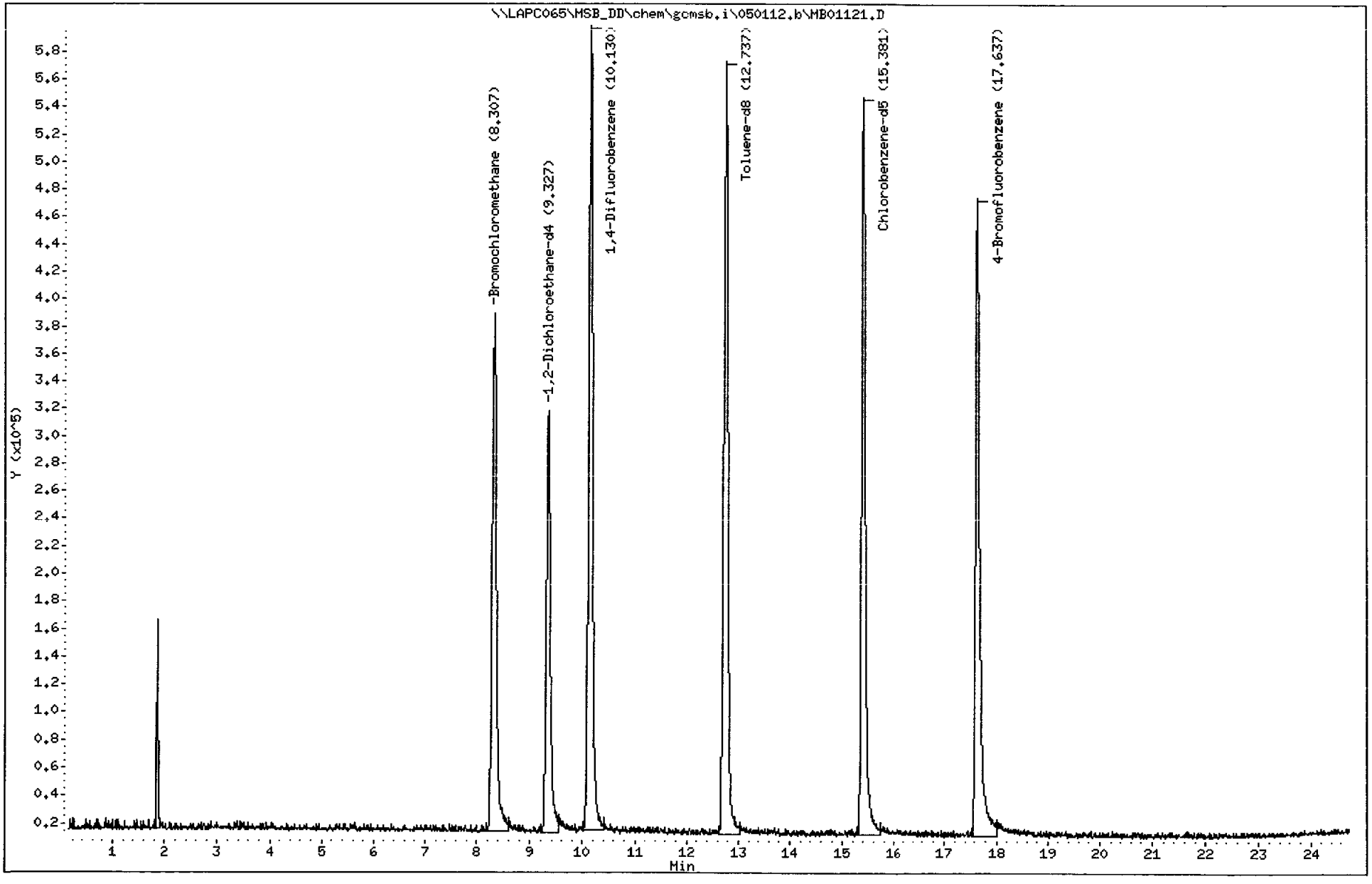
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\MB01121.D
Date : 12-JAN-2005 09:52
Client ID: BLANK
Sample Info: BLANK,BLANK,

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7555.D
Lab Smp Id: G2DG01AD Client Smp ID: 066358-001
Inj Date : 12-JAN-2005 10:53
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DG01AD,066358-001,SANDIA,E5A100219-1
Misc Info : 24.5,12.8,500,958,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.500	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	958.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.147	2.128	(0.259)	12802	0.58901	0.5884(a)
* 58 Bromochloromethane	49	8.291	8.299	(1.000)	514937	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.311	9.319	(0.920)	466618	51.9710	51.92
* 73 1,4-Difluorobenzene	114	10.123	10.131	(1.000)	1094050	50.0000	
75 Trichloroethene	130	10.574	10.573	(1.045)	137406	14.3841	14.37
$ 88 Toluene-d8	100	12.739	12.738	(1.258)	572740	49.9946	49.94
89 Toluene	91	12.875	12.856	(1.272)	13855	0.71926	0.7185(a)
* 101 Chlorobenzene-d5	117	15.392	15.382	(1.000)	767958	50.0000	
$ 114 4-Bromofluorobenzene	95	17.648	17.638	(1.147)	597719	43.5701	43.53

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

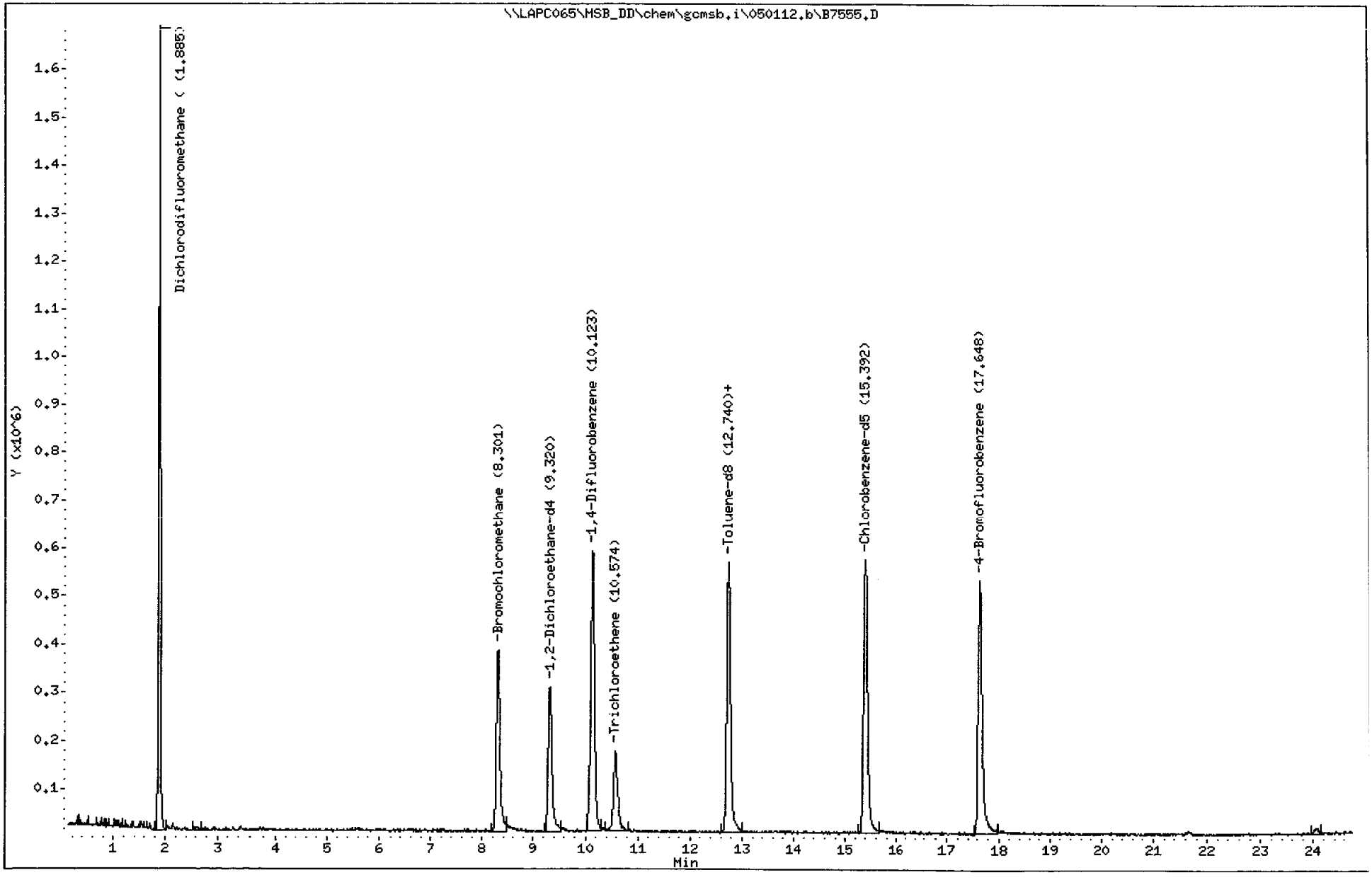
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7555.D
Date : 12-JAN-2005 10:53
Client ID: 066358-001
Sample Info: G2DG01AD,066358-001,SANDIA,E5A100219-1

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7555.D

Date : 12-JAN-2005 10:53

Client ID: 066358-001

Instrument: gcmsb.i

Sample Info: G2DG01AD,066358-001,SANDIA,E5A100219-1

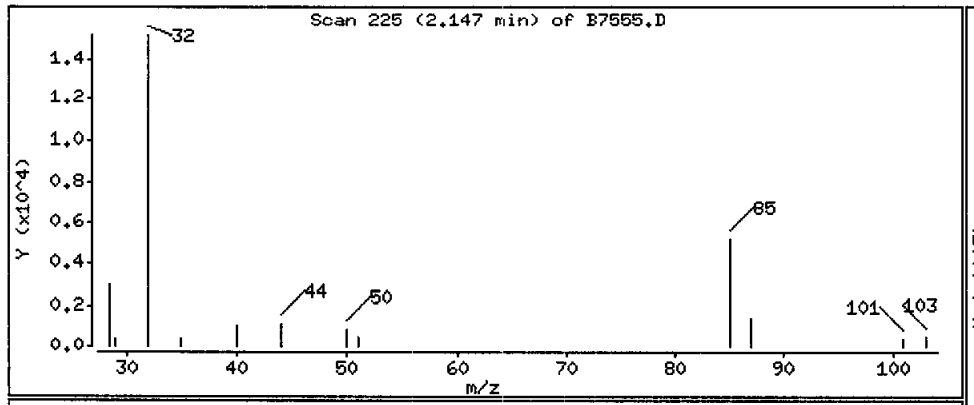
Operator: DLK

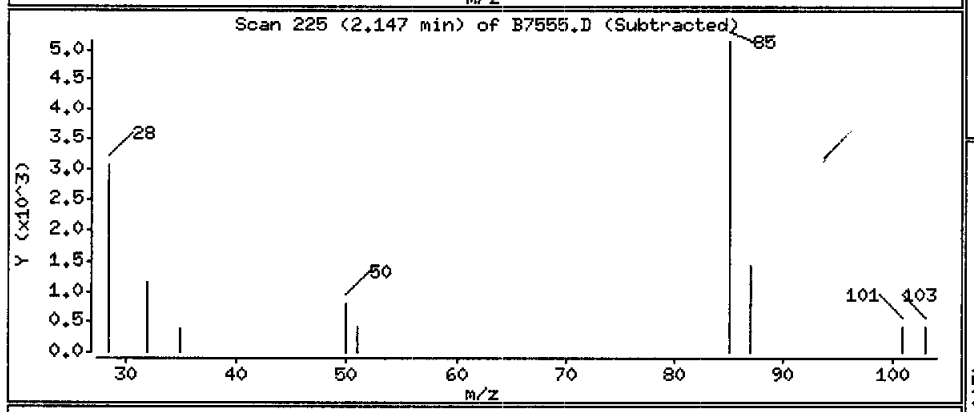
Column phase: J&W DB-624

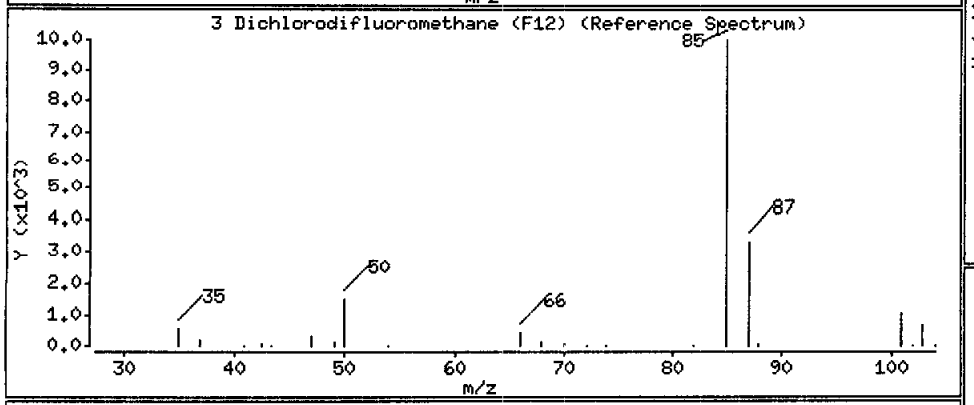
Column diameter: 0.53

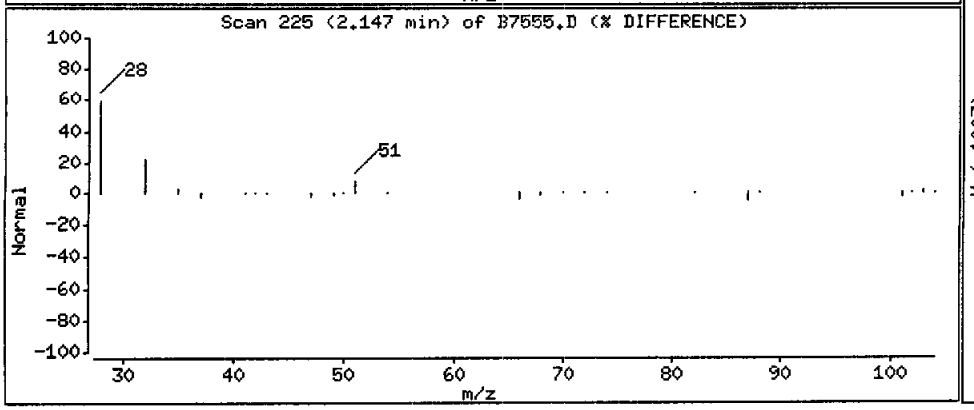
3 Dichlorodifluoromethane (F12)

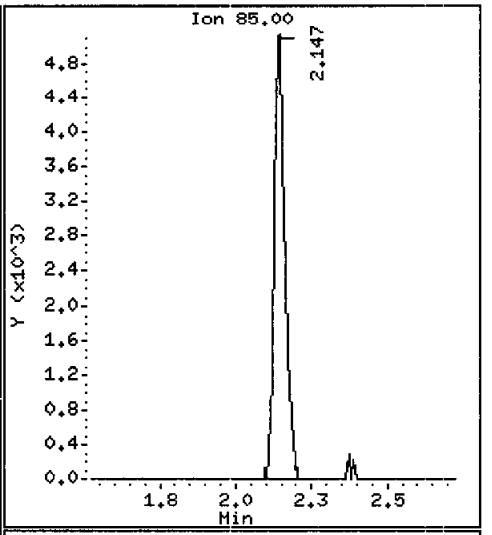
Concentration: 0.5884 ppbv

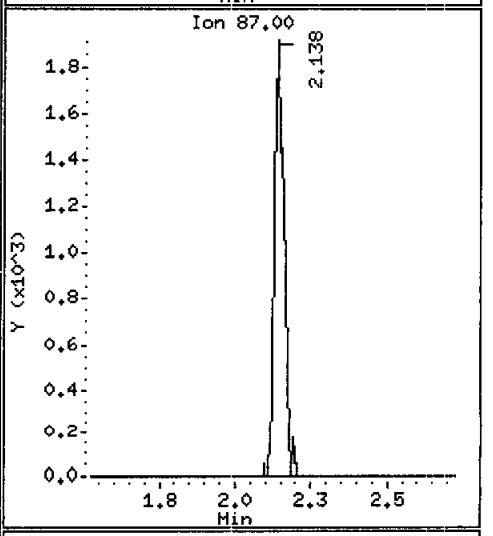


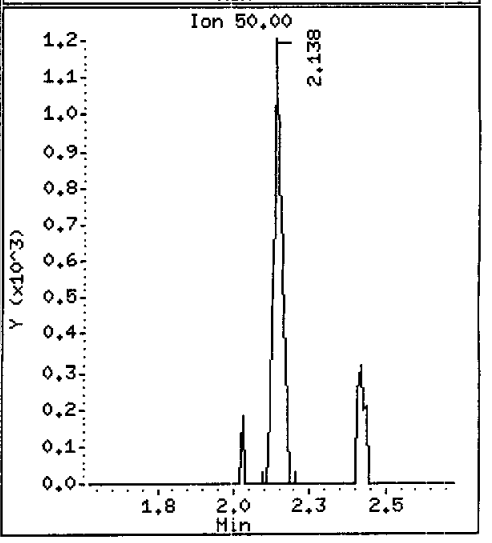












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7555.D

Date : 12-JAN-2005 10:53

Client ID: 066358-001

Instrument: gcmsb.i

Sample Info: G2DG01AD,066358-001,SANDIA,E5A100219-1

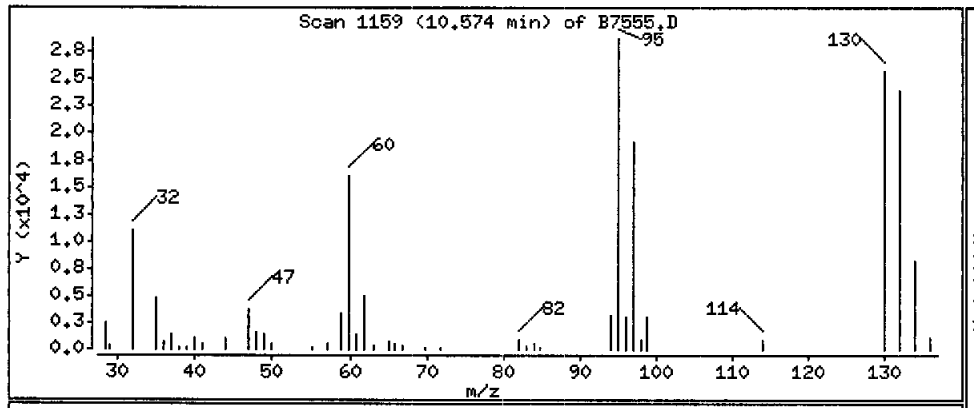
Operator: DLK

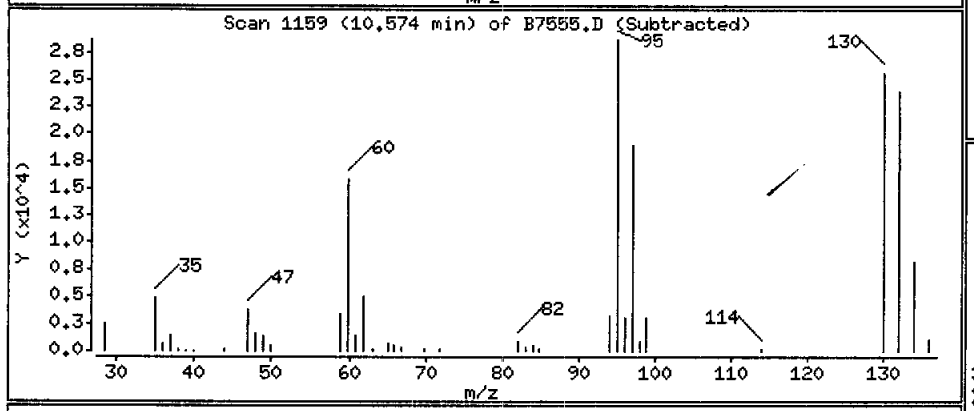
Column phase: J&W DB-624

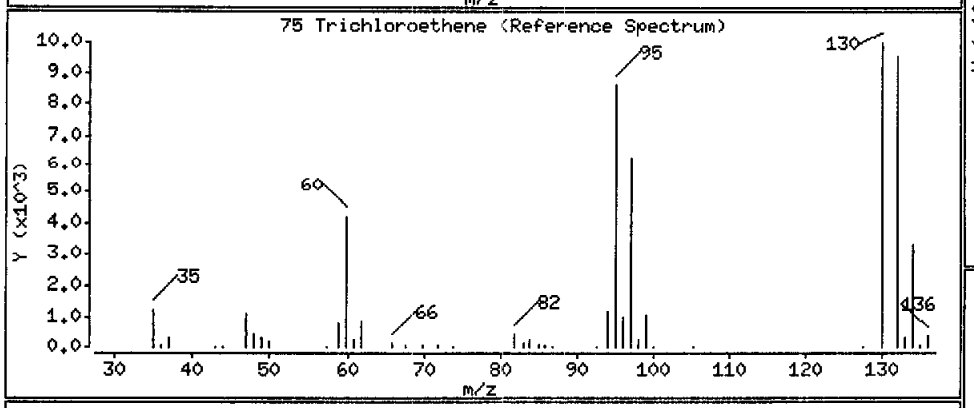
Column diameter: 0.53

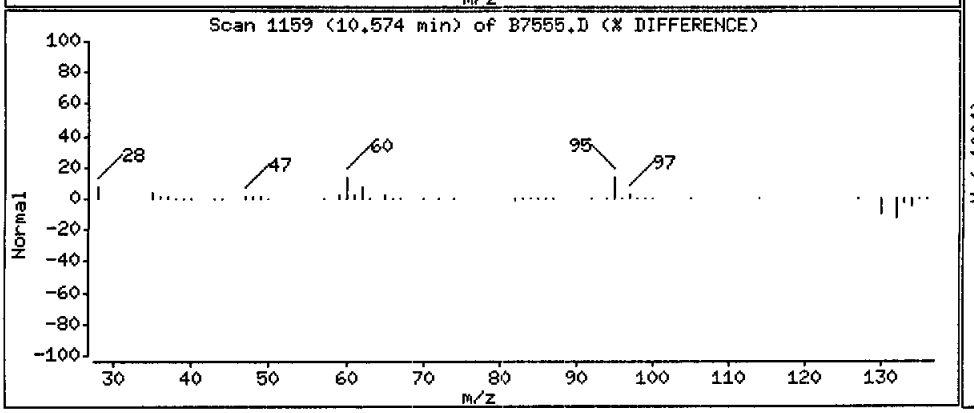
75 Trichloroethene

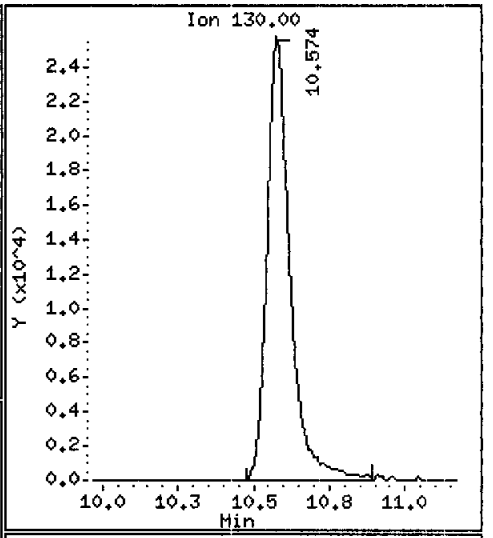
Concentration: 14.37 ppbv

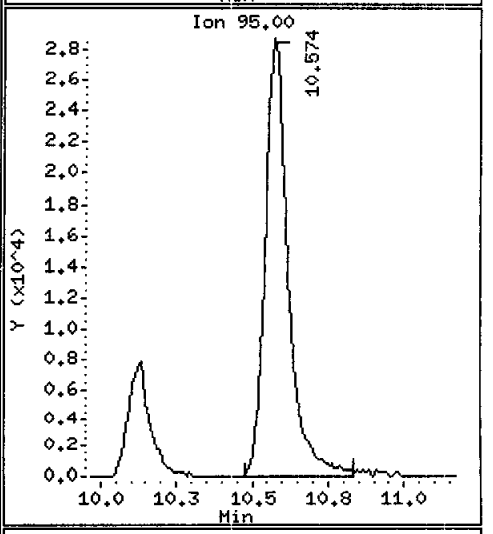


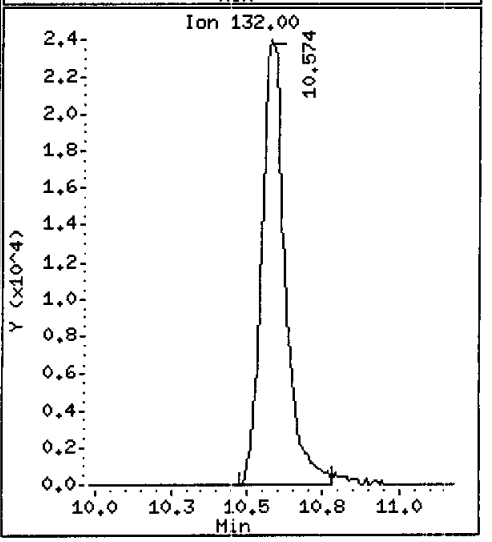












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7555.D

Date : 12-JAN-2005 10:53

Client ID: 066358-001

Instrument: gcmsb.i

Sample Info: G2DG01AD,066358-001,SANDIA,E5A100219-1

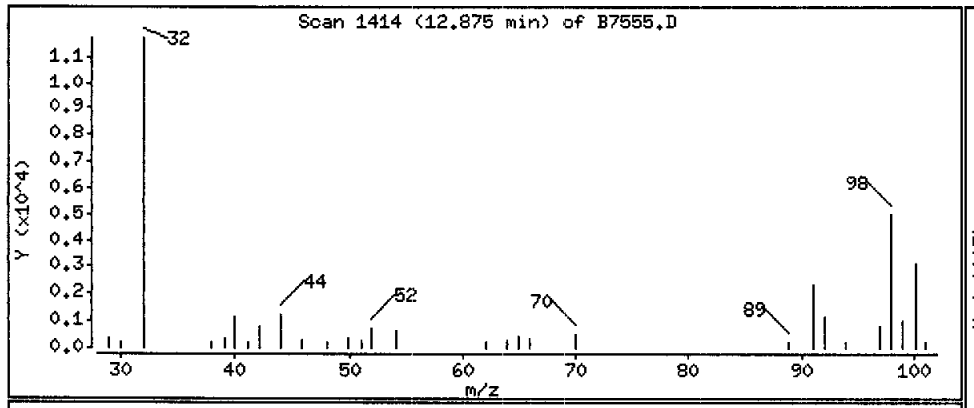
Operator: DLK

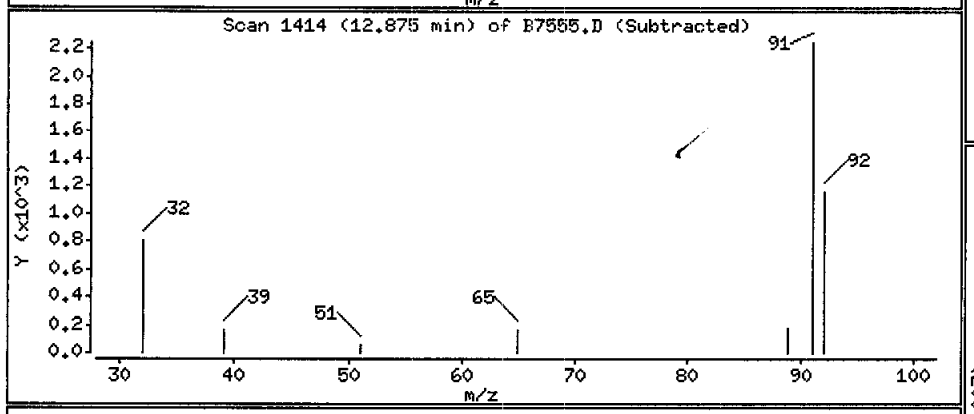
Column phase: J&W DB-624

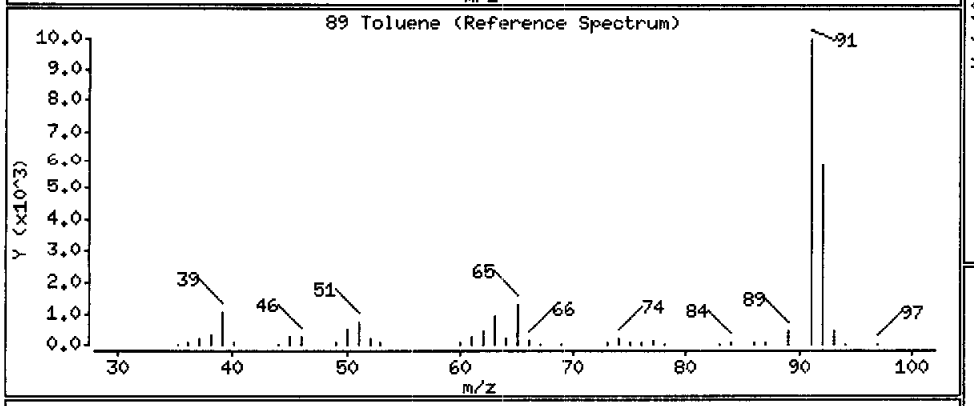
Column diameter: 0.53

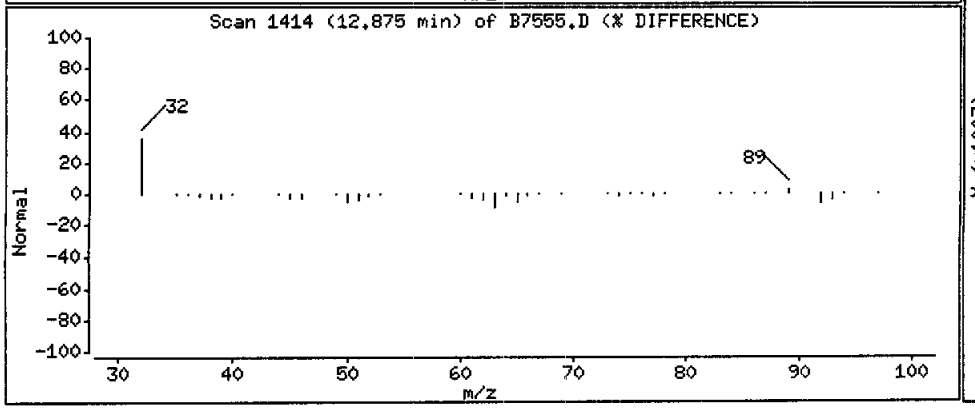
89 Toluene

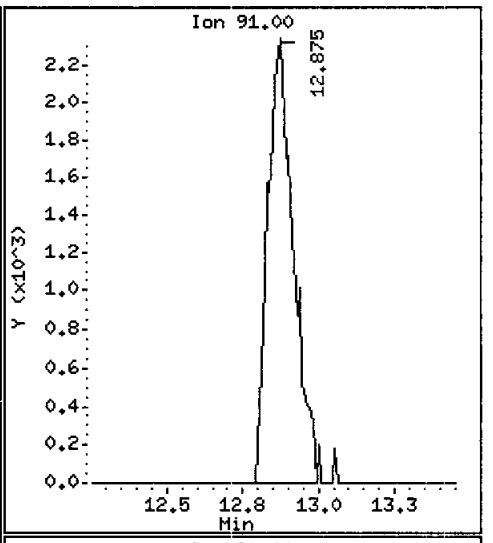
Concentration: 0.7185 ppbv

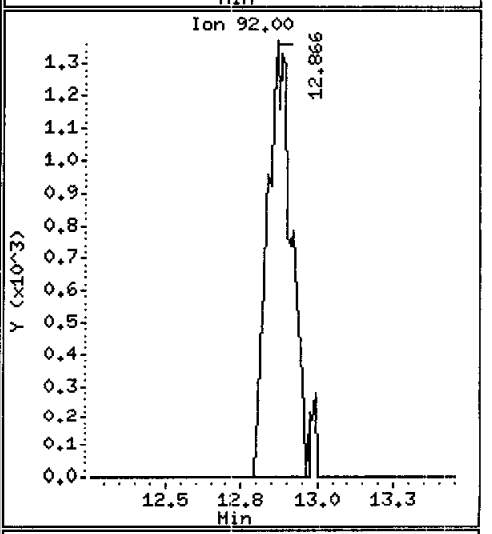


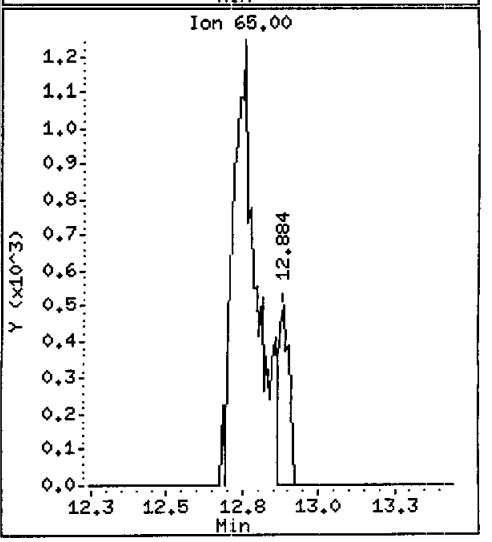












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7556.D
Lab Smp Id: G2DG11AD Client Smp ID: 066359-001
Inj Date : 12-JAN-2005 11:21
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DG11AD,066359-001,SANDIA,E5A100219-2
Misc Info : 24.2,12.7,500,500,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.248	8.299	(1.000)	506696	50.0000	
60 Chloroform	83	8.420	8.471	(1.021)	21408	1.32803	2.530(a)
$ 66 1,2-Dichloroethane-d4	65	9.286	9.319	(0.920)	460235	50.4129	96.06
* 73 1,4-Difluorobenzene	114	10.098	10.131	(1.000)	1112436	50.0000	
75 Trichloroethene	130	10.540	10.573	(1.044)	3499884	360.322	686.6
$ 88 Toluene-d8	100	12.724	12.738	(1.260)	575201	49.3795	94.09
95 Tetrachloroethene	166	13.860	13.857	(0.901)	22689	1.86353	3.551(a)
* 101 Chlorobenzene-d5	117	15.376	15.382	(1.000)	777671	50.0000	
$ 114 4-Bromofluorobenzene	95	17.641	17.638	(1.147)	624814	44.9763	85.70

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7556.D

Date : 12-JAN-2005 11:21

Client ID: 066359-001

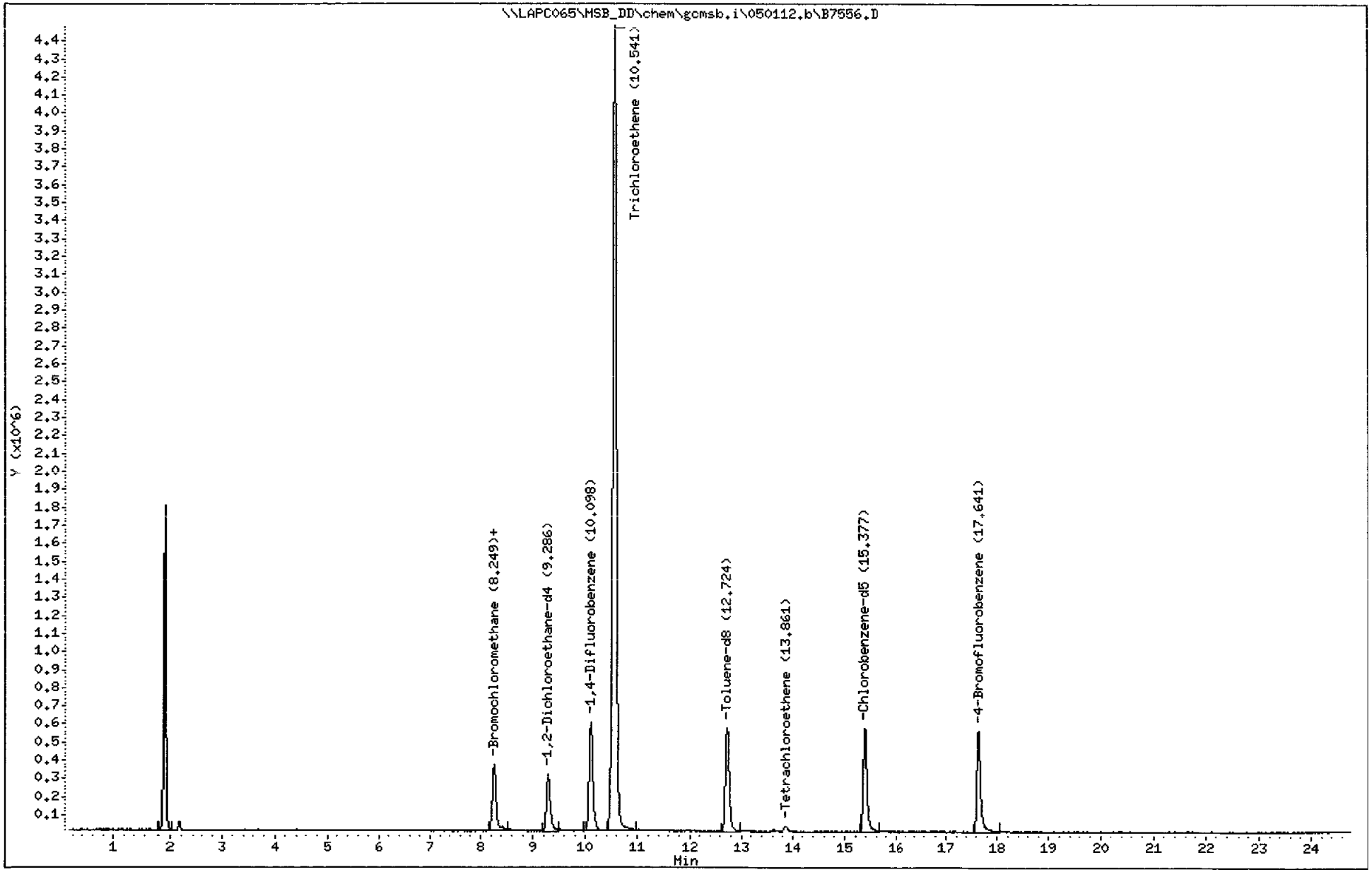
Sample Info: G2DG11AD,066359-001,SANDIA,E5A100219-2

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7556.D

Date : 12-JAN-2005 11:21

Client ID: 066359-001

Instrument: gcmsb.i

Sample Info: G2DG11AD,066359-001,SANDIA,E5A100219-2

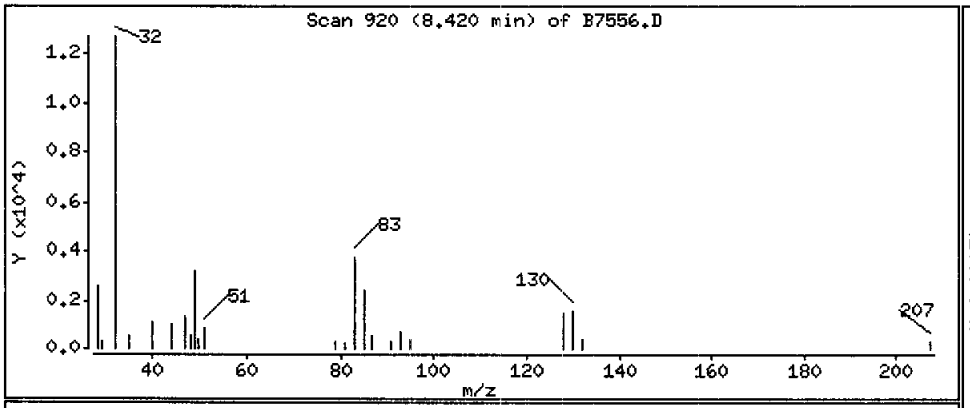
Operator: DLK

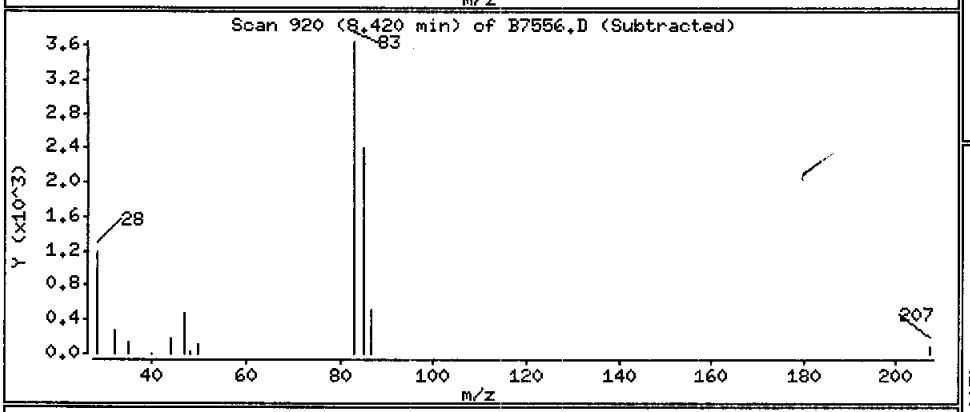
Column phase: J&W DB-624

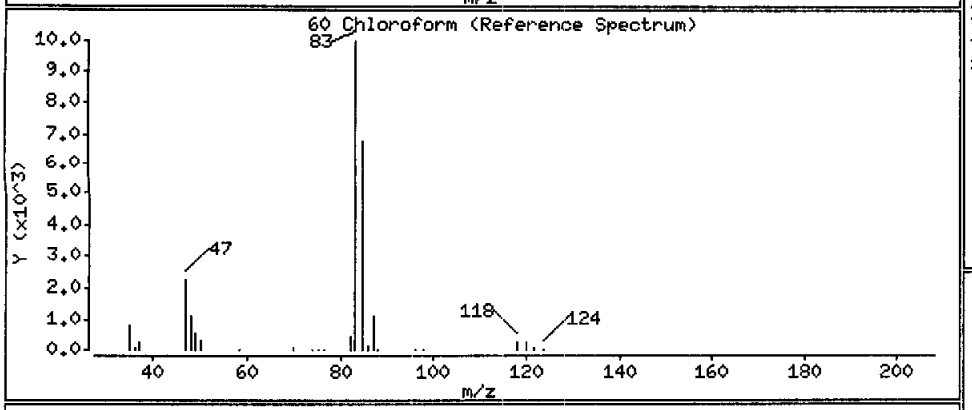
Column diameter: 0.53

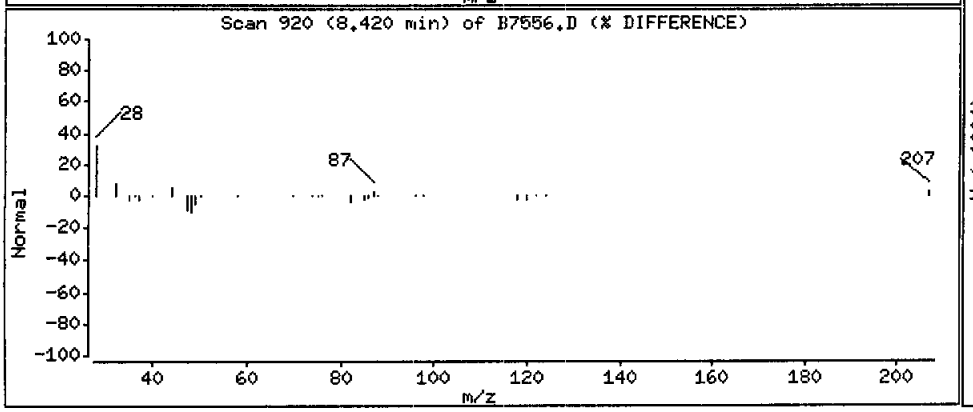
60 Chloroform

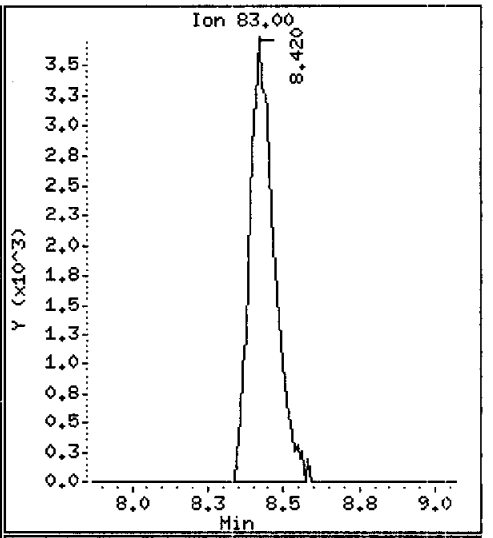
Concentration: 2.530 ppbv

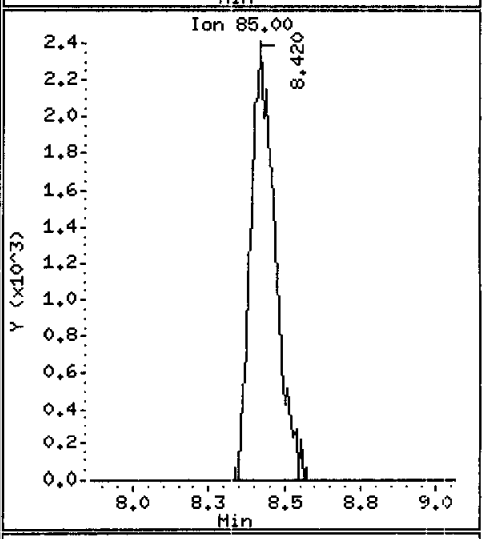


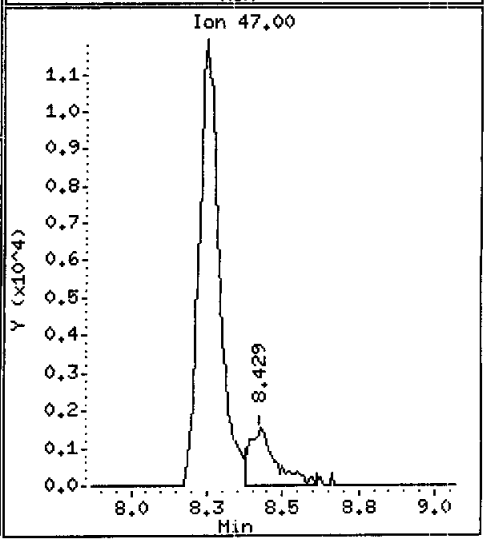












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7556.D

Date : 12-JAN-2005 11:21

Client ID: 066359-001

Instrument: gcmsb.i

Sample Info: G2DG11AD,066359-001,SANDIA,E5A100219-2

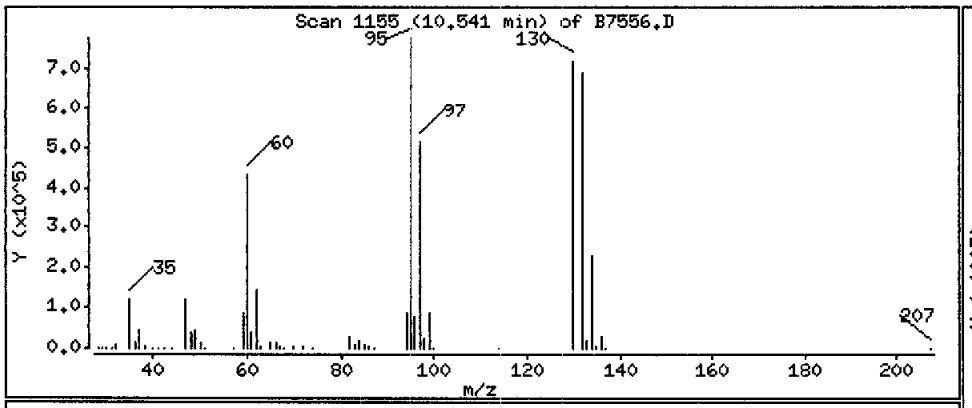
Operator: DLK

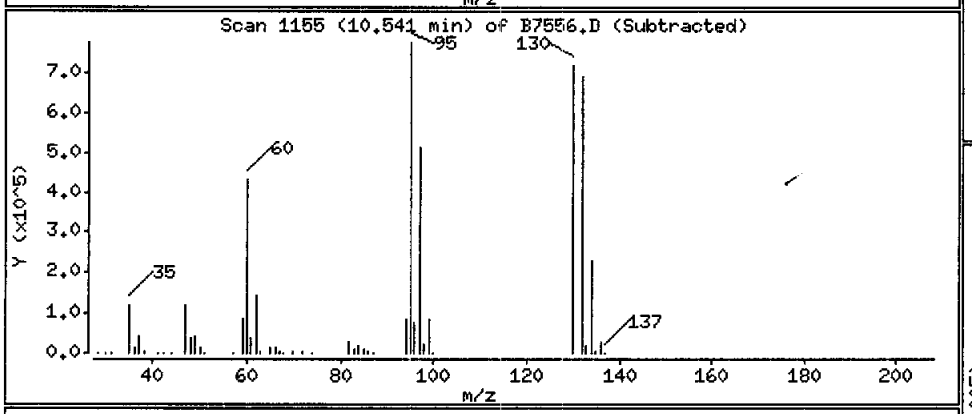
Column phase: J&W DB-624

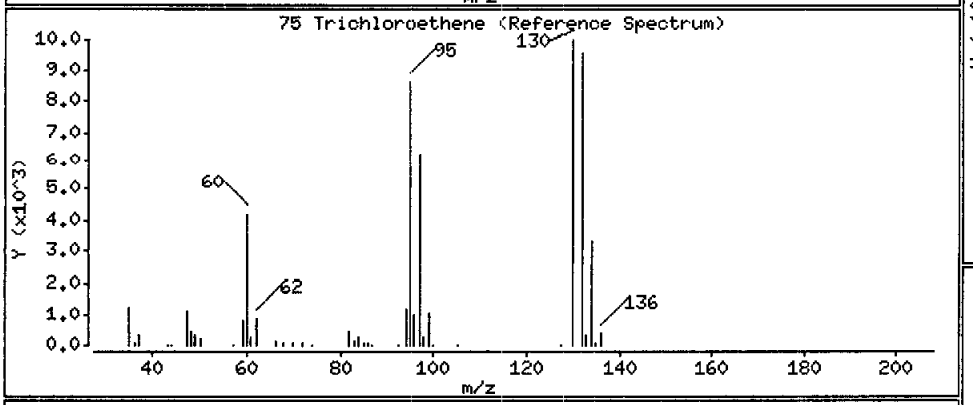
Column diameter: 0.53

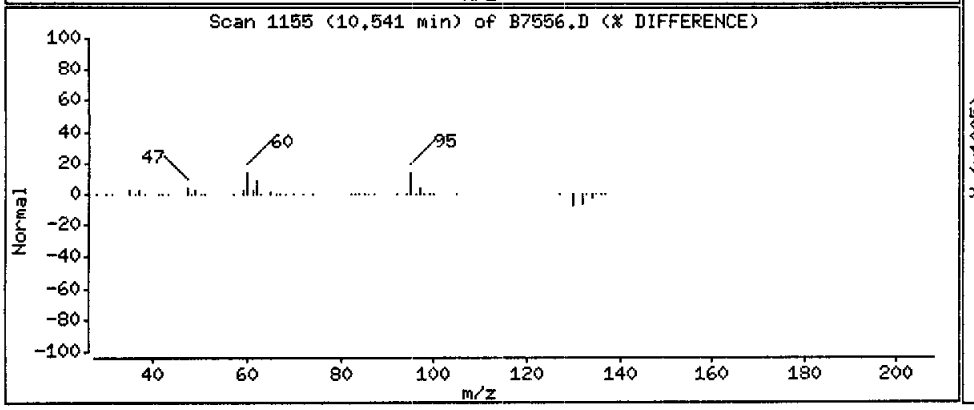
75 Trichloroethene

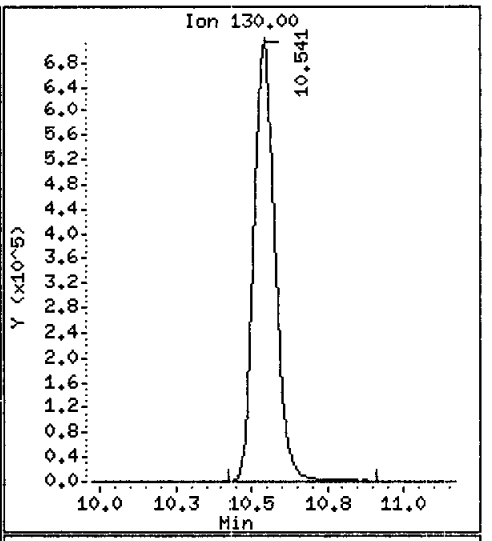
Concentration: 686.6 ppbv

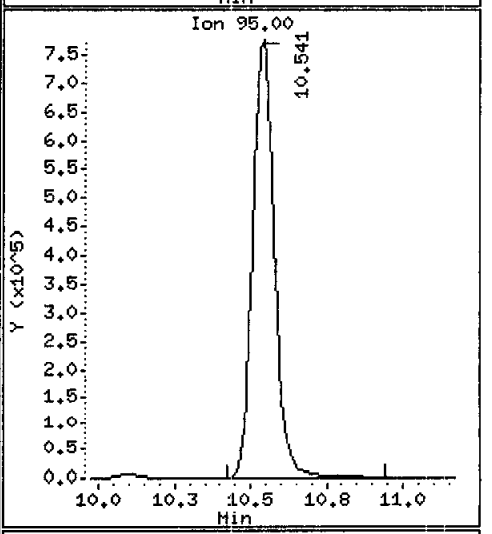


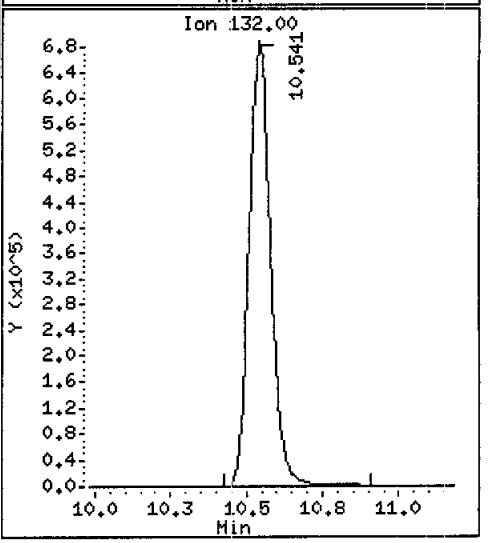












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7556.D

Date : 12-JAN-2005 11:21

Client ID: 066359-001

Instrument: gcmsb.i

Sample Info: G2DG11AD,066359-001,SANDIA,E5A100219-2

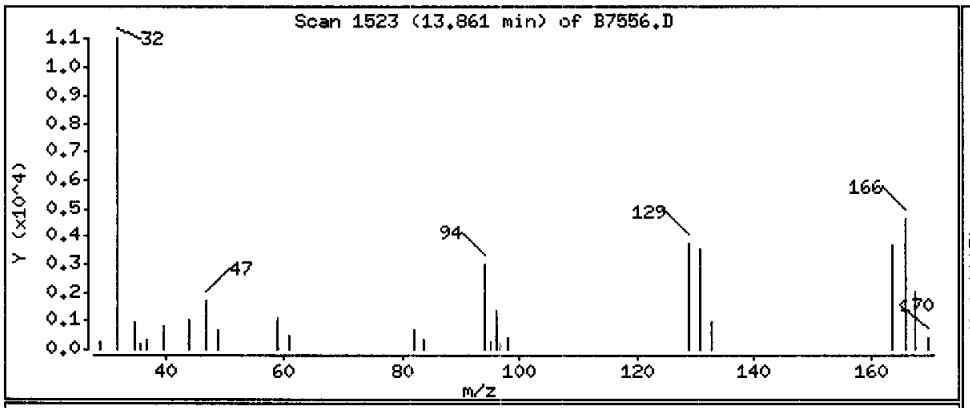
Operator: DLK

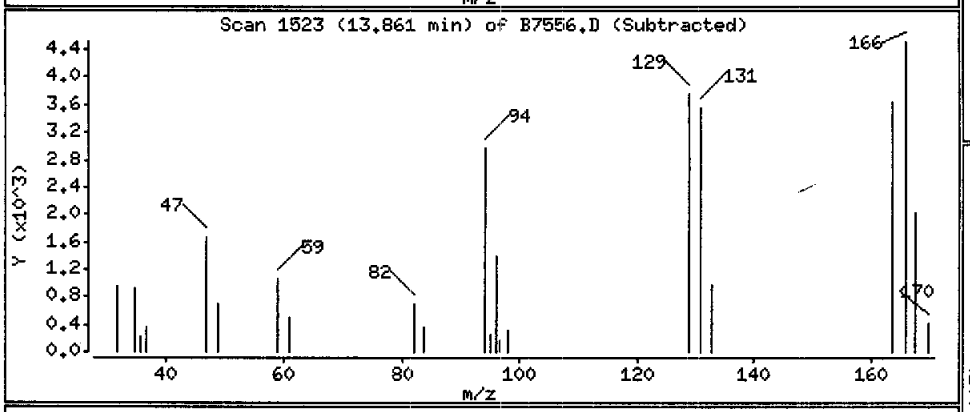
Column phase: J&W DB-624

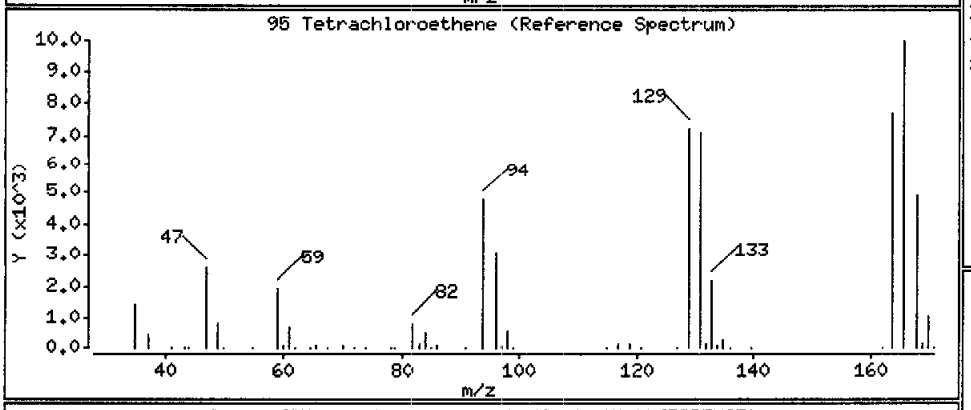
Column diameter: 0.53

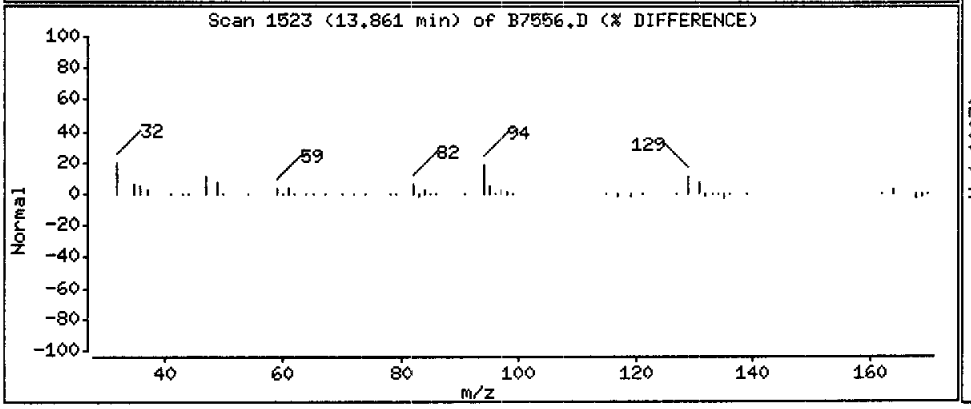
95 Tetrachloroethene

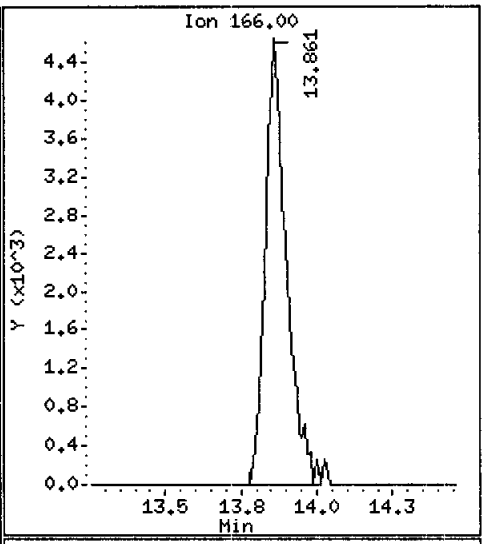
Concentration: 3.551 ppbv

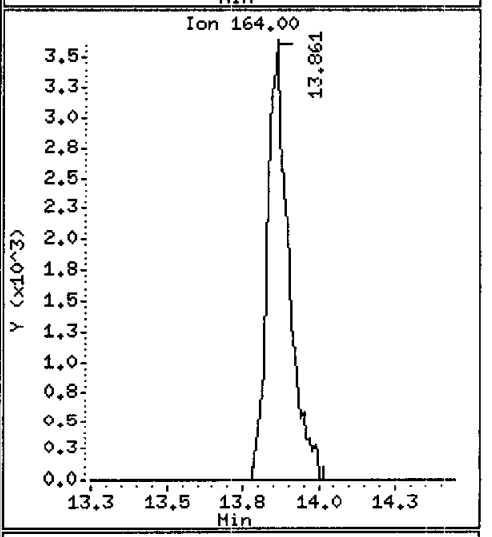


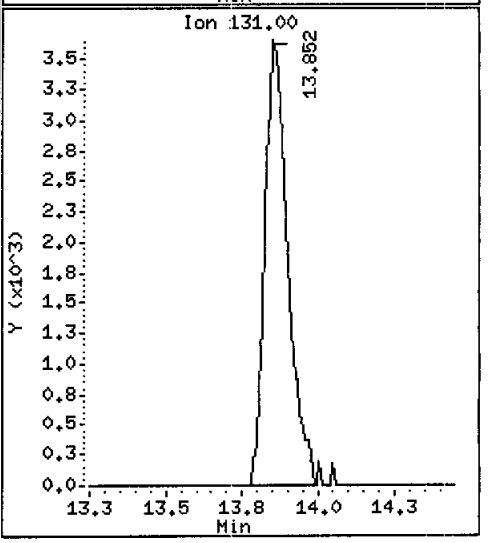












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7557.D
Lab Smp Id: G2DG21AD Client Smp ID: 066360-001
Inj Date : 12-JAN-2005 11:51
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DG21AD,066360-001,SANDIA,E5A100219-3
Misc Info : 24.4,12.8,500,100,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.300	8.299	(1.000)	519702	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.319	9.319	(0.921)	477397	52.2331	497.8
* 73 1,4-Difluorobenzene	114	10.122	10.131	(1.000)	1113706	50.0000	
75 Trichloroethene	130	10.564	10.573	(1.044)	3003378	308.853	2944
$ 88 Toluene-d8	100	12.739	12.738	(1.258)	576531	49.4373	471.2
95 Tetrachloroethene	166	13.885	13.857	(0.902)	10034	0.83108	7.921(a)
* 101 Chlorobenzene-d5	117	15.391	15.382	(1.000)	771221	50.0000	
$ 114 4-Bromofluorobenzene	95	17.647	17.638	(1.147)	624585	45.3358	432.1

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

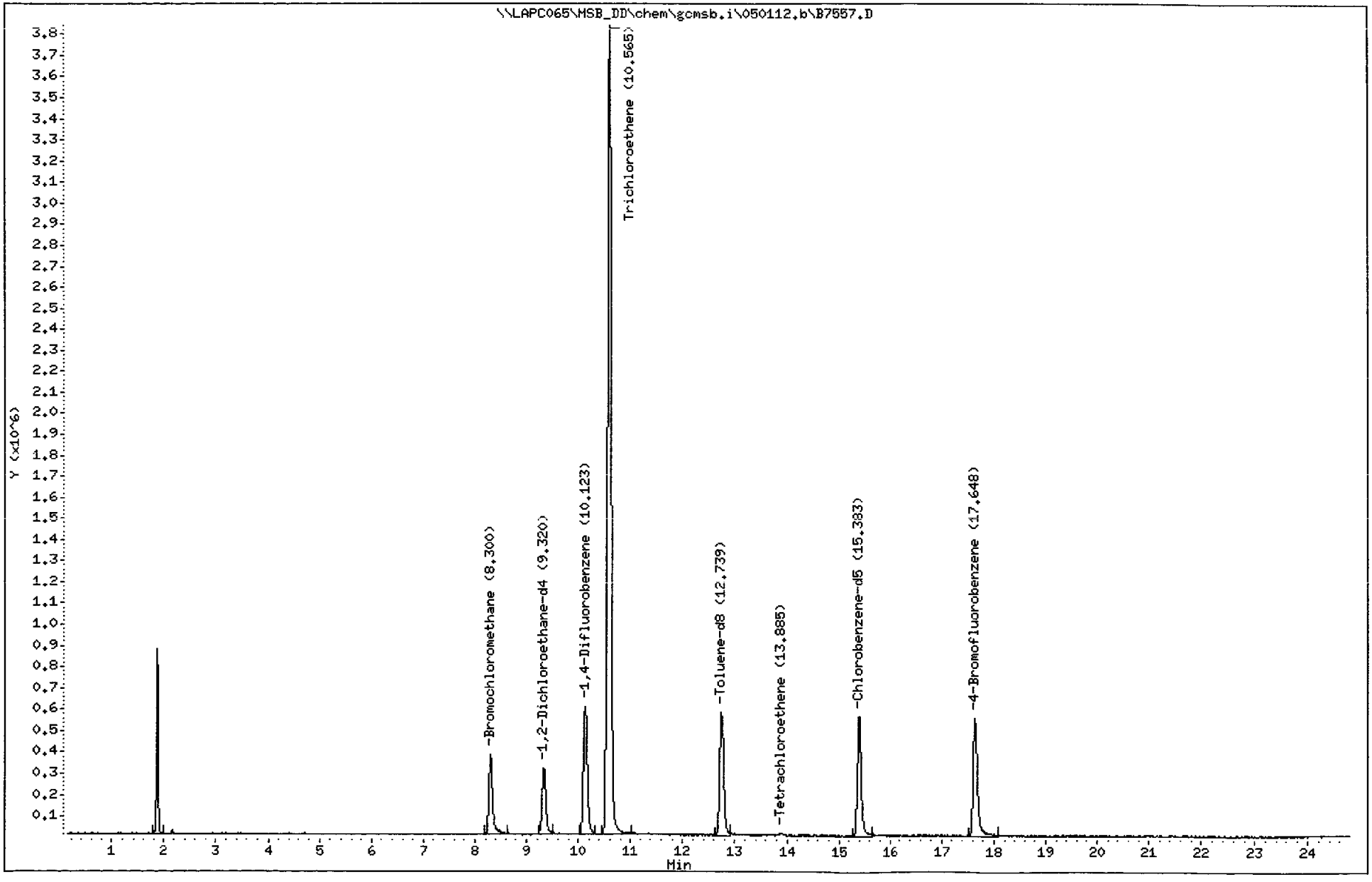
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7557.D
Date : 12-JAN-2005 11:51
Client ID: 066360-001
Sample Info: G2DG21AD,066360-001,SANDIA,E5A100219-3

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7557.D

Date : 12-JAN-2005 11:51

Client ID: 066360-001

Instrument: gcmsb.i

Sample Info: G2DG21AD,066360-001,SANDIA,E5A100219-3

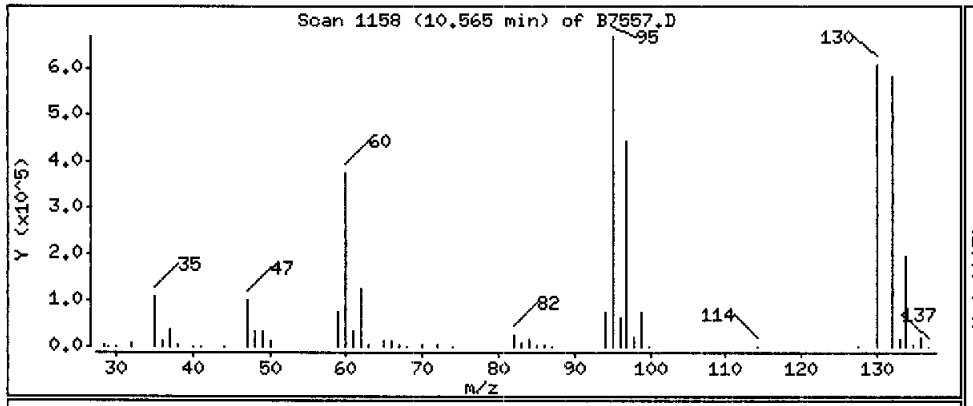
Operator: DLK

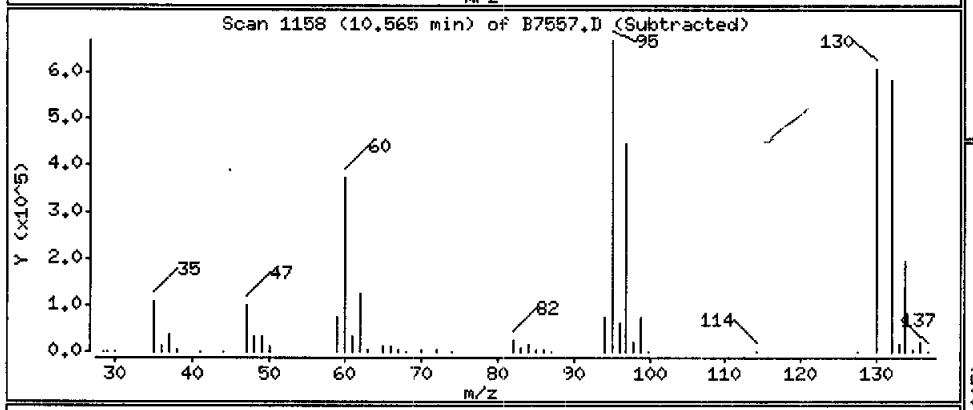
Column phase: J&W DB-624

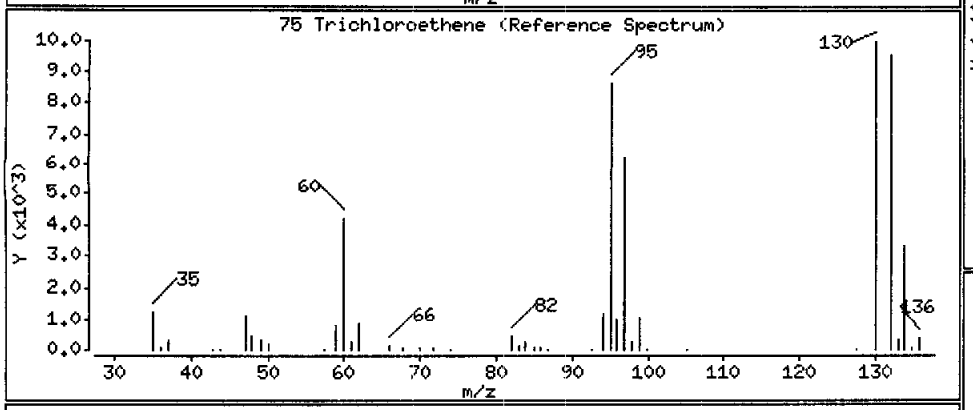
Column diameter: 0.53

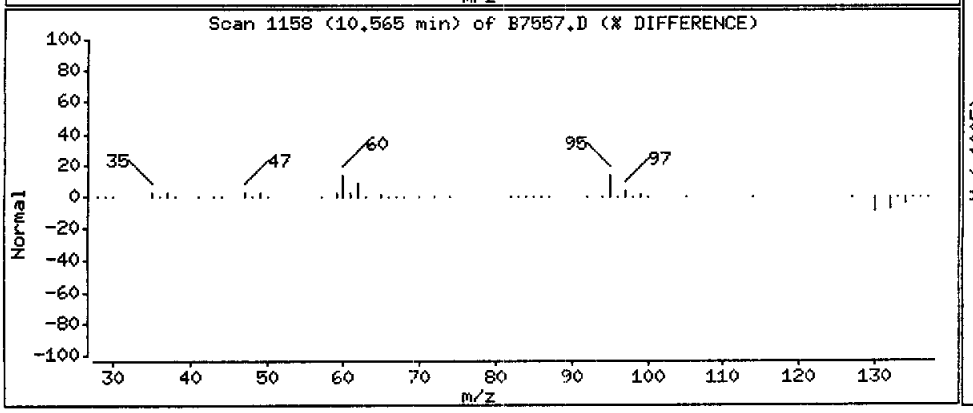
75 Trichloroethene

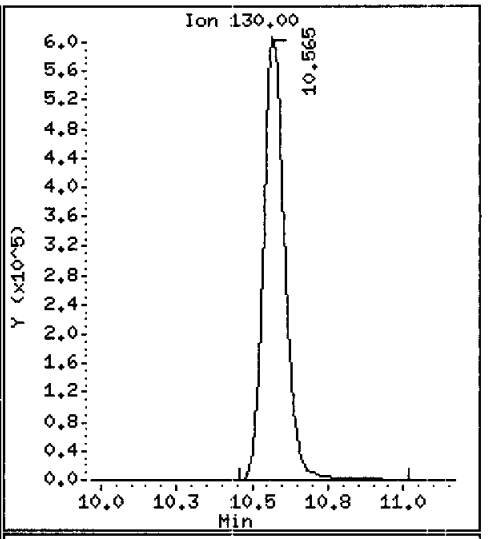
Concentration: 2944 ppbv

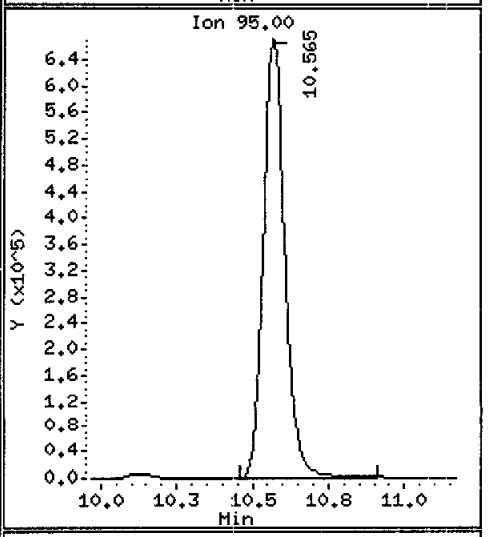


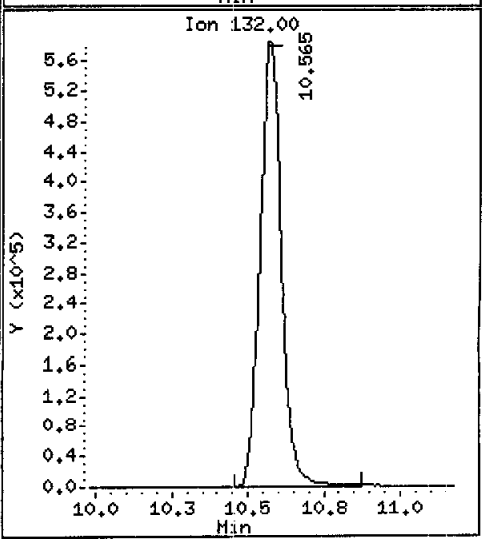












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7557.D

Date : 12-JAN-2005 11:51

Client ID: 066360-001

Instrument: gcmsb.i

Sample Info: G2DG21AD,066360-001,SANDIA,E5A100219-3

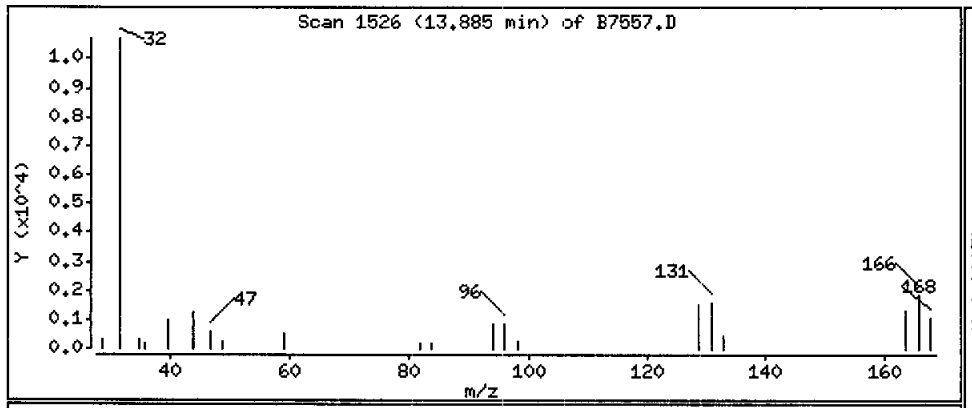
Operator: DLK

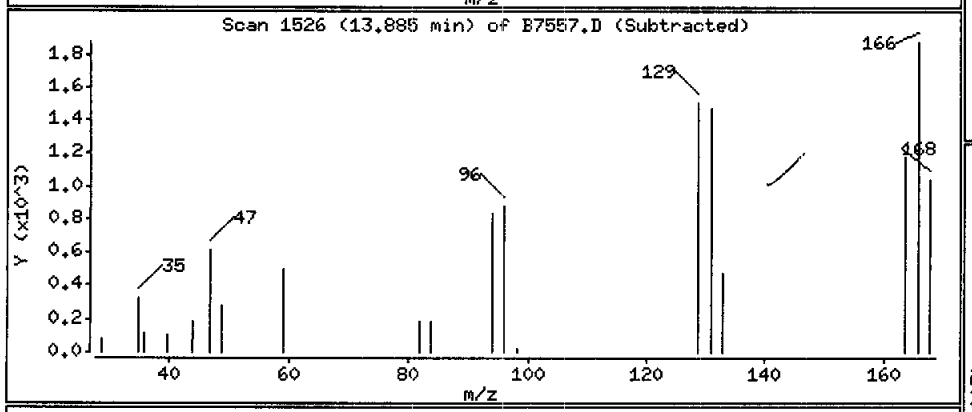
Column phase: J&W DB-624

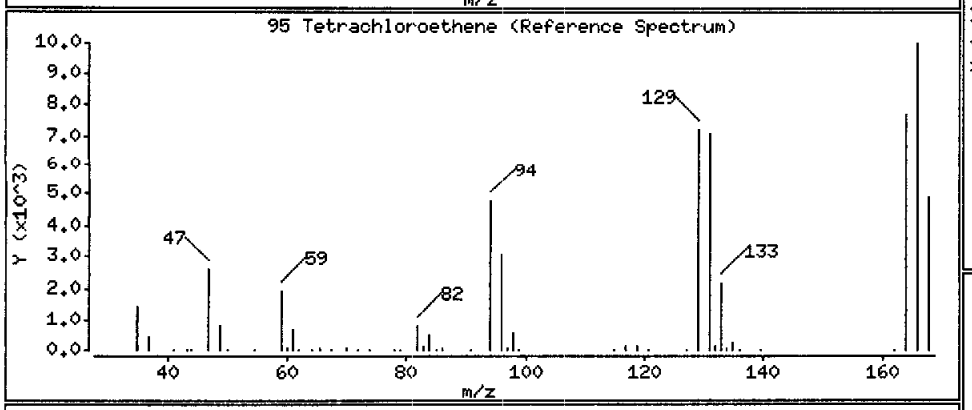
Column diameter: 0.53

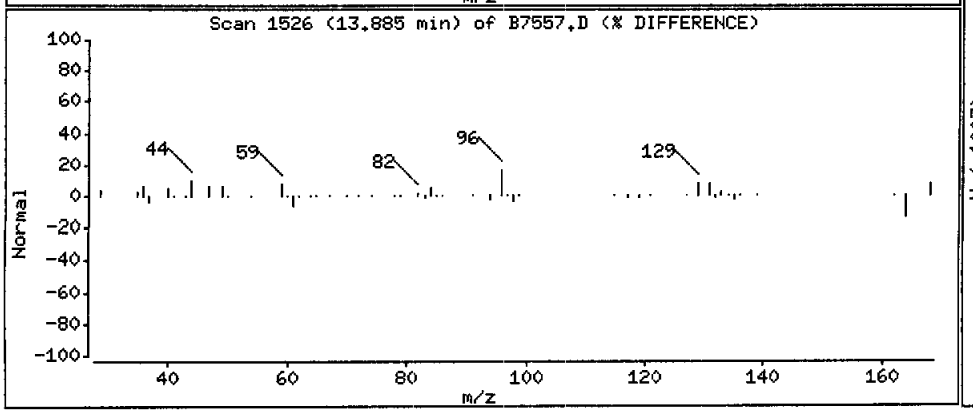
95 Tetrachloroethene

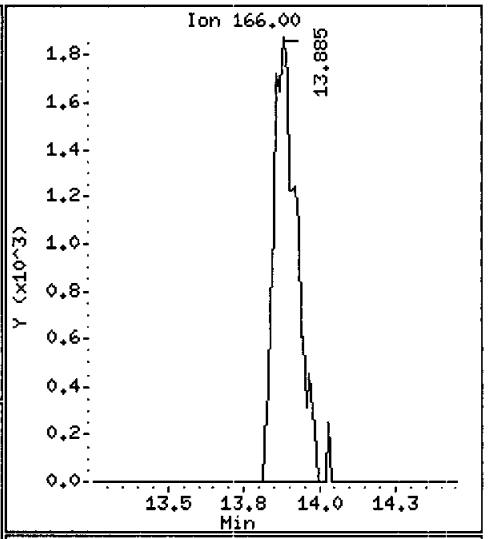
Concentration: 7.921 ppbv

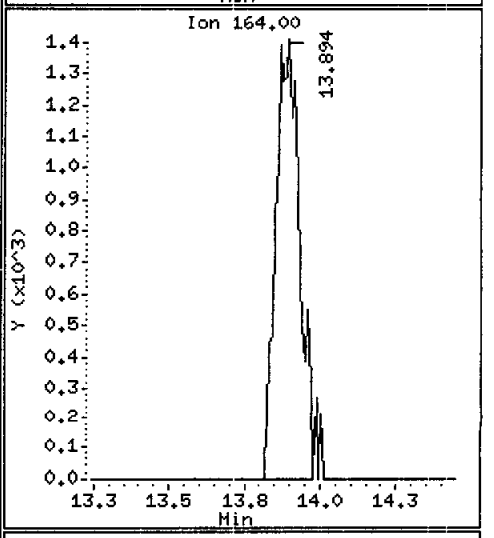


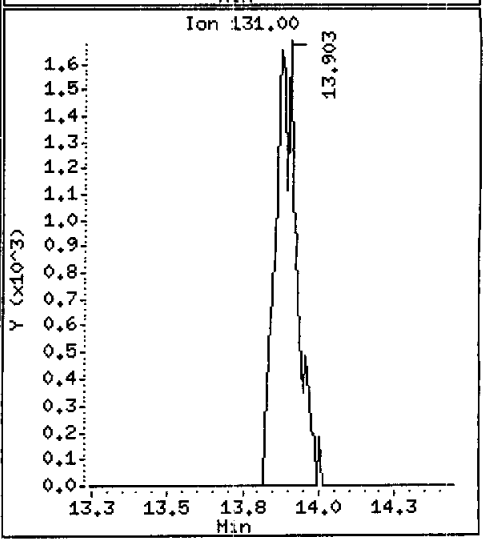












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7558.D
Lab Smp Id: G2DG51AD Client Smp ID: 066363-001
Inj Date : 12-JAN-2005 12:26
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DG51AD,066363-001,SANDIA,E5A100219-6
Misc Info : 24.1,12.8,500,942,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\TO14A.m
Meth Date : 12-Jan-2005 08:52 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.100	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	942.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.127	2.128	(0.257)	12962	0.58526	0.5849(a)
* 58 Bromochloromethane	49	8.290	8.299	(1.000)	524700	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.319	9.319	(0.920)	466228	51.9630	51.93
* 73 1,4-Difluorobenzene	114	10.131	10.131	(1.000)	1093304	50.0000	
75 Trichloroethene	130	10.582	10.573	(1.045)	183183	19.1893	19.18
$ 88 Toluene-d8	100	12.747	12.738	(1.258)	571800	49.9466	49.92
* 101 Chlorobenzene-d5	117	15.391	15.382	(1.000)	776692	50.0000	
$ 114 4-Bromofluorobenzene	95	17.656	17.638	(1.147)	621461	44.7913	44.76

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7558.D

Date : 12-JAN-2005 12:26

Client ID: 066363-001

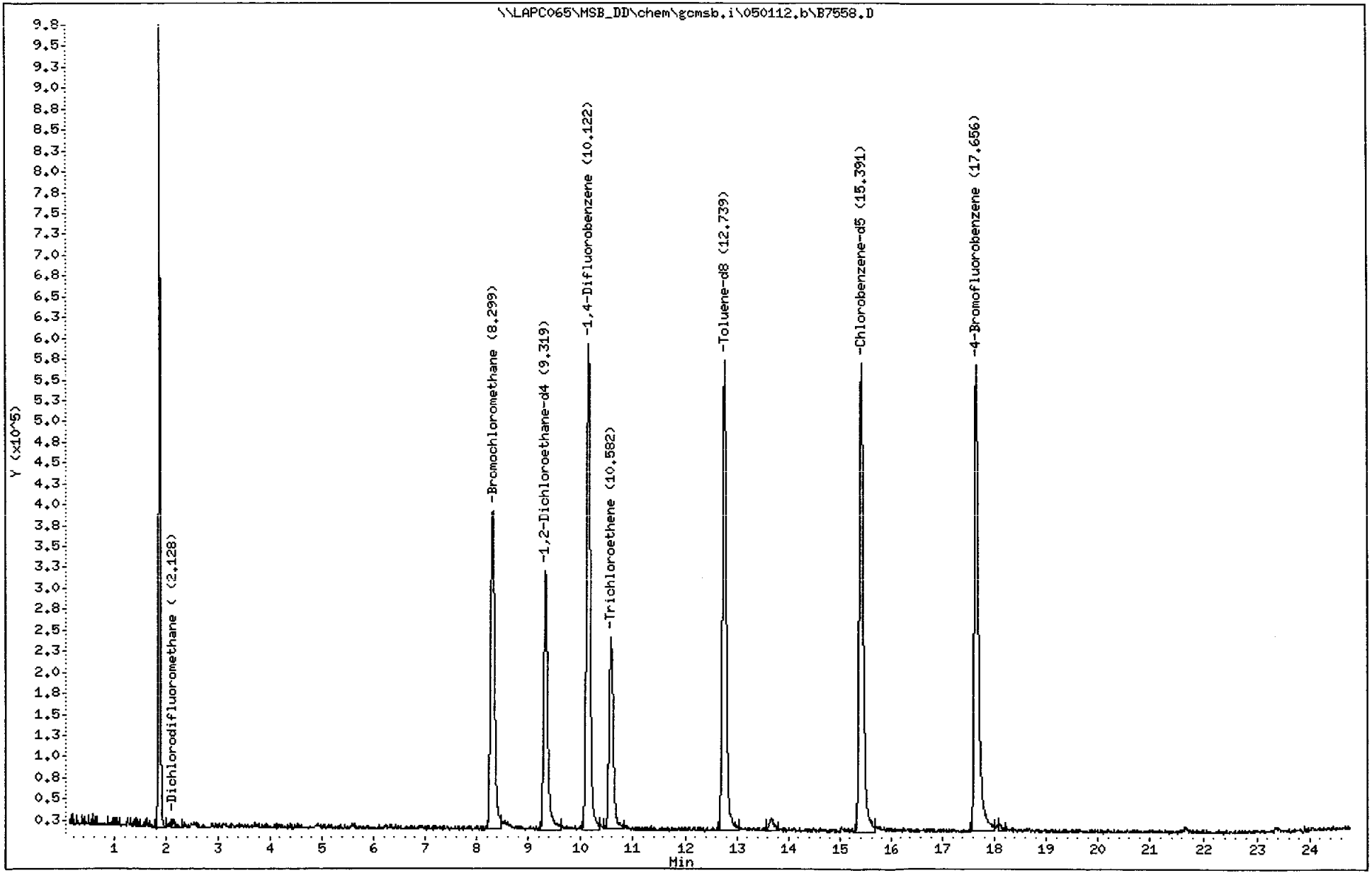
Sample Info: G2DG51AD,066363-001,SANDIA,E5A100219-6

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7558.D

Date : 12-JAN-2005 12:26

Client ID: 066363-001

Instrument: gcmsb.i

Sample Info: G2DG51AD,066363-001,SANDIA,E5A100219-6

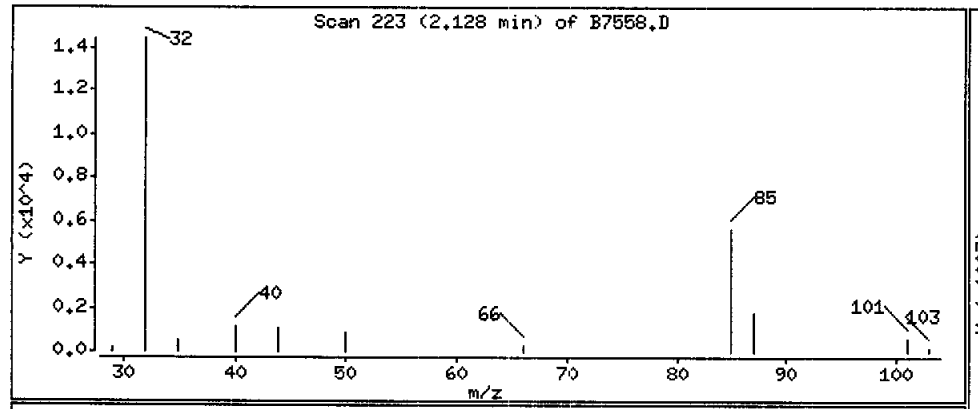
Operator: DLK

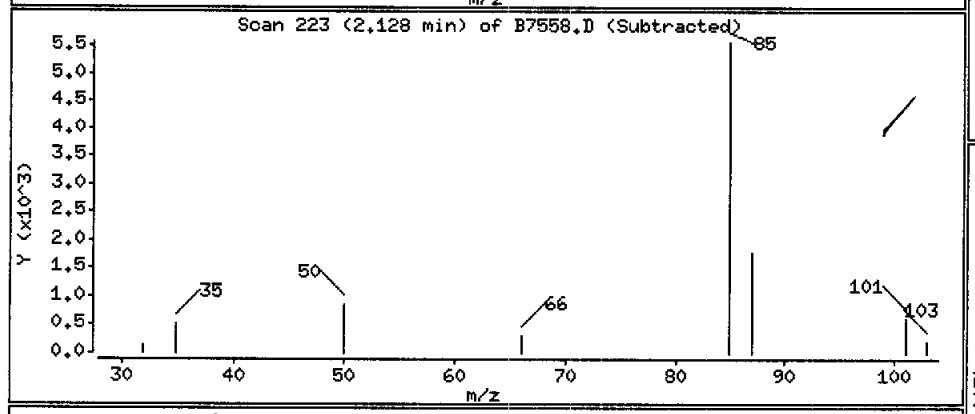
Column phase: J&W DB-624

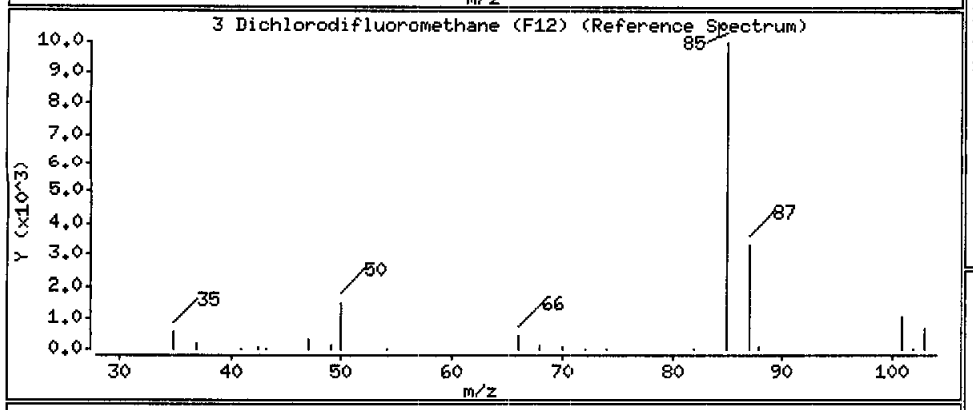
Column diameter: 0.53

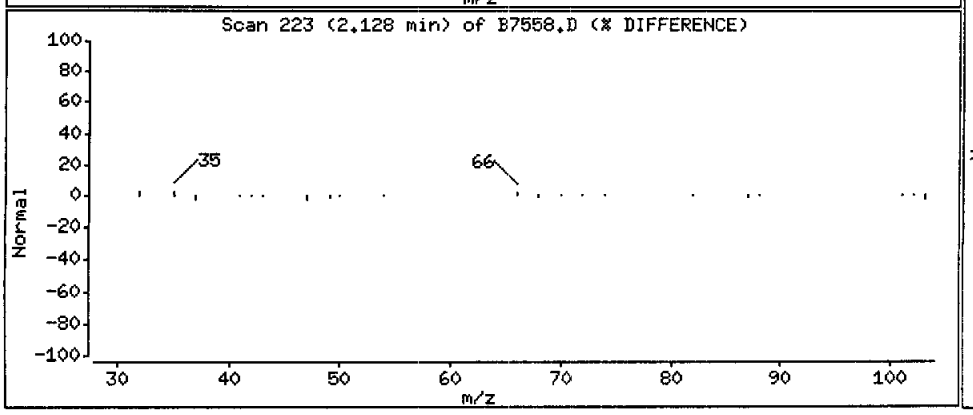
3 Dichlorodifluoromethane (F12)

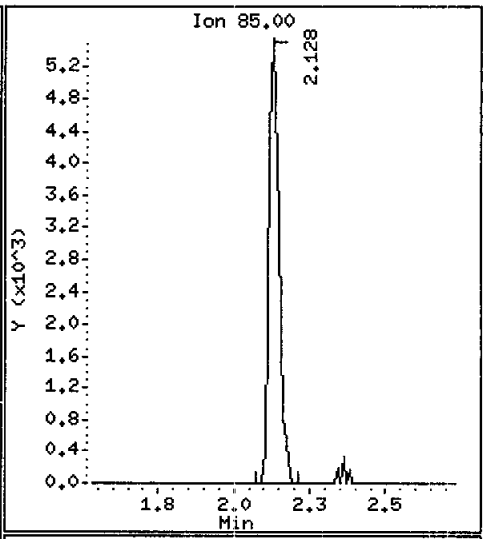
Concentration: 0.5849 ppbv

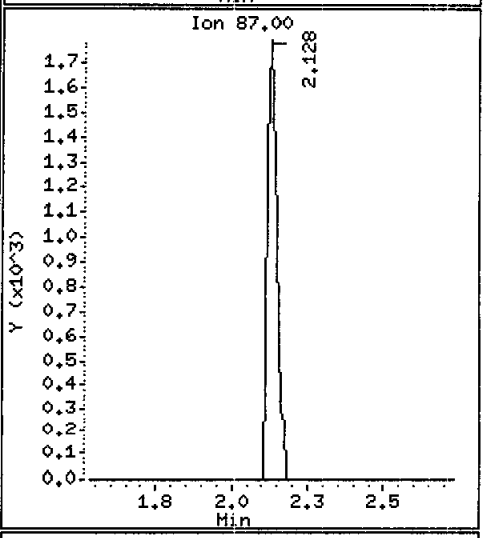


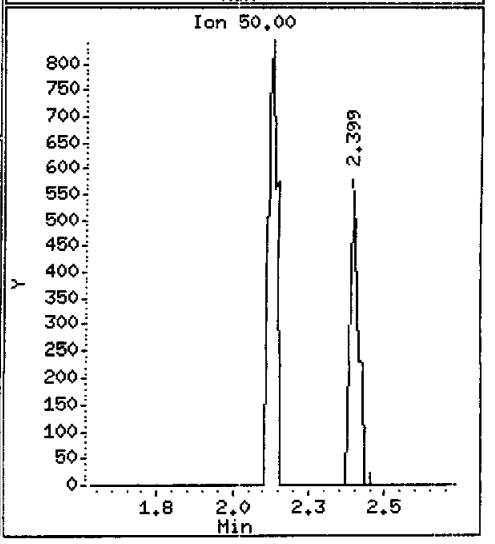












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\B7558.D

Date : 12-JAN-2005 12:26

Client ID: 066363-001

Instrument: gcmsb.i

Sample Info: G2DG51AD,066363-001,SANDIA,E5A100219-6

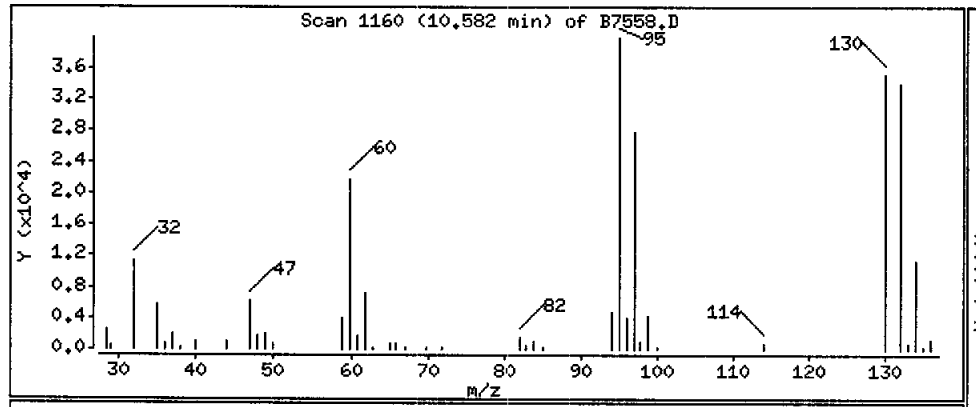
Operator: DLK

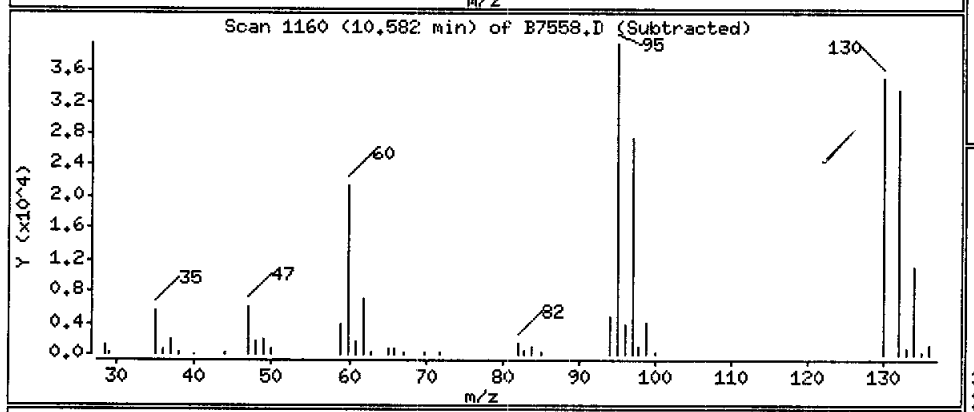
Column phase: J&W DB-624

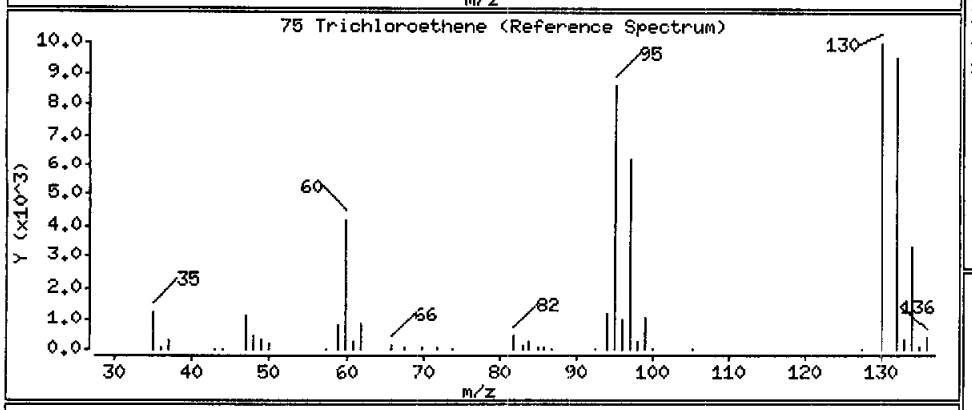
Column diameter: 0.53

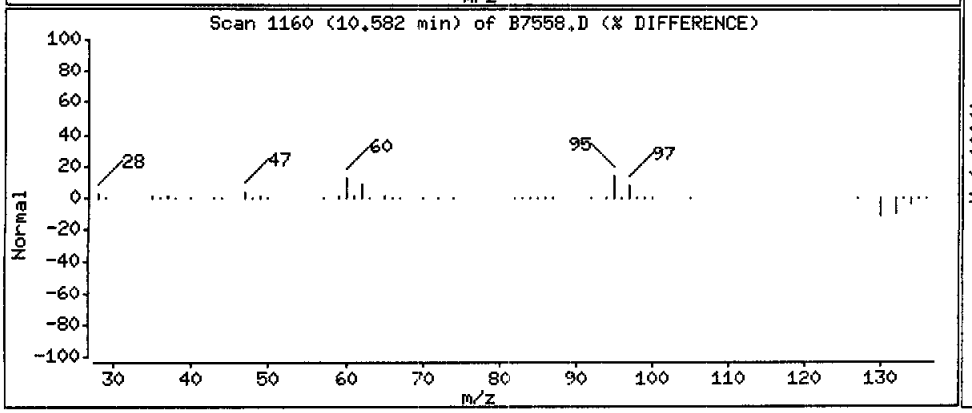
75 Trichloroethene

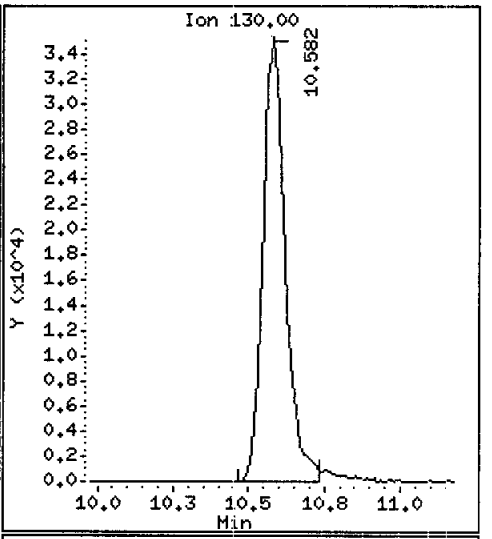
Concentration: 19.18 ppbv

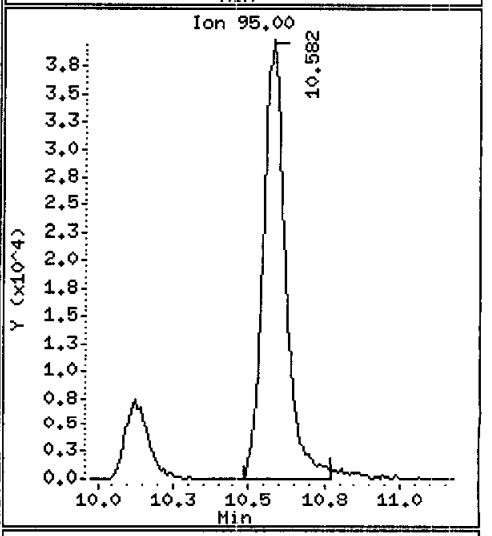


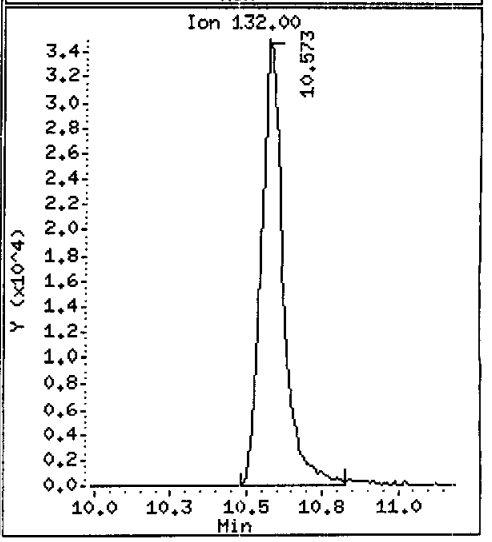












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD: Palencia
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608038	STCA	E5A100226		2/7/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	L. Herrera		02.08.05	
FINAL TRANSMITTED TO/DATE:	M. Shelly		02.08.05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO (ERDMS) OR RECORDS CENTER BY/DATE:	R. Kavanaugh		2-8-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader Collins | Project Name TAG Vapor Well Sampling | Case No. 7222_01.05

AR/COC No. 608038 | Analytical Lab STCA | SDG No. E5A100226

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted_____

Reviewed by: Ulter Date: 02/08/05 Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC 608038

Dept. No./Mail Stop:	6146/1037	Date Samples Shipped:	1-04-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No:	4469	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

SEE BATTLE ORDER

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
✓ 066376-001	TAG-SV03-47	47.5		12/29/2004 0953	SG	SC	6L	none	G	SA	TO-14 summa# 12876	
✓ 066377-001	TAG-SV03-97	97.5		12/29/2004 0959	SG	SC	6L	none	G	SA	TO-14 summa# 0117	
✓ 066378-001	TAG-SV03-147	147.5		12/29/2004 1005	SG	SC	6L	none	G	SA	TO-14 summa# 03322	
✓ 066379-001	TAG-SV03-147-SD	147.5		12/29/2004 1005	SG	SC	6L	none	G	SD	TO-14 summa# 93036	
✓ 066380-001	TAG-SV03-197	197.5		12/29/2004 1012	SG	SC	6L	none	G	SA	TO-14 summa# 92040	
✓ 066381-001	TAG-SV03-247	247		12/29/2004 1018	SG	SC	6L	none	G	SA	TO-14 summa# 9145-B	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/12/05
Entered by: JAC

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

Abnormal Conditions on Receipt

Return Samples By: ☐ **Negotiated TAT** QC inits. WJP

	Name	Signature	Init	Company/Organization/Phone/Cellular
Sample Team Members	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Lab Use

1.Relinquished by		Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by		Org 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by		Org 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by		Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by		Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by		Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER 44649

Commercial Invoice

Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:
No freight charge reason: NONE

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination:
Import duties and taxes will be paid by my project/task:
Export Authorization:

Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES									
				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED-EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

1-24-05
RK

ESA100826

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Page 1 of 1

Internal Lab

AR/COC 608038

Batch No. N/A

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-04-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No	44649	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SOW BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066376-001	TAG-SV03-47	47.5		12/29/2004 0953	SG	SC	6L	none	G	SA	TO-14 summa# 12876	
066377-001	TAG-SV03-97	97.5		12/29/2004 0959	SG	SC	6L	none	G	SA	TO-14 summa# 0117	
066378-001	TAG-SV03-147	147.5		12/29/2004 1005	SG	SC	6L	none	G	SA	TO-14 summa# 03322	
066379-001	TAG-SV03-147-SD	147.5		12/29/2004 1005	SG	SC	6L	none	G	SD	TO-14 summa# 93036	
066380-001	TAG-SV03-197	197.5		12/29/2004 1012	SG	SC	6L	none	G	SA	TO-14 summa# 92040	
066381-001	TAG-SV03-247	247		12/29/2004 1018	SG	SC	6L	none	G	SA	TO-14 summa# 9145-B	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day ☐ Negotiated TAT

Return Samples By:

Sample Team Members

Name	Signature	Init	Company/Organization/Phone/Cellular
J Lee		JDL	Weston Solutions 6146 (505-284-3309)
R Lynch		RL	Weston Solutions 6146 (505-250-7090)
W Gibson		WG	Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:
QC Inits.

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

OOC 608038 E5A100226

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/21/05
Page : 1
Time : 19:25:38

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066376-001/TAG-SV03-47
Date Sampled: 12/29/04 Time Sampled: 9:53
LAB ID: E5A100226-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066377-001/TAG-SV03-97
Date Sampled: 12/29/04 Time Sampled: 9:59
LAB ID: E5A100226-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066378-001/TAG-SV03-147
Date Sampled: 12/29/04 Time Sampled: 10:05
LAB ID: E5A100226-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066379-001/TAG-SV03-147-SD
Date Sampled: 12/29/04 Time Sampled: 10:05
LAB ID: E5A100226-004 Matrix: AIR

Parameter	Method	Rep

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066379-001/TAG-SV03-147-SD
Date Sampled: 12/29/04 Time Sampled: 10:05
LAB ID: E5A100226-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066380-001/TAG-SV03-197
Date Sampled: 12/29/04 Time Sampled: 10:12
LAB ID: E5A100226-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066381-001/TAG-SV03-247
Date Sampled: 12/29/04 Time Sampled: 10:18
LAB ID: E5A100226-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 2
Case Narrative 2
Chain of Custody 3
Analytical Report 20
QA/QC 38
STL Los Angeles Raw Data 44
Raw Data: TO-14A 45

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 3, 2005

STL LOT NUMBER: **E5A100226**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

000177

This report contains _____ pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100226

ESA100226

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

al Lab No. N/A

SMO Use

AR/COC **608038**

No./Mail Stop:	6146/1087	Date Samples Shipped:	1-04-05	Project/Task No.:	7222.01.05
/Task Manager:	Sue Collins	Carrier/Waybill No:	44649	SMO Authorization:	SB
ct Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
l Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
ce Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
ation	Tech Area 2				
ng	Room				

SOO BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
66376-001	TAG-SV03-47	47.5		12/29/2004 0953	SG	SC	6L	none	G	SA	TO-14 summa# 12876	
66377-001	TAG-SV03-97	97.5		12/29/2004 0959	SG	SC	6L	none	G	SA	TO-14 summa# 0117	
66378-001	TAG-SV03-147	147.5		12/29/2004 1005	SG	SC	6L	none	G	SA	TO-14 summa# 03322	
66379-001	TAG-SV03-147-SD	147.5		12/29/2004 1005	SG	SC	6L	none	G	SD	TO-14 summa# 93036	
66380-001	TAG-SV03-197	197.5		12/29/2004 1012	SG	SC	6L	none	G	SA	TO-14 summa# 92040	
66381-001	TAG-SV03-247	247		12/29/2004 1018	SG	SC	6L	none	G	SA	TO-14 summa# 9145-B	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

around Time ☐ 7 Day ☐ 15 Day ☑ 30 Day ☐ Negotiated TAT

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:
QC inits.

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

Abnormal Conditions on Receipt

Lab Use

n Samples By:

	Name	Signature	Init	Company/Organization/Phone/Cellular
ple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
bers	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

inquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
ceived by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
inquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
ceived by	Org. STL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
inquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
ceived by	Org.	Date	Time	6. Received by	Org.	Date	Time

4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 12876
DATE CLEANED: 12/1/04A, 12/1/04C, 12/9/04A, 12/20/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.20	1-12-05	✓
FINAL PRESSURE (PSIA)	23.90	1-12-05	✓

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 0117
DATE CLEANED: 12/1/04 A, 12/1/04 C, 10/29/04 A, 12/2/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.25	1-12-05	n
FINAL PRESSURE (PSIA)	24.32	1-12-05	L

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 03322
DATE CLEANED: 12/1/04A, 12/1/04C, 1/29/04A, 2/6/04A, 6/2/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.46	1-12-05	[illegible]
FINAL PRESSURE (PSIA)	24.64	1-12-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93036
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/8/04A, 12/9/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.24	1-12-05	a
FINAL PRESSURE (PSIA)	24.27	1-12-05	~

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 920410
DATE CLEANED: 12/1/04 A, 12/1/04C, 10/29/04A, 12/6/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	[redacted]	30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.41	1-12-05	✓
FINAL PRESSURE (PSIA)	24.33	1-12-05	✓

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 9145 B
DATE CLEANED: 12/1/04 A, 12/1/04 C, 10/29/04 A, 12/2/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.23	1-12-05	"
FINAL PRESSURE (PSIA)	24.37	1-12-05	"

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15ML

Date Cleaned/Batch 12-1-04C

Date of QC 12-2-04

Data File Number MB12021 (MSB)

Canister ID Numbers

* 02803	11203
93110	12166
0142	12620
DL115	9413 BB
12211	12876 ✓
92056	93154

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-2-04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:25
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,02803
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.314	8.326	(1.000)	503233	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.343	9.345	(0.921)	561863	47.6517	47.65
* 72 1,4-Difluorobenzene	114	10.146	10.157	(1.000)	1505004	50.0000	
$ 87 Toluene-d8	100	12.762	12.765	(1.258)	647801	43.9086	43.91
* 99 Chlorobenzene-d5	117	15.415	15.418	(1.000)	829144	50.0000	
$ 113 4-Bromofluorobenzene -	95	17.670	17.664	(1.146)	411537	27.8068	27.81(R)

QC Flag Legend

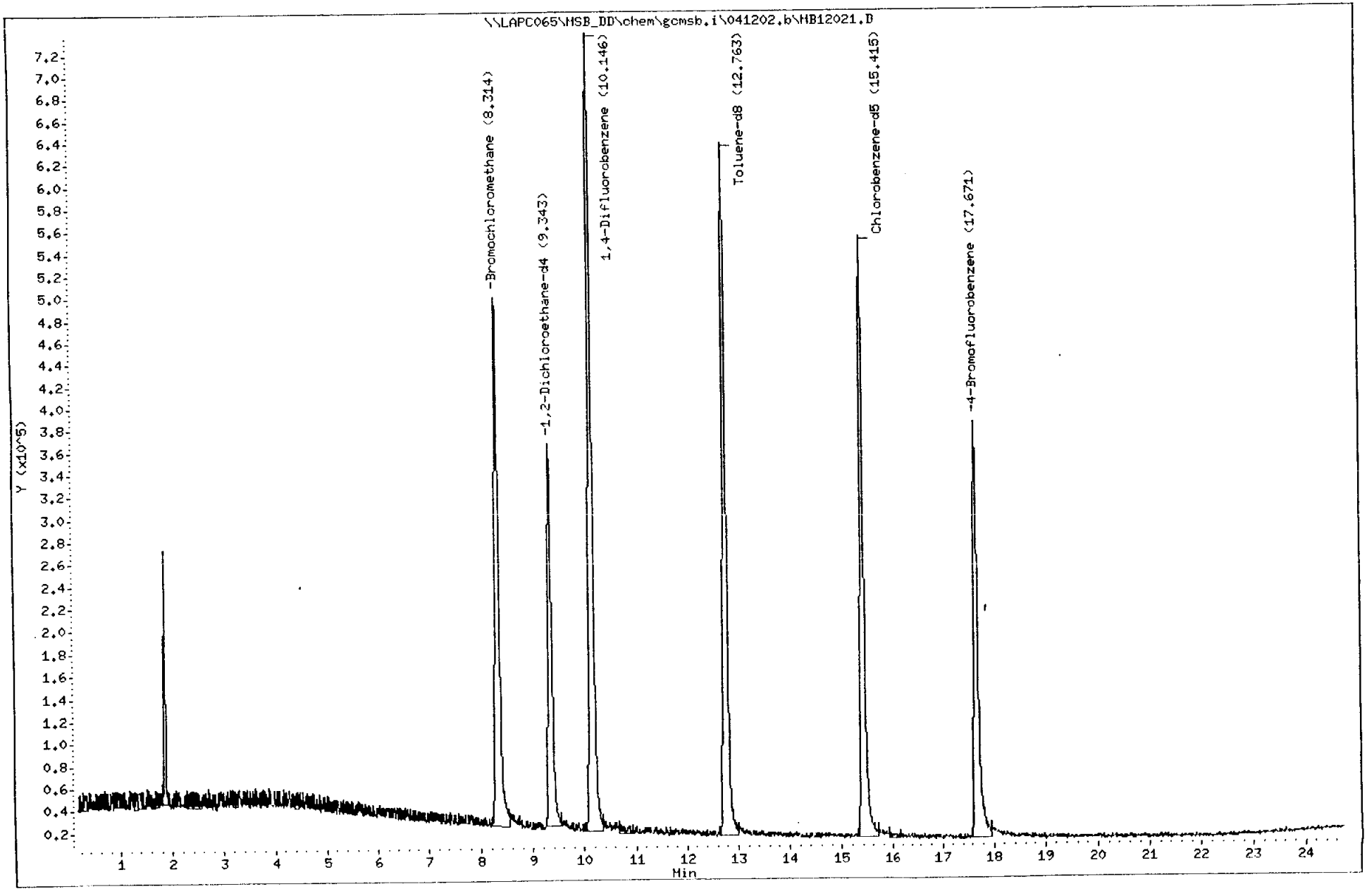
R - Spike/Surrogate failed recovery limits.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Date : 02-DEC-2004 13:25
Client ID: BLANK
Sample Info: BLANK,BLANK,02803

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch 12.2.04 C

Date of QC 12.3.04

Data File Number MB12032 (MSB)

Canister ID Numbers

*03322 ✓	G0161
04398	A-263
92040 ✓	0117 ✓
93273	93148
A-272	G0054
93036 ✓	04736

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12.3.04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:46
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,03322
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.327	8.324	(1.000)	480472	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.346	9.352	(0.921)	580377	47.9120	47.91
* 72 1,4-Difluorobenzene	114	10.149	10.155	(1.000)	1546149	50.0000	
$ 87 Toluene-d8	100	12.766	12.763	(1.258)	726802	47.9524	47.95
* 99 Chlorobenzene-d5	117	15.419	15.406	(1.000)	1096086	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.662	(1.146)	755239	38.6021	38.60

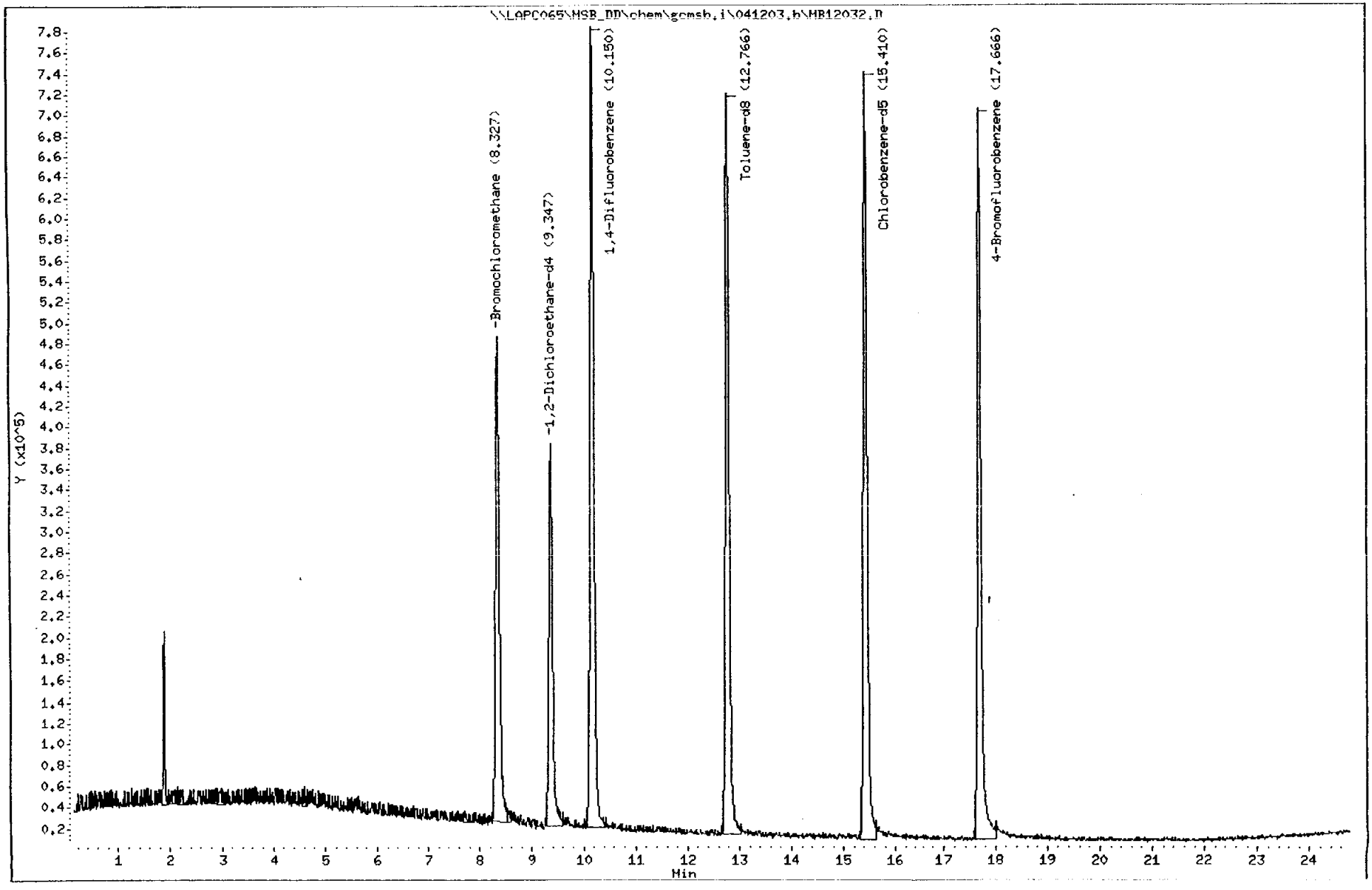
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Date : 03-DEC-2004 12:46
Client ID: BLANK
Sample Info: BLANK,BLANK,03322

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12-2-04A

Date of QC: 12-3-04

Data File Number: MB12031(MSB)

Canister ID Numbers

*GL0141	12625
9243 B	9145 B
02471	0041
93012	03855
04340	92012
93257	9631B

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-3-04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12031.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:18
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,GL0141
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.311	8.324	(1.000)	498682	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.340	9.352	(0.921)	590663	47.4850	47.48
* 72 1,4-Difluorobenzene	114	10.143	10.155	(1.000)	1587702	50.0000	
$ 87 Toluene-d8	100	12.760	12.763	(1.258)	730243	46.9185	46.92
* 99 Chlorobenzene-d5	117	15.412	15.406	(1.000)	1098670	50.0000	
$ 113 4-Bromofluorobenzene	95	17.668	17.662	(1.146)	726403	37.0409	37.04

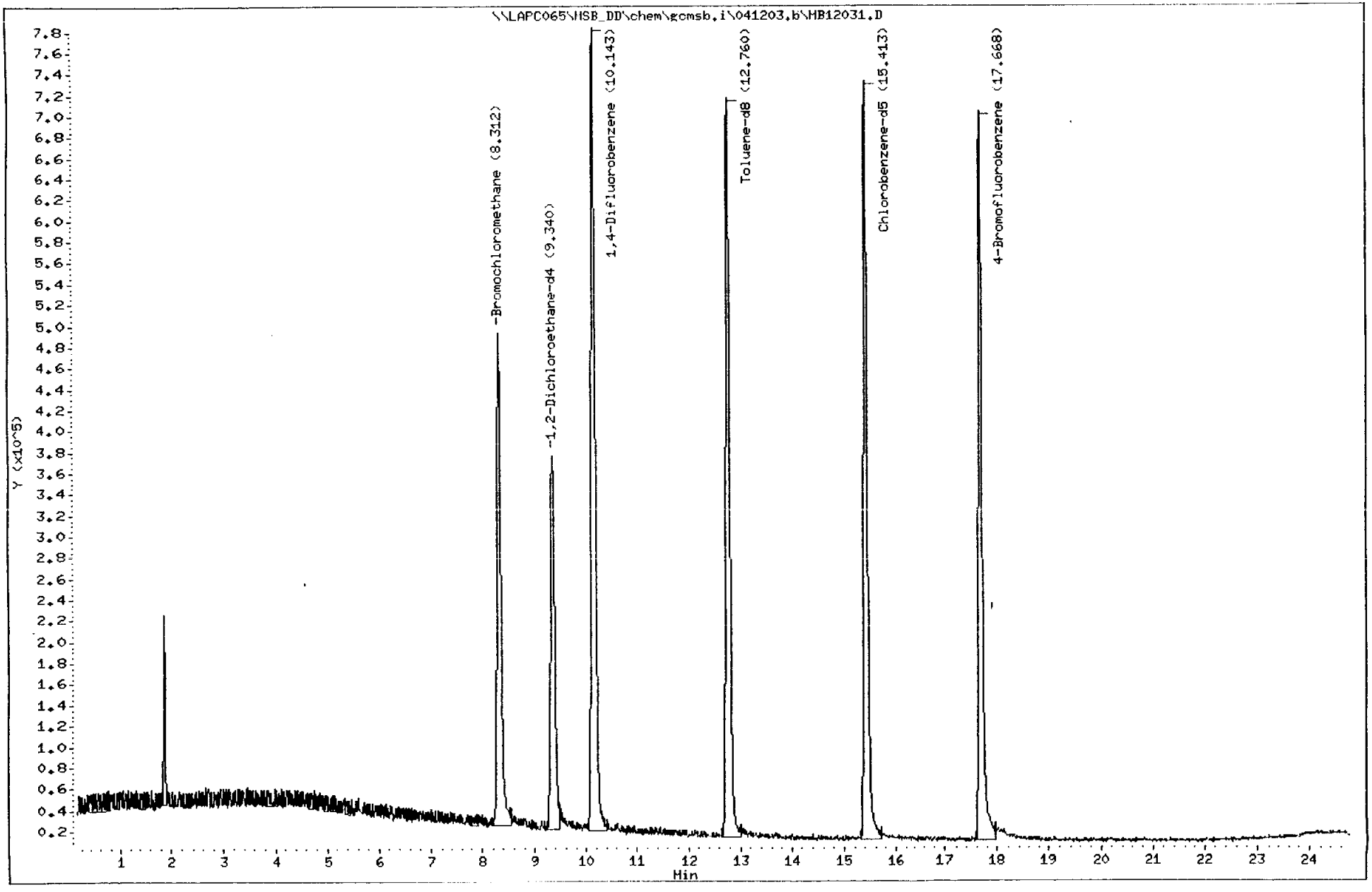
Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\041203.b\HB12031.D
Date : 03-DEC-2004 12:18
Client ID: BLANK
Sample Info: BLANK,BLANK,GL0141

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100226

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100226

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066376-001/TAG-SV03-47 12/29/04 09:53 001				
Dichlorodifluoromethane	0.56 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	5.3 J	10	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	2.0 J	10	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	0.99 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	0.82 J	2.0	ppb(v/v)	EPA-21 TO-14A
066377-001/TAG-SV03-97 12/29/04 09:59 002				
Acetone	4.3 J	10	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
066378-001/TAG-SV03-147 12/29/04 10:05 003				
Acetone	5.6 J	10	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	2.1 J	10	ppb(v/v)	EPA-21 TO-14A
Benzene	0.87 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	13	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	6.0	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	19	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	5.6	2.0	ppb(v/v)	EPA-21 TO-14A
066379-001/TAG-SV03-147-SD 12/29/04 10:05 004				
Benzene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	4.5	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	0.69 J	2.0	ppb(v/v)	EPA-21 TO-14A
066380-001/TAG-SV03-197 12/29/04 10:12 005				
Acetone	9.5 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	0.82 J	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	9.6 J	10	ppb(v/v)	EPA-21 TO-14A
Benzene	1.5 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	3.1	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	15	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	4.5	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	14	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	4.6	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

E5A100226

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066381-001/TAG-SV03-247 12/29/04 10:18 006				
1,1-Dichloroethene	0.52 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	0.86 J	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	4.0 J	10	ppb(v/v)	EPA-21 TO-14A
Benzene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	12	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	3.7	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	0.99 J	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	0.66 J	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100226

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100226

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DH0	001	066376-001/TAG-SV03-47	12/29/04	09:53
G2DH3	002	066377-001/TAG-SV03-97	12/29/04	09:59
G2DH4	003	066378-001/TAG-SV03-147	12/29/04	10:05
G2DH5	004	066379-001/TAG-SV03-147-SD	12/29/04	10:05
G2DH6	005	066380-001/TAG-SV03-197	12/29/04	10:12
G2DH7	006	066381-001/TAG-SV03-247	12/29/04	10:18

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066376-001/TAG-SV03-47

GC/MS Volatiles

Lot-Sample #...: E5A100226-001 **Work Order #...:** G2DH01AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:53 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 15:23
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.56 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**5.3 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**2.0 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**0.99 J**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**0.82 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

(Continued on next page)

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066376-001/TAG-SV03-47

GC/MS Volatiles

Lot-Sample #...: E5A100226-001 **Work Order #...:** G2DH01AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066377-001/TAG-SV03-97

GC/MS Volatiles

Lot-Sample #...: E5A100226-002 **Work Order #...:** G2DH31AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:59 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 15:57
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**4.3 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**1.0 J**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.2 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066377-001/TAG-SV03-97

GC/MS Volatiles

Lot-Sample #...: E5A100226-002 **Work Order #...:** G2DH31AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066378-001/TAG-SV03-147

GC/MS Volatiles

Lot-Sample #...: E5A100226-003 **Work Order #...:** G2DH41AD **Matrix.....:** AE
Date Sampled...: 12/29/04 10:05 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 16:29
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**5.6 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**2.1 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**0.87 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**1.2 J**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**13**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066378-001/TAG-SV03-147

GC/MS Volatiles

Lot-Sample #...: E5A100226-003 **Work Order #...:** G2DH41AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	**6.0**	**2.0**	**ppb(v/v)**	**0.50**
m-Xylene & p-Xylene	**19**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	**5.6**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066379-001/TAG-SV03-147-SD

GC/MS Volatiles

Lot-Sample #...: E5A100226-004 **Work Order #...:** G2DH51AD **Matrix.....:** AE
Date Sampled...: 12/29/04 10:05 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 17:01
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**1.2 J**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**4.5**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066379-001/TAG-SV03-147-SD

GC/MS Volatiles

Lot-Sample #...: E5A100226-004 **Work Order #...:** G2DH51AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	**0.69 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066380-001/TAG-SV03-197

GC/MS Volatiles

Lot-Sample #...: E5A100226-005 **Work Order #...:** G2DH61AD **Matrix.....:** AE
Date Sampled...: 12/29/04 10:12 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 17:36
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**9.5 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**0.82 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**9.6 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.5 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**3.1**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**15**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066380-001/TAG-SV03-197

GC/MS Volatiles

Lot-Sample #...: E5A100226-005 **Work Order #...:** G2DH61AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	**4.5**	**2.0**	**ppb(v/v)**	**0.50**
m-Xylene & p-Xylene	**14**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	**4.6**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066381-001/TAG-SV03-247

GC/MS Volatiles

Lot-Sample #...: E5A100226-006 **Work Order #...:** G2DH71AD **Matrix.....:** AE
Date Sampled...: 12/29/04 10:18 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 18:09
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	0.50
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	**0.52 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**0.86 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**4.0 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**12**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**3.7**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**0.99 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066381-001/TAG-SV03-247

GC/MS Volatiles

Lot-Sample #...: E5A100226-006 **Work Order #...:** G2DH71AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	**0.66 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100226

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5017446	
002	AE	EPA-21 TO-14A		5017446	
003	AE	EPA-21 TO-14A		5017446	
004	AE	EPA-21 TO-14A		5017446	
005	AE	EPA-21 TO-14A		5017446	
006	AE	EPA-21 TO-14A		5017446	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100226 **Work Order #...:** G2QA41AA **Matrix.....:** AIR
MB Lot-Sample #: M5A170000-446

Prep Date.....: 01/17/05 **Analysis Time..:** 11:13
Analysis Date..: 01/17/05 **Prep Batch #...:** 5017446 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 117751

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100226 **Work Order #...:** G2QA41AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100226 **Work Order #...:** G2QA41AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-446 G2QA41AD-LCSD
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 10:15
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**103**	**(70 - 125)**			**EPA-21 TO-14A**
	99	**(70 - 125)**	**3.7**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**104**	**(75 - 120)**			**EPA-21 TO-14A**
	101	**(75 - 120)**	**2.5**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**101**	**(70 - 125)**			**EPA-21 TO-14A**
	101	**(70 - 125)**	**0.22**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**97**	**(75 - 125)**			**EPA-21 TO-14A**
	99	**(75 - 125)**	**2.6**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**96**	**(65 - 130)**			**EPA-21 TO-14A**
	99	**(65 - 130)**	**2.8**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100226 **Work Order #...:** G2QA41AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-446 G2QA41AD-LCSD
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 10:15
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**51.8**	**ppb(v/v)**	**103**		**EPA-21 TO-14A**
	50.5	**49.9**	**ppb(v/v)**	**99**	**3.7**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**56.4**	**ppb(v/v)**	**104**		**EPA-21 TO-14A**
	54.5	**55.0**	**ppb(v/v)**	**101**	**2.5**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**49.8**	**ppb(v/v)**	**101**		**EPA-21 TO-14A**
	49.5	**49.9**	**ppb(v/v)**	**101**	**0.22**	**EPA-21 TO-14A**
Toluene	**49.5**	**47.9**	**ppb(v/v)**	**97**		**EPA-21 TO-14A**
	49.5	**49.2**	**ppb(v/v)**	**99**	**2.6**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**48.0**	**ppb(v/v)**	**96**		**EPA-21 TO-14A**
	50.0	**49.4**	**ppb(v/v)**	**99**	**2.8**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100226

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: AAlmeg / 01-18-05

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

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Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
18 1,1-Difluoroethane	+++++ +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372
19 Vinyl Bromide	0.62278 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391
20 Dichlorofluoromethane (F21)	1.78533 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446
21 Trichlorofluoromethane (F11)	2.44228 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083
22 n-Pentane	1.21122 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395
23 1,1-DC-1-flouroethane(F141b)	2.58910 +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444
24 Ethanol	+++++ 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705
25 Ether (Diethyl ether)	0.49364 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284
26 Acrolein	0.20601 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263 <-
27 Propionaldehyde (Propanal)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
28 1,1-Dichloroethene	1.26790 1.06973	1.17864	1.08330	1.12535	1.10018	1.07502	1.12859	6.381
29 2,2-Dimethylbutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715 2.22085	2.59937	2.38876	2.40025	2.34655	2.25977	2.44467	9.559
31 Acetone	+++++ 0.20458	0.12242	0.14598	0.16090	0.16041	0.16574	0.16001	16.836
32 Iodomethane	1.11548 1.87248	1.03774	1.38752	1.40857	2.82193	2.47154	1.73075	39.751 <-
33 Carbon Disulfide	0.84200 1.35974	0.90775	0.92884	1.06258	1.12947	1.19849	1.06127	17.279
34 2-Propanol	+++++ 0.71716	0.45343	0.48827	0.55577	0.58306	0.59777	0.56591	16.380
35 Acetonitrile	0.04928 0.15546	0.08266	0.12149	0.13210	0.18434	0.18610	0.13021	39.137 <-
36 Allyl Chloride	0.54011 0.71567	0.56312	0.52171	0.54469	0.60226	0.61352	0.58587	11.302
37 Methylene Chloride	0.81147 0.69121	0.73641	0.65629	0.67719	0.66235	0.64310	0.69686	8.458

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

STL Los Angeles

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 / 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 / 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ / 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 / 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 / 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ / 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 / 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ / 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 / 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23510	35.970	<-

STL Los Angeles

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384	1.84557	1.78175	1.69840	1.73692	1.68874		
	1.43818						1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680	0.92384	0.86786	0.85814	1.07070	0.99994		
	0.81576						0.93758	10.283
72 n-Heptane	0.65292	0.59087	0.57809	0.57044	0.59474	0.58371		
	0.52727						0.58544	6.367
74 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Trichloroethene	0.49675	0.44912	0.44758	0.42160	0.43287	0.42172		
	0.38637						0.43657	7.756
76 Methylcyclohexane	0.42140	0.36653	0.33095	0.30891	0.38179	0.35467		
	0.29346						0.35110	12.546
77 1-Butanol	+++++	0.02081	0.01680	0.01594	0.01842	0.01675		
	0.01390						0.01710	13.662
78 1,2-Dichloropropane	0.16774	0.15879	0.17082	0.16553	0.16628	0.16412		
	0.15399						0.16390	3.481
79 Dibromomethane	0.53415	0.48041	0.44691	0.42596	0.54917	0.51576		
	0.44421						0.48522	9.991
80 Methyl methacrylate	+++++	0.23366	0.24181	+++++	0.31202	0.30819		
	0.31492						0.28212	14.422

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
81 1,4-Dioxane	+++++ 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014
82 Bromodichloromethane	0.49808 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007
83 1-Bromo-2-chloroethane	0.08427 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014
84 2-Chloroethylvinyl ether	+++++ 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497 <-
85 cis-1,3-Dichloropropene	0.34414 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693
86 4-Methyl-2-Pentanone	++++- 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270
87 Pyridine	+++++ +++++	++-++	+++++	+++++	+++++	+++++	+++++	+++++
89 Toluene	1.01334 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491
90 n-Octane	0.59003 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716
91 trans-1,3-Dichloropropene	0.29058 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924	
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318	
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62387	10.012	
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629	
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442	<-
97 Dibromochloromethane	0.78993 / 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682	
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882	
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871	
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341	
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
113 Cyclohexanone	+++++ / 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036	<-
115 Bromobenzene	0.62810 / 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953	
116 1,1,2,2-Tetrachloroethane	1.35006 / 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.35429	6.584	
117 1,2,3-Trichloropropane	0.40312 / 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311	
118 trans-1,4-Dichloro-2-butene	+++++ / +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055	<-
119 n-Propylbenzene	1.28187 / 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097	
120 2-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
121 4-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
122 3-Ethyltoluene	1.05354 / 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139	
123 4-Ethyl Toluene	0.81519 / 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
124 1,3,5-Trimethylbenzene	1.37558	1.21368	0.81082	0.65064	0.83940	0.78774		
	+++++						0.94631	29.818
125 n-Decane	0.46267	0.34922	0.25520	0.27626	0.36839	0.34720		
	0.32620						0.34073	19.844
126 .beta.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
127 2-Ethyltoluene	1.11542	0.94881	0.85458	0.95853	1.30303	1.23402		
	1.16620						1.08294	15.307
128 .alpha.-Methylstyrene	0.43803	0.36069	0.33804	0.37867	0.54465	0.52825		
	0.54809						0.44806	20.459
129 tert-Butylbenzene	0.80994	0.73130	0.67470	0.76818	1.05286	1.00081		
	0.87914						0.84528	16.570
130 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955	0.35806	0.23173	0.19988	0.25825	0.25412		
	+++++						0.27527	23.368
132 sec-Butylbenzene	1.53068	1.27842	1.22547	1.37218	1.91352	1.87496		
	1.68519						1.55435	17.948
133 D-Limonene	0.56335	0.44070	0.33104	0.35410	0.48917	0.46237		
	0.43408						0.43926	17.978

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030			
	0.69853						0.52632	18.610	
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222			
	1.26479						1.14477	17.565	
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895			
	0.67222						0.54141	18.711	
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417			
	0.67804						0.64142	16.131	
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209			
	1.02647						0.56325	55.511	<-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348			
	0.55025						0.48440	18.904	
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253			
	0.64790						0.53798	14.023	
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416			
	0.23934						0.27616	17.206	
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159			
	0.79399						0.72730	19.989	
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136			
	0.17470						0.37429	42.157	<-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++ / 0.27629	0.26338	0.25799	0.22180	0.31565	0.26332	0.26641	11.388
145 Hexachlorobutadiene	0.56644 / 0.51820	0.58610	0.42156	0.35251	0.47676	0.47942	0.48586	16.727
146 Naphthalene	+++++ / 0.49153	0.70441	0.53060	0.46537	0.55710	0.47106	0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850 / 0.25906	0.48714	0.49598	+++++	0.42244	0.27752	0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014 / 0.39572	0.40234	0.40611	0.41316	0.41851	0.44633	0.41033	4.531
$ 88 Toluene-d8	0.51061 / 0.54926	0.50803	0.52649	0.50915	0.52457	0.53681	0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642 / 1.09717	0.79382	0.81777	0.80936	0.95153	0.96622	0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0 MA 01/04/05

STL Los Angeles
Air Toxics Lab GC/MS Run Log

strument ID: CMS-B	Data Directory: D:\GCMSB\ 050103A-B	BFB Standard: BSL491123	Initial Calibration ID: 1-3 05
	Method File: TO14A	Daily Standard: MSL04011028	SOP: CDI-MS-013
gbook ID: -AMS-041	Tune File: BF041123	LCS Standard: MSL04011043	MDL Date: 01-28-01
		I.S. Standard: ISL491123	Blank Lot No. 1050301-00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
13 05	1909	BF01032	-	-	-	BFB	28	-	-	-	m	OK	A	
	1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL0071
	2002	IC01031	-	-	-	2.0 PPBV STD	40	-	-	-	m	OK	10	MSL04011043
	2037	IC01032	-	-	-	4.0	80	-	-	-	m	OK	10	
	2112	IC01033	-	-	-	10	200	-	-	-	m	OK	10	
	2148	IC01034	-	-	-	25	500	-	-	-	m	OK	10	
	2223	IC01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
	2258	IC01036	-	-	-	100	250	-	-	-	m	OK	11	
	2334	IC01037	-	-	-	500	1250	-	-	-	m	OK	11	
1405	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 c/o?
	0014	LC01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
	0119	LC01034	-	-	-	LCSD	500	-	-	-	m	OK	13	
	0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
	0342	B7371	G1P4S1AA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EYL220306-1
	0417	B7372	G1P4T1AA			002	872	24.4/14.0	-		m	OK	1	-2
	0452	B7373	G1P4U1AA			003	1130	24.4/10.9	-		m	OK	2	-3
	0527	B7374	G1P4E2AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
	0602	B7375	G1P4G1AA			005	1000	24.4/11.0	-	1.00	m	O/R	4	-5

Reviewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
ook ID:	Tune File:	LCS Standard: 1-4-05	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-4-05	0637	B7576	G1P4A1AA	CCA	CRA	A 17178-AW 006	1150	244/1.2	—	1.00	W	OK	5	EYL22036-6
↓	0712	B7577	G1Q191AD	↓	TAIT	LG SVOCS 1B 0700	40	244/1.1	100/10	2730	W	O/R	6	EYL23056-1
↓	0741	B7578	G1Q2A1AD	↓	↓	LG SVOCS 1B 1030	40	244/1.2	100/10	2720	W	OK	7	↓ -2

/iewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

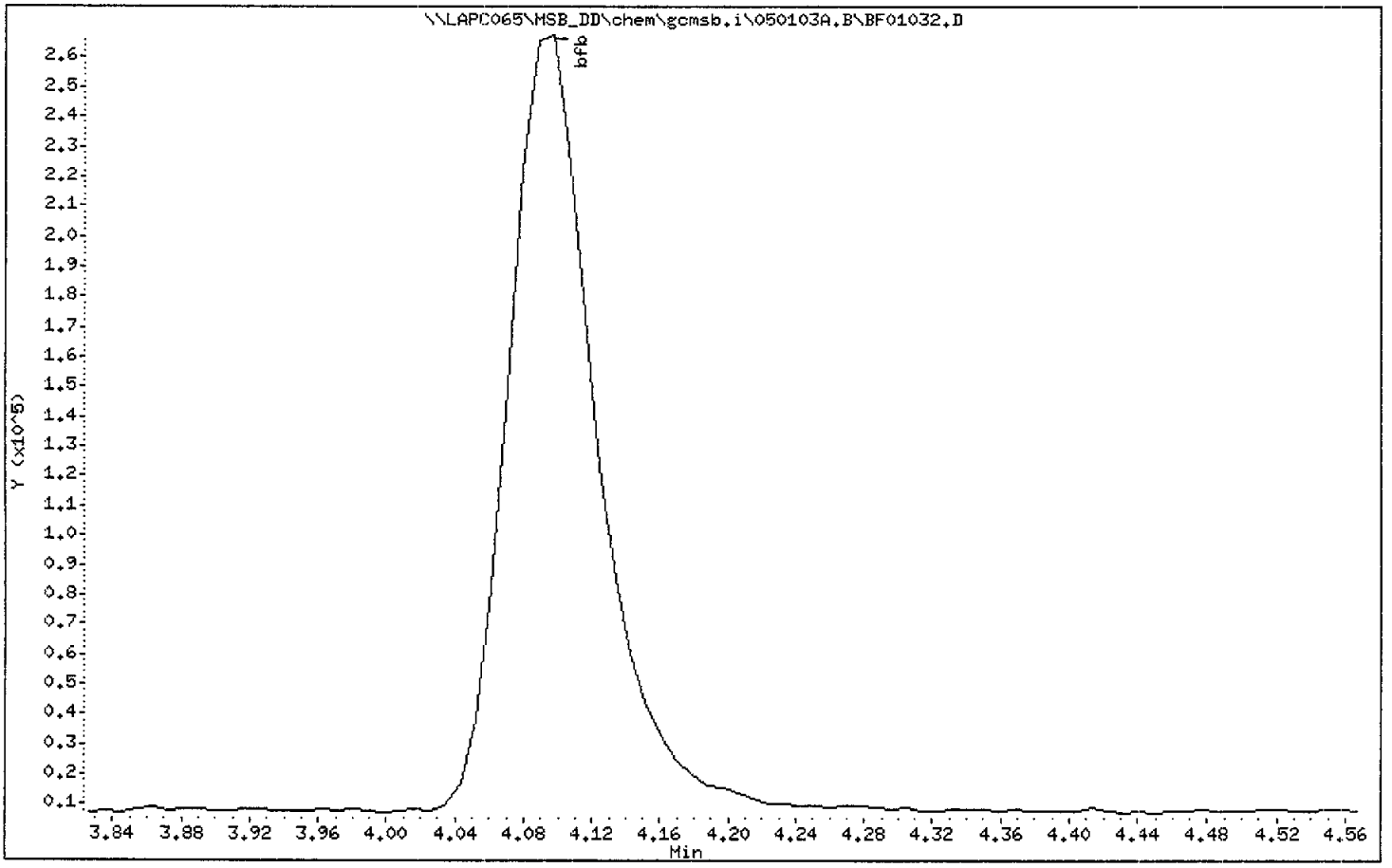
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

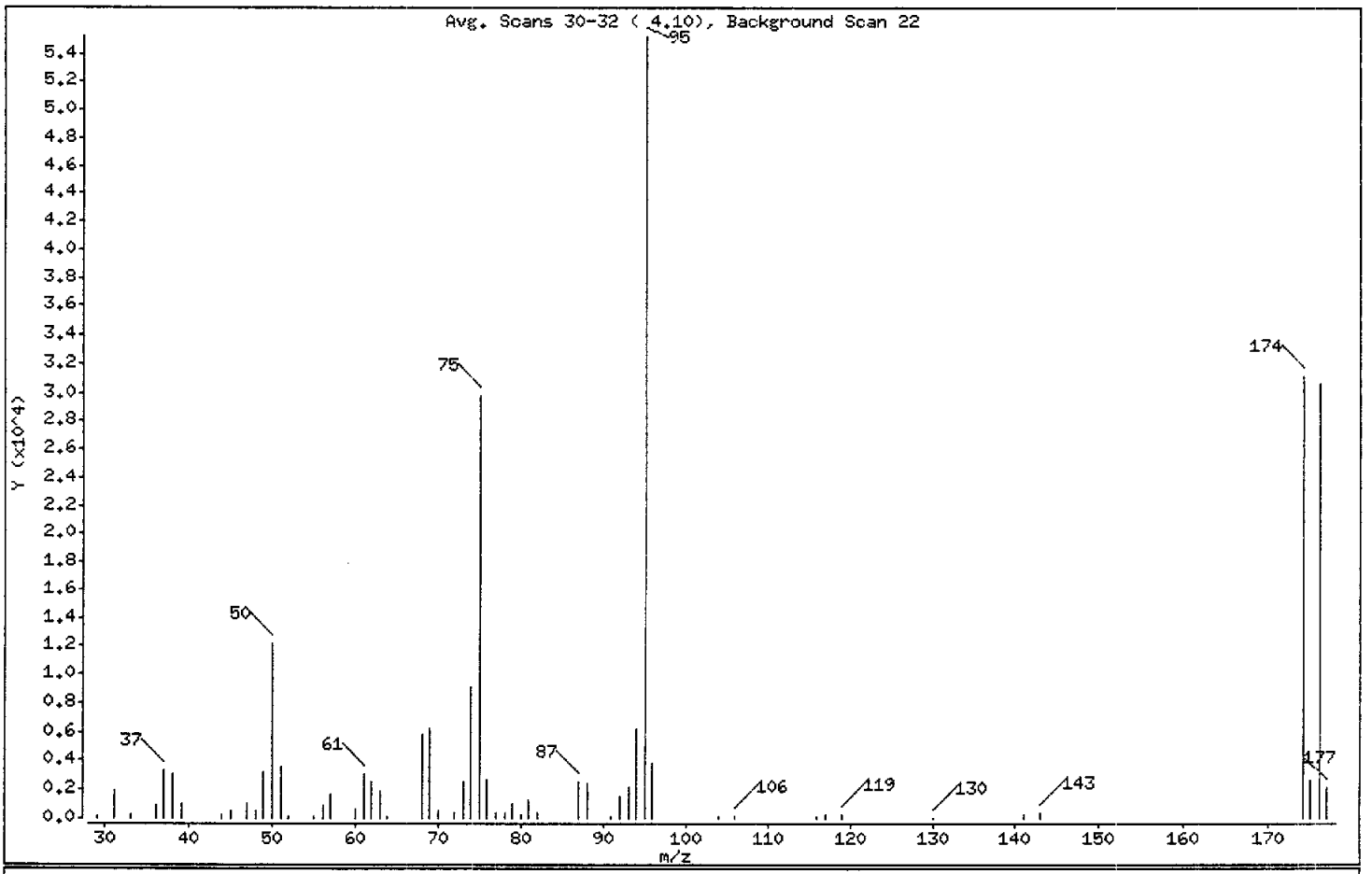
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

AA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.3537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

QC Flag Legend

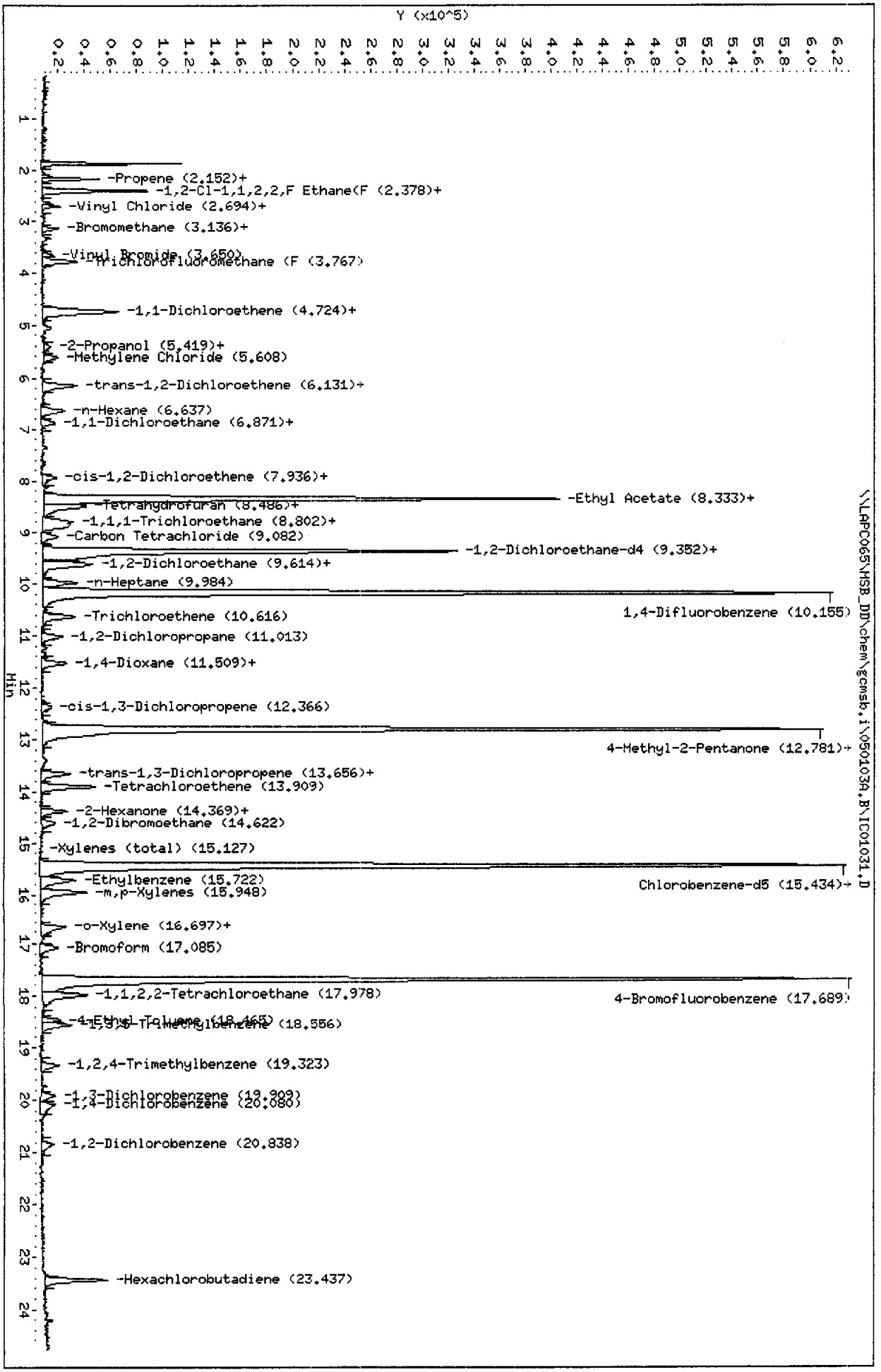
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

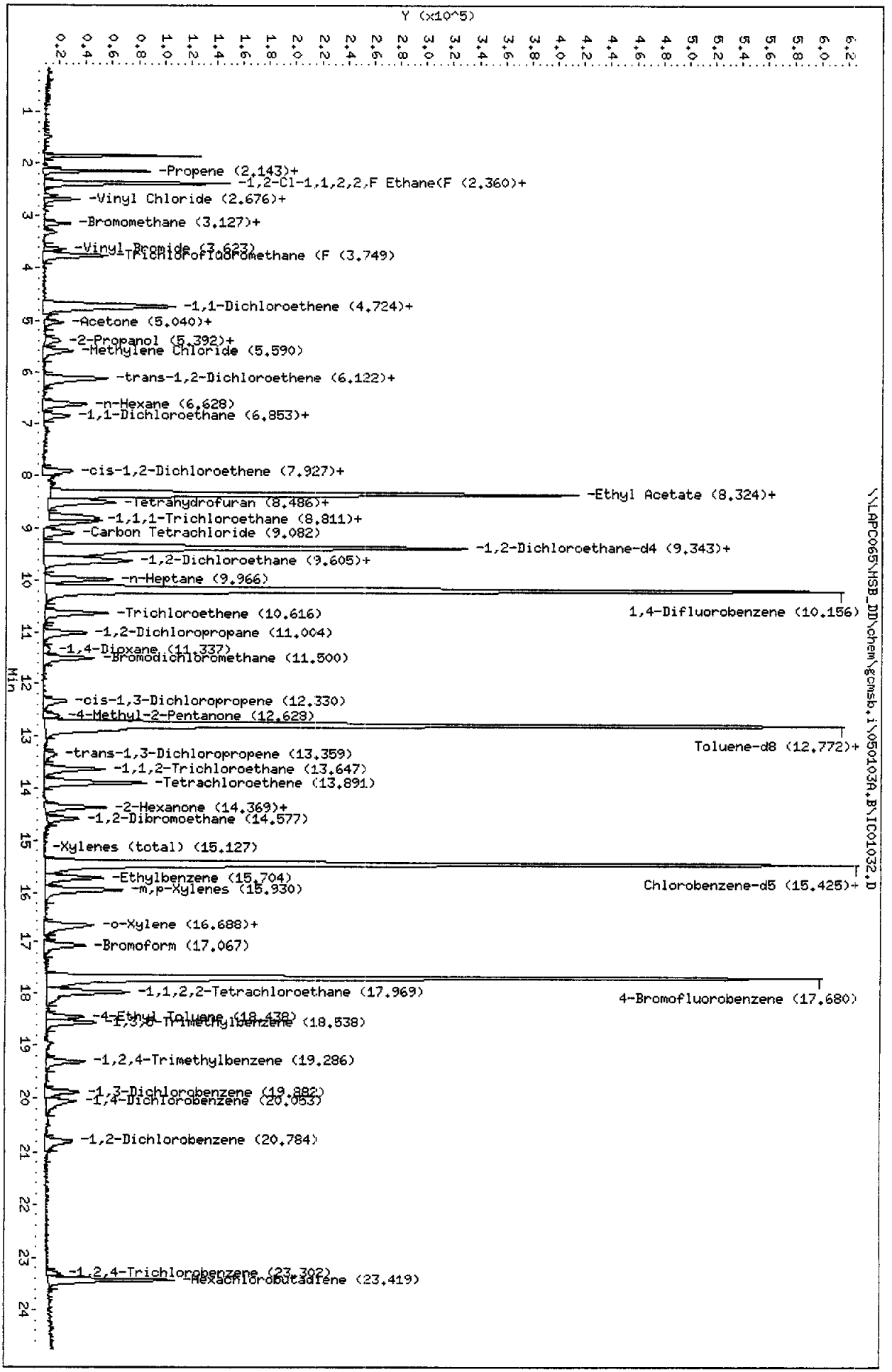
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
* 58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$ 66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
* 73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$ 88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
* 101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M 99 Xylenes (total)	106				196706	30.0000	28.63
104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$ 114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

QC Flag Legend

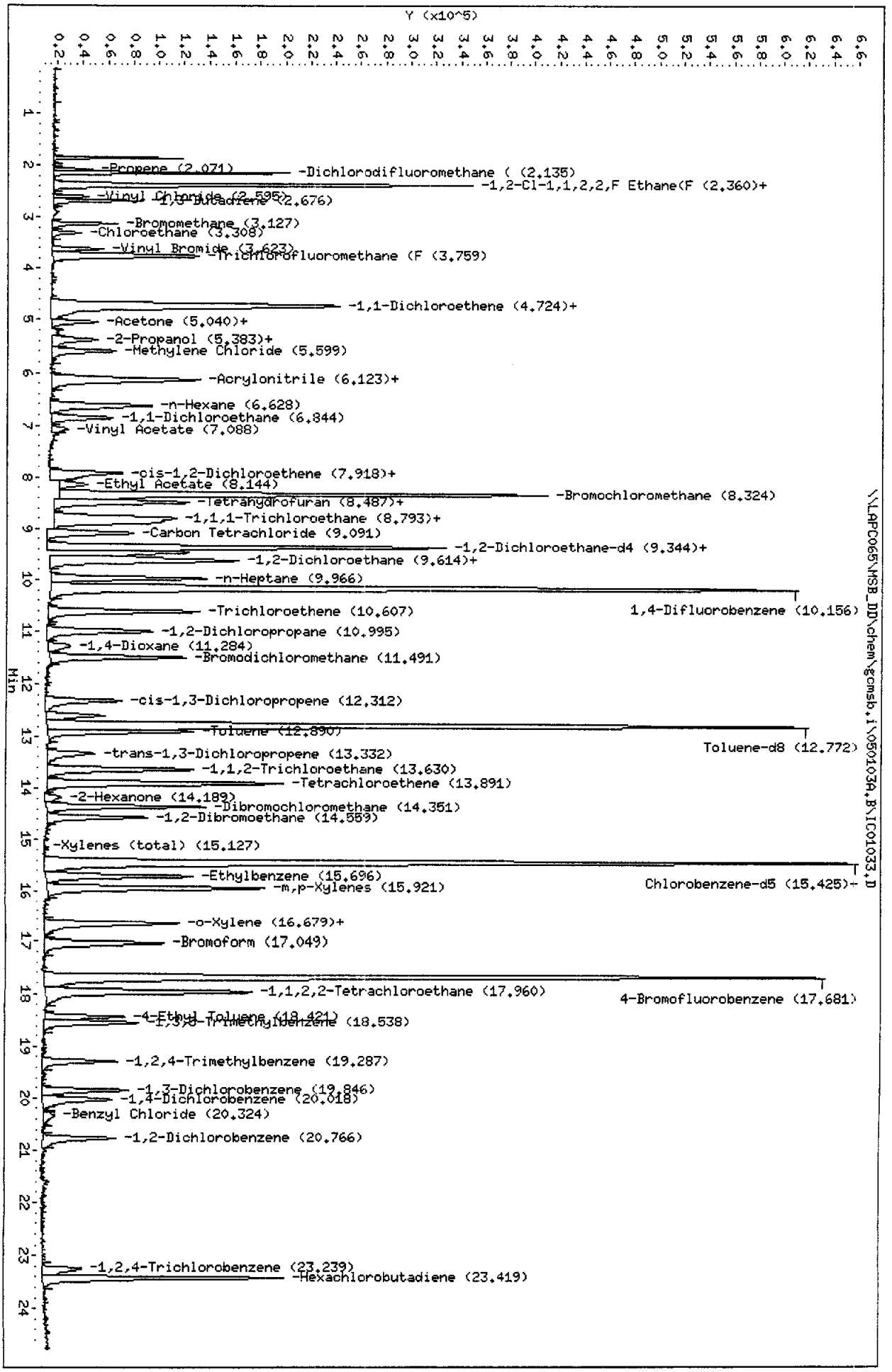
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



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AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
* 58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$ 66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
* 73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$ 88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	25.03
93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	13.88(aQ)
97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
* 101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M 99 Xylenes (total)	106				477975	75.0000	68.20
104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$ 114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

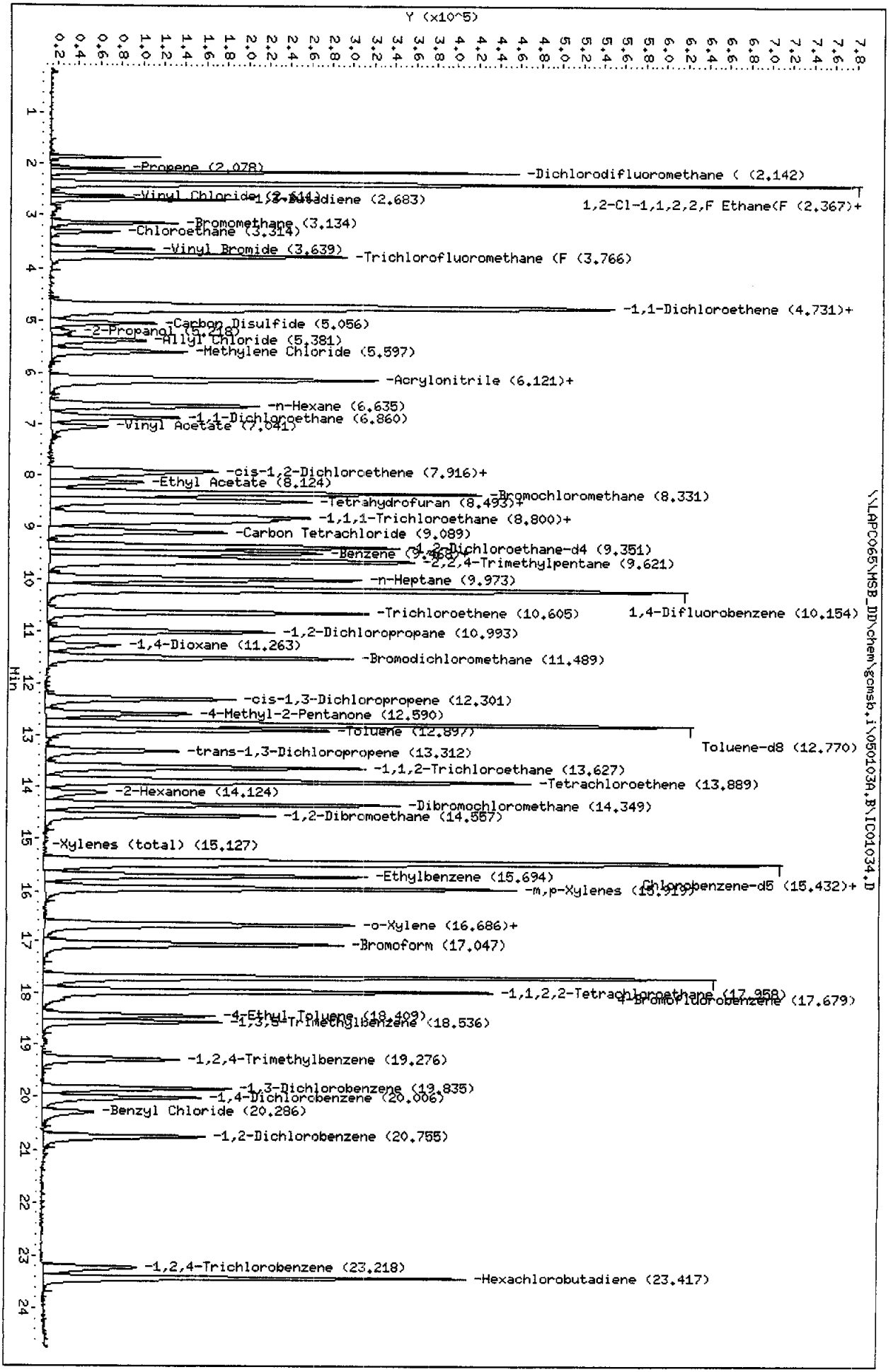
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

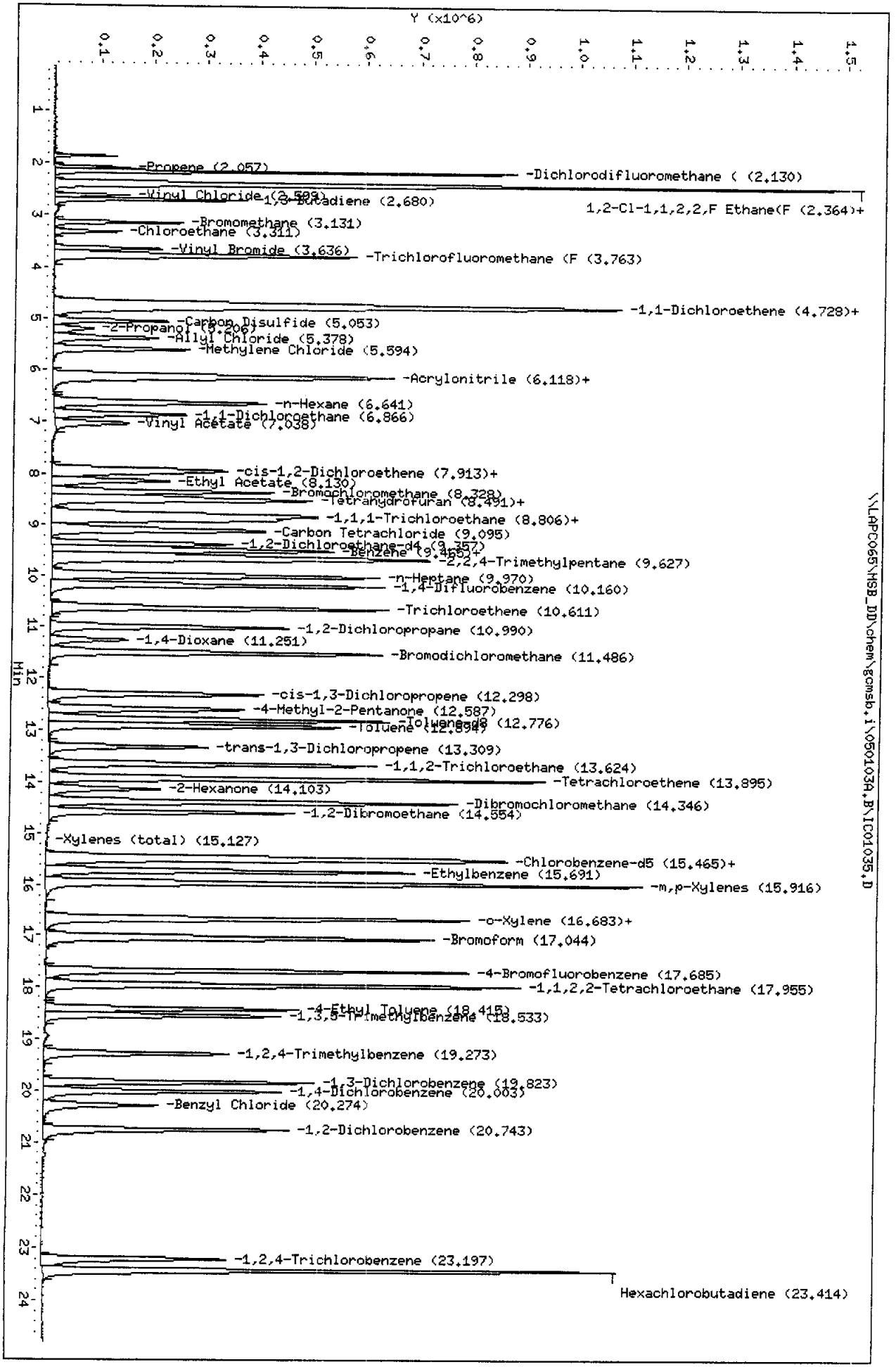
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	93.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
	36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
	37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
	40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
	41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
	43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
	44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
	45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
	53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
	54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
	56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
*	58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
	59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
	60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
	61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
	62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
	64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$	66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
	68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
	69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
	70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
	72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
*	73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
	75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
	78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
	81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
	82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
	85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
	86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$	88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
	89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
	91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
	93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
	95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
	96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
	97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
	98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
*	101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
	102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M	99 Xylenes (total)	106				2384108	300.000	320.3
	104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
	105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
	107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
	108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
	110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$	114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

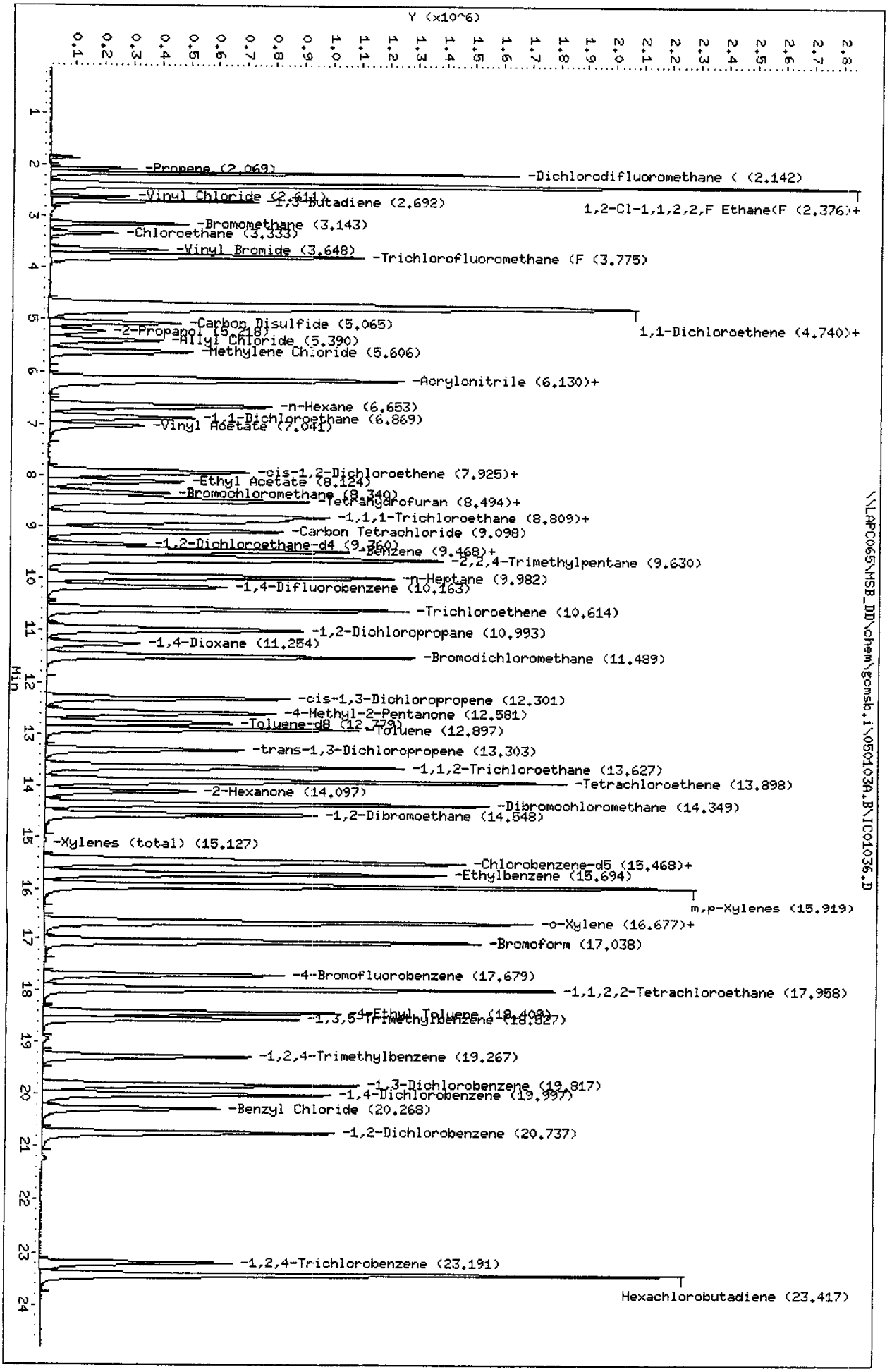
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
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Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
* 58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$ 66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
* 73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$ 88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
89 Toluene	92	12.907	12.893	(1.269)	9076851	500.000	434.3
91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
* 101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M 99 Xylenes (total)	106				11979064	1500.00	1564
104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$ 114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

QC Flag Legend

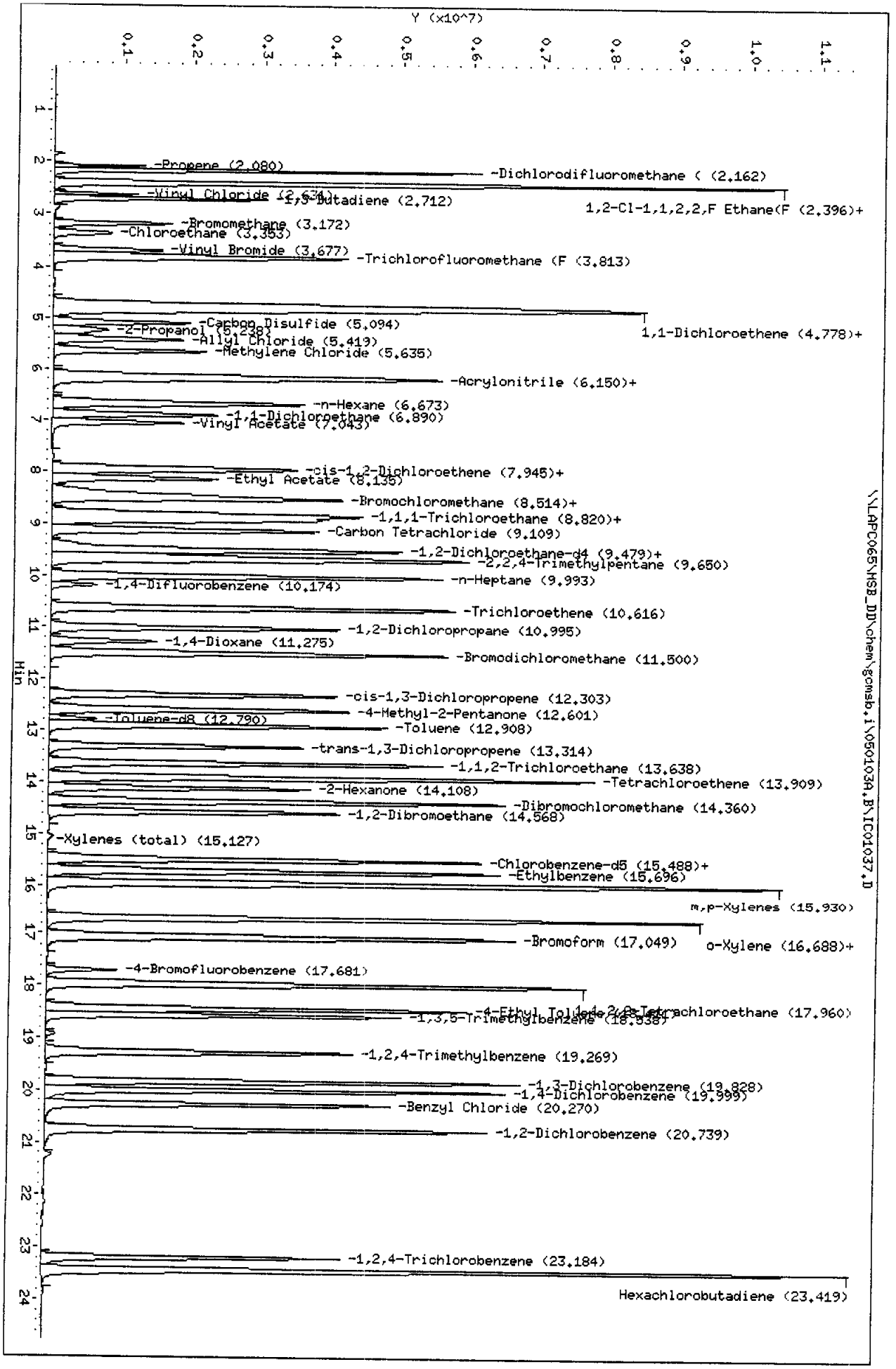
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD.MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 01-17-05 / S017446

E5A100226

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\ 050117. B	BFB Standard: PSL9911283	Initial Calibration ID: 01-3 05
CMS-B	Method File: 7014A	Daily Standard: MSL04011028	SOP: CDI-MS 003
book ID:	Tune File: BF041127.m	LCS Standard: PSL9911359	MDL Date: 01-28-04
AMS-041		I.S. Standard: PSL9911283	Blank Lot No. 050301-00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/17/05	0913	BF01171	—	—	—	BFB	28	—	-	-	AA	NG	A	
1/17/05	0927	BF01172	—	-	-	BFB	28	-	-	-	AA	OK	A	
	0944	CCC1171	—	-	-	CCV	125	-	-	—	AA	OK	B	
	1015	LCC01171	—	—	—	LCS	250	—	—	—	AA	OK	C	
	1045	LCC01172	—	—	—	LCSD	250	—	-	-	AA	OK	C	
	1113	MB01171	—	—	—	Method Blank	500	—	—	—	AA	OK	13	# 0118
	1141	B7636	G2DKQIAD	001	SANDIA	066388.001	40	24.2/12.7	-	23.8	AA	OK	14	ESA100233 -1
	1211	B7637	G2DKRIAD			066389.001	20	24.2/12.7	-	47.6	AA	OK	15	-2
	1239	B7638	G2DKTIAD			066390.001	100	24.3/12.7	-	9.57	AA	OK	16	-3
	1315	B7639	G2DKVIAD			066391.001	100	24.4/12.6	-	9.53	AA	OK	1	-4
	1343	B7640	G2DKWIAD			066392.001	250	24.4/12.7	-	3.84	AA	OK	2	-5
	1416	B7641	G2DKXIAD			066393.001	964	24.4/12.6	—	1	AA	OK	3	-6
	1445	B7642	G2DKOIAD			066394.001	933	24.2/12.7	-	1	AA	OK	4	-7
	1523	B7643	G2DH0IAD			066376.001	980	24.4/12.6	-	1	AA	OK	5	ESA100226 -1
	1557	B7644	G2DH3IAD			066377.001	996	24.3/12.7	-	1	AA	OK	6	-2
	1629	B7645	G2DH4IAD			066378.001	985	24.5/12.5	—	1	AA	OK	7	-3
	1701	B7646	G2DH5IAD			066379.001	996	24.3/12.4	—	1	AA	OK	8	-4
	1736	B7647	G2DH6IAD			066380.001	983	24.3/12.4	-	1	AA	OK	9	-5

99

Viewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
:MS-B	Method File:	Daily Standard: per previous page	SOP:
ook ID:	Tune File:	~~LCS Standard:~~	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/17/05	1810	137648	G2DH7IAD	001	SANDIA	066381_001	1000	24.4/12.2	—	1	w	ok	10	ESA100226-6
	1846	~~B7649~~ LC01173	–	–	–	LCS	250	–	–	–	w	ok	11	
	1922	LC01174	–	–	–	LCSD	250	–	–	–	w	ok	~~B~~ 11	
	1958	MB01172	–	–	–	METHOD BLANK	500	–	–	–	w	ok	~~B~~ 12	
	1846 2236	B7649	G2ETV1AA	001	WESTON	WSG04-010705	80	24.3/11.5	–	21.1	w	OK	~~14~~ 13 15	ESA110276-4
	2112	B7650	G2ETI1AA			WSG05	100	24.4/12.4	–	9.68	w	o/R	~~15~~ 14	-5 ok 20
	2149	B7651	G2ETY1AA			WSG06	50	24.4/12.6	–	19.0	w	o/R	~~16~~ 15	-6 w 200
	2225	B7652	G2ET61AA			WSG07	120	23.8/12.5	–	7.93	w	ok	16	-7 G
	2303	B7653	G2ET81AA			WSG08	225	24.2/12.5	–	4.28	w	ok	~~2~~ 1	-8
	2340	B7654	G2ET91AA			WSG09	250	22.9/12.5	–	3.82	w	o/R	2	-9 w 20
1/18/05	0016	B7655	G2EW1AAA			WSG10	300	22.7/12.4	–	3.05	w	o/R	3	-10 w 30
	0053	B7656	G2MH1AA		SANDIA	066819-001	1010	24.0/11.9	–	1.00	w	ok	4	ESA100321-1
	0130	B7657	G2MJ1AA			066820	984	24.4/12.3	–		w	ok	5	-2
	0208	B7658	G2MJ31AD			066821	965	24.3/12.6	–		w	ok	6	-3
	0244	B7659	G2MJ41AD			066822	1020	24.3/11.9	–		w	ok	7	-4
	0321	B7660	G2MJ91AD			066823	984	24.4/12.2	–		w	ok	8	-5
	0358	B7661	G2MJ71AD			066824	1080	24.0/11.7	–		w	ok	9	-6
	0435	B7662	G2MJ91AD			066825	1020	24.6/12.1	–		w	ok	10	-7

iewed: _____

ESA100226

100

STL Los Angeles
Air Toxics Lab GC/MS Run Log

rument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
book ID:	Tune File:	LCS Standard: 1-18-05	~~MDL Date:~~
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/18/05	0511	B7663	G2MKQAW	001	STANDARD	066826-001	1025	24.6/12.0	--	1.00	w	ok	11	ESA110321-8
	0548	B7664	G2MKAIWD			066827	992	23.8/12.0	-		w	ok	12	-9
	0625	B7665	G2MKJIWD			066828	1030	24.6/12.1	-		w	ok	13	-10
	0701	B7666	G2MLEIWD			066829	988	24.3/12.3	-		w	ok	14	-11
	0738	B7667	G2MLHIWD			066830	996	24.3/11.2	-		w	ok	15	-12
	0817	B7668	G2MLMIWD			066831	1025	24.4/11.9	-		w	ok	16	-13
	0917	B7669	G2ETMAW		WESTON	WSG05-010705	20	24.0/12.4	-		w	NO	1	ESA110276-5
	0918	B7670	G2ETYAW			WSG06	200	24.0/12.6	-		w	ok	2	-6

1-18-05

viewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A140321-13

Lab File ID (Standard): CC01171 Date Analyzed: 01/17/05

Instrument ID: GCMSB Time Analyzed: 0944

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	738375	8.32	1719944	10.14	1320029	15.40
	UPPER LIMIT	1033725	8.82	2407922	10.64	1848041	15.90
	LOWER LIMIT	443025	7.82	1031966	9.64	792017	14.90
	EPA SAMPLE NO.						
01	LCS	690455	8.33	1578011	10.15	1186873	15.40
02	LCSD	693284	8.31	1532598	10.14	1145960	15.40
03	BLANK	656194	8.27	1471831	10.11	1085254	15.39
04	066376-001	631479	8.32	1362444	10.15	1004557	15.41
05	066377-001	624012	8.32	1379403	10.15	993001	15.42
06	066378-001	621734	8.33	1357872	10.15	1004649	15.41
07	066379-001	612683	8.32	1358401	10.15	984364	15.41
08	066380-001	621244	8.33	1343259	10.15	1005368	15.41
09	066381-001	607853	8.32	1350856	10.15	967871	15.41
10	LCS	642063	8.32	1350812	10.15	970436	15.42
11	LCSD	633794	8.32	1329484	10.15	983569	15.41
12	BLANK	622140	8.32	1306741	10.15	973296	15.41
13	WSG04-010705	640355	8.33	1342510	10.15	1031326	15.41
14	WSG05-010705	658484	8.34	1417942	10.15	1116078	15.42
15	WSG06-010705	660435	8.33	1457513	10.16	1087475	15.41
16	WSG07-010705	630711	8.33	1403332	10.15	1075310	15.41
17	WSG08-010705	630512	8.33	1451423	10.15	1141796	15.42
18	WSG09-010705	700237	8.34	1504172	10.16	1200106	15.42
19	WSG10-010705	693204	8.34	1509351	10.15	1181701	15.41
20	066819-001	644222	8.31	1492027	10.15	1067409	15.42
21	066820-001	643938	8.32	1452802	10.15	1079025	15.41
22	066821-001	640063	8.33	1433547	10.15	1049655	15.41

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A140321-13

Lab File ID (Standard): CC01171 Date Analyzed: 01/17/05

Instrument ID: GCMSB Time Analyzed: 0944

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	738375	8.32	1719944	10.14	1320029	15.40
	UPPER LIMIT	1033725	8.82	2407922	10.64	1848041	15.90
	LOWER LIMIT	443025	7.82	1031966	9.64	792017	14.90
	EPA SAMPLE NO.						
01	066822-001	626670	8.32	1400593	10.16	1022451	15.42
02	066823-001	626529	8.32	1376877	10.15	1033046	15.42
03	066824-001	626010	8.32	1394505	10.15	979165	15.41
04	066825-001	629554	8.32	1367075	10.15	973962	15.42
05	066826-001	631239	8.32	1354614	10.16	1006005	15.42
06	066827-001	633002	8.32	1364868	10.15	985616	15.41
07	066828-001	600694	8.32	1344439	10.15	949159	15.41
08	066829-001	630313	8.32	1332007	10.15	947457	15.41
09	066830-001	619552	8.32	1320903	10.14	950513	15.41
10	066831-001	597615	8.31	1271957	10.14	912801	15.40
11	WSG05-010705	642815	8.31	1317140	10.14	934440	15.40
12	WSG06-010705	639479	8.34	1353224	10.16	1055929	15.40
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D
Lab Smp Id:
Inj Date : 17-JAN-2005 09:27
Operator : AA Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.078	4.200	(0.000)	95	84936			0.00- 100.00	100.00
4.078	4.200	(0.000)	50	18370			15.00- 40.00	21.63
4.078	4.200	(0.000)	75	43576			30.00- 60.00	51.30
4.078	4.200	(0.000)	96	5675			5.00- 9.00	6.68
4.078	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.078	4.200	(0.000)	174	48266			50.00- 120.00	56.83
4.078	4.200	(0.000)	175	3961			5.00- 9.00	8.21
4.078	4.200	(0.000)	176	47722			95.00- 101.00	98.87
4.078	4.200	(0.000)	177	3113			5.00- 9.00	6.52

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D

Date : 17-JAN-2005 09:27

Client ID:

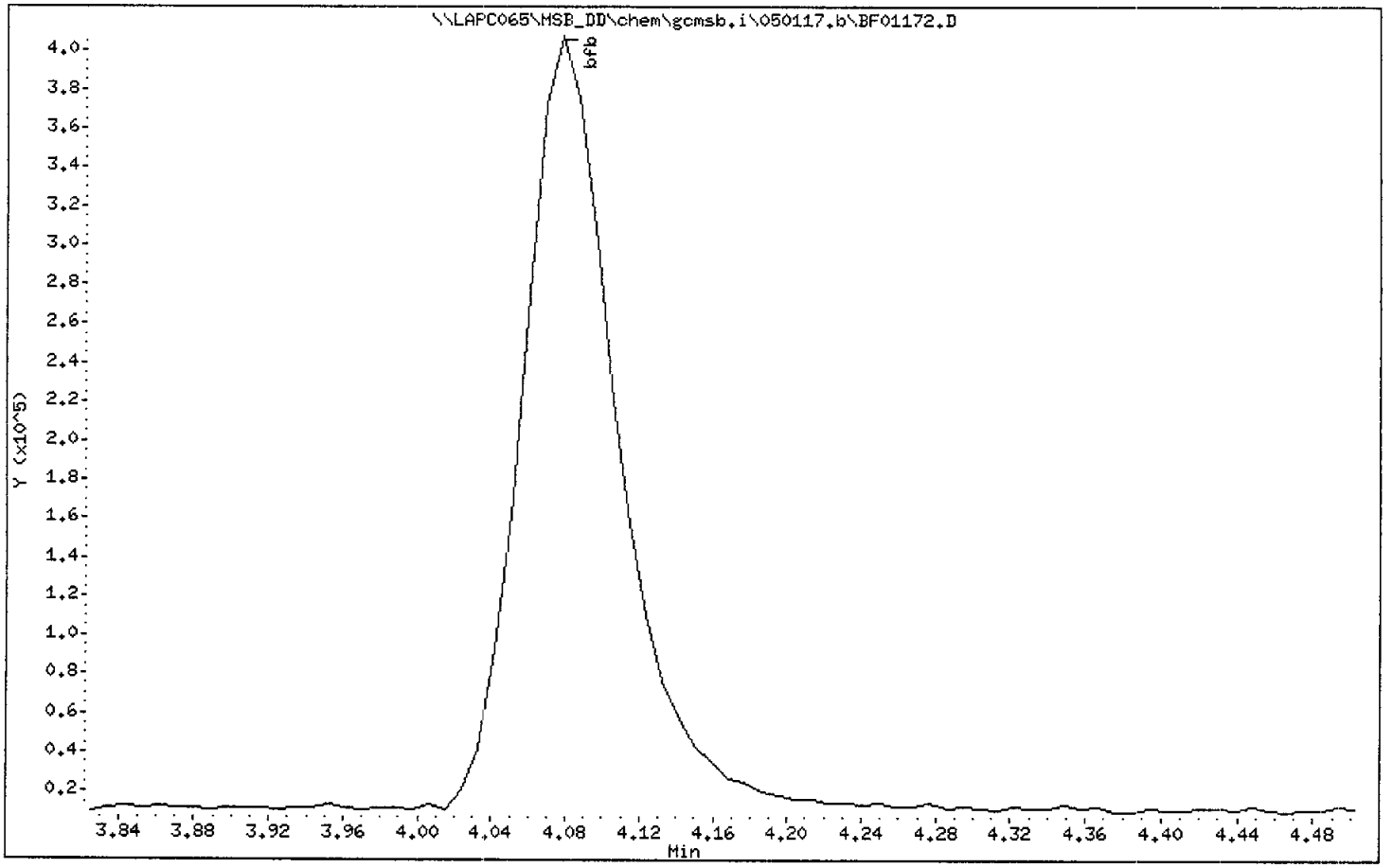
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D

Date : 17-JAN-2005 09:27

Client ID:

Instrument: gcmsb.i

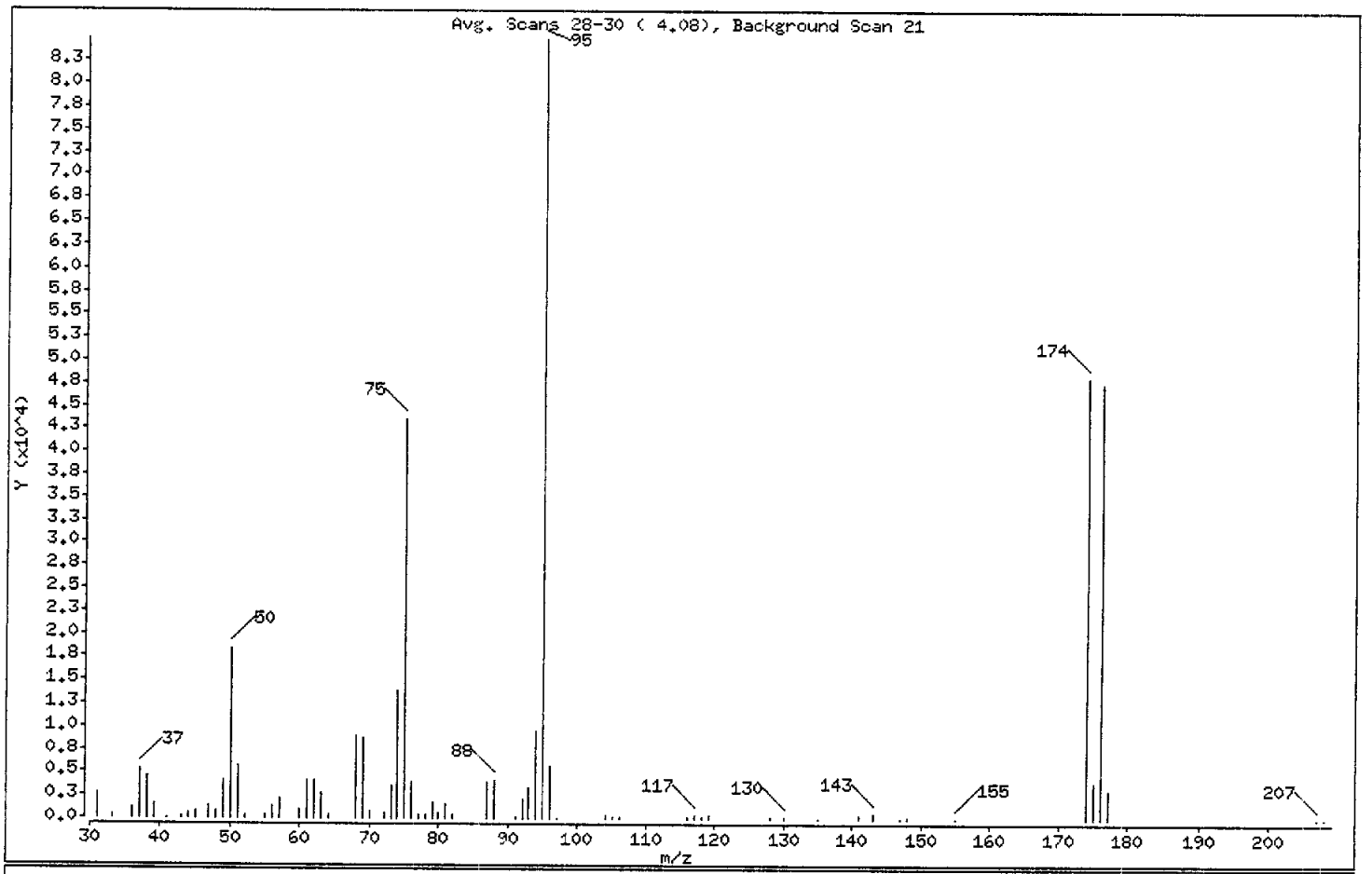
Sample Info: BFB,PSL9911283

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.63
75	30.00 - 60.00% of mass 95	51.30
96	5.00 - 9.00% of mass 95	6.68
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.83
175	5.00 - 9.00% of mass 174	4.66 (8.21)
176	95.00 - 101.00% of mass 174	56.19 (98.87)
177	5.00 - 9.00% of mass 176	3.67 (6.52)

1/18-5

AA 1/17/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D

Date : 17-JAN-2005 09:27

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01172.D

Spectrum: Avg. Scans 28-30 (4.08), Background Scan 21

Location of Maximum: 95.00

Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2763	57.00	2171	81.00	1593	128.00	219
33.00	363	60.00	995	82.00	437	130.00	266
36.00	1142	61.00	4106	87.00	3925	135.00	63
37.00	5253	62.00	4042	88.00	4136	141.00	425
38.00	4512	63.00	2690	91.00	265	143.00	489
39.00	1473	64.00	302	92.00	2151	147.00	62
41.00	64	68.00	8954	93.00	3246	148.00	166
43.00	206	69.00	8753	94.00	9506	155.00	68
44.00	493	70.00	771	95.00	84936	174.00	48264
45.00	796	72.00	594	96.00	5675	175.00	3961
47.00	1372	73.00	3549	97.00	64	176.00	47720
48.00	689	74.00	13847	104.00	315	177.00	3113
49.00	4114	75.00	43576	105.00	207	207.00	69
50.00	18368	76.00	3890	106.00	270	208.00	62
51.00	5651	77.00	374	116.00	130		
52.00	368	78.00	406	117.00	371		
55.00	358	79.00	1780	118.00	162		
56.00	1408	80.00	547	119.00	299		

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 17-JAN-2005 09:44
Lab File ID: CC01171.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	1 Propene	0.18345	0.18625	0.010	1.5	30.0	
	3 Dichlorodifluoromethane (F1	2.11052	2.03885	0.010	-3.4	30.0	
	5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.73582	0.010	1.1	30.0	
	8 Chloromethane	0.09369	0.10009	0.100	6.8	30.0	
	9 Vinyl Chloride	0.40660	0.42304	0.010	4.0	30.0	
	12 1,3-Butadiene	0.27551	0.27087	0.010	-1.7	30.0	
	15 Bromomethane	0.50552	0.51268	0.010	1.4	30.0	
	16 Chloroethane	0.25753	0.28073	0.010	9.0	30.0	
	19 Vinyl Bromide	0.57915	0.63951	0.010	10.4	30.0	
	21 Trichlorofluoromethane (F11	2.12773	2.05720	0.010	-3.3	30.0	
	28 1,1-Dichloroethene	1.12859	1.12737	0.010	-0.1	30.0	
	30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.48552	0.010	1.7	30.0	
	31 Acetone	0.16001	0.17957	0.010	12.2	30.0	
	33 Carbon Disulfide	1.06127	1.30504	0.010	23.0	30.0	
	34 2-Propanol	0.56591	0.59574	0.010	5.3	30.0	
	36 Allyl Chloride	0.58587	0.64985	0.010	10.9	30.0	
	37 Methylene Chloride	0.69686	0.66374	0.010	-4.8	30.0	
	40 Acrylonitrile	0.18791	0.22161	0.010	17.9	30.0	
	41 trans-1,2-Dichloroethene	0.98199	1.02119	0.010	4.0	30.0	
	42 Methyl-tert-butyl ether[MTB	1.66607	1.77734	0.010	6.7	30.0	
	43 n-Hexane	0.77083	0.74902	0.010	-2.8	30.0	
	44 1,1-Dichloroethane	1.23672	1.26123	0.100	2.0	30.0	
	45 Vinyl Acetate	1.19013	1.29980	0.010	9.2	30.0	
	53 cis-1,2-Dichloroethene	0.63910	0.67871	0.010	6.2	30.0	
	54 2-Butanone	0.21287	0.24134	0.010	13.4	30.0	
	56 Ethyl Acetate	1.14995	1.35156	0.010	17.5	30.0	
	59 Tetrahydrofuran	0.55193	0.55958	0.010	1.4	30.0	
	60 Chloroform	1.59075	1.56823	0.010	-1.4	30.0	
	61 1,1,1-Trichloroethane	1.59033	1.61298	0.010	1.4	30.0	
	62 Cyclohexane	0.79797	0.83884	0.010	5.1	30.0	
	64 Carbon Tetrachloride	1.05674	1.48410	0.010	40.4	30.0	<-
$	66 1,2-Dichloroethane-d4	0.41033	0.37997	0.010	-7.4	30.0	
	68 Benzene	0.68038	0.66430	0.010	-2.4	30.0	
	69 1,2-Dichloroethane	0.44323	0.39403	0.010	-11.1	30.0	
	70 2,2,4-Trimethylpentane	1.74763	1.69828	0.010	-2.8	30.0	

AA 1/17/05

VE 1-18-05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i
Lab File ID: CC01171.D
Analysis Type: AIR
Lab Sample ID: 50 PPBV STD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m

Injection Date: 17-JAN-2005 09:44
Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Init. Cal. Times: 14:40 23:34
Quant Type: ISTD

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	72 n-Heptane	0.58544	0.55296	0.010	-5.5	30.0
	75 Trichloroethene	0.43657	0.43403	0.010	-0.6	30.0
	78 1,2-Dichloropropane	0.16390	0.15617	0.010	-4.7	30.0
	81 1,4-Dioxane	0.15796	0.17124	0.010	8.4	30.0
	82 Bromodichloromethane	0.54492	0.57209	0.010	5.0	30.0
	85 cis-1,3-Dichloropropene	0.44931	0.51550	0.010	14.7	30.0
	86 4-Methyl-2-Pentanone	0.22967	0.23951	0.010	4.3	30.0
$	88 Toluene-d8	0.52356	0.53535	0.010	2.3	30.0
	89 Toluene	0.88039	0.85263	0.010	-3.2	30.0
	91 trans-1,3-Dichloropropene	0.42279	0.49327	0.010	16.7	30.0
	93 1,1,2-Trichloroethane	0.56403	0.54316	0.010	-3.7	30.0
	95 Tetrachloroethene	0.78282	0.74644	0.010	-4.6	30.0
	96 2-Hexanone	0.25237	0.29324	0.010	16.2	30.0
	97 Dibromochloromethane	0.94658	1.06533	0.010	12.5	30.0
	98 1,2-Dibromoethane	0.94544	0.98303	0.010	4.0	30.0
	102 Chlorobenzene	0.91801	0.90070	0.300	-1.9	30.0
M	99 Xylenes (total)	0.40771	0.44754	0.010	9.8	30.0
	104 Ethylbenzene	1.42124	1.46273	0.010	2.9	30.0
	105 m,p-Xylenes	0.41273	0.45180	0.010	9.5	30.0
	107 o-Xylene	0.39767	0.43903	0.010	10.4	30.0
	108 Styrene	0.49829	0.59010	0.010	18.4	30.0
	110 Bromoform	0.74450	0.93746	0.100	25.9	30.0
$	114 4-Bromofluorobenzene	0.89318	0.93650	0.010	4.8	30.0
	116 1,1,2,2-Tetrachloroethane	1.35429	1.34428	0.300	-0.7	30.0
	123 4-Ethyl Toluene	0.84706	1.02443	0.010	20.9	30.0
	124 1,3,5-Trimethylbenzene	0.94631	0.88195	0.010	-6.8	30.0
	131 1,2,4-Trimethylbenzene	0.27527	0.28873	0.010	4.9	30.0
	134 1,3-Dichlorobenzene	0.52632	0.61516	0.010	16.9	30.0
	136 1,4-Dichlorobenzene	0.54141	0.57182	0.010	5.6	30.0
	138 Benzyl Chloride	0.56325	0.72265	0.010	28.3	30.0
	140 1,2-Dichlorobenzene	0.53798	0.58430	0.010	8.6	30.0
	144 1,2,4-Trichlorobenzene	0.26641	0.31163	0.010	17.0	30.0
	145 Hexachlorobutadiene	0.48586	0.47297	0.010	-2.7	30.0

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\CC01171.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 17-JAN-2005 09:44
Operator : AA Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.059	2.059	(0.248)	137520	50.0000	50.76
3 Dichlorodifluoromethane (F12)	85	2.123	2.123	(0.255)	1505439	50.0000	48.30
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.357	2.357	(0.283)	1281684	50.0000	50.57
8 Chloromethane	52	2.402	2.402	(0.289)	73907	50.0000	53.42(Q)
9 Vinyl Chloride	62	2.592	2.592	(0.312)	312359	50.0000	52.02
12 1,3-Butadiene	39	2.664	2.664	(0.320)	400010	100.000	98.32
15 Bromomethane	94	3.124	3.124	(0.375)	378549	50.0000	50.71
16 Chloroethane	64	3.304	3.304	(0.397)	207284	50.0000	54.50
19 Vinyl Bromide	106	3.629	3.629	(0.436)	472195	50.0000	55.21
21 Trichlorofluoromethane (F11)	101	3.756	3.756	(0.451)	1518984	50.0000	48.34
28 1,1-Dichloroethene	61	4.685	4.685	(0.563)	832421	50.0000	49.94
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.739	4.739	(0.570)	1835244	50.0000	50.84
31 Acetone	58	4.847	4.847	(0.583)	132586	50.0000	56.11(Q)
33 Carbon Disulfide	76	5.037	5.037	(0.605)	963608	50.0000	61.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.199	5.199	(0.625)	439879	50.0000	52.64
	36 Allyl Chloride	41	5.371	5.371	(0.645)	479830	50.0000	55.46
	37 Methylene Chloride	49	5.587	5.587	(0.671)	490086	50.0000	47.62
	40 Acrylonitrile	53	6.083	6.083	(0.731)	163631	50.0000	58.97
	41 trans-1,2-Dichloroethene	61	6.102	6.102	(0.733)	754023	50.0000	52.00
	42 Methyl-tert-butyl ether[MTBE]	73	6.138	6.138	(0.738)	1312342	50.0000	53.34
	43 n-Hexane	41	6.634	6.634	(0.797)	553057	50.0000	48.58
	44 1,1-Dichloroethane	63	6.850	6.850	(0.823)	931261	50.0000	50.99
	45 Vinyl Acetate	43	7.031	7.031	(0.845)	959741	50.0000	54.61
	53 cis-1,2-Dichloroethene	96	7.906	7.906	(0.950)	501143	50.0000	53.10
	54 2-Butanone	72	7.969	7.969	(0.958)	178196	50.0000	56.69
	56 Ethyl Acetate	43	8.114	8.114	(0.975)	997956	50.0000	58.76
*	58 Bromochloromethane	49	8.321	8.321	(1.000)	738375	50.0000	
	59 Tetrahydrofuran	42	8.420	8.420	(1.012)	413181	50.0000	50.69
	60 Chloroform	83	8.484	8.484	(1.020)	1157942	50.0000	49.29
	61 1,1,1-Trichloroethane	97	8.781	8.781	(1.055)	1190986	50.0000	50.71
	62 Cyclohexane	84	8.871	8.871	(1.066)	619381	50.0000	52.56
	64 Carbon Tetrachloride	117	9.079	9.079	(1.091)	1095820	50.0000	70.22
$	66 1,2-Dichloroethane-d4	65	9.341	9.341	(0.921)	653525	50.0000	46.30
	68 Benzene	78	9.440	9.440	(0.931)	1142559	50.0000	48.82
	69 1,2-Dichloroethane	62	9.467	9.467	(0.933)	677711	50.0000	44.45
	70 2,2,4-Trimethylpentane	57	9.611	9.611	(0.948)	2920945	50.0000	48.59
	72 n-Heptane	43	9.954	9.954	(0.981)	951056	50.0000	47.23
*	73 1,4-Difluorobenzene	114	10.144	10.144	(1.000)	1719944	50.0000	
	75 Trichloroethene	130	10.586	10.586	(1.044)	746504	50.0000	49.71
	78 1,2-Dichloropropane	76	10.974	10.974	(1.082)	268610	50.0000	47.64
	81 1,4-Dioxane	88	11.244	11.244	(1.109)	294524	50.0000	54.20
	82 Bromodichloromethane	85	11.470	11.470	(1.131)	983965	50.0000	52.49
	85 cis-1,3-Dichloropropene	75	12.282	12.282	(1.211)	886625	50.0000	57.36
	86 4-Methyl-2-Pentanone	58	12.562	12.562	(1.238)	411938	50.0000	52.14(Q)
$	88 Toluene-d8	100	12.751	12.751	(1.257)	920776	50.0000	51.13
	89 Toluene	91	12.878	12.878	(1.270)	1466469	50.0000	48.42
	91 trans-1,3-Dichloropropene	75	13.284	13.284	(0.862)	651129	50.0000	58.33
	93 1,1,2-Trichloroethane	97	13.608	13.608	(0.883)	716986	50.0000	48.15
	95 Tetrachloroethene	166	13.870	13.870	(0.900)	985324	50.0000	47.68
	96 2-Hexanone	58	14.087	14.087	(0.914)	387090	50.0000	58.10(Q)
	97 Dibromochloromethane	129	14.321	14.321	(0.930)	1406260	50.0000	56.27
	98 1,2-Dibromoethane	107	14.529	14.529	(0.943)	1297628	50.0000	51.99
*	101 Chlorobenzene-d5	117	15.404	15.404	(1.000)	1320029	50.0000	
	102 Chlorobenzene	112	15.458	15.458	(1.004)	1188947	50.0000	49.06
M	99 Xylenes (total)	106				1772308	150.000	164.7
	104 Ethylbenzene	91	15.675	15.675	(1.018)	1930841	50.0000	51.46
	105 m,p-Xylenes	106	15.891	15.891	(1.032)	1192774	100.000	109.5
	107 o-Xylene	106	16.649	16.649	(1.081)	579534	50.0000	55.20
	108 Styrene	104	16.676	16.676	(1.083)	778948	50.0000	59.21
	110 Bromoform	173	17.019	17.019	(1.105)	1237477	50.0000	62.96
$	114 4-Bromofluorobenzene	95	17.651	17.651	(1.146)	1236206	50.0000	52.42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.930	17.930	(1.164)	1774493	50.0000	49.63
123 4-Ethyl Toluene	105	18.381	18.381	(1.193)	1352273	50.0000	60.47
124 1,3,5-Trimethylbenzene	105	18.508	18.508	(1.201)	1164195	50.0000	46.60
131 1,2,4-Trimethylbenzene	120	19.248	19.248	(1.250)	381134	50.0000	52.45
134 1,3-Dichlorobenzene	146	19.798	19.798	(1.285)	812026	50.0000	58.44
136 1,4-Dichlorobenzene	146	19.978	19.978	(1.297)	754813	50.0000	52.81
138 Benzyl Chloride	91	20.249	20.249	(1.315)	953915	50.0000	64.15
140 1,2-Dichlorobenzene	146	20.718	20.718	(1.345)	771287	50.0000	54.30
144 1,2,4-Trichlorobenzene	180	23.181	23.181	(1.505)	411364	50.0000	58.49
145 Hexachlorobutadiene	225	23.398	23.398	(1.519)	624340	50.0000	48.67

QC Flag Legend

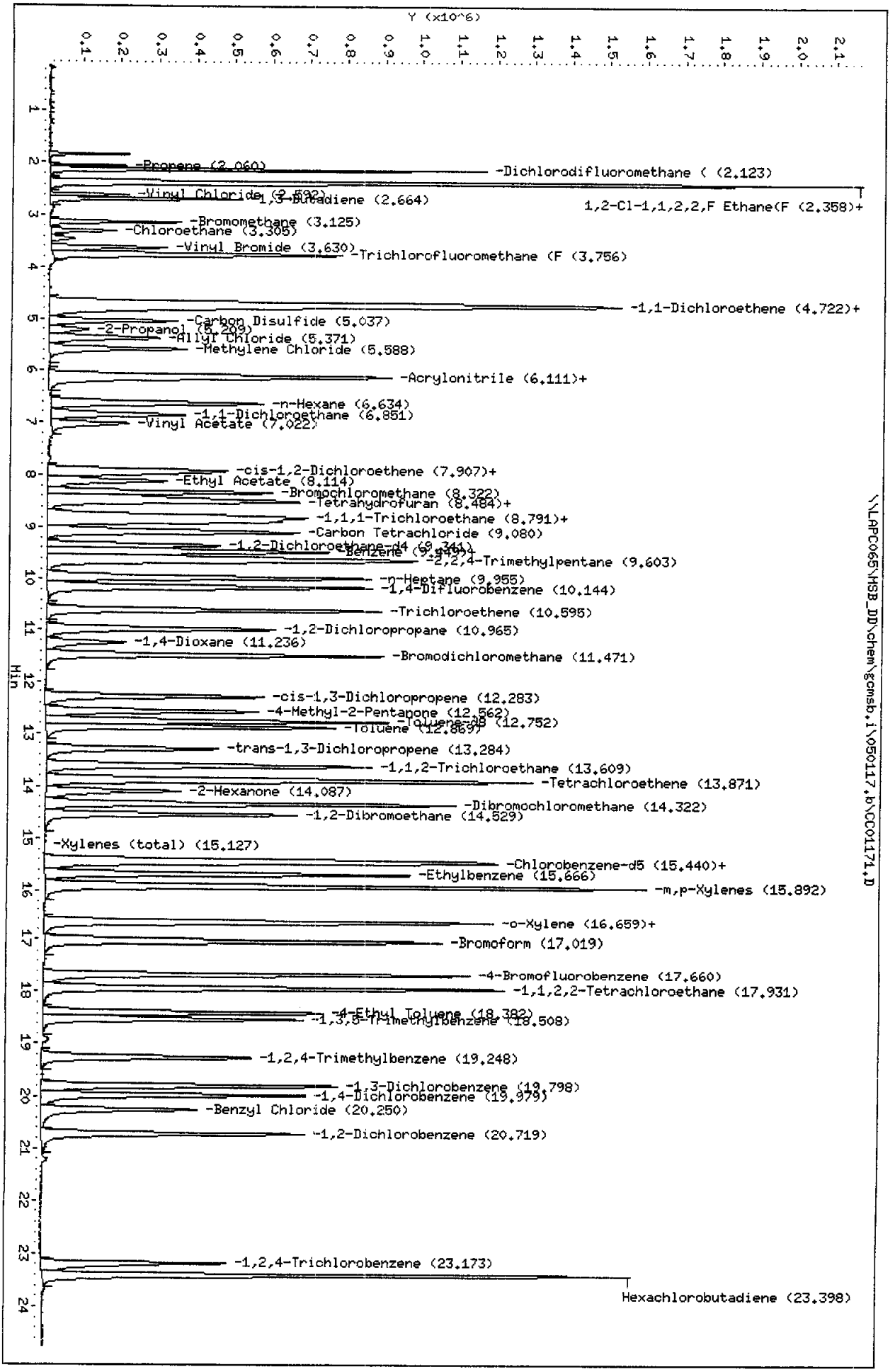
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\CC01171.D
Date : 17-JAN-2005 09:44
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA
Column diameter: 0.53



Reduced By: MA Date: 1/17/05 LCSD Report
Reviewed By: W Date: 1-18-05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B/LC01171.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 17-JAN-2005 10:15

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B/LC01172.D
Samp Info : LCSD,LCSD,MSL0501045
Inj Date : 17-JAN-2005 10:45

	Concentration								
	Mass Spiked		Measured			%Recovery		RPD	
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	51.8	49.9	50.9	100.8	70	125	4	20
Methylene Chloride									
54.5	188.95	56.5	55.0	55.7	102.3	75	120	3	20
Trichloroethene									
49.5	265.47	49.8	49.9	49.8	100.7	70	125	0	20
Toluene									
49.5	186.17	47.9	49.1	48.5	98.0	75	125	3	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	48.0	49.4	48.7	97.4	65	130	3	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01171.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 17-JAN-2005 10:15
Operator : AA Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,250,250,3,,LCS,spk.sub,1,sh.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: spk.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.709	4.685	(0.566)	807569	51.8176	51.82
37 Methylene Chloride	49	5.602	5.587	(0.673)	543241	56.4523	56.45
* 58 Bromochloromethane	49	8.327	8.321	(1.000)	690455	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.347	9.341	(0.921)	560386	43.2728	43.27
* 73 1,4-Difluorobenzene	114	10.150	10.144	(1.000)	1578011	50.0000	
75 Trichloroethene	130	10.592	10.586	(1.044)	685797	49.7735	49.77
$ 88 Toluene-d8	100	12.757	12.751	(1.257)	838478	50.7439	50.74
89 Toluene	91	12.875	12.878	(1.268)	1330127	47.8717	47.87
* 101 Chlorobenzene-d5	117	15.401	15.404	(1.000)	1186873	50.0000	
$ 114 4-Bromofluorobenzene	95	17.657	17.651	(1.146)	949369	44.7775	44.78
116 1,1,2,2-Tetrachloroethane	83	17.927	17.930	(1.164)	1543244	48.0051	48.00

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01171.D

Date : 17-JAN-2005 10:15

Client ID: LCS

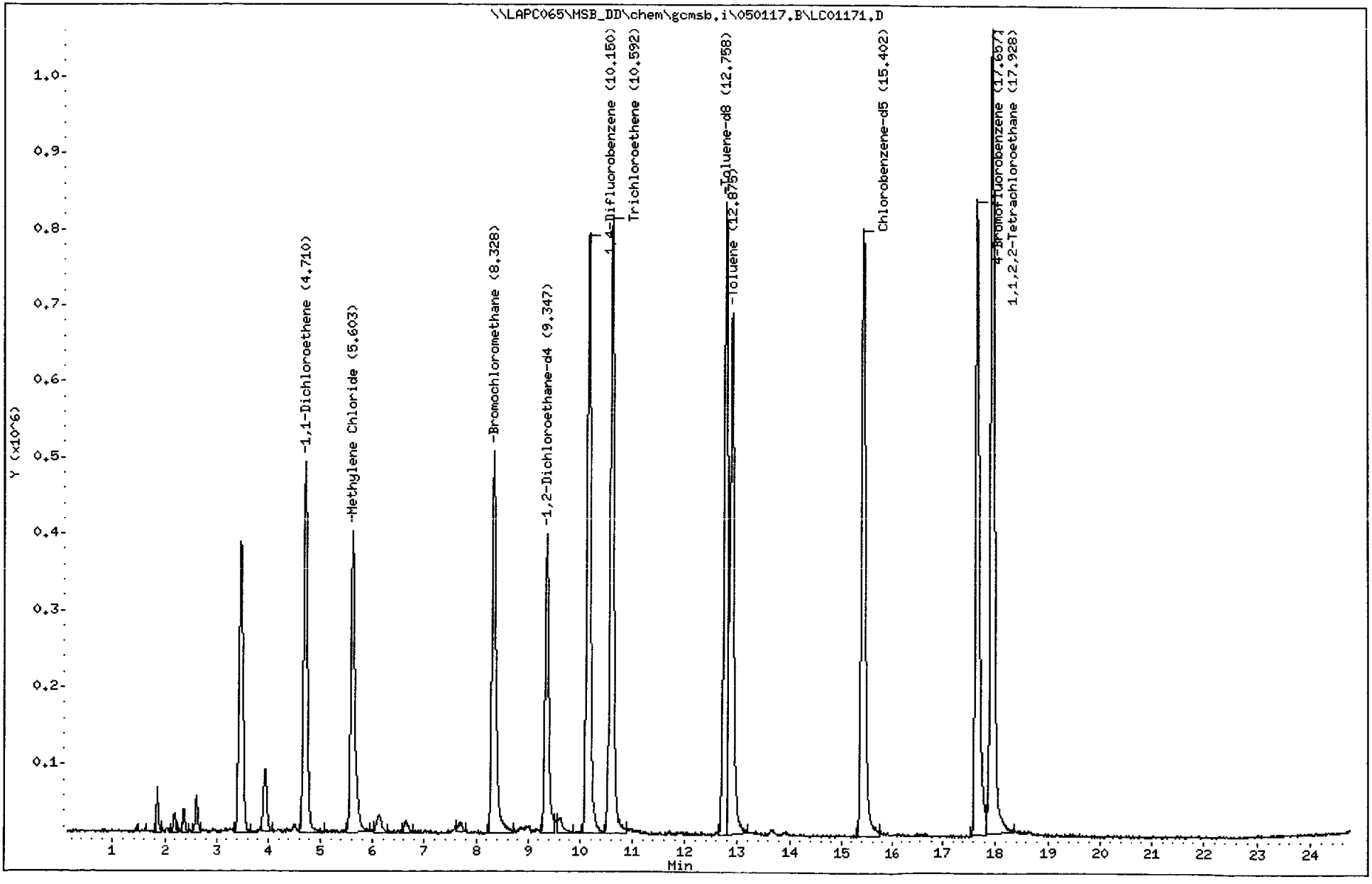
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01172.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 17-JAN-2005 10:45
Operator : AA Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,MSL0501045
Misc Info : 1,1,250,250,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.687	4.685	(0.564)	781439	49.9364	49.94
37 Methylene Chloride	49	5.589	5.587	(0.672)	531853	55.0433	55.04
* 58 Bromochloromethane	49	8.314	8.321	(1.000)	693284	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.341	(0.922)	558848	44.4327	44.43
* 73 1,4-Difluorobenzene	114	10.137	10.144	(1.000)	1532598	50.0000	
75 Trichloroethene	130	10.588	10.586	(1.045)	667542	49.8842	49.88
$ 88 Toluene-d8	100	12.744	12.751	(1.257)	817565	50.9444	50.94
89 Toluene	91	12.870	12.878	(1.270)	1326468	49.1547	49.15
* 101 Chlorobenzene-d5	117	15.397	15.404	(1.000)	1145960	50.0000	
$ 114 4-Bromofluorobenzene	95	17.652	17.651	(1.146)	900389	43.9835	43.98
116 1,1,2,2-Tetrachloroethane	83	17.932	17.930	(1.165)	1531986	49.3563	49.36

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01172.D

Date : 17-JAN-2005 10:45

Client ID: LCSD

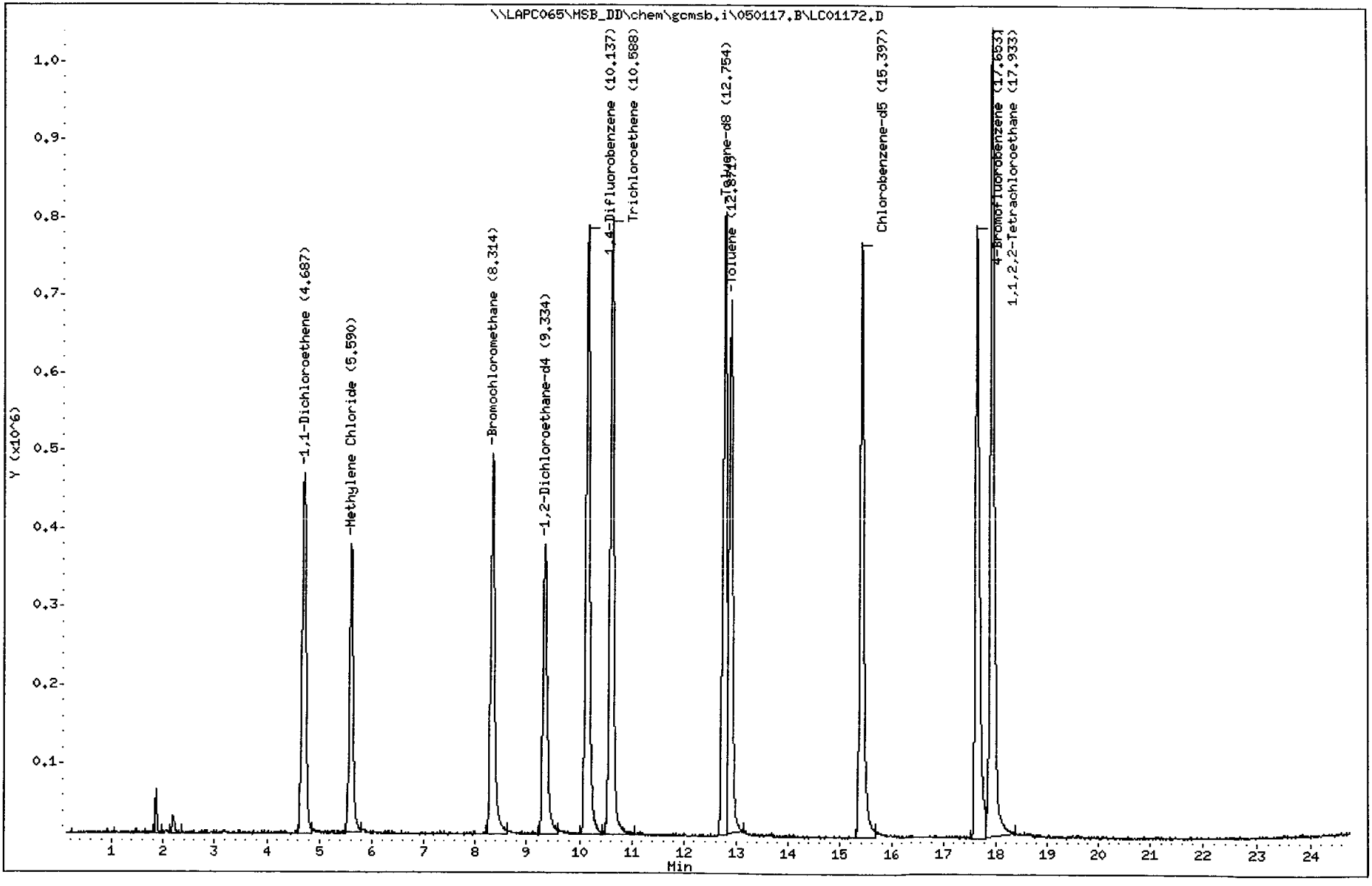
Sample Info: LCSD,LCSD,MSL0501045

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



118

E5A100226

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\MB01171.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 17-JAN-2005 11:13
Operator : AA Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,0118
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.273	8.321	(1.000)	656194	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.302	9.341	(0.920)	545601	45.1704	45.17
* 73 1,4-Difluorobenzene	114	10.114	10.144	(1.000)	1471831	50.0000	
$ 88 Toluene-d8	100	12.739	12.751	(1.260)	785168	50.9456	50.94
* 101 Chlorobenzene-d5	117	15.392	15.404	(1.000)	1085254	50.0000	
$ 114 4-Bromofluorobenzene	95	17.648	17.651	(1.147)	874239	45.0950	45.09

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\MB01171.D

Date : 17-JAN-2005 11:13

Client ID: BLANK

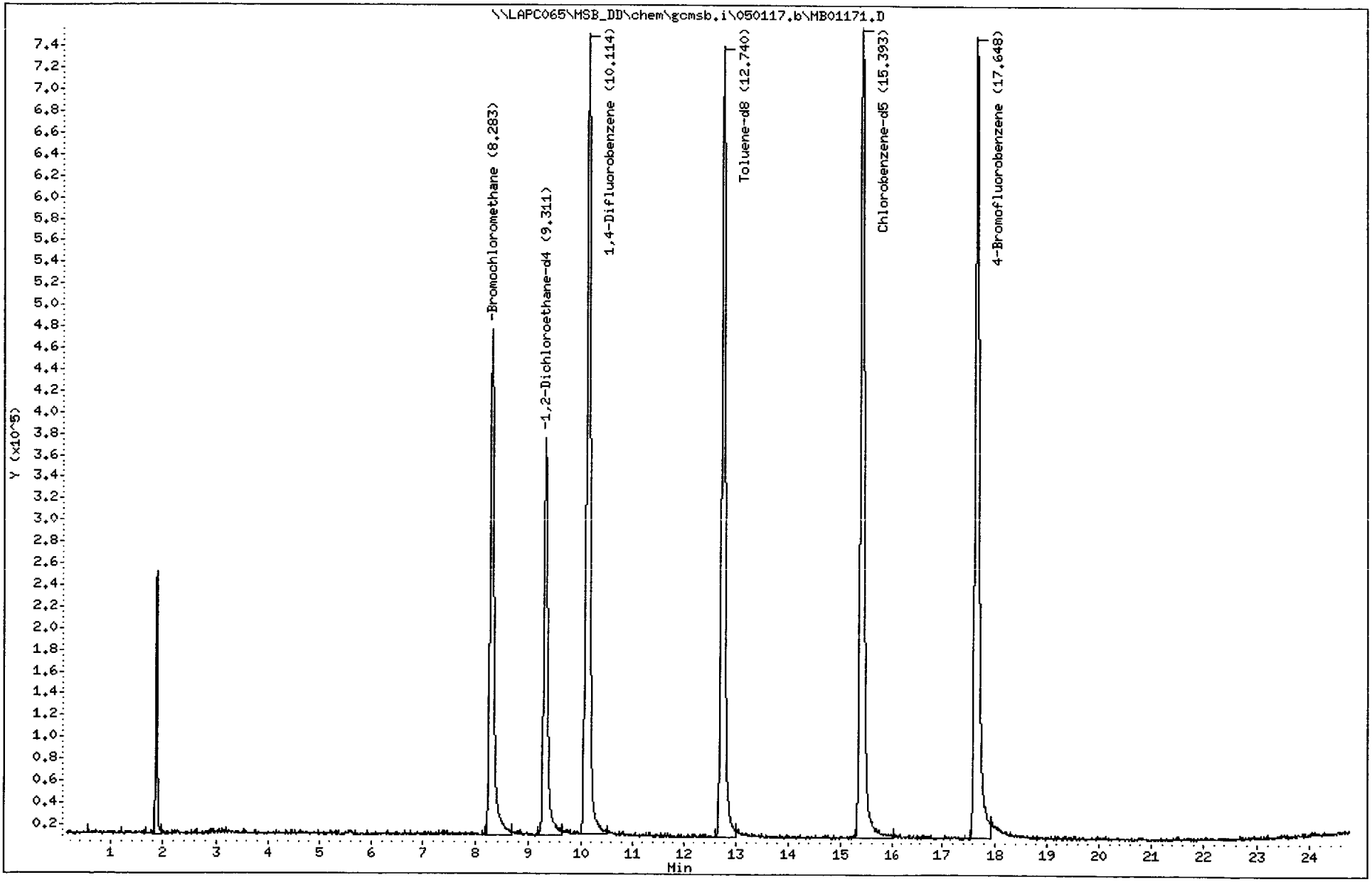
Sample Info: BLANK,BLANK,0118

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D
Lab Smp Id: G2DH01AD Client Smp ID: 066376-001
Inj Date : 17-JAN-2005 15:23
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DH01AD,066376-001,SANDIA,E5A100226-1
Misc Info : 23.9,12.2,500,980,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.900	FinalPres
InitPres	12.200	InitPres
CalVol	500.000	CalVol
SmpVol	980.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.143	2.123	(0.258)	14846	0.55699	0.5567(a)
31 Acetone	58	4.904	4.847	(0.590)	10783	5.33601	5.333(aQ)
54 2-Butanone	72	8.098	7.969	(0.974)	5402	2.00964	2.009(a)
* 58 Bromochloromethane	49	8.315	8.321	(1.000)	631479	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.341	(0.921)	526662	47.1032	47.08
* 73 1,4-Difluorobenzene	114	10.146	10.144	(1.000)	1362444	50.0000	
75 Trichloroethene	130	10.625	10.586	(1.047)	11804	0.99234	0.9918(a)
$ 88 Toluene-d8	100	12.763	12.751	(1.258)	724047	50.7517	50.73
89 Toluene	91	12.907	12.878	(1.272)	19707	0.82151	0.8211(a)
* 101 Chlorobenzene-d5	117	15.407	15.404	(1.000)	1004557	50.0000	
$ 114 4-Bromofluorobenzene	95	17.671	17.651	(1.147)	804378	44.8244	44.80

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D

Date : 17-JAN-2005 15:23

Client ID: 066376-001

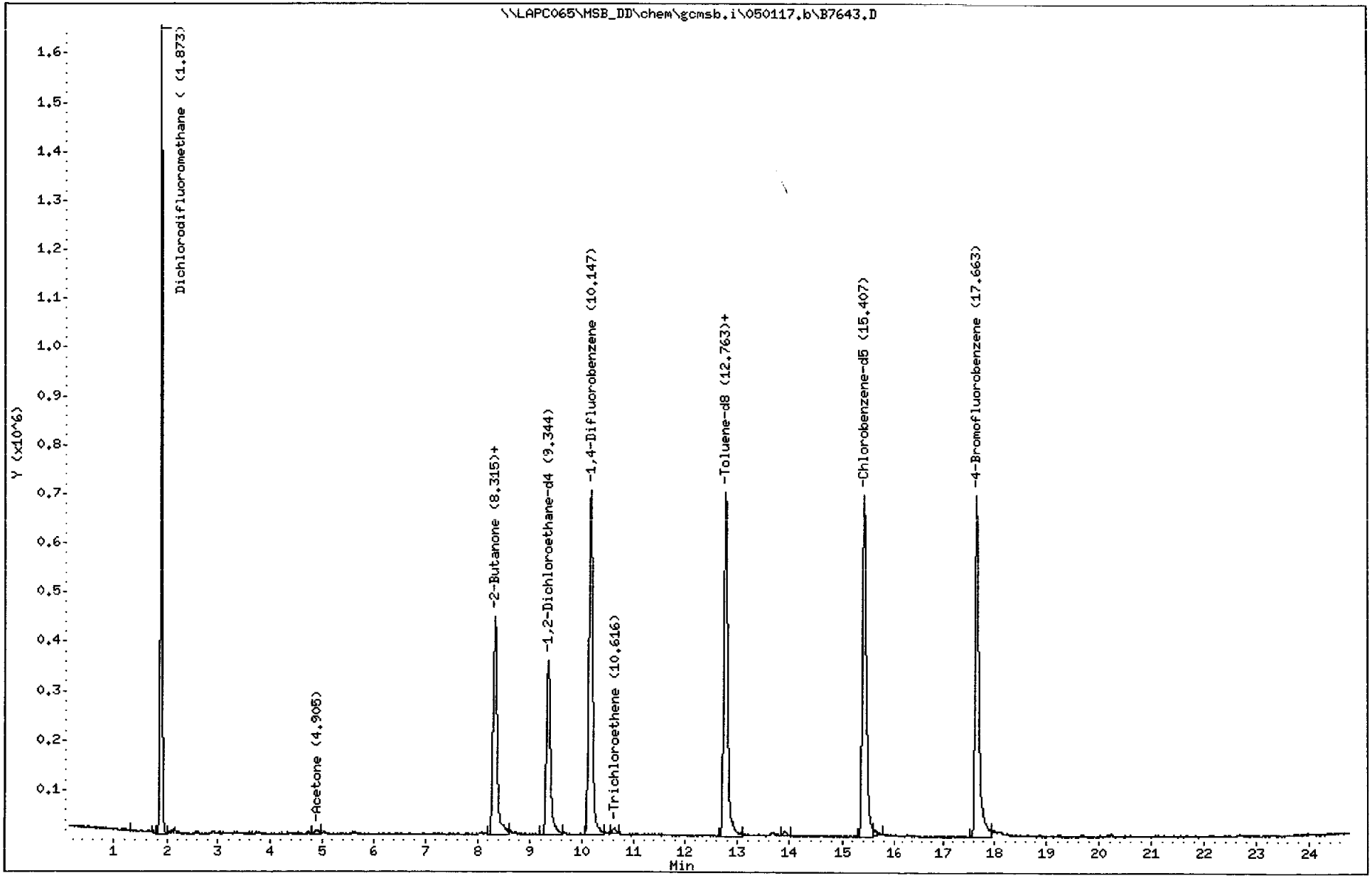
Sample Info: G2DH01AD,066376-001,SANDIA,E5A100226-1

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D

Date : 17-JAN-2005 15:23

Client ID: 066376-001

Instrument: gcmsb.i

Sample Info: G2DH01AD,066376-001,SANDIA,E5A100226-1

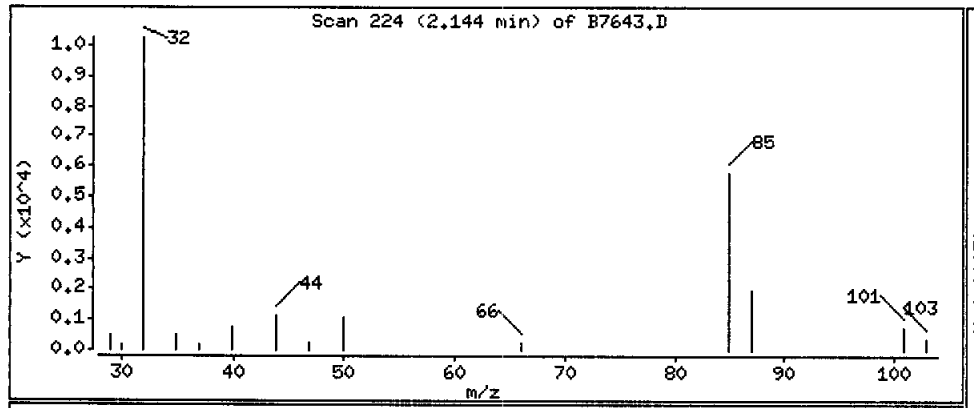
Operator: AA

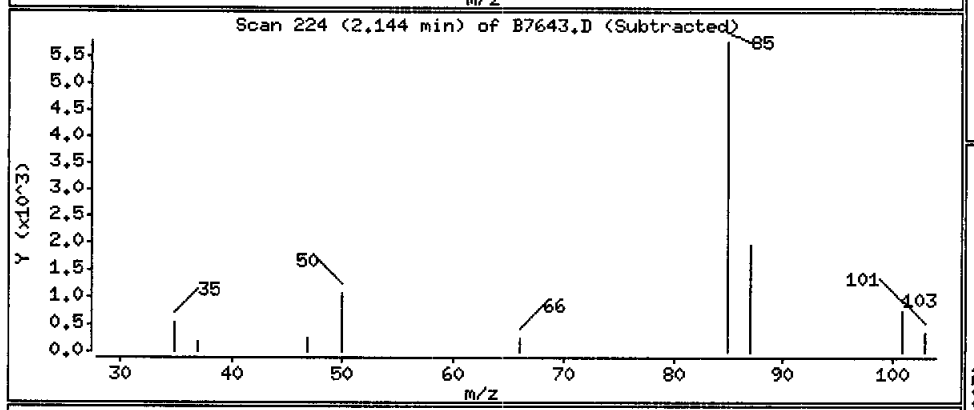
Column phase: J&W DB-624

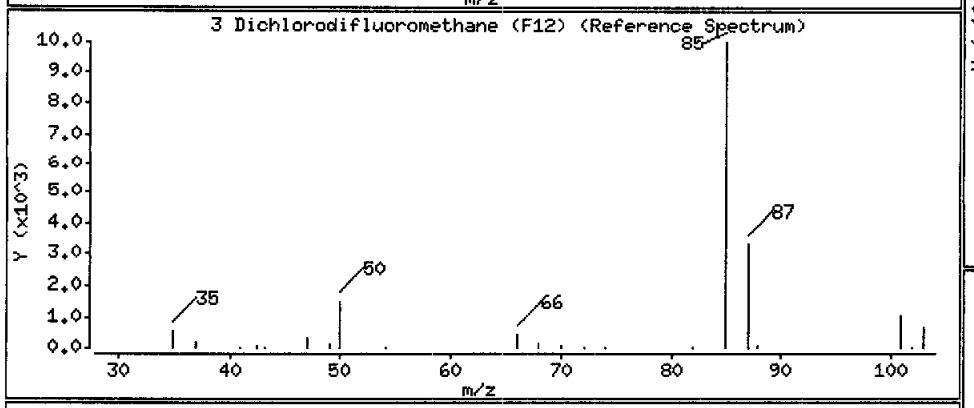
Column diameter: 0.53

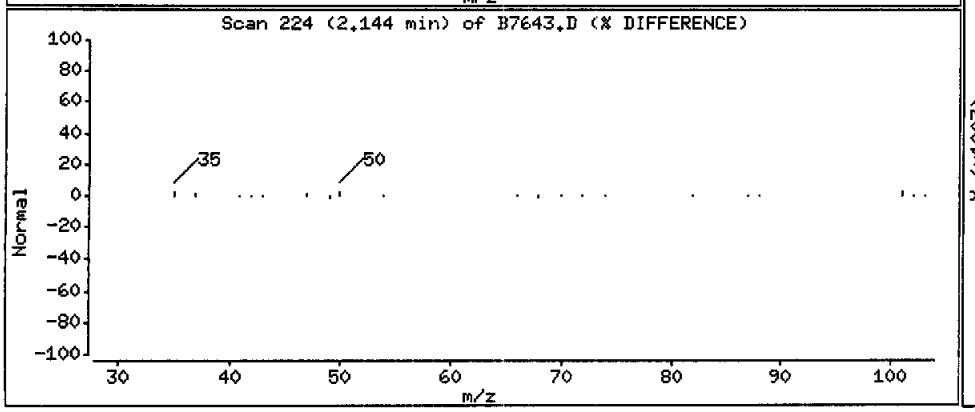
3 Dichlorodifluoromethane (F12)

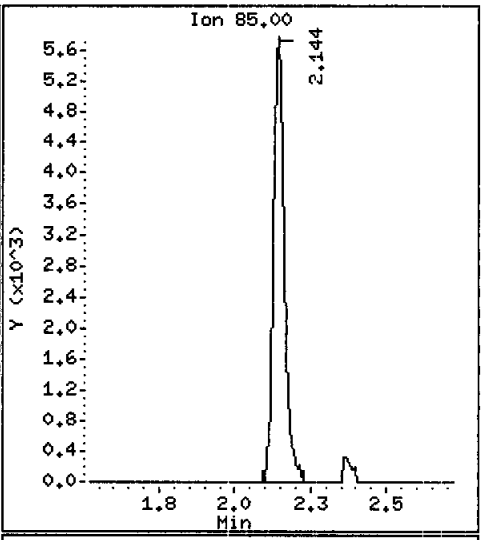
Concentration: 0.5567 ppbv

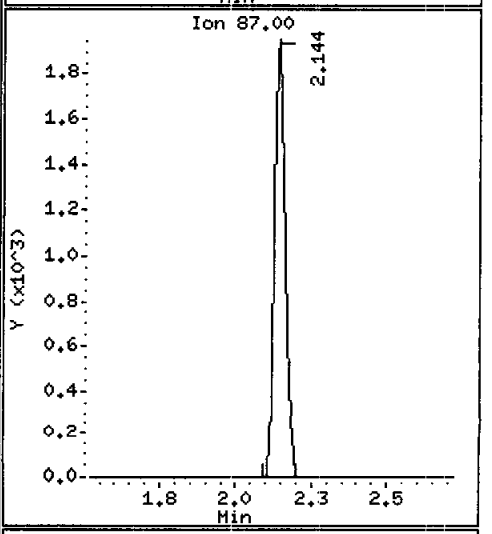


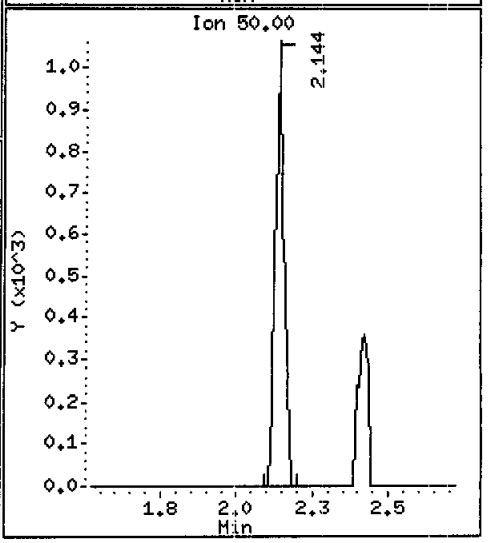












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D

Date : 17-JAN-2005 15:23

Client ID: 066376-001

Instrument: gcmsb.i

Sample Info: G2DH01AD,066376-001,SANDIA,E5A100226-1

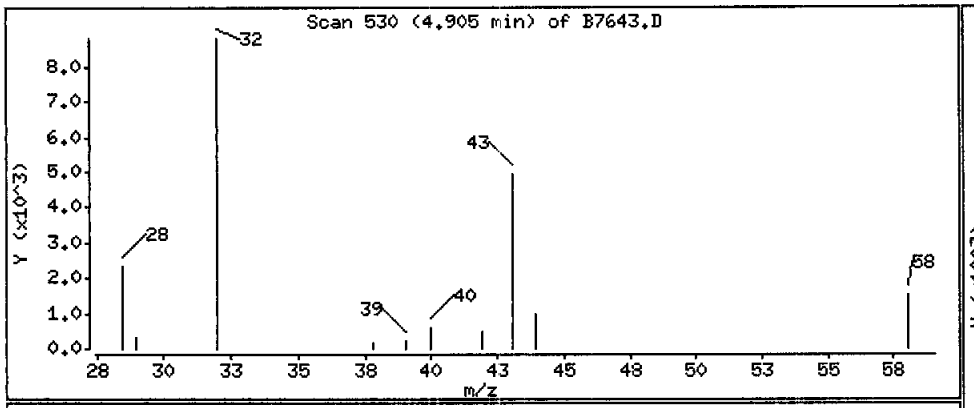
Operator: AA

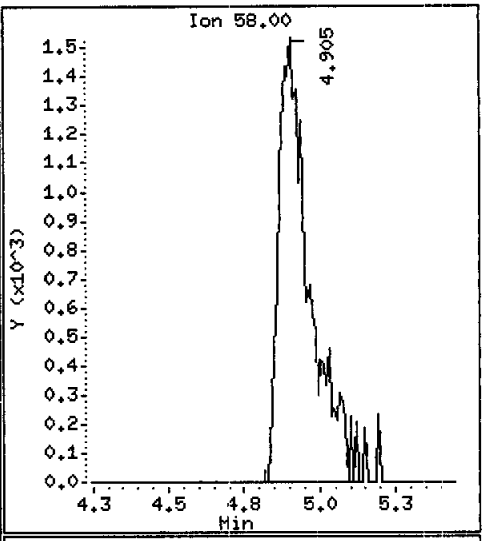
Column phase: J&W DB-624

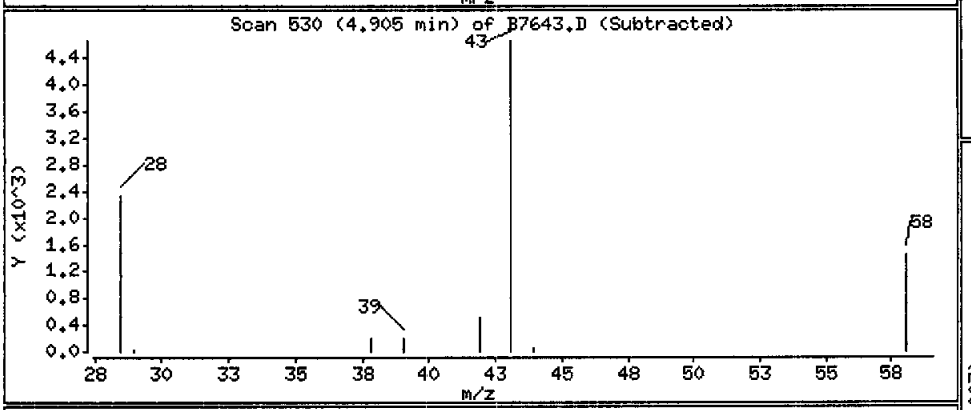
Column diameter: 0.53

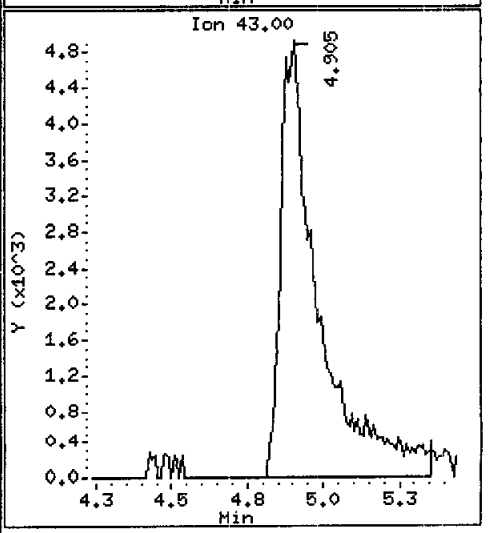
31 Acetone

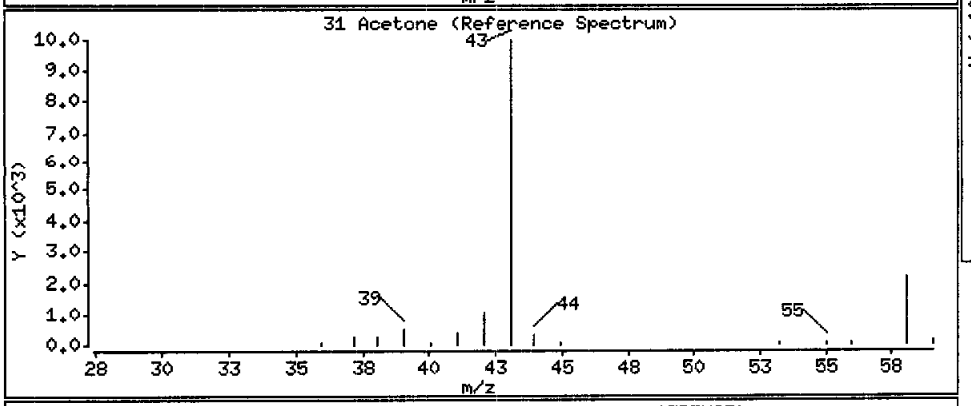
Concentration: 5.333 ppbv

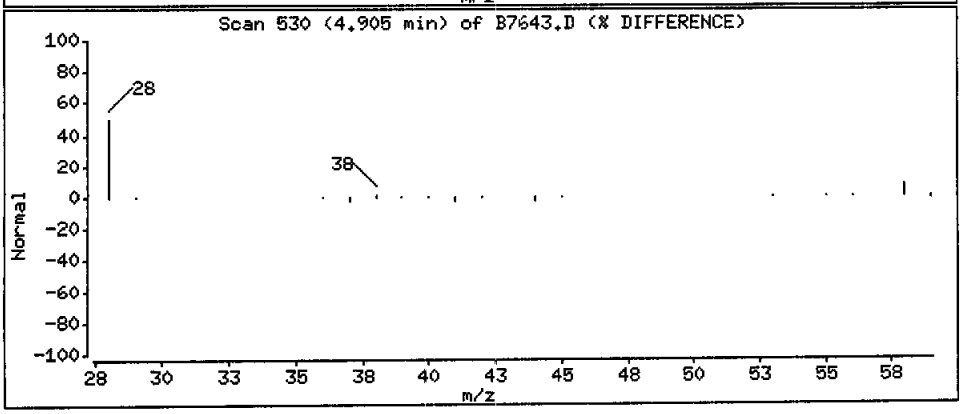












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D

Date : 17-JAN-2005 15:23

Client ID: 066376-001

Instrument: gcmsb.i

Sample Info: G2DH01AD,066376-001,SANDIA,E5A100226-1

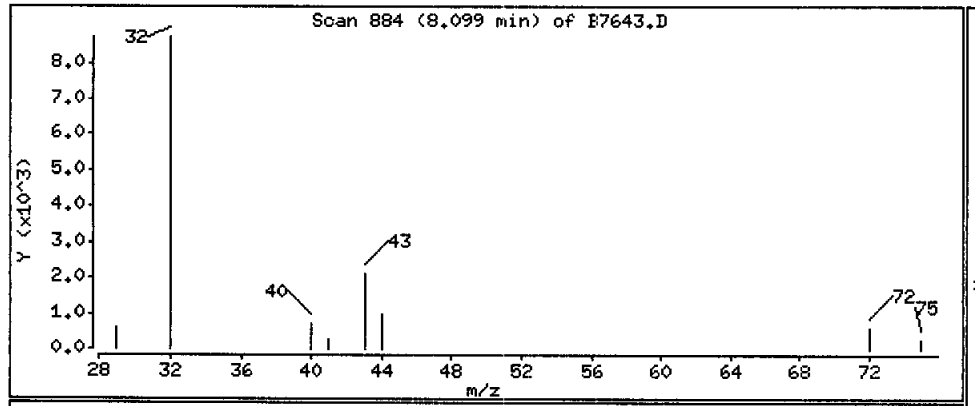
Operator: AA

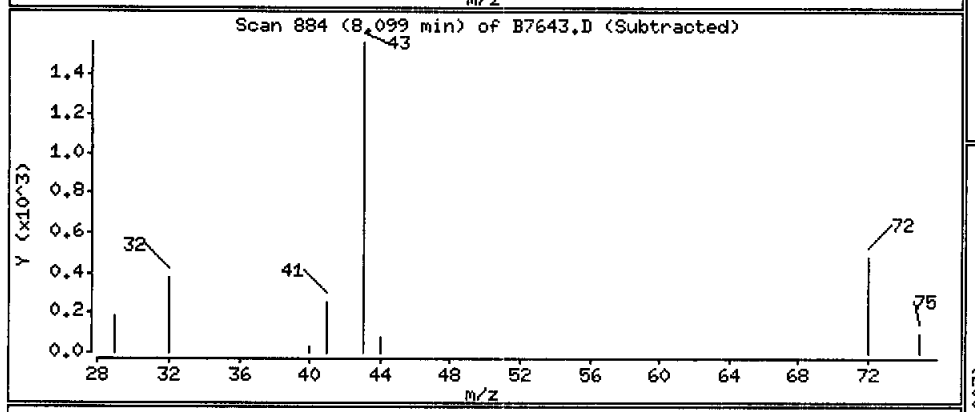
Column phase: J&W DB-624

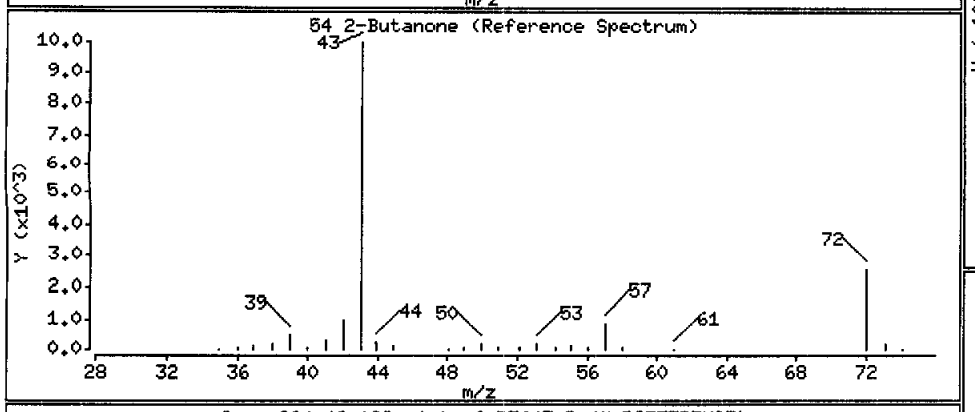
Column diameter: 0.53

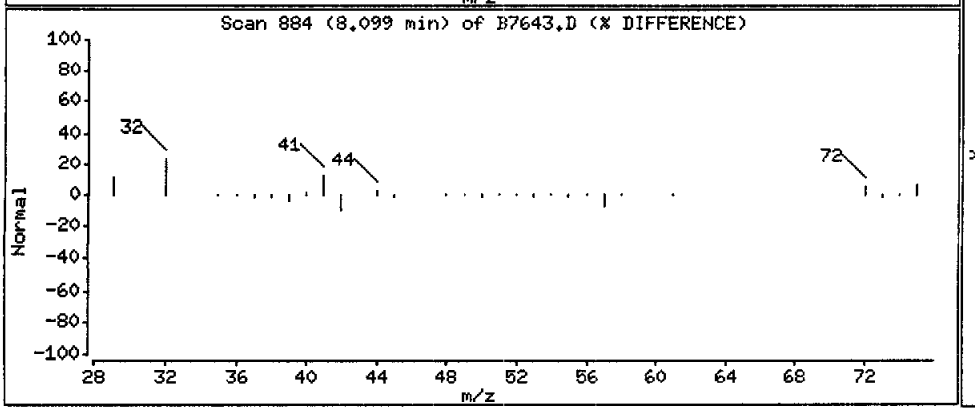
54 2-Butanone

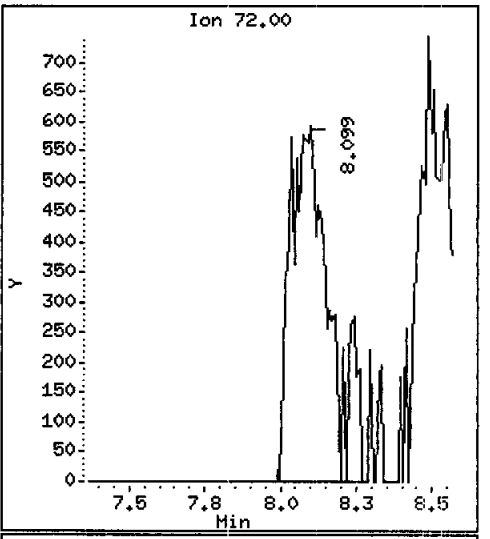
Concentration: 2.009 ppbv

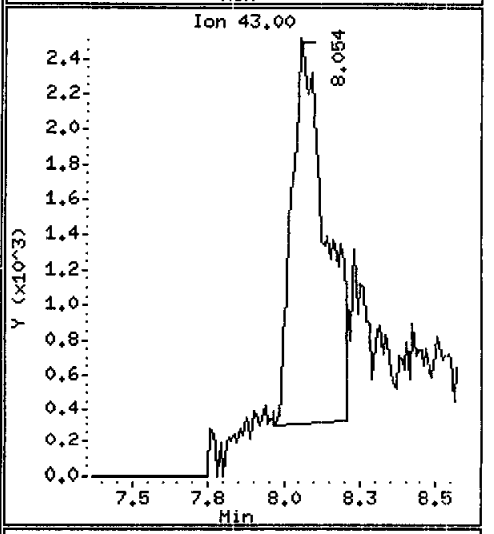


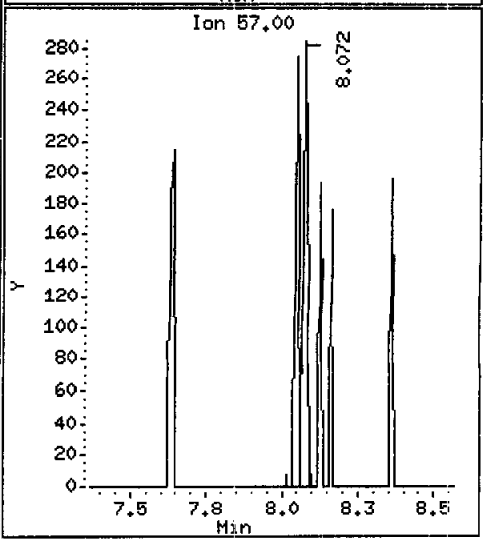












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D

Date : 17-JAN-2005 15:23

Client ID: 066376-001

Instrument: gcmsb.i

Sample Info: G2DH01AD,066376-001,SANDIA,E5A100226-1

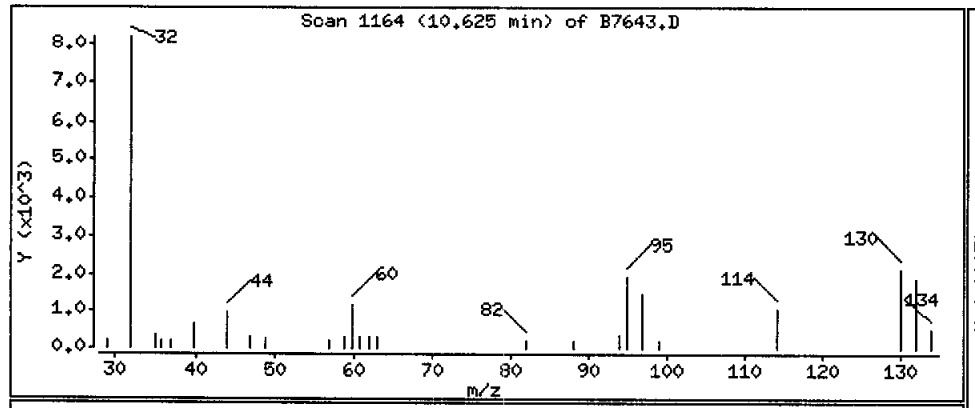
Operator: AA

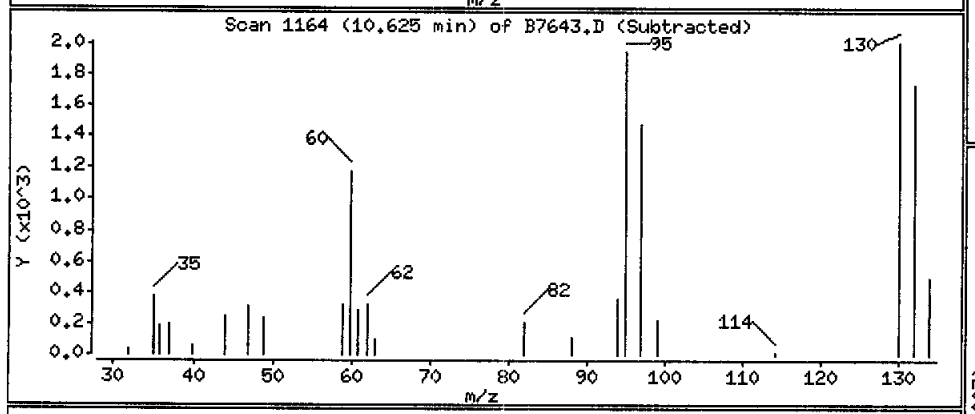
Column phase: J&W DB-624

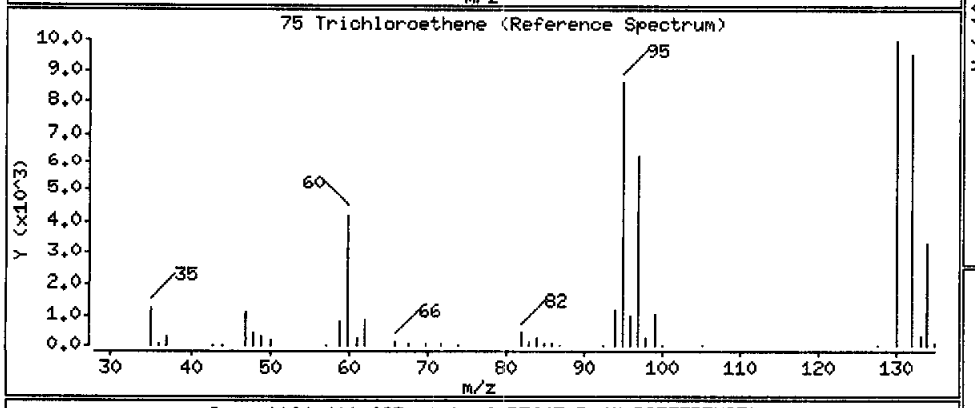
Column diameter: 0.53

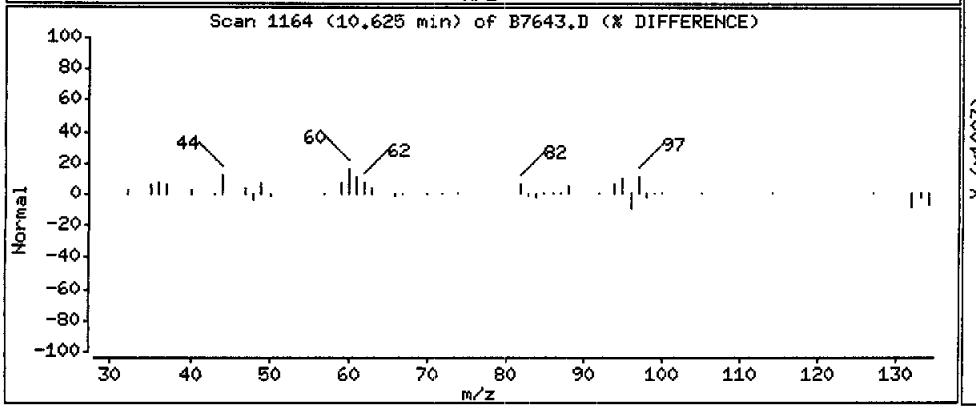
75 Trichloroethene

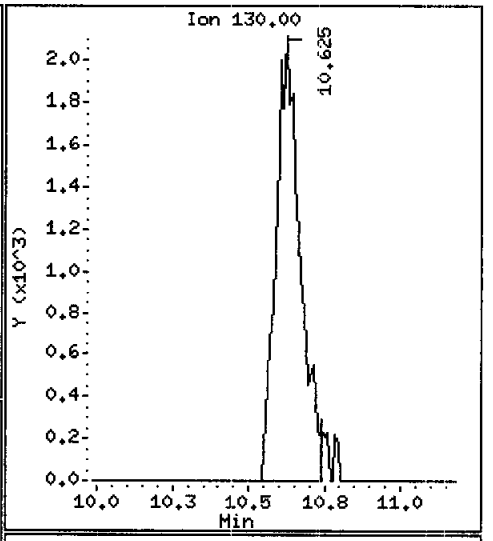
Concentration: 0.9918 ppbv

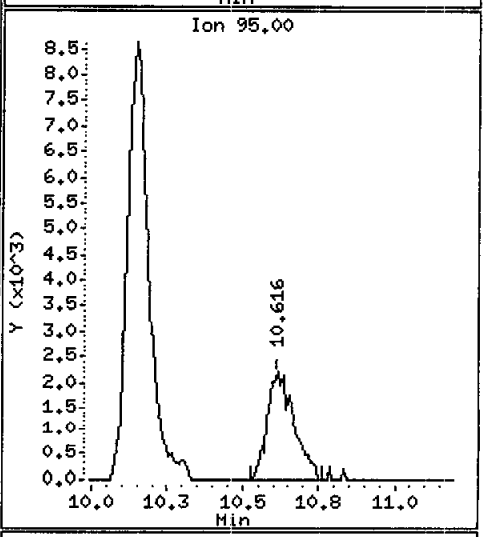


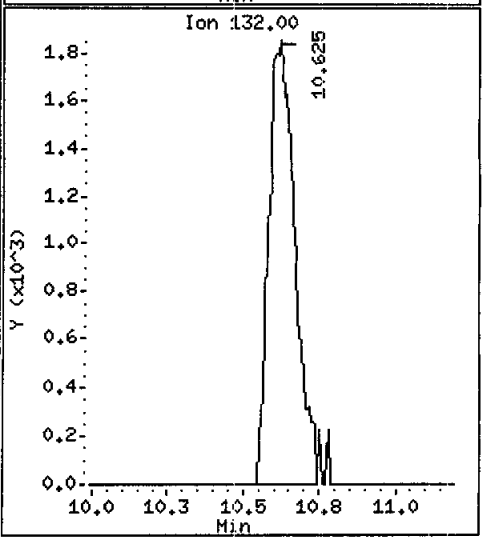












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7643.D

Date : 17-JAN-2005 15:23

Client ID: 066376-001

Instrument: gcmsb.i

Sample Info: G2DH01AD,066376-001,SANDIA,E5A100226-1

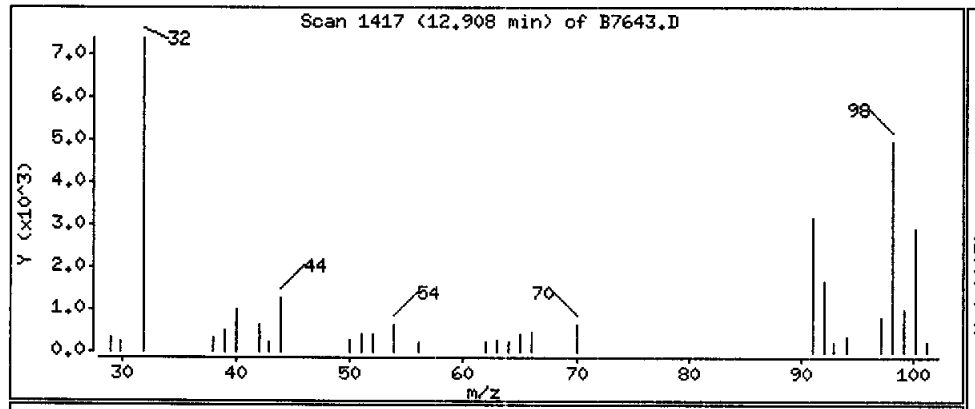
Operator: AA

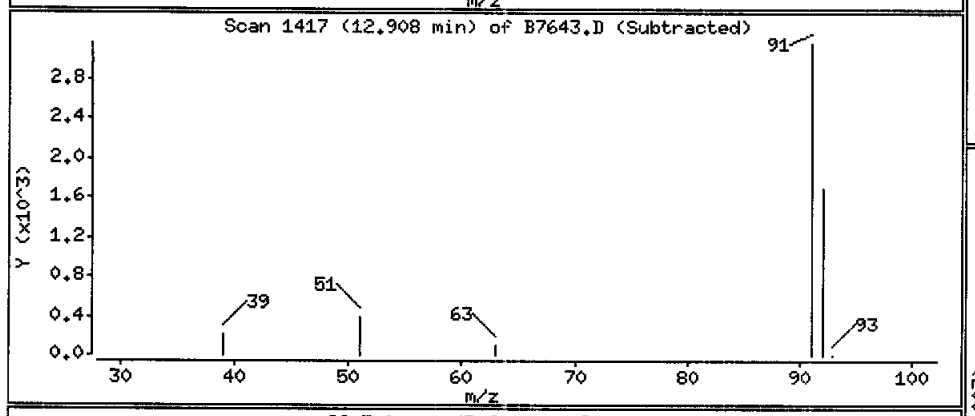
Column phase: J&W DB-624

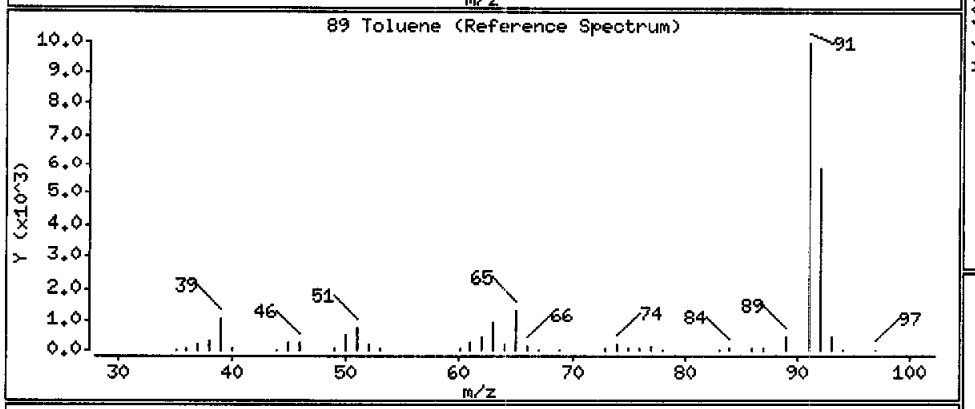
Column diameter: 0.53

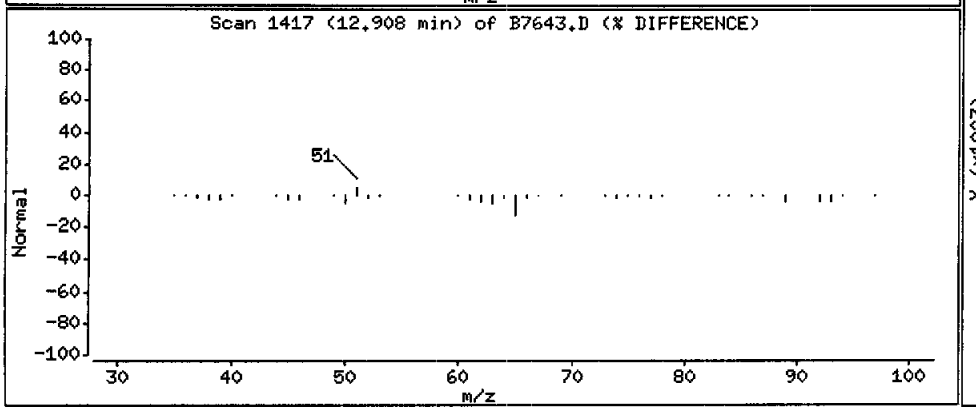
89 Toluene

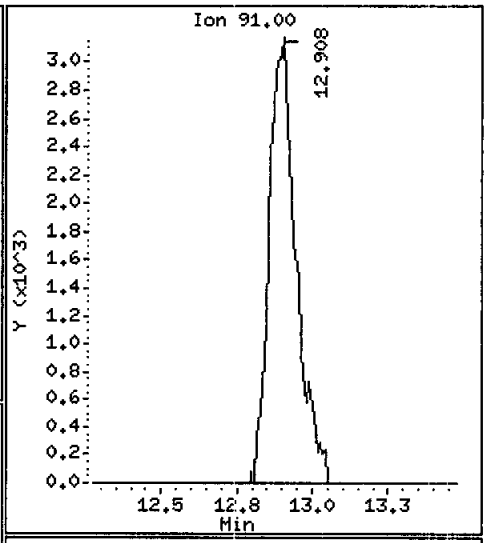
Concentration: 0.8211 ppbv

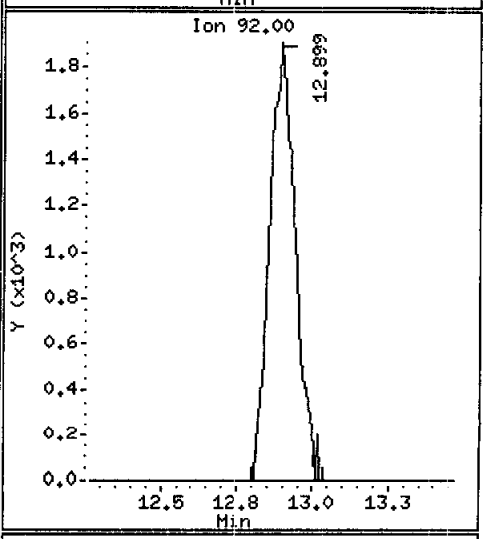


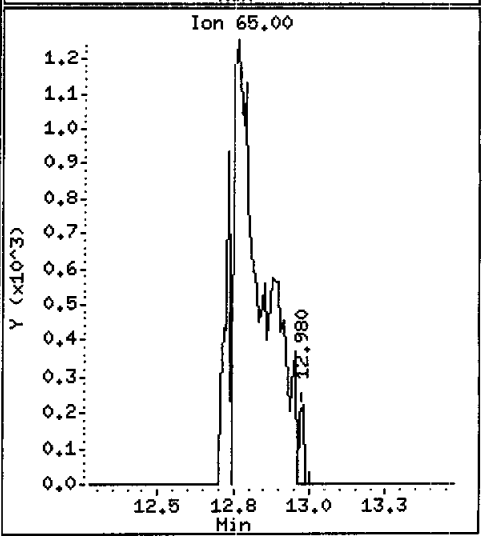












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7644.D
Lab Smp Id: G2DH31AD Client Smp ID: 066377-001
Inj Date : 17-JAN-2005 15:57
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DH31AD,066377-001,SANDIA,E5A100226-2
Misc Info : 24.3,12.2,500,996,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.200	InitPres
CalVol	500.000	CalVol
SmpVol	996.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
31 Acetone	58	4.931	4.847	(0.592)	8643	4.32824	4.328(a)
* 58 Bromochloromethane	49	8.323	8.321	(1.000)	624012	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.341	(0.921)	532056	47.0006	47.00
* 73 1,4-Difluorobenzene	114	10.146	10.144	(1.000)	1379403	50.0000	
75 Trichloroethene	130	10.624	10.586	(1.047)	12233	1.01572	1.016(a)
$ 88 Toluene-d8	100	12.762	12.751	(1.258)	726039	50.2656	50.26
89 Toluene	91	12.898	12.878	(1.271)	29581	1.21795	1.218(a)
* 101 Chlorobenzene-d5	117	15.415	15.404	(1.000)	993001	50.0000	
$ 114 4-Bromofluorobenzene	95	17.671	17.651	(1.146)	788179	44.4329	44.43

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7644.D

Date : 17-JAN-2005 15:57

Client ID: 066377-001

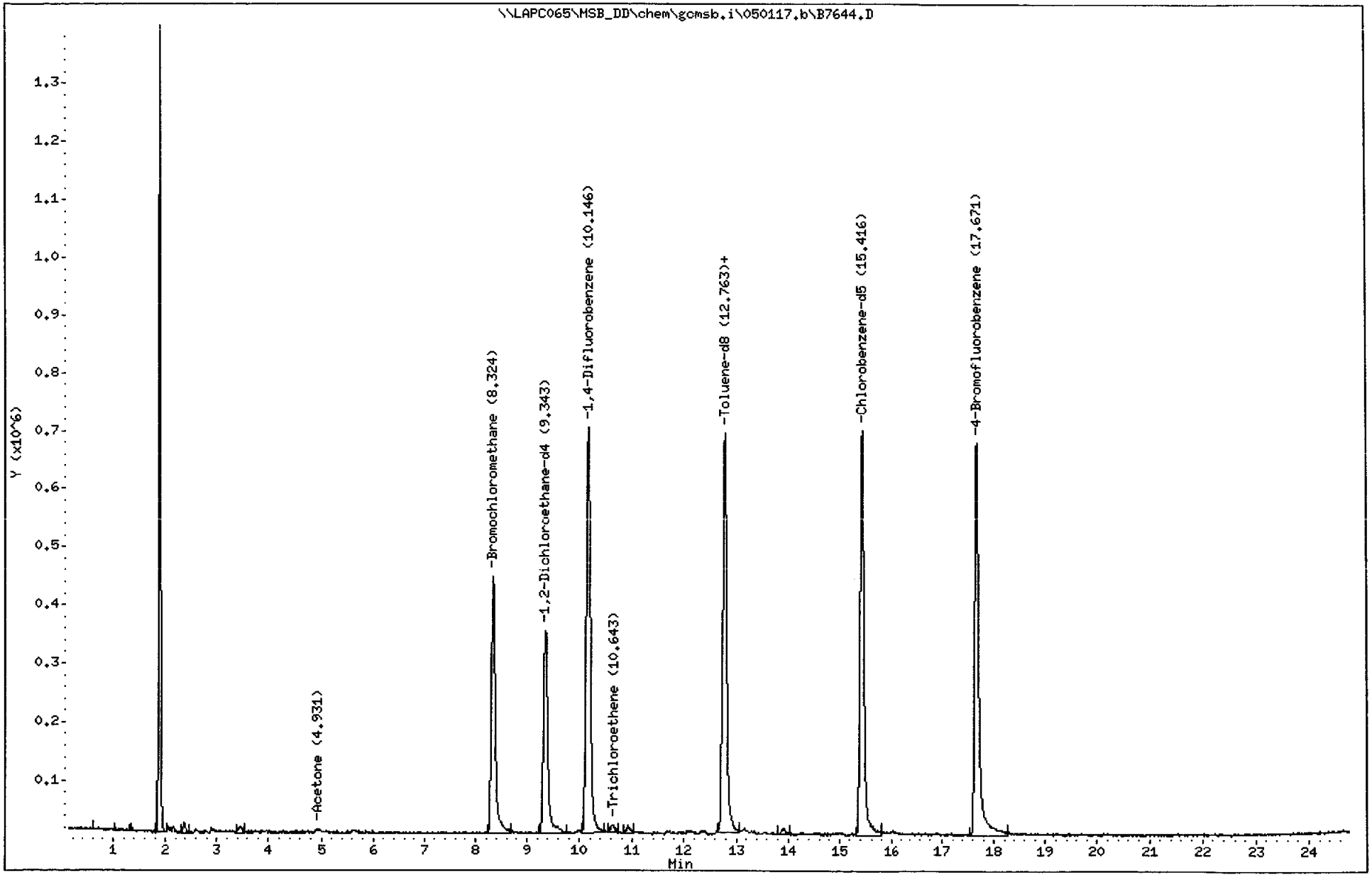
Sample Info: G2DH31AD,066377-001,SANDIA,E5A100226-2

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7644.D

Date : 17-JAN-2005 15:57

Client ID: 066377-001

Instrument: gcmsb.i

Sample Info: G2DH31AD,066377-001,SANDIA,E5A100226-2

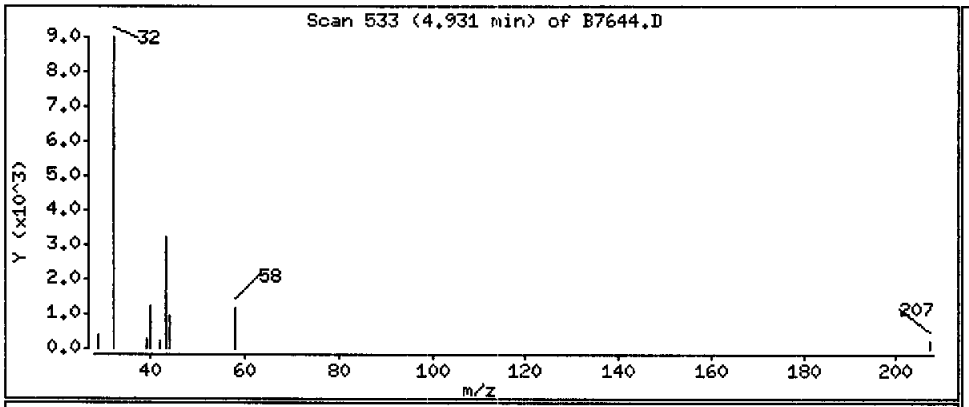
Operator: AA

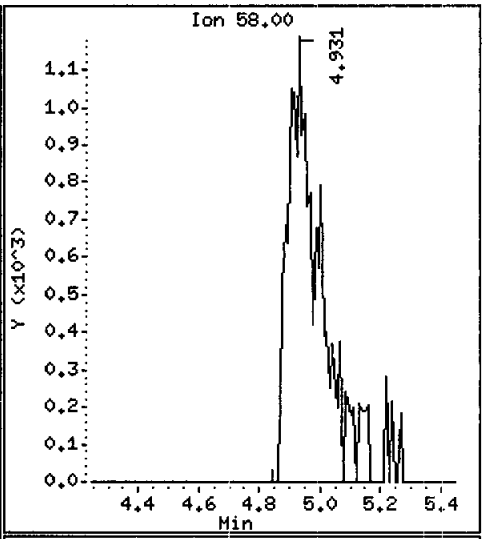
Column phase: J&W DB-624

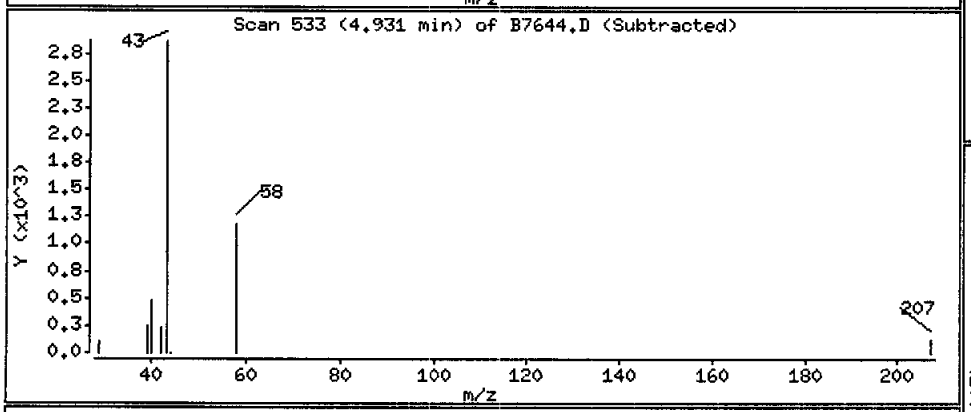
Column diameter: 0.53

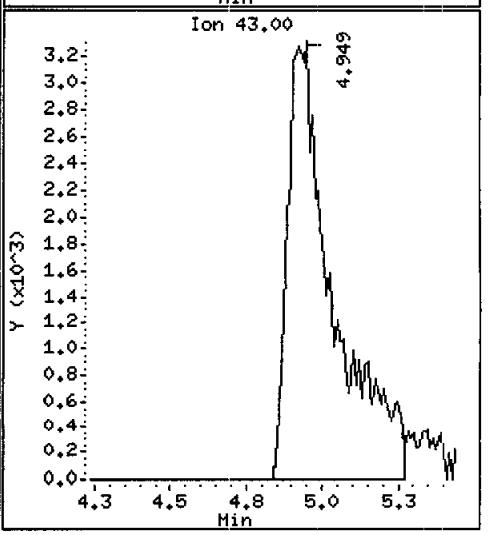
31 Acetone

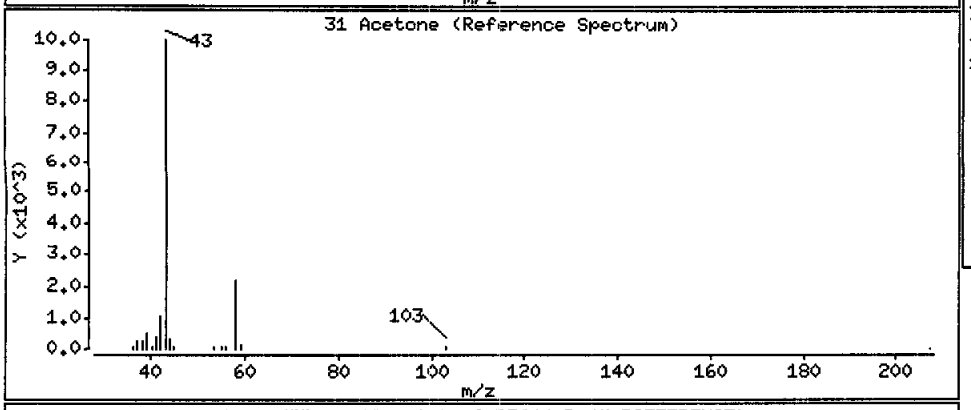
Concentration: 4.328 ppbv

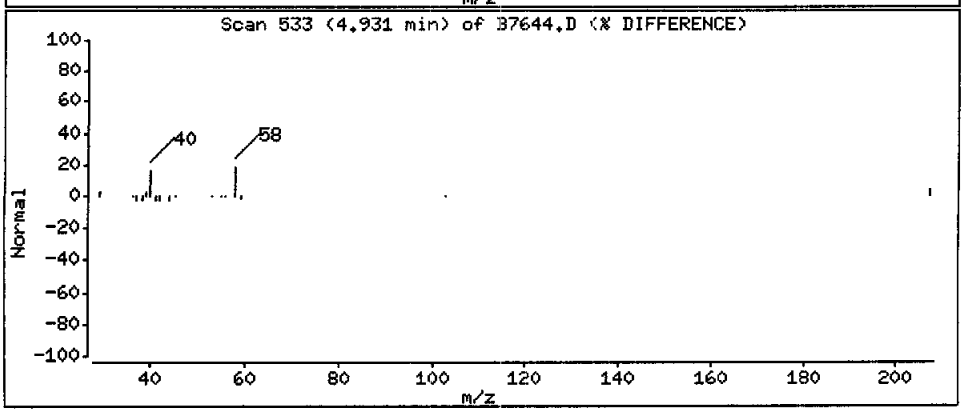












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7644.D

Date : 17-JAN-2005 15:57

Client ID: 066377-001

Instrument: gcmsb.i

Sample Info: G2DH31AD,066377-001,SANDIA,E5A100226-2

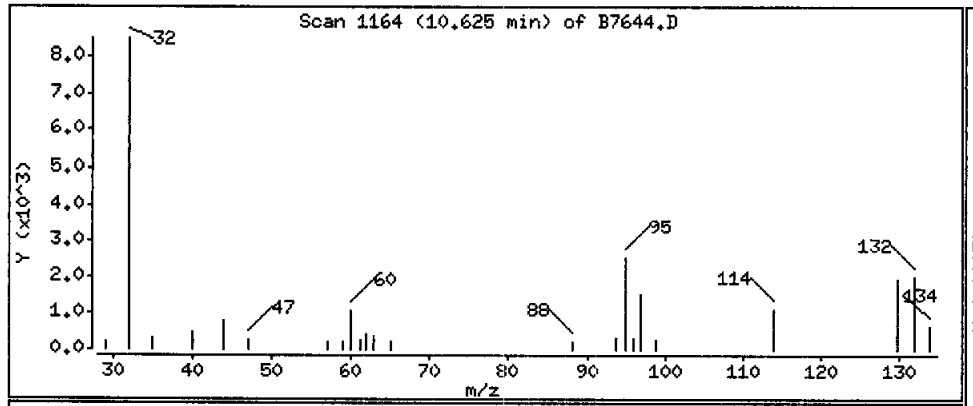
Operator: AA

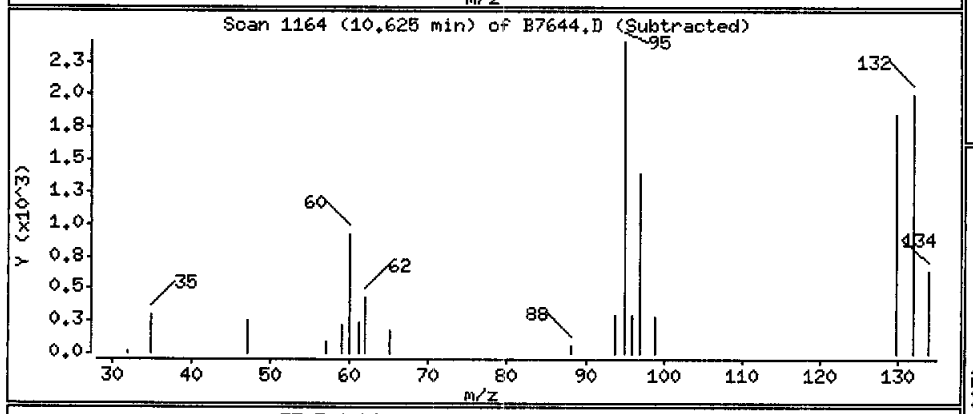
Column phase: J&W DB-624

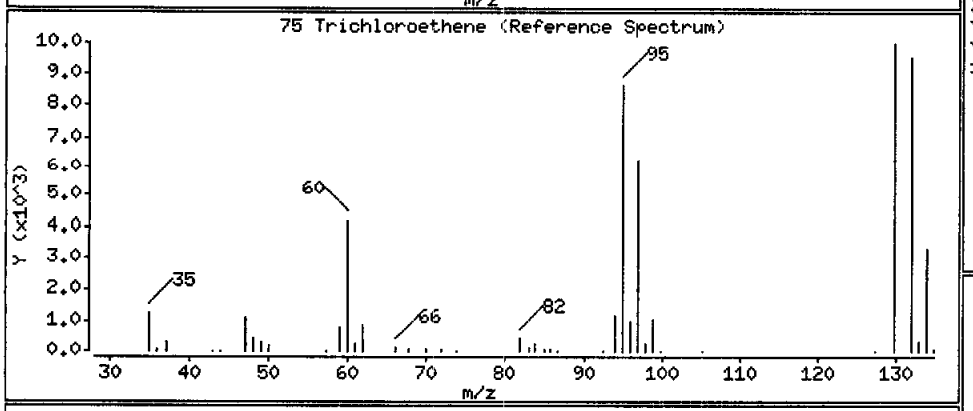
Column diameter: 0.53

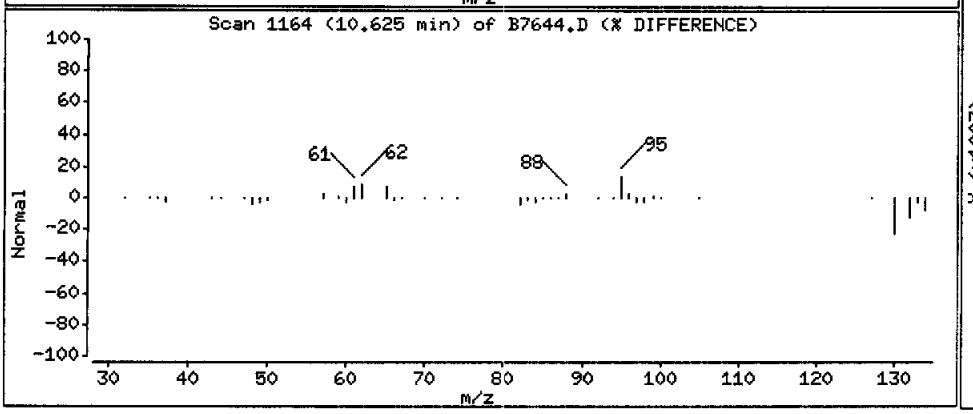
75 Trichloroethene

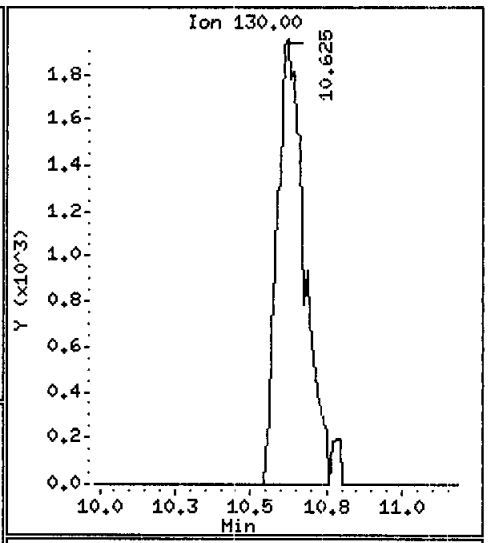
Concentration: 1.016 ppbv

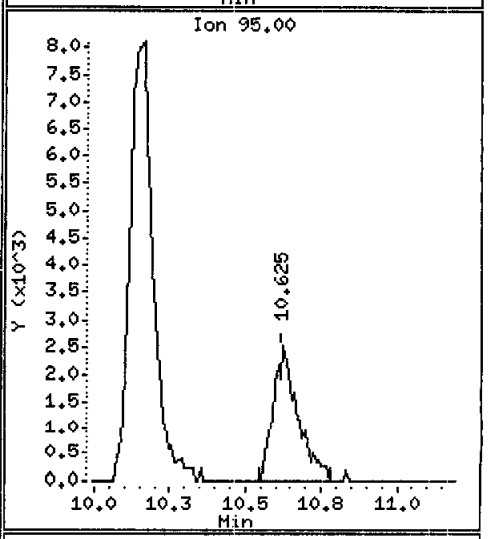


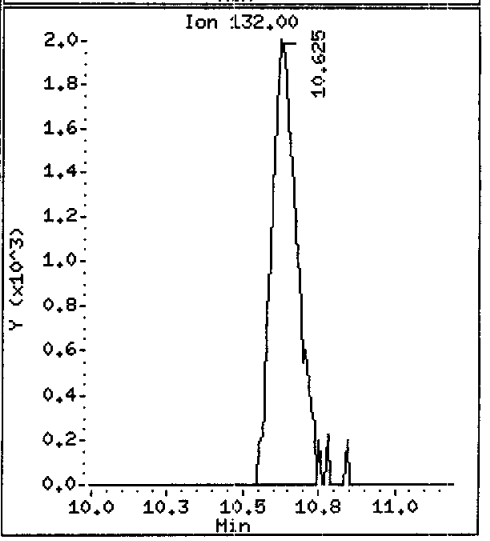












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7644.D

Date : 17-JAN-2005 15:57

Client ID: 066377-001

Instrument: gcmsb.i

Sample Info: G2DH31AD,066377-001,SANDIA,E5A100226-2

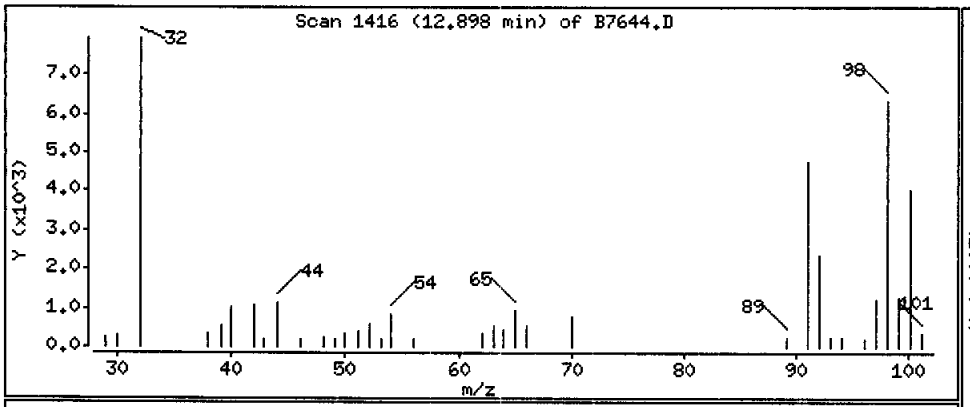
Operator: AA

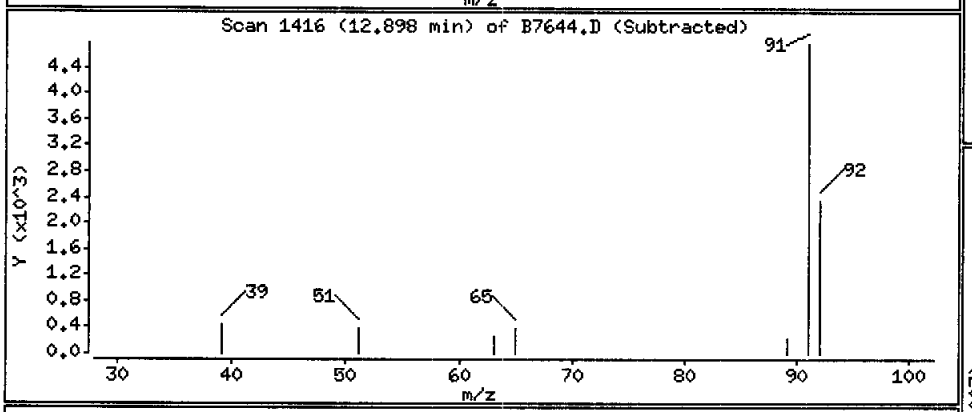
Column phase: J&W DB-624

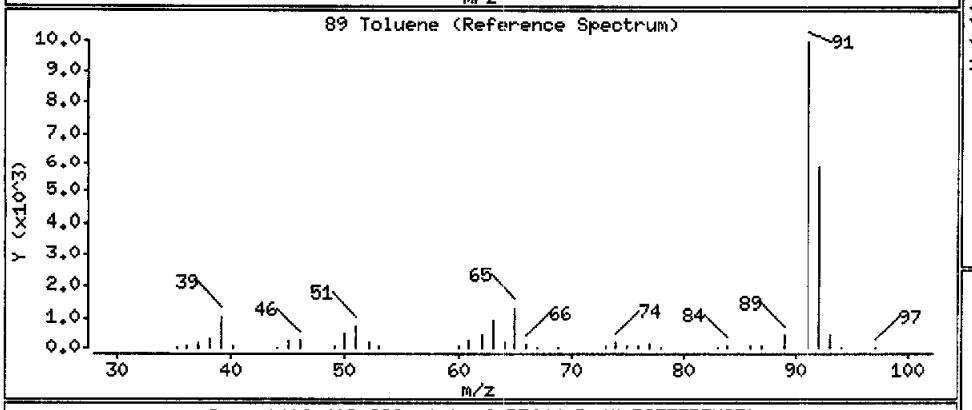
Column diameter: 0.53

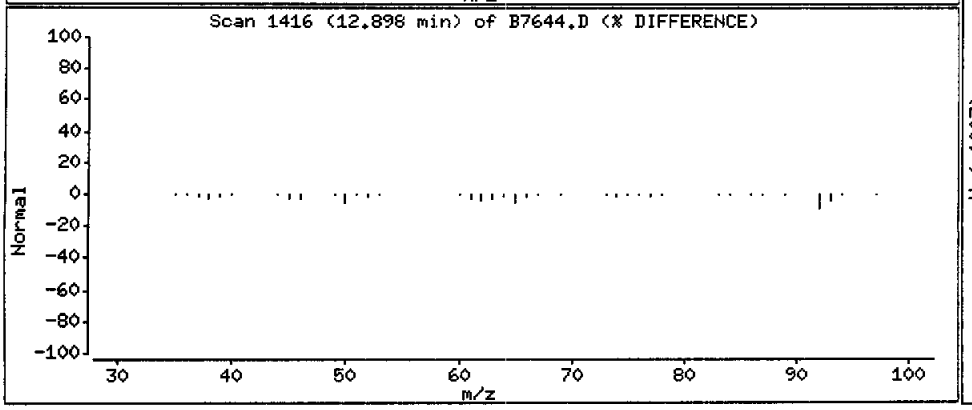
89 Toluene

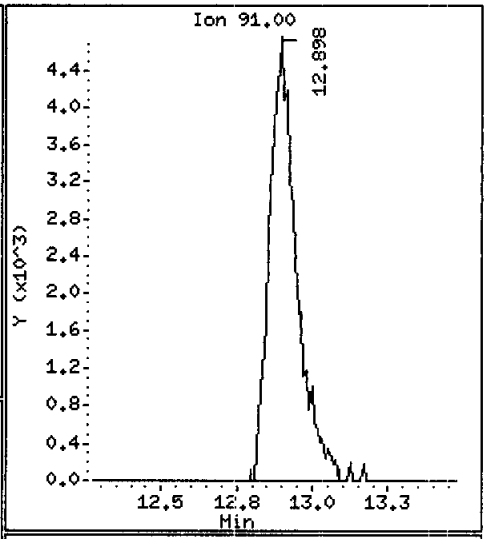
Concentration: 1.218 ppbv

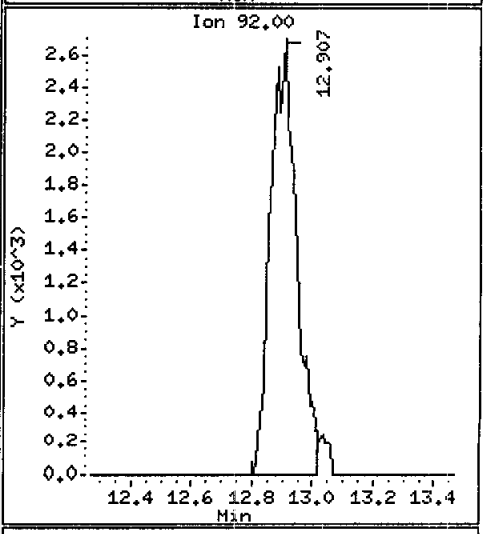


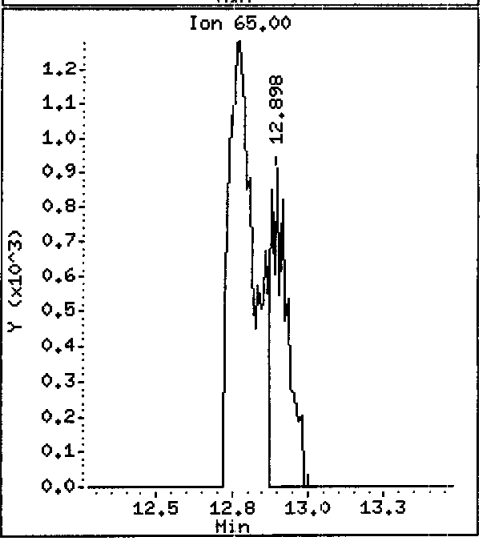












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D
Lab Smp Id: G2DH41AD Client Smp ID: 066378-001
Inj Date : 17-JAN-2005 16:29
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DH41AD,066378-001,SANDIA,E5A100226-3
Misc Info : 24.6,12.5,500,985,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.600	FinalPres
InitPres	12.500	InitPres
CalVol	500.000	CalVol
SmpVol	985.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
31 Acetone	58	4.902	4.847	(0.588)	11173	5.61555	5.610(aQ)
54 2-Butanone	72	8.069	7.969	(0.969)	5635	2.12896	2.127(aQ)
* 58 Bromochloromethane	49	8.331	8.321	(1.000)	621734	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.341	9.341	(0.920)	517643	46.4525	46.40
68 Benzene	78	9.468	9.440	(0.932)	16097	0.87119	0.8703(a)
* 73 1,4-Difluorobenzene	114	10.153	10.144	(1.000)	1357872	50.0000	
75 Trichloroethene	130	10.631	10.586	(1.047)	14140	1.19264	1.191(a)
$ 88 Toluene-d8	100	12.770	12.751	(1.258)	723586	50.8901	50.84
89 Toluene	91	12.887	12.878	(1.269)	320128	13.3894	13.38
93 1,1,2-Trichloroethane	97	13.555	13.608	(0.879)	84879	7.48949	7.482(Q)
96 2-Hexanone	58	14.204	14.087	(0.922)	5480	1.08071	1.080(aQ)
M 99 Xylenes (total)	106				202206	24.5884	24.56
* 101 Chlorobenzene-d5	117	15.413	15.404	(1.000)	1004649	50.0000	
104 Ethylbenzene	91	15.693	15.675	(1.018)	171647	6.01070	6.005

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
105 m,p-Xylenes	106	15.910	15.891	(1.032)	157238	18.9605	18.94
107 o-Xylene	106	16.677	16.649	(1.082)	44968	5.62786	5.622
$ 114 4-Bromofluorobenzene	95	17.660	17.651	(1.146)	847577	47.2274	47.18

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

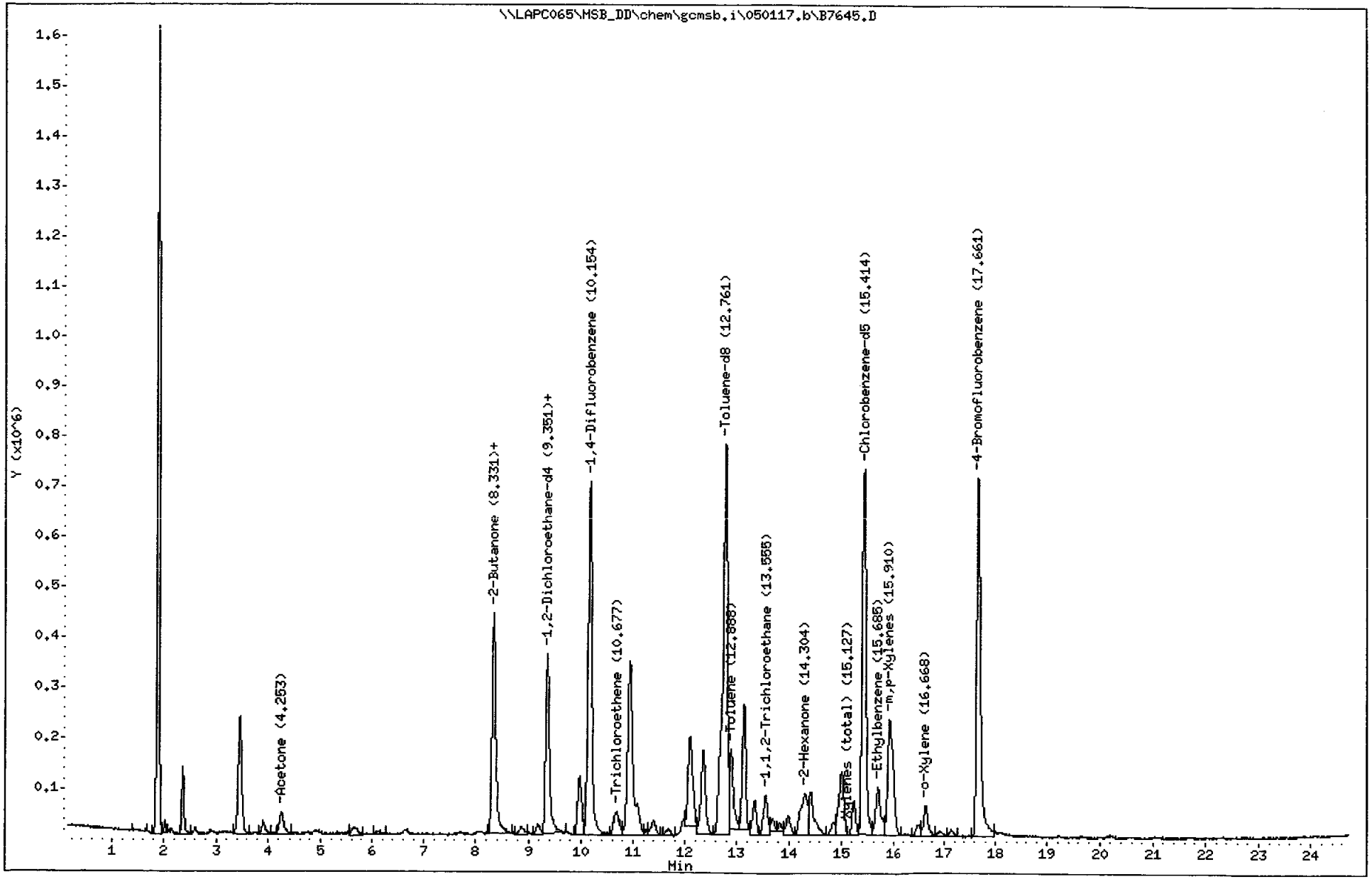
Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

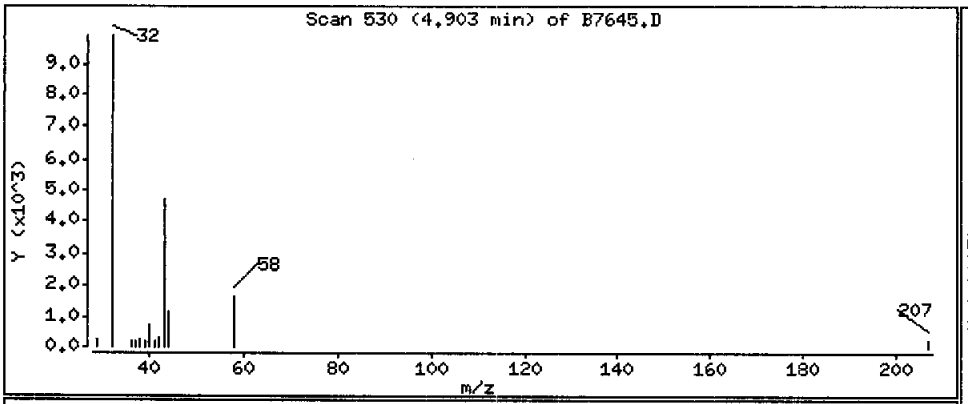
Operator: AA

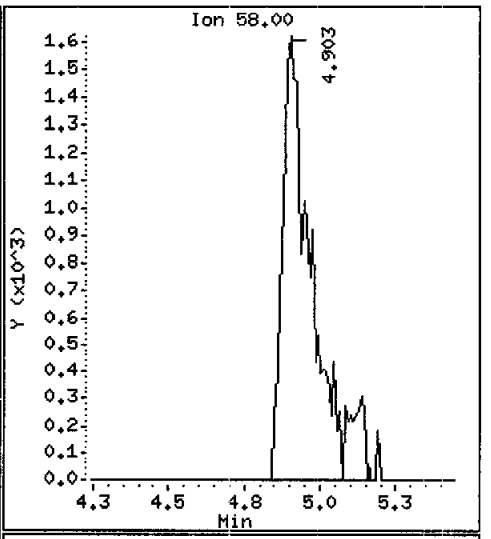
Column phase: J&W DB-624

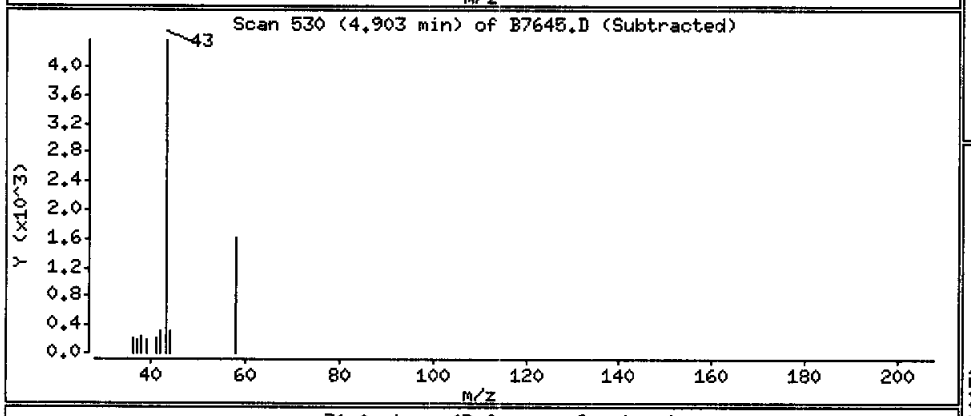
Column diameter: 0.53

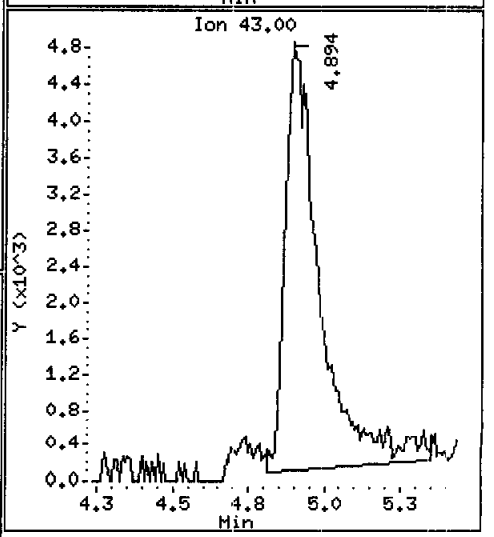
31 Acetone

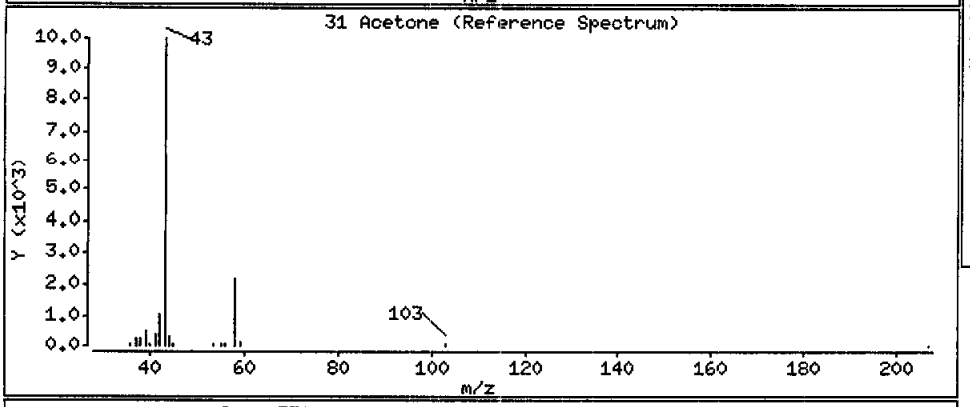
Concentration: 5.610 ppbv

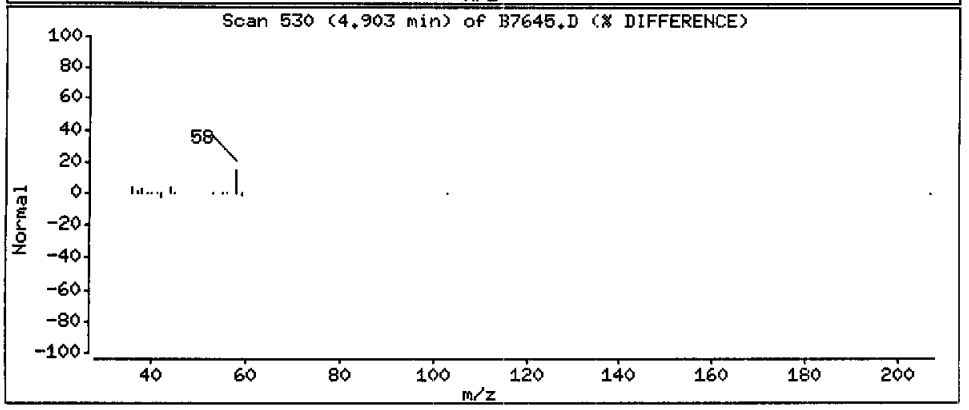












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

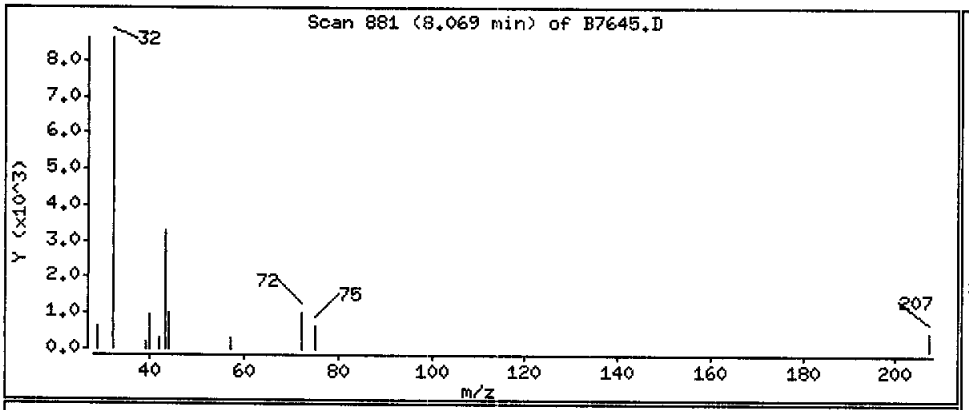
Operator: AA

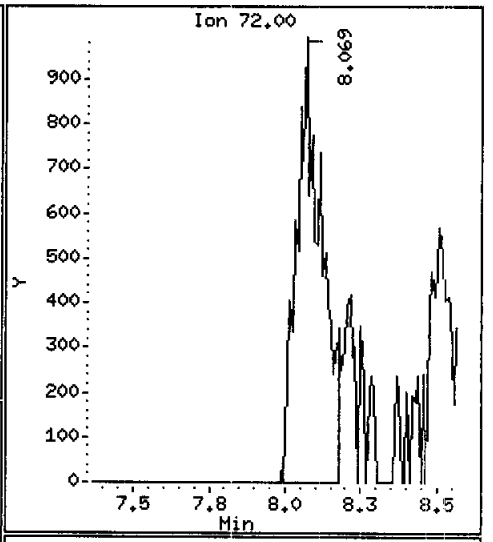
Column phase: J&W DB-624

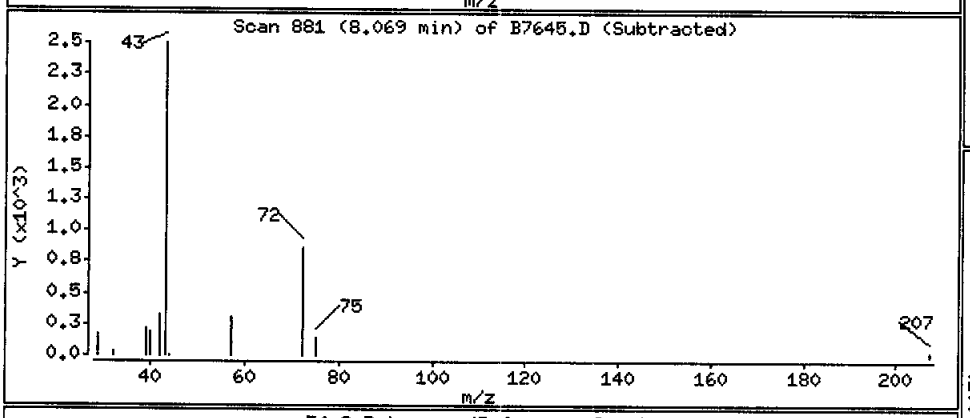
Column diameter: 0.53

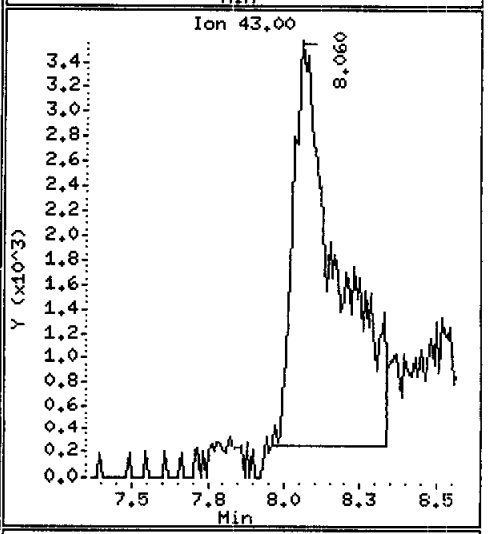
54 2-Butanone

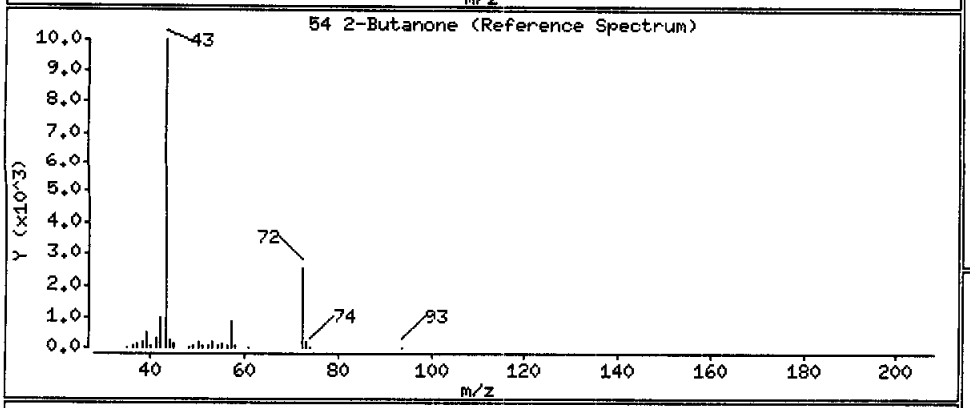
Concentration: 2.127 ppbv

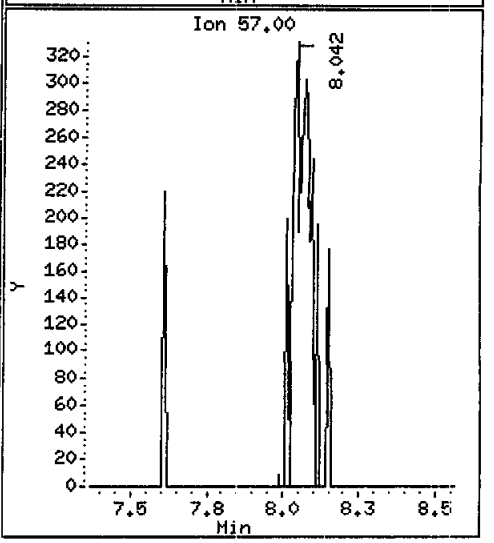


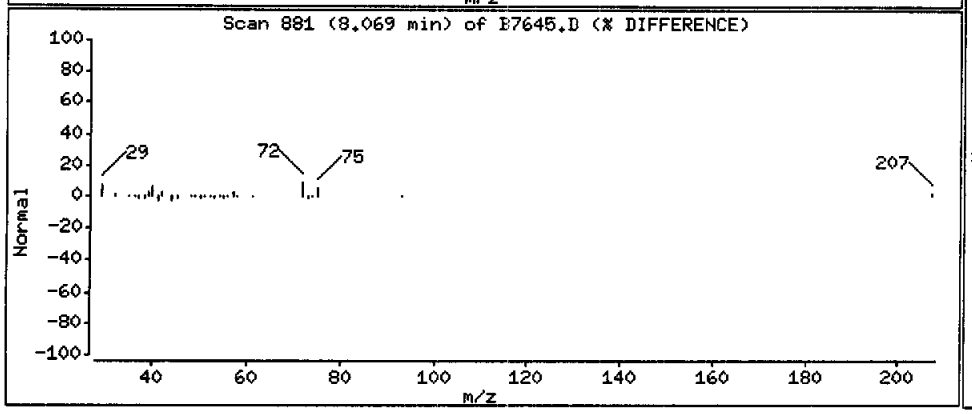












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

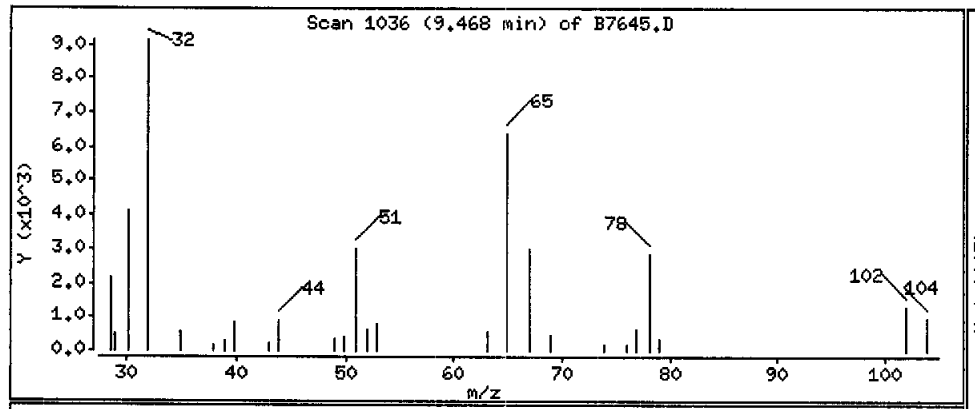
Operator: AA

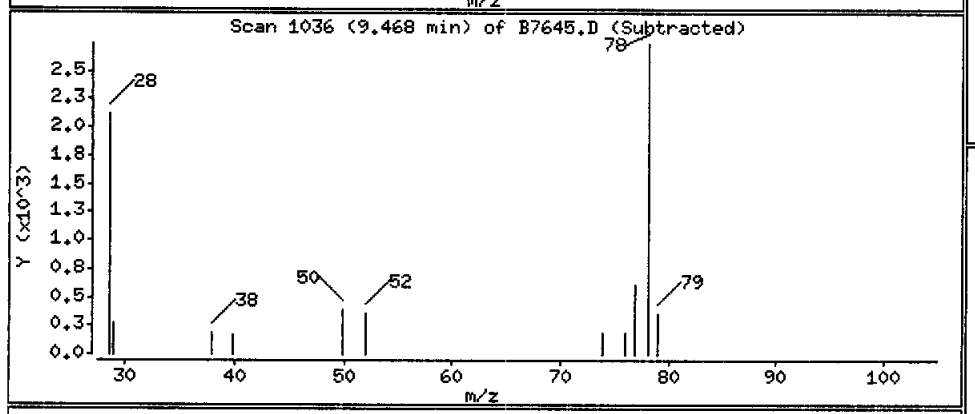
Column phase: J&W DB-624

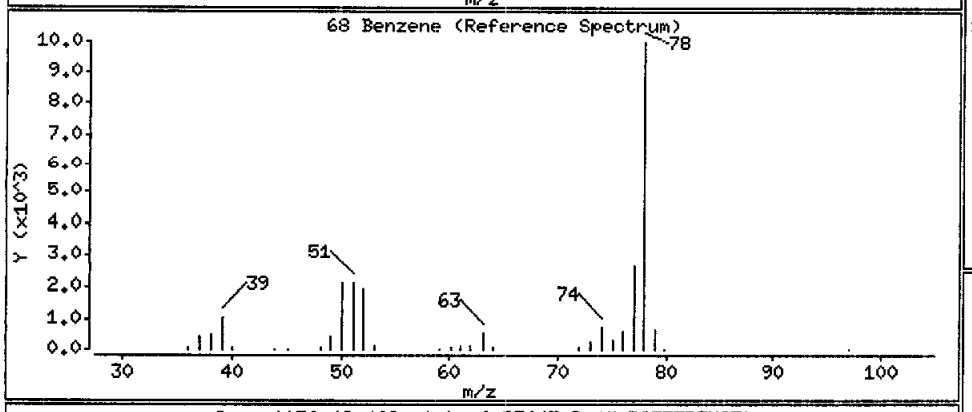
Column diameter: 0.53

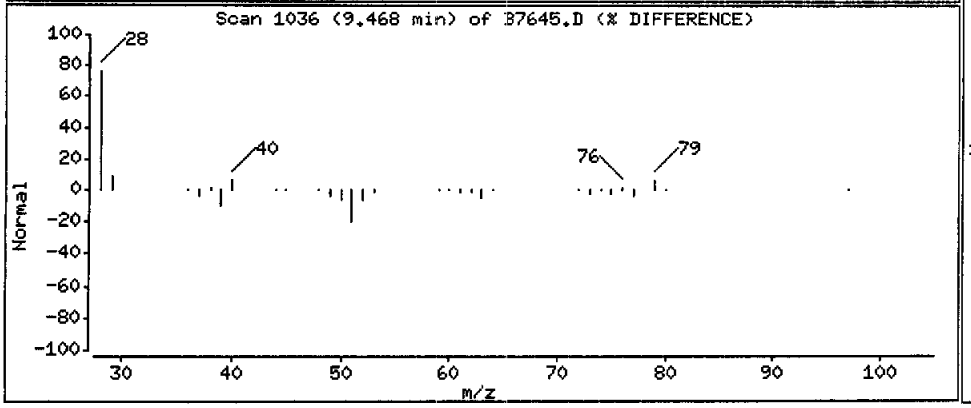
68 Benzene

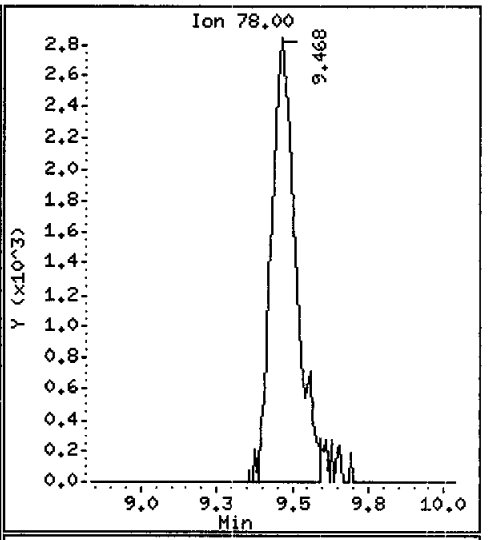
Concentration: 0.8703 ppbv

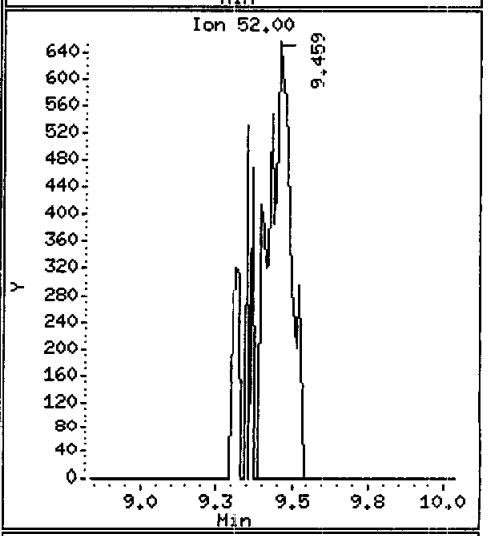


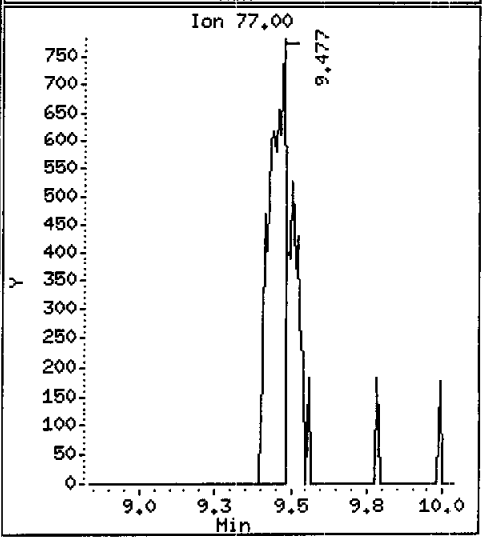












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

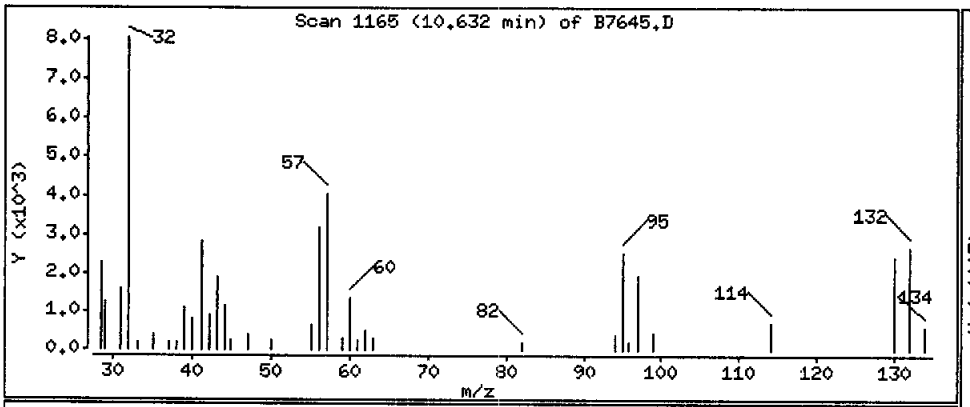
Operator: AA

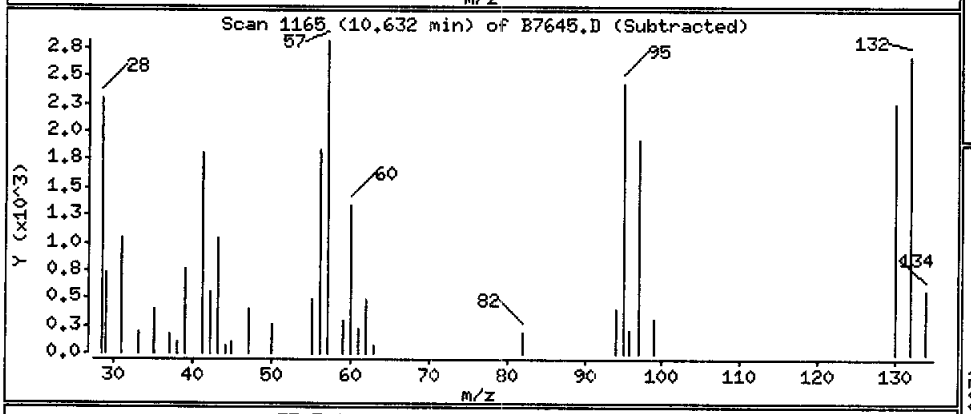
Column phase: J&W DB-624

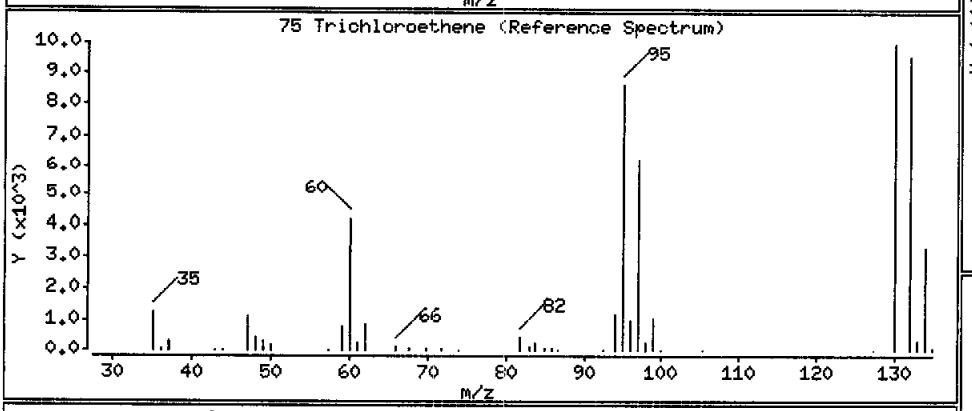
Column diameter: 0.53

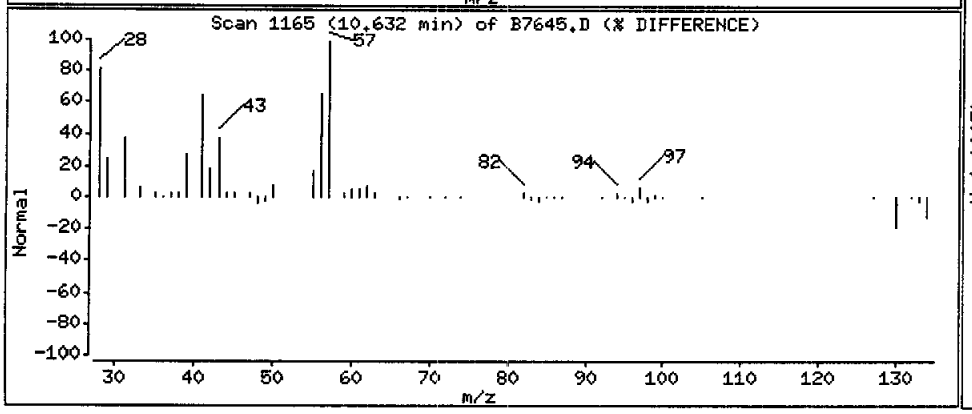
75 Trichloroethene

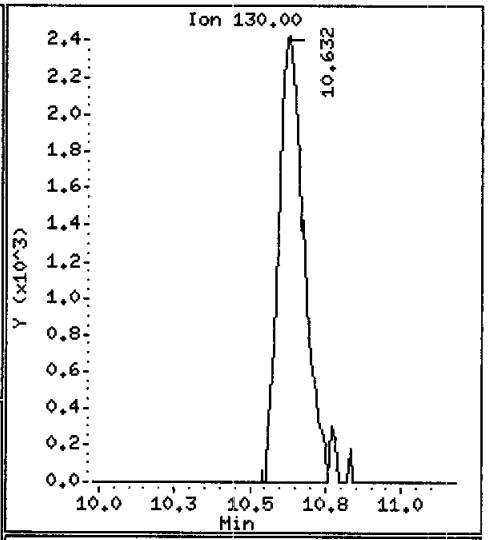
Concentration: 1.191 ppbv

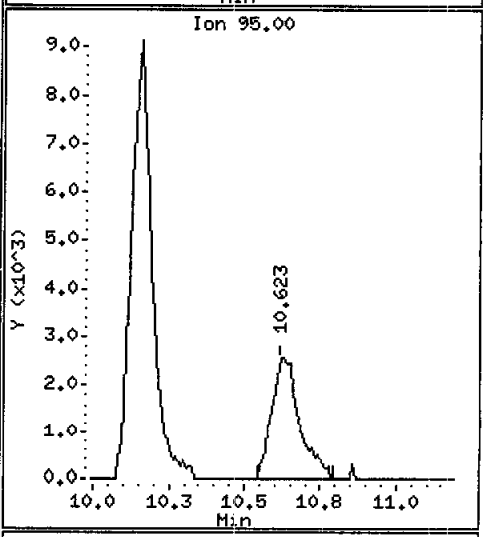


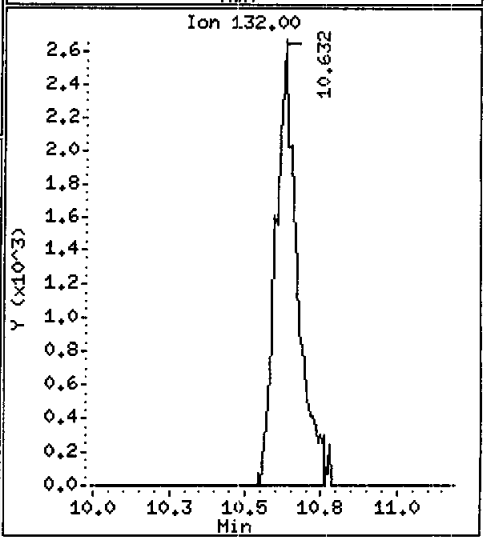












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

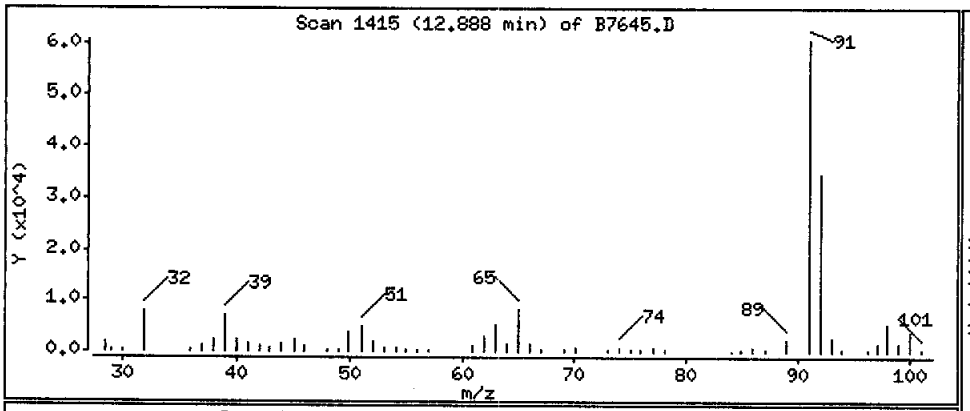
Operator: AA

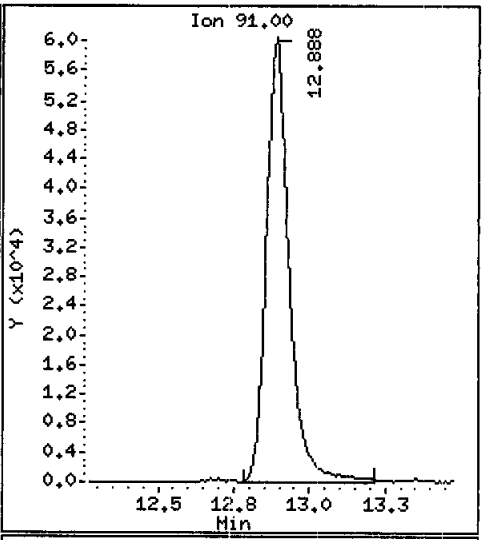
Column phase: J&W DB-624

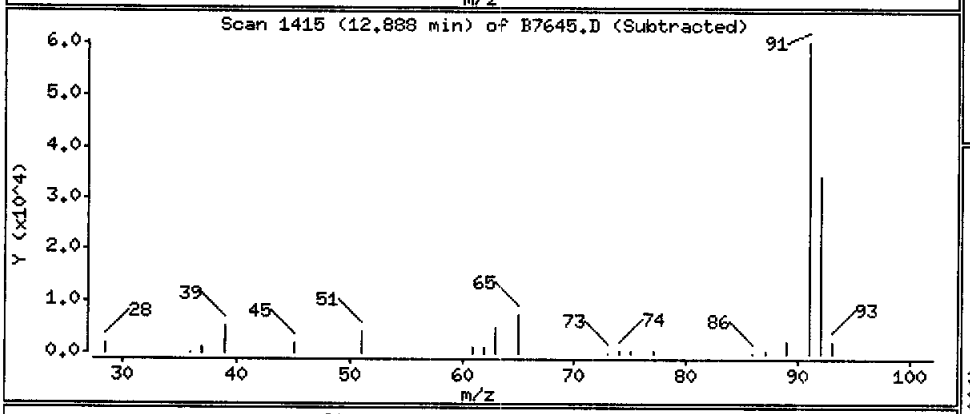
Column diameter: 0.53

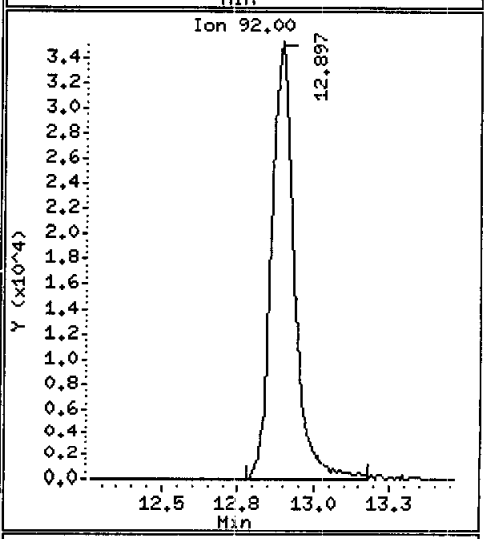
89 Toluene

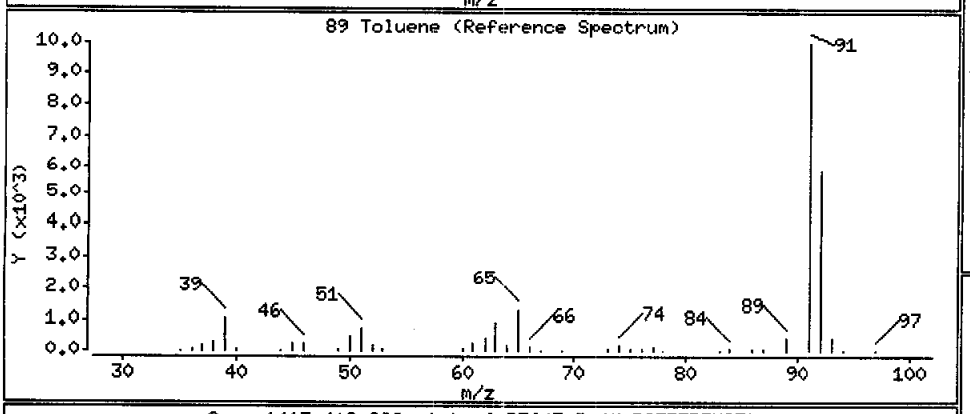
Concentration: 13.38 ppbv

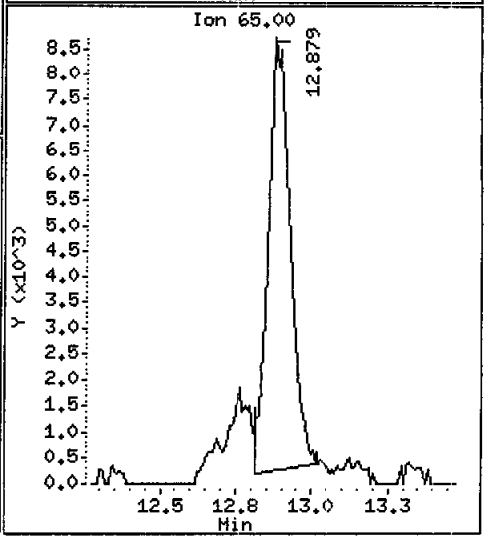


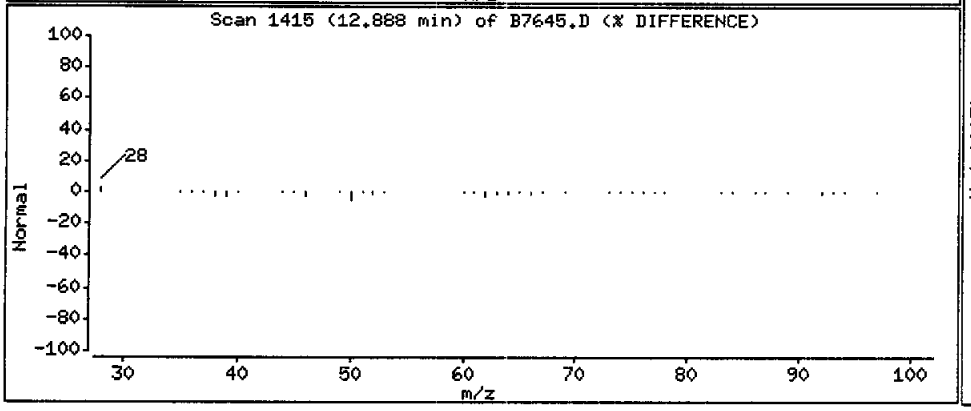












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

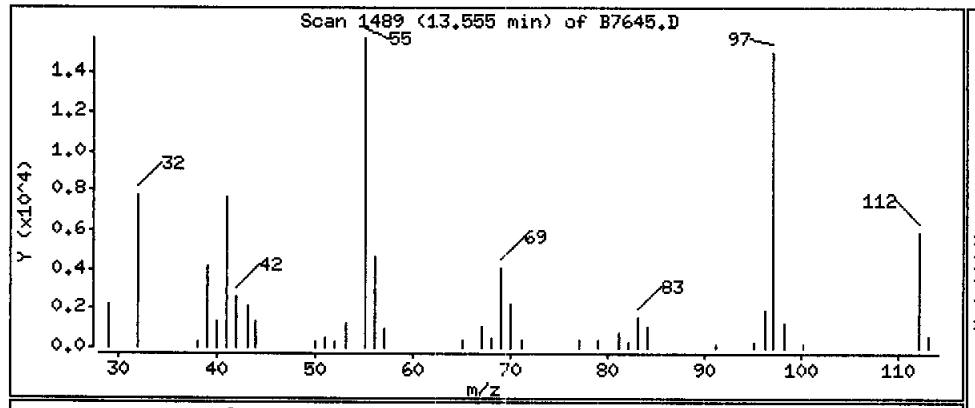
Operator: AA

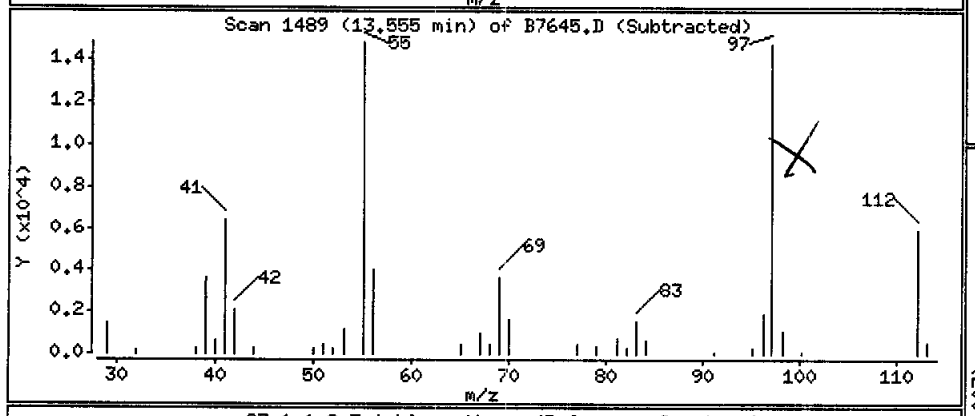
Column phase: J&W DB-624

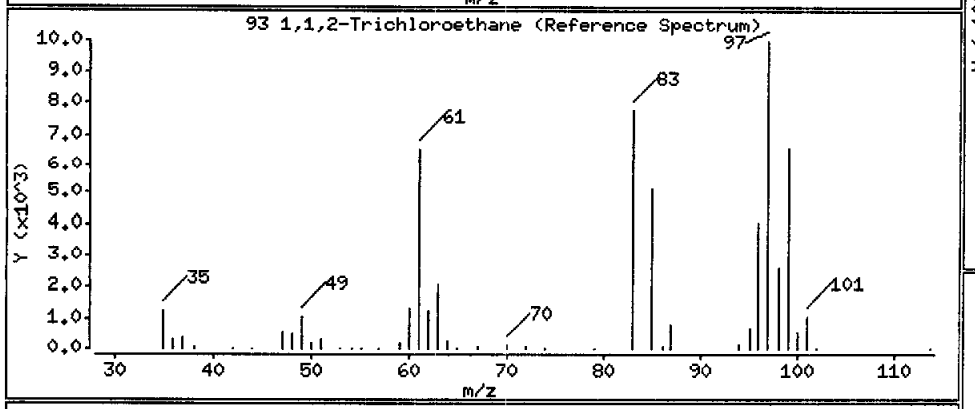
Column diameter: 0.53

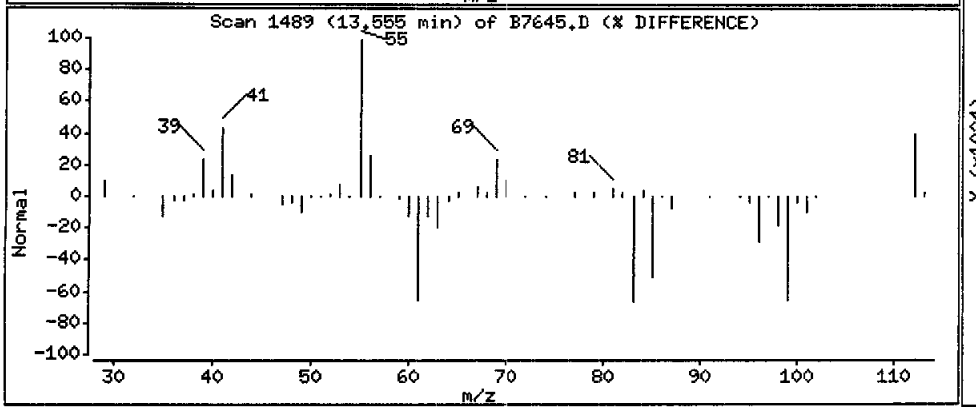
93 1,1,2-Trichloroethane

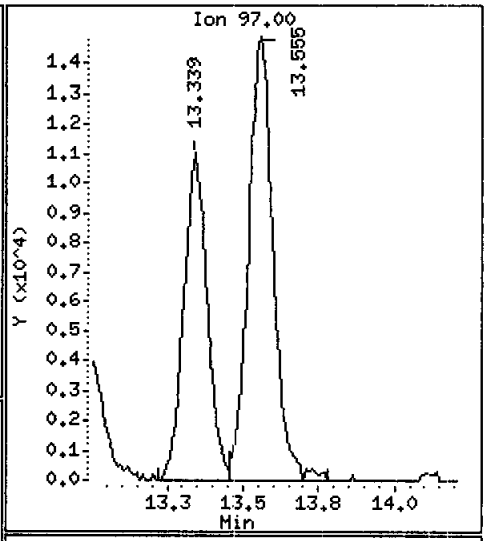
Concentration: 7.482 ppbv

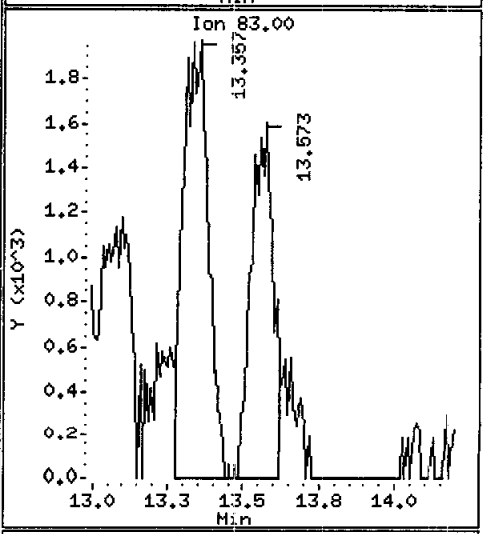


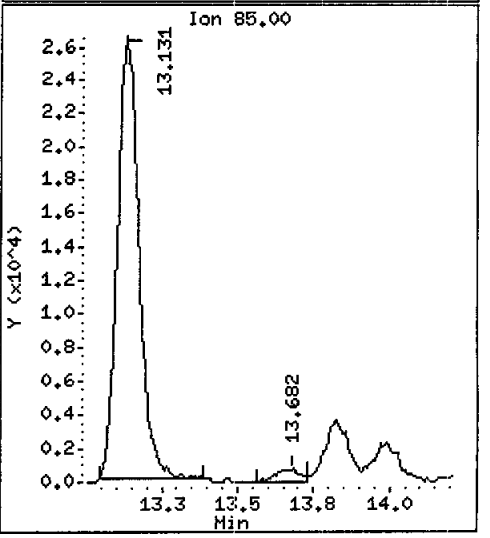












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

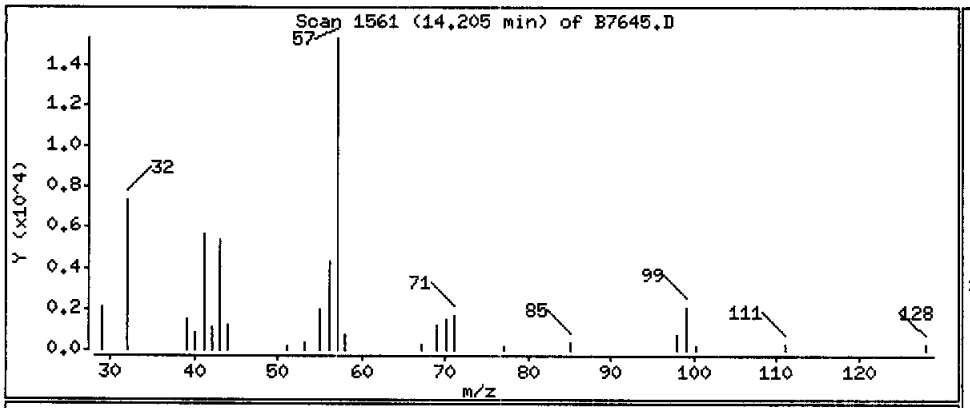
Operator: AA

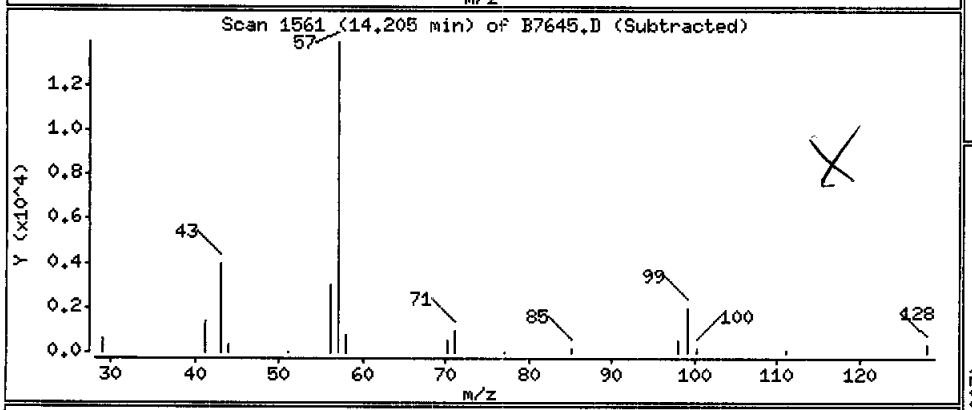
Column phase: J&W DB-624

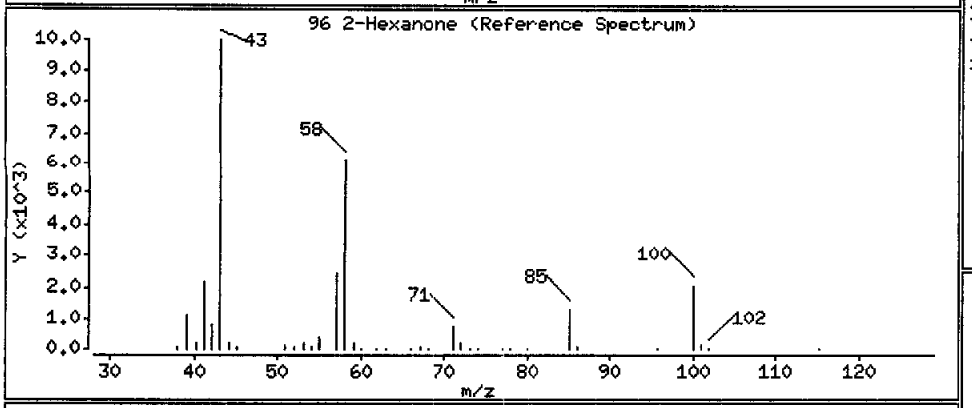
Column diameter: 0.53

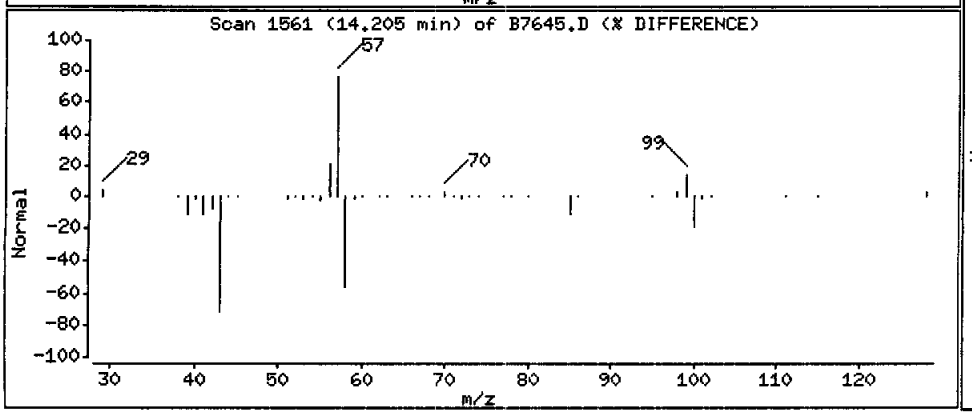
96 2-Hexanone

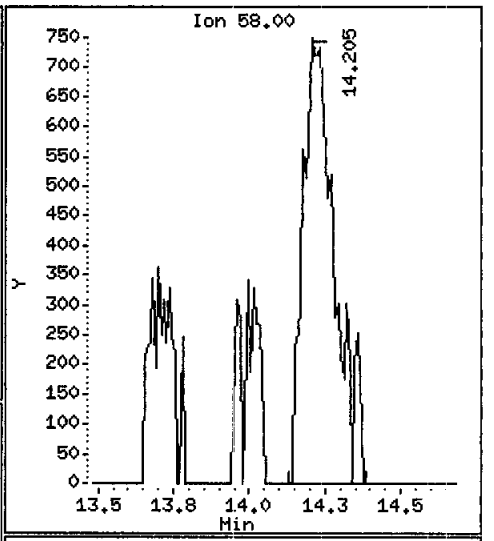
Concentration: 1.080 ppbv

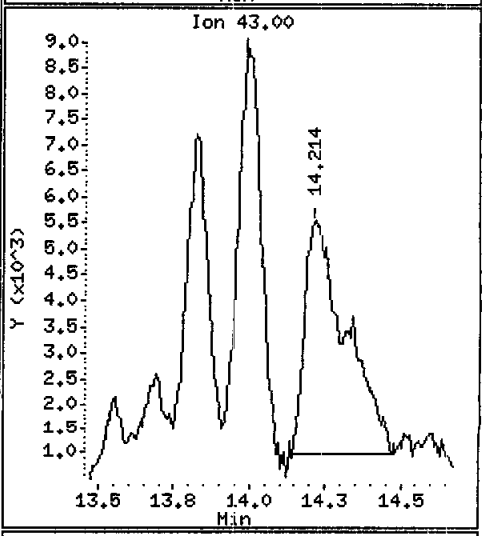


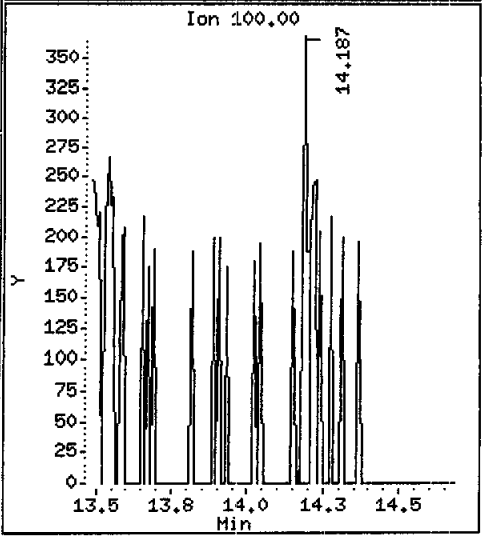












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

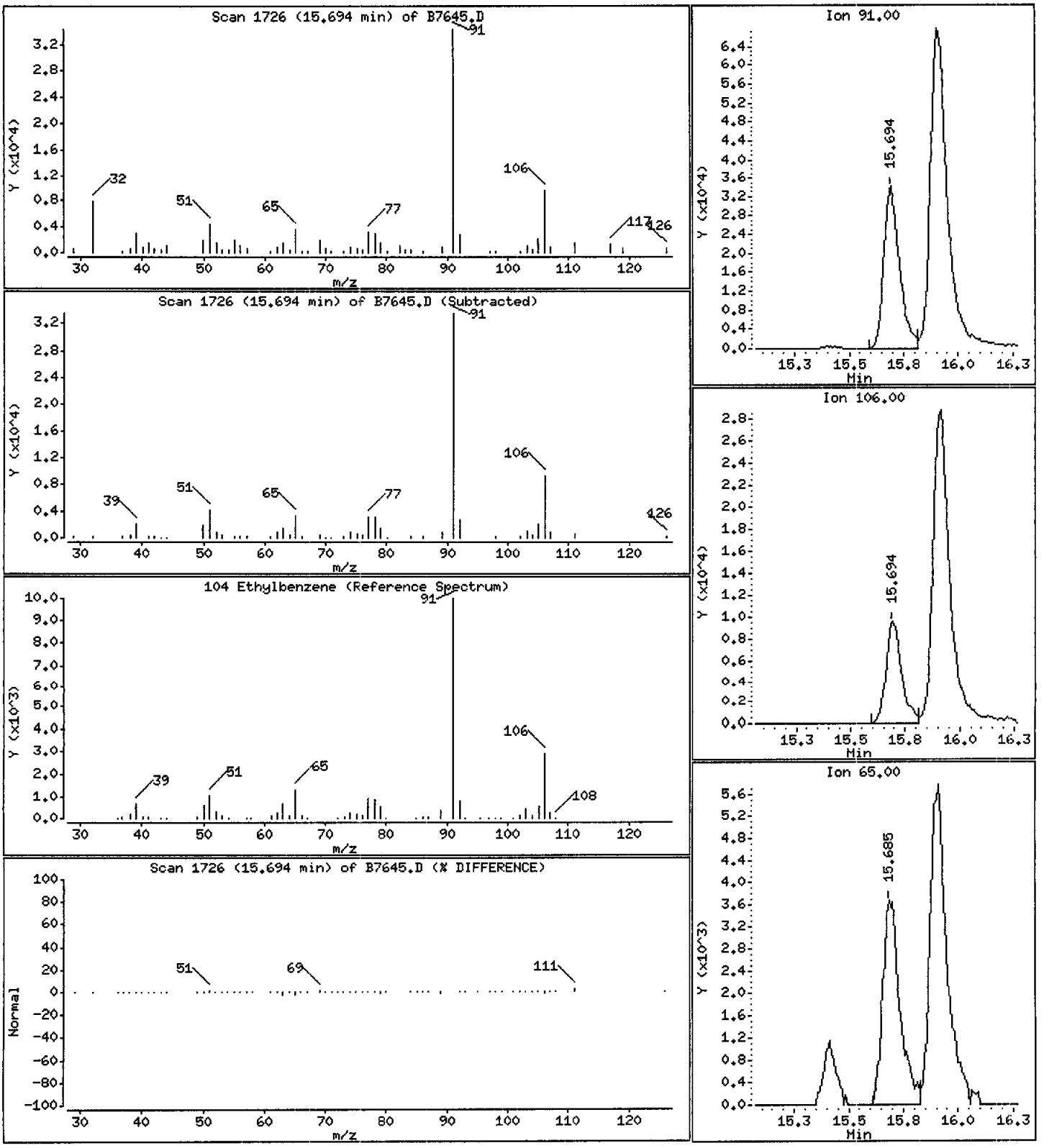
Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53

104 Ethylbenzene

Concentration: 6.005 ppbv



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

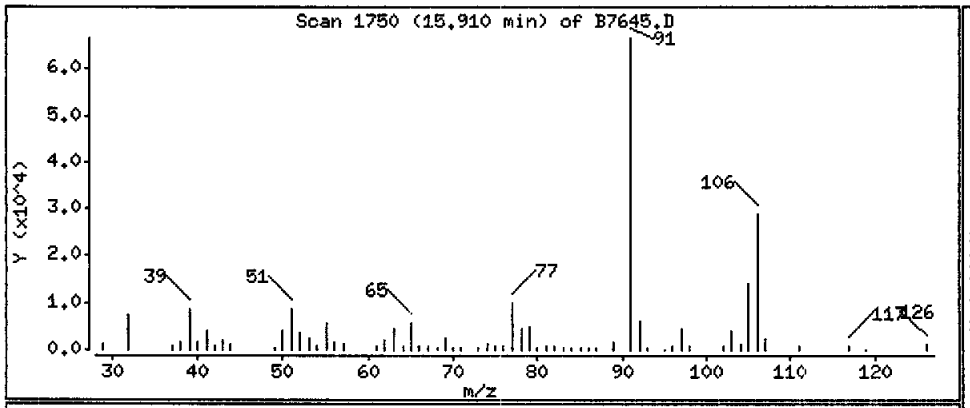
Operator: AA

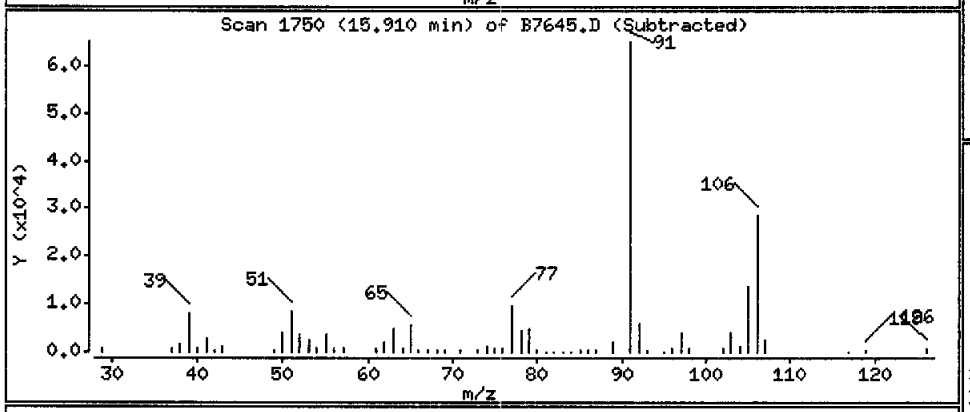
Column phase: J&W DB-624

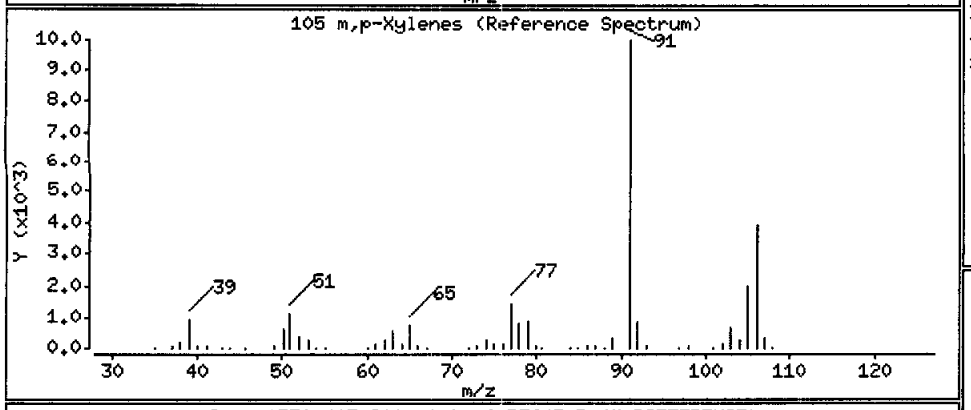
Column diameter: 0.53

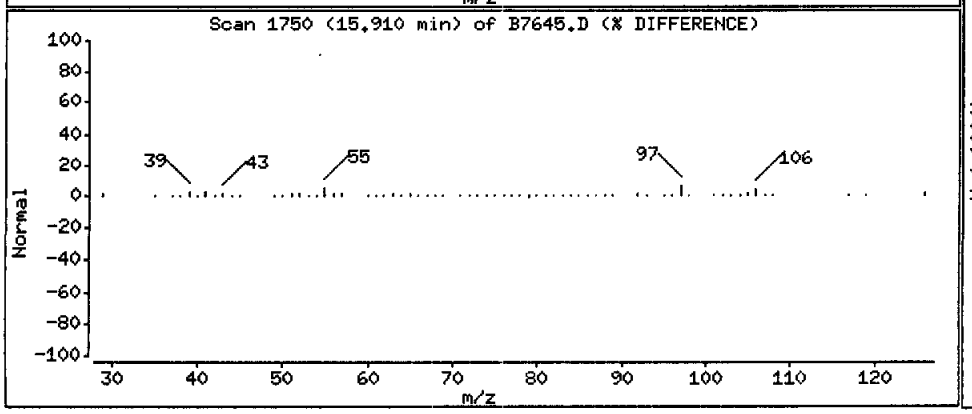
105 m,p-Xylenes

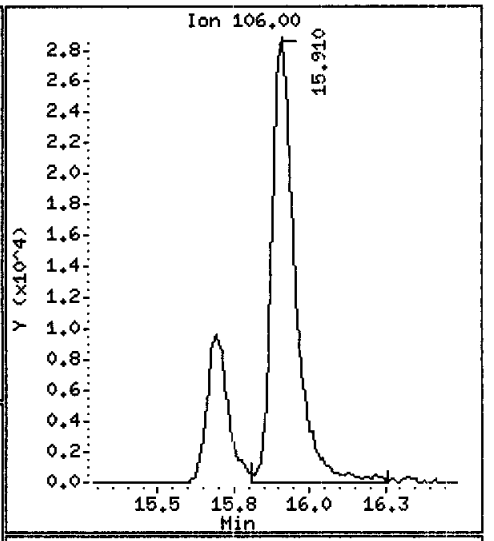
Concentration: 18.94 ppbv

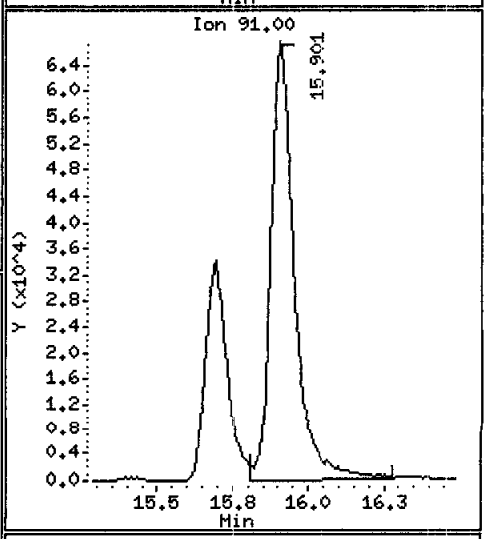


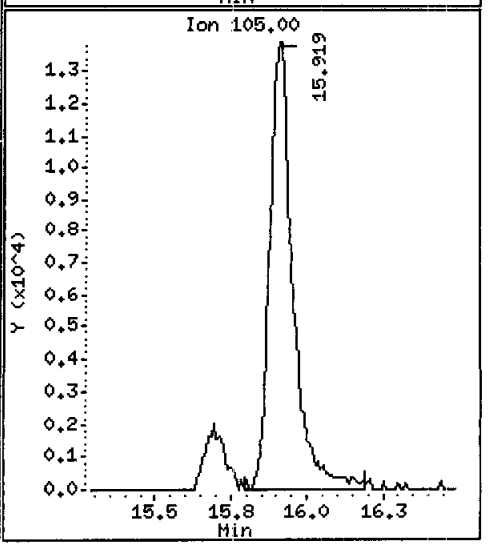












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7645.D

Date : 17-JAN-2005 16:29

Client ID: 066378-001

Instrument: gcmsb.i

Sample Info: G2DH41AD,066378-001,SANDIA,E5A100226-3

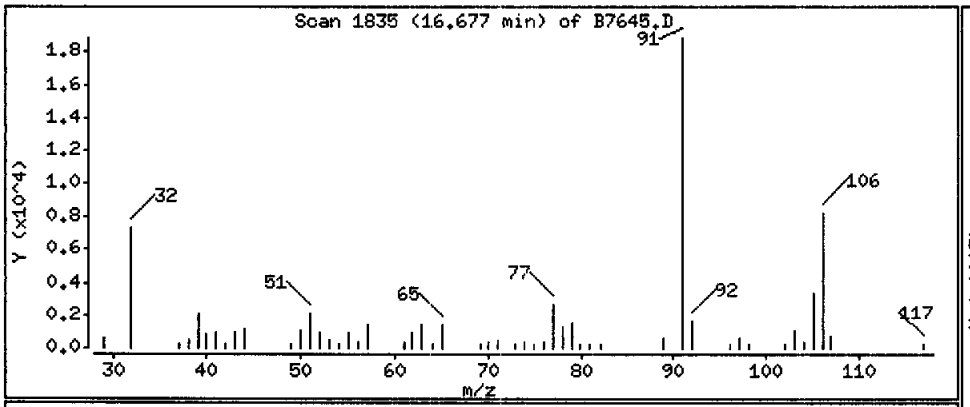
Operator: AA

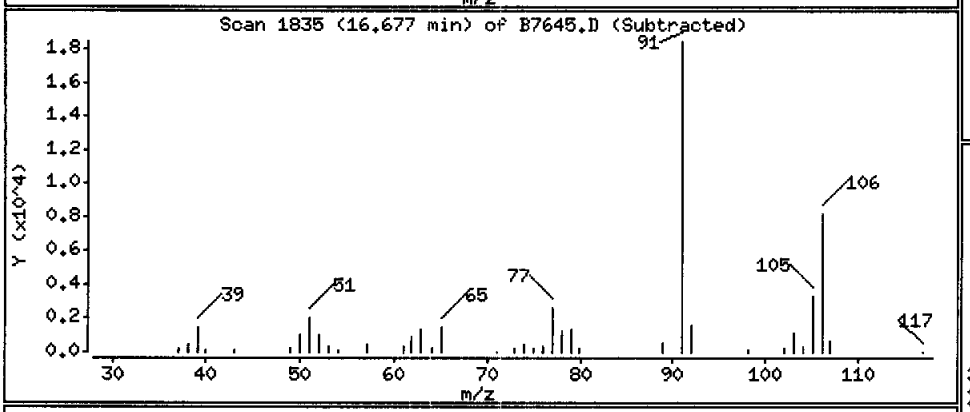
Column phase: J&W DB-624

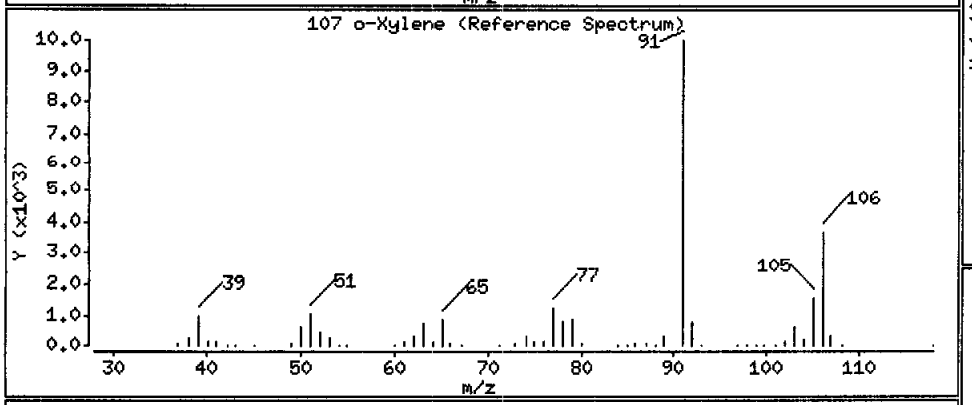
Column diameter: 0.53

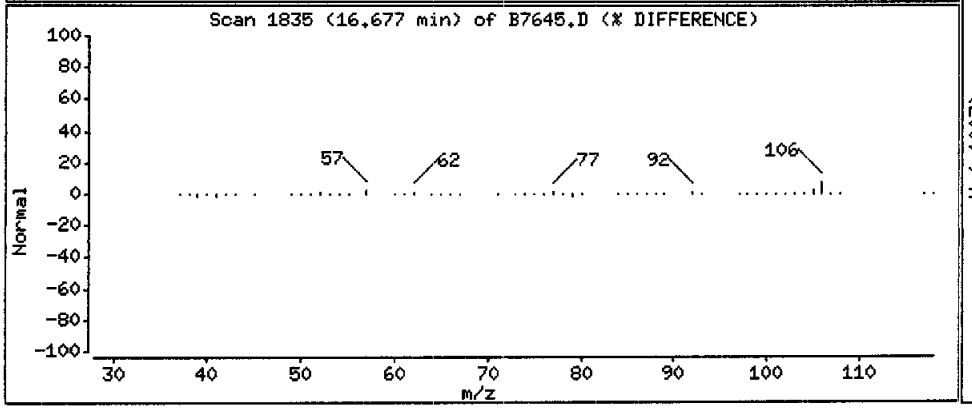
107 o-Xylene

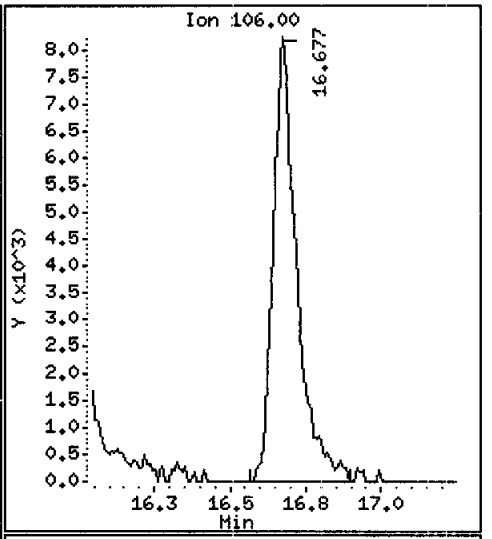
Concentration: 5.622 ppbv

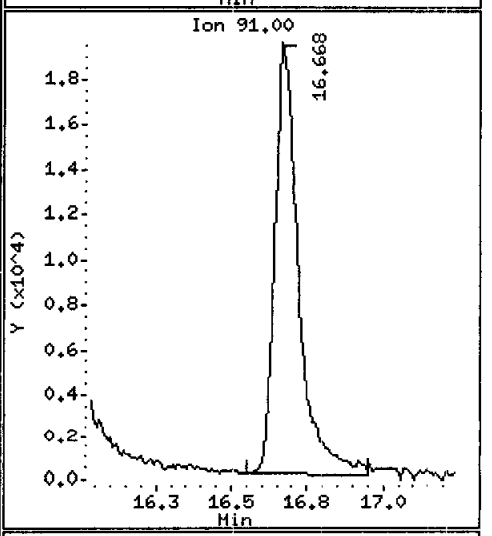


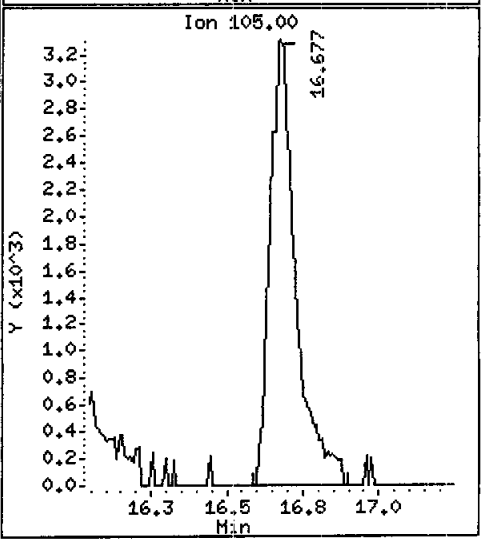












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7646.D
Lab Smp Id: G2DH51AD Client Smp ID: 066379-001
Inj Date : 17-JAN-2005 17:01
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DH51AD,066379-001,SANDIA,E5A100226-4
Misc Info : 24.3,12.2,500,996,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.200	InitPres
CalVol	500.000	CalVol
SmpVol	996.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.317	8.321	(1.000)	612683	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.346	9.341	(0.921)	524056	47.0096	47.00
68 Benzene	78	9.454	9.440	(0.932)	24305	1.31492	1.315(a)
* 73 1,4-Difluorobenzene	114	10.149	10.144	(1.000)	1358401	50.0000	
75 Trichloroethene	130	10.627	10.586	(1.047)	13782	1.16200	1.162(a)
$ 88 Toluene-d8	100	12.756	12.751	(1.257)	716425	50.3669	50.36
89 Toluene	91	12.883	12.878	(1.269)	108680	4.54380	4.543
M 99 Xylenes (total)	106				5411	0.69124	0.6912(a)
* 101 Chlorobenzene-d5	117	15.409	15.404	(1.000)	984364	50.0000	
107 o-Xylene	106	16.717	16.649	(1.085)	5411	0.69124	0.6912(a)
$ 114 4-Bromofluorobenzene	95	17.665	17.651	(1.146)	778985	44.2999	44.30

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7646.D

Date : 17-JAN-2005 17:01

Client ID: 066379-001

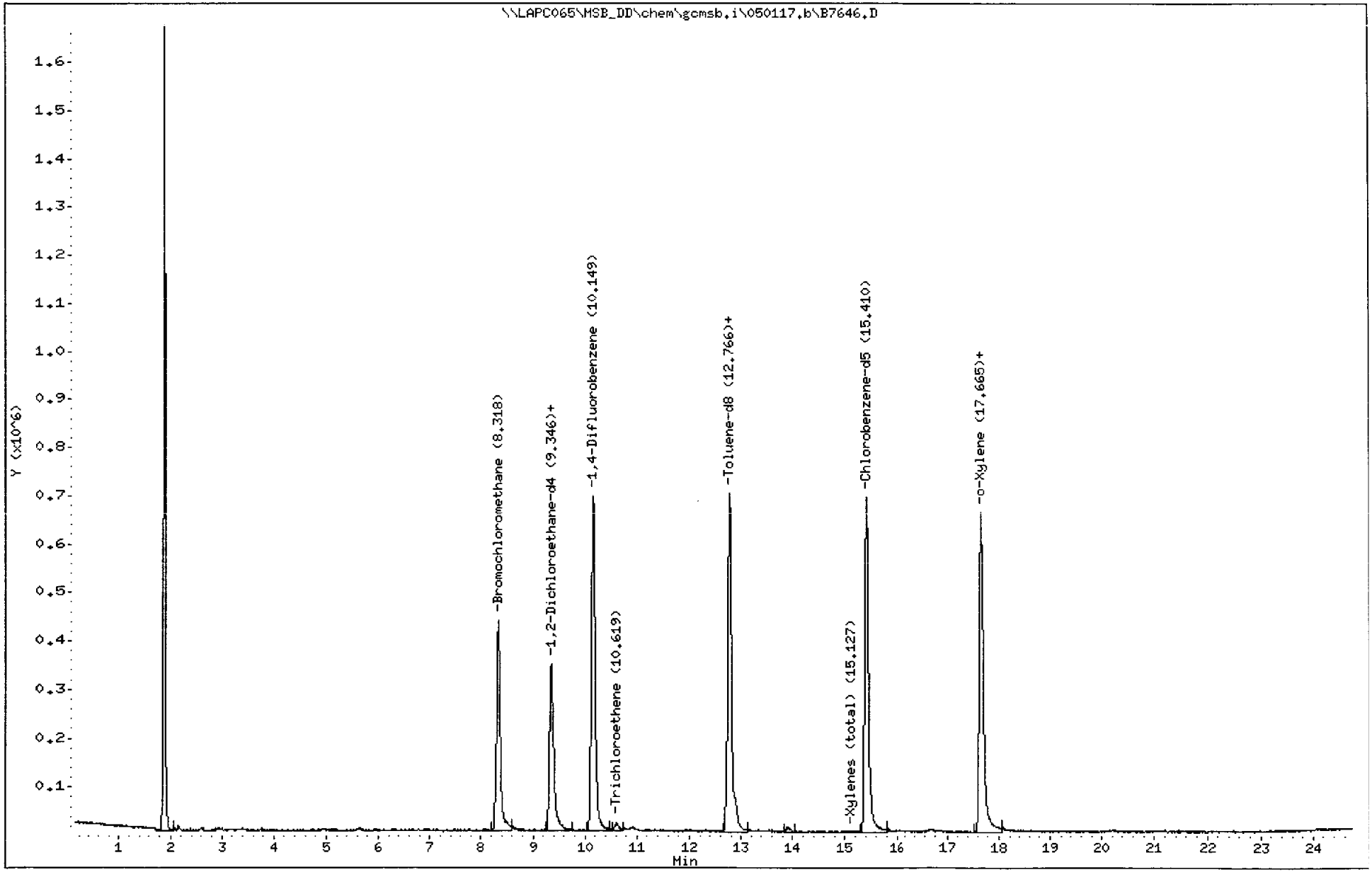
Instrument: gcmsb.i

Sample Info: G2DH51AD,066379-001,SANDIA,E5A100226-4

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7646.D

Date : 17-JAN-2005 17:01

Client ID: 066379-001

Instrument: gcmsb.i

Sample Info: G2DH51AD,066379-001,SANDIA,E5A100226-4

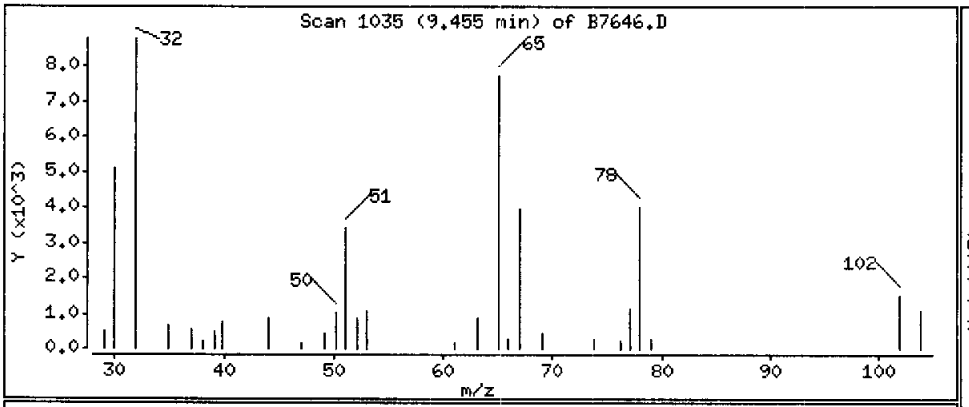
Operator: AA

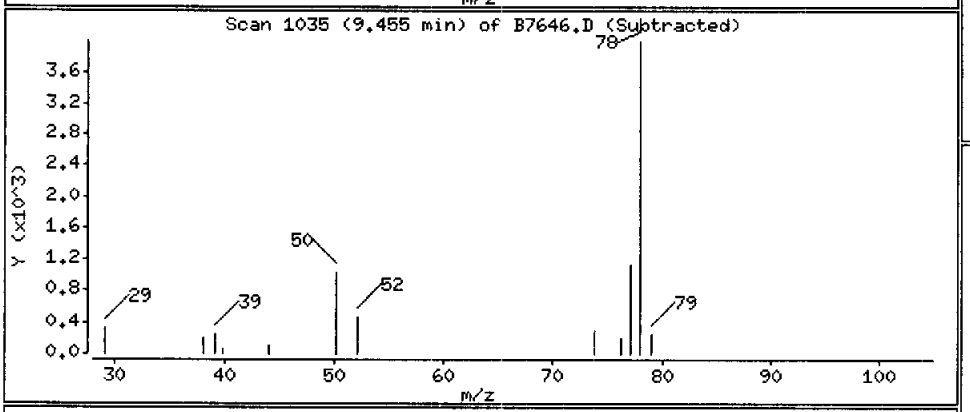
Column phase: J&W DB-624

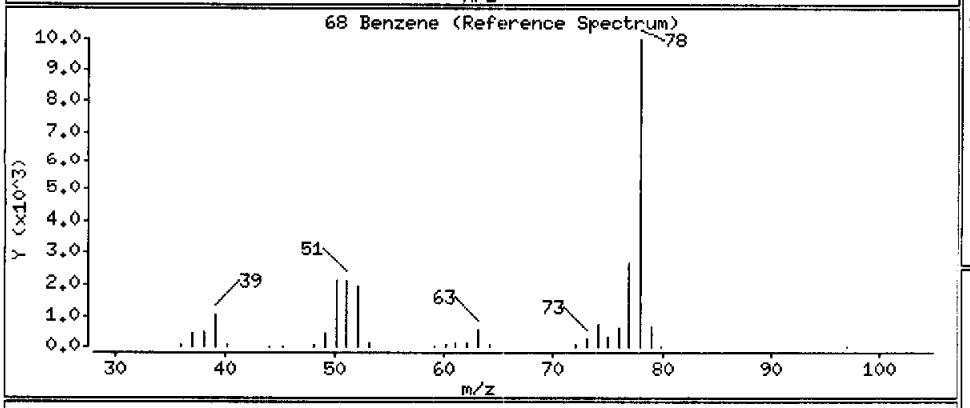
Column diameter: 0.53

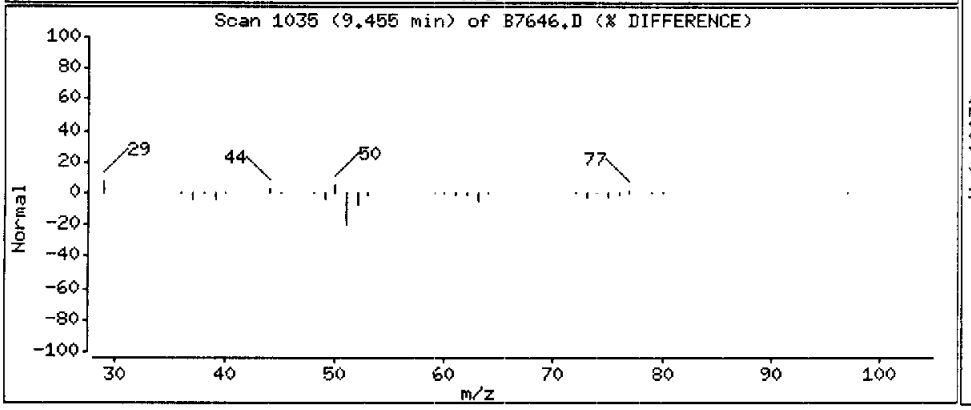
68 Benzene

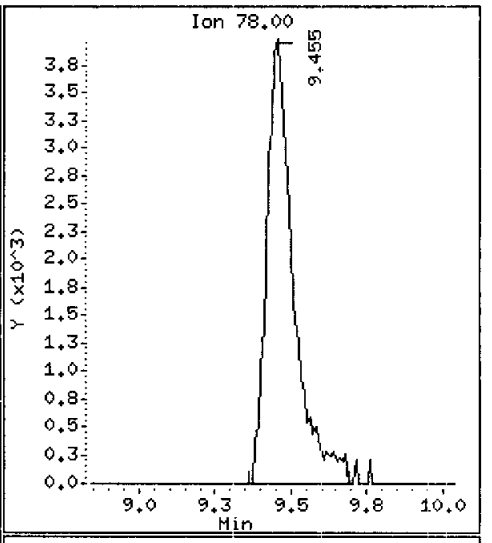
Concentration: 1.315 ppbv

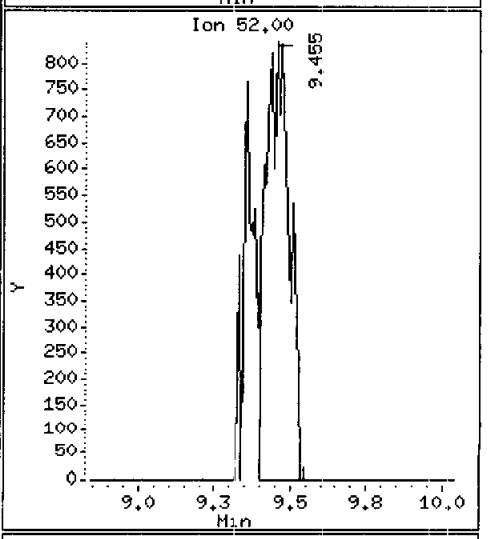


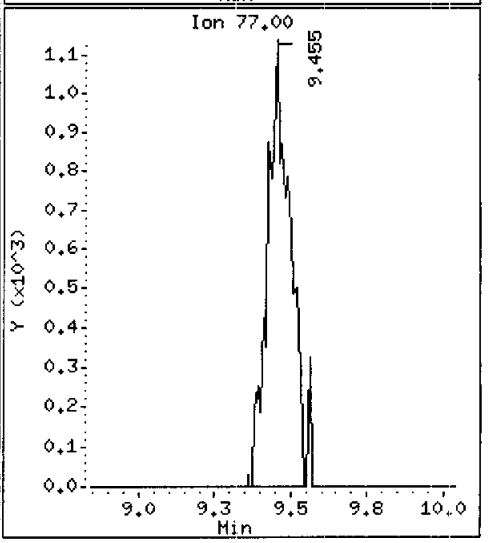












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Date : 17-JAN-2005 17:01

Client ID: 066379-001

Instrument: gcmsb.i

Sample Info: G2DH51AD,066379-001,SANDIA,E5A100226-4

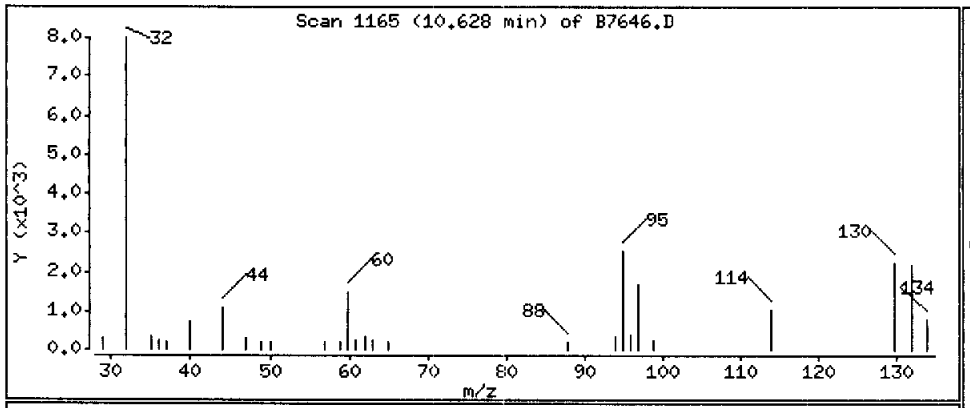
Operator: AA

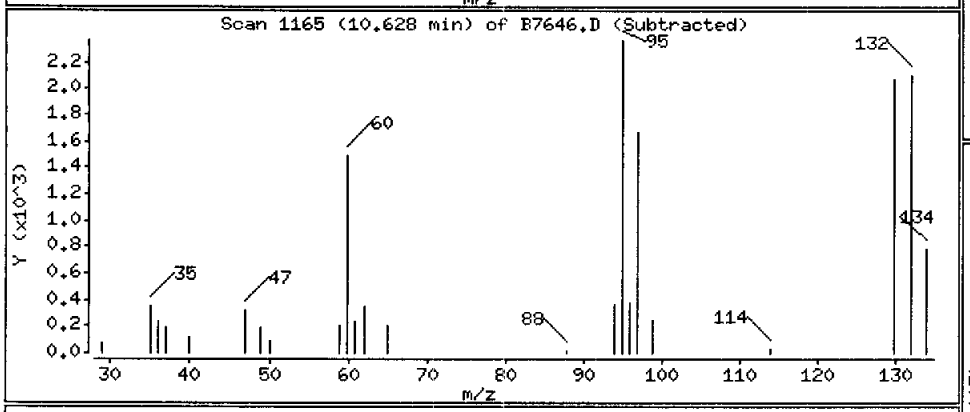
Column phase: J&W DB-624

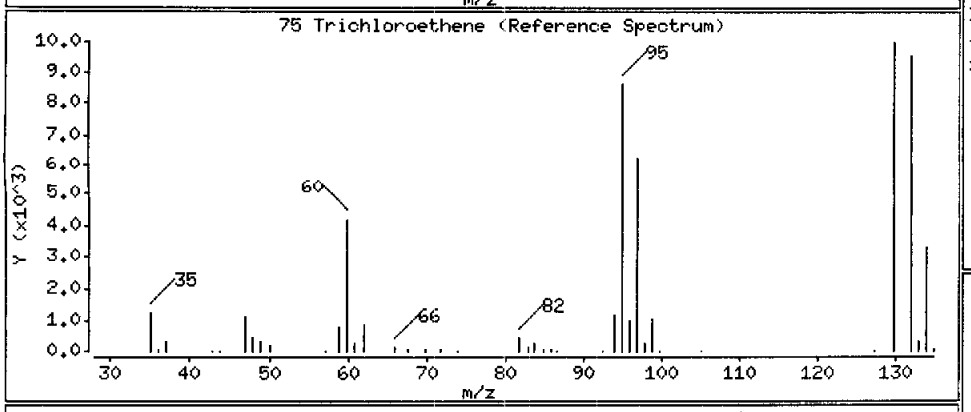
Column diameter: 0.53

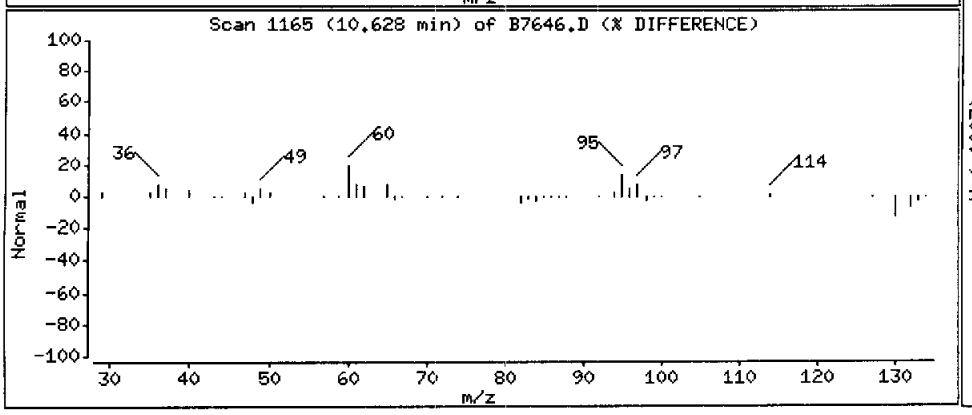
75 Trichloroethene

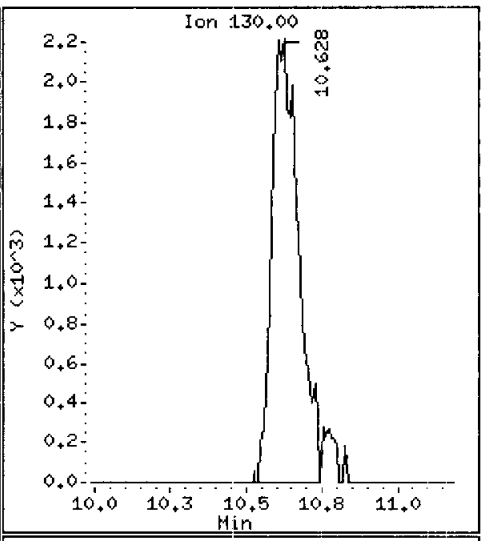
Concentration: 1.162 ppbv

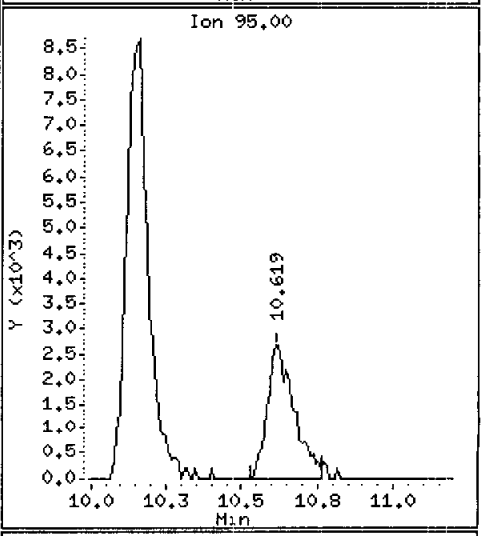


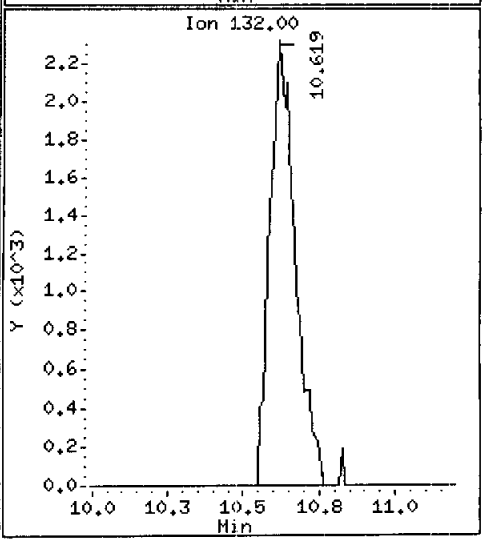












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7646.D

Date : 17-JAN-2005 17:01

Client ID: 066379-001

Instrument: gcmsb.i

Sample Info: G2DH51AD,066379-001,SANDIA,E5A100226-4

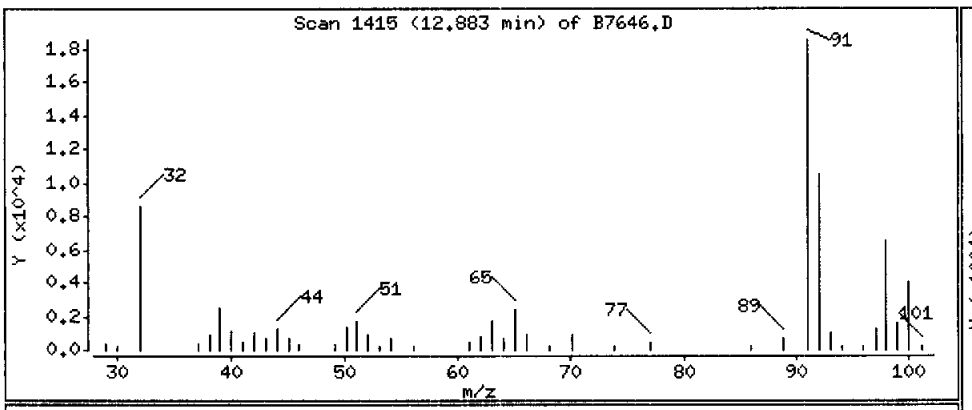
Operator: AA

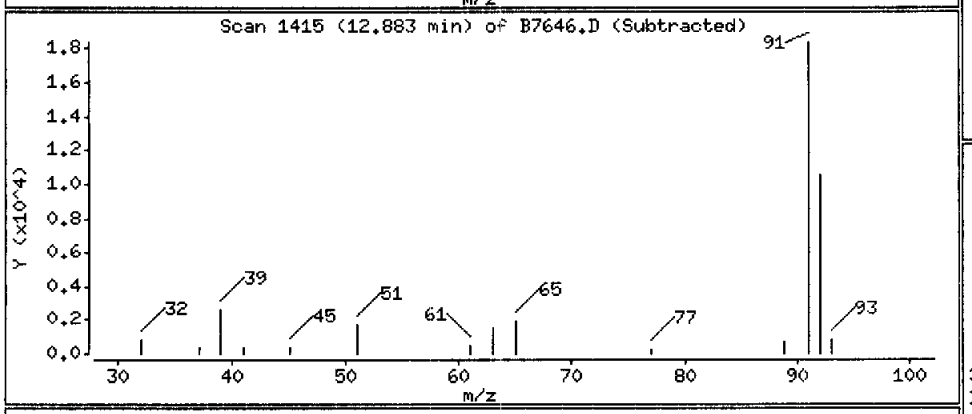
Column phase: J&W DB-624

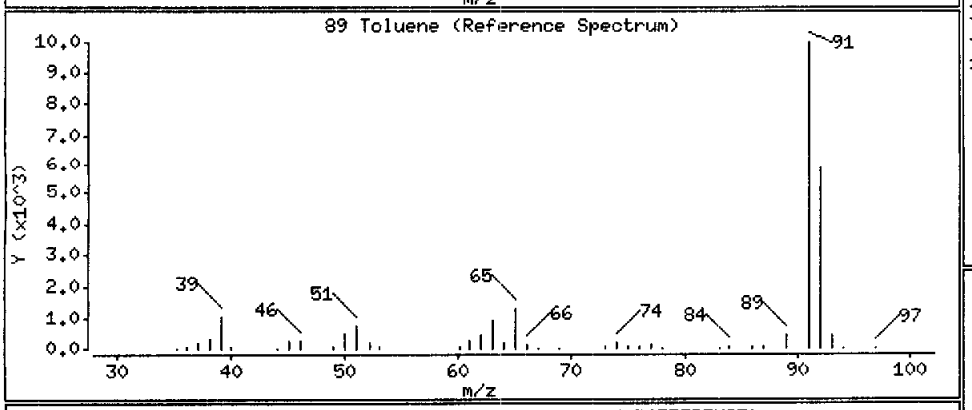
Column diameter: 0.53

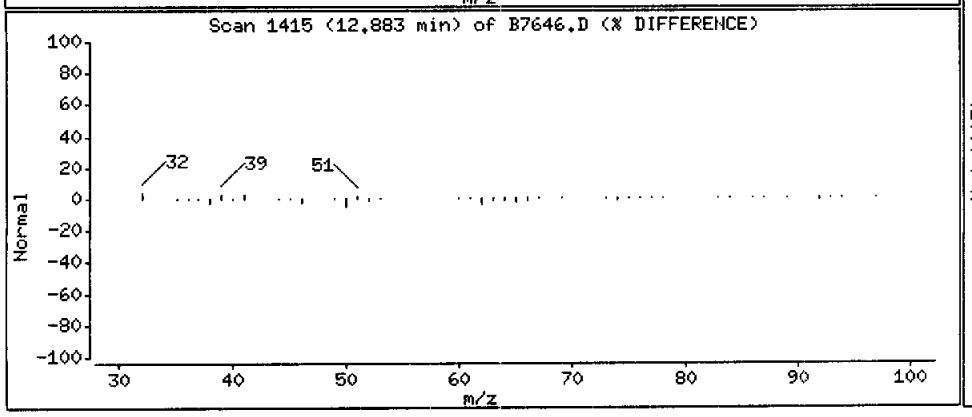
89 Toluene

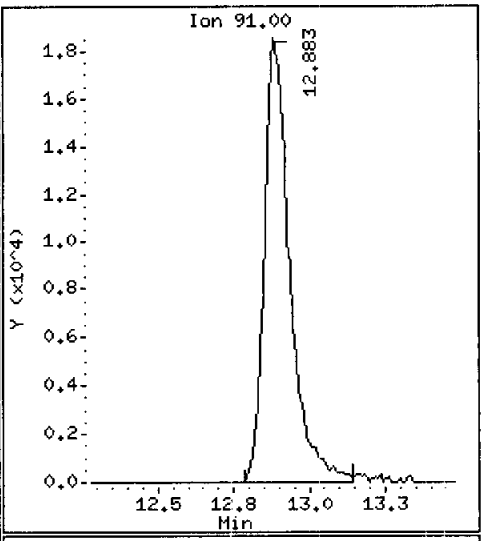
Concentration: 4.543 ppbv

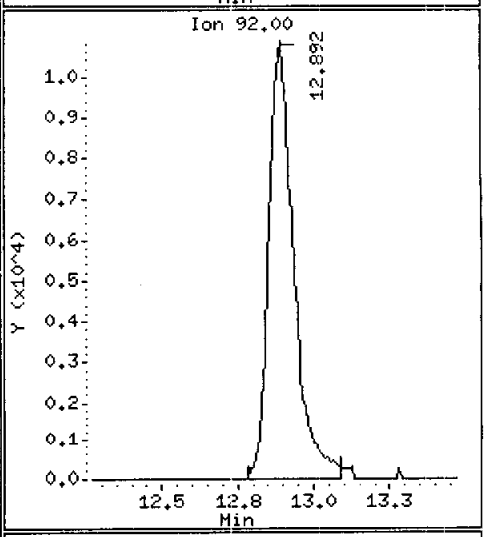


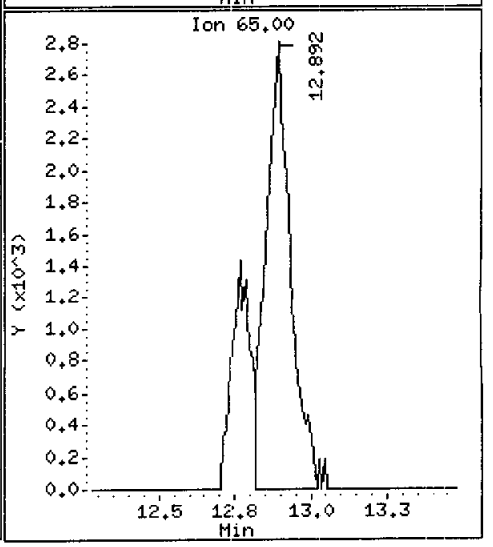












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7646.D

Date : 17-JAN-2005 17:01

Client ID: 066379-001

Instrument: gcmsb.i

Sample Info: G2DH51AD,066379-001,SANDIA,E5A100226-4

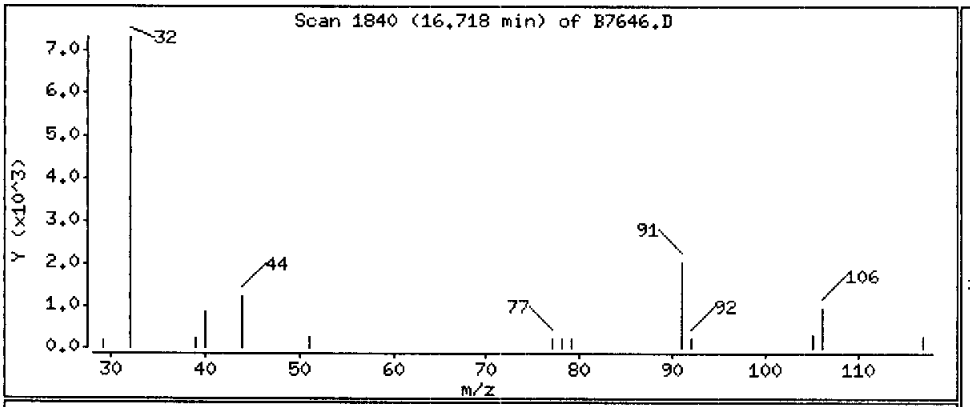
Operator: AA

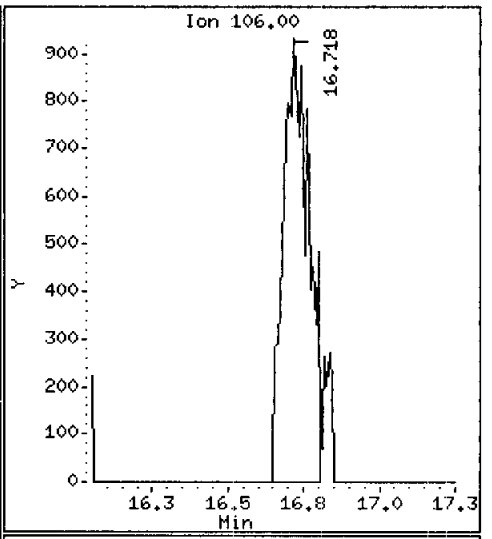
Column phase: J&W DB-624

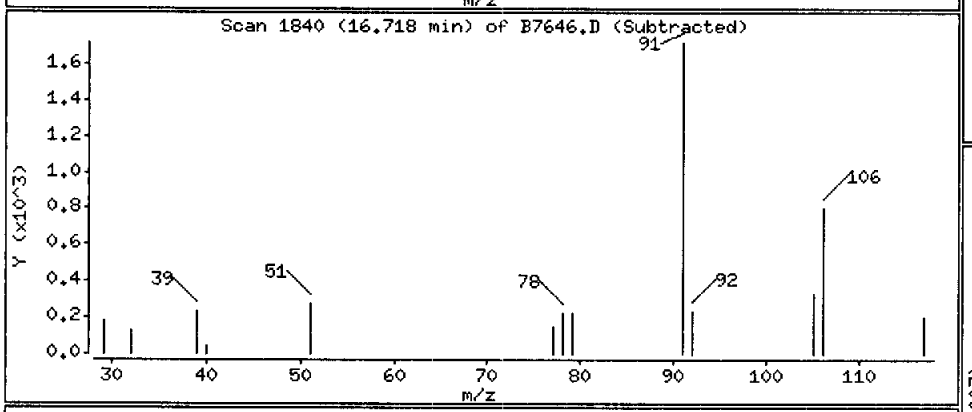
Column diameter: 0.53

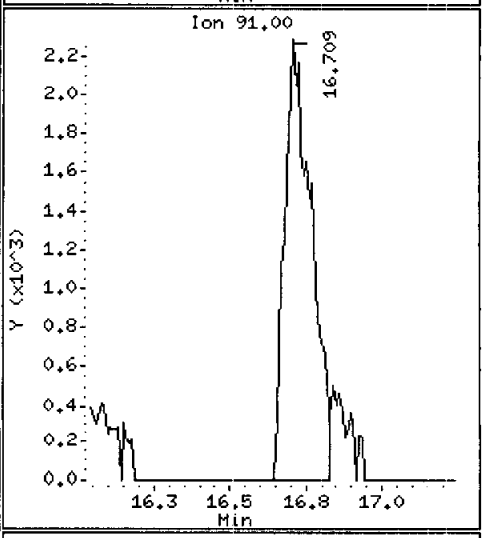
107 o-Xylene

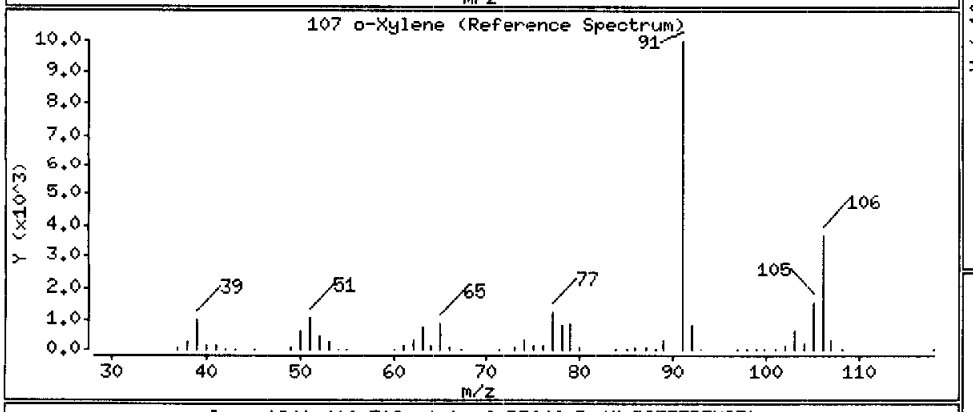
Concentration: 0.6912 ppbv

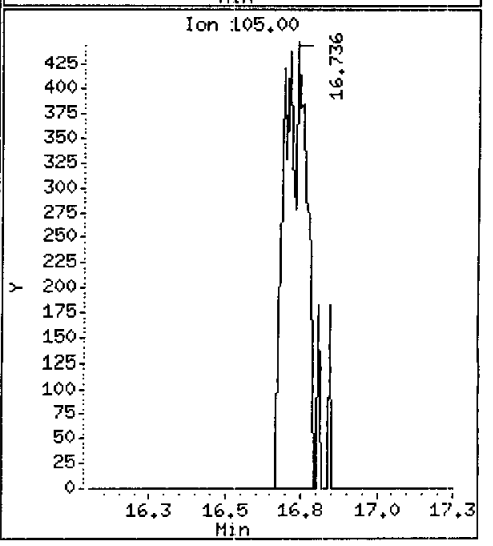


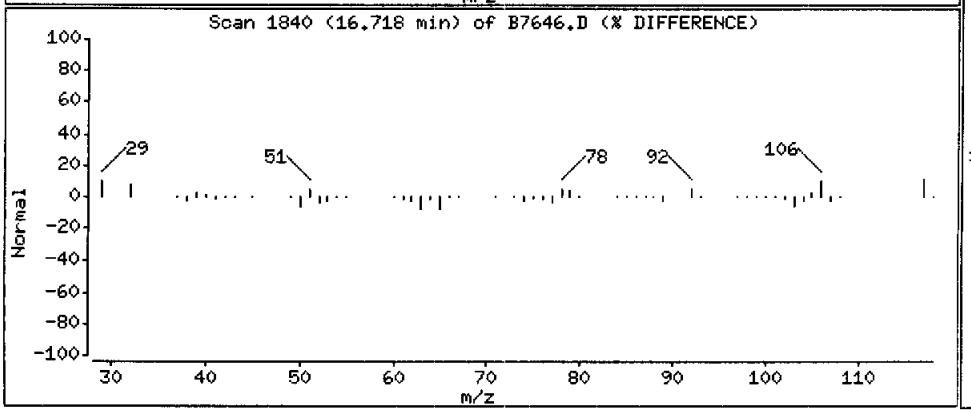












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D
Lab Smp Id: G2DH61AD Client Smp ID: 066380-001
Inj Date : 17-JAN-2005 17:36
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DH61AD,066380-001,SANDIA,E5A100226-5
Misc Info : 24.3,12.4,500,980,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.400	InitPres
CalVol	500.000	CalVol
SmpVol	980.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
31 Acetone	58	4.880	4.847	(0.586)	18911	9.51231	9.511(aQ)
37 Methylene Chloride	49	5.620	5.587	(0.675)	7100	0.82005	0.8199(a)
54 2-Butanone	72	8.011	7.969	(0.962)	25373	9.59358	9.592(aQ)
* 58 Bromochloromethane	49	8.326	8.321	(1.000)	621244	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.346	9.341	(0.921)	520883	47.2517	47.24
68 Benzene	78	9.454	9.440	(0.932)	27340	1.49577	1.496(a)
* 73 1,4-Difluorobenzene	114	10.149	10.144	(1.000)	1343259	50.0000	
75 Trichloroethene	130	10.609	10.586	(1.045)	36873	3.14391	3.143
$ 88 Toluene-d8	100	12.766	12.751	(1.258)	730426	51.9301	51.92
89 Toluene	91	12.883	12.878	(1.269)	361119	15.2682	15.26
93 1,1,2-Trichloroethane	97	13.541	13.608	(0.879)	61106	5.38801	5.387(Q)
M 99 Xylenes (total)	106				153773	18.6973	18.69
* 101 Chlorobenzene-d5	117	15.409	15.404	(1.000)	1005368	50.0000	
104 Ethylbenzene	91	15.689	15.675	(1.018)	129771	4.54106	4.540

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
105 m,p-Xylenes	106	15.905	15.891	(1.032)	117000	14.0983	14.10
107 o-Xylene	106	16.672	16.649	(1.082)	36773	4.59900	4.598
$ 114 4-Bromofluorobenzene	95	17.665	17.651	(1.146)	852756	47.4820	47.47

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

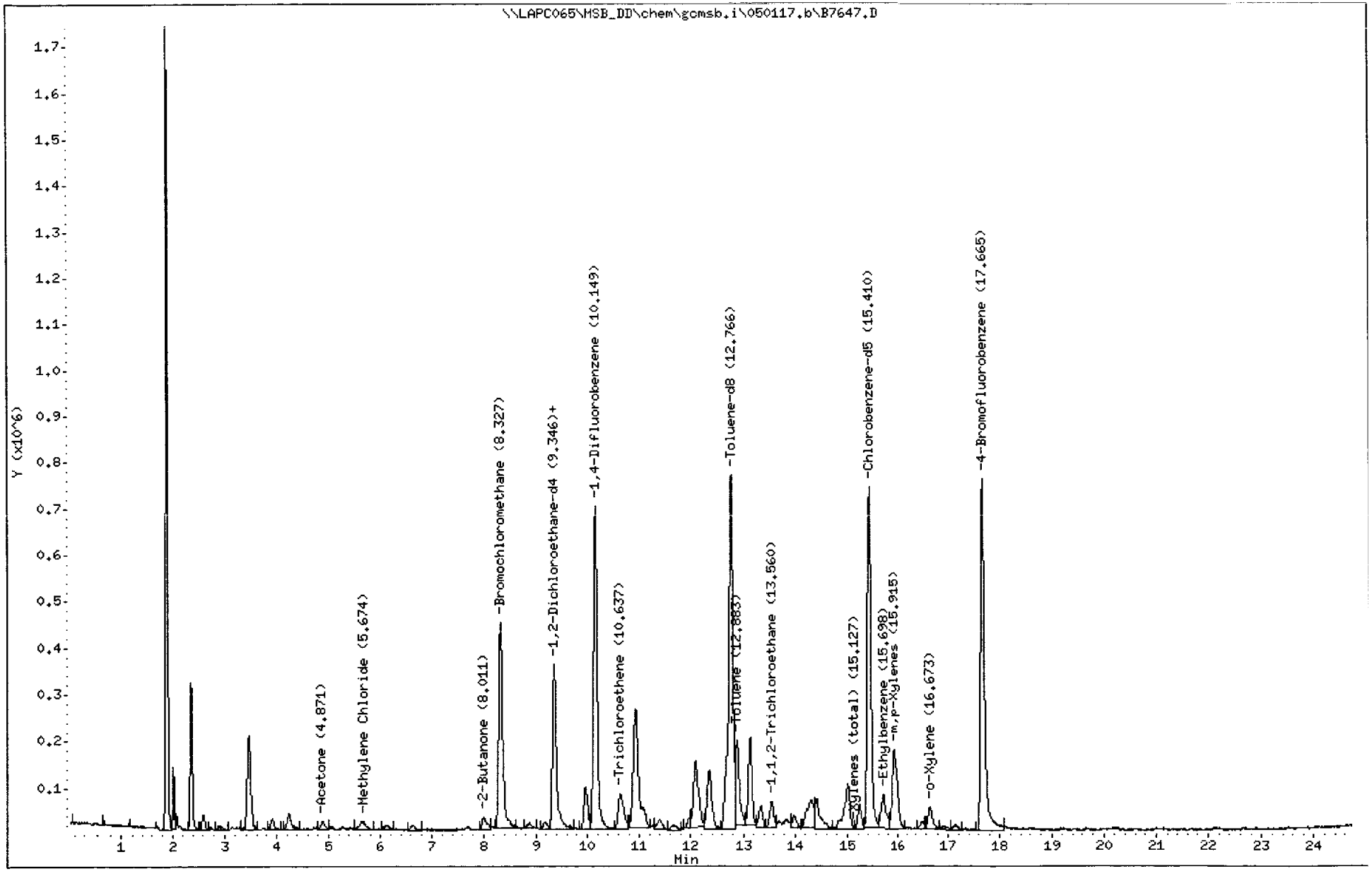
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D
Date : 17-JAN-2005 17:36
Client ID: 066380-001
Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

Instrument: gcmsb.i

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

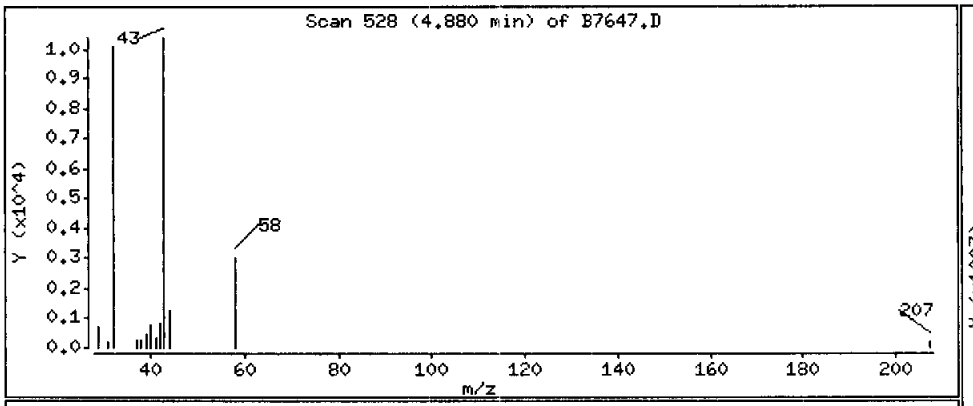
Operator: AA

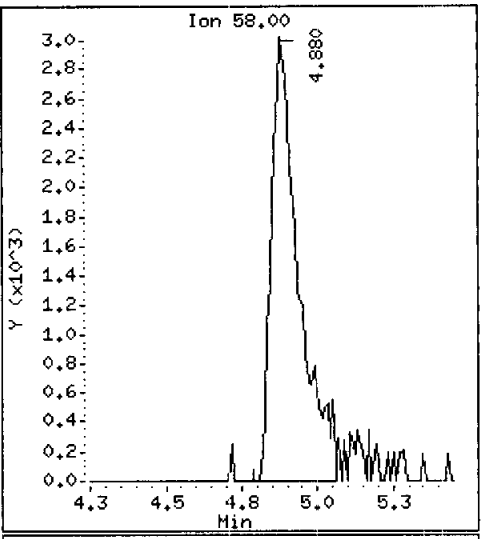
Column phase: J&W DB-624

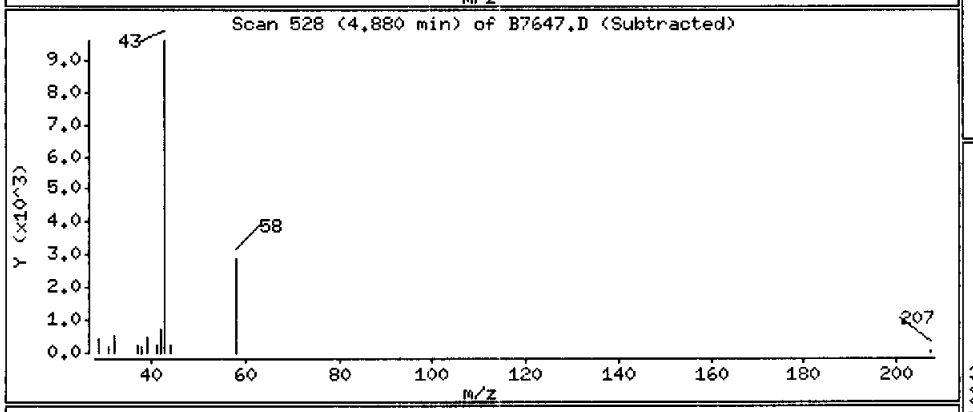
Column diameter: 0.53

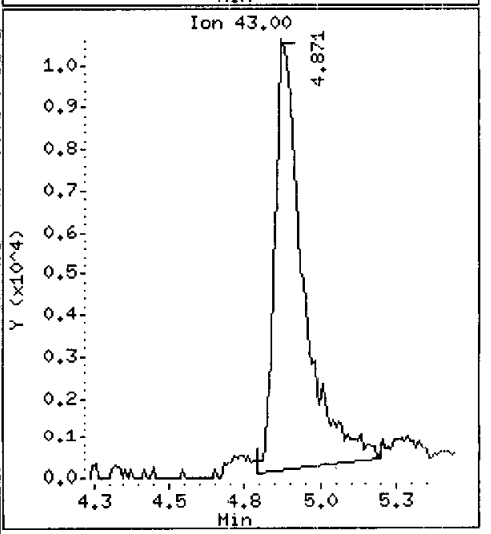
31 Acetone

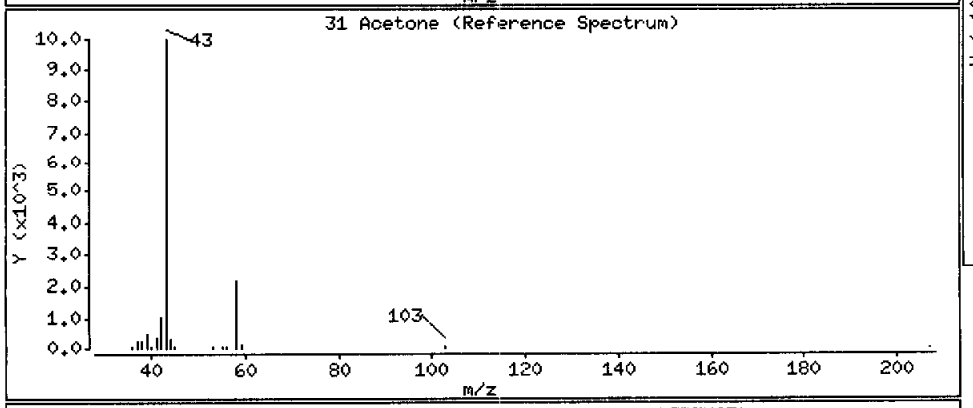
Concentration: 9.511 ppbv

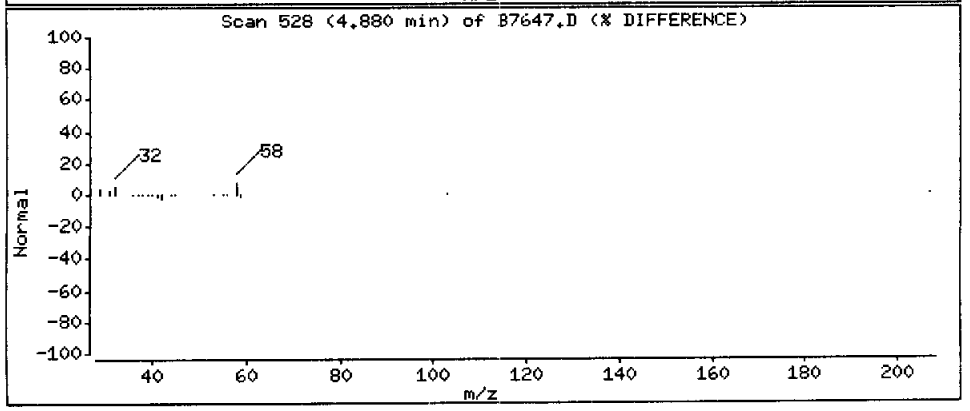












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

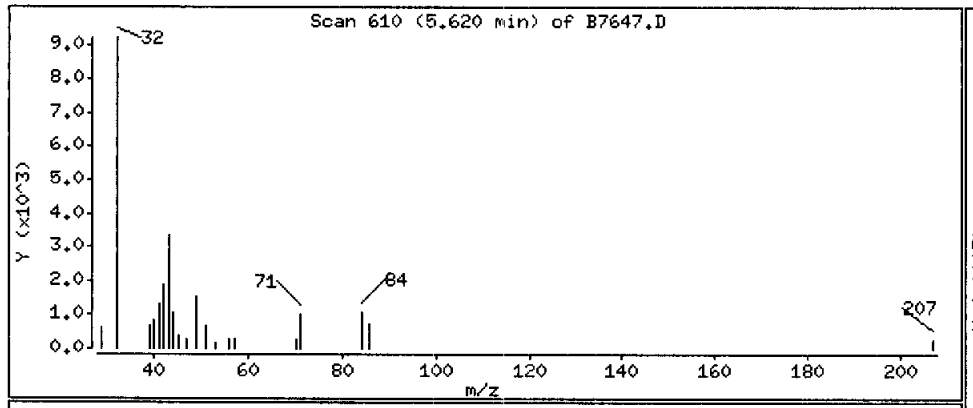
Operator: AA

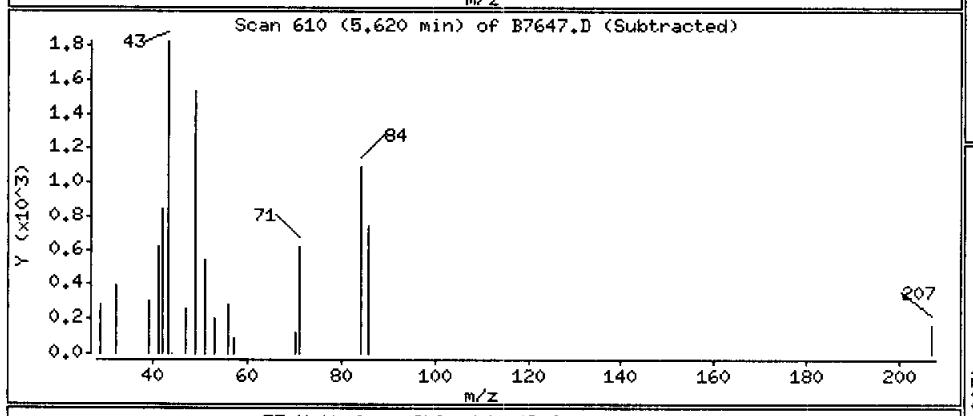
Column phase: J&W DB-624

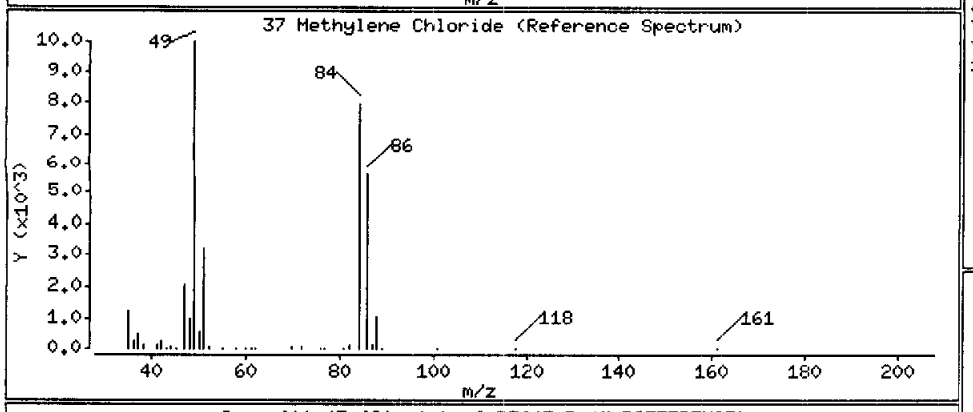
Column diameter: 0.53

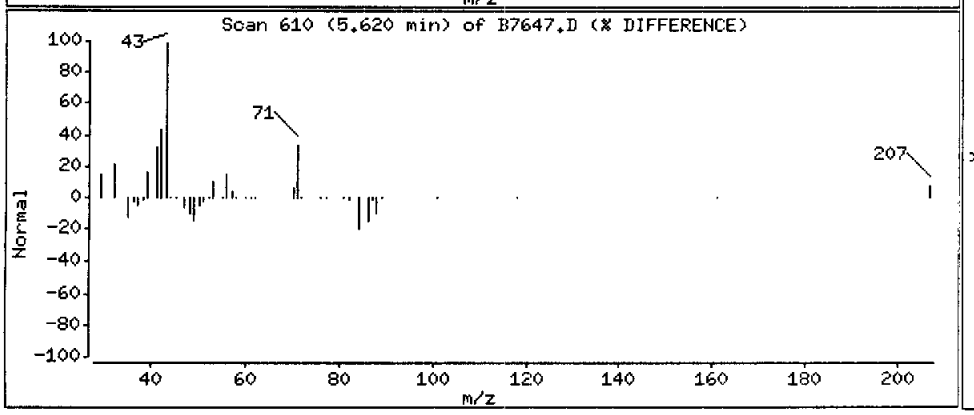
37 Methylene Chloride

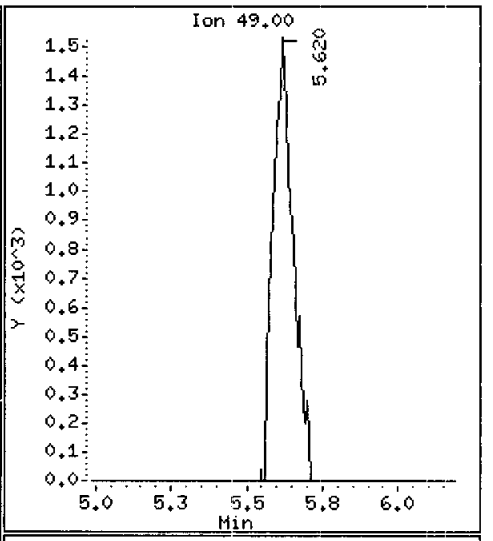
Concentration: 0.8199 ppbv

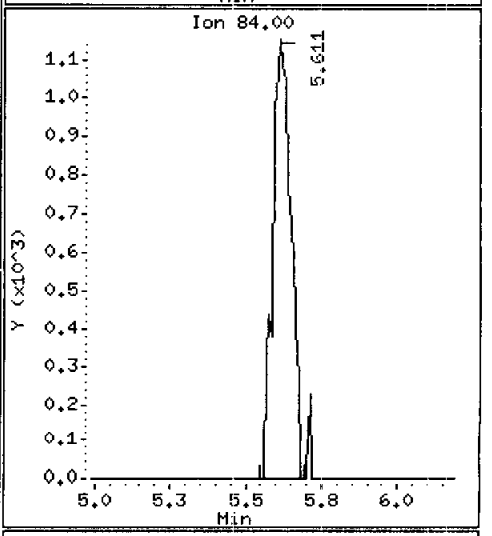


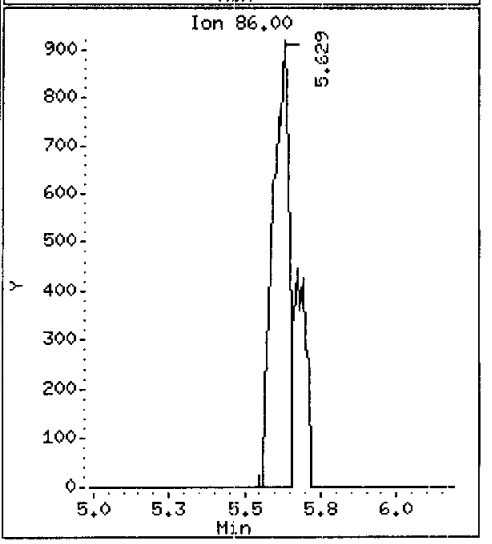












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

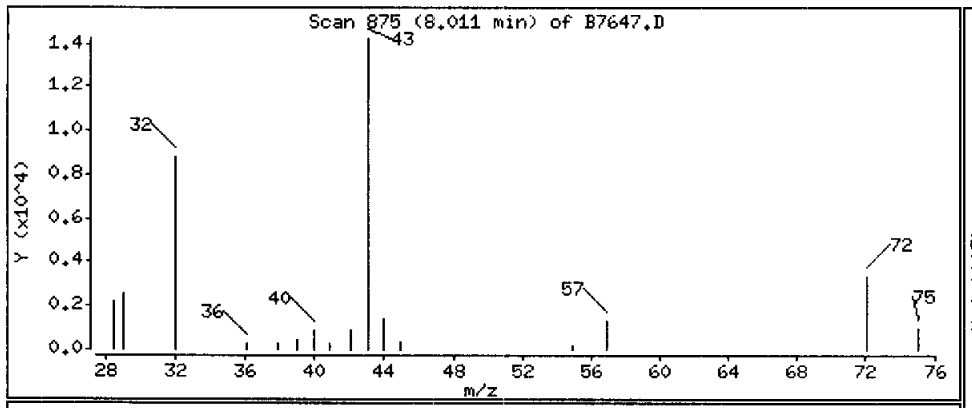
Operator: AA

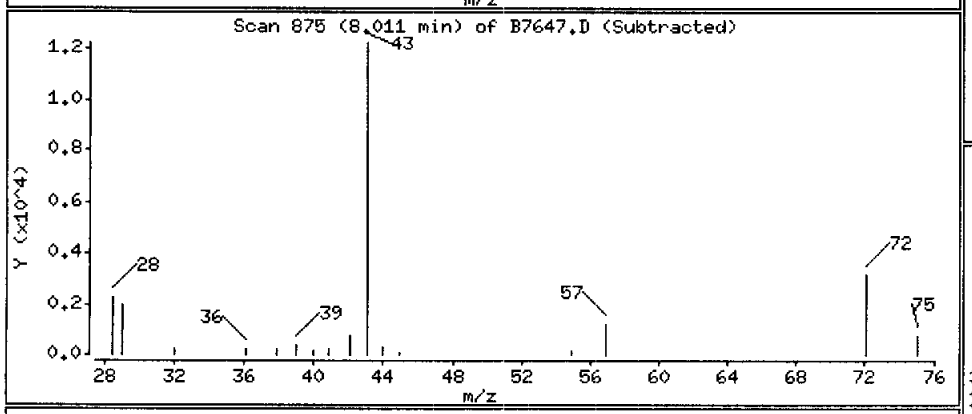
Column phase: J&W DB-624

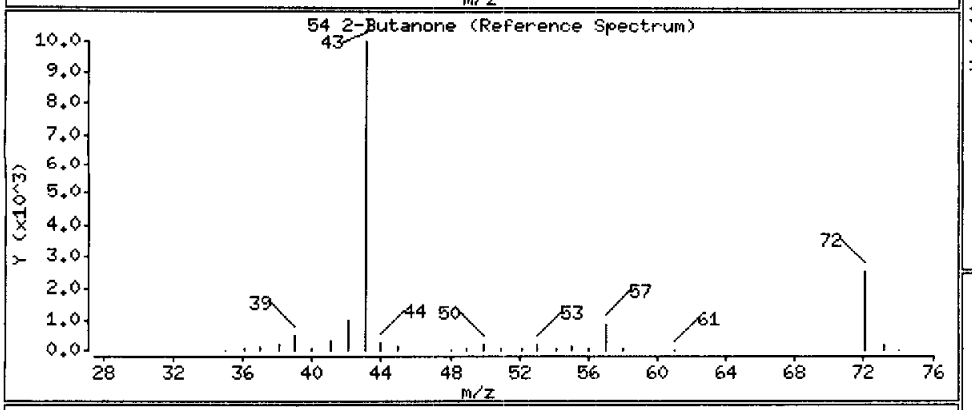
Column diameter: 0.53

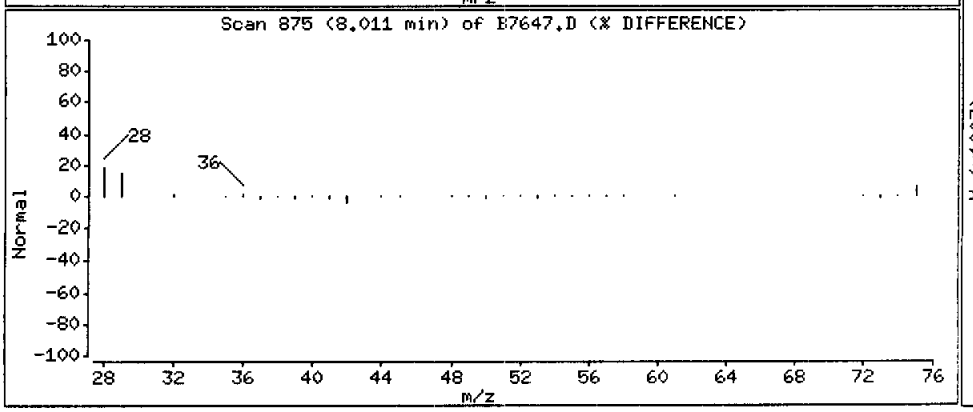
54 2-Butanone

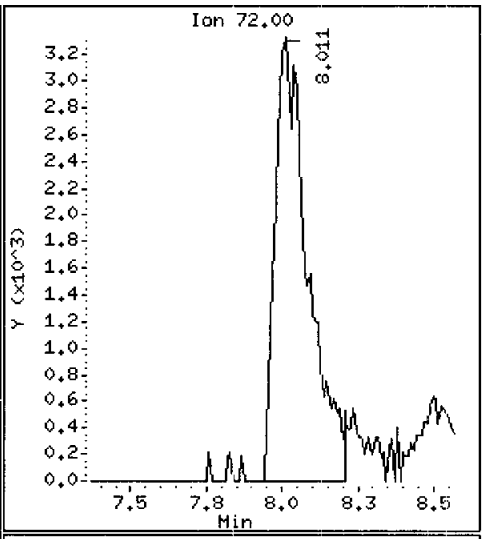
Concentration: 9.592 ppbv

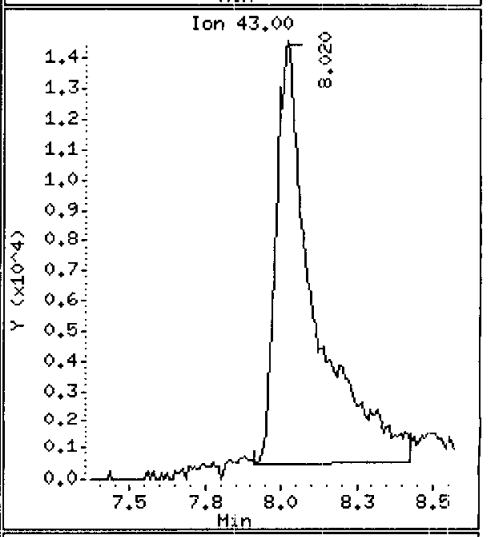


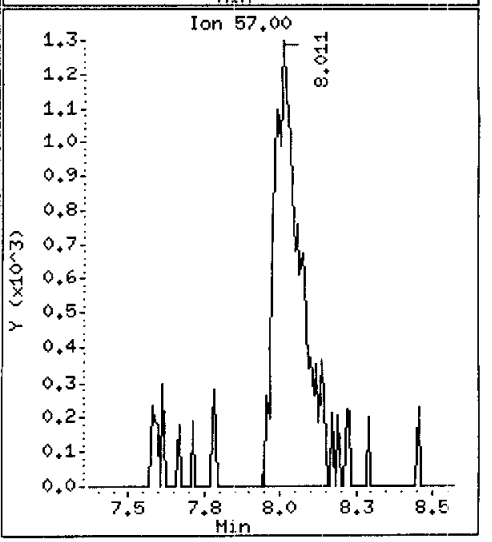












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

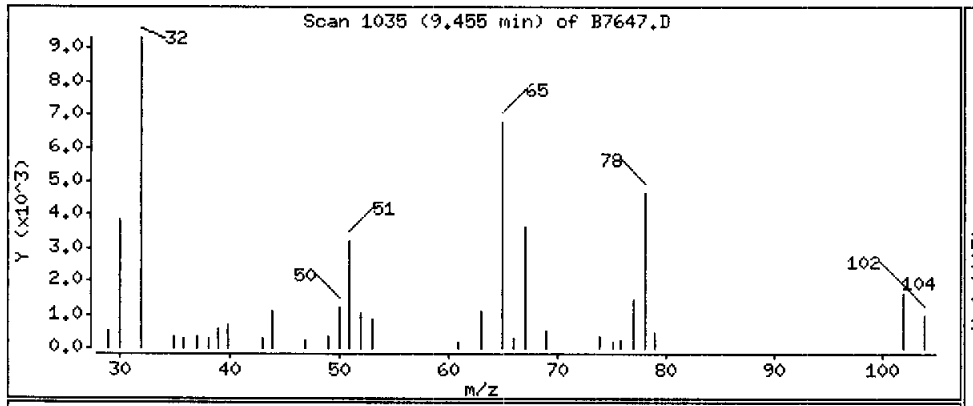
Operator: AA

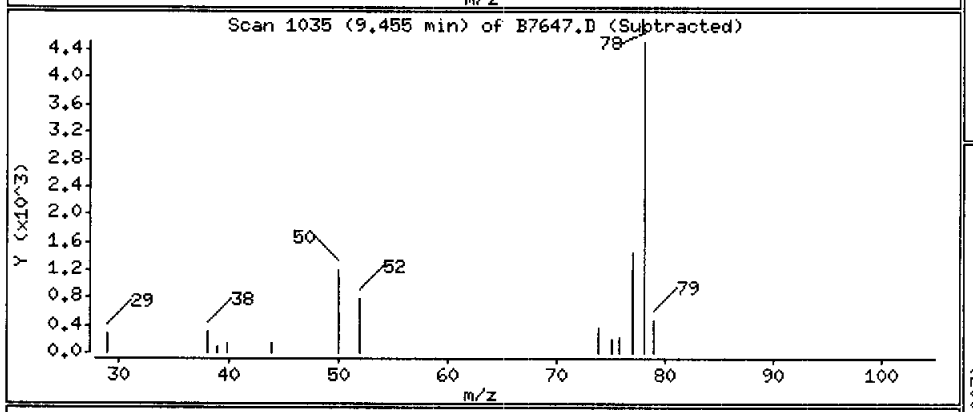
Column phase: J&W DB-624

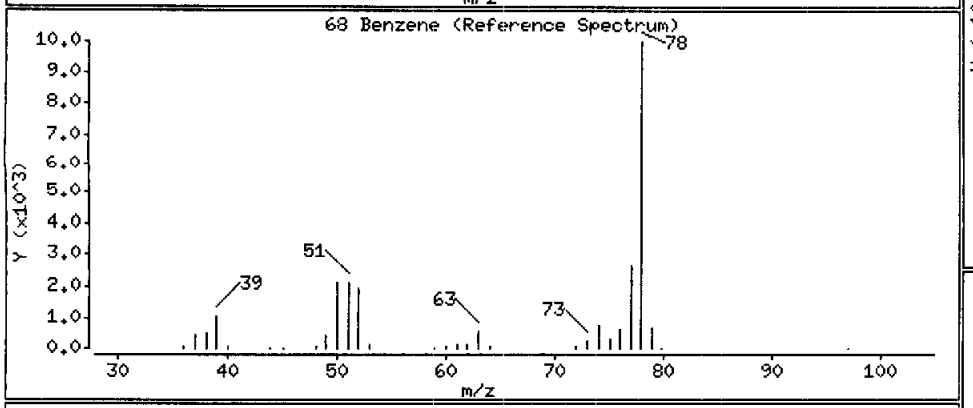
Column diameter: 0.53

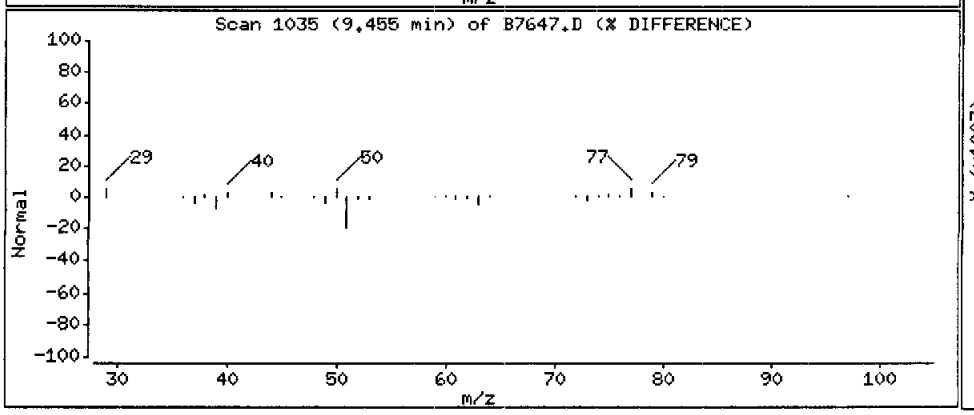
68 Benzene

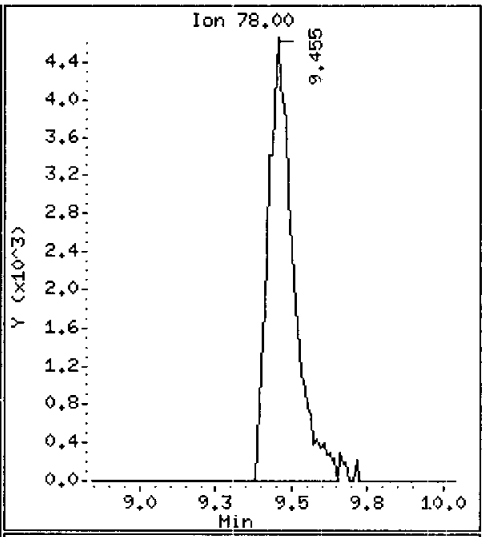
Concentration: 1.496 ppbv

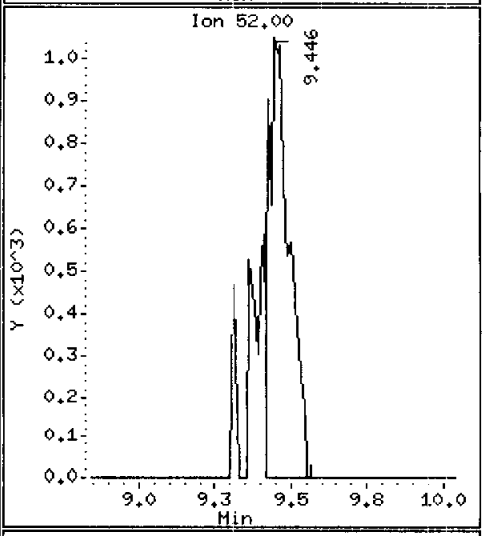


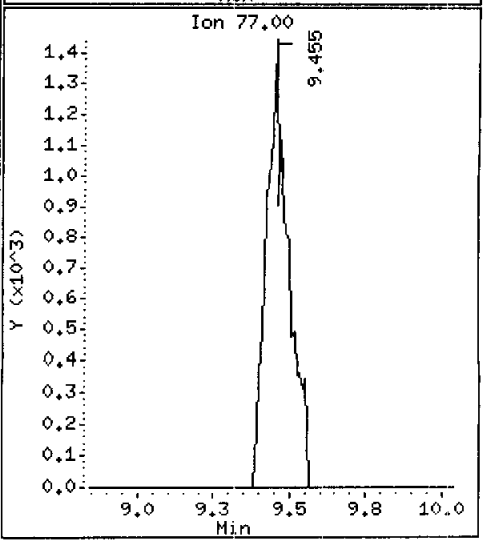












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

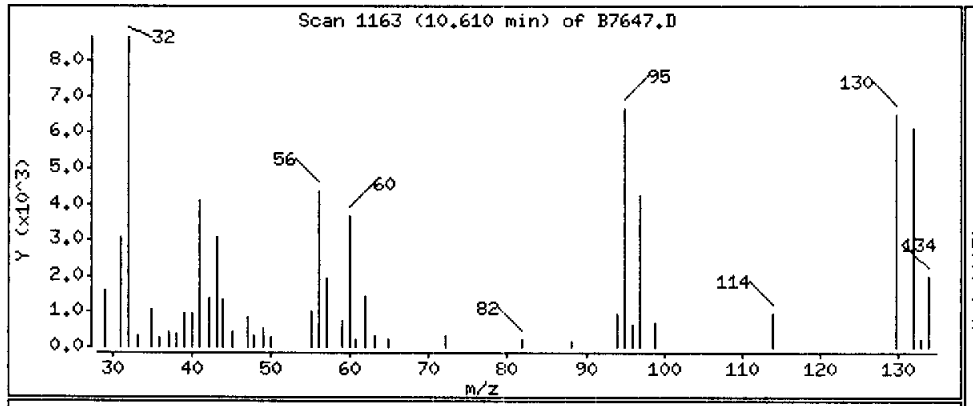
Operator: AA

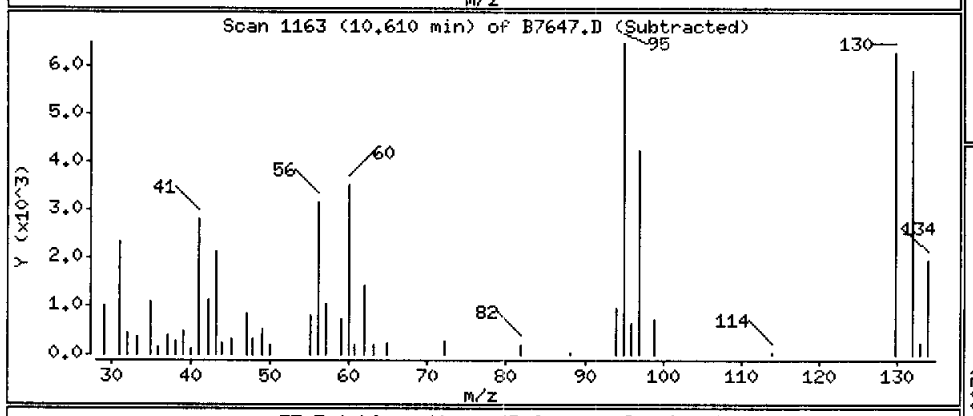
Column phase: J&W DB-624

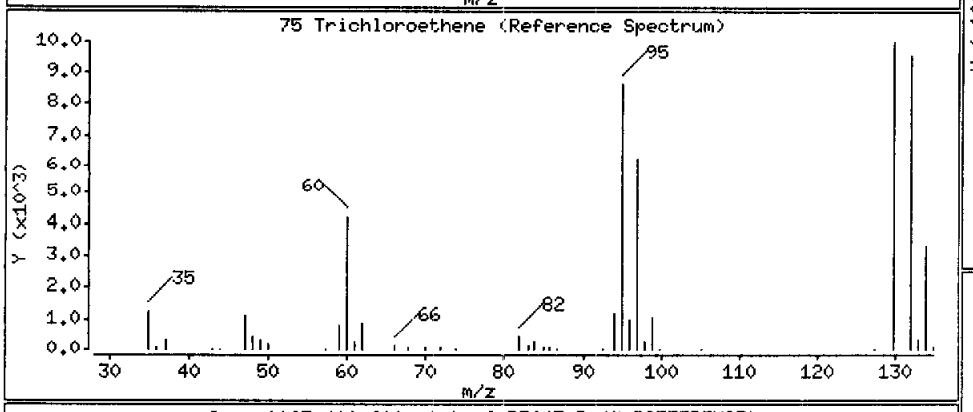
Column diameter: 0.53

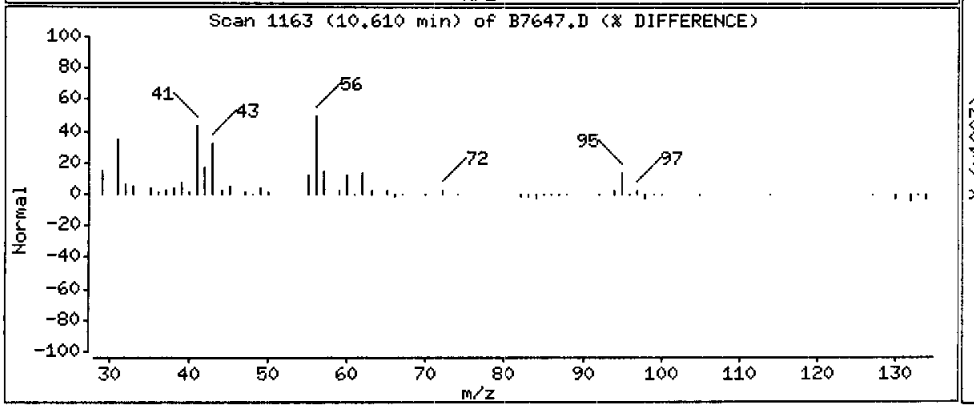
75 Trichloroethene

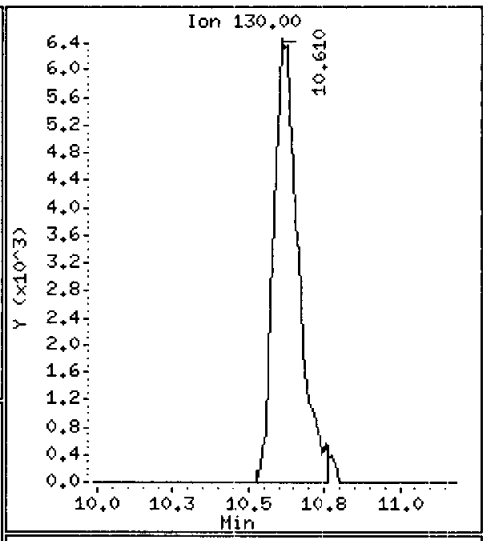
Concentration: 3.143 ppbv

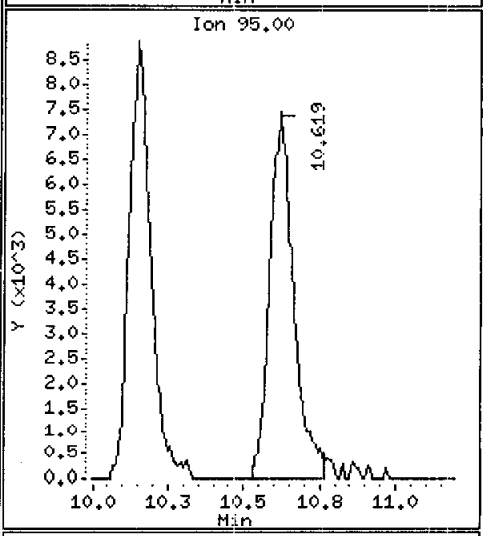


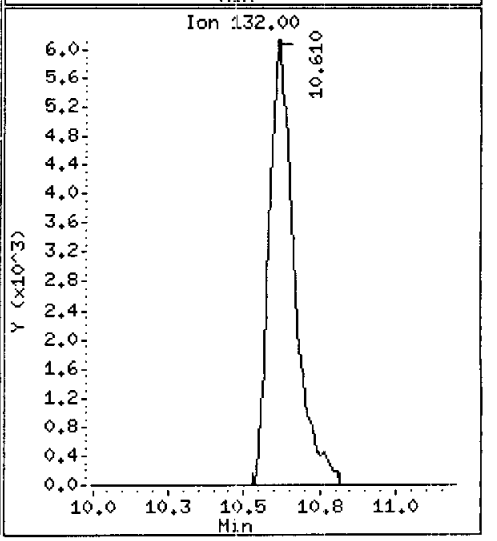












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

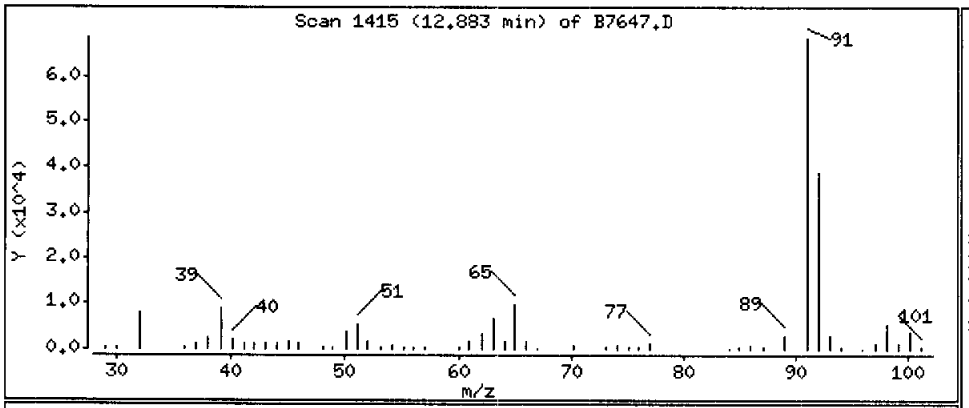
Operator: AA

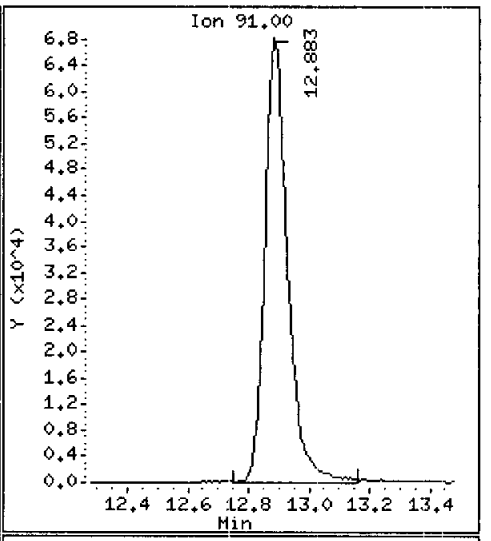
Column phase: J&W DB-624

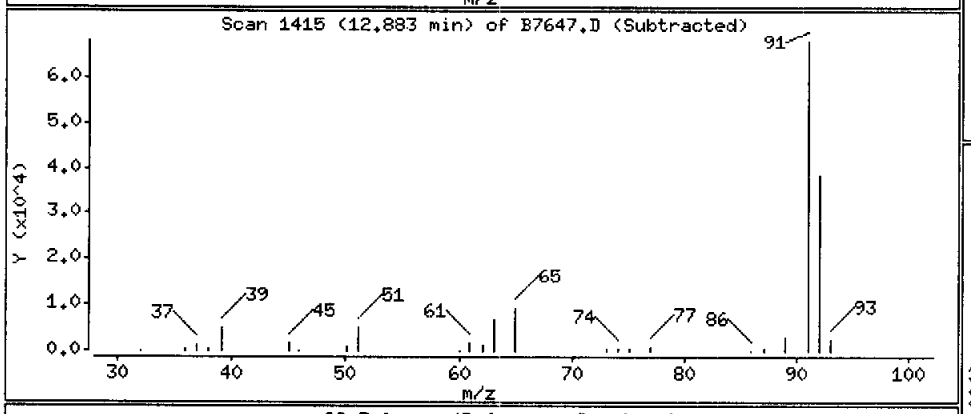
Column diameter: 0.53

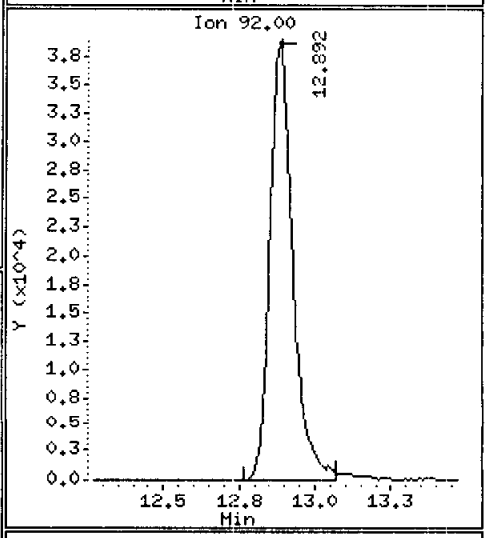
89 Toluene

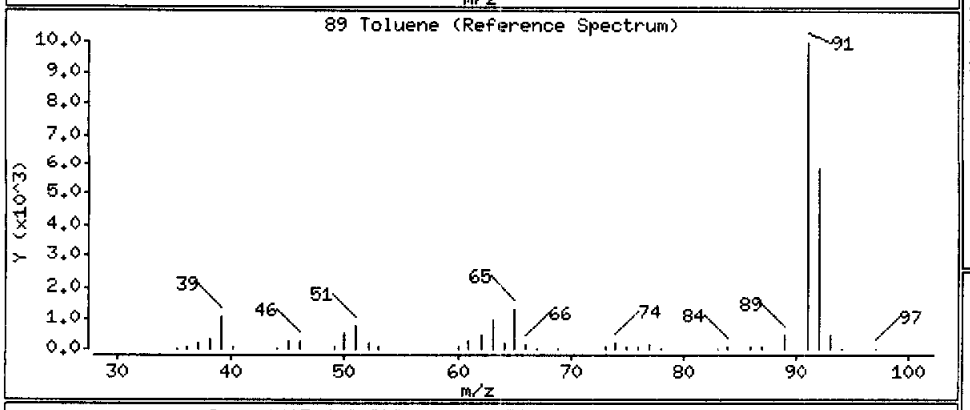
Concentration: 15.26 ppbv

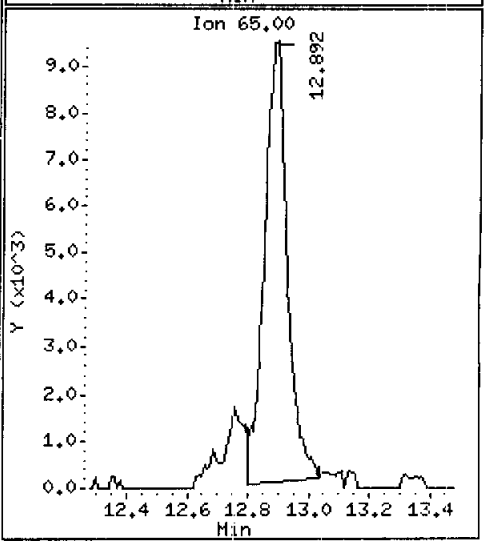


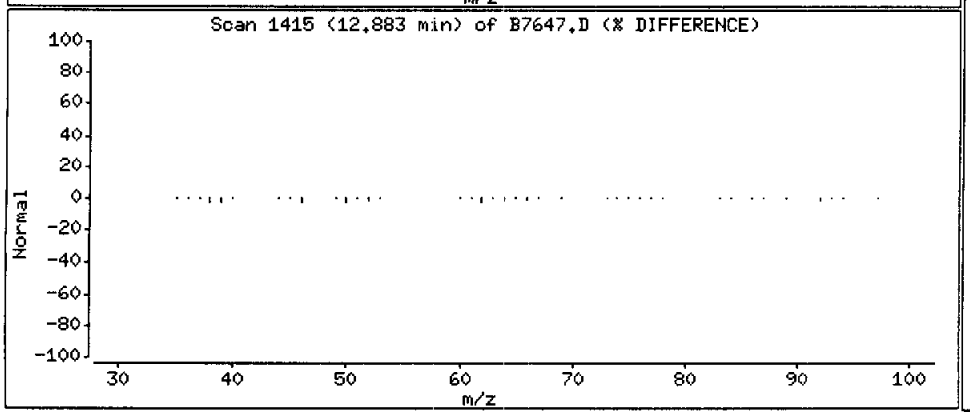












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

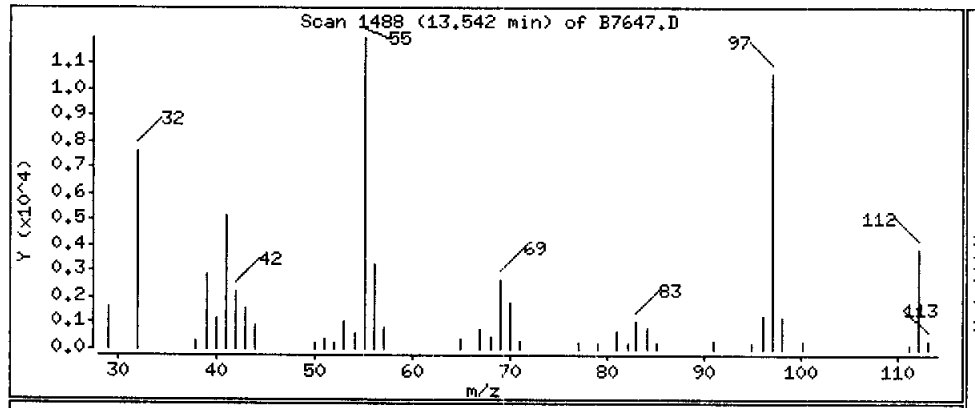
Operator: AA

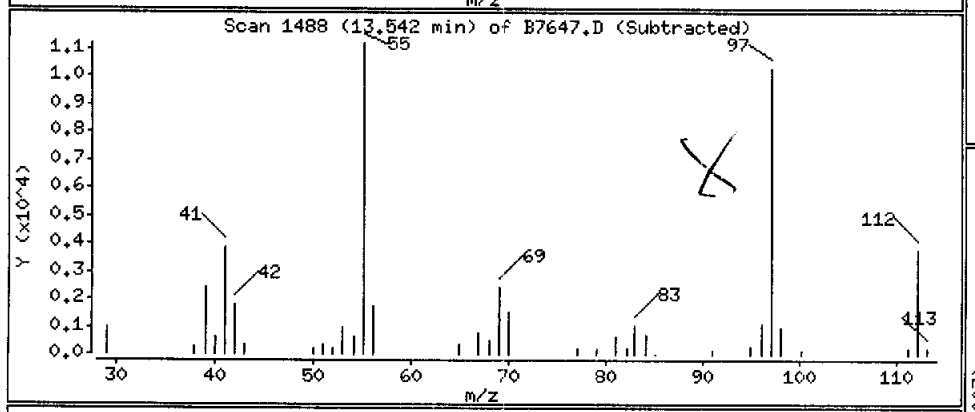
Column phase: J&W DB-624

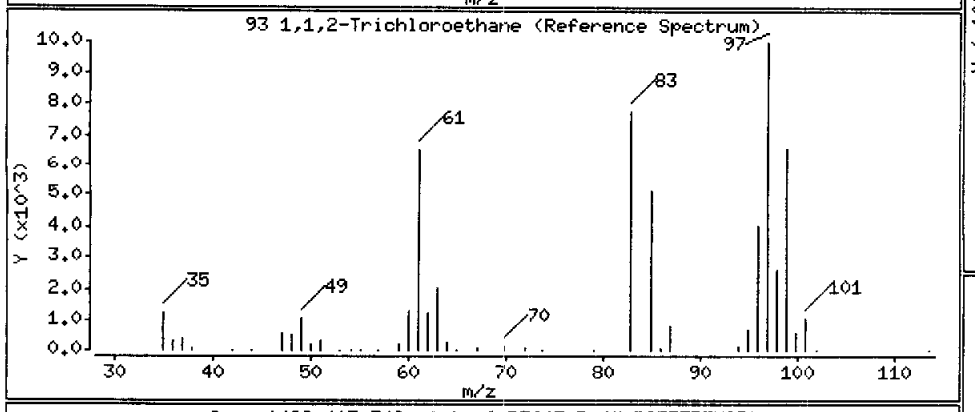
Column diameter: 0.53

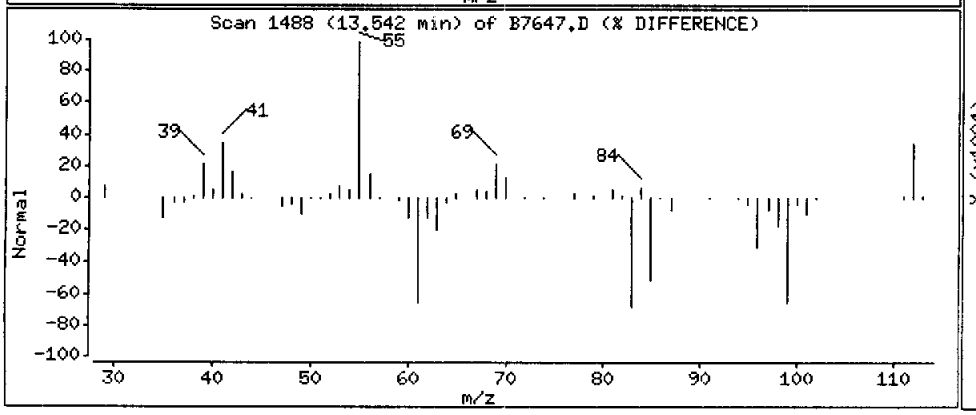
93 1,1,2-Trichloroethane

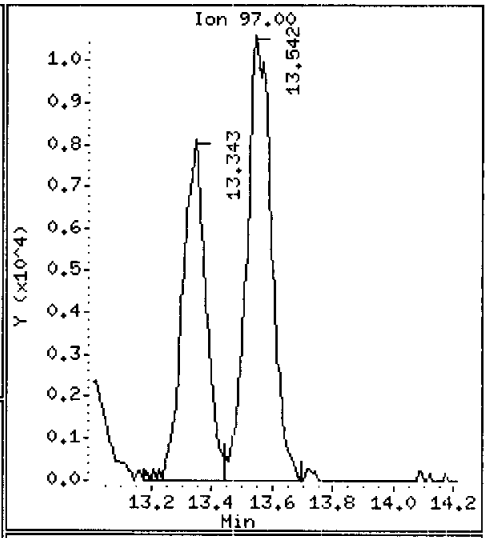
Concentration: 5.387 ppbv

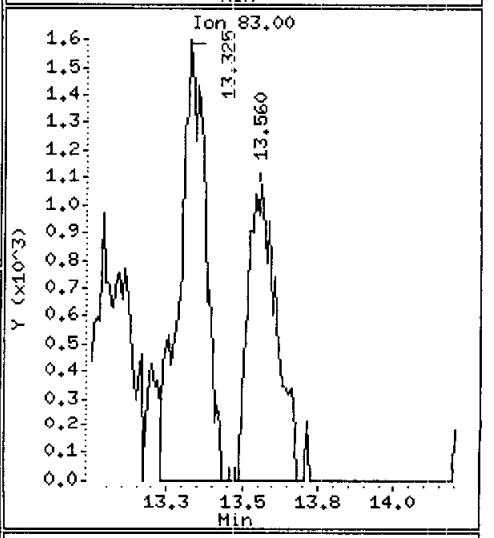


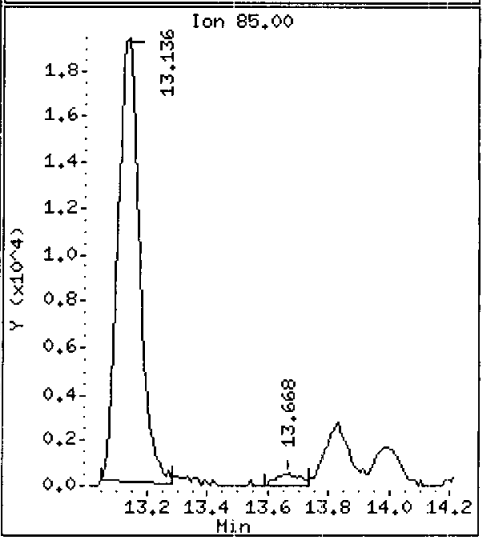












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

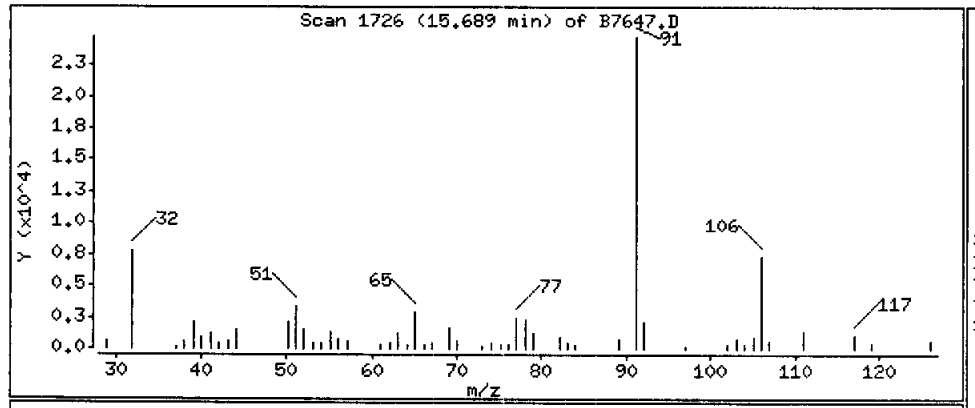
Operator: AA

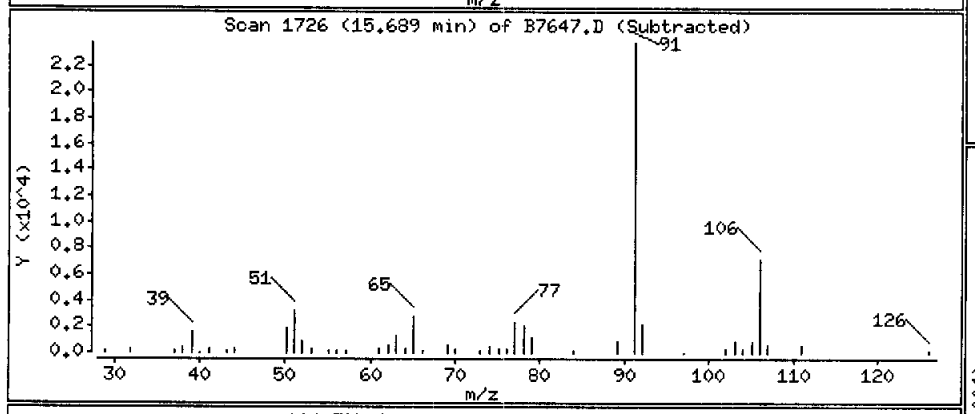
Column phase: J&W DB-624

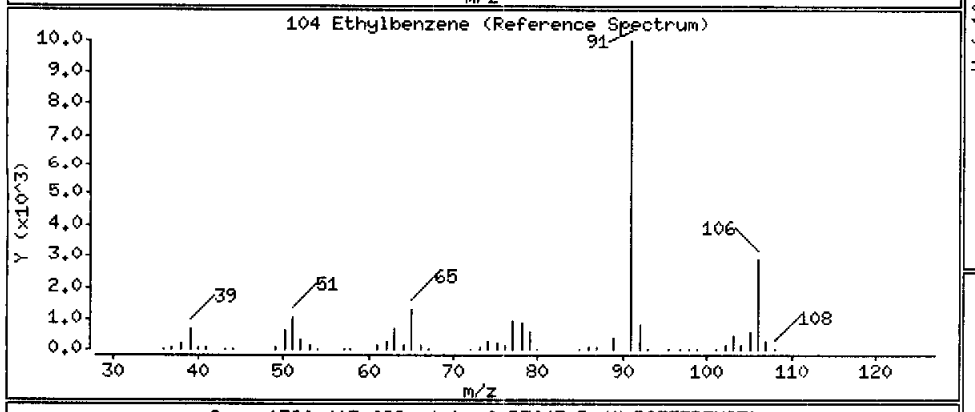
Column diameter: 0.53

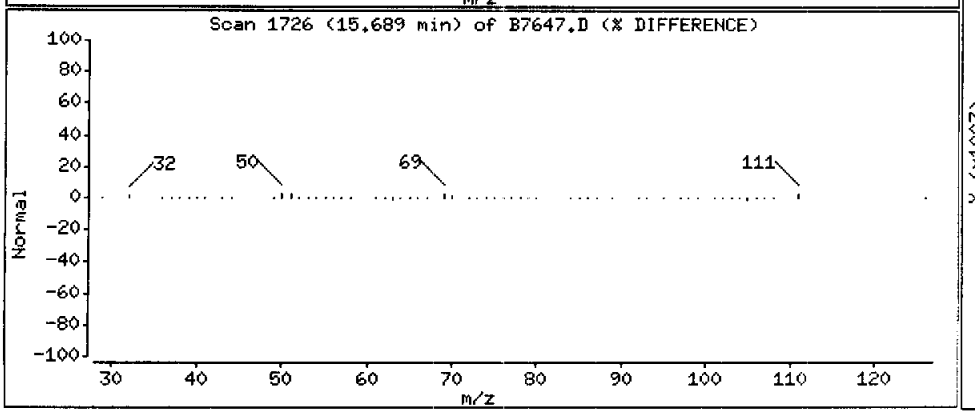
104 Ethylbenzene

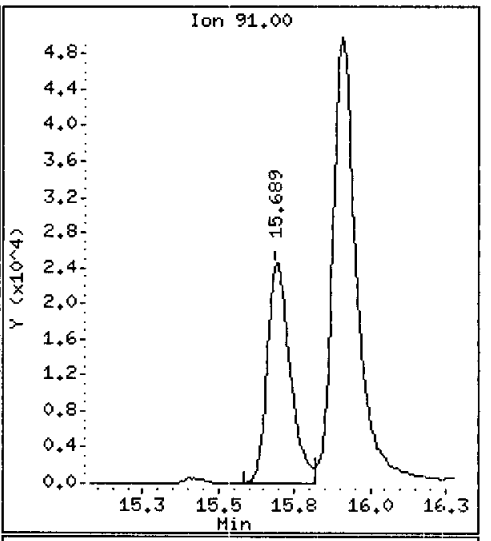
Concentration: 4.540 ppbv

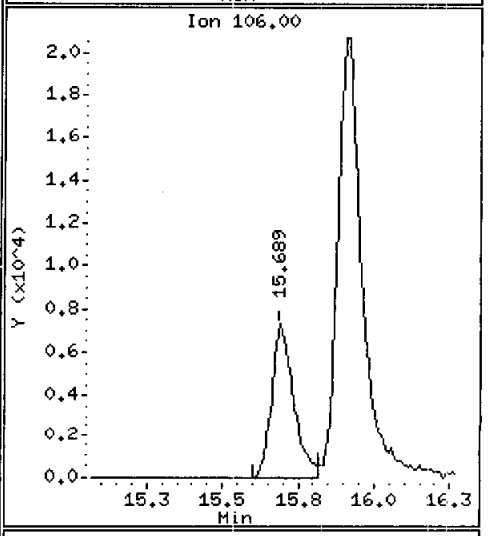


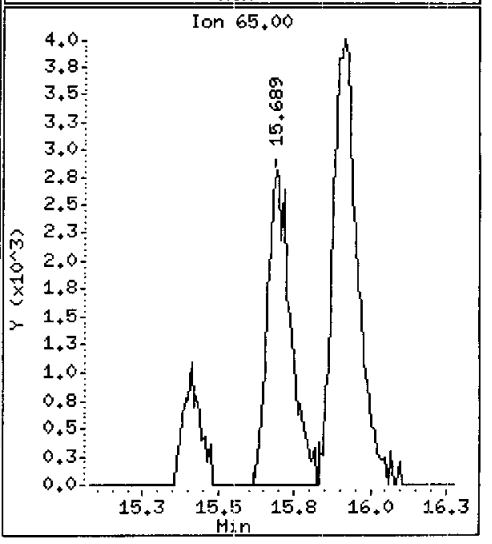












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

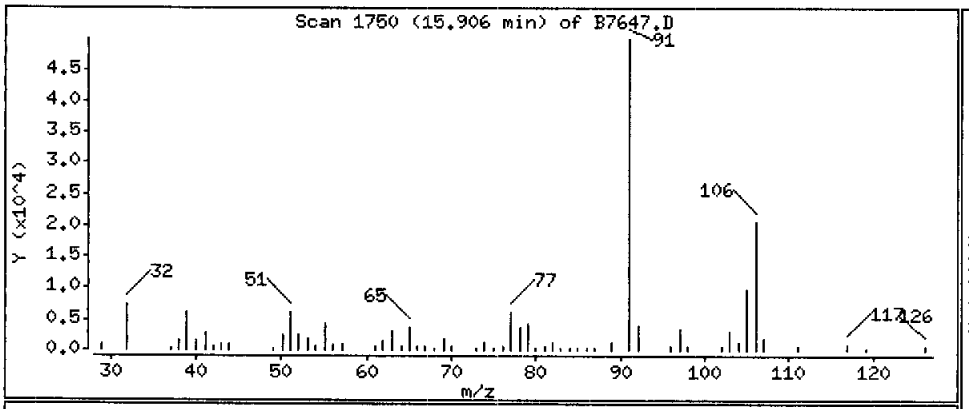
Operator: AA

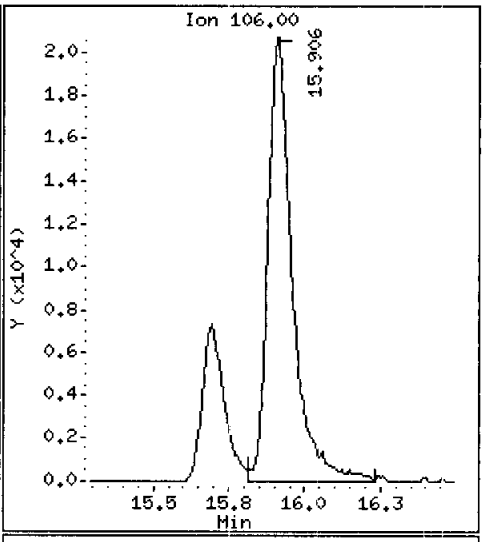
Column phase: J&W DB-624

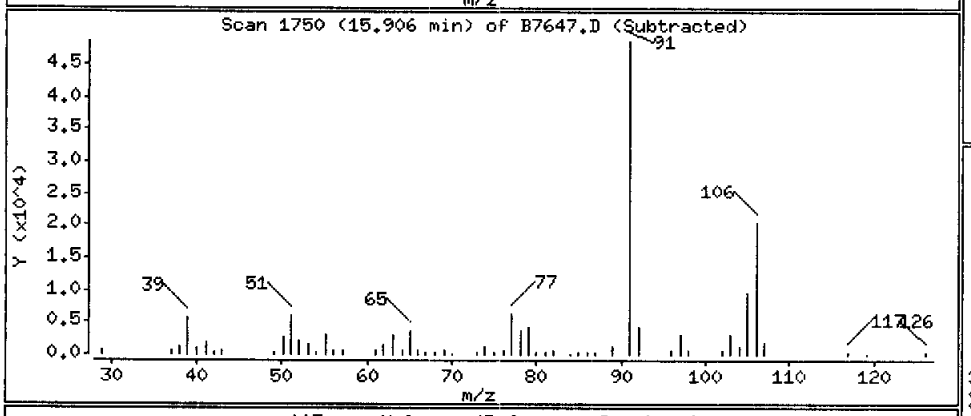
Column diameter: 0.53

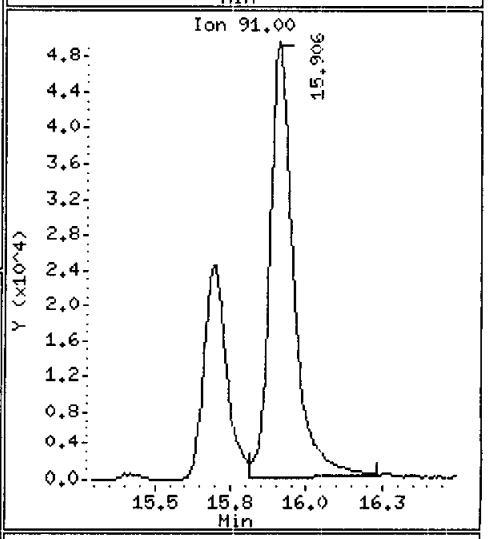
105 m,p-Xylenes

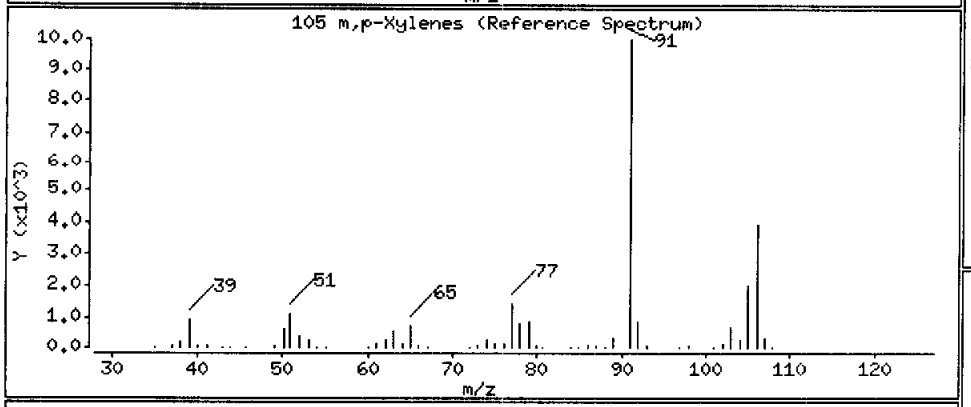
Concentration: 14.10 ppbv

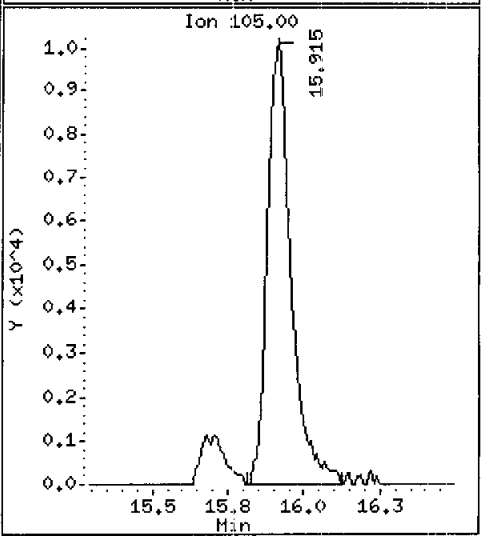


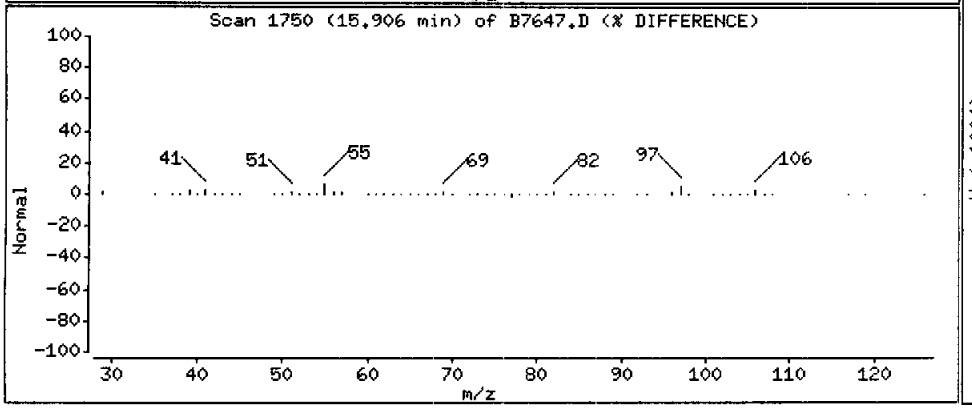












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7647.D

Date : 17-JAN-2005 17:36

Client ID: 066380-001

Instrument: gcmsb.i

Sample Info: G2DH61AD,066380-001,SANDIA,E5A100226-5

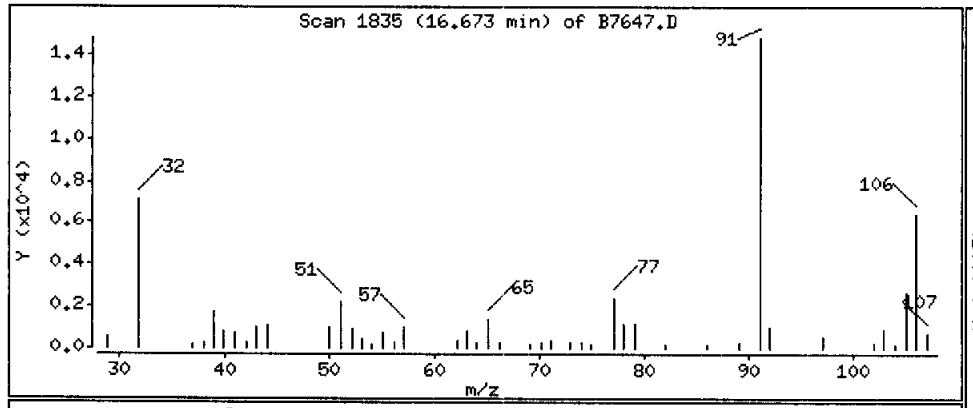
Operator: AA

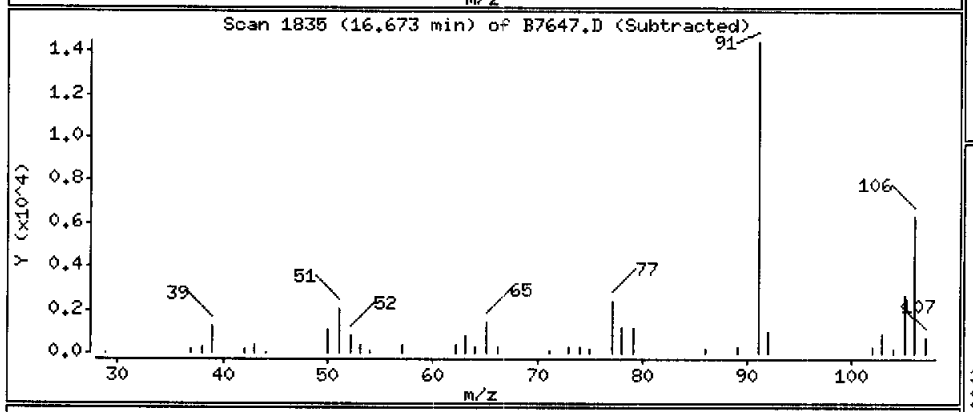
Column phase: J&W DB-624

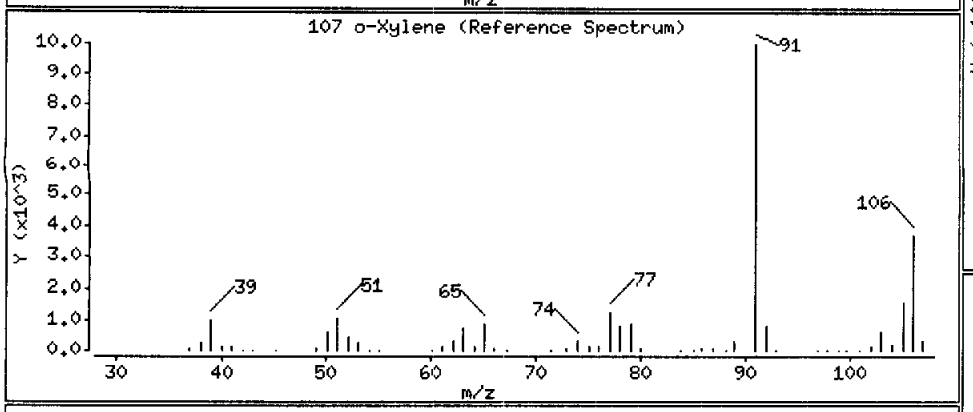
Column diameter: 0.53

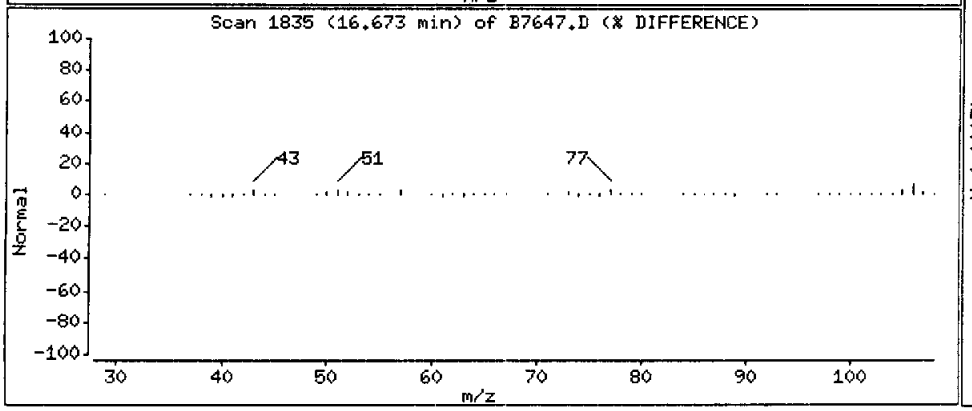
107 o-Xylene

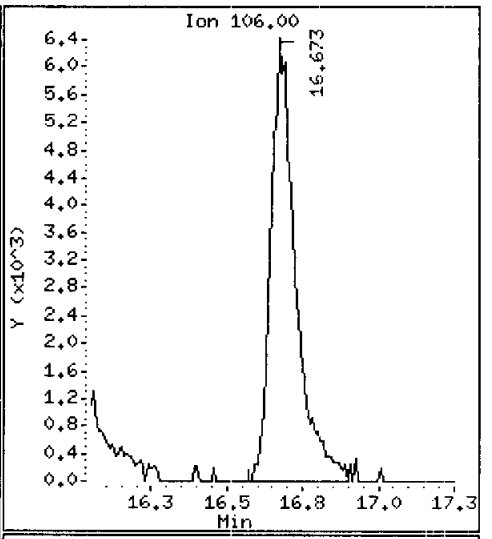
Concentration: 4.598 ppbv

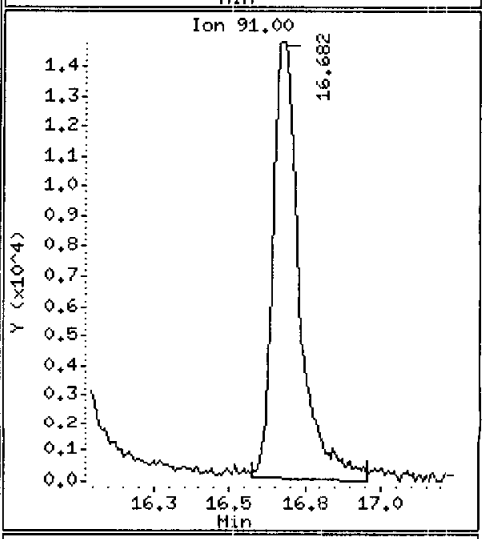


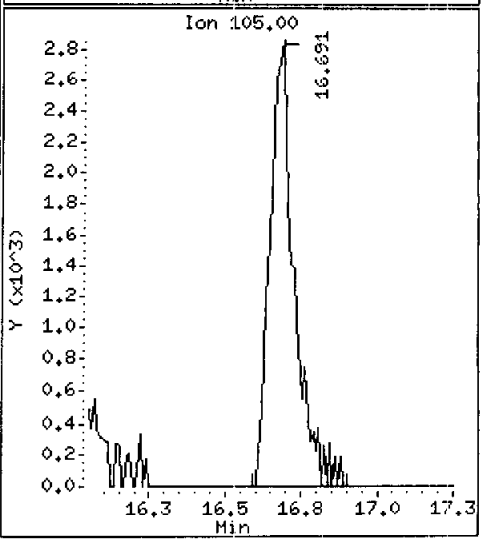












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D
Lab Smp Id: G2DH71AD Client Smp ID: 066381-001
Inj Date : 17-JAN-2005 18:09
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DH71AD,066381-001,SANDIA,E5A100226-6
Misc Info : 24.4,12.2,500,1000,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.200	InitPres
CalVol	500.000	CalVol
SmpVol	1000.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.693	4.685	(0.564)	7084	0.51636	0.5164(a)
44 1,1-Dichloroethane	63	6.876	6.850	(0.826)	12944	0.86097	0.8610(a)
54 2-Butanone	72	8.022	7.969	(0.964)	10396	4.01754	4.018(aQ)
* 58 Bromochloromethane	49	8.320	8.321	(1.000)	607853	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.340	9.341	(0.920)	522451	47.1274	47.13
68 Benzene	78	9.457	9.440	(0.932)	22994	1.25093	1.251(a)
* 73 1,4-Difluorobenzene	114	10.152	10.144	(1.000)	1350856	50.0000	
75 Trichloroethene	130	10.603	10.586	(1.044)	141250	11.9755	11.98
$ 88 Toluene-d8	100	12.759	12.751	(1.257)	701644	49.6032	49.60
89 Toluene	91	12.895	12.878	(1.270)	87329	3.67155	3.672
95 Tetrachloroethene	166	13.896	13.870	(0.902)	15011	0.99063	0.9906(a)
M 99 Xylenes (total)	106				5093	0.66169	0.6617(a)
* 101 Chlorobenzene-d5	117	15.412	15.404	(1.000)	967871	50.0000	
107 o-Xylene	106	16.720	16.649	(1.085)	5093	0.66169	0.6617(aQ)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 114 4-Bromofluorobenzene	95	17.668	17.651	(1.146)	775189	44.8352	44.84

QC Flag Legend

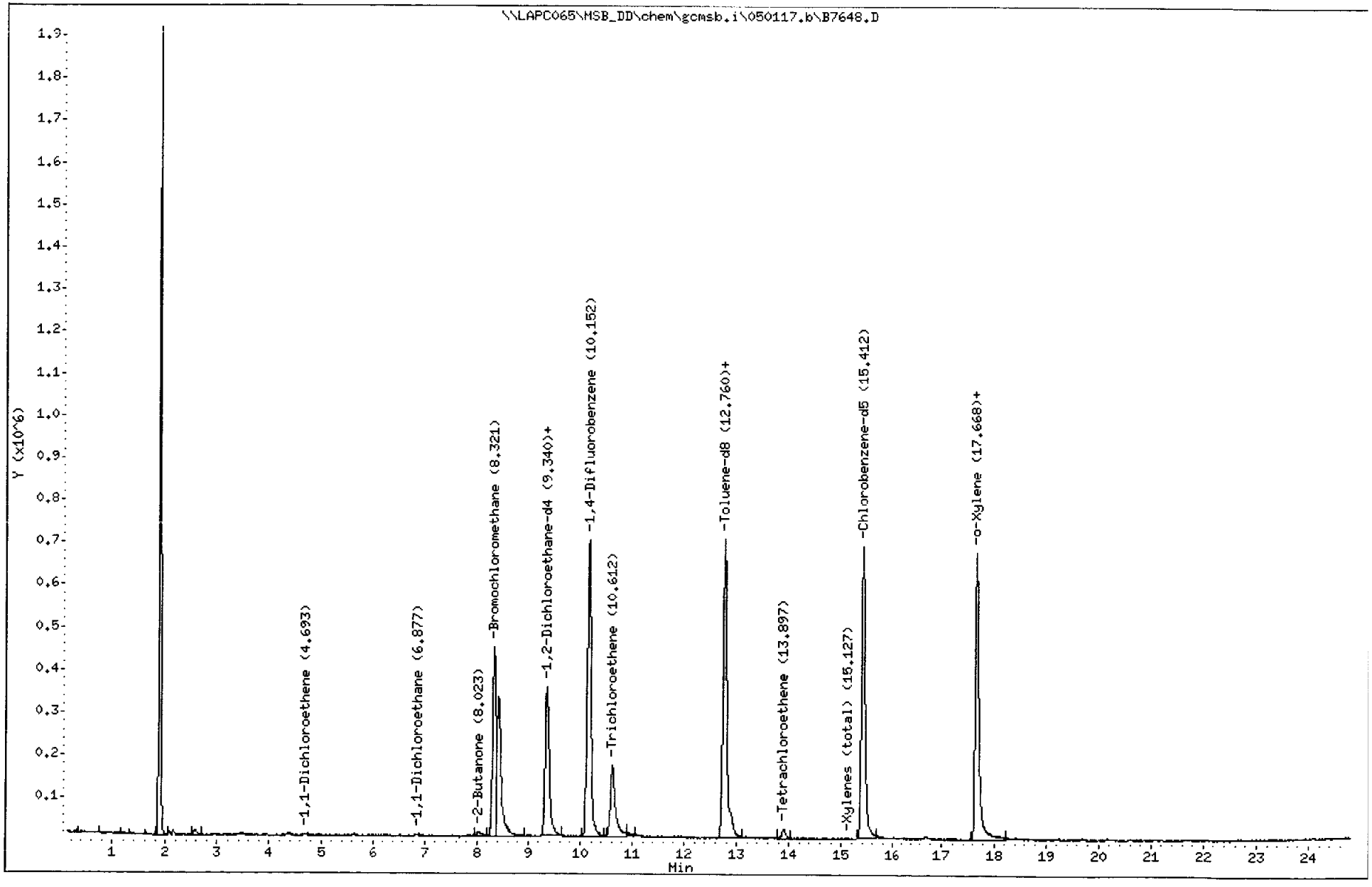
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D
Date : 17-JAN-2005 18:09
Client ID: 066381-001
Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

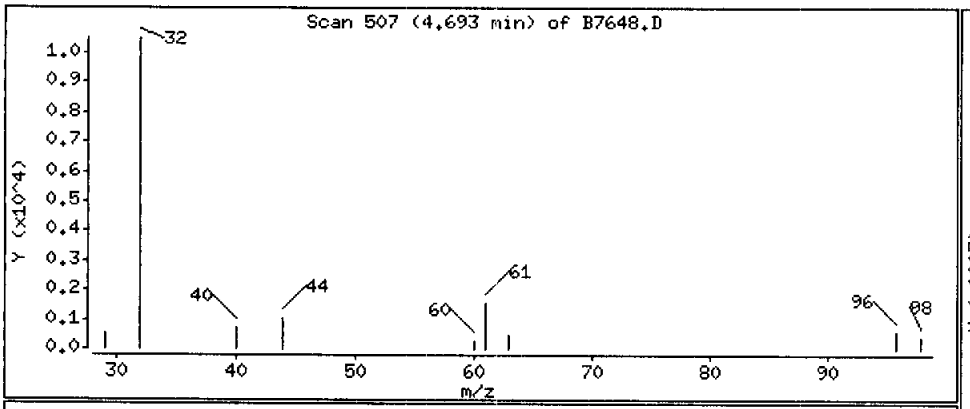
Operator: AA

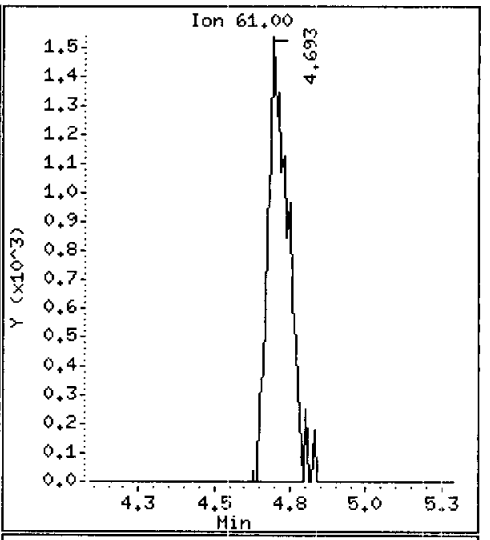
Column phase: J&W DB-624

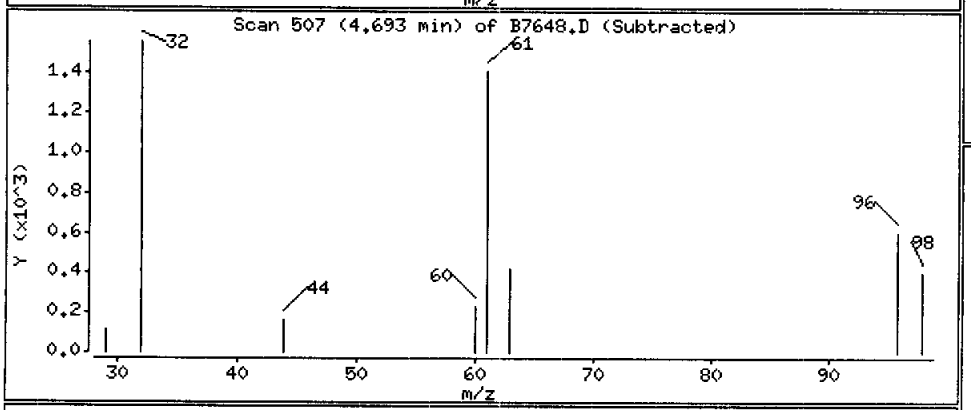
Column diameter: 0.53

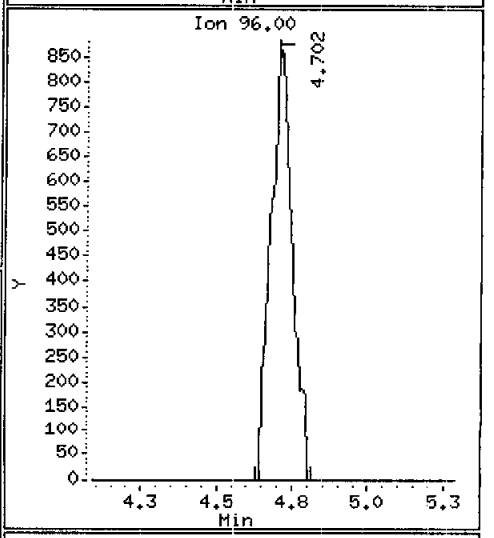
28 1,1-Dichloroethene

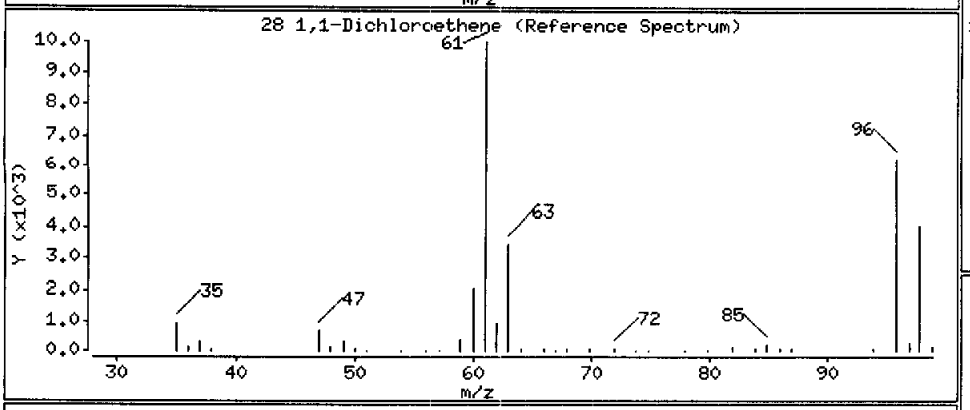
Concentration: 0.5164 ppbv

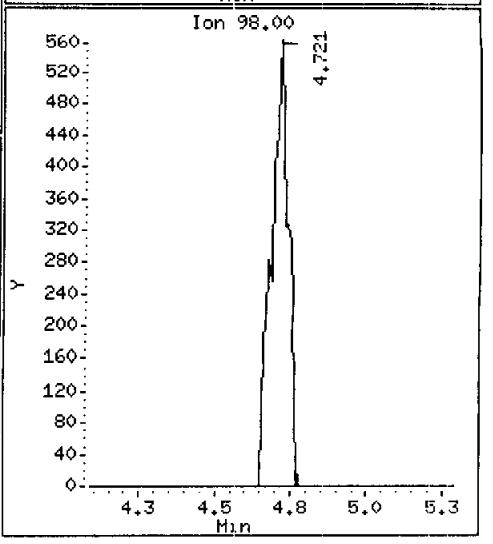


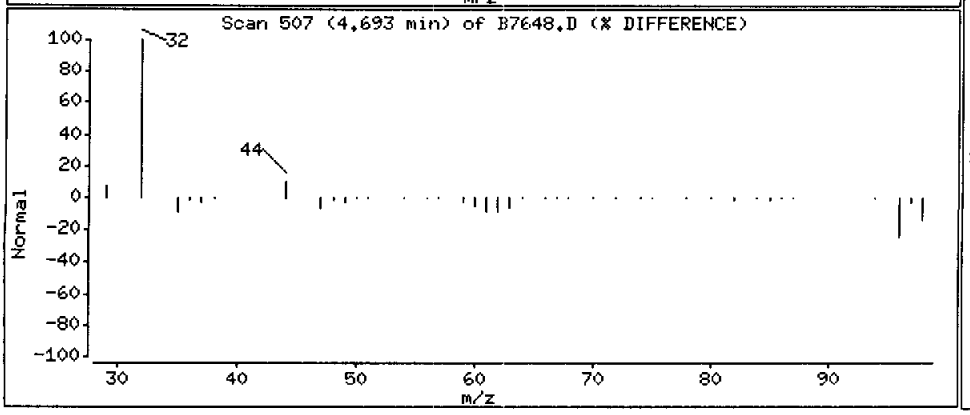












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

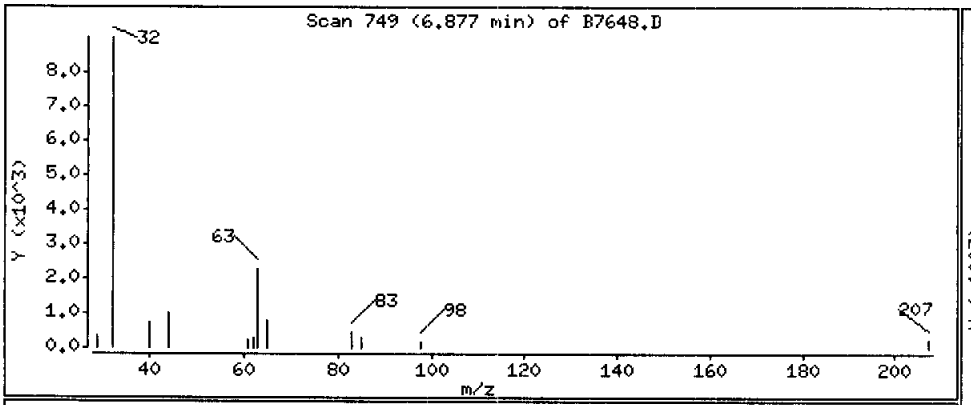
Operator: AA

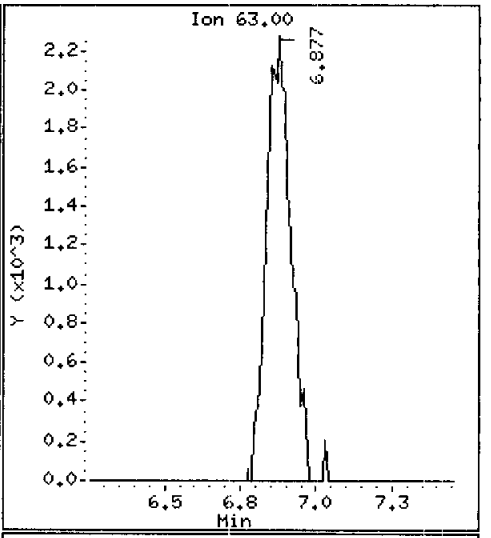
Column phase: J&W DB-624

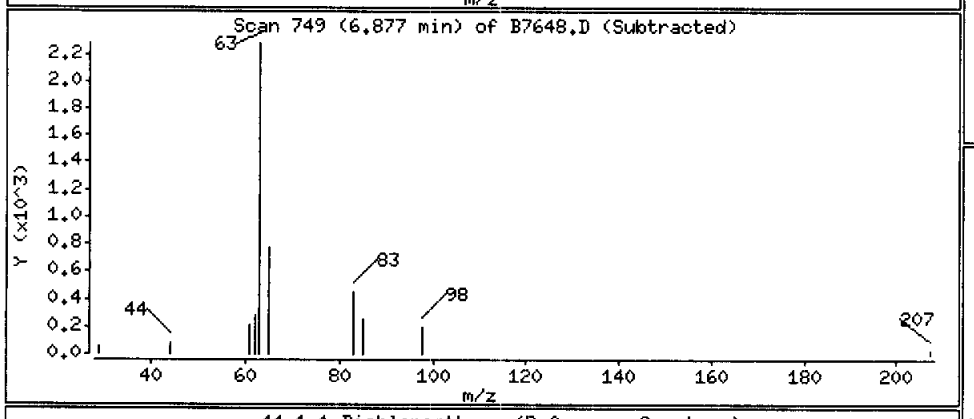
Column diameter: 0.53

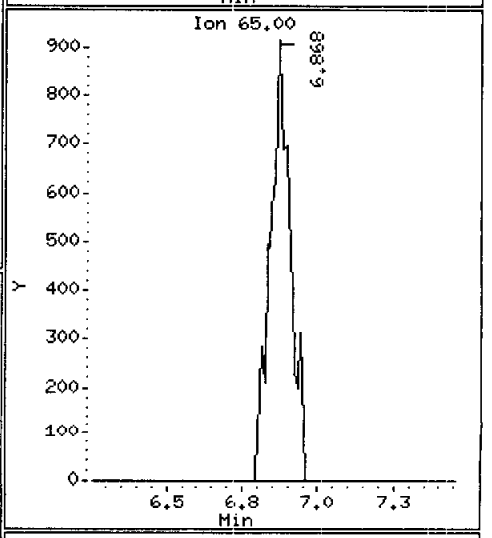
44 1,1-Dichloroethane

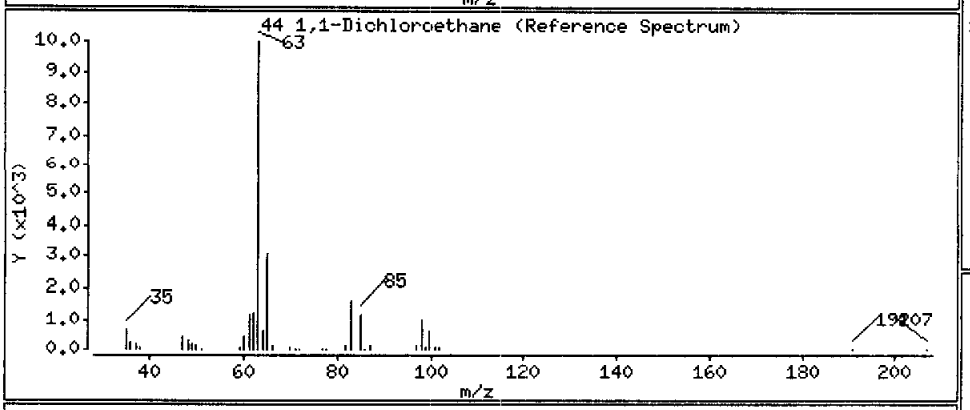
Concentration: 0.8610 ppbv

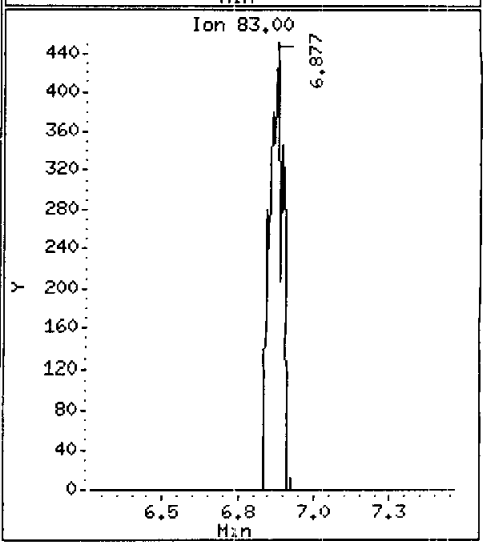


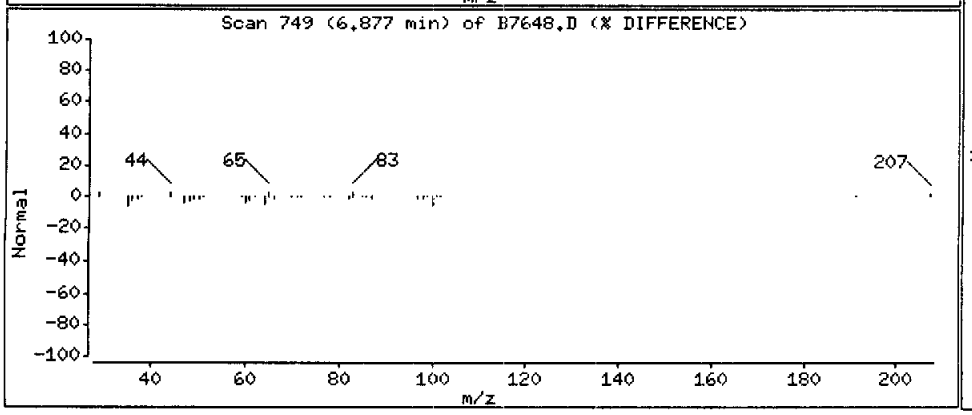












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

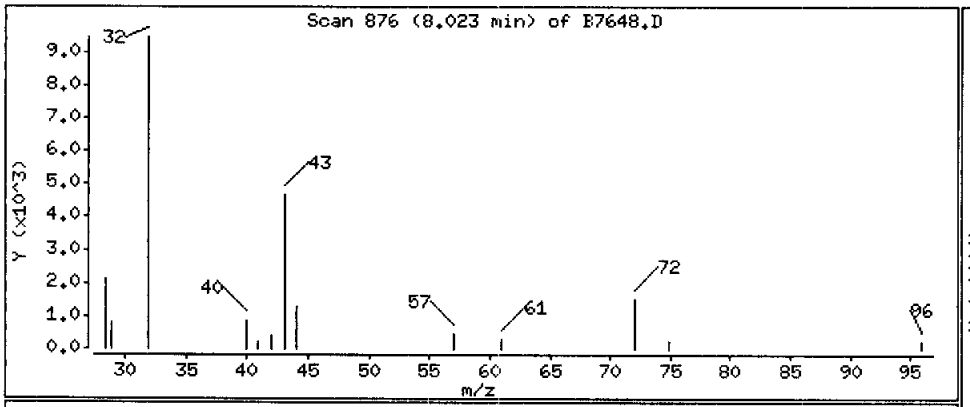
Operator: AA

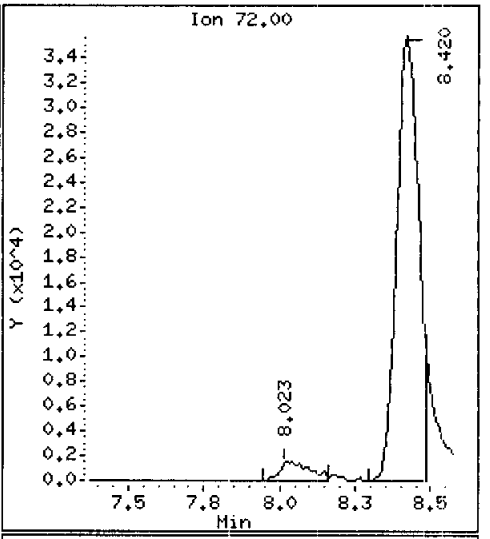
Column phase: J&W DB-624

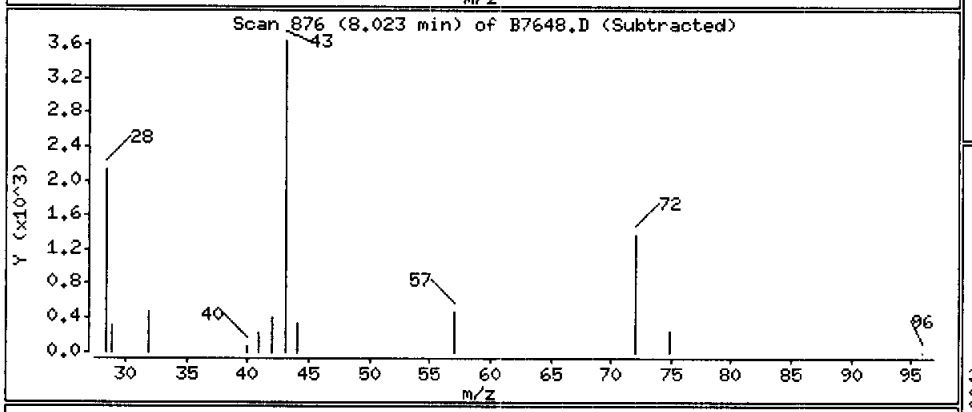
Column diameter: 0.53

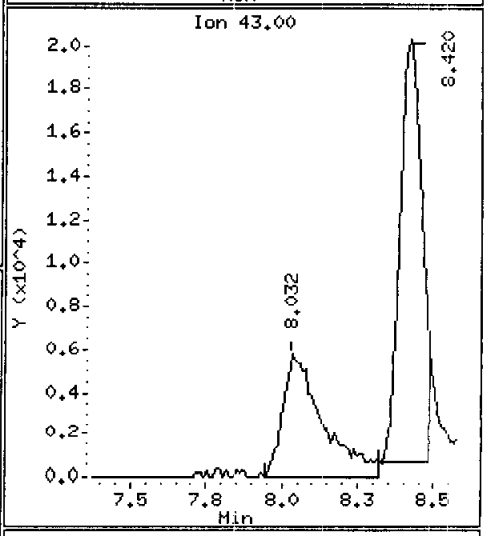
54 2-Butanone

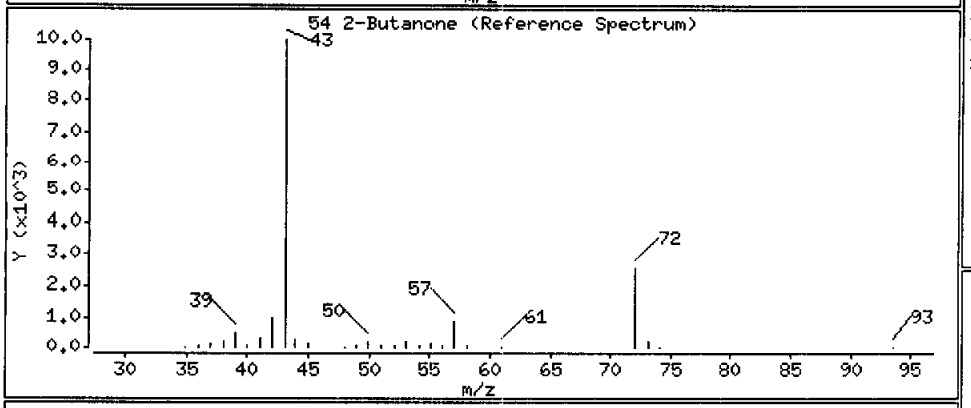
Concentration: 4.018 ppbv

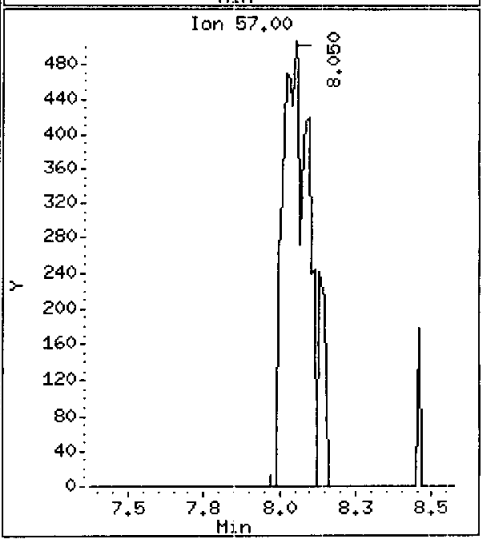


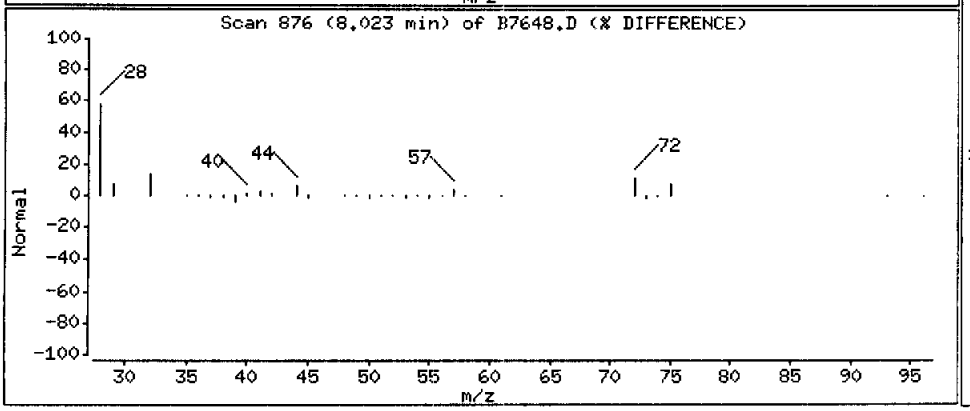












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

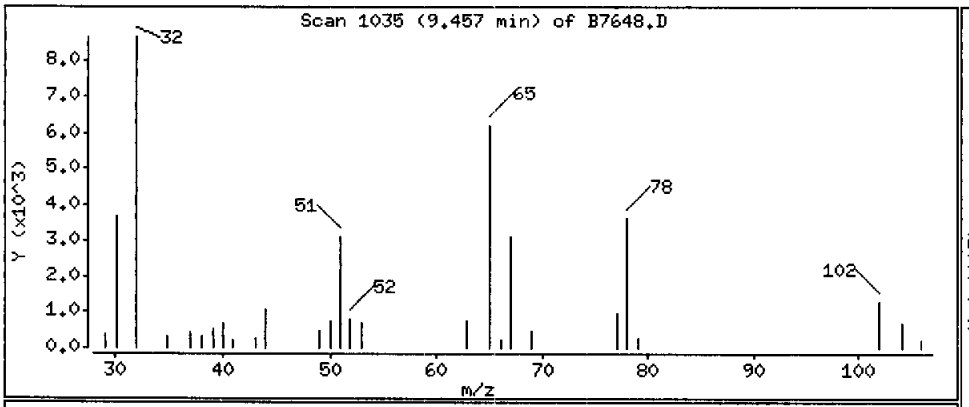
Operator: AA

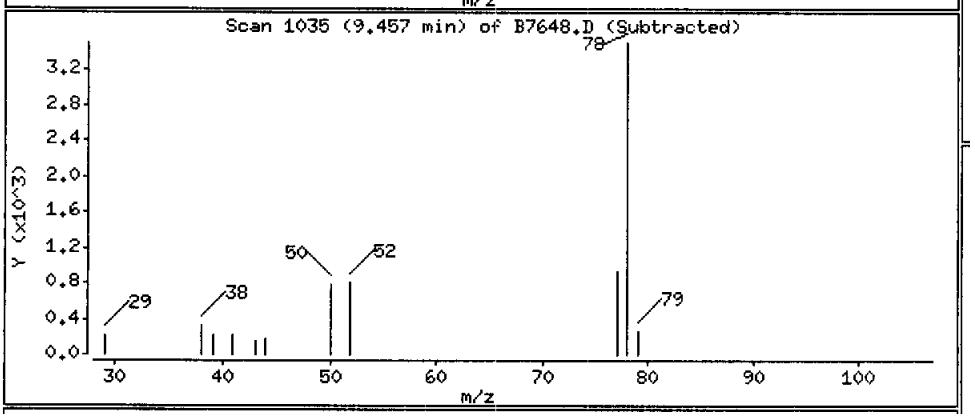
Column phase: J&W DB-624

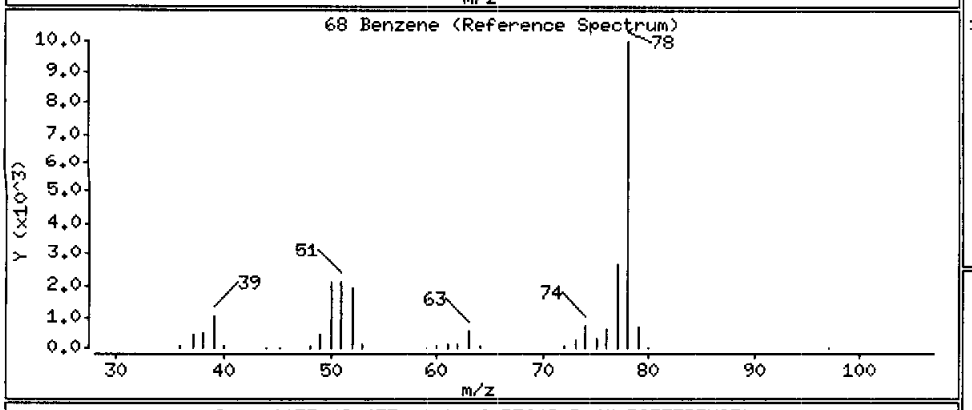
Column diameter: 0.53

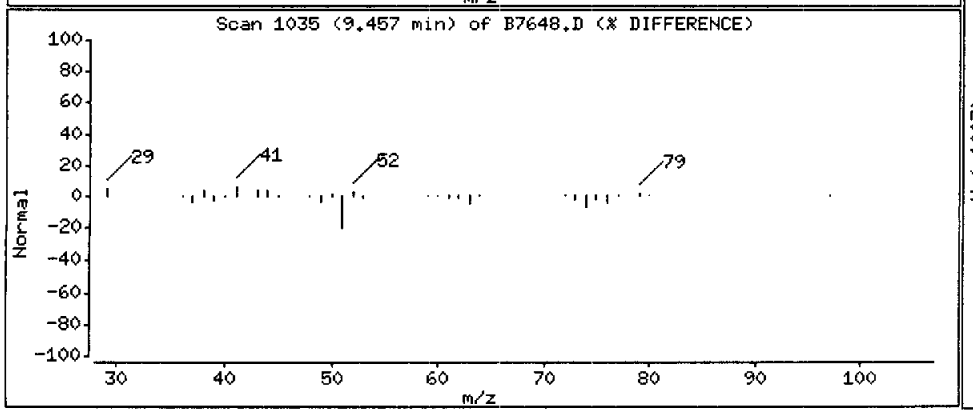
68 Benzene

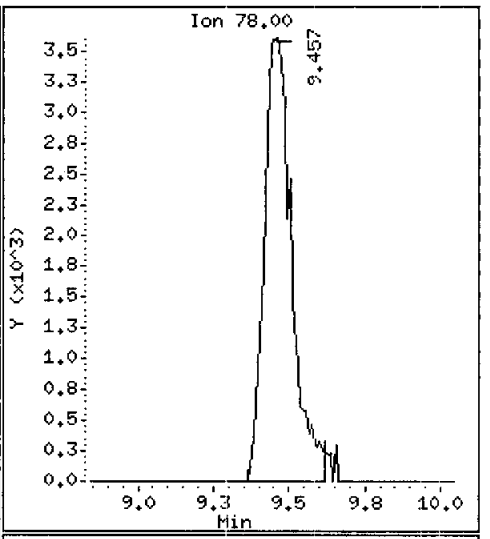
Concentration: 1.251 ppbv

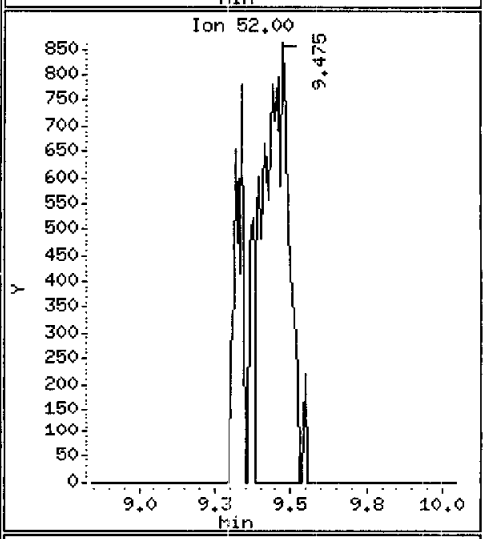


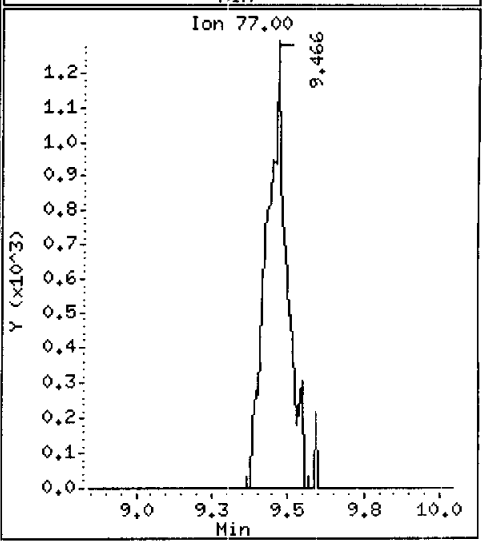












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

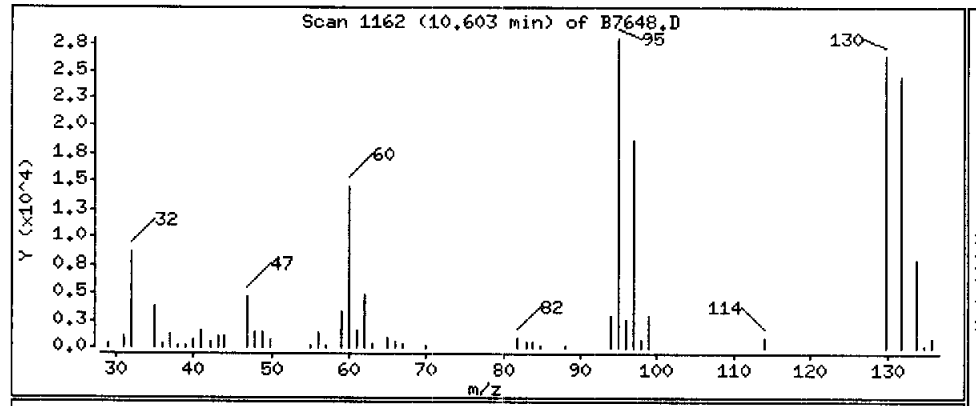
Operator: AA

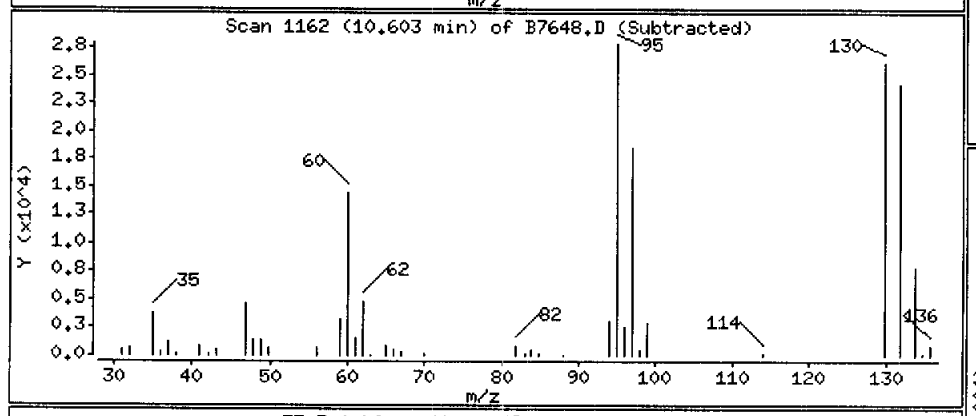
Column phase: J&W DB-624

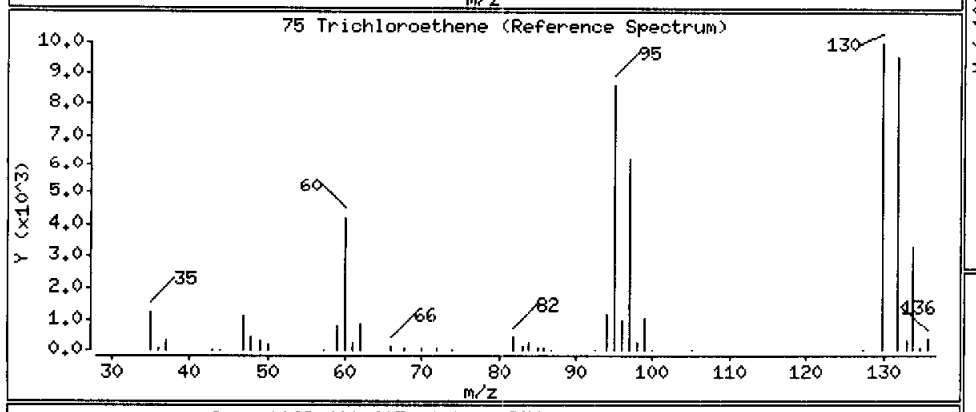
Column diameter: 0.53

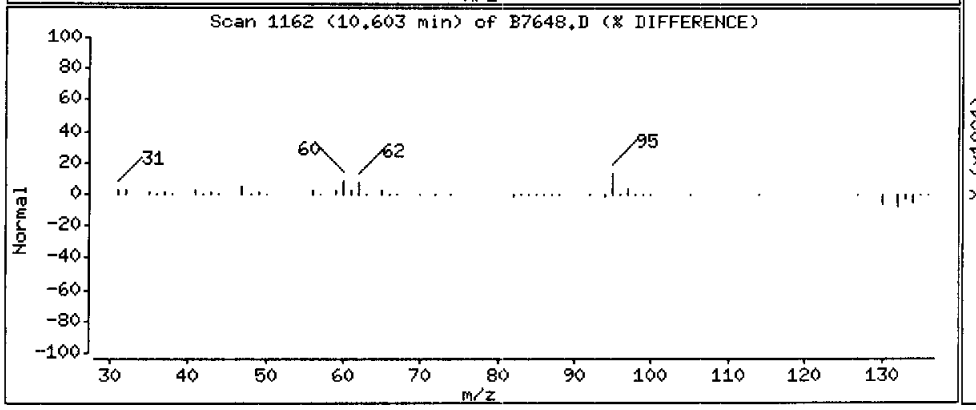
75 Trichloroethene

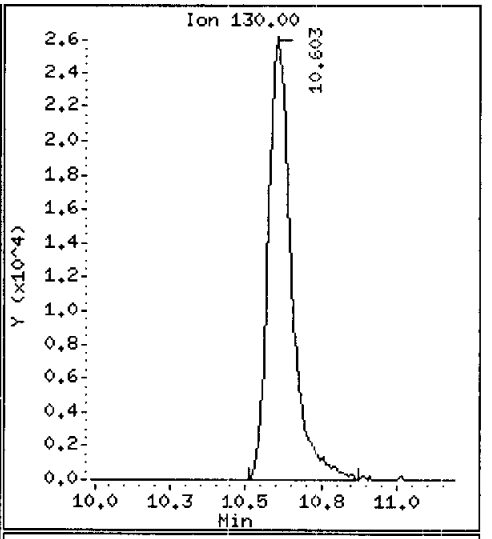
Concentration: 11.98 ppbv

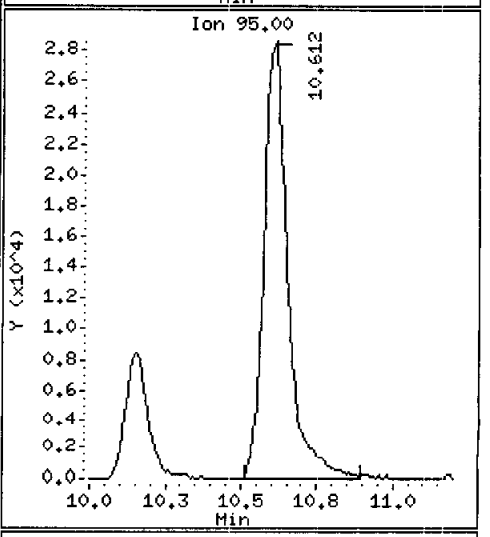


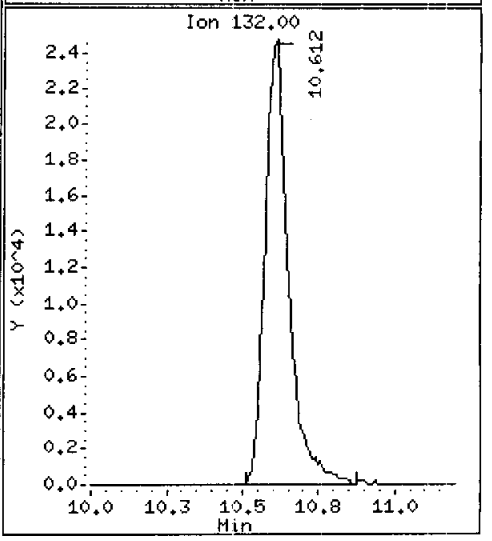












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

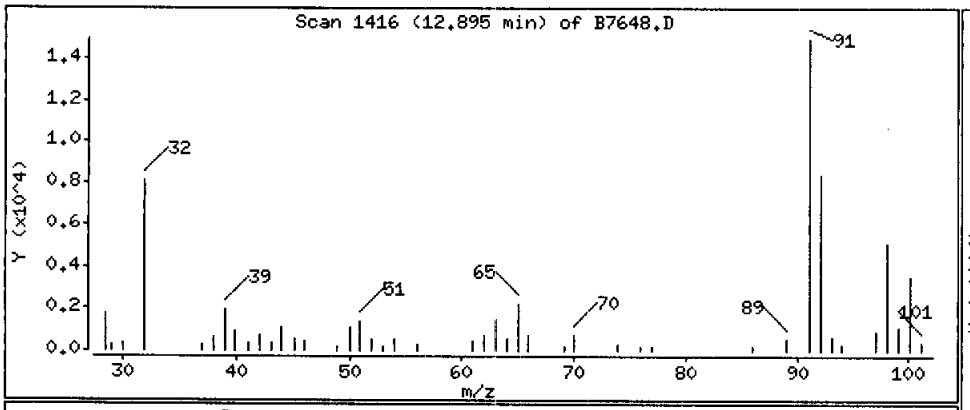
Operator: AA

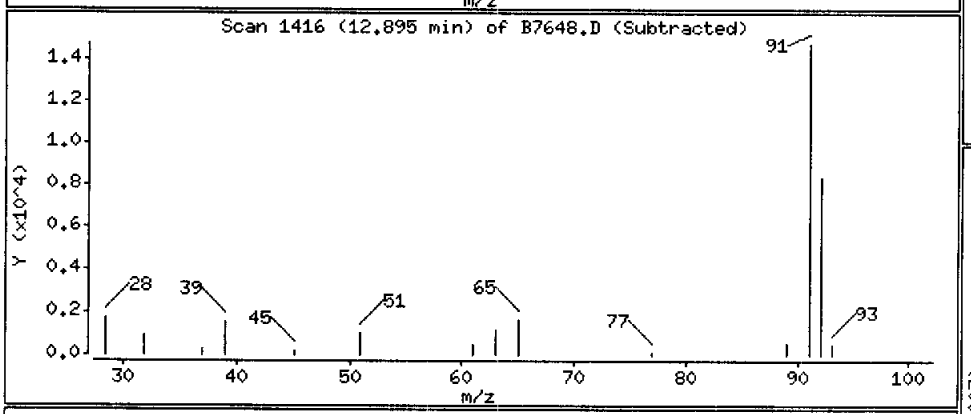
Column phase: J&W DB-624

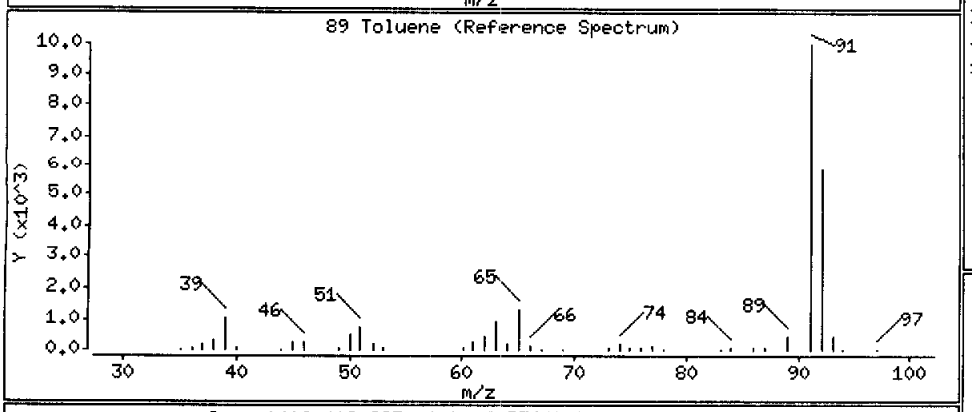
Column diameter: 0.53

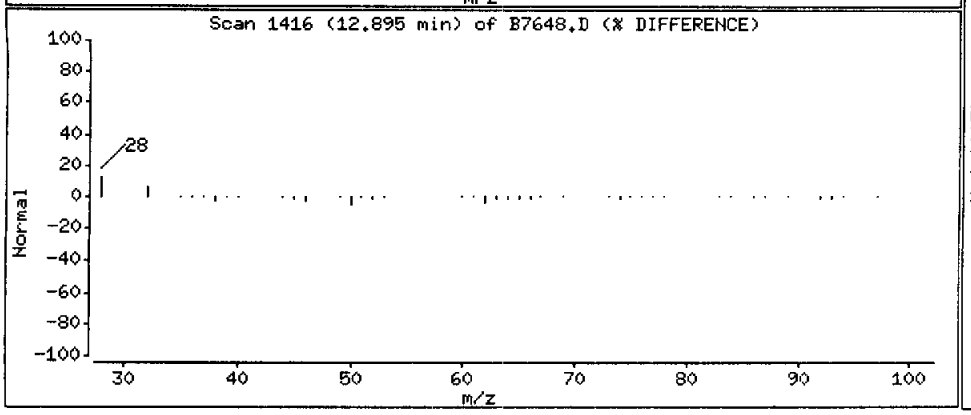
89 Toluene

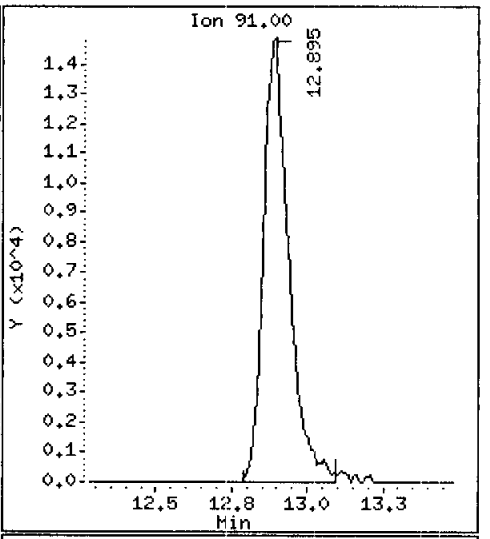
Concentration: 3.672 ppbv

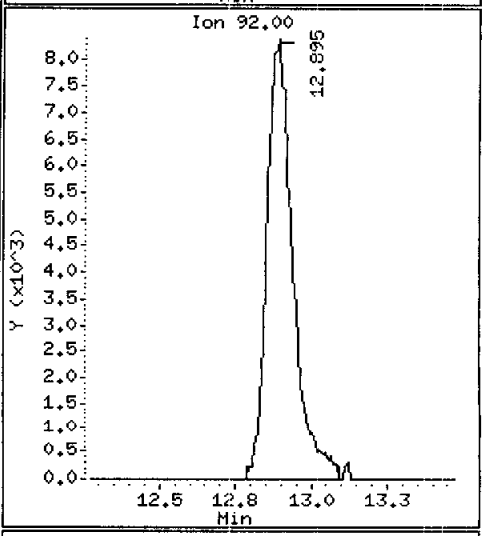


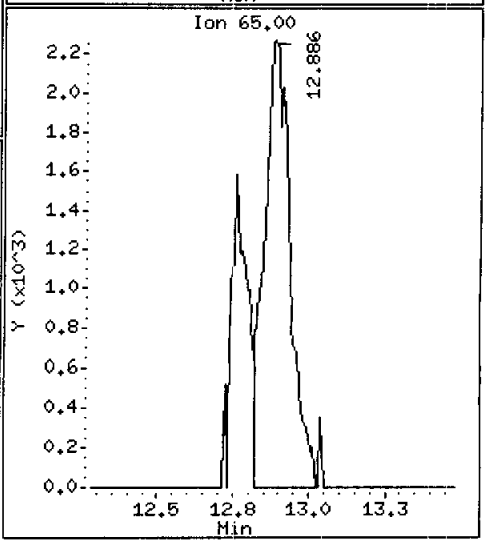












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

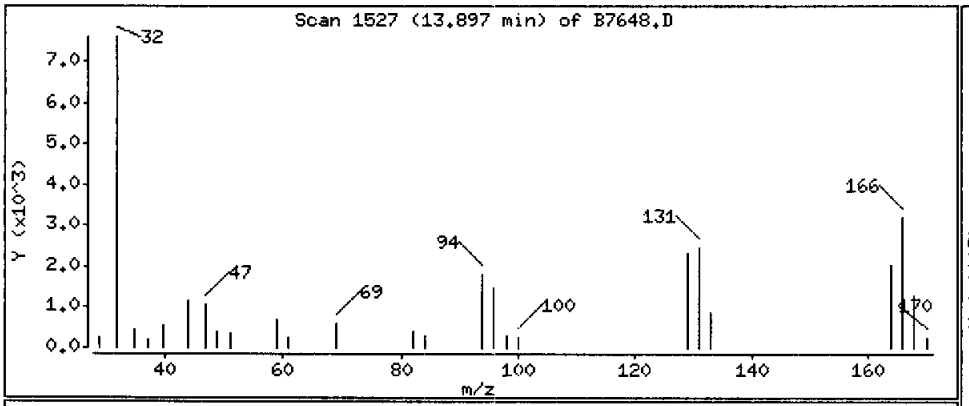
Operator: AA

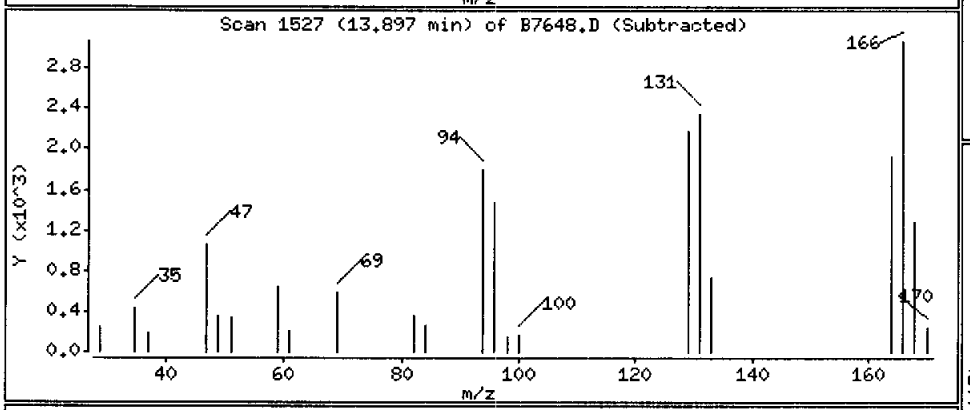
Column phase: J&W DB-624

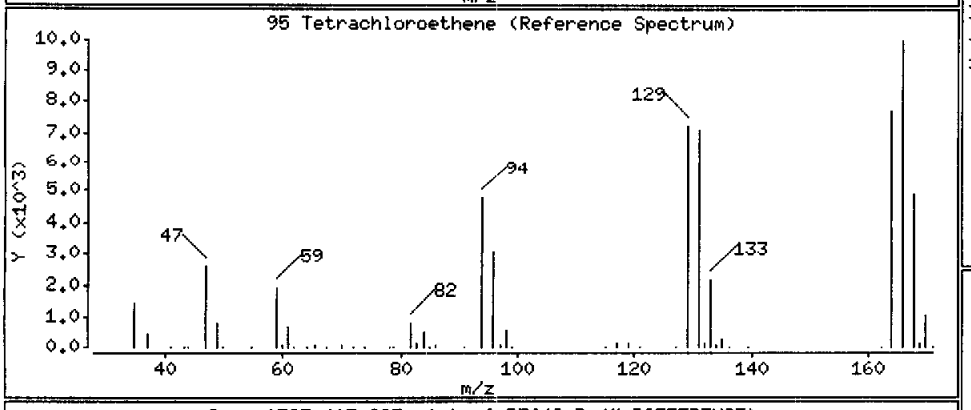
Column diameter: 0.53

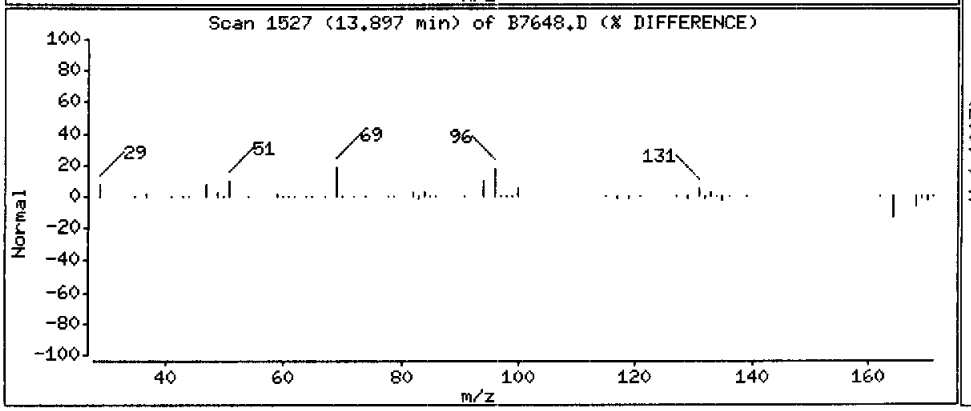
95 Tetrachloroethene

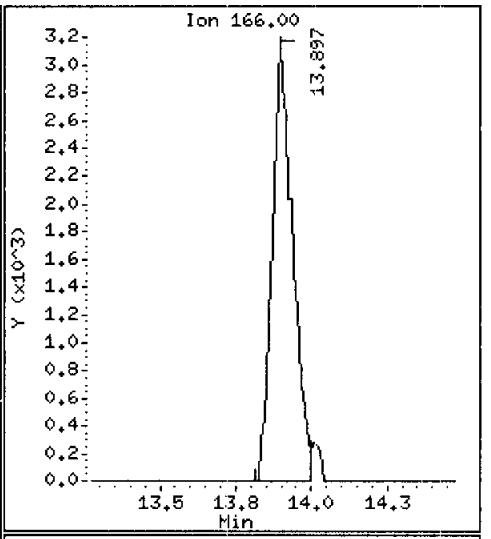
Concentration: 0.9906 ppbv

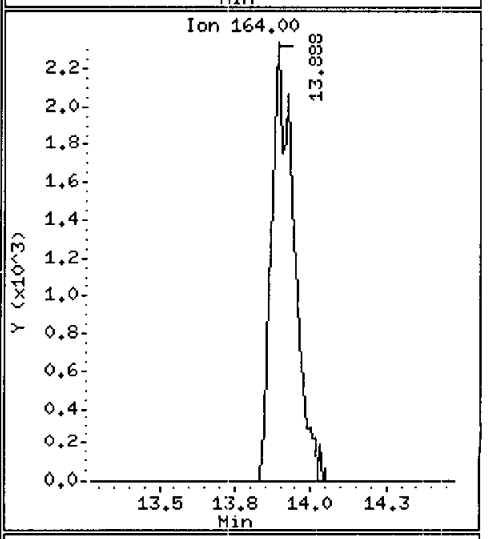


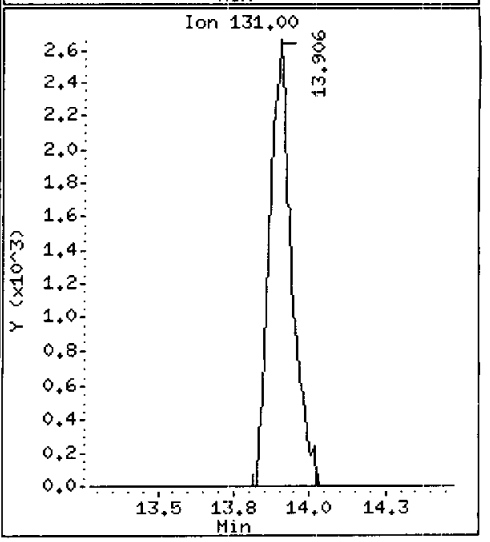












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7648.D

Date : 17-JAN-2005 18:09

Client ID: 066381-001

Instrument: gcmsb.i

Sample Info: G2DH71AD,066381-001,SANDIA,E5A100226-6

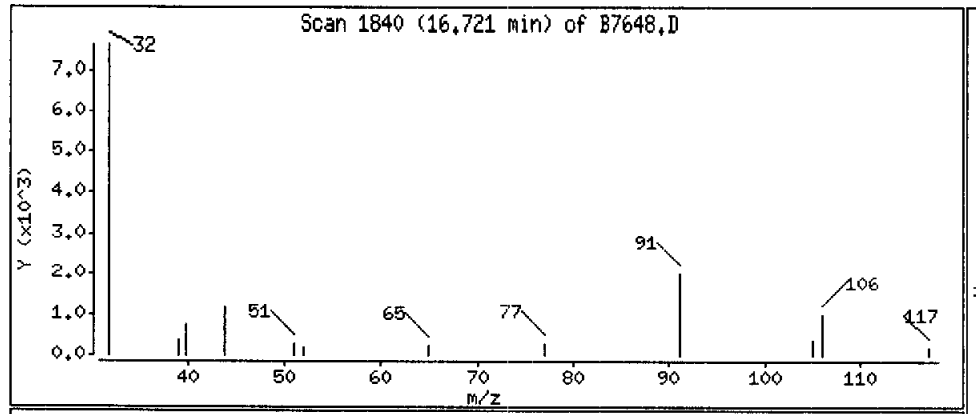
Operator: AA

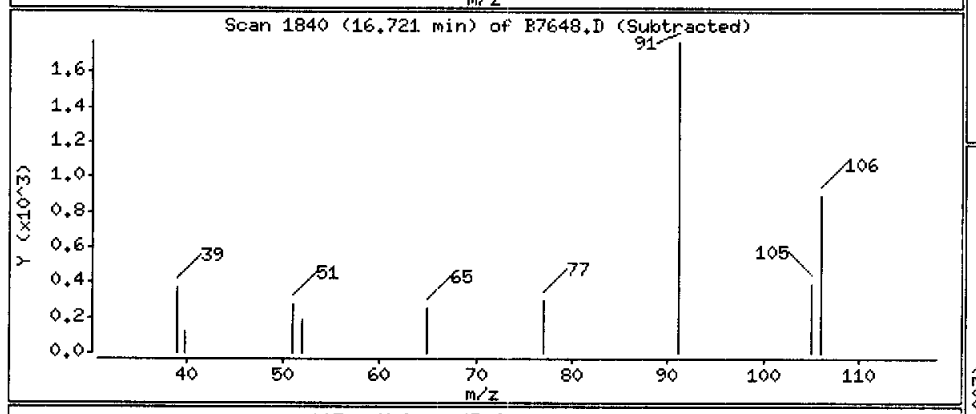
Column phase: J&W DB-624

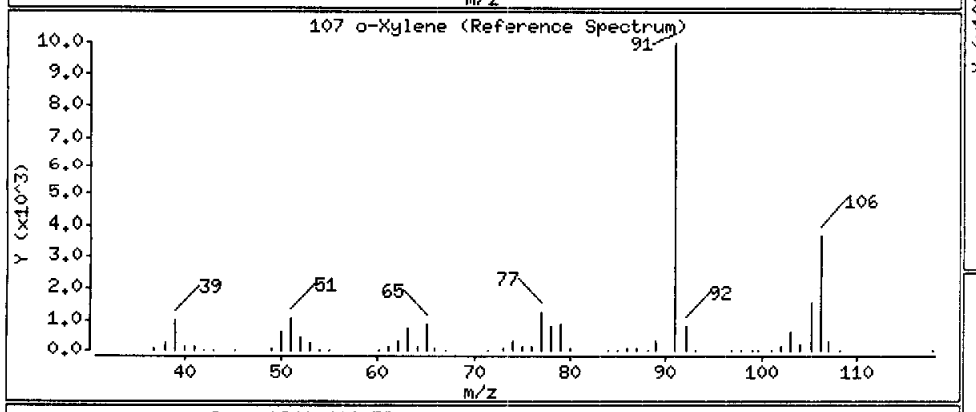
Column diameter: 0.53

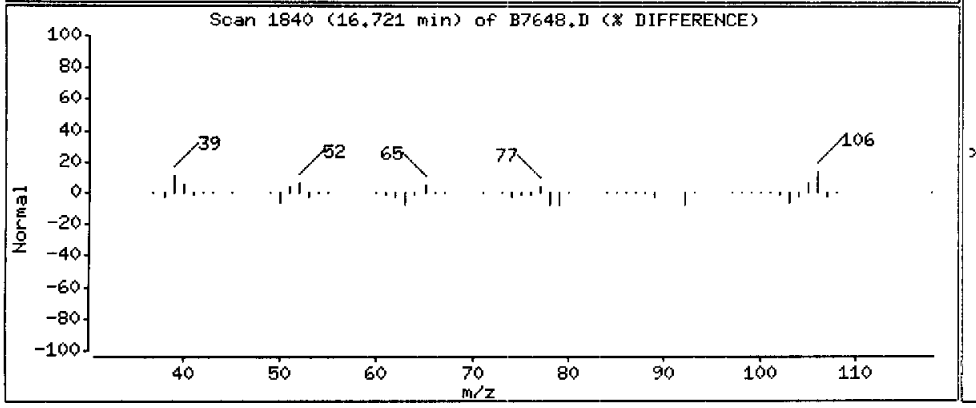
107 o-Xylene

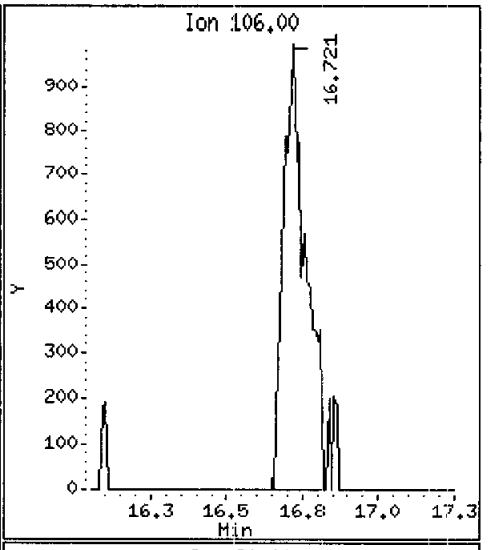
Concentration: 0.6617 ppbv

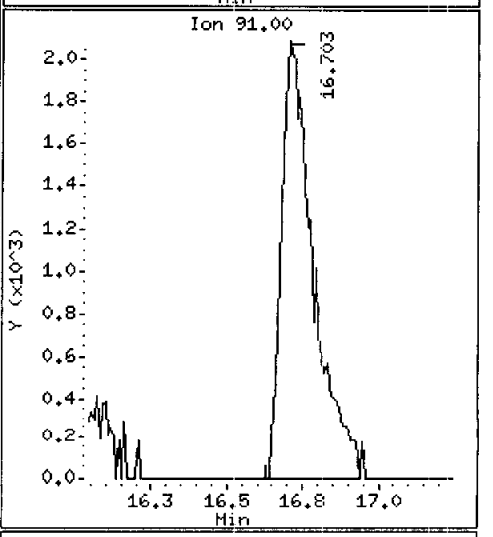


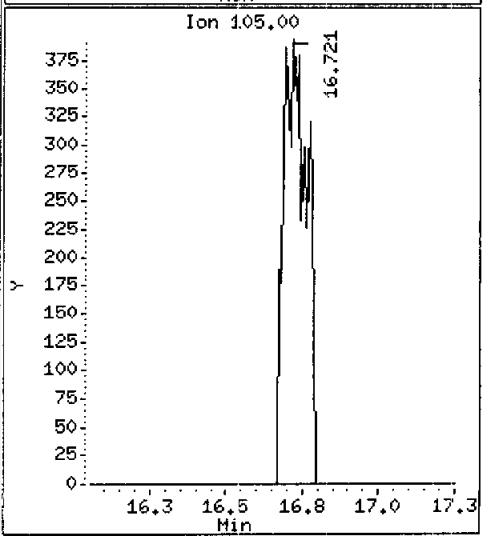












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD:
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608037	STCA	E5A100224		2/7/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	W. Palencia		2-8-05	
FINAL TRANSMITTED TO/DATE:	Shelly		2-8-05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO (ERDMS) OR RECORDS CENTER BY/DATE:	R. Kawanagl		2-8-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader COLLINS | Project Name (TAG) VAPOR WELL SAMPLING | Case No. 7222_01.05

AR/COC No. 608037 | Analytical Lab SEVERN TRENT | SDG No. E5A100224

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted:_____

Reviewed by: W. Palencia Date: 2-8-05 Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of 1

AR/COC 608037

Batch No. N/A

SMO Use

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	74649	SMO Authorization:	LB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21623
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		

SEE BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Location	Tech Area 2
Building	Room

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066370-001	TAG-SV02-47	47.5		12/29/2004 0859	SG	SC	6L	none	G	SA	TO-14 summa# 04398	
066371-001	TAG-SV02-97	97.5		12/29/2004 0903	SG	SC	6L	none	G	SA	TO-14 summa# A-272	
066372-001	TAG-SV02-147	147.5		12/29/2004 0908	SG	SC	6L	none	G	SA	TO-14 summa# 93273	
066373-001	TAG-SV02-197	197.5		12/29/2004 0913	SG	SC	6L	none	G	SA	TO-14 summa# DL-115	
066374-001	TAG-SV02-247	247		12/29/2004 0920	SG	SC	6L	none	G	SA	TO-14 summa# 93110	
066375-001	TAG-SV02-247-SD	247		12/29/2004 0920	SG	SC	6L	none	G	SD	TO-14 summa# 12211	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/12/05
Entered by: JAC
QC inits. WJP

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

Abnormal Conditions on Receipt

Lab Use

Sample Team Members

Name	Signature	Init	Company/Organization/Phone/Cellular
J Lee		JDL	Weston Solutions 6146 (505-284-3309)
R Lynch		RL	Weston Solutions 6146 (505-250-7090)
W Gibson		WJP	Weston Solutions 6146 (505-284-5232)

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER **44649**

Commercial Invoice

Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#

Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination:
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES

				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED- EX
GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

1-24-05
RK

ESA100224

ESA100224

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Page 1 of 1

Internal Lab

Batch No. N/A

SMO Use

AR/COC 608037

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	74699	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		SEE BOTTLE ORDER
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

☐ Waste Characterization
-Send preliminary/copy report to:

☐ Released by COC No.:
☐ Validation Required

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066370-001	TAG-SV02-47	47.5		12/29/2004 0859	SG	SC	6L	none	G	SA	TO-14 summa# 04398 -1	
066371-001	TAG-SV02-97	97.5		12/29/2004 0903	SG	SC	6L	none	G	SA	TO-14 summa# A-272 -2	
066372-001	TAG-SV02-147	147.5		12/29/2004 0908	SG	SC	6L	none	G	SA	TO-14 summa# 93273 -3	
066373-001	TAG-SV02-197	197.5		12/29/2004 0913	SG	SC	6L	none	G	SA	TO-14 summa# DL-115 -4	
066374-001	TAG-SV02-247	247		12/29/2004 0920	SG	SC	6L	none	G	SA	TO-14 summa# 93110 -5	
066375-001	TAG-SV02-247-SD	247		12/29/2004 0920	SG	SC	6L	none	G	SD	TO-14 summa# 12211 -6	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day ☐ Negotiated TAT

Return Samples By:

Sample Tracking Smo Use
Date Entered(mm/dd/yy)
Entered by:
QC Inits.

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

*Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. SRL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

COC 608037 E5A100224

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/21/05
Page : 1
Time : 19:15:03

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066370-001/TAG-SV02-47
Date Sampled: 12/29/04 Time Sampled: 8:59
LAB ID: E5A100224-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066371-001/TAG-SV02-97
Date Sampled: 12/29/04 Time Sampled: 9:03
LAB ID: E5A100224-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066372-001/TAG-SV02-147
Date Sampled: 12/29/04 Time Sampled: 9:08
LAB ID: E5A100224-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066373-001/TAG-SV02-197
Date Sampled: 12/29/04 Time Sampled: 9:13
LAB ID: E5A100224-004 Matrix: AIR

Parameter	Method	Rep

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066373-001/TAG-SV02-197
Date Sampled: 12/29/04 Time Sampled: 9:13
LAB ID: E5A100224-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066374-001/TAG-SV02-247
Date Sampled: 12/29/04 Time Sampled: 9:20
LAB ID: E5A100224-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066375-001/TAG-SV02-247-SD
Date Sampled: 12/29/04 Time Sampled: 9:20
LAB ID: E5A100224-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 1
Case Narrative 2
Chain of Custody 3
Analytical Report 16
QA/QC 34
STL Los Angeles Raw Data 40
Raw Data: TO-14A 41

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 3, 2005

STL LOT NUMBER: **E5A100224**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

This report contains 000172 pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100224

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

E5A100224

Page 1 of 1

AR/COC 608037

nal Lab

n No. N/A

SMO Use

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	94649	SMO Authorization: LB	
ct Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21623	
d Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Released by COC No.:
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		☐ Validation Required
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To:Sandia National Labs (Accounts Payable) P.O. Box 5800 MS 0154 Albuquerque, NM 87185-0154
ation	Tech Area 2				
ing	Room				

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066370-001	TAG-SV02-47	47.5		12/29/2004 0859	SG	SC	6L	none	G	SA	TO-14 summa# 04398	
066371-001	TAG-SV02-97	97.5		12/29/2004 0903	SG	SC	6L	none	G	SA	TO-14 summa# A-272	
066372-001	TAG-SV02-147	147.5		12/29/2004 0908	SG	SC	6L	none	G	SA	TO-14 summa# 93273	
066373-001	TAG-SV02-197	197.5		12/29/2004 0913	SG	SC	6L	none	G	SA	TO-14 summa# DL-115	
066374-001	TAG-SV02-247	247		12/29/2004 0920	SG	SC	6L	none	G	SA	TO-14 summa# 93110	
066375-001	TAG-SV02-247-SD	247		12/29/2004 0920	SG	SC	6L	none	G	SD	TO-14 summa# 12211	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

rn Samples By: ☐ Negotiated TAT QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
mbers	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use

Date Entered(mm/dd/yy)

Entered by:

Special Instructions/QC Requirements

EDD ☑ Yes ☐ No

Level C Package ☑ Yes ☐ No

*Send report to:

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

*Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

linquished by		Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by		Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
linquished by		Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by		Org. SR	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
linquished by		Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by		Org.	Date	Time	6. Received by	Org.	Date	Time

E5A100224

3

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: C4398
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/9/04A, 12/22/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.59	1/12/05	~
FINAL PRESSURE (PSIA)	24.01	1-12-05	~

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: A-272
DATE CLEANED: 12/1/04A, 12/1/04C, 10/26/04A, 12/6/04A, 12/2/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.69	1-12-05	✓
FINAL PRESSURE (PSIA)	24.50	1-12-05	✓

Pressurization Gas: N

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93273
DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 12/2/04A, 10/12/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.64	1-12-05	
FINAL PRESSURE (PSIA)	24.62	1-12-05	

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: DC115
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/8/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.34	1-12-05	u
FINAL PRESSURE (PSIA)	24.31	1-12-05	u

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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5

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93110
DATE CLEANED: ~~12/1/04 A~~, 12/1/04 C, ~~10/28/04 A~~, ~~12/22/04 A~~, ~~1/2/04 C~~
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12-03	1-12-05	"
FINAL PRESSURE (PSIA)	24.43	1-12-05	"

Pressurization Gas: N2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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6

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories

CANISTER SERIAL #: 12211

DATE CLEANED: ~~12/1/04 A~~, 12/1/04 C, ~~12/29/04 A~~, ~~12/30/04 A~~, ~~1/2/05 C~~

CLIENT SAMPLE #: _____

SITE LOCATION: _____

VFR ID: _____

Duration of comp. : _____ hrs. / mins.

Flow setting: _____ ml/min

Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.07	1-12-05	"
FINAL PRESSURE (PSIA)	23.60	1-12-05	"

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch 12.2.04 C

Date of QC 12.3.04

Data File Number MB12032 (MSB)

Canister ID Numbers

*03322	G0161
04398 ✓	A-263
92040	0117
93273 ✓	93148
A-272 ✓	G0054
93036	04736

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12.3.04

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:46
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,03322
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.327	8.324	(1.000)	480472	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.346	9.352	(0.921)	580377	47.9120	47.91
* 72 1,4-Difluorobenzene	114	10.149	10.155	(1.000)	1546149	50.0000	
$ 87 Toluene-d8	100	12.766	12.763	(1.258)	726802	47.9524	47.95
* 99 Chlorobenzene-d5	117	15.419	15.406	(1.000)	1096086	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.662	(1.146)	755239	38.6021	38.60

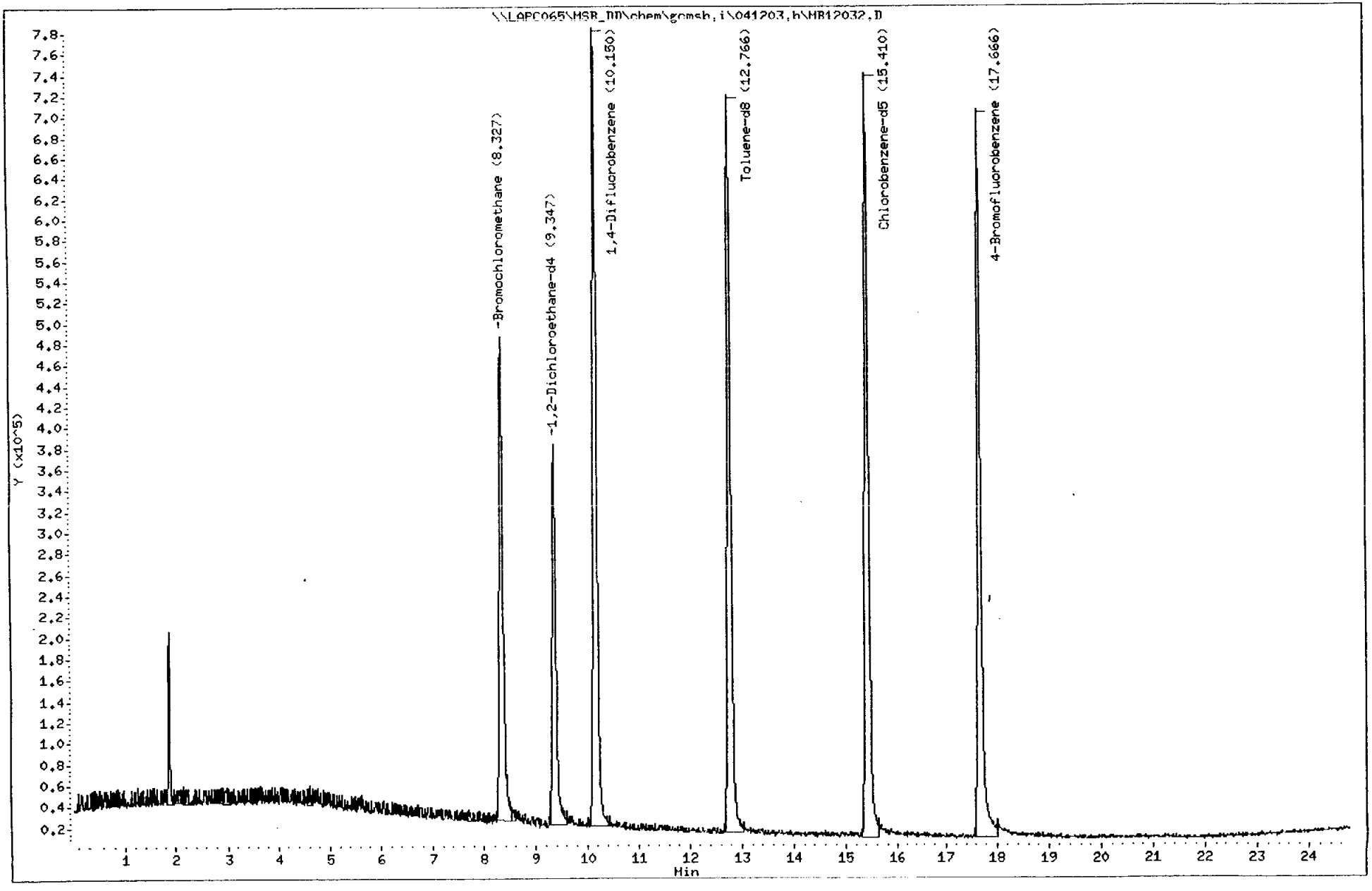
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Date : 03-DEC-2004 12:46
Client ID: BLANK
Sample Info: BLANK,BLANK,03322

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15ML

Date Cleaned/Batch 12-1004C

Date of QC 12-2-04

Data File Number MB12021 (MSB)

Canister ID Numbers

* 02803	11203
93110 ✓	12166
0142	12620
DL115 ✓	9413 BB
12211 ✓	12876
92056	93154

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-2-04

N:\CO\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:25
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,02803
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.314	8.326	(1.000)	503233	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.343	9.345	(0.921)	561863	47.6517	47.65
* 72 1,4-Difluorobenzene	114	10.146	10.157	(1.000)	1505004	50.0000	
$ 87 Toluene-d8	100	12.762	12.765	(1.258)	647801	43.9086	43.91
* 99 Chlorobenzene-d5	117	15.415	15.418	(1.000)	829144	50.0000	
$ 113 4-Bromofluorobenzene -	95	17.670	17.664	(1.146)	411537	27.8068	27.81(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

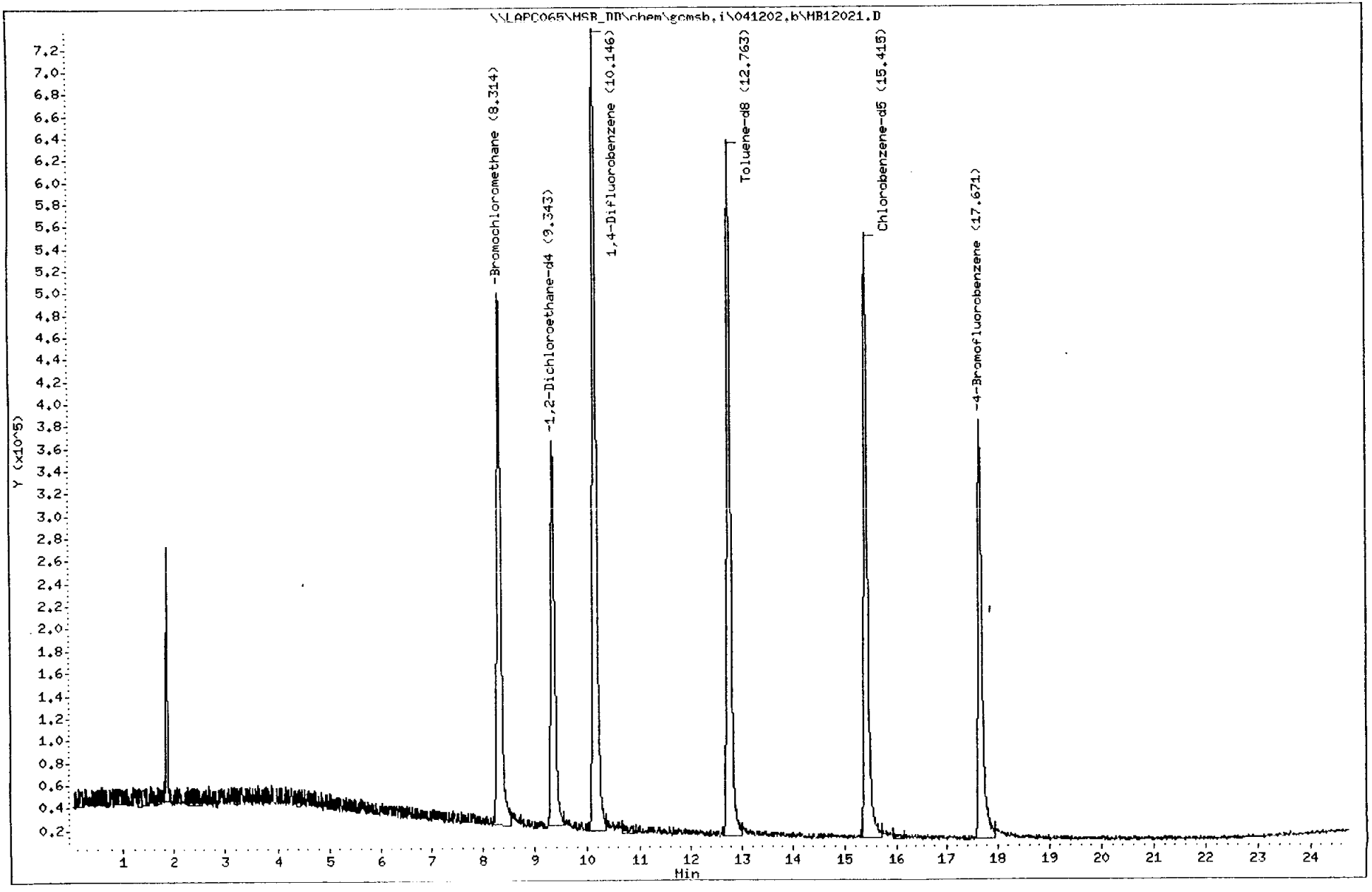
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Date : 02-DEC-2004 13:25
Client ID: BLANK
Sample Info: BLANK,BLANK,02803

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100224

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100224

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066370-001/TAG-SV02-47 12/29/04 08:59 001				
Dichlorodifluoromethane	0.62 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	3.0 J	10	ppb(v/v)	EPA-21 TO-14A
066371-001/TAG-SV02-97 12/29/04 09:03 002				
Dichlorodifluoromethane	0.61 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	2.0	2.0	ppb(v/v)	EPA-21 TO-14A
066372-001/TAG-SV02-147 12/29/04 09:08 003				
Dichlorodifluoromethane	0.59 J	2.0	ppb(v/v)	EPA-21 TO-14A
066373-001/TAG-SV02-197 12/29/04 09:13 004				
Dichlorodifluoromethane	0.57 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	0.85 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	4.2 J	10	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	2.5 J	10	ppb(v/v)	EPA-21 TO-14A
Benzene	1.6 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	7.8	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	4.9	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	5.8	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	0.91 J	2.0	ppb(v/v)	EPA-21 TO-14A
066374-001/TAG-SV02-247 12/29/04 09:20 005				
Dichlorodifluoromethane	0.58 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.6 J	10	ppb(v/v)	EPA-21 TO-14A
Benzene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	0.99 J	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	2.5	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	0.74 J	2.0	ppb(v/v)	EPA-21 TO-14A
066375-001/TAG-SV02-247-SD 12/29/04 09:20 006				
Dichlorodifluoromethane	0.61 J	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	0.95 J	4.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	2.2 J	10	ppb(v/v)	EPA-21 TO-14A
Acetone	23	10	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	52	10	ppb(v/v)	EPA-21 TO-14A

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EXECUTIVE SUMMARY - Detection Highlights

E5A100224

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066375-001/TAG-SV02-247-SD 12/29/04 09:20 006				
Benzene	2.3	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	2.3	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	3.8 J	10	ppb(v/v)	EPA-21 TO-14A
Toluene	7.0	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	0.70 J	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100224

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100224

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DHN	001	066370-001/TAG-SV02-47	12/29/04	08:59
G2DHP	002	066371-001/TAG-SV02-97	12/29/04	09:03
G2DHQ	003	066372-001/TAG-SV02-147	12/29/04	09:08
G2DHR	004	066373-001/TAG-SV02-197	12/29/04	09:13
G2DHT	005	066374-001/TAG-SV02-247	12/29/04	09:20
G2DHV	006	066375-001/TAG-SV02-247-SD	12/29/04	09:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066370-001/TAG-SV02-47

GC/MS Volatiles

Lot-Sample #...: E5A100224-001 **Work Order #...:** G2DHN1AD **Matrix.....:** AE
Date Sampled...: 12/29/04 08:59 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 19:44
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.62 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**3.0 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	ND	2.0	ppb(v/v)	0.50
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	ND	2.0	ppb(v/v)	0.50
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066370-001/TAG-SV02-47

GC/MS Volatiles

Lot-Sample #...: E5A100224-001 **Work Order #...:** G2DHN1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066371-001/TAG-SV02-97

GC/MS Volatiles

Lot-Sample #...: E5A100224-002 **Work Order #...:** G2DHP1AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:03 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 20:20
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.61 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**2.0**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066371-001/TAG-SV02-97

GC/MS Volatiles

Lot-Sample #...: E5A100224-002 **Work Order #...:** G2DHP1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066372-001/TAG-SV02-147

GC/MS Volatiles

Lot-Sample #...: E5A100224-003 **Work Order #...:** G2DHQ1AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:08 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 20:56
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.59 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	ND	2.0	ppb(v/v)	0.50
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	ND	2.0	ppb(v/v)	0.50
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066372-001/TAG-SV02-147

GC/MS Volatiles

Lot-Sample #...: E5A100224-003 **Work Order #...:** G2DHQ1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066373-001/TAG-SV02-197

GC/MS Volatiles

Lot-Sample #...: E5A100224-004 **Work Order #...:** G2DHR1AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:13 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 21:31
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.57 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	**0.85 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**4.2 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**2.5 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.6 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**7.8**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**4.9**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**5.8**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066373-001/TAG-SV02-197

GC/MS Volatiles

Lot-Sample #...: E5A100224-004 **Work Order #...:** G2DHR1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	**0.91 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066374-001/TAG-SV02-247

GC/MS Volatiles

Lot-Sample #...: E5A100224-005 **Work Order #...:** G2DHT1AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:20 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 22:07
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.58 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**2.6 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**0.99 J**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**2.5**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	ND	2.0	ppb(v/v)	0.60
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066374-001/TAG-SV02-247

GC/MS Volatiles

Lot-Sample #...: E5A100224-005 **Work Order #...:** G2DHT1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	**1.4 J**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	**0.74 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066375-001/TAG-SV02-247-SD

GC/MS Volatiles

Lot-Sample #...: E5A100224-006 **Work Order #...:** G2DHV1AD **Matrix.....:** AE
Date Sampled...: 12/29/04 09:20 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 22:42
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**0.61 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	**0.95 J**	**4.0**	**ppb(v/v)**	**0.80**
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	ND	2.0	ppb(v/v)	0.50
Carbon disulfide	**2.2 J**	**10**	**ppb(v/v)**	**2.0**
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	0.50
Acetone	**23**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	**52**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**2.3**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**2.3**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	**3.8 J**	**10**	**ppb(v/v)**	**2.0**
Toluene	**7.0**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**0.70 J**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066375-001/TAG-SV02-247-SD

GC/MS Volatiles

Lot-Sample #...: E5A100224-006 **Work Order #...:** G2DHV1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	**1.0 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100224

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5017155	
002	AE	EPA-21 TO-14A		5017155	
003	AE	EPA-21 TO-14A		5017155	
004	AE	EPA-21 TO-14A		5017155	
005	AE	EPA-21 TO-14A		5017155	
006	AE	EPA-21 TO-14A		5017155	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100224 **Work Order #...:** G2PN51AA **Matrix.....:** AIR
MB Lot-Sample #: M5A170000-155

Prep Date.....: 01/14/05 **Analysis Time..:** 11:56
Analysis Date..: 01/14/05 **Prep Batch #...:** 5017155 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 101605

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100224 **Work Order #...:** G2PN51AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100224 **Work Order #...:** G2PN51AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-155 G2PN51AD-LCSD
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 10:21
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**103**	**(70 - 125)**			**EPA-21 TO-14A**
	103	**(70 - 125)**	**0.25**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**99**	**(75 - 120)**			**EPA-21 TO-14A**
	99	**(75 - 120)**	**0.56**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**100**	**(70 - 125)**			**EPA-21 TO-14A**
	101	**(70 - 125)**	**0.63**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**101**	**(75 - 125)**			**EPA-21 TO-14A**
	101	**(75 - 125)**	**0.39**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**104**	**(65 - 130)**			**EPA-21 TO-14A**
	106	**(65 - 130)**	**1.5**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100224 **Work Order #...:** G2PN51AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-155 G2PN51AD-LCSD
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017155 **Analysis Time..:** 10:21
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.0**	**51.5**	**ppb(v/v)**	**103**		**EPA-21 TO-14A**
	50.0	**51.4**	**ppb(v/v)**	**103**	**0.25**	**EPA-21 TO-14A**
Methylene chloride	**50.0**	**49.5**	**ppb(v/v)**	**99**		**EPA-21 TO-14A**
	50.0	**49.8**	**ppb(v/v)**	**99**	**0.56**	**EPA-21 TO-14A**
Trichloroethene	**50.0**	**50.2**	**ppb(v/v)**	**100**		**EPA-21 TO-14A**
	50.0	**50.5**	**ppb(v/v)**	**101**	**0.63**	**EPA-21 TO-14A**
Toluene	**50.0**	**50.7**	**ppb(v/v)**	**101**		**EPA-21 TO-14A**
	50.0	**50.5**	**ppb(v/v)**	**101**	**0.39**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**52.1**	**ppb(v/v)**	**104**		**EPA-21 TO-14A**
	50.0	**52.9**	**ppb(v/v)**	**106**	**1.5**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A 100224

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: Cy 011805

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
18 1,1-Difluoroethane	+++++	0.83932	0.68757	0.62197	0.58987	0.54653		
	+++++						0.65705	17.372
19 Vinyl Bromide	0.62278	0.56455	0.53870	0.56539	0.57273	0.56881		
	0.62107						0.57915	5.391
20 Dichlorofluoromethane (F21)	1.78533	1.50223	1.39821	1.34166	1.65446	1.49514		
	1.13113						1.47259	14.446
21 Trichlorofluoromethane (F11)	2.44228	2.19307	2.04879	2.09644	2.05197	2.00515		
	2.05644						2.12773	7.083
22 n-Pentane	1.21122	0.91843	0.83705	0.76734	0.91893	0.83317		
	0.63205						0.87403	20.395
23 1,1-DC-1-flouroethane(F141b)	2.58910	2.46384	2.73685	2.65312	2.66299	2.44988		
	+++++						2.59263	4.444
24 Ethanol	+++++	0.03096	0.04049	0.04678	0.06130	0.05751		
	0.04475						0.04697	23.705
25 Ether (Diethyl ether)	0.49364	0.50122	0.46318	0.44008	0.54085	0.49061		
	0.37446						0.47201	11.284
26 Acrolein	0.20601	0.05556	0.08013	0.08246	0.09423	0.10125		
	0.10903						0.10410	46.263 <-
27 Propionaldehyde (Propanal)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
28 1,1-Dichloroethene	1.26790	1.17864	1.08330	1.12535	1.10018	1.07502			
	1.06973						1.12859	6.381	
29 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715	2.59937	2.38876	2.40025	2.34655	2.25977			
	2.22085						2.44467	9.559	
31 Acetone	+++++	0.12242	0.14598	0.16090	0.16041	0.16574			
	0.20458						0.16001	16.836	
32 Iodomethane	1.11548	1.03774	1.38752	1.40857	2.82193	2.47154			
	1.87248						1.73075	39.751	<-
33 Carbon Disulfide	0.84200	0.90775	0.92884	1.06258	1.12947	1.19849			
	1.35974						1.06127	17.279	
34 2-Propanol	+++++	0.45343	0.48827	0.55577	0.58306	0.59777			
	0.71716						0.56591	16.380	
35 Acetonitrile	0.04928	0.08266	0.12149	0.13210	0.18434	0.18610			
	0.15546						0.13021	39.137	<-
36 Allyl Chloride	0.54011	0.56312	0.52171	0.54469	0.60226	0.61352			
	0.71567						0.58587	11.302	
37 Methylene Chloride	0.81147	0.73641	0.65629	0.67719	0.66235	0.64310			
	0.69121						0.69686	8.458	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694			
	0.57332						0.76494	18.881	
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523			
	1.08163						1.65179	16.814	
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017			
	0.26841						0.18791	31.549	<-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358			
	1.00617						0.98199	4.210	
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540			
	1.68918						1.66607	5.005	
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136			
	0.79541						0.77083	4.090	
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403			
	1.25722						1.23672	4.604	
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738			
	1.50832						1.19013	19.897	
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906			
	2.16172						2.88491	13.550	
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799			
	0.41314						0.46225	14.194	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 / 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 / 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ / 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 / 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 / 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ / 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 / 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ / 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 / 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.Q4
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384	1.84557	1.78175	1.69840	1.73692	1.68874		
	1.43818						1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680	0.92384	0.86786	0.85814	1.07070	0.99994		
	0.81576						0.93758	10.283
72 n-Heptane	0.65292	0.59087	0.57809	0.57044	0.59474	0.58371		
	0.52727						0.58544	6.367
74 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
75 Trichloroethene	0.49675	0.44912	0.44758	0.42160	0.43287	0.42172		
	0.38637						0.43657	7.756
76 Methylcyclohexane	0.42140	0.36653	0.33095	0.30891	0.38179	0.35467		
	0.29346						0.35110	12.546
77 1-Butanol	+++++	0.02081	0.01680	0.01594	0.01842	0.01675		
	0.01390						0.01710	13.662
78 1,2-Dichloropropane	0.16774	0.15879	0.17082	0.16553	0.16628	0.16412		
	0.15399						0.16390	3.481
79 Dibromomethane	0.53415	0.48041	0.44691	0.42596	0.54917	0.51576		
	0.44421						0.48522	9.991
80 Methyl methacrylate	+++++	0.23366	0.24181	+++++	0.31202	0.30819		
	0.31492						0.28212	14.422

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
81 1,4-Dioxane	+++++	0.12593	0.15230	0.15893	0.16896	0.17203		
	0.16962						0.15796	11.014
82 Bromodichloromethane	0.49808	0.50550	0.52561	0.54819	0.59184	0.59358		
	0.55167						0.54492	7.007
83 1-Bromo-2-chloroethane	0.08427	0.08575	0.08922	0.08796	0.10824	0.10176		
	0.08679						0.09200	10.014
84 2-Chloroethylvinyl ether	+++++	+++++	0.00529	0.00839	0.01628	0.02467		
	0.04137						0.01920	75.497 <-
85 cis-1,3-Dichloropropene	0.34414	0.37747	0.43712	0.47488	0.49476	0.51468		
	0.50210						0.44931	14.693
86 4-Methyl-2-Pentanone	+++++	+++++	+++++	0.17847	0.22374	0.24354		
	0.27292						0.22967	17.270
87 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
89 Toluene	1.01334	0.91538	0.88423	0.85555	0.87314	0.85627		
	0.76479						0.88039	8.491
90 n-Octane	0.59003	0.53603	0.54695	0.55948	0.73478	0.68532		
	0.56563						0.60260	12.716
91 trans-1,3-Dichloropropene	0.29058	0.33347	0.38018	0.44019	0.49187	0.50533		
	0.51792						0.42279	21.201

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD	
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924	
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318	
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62887	10.012	
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629	
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442	<-
97 Dibromochloromethane	0.78993 / 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682	
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882	
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871	
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341	
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759	

STL Los Angeles

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
113 Cyclohexanone	+++++ / 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036	<-
115 Bromobenzene	0.62810 / 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953	
116 1,1,2,2-Tetrachloroethane	1.35006 / 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.35429	6.584	
117 1,2,3-Trichloropropane	0.40312 / 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311	
118 trans-1,4-Dichloro-2-butene	+++++ / +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055	<-
119 n-Propylbenzene	1.28187 / 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097	
120 2-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
121 4-Chlorotoluene	0.34395 / 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365	
122 3-Ethyltoluene	1.05354 / 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139	
123 4-Ethyl Toluene	0.81519 / 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558	1.21368	0.81082	0.65064	0.83940	0.78774		
	+++++						0.94631	29.818
125 n-Decane	0.46267	0.34922	0.25520	0.27626	0.36839	0.34720		
	0.32620						0.34073	19.844
126 .beta.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
127 2-Ethyltoluene	1.11542	0.94881	0.85458	0.95853	1.30303	1.23402		
	1.16620						1.08294	15.307
128 .alpha.-Methylstyrene	0.43803	0.36069	0.33804	0.37867	0.54465	0.52825		
	0.54809						0.44806	20.459
129 tert-Butylbenzene	0.80994	0.73130	0.67470	0.76818	1.05286	1.00081		
	0.87914						0.84528	16.570
130 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955	0.35806	0.23173	0.19988	0.25825	0.25412		
	+++++						0.27527	23.368
132 sec-Butylbenzene	1.53068	1.27842	1.22547	1.37218	1.91352	1.87496		
	1.68519						1.55435	17.948
133 D-Limonene	0.56335	0.44070	0.33104	0.35410	0.48917	0.46237		
	0.43408						0.43926	17.978

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030		
	0.69853						0.52632	18.610
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222		
	1.26479						1.14477	17.565
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895		
	0.67222						0.54141	18.711
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417		
	0.67804						0.64142	16.131
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209		
	1.02647						0.56325	55.511 <-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348		
	0.55025						0.48440	18.904
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253		
	0.64790						0.53798	14.023
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416		
	0.23934						0.27616	17.206
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159		
	0.79399						0.72730	19.989
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136		
	0.17470						0.37429	42.157 <-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++ / 0.27629	0.26338	0.25799	0.22180	0.31565	0.26332	0.26641	11.388
145 Hexachlorobutadiene	0.56644 / 0.51820	0.58610	0.42156	0.35251	0.47676	0.47942	0.48586	16.727
146 Naphthalene	+++++ / 0.49153	0.70441	0.53060	0.46537	0.55710	0.47106	0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850 / 0.25906	0.48714	0.49598	+++++	0.42244	0.27752	0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014 / 0.39572	0.40234	0.40611	0.41316	0.41851	0.44633	0.41033	4.531
$ 88 Toluene-d8	0.51061 / 0.54926	0.50803	0.52649	0.50915	0.52457	0.53681	0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642 / 1.09717	0.79382	0.81777	0.80936	0.95153	0.96622	0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

. COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\[illegible]
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0 MA 01/04/05

E5A100224

STL Los Angeles
Air Toxics Lab GC/MS Run Log

Instrument ID:	Data Directory: D:\GCMSB\ 050103A-JB	BFB Standard: PSL99112 83	Initial Calibration ID: 1-3 05
GCMS-B	Method File: TO14A	Daily Standard: MSL04011028	SOP: CO1-MS-013
Logbook ID:	Tune File:	LCS Standard: MSL04011043	MDL Date: 01-28-01
R-AMS-041	BF041123	I.S. Standard: PSL99112 83	Blank Lot No. G050301-00

#	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
	13 05	1909	BF01032	-	-		BFB	28	-	-	-	m	OK	A	
		1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL0571
		2002	IC01031	-	-	-	2.0 PPBV STD	40	-	-	-	m	OK	10	MSL04011043
		2037	IC01032	-	-	-	4.0	80	-	-	-	m	OK	10	
		2112	IC01033	-	-	-	10	200	-	-	-	m	OK	10	
		2148	IC01034	-	-	-	25	500	-	-	-	m	OK	10	
		2223	IC01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
		2258	IC01036	-	-	-	100	250	-	-	-	m	OK	11	
		2334	IC01037	-	-	-	500	1250	-	-	-	m	OK	11	
10	14 05	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 c/o?
11		0014	LC01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
12		0119	LC01034	-	-	-	LCSD	500	-	-	-	m	OK	13	
13		0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
14		0342	B7371	G1P4S1AA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	E4L220306-1
15		0417	B7372	G1P4T1AA			002	872	24.4/14.0	-		m	OK	1	-2
16		0452	B7373	G1P4U1AA			003	1130	24.4/10.9	-		m	OK	2	-3
17		0527	B7374	G1P4E2AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
18		0602	B7375	G1P4G1AA			005	1000	24.5/11.0	-	1.00	m	O/R	4	-5

Reviewed: _____

E5A100224

STL Los Angeles
Air Toxics Lab GC/MS Run Log

strument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
gbook ID:	Tune File:	LCS Standard: 1.4.05	MDL Date:
-AMS-041		I.S. Standard:	Blank Lot No.

	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
	1.4.05	0637	B7376	G1P4M1AA	CCA	CRA	A 17178-AW 1000	1150	244/1.2	—	1.00	W	OK	5	E4L22031-6
	↓	0712	B7377	G1Q191AD	↓	TAST	LGSVOCX15B 0730	40	244/1.1	100/10	2730	W	O/R	6	E4L23056-1
		0741	B7378	G1R241AD		↓	LGSVOCX15B 1030	40	244/1.2	100/10	2720	W	OK	7	↓ -2
0															
1															
2															
3															
4															
5															
6															
7															
8															

Reviewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

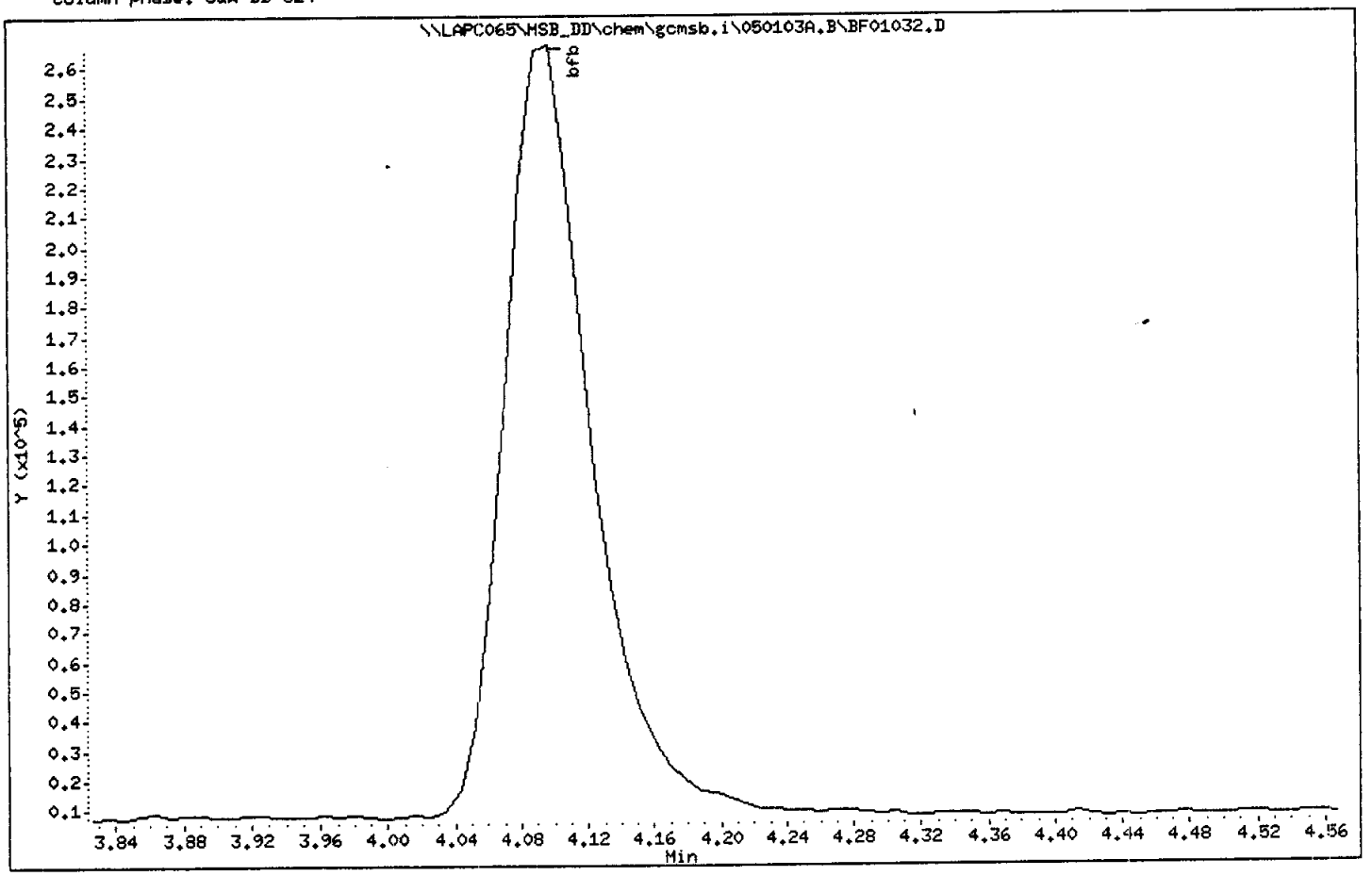
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

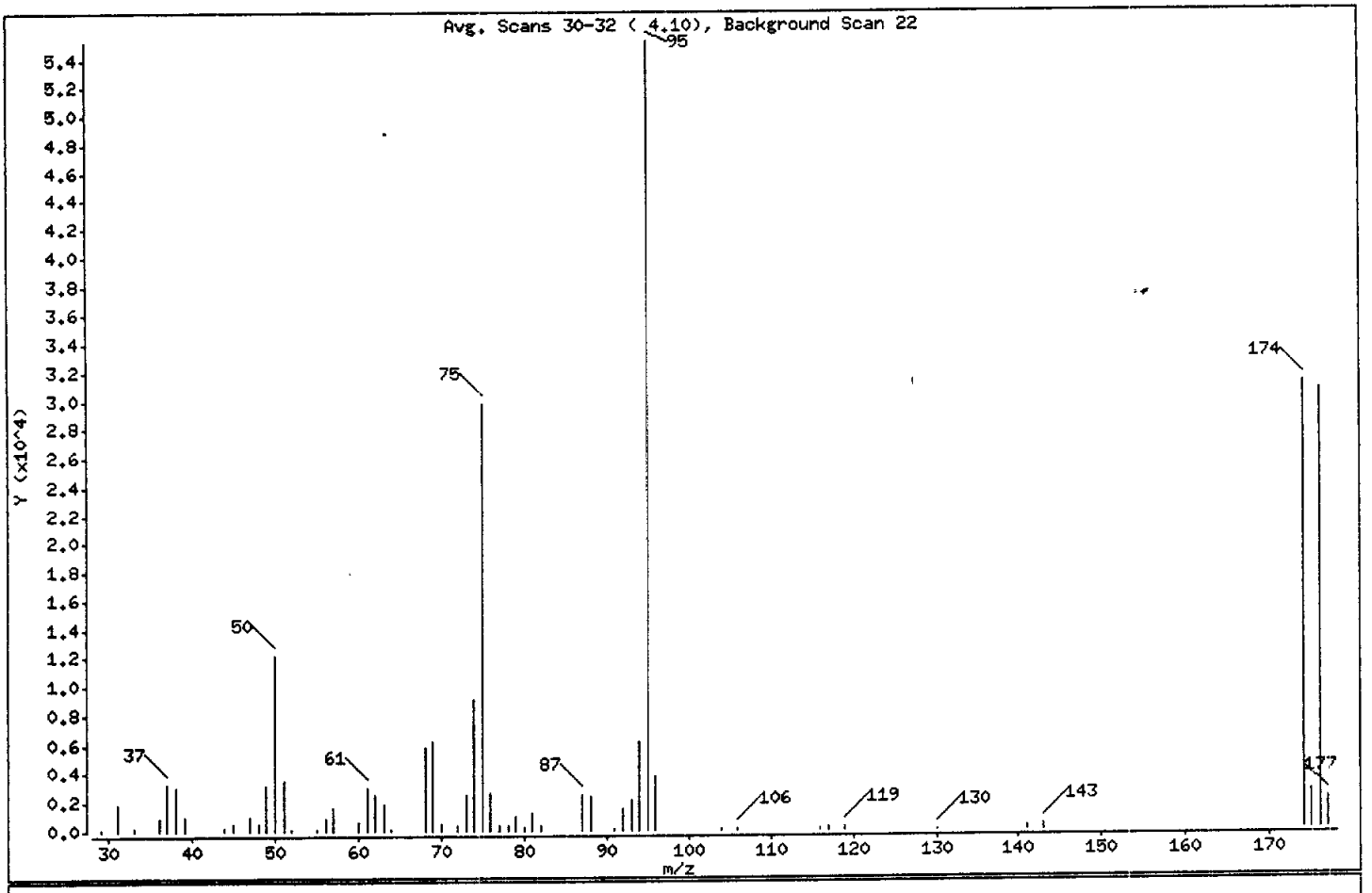
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

KA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.388
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

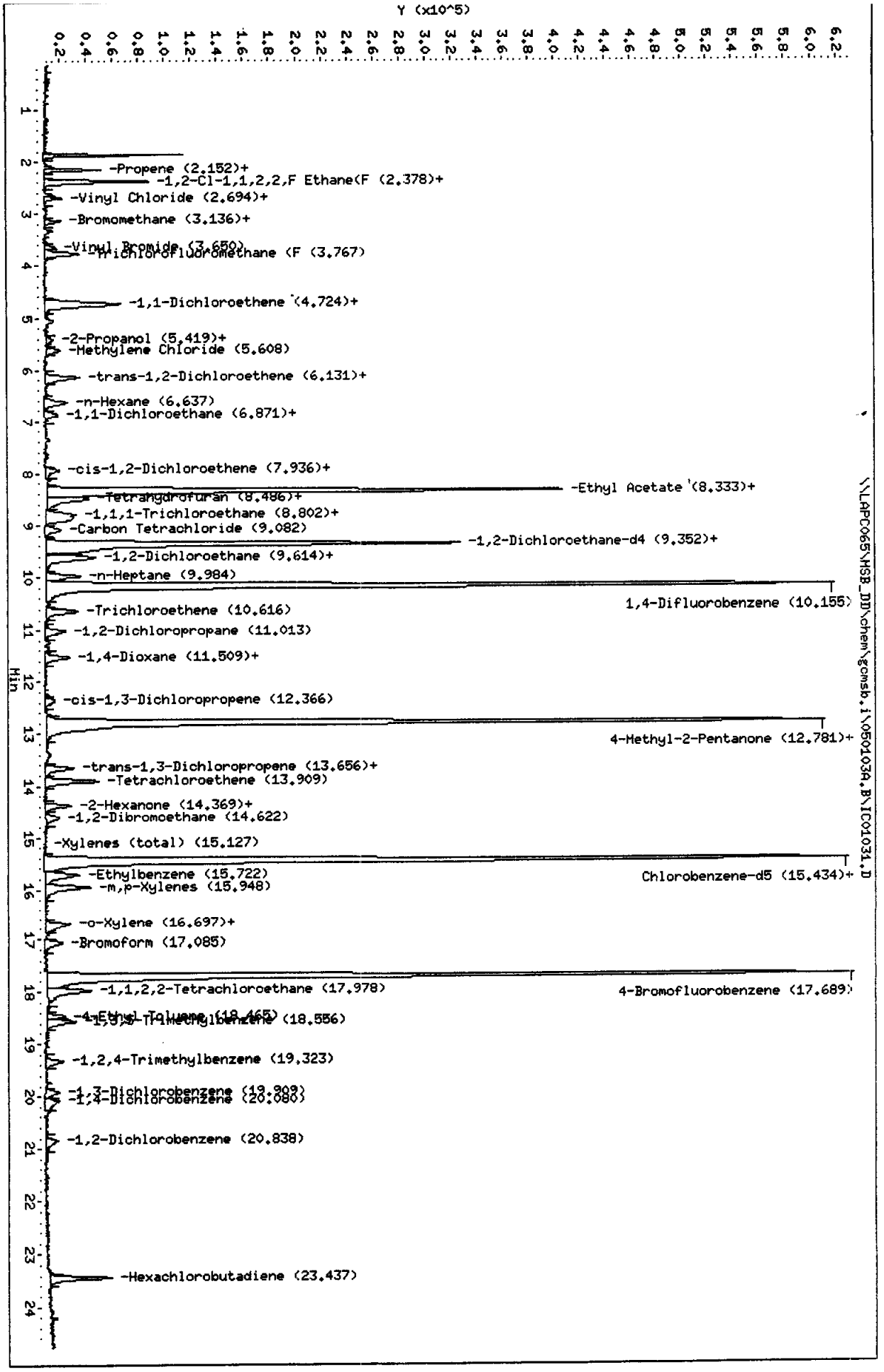
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	[illegible]
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

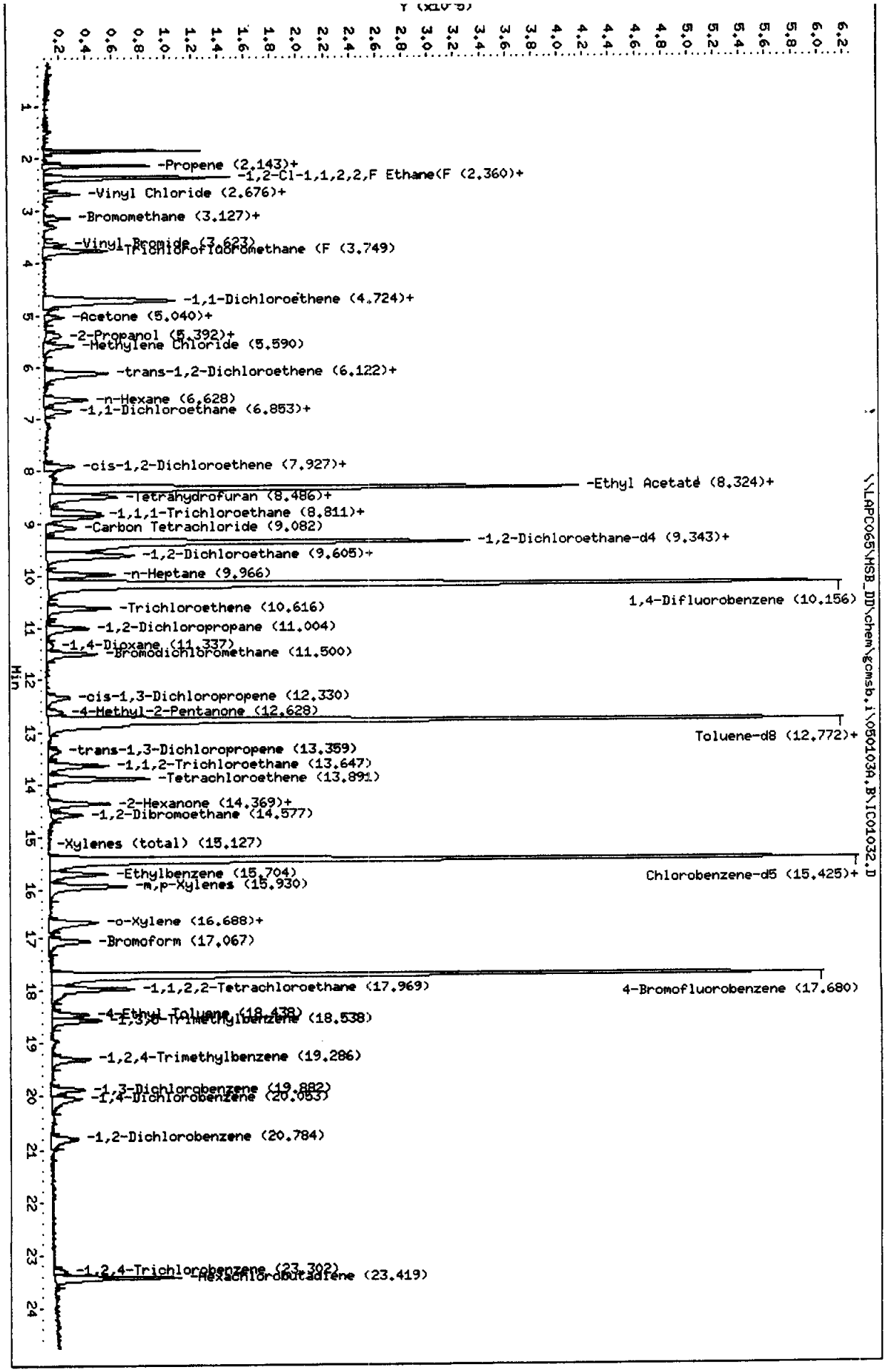
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
42 Methyl-tert-butyl ether[MTBE].	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
* 58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$ 66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
* 73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$ 88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
* 101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M 99 Xylenes (total)	106				196706	30.0000	28.63
104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$ 114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

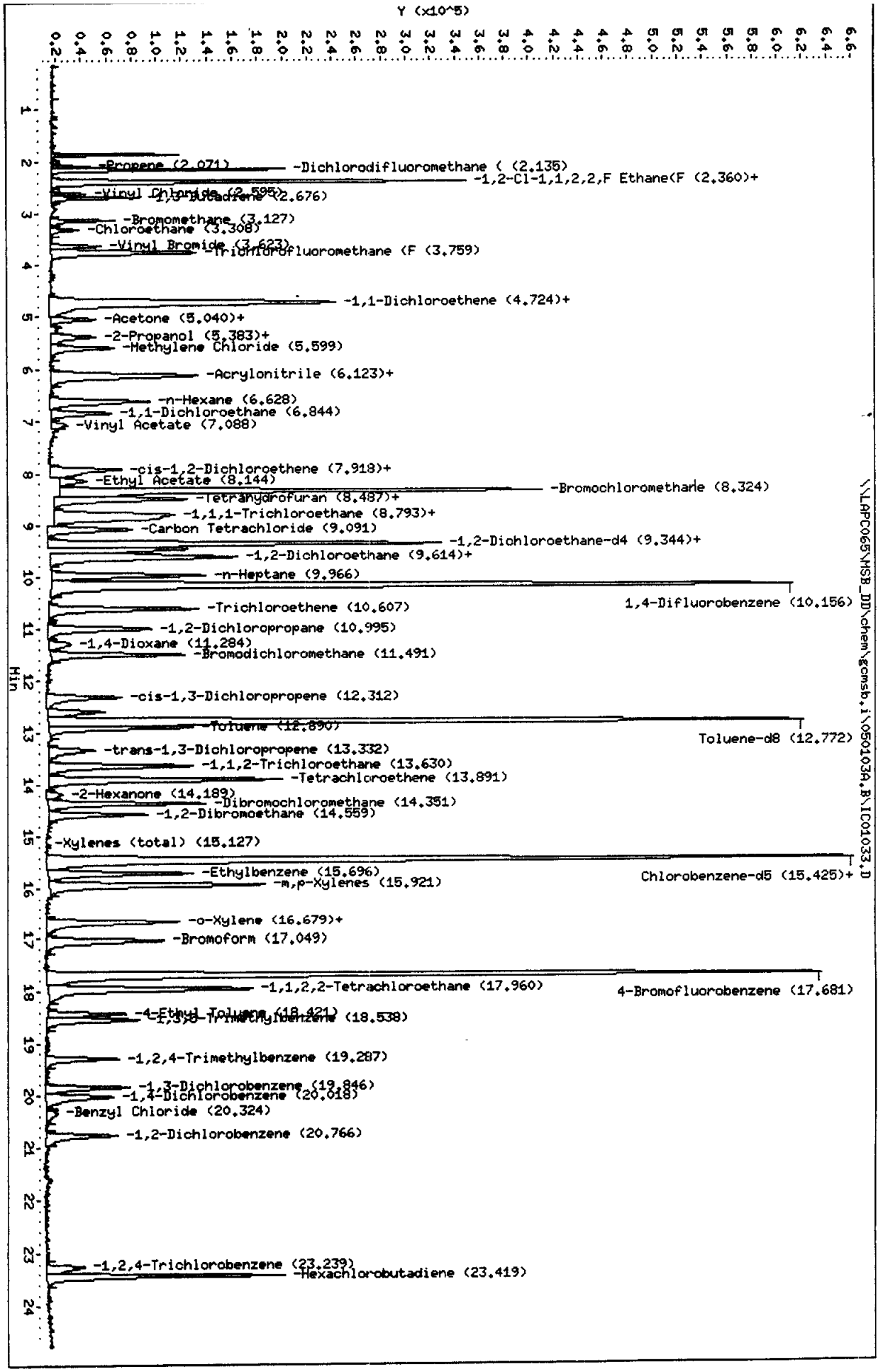
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
	36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
	37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
	40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
	41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
	43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
	44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
	45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
	53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
	54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
	56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
*	58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
	59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
	60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
	61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
	62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
	64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$	66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
	68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
	69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
	70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
	72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
*	73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
	75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
	78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
	81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
	82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
	85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
	86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$	88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
	89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
	91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
	93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
	95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
	96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
	97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
	98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
*	101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
	102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M	99 Xylenes (total)	106				477975	75.0000	68.20
	104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
	105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
	107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
	108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
	110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$	114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

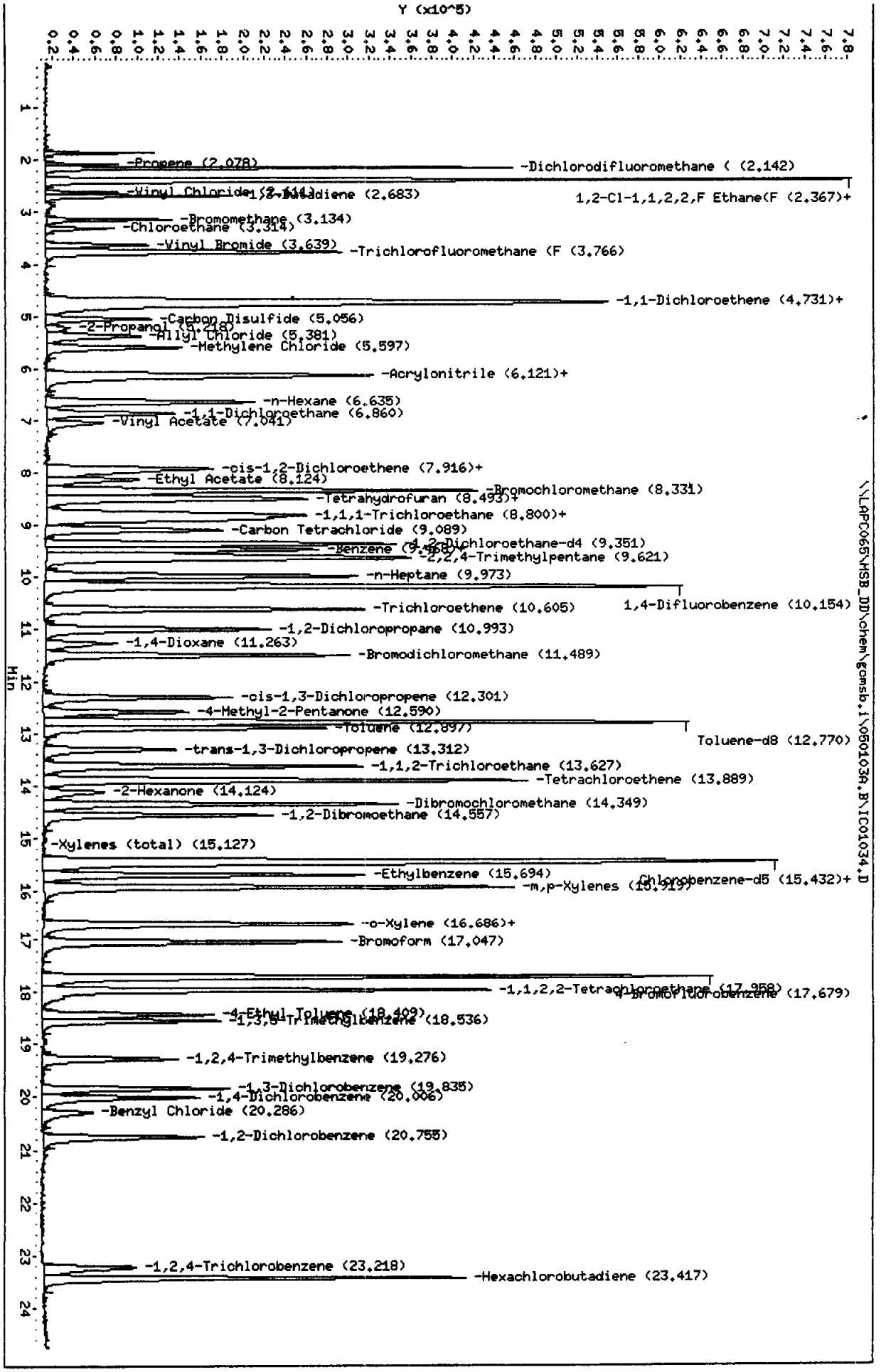
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.40
* 58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$ 66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
* 73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$ 88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
* 101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M 99 Xylenes (total)	106				1168928	150.000	161.6
104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$ 114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

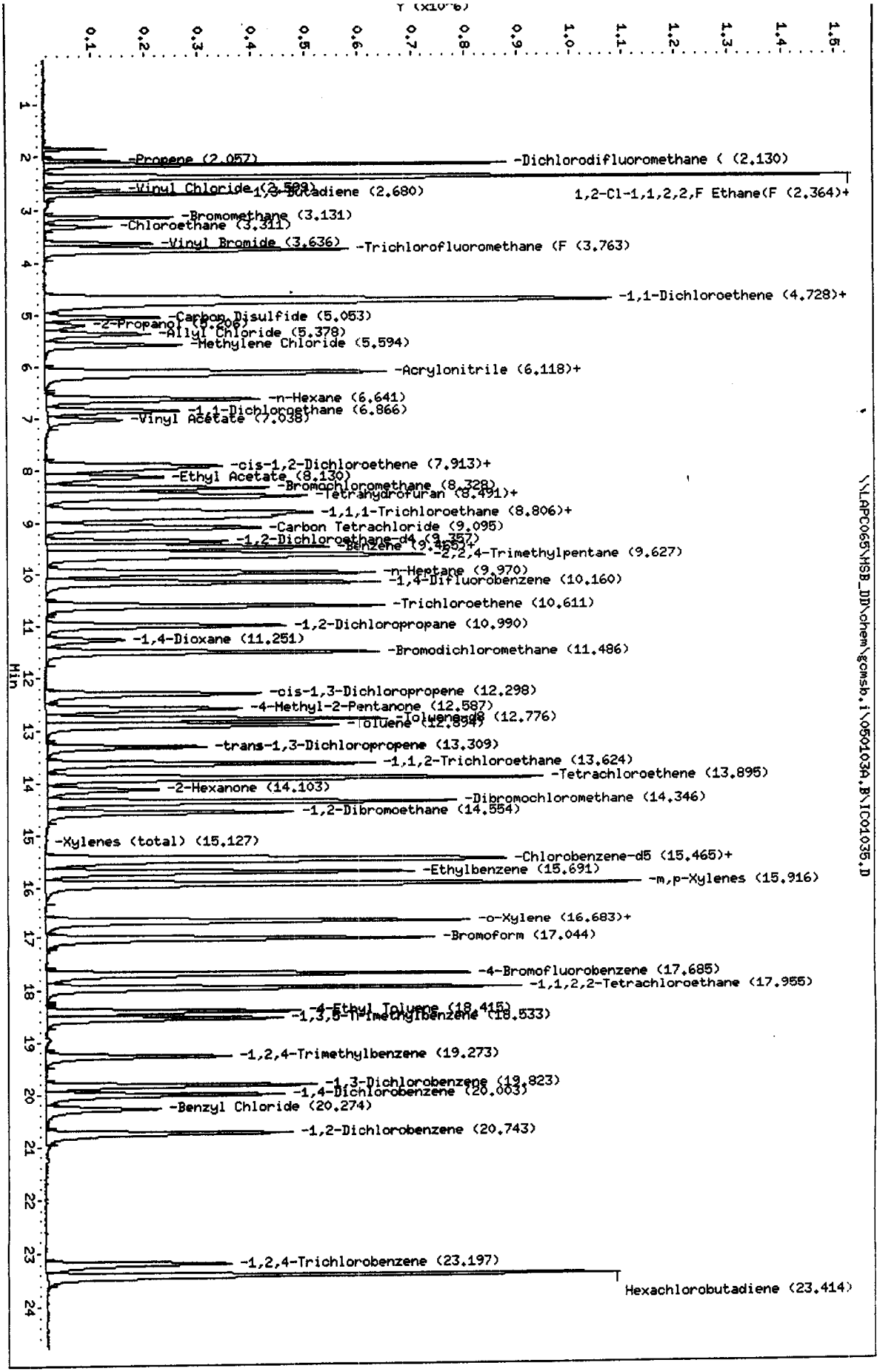
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
	36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
	37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
	40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
	41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
	43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
	44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
	45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
	53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
	54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
	56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
*	58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
	59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
	60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
	61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
	62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
	64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$	66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
	68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
	69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
	70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
	72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
*	73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
	75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
	78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
	81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
	82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
	85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
	86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$	88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
	89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
	91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
	93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
	95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
	96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
	97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
	98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
*	101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
	102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M	99 Xylenes (total)	106				2384108	300.000	320.3
	104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
	105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
	107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
	108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
	110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$	114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

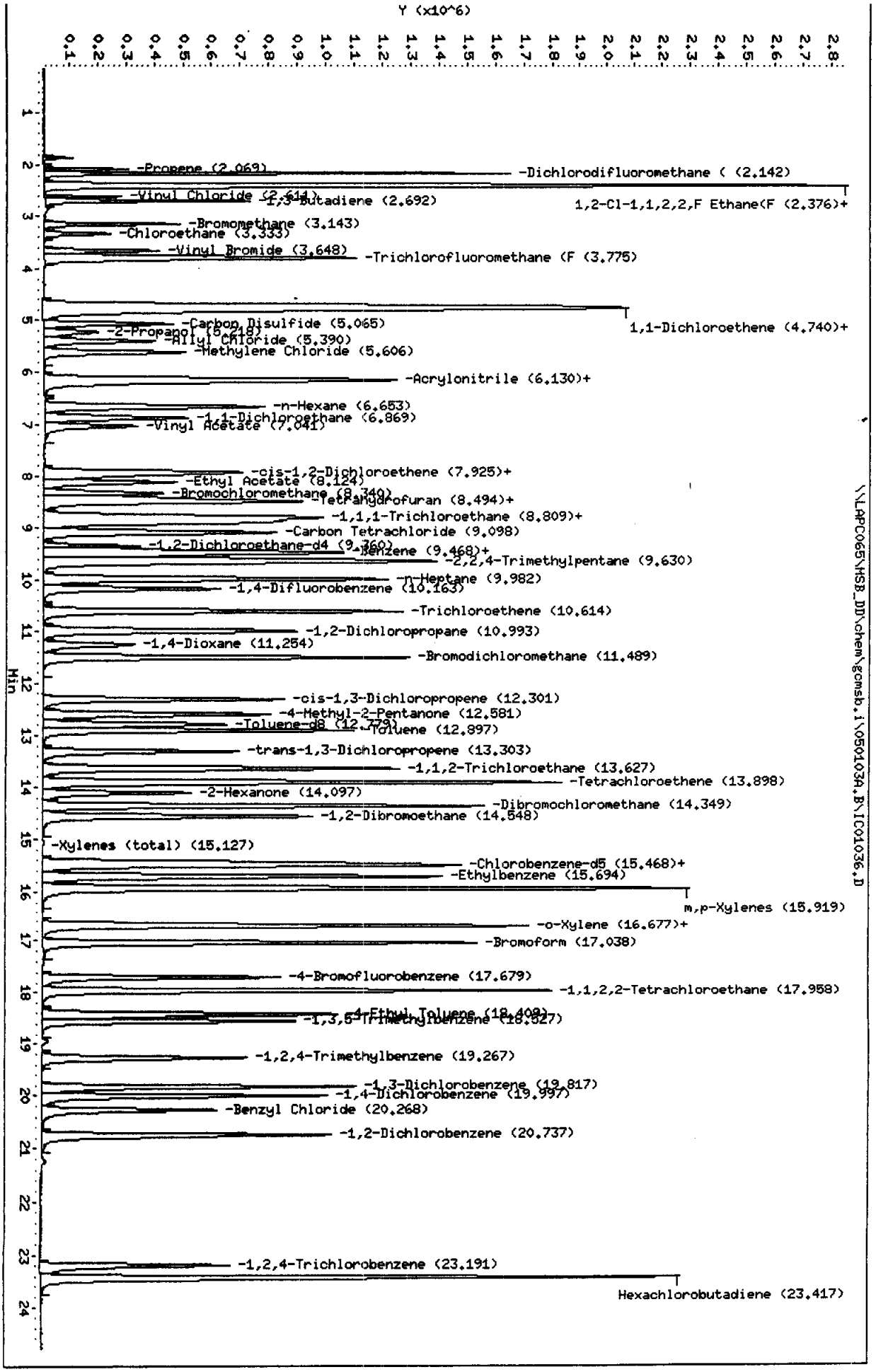
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Lab Smp Id: 500 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	535.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	505.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	553.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

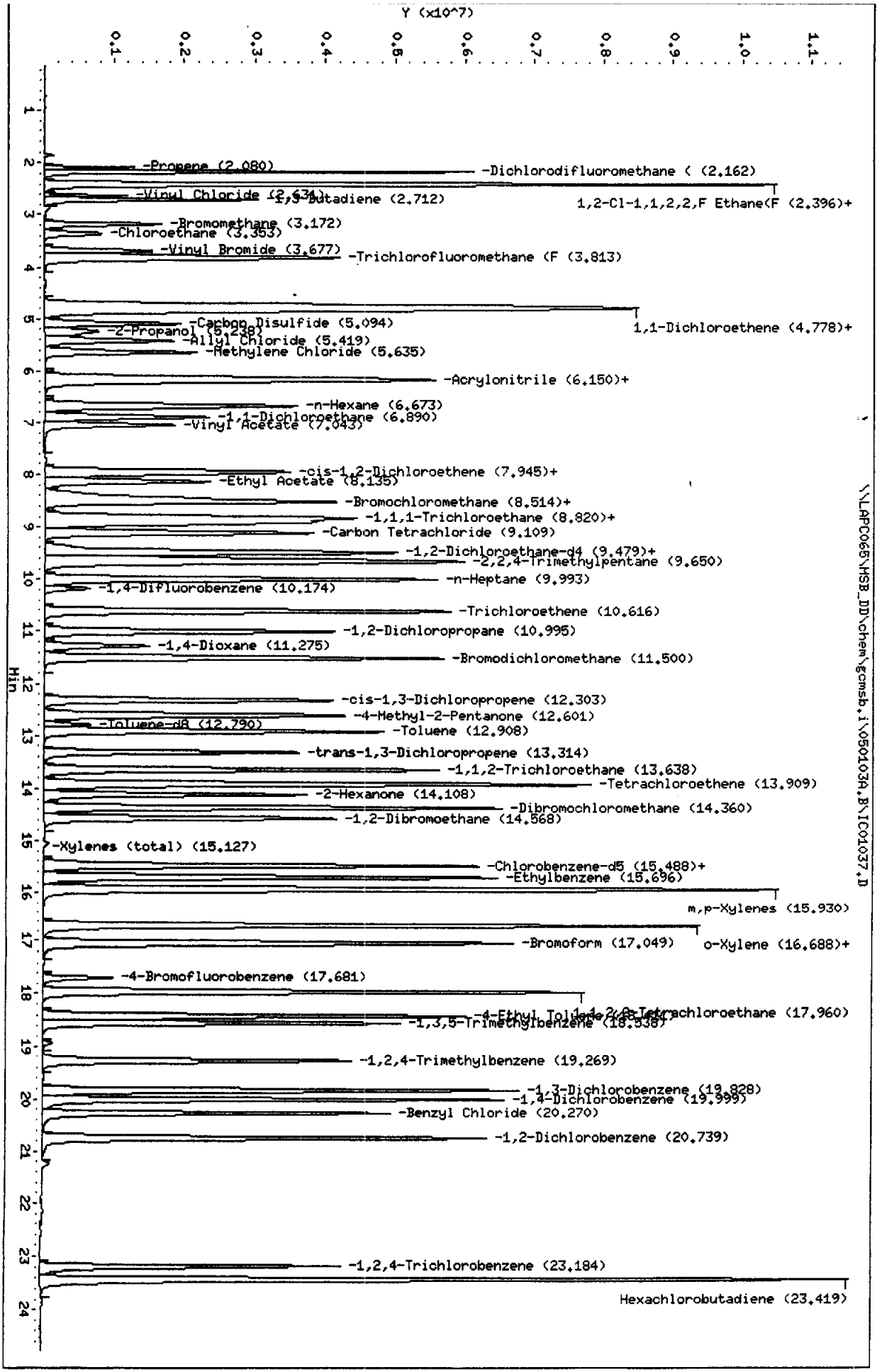
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011405 / 5017155

E5A100224

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ent ID:	Data Directory: D:\GCMSB\ B050114.B	BFB Standard: BSL991283	Initial Calibration ID: 1-3-05
S-B	Method File: TO14A	Daily Standard: MSL0401028	SOP: COE-MS-003
k ID:	Tune File:	LCS Standard: BSL991357	MDL Date: 1-28-04
S-041	BF041123.m	I.S. Standard: BSL991283	Blank Lot No. 9050301 02

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments	
1-05	0805	BF0141	–	–	–	BFB	28	–	–	–	w	OK	A		
	0822	LL0141	–	–	–	ADD-ON CCV	500	–	–	–	w	OK	4	MSL0501089	
	0851	LL0142	–	–	–	CCV	125	–	–	–	w	OK	B		
	0914	LL0141	–	–		ADD LCS	250	–	–	–	w	OK	5	MSL0501045	
	0948	LL0142	–	–	–	ADD LCS	250	–	–	–	w	OK	5	↓	
	1011	LL0143	–	–	–	FULL LCS	250	–	–	–	w	OK	C	MSL0401043	
	1055	LL0144	–	–	–	FULL LCSD	250	–	–	–	w	OK	6	↓	
	1128	LL0145	–	–	–	ADD LCSD	250	–	–	–	w	OK	5	MSL0501045	NAPHT RSD
	1156	MB1141	–	–	–	Method Blank	500	–	–	–	AA	OK	7		
	1229	B7615	G2LK21AC	001	SECOR	VE-PROC	TEDLAR	50	–	10	AA	M/R	8	ESA140196-2	"G"
	1305	B7616	G2LND1AA	001	ERM	GMW-65, 72	20	TEDLAR	100%	2500	AA	OK	9	ESA140206-1	"G"
	1341	B7617	G2JHL2AC	001	SECOR	VE PROC	25	↓	–	20	AA	OK	10	ESA130250-2	
	1409	B7618	G2G7K1AA	001	ERM	Inlet T.O	20	TEDLAR	–	25	AA	OK	11	ESA120363-1	
	1451	B7619	G2LK61AC	001	SECOR	VE-EFF	500	↓	–	1	AA	OK	12	ESA140196-3	
	1519	B7620	G2LKW1AC	001	↓	VE-SRC	200	↓		2.5	AA	OK	13	↓	-1
	1548	B7621	G2LK21AC	001	↓	VE-PROC	200	↓		2.5	AA	OK	14	↓	-2
	1616	B7622	G2LL11AC	001	↓	VE-SRC	15	↓	–	3.33	AA	OK	15	ESA140202-1	
↓	1645	B7623	G2LL21AC	001	SECOR	VE-PROC	20	↓		25	AA	OK	16	ESA140202-2	"G"

wed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ment ID:	Data Directory: D:\GCMSB\	BFB Standard: See previous page	Initial Calibration ID:
MS-B	Method File:	Daily Standard:	SOP:
ook ID:	Tune File:	LCS Standard:	MDL Date:
MS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/14/05	1720	B7624	G2LL41AA	001	SCCOR	VE-CTF	500	Revlan	-	1	AA	OK	1	E5A140202-3
	1756	B7625	G2G8C1AA		ERM	TOU Inlet Tank	20	15/15.5	-	25.00	AA	OK	2	E5A120363-3
	1832	B7626	G2HCF1AA		CDM	CRA influent	15	23.3/23	-	16.7	AA	OK	3	E5A120378-1
	1904	B7627	G2HCR		CDM	CRA Effluent	1260	23.1/4.14	-	1	AA	OK	4	↓ -2
	1944	B7628	G2DHN		SANDIA	066370 001	953	24.0/12.6	-	1	AA	OK	5	E5A100224-1
	2020	B7629	G2DHP			066371_001	965	24.5/12.7	-	1	AA	OK	6	-2
	2056	B7630	G2DHQ			066372_00	977	24.6/12.6	-	1	AA	OK	7	-3
	2131	B7631	G2DHR			066373 001	988	24.3/12.3	-	1	AA	OK	8	-4
	2207	B7632	G2DHT			066374_001	1020	24.4/12.0	-	1	AA	OK	9	-5
	2242	B7633	G2DHV			066375_001	984	23.6/12.0	-	1	AA	OK	10	-6
	2317	B7634	G2ETD1AA		WESTON	WSG02 90705	100	24.5/12.8	-	9.45	AA	OK	11	E5A110276-2
	2352	B7635	G2ETQ		↓	VSG03 10705	100	24.0/14.6	-	8.22	AA	OK	12	↓ -3
	0026	MB01142	—	—	—	Screen Cam	500	—	-	—	AA	No	13	#0118

AA 1/17/05

ewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\BF01141.D
Lab Smp Id:
Inj Date : 14-JAN-2005 08:05
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.071	4.200	(0.000)	95	61192			0.00- 100.00	100.00
4.071	4.200	(0.000)	50	14482			15.00- 40.00	23.67
4.071	4.200	(0.000)	75	33370			30.00- 60.00	54.53
4.071	4.200	(0.000)	96	4316			5.00- 9.00	7.05
4.071	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.071	4.200	(0.000)	174	34026			50.00- 120.00	55.61
4.071	4.200	(0.000)	175	2750			5.00- 9.00	8.08
4.071	4.200	(0.000)	176	32981			95.00- 101.00	96.93
4.071	4.200	(0.000)	177	2422			5.00- 9.00	7.34

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\BF01141.D

Date : 14-JAN-2005 08:05

Client ID:

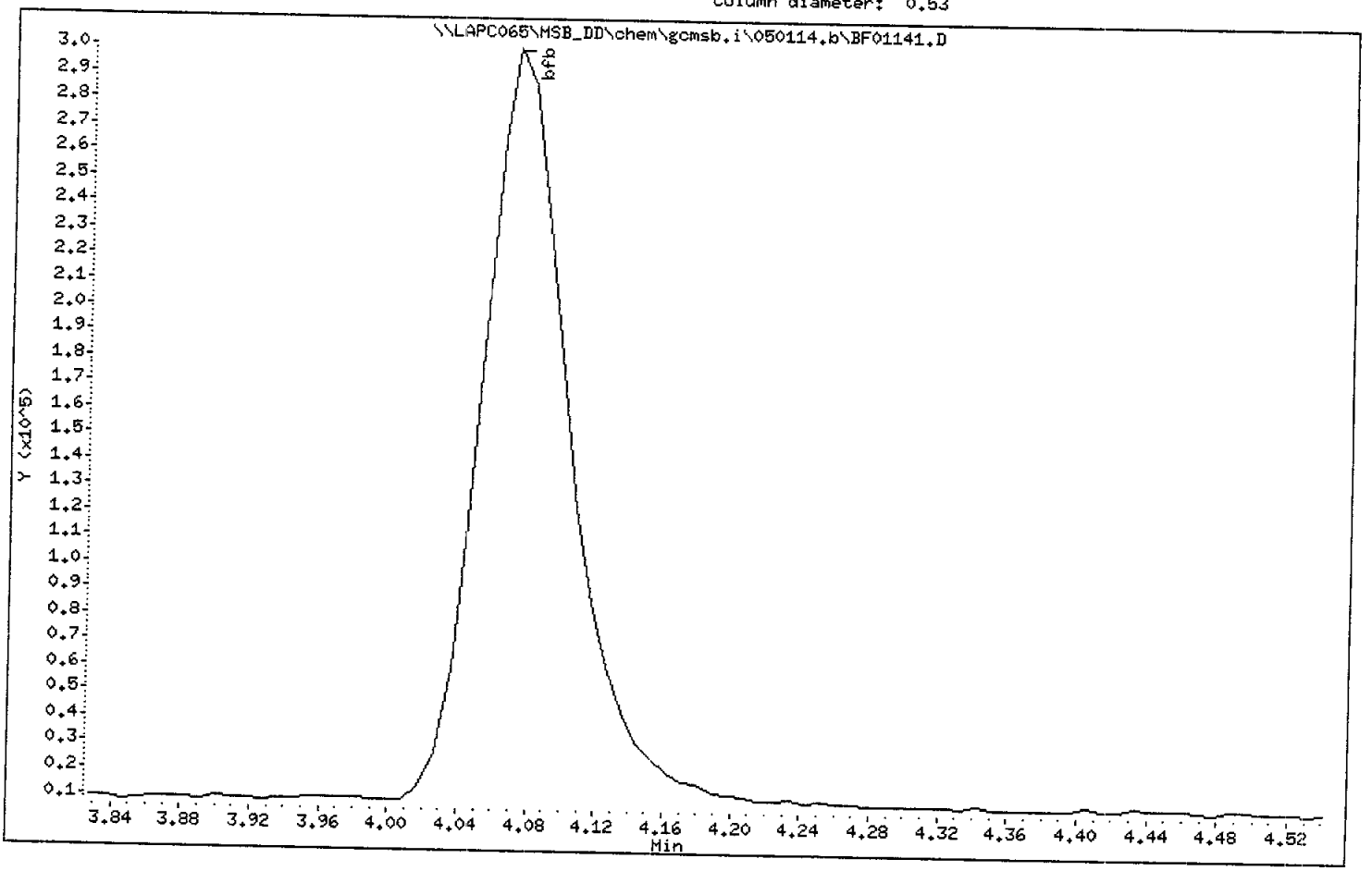
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\BF01141.D

Date : 14-JAN-2005 08:05

Client ID:

Instrument: gcmsb.i

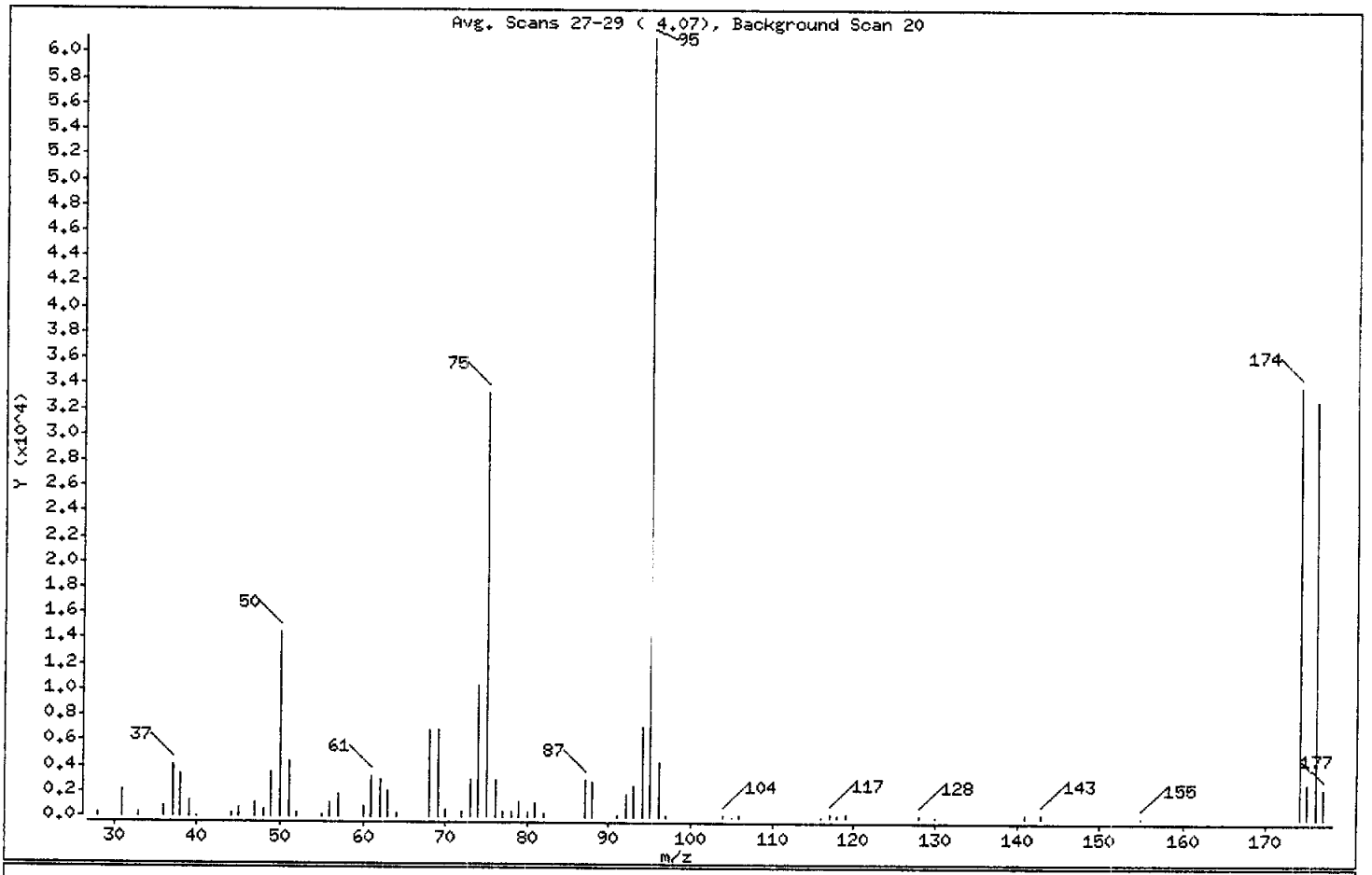
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.67
75	30.00 - 60.00% of mass 95	54.53
96	5.00 - 9.00% of mass 95	7.05
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	55.61
175	5.00 - 9.00% of mass 174	4.49 (8.08)
176	95.00 - 101.00% of mass 174	53.90 (96.93)
177	5.00 - 9.00% of mass 176	3.96 (7.34)

1-18-05

1/14/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\BF01141.D

Date : 14-JAN-2005 08:05

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01141.D

Spectrum: Avg. Scans 27-29 (4.07), Background Scan 20

Location of Maximum: 95.00

Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	336	55.00	158	77.00	463	105.00	66
31.00	2112	56.00	1075	78.00	415	106.00	124
33.00	316	57.00	1800	79.00	1236	116.00	60
36.00	866	60.00	892	80.00	441	117.00	319
37.00	4069	61.00	3301	81.00	1176	118.00	121
38.00	3382	62.00	3004	82.00	285	119.00	276
39.00	1274	63.00	2088	87.00	2948	128.00	158
40.00	31	64.00	250	88.00	2746	130.00	64
44.00	322	68.00	6947	91.00	139	141.00	289
45.00	713	69.00	6865	92.00	1759	143.00	332
47.00	1074	70.00	516	93.00	2551	155.00	65
48.00	594	72.00	409	94.00	7128	174.00	34024
49.00	3503	73.00	2986	95.00	61192	175.00	2750
50.00	14482	74.00	10371	96.00	4316	176.00	32976
51.00	4356	75.00	33368	97.00	74	177.00	2422
52.00	253	76.00	3005	104.00	150		

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i
Lab File ID: CC01142.D
Analysis Type: AIR
Lab Sample ID: 50 PPBV STD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m

Injection Date: 14-JAN-2005 08:51
Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Init. Cal. Times: 14:40 23:34
Quant Type: ISTD

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
1 Propene	0.18345	0.18284	0.010	-0.3	30.0	
3 Dichlorodifluoromethane (F1	2.11052	2.04706	0.010	-3.0	30.0	
5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.70240	0.010	-0.8	30.0	
8 Chloromethane	0.09369	0.09816	0.100	4.8	30.0	
9 Vinyl Chloride	0.40660	0.40228	0.010	-1.1	30.0	
12 1,3-Butadiene	0.27551	0.27575	0.010	0.1	30.0	
15 Bromomethane	0.50552	0.50683	0.010	0.3	30.0	
16 Chloroethane	0.25753	0.26131	0.010	1.5	30.0	
19 Vinyl Bromide	0.57915	0.58692	0.010	1.3	30.0	
21 Trichlorofluoromethane (F11	2.12773	2.08774	0.010	-1.9	30.0	
28 1,1-Dichloroethene	1.12859	1.11107	0.010	-1.6	30.0	
30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.37419	0.010	-2.9	30.0	
31 Acetone	0.16001	0.17356	0.010	8.5	30.0	
33 Carbon Disulfide	1.06127	1.15961	0.010	9.3	30.0	
34 2-Propanol	0.56591	0.57895	0.010	2.3	30.0	
36 Allyl Chloride	0.58587	0.61423	0.010	4.8	30.0	
37 Methylene Chloride	0.69686	0.67533	0.010	-3.1	30.0	
40 Acrylonitrile	0.18791	0.20969	0.010	11.6	30.0	
41 trans-1,2-Dichloroethene	0.98199	0.99056	0.010	0.9	30.0	
42 Methyl-tert-butyl ether[MTB	1.66607	1.67715	0.010	0.7	30.0	
43 n-Hexane	0.77083	0.75306	0.010	-2.3	30.0	
44 1,1-Dichloroethane	1.23672	1.23194	0.100	-0.4	30.0	
45 Vinyl Acetate	1.19013	1.28121	0.010	7.7	30.0	
53 cis-1,2-Dichloroethene	0.63910	0.64291	0.010	0.6	30.0	
54 2-Butanone	0.21287	0.23147	0.010	8.7	30.0	
56 Ethyl Acetate	1.14995	1.35390	0.010	17.7	30.0	
59 Tetrahydrofuran	0.55193	0.54908	0.010	-0.5	30.0	
60 Chloroform	1.59075	1.55482	0.010	-2.3	30.0	
61 1,1,1-Trichloroethane	1.59033	1.59505	0.010	0.3	30.0	
62 Cyclohexane	0.79797	0.79758	0.010	-0.0	30.0	
64 Carbon Tetrachloride	1.05674	1.42236	0.010	34.6	30.0	<-
$ 66 1,2-Dichloroethane-d4	0.41033	0.41456	0.010	1.0	30.0	
68 Benzene	0.68038	0.67455	0.010	-0.9	30.0	
69 1,2-Dichloroethane	0.44323	0.43687	0.010	-1.4	30.0	
70 2,2,4-Trimethylpentane	1.74763	1.76787	0.010	1.2	30.0	

AA 1/14/05

1/18-05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i
Lab File ID: CC01142.D
Analysis Type: AIR
Lab Sample ID: 50 PPBV STD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m

Injection Date: 14-JAN-2005 08:51
Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Init. Cal. Times: 14:40 23:34
Quant Type: ISTD

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	72 n-Heptane	0.58544	0.58785	0.010	0.4	30.0
	75 Trichloroethene	0.43657	0.43952	0.010	0.7	30.0
	78 1,2-Dichloropropane	0.16390	0.16749	0.010	2.2	30.0
	81 1,4-Dioxane	0.15796	0.17779	0.010	12.6	30.0
	82 Bromodichloromethane	0.54492	0.59822	0.010	9.8	30.0
	85 cis-1,3-Dichloropropene	0.44931	0.52312	0.010	16.4	30.0
	86 4-Methyl-2-Pentanone	0.22967	0.24925	0.010	8.5	30.0
$	88 Toluene-d8	0.52356	0.54639	0.010	4.4	30.0
	89 Toluene	0.88039	0.89291	0.010	1.4	30.0
	91 trans-1,3-Dichloropropene	0.42279	0.50558	0.010	19.6	30.0
	93 1,1,2-Trichloroethane	0.56403	0.55000	0.010	-2.5	30.0
	95 Tetrachloroethene	0.78282	0.74901	0.010	-4.3	30.0
	96 2-Hexanone	0.25237	0.29176	0.010	15.6	30.0
	97 Dibromochloromethane	0.94658	1.09330	0.010	15.5	30.0
	98 1,2-Dibromoethane	0.94544	1.00230	0.010	6.0	30.0
	102 Chlorobenzene	0.91801	0.92235	0.300	0.5	30.0
M	99 Xylenes (total)	0.40771	0.45336	0.010	11.2	30.0
	104 Ethylbenzene	1.42124	1.51710	0.010	6.7	30.0
	105 m,p-Xylenes	0.41273	0.45960	0.010	11.4	30.0
	107 o-Xylene	0.39767	0.44088	0.010	10.9	30.0
	108 Styrene	0.49829	0.57886	0.010	16.2	30.0
	110 Bromoform	0.74450	0.94841	0.100	27.4	30.0
$	114 4-Bromofluorobenzene	0.89318	0.96117	0.010	7.6	30.0
	116 1,1,2,2-Tetrachloroethane	1.35429	1.42814	0.300	5.5	30.0
	123 4-Ethyl Toluene	0.84706	1.00884	0.010	19.1	30.0
	124 1,3,5-Trimethylbenzene	0.94631	0.90533	0.010	-4.3	30.0
	131 1,2,4-Trimethylbenzene	0.27527	0.27759	0.010	0.8	30.0
	134 1,3-Dichlorobenzene	0.52632	0.60978	0.010	15.9	30.0
	136 1,4-Dichlorobenzene	0.54141	0.53896	0.010	-0.5	30.0
	138 Benzyl Chloride	0.56325	0.69523	0.010	23.4	30.0
	140 1,2-Dichlorobenzene	0.53798	0.57445	0.010	6.8	30.0
	144 1,2,4-Trichlorobenzene	0.26641	0.30814	0.010	15.7	30.0
	145 Hexachlorobutadiene	0.48586	0.47093	0.010	-3.1	30.0

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\CC01142.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 14-JAN-2005 08:51
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.056	2.056	(0.248)	113737	50.0000	49.83
3 Dichlorodifluoromethane (F12)	85	2.128	2.128	(0.256)	1273428	50.0000	48.50
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.363	2.363	(0.284)	1059020	50.0000	49.60
8 Chloromethane	52	2.399	2.399	(0.289)	61065	50.0000	52.39
9 Vinyl Chloride	62	2.589	2.589	(0.312)	250246	50.0000	49.47
12 1,3-Butadiene	39	2.670	2.670	(0.321)	343080	100.000	100.1
15 Bromomethane	94	3.130	3.130	(0.377)	315284	50.0000	50.13
16 Chloroethane	64	3.301	3.301	(0.397)	162552	50.0000	50.73
19 Vinyl Bromide	106	3.626	3.626	(0.436)	365107	50.0000	50.67
21 Trichlorofluoromethane (F11)	101	3.752	3.752	(0.452)	1298732	50.0000	49.06
28 1,1-Dichloroethene	61	4.682	4.682	(0.563)	691170	50.0000	49.22
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.736	4.736	(0.570)	1476928	50.0000	48.56
31 Acetone	58	4.844	4.844	(0.583)	107970	50.0000	54.24(Q)
33 Carbon Disulfide	76	5.043	5.043	(0.607)	721366	50.0000	54.63

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.205	5.205	(0.626)	360150	50.0000	51.15
	36 Allyl Chloride	41	5.368	5.368	(0.646)	382096	50.0000	52.42
	37 Methylene Chloride	49	5.584	5.584	(0.672)	420109	50.0000	48.46
	40 Acrylonitrile	53	6.089	6.089	(0.733)	130444	50.0000	55.80
	41 trans-1,2-Dichloroethene	61	6.098	6.098	(0.734)	616203	50.0000	50.44
	42 Methyl-tert-butyl ether[MTBE]	73	6.134	6.134	(0.738)	1043312	50.0000	50.33
	43 n-Hexane	41	6.622	6.622	(0.797)	468463	50.0000	48.85
	44 1,1-Dichloroethane	63	6.847	6.847	(0.824)	766357	50.0000	49.81
	45 Vinyl Acetate	43	7.028	7.028	(0.846)	797009	50.0000	53.83
	53 cis-1,2-Dichloroethene	96	7.903	7.903	(0.951)	399939	50.0000	50.30
	54 2-Butanone	72	7.975	7.975	(0.960)	143989	50.0000	54.37
	56 Ethyl Acetate	43	8.110	8.110	(0.976)	842231	50.0000	58.87
*	58 Bromochloromethane	49	8.309	8.309	(1.000)	622076	50.0000	
	59 Tetrahydrofuran	42	8.417	8.417	(1.013)	341570	50.0000	49.74
	60 Chloroform	83	8.480	8.480	(1.021)	967216	50.0000	48.87
	61 1,1,1-Trichloroethane	97	8.778	8.778	(1.056)	992245	50.0000	50.15
	62 Cyclohexane	84	8.868	8.868	(1.067)	496153	50.0000	49.98
	64 Carbon Tetrachloride	117	9.076	9.076	(1.092)	884819	50.0000	67.30
$	66 1,2-Dichloroethane-d4	65	9.338	9.338	(0.921)	563822	50.0000	50.52
	68 Benzene	78	9.437	9.437	(0.931)	917424	50.0000	49.57
	69 1,2-Dichloroethane	62	9.464	9.464	(0.933)	594167	50.0000	49.28
	70 2,2,4-Trimethylpentane	57	9.608	9.608	(0.948)	2404396	50.0000	50.58
	72 n-Heptane	43	9.951	9.951	(0.981)	799511	50.0000	50.21
*	73 1,4-Difluorobenzene	114	10.141	10.141	(1.000)	1360050	50.0000	
	75 Trichloroethene	130	10.583	10.583	(1.044)	597773	50.0000	50.34
	78 1,2-Dichloropropane	76	10.971	10.971	(1.082)	227790	50.0000	51.10
	81 1,4-Dioxane	88	11.232	11.232	(1.108)	241808	50.0000	56.28
	82 Bromodichloromethane	85	11.467	11.467	(1.131)	813615	50.0000	54.89
	85 cis-1,3-Dichloropropene	75	12.270	12.270	(1.210)	711469	50.0000	58.21
	86 4-Methyl-2-Pentanone	58	12.559	12.559	(1.238)	338994	50.0000	54.26(Q)
$	88 Toluene-d8	100	12.739	12.739	(1.256)	743115	50.0000	52.18
	89 Toluene	91	12.865	12.865	(1.269)	1214408	50.0000	50.71
	91 trans-1,3-Dichloropropene	75	13.271	13.271	(0.863)	538323	50.0000	59.79
	93 1,1,2-Trichloroethane	97	13.596	13.596	(0.884)	585622	50.0000	48.76
	95 Tetrachloroethene	166	13.858	13.858	(0.901)	797527	50.0000	47.84
	96 2-Hexanone	58	14.065	14.065	(0.914)	310658	50.0000	57.80(Q)
	97 Dibromochloromethane	129	14.309	14.309	(0.930)	1164111	50.0000	57.75
	98 1,2-Dibromoethane	107	14.508	14.508	(0.943)	1067215	50.0000	53.01
*	101 Chlorobenzene-d5	117	15.383	15.383	(1.000)	1064769	50.0000	
	102 Chlorobenzene	112	15.437	15.437	(1.004)	982094	50.0000	50.24
M	99 Xylenes (total)	106				1448167	150.000	166.8
	104 Ethylbenzene	91	15.653	15.653	(1.018)	1615357	50.0000	53.37
	105 m,p-Xylenes	106	15.879	15.879	(1.032)	978727	100.000	111.4
	107 o-Xylene	106	16.628	16.628	(1.081)	469439	50.0000	55.43
	108 Styrene	104	16.664	16.664	(1.083)	616356	50.0000	58.08
	110 Bromoform	173	16.998	16.998	(1.105)	1009840	50.0000	63.69
$	114 4-Bromofluorobenzene	95	17.638	17.638	(1.147)	1023423	50.0000	53.80

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.918	17.918	(1.165)	1520636	50.0000	52.73
123 4-Ethyl Toluene	105	18.369	18.369	(1.194)	1074181	50.0000	59.55
124 1,3,5-Trimethylbenzene	105	18.496	18.496	(1.202)	963963	50.0000	47.83
131 1,2,4-Trimethylbenzene	120	19.226	19.226	(1.250)	295574	50.0000	50.42
134 1,3-Dichlorobenzene	146	19.777	19.777	(1.286)	649280	50.0000	57.93
136 1,4-Dichlorobenzene	146	19.957	19.957	(1.297)	573868	50.0000	49.77
138 Benzyl Chloride	91	20.228	20.228	(1.315)	740258	50.0000	61.72
140 1,2-Dichlorobenzene	146	20.697	20.697	(1.345)	611660	50.0000	53.39
144 1,2,4-Trichlorobenzene	180	23.160	23.160	(1.506)	328100	50.0000	57.83
145 Hexachlorobutadiene	225	23.377	23.377	(1.520)	501428	50.0000	48.46

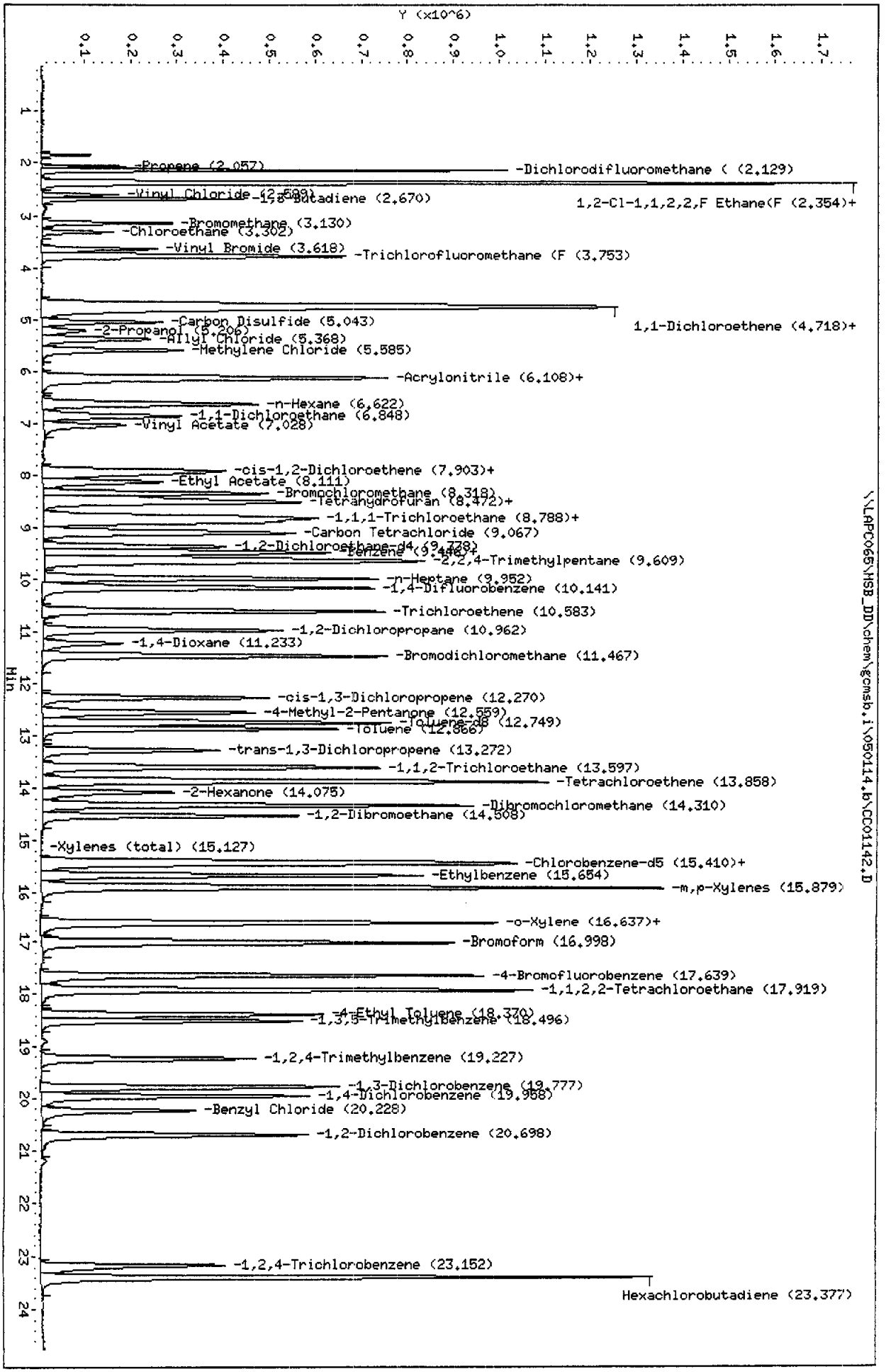
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\CC01142.D
Date : 14-JAN-2005 08:51
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



Reduced By: PA Date: 1/14/05 LCSD Report
Reviewed By: [illegible] Date: 1/18/05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.B/lc01143.d
Samp Info : LCS,LCS,MSL04011043
Inj Date : 14-JAN-2005 10:21

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.B/LC01144.D
Samp Info : LCSD,LCSD,MSL04011043
Inj Date : 14-JAN-2005 10:55

	Concentration				%Recovery			RPD	
	Mass Spiked		Measured						
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
Dichlorodifluoromethane (F12)									
50.0	246.75	50.4	50.9	50.7	101.4	70	130	1	20
Chloromethane									
50.0	103.05	53.7	54.5	54.1	108.2	70	130	2	20
1,2-Cl-1,1,2,2,F Ethane(F114)									
50.0	348.80	51.5	51.6	51.5	103.1	70	130	0	20
Vinyl Chloride									
50.0	127.55	50.9	51.6	51.3	102.6	70	130	1	20
1,3-Butadiene									
100.0	220.80	103.2	105.5	104.3	104.3	70	130	2	20
Bromomethane									
50.0	193.75	51.6	51.4	51.5	103.0	70	130	0	20
Chloroethane									
50.0	131.65	49.5	49.9	49.7	99.4	70	130	1	20
Trichlorofluoromethane (F11)									
50.0	280.35	50.3	49.5	49.9	99.9	70	130	2	20
1,1-Dichloroethene									
50.0	197.85	51.5	51.4	51.4	102.9	70	125	0	20
Carbon Disulfide									
50.0	155.40	59.9	61.1	60.5	121.0	70	130	2	20
1,1,2-CL 1,2,2-F ethane(F113)									
50.0	382.40	51.5	51.6	51.5	103.1	70	130	0	20
Acetone									
50.0	118.55	56.8	58.5	57.6	115.3	70	130	3	20
2-Propanol									
50.0	118.20	51.9	52.6	52.3	104.5	70	130	1	20
Methylene Chloride									
50.0	173.35	49.5	49.8	49.6	99.2	75	120	1	20
trans-1,2-Dichloroethene									
50.0	197.85	52.7	52.9	52.8	105.6	70	130	0	20
Acrylonitrile									
50.0	108.30	60.2	60.0	60.1	120.2	70	130	0	20
Methyl-tert-butyl ether[MTBE]									
50.0	179.90	50.9	51.8	51.4	102.7	70	130	2	20
n-Hexane									
50.0	175.85	48.7	49.3	49.0	98.0	70	130	1	20
1,1-Dichloroethane									
50.0	201.95	50.5	50.8	50.7	101.3	70	130	1	20
Vinyl Acetate									
50.0	175.70	53.8	54.3	54.0	108.0	70	130	1	20
cis-1,2-Dichloroethene									
50.0	197.85	51.1	51.9	51.5	103.0	70	130	2	20
2-Butanone									
50.0	147.15	54.2	55.1	54.6	109.3	70	130	2	20
Tetrahydrofuran									
50.0	147.15	51.4	50.2	50.8	101.6	70	130	2	20
Chloroform									

50.0	243.65	49.8	50.5	50.1	100.3	70	130	1	20
1,1,1-Trichloroethane									
50.0	272.25	50.4	51.1	50.8	101.5	70	130	1	20
Cyclohexane									
50.0	171.75	50.4	50.7	50.5	101.1	70	130	0	20
Carbon Tetrachloride									
50.0	313.90	58.8	58.3	58.6	117.2	70	130	1	20
Benzene									
50.0	159.40	49.4	49.8	49.6	99.2	70	130	1	20
1,2-Dichloroethane									
50.0	201.95	48.2	48.7	48.4	96.9	70	130	1	20
n-Heptane									
50.0	204.50	49.7	48.3	49.0	98.0	70	130	3	20
Trichloroethene									
50.0	268.15	50.2	50.5	50.3	100.7	70	125	1	20
1,2-Dichloropropane									
50.0	230.60	50.4	51.0	50.7	101.4	70	130	1	20
1,4-Dioxane									
50.0	179.80	55.5	55.6	55.5	111.1	70	130	0	20
Bromodichloromethane									
50.0	334.35	53.2	53.4	53.3	106.6	70	130	1	20
cis-1,3-Dichloropropene									
50.0	226.45	58.0	57.7	57.9	115.7	70	130	1	20
4-Methyl-2-Pentanone									
50.0	204.40	54.9	54.4	54.7	109.3	70	130	1	20
Toluene									
50.0	188.05	50.7	50.5	50.6	101.1	75	125	0	20
trans-1,3-Dichloropropene									
50.0	226.45	58.9	59.6	59.3	118.5	70	130	1	20
1,1,2-Trichloroethane									
50.0	272.25	48.6	49.0	48.8	97.5	70	130	1	20
Tetrachloroethene									
50.0	338.45	47.3	47.9	47.6	95.2	70	130	1	20
2-Hexanone									
50.0	204.40	58.6	59.2	58.9	117.8	70	130	1	20
Dibromochloromethane									
50.0	425.10	55.0	56.3	55.6	111.3	70	130	2	20
1,2-Dibromoethane									
50.0	383.40	52.2	53.5	52.8	105.6	70	130	2	20
Chlorobenzene									
50.0	229.70	50.5	50.3	50.4	100.9	70	130	0	20
Xylenes (total)									
150.0	649.95	173.6	169.5	171.6	114.4	70	130	2	20
Ethylbenzene									
50.0	216.65	54.5	54.4	54.4	108.8	70	130	0	20
m,p-Xylenes									
100.0	433.30	116.0	112.3	114.2	114.1	70	130	3	20
o-Xylene									
50.0	216.65	57.6	57.2	57.4	114.9	70	130	1	20
Styrene									
50.0	212.55	62.7	60.6	61.7	123.3	70	130	3	20
Bromoform									
50.0	515.80	61.3	61.9	61.6	123.2	70	130	1	20
1,2-Dichlorobenzene									
50.0	300.00	58.3	56.7	57.5	115.0	70	130	3	20
1,4-Dichlorobenzene									
50.0	300.00	56.5	54.3	55.4	110.8	70	130	4	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	52.1	52.9	52.5	105.1	65	130	2	20
4-Ethyl Toluene									
50.0	245.30	64.7	62.8	63.7	127.5	70	130	3	20
1,3,5-Trimethylbenzene									
50.0	245.30	52.6	50.7	51.7	103.3	70	130	4	20
1,2,4-Trimethylbenzene									
50.0	245.30	57.5	56.7	57.1	114.2	70	130	1	20
1,3-Dichlorobenzene									

50.0	300.00	62.0	60.0	61.0	122.0	70	130	3	20
1,2,4-Trichlorobenzene									
50.0	370.30	61.1	61.0	61.1	122.1	70	130	0	20
Hexachlorobutadiene									
50.0	532.15	52.6	51.3	52.0	103.9	70	130	3	20
Benzyl Chloride									
50.0	258.80	64.5	64.2	64.4	128.7	70	130	0	20
2,2,4-Trimethylpentane									
50.0	232.95	49.5	49.5	49.5	99.0	70	130	0	20
Ethyl Acetate									
50.0	179.70	56.8	60.8	58.8	117.6	70	130	7	20
Propene									
50.0	85.90	54.1	55.0	54.5	109.1	70	130	2	20
Vinyl Bromide									
50.0	216.35	54.0	54.0	54.0	108.0	70	130	0	20
1,2-Dichloroethane-d4									
50.0	210.15	49.2	49.9	49.5	99.1	70	130	1	20
Toluene-d8									
50.0	204.50	51.6	50.6	51.1	102.2	70	130	2	20
4-Bromofluorobenzene									
50.0	357.15	53.9	53.1	53.5	107.1	70	130	1	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\LC01143.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 14-JAN-2005 10:21
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,MSL04011043
Misc Info : 1,1,250,250,3,,LCS,TO14ALONG.sub,1,FULL.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
1 Propene	41	2.068	2.056	(0.249)	120947	54.0809	54.08
3 Dichlorodifluoromethane (F12)	85	2.140	2.128	(0.258)	1297927	50.4460	50.44
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.366	2.363	(0.285)	1077971	51.5250	51.52
8 Chloromethane	52	2.411	2.399	(0.290)	61335	53.7007	53.70(Q)
9 Vinyl Chloride	62	2.601	2.589	(0.313)	252305	50.9005	50.90
12 1,3-Butadiene	39	2.673	2.670	(0.322)	346606	103.195	103.2
15 Bromomethane	94	3.133	3.130	(0.377)	318066	51.6117	51.61
16 Chloroethane	64	3.313	3.301	(0.399)	155507	49.5323	49.53
19 Vinyl Bromide	106	3.629	3.626	(0.437)	381130	53.9821	53.98
21 Trichlorofluoromethane (F11)	101	3.755	3.752	(0.452)	1305915	50.3457	50.34
28 1,1-Dichloroethene	61	4.685	4.682	(0.564)	708539	51.4982	51.50
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.730	4.736	(0.569)	1533956	51.4704	51.47
31 Acetone	58	4.847	4.844	(0.583)	110780	56.7912	56.79(Q)
33 Carbon Disulfide	76	5.037	5.043	(0.606)	774288	59.8470	59.85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	34 2-Propanol	45	5.217	5.205	(0.628)	358082	51.9037	51.90
	36 Allyl Chloride	41	5.371	5.368	(0.646)	359282	50.3037	50.30
	37 Methylene Chloride	49	5.587	5.584	(0.672)	420252	49.4685	49.47
	40 Acrylonitrile	53	6.083	6.089	(0.732)	137953	60.2204	60.22
	41 trans-1,2-Dichloroethene	61	6.101	6.098	(0.734)	631233	52.7290	52.73
	42 Methyl-tert-butyl ether[MTBE]	73	6.137	6.134	(0.738)	1034310	50.9240	50.92
	43 n-Hexane	41	6.625	6.622	(0.797)	457518	48.6871	48.69
	44 1,1-Dichloroethane	63	6.850	6.847	(0.824)	761563	50.5125	50.51
	45 Vinyl Acetate	43	7.022	7.028	(0.845)	779810	53.7478	53.75
	53 cis-1,2-Dichloroethene	96	7.906	7.903	(0.951)	397778	51.0551	51.06
	54 2-Butanone	72	7.969	7.975	(0.959)	140722	54.2270	54.23
	56 Ethyl Acetate	43	8.113	8.110	(0.976)	796849	56.8411	56.84
*	58 Bromochloromethane	49	8.312	8.309	(1.000)	609544	50.0000	
	59 Tetrahydrofuran	42	8.420	8.417	(1.013)	345668	51.3739	51.37
	60 Chloroform	83	8.483	8.480	(1.021)	965674	49.7959	49.80
	61 1,1,1-Trichloroethane	97	8.781	8.778	(1.056)	976599	50.3726	50.37
	62 Cyclohexane	84	8.862	8.868	(1.066)	490459	50.4178	50.42
	64 Carbon Tetrachloride	117	9.070	9.076	(1.091)	757767	58.8211	58.82
$	66 1,2-Dichloroethane-d4	65	9.341	9.338	(0.922)	545481	49.1872	49.19
	68 Benzene	78	9.431	9.437	(0.931)	907646	49.3591	49.36
	69 1,2-Dichloroethane	62	9.467	9.464	(0.934)	576894	48.1579	48.16
	70 2,2,4-Trimethylpentane	57	9.602	9.608	(0.947)	2340044	49.5427	49.54
	72 n-Heptane	43	9.945	9.951	(0.981)	785876	49.6682	49.67
*	73 1,4-Difluorobenzene	114	10.135	10.141	(1.000)	1351341	50.0000	
	75 Trichloroethene	130	10.586	10.583	(1.045)	591926	50.1666	50.17
	78 1,2-Dichloropropane	76	10.965	10.971	(1.082)	223291	50.4090	50.41
	81 1,4-Dioxane	88	11.235	11.232	(1.109)	236782	55.4627	55.46
	82 Bromodichloromethane	85	11.470	11.467	(1.132)	782874	53.1572	53.16
	85 cis-1,3-Dichloropropene	75	12.264	12.270	(1.210)	704629	58.0260	58.02
	86 4-Methyl-2-Pentanone	58	12.553	12.559	(1.239)	340683	54.8849	54.88(Q)
$	88 Toluene-d8	100	12.742	12.739	(1.257)	730271	51.6086	51.61
	89 Toluene	91	12.868	12.865	(1.270)	1205341	50.6572	50.66
	91 trans-1,3-Dichloropropene	75	13.274	13.271	(0.863)	530081	58.8756	58.88
	93 1,1,2-Trichloroethane	97	13.590	13.596	(0.883)	583397	48.5710	48.57
	95 Tetrachloroethene	166	13.861	13.858	(0.901)	789080	47.3347	47.33
	96 2-Hexanone	58	14.068	14.065	(0.914)	314940	58.6016	58.60(Q)
	97 Dibromochloromethane	129	14.312	14.309	(0.930)	1109273	55.0300	55.03
	98 1,2-Dibromoethane	107	14.520	14.508	(0.944)	1050209	52.1629	52.16
*	101 Chlorobenzene-d5	117	15.386	15.383	(1.000)	1064759	50.0000	
	102 Chlorobenzene	112	15.440	15.437	(1.004)	987596	50.5183	50.52
M	99 Xylenes (total)	106				1507800	173.656	173.6
	104 Ethylbenzene	91	15.656	15.653	(1.018)	1648291	54.4609	54.46
	105 m,p-Xylenes	106	15.882	15.879	(1.032)	1019727	116.022	116.0
	107 o-Xylene	106	16.631	16.628	(1.081)	488073	57.6350	57.63
	108 Styrene	104	16.658	16.664	(1.083)	664954	62.6653	62.66
	110 Bromoform	173	17.001	16.998	(1.105)	971796	61.2959	61.30
$	114 4-Bromofluorobenzene	95	17.641	17.638	(1.147)	1025773	53.9298	53.93

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.912	17.918	(1.164)	1503769	52.1419	52.14
123 4-Ethyl Toluene	105	18.372	18.369	(1.194)	1166129	64.6477	64.65
124 1,3,5-Trimethylbenzene	105	18.490	18.496	(1.202)	1059525	52.5771	52.58
131 1,2,4-Trimethylbenzene	120	19.229	19.226	(1.250)	336886	57.4712	57.47
134 1,3-Dichlorobenzene	146	19.780	19.777	(1.286)	695333	62.0383	62.04
136 1,4-Dichlorobenzene	146	19.960	19.957	(1.297)	651089	56.4720	56.47
138 Benzyl Chloride	91	20.222	20.228	(1.314)	773637	64.4997	64.50
140 1,2-Dichlorobenzene	146	20.700	20.697	(1.345)	667851	58.2952	58.30
144 1,2,4-Trichlorobenzene	180	23.163	23.160	(1.505)	346731	61.1180	61.12
145 Hexachlorobutadiene	225	23.380	23.377	(1.520)	544730	52.6492	52.65

QC Flag Legend

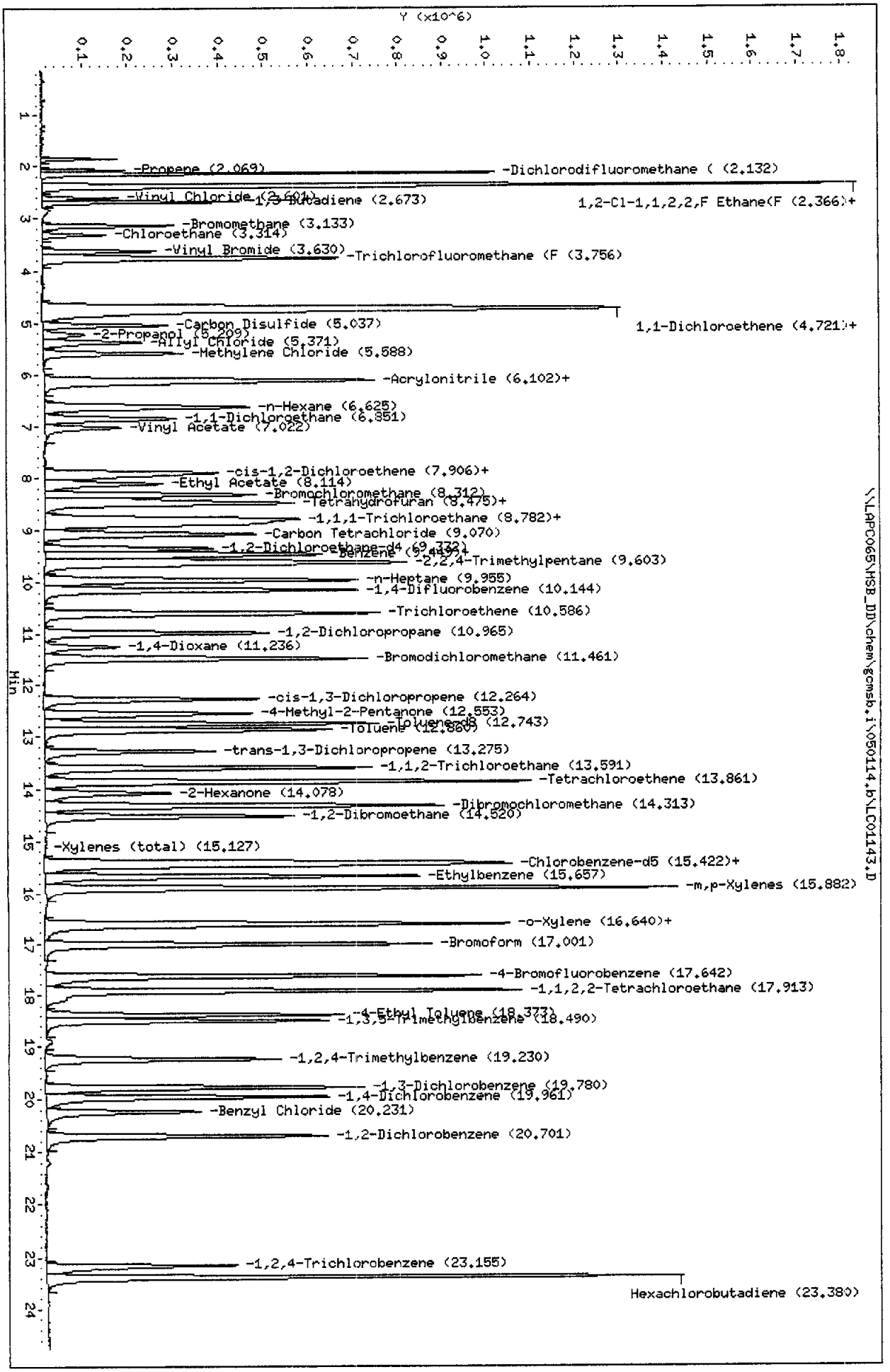
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\HSB_DD\chem\gcmsb.i\050114.b\LC01143.D
Date : 14-JAN-2005 10:21
Client ID: LCS
Sample Info: LCS,LCS,HSL04011043

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\LC01144.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 14-JAN-2005 10:55
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,MSL04011043
Misc Info : 1,1,250,250,3,,LCSD,TO14ALONG.sub,1,FULL.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
1 Propene	41	2.047	2.056	(0.246)	122154	55.0026	55.00
3 Dichlorodifluoromethane (F12)	85	2.110	2.128	(0.254)	1301047	50.9210	50.92
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.344	2.363	(0.282)	1071188	51.5590	51.56
8 Chloromethane	52	2.390	2.399	(0.288)	61833	54.5160	54.52
9 Vinyl Chloride	62	2.579	2.589	(0.310)	254231	51.6478	51.65
12 1,3-Butadiene	39	2.651	2.670	(0.319)	352002	105.535	105.5
15 Bromomethane	94	3.111	3.130	(0.375)	314341	51.3642	51.36
16 Chloroethane	64	3.292	3.301	(0.396)	155411	49.8481	49.85
19 Vinyl Bromide	106	3.608	3.626	(0.434)	378732	54.0178	54.02
21 Trichlorofluoromethane (F11)	101	3.734	3.752	(0.449)	1275854	49.5310	49.53
28 1,1-Dichloroethene	61	4.672	4.682	(0.562)	701813	51.3662	51.37
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.717	4.736	(0.568)	1527708	51.6194	51.62
31 Acetone	58	4.835	4.844	(0.582)	113260	58.4688	58.47(Q)
33 Carbon Disulfide	76	5.024	5.043	(0.605)	784993	61.0990	61.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	CONCENTRATIONS FINAL (ppbv)
	34 2-Propanol	45	5.196	5.205	(0.625)	360701	52.6492	52.65
	36 Allyl Chloride	41	5.358	5.368	(0.645)	361259	50.9344	50.93
	37 Methylene Chloride	49	5.575	5.584	(0.671)	419685	49.7475	49.75
	40 Acrylonitrile	53	6.071	6.089	(0.731)	136414	59.9655	59.96
	41 trans-1,2-Dichloroethene	61	6.080	6.098	(0.732)	628800	52.8933	52.89
	42 Methyl-tert-butyl ether[MTBE]	73	6.125	6.134	(0.737)	1044496	51.7853	51.78
	43 n-Hexane	41	6.612	6.622	(0.796)	460408	49.3373	49.34
	44 1,1-Dichloroethane	63	6.838	6.847	(0.823)	760788	50.8142	50.81
	45 Vinyl Acetate	43	7.009	7.028	(0.844)	781807	54.2624	54.26
	53 cis-1,2-Dichloroethene	96	7.884	7.903	(0.949)	401585	51.9044	51.90
	54 2-Butanone	72	7.966	7.975	(0.959)	141896	55.0620	55.06
	56 Ethyl Acetate	43	8.101	8.110	(0.975)	845921	60.7637	60.76
*	58 Bromochloromethane	49	8.308	8.309	(1.000)	605309	50.0000	
	59 Tetrahydrofuran	42	8.417	8.417	(1.013)	335488	50.2099	50.21
	60 Chloroform	83	8.471	8.480	(1.020)	971577	50.4508	50.45
	61 1,1,1-Trichloroethane	97	8.769	8.778	(1.055)	984450	51.1329	51.13
	62 Cyclohexane	84	8.859	8.868	(1.066)	489403	50.6613	50.66
	64 Carbon Tetrachloride	117	9.066	9.076	(1.091)	746269	58.3339	58.33
$	66 1,2-Dichloroethane-d4	65	9.328	9.338	(0.920)	554990	49.8738	49.87
	68 Benzene	78	9.427	9.437	(0.930)	918669	49.7880	49.79
	69 1,2-Dichloroethane	62	9.463	9.464	(0.933)	585332	48.6955	48.70
	70 2,2,4-Trimethylpentane	57	9.599	9.608	(0.947)	2344943	49.4769	49.48
	72 n-Heptane	43	9.951	9.951	(0.981)	766738	48.2933	48.29
*	73 1,4-Difluorobenzene	114	10.140	10.141	(1.000)	1355970	50.0000	
	75 Trichloroethene	130	10.582	10.583	(1.044)	597745	50.4869	50.49
	78 1,2-Dichloropropane	76	10.961	10.971	(1.081)	226881	51.0446	51.04
	81 1,4-Dioxane	88	11.232	11.232	(1.108)	238290	55.6254	55.62
	82 Bromodichloromethane	85	11.457	11.467	(1.130)	789576	53.4292	53.43
	85 cis-1,3-Dichloropropene	75	12.269	12.270	(1.210)	702934	57.6888	57.69
	86 4-Methyl-2-Pentanone	58	12.558	12.559	(1.238)	338959	54.4207	54.42(Q)
$	88 Toluene-d8	100	12.748	12.739	(1.257)	717830	50.5562	50.56
	89 Toluene	91	12.865	12.865	(1.269)	1204820	50.4624	50.46
	91 trans-1,3-Dichloropropene	75	13.280	13.271	(0.863)	529736	59.6349	59.63
	93 1,1,2-Trichloroethane	97	13.596	13.596	(0.883)	580435	48.9796	48.98
	95 Tetrachloroethene	166	13.866	13.858	(0.901)	787481	47.8792	47.88
	96 2-Hexanone	58	14.074	14.065	(0.914)	313924	59.2044	59.20(Q)
	97 Dibromochloromethane	129	14.318	14.309	(0.930)	1118737	56.2519	56.25
	98 1,2-Dibromoethane	107	14.516	14.508	(0.943)	1061760	53.4516	53.45
*	101 Chlorobenzene-d5	117	15.391	15.383	(1.000)	1050516	50.0000	
	102 Chlorobenzene	112	15.445	15.437	(1.004)	971026	50.3442	50.34
M	99 Xylenes (total)	106				1451898	169.521	169.5
	104 Ethylbenzene	91	15.653	15.653	(1.017)	1623354	54.3642	54.36
	105 m,p-Xylenes	106	15.878	15.879	(1.032)	973697	112.286	112.3
	107 o-Xylene	106	16.627	16.628	(1.080)	478200	57.2347	57.23
	108 Styrene	104	16.663	16.664	(1.083)	634993	60.6531	60.65
	110 Bromoform	173	17.006	16.998	(1.105)	967872	61.8761	61.88
$	114 4-Bromofluorobenzene	95	17.647	17.638	(1.147)	997193	53.1380	53.14

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	CONCENTRATIONS FINAL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.918	17.918	(1.164)	1506100	52.9308	52.93
123 4-Ethyl Toluene	105	18.378	18.369	(1.194)	1118271	62.8351	62.84
124 1,3,5-Trimethylbenzene	105	18.495	18.496	(1.202)	1008692	50.7333	50.73
131 1,2,4-Trimethylbenzene	120	19.235	19.226	(1.250)	327888	56.6946	56.69
134 1,3-Dichlorobenzene	146	19.785	19.777	(1.285)	663359	59.9879	59.99
136 1,4-Dichlorobenzene	146	19.966	19.957	(1.297)	618040	54.3323	54.33
138 Benzyl Chloride	91	20.236	20.228	(1.315)	760230	64.2412	64.24
140 1,2-Dichlorobenzene	146	20.706	20.697	(1.345)	641379	56.7435	56.74
144 1,2,4-Trichlorobenzene	180	23.169	23.160	(1.505)	341568	61.0241	61.02
145 Hexachlorobutadiene	225	23.385	23.377	(1.519)	523334	51.2670	51.27

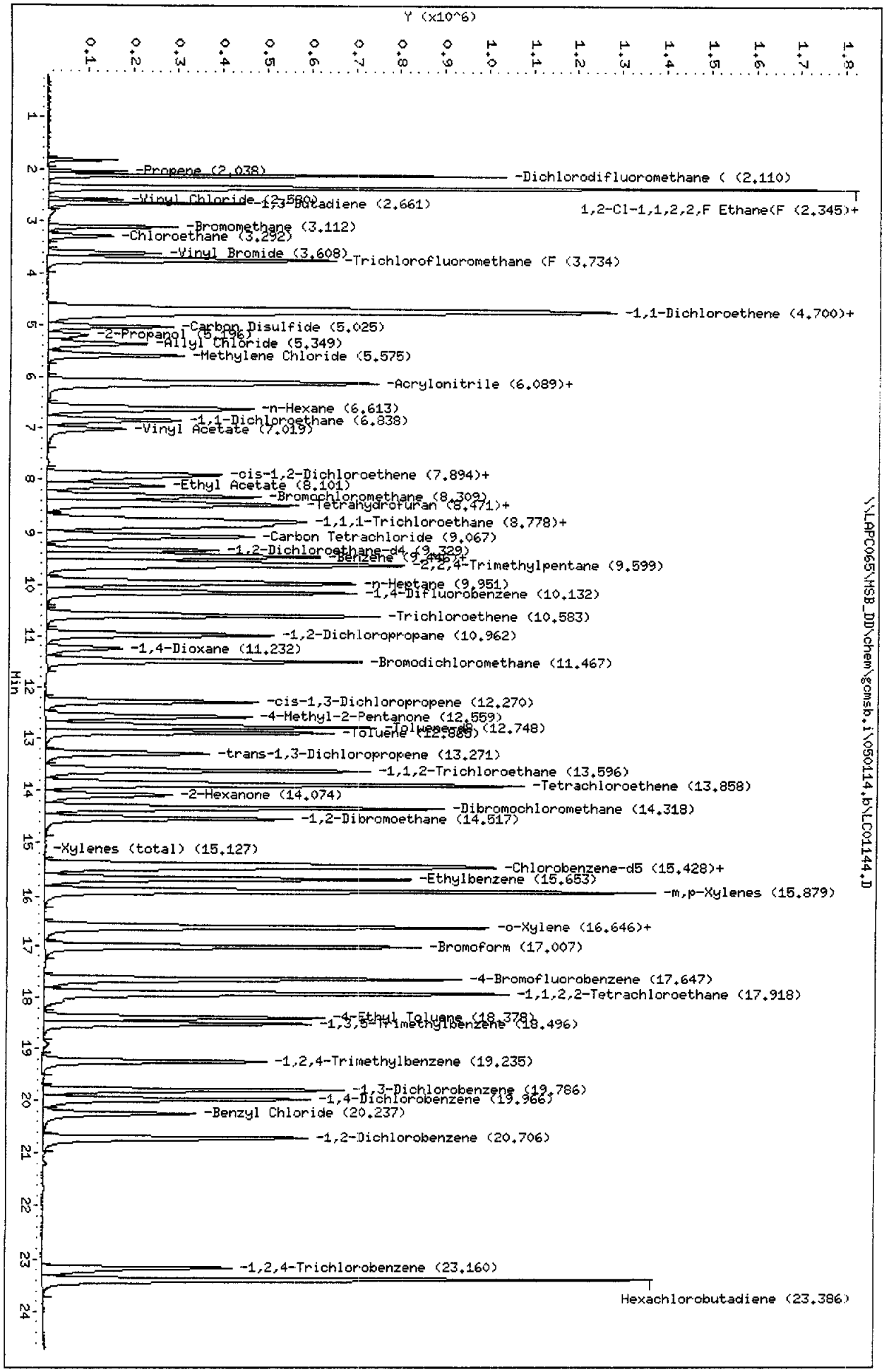
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\LC01144.D
Date : 14-JAN-2005 10:55
Client ID: LCSD
Sample Info: LCSD,LCSD,MSL04011043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\MB01141.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 14-JAN-2005 11:56
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.233	8.309	(1.000)	596940	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.270	9.338	(0.919)	503891	46.8648	46.86
70 2,2,4-Trimethylpentane	57	10.074	9.608	(0.999)	132163	2.88606	~~2.886(a)~~ ND
* 73 1,4-Difluorobenzene	114	10.083	10.141	(1.000)	1310167	50.0000	
$ 88 Toluene-d8	100	12.708	12.739	(1.260)	700037	51.0266	51.03
* 101 Chlorobenzene-d5	117	15.379	15.383	(1.000)	980194	50.0000	
$ 114 4-Bromofluorobenzene	95	17.635	17.638	(1.147)	795520	45.4327	45.43

AA 1/14/05

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\MB01141.D

Date : 14-JAN-2005 11:56

Client ID: BLANK

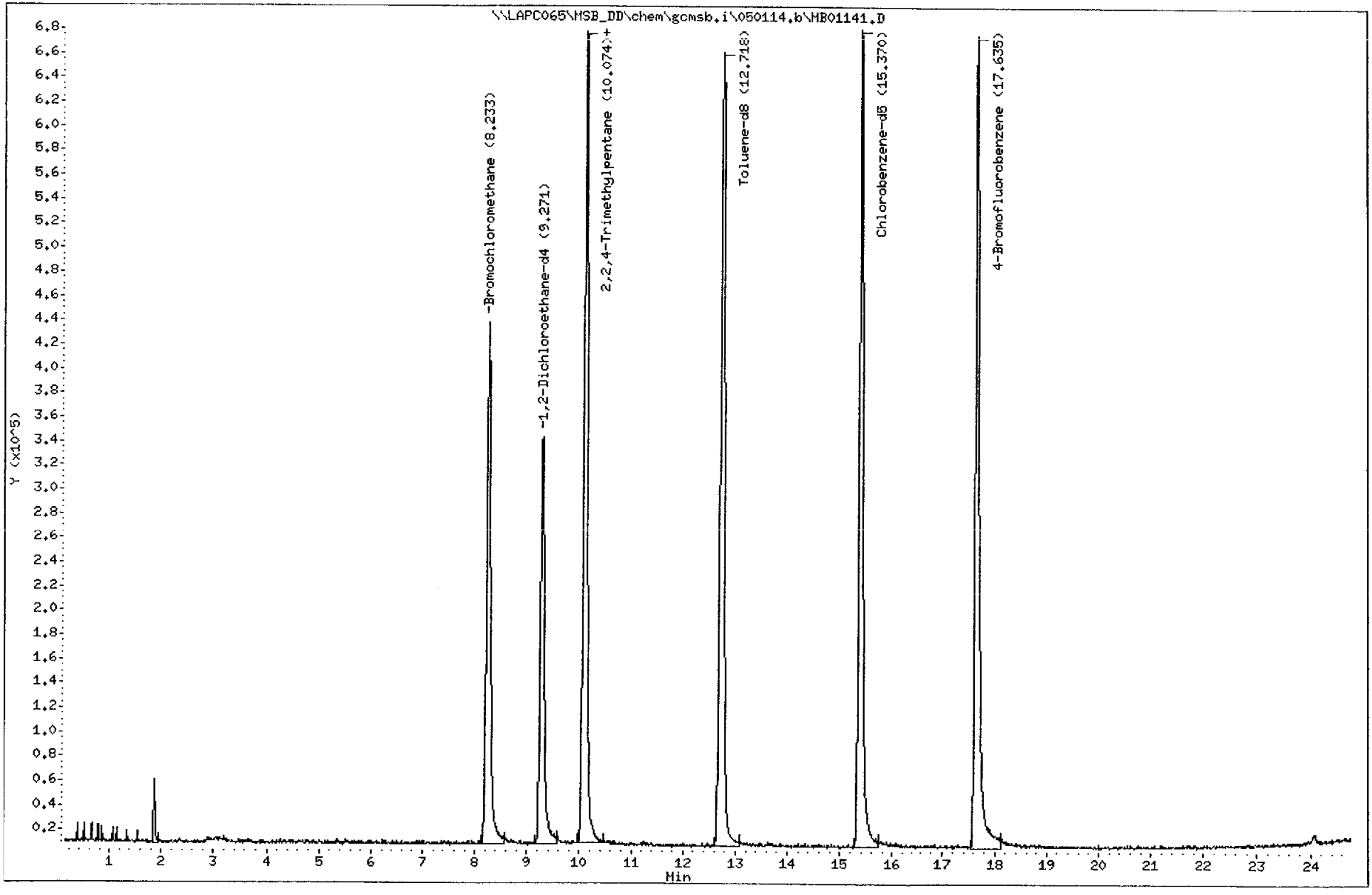
Sample Info: BLANK,BLANK,

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



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Date : 14-JAN-2005 11:56

Client ID: BLANK

Instrument: gcmsb.i

Sample Info: BLANK,BLANK,

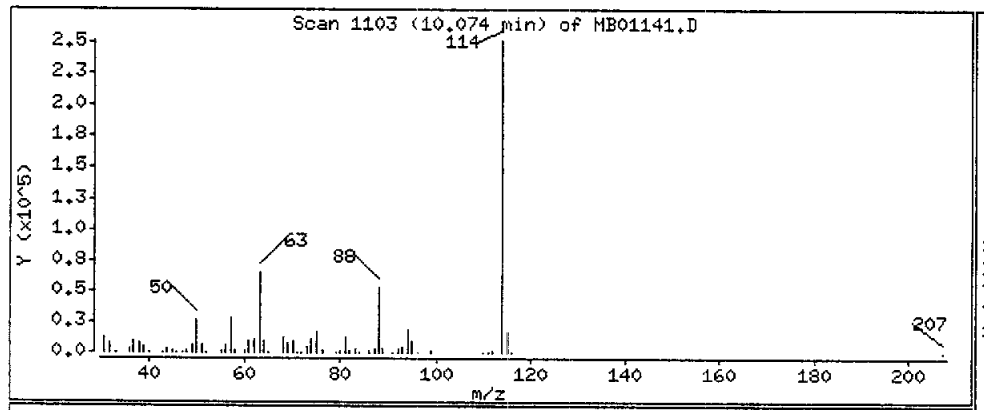
Operator: DLK

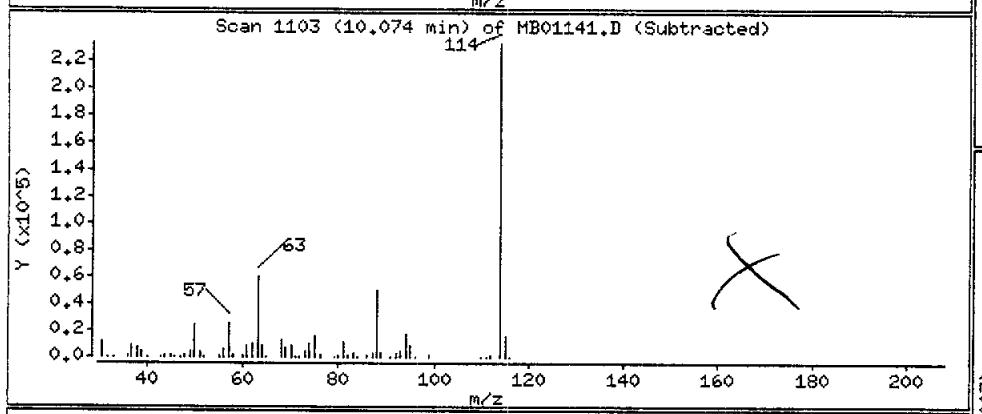
Column phase: J&W DB-624

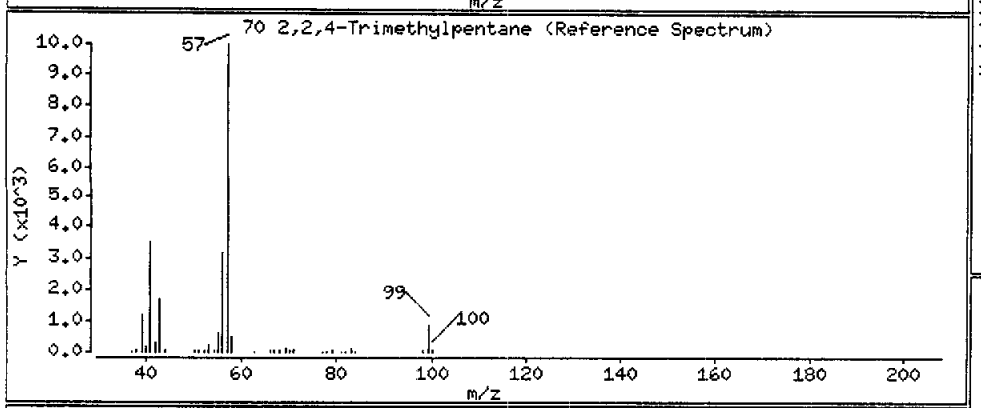
Column diameter: 0.53

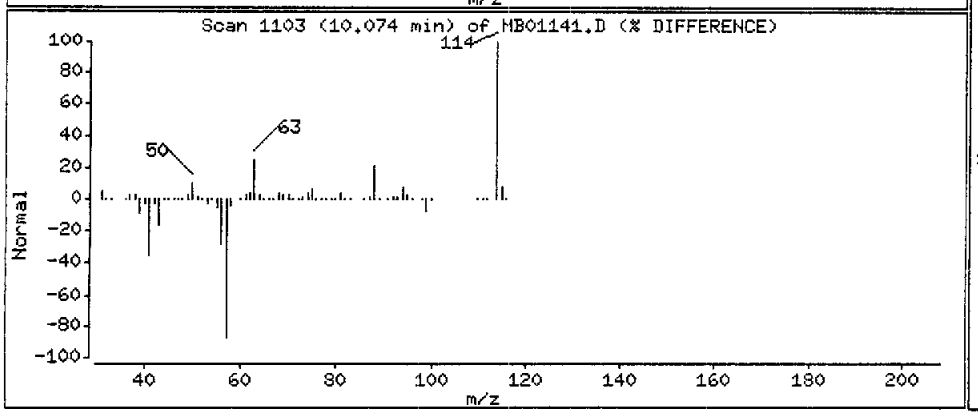
70 2,2,4-Trimethylpentane

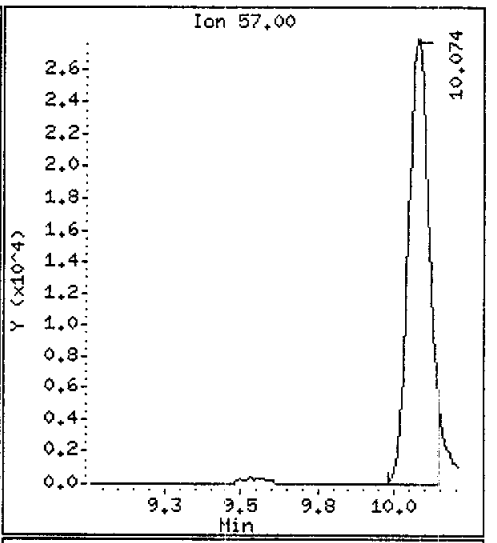
Concentration: 2.886 ppbv

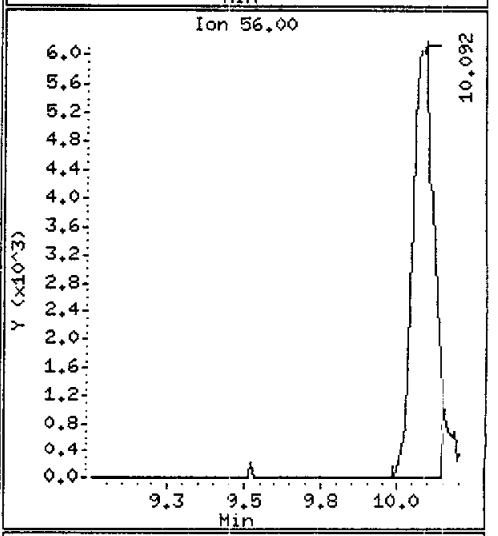


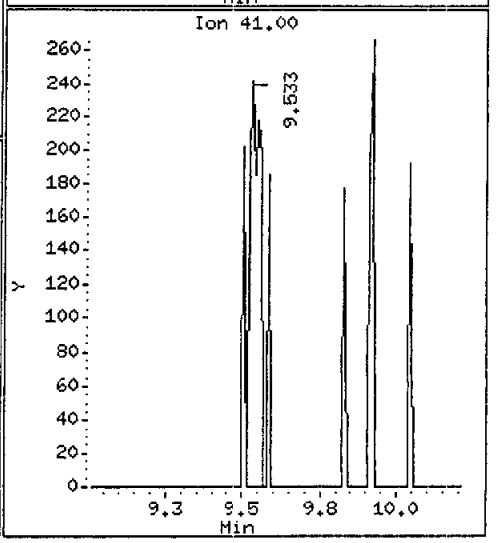












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7628.D
Lab Smp Id: G2DHN1AD Client Smp ID: 066370-001
Inj Date : 14-JAN-2005 19:44
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHN1AD,066370-001,SANDIA,E5A100224-1
Misc Info : 24.0,12.6,500,953,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.000	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	953.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.127	2.128	(0.256)	15244	0.61586	0.6154(a)
31 Acetone	58	4.906	4.844	(0.591)	5689	3.03168	3.030(a)
* 58 Bromochloromethane	49	8.299	8.309	(1.000)	586415	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.328	9.338	(0.921)	513892	45.7792	45.75
* 73 1,4-Difluorobenzene	114	10.131	10.141	(1.000)	1367857	50.0000	
$ 88 Toluene-d8	100	12.747	12.739	(1.258)	719114	50.2065	50.17
* 101 Chlorobenzene-d5	117	15.391	15.383	(1.000)	983698	50.0000	
$ 114 4-Bromofluorobenzene	95	17.646	17.638	(1.147)	763436	43.4450	43.42

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

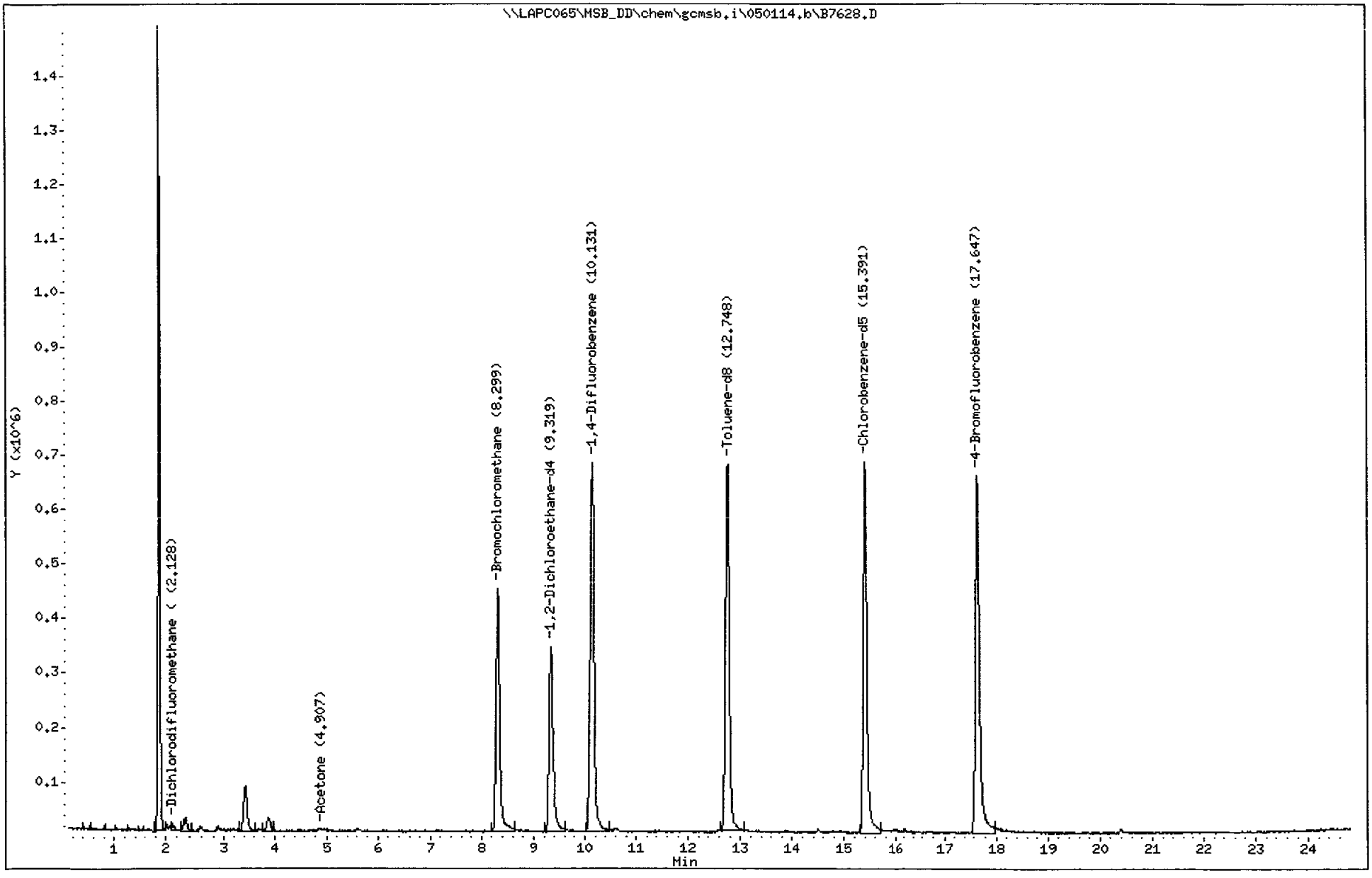
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7628.D
Date : 14-JAN-2005 19:44
Client ID: 066370-001
Sample Info: G2DHN1AD,066370-001,SANDIA,E5A100224-1

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7628.D

Date : 14-JAN-2005 19:44

Client ID: 066370-001

Instrument: gcmsb.i

Sample Info: G2DHN1AD,066370-001,SANDIA,E5A100224-1

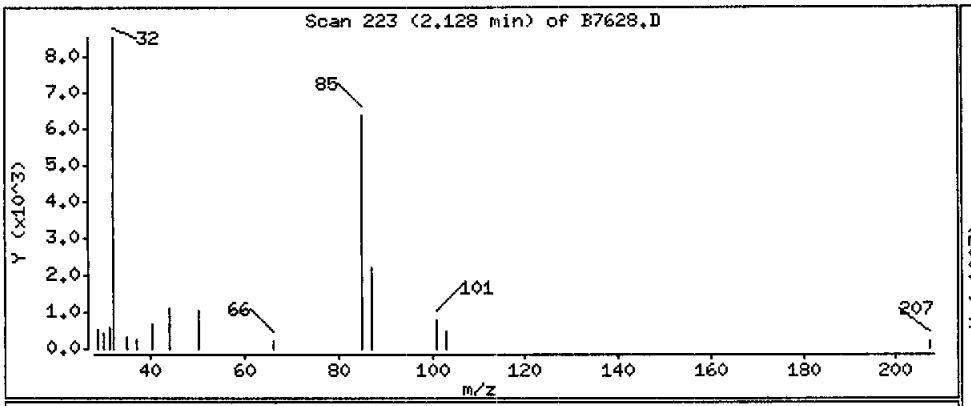
Operator: DLK

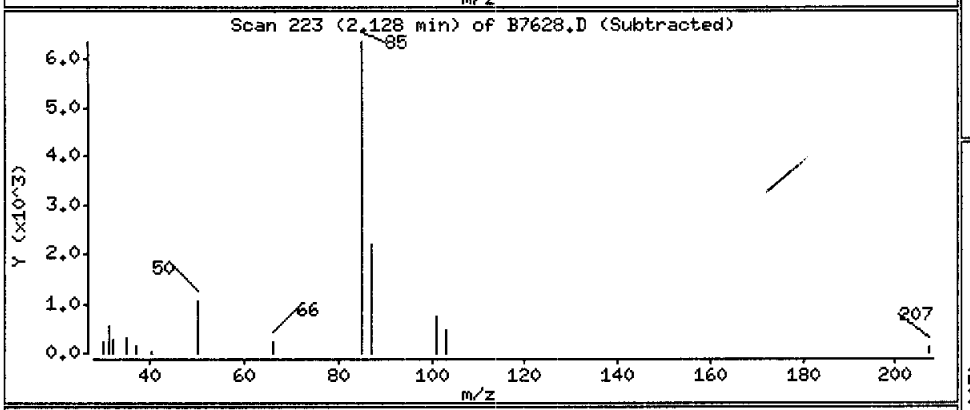
Column phase: J&W DB-624

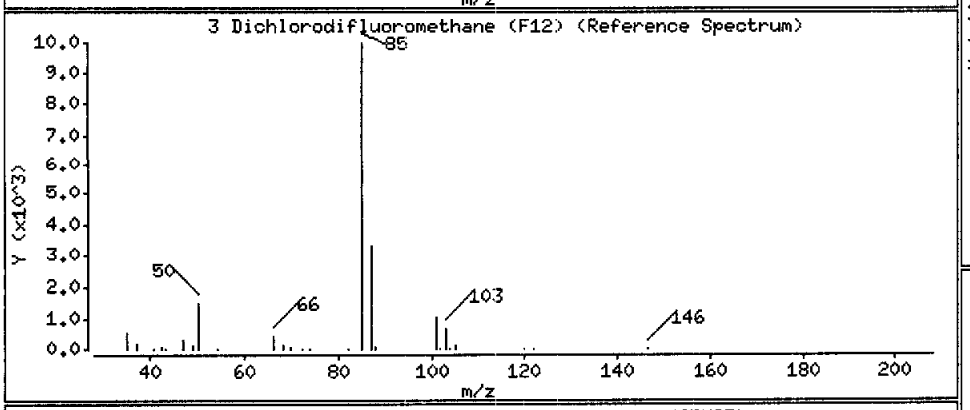
Column diameter: 0.53

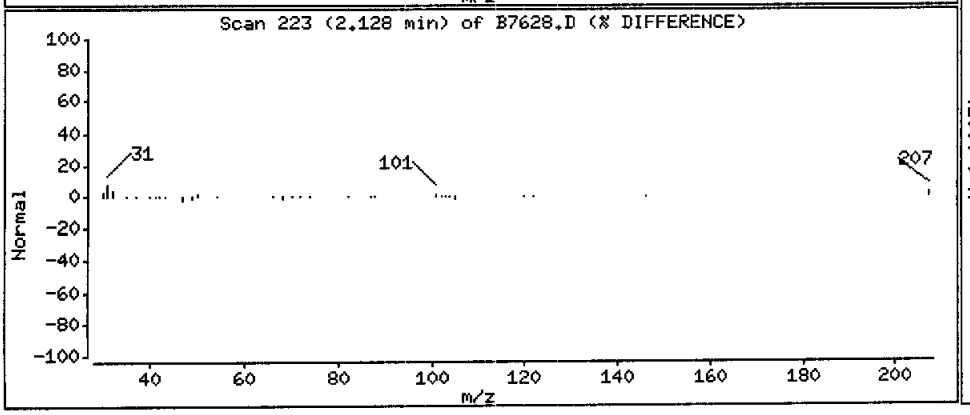
3 Dichlorodifluoromethane (F12)

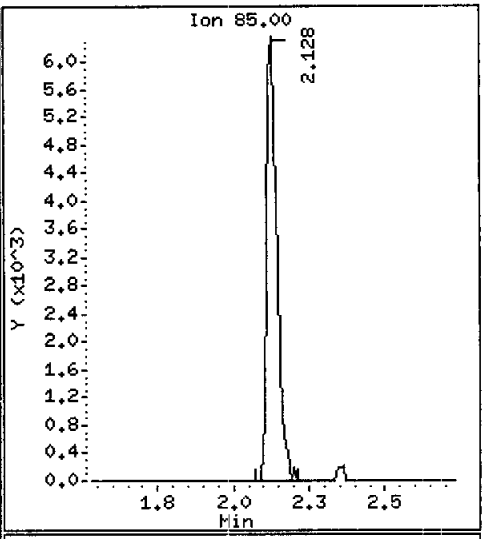
Concentration: 0.6154 ppbv

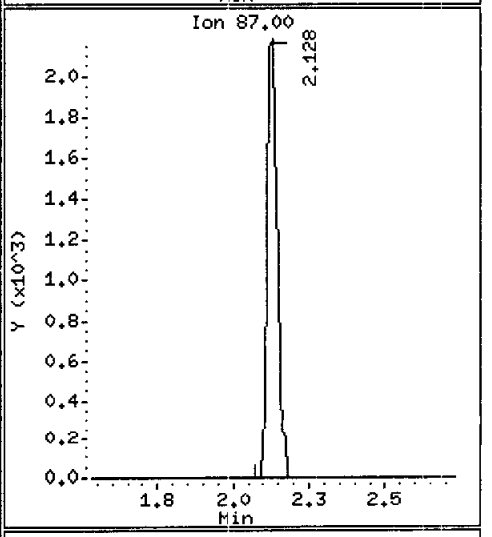


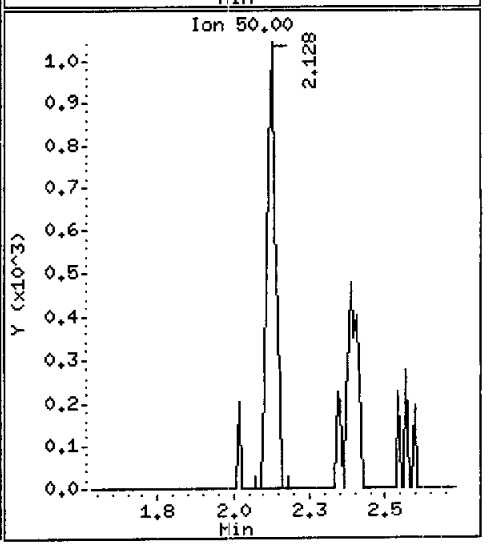












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7628.D

Date : 14-JAN-2005 19:44

Client ID: 066370-001

Instrument: gcmsb.i

Sample Info: G2DHN1AD,066370-001,SANDIA,E5A100224-1

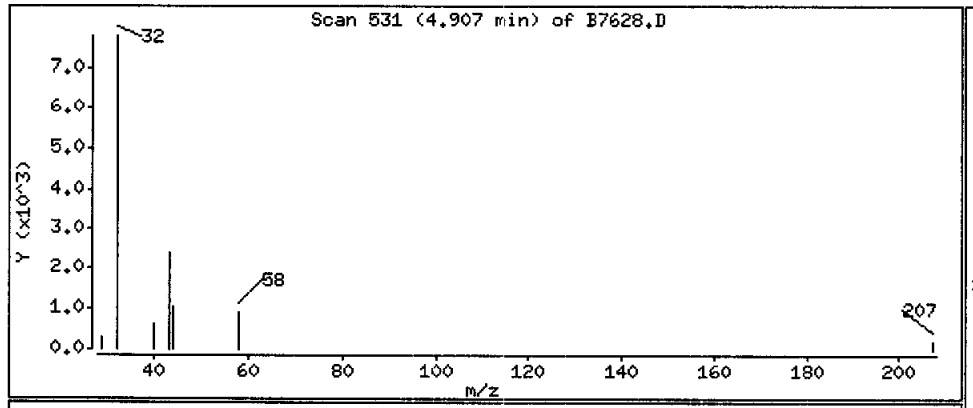
Operator: DLK

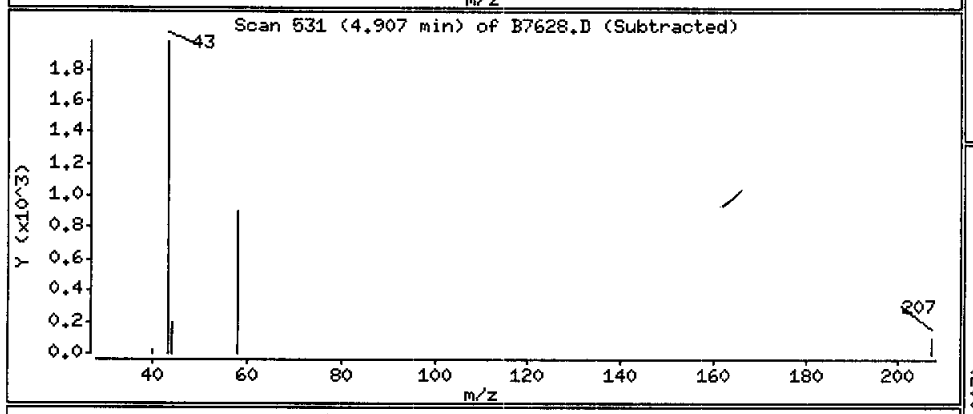
Column phase: J&W DB-624

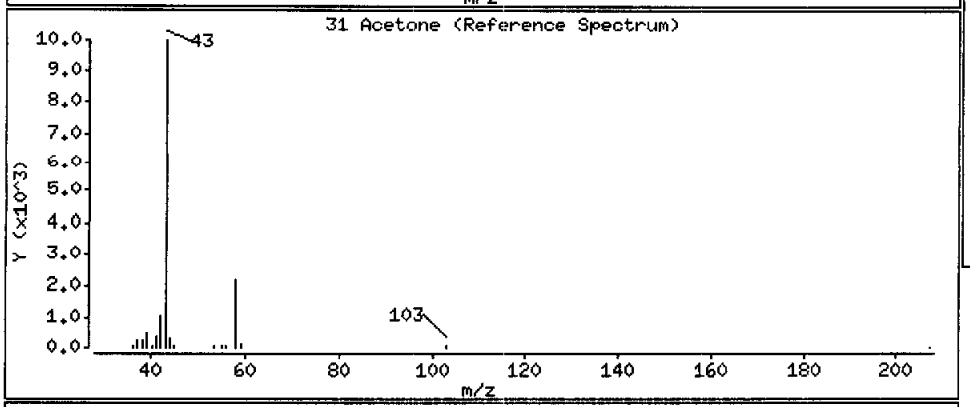
Column diameter: 0.53

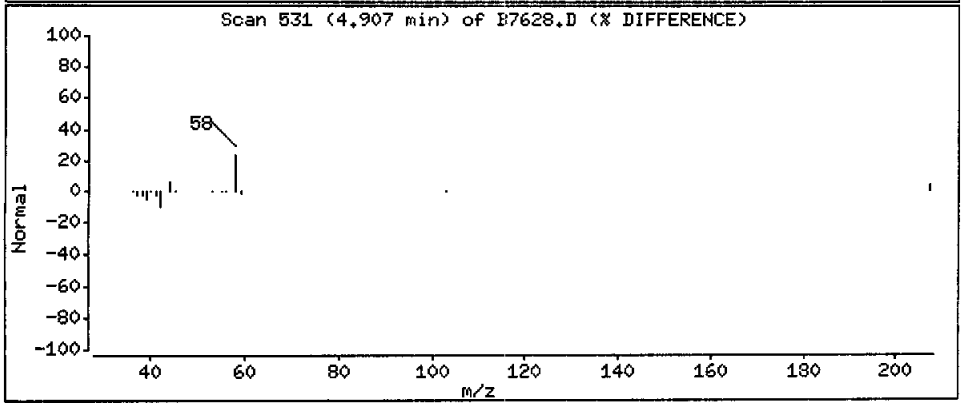
31 Acetone

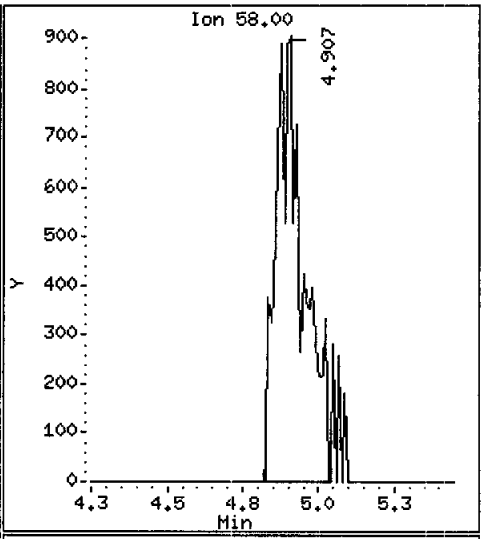
Concentration: 3.030 ppbv

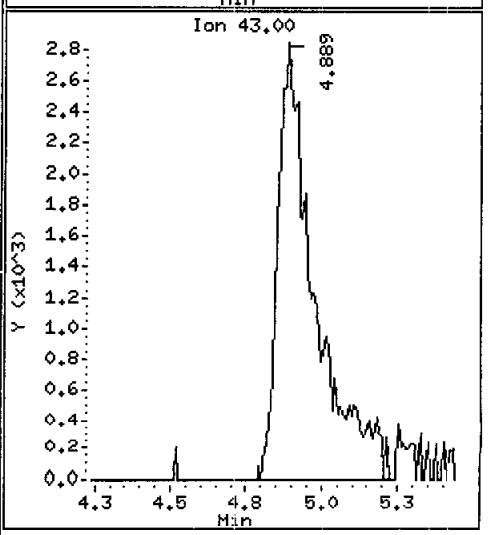












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7629.D
Lab Smp Id: G2DHP1AD Client Smp ID: 066371-001
Inj Date : 14-JAN-2005 20:20
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHP1AD,066371-001,SANDIA,E5A100224-2
Misc Info : 24.5,12.7,500,965,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.500	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	965.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.134	2.128	(0.257)	14961	0.60816	0.6079(a)
* 58 Bromochloromethane	49	8.296	8.309	(1.000)	582821	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.325	9.338	(0.921)	499969	44.8580	44.84
* 73 1,4-Difluorobenzene	114	10.128	10.141	(1.000)	1358128	50.0000	
75 Trichloroethene	130	10.606	10.583	(1.047)	13377	1.12811	1.128(a)
$ 88 Toluene-d8	100	12.744	12.739	(1.258)	704490	49.5378	49.52
89 Toluene	91	12.871	12.865	(1.271)	30794	1.28774	1.287(a)
95 Tetrachloroethene	166	13.881	13.858	(0.902)	30031	1.96171	1.961(a)
* 101 Chlorobenzene-d5	117	15.388	15.383	(1.000)	977798	50.0000	
$ 114 4-Bromofluorobenzene	95	17.644	17.638	(1.147)	766353	43.8741	43.85

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

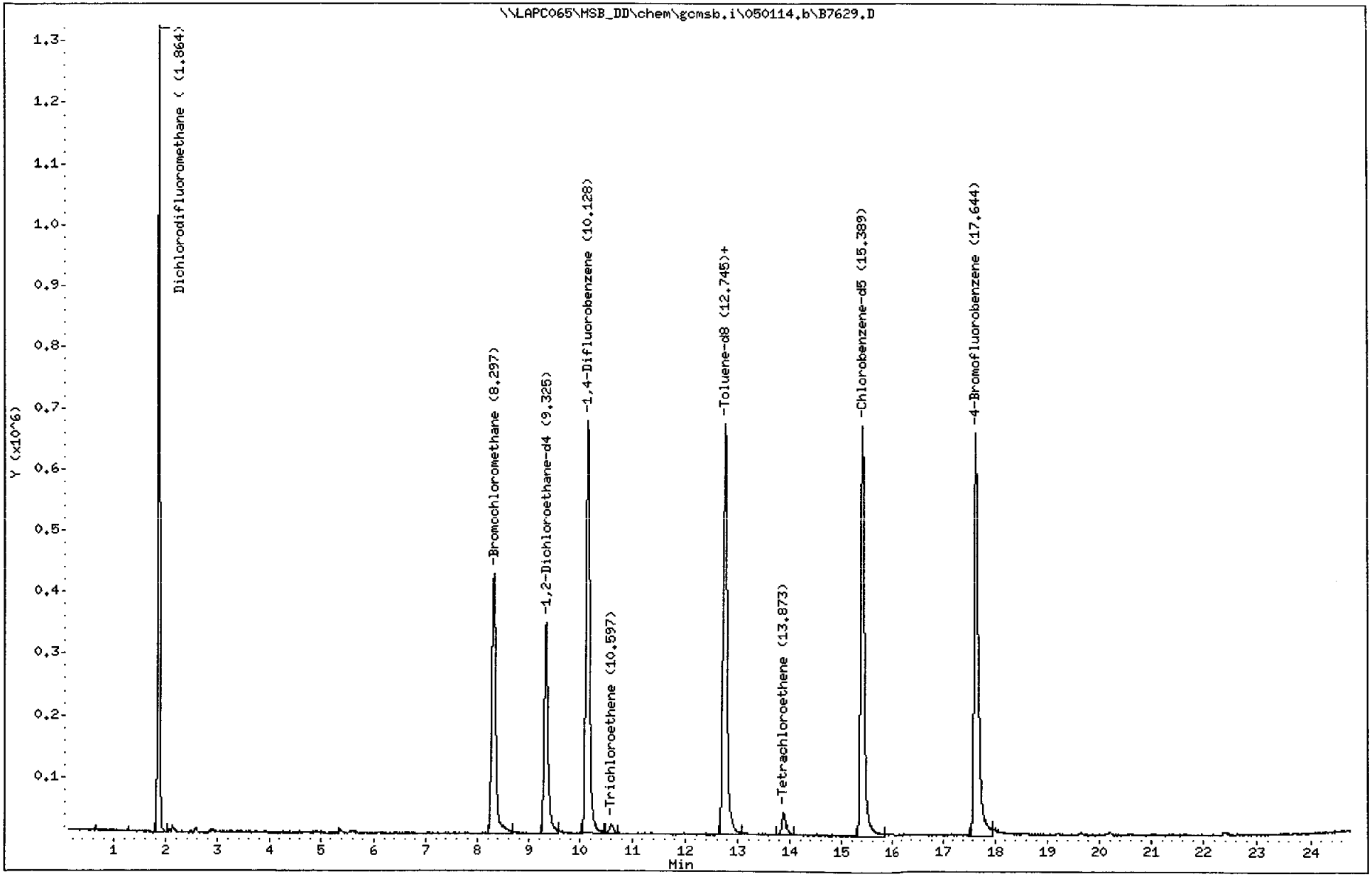
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7629.D
Date : 14-JAN-2005 20:20
Client ID: 066371-001
Sample Info: G2DHP1AD,066371-001,SANDIA,E5A100224-2

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7629.D

Date : 14-JAN-2005 20:20

Client ID: 066371-001

Instrument: gcmsb.i

Sample Info: G2DHP1AD,066371-001,SANDIA,E5A100224-2

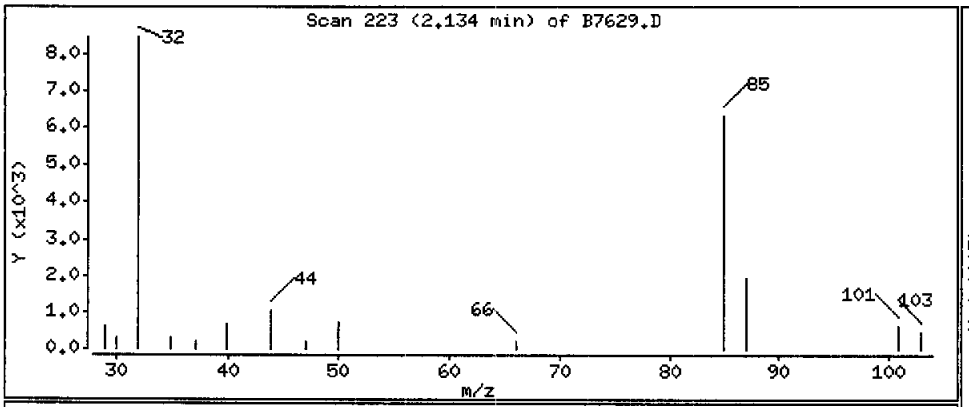
Operator: DLK

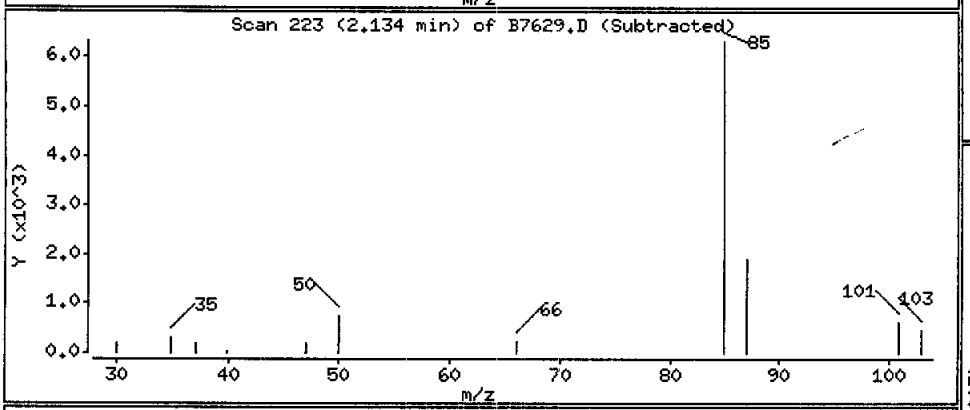
Column phase: J&W DB-624

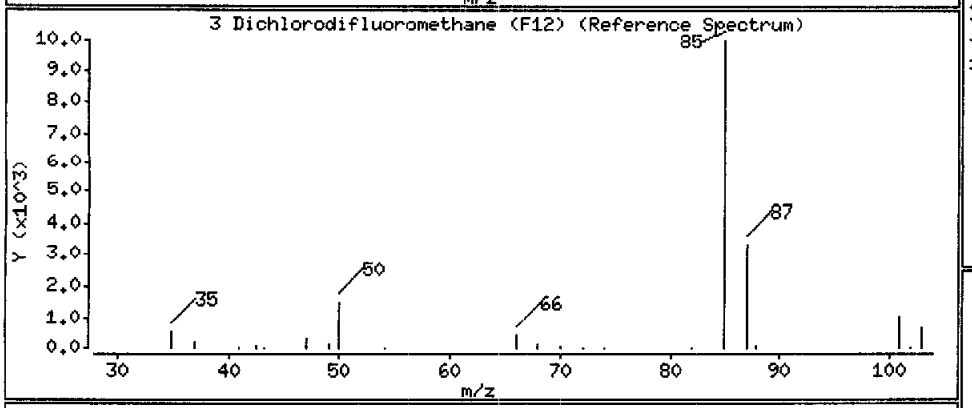
Column diameter: 0.53

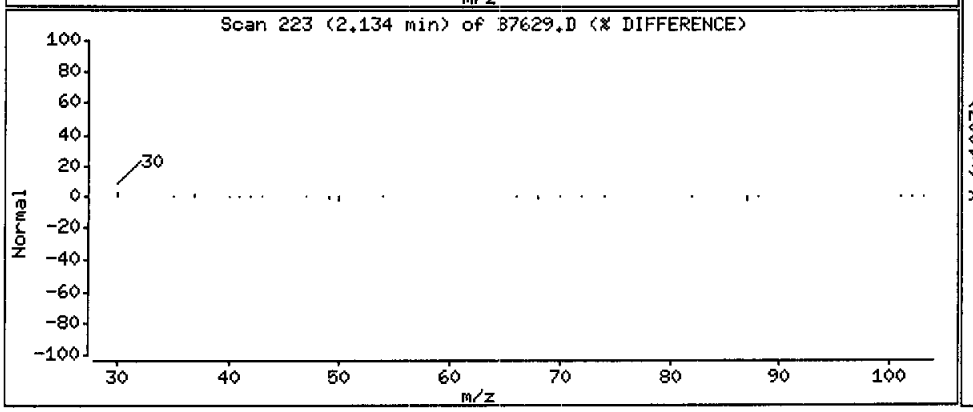
3 Dichlorodifluoromethane (F12)

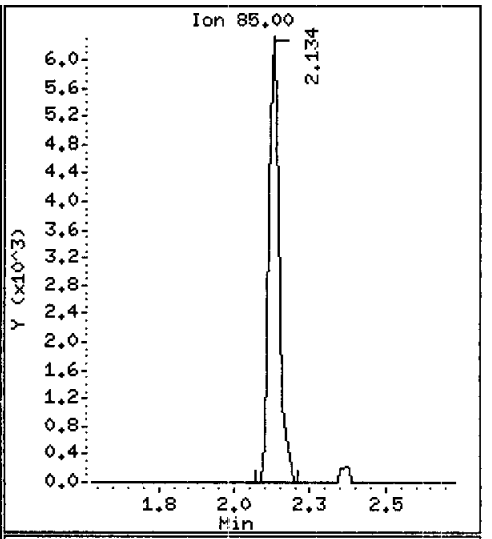
Concentration: 0.6079 ppbv

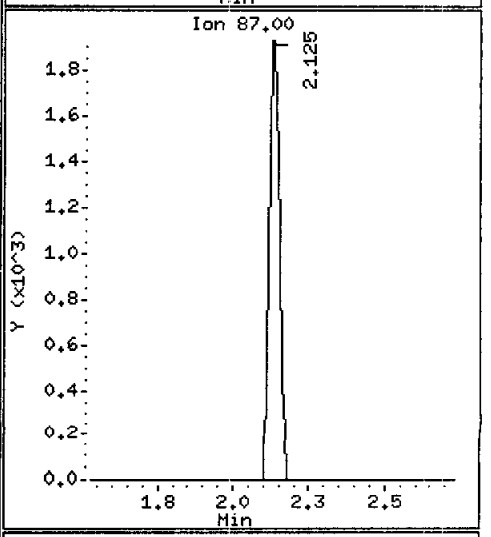


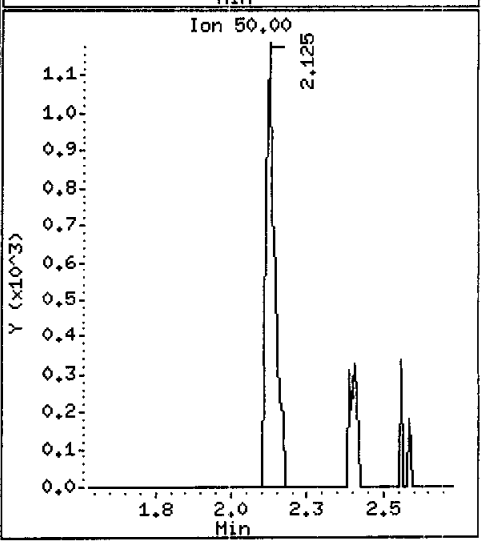












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7629.D

Date : 14-JAN-2005 20:20

Client ID: 066371-001

Instrument: gcmsb.i

Sample Info: G2DHP1AD,066371-001,SANDIA,E5A100224-2

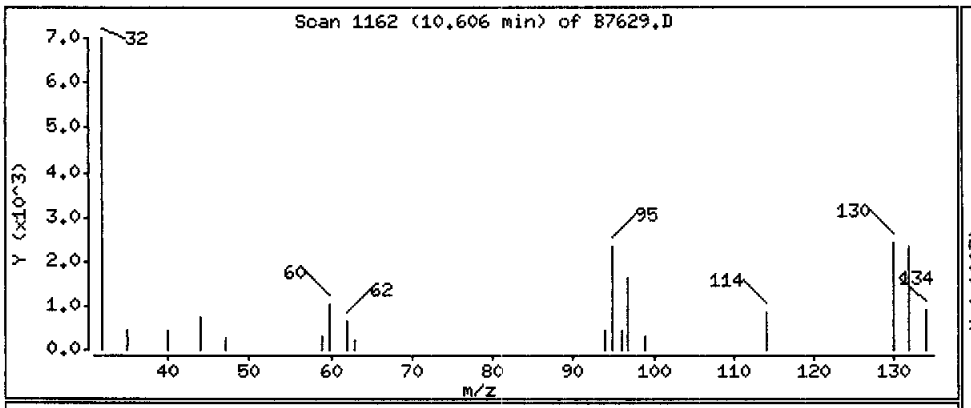
Operator: DLK

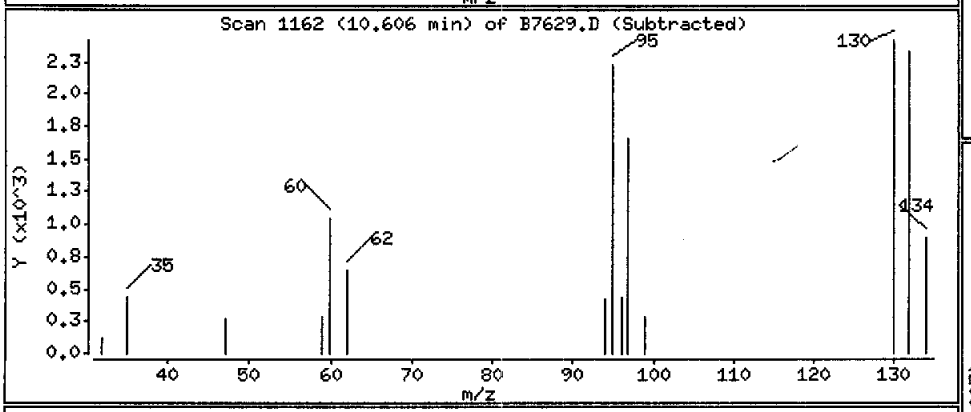
Column phase: J&W DB-624

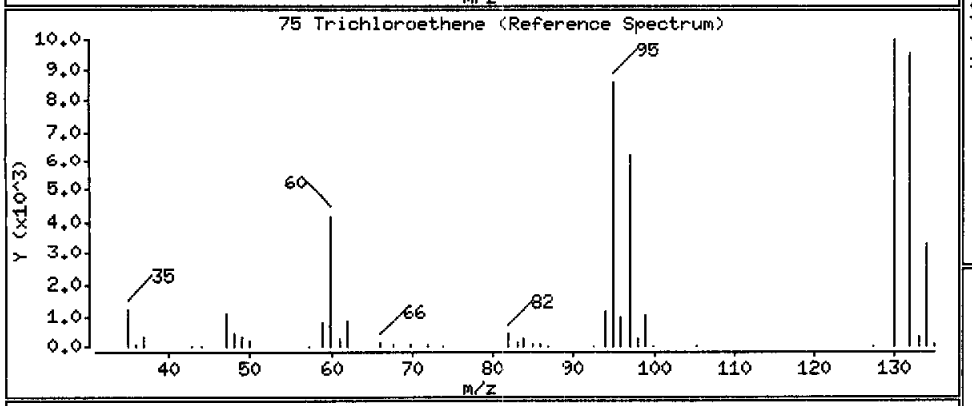
Column diameter: 0.53

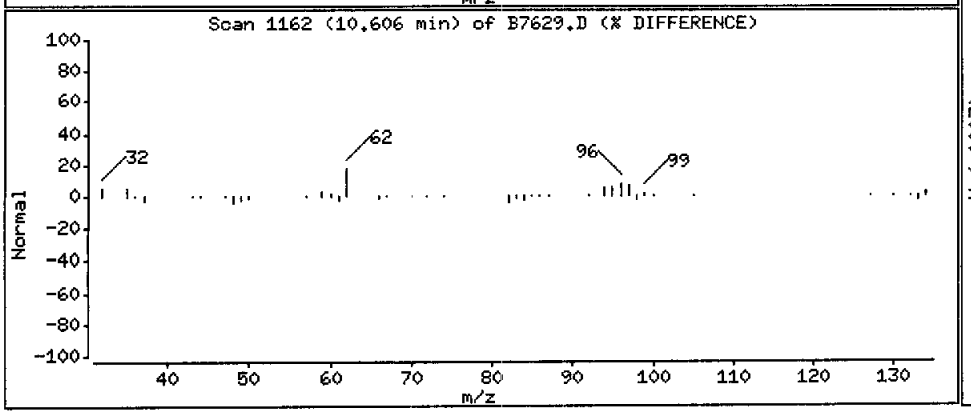
75 Trichloroethene

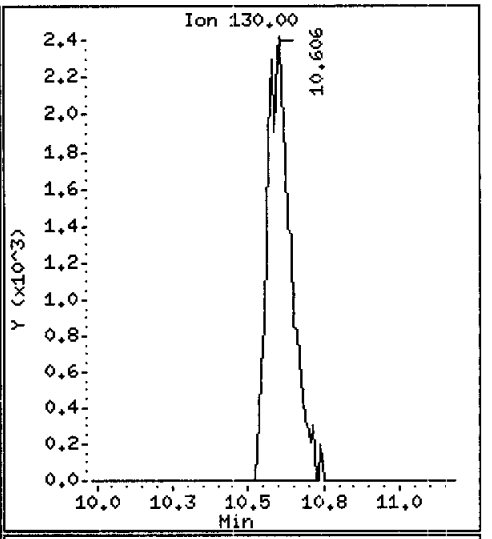
Concentration: 1.128 ppbv

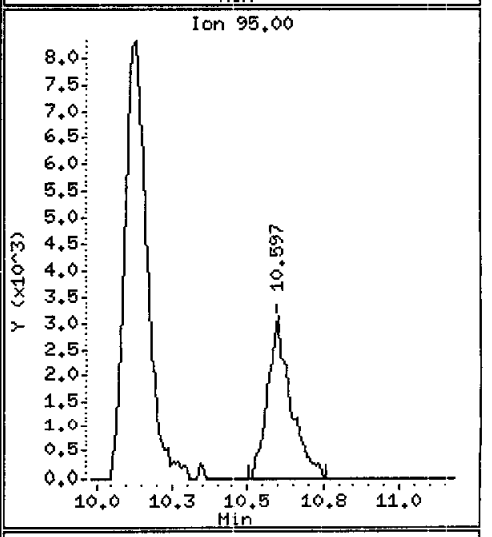


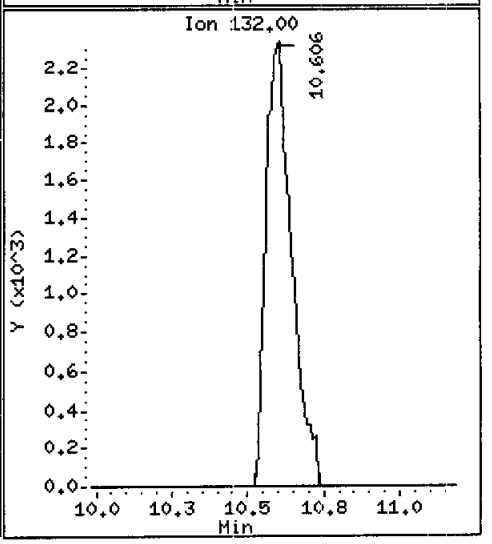












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7629.D

Date : 14-JAN-2005 20:20

Client ID: 066371-001

Instrument: gcmsb.i

Sample Info: C2DHP1AD,066371-001,SANDIA,E5A100224-2

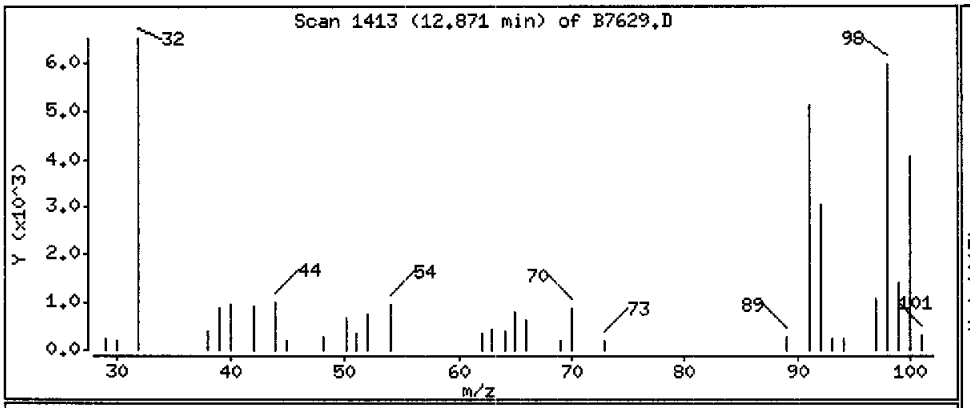
Operator: DLK

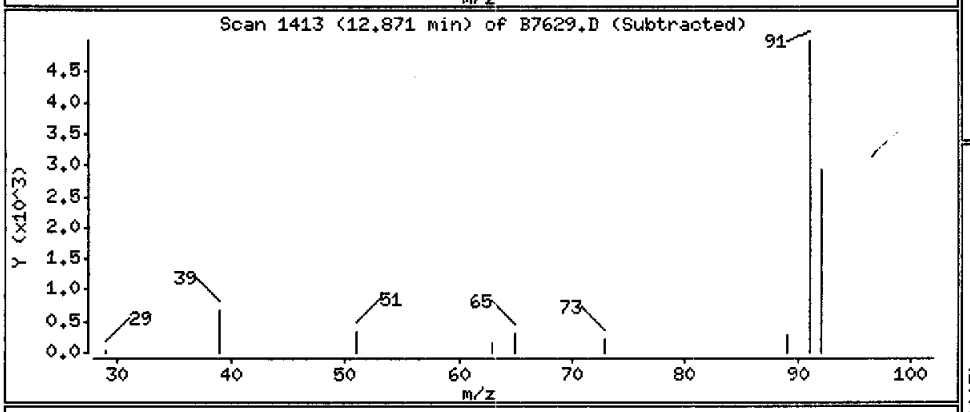
Column phase: J&W DB-624

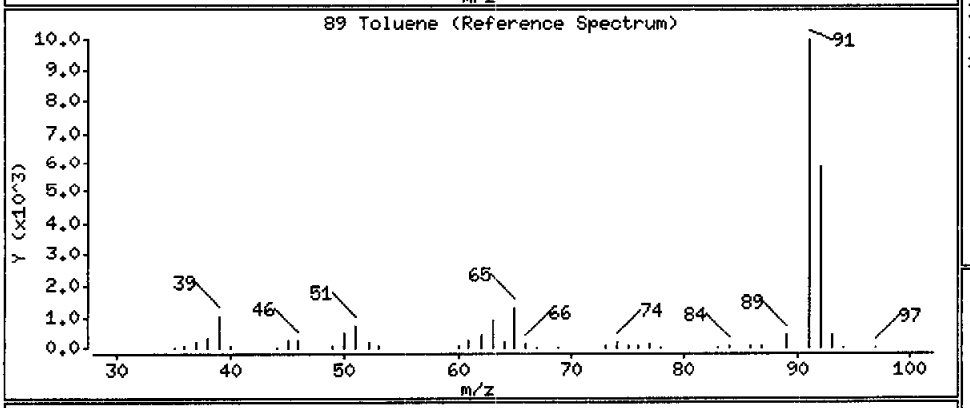
Column diameter: 0.53

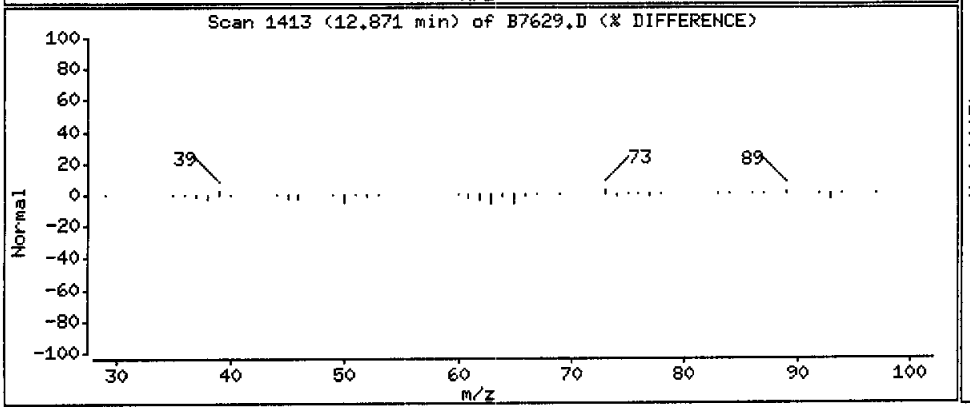
89 Toluene

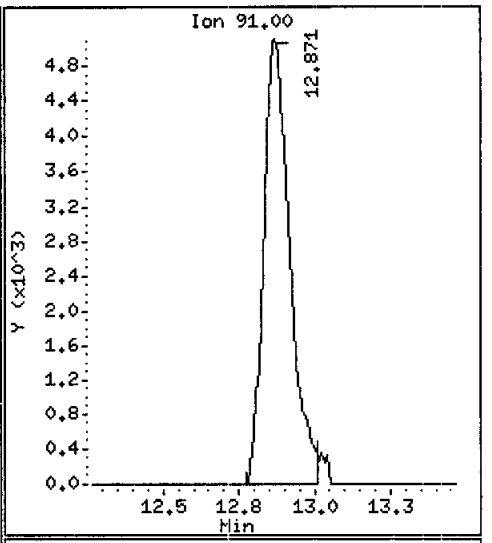
Concentration: 1.287 ppbv

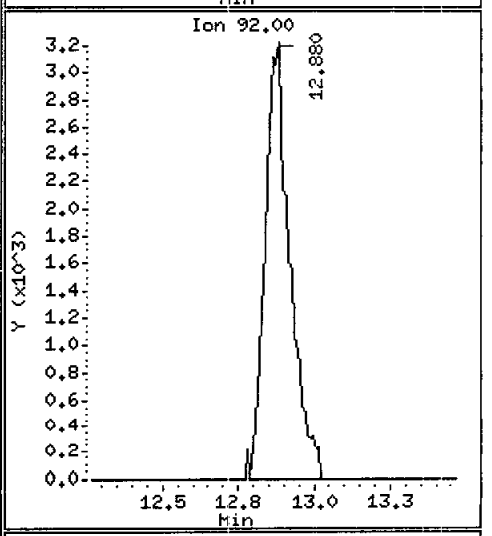


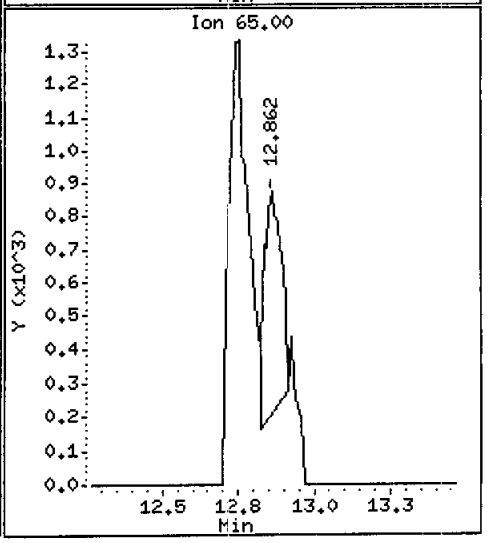












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7629.D

Date : 14-JAN-2005 20:20

Client ID: 066371-001

Instrument: gcmsb.i

Sample Info: G2DHP1AD,066371-001,SANDIA,E5A100224-2

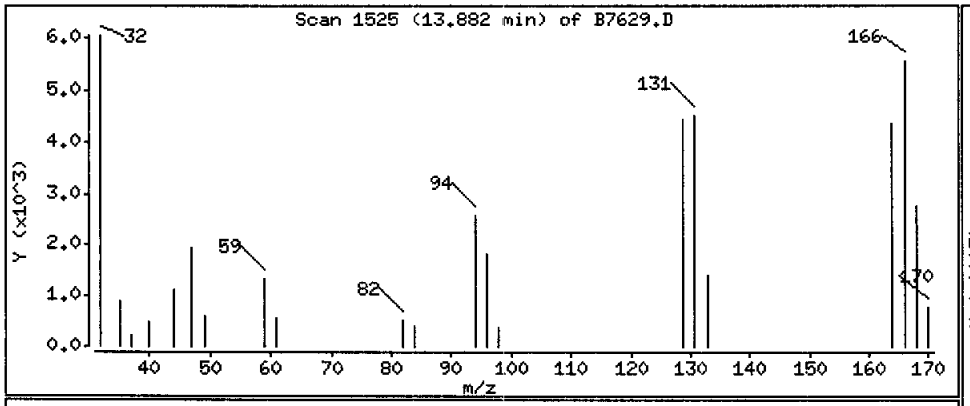
Operator: DLK

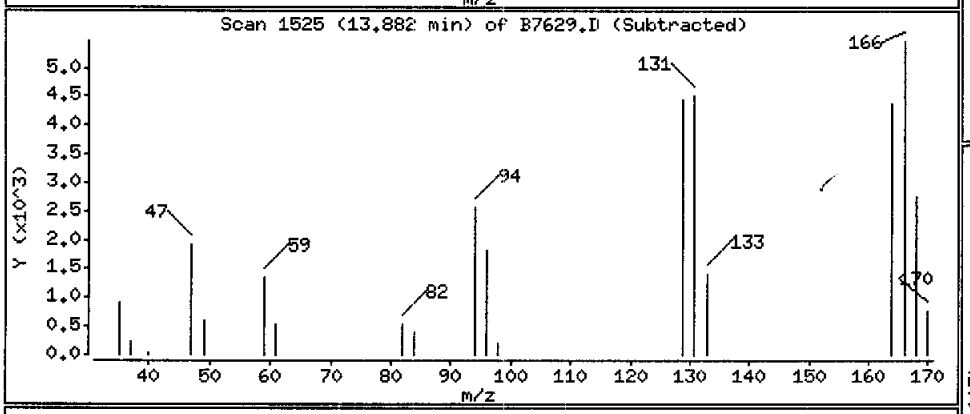
Column phase: J&W DB-624

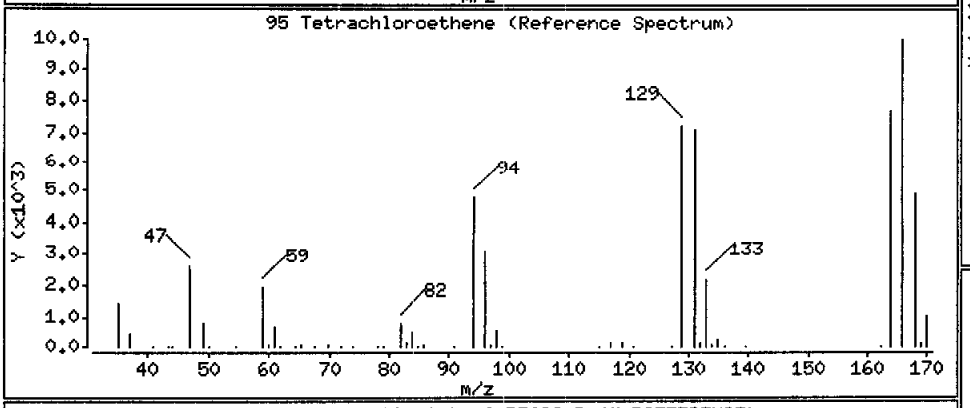
Column diameter: 0.53

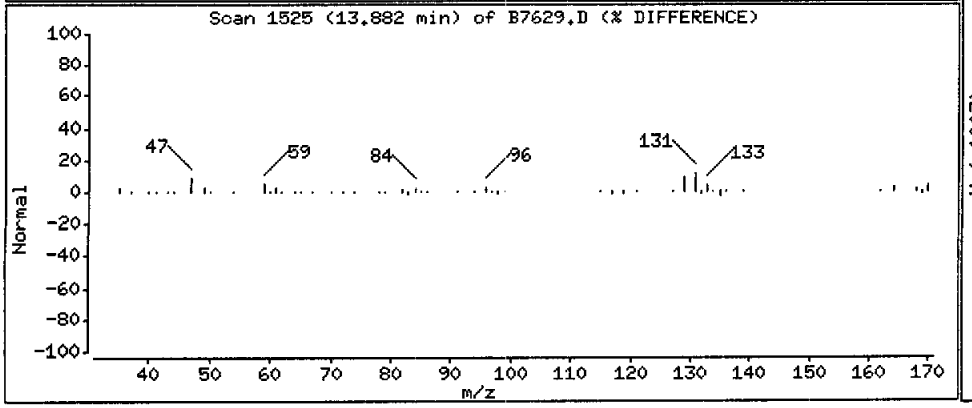
95 Tetrachloroethene

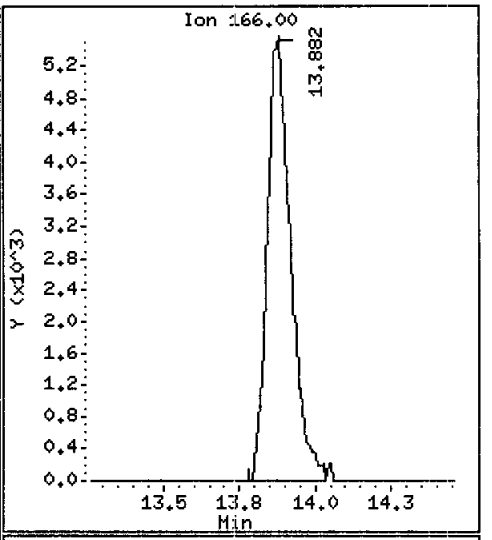
Concentration: 1.961 ppbv

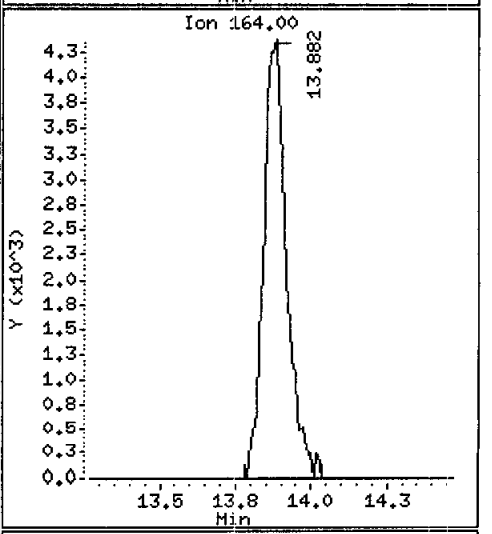


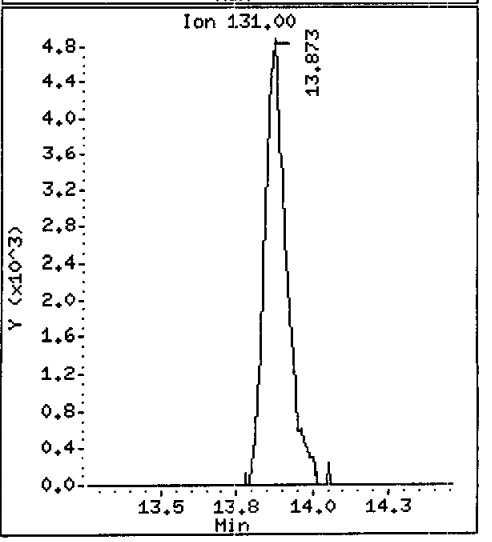












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7630.D
Lab Smp Id: G2DHQ1AD Client Smp ID: 066372-001
Inj Date : 14-JAN-2005 20:56
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHQ1AD,066372-001,SANDIA,E5A100224-3
Misc Info : 24.6,12.6,500,977,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.600	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	977.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.140	2.128	(0.258)	14462	0.59101	0.5905(a)
* 58 Bromochloromethane	49	8.302	8.309	(1.000)	579723	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.322	9.338	(0.921)	496801	45.6018	45.56
* 73 1,4-Difluorobenzene	114	10.125	10.141	(1.000)	1327507	50.0000	
$ 88 Toluene-d8	100	12.741	12.739	(1.258)	698650	50.2603	50.22
* 101 Chlorobenzene-d5	117	15.394	15.383	(1.000)	979632	50.0000	
$ 114 4-Bromofluorobenzene	95	17.640	17.638	(1.146)	761601	43.5205	43.48

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

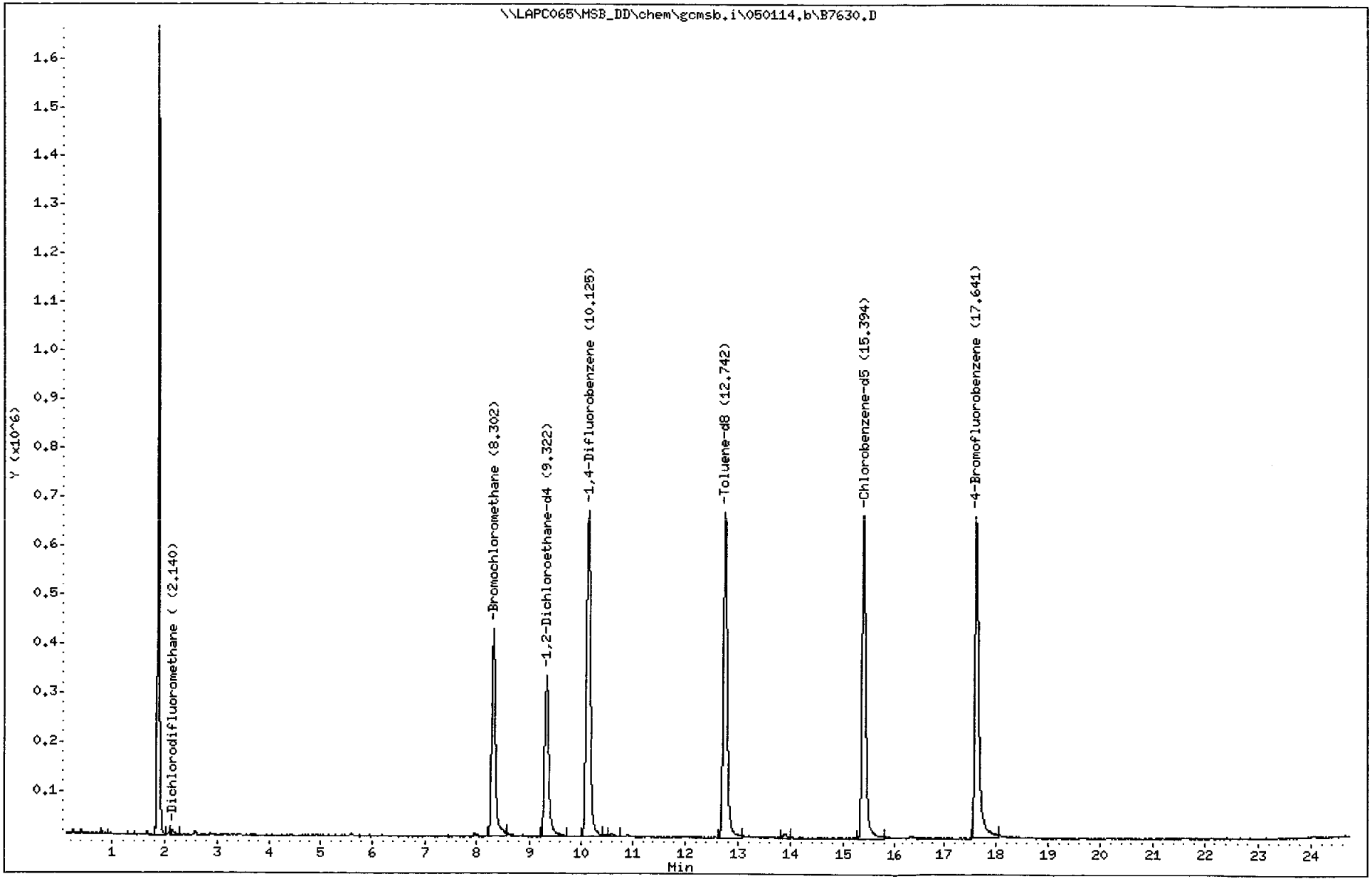
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7630.D
Date : 14-JAN-2005 20:56
Client ID: 066372-001
Sample Info: G2DHQ1AD,066372-001,SANDIA,E5A100224-3

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



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Date : 14-JAN-2005 20:56

Client ID: 066372-001

Instrument: gcmsb.i

Sample Info: G2DHQ1AD,066372-001,SANDIA,E5A100224-3

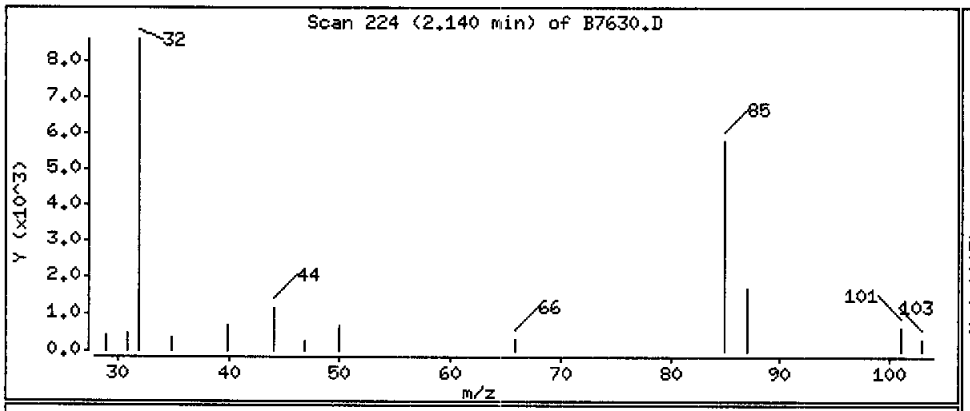
Operator: DLK

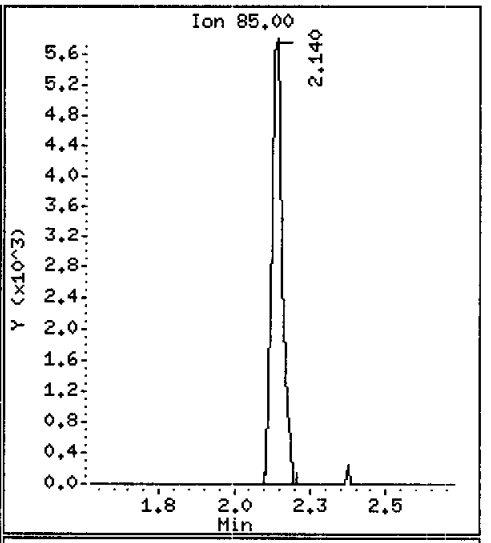
Column phase: J&W DB-624

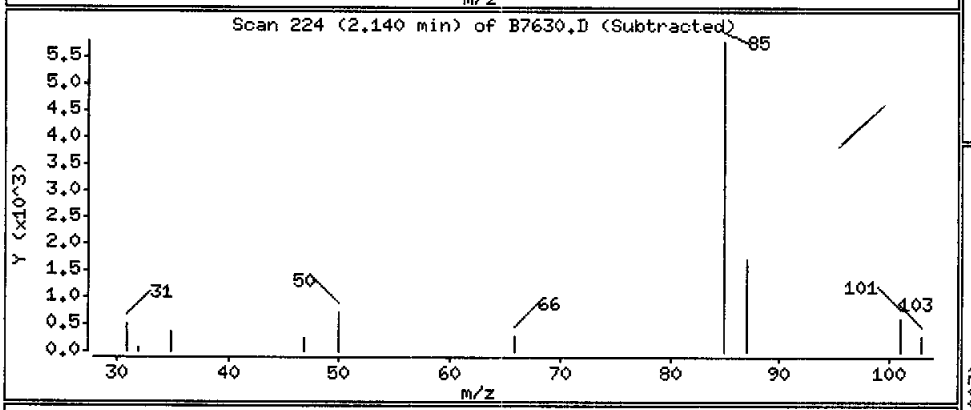
Column diameter: 0.53

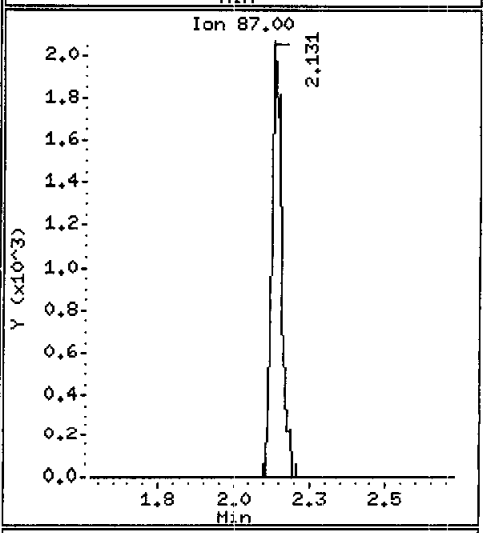
3 Dichlorodifluoromethane (F12)

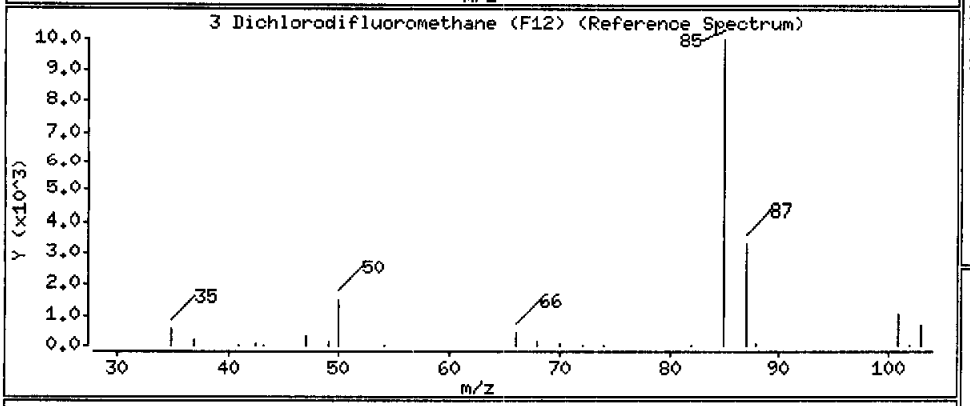
Concentration: 0.5905 ppbv

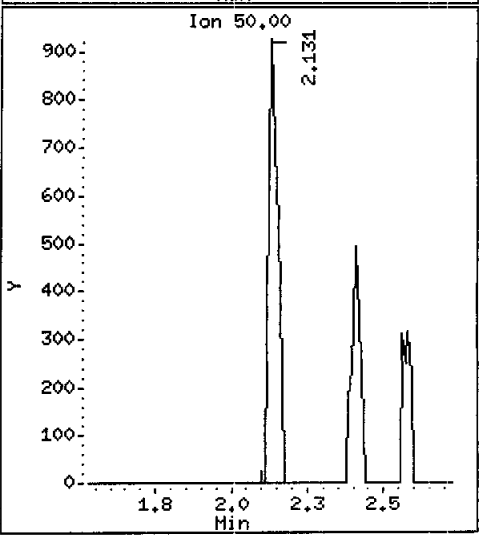


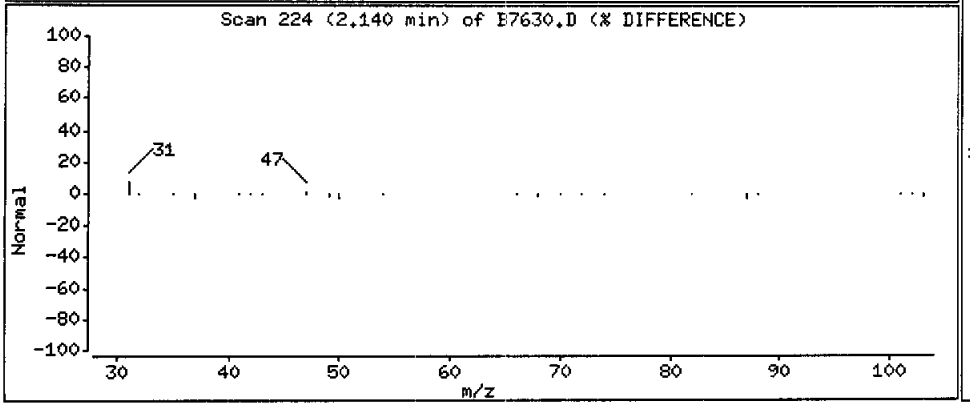












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D
Lab Smp Id: G2DHR1AD Client Smp ID: 066373-001
Inj Date : 14-JAN-2005 21:31
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHR1AD,066373-001,SANDIA,E5A100224-4
Misc Info : 24.3,12.3,500,988,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.300	InitPres
CalVol	500.000	CalVol
SmpVol	988.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.133	2.128	(0.257)	13663	0.56534	0.5652(a)
28 1,1-Dichloroethene	61	4.687	4.682	(0.565)	10942	0.84664	0.8465(a)
31 Acetone	58	4.903	4.844	(0.591)	7717	4.21154	4.211(aQ)
54 2-Butanone	72	8.052	7.975	(0.971)	6014	2.46738	2.467(aQ)
* 58 Bromochloromethane	49	8.296	8.309	(1.000)	572589	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.324	9.338	(0.921)	499915	45.3863	45.38
68 Benzene	78	9.433	9.437	(0.931)	28771	1.57532	1.575(a)
* 73 1,4-Difluorobenzene	114	10.127	10.141	(1.000)	1342171	50.0000	
75 Trichloroethene	130	10.587	10.583	(1.045)	90861	7.75326	7.752
$ 88 Toluene-d8	100	12.744	12.739	(1.258)	702874	50.0117	50.00
89 Toluene	91	12.870	12.865	(1.271)	116684	4.93741	4.936
95 Tetrachloroethene	166	13.872	13.858	(0.901)	86558	5.77330	5.772
M 99 Xylenes (total)	106				6907	0.90697	0.9068(a)
* 101 Chlorobenzene-d5	117	15.388	15.383	(1.000)	957628	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
107 o-Xylene	106	16.687	16.628	(1.084)	6907	0.90697	0.9068(a)
$ 114 4-Bromofluorobenzene	95	17.643	17.638	(1.147)	800765	46.8099	46.80

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

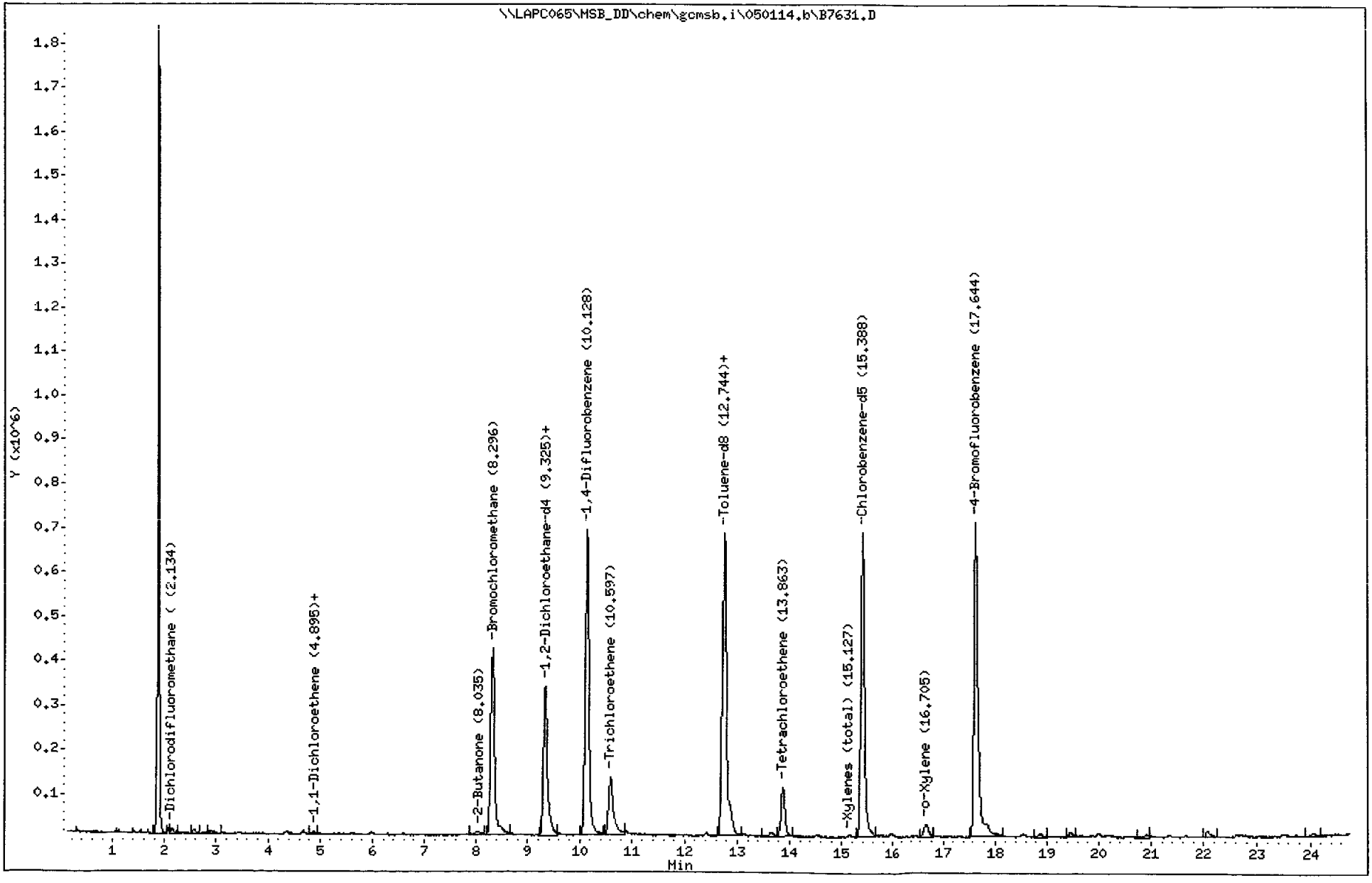
Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



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Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

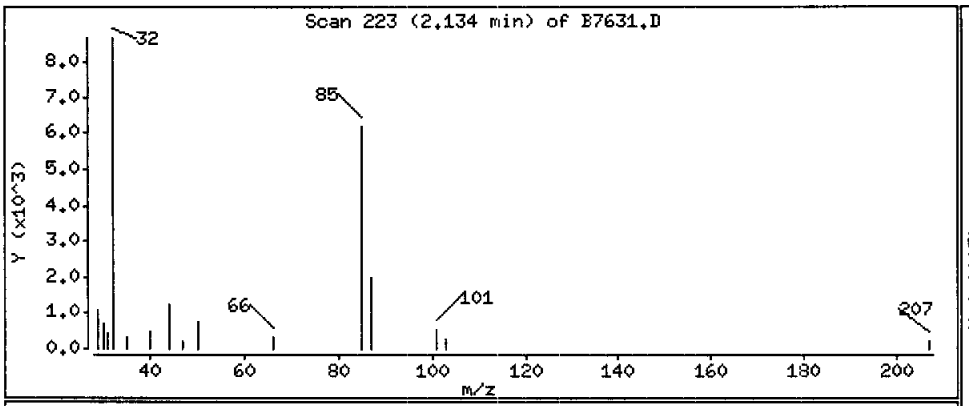
Operator: DLK

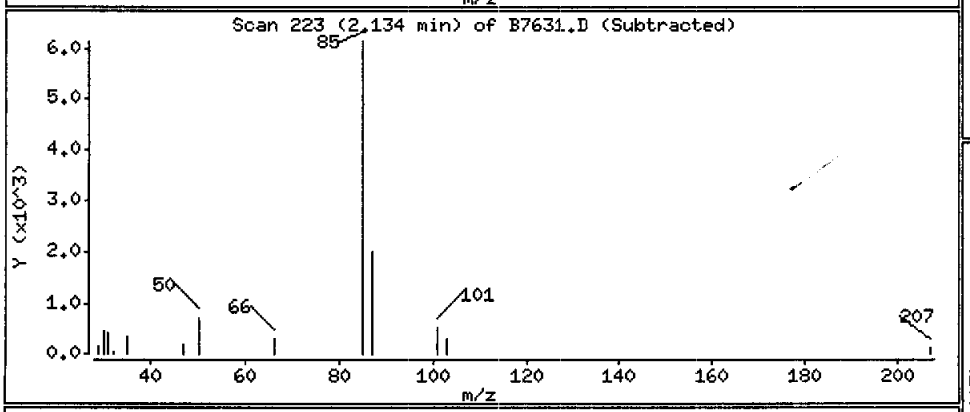
Column phase: J&W DB-624

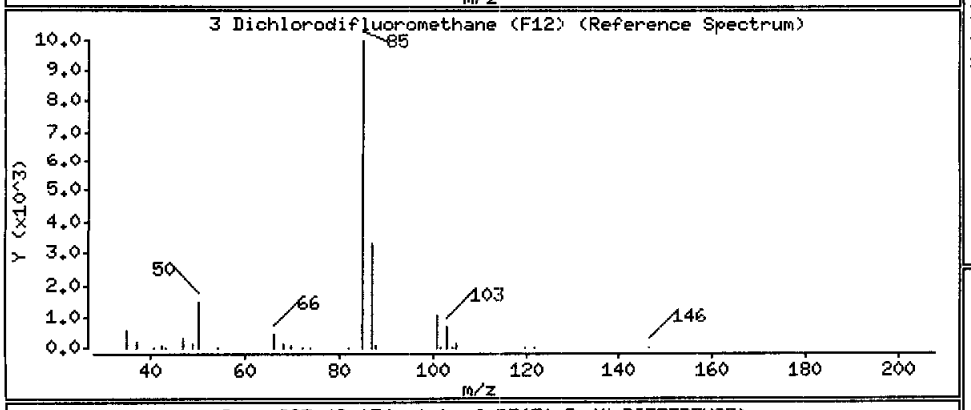
Column diameter: 0.53

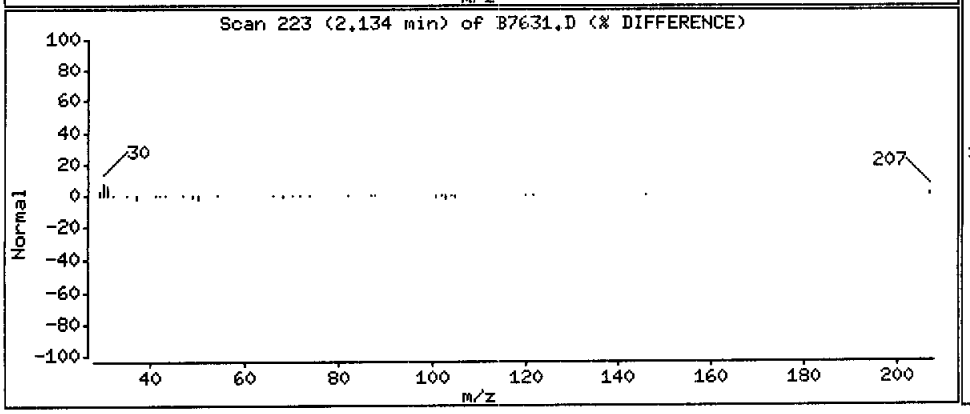
3 Dichlorodifluoromethane (F12)

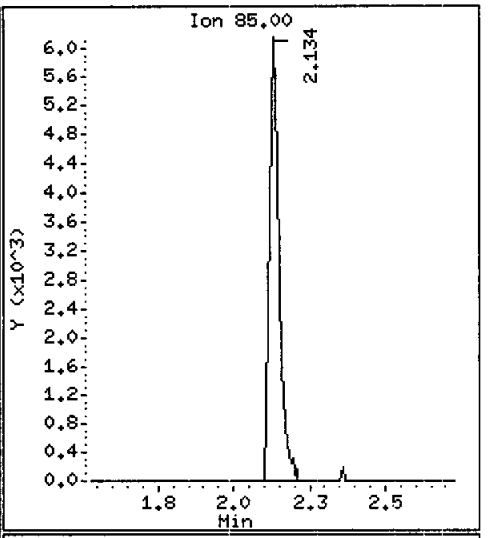
Concentration: 0.5652 ppbv

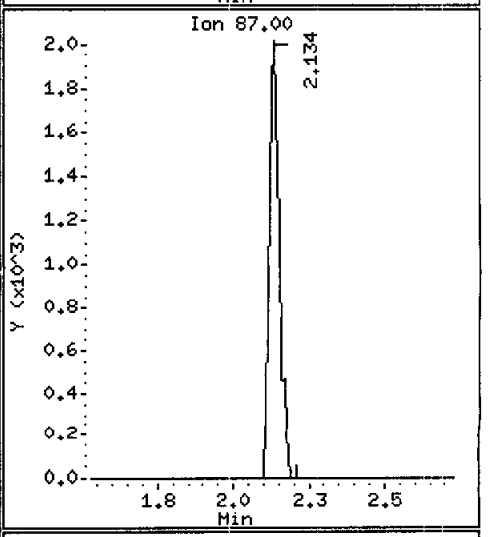


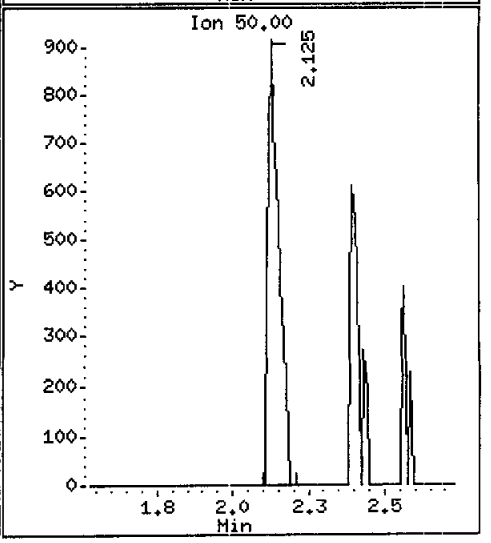












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

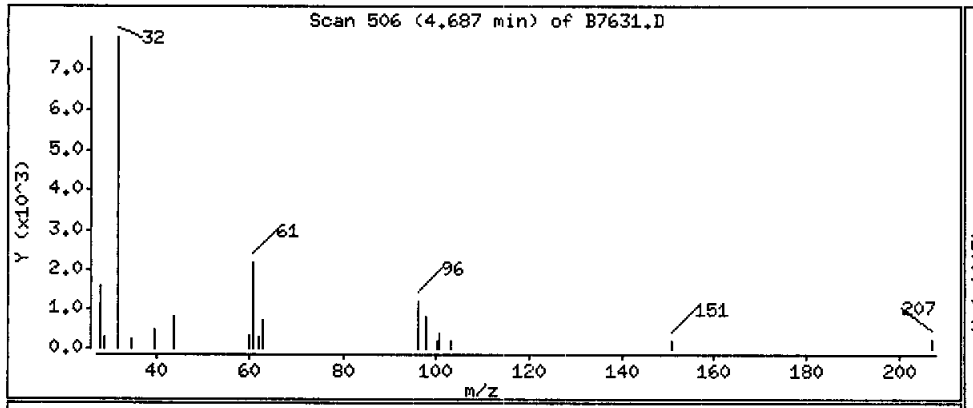
Operator: DLK

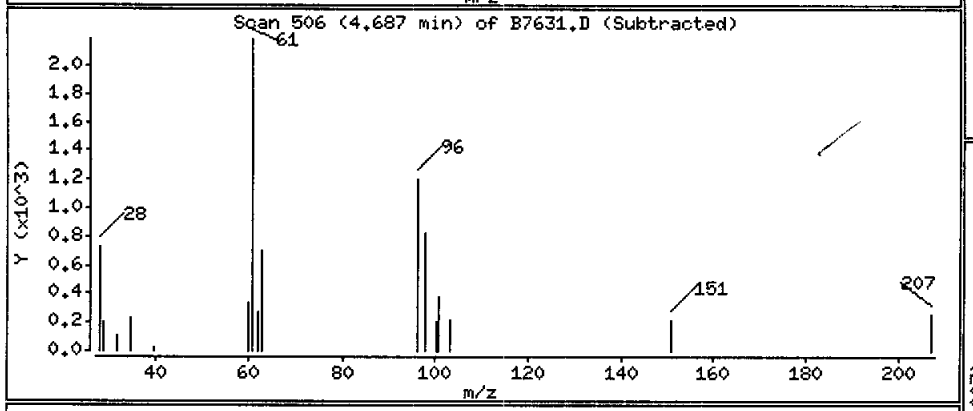
Column phase: J&W DB-624

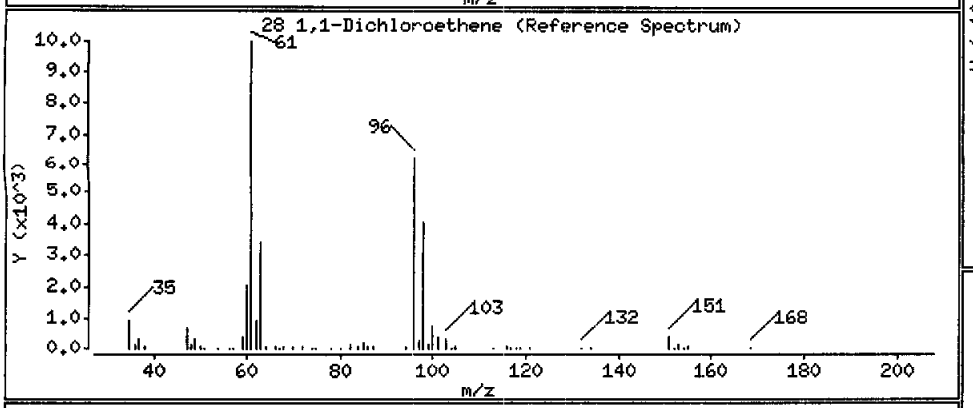
Column diameter: 0.53

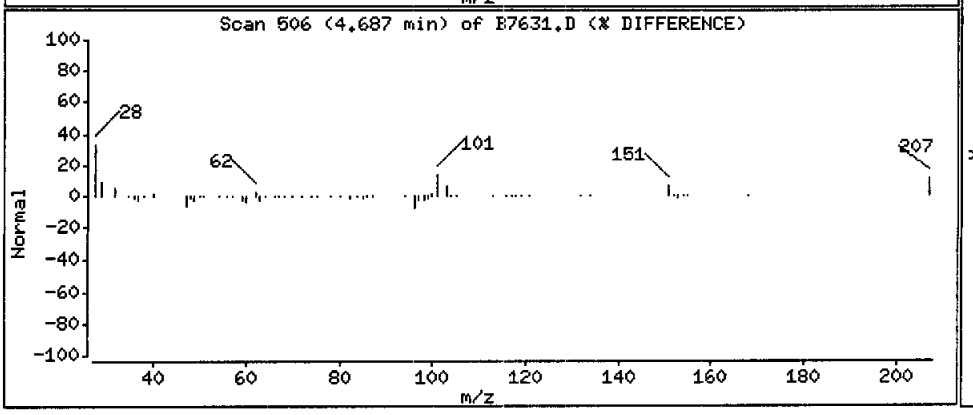
28 1,1-Dichloroethene

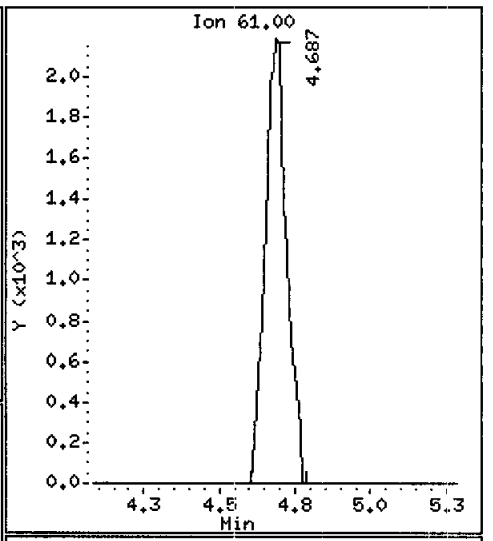
Concentration: 0.8465 ppbv

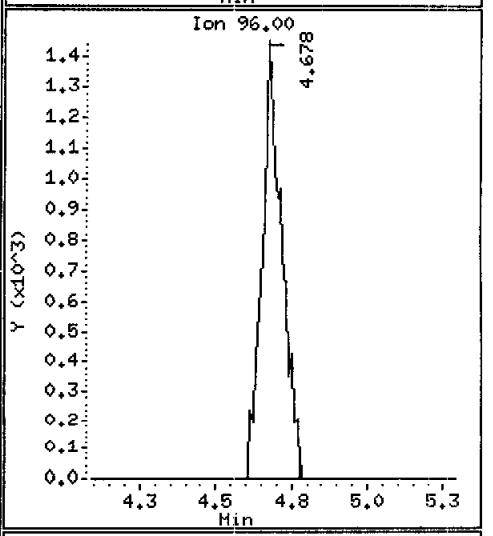


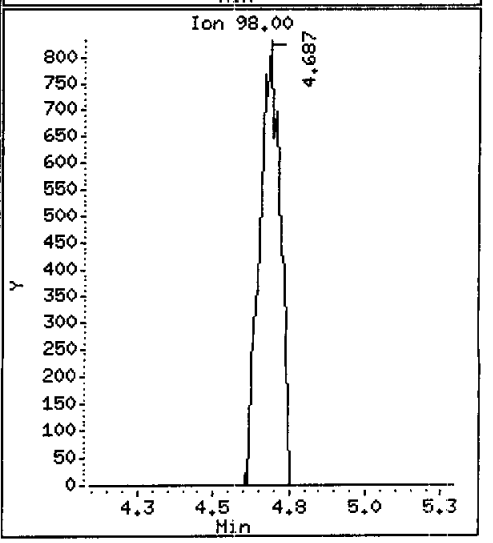












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

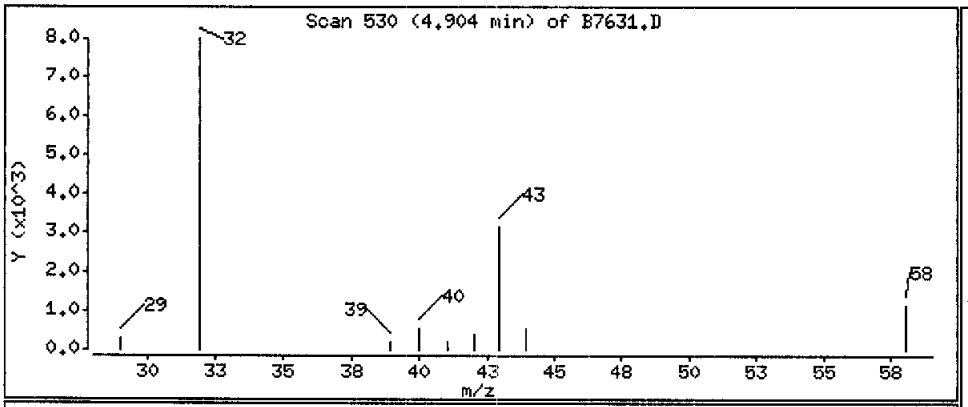
Operator: DLK

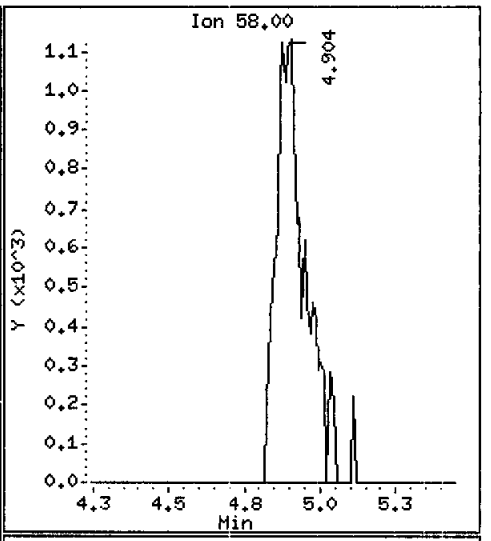
Column phase: J&W DB-624

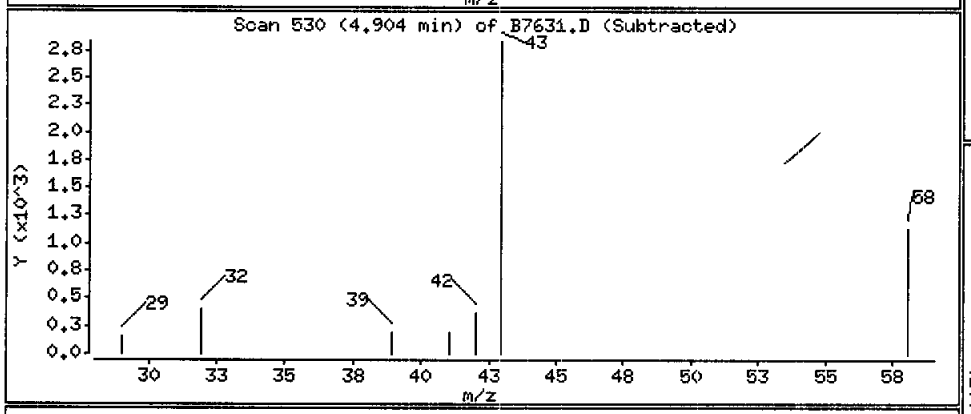
Column diameter: 0.53

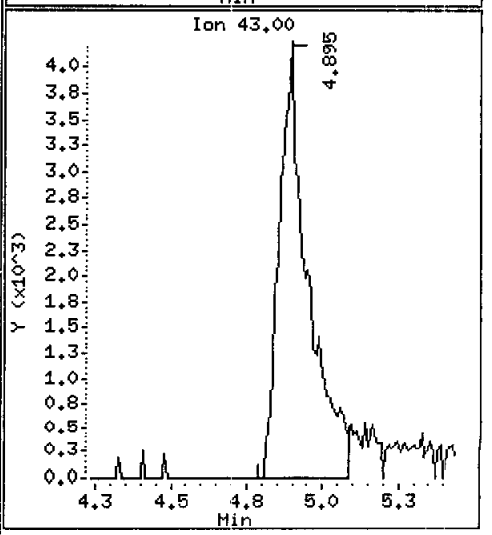
31 Acetone

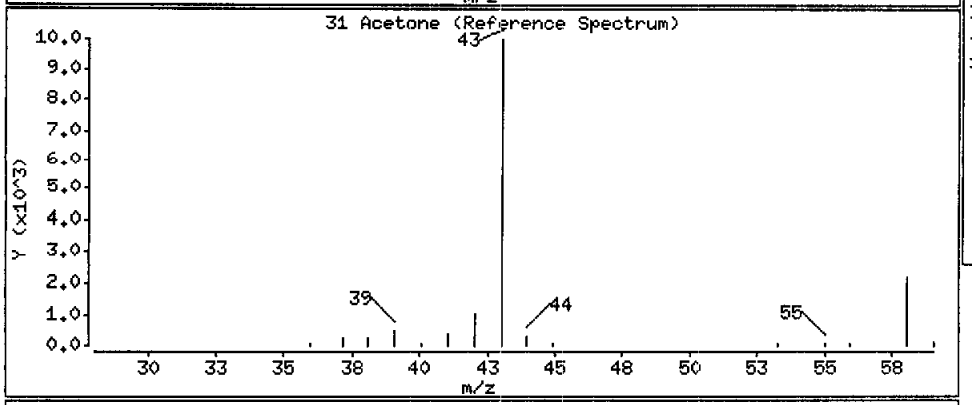
Concentration: 4.211 ppbv

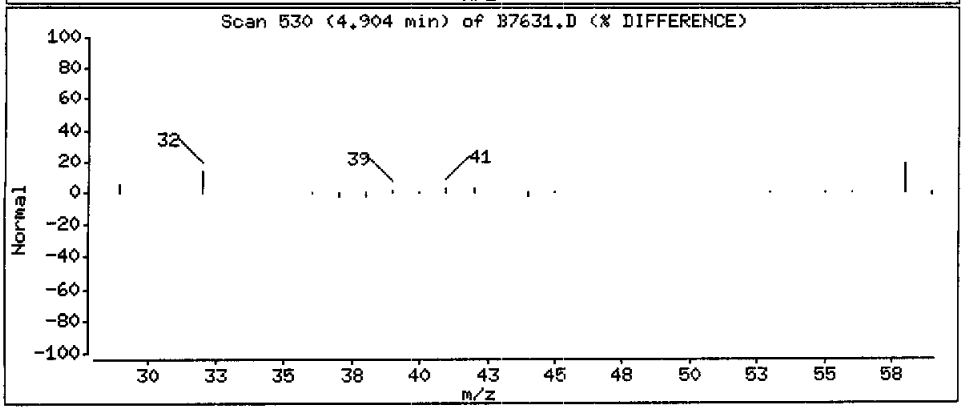












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

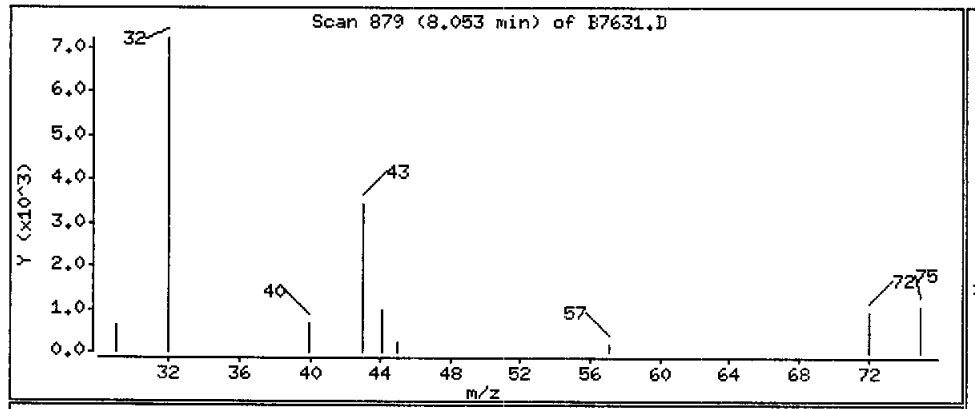
Operator: DLK

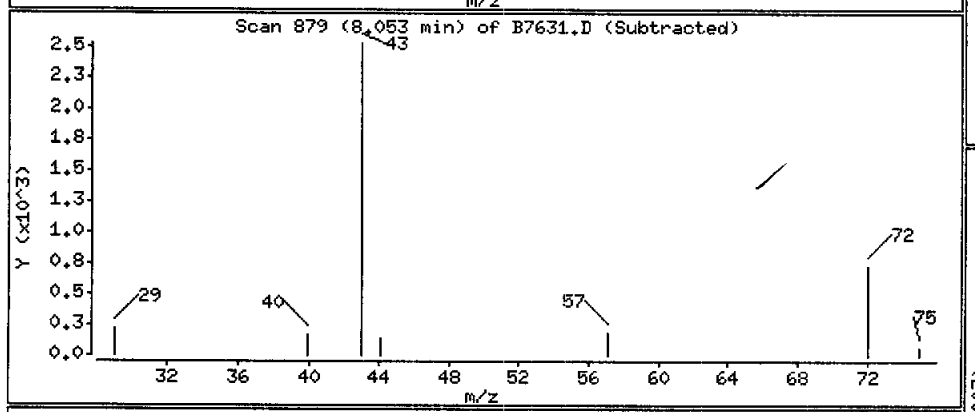
Column phase: J&W DB-624

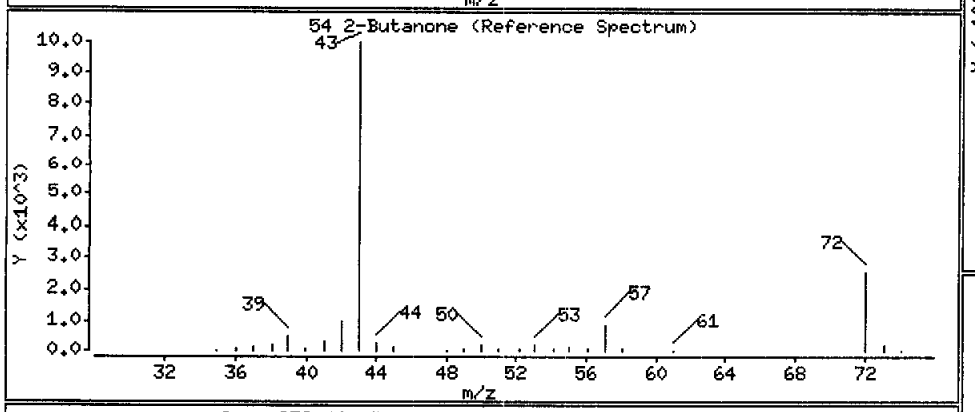
Column diameter: 0.53

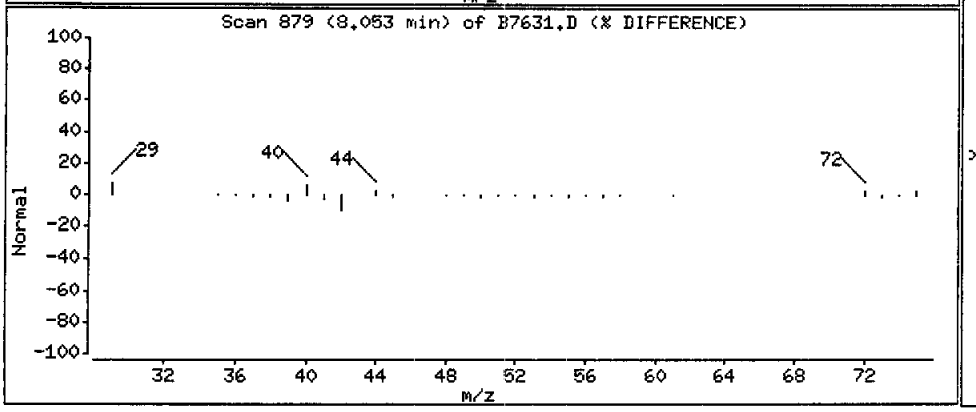
54 2-Butanone

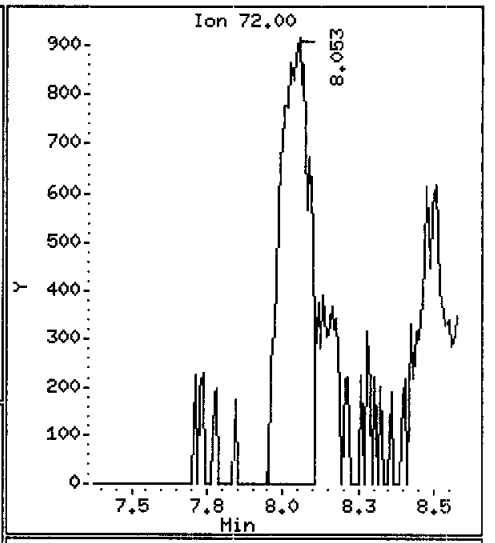
Concentration: 2.467 ppbv

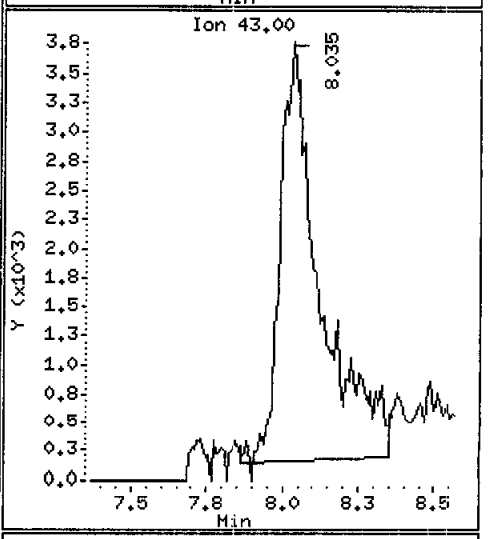


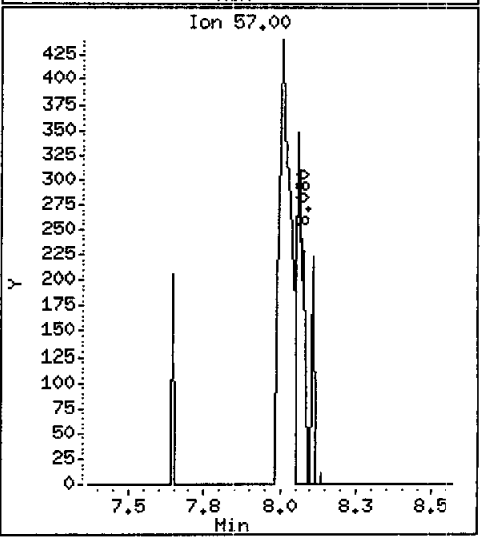












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

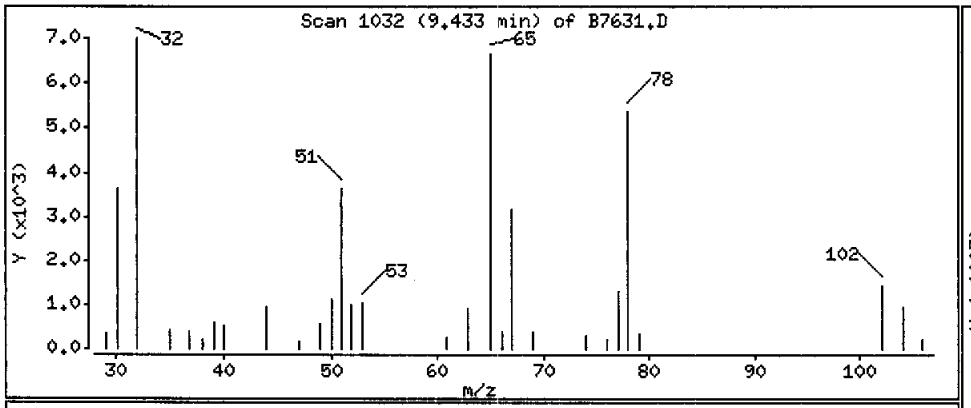
Operator: DLK

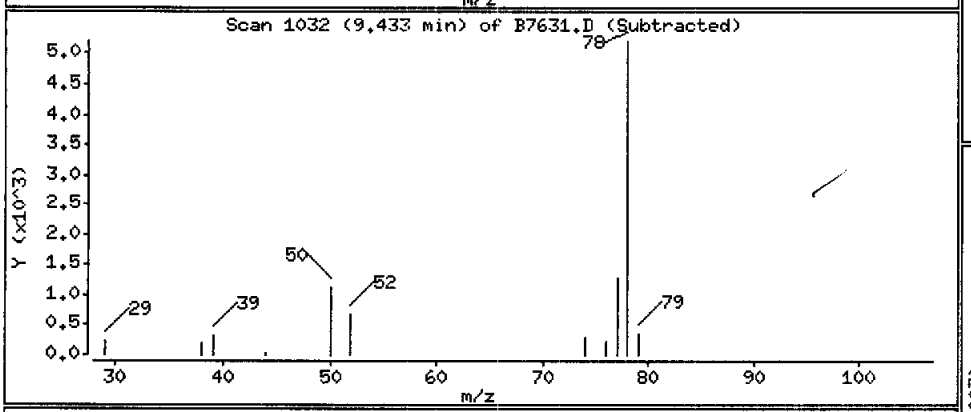
Column phase: J&W DB-624

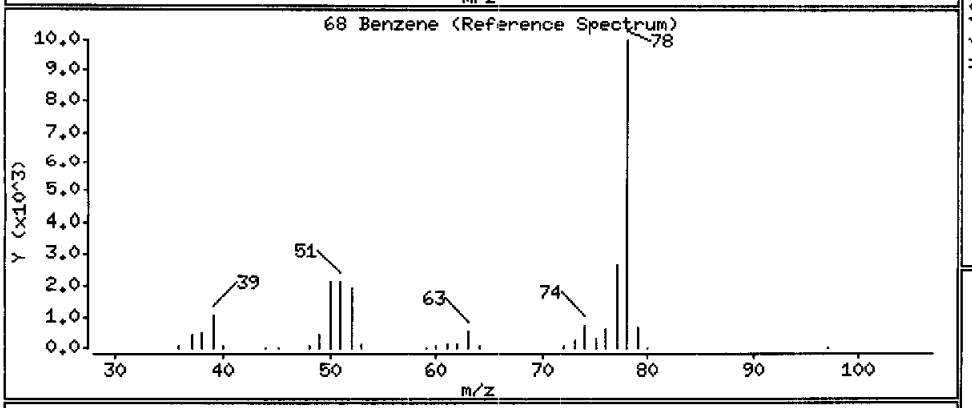
Column diameter: 0.53

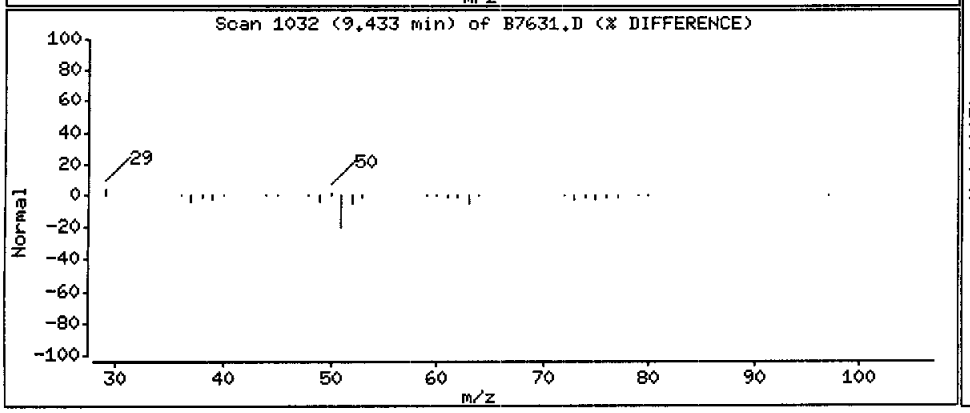
68 Benzene

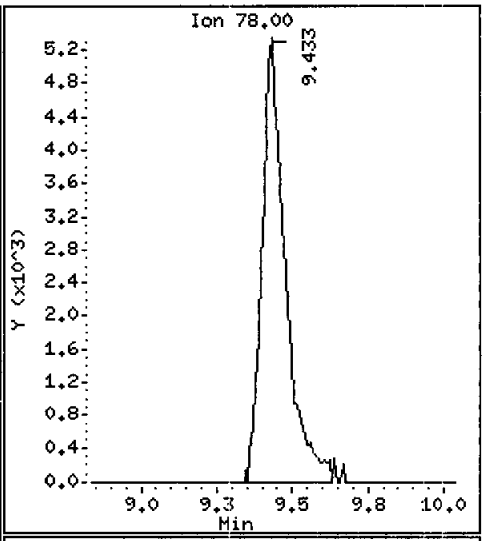
Concentration: 1.575 ppbv

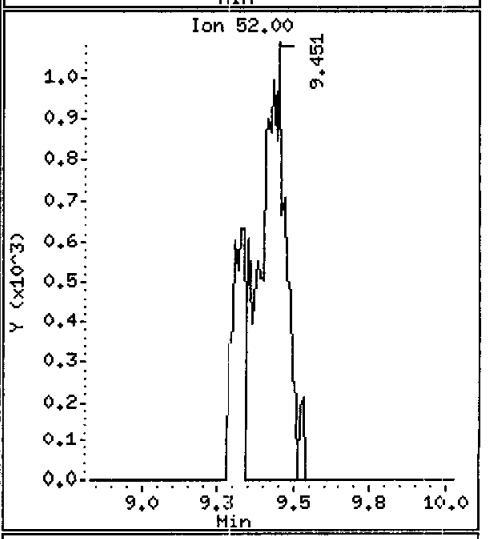


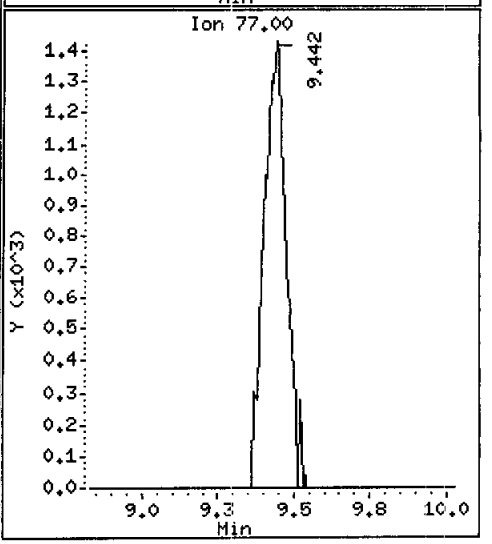












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

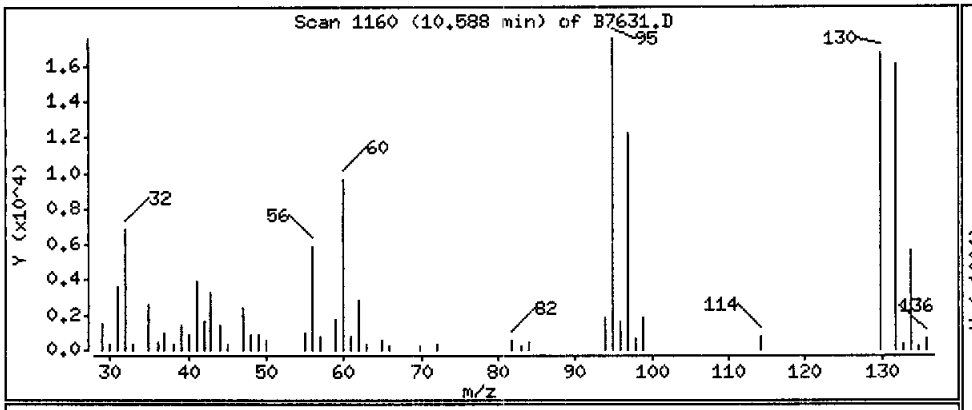
Operator: DLK

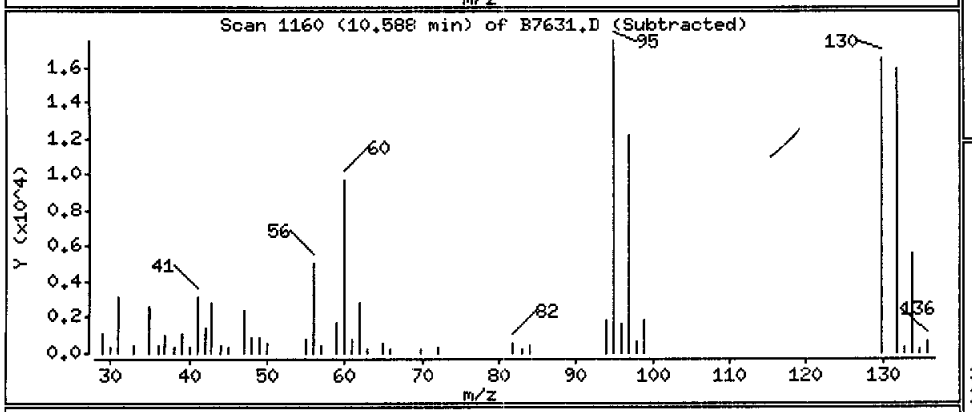
Column phase: J&W DB-624

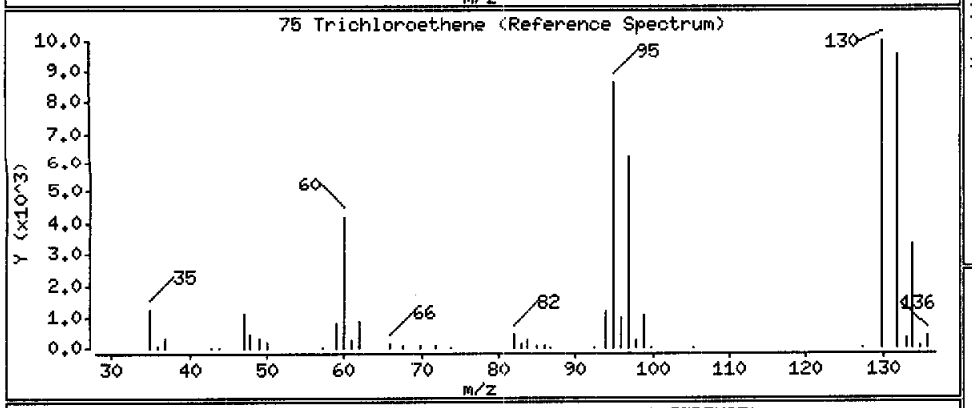
Column diameter: 0.53

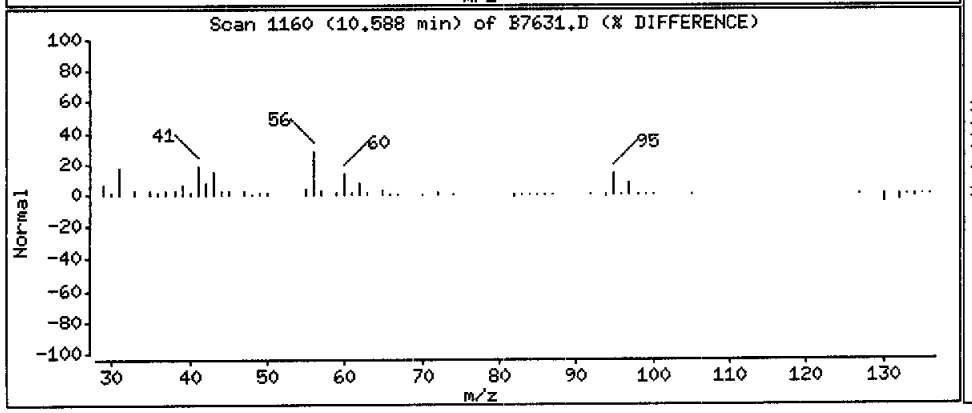
75 Trichloroethene

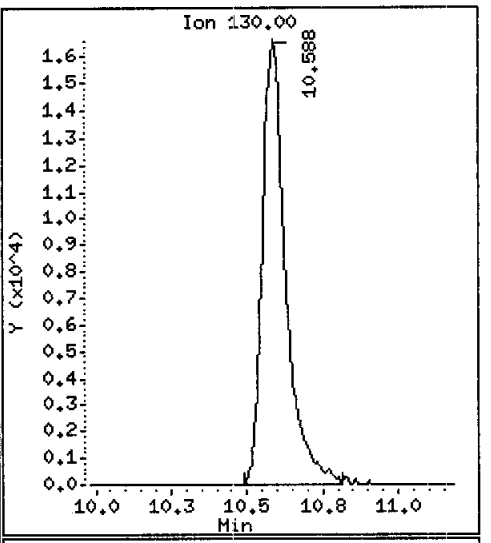
Concentration: 7.752 ppbv

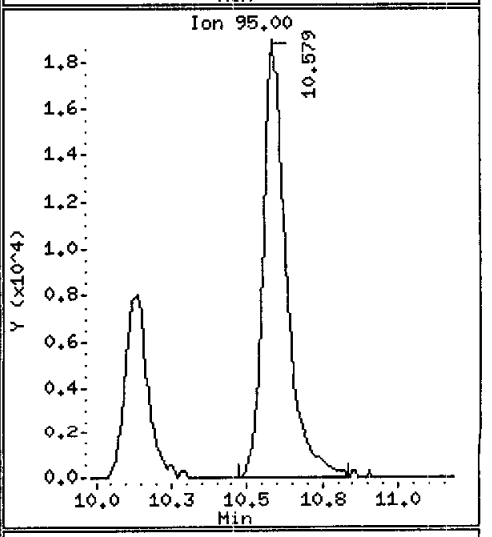


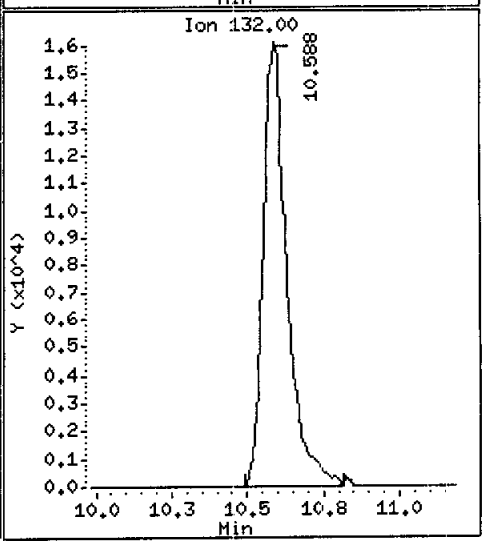












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

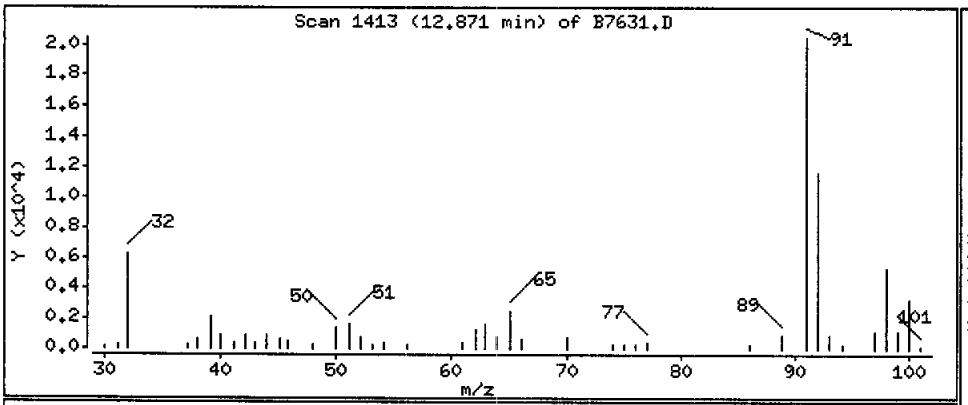
Operator: DLK

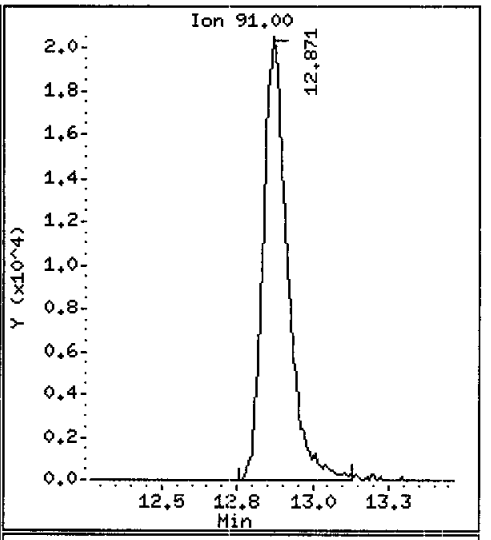
Column phase: J&W DB-624

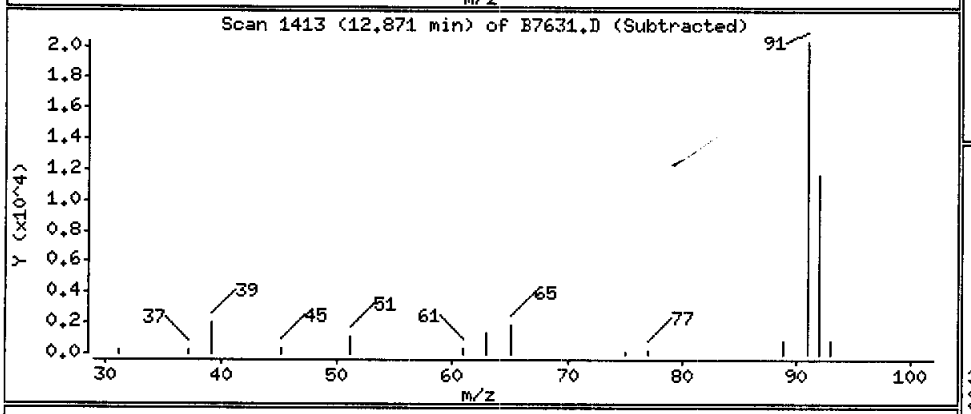
Column diameter: 0.53

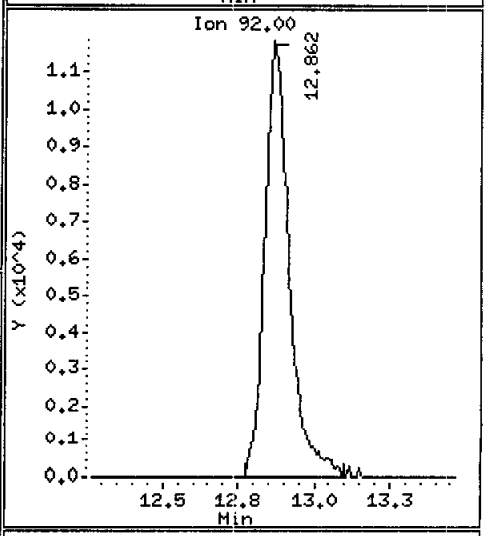
89 Toluene

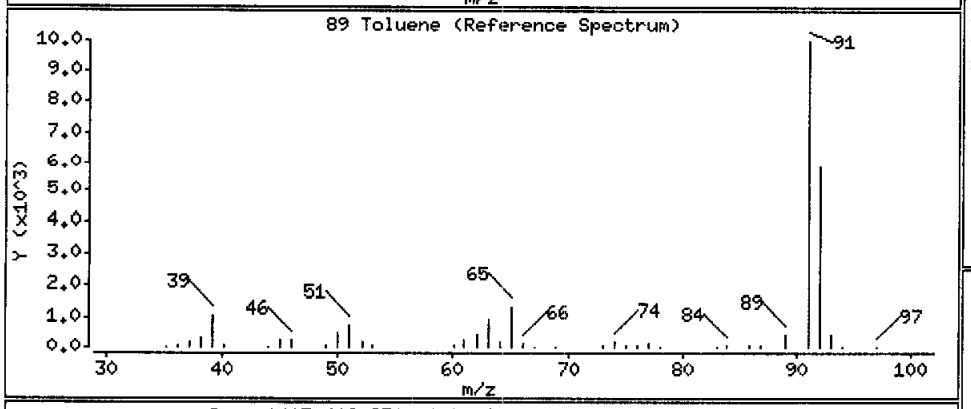
Concentration: 4.936 ppbv

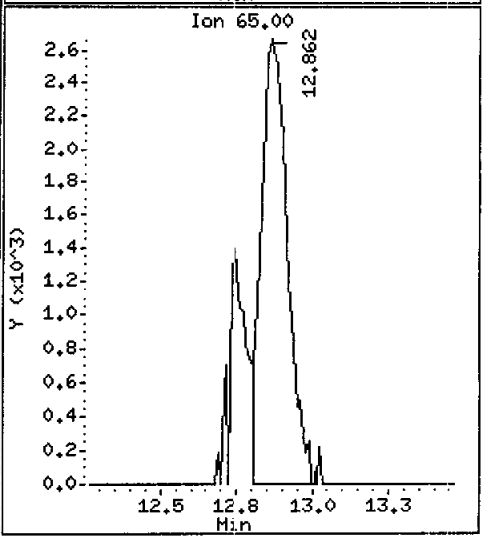


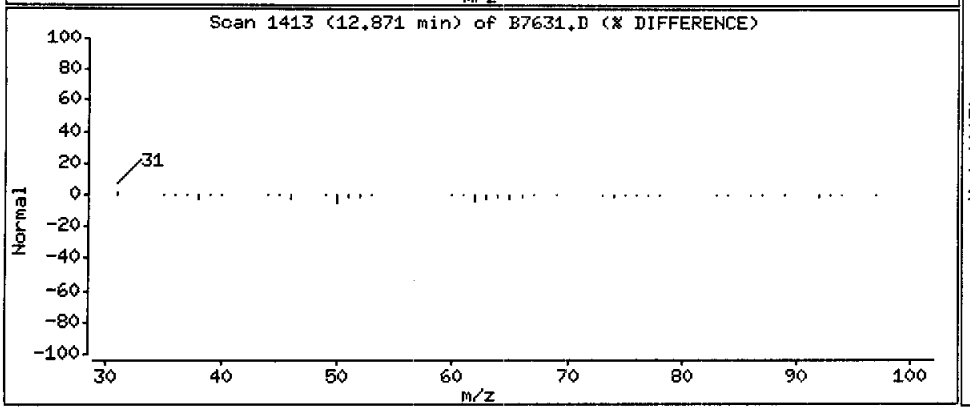












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

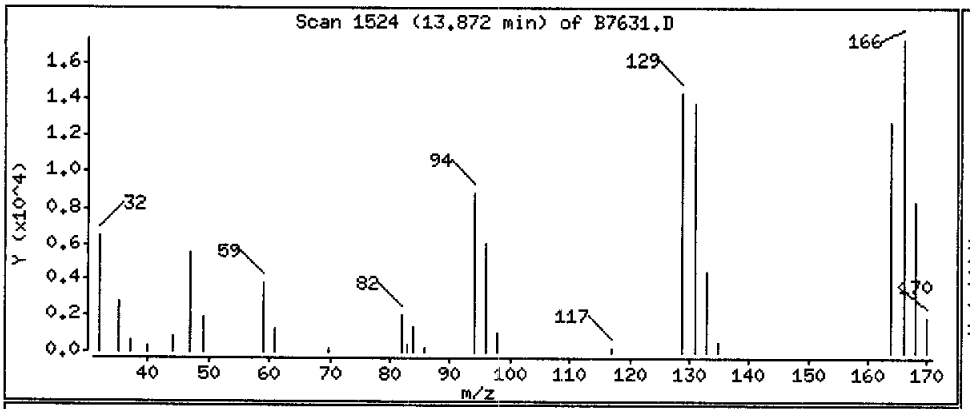
Operator: DLK

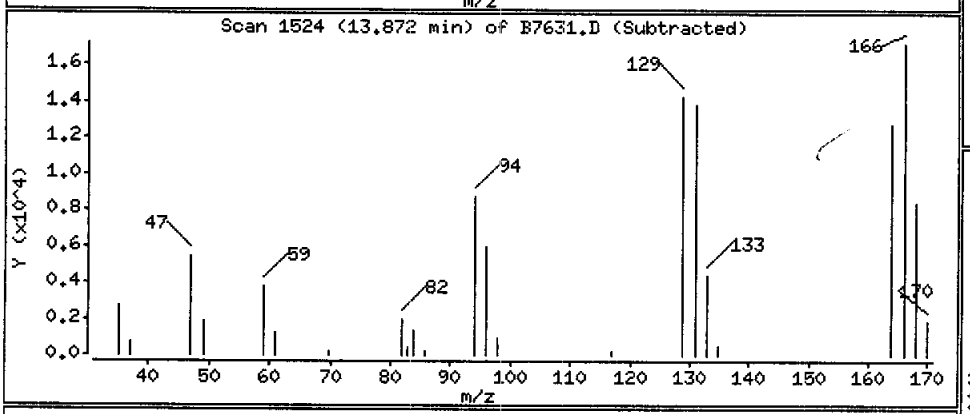
Column phase: J&W DB-624

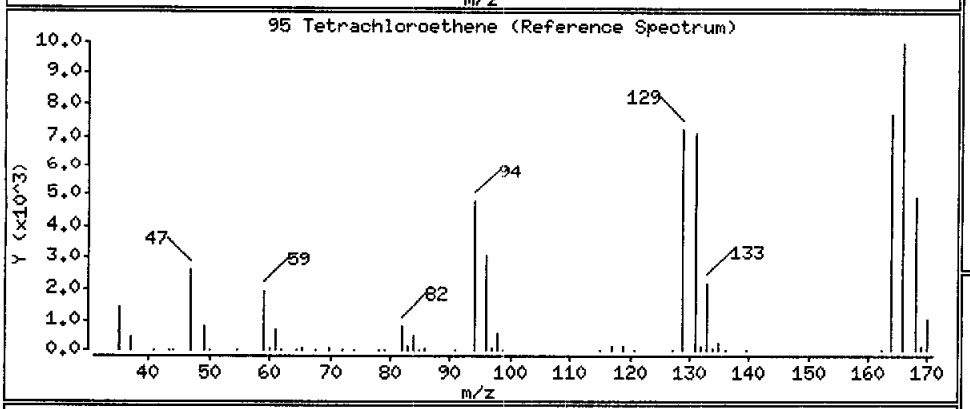
Column diameter: 0.53

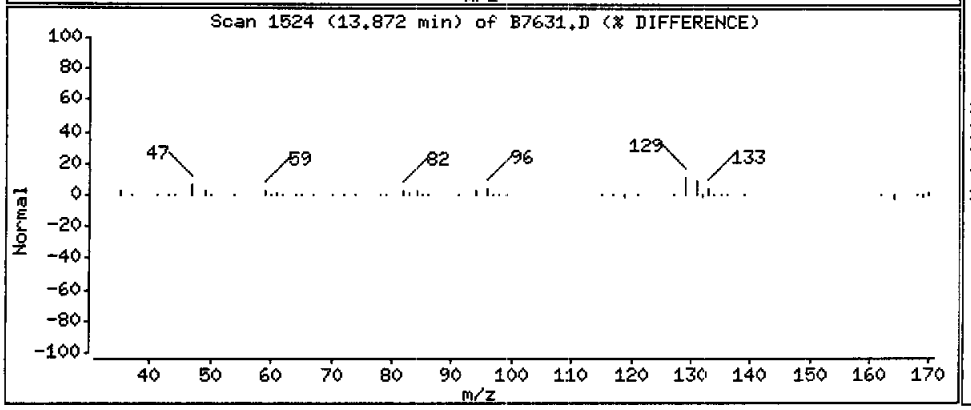
95 Tetrachloroethene

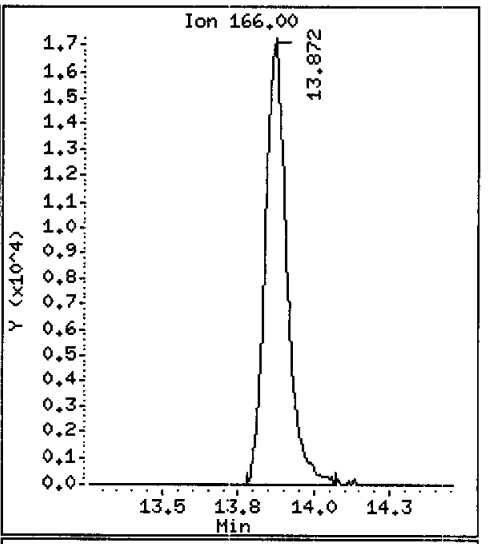
Concentration: 5.772 ppbv

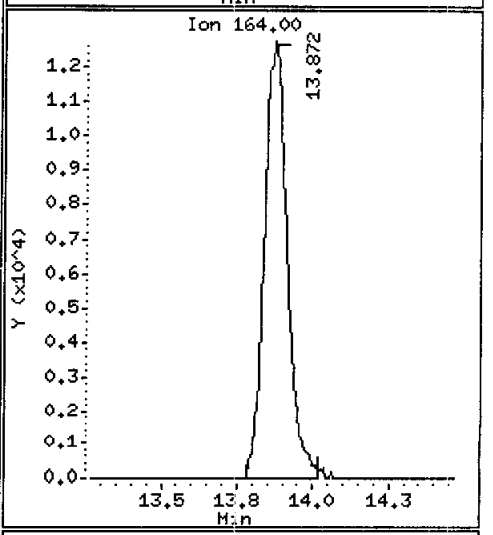


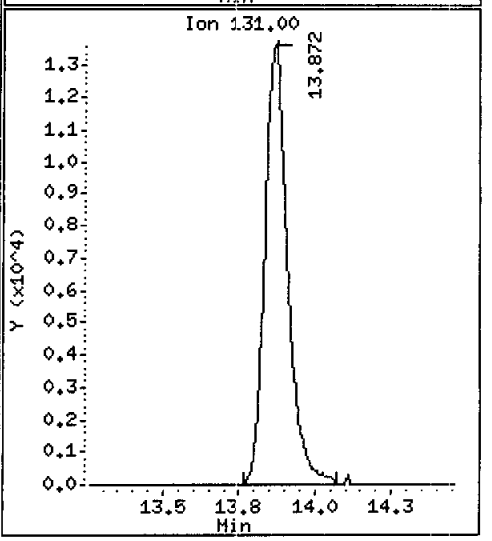












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7631.D

Date : 14-JAN-2005 21:31

Client ID: 066373-001

Instrument: gcmsb.i

Sample Info: G2DHR1AD,066373-001,SANDIA,E5A100224-4

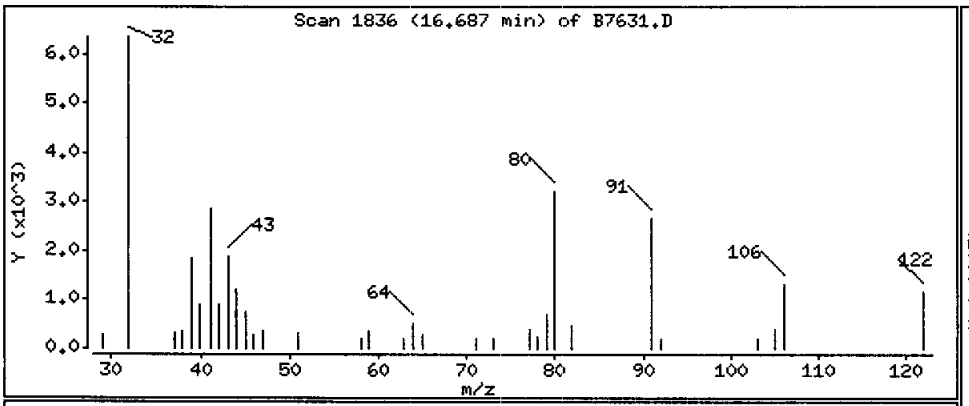
Operator: DLK

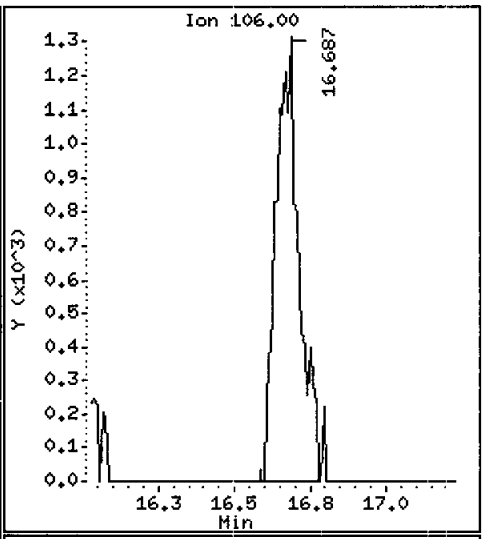
Column phase: J&W DB-624

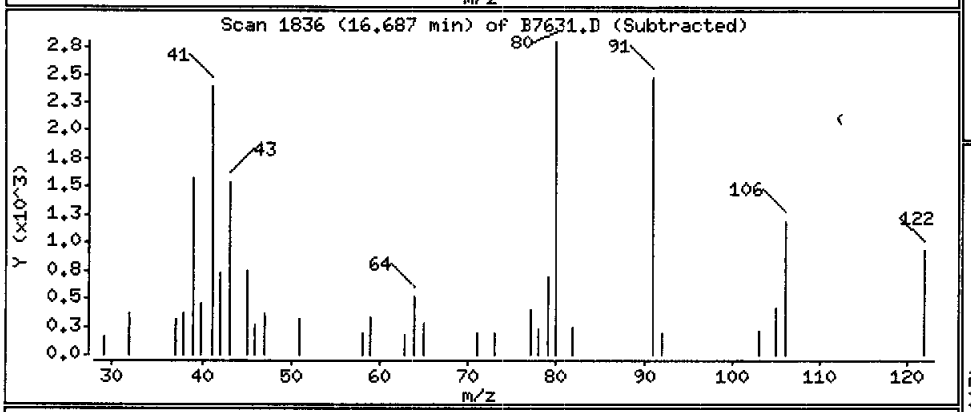
Column diameter: 0.53

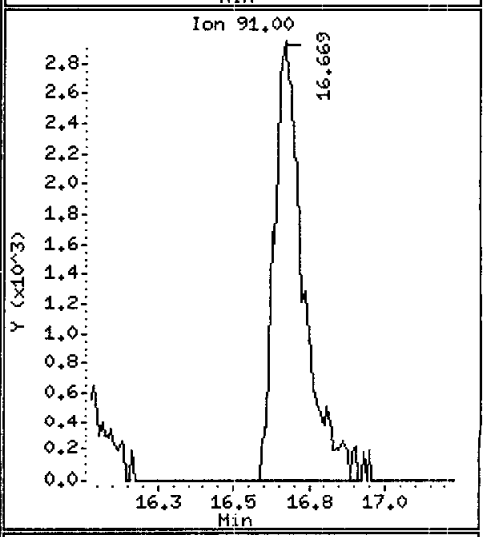
107 o-Xylene

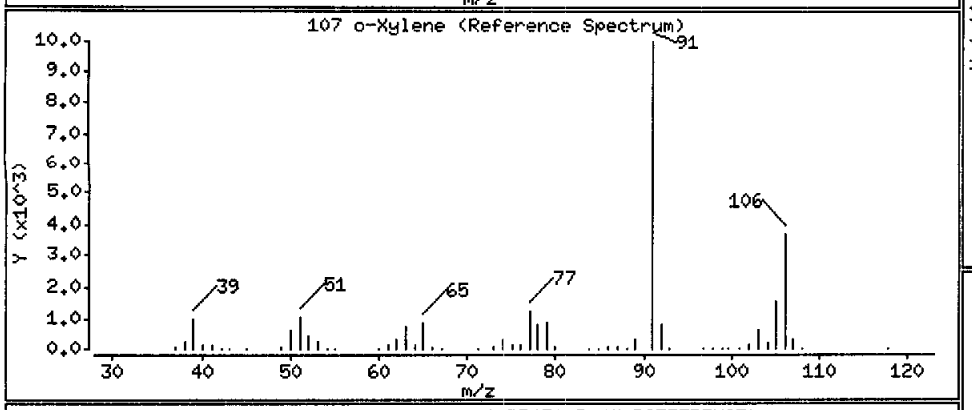
Concentration: 0.9068 ppbv

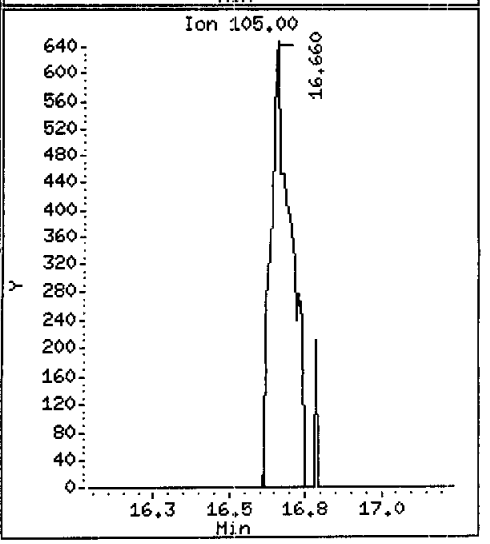


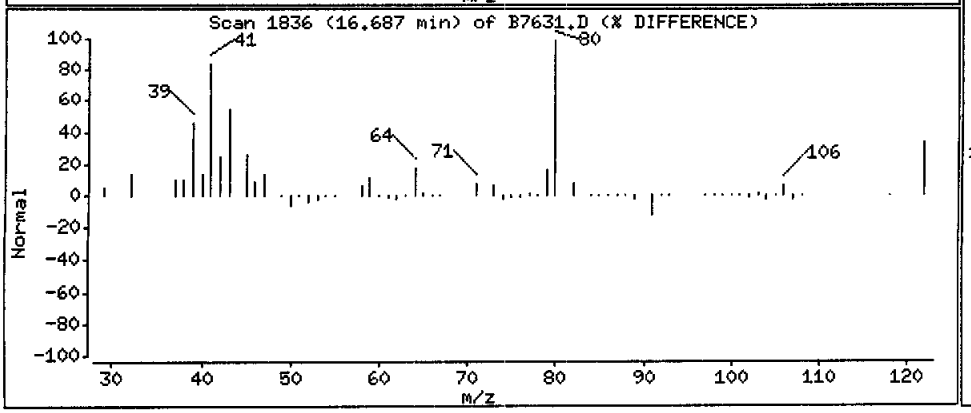












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D
Lab Smp Id: G2DHT1AD Client Smp ID: 066374-001
Inj Date : 14-JAN-2005 22:07
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHT1AD,066374-001,SANDIA,E5A100224-5
Misc Info : 24.4,12.0,500,1020,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.000	InitPres
CalVol	500.000	CalVol
SmpVol	1020.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.134	2.128	(0.257)	13937	0.57973	0.5778(a)
31 Acetone	58	4.895	4.844	(0.590)	4840	2.65566	2.647(a)
* 58 Bromochloromethane	49	8.296	8.309	(1.000)	569546	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.316	9.338	(0.920)	500689	46.2104	46.06
68 Benzene	78	9.424	9.437	(0.930)	25116	1.39799	1.393(a)
* 73 1,4-Difluorobenzene	114	10.128	10.141	(1.000)	1320279	50.0000	
75 Trichloroethene	130	10.579	10.583	(1.045)	11431	0.99165	0.9884(a)
$ 88 Toluene-d8	100	12.744	12.739	(1.258)	694002	50.1993	50.04
89 Toluene	91	12.871	12.865	(1.271)	59311	2.55136	2.543
M 99 Xylenes (total)	106				16925	2.16303	2.156
* 101 Chlorobenzene-d5	117	15.388	15.383	(1.000)	959968	50.0000	
105 m,p-Xylenes	106	15.929	15.879	(1.035)	11265	1.42162	1.417(a)
107 o-Xylene	106	16.696	16.628	(1.085)	5660	0.74141	0.7390(a)
$ 114 4-Bromofluorobenzene	95	17.644	17.638	(1.147)	811799	47.3392	47.18

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

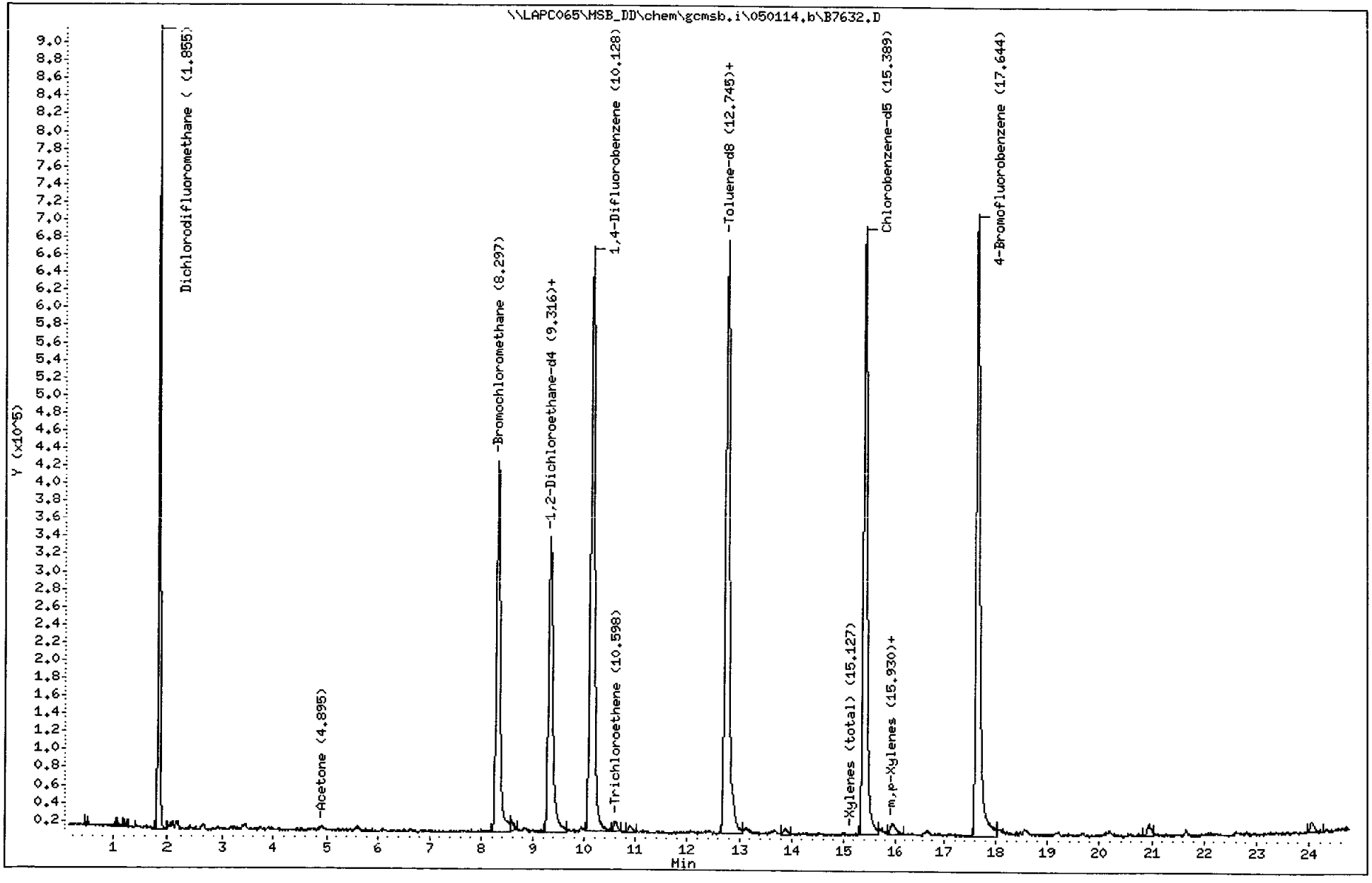
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D
Date : 14-JAN-2005 22:07
Client ID: 066374-001
Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

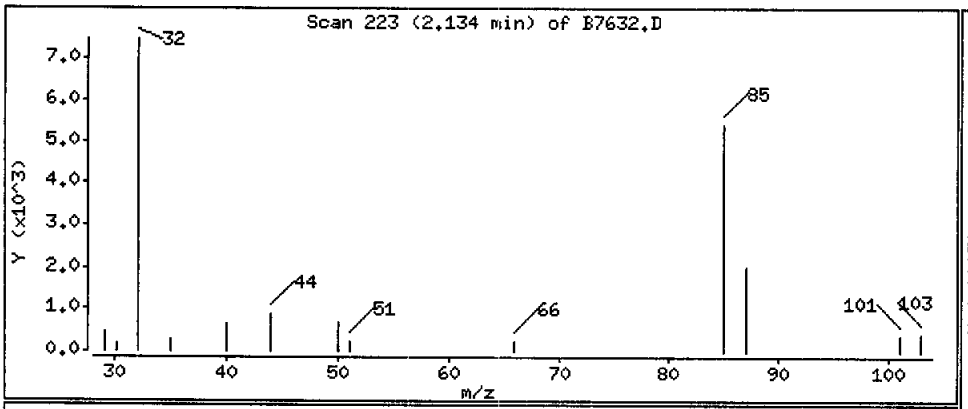
Operator: DLK

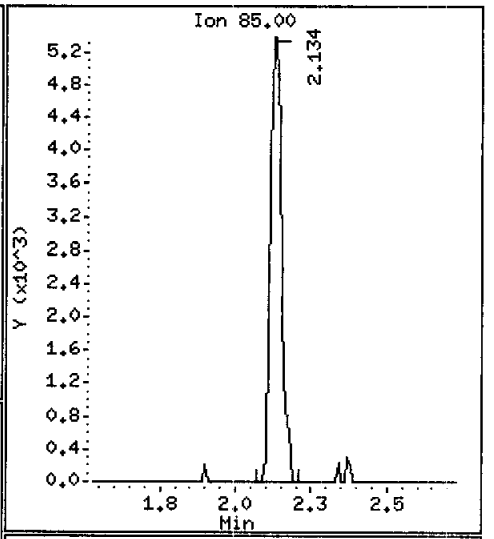
Column phase: J&W DB-624

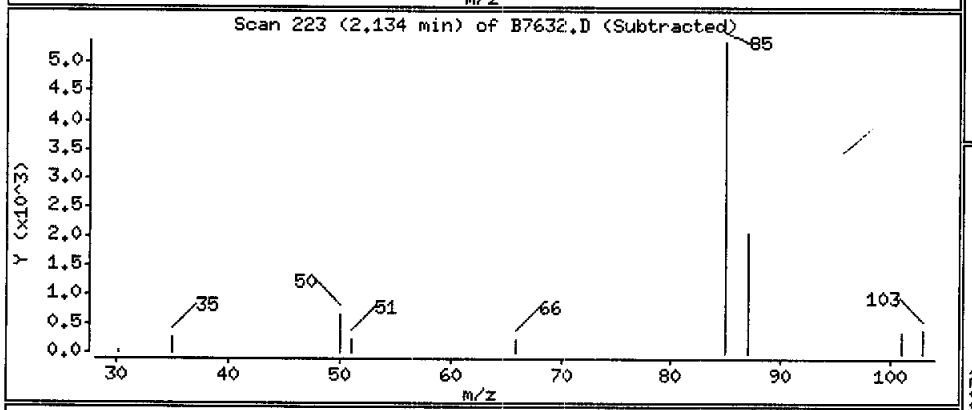
Column diameter: 0.53

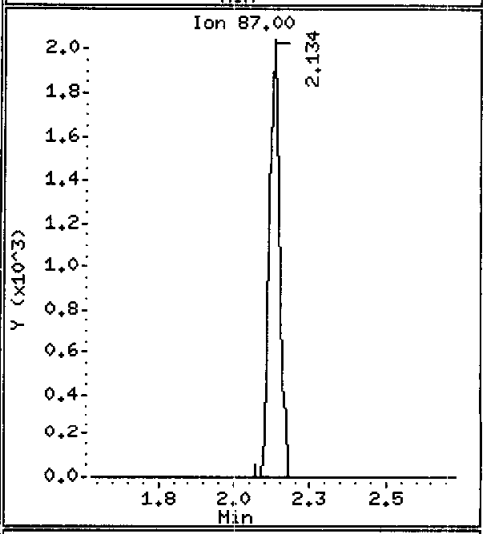
3 Dichlorodifluoromethane (F12)

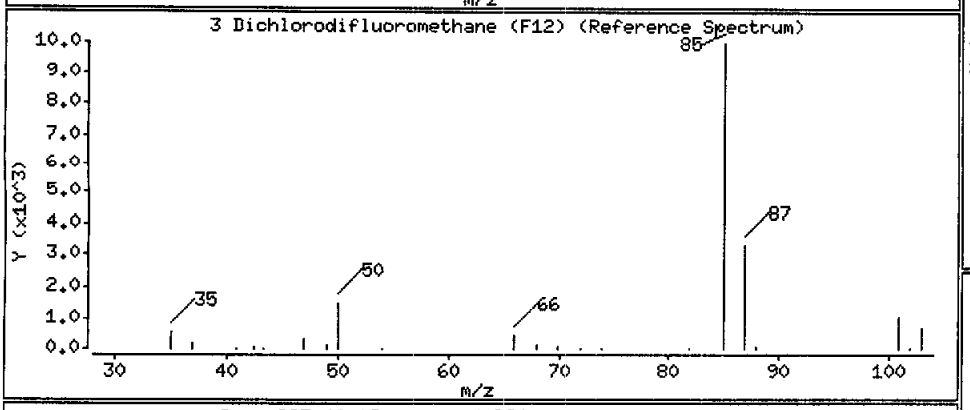
Concentration: 0.5778 ppbv

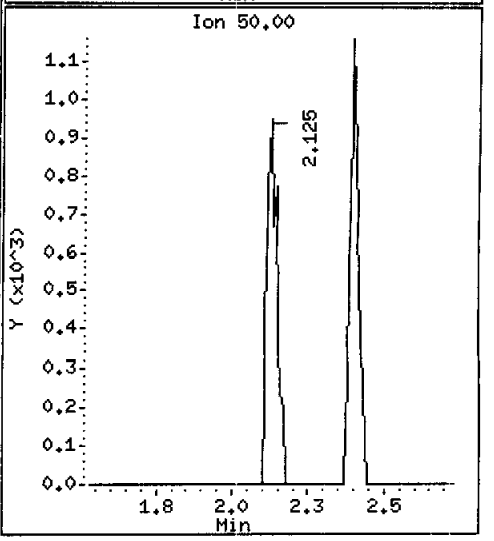


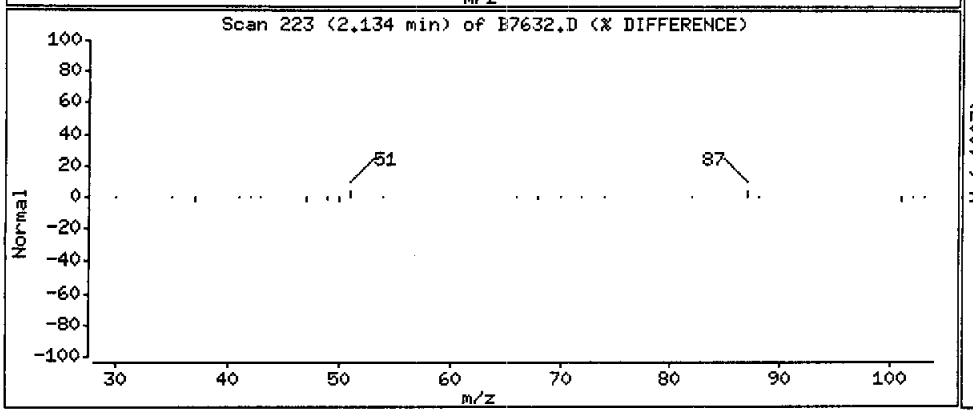












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

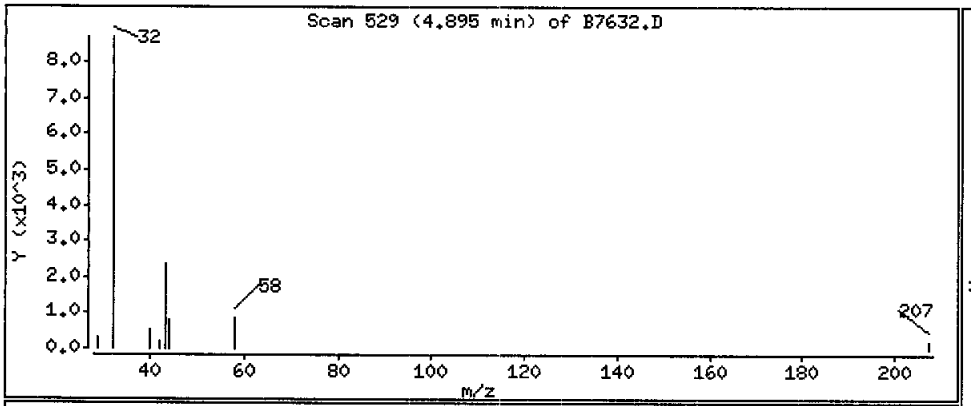
Operator: DLK

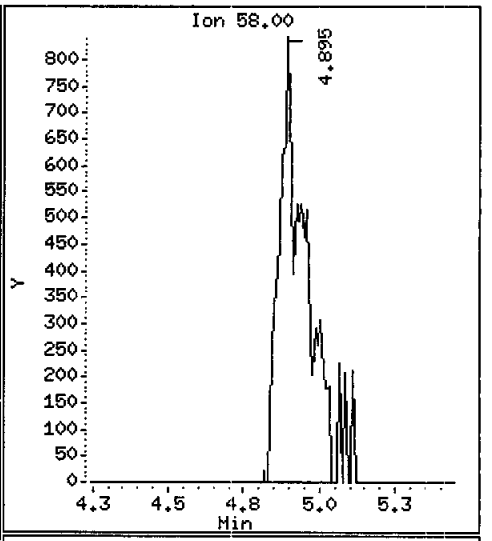
Column phase: J&W DB-624

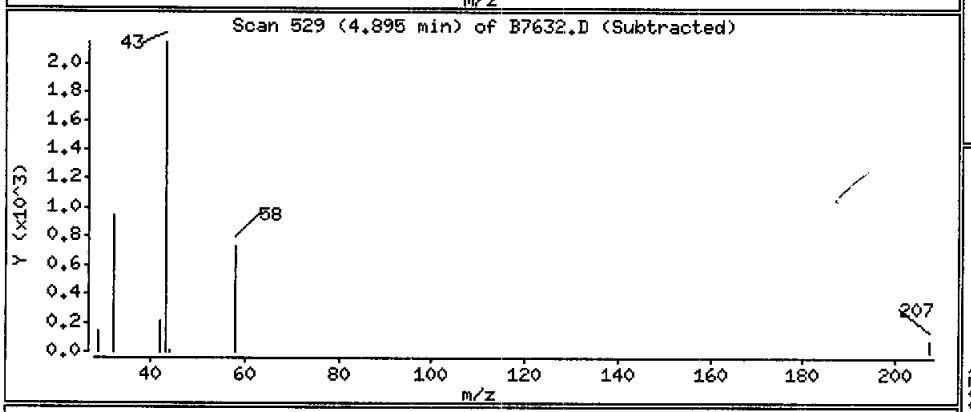
Column diameter: 0.53

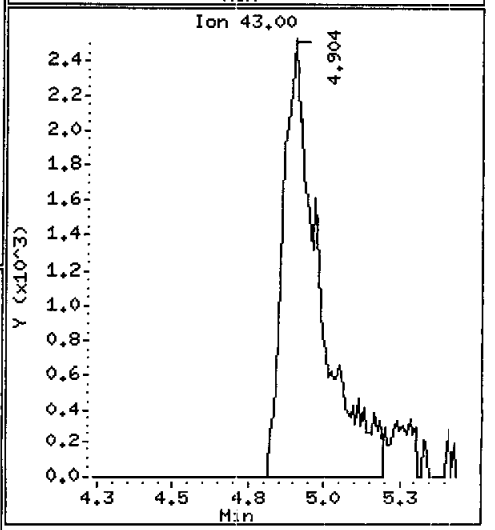
31 Acetone

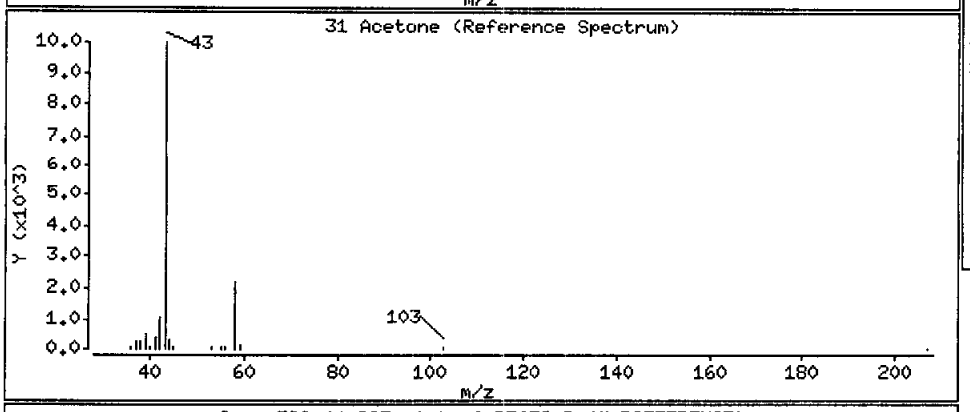
Concentration: 2.647 ppbv

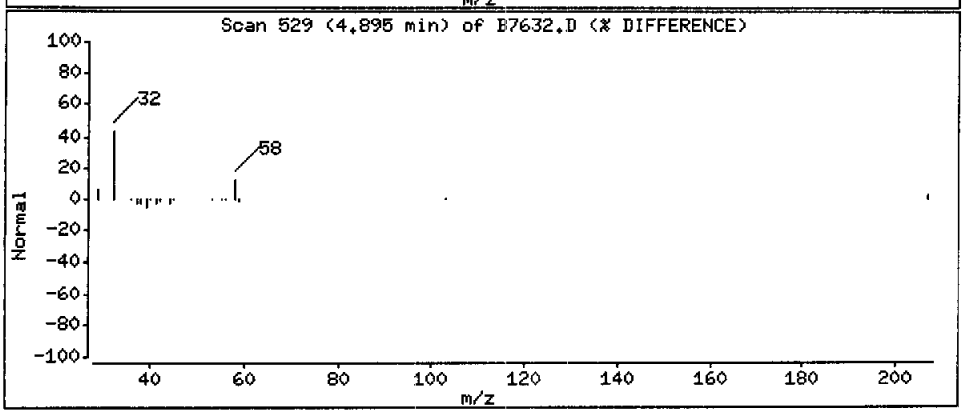












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

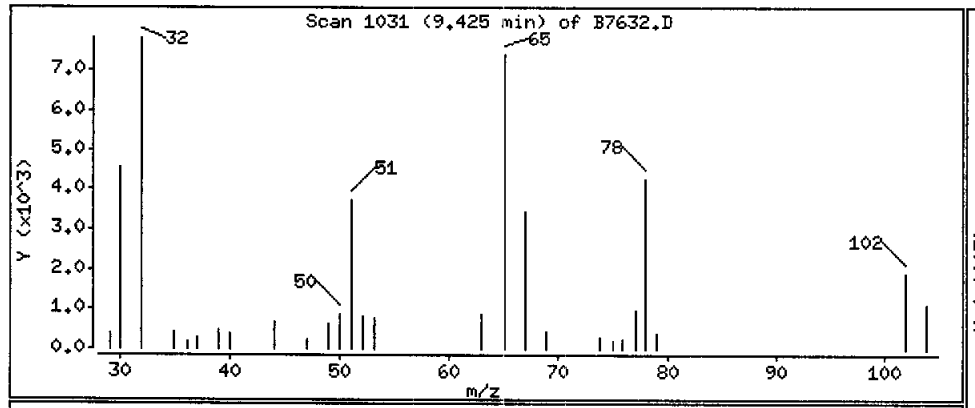
Operator: DLK

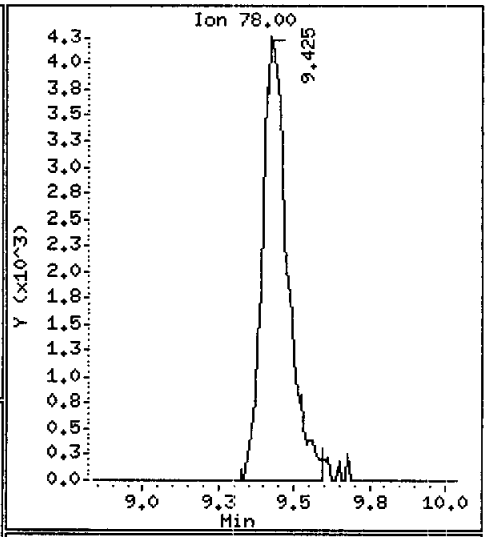
Column phase: J&W DB-624

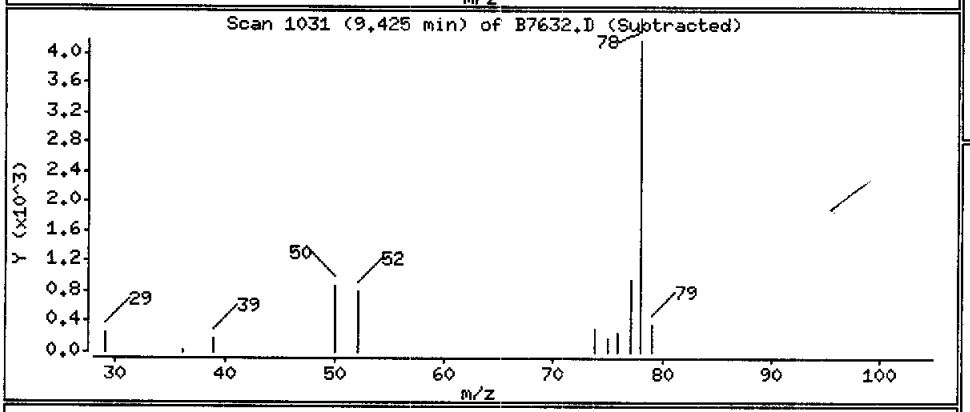
Column diameter: 0.53

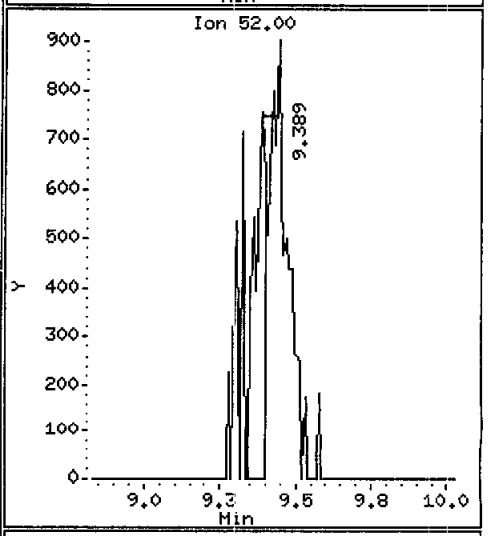
68 Benzene

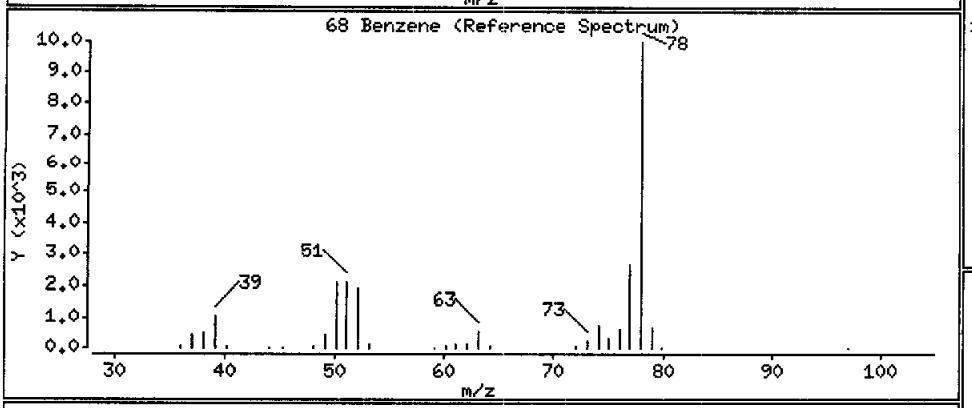
Concentration: 1.393 ppbv

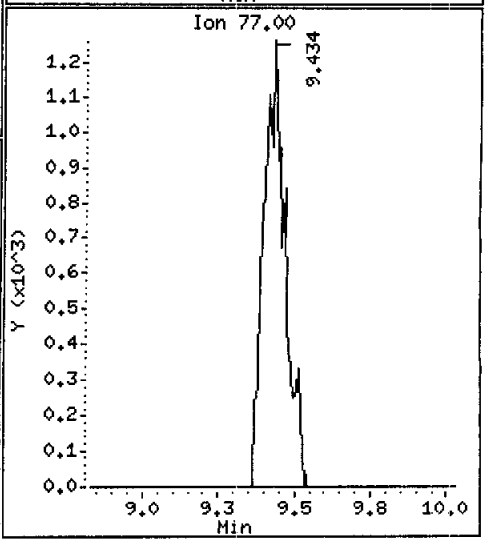


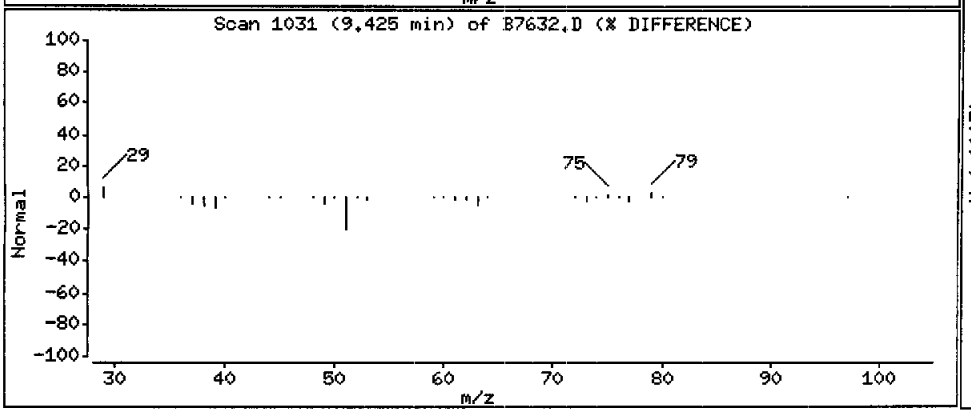












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

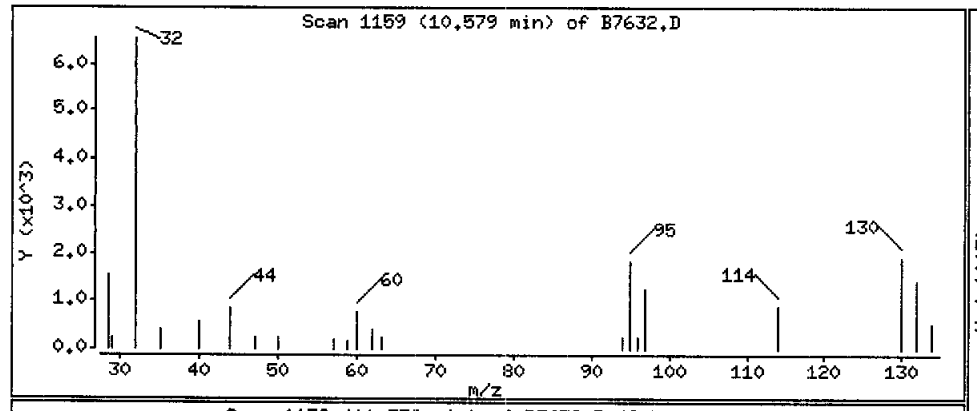
Operator: DLK

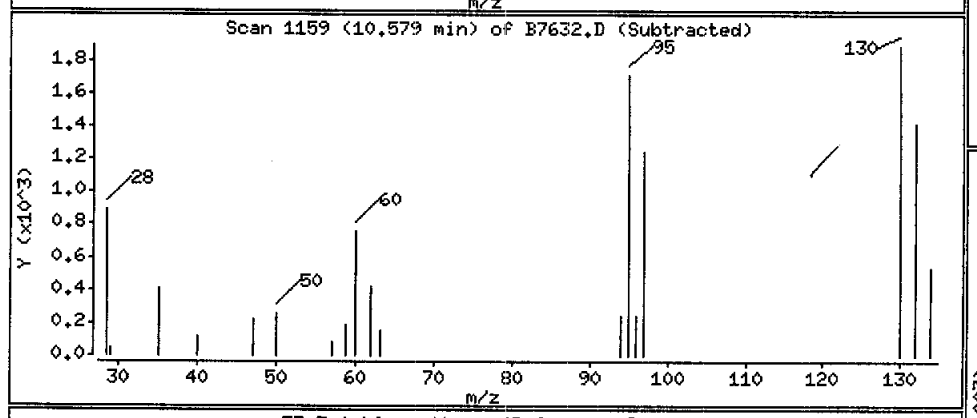
Column phase: J&W DB-624

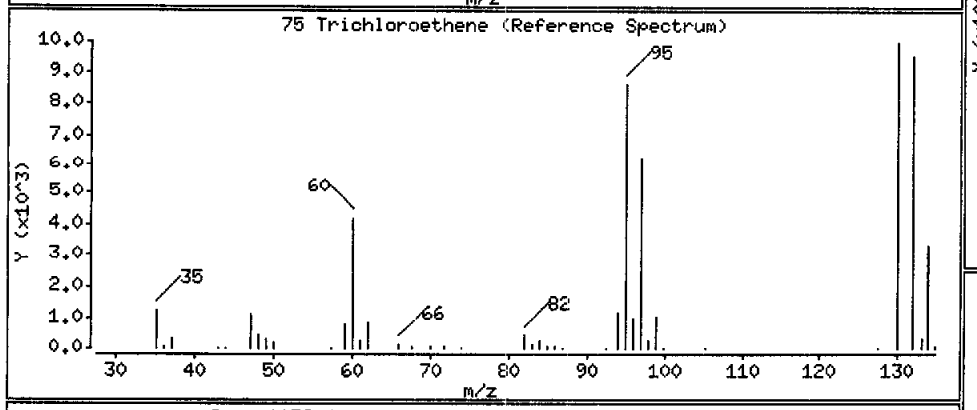
Column diameter: 0.53

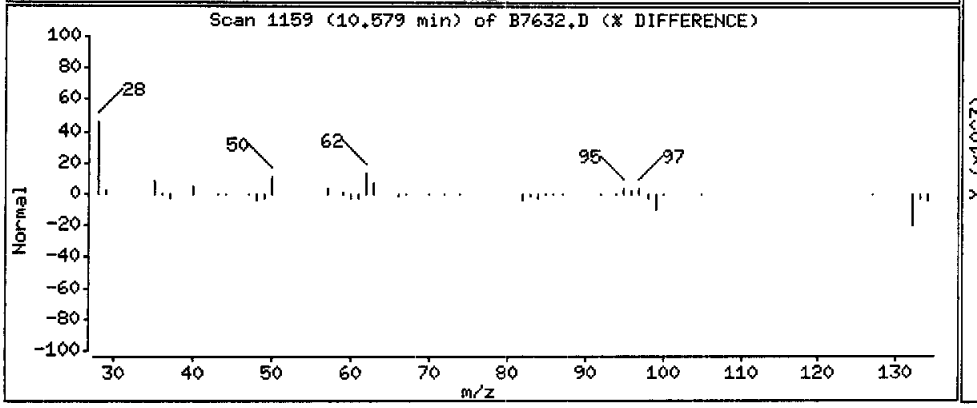
75 Trichloroethene

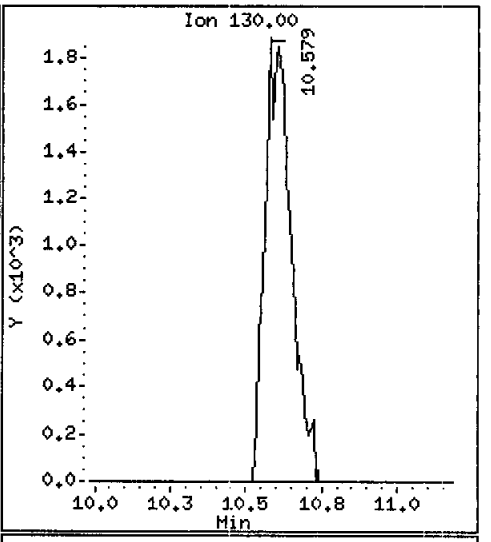
Concentration: 0.9884 ppbv

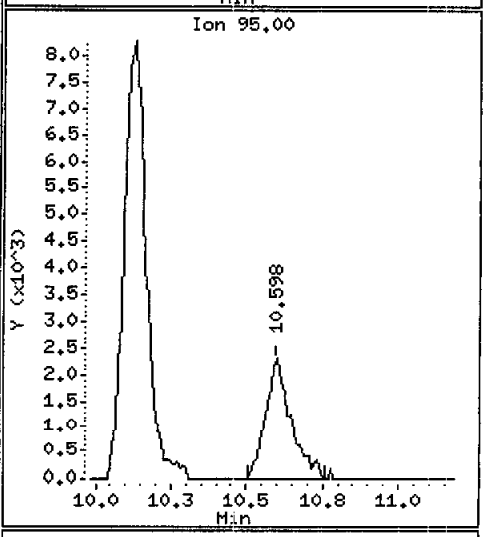


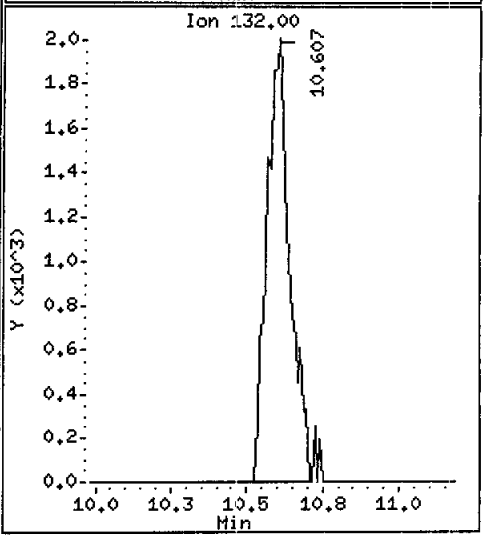












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

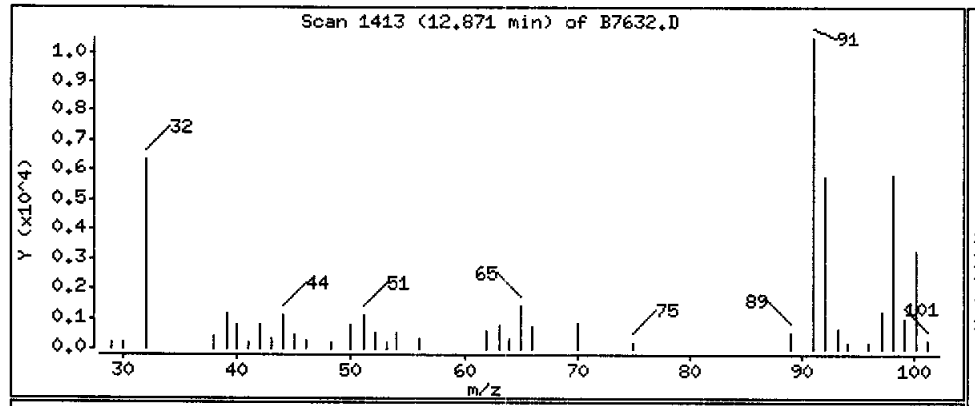
Operator: DLK

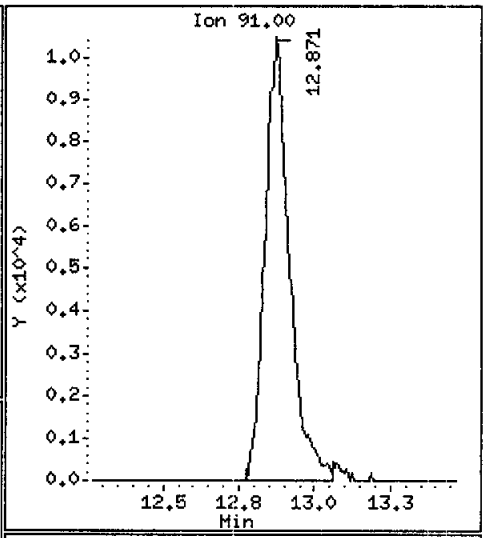
Column phase: J&W DB-624

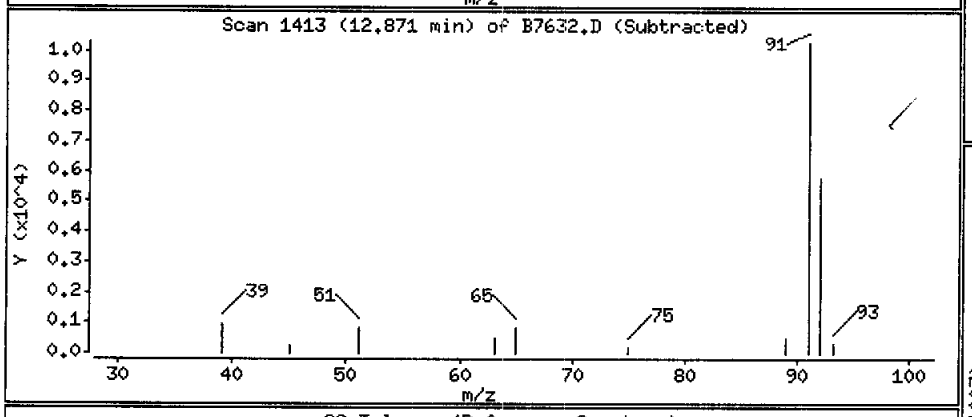
Column diameter: 0.53

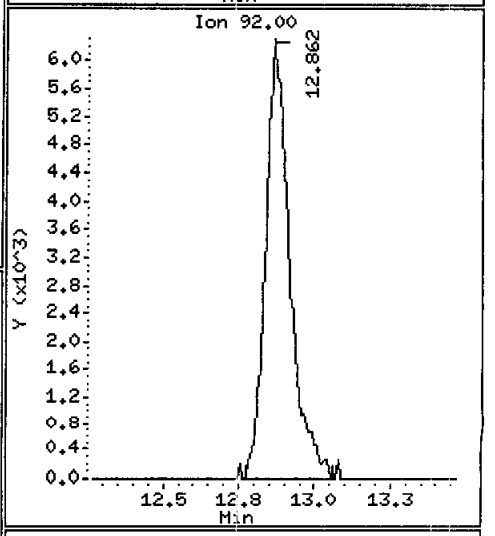
89 Toluene

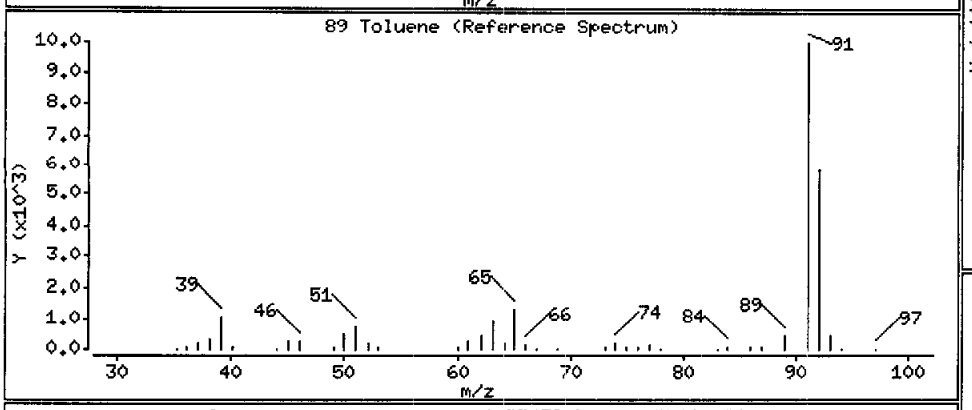
Concentration: 2.543 ppbv

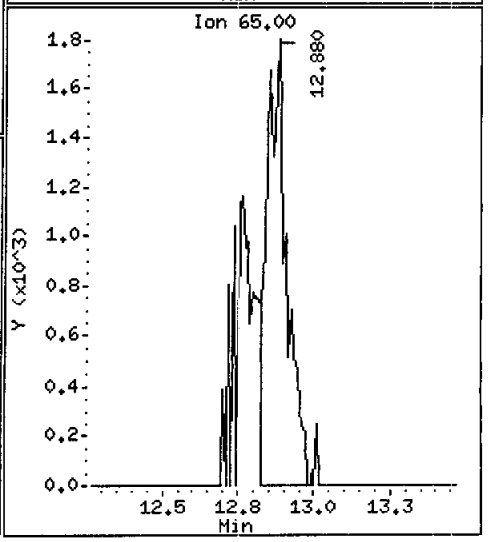


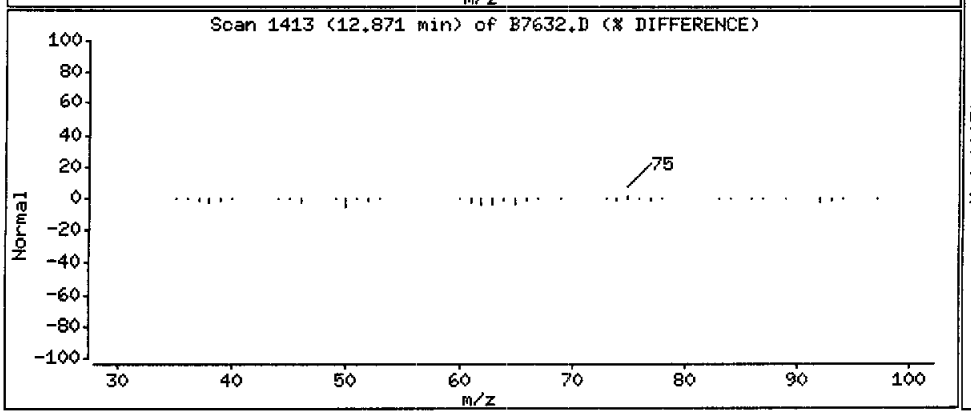












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

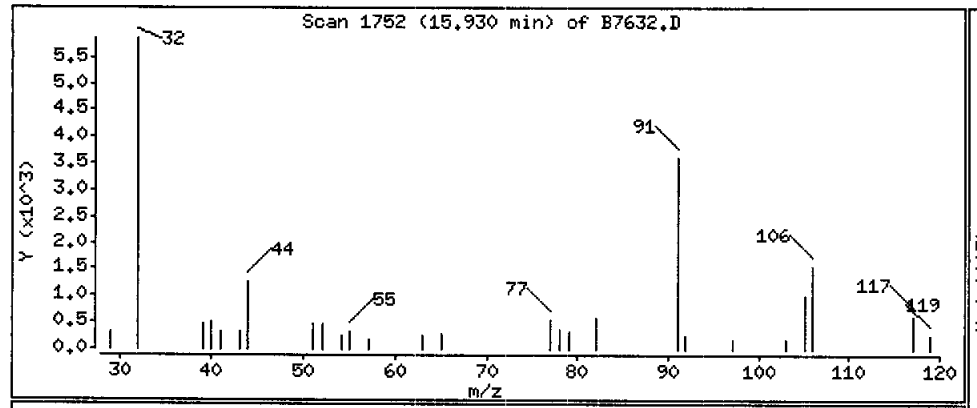
Operator: DLK

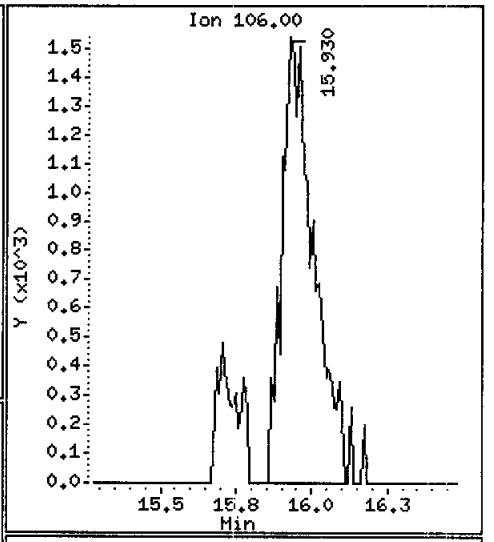
Column phase: J&W DB-624

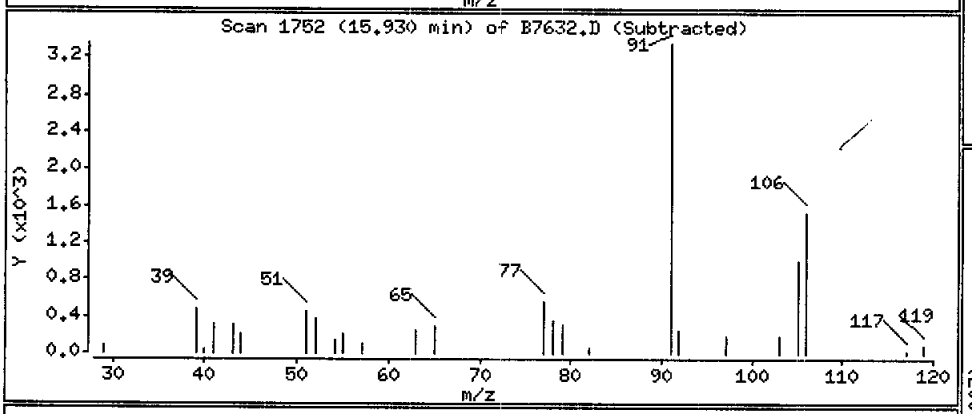
Column diameter: 0.53

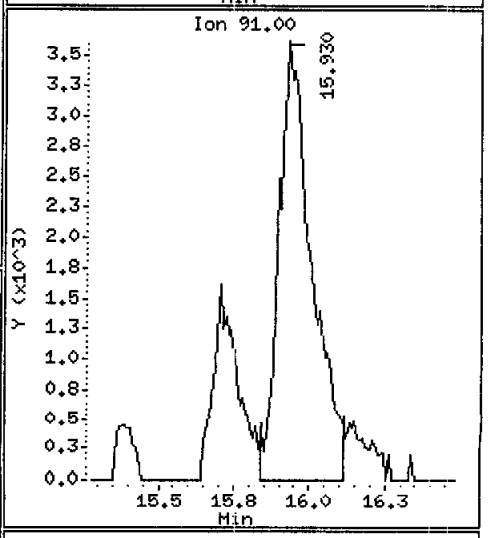
105 m,p-Xylenes

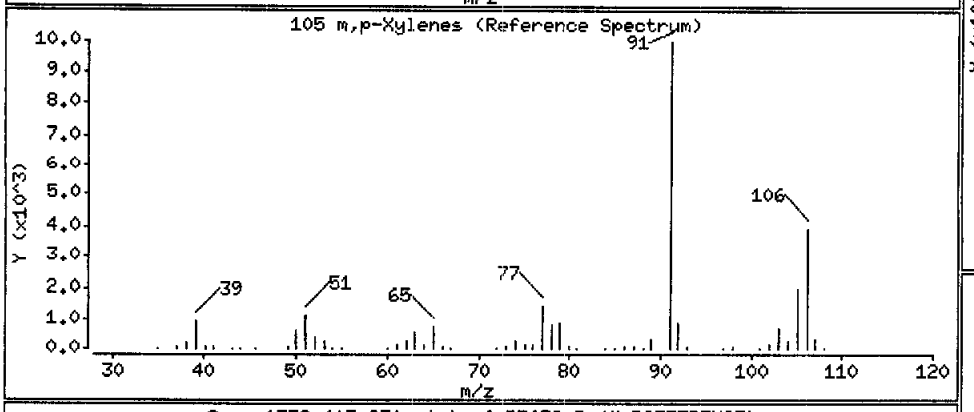
Concentration: 1.417 ppbv

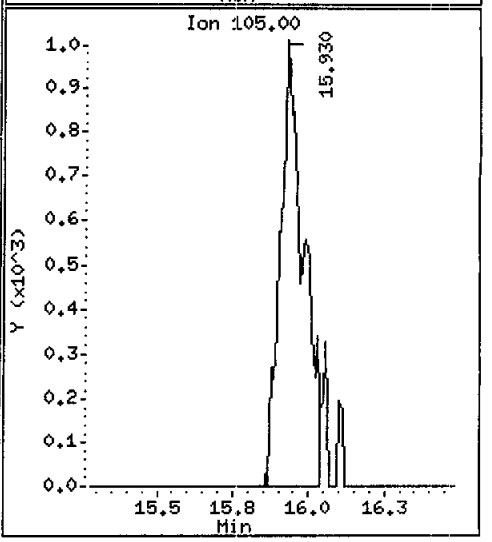


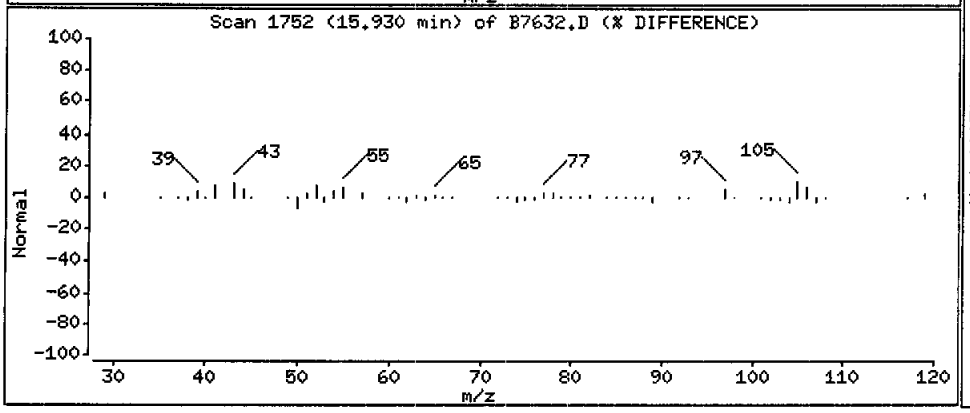












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7632.D

Date : 14-JAN-2005 22:07

Client ID: 066374-001

Instrument: gcmsb.i

Sample Info: G2DHT1AD,066374-001,SANDIA,E5A100224-5

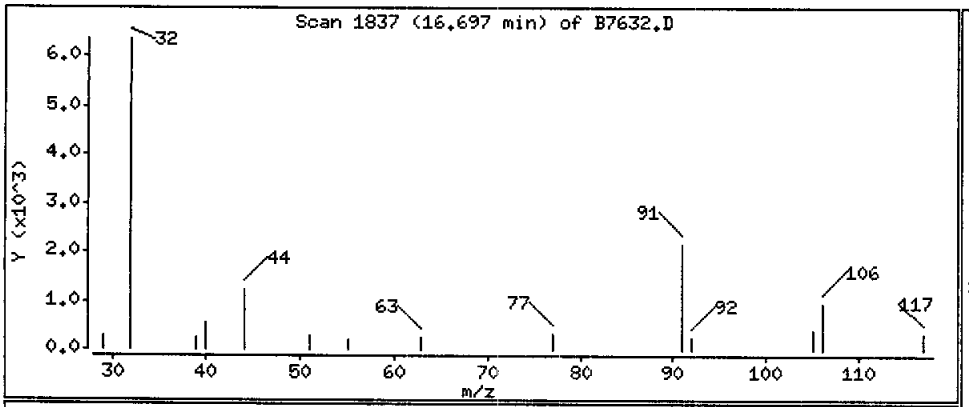
Operator: DLK

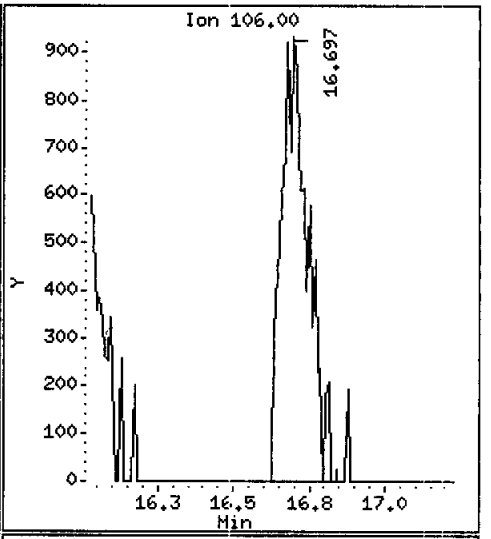
Column phase: J&W DB-624

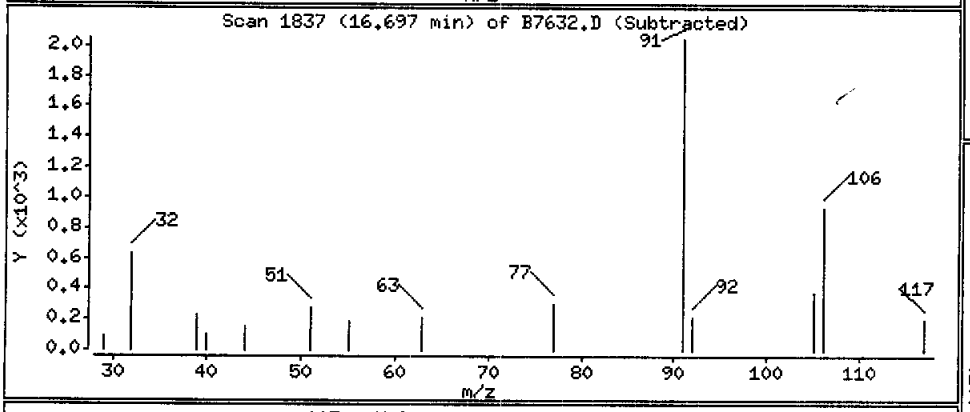
Column diameter: 0.53

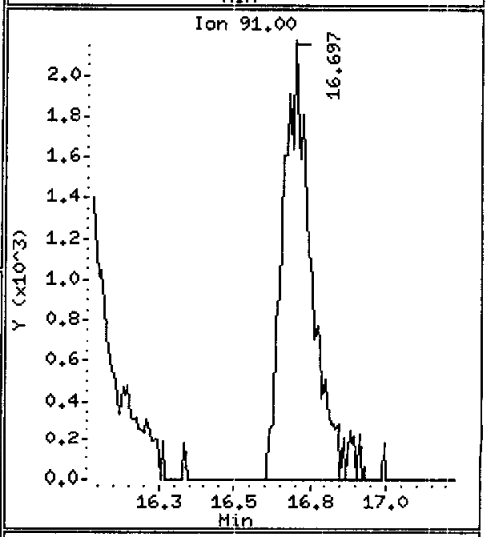
107 o-Xylene

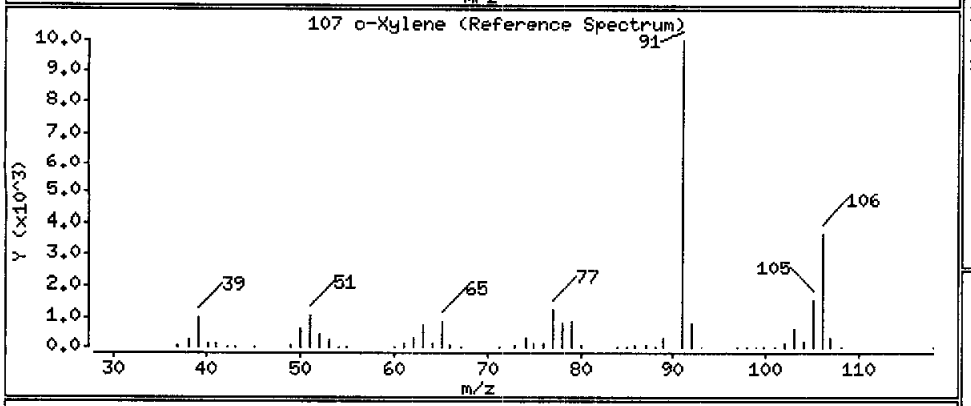
Concentration: 0.7390 ppbv

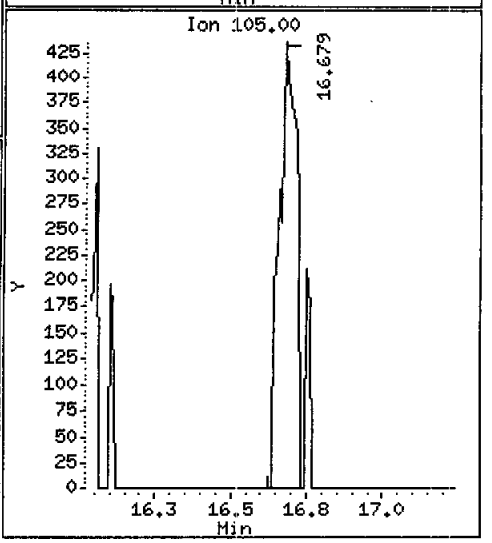


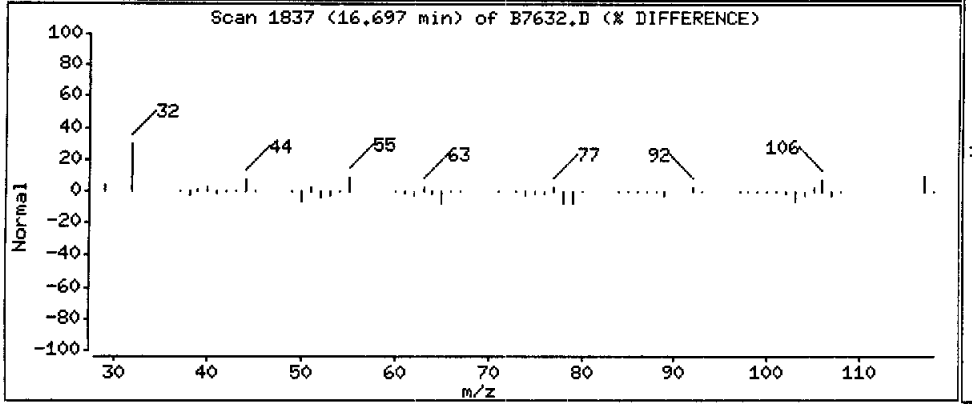












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D
Lab Smp Id: G2DHV1AD Client Smp ID: 066375-001
Inj Date : 14-JAN-2005 22:42
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DHV1AD,066375-001,SANDIA,E5A100224-6
Misc Info : 23.6,12.0,500,984,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\TO14A.m
Meth Date : 14-Jan-2005 09:15 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	23.600	FinalPres
InitPres	12.000	InitPres
CalVol	500.000	CalVol
SmpVol	984.000	SmpVol

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	3 Dichlorodifluoromethane (F12)	85	2.133	2.128	(0.257)	15281	0.61494	0.6145(a)
	16 Chloroethane	64	3.306	3.301	(0.398)	2891	0.95365	0.9530(a)
	31 Acetone	58	4.831	4.844	(0.582)	43348	23.0077	22.99(Q)
	33 Carbon Disulfide	76	5.020	5.043	(0.605)	28039	2.24384	2.242(a)
	54 2-Butanone	72	7.953	7.975	(0.958)	131382	52.4172	52.38
*	58 Bromochloromethane	49	8.304	8.309	(1.000)	588737	50.0000	
$	66 1,2-Dichloroethane-d4	65	9.324	9.338	(0.920)	512945	46.5336	46.50
	68 Benzene	78	9.432	9.437	(0.931)	42186	2.30807	2.306
*	73 1,4-Difluorobenzene	114	10.136	10.141	(1.000)	1343202	50.0000	
	75 Trichloroethene	130	10.578	10.583	(1.044)	26591	2.26729	2.266
	86 4-Methyl-2-Pentanone	58	12.572	12.559	(1.240)	23371	3.78802	3.785(aQ)
$	88 Toluene-d8	100	12.744	12.739	(1.257)	715469	50.8689	50.83
	89 Toluene	91	12.870	12.865	(1.270)	165162	6.98339	6.979
	95 Tetrachloroethene	166	13.880	13.858	(0.902)	11408	0.70226	0.7018(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
96 2-Hexanone	58	14.142	14.065	(0.919)	12025	2.29622	2.295(a)
M 99 Xylenes (total)	106				8487	1.02849	1.028(a)
* 101 Chlorobenzene-d5	117	15.387	15.383	(1.000)	1037585	50.0000	
107 o-Xylene	106	16.650	16.628	(1.082)	8487	1.02849	1.028(a)
$ 114 4-Bromofluorobenzene	95	17.643	17.638	(1.147)	922954	49.7950	49.76

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

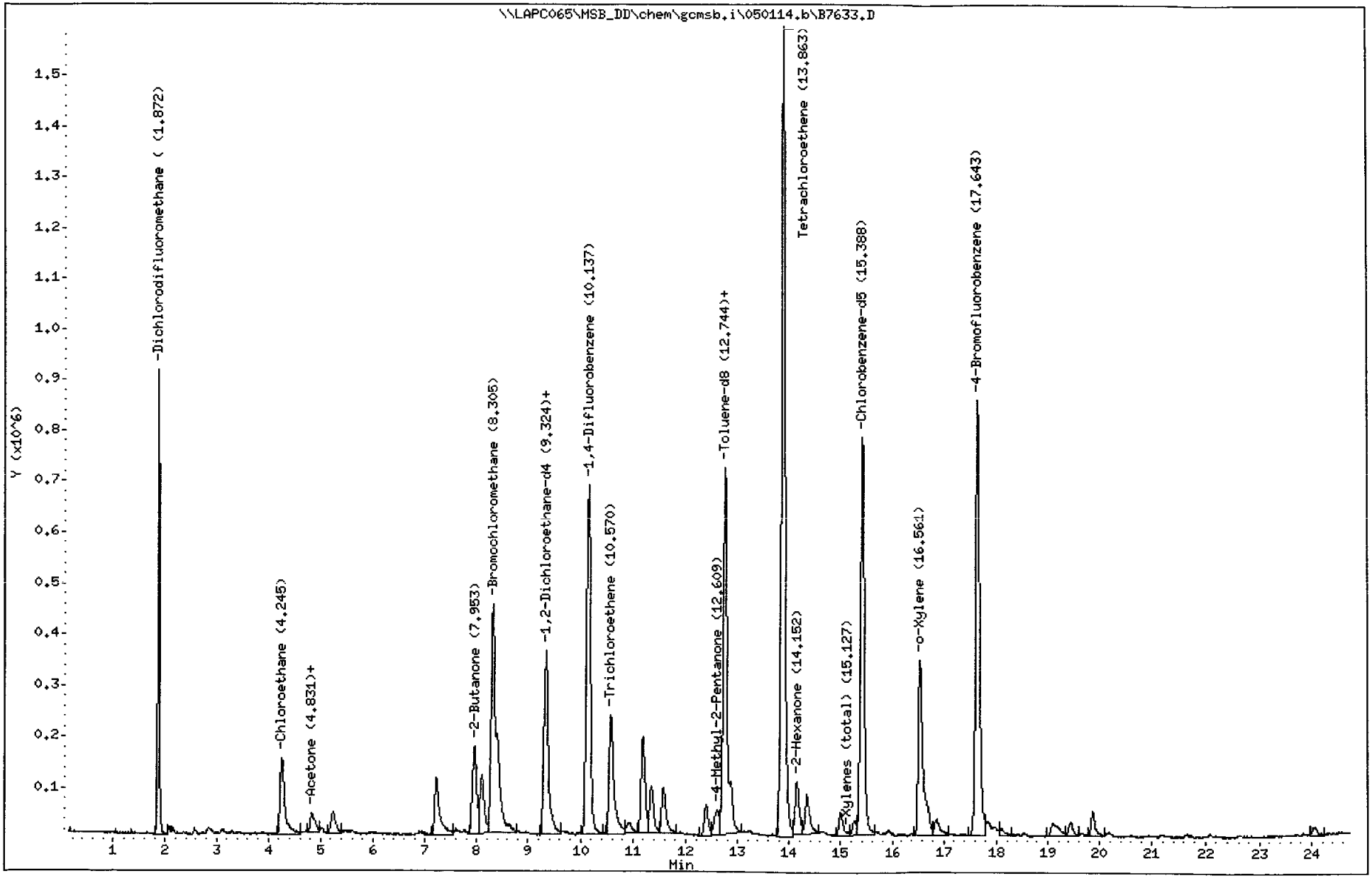
Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

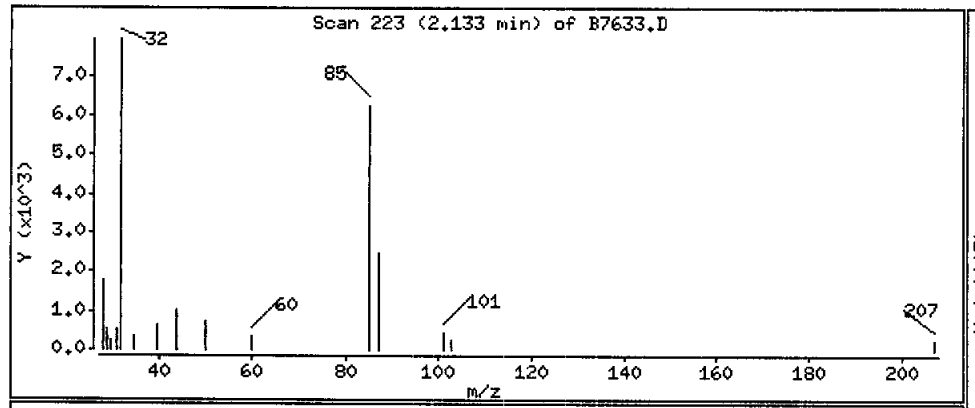
Operator: DLK

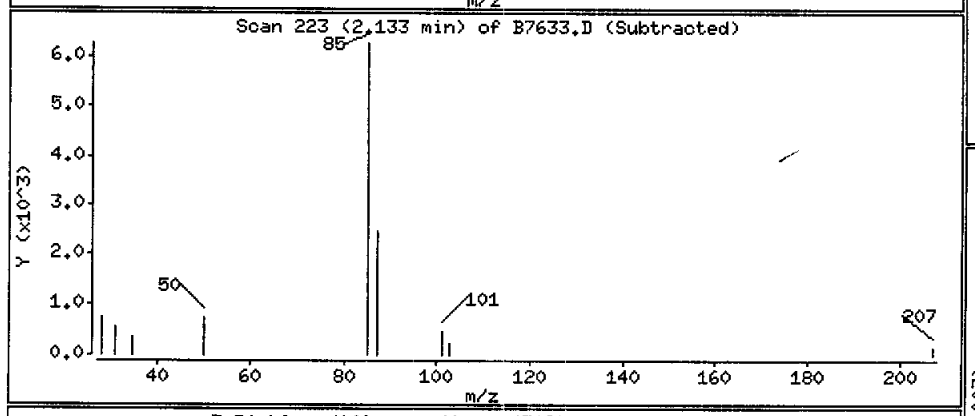
Column phase: J&W DB-624

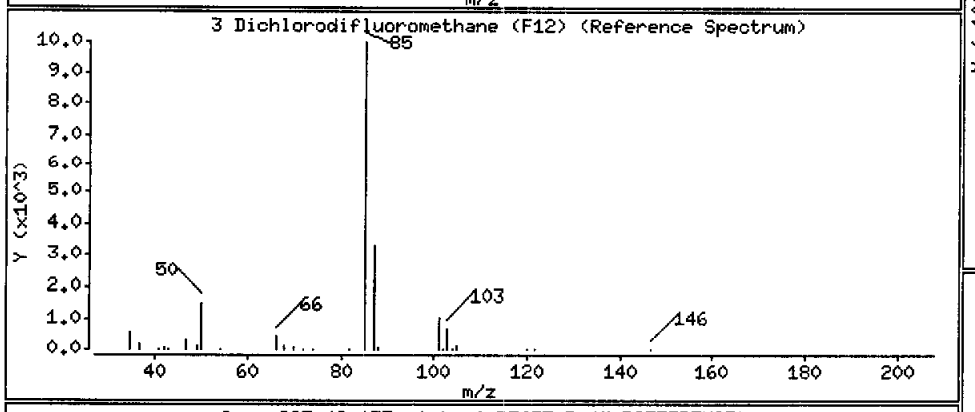
Column diameter: 0.53

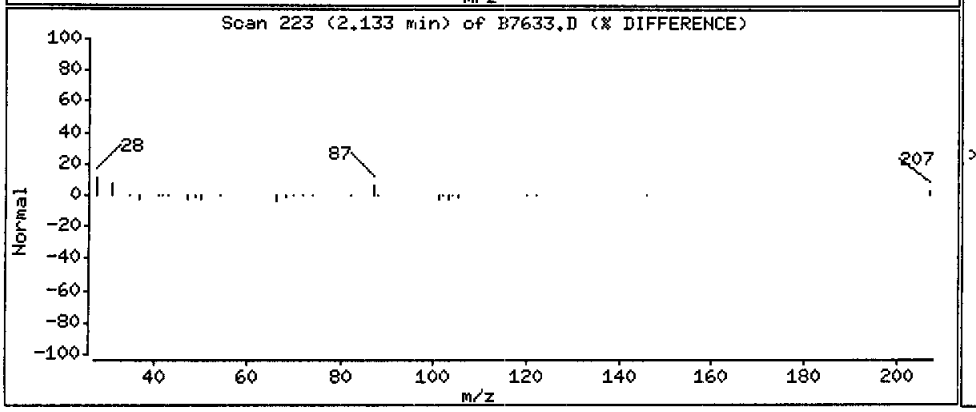
3 Dichlorodifluoromethane (F12)

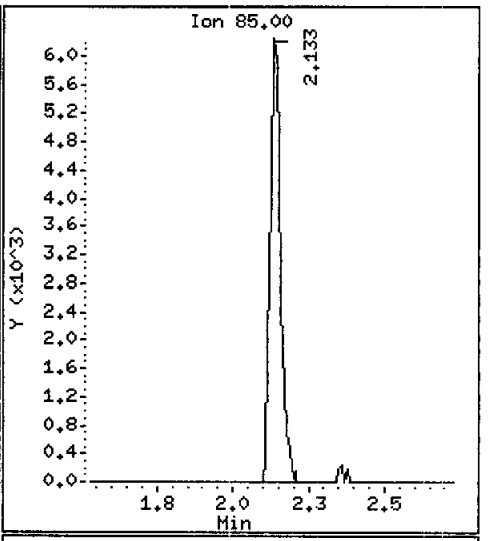
Concentration: 0.6145 ppbv

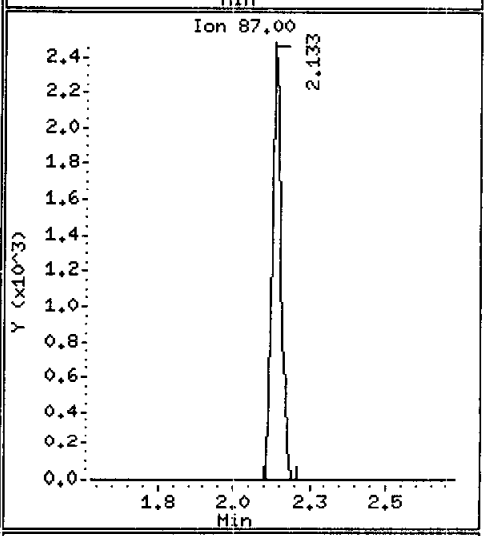


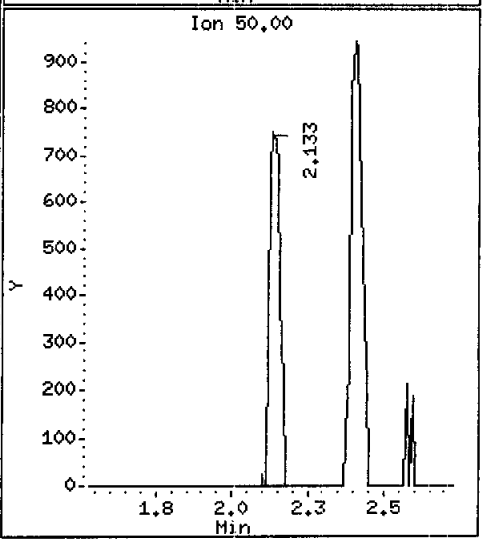












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

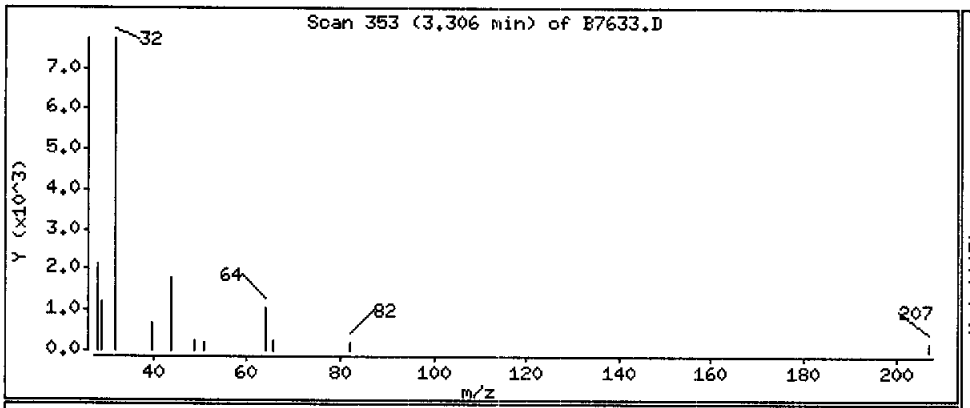
Operator: DLK

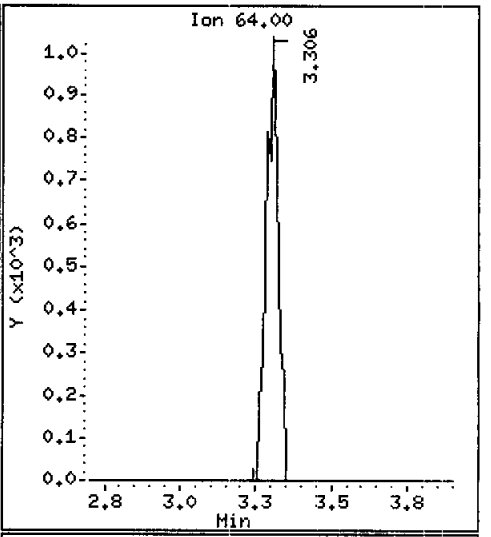
Column phase: J&W DB-624

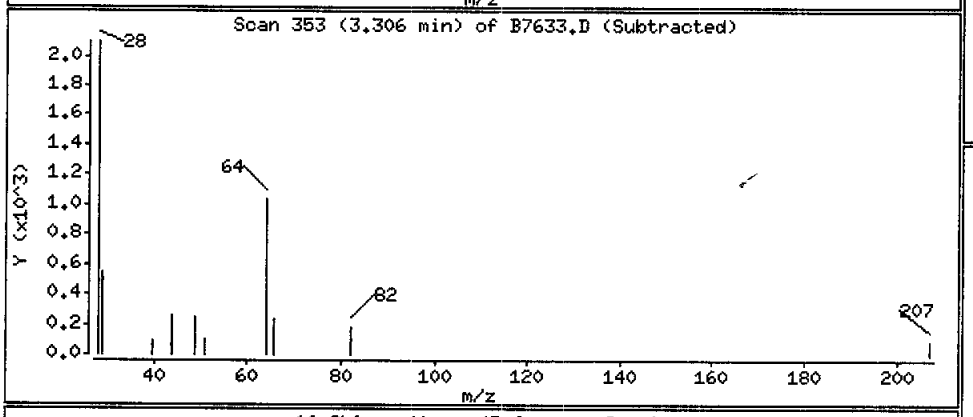
Column diameter: 0.53

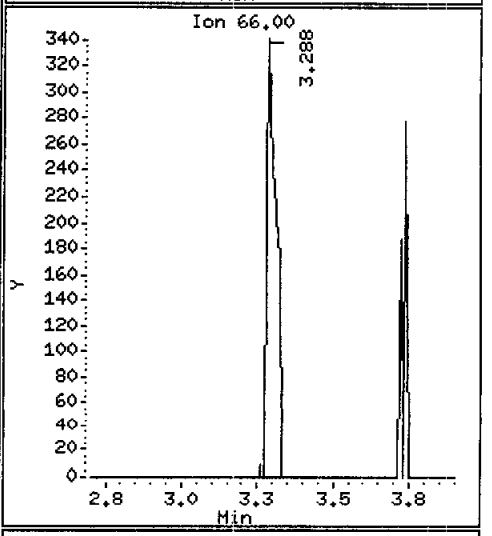
16 Chloroethane

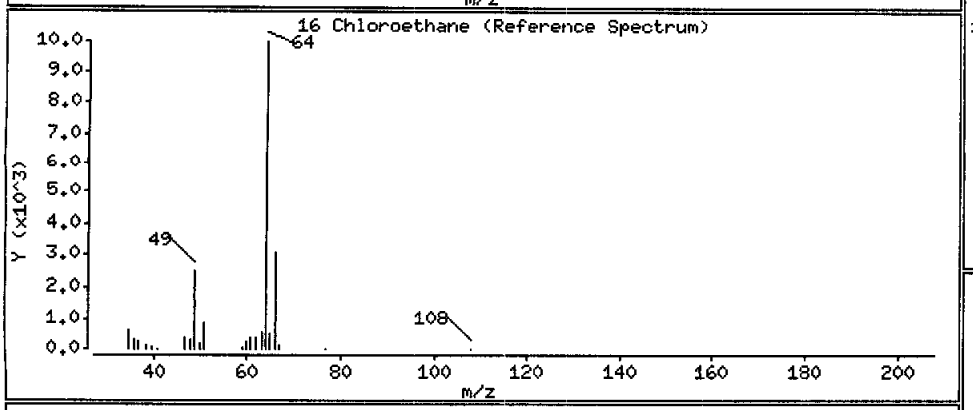
Concentration: 0.9530 ppbv

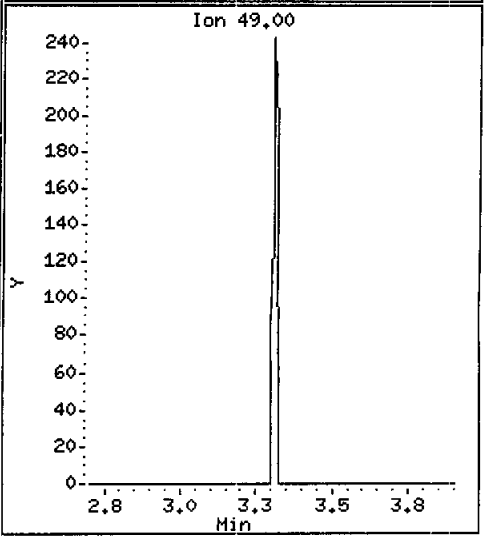


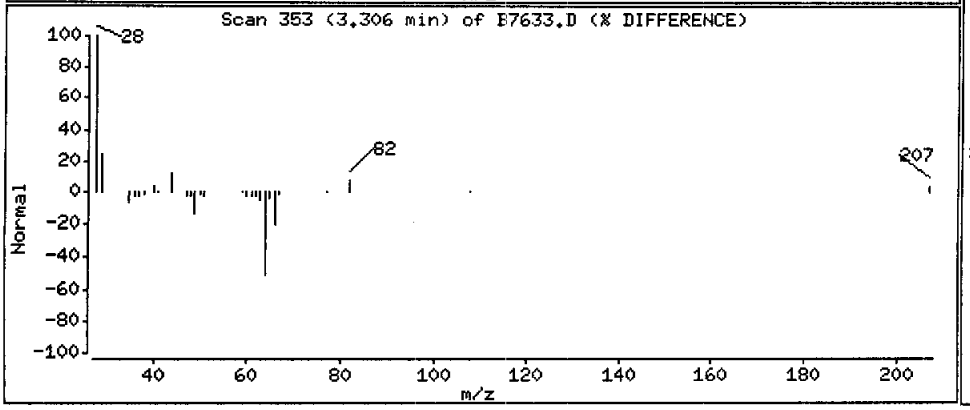












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

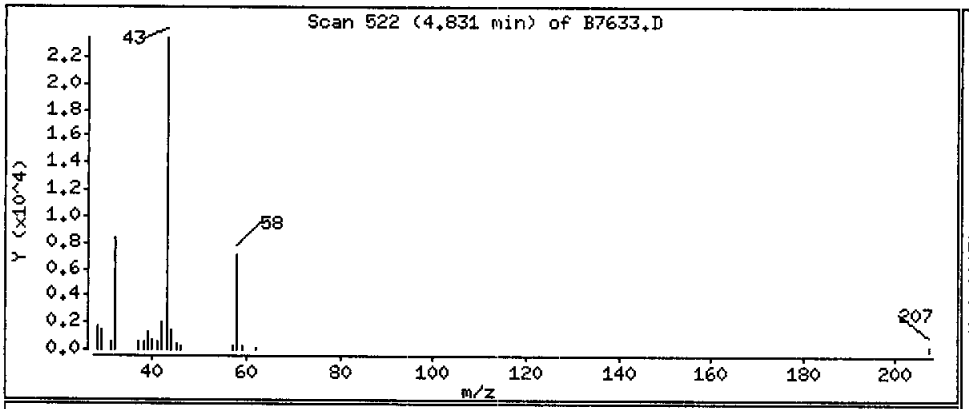
Operator: DLK

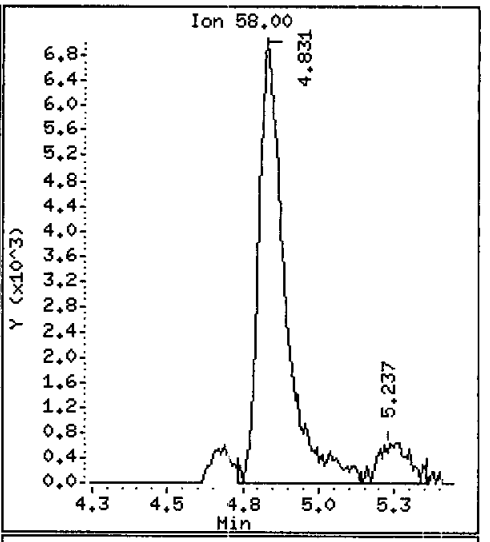
Column phase: J&W DB-624

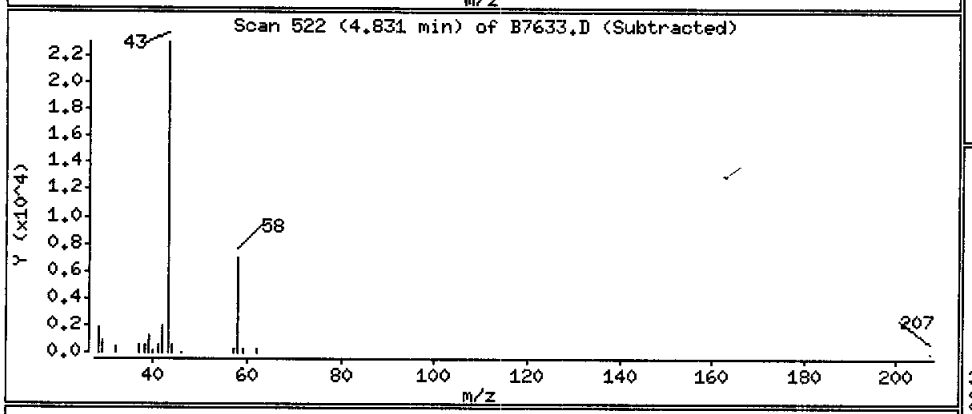
Column diameter: 0.53

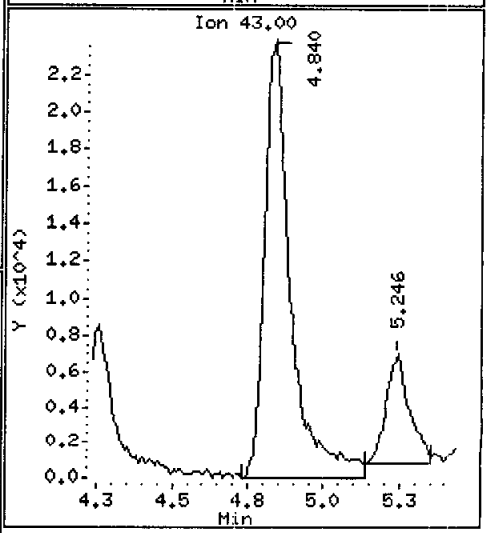
31 Acetone

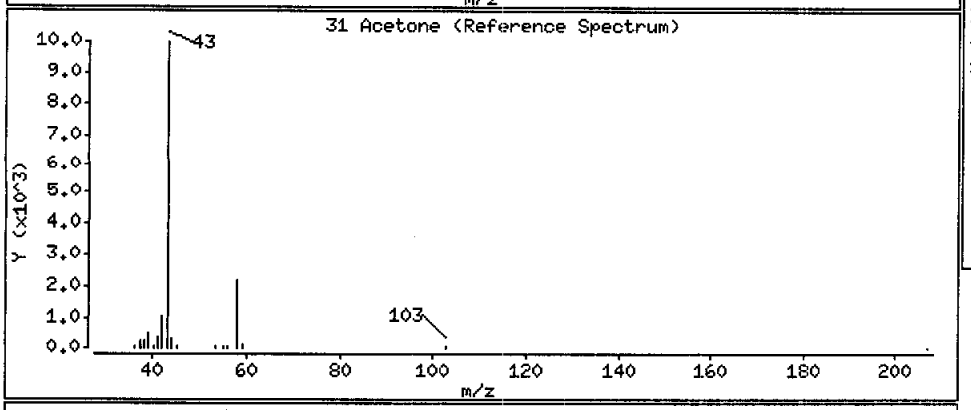
Concentration: 22.99 ppbv

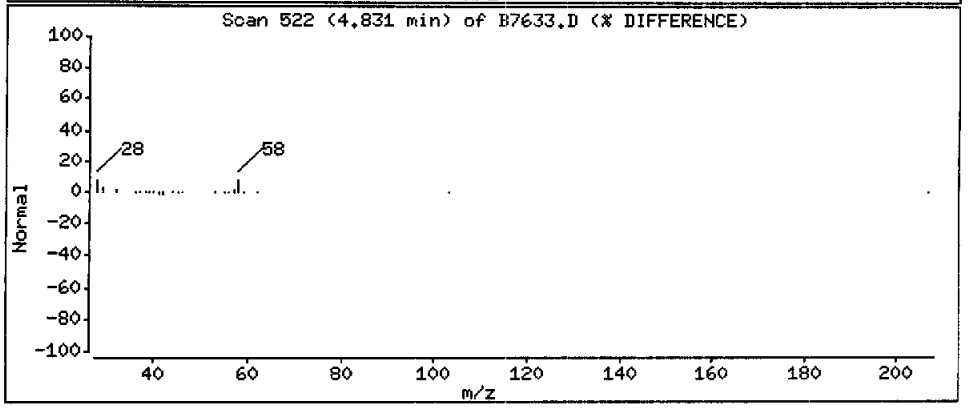












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

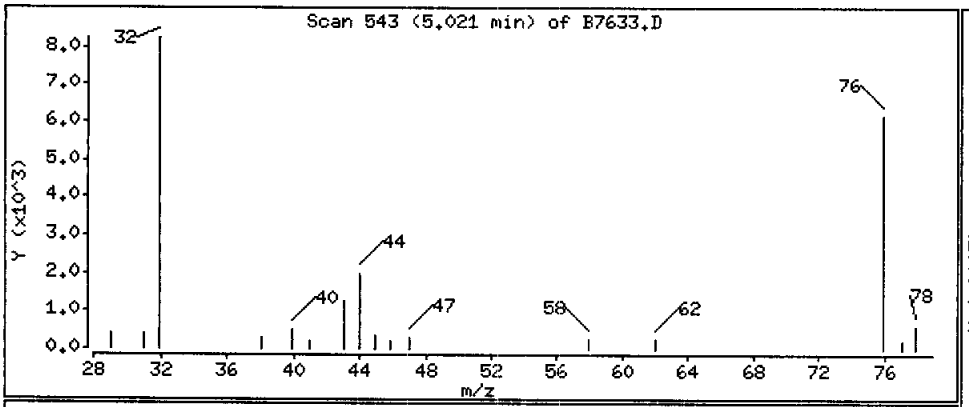
Operator: DLK

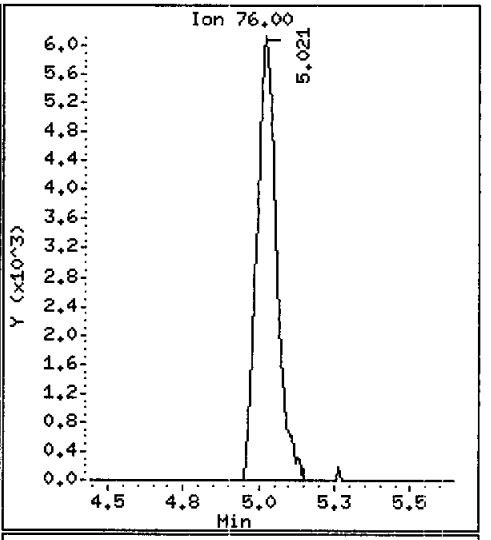
Column phase: J&W DB-624

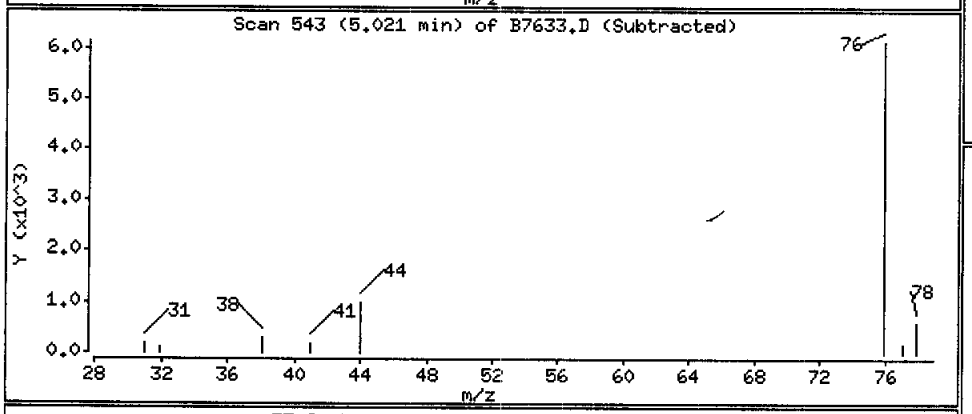
Column diameter: 0.53

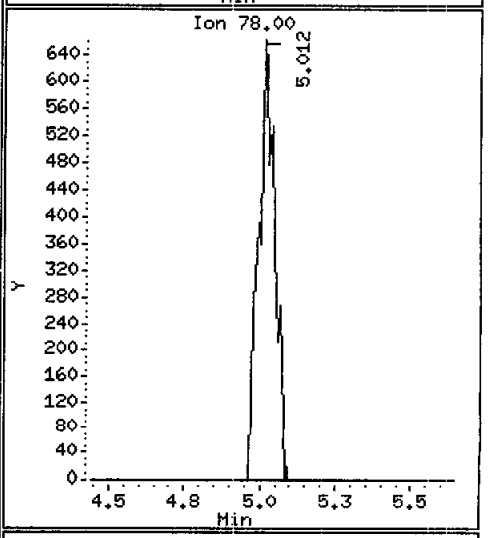
33 Carbon Disulfide

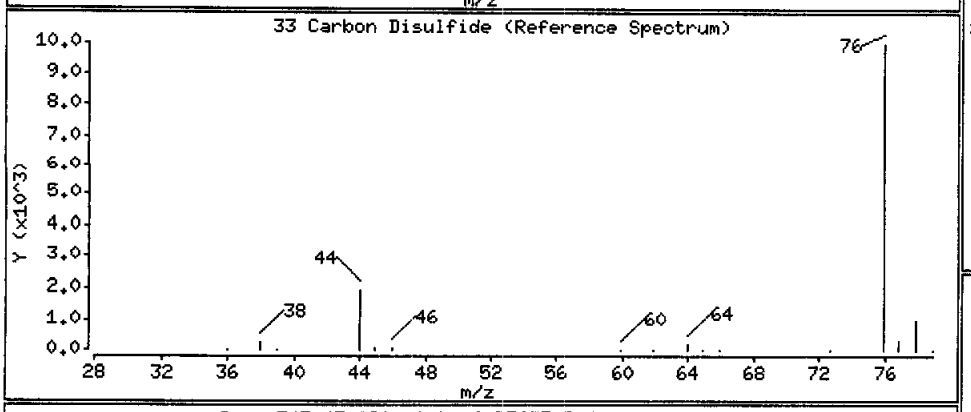
Concentration: 2.242 ppbv

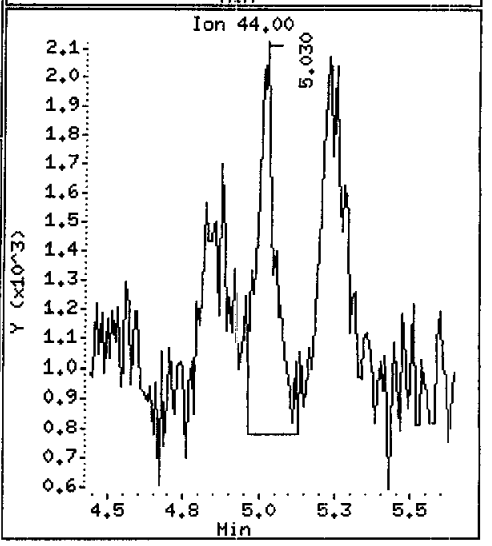


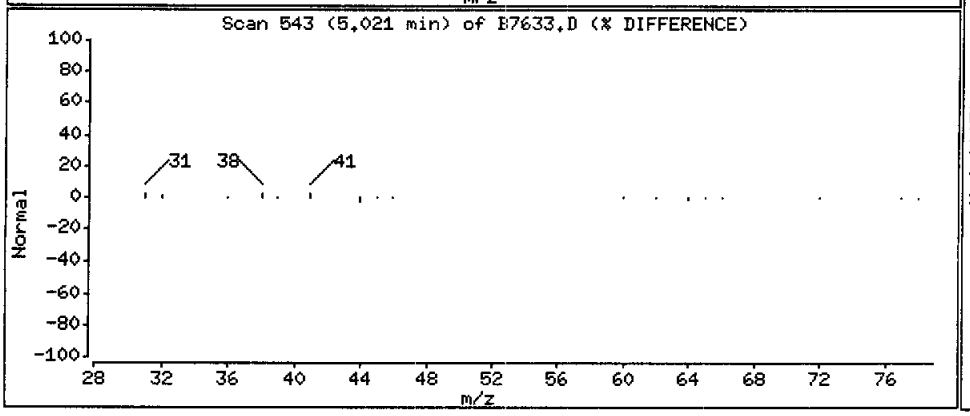












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

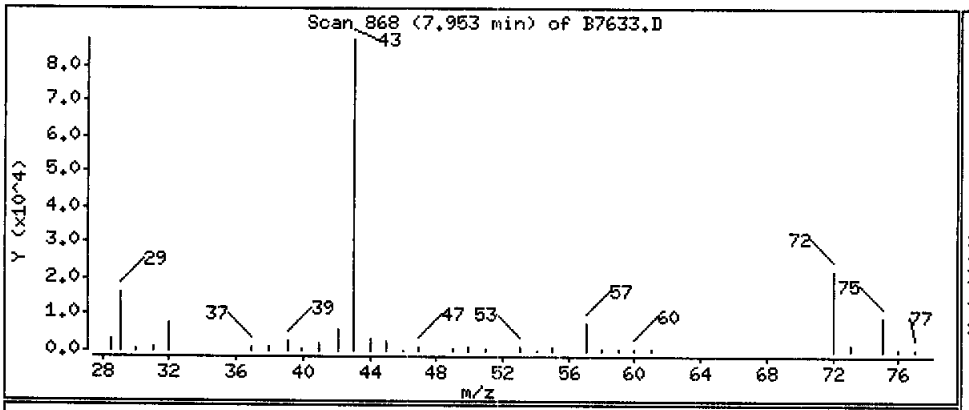
Operator: DLK

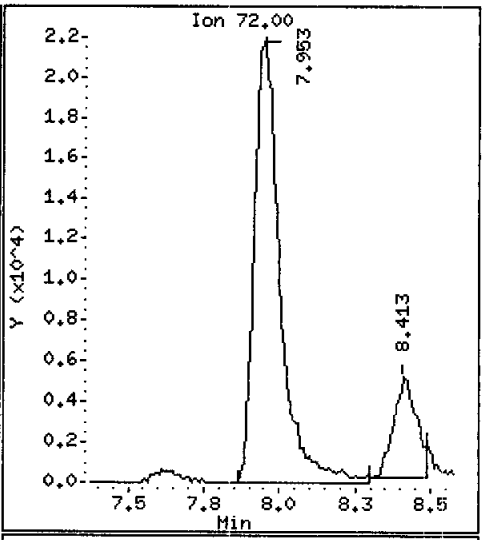
Column phase: J&W DB-624

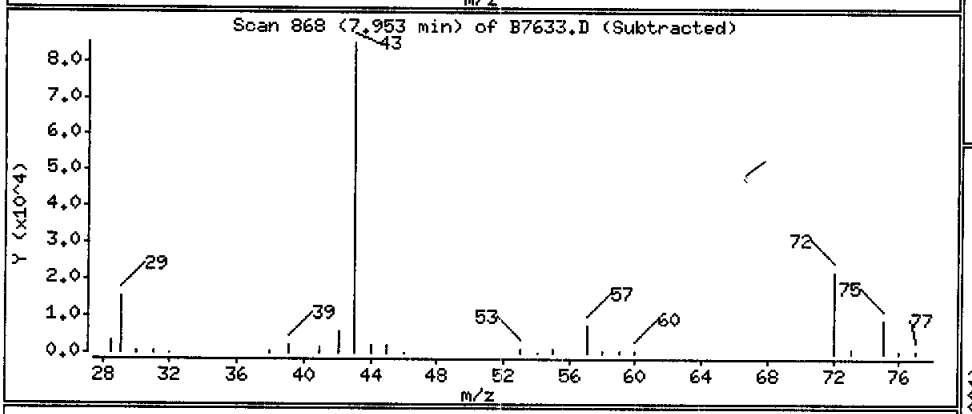
Column diameter: 0.53

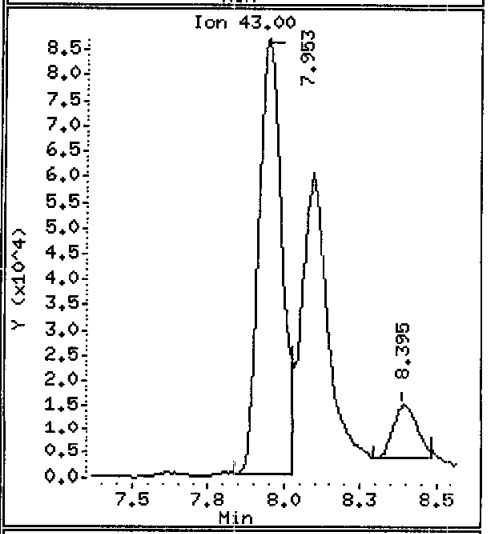
54 2-Butanone

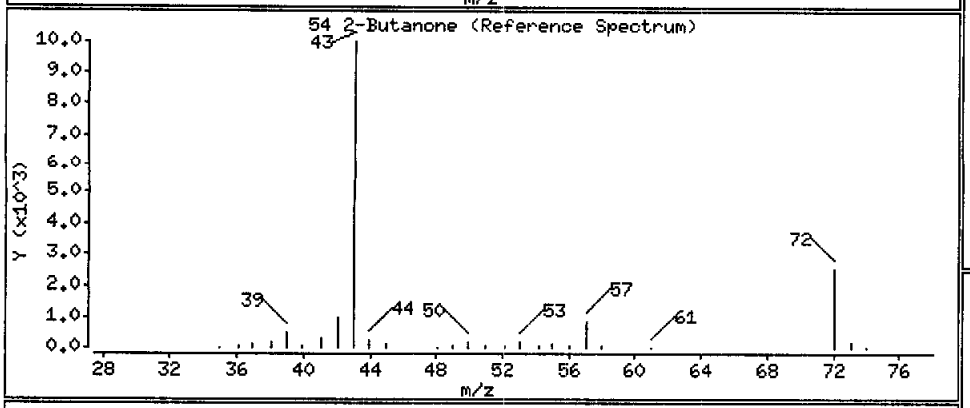
Concentration: 52.38 ppbv

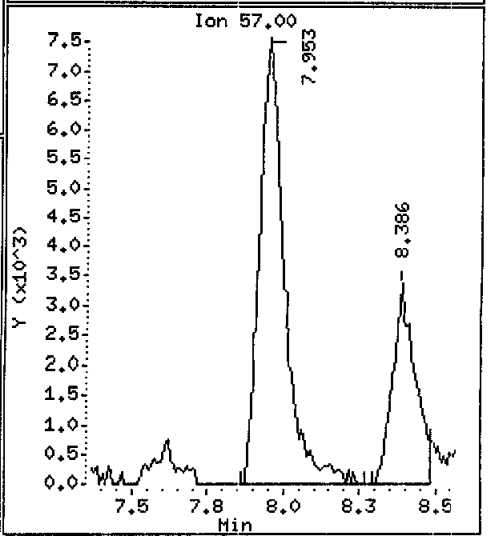


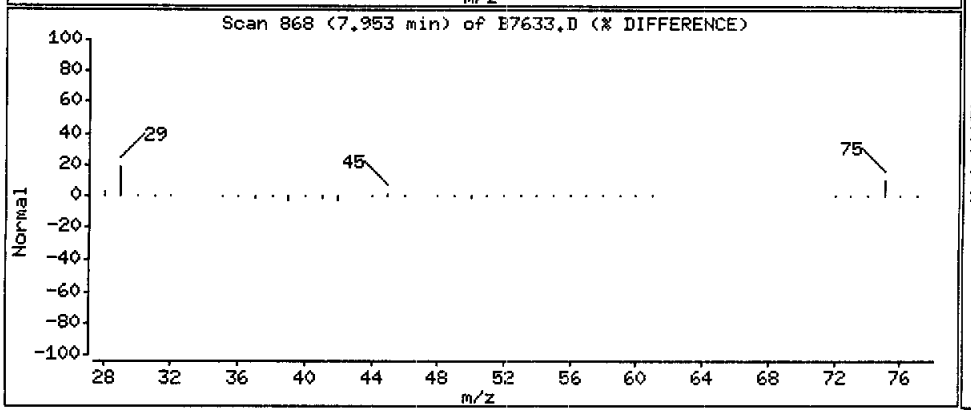












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

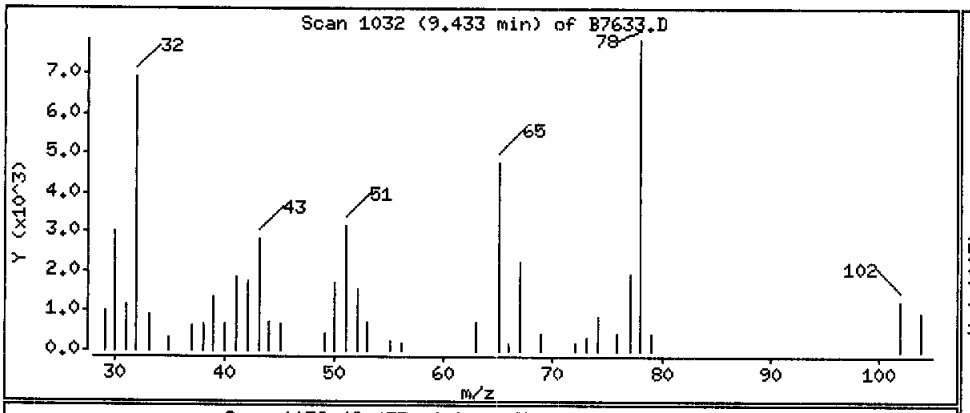
Operator: DLK

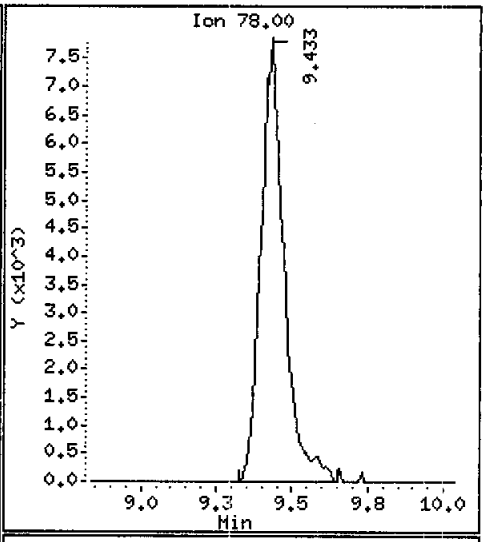
Column phase: J&W DB-624

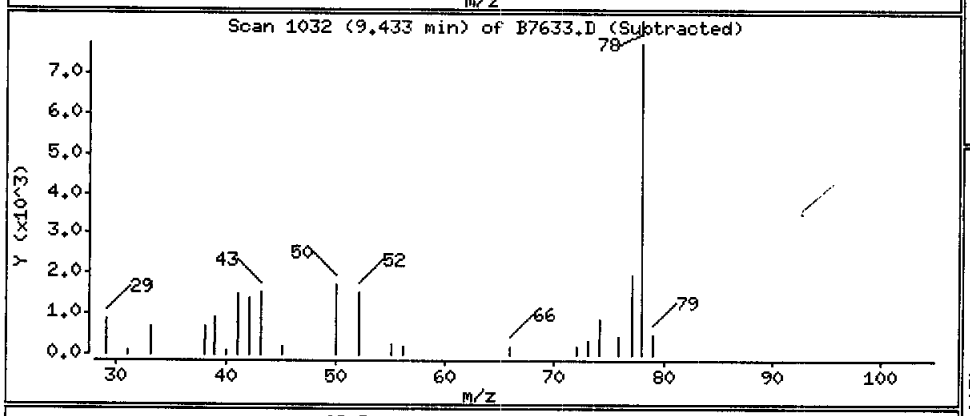
Column diameter: 0.53

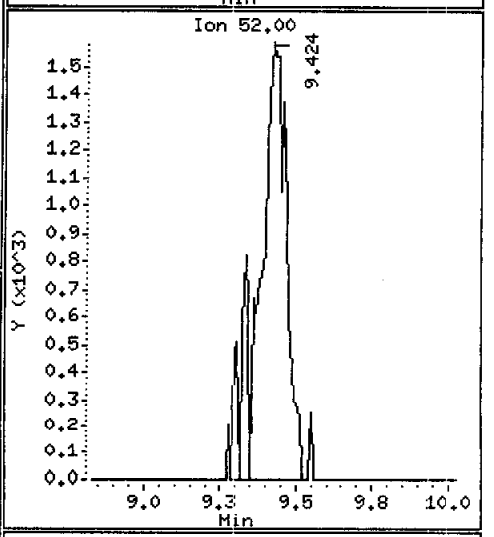
68 Benzene

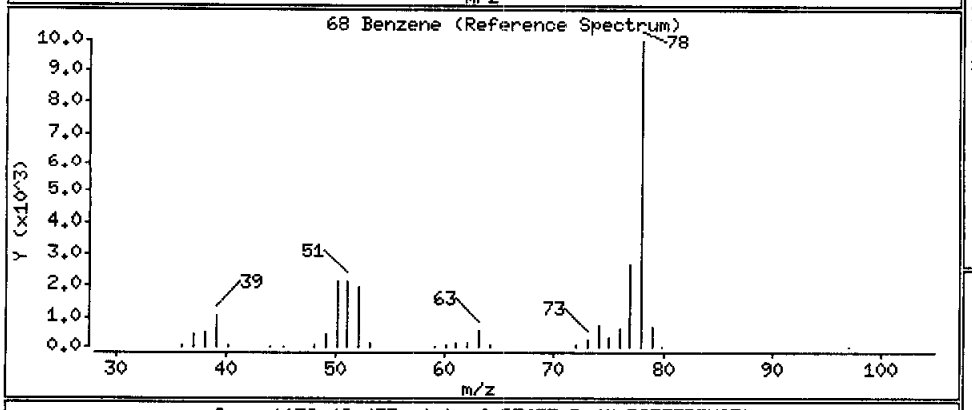
Concentration: 2.306 ppbv

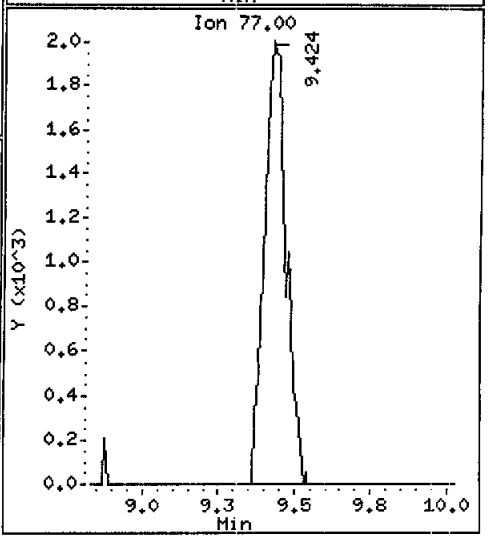


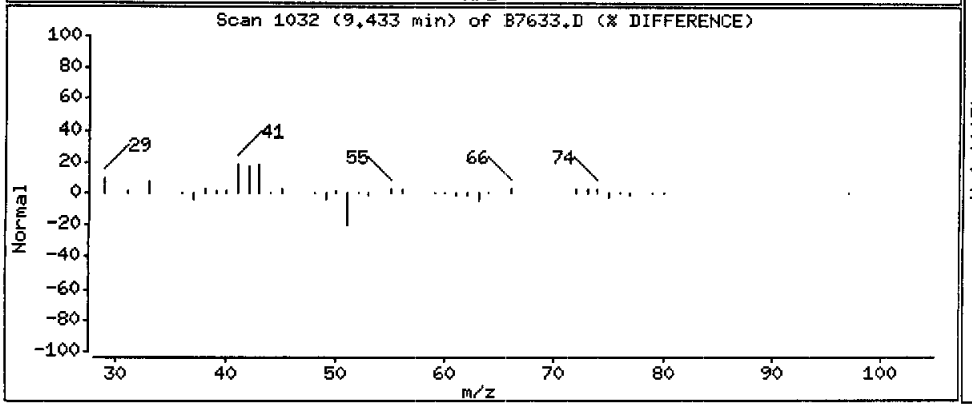












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

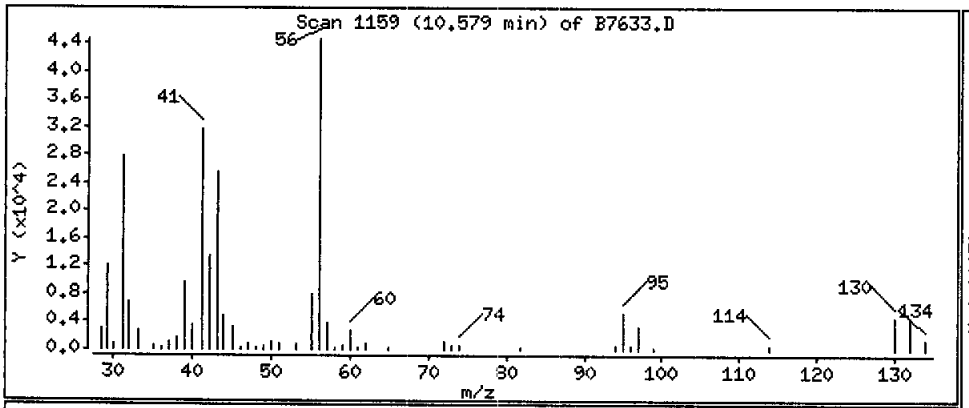
Operator: DLK

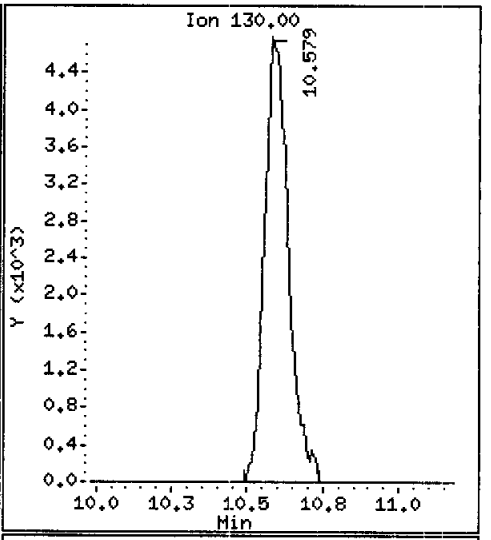
Column phase: J&W DB-624

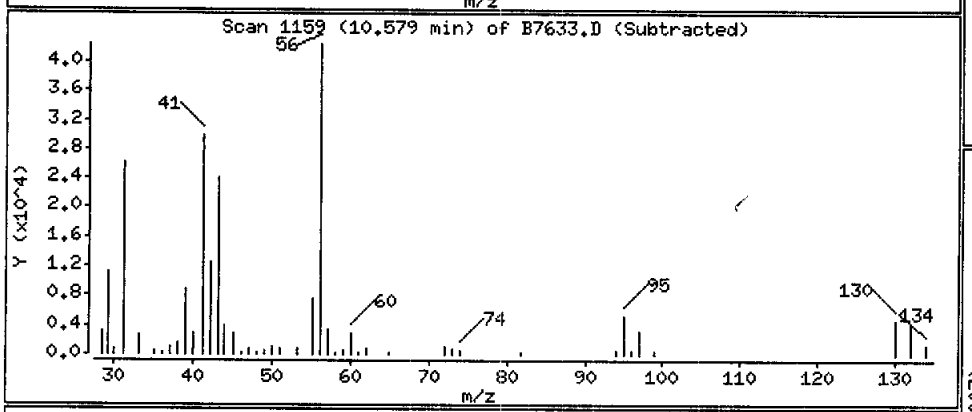
Column diameter: 0.53

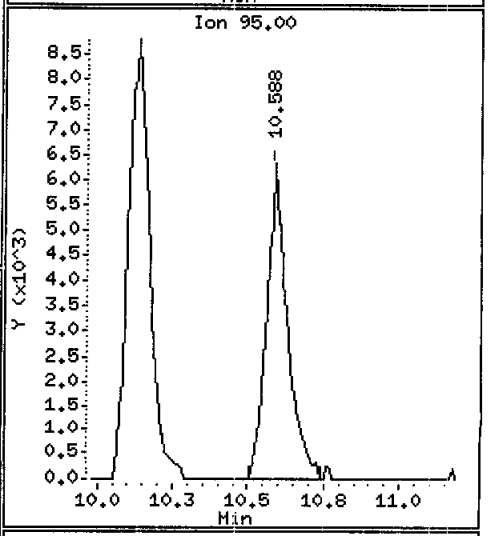
75 Trichloroethene

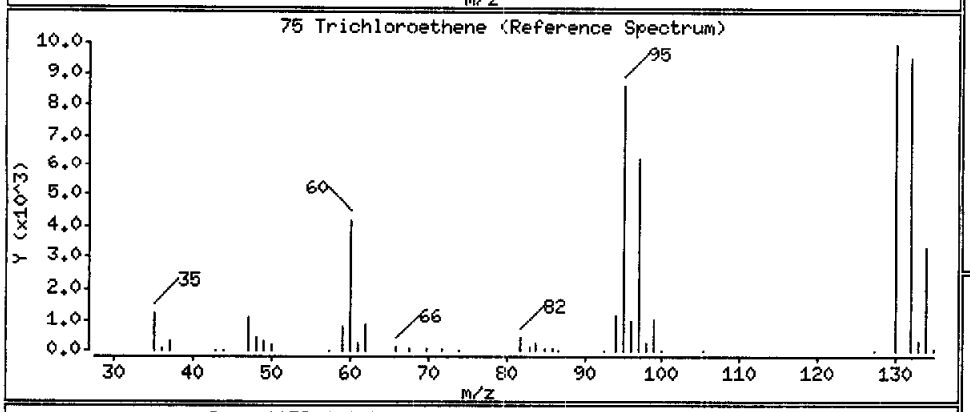
Concentration: 2.266 ppbv

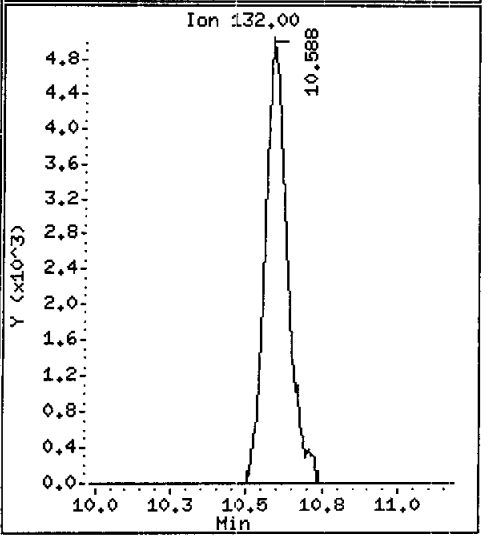


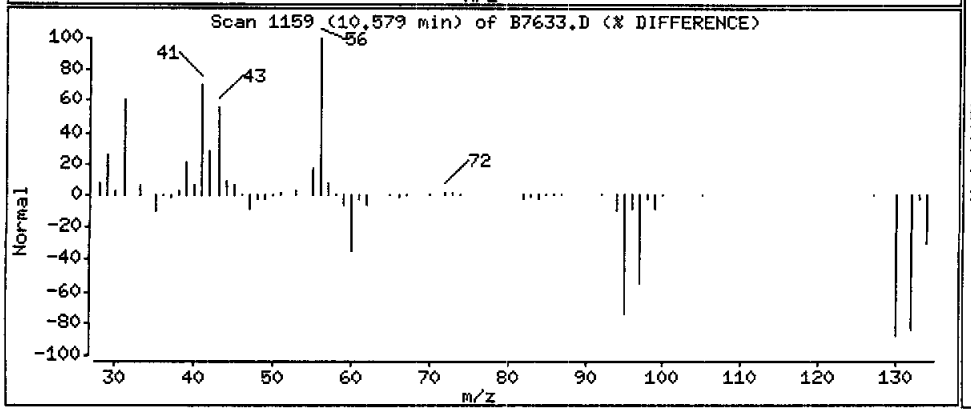












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

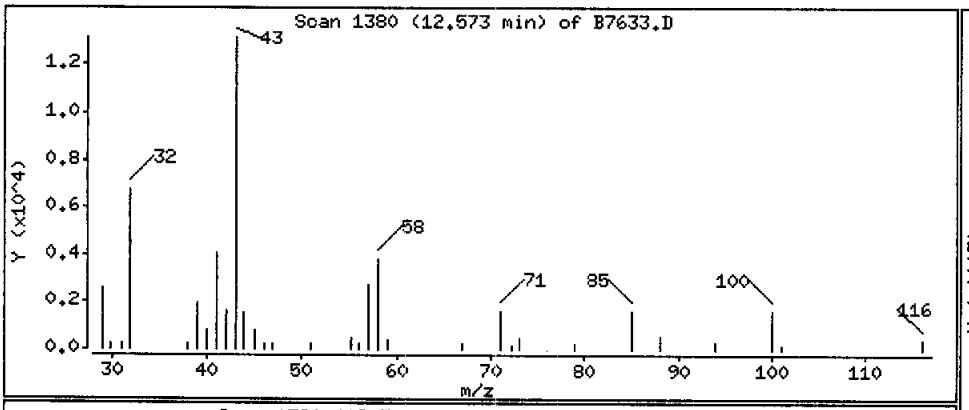
Operator: DLK

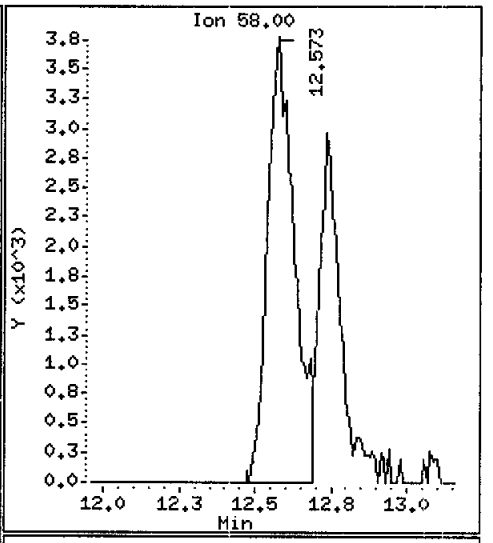
Column phase: J&W DB-624

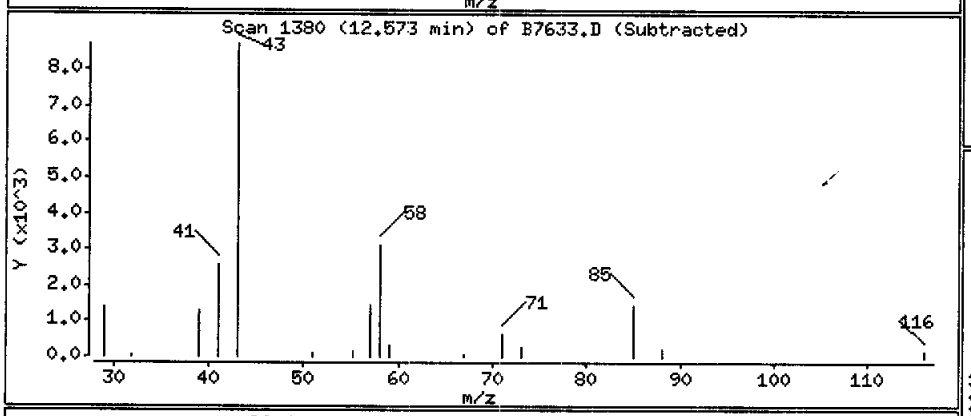
Column diameter: 0.53

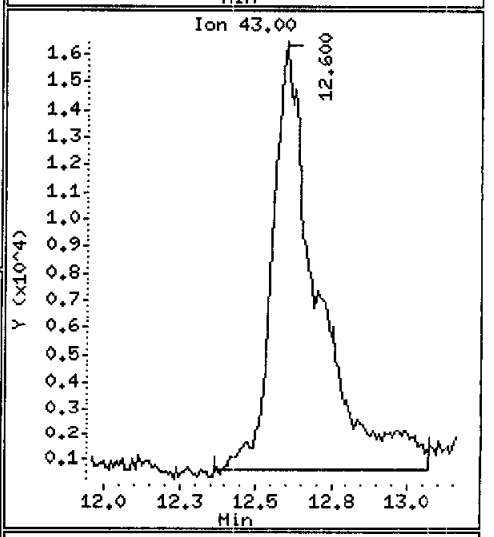
86 4-Methyl-2-Pentanone

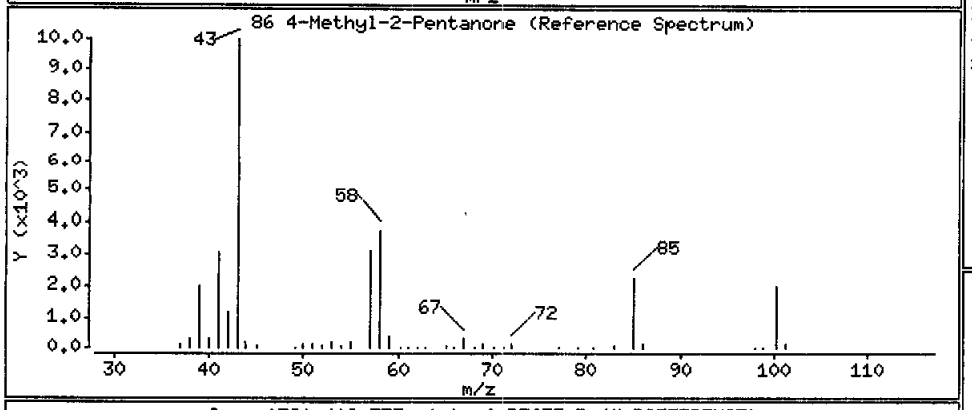
Concentration: 3.785 ppbv

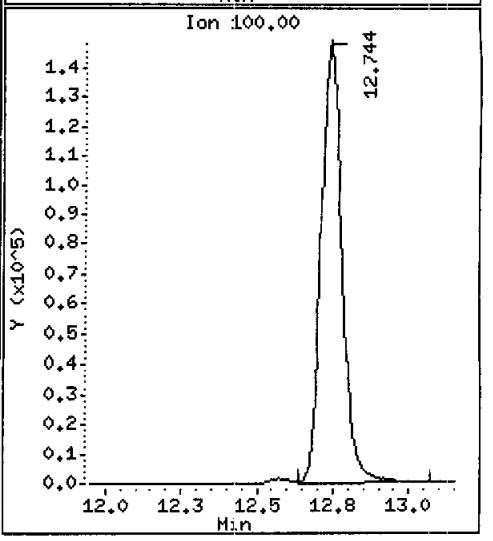


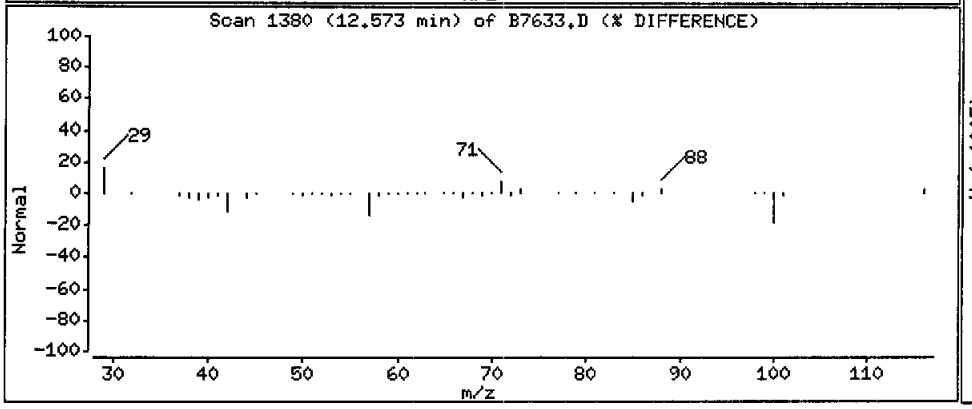












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

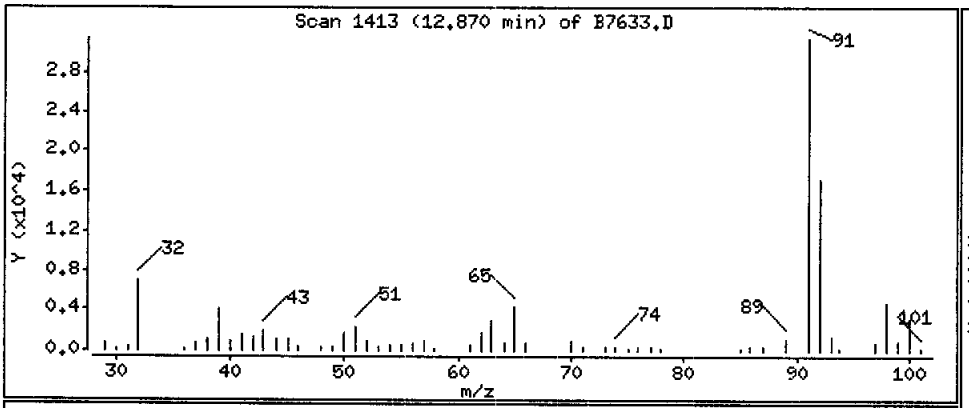
Operator: DLK

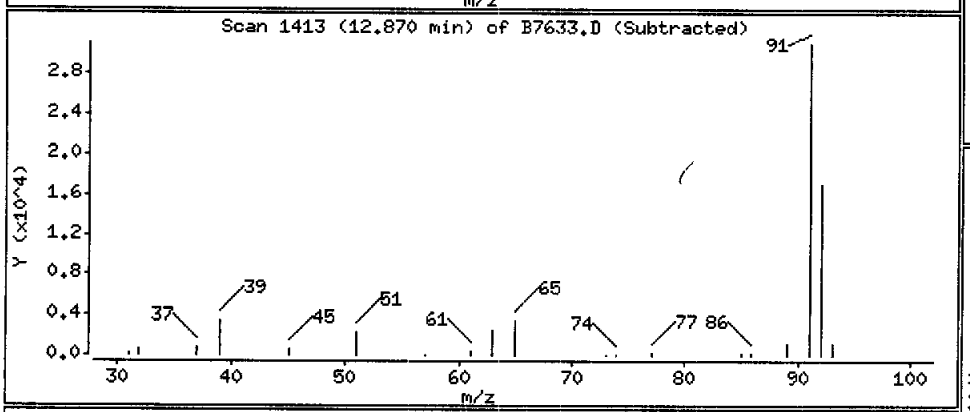
Column phase: J&W DB-624

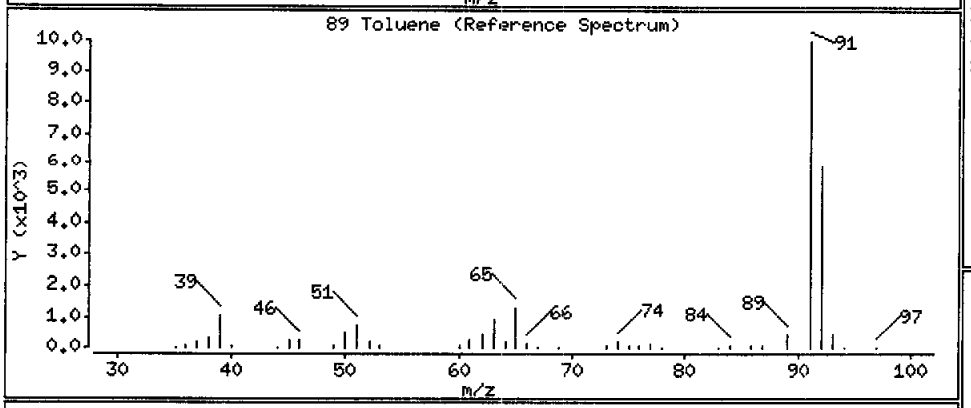
Column diameter: 0.53

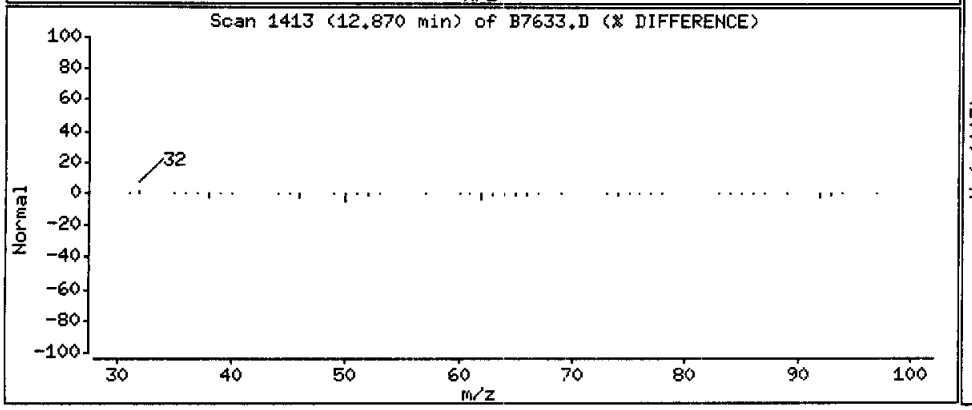
89 Toluene

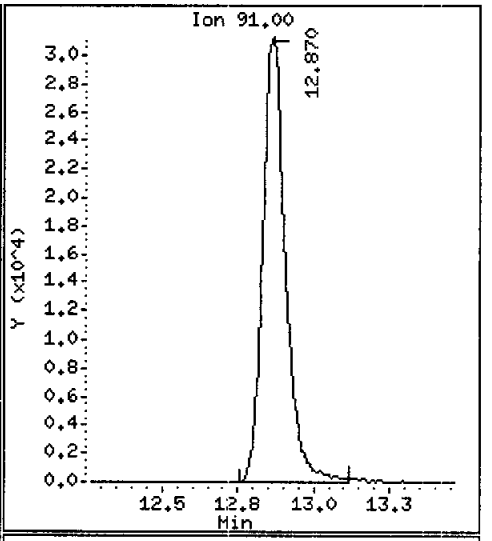
Concentration: 6.979 ppbv

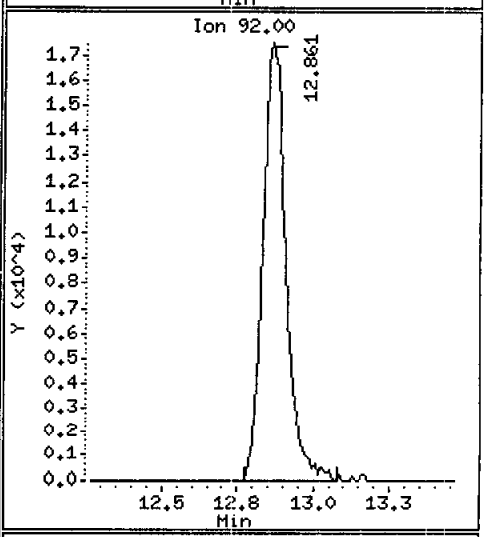


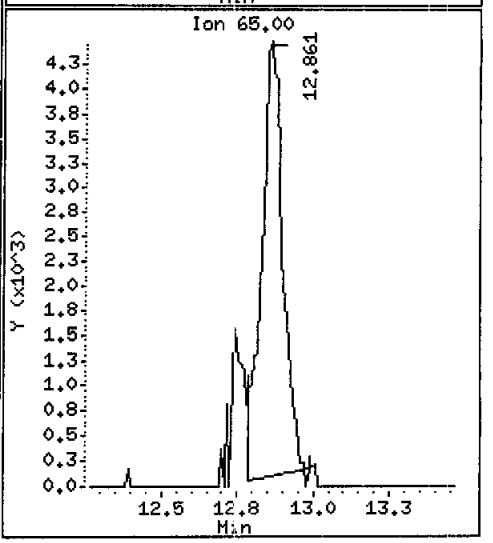












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

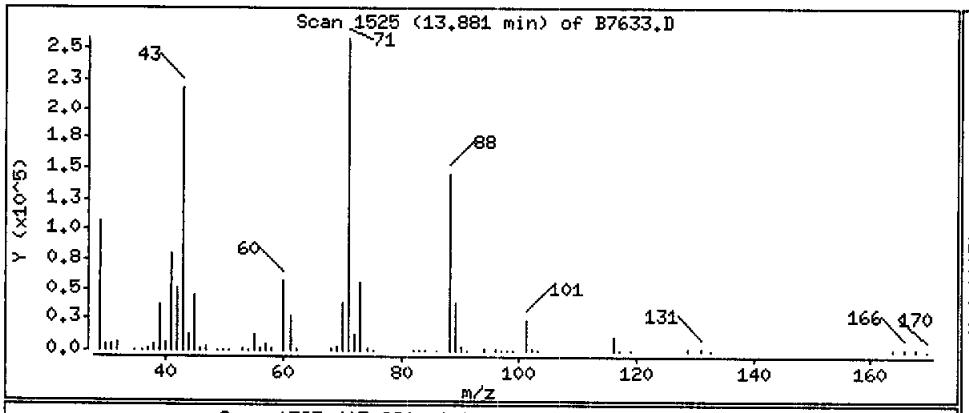
Operator: DLK

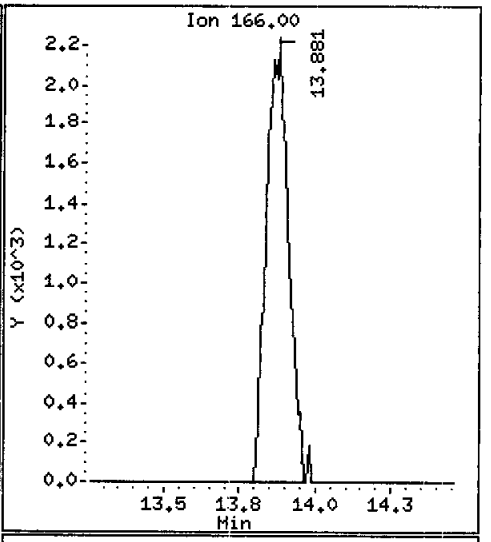
Column phase: J&W DB-624

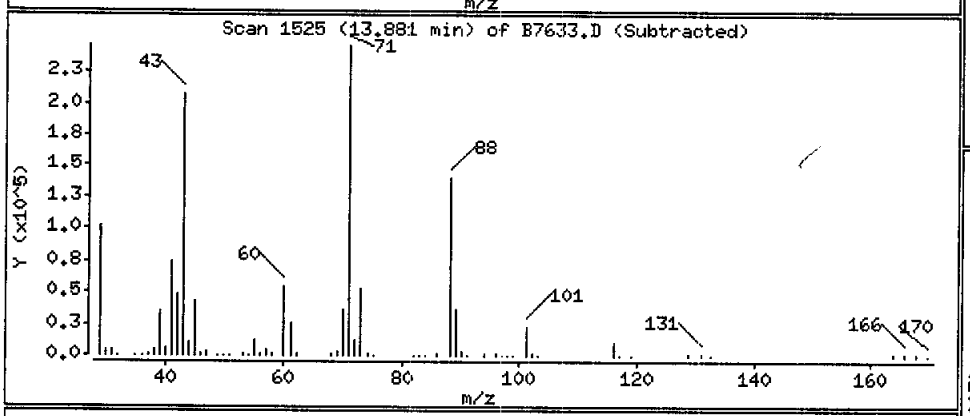
Column diameter: 0.53

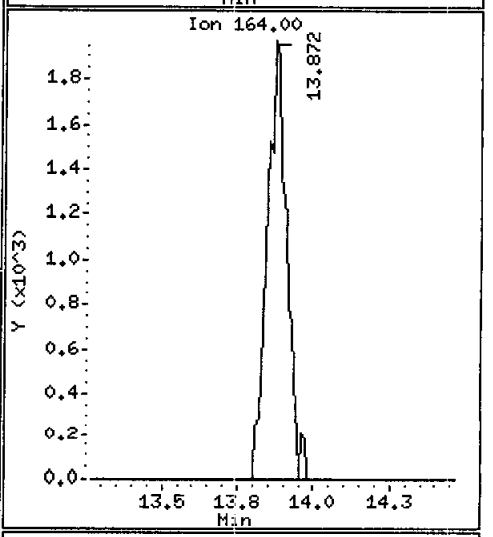
95 Tetrachloroethene

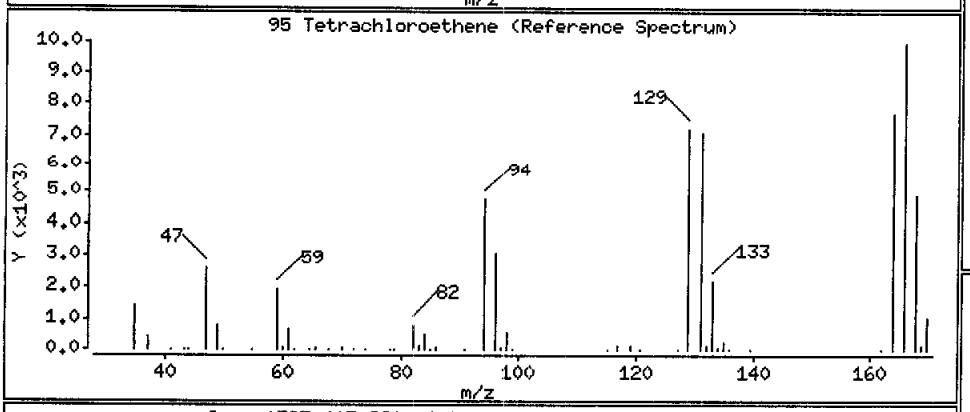
Concentration: 0.7018 ppbv

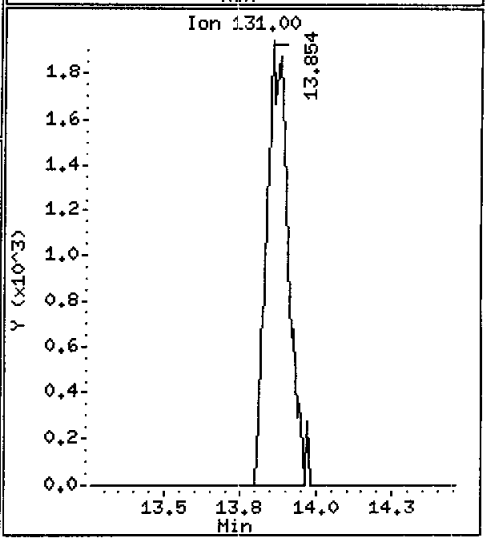


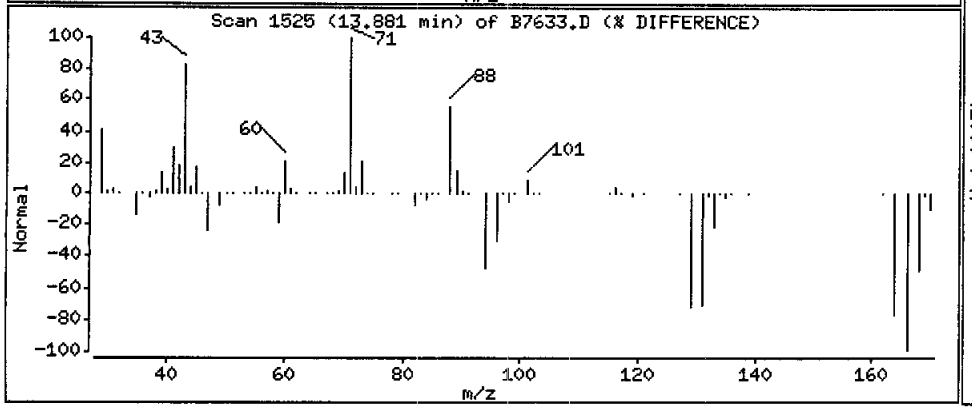












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

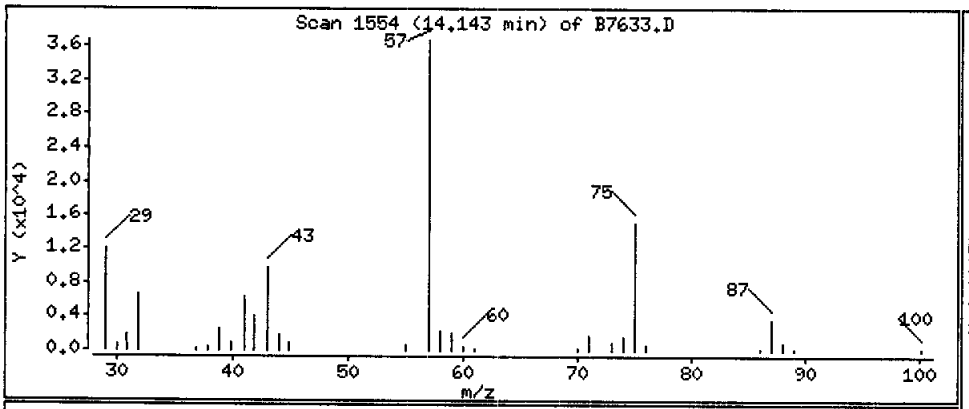
Operator: DLK

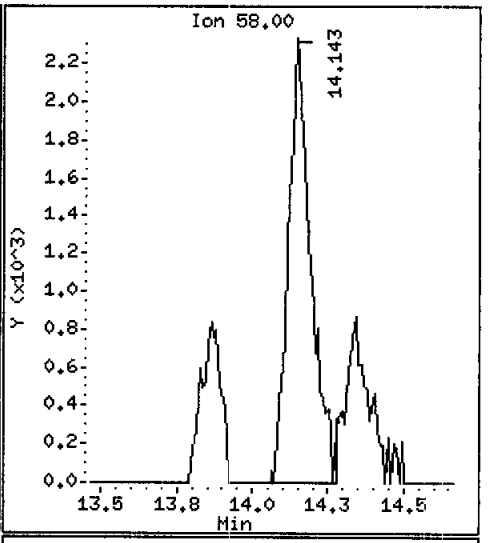
Column phase: J&W DB-624

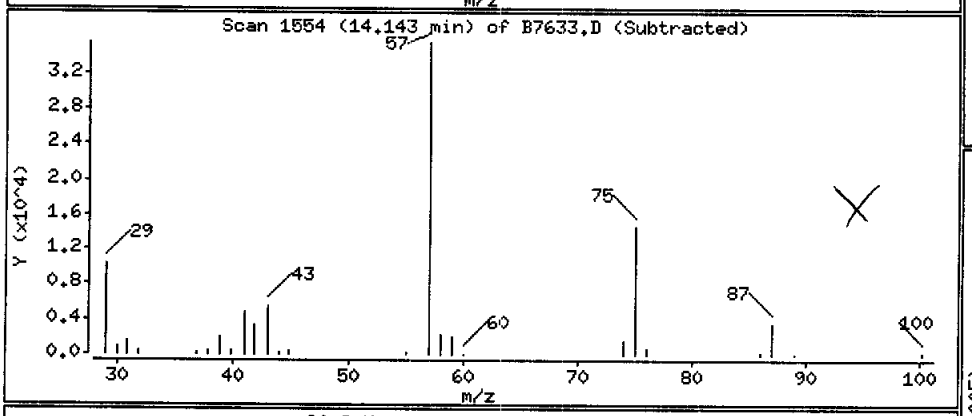
Column diameter: 0.53

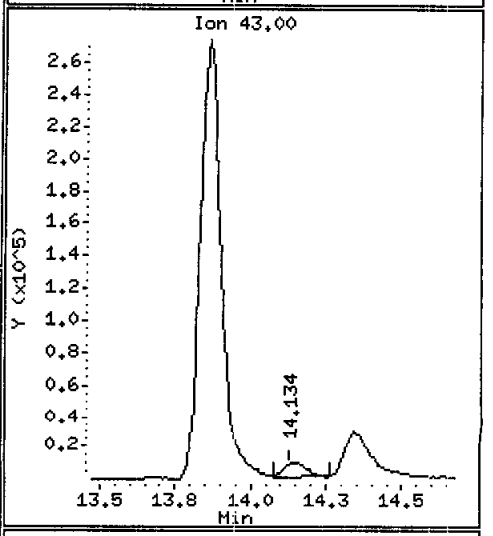
96 2-Hexanone

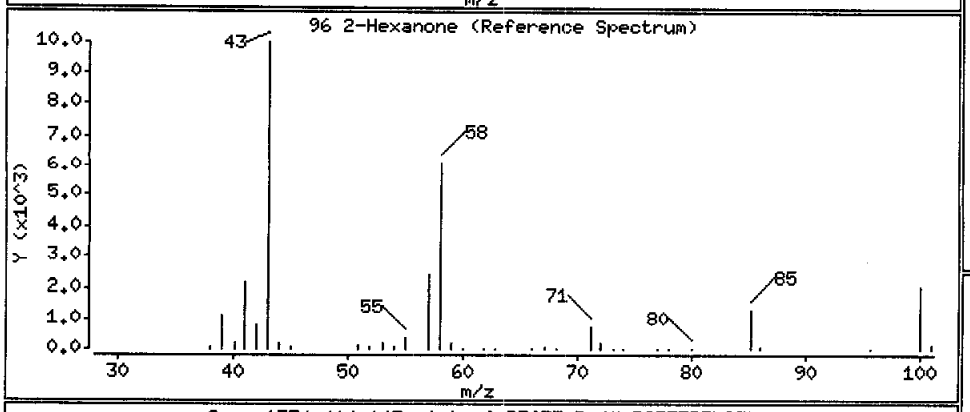
Concentration: 2.295 ppbv

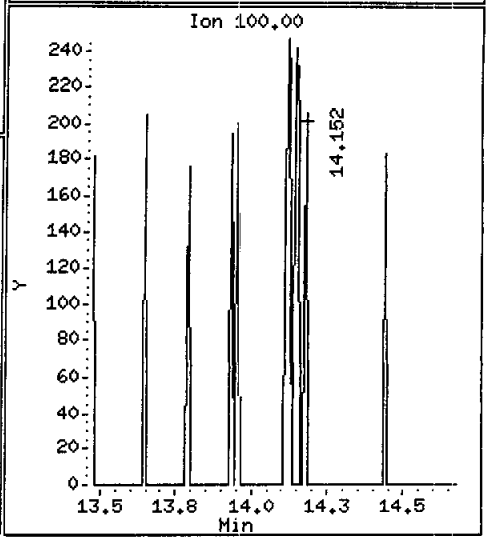


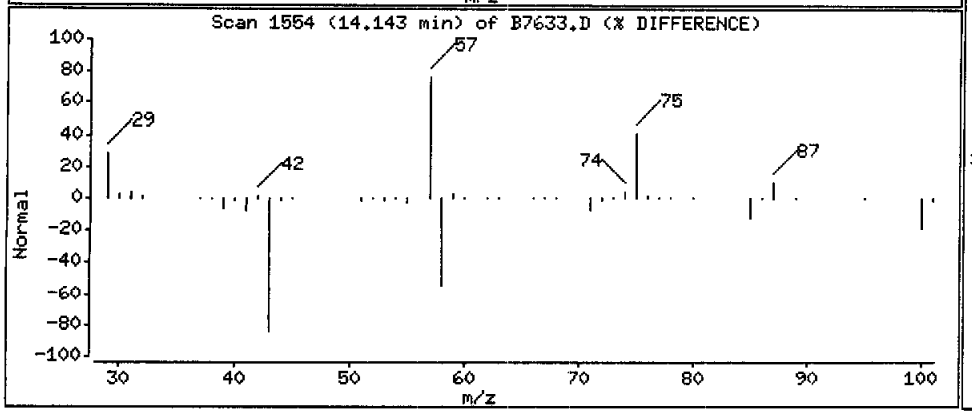












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050114.b\B7633.D

Date : 14-JAN-2005 22:42

Client ID: 066375-001

Instrument: gcmsb.i

Sample Info: G2DHV1AD,066375-001,SANDIA,E5A100224-6

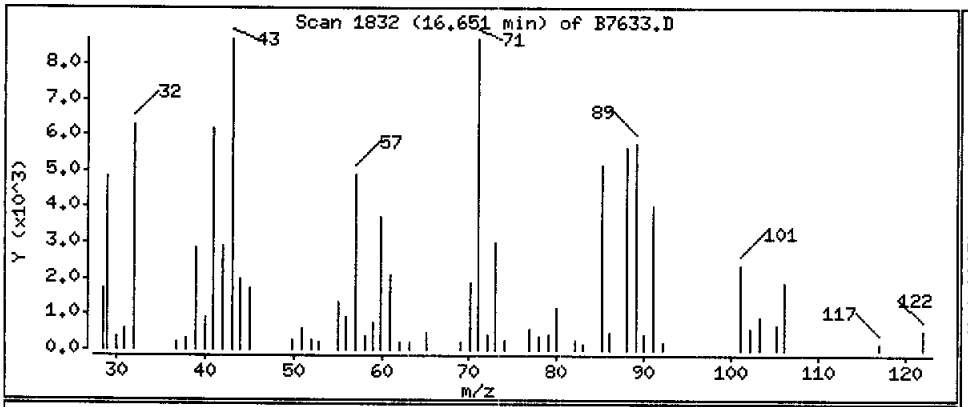
Operator: DLK

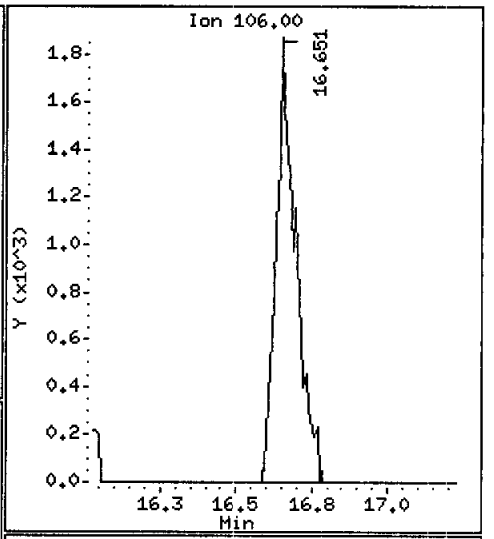
Column phase: J&W DB-624

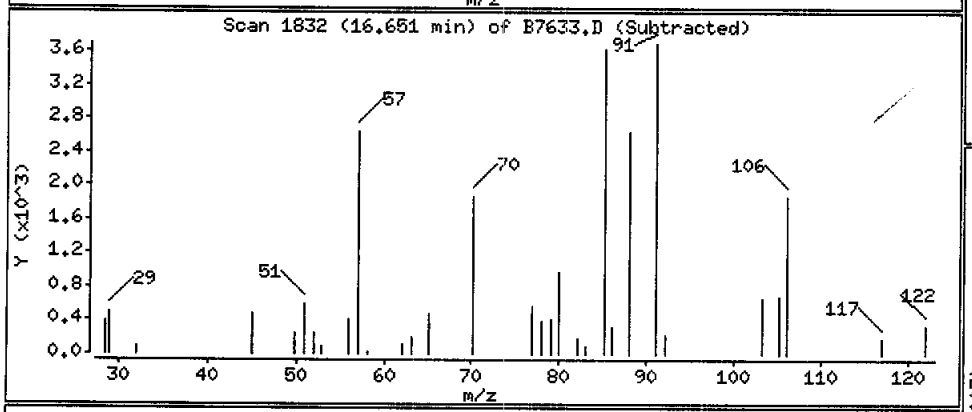
Column diameter: 0.53

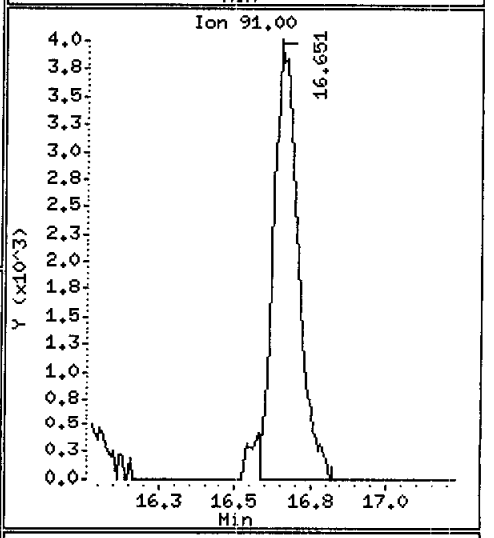
107 o-Xylene

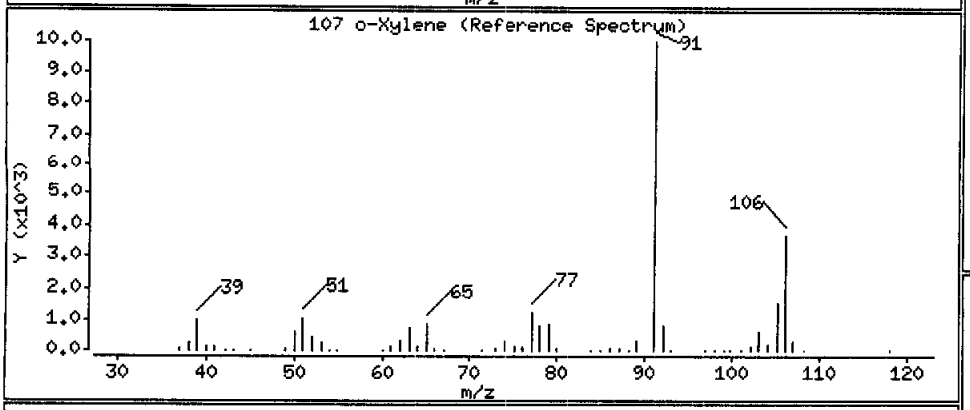
Concentration: 1.028 ppbv

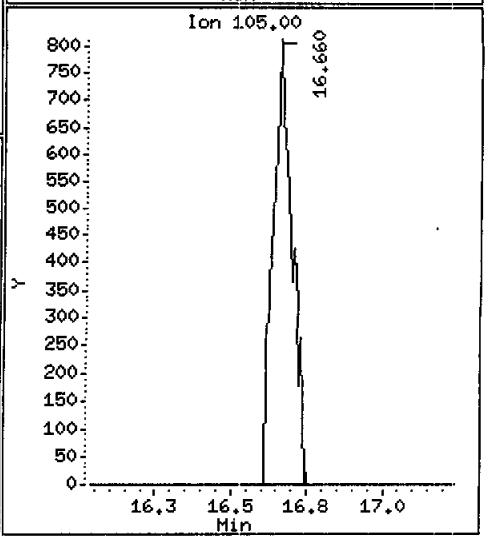


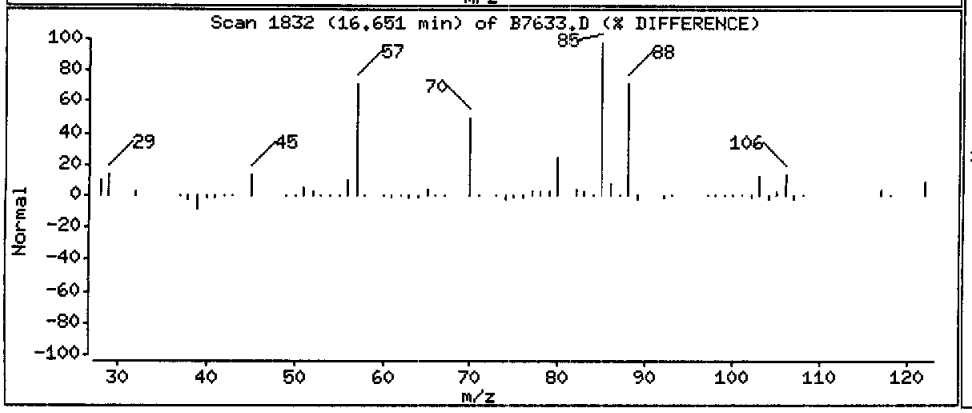












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD: Palencia
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608040	STCA	E5A100233		2/7/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	L. Herrera		02-08-05	
FINAL TRANSMITTED TO/DATE:	M. Sially		02-08-05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO(ERDMS)OR RECORDS CENTER BY/DATE:	R. Kavanaugh		2-8-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader Collins | Project Name TAG Vapor Well Sampling | Case No. 7222_01.05

AR/COC No. 608040 | Analytical Lab STCA | SDG No. E5A100233

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided: PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.) a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals) a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted_____

Reviewed by: [signature] Date: 02/08/05 Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of 1

Batch No. N/A

SMO Use

AR/COC 608040

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44644	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SEE BOTTOM ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
✓ 066388-001	TAG-SV05-50	50		12/28/2004 0845	SG	SC	6L	none	G	SA	TO-14 summa# 11346	
✓ 066389-001	TAG-SV05-100	100		12/28/2004 0850	SG	SC	6L	none	G	SA	TO-14 summa# 0185	
✓ 066390-001	TAG-SV05-150	150		12/28/2004 0855	SG	SC	6L	none	G	SA	TO-14 summa# 0142	
✓ 066391-001	TAG-SV05-150-SD	150		12/28/2004 0855	SG	SC	6L	none	G	SD	TO-14 summa# 9413-BB	
✓ 066392-001	TAG-SV05-200	200		12/28/2004 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12166	
✓ 066393-001	TAG-SV05-250	250		12/28/2004 0920	SG	SC	6L	none	G	SA	TO-14 summa# 9148-B	
✓ 066394-001	TAG-SV05-300	299.5		12/28/2004 0908	SG	SC	6L	none	G	SA	TO-14 summa# 02803	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/12/05
Entered by: JAC
QC inits. WJP

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0525	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0525	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER 44649

Commercial Invoice
Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination:
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials, 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES									
				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED- EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: **087104430050594,587,617,600,631,624,679,662,693,686,716,709,723**

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

RK 1-24-05

ESA100233

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC **608040**

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: 503	
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO21673	☐ Released by COC No.:
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SOW BOTTLE ORDER	☐ Validation Required
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		Bill To: Sandia National Labs (Accounts Payable)
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		P.O. Box 5800 MS 0154
Location	Tech Area 2				Albuquerque, NM 87185-0154
Building	Room				

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preservative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066388-001	TAG-SV05-50	50		12/28/2004 0845	SG	SC	6L	none	G	SA	TO-14 summa# 11346	
066389-001	TAG-SV05-100	100		12/28/2004 0850	SG	SC	6L	none	G	SA	TO-14 summa# 0185	
066390-001	TAG-SV05-150	150		12/28/2004 0855	SG	SC	6L	none	G	SA	TO-14 summa# 0142	
066391-001	TAG-SV05-150-SD	150		12/28/2004 0855	SG	SC	6L	none	G	SD	TO-14 summa# 9413-BB	
066392-001	TAG-SV05-200	200		12/28/2004 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12166	
066393-001	TAG-SV05-250	250		12/28/2004 0920	SG	SC	6L	none	G	SA	TO-14 summa# 9148-B	
066394-001	TAG-SV05-300	299.5		12/28/2004 0908	SG	SC	6L	none	G	SA	TO-14 summa# 02803	

RMMA	☐ Yes ☑ No Ref. No.	**Sample Tracking**	Smo Use
Sample Disposal	☐ Return to Client ☑ Disposal by lab	Date Entered(mm/dd/yy)	
Turnaround Time	☐ 7 Day ☐ 15 Day ☑ 30 Day	Entered by:	
Return Samples By:	☐ Negotiated TAT	QC inits.	

Special Instructions/QC Requirements

EDD ☑ Yes ☐ No

Level C Package ☑ Yes ☐ No

*Send report to:

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

*Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

	Name	Signature	Init	Company/Organization/Phone/Cellular
Sample Team Members	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. SR	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066388-001/TAG-SV05-50
Date Sampled: 12/28/04 Time Sampled: 8:45
LAB ID: E5A100233-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066389-001/TAG-SV05-100
Date Sampled: 12/28/04 Time Sampled: 8:50
LAB ID: E5A100233-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066390-001/TAG-SV05-150
Date Sampled: 12/28/04 Time Sampled: 8:55
LAB ID: E5A100233-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066391-001/TAG-SV05-150-SD
Date Sampled: 12/28/04 Time Sampled: 8:55
LAB ID: E5A100233-004 Matrix: AIR

Parameter	Method		Rep

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066391-001/TAG-SV05-150-SD
Date Sampled: 12/28/04 Time Sampled: 8:55
LAB ID: E5A100233-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066392-001/TAG-SV05-200
Date Sampled: 12/28/04 Time Sampled: 9:00
LAB ID: E5A100233-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066393-001/TAG-SV05-250
Date Sampled: 12/28/04 Time Sampled: 9:20
LAB ID: E5A100233-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066394-001/TAG-SV05-300
Date Sampled: 12/28/04 Time Sampled: 9:08
LAB ID: E5A100233-007 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 2
Case Narrative 2
Chain of Custody 3
Analytical Report 18
QA/QC 40
STL Los Angeles Raw Data 46
Raw Data: TO-14A 47

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 3, 2005

STL LOT NUMBER: **E5A100233**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the seven samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

000286

This report contains _____ pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

ESA100233

ESA100233

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

al Lab No. N/A

SMO Use

AR/COC **608040**

No./Mail Stop:	6146/1087	Date Samples Shipped:	1-4-05	Project/Task No.: 7222.01.05	☐ Waste Characterization -Send preliminary/copy report to:
/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: SB	
t Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO21673	
Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		☐ Released by COC No.:
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185	SEE BOTTLE ORDER	☐ Validation Required
e Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To: Sandia National Labs (Accounts Payable) P.O. Box 5800 MS 0154 Albuquerque, NM 87185-0154
ation	Tech Area 2				
ng	Room				

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
66388-001	TAG-SV05-50	50		12/28/2004 0845	SG	SC	6L	none	G	SA	TO-14 summa# 11346	
66389-001	TAG-SV05-100	100		12/28/2004 0850	SG	SC	6L	none	G	SA	TO-14 summa# 0185	
66390-001	TAG-SV05-150	150		12/28/2004 0855	SG	SC	6L	none	G	SA	TO-14 summa# 0142	
66391-001	TAG-SV05-150-SD	150		12/28/2004 0855	SG	SC	6L	none	G	SD	TO-14 summa# 9413-BB	
66392-001	TAG-SV05-200	200		12/28/2004 0900	SG	SC	6L	none	G	SA	TO-14 summa# 12166	
66393-001	TAG-SV05-250	250		12/28/2004 0920	SG	SC	6L	none	G	SA	TO-14 summa# 9148-B	
66394-001	TAG-SV05-300	299.5		12/28/2004 0908	SG	SC	6L	none	G	SA	TO-14 summa# 02803	

MA ☐ Yes ☑ No Ref. No.

le Disposal ☐ Return to Client ☑ Disposal by lab

around Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Sample Tracking Smo Use

Date Entered(mm/dd/yy)

Entered by:

Special Instructions/QC Requirements

EDD ☑ **Yes** ☐ **No**

Level C Package ☑ **Yes** ☐ **No**

Abnormal Conditions on Receipt

n Samples By: ☐ **Negotiated TAT** QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
ple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
n	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
bers	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Lab Use

nquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
ceived by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
nquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
ceived by	Org. SR	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
nquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
ceived by	Org.	Date	Time	6. Received by	Org.	Date	Time

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 11346
DATE CLEANED: 12/1/04 A, 12/1/04 C, 11/29/04 A, 12/6/04 A, 12/7/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.70	6-12-05	✓
FINAL PRESSURE (PSIA)	24.21	6-12-05	✓

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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2

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 0185
DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 12/7/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12-73	1-12-05	"
FINAL PRESSURE (PSIA)	24.24	1-12-05	"

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 0142
DATE CLEANED: ~~12/1/04 A~~, 12/1/04C, ~~12/9/04A~~, ~~12/20/04A~~, ~~12/22/04~~ C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.70	1-12-05	–
FINAL PRESSURE (PSIA)	24.29	1-12-05	–

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 9413BB
DATE CLEANED: ~~12/1/04A~~, 12/1/04B, ~~10/29/04A~~, ~~12/6/04A~~, ~~12/2/04C~~
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.75	1-12-05	n
FINAL PRESSURE (PSIA)	24.18	1-12-05	h

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 12166
DATE CLEANED: 12/1/04A, 12/1/04C, 12/2/04A, 12/2/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12-69	1-12-05	~
FINAL PRESSURE (PSIA)	24-35	1-12-05	~

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 9148 B
DATE CLEANED: 12/1/04 A, 12/1/04 C, 12/2/04 A, 12/2/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.62	1-12-05	✓
FINAL PRESSURE (PSIA)	24.45	1-12-05	✓

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 02803
DATE CLEANED: ~~12/1/04A~~, 12/1/04C, ~~12/9/04A~~, ~~12/14/04A~~, ~~12/2/04C~~
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.70	1/12/05	[illegible]
FINAL PRESSURE (PSIA)	24.24 ~~1/12/05~~	1/12/05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 10-29-04 A

Date of QC: 11-3-04

Data File Number: MB11036

Canister ID Numbers

* 9129 B	A-247
A-318	02696
11346	9148 B
GL0009	04145
9235 B	04416
0185	03845

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

AA
Reviewed By:

11/4/04
Date:

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041103.b\MB11036.D
Lab Smp Id: BLANK Client Smp ID: blank
Inj Date : 04-NOV-2004 03:53
Operator : AA Inst ID: gcmsb.i
Smp Info : BLANK,blank,9129B
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041103.b\TO14A.m
Meth Date : 03-Nov-2004 12:17 almagroa Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

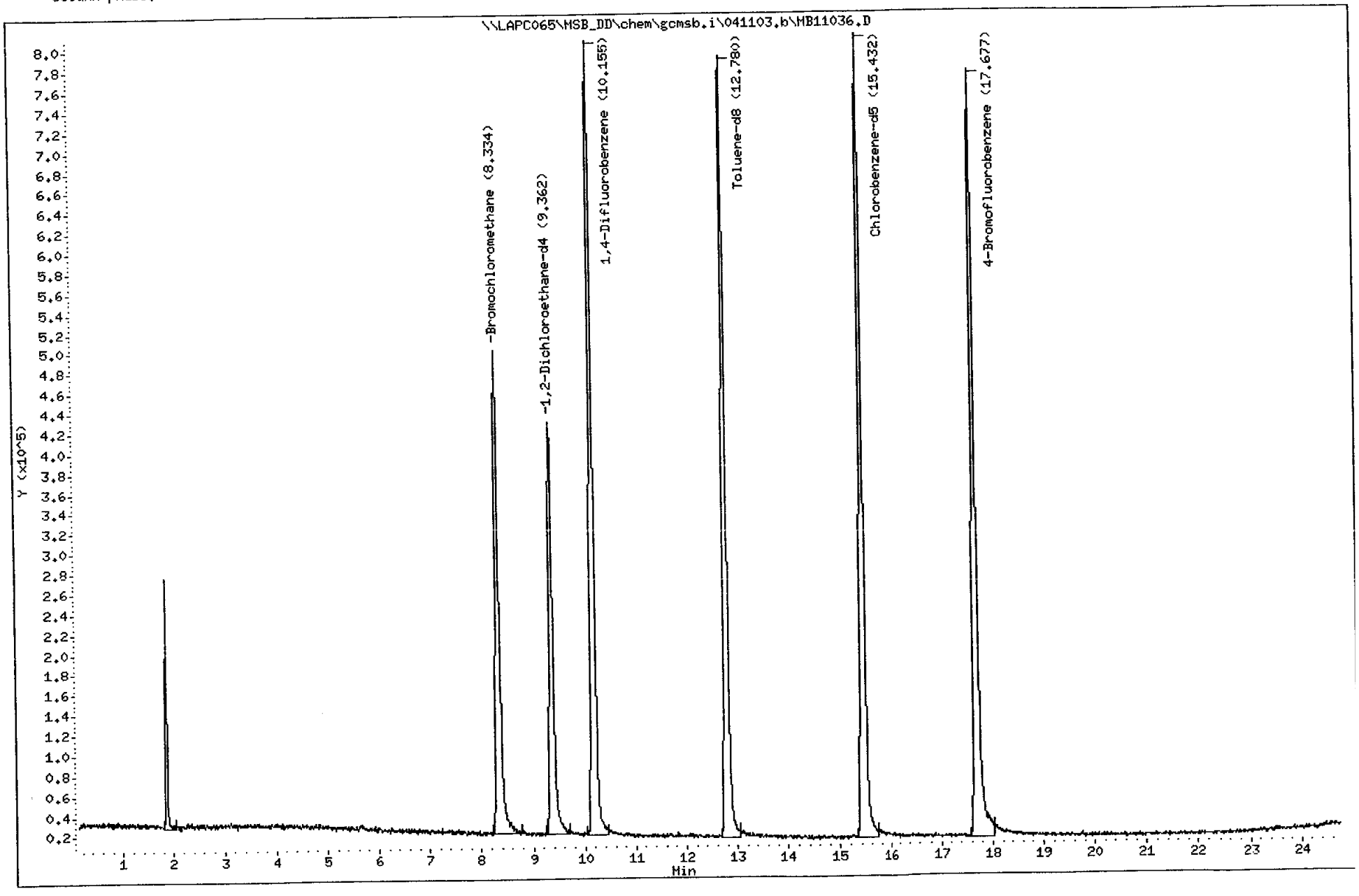
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.333	8.342	(1.000)	654560	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.352	9.370	(0.920)	647373	55.7101	55.71
* 72 1,4-Difluorobenzene	114	10.164	10.172	(1.000)	1480815	50.0000	
$ 87 Toluene-d8	100	12.779	12.779	(1.257)	762254	48.8563	48.86
* 99 Chlorobenzene-d5	117	15.431	15.422	(1.000)	1069829	50.0000	
$ 113 4-Bromofluorobenzene	95	17.677	17.676	(1.146)	860302	41.8962	41.90

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041103.b\MB11036.D
Date : 04-NOV-2004 03:53
Client ID: blank
Sample Info: BLANK,blank,9129B

Instrument: gcmsb.i

Operator: AA
Column diameter: 0.53

Column phase: J&W DB-624



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15ML

Date Cleaned/Batch: 12-1-04C

Date of QC: 12-2-04

Data File Number: MB12021(MSB)

Canister ID Numbers

* 02803 ✓	11203
93110	12166 ✓
0142 ✓	12620
DL115	9413 BB ✓
12211	12876
92056	93154

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-2-04

N:\COI\DOCS\Can QC Cert (012103).doc

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 02-DEC-2004 13:25
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,02803
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\TO14A.m
Meth Date : 02-Dec-2004 12:04 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.314	8.326	(1.000)	503233	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.343	9.345	(0.921)	561863	47.6517	47.65
* 72 1,4-Difluorobenzene	114	10.146	10.157	(1.000)	1505004	50.0000	
$ 87 Toluene-d8	100	12.762	12.765	(1.258)	647801	43.9086	43.91
* 99 Chlorobenzene-d5	117	15.415	15.418	(1.000)	829144	50.0000	
$ 113 4-Bromofluorobenzene	95	17.670	17.664	(1.146)	411537	27.8068	27.81(R)

QC Flag Legend

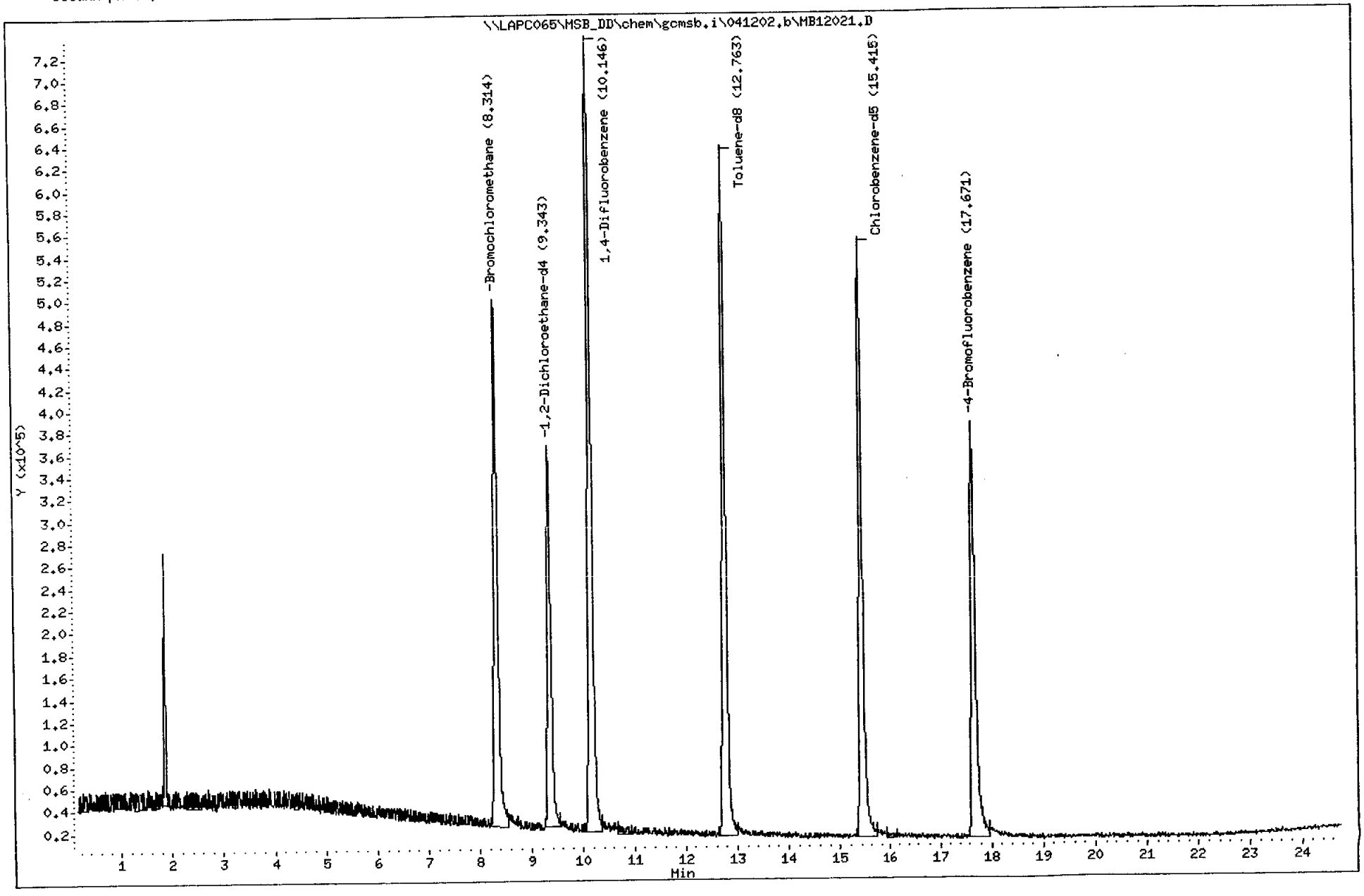
R - Spike/Surrogate failed recovery limits.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041202.b\MB12021.D
Date : 02-DEC-2004 13:25
Client ID: BLANK
Sample Info: BLANK,BLANK,02803

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53

Column phase: J&W DB-624



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100233

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100233

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066388-001/TAG-SV05-50 12/28/04 08:45 001				
Dichlorodifluoromethane	5900	48	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	430	48	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	1100	48	ppb(v/v)	EPA-21 TO-14A
Chloroethane	27 J	95	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	810	48	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	2400	48	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	920	48	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	9700	48	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	8000	48	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	260	48	ppb(v/v)	EPA-21 TO-14A
Chloroform	110	48	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	88	48	ppb(v/v)	EPA-21 TO-14A
Benzene	230	48	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	11000	48	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	32 J	48	ppb(v/v)	EPA-21 TO-14A
Toluene	100	48	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	3100	48	ppb(v/v)	EPA-21 TO-14A
o-Xylene	18 J	48	ppb(v/v)	EPA-21 TO-14A
066389-001/TAG-SV05-100 12/28/04 08:50 002				
Dichlorodifluoromethane	7300	95	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	450	95	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	300	95	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	770	95	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	3300	95	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	95	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	13000	95	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	5900	95	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	140	95	ppb(v/v)	EPA-21 TO-14A
Chloroform	56 J	95	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	140	95	ppb(v/v)	EPA-21 TO-14A
Benzene	160	95	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	9400	95	ppb(v/v)	EPA-21 TO-14A
Toluene	170	95	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	2400	95	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	48 J	95	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

E5A100233

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066390-001/TAG-SV05-150 12/28/04 08:55 003				
Dichlorodifluoromethane	4000	19	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	240	19	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	160	19	ppb(v/v)	EPA-21 TO-14A
Chloroethane	11 J	38	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	490	19	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	2700	19	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	2200	19	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1400	19	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	680	19	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	18 J	19	ppb(v/v)	EPA-21 TO-14A
Chloroform	8.7 J	19	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	71	19	ppb(v/v)	EPA-21 TO-14A
Benzene	26	19	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	2500	19	ppb(v/v)	EPA-21 TO-14A
Toluene	93	19	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	790	19	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	6.7 J	19	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	16 J	19	ppb(v/v)	EPA-21 TO-14A
066391-001/TAG-SV05-150-SD 12/28/04 08:55 004				
Dichlorodifluoromethane	4400	19	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	280	19	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	180	19	ppb(v/v)	EPA-21 TO-14A
Chloroethane	13 J	38	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	550	19	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	3000	19	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	19	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1400	19	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	720	19	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	18 J	19	ppb(v/v)	EPA-21 TO-14A
Chloroform	9.5 J	19	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	80	19	ppb(v/v)	EPA-21 TO-14A
Benzene	28	19	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	2800	19	ppb(v/v)	EPA-21 TO-14A
Toluene	100	19	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	860	19	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	7.4 J	19	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	16 J	19	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

E5A100233

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066392-001/TAG-SV05-200 12/28/04 09:00 005				
Dichlorodifluoromethane	1200	7.7	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	57	7.7	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	25	7.7	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	120	7.7	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	580	7.7	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	520	7.7	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	750	7.7	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	290	7.7	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	11	7.7	ppb(v/v)	EPA-21 TO-14A
Chloroform	4.1 J	7.7	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	12	7.7	ppb(v/v)	EPA-21 TO-14A
Benzene	11	7.7	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	1000	7.7	ppb(v/v)	EPA-21 TO-14A
Toluene	31	7.7	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	280	7.7	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	3.9 J	7.7	ppb(v/v)	EPA-21 TO-14A
o-Xylene	2.5 J	7.7	ppb(v/v)	EPA-21 TO-14A
066393-001/TAG-SV05-250 12/28/04 09:20 006				
Dichlorodifluoromethane	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	0.62 J	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.1 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	2.8	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	1.0 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	10	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	4.3	2.0	ppb(v/v)	EPA-21 TO-14A
066394-001/TAG-SV05-300 12/28/04 09:08 007				
Dichlorodifluoromethane	110	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	5.9	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	2.4	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	12	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	57	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	58	2.0	ppb(v/v)	EPA-21 TO-14A

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EXECUTIVE SUMMARY - Detection Highlights

E5A100233

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066394-001/TAG-SV05-300 12/28/04 09:08 007				
Acetone	6.1 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	87	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	40	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	1.7 J	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	2.7 J	10	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	1.8 J	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	4.1	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	140	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	14	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	30	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	2.4	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100233

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100233

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DKQ	001	066388-001/TAG-SV05-50	12/28/04	08:45
G2DKR	002	066389-001/TAG-SV05-100	12/28/04	08:50
G2DKT	003	066390-001/TAG-SV05-150	12/28/04	08:55
G2DKV	004	066391-001/TAG-SV05-150-SD	12/28/04	08:55
G2DKW	005	066392-001/TAG-SV05-200	12/28/04	09:00
G2DKX	006	066393-001/TAG-SV05-250	12/28/04	09:20
G2DK0	007	066394-001/TAG-SV05-300	12/28/04	09:08

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066388-001/TAG-SV05-50

GC/MS Volatiles

Lot-Sample #...: E5A100233-001 **Work Order #...:** G2DKQ1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 08:45 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 11:41
Dilution Factor: 23.82
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**5900**	**48**	**ppb(v/v)**	**12**
Chloromethane	ND	95	ppb(v/v)	24
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**430**	**48**	**ppb(v/v)**	**19**
Vinyl chloride	**1100**	**48**	**ppb(v/v)**	**19**
Bromomethane	ND	48	ppb(v/v)	24
Chloroethane	**27 J**	**95**	**ppb(v/v)**	**19**
Trichlorofluoromethane	**810**	**48**	**ppb(v/v)**	**12**
1,1-Dichloroethene	**2400**	**48**	**ppb(v/v)**	**12**
Carbon disulfide	ND	240	ppb(v/v)	48
1,1,2-Trichloro-1,2,2-trifluoroethane	**920**	**48**	**ppb(v/v)**	**12**
Acetone	ND	240	ppb(v/v)	48
Methylene chloride	**9700**	**48**	**ppb(v/v)**	**19**
1,1-Dichloroethane	**8000**	**48**	**ppb(v/v)**	**12**
Vinyl acetate	ND	240	ppb(v/v)	48
cis-1,2-Dichloroethene	**260**	**48**	**ppb(v/v)**	**19**
2-Butanone (MEK)	ND	240	ppb(v/v)	48
Chloroform	**110**	**48**	**ppb(v/v)**	**19**
1,1,1-Trichloroethane	**88**	**48**	**ppb(v/v)**	**12**
Carbon tetrachloride	ND	48	ppb(v/v)	12
Benzene	**230**	**48**	**ppb(v/v)**	**19**
1,2-Dichloroethane	ND	48	ppb(v/v)	19
Trichloroethene	**11000**	**48**	**ppb(v/v)**	**12**
1,2-Dichloropropane	**32 J**	**48**	**ppb(v/v)**	**19**
Bromodichloromethane	ND	48	ppb(v/v)	19
cis-1,3-Dichloropropene	ND	48	ppb(v/v)	12
4-Methyl-2-pentanone (MIBK)	ND	240	ppb(v/v)	48
Toluene	**100**	**48**	**ppb(v/v)**	**12**
trans-1,3-Dichloropropene	ND	48	ppb(v/v)	19
1,1,2-Trichloroethane	ND	48	ppb(v/v)	14
Tetrachloroethene	**3100**	**48**	**ppb(v/v)**	**14**
2-Hexanone	ND	240	ppb(v/v)	24
Dibromochloromethane	ND	48	ppb(v/v)	12
1,2-Dibromoethane (EDB)	ND	48	ppb(v/v)	12
Chlorobenzene	ND	48	ppb(v/v)	12

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066388-001/TAG-SV05-50

GC/MS Volatiles

Lot-Sample #...: E5A100233-001 **Work Order #...:** G2DKQ1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	48	ppb(v/v)	12
m-Xylene & p-Xylene	ND	48	ppb(v/v)	24
o-Xylene	**18 J**	**48**	**ppb(v/v)**	**14**
Styrene	ND	48	ppb(v/v)	14
Bromoform	ND	48	ppb(v/v)	12
1,1,2,2-Tetrachloroethane	ND	48	ppb(v/v)	12
Benzyl chloride	ND	240	ppb(v/v)	19
4-Ethyltoluene	ND	48	ppb(v/v)	17
1,3,5-Trimethylbenzene	ND	48	ppb(v/v)	19
1,2,4-Trimethylbenzene	ND	48	ppb(v/v)	19
1,3-Dichlorobenzene	ND	48	ppb(v/v)	17
1,4-Dichlorobenzene	ND	48	ppb(v/v)	19
1,2-Dichlorobenzene	ND	48	ppb(v/v)	19
1,2,4-Trichloro-benzene	ND	120	ppb(v/v)	24
Hexachlorobutadiene	ND	95	ppb(v/v)	24

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066389-001/TAG-SV05-100

GC/MS Volatiles

Lot-Sample #...: E5A100233-002 **Work Order #...:** G2DKR1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 08:50 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 12:11
Dilution Factor: 47.64
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**7300**	**95**	**ppb(v/v)**	**24**
Chloromethane	ND	190	ppb(v/v)	48
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**450**	**95**	**ppb(v/v)**	**38**
Vinyl chloride	**300**	**95**	**ppb(v/v)**	**38**
Bromomethane	ND	95	ppb(v/v)	48
Chloroethane	ND	190	ppb(v/v)	38
Trichlorofluoromethane	**770**	**95**	**ppb(v/v)**	**24**
1,1-Dichloroethene	**3300**	**95**	**ppb(v/v)**	**24**
Carbon disulfide	ND	480	ppb(v/v)	95
1,1,2-Trichloro-1,2,2-trifluoroethane	**2000**	**95**	**ppb(v/v)**	**24**
Acetone	ND	480	ppb(v/v)	95
Methylene chloride	**13000**	**95**	**ppb(v/v)**	**38**
1,1-Dichloroethane	**5900**	**95**	**ppb(v/v)**	**24**
Vinyl acetate	ND	480	ppb(v/v)	95
cis-1,2-Dichloroethene	**140**	**95**	**ppb(v/v)**	**38**
2-Butanone (MEK)	ND	480	ppb(v/v)	95
Chloroform	**56 J**	**95**	**ppb(v/v)**	**38**
1,1,1-Trichloroethane	**140**	**95**	**ppb(v/v)**	**24**
Carbon tetrachloride	ND	95	ppb(v/v)	24
Benzene	**160**	**95**	**ppb(v/v)**	**38**
1,2-Dichloroethane	ND	95	ppb(v/v)	38
Trichloroethene	**9400**	**95**	**ppb(v/v)**	**24**
1,2-Dichloropropane	ND	95	ppb(v/v)	38
Bromodichloromethane	ND	95	ppb(v/v)	38
cis-1,3-Dichloropropene	ND	95	ppb(v/v)	24
4-Methyl-2-pentanone (MIBK)	ND	480	ppb(v/v)	95
Toluene	**170**	**95**	**ppb(v/v)**	**24**
trans-1,3-Dichloropropene	ND	95	ppb(v/v)	38
1,1,2-Trichloroethane	ND	95	ppb(v/v)	29
Tetrachloroethene	**2400**	**95**	**ppb(v/v)**	**29**
2-Hexanone	ND	480	ppb(v/v)	48
Dibromochloromethane	ND	95	ppb(v/v)	24
1,2-Dibromoethane (EDB)	ND	95	ppb(v/v)	24
Chlorobenzene	ND	95	ppb(v/v)	24

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066389-001/TAG-SV05-100

GC/MS Volatiles

Lot-Sample #...: E5A100233-002 **Work Order #...:** G2DKR1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	95	ppb(v/v)	24
m-Xylene & p-Xylene	**48 J**	**95**	**ppb(v/v)**	**48**
o-Xylene	ND	95	ppb(v/v)	29
Styrene	ND	95	ppb(v/v)	29
Bromoform	ND	95	ppb(v/v)	24
1,1,2,2-Tetrachloroethane	ND	95	ppb(v/v)	24
Benzyl chloride	ND	480	ppb(v/v)	38
4-Ethyltoluene	ND	95	ppb(v/v)	33
1,3,5-Trimethylbenzene	ND	95	ppb(v/v)	38
1,2,4-Trimethylbenzene	ND	95	ppb(v/v)	38
1,3-Dichlorobenzene	ND	95	ppb(v/v)	33
1,4-Dichlorobenzene	ND	95	ppb(v/v)	38
1,2-Dichlorobenzene	ND	95	ppb(v/v)	38
1,2,4-Trichloro-benzene	ND	240	ppb(v/v)	48
Hexachlorobutadiene	ND	190	ppb(v/v)	48

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066390-001/TAG-SV05-150

GC/MS Volatiles

Lot-Sample #...: E5A100233-003 **Work Order #...:** G2DKT1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 08:55 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 12:39
Dilution Factor: 9.56
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**4000**	**19**	**ppb(v/v)**	**4.8**
Chloromethane	ND	38	ppb(v/v)	9.6
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**240**	**19**	**ppb(v/v)**	**7.6**
Vinyl chloride	**160**	**19**	**ppb(v/v)**	**7.6**
Bromomethane	ND	19	ppb(v/v)	9.6
Chloroethane	**11 J**	**38**	**ppb(v/v)**	**7.6**
Trichlorofluoromethane	**490**	**19**	**ppb(v/v)**	**4.8**
1,1-Dichloroethene	**2700**	**19**	**ppb(v/v)**	**4.8**
Carbon disulfide	ND	96	ppb(v/v)	19
1,1,2-Trichloro-1,2,2-trifluoroethane	**2200**	**19**	**ppb(v/v)**	**4.8**
Acetone	ND	96	ppb(v/v)	19
Methylene chloride	**1400**	**19**	**ppb(v/v)**	**7.6**
1,1-Dichloroethane	**680**	**19**	**ppb(v/v)**	**4.8**
Vinyl acetate	ND	96	ppb(v/v)	19
cis-1,2-Dichloroethene	**18 J**	**19**	**ppb(v/v)**	**7.6**
2-Butanone (MEK)	ND	96	ppb(v/v)	19
Chloroform	**8.7 J**	**19**	**ppb(v/v)**	**7.6**
1,1,1-Trichloroethane	**71**	**19**	**ppb(v/v)**	**4.8**
Carbon tetrachloride	ND	19	ppb(v/v)	4.8
Benzene	**26**	**19**	**ppb(v/v)**	**7.6**
1,2-Dichloroethane	ND	19	ppb(v/v)	7.6
Trichloroethene	**2500**	**19**	**ppb(v/v)**	**4.8**
1,2-Dichloropropane	ND	19	ppb(v/v)	7.6
Bromodichloromethane	ND	19	ppb(v/v)	7.6
cis-1,3-Dichloropropene	ND	19	ppb(v/v)	4.8
4-Methyl-2-pentanone (MIBK)	ND	96	ppb(v/v)	19
Toluene	**93**	**19**	**ppb(v/v)**	**4.8**
trans-1,3-Dichloropropene	ND	19	ppb(v/v)	7.6
1,1,2-Trichloroethane	ND	19	ppb(v/v)	5.7
Tetrachloroethene	**790**	**19**	**ppb(v/v)**	**5.7**
2-Hexanone	ND	96	ppb(v/v)	9.6
Dibromochloromethane	ND	19	ppb(v/v)	4.8
1,2-Dibromoethane (EDB)	ND	19	ppb(v/v)	4.8
Chlorobenzene	ND	19	ppb(v/v)	4.8

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066390-001/TAG-SV05-150

GC/MS Volatiles

Lot-Sample #...: E5A100233-003 **Work Order #...:** G2DKT1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	**6.7 J**	**19**	**ppb(v/v)**	**4.8**
m-Xylene & p-Xylene	**16 J**	**19**	**ppb(v/v)**	**9.6**
o-Xylene	ND	19	ppb(v/v)	5.7
Styrene	ND	19	ppb(v/v)	5.7
Bromoform	ND	19	ppb(v/v)	4.8
1,1,2,2-Tetrachloroethane	ND	19	ppb(v/v)	4.8
Benzyl chloride	ND	96	ppb(v/v)	7.6
4-Ethyltoluene	ND	19	ppb(v/v)	6.7
1,3,5-Trimethylbenzene	ND	19	ppb(v/v)	7.6
1,2,4-Trimethylbenzene	ND	19	ppb(v/v)	7.6
1,3-Dichlorobenzene	ND	19	ppb(v/v)	6.7
1,4-Dichlorobenzene	ND	19	ppb(v/v)	7.6
1,2-Dichlorobenzene	ND	19	ppb(v/v)	7.6
1,2,4-Trichloro-benzene	ND	48	ppb(v/v)	9.6
Hexachlorobutadiene	ND	38	ppb(v/v)	9.6

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066391-001/TAG-SV05-150-SD

GC/MS Volatiles

Lot-Sample #...: E5A100233-004 **Work Order #...:** G2DKV1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 08:55 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 13:15
Dilution Factor: 9.53
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**4400**	**19**	**ppb(v/v)**	**4.8**
Chloromethane	ND	38	ppb(v/v)	9.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**280**	**19**	**ppb(v/v)**	**7.6**
Vinyl chloride	**180**	**19**	**ppb(v/v)**	**7.6**
Bromomethane	ND	19	ppb(v/v)	9.5
Chloroethane	**13 J**	**38**	**ppb(v/v)**	**7.6**
Trichlorofluoromethane	**550**	**19**	**ppb(v/v)**	**4.8**
1,1-Dichloroethene	**3000**	**19**	**ppb(v/v)**	**4.8**
Carbon disulfide	ND	95	ppb(v/v)	19
1,1,2-Trichloro-1,2,2-trifluoroethane	**2500**	**19**	**ppb(v/v)**	**4.8**
Acetone	ND	95	ppb(v/v)	19
Methylene chloride	**1400**	**19**	**ppb(v/v)**	**7.6**
1,1-Dichloroethane	**720**	**19**	**ppb(v/v)**	**4.8**
Vinyl acetate	ND	95	ppb(v/v)	19
cis-1,2-Dichloroethene	**18 J**	**19**	**ppb(v/v)**	**7.6**
2-Butanone (MEK)	ND	95	ppb(v/v)	19
Chloroform	**9.5 J**	**19**	**ppb(v/v)**	**7.6**
1,1,1-Trichloroethane	**80**	**19**	**ppb(v/v)**	**4.8**
Carbon tetrachloride	ND	19	ppb(v/v)	4.8
Benzene	**28**	**19**	**ppb(v/v)**	**7.6**
1,2-Dichloroethane	ND	19	ppb(v/v)	7.6
Trichloroethene	**2800**	**19**	**ppb(v/v)**	**4.8**
1,2-Dichloropropane	ND	19	ppb(v/v)	7.6
Bromodichloromethane	ND	19	ppb(v/v)	7.6
cis-1,3-Dichloropropene	ND	19	ppb(v/v)	4.8
4-Methyl-2-pentanone (MIBK)	ND	95	ppb(v/v)	19
Toluene	**100**	**19**	**ppb(v/v)**	**4.8**
trans-1,3-Dichloropropene	ND	19	ppb(v/v)	7.6
1,1,2-Trichloroethane	ND	19	ppb(v/v)	5.7
Tetrachloroethene	**860**	**19**	**ppb(v/v)**	**5.7**
2-Hexanone	ND	95	ppb(v/v)	9.5
Dibromochloromethane	ND	19	ppb(v/v)	4.8
1,2-Dibromoethane (EDB)	ND	19	ppb(v/v)	4.8
Chlorobenzene	ND	19	ppb(v/v)	4.8

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066391-001/TAG-SV05-150-SD

GC/MS Volatiles

Lot-Sample #...: E5A100233-004 **Work Order #...:** G2DKV1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	**7.4 J**	**19**	**ppb(v/v)**	**4.8**
m-Xylene & p-Xylene	**16 J**	**19**	**ppb(v/v)**	**9.5**
o-Xylene	ND	19	ppb(v/v)	5.7
Styrene	ND	19	ppb(v/v)	5.7
Bromoform	ND	19	ppb(v/v)	4.8
1,1,2,2-Tetrachloroethane	ND	19	ppb(v/v)	4.8
Benzyl chloride	ND	95	ppb(v/v)	7.6
4-Ethyltoluene	ND	19	ppb(v/v)	6.7
1,3,5-Trimethylbenzene	ND	19	ppb(v/v)	7.6
1,2,4-Trimethylbenzene	ND	19	ppb(v/v)	7.6
1,3-Dichlorobenzene	ND	19	ppb(v/v)	6.7
1,4-Dichlorobenzene	ND	19	ppb(v/v)	7.6
1,2-Dichlorobenzene	ND	19	ppb(v/v)	7.6
1,2,4-Trichloro-benzene	ND	48	ppb(v/v)	9.5
Hexachlorobutadiene	ND	38	ppb(v/v)	9.5

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066392-001/TAG-SV05-200

GC/MS Volatiles

Lot-Sample #...: E5A100233-005 **Work Order #...:** G2DKW1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 09:00 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 13:43
Dilution Factor: 3.84
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**1200**	**7.7**	**ppb(v/v)**	**1.9**
Chloromethane	ND	15	ppb(v/v)	3.8
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**57**	**7.7**	**ppb(v/v)**	**3.1**
Vinyl chloride	**25**	**7.7**	**ppb(v/v)**	**3.1**
Bromomethane	ND	7.7	ppb(v/v)	3.8
Chloroethane	ND	15	ppb(v/v)	3.1
Trichlorofluoromethane	**120**	**7.7**	**ppb(v/v)**	**1.9**
1,1-Dichloroethene	**580**	**7.7**	**ppb(v/v)**	**1.9**
Carbon disulfide	ND	38	ppb(v/v)	7.7
1,1,2-Trichloro-1,2,2-trifluoroethane	**520**	**7.7**	**ppb(v/v)**	**1.9**
Acetone	ND	38	ppb(v/v)	7.7
Methylene chloride	**750**	**7.7**	**ppb(v/v)**	**3.1**
1,1-Dichloroethane	**290**	**7.7**	**ppb(v/v)**	**1.9**
Vinyl acetate	ND	38	ppb(v/v)	7.7
cis-1,2-Dichloroethene	**11**	**7.7**	**ppb(v/v)**	**3.1**
2-Butanone (MEK)	ND	38	ppb(v/v)	7.7
Chloroform	**4.1 J**	**7.7**	**ppb(v/v)**	**3.1**
1,1,1-Trichloroethane	**12**	**7.7**	**ppb(v/v)**	**1.9**
Carbon tetrachloride	ND	7.7	ppb(v/v)	1.9
Benzene	**11**	**7.7**	**ppb(v/v)**	**3.1**
1,2-Dichloroethane	ND	7.7	ppb(v/v)	3.1
Trichloroethene	**1000**	**7.7**	**ppb(v/v)**	**1.9**
1,2-Dichloropropane	ND	7.7	ppb(v/v)	3.1
Bromodichloromethane	ND	7.7	ppb(v/v)	3.1
cis-1,3-Dichloropropene	ND	7.7	ppb(v/v)	1.9
4-Methyl-2-pentanone (MIBK)	ND	38	ppb(v/v)	7.7
Toluene	**31**	**7.7**	**ppb(v/v)**	**1.9**
trans-1,3-Dichloropropene	ND	7.7	ppb(v/v)	3.1
1,1,2-Trichloroethane	ND	7.7	ppb(v/v)	2.3
Tetrachloroethene	**280**	**7.7**	**ppb(v/v)**	**2.3**
2-Hexanone	ND	38	ppb(v/v)	3.8
Dibromochloromethane	ND	7.7	ppb(v/v)	1.9
1,2-Dibromoethane (EDB)	ND	7.7	ppb(v/v)	1.9
Chlorobenzene	ND	7.7	ppb(v/v)	1.9

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066392-001/TAG-SV05-200

GC/MS Volatiles

Lot-Sample #...: E5A100233-005 **Work Order #...:** G2DKW1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	7.7	ppb(v/v)	1.9
m-Xylene & p-Xylene	**3.9 J**	**7.7**	**ppb(v/v)**	**3.8**
o-Xylene	**2.5 J**	**7.7**	**ppb(v/v)**	**2.3**
Styrene	ND	7.7	ppb(v/v)	2.3
Bromoform	ND	7.7	ppb(v/v)	1.9
1,1,2,2-Tetrachloroethane	ND	7.7	ppb(v/v)	1.9
Benzyl chloride	ND	38	ppb(v/v)	3.1
4-Ethyltoluene	ND	7.7	ppb(v/v)	2.7
1,3,5-Trimethylbenzene	ND	7.7	ppb(v/v)	3.1
1,2,4-Trimethylbenzene	ND	7.7	ppb(v/v)	3.1
1,3-Dichlorobenzene	ND	7.7	ppb(v/v)	2.7
1,4-Dichlorobenzene	ND	7.7	ppb(v/v)	3.1
1,2-Dichlorobenzene	ND	7.7	ppb(v/v)	3.1
1,2,4-Trichloro-benzene	ND	19	ppb(v/v)	3.8
Hexachlorobutadiene	ND	15	ppb(v/v)	3.8

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066393-001/TAG-SV05-250

GC/MS Volatiles

Lot-Sample #...: E5A100233-006 **Work Order #...:** G2DKX1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 09:20 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 14:16
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**1.0 J**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	ND	2.0	ppb(v/v)	0.50
1,1-Dichloroethene	**1.2 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.62 J**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**2.1 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**2.8**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	**1.0 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**10**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**4.3**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066393-001/TAG-SV05-250

GC/MS Volatiles

Lot-Sample #...: E5A100233-006 **Work Order #...:** G2DKX1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066394-001/TAG-SV05-300

GC/MS Volatiles

Lot-Sample #...: E5A100233-007 **Work Order #...:** G2DK01AD **Matrix.....:** AE
Date Sampled...: 12/28/04 09:08 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 14:45
Dilution Factor: 1
Analyst ID.....: 117751 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**110**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**5.9**	**2.0**	**ppb(v/v)**	**0.80**
Vinyl chloride	**2.4**	**2.0**	**ppb(v/v)**	**0.80**
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**12**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**57**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**58**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**6.1 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**87**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	**40**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	**1.7 J**	**2.0**	**ppb(v/v)**	**0.80**
2-Butanone (MEK)	**2.7 J**	**10**	**ppb(v/v)**	**2.0**
Chloroform	ND	2.0	ppb(v/v)	0.80
1,1,1-Trichloroethane	**1.8 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**4.1**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**140**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**14**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**30**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066394-001/TAG-SV05-300

GC/MS Volatiles

Lot-Sample #...: E5A100233-007 **Work Order #...:** G2DK01AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	**1.3 J**	**2.0**	**ppb(v/v)**	**1.0**
o-Xylene	**2.4**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100233

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5017446	
002	AE	EPA-21 TO-14A		5017446	
003	AE	EPA-21 TO-14A		5017446	
004	AE	EPA-21 TO-14A		5017446	
005	AE	EPA-21 TO-14A		5017446	
006	AE	EPA-21 TO-14A		5017446	
007	AE	EPA-21 TO-14A		5017446	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100233 **Work Order #...:** G2QA41AA **Matrix.....:** AIR
MB Lot-Sample #: M5A170000-446

Prep Date.....: 01/17/05 **Analysis Time..:** 11:13
Analysis Date..: 01/17/05 **Prep Batch #...:** 5017446 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 117751

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100233 **Work Order #...:** G2QA41AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100233 **Work Order #...:** G2QA41AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-446 G2QA41AD-LCSD
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 10:15
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**103**	**(70 - 125)**			**EPA-21 TO-14A**
	99	**(70 - 125)**	**3.7**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**104**	**(75 - 120)**			**EPA-21 TO-14A**
	101	**(75 - 120)**	**2.5**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**101**	**(70 - 125)**			**EPA-21 TO-14A**
	101	**(70 - 125)**	**0.22**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**97**	**(75 - 125)**			**EPA-21 TO-14A**
	99	**(75 - 125)**	**2.6**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**96**	**(65 - 130)**			**EPA-21 TO-14A**
	99	**(65 - 130)**	**2.8**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100233 **Work Order #...:** G2QA41AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-446 G2QA41AD-LCSD
Prep Date.....: 01/17/05 **Analysis Date..:** 01/17/05
Prep Batch #...: 5017446 **Analysis Time..:** 10:15
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 117751

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**51.8**	**ppb(v/v)**	**103**		**EPA-21 TO-14A**
	50.5	**49.9**	**ppb(v/v)**	**99**	**3.7**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**56.4**	**ppb(v/v)**	**104**		**EPA-21 TO-14A**
	54.5	**55.0**	**ppb(v/v)**	**101**	**2.5**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**49.8**	**ppb(v/v)**	**101**		**EPA-21 TO-14A**
	49.5	**49.9**	**ppb(v/v)**	**101**	**0.22**	**EPA-21 TO-14A**
Toluene	**49.5**	**47.9**	**ppb(v/v)**	**97**		**EPA-21 TO-14A**
	49.5	**49.2**	**ppb(v/v)**	**99**	**2.6**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**48.0**	**ppb(v/v)**	**96**		**EPA-21 TO-14A**
	50.0	**49.4**	**ppb(v/v)**	**99**	**2.8**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100233

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: AAlmag / 01-17-05

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Propene	0.19327 0.19221	0.18168	0.18289	0.17632	0.18120	0.17659	0.18345	3.720
2 Propane	0.10762 0.06207	0.10090	0.08193	0.07279	0.08773	0.08349	0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143 1.80312	2.27300	2.07819	2.10083	2.03924	1.93780	2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930 1.50102	1.87384	1.66897	1.68434	1.63955	1.57599	1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357 0.52233	0.72602	0.63311	0.59781	0.74543	0.71071	0.67985	14.924
7 Dimethyl ether (DME)	0.32260 0.20216	0.26274	0.23873	0.22457	0.27348	0.27160	0.25656	15.273

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
8 Chloromethane	0.11174	0.09503	0.09627	0.09303	0.09518	0.09243		
	0.07215						0.09369	12.344
9 Vinyl Chloride	0.44242	0.41143	0.38835	0.39845	0.39759	0.38750		
	0.42047						0.40660	4.861
10 n-Butane	0.62727	0.57900	0.54623	0.50691	0.60872	0.59000		
	0.43640						0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
12 1,3-Butadiene	0.28308	0.27476	0.25635	0.27624	0.27811	0.27157		
	0.28848						0.27551	3.677
13 Acetaldehyde	+++++	+++++	+++++	+++++	0.05788	+++++		
	+++++						0.05788	0.000
14 Methanol	0.04169	0.04801	0.05160	0.05241	0.07195	0.06538		
	0.04950						0.05436	19.393
15 Bromomethane	0.53114	0.52479	0.47987	0.49112	0.49197	0.49280		
	0.52690						0.50552	4.193
16 Chloroethane	0.27607	0.27427	0.24332	0.24839	0.25392	0.24572		
	0.26101						0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570	0.45177	0.43126	0.39841	0.47650	0.43057		
	0.32216						0.44377	18.717

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
18 1,1-Difluoroethane	+++++ +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372	
19 Vinyl Bromide	0.62278 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391	
20 Dichlorofluoromethane (F21)	1.78533 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446	
21 Trichlorofluoromethane (F11)	2.44228 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083	
22 n-Pentane	1.21122 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395	
23 1,1-DC-1-flouroethane(F141b)	2.58910 +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444	
24 Ethanol	+++++ 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705	
25 Ether (Diethyl ether)	0.49364 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284	
26 Acrolein	0.20601 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263	<-
27 Propionaldehyde (Propanal)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+-+++	

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
28 1,1-Dichloroethene	1.26790 1.06973	1.17864	1.08330	1.12535	1.10018	1.07502	1.12859	6.381
29 2,2-Dimethylbutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715 2.22085	2.59937	2.38876	2.40025	2.34655	2.25977	2.44467	9.559
31 Acetone	+++++ 0.20458	0.12242	0.14598	0.16090	0.16041	0.16574	0.16001	16.836
32 Iodomethane	1.11548 1.87248	1.03774	1.38752	1.40857	2.82193	2.47154	1.73075	39.751 <-
33 Carbon Disulfide	0.84200 1.35974	0.90775	0.92884	1.06258	1.12947	1.19849	1.06127	17.279
34 2-Propanol	+++++ 0.71716	0.45343	0.48827	0.55577	0.58306	0.59777	0.56591	16.380
35 Acetonitrile	0.04928 0.15546	0.08266	0.12149	0.13210	0.18434	0.18610	0.13021	39.137 <-
36 Allyl Chloride	0.54011 0.71567	0.56312	0.52171	0.54469	0.60226	0.61352	0.58587	11.302
37 Methylene Chloride	0.81147 0.69121	0.73641	0.65629	0.67719	0.66235	0.64310	0.69686	8.458

STL Los Angeles

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Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
48 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Methylcyclopentane	0.29986 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674	
50 Ethyl tert-butyl ether (ETBE)	4.00260 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431	
51 Nitromethane	+++++ 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645	
52 2,2-Dichloropropane	2.07653 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951	
53 cis-1,2-Dichloroethene	0.71397 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930	
54 2-Butanone	+++++ 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856	
55 Propionitrile (Ethyl cyanide)	0.09053 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987	<-
56 Ethyl Acetate	+++++ 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061	
57 Methacrylonitrile	0.07711 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23610	35.970	<-

STL Los Angeles

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

STL Los Angeles

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384 / 1.43818	1.84557	1.78175	1.69840	1.73692	1.68874	1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680 / 0.81576	0.92384	0.86786	0.85814	1.07070	0.99994	0.93758	10.283
72 n-Heptane	0.65292 / 0.52727	0.59087	0.57809	0.57044	0.59474	0.58371	0.58544	6.367
74 2,3,4-Trimethylpentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Trichloroethene	0.49675 / 0.38637	0.44912	0.44758	0.42160	0.43287	0.42172	0.43657	7.756
76 Methylcyclohexane	0.42140 / 0.29346	0.36653	0.33095	0.30891	0.38179	0.35467	0.35110	12.546
77 1-Butanol	+++++ / 0.01390	0.02081	0.01680	0.01594	0.01842	0.01675	0.01710	13.662
78 1,2-Dichloropropane	0.16774 / 0.15399	0.15879	0.17082	0.16553	0.16628	0.16412	0.16390	3.481
79 Dibromomethane	0.53415 / 0.44421	0.48041	0.44691	0.42596	0.54917	0.51576	0.48522	9.991
80 Methyl methacrylate	+++++ / 0.31492	0.23366	0.24181	+++++	0.31202	0.30819	0.28212	14.422

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++ / 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014	
82 Bromodichloromethane	0.49808 / 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427 / 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++ / 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414 / 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++ / 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270	
87 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Toluene	1.01334 / 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491	
90 n-Octane	0.59003 / 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058 / 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62887	10.012
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442 <-
97 Dibromochloromethane	0.78993 / 0.93269	0.82338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
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Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
113 Cyclohexanone	+++++ 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036 <-
115 Bromobenzene	0.62810 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953
116 1,1,2,2-Tetrachloroethane	1.35006 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.35429	6.584
117 1,2,3-Trichloropropane	0.40312 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311
118 trans-1,4-Dichloro-2-butene	+++++ +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055 <-
119 n-Propylbenzene	1.28187 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097
120 2-Chlorotoluene	0.34395 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365
121 4-Chlorotoluene	0.34395 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365
122 3-Ethyltoluene	1.05354 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139
123 4-Ethyl Toluene	0.81519 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558 +++++	1.21368	0.81082	0.65064	0.83940	0.78774	0.94631	29.818
125 n-Decane	0.46267 0.32620	0.34922	0.25520	0.27626	0.36839	0.34720	0.34073	19.844
126 .beta.-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Ethyltoluene	1.11542 1.16620	0.94881	0.85458	0.95853	1.30303	1.23402	1.08294	15.307
128 .alpha.-Methylstyrene	0.43803 0.54809	0.36069	0.33804	0.37867	0.54465	0.52825	0.44806	20.459
129 tert-Butylbenzene	0.80994 0.87914	0.73130	0.67470	0.76818	1.05286	1.00081	0.84528	16.570
130 Pentachloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955 +++++	0.35806	0.23173	0.19988	0.25825	0.25412	0.27527	23.368
132 sec-Butylbenzene	1.53068 1.68519	1.27842	1.22547	1.37218	1.91352	1.87496	1.55435	17.948
133 D-Limonene	0.56335 0.43408	0.44070	0.33104	0.35410	0.48917	0.46237	0.43926	17.978

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030			
	0.69853						0.52632	18.610	
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222			
	1.26479						1.14477	17.565	
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895			
	0.67222						0.54141	18.711	
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417			
	0.67804						0.64142	16.131	
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209			
	1.02647						0.56325	55.511	<-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348			
	0.55025						0.48440	18.904	
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253			
	0.64790						0.53798	14.023	
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416			
	0.23934						0.27616	17.206	
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159			
	0.79399						0.72730	19.989	
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136			
	0.17470						0.37429	42.157	<-

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
	500.000 Level 7							
144 1,2,4-Trichlorobenzene	+++++	0.26338	0.25799	0.22180	0.31565	0.26332		
	0.27629						0.26641	11.388
145 Hexachlorobutadiene	0.56644	0.58610	0.42156	0.35251	0.47676	0.47942		
	0.51820						0.48586	16.727
146 Naphthalene	+++++	0.70441	0.53060	0.46537	0.55710	0.47106		
	0.49153						0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850	0.48714	0.49598	+++++	0.42244	0.27752		
	0.25906						0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014	0.40234	0.40611	0.41316	0.41851	0.44633		
	0.39572						0.41033	4.531
$ 88 Toluene-d8	0.51061	0.50803	0.52649	0.50915	0.52457	0.53681		
	0.54926						0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642	0.79382	0.81777	0.80936	0.95153	0.96622		
	1.09717						0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0 NA 01/04/05

E5A100233

STL Los Angeles
Air Toxics Lab GC/MS Run Log

strument ID:	Data Directory: D:\GCMSB\ 050103A-B	BFB Standard: PSL99112 83	Initial Calibration ID: 1-3 05
CMS-B	Method File: TO14A	Daily Standard: MSL04011028	SOP: CQI-MS-013
gbook ID:	Tune File:	LCS Standard: MSL04011043	MDL Date: 01-28-01
-AMS-041	BF041123	I.S. Standard: PSL99112 83	Blank Lot No. G050301-00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1305	1909	BF01032	-	-	-	BFB	28	-	-	-	m	OK	A	
	1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL0571
	2002	IC01031	-	-	-	2.0 PIBV STD	40	-	-	-	m	OK	10	MSL04011043
	2037	IC01032	-	-	-	4.0	80	-	-	-	m	OK	10	
	2112	IC01033	-	-	-	10	200	-	-	-	m	OK	10	
	2148	IC01034	-	-	-	25	500	-	-	-	m	OK	10	
	2223	IC01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
	2258	IC01036	-	-	-	100	250	-	-	-	m	OK	11	
	2334	IC01037	-	-	-	500	1250	-	-	-	m	OK	11	
1405	0009	MB01035	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 4/0.7
	0014	LC01035	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
	0119	LC01034	-	-	-	LCD	500	-	-	-	m	OK	13	2
	0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
	0342	B7371	GIPG5AA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EYL220306-1
	0417	B7372	GIPG7AA			002	872	24.4/14.0	-		m	OK	1	-2
	0452	B7373	GIPH1AA			003	1130	24.4/10.9	-		m	OK	2	-3
	0527	B7374	GIPH3AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
	0602	B7375	GIPH4AA			005	1000	24.5/11.0	-	1.00	m	O/R	4	-5

eviewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

ument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
book ID:	Tune File:	LCS Standard: 1-4-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-4-05	0637	B7576	G1P4A1AA	CCA	CRA	A 17178-AW 006	1150	244/1.2	—	1.00	W	OK	5	E4L22036-6
↓	0712	B7577	G1Q191AD	↓	TAST	LGSVEC015B 0750	40	244/1.1	100/10	2730	W	O/R	6	E4L23015-1
	0741	B7578	G1G2A1AD	↓	↓	LGSVEC015B 1030	40	244/1.2	100/10	2720	W	OK	7	↓ -2

Viewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

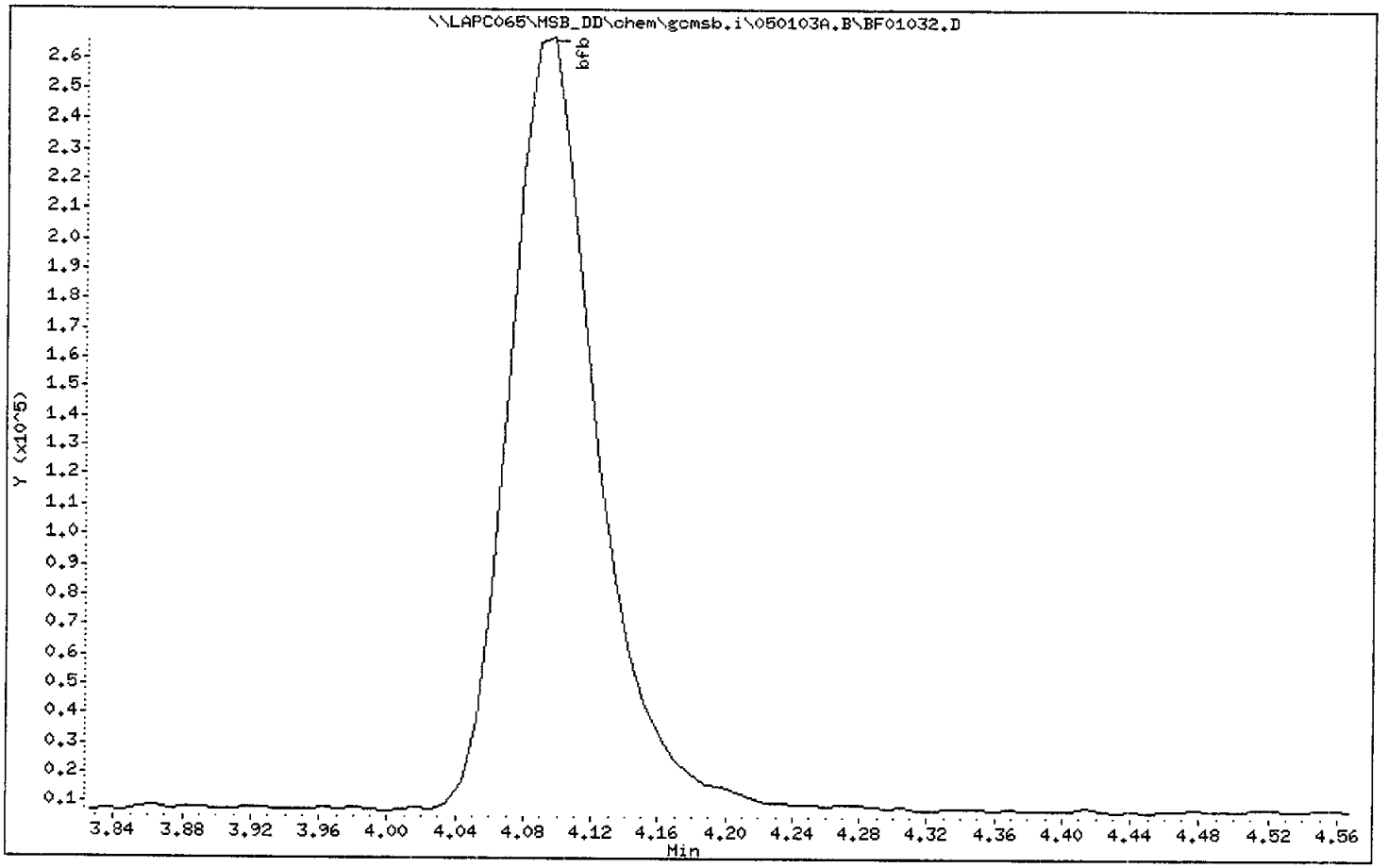
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

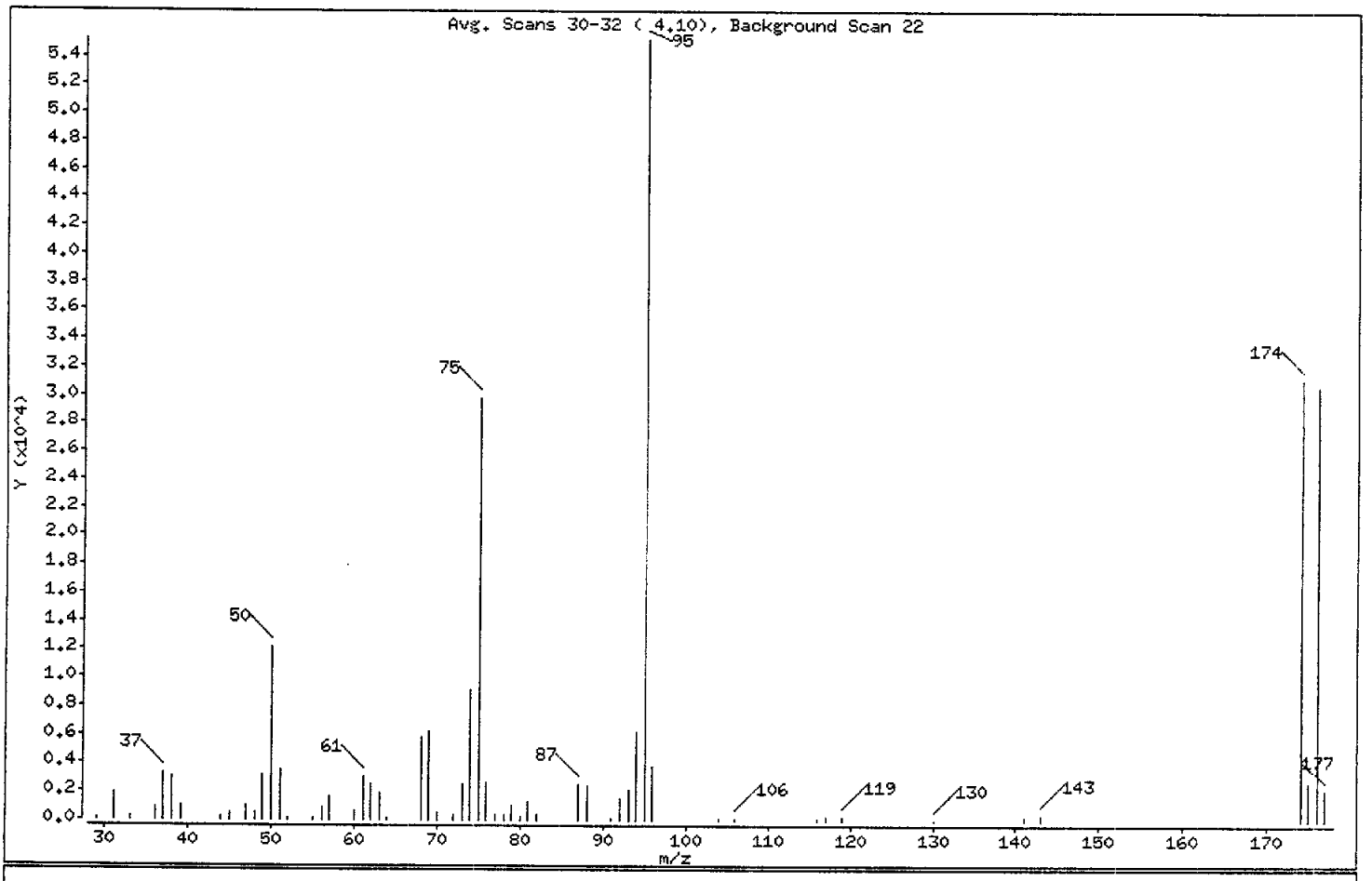
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

AA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

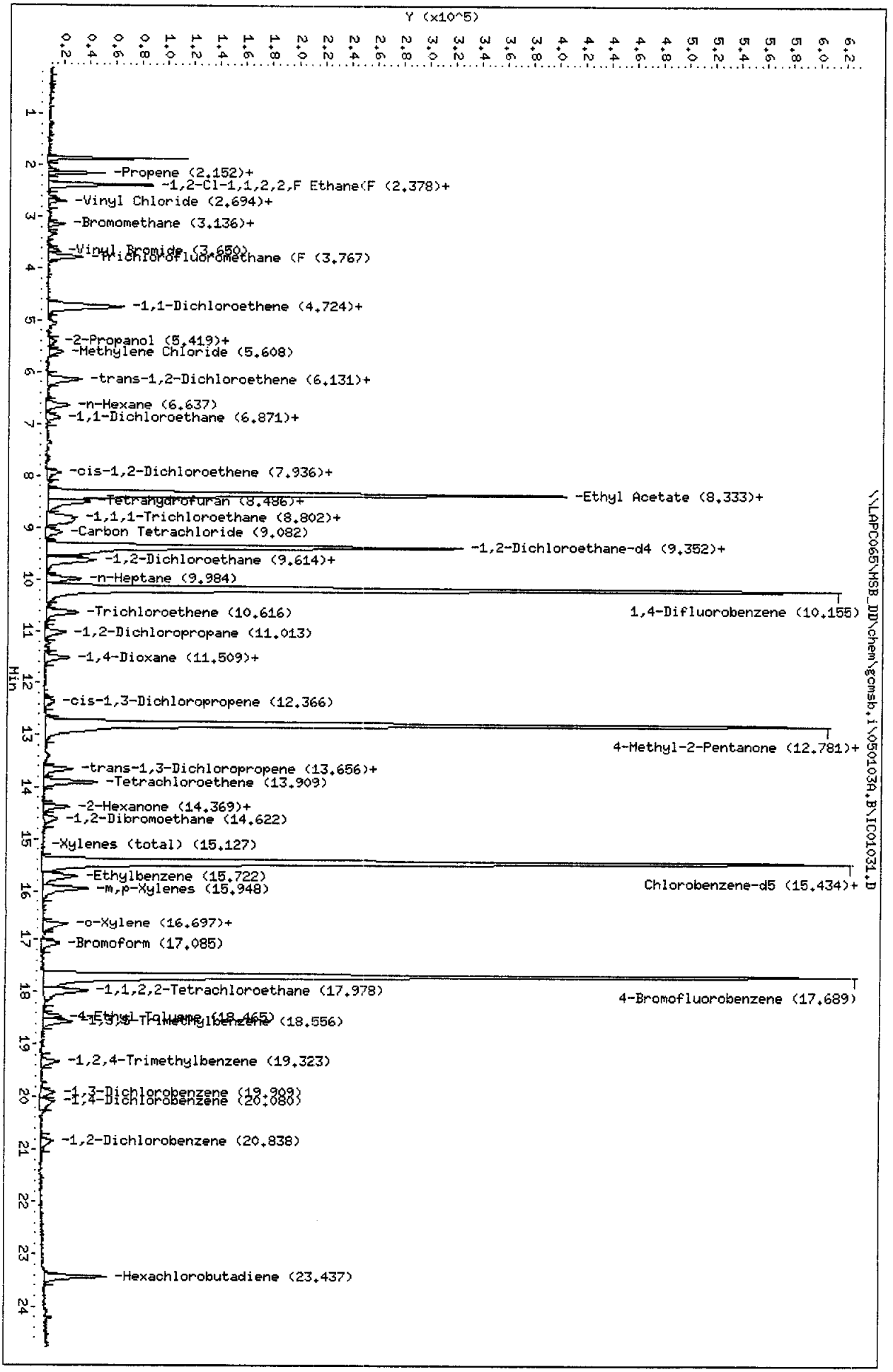
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

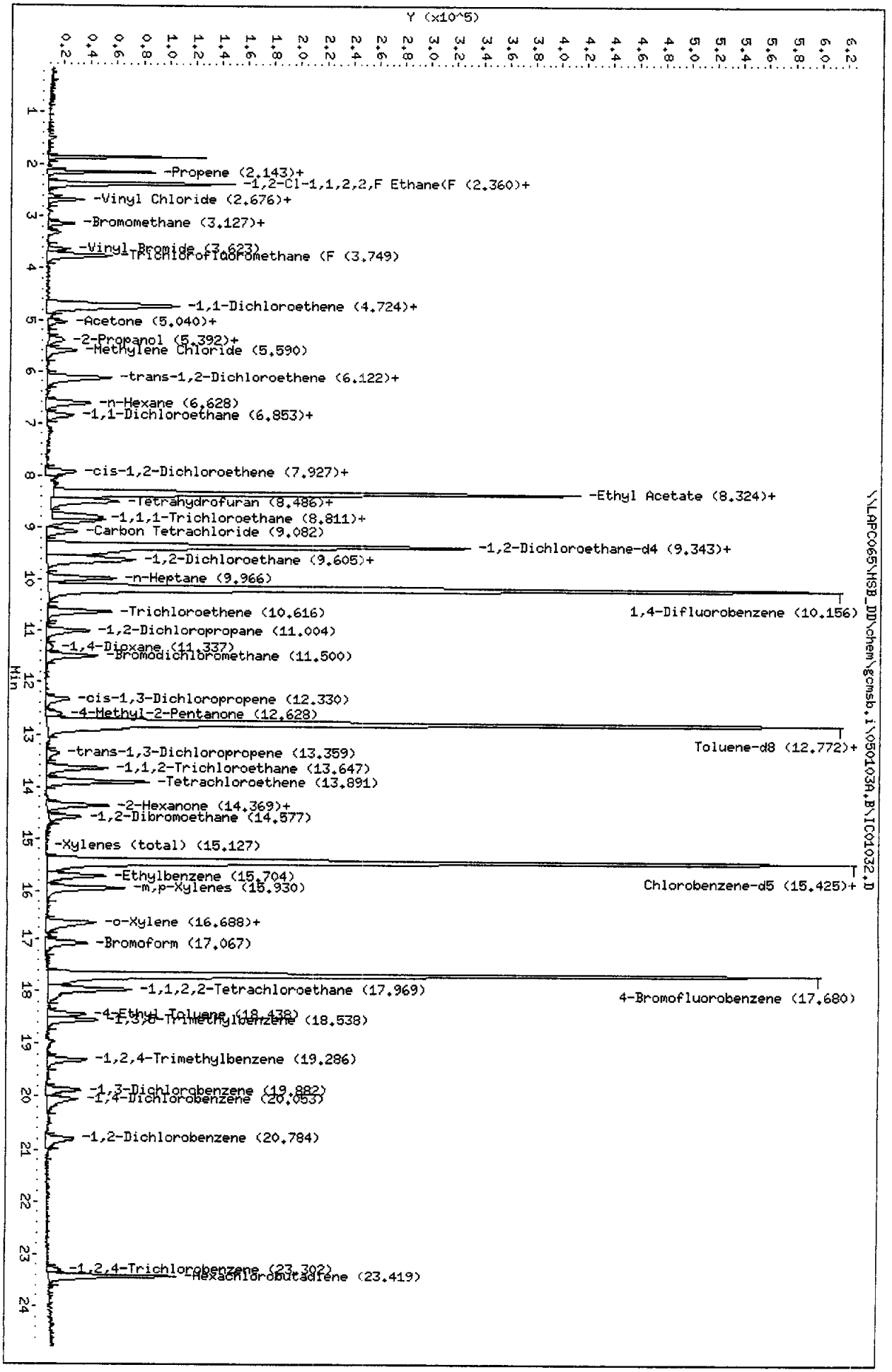
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
* 58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$ 66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
* 73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$ 88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
* 101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M 99 Xylenes (total)	106				196706	30.0000	28.63
104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$ 114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

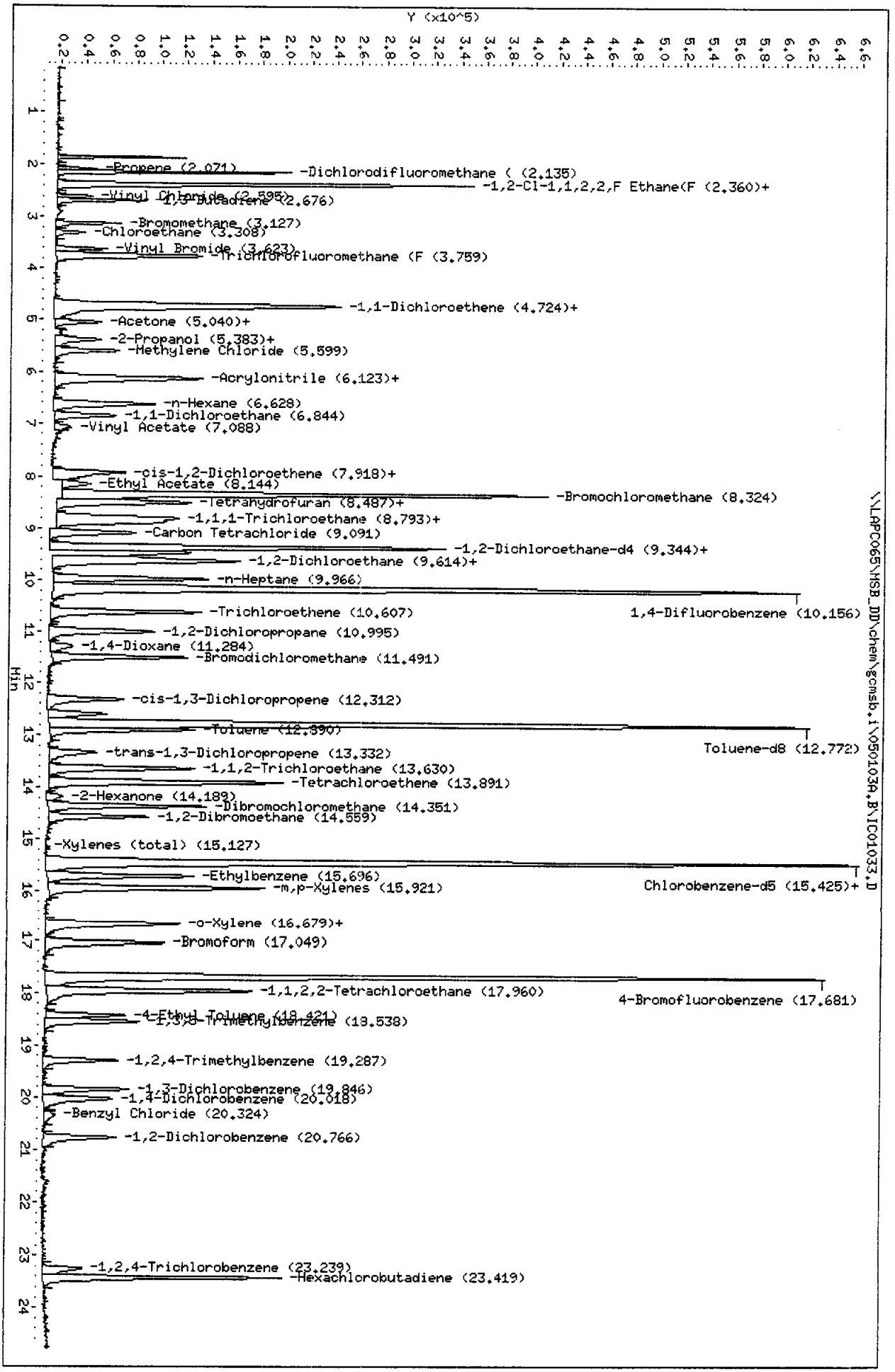
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\0501033A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
* 58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$ 66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
* 73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$ 88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
* 101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M 99 Xylenes (total)	106				477975	75.0000	68.20
104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$ 114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

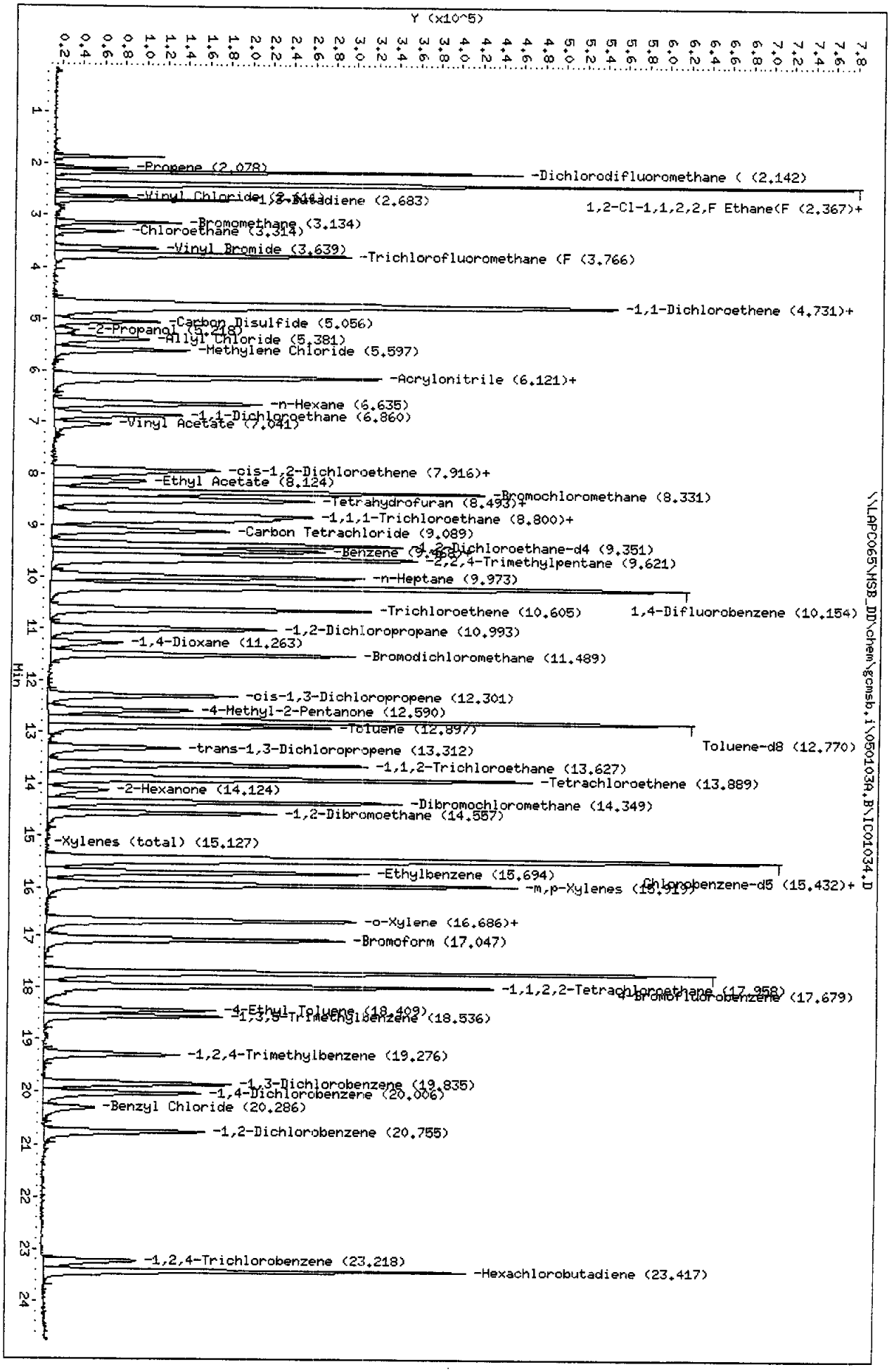
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

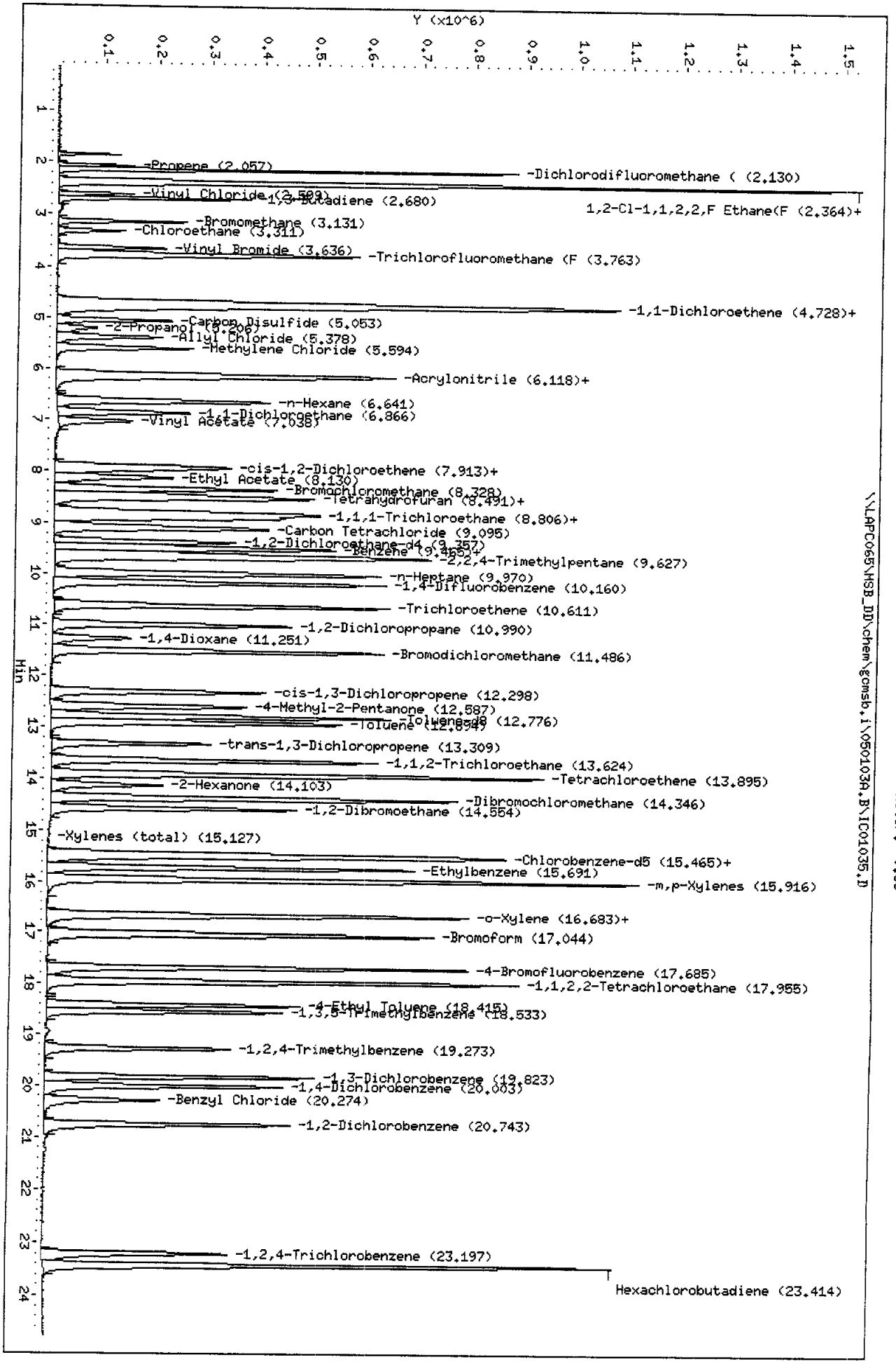
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
* 58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$ 66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
* 73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$ 88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
* 101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M 99 Xylenes (total)	106				2384108	300.000	320.3
104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$ 114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

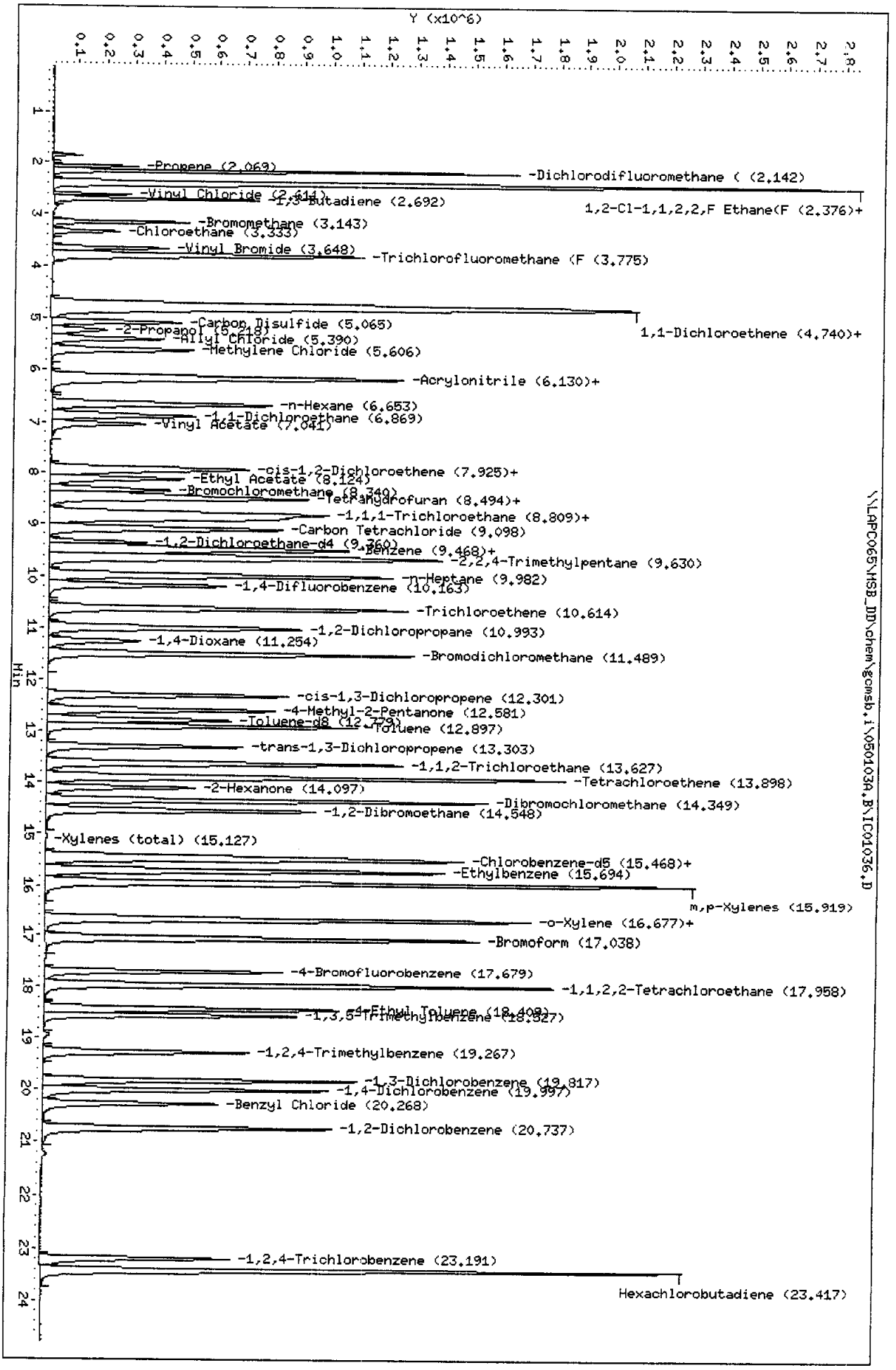
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\0501030.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
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Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	515.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

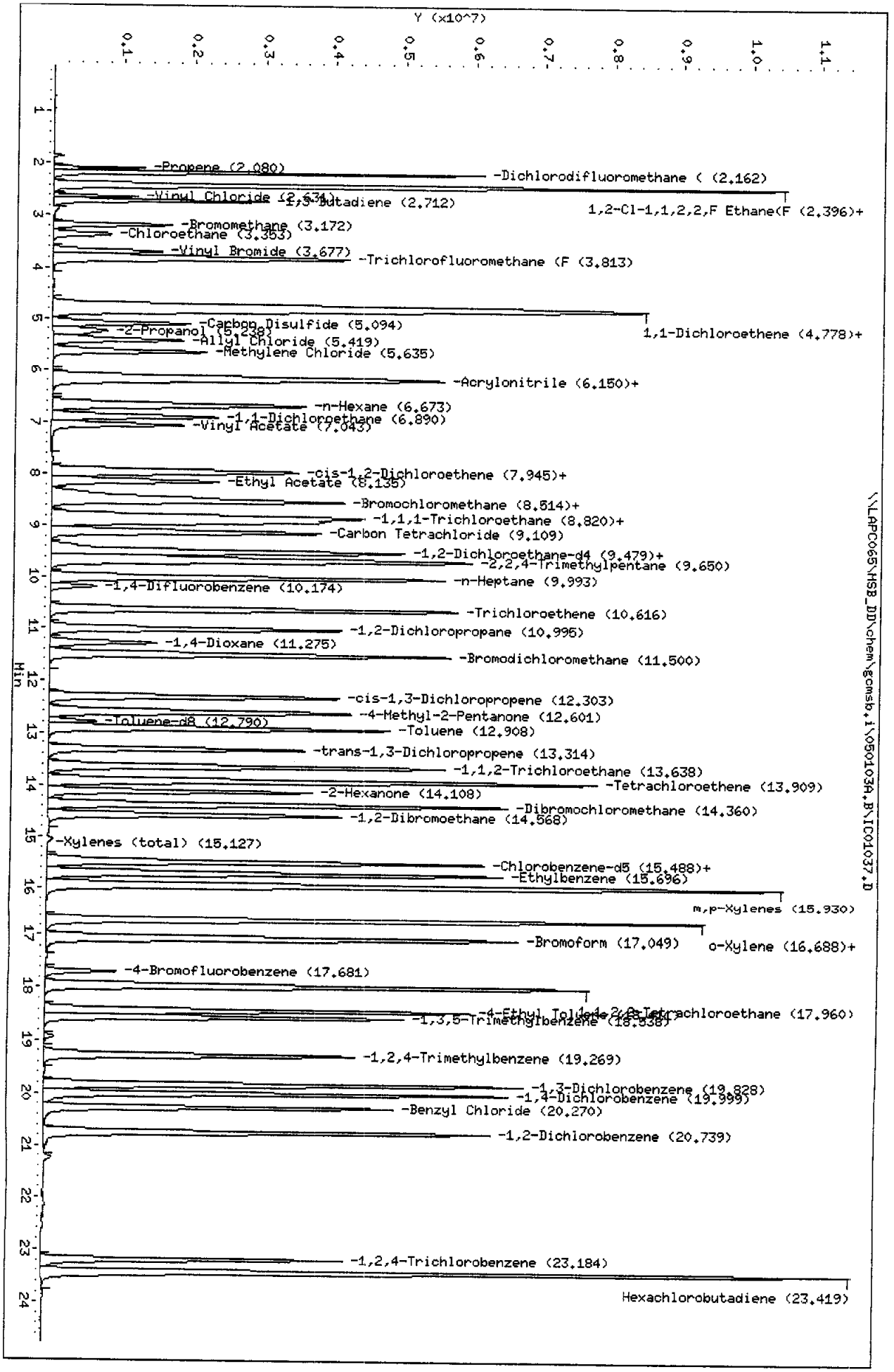
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 01-17-05 / 5017446

STL Los Angeles
Air Toxics Lab GC/MS Run Log

rument ID:	Data Directory: D:\GCMSB\ 050117. B	BFB Standard: PSL9911283	Initial Calibration ID: 01-3-05
CMS-B	Method File: 7014A	Daily Standard: MSL0401 1028	SOP: CD1-MS-003
book ID:	Tune File: BF041123.m	LCS Standard: PSL9911359	MDL Date: 01-28-04
AMS-041		I.S. Standard: PSL9911283	Blank Lot No. 050830L00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/17/05	0913	BF01171	—	—	—	BFB	28	—	—	—	AA	NG	A	
1/17/05	0927	BF01172	—	—	—	BFB	28	—	—	—	AA	OK	A	
	0944	CC01171	—	—	—	CCV	125	—	—	—	AA	OK	B	
	1015	LC01171	—	—	—	LCS	250	—	—	—	AA	OK	C	
	1045	LC01172	—	—	—	LCSD	250	—	—	—	AA	OK	C	
	1113	MB01171	—	—	—	Method Blank	500	—	—	—	AA	OK	13	# 0118
	1141	B7636	G2DKQIAD	001	SANDIA	066388-001	40	24.2/12.7	—	2.38	AA	OK	14	ESA100233-1
	1211	B7637	G2DKR			066389-001	20	24.2/12.7	—	4.76	AA	OK	15	-2
	1239	B7638	G2DKT			066390-001	100	24.3/12.7	—	9.57	AA	OK	16	-3
	1315	B7639	G2DKV			066391-001	100	24.4/12.8	—	9.53	AA	OK	1	-4
	1343	B7640	G2DKW			066392-001	250	24.4/12.7	—	3.84	AA	OK	2	-5
	1416	B7641	G2DKX			066393-001	964	24.4/12.6	—	1	AA	OK	3	-6
	1445	B7642	G2DKO			066394-001	953	24.2/12.7	—	1	AA	OK	4	-7
													5	ESA100226-1

viewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A100233-7

Lab File ID (Standard): CC01171 Date Analyzed: 01/17/05

Instrument ID: GCMSB Time Analyzed: 0944

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	738375	8.32	1719944	10.14	1320029	15.40
	UPPER LIMIT	1033725	8.82	2407922	10.64	1848041	15.90
	LOWER LIMIT	443025	7.82	1031966	9.64	792017	14.90
	EPA SAMPLE NO.						
01	LCS	690455	8.33	1578011	10.15	1186873	15.40
02	LCSD	693284	8.31	1532598	10.14	1145960	15.40
03	BLANK	656194	8.27	1471831	10.11	1085254	15.39
04	066388-001	698823	8.27	1505280	10.11	1135746	15.38
05	066389-001	697508	8.34	1489730	10.16	1104687	15.41
06	066390-001	675125	8.21	1475621	10.06	1100195	15.38
07	066391-001	679038	8.33	1470119	10.15	1081073	15.41
08	066392-001	660872	8.27	1419594	10.10	1066513	15.40
09	066393-001	652442	8.33	1394013	10.16	1025131	15.41
10	066394-001	647189	8.32	1390420	10.15	1033482	15.40
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D
Lab Smp Id:
Inj Date : 17-JAN-2005 09:27
Operator : AA
Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BFB.M
Meth Date : 07-Sep-2004 09:37
Quant Type: ISTD
Cal Date :
Cal File:
Als bottle: 2
QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: all.sub
Target Version: 4.04
Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.078	4.200	(0.000)	95	84936			0.00- 100.00	100.00
4.078	4.200	(0.000)	50	18370			15.00- 40.00	21.63
4.078	4.200	(0.000)	75	43576			30.00- 60.00	51.30
4.078	4.200	(0.000)	96	5675			5.00- 9.00	6.68
4.078	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.078	4.200	(0.000)	174	48266			50.00- 120.00	56.83
4.078	4.200	(0.000)	175	3961			5.00- 9.00	8.21
4.078	4.200	(0.000)	176	47722			95.00- 101.00	98.87
4.078	4.200	(0.000)	177	3113			5.00- 9.00	6.52

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D

Date : 17-JAN-2005 09:27

Client ID:

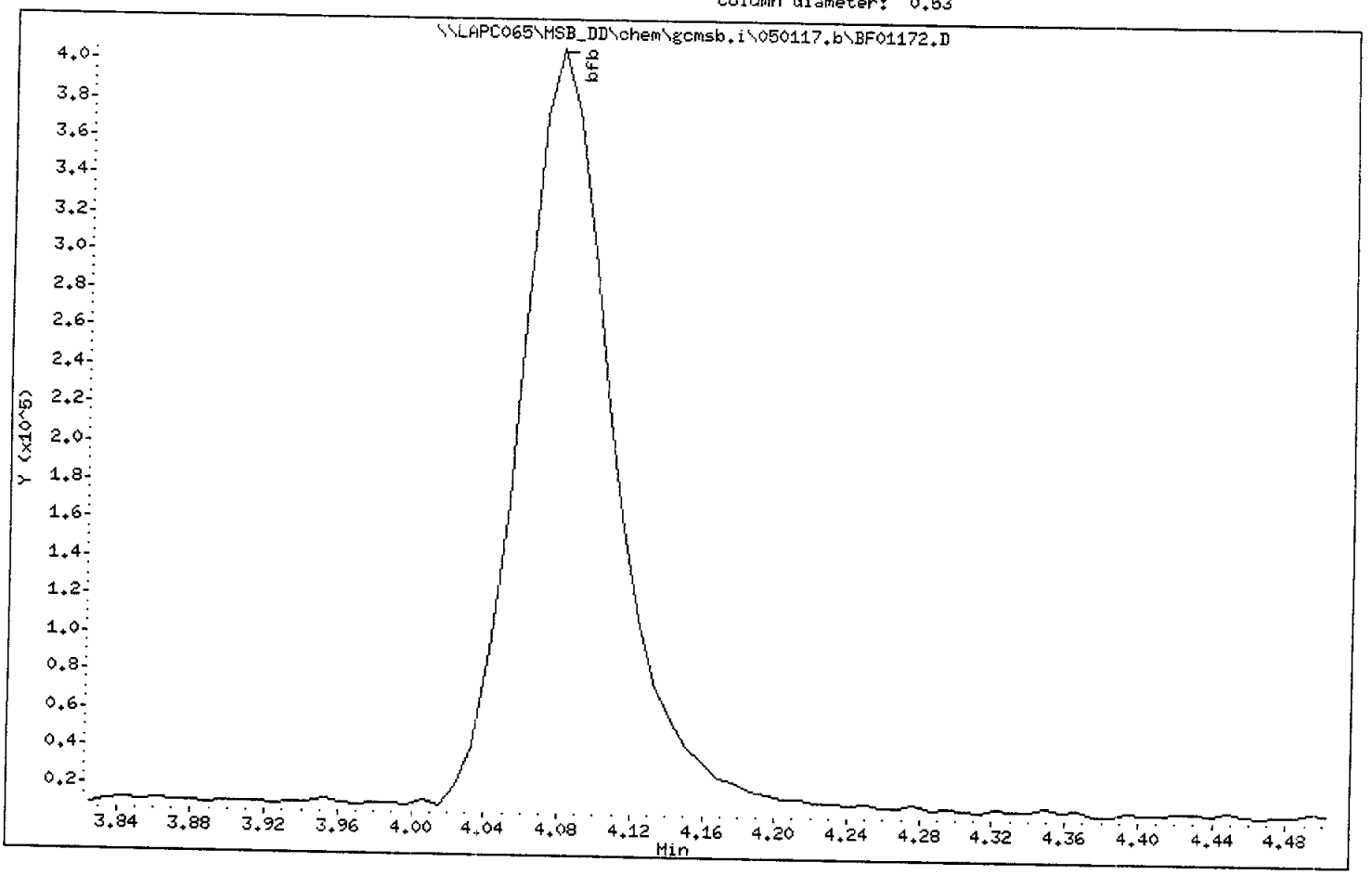
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D

Date : 17-JAN-2005 09:27

Client ID:

Instrument: gcmsb.i

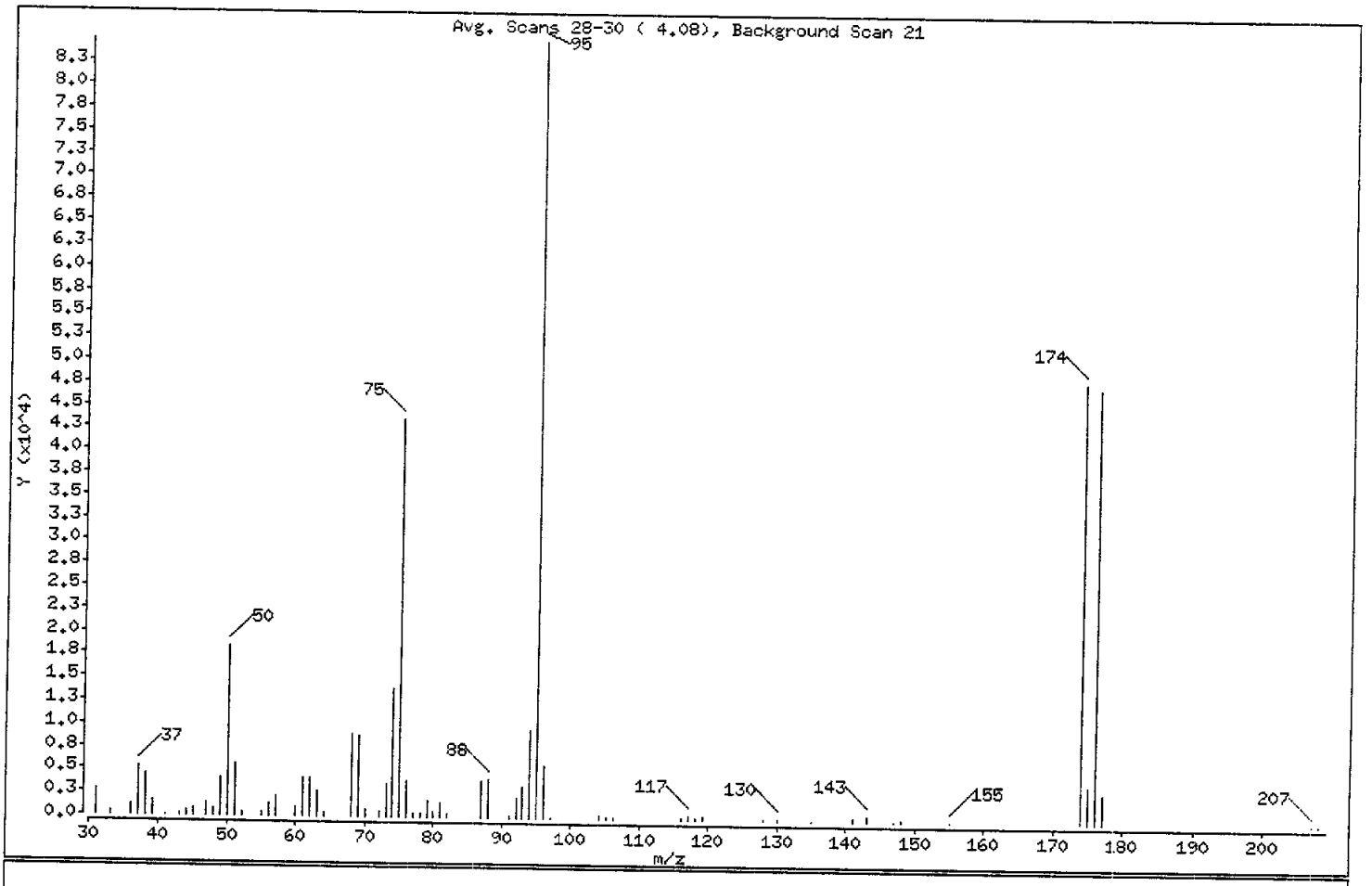
Sample Info: BFB,PSL9911283

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.63
75	30.00 - 60.00% of mass 95	51.30
96	5.00 - 9.00% of mass 95	6.68
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.83
175	5.00 - 9.00% of mass 174	4.66 (8.21)
176	95.00 - 101.00% of mass 174	56.19 (98.87)
177	5.00 - 9.00% of mass 176	3.67 (6.52)

AA 1/17/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\BF01172.D

Date : 17-JAN-2005 09:27

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01172.D
Spectrum: Avg. Scans 28-30 (4.08), Background Scan 21
Location of Maximum: 95.00
Number of points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2763	57.00	2171	81.00	1593	128.00	219
33.00	363	60.00	995	82.00	437	130.00	266
36.00	1142	61.00	4106	87.00	3925	135.00	63
37.00	5253	62.00	4042	88.00	4136	141.00	425
38.00	4512	63.00	2690	91.00	265	143.00	489
39.00	1473	64.00	302	92.00	2151	147.00	62
41.00	64	68.00	8954	93.00	3246	148.00	166
43.00	206	69.00	8753	94.00	9506	155.00	68
44.00	493	70.00	771	95.00	84936	174.00	48264
45.00	796	72.00	594	96.00	5675	175.00	3961
47.00	1372	73.00	3549	97.00	64	176.00	47720
48.00	689	74.00	13847	104.00	315	177.00	3113
49.00	4114	75.00	43576	105.00	207	207.00	69
50.00	18368	76.00	3890	106.00	270	208.00	62
51.00	5651	77.00	374	116.00	130		
52.00	368	78.00	406	117.00	371		
55.00	358	79.00	1780	118.00	162		
56.00	1408	80.00	547	119.00	299		

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 17-JAN-2005 09:44
Lab File ID: CC01171.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	1 Propene	0.18345	0.18625	0.010	1.5	30.0	
	3 Dichlorodifluoromethane (F1	2.11052	2.03885	0.010	-3.4	30.0	
	5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.73582	0.010	1.1	30.0	
	8 Chloromethane	0.09369	0.10009	0.100	6.8	30.0	
	9 Vinyl Chloride	0.40660	0.42304	0.010	4.0	30.0	
	12 1,3-Butadiene	0.27551	0.27087	0.010	-1.7	30.0	
	15 Bromomethane	0.50552	0.51268	0.010	1.4	30.0	
	16 Chloroethane	0.25753	0.28073	0.010	9.0	30.0	
	19 Vinyl Bromide	0.57915	0.63951	0.010	10.4	30.0	
	21 Trichlorofluoromethane (F11	2.12773	2.05720	0.010	-3.3	30.0	
	28 1,1-Dichloroethene	1.12859	1.12737	0.010	-0.1	30.0	
	30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.48552	0.010	1.7	30.0	
	31 Acetone	0.16001	0.17957	0.010	12.2	30.0	
	33 Carbon Disulfide	1.06127	1.30504	0.010	23.0	30.0	
	34 2-Propanol	0.56591	0.59574	0.010	5.3	30.0	
	36 Allyl Chloride	0.58587	0.64985	0.010	10.9	30.0	
	37 Methylene Chloride	0.69686	0.66374	0.010	-4.8	30.0	
	40 Acrylonitrile	0.18791	0.22161	0.010	17.9	30.0	
	41 trans-1,2-Dichloroethene	0.98199	1.02119	0.010	4.0	30.0	
	42 Methyl-tert-butyl ether[MTB	1.66607	1.77734	0.010	6.7	30.0	
	43 n-Hexane	0.77083	0.74902	0.010	-2.8	30.0	
	44 1,1-Dichloroethane	1.23672	1.26123	0.100	2.0	30.0	
	45 Vinyl Acetate	1.19013	1.29980	0.010	9.2	30.0	
	53 cis-1,2-Dichloroethene	0.63910	0.67871	0.010	6.2	30.0	
	54 2-Butanone	0.21287	0.24134	0.010	13.4	30.0	
	56 Ethyl Acetate	1.14995	1.35156	0.010	17.5	30.0	
	59 Tetrahydrofuran	0.55193	0.55958	0.010	1.4	30.0	
	60 Chloroform	1.59075	1.56823	0.010	-1.4	30.0	
	61 1,1,1-Trichloroethane	1.59033	1.61298	0.010	1.4	30.0	
	62 Cyclohexane	0.79797	0.83884	0.010	5.1	30.0	
	64 Carbon Tetrachloride	1.05674	1.48410	0.010	40.4	30.0	<-
$	66 1,2-Dichloroethane-d4	0.41033	0.37997	0.010	-7.4	30.0	
	68 Benzene	0.68038	0.66430	0.010	-2.4	30.0	
	69 1,2-Dichloroethane	0.44323	0.39403	0.010	-11.1	30.0	
	70 2,2,4-Trimethylpentane	1.74763	1.69828	0.010	-2.8	30.0	

MA 1/17/05

1/18/05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i
Lab File ID: CC01171.D
Analysis Type: AIR
Lab Sample ID: 50 PPBV STD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m

Injection Date: 17-JAN-2005 09:44
Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Init. Cal. Times: 14:40 23:34
Quant Type: ISTD

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	72 n-Heptane	0.58544	0.55296	0.010	-5.5	30.0
	75 Trichloroethene	0.43657	0.43403	0.010	-0.6	30.0
	78 1,2-Dichloropropane	0.16390	0.15617	0.010	-4.7	30.0
	81 1,4-Dioxane	0.15796	0.17124	0.010	8.4	30.0
	82 Bromodichloromethane	0.54492	0.57209	0.010	5.0	30.0
	85 cis-1,3-Dichloropropene	0.44931	0.51550	0.010	14.7	30.0
	86 4-Methyl-2-Pentanone	0.22967	0.23951	0.010	4.3	30.0
$	88 Toluene-d8	0.52356	0.53535	0.010	2.3	30.0
	89 Toluene	0.88039	0.85263	0.010	-3.2	30.0
	91 trans-1,3-Dichloropropene	0.42279	0.49327	0.010	16.7	30.0
	93 1,1,2-Trichloroethane	0.56403	0.54316	0.010	-3.7	30.0
	95 Tetrachloroethene	0.78282	0.74644	0.010	-4.6	30.0
	96 2-Hexanone	0.25237	0.29324	0.010	16.2	30.0
	97 Dibromochloromethane	0.94658	1.06533	0.010	12.5	30.0
	98 1,2-Dibromoethane	0.94544	0.98303	0.010	4.0	30.0
	102 Chlorobenzene	0.91801	0.90070	0.300	-1.9	30.0
M	99 Xylenes (total)	0.40771	0.44754	0.010	9.8	30.0
	104 Ethylbenzene	1.42124	1.46273	0.010	2.9	30.0
	105 m,p-Xylenes	0.41273	0.45180	0.010	9.5	30.0
	107 o-Xylene	0.39767	0.43903	0.010	10.4	30.0
	108 Styrene	0.49829	0.59010	0.010	18.4	30.0
	110 Bromoform	0.74450	0.93746	0.100	25.9	30.0
$	114 4-Bromofluorobenzene	0.89318	0.93650	0.010	4.8	30.0
	116 1,1,2,2-Tetrachloroethane	1.35429	1.34428	0.300	-0.7	30.0
	123 4-Ethyl Toluene	0.84706	1.02443	0.010	20.9	30.0
	124 1,3,5-Trimethylbenzene	0.94631	0.88195	0.010	-6.8	30.0
	131 1,2,4-Trimethylbenzene	0.27527	0.28873	0.010	4.9	30.0
	134 1,3-Dichlorobenzene	0.52632	0.61516	0.010	16.9	30.0
	136 1,4-Dichlorobenzene	0.54141	0.57182	0.010	5.6	30.0
	138 Benzyl Chloride	0.56325	0.72265	0.010	28.3	30.0
	140 1,2-Dichlorobenzene	0.53798	0.58430	0.010	8.6	30.0
	144 1,2,4-Trichlorobenzene	0.26641	0.31163	0.010	17.0	30.0
	145 Hexachlorobutadiene	0.48586	0.47297	0.010	-2.7	30.0

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\CC01171.D
Lab Smp Id: 50 PPBV STD
Client Smp ID: MSL04011028
Inj Date : 17-JAN-2005 09:44
Operator : AA
Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd
Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31
Cal File: IC11016.D
Als bottle: 11
Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.059	2.059	(0.248)	137520	50.0000	50.76
3 Dichlorodifluoromethane (F12)	85	2.123	2.123	(0.255)	1505439	50.0000	48.30
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.357	2.357	(0.283)	1281684	50.0000	50.57
8 Chloromethane	52	2.402	2.402	(0.289)	73907	50.0000	53.42(Q)
9 Vinyl Chloride	62	2.592	2.592	(0.312)	312359	50.0000	52.02
12 1,3-Butadiene	39	2.664	2.664	(0.320)	400010	100.000	98.32
15 Bromomethane	94	3.124	3.124	(0.375)	378549	50.0000	50.71
16 Chloroethane	64	3.304	3.304	(0.397)	207284	50.0000	54.50
19 Vinyl Bromide	106	3.629	3.629	(0.436)	472195	50.0000	55.21
21 Trichlorofluoromethane (F11)	101	3.756	3.756	(0.451)	1518984	50.0000	48.34
28 1,1-Dichloroethene	61	4.685	4.685	(0.563)	832421	50.0000	49.94
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.739	4.739	(0.570)	1835244	50.0000	50.84
31 Acetone	58	4.847	4.847	(0.583)	132586	50.0000	56.11(Q)
33 Carbon Disulfide	76	5.037	5.037	(0.605)	963608	50.0000	61.48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.199	5.199	(0.625)	439879	50.0000	52.64
36 Allyl Chloride	41	5.371	5.371	(0.645)	479830	50.0000	55.46
37 Methylene Chloride	49	5.587	5.587	(0.671)	490086	50.0000	47.62
40 Acrylonitrile	53	6.083	6.083	(0.731)	163631	50.0000	58.97
41 trans-1,2-Dichloroethene	61	6.102	6.102	(0.733)	754023	50.0000	52.00
42 Methyl-tert-butyl ether[MTBE]	73	6.138	6.138	(0.738)	1312342	50.0000	53.34
43 n-Hexane	41	6.634	6.634	(0.797)	553057	50.0000	48.58
44 1,1-Dichloroethane	63	6.850	6.850	(0.823)	931261	50.0000	50.99
45 Vinyl Acetate	43	7.031	7.031	(0.845)	959741	50.0000	54.61
53 cis-1,2-Dichloroethene	96	7.906	7.906	(0.950)	501143	50.0000	53.10
54 2-Butanone	72	7.969	7.969	(0.958)	178196	50.0000	56.69
56 Ethyl Acetate	43	8.114	8.114	(0.975)	997956	50.0000	58.76
* 58 Bromochloromethane	49	8.321	8.321	(1.000)	738375	50.0000	
59 Tetrahydrofuran	42	8.420	8.420	(1.012)	413181	50.0000	50.69
60 Chloroform	83	8.484	8.484	(1.020)	1157942	50.0000	49.29
61 1,1,1-Trichloroethane	97	8.781	8.781	(1.055)	1190986	50.0000	50.71
62 Cyclohexane	84	8.871	8.871	(1.066)	619381	50.0000	52.56
64 Carbon Tetrachloride	117	9.079	9.079	(1.091)	1095820	50.0000	70.22
$ 66 1,2-Dichloroethane-d4	65	9.341	9.341	(0.921)	653525	50.0000	46.30
68 Benzene	78	9.440	9.440	(0.931)	1142559	50.0000	48.82
69 1,2-Dichloroethane	62	9.467	9.467	(0.933)	677711	50.0000	44.45
70 2,2,4-Trimethylpentane	57	9.611	9.611	(0.948)	2920945	50.0000	48.59
72 n-Heptane	43	9.954	9.954	(0.981)	951056	50.0000	47.23
* 73 1,4-Difluorobenzene	114	10.144	10.144	(1.000)	1719944	50.0000	
75 Trichloroethene	130	10.586	10.586	(1.044)	746504	50.0000	49.71
78 1,2-Dichloropropane	76	10.974	10.974	(1.082)	268610	50.0000	47.64
81 1,4-Dioxane	88	11.244	11.244	(1.109)	294524	50.0000	54.20
82 Bromodichloromethane	85	11.470	11.470	(1.131)	983965	50.0000	52.49
85 cis-1,3-Dichloropropene	75	12.282	12.282	(1.211)	886625	50.0000	57.36
86 4-Methyl-2-Pentanone	58	12.562	12.562	(1.238)	411938	50.0000	52.14(Q)
$ 88 Toluene-d8	100	12.751	12.751	(1.257)	920776	50.0000	51.13
89 Toluene	91	12.878	12.878	(1.270)	1466469	50.0000	48.42
91 trans-1,3-Dichloropropene	75	13.284	13.284	(0.862)	651129	50.0000	58.33
93 1,1,2-Trichloroethane	97	13.608	13.608	(0.883)	716986	50.0000	48.15
95 Tetrachloroethene	166	13.870	13.870	(0.900)	985324	50.0000	47.68
96 2-Hexanone	58	14.087	14.087	(0.914)	387090	50.0000	58.10(Q)
97 Dibromochloromethane	129	14.321	14.321	(0.930)	1406260	50.0000	56.27
98 1,2-Dibromoethane	107	14.529	14.529	(0.943)	1297628	50.0000	51.99
* 101 Chlorobenzene-d5	117	15.404	15.404	(1.000)	1320029	50.0000	
102 Chlorobenzene	112	15.458	15.458	(1.004)	1188947	50.0000	49.06
M 99 Xylenes (total)	106				1772308	150.000	164.7
104 Ethylbenzene	91	15.675	15.675	(1.018)	1930841	50.0000	51.46
105 m,p-Xylenes	106	15.891	15.891	(1.032)	1192774	100.000	109.5
107 o-Xylene	106	16.649	16.649	(1.081)	579534	50.0000	55.20
108 Styrene	104	16.676	16.676	(1.083)	778948	50.0000	53.21
110 Bromoform	173	17.019	17.019	(1.105)	1237477	50.0000	62.96
$ 114 4-Bromofluorobenzene	95	17.651	17.651	(1.146)	1236206	50.0000	52.42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.930	17.930	(1.164)	1774493	50.0000	49.63
123 4-Ethyl Toluene	105	18.381	18.381	(1.193)	1352273	50.0000	60.47
124 1,3,5-Trimethylbenzene	105	18.508	18.508	(1.201)	1164195	50.0000	46.60
131 1,2,4-Trimethylbenzene	120	19.248	19.248	(1.250)	381134	50.0000	52.45
134 1,3-Dichlorobenzene	146	19.798	19.798	(1.285)	812026	50.0000	58.44
136 1,4-Dichlorobenzene	146	19.978	19.978	(1.297)	754813	50.0000	52.81
138 Benzyl Chloride	91	20.249	20.249	(1.315)	953915	50.0000	64.15
140 1,2-Dichlorobenzene	146	20.718	20.718	(1.345)	771287	50.0000	54.30
144 1,2,4-Trichlorobenzene	180	23.181	23.181	(1.505)	411364	50.0000	58.49
145 Hexachlorobutadiene	225	23.398	23.398	(1.519)	624340	50.0000	48.67

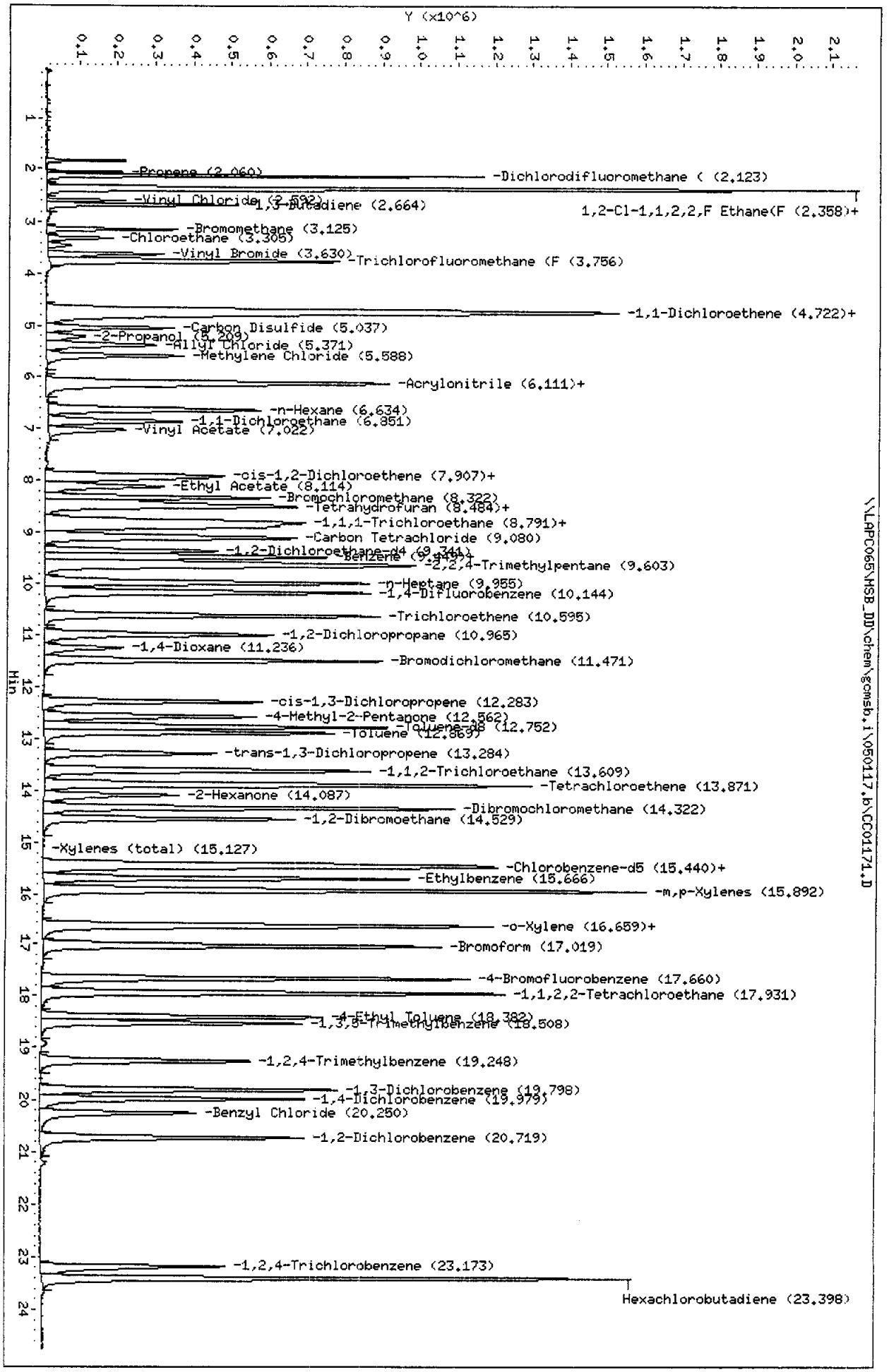
QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\CC01171.D
Date : 17-JAN-2005 09:44
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: AA
Column diameter: 0.53



Reviewed By: _____ Date: _____

Reviewed By: _____ Date: _____

LCSD Report

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B/LC01171.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 17-JAN-2005 10:15

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B/LC01172.D
Samp Info : LCSD,LCSD,MSL0501045
Inj Date : 17-JAN-2005 10:45

Spiked	Mass Spiked (ug/m3)	Concentration LCS	Measured LCSD	Avg.	%Recovery Meas.	Min	Max	RPD Meas.	Max
1,1-Dichloroethene									
50.5	199.83	51.8	49.9	50.9	100.8	70	125	4	20
Methylene Chloride									
54.5	188.95	56.5	55.0	55.7	102.3	75	120	3	20
Trichloroethene									
49.5	265.47	49.8	49.9	49.8	100.7	70	125	0	20
Toluene									
49.5	186.17	47.9	49.1	48.5	98.0	75	125	3	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	48.0	49.4	48.7	97.4	65	130	3	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01171.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 17-JAN-2005 10:15
Operator : AA Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,250,250,3,,LCS,spk.sub,1,sh.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: spk.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

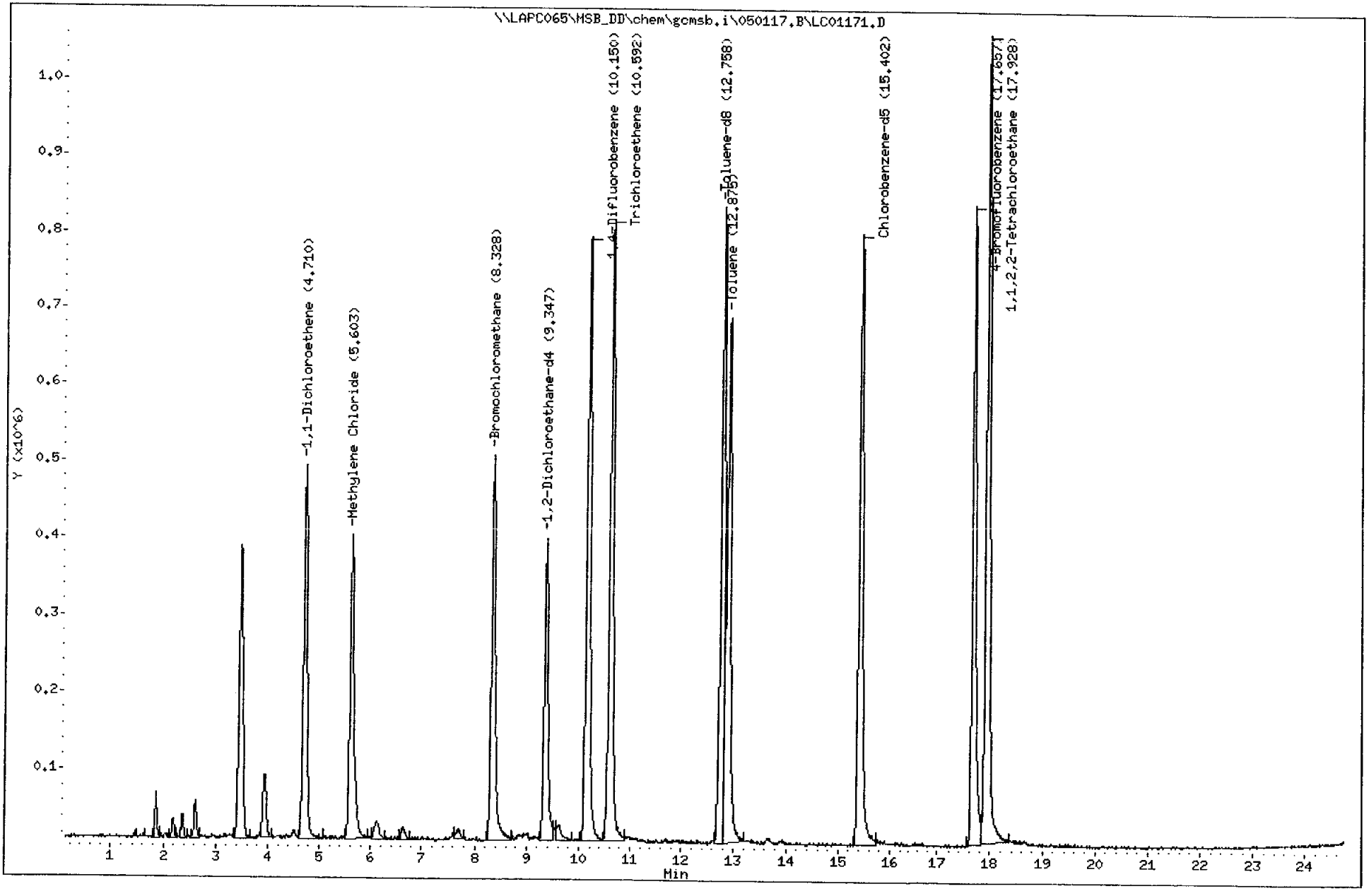
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.709	4.685	(0.566)	807569	51.8176	51.82
37 Methylene Chloride	49	5.602	5.587	(0.673)	543241	56.4523	56.45
* 58 Bromochloromethane	49	8.327	8.321	(1.000)	690455	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.347	9.341	(0.921)	560386	43.2728	43.27
* 73 1,4-Difluorobenzene	114	10.150	10.144	(1.000)	1578011	50.0000	
75 Trichloroethene	130	10.592	10.586	(1.044)	685797	49.7735	49.77
$ 88 Toluene-d8	100	12.757	12.751	(1.257)	838478	50.7439	50.74
89 Toluene	91	12.875	12.878	(1.268)	1330127	47.8717	47.87
* 101 Chlorobenzene-d5	117	15.401	15.404	(1.000)	1186873	50.0000	
$ 114 4-Bromofluorobenzene	95	17.657	17.651	(1.146)	949369	44.7775	44.78
116 1,1,2,2-Tetrachloroethane	83	17.927	17.930	(1.164)	1543244	48.0051	48.00

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01171.D
Date : 17-JAN-2005 10:15
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA
Column diameter: 0.53



E5A100233

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01172.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 17-JAN-2005 10:45
Operator : AA Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,MSL0501045
Misc Info : 1,1,250,250,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.687	4.685	(0.564)	781439	49.9364	49.94
37 Methylene Chloride	49	5.589	5.587	(0.672)	531853	55.0433	55.04
* 58 Bromochloromethane	49	8.314	8.321	(1.000)	693284	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.343	9.341	(0.922)	558848	44.4327	44.43
* 73 1,4-Difluorobenzene	114	10.137	10.144	(1.000)	1532598	50.0000	
75 Trichloroethene	130	10.588	10.586	(1.045)	667542	49.8842	49.88
$ 88 Toluene-d8	100	12.744	12.751	(1.257)	817565	50.9444	50.94
89 Toluene	91	12.870	12.878	(1.270)	1326468	49.1547	49.15
* 101 Chlorobenzene-d5	117	15.397	15.404	(1.000)	1145960	50.0000	
$ 114 4-Bromofluorobenzene	95	17.652	17.651	(1.146)	900389	43.9835	43.98
116 1,1,2,2-Tetrachloroethane	83	17.932	17.930	(1.165)	1531986	49.3563	49.36

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.B\LC01172.D

Date : 17-JAN-2005 10:45

Client ID: LCSD

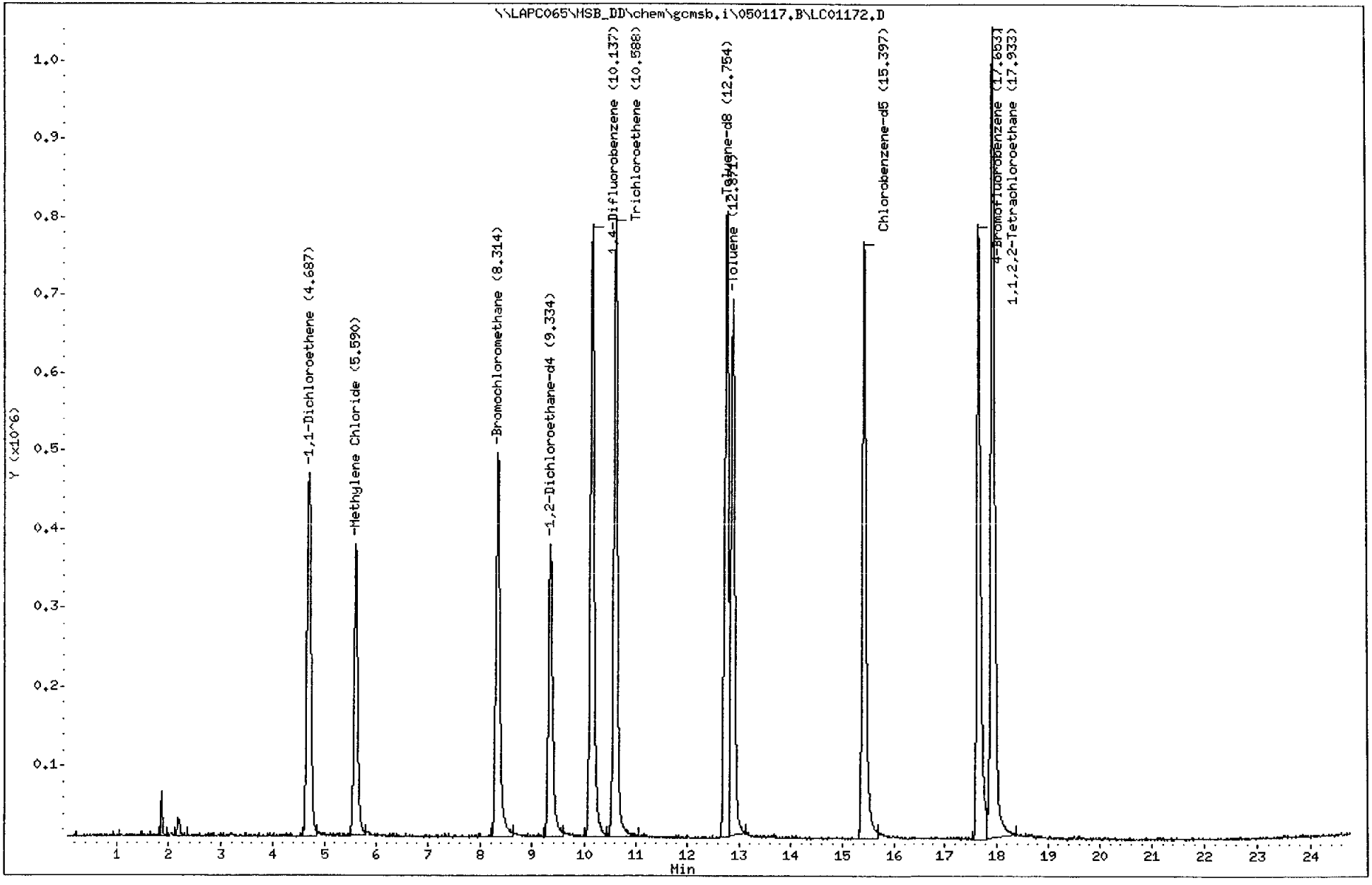
Instrument: gcmsb.i

Sample Info: LCSD,LCSD,MSL0501045

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\MB01171.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 17-JAN-2005 11:13
Operator : AA Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,0118
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.273	8.321	(1.000)	656194	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.302	9.341	(0.920)	545601	45.1704	45.17
* 73 1,4-Difluorobenzene	114	10.114	10.144	(1.000)	1471831	50.0000	
$ 88 Toluene-d8	100	12.739	12.751	(1.260)	785168	50.9456	50.94
* 101 Chlorobenzene-d5	117	15.392	15.404	(1.000)	1085254	50.0000	
$ 114 4-Bromofluorobenzene	95	17.648	17.651	(1.147)	874239	45.0950	45.09

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\MB01171.D

Date : 17-JAN-2005 11:13

Client ID: BLANK

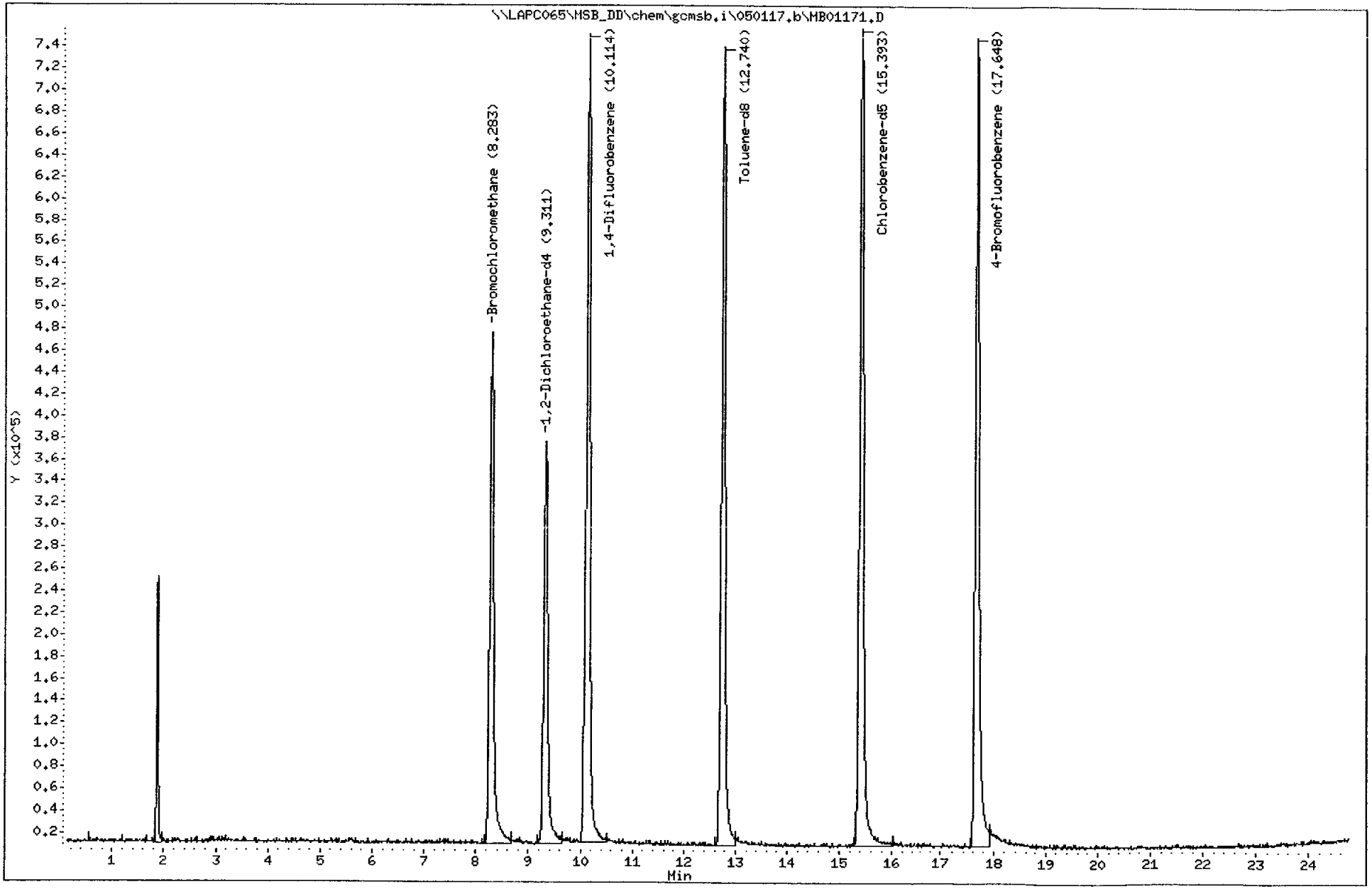
Sample Info: BLANK,BLANK,0118

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: AA

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D
Lab Smp Id: G2DKQ1AD Client Smp ID: 066388-001
Inj Date : 17-JAN-2005 11:41
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DKQ1AD,066388-001,SANDIA,E5A100233-1
Misc Info : 24.2,12.7,500,40,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.147	2.123	(0.260)	7246511	245.665	5851
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.363	2.357	(0.286)	433423	18.0701	430.4
8 Chloromethane	52	2.372	2.402	(0.287)	4348	3.32086	79.10(aQ)
9 Vinyl Chloride	62	2.589	2.592	(0.313)	271597	47.7922	1138
16 Chloroethane	64	3.284	3.304	(0.397)	4114	1.14322	27.23(aQ)
21 Trichlorofluoromethane (F11)	101	3.717	3.756	(0.449)	1008958	33.9280	808.1
28 1,1-Dichloroethene	61	4.646	4.685	(0.562)	1578987	100.102	2384
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.691	4.739	(0.567)	1318104	38.5773	918.9
37 Methylene Chloride	49	5.539	5.587	(0.670)	3963732	406.968	9694
41 trans-1,2-Dichloroethene	61	6.090	6.102	(0.736)	17514	1.27613	30.40(a)
44 1,1-Dichloroethane	63	6.812	6.850	(0.823)	5781973	334.508	7968
53 cis-1,2-Dichloroethene	96	7.876	7.906	(0.952)	95773	10.7221	255.4
* 58 Bromochloromethane	49	8.273	8.321	(1.000)	698823	50.0000	
60 Chloroform	83	8.454	8.484	(1.022)	99031	4.45424	106.1

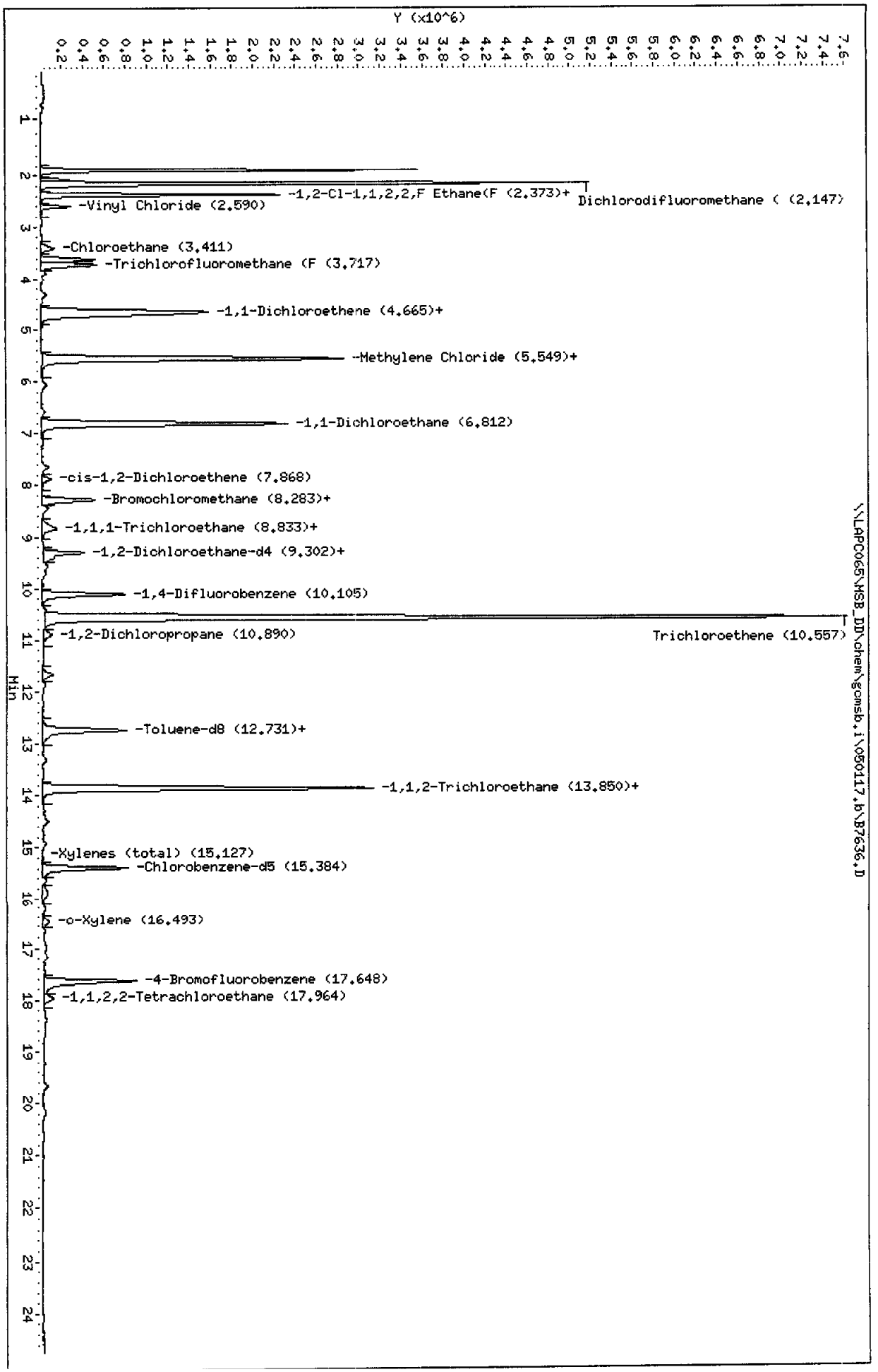
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	61 1,1,1-Trichloroethane	97	8.752	8.781	(1.058)	81936	3.68630	87.80
	64 Carbon Tetrachloride	117	8.733	9.079	(1.056)	10157	0.68771	16.38(a)
$	66 1,2-Dichloroethane-d4	65	9.302	9.341	(0.920)	568271	46.0018	1096
	68 Benzene	78	9.401	9.440	(0.930)	196452	9.59082	228.4
*	73 1,4-Difluorobenzene	114	10.114	10.144	(1.000)	1505280	50.0000	
	75 Trichloroethene	130	10.556	10.586	(1.044)	6212495	472.673	11260
	78 1,2-Dichloropropane	76	10.971	10.974	(1.085)	6729	1.36389	32.49(aQ)
$	88 Toluene-d8	100	12.731	12.751	(1.259)	807108	51.2055	1220
	89 Toluene	91	12.866	12.878	(1.272)	113521	4.28308	102.0
	93 1,1,2-Trichloroethane	97	13.840	13.608	(0.900)	21243	1.65810	39.49(aQ)
	95 Tetrachloroethene	166	13.849	13.870	(0.900)	2282660	128.372	3058
M	99 Xylenes (total)	106				6978	0.77259	18.40(a)
*	101 Chlorobenzene-d5	117	15.383	15.404	(1.000)	1135746	50.0000	
	107 o-Xylene	106	16.682	16.649	(1.084)	6978	0.77259	18.40(a)
$	114 4-Bromofluorobenzene	95	17.648	17.651	(1.147)	993623	48.9744	1166
	116 1,1,2,2-Tetrachloroethane	83	17.973	17.930	(1.168)	19541	0.63524	15.13(aQ)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D
Date : 17-JAN-2005 11:41
Client ID: 066388-001
Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: AA
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

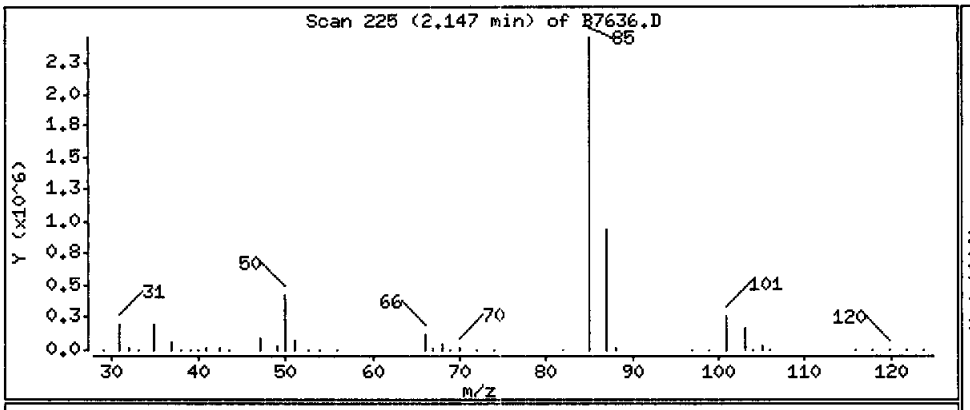
Operator: AA

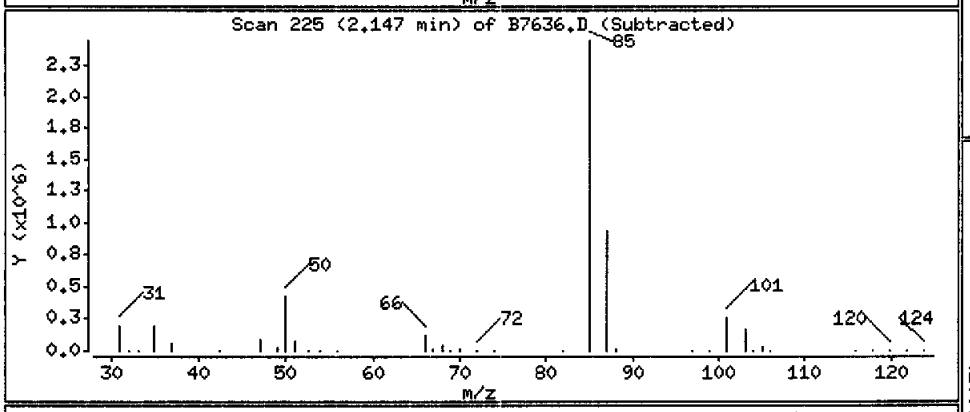
Column phase: J&W DB-624

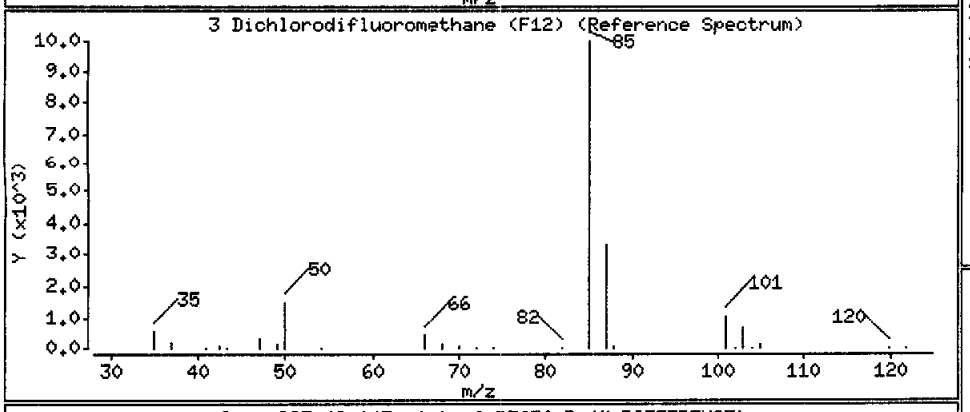
Column diameter: 0.53

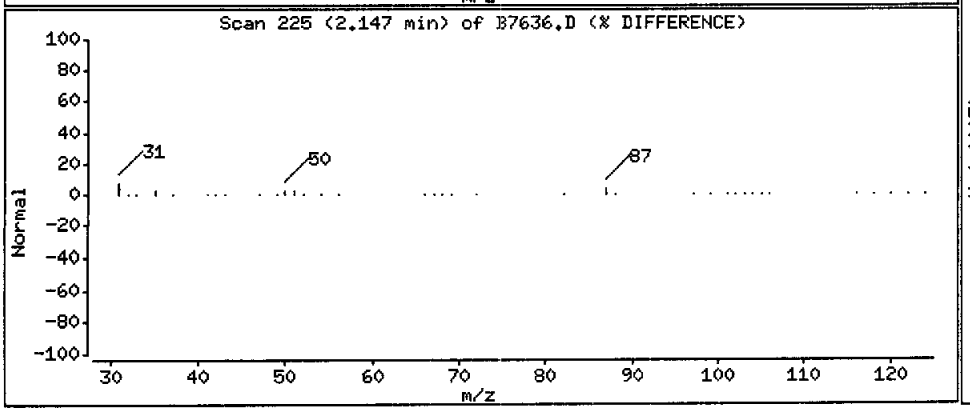
3 Dichlorodifluoromethane (F12)

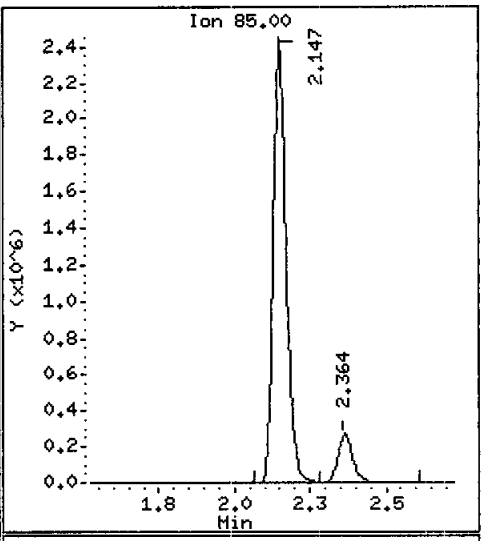
Concentration: 5851 ppbv

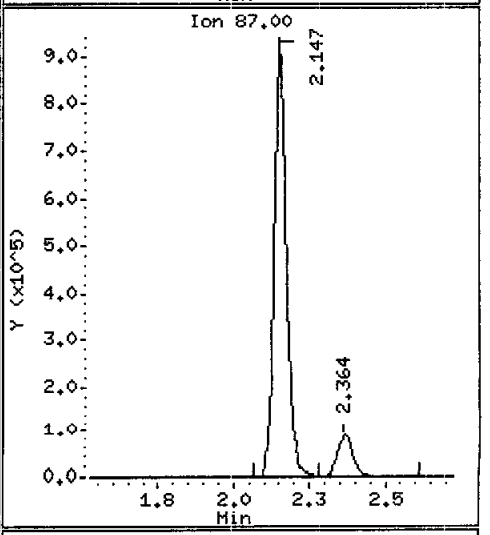


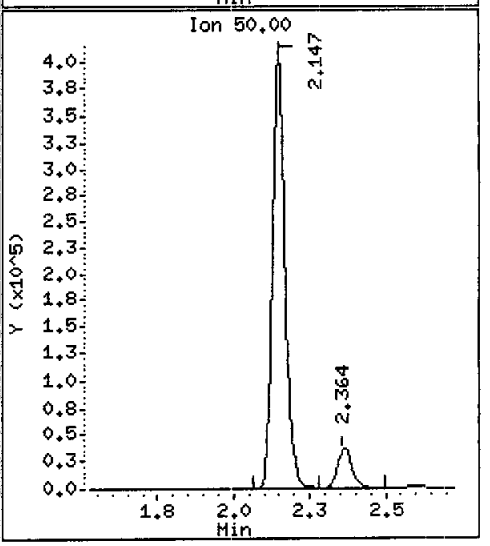












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Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

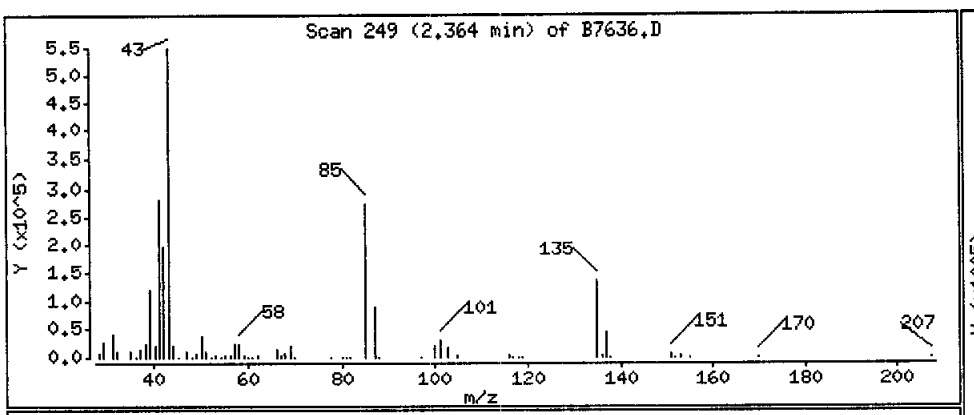
Operator: AA

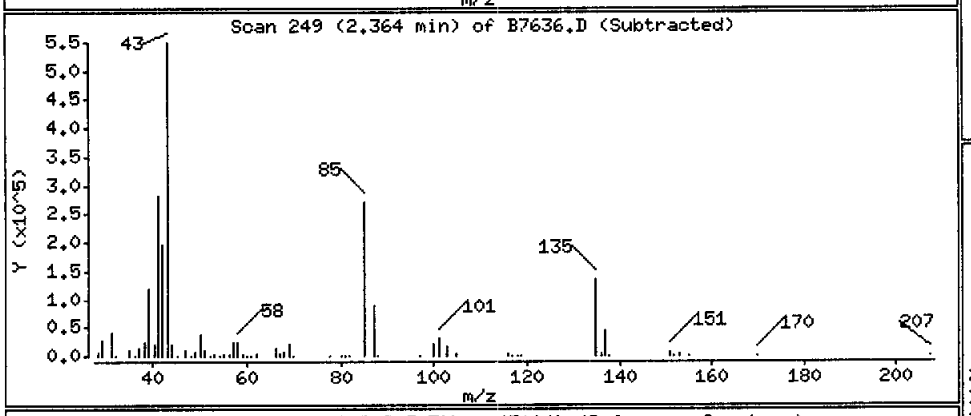
Column phase: J&W DB-624

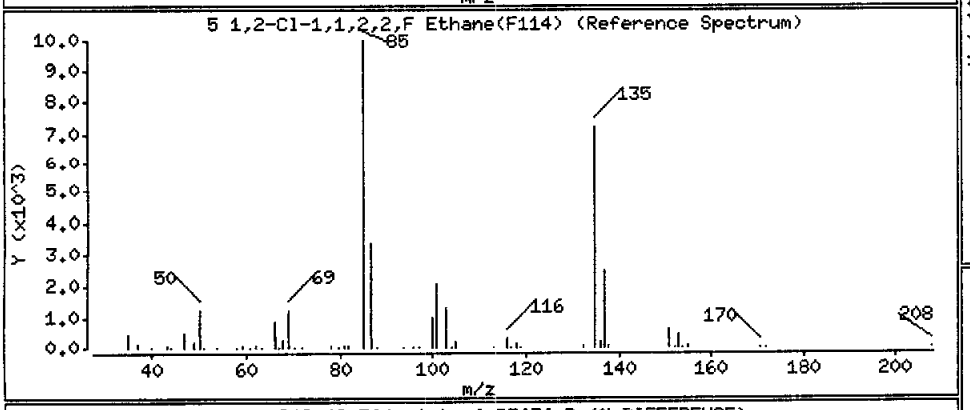
Column diameter: 0.53

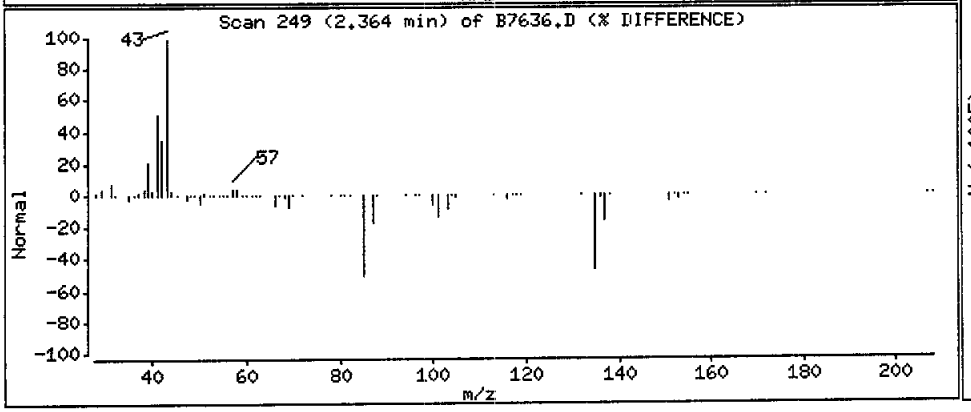
5 1,2-Cl-1,1,2,2,F Ethane(F114)

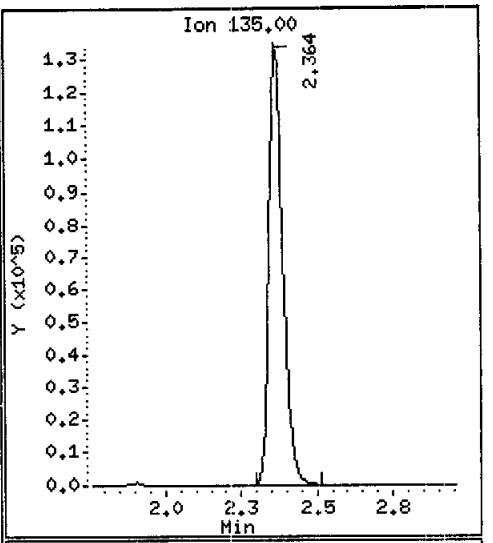
Concentration: 430.4 ppbv

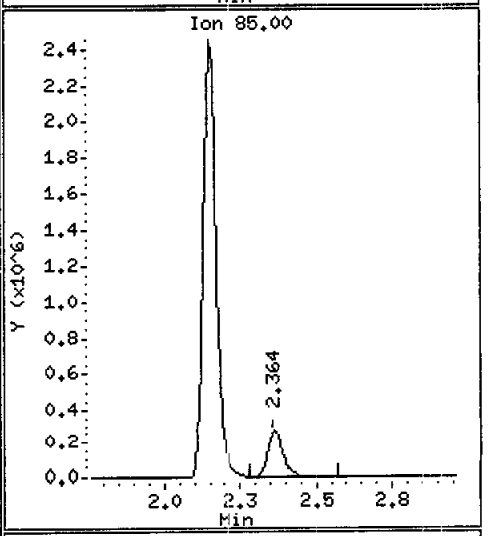


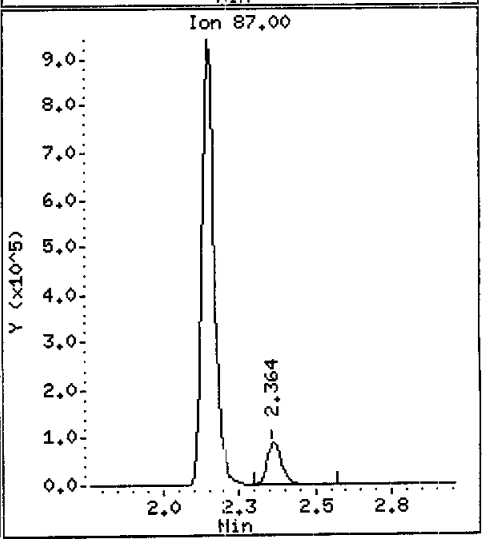












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

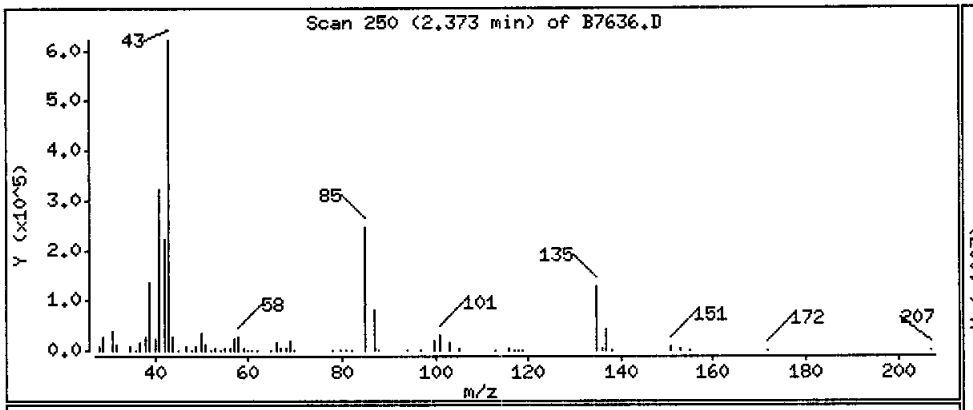
Operator: AA

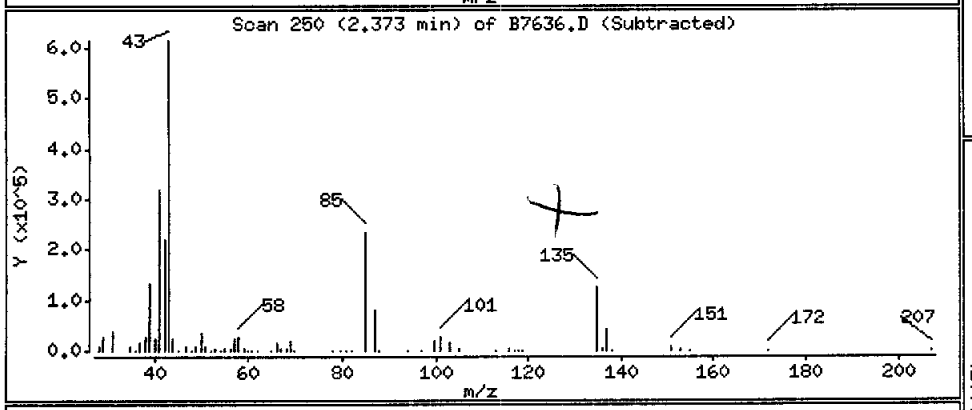
Column phase: J&W DB-624

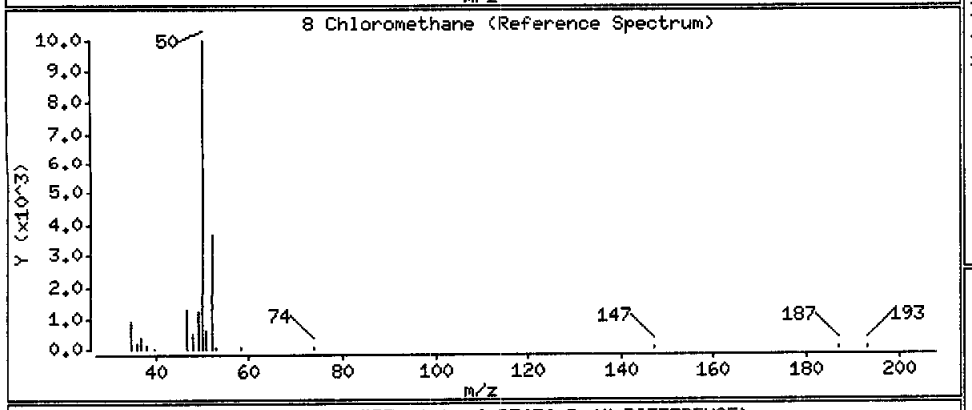
Column diameter: 0.53

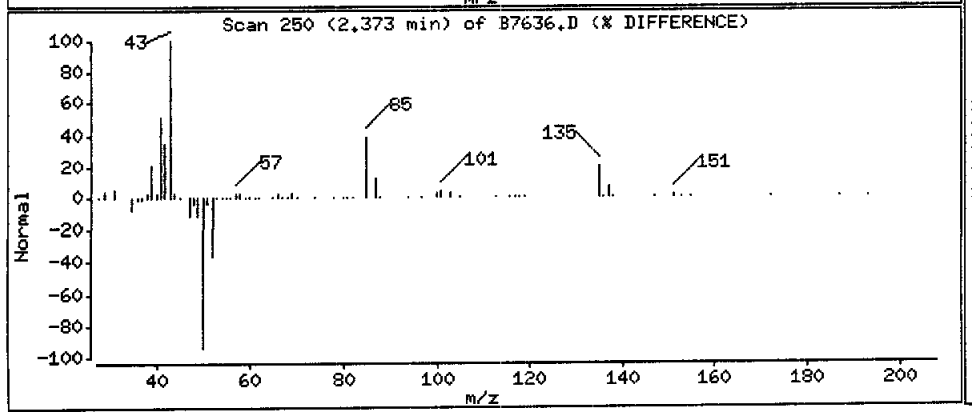
8 Chloromethane

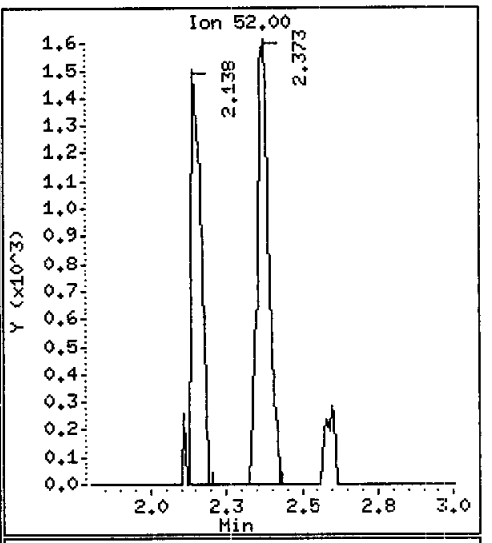
Concentration: 79.10 ppbv

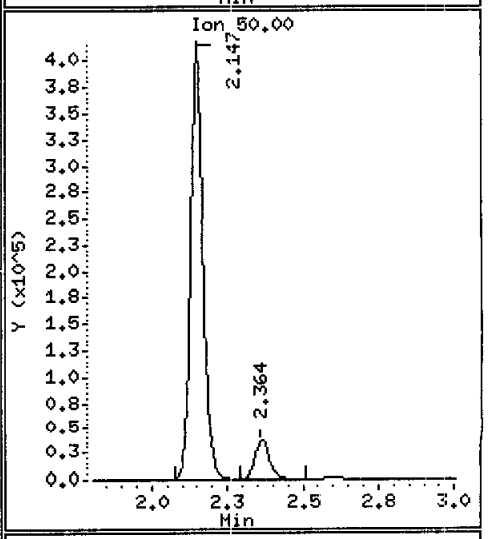


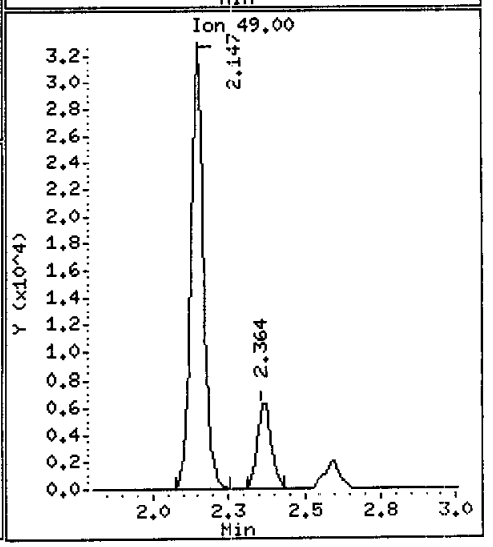












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

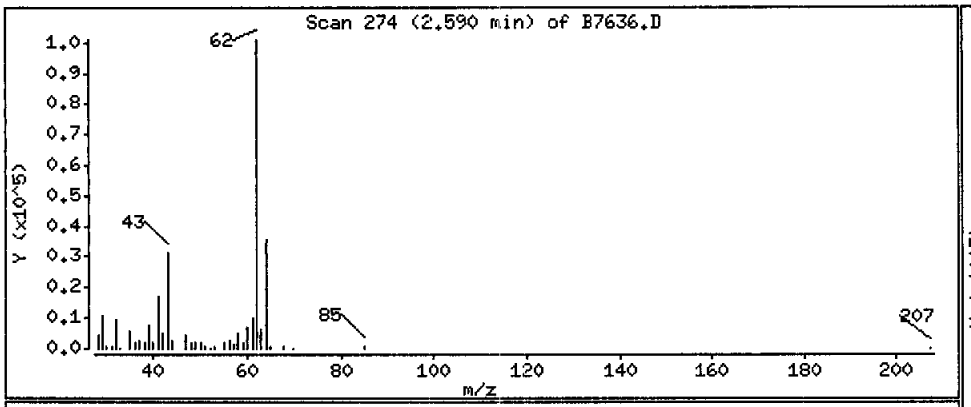
Operator: AA

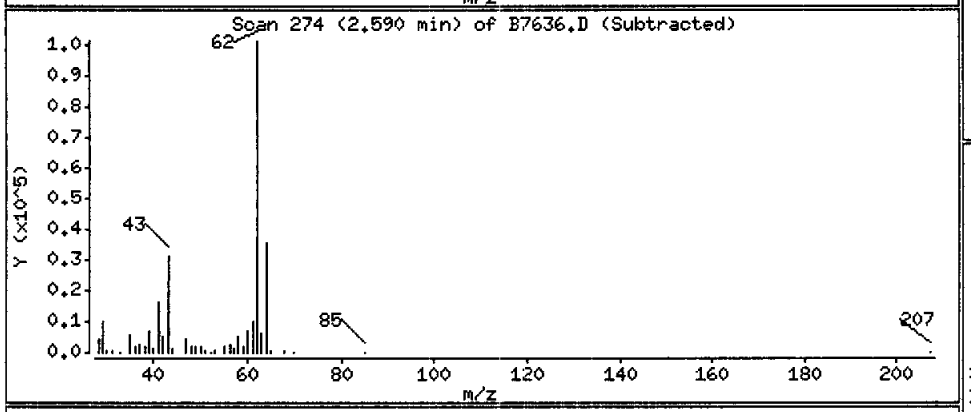
Column phase: J&W DB-624

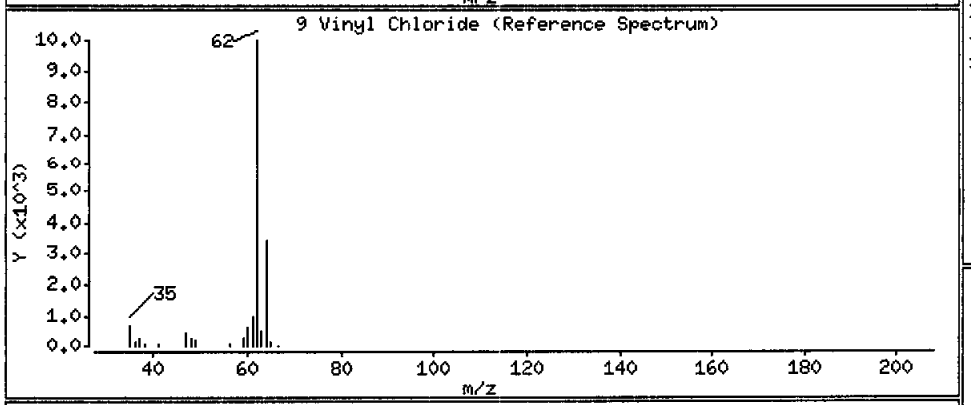
Column diameter: 0.53

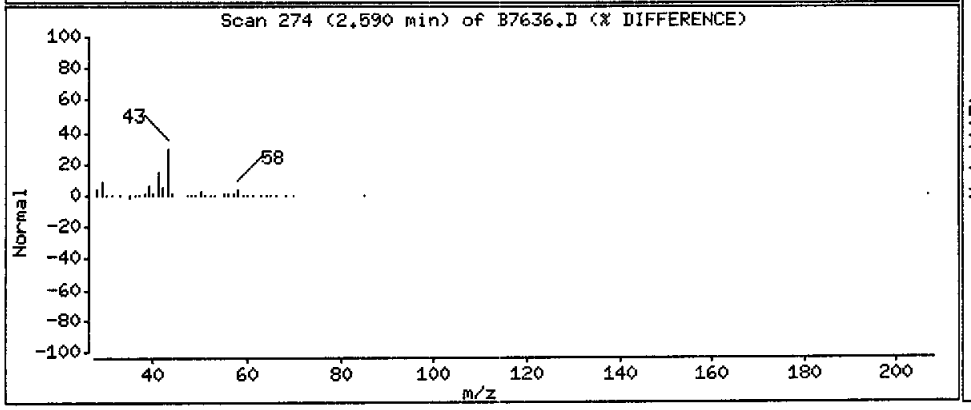
9 Vinyl Chloride

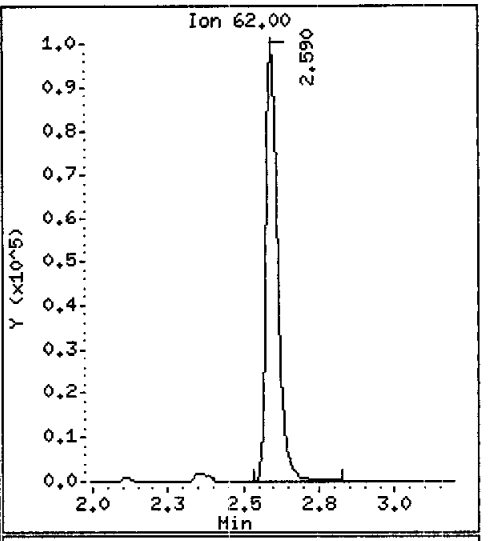
Concentration: 1138 ppbv

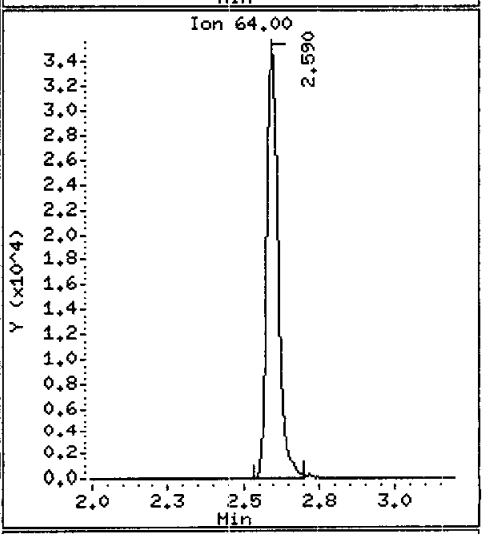


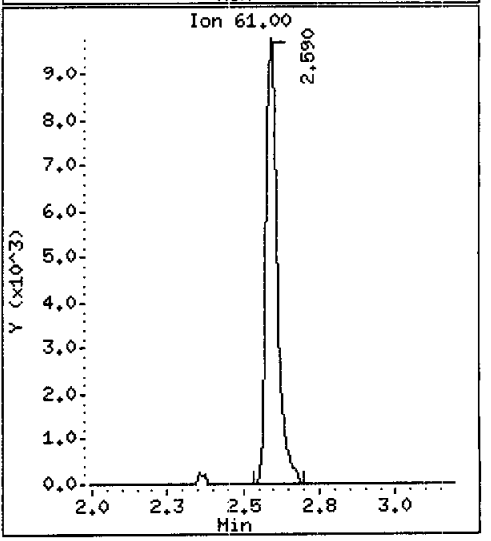












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

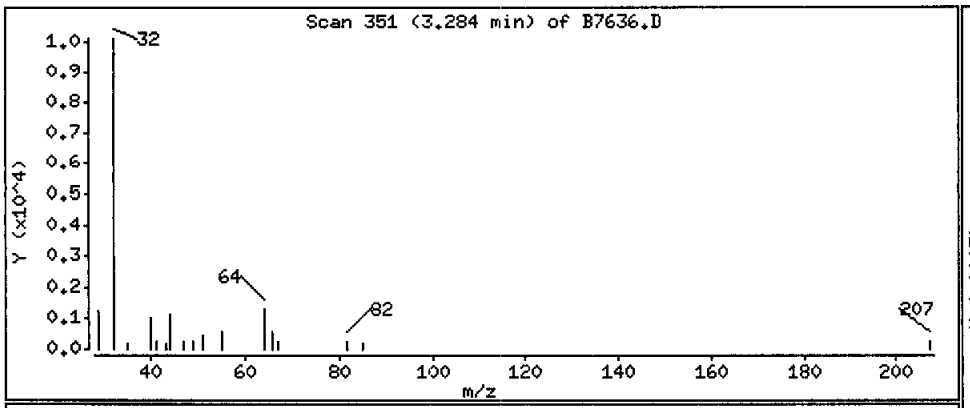
Operator: AA

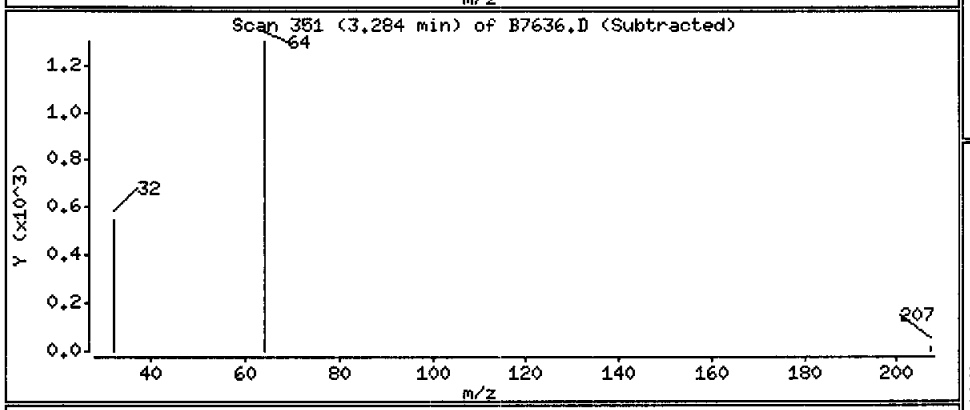
Column phase: J&W DB-624

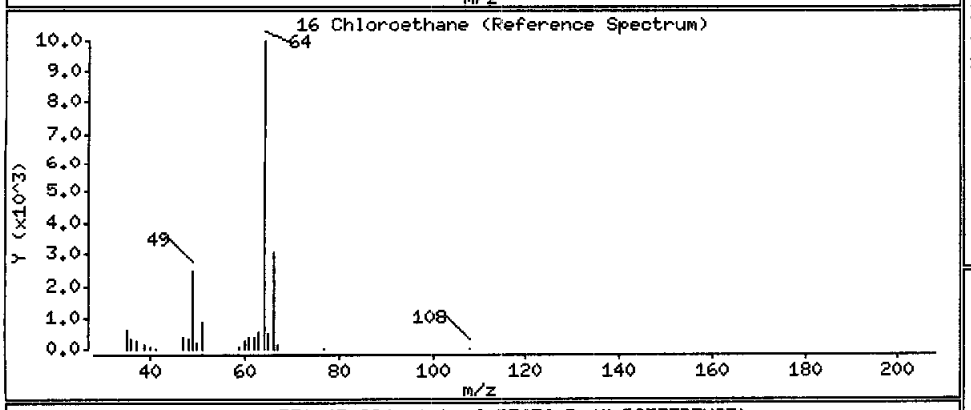
Column diameter: 0.53

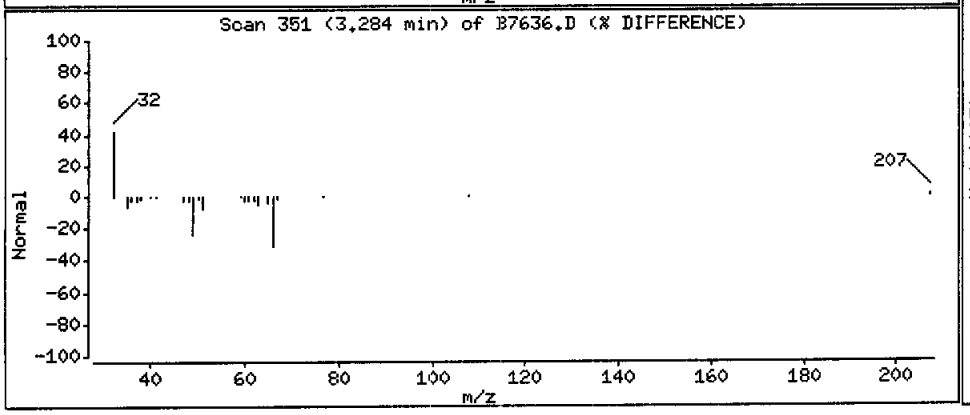
16 Chloroethane

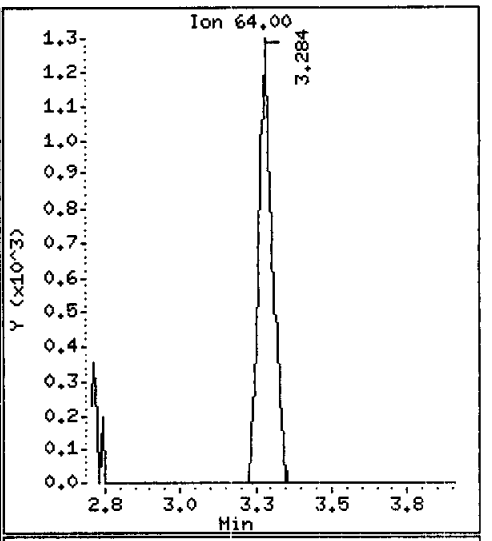
Concentration: 27.23 ppbv

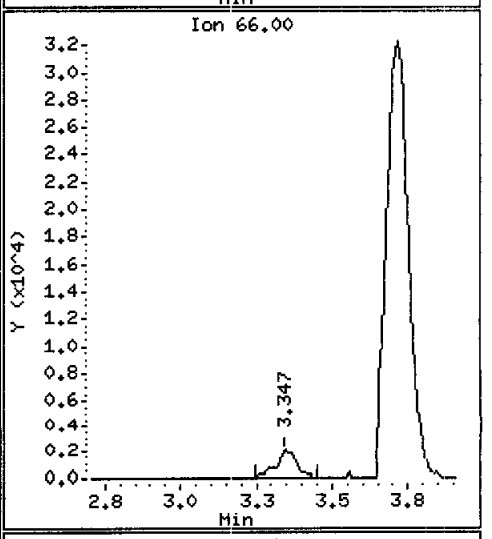


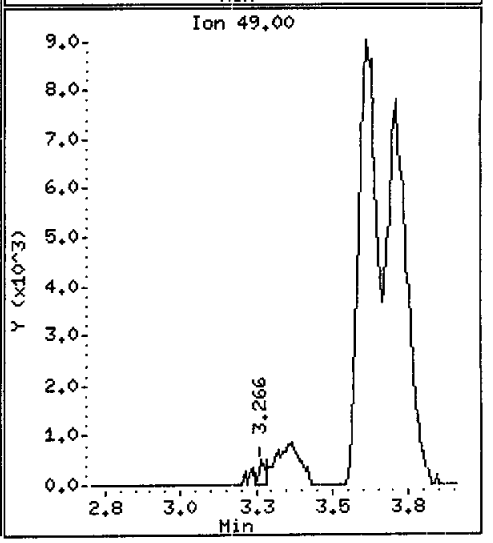












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

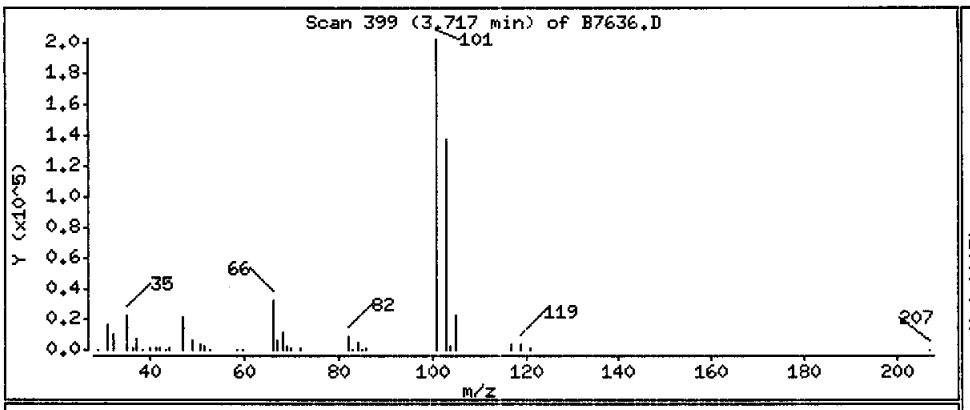
Operator: AA

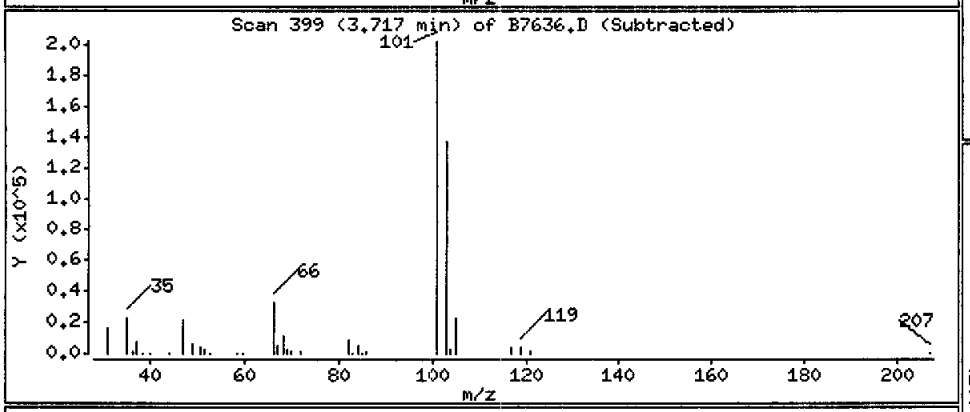
Column phase: J&W DB-624

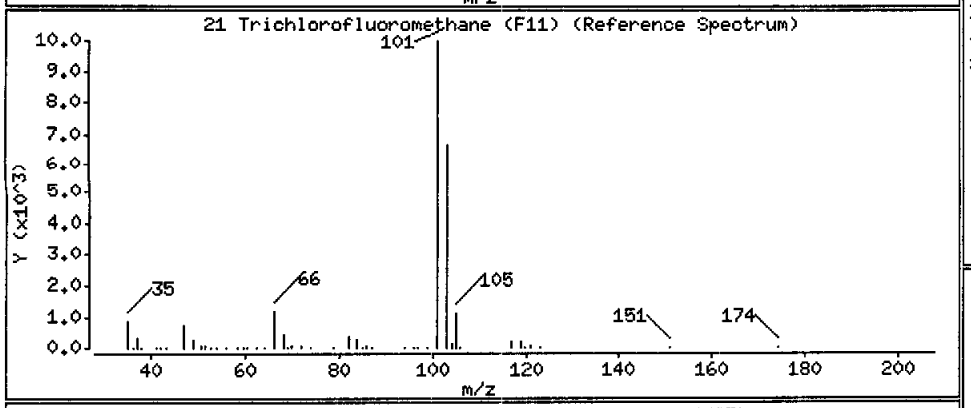
Column diameter: 0.53

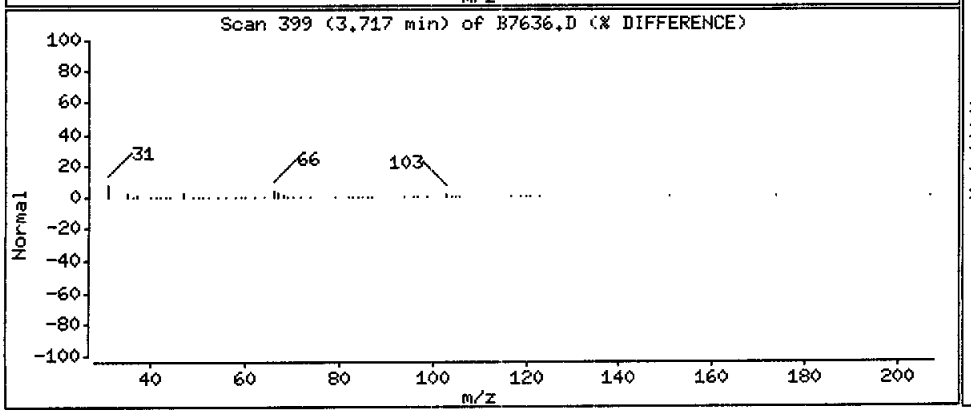
21 Trichlorofluoromethane (F11)

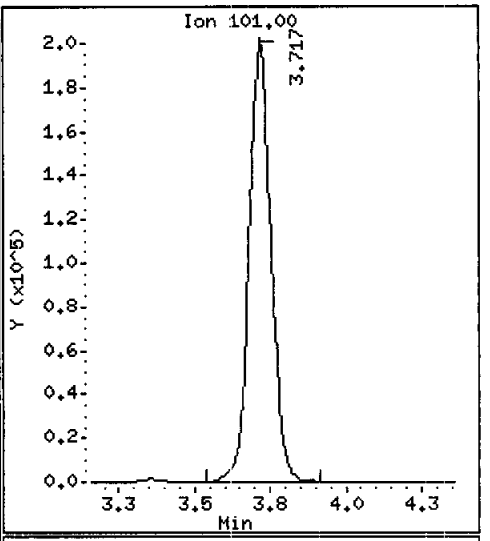
Concentration: 808.1 ppbv

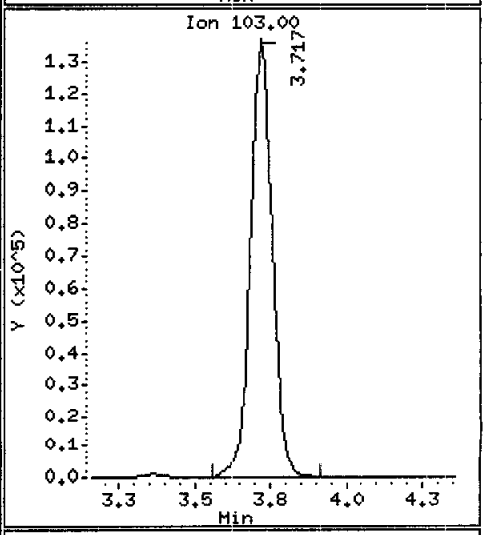


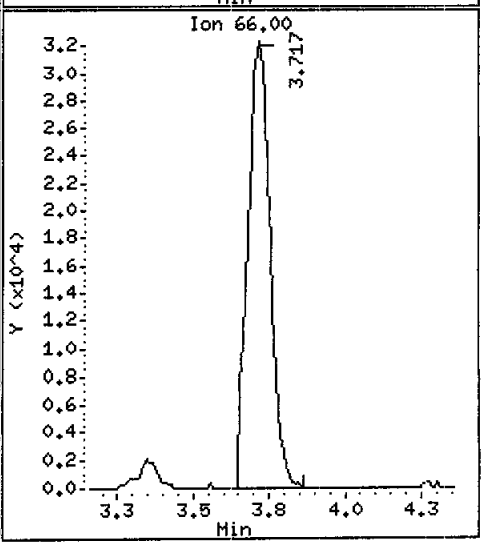












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

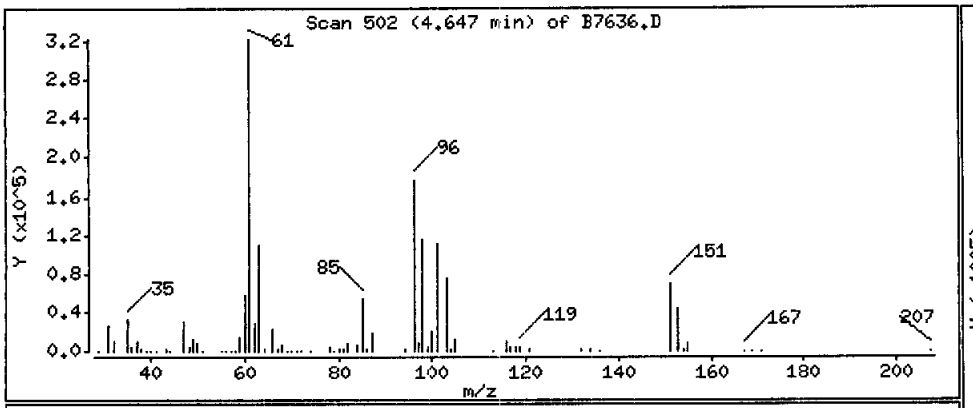
Operator: AA

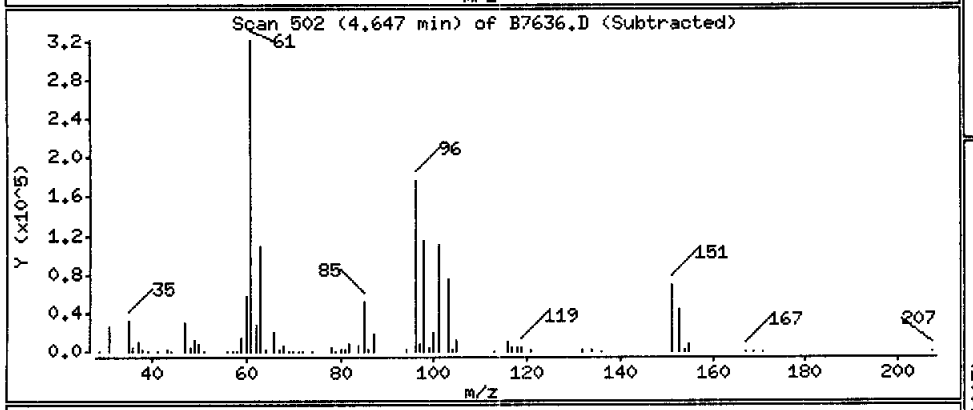
Column phase: J&W DB-624

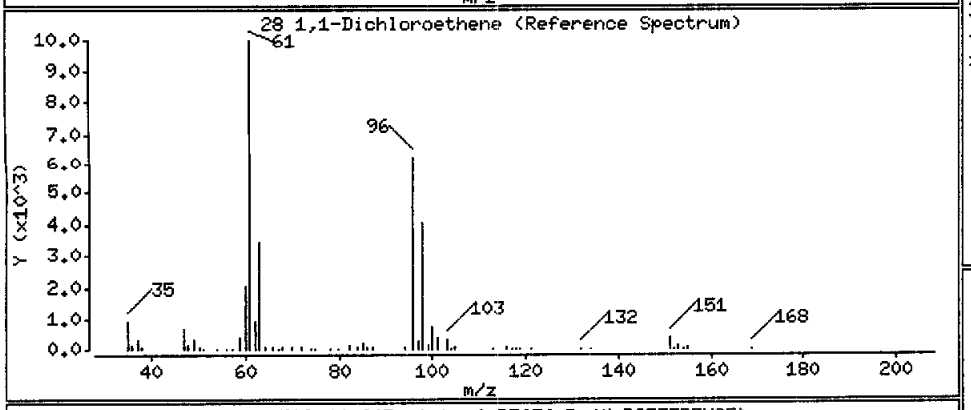
Column diameter: 0.53

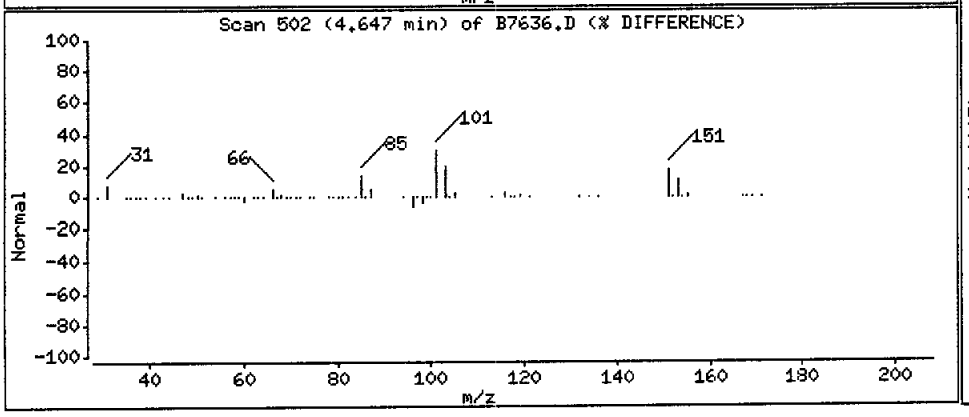
28 1,1-Dichloroethene

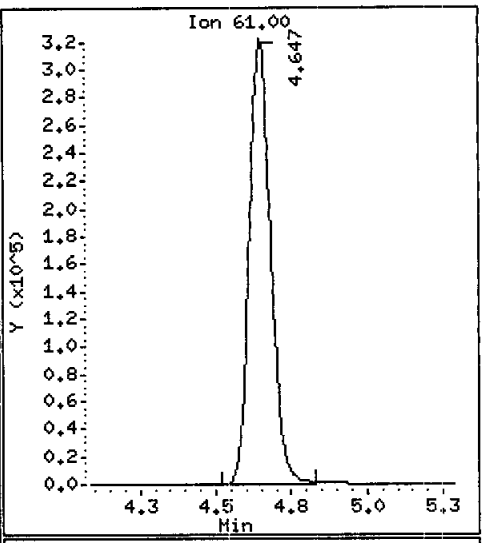
Concentration: 2384 ppbv

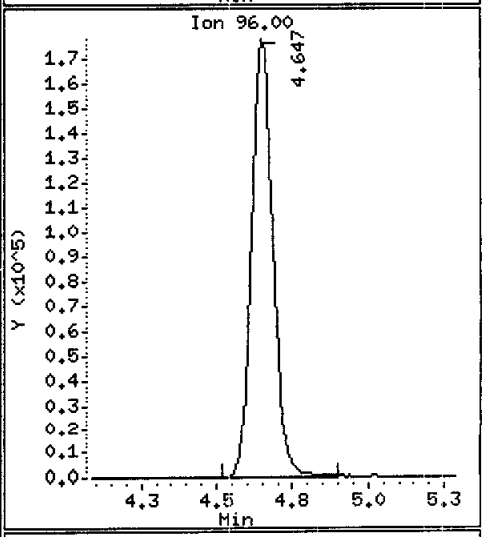


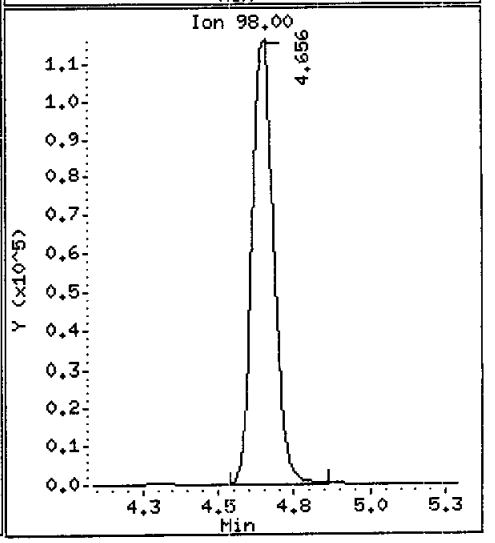












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

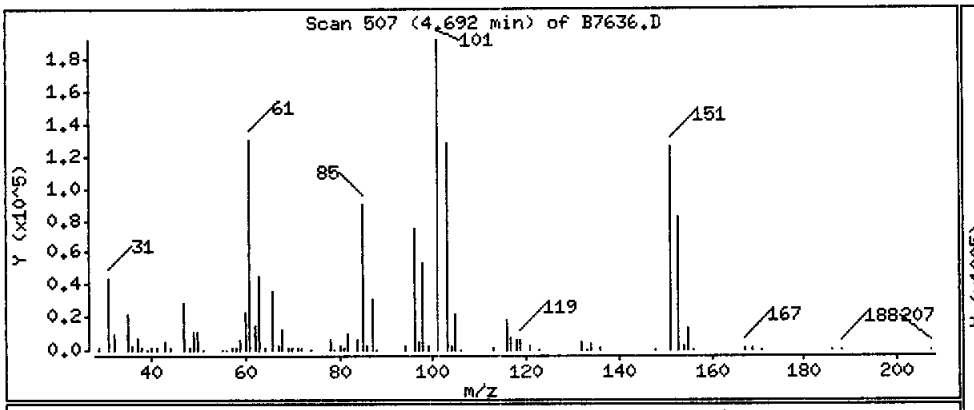
Operator: AA

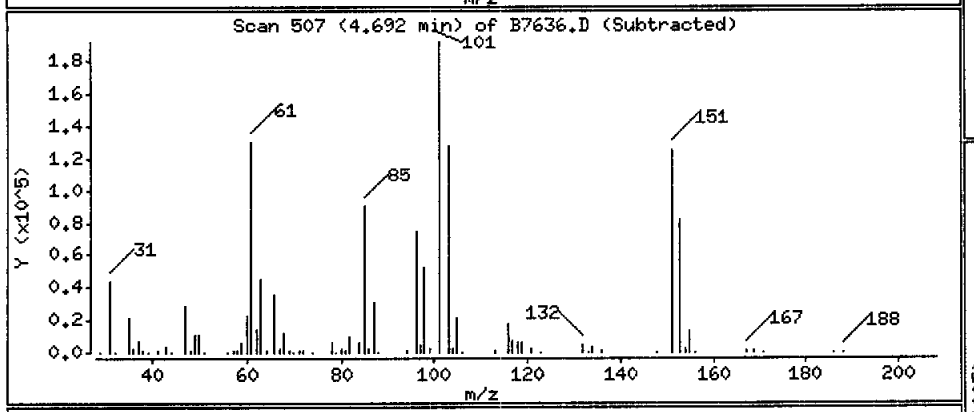
Column phase: J&W DB-624

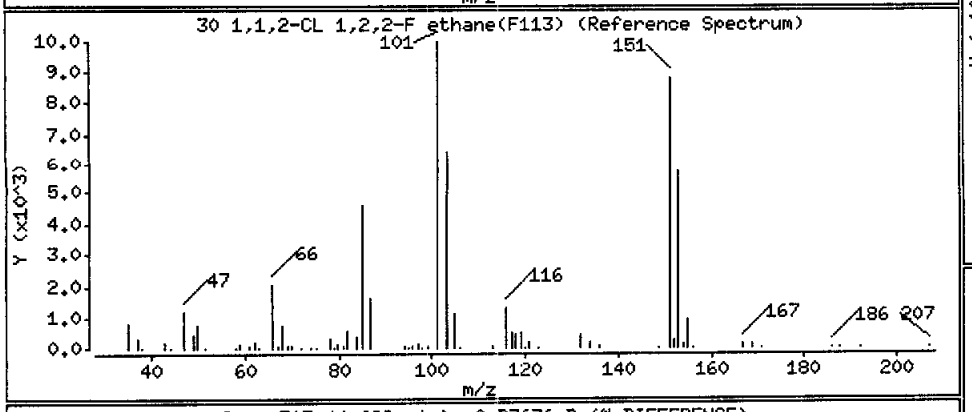
Column diameter: 0.53

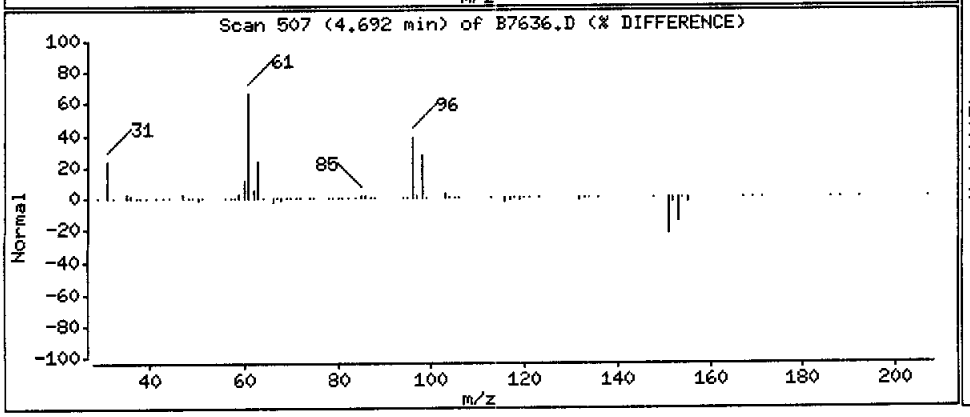
30 1,1,2-CL 1,2,2-F ethane(F113)

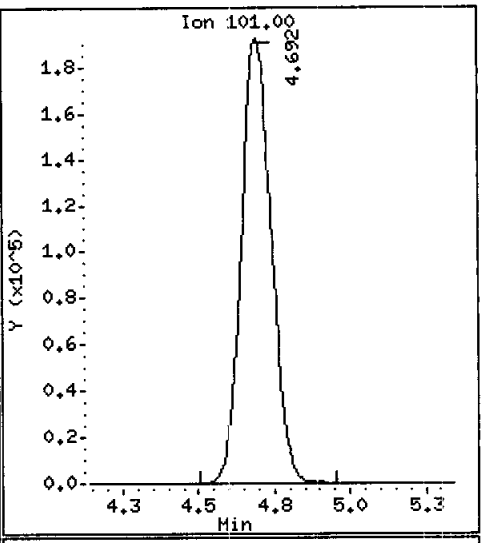
Concentration: 918.9 ppbv

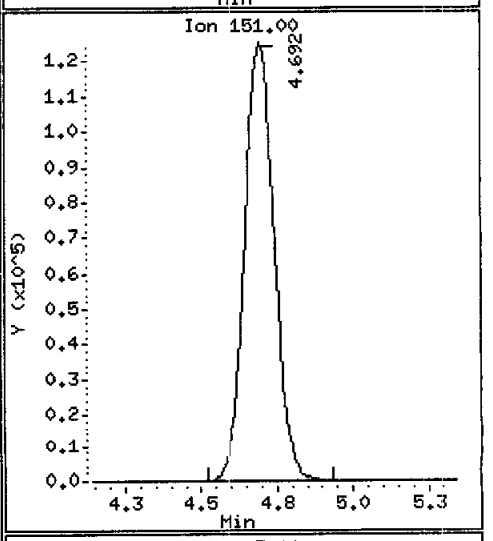


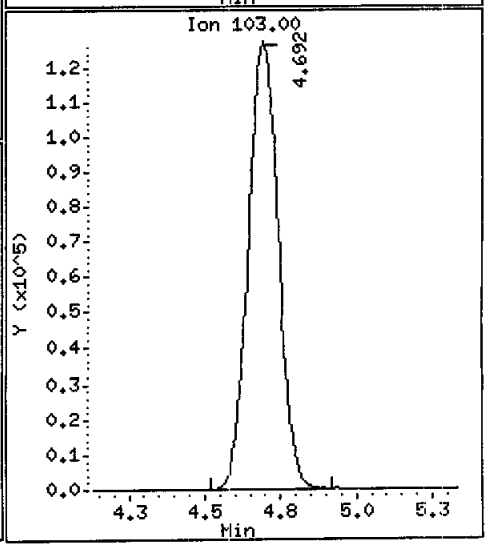












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

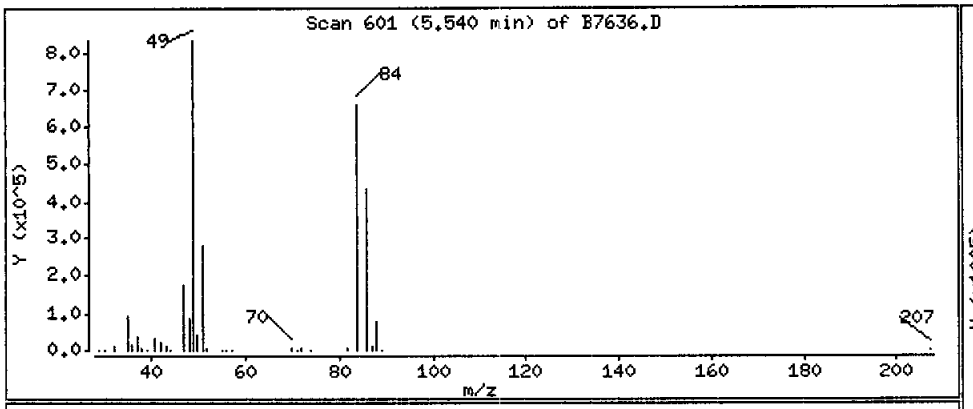
Operator: AA

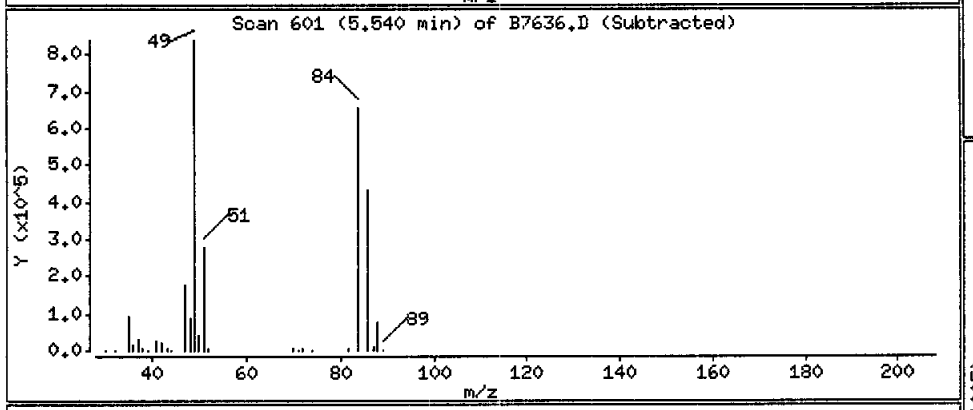
Column phase: J&W DB-624

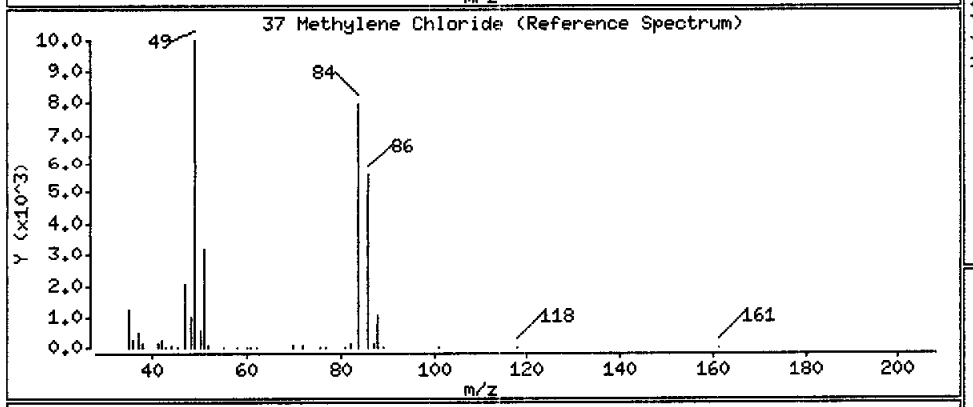
Column diameter: 0.53

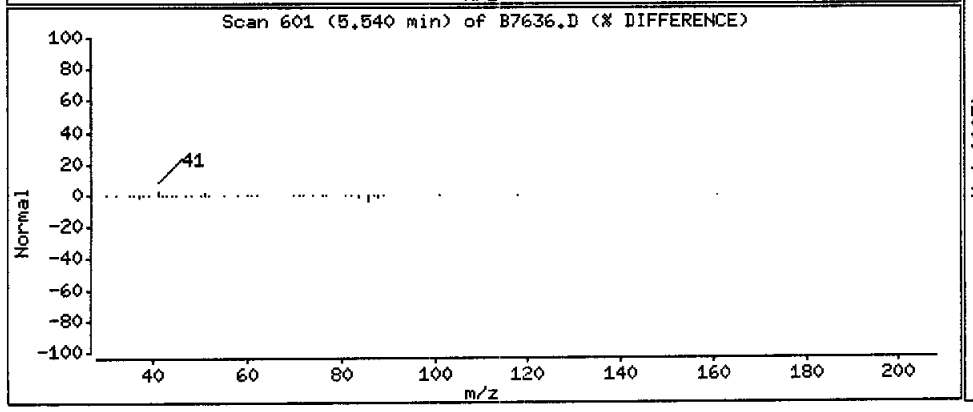
37 Methylene Chloride

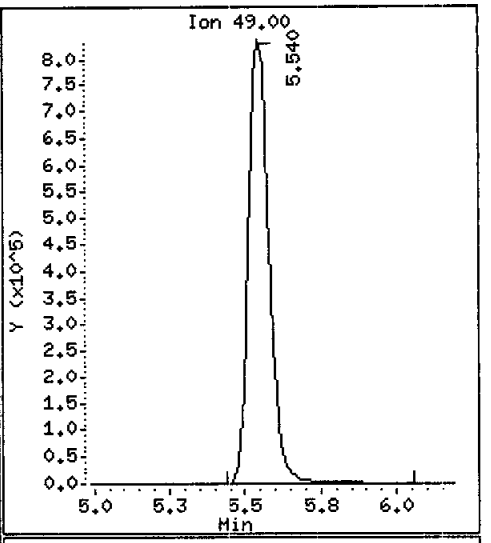
Concentration: 9694 ppbv

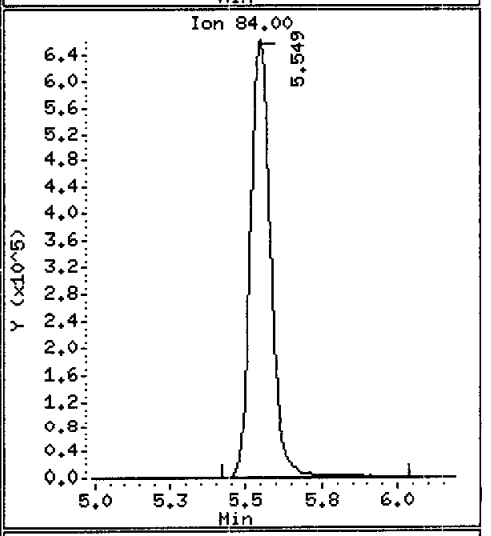


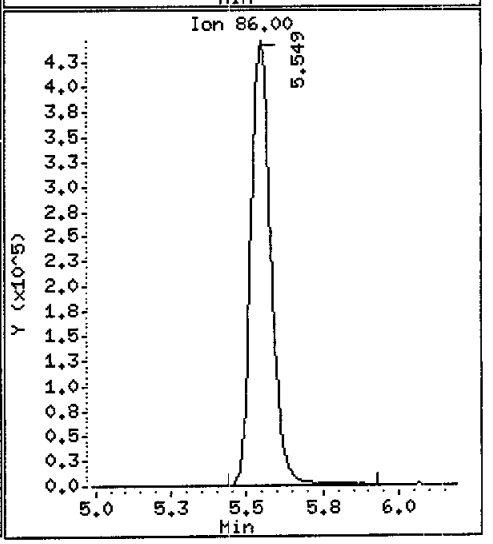












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

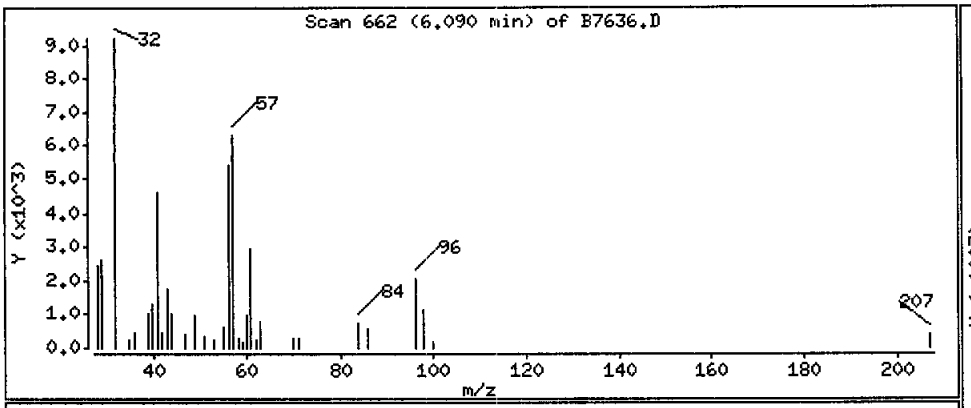
Operator: AA

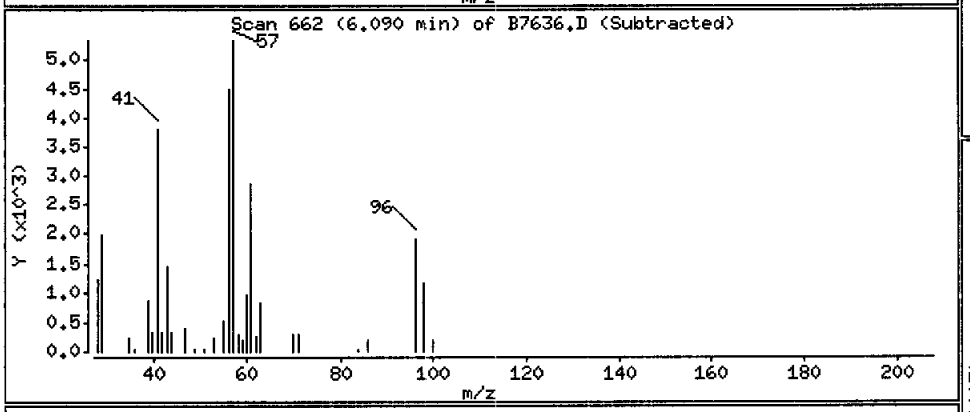
Column phase: J&W DB-624

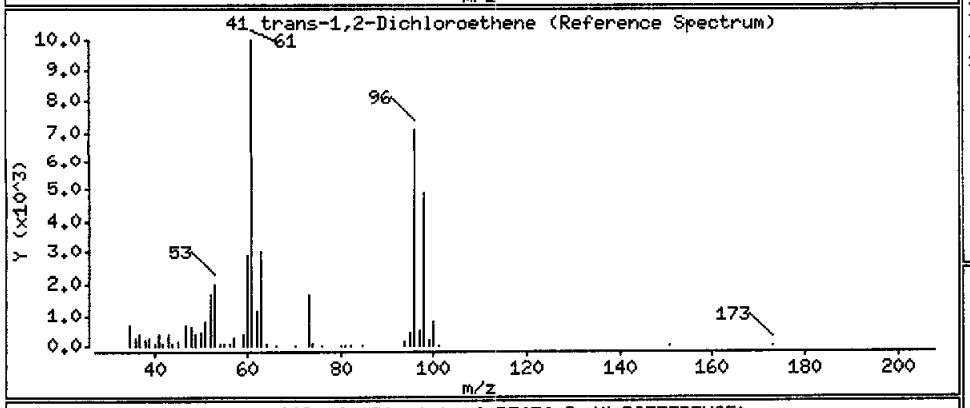
Column diameter: 0.53

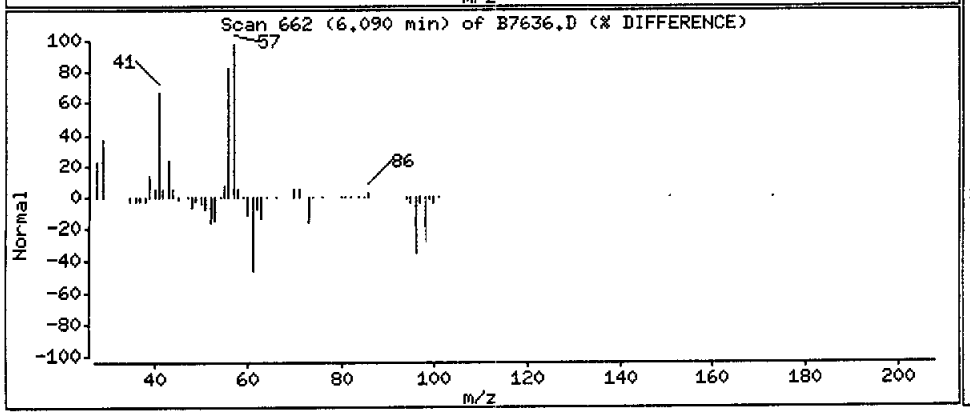
41 trans-1,2-Dichloroethene

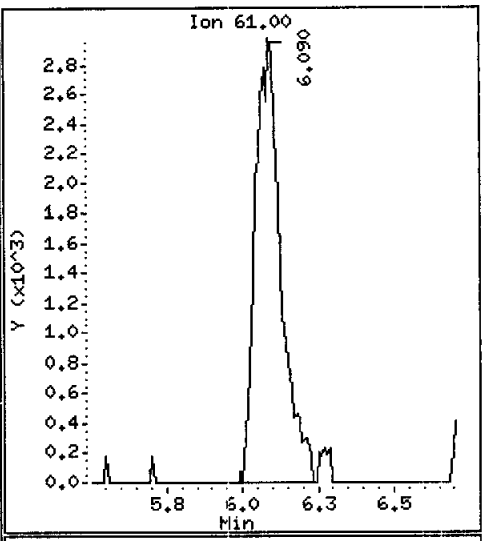
Concentration: 30.40 ppbv

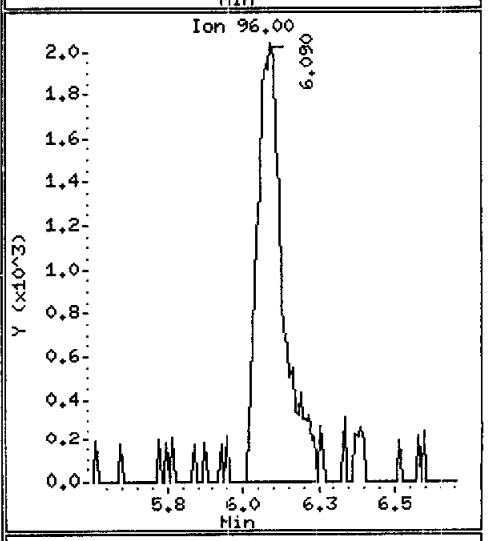


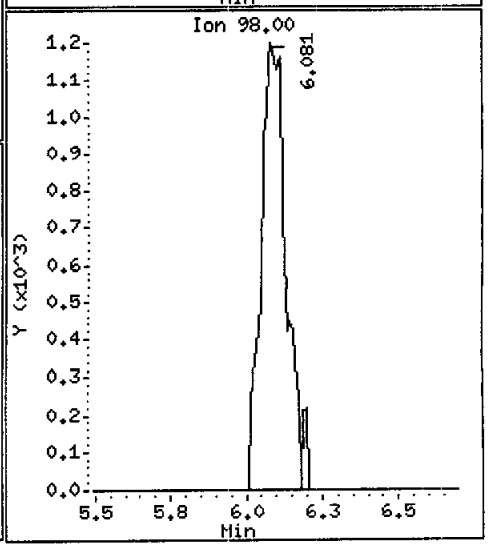












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

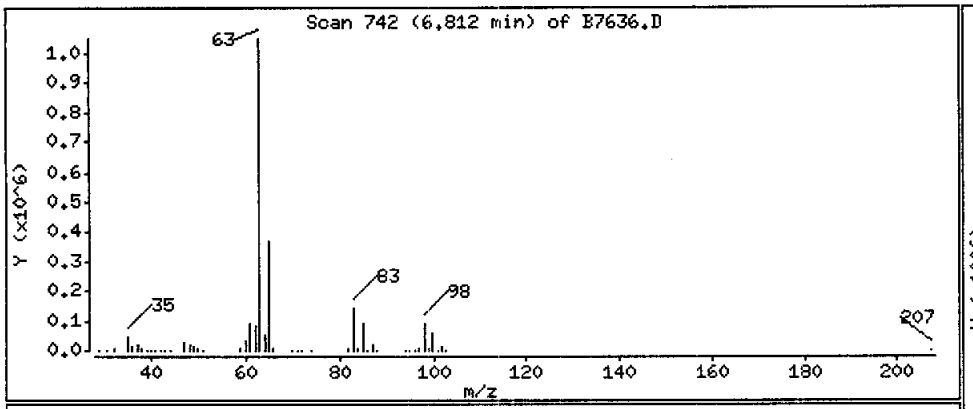
Operator: AA

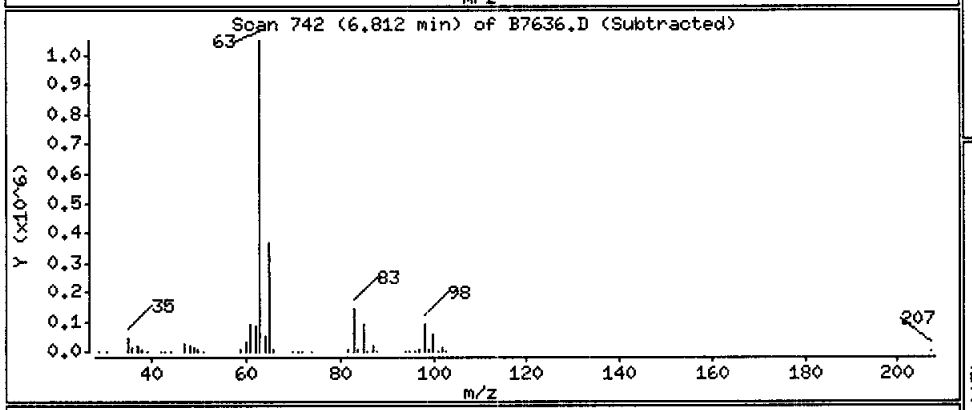
Column phase: J&W DB-624

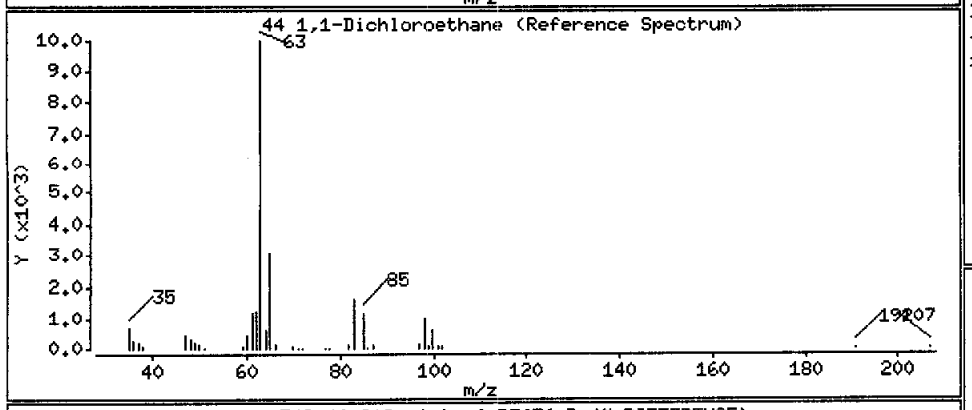
Column diameter: 0.53

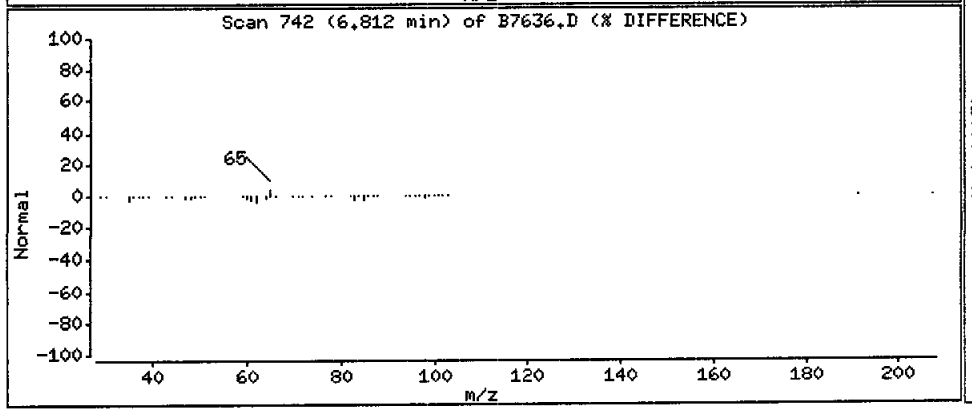
44 1,1-Dichloroethane

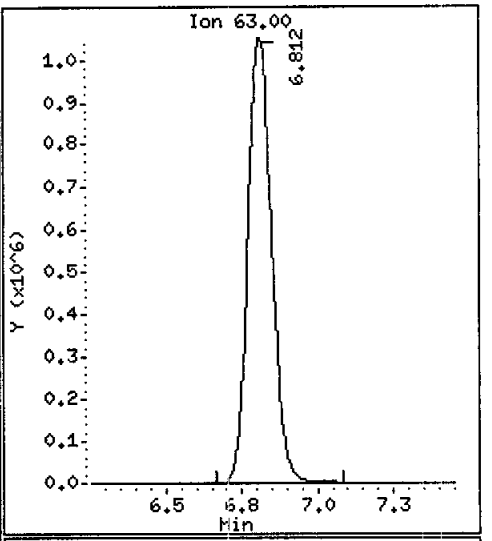
Concentration: 7968 ppbv

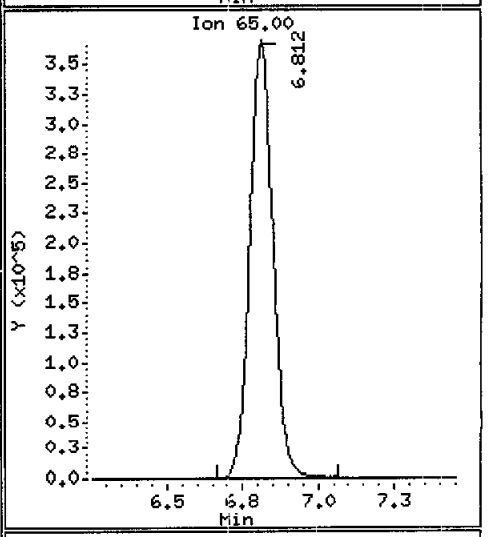


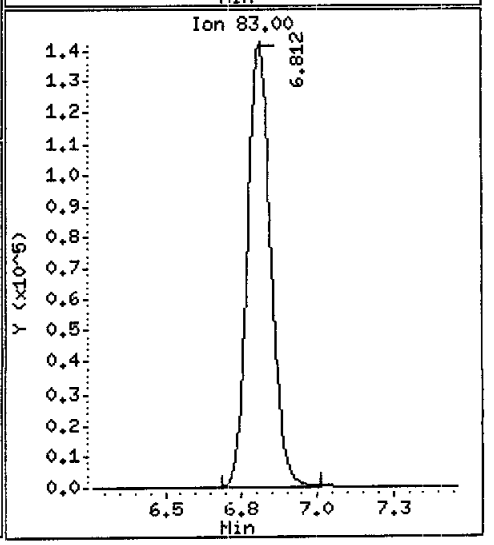












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

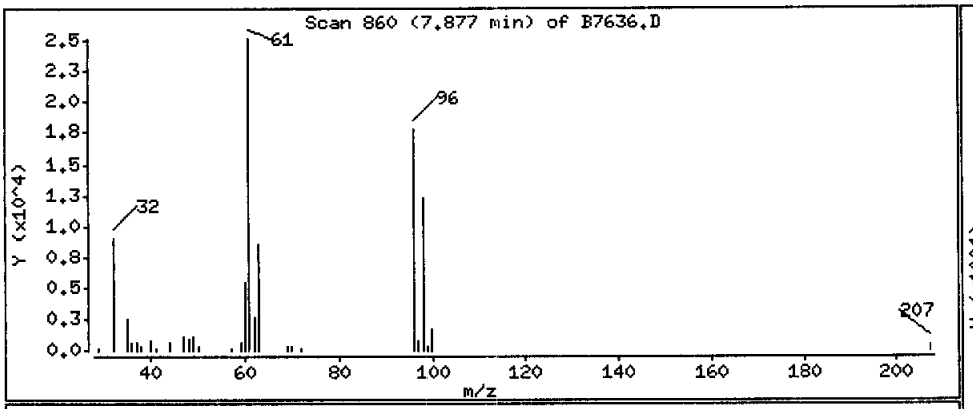
Operator: AA

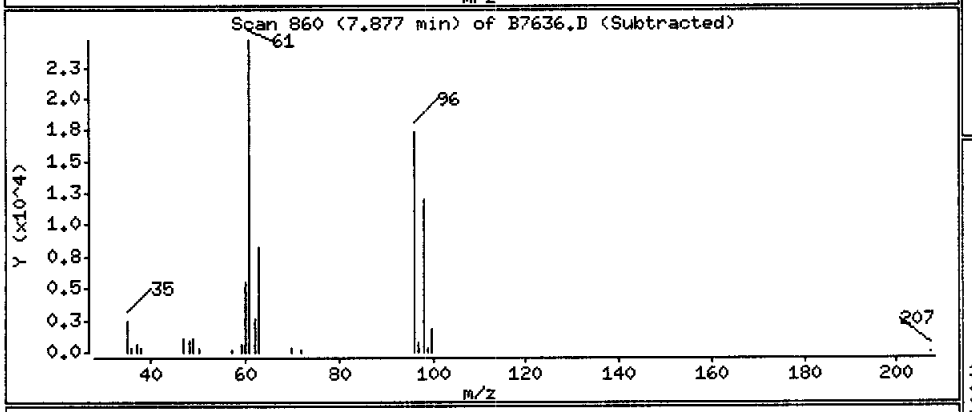
Column phase: J&W DB-624

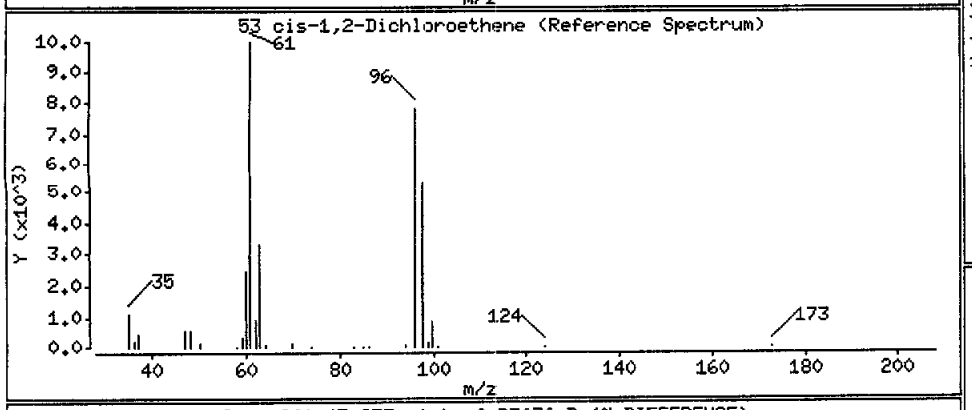
Column diameter: 0.53

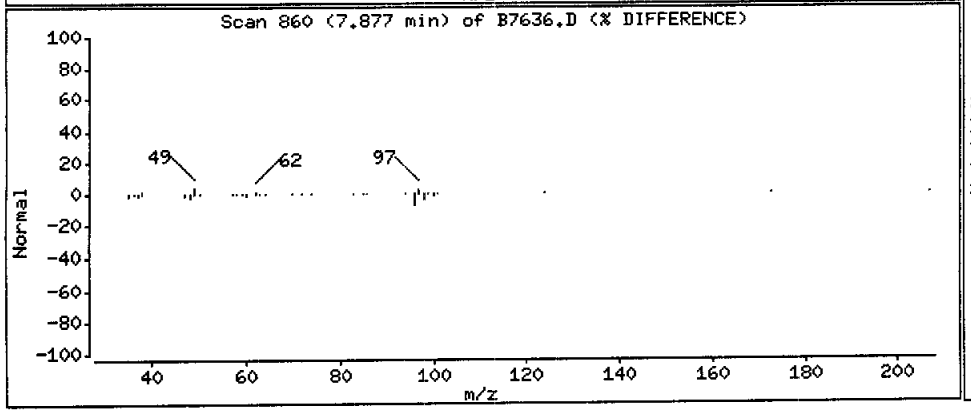
53 cis-1,2-Dichloroethene

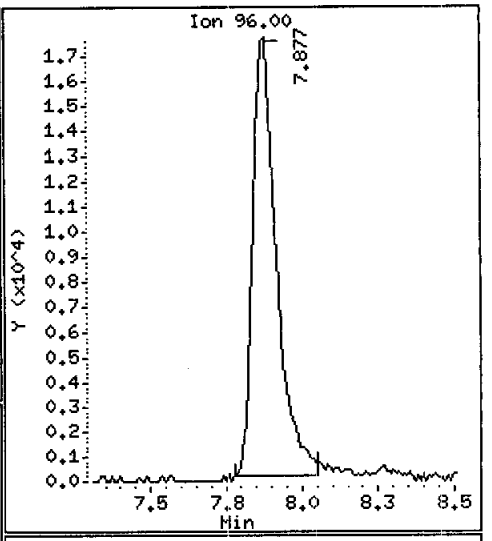
Concentration: 255.4 ppbv

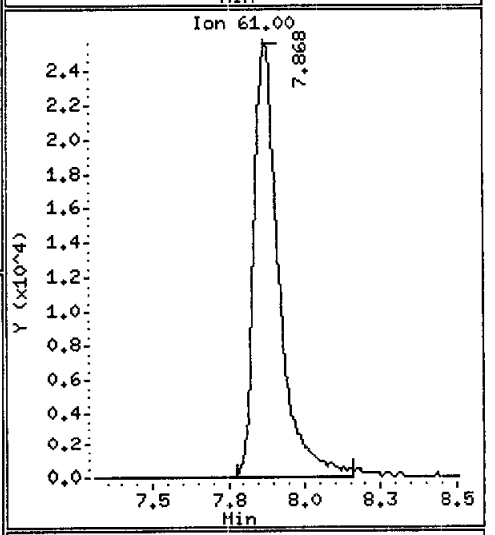


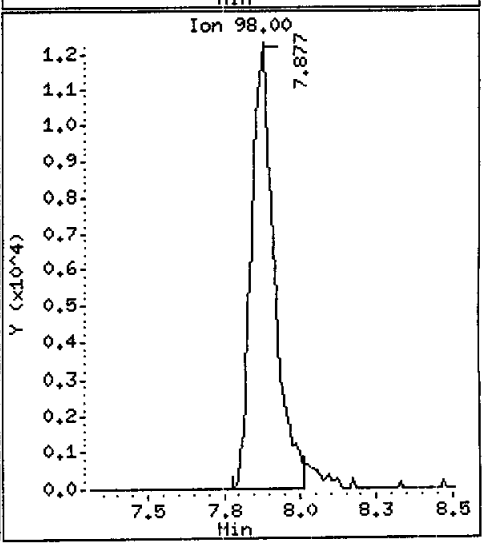












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

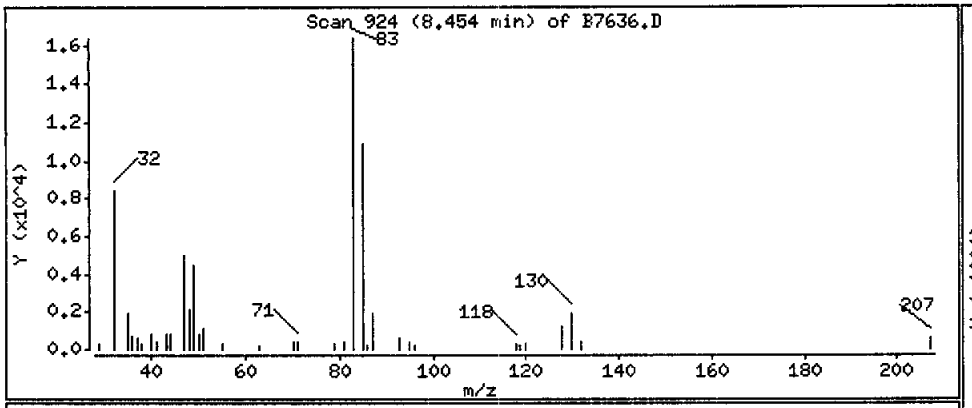
Operator: AA

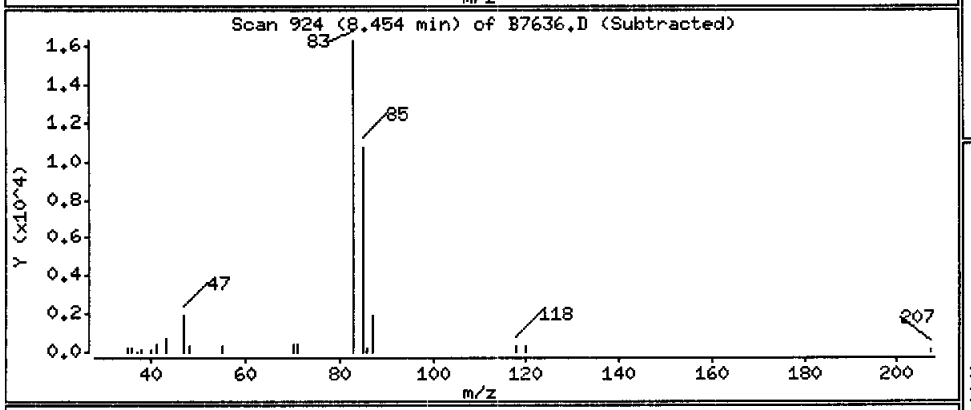
Column phase: J&W DB-624

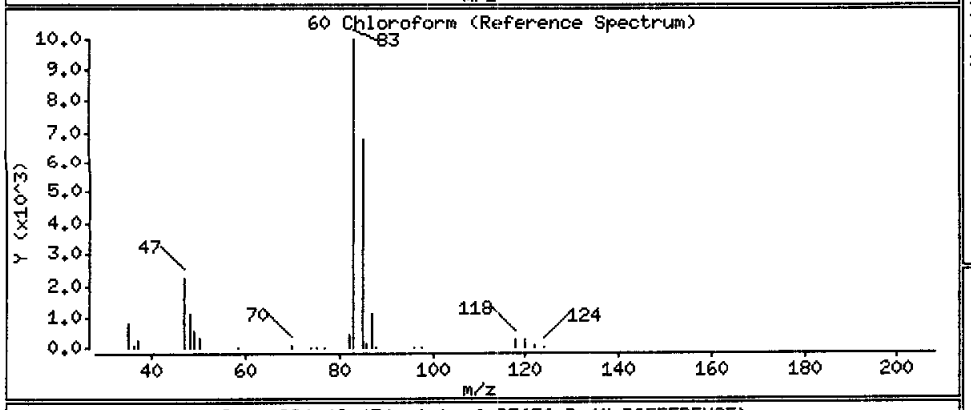
Column diameter: 0.53

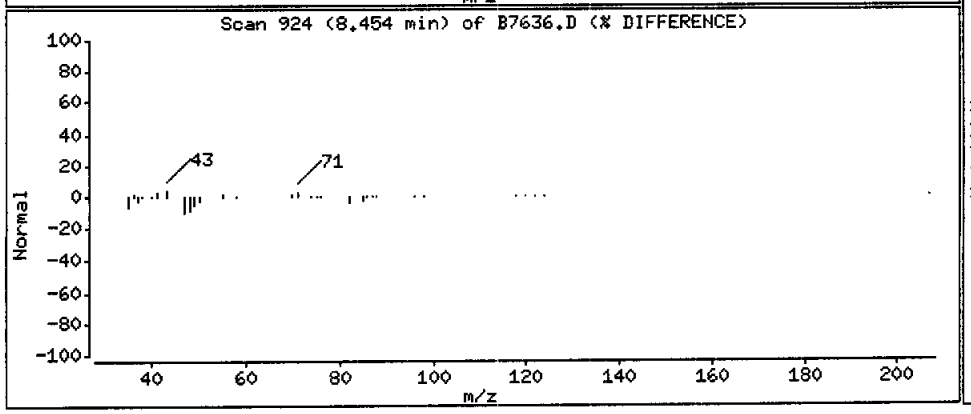
60 Chloroform

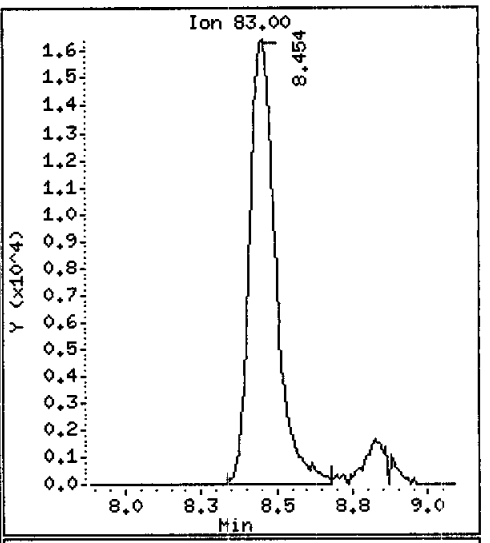
Concentration: 106.1 ppbv

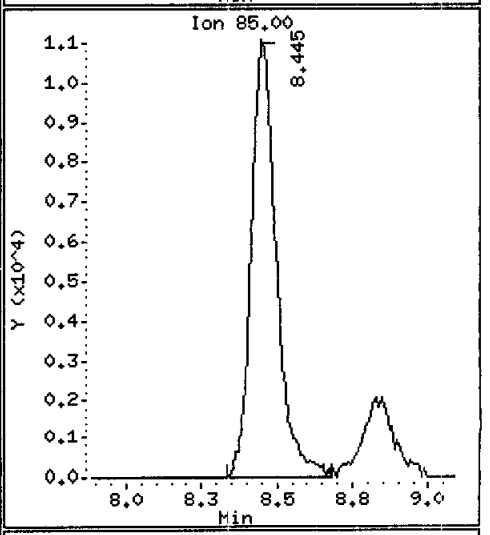


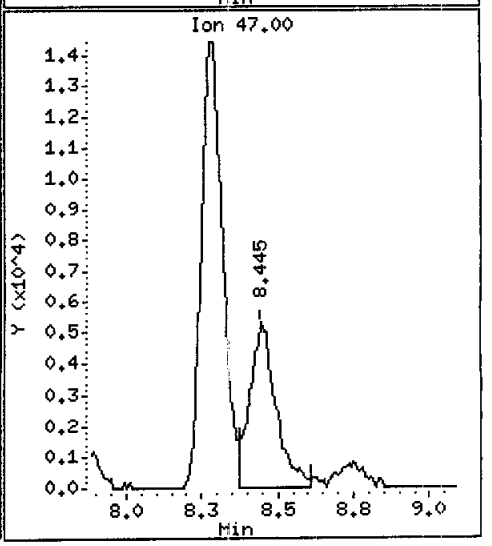












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

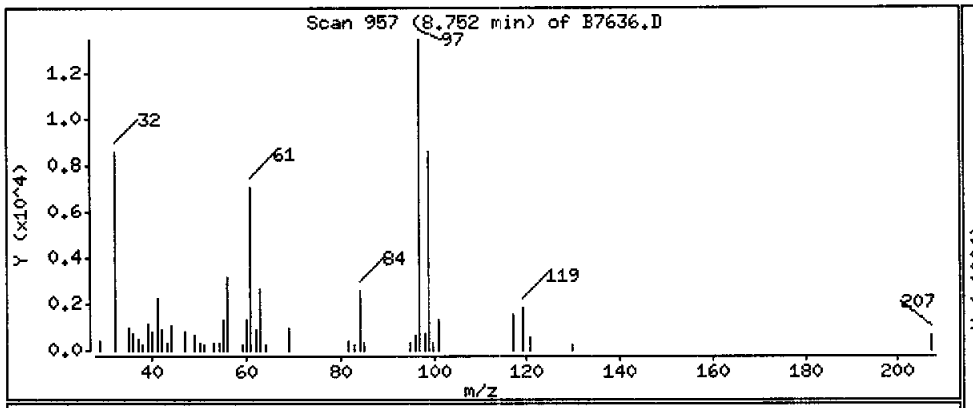
Operator: AA

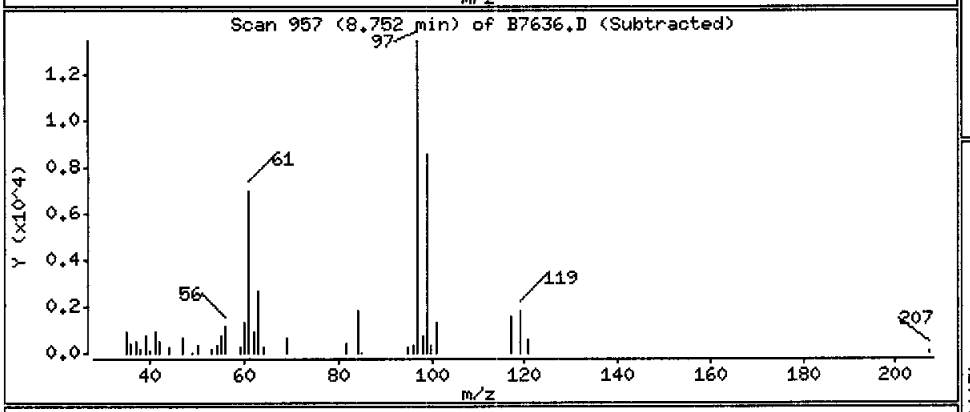
Column phase: J&W DB-624

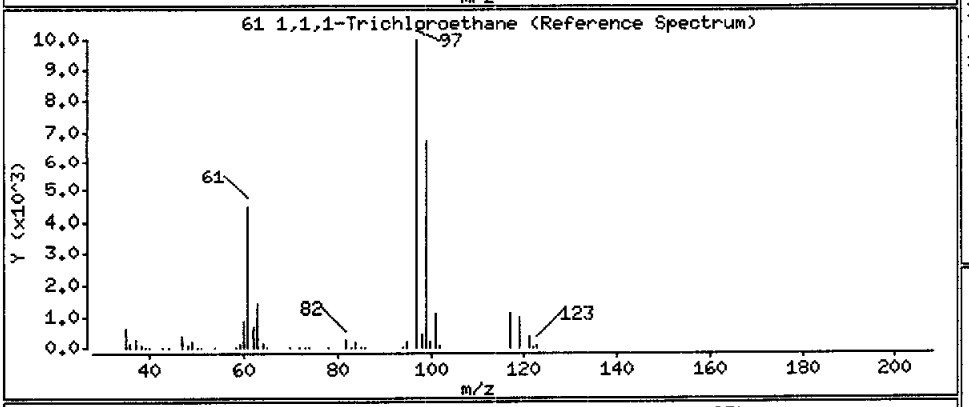
Column diameter: 0.53

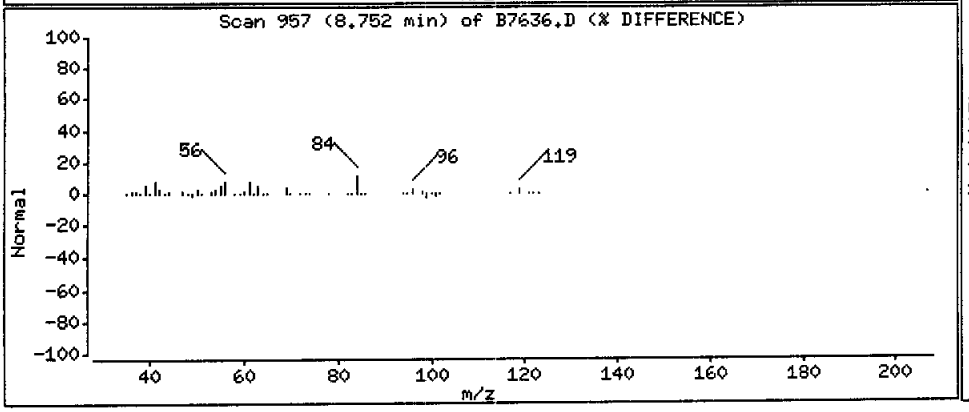
61 1,1,1-Trichloroethane

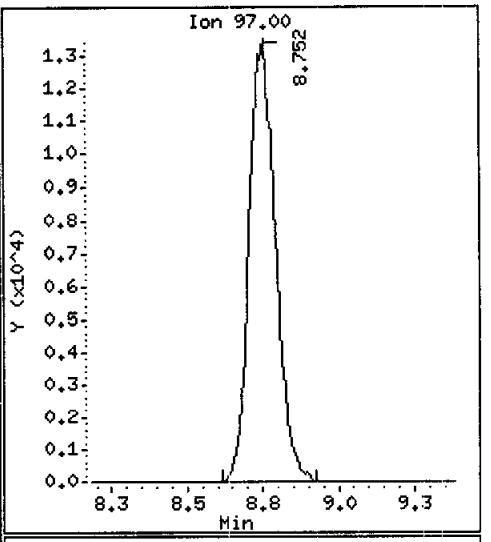
Concentration: 87.80 ppbv

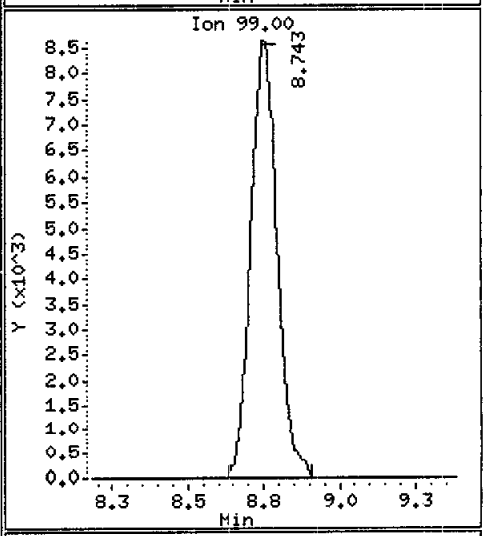


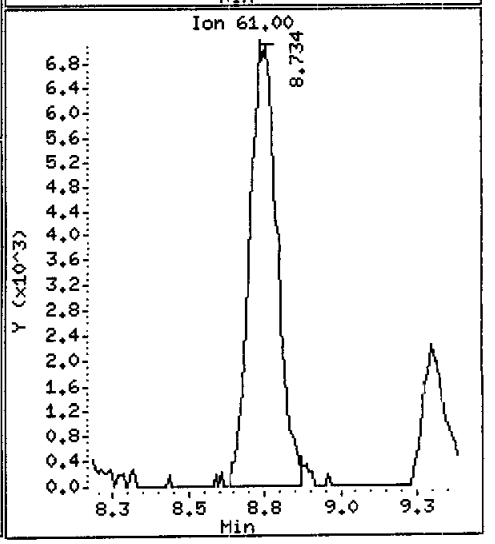












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

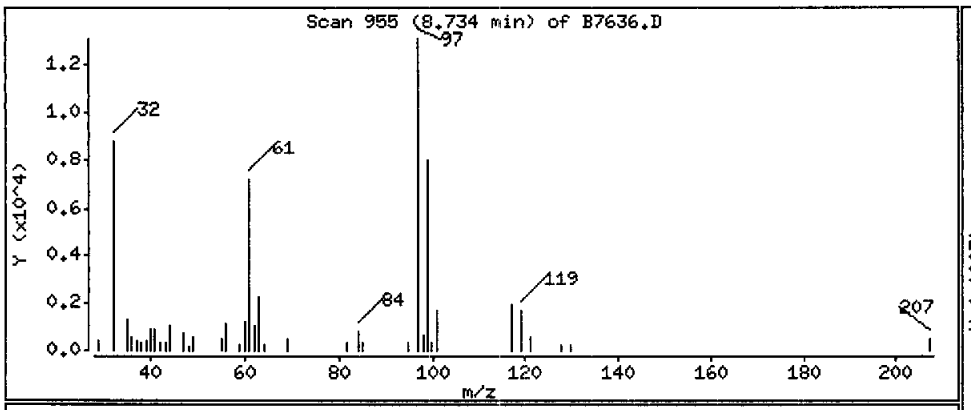
Operator: AA

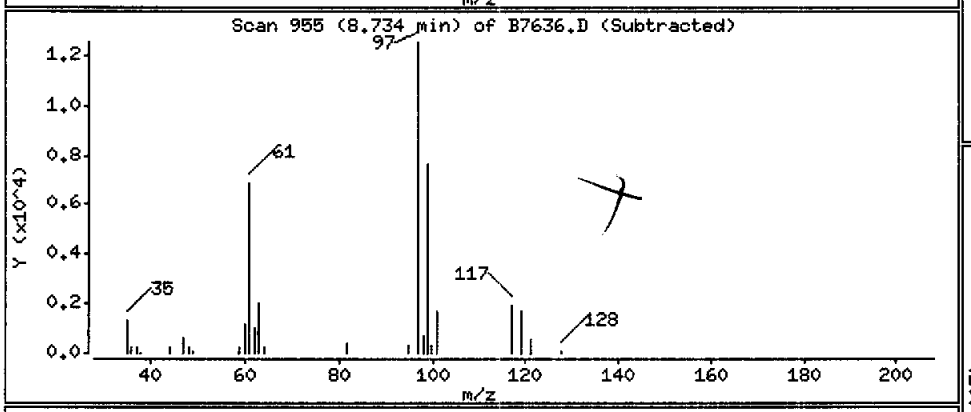
Column phase: J&W DB-624

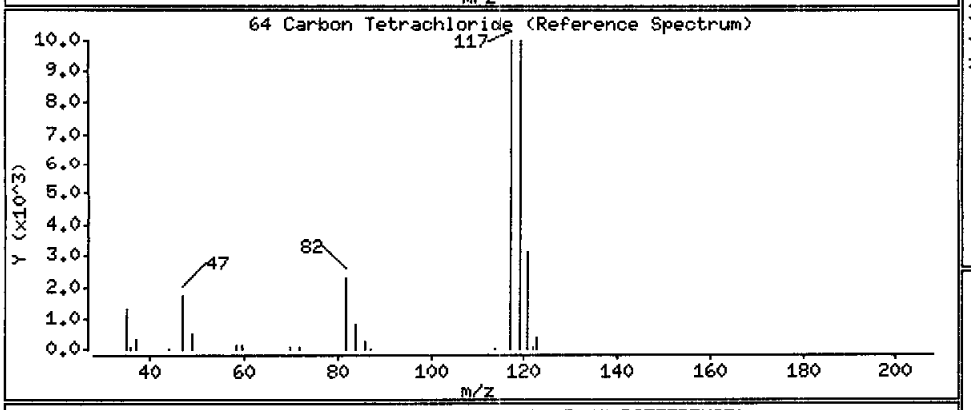
Column diameter: 0.53

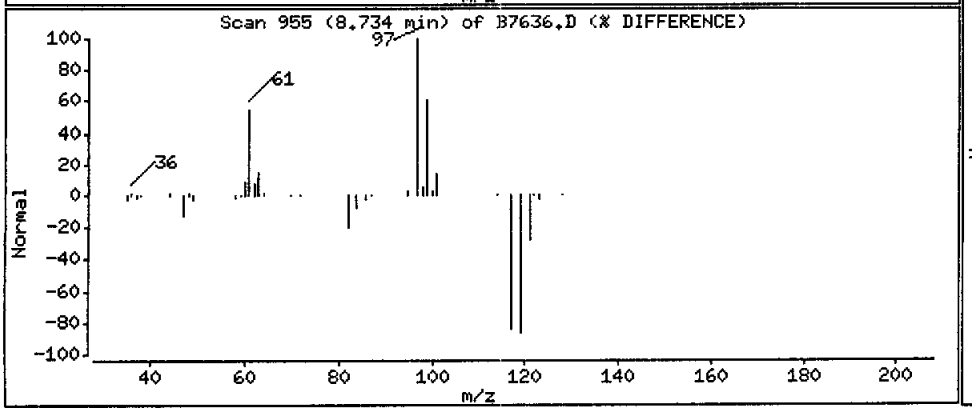
64 Carbon Tetrachloride

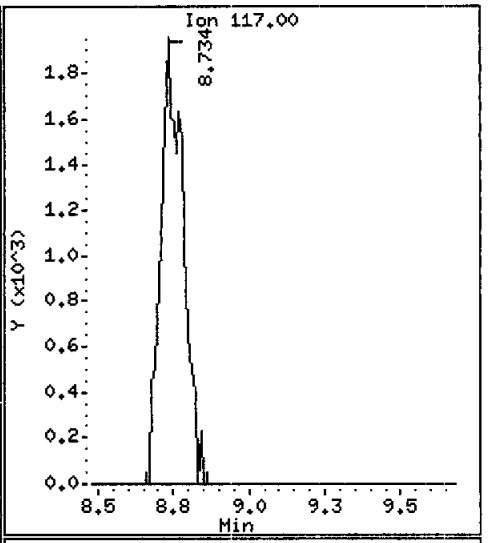
Concentration: 16.38 ppbv

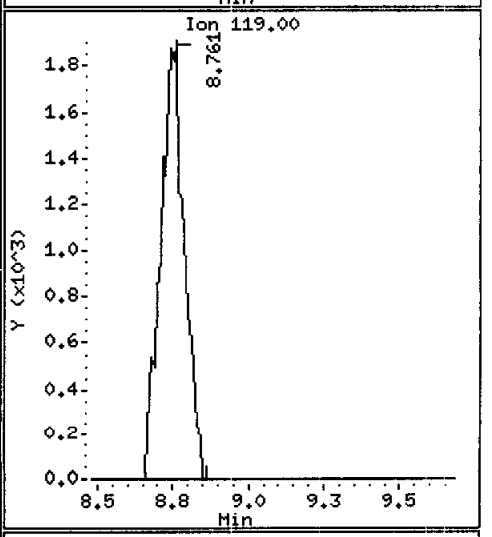


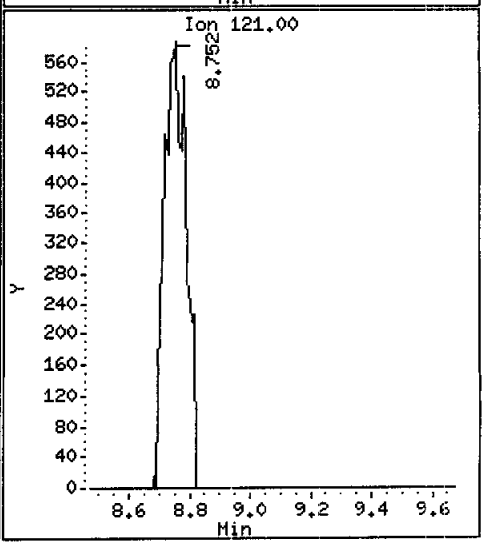












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

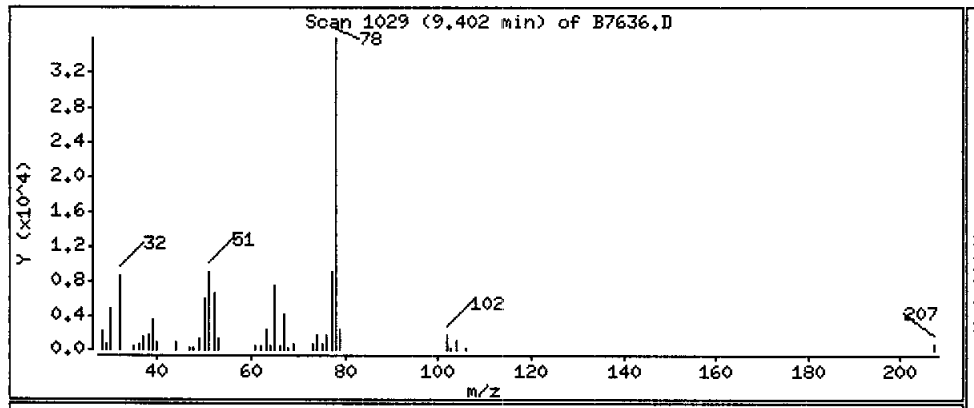
Operator: AA

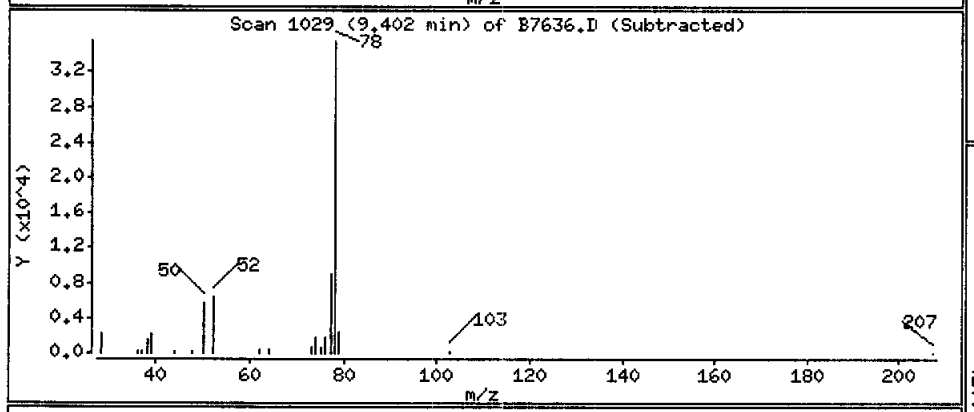
Column phase: J&W DB-624

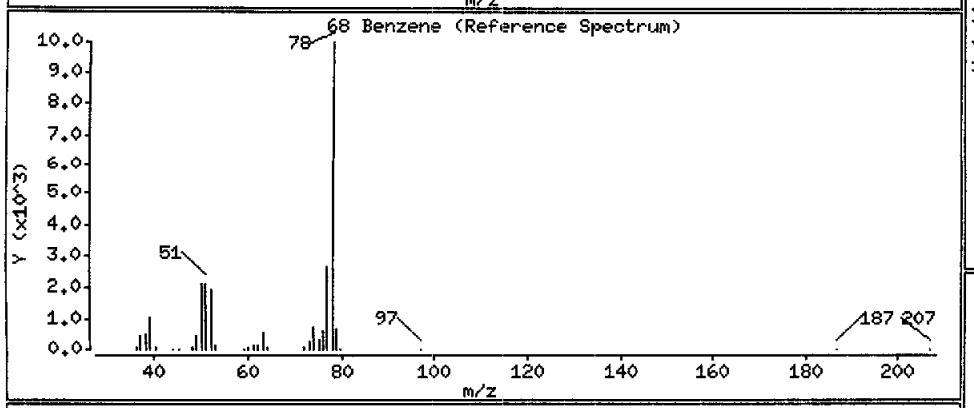
Column diameter: 0.53

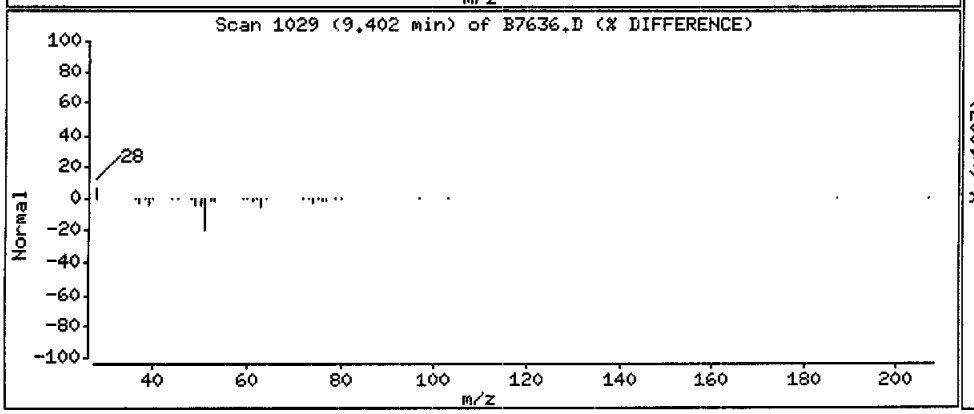
68 Benzene

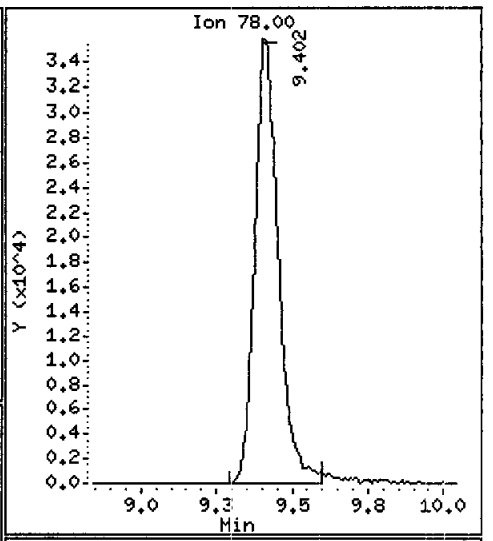
Concentration: 228.4 ppbv

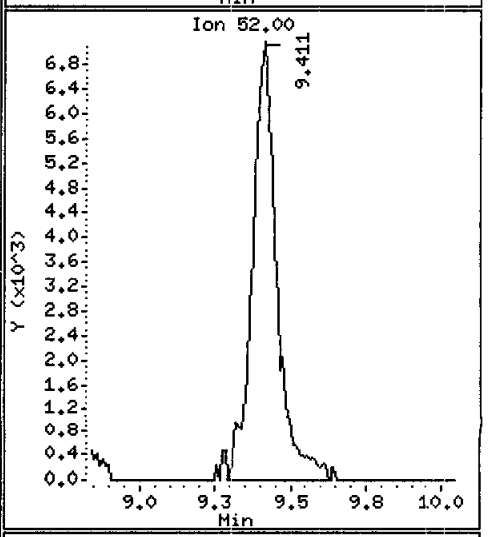


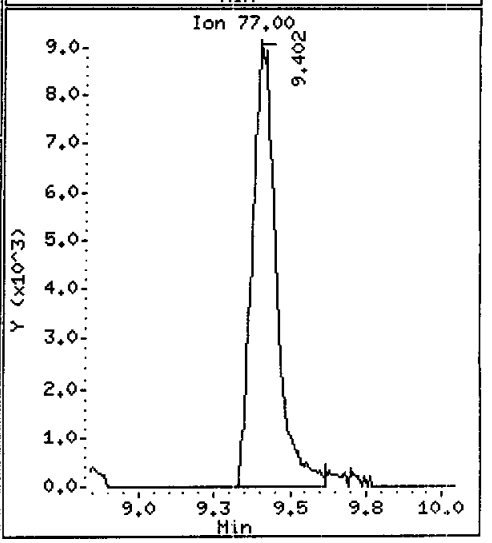












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

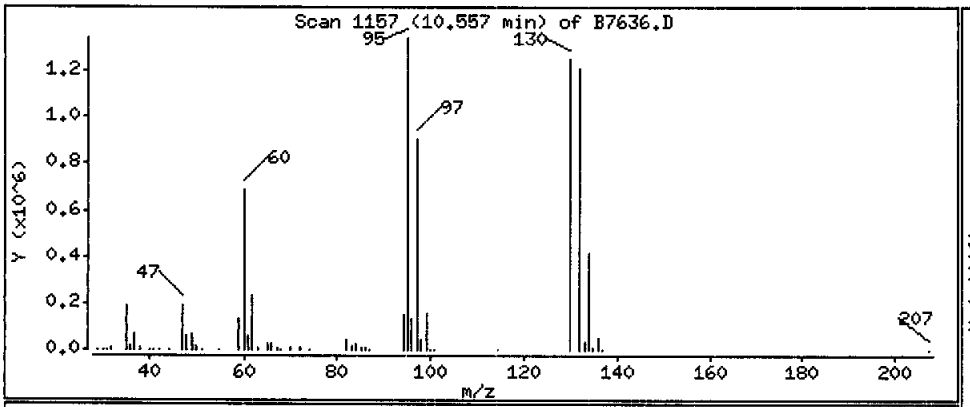
Operator: AA

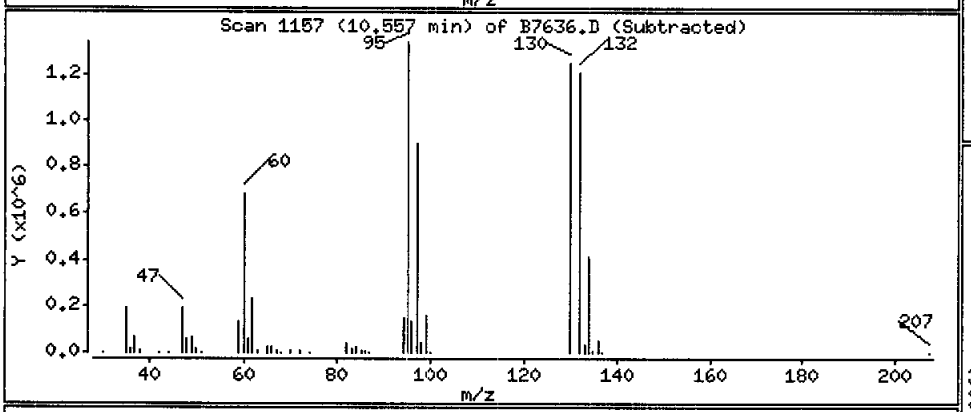
Column phase: J&W DB-624

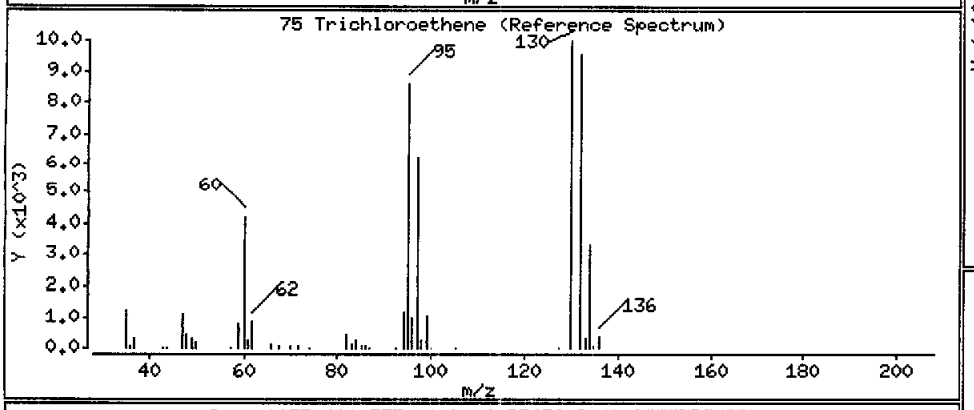
Column diameter: 0.53

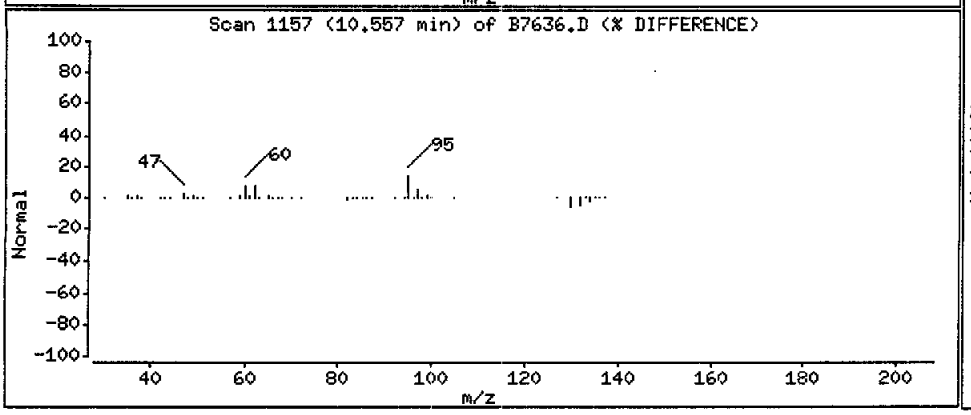
75 Trichloroethene

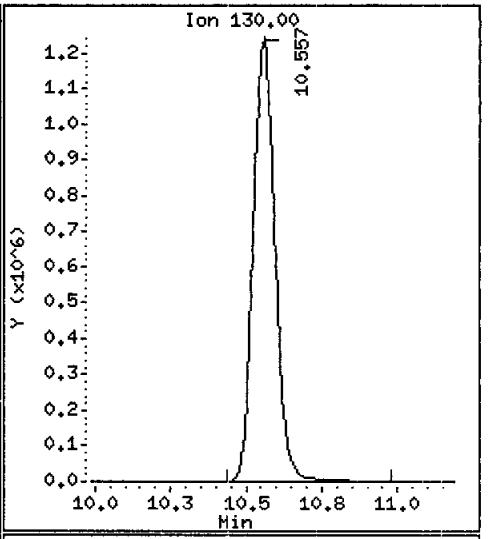
Concentration: 11260 ppbv

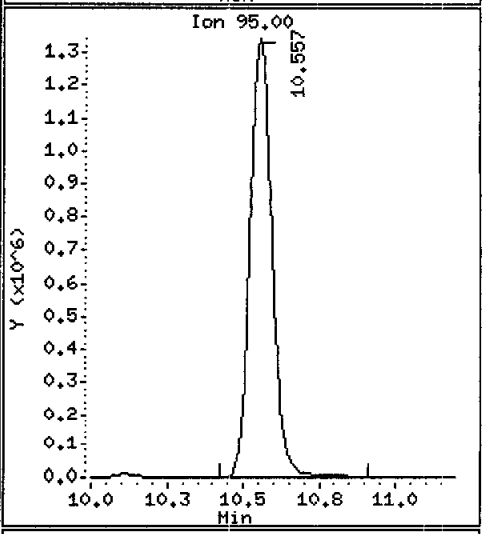


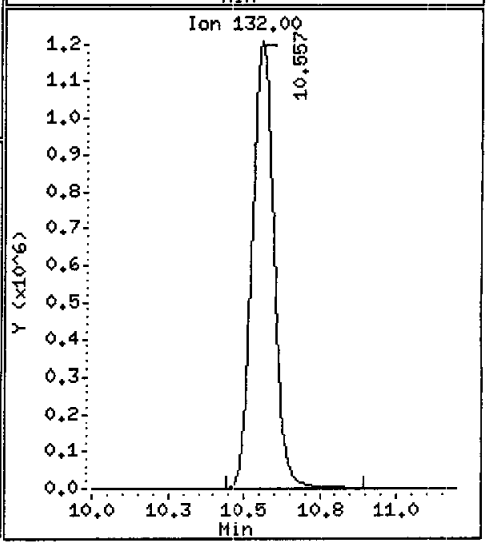












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

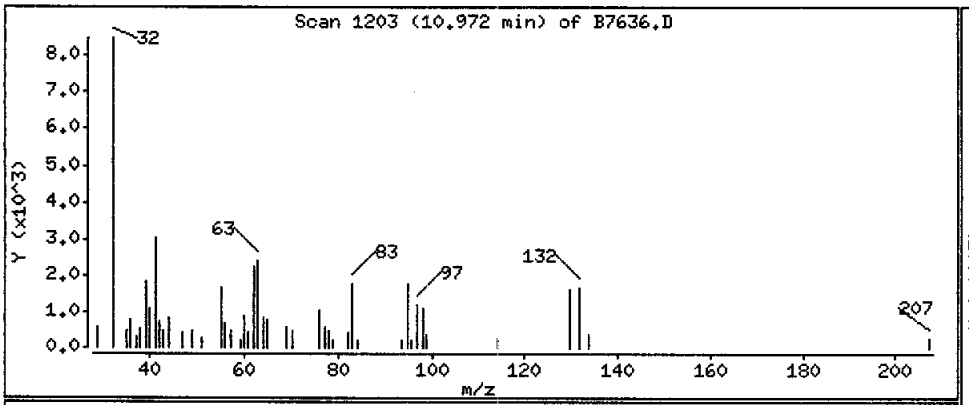
Operator: AA

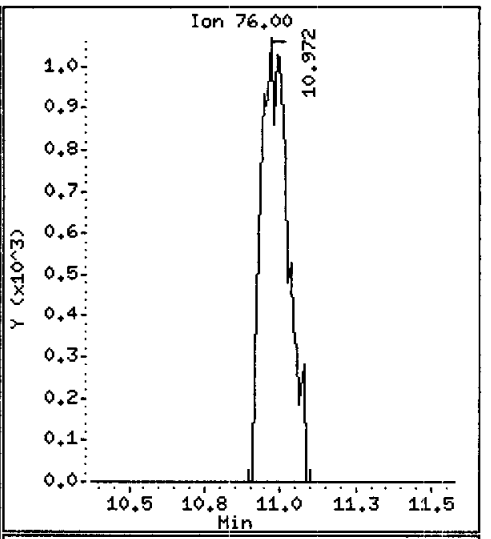
Column phase: J&W DB-624

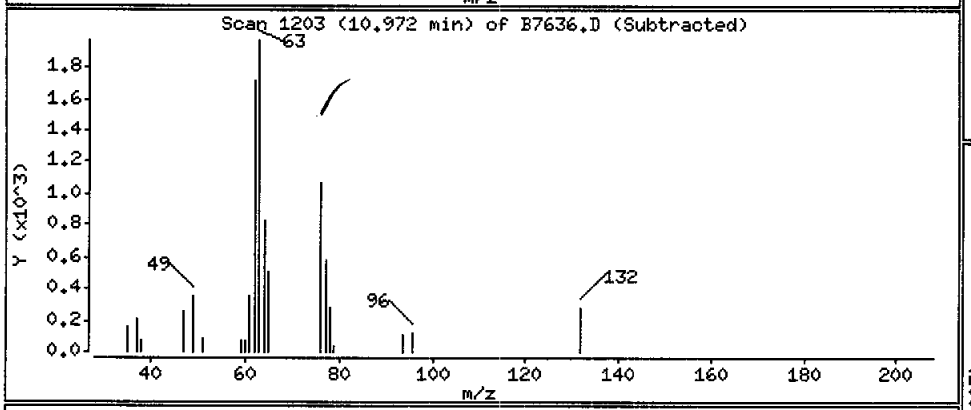
Column diameter: 0.53

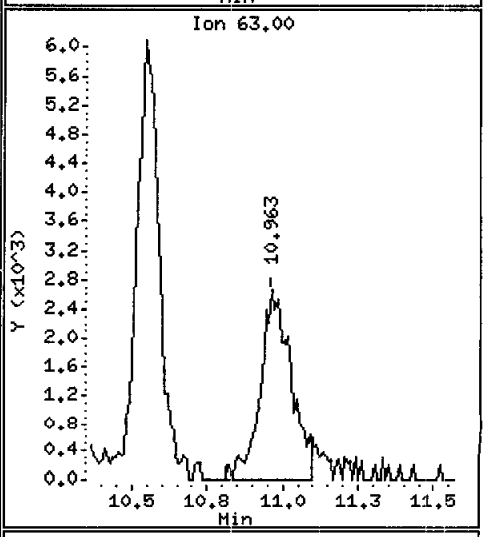
78 1,2-Dichloropropane

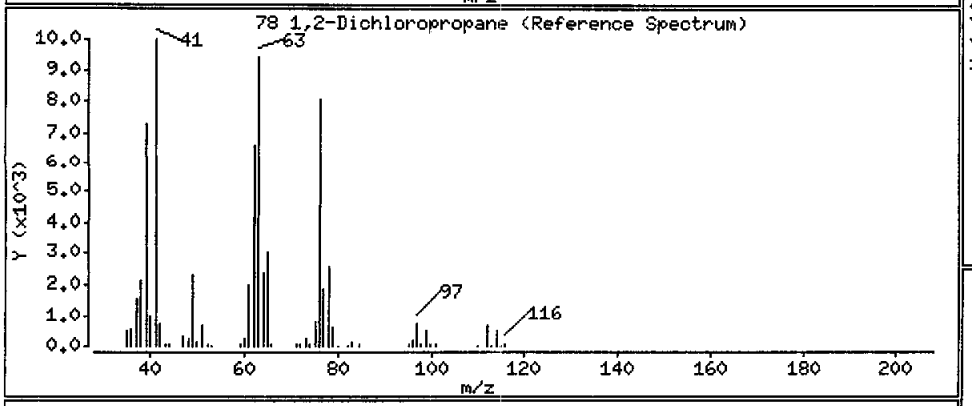
Concentration: 32.49 ppbv

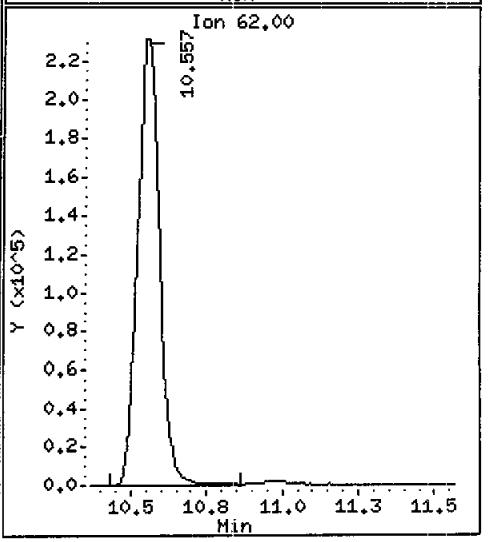


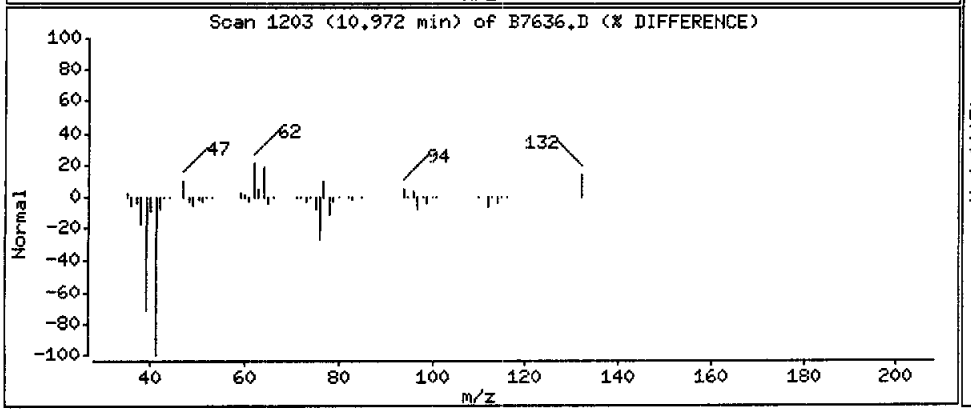












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

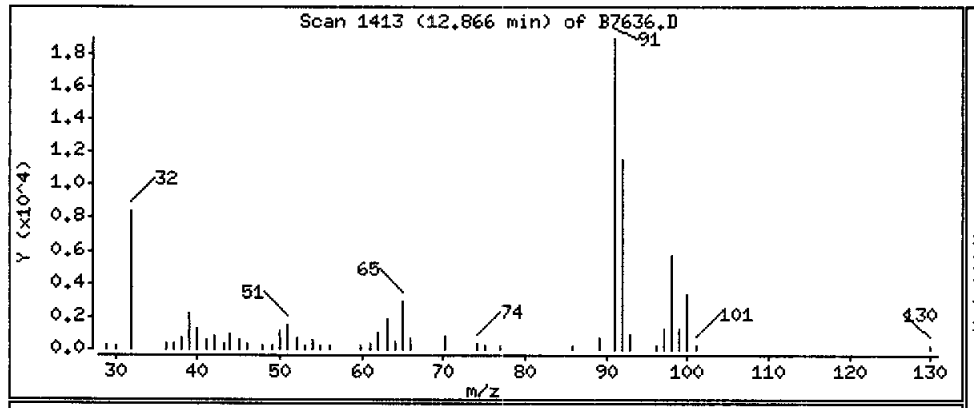
Operator: AA

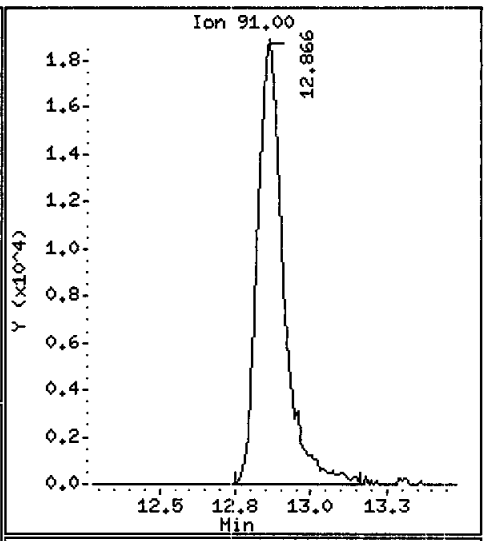
Column phase: J&W DB-624

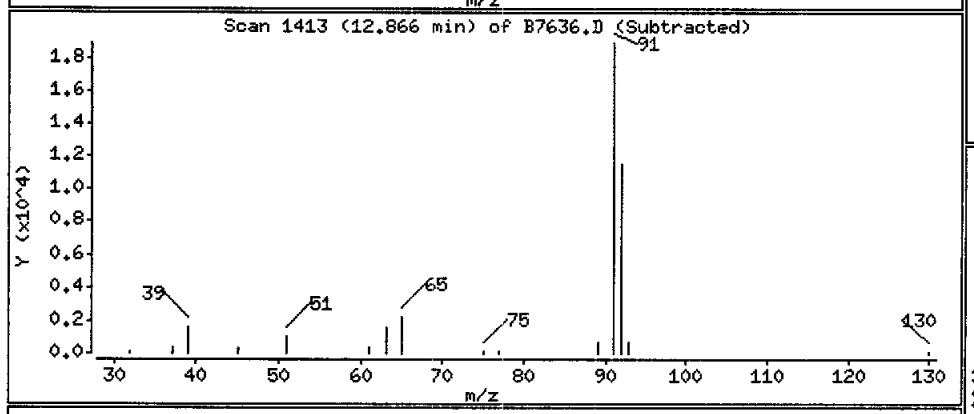
Column diameter: 0.53

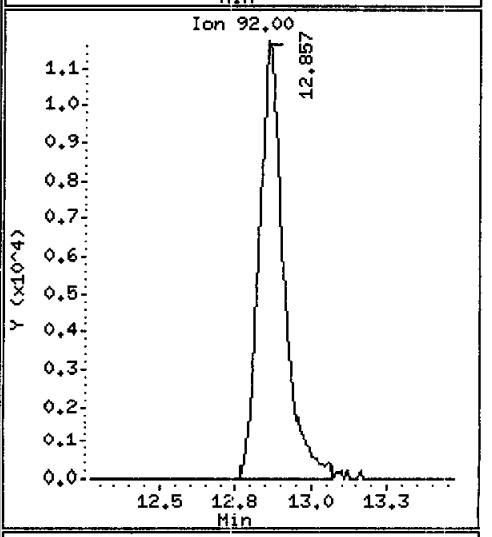
89 Toluene

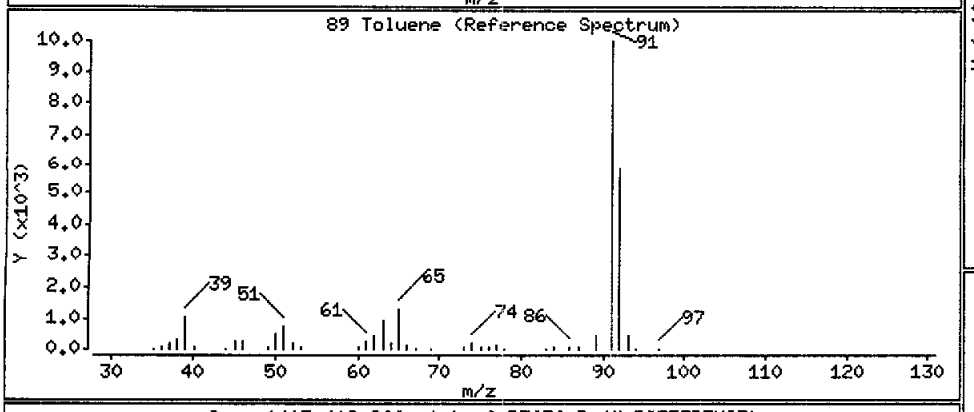
Concentration: 102.0 ppbv

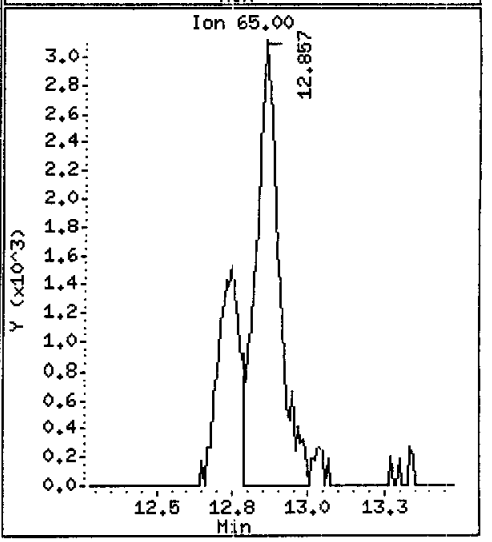


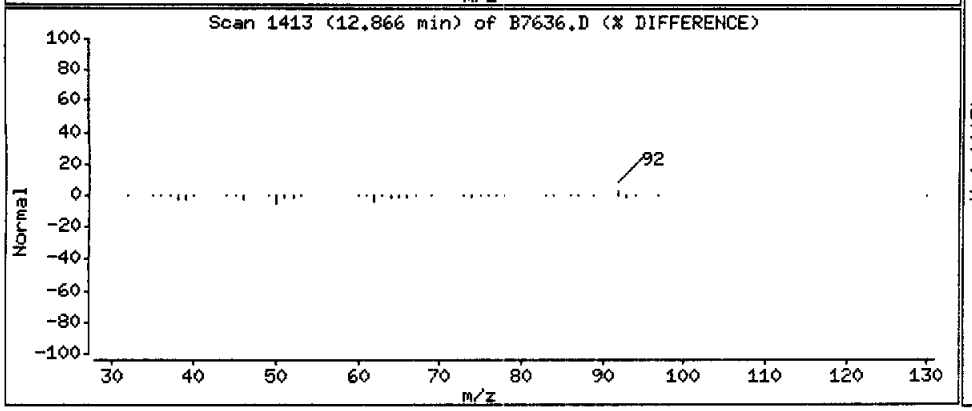












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

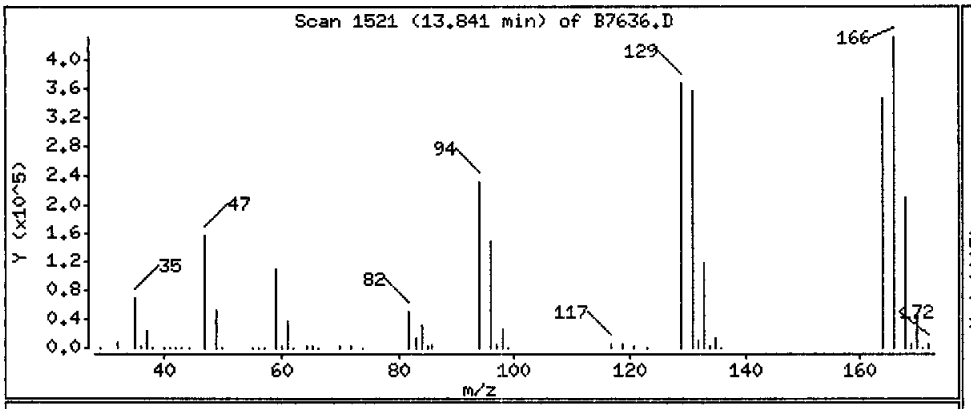
Operator: AA

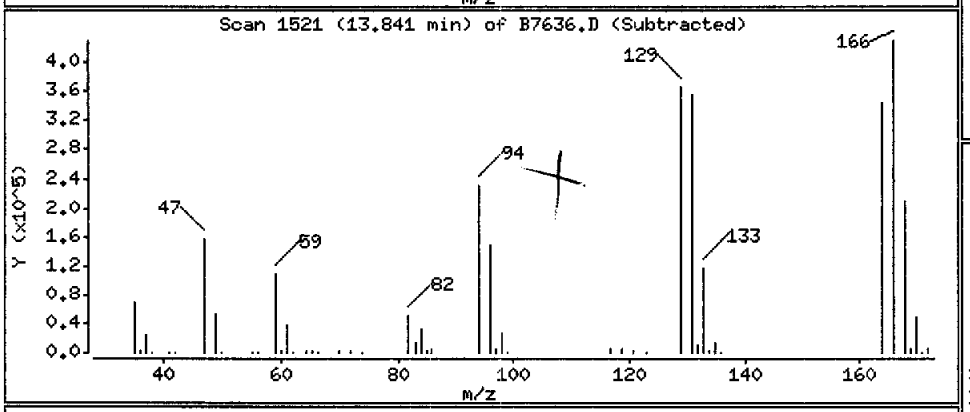
Column phase: J&W DB-624

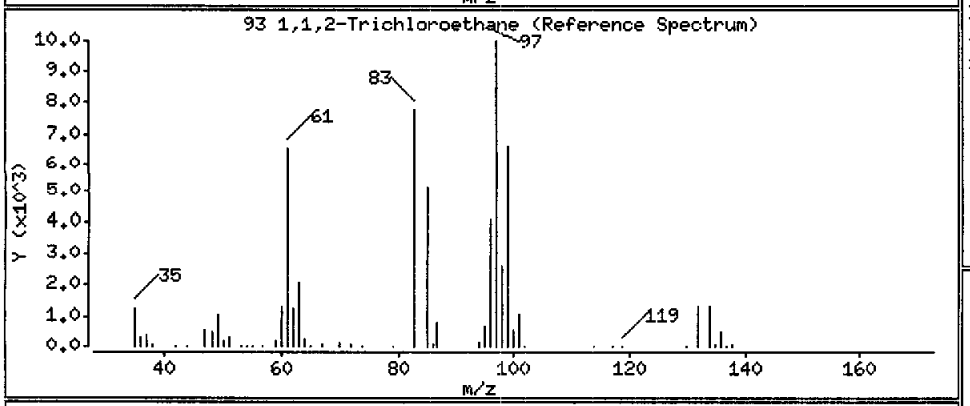
Column diameter: 0.53

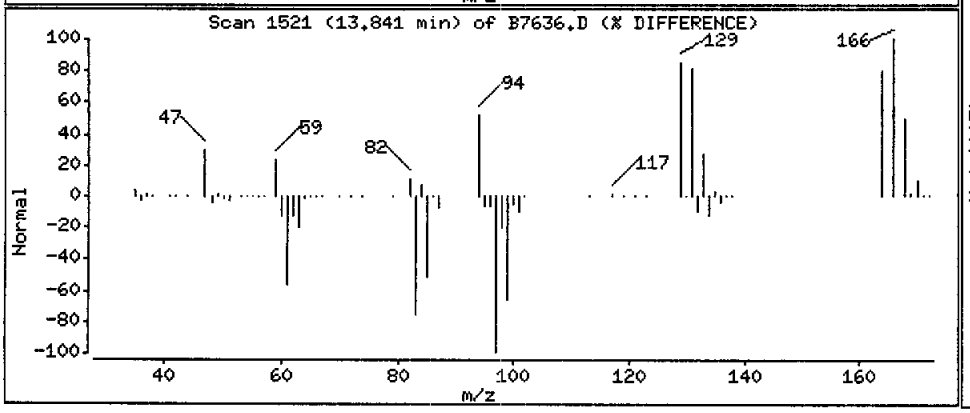
93 1,1,2-Trichloroethane

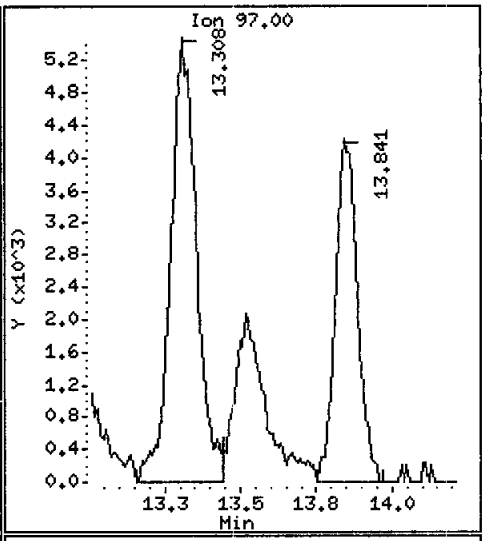
Concentration: 39.49 ppbv

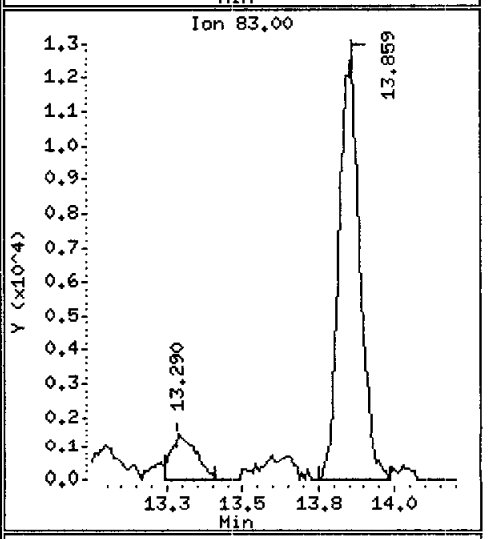


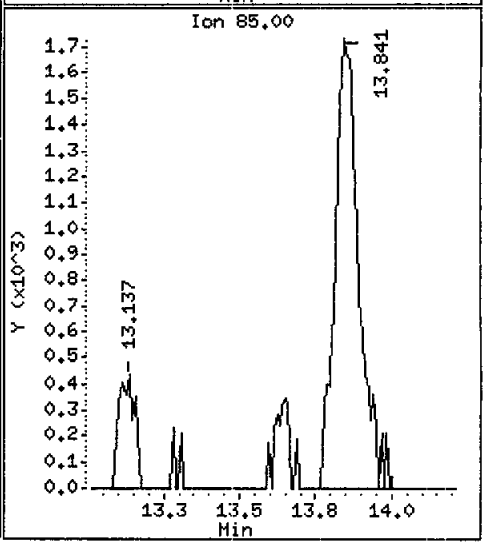












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

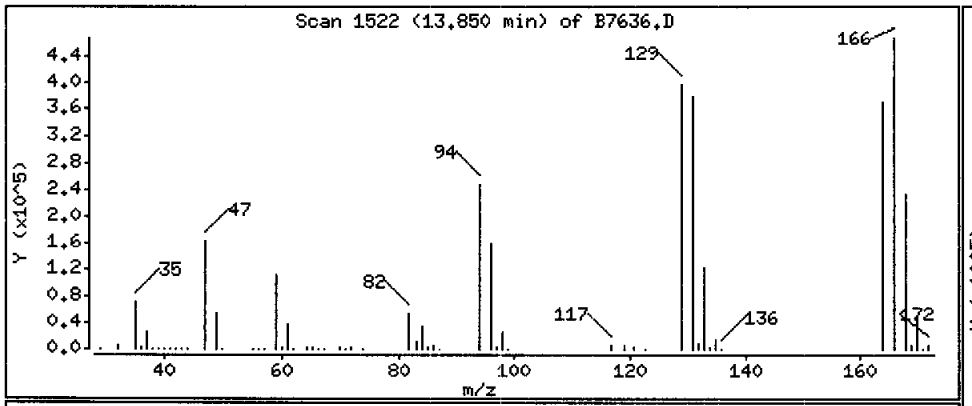
Operator: AA

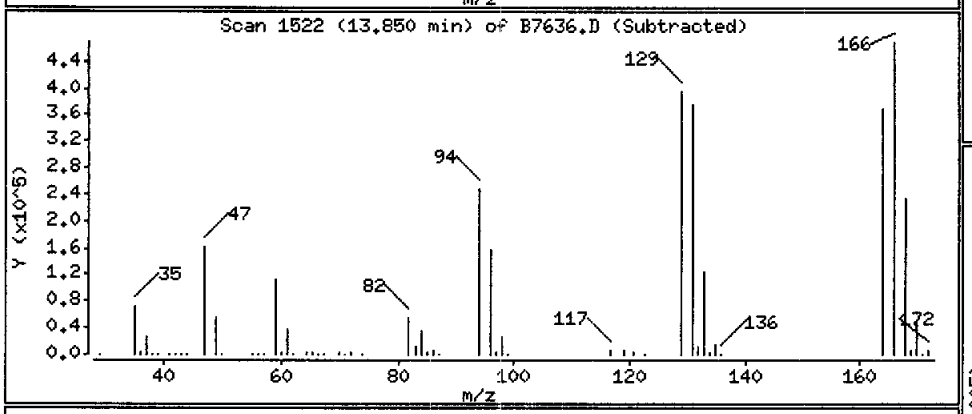
Column phase: J&W DB-624

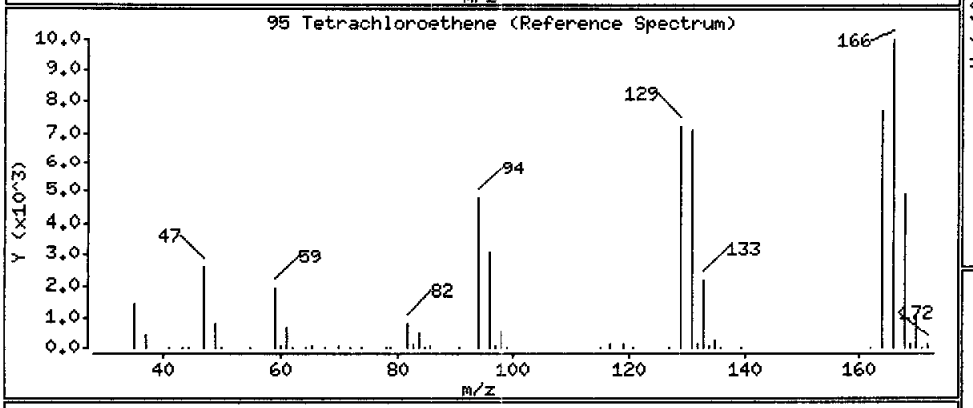
Column diameter: 0.53

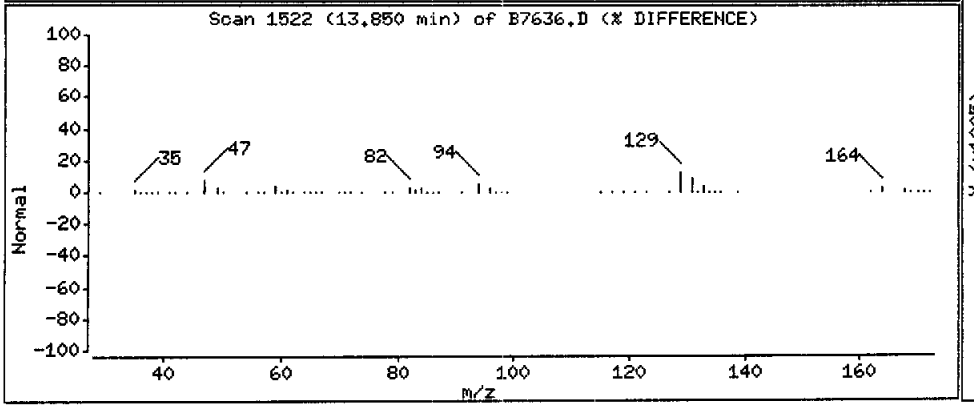
95 Tetrachloroethene

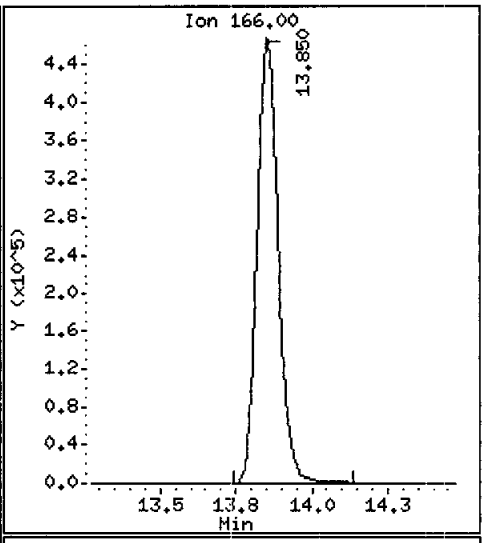
Concentration: 3058 ppbv

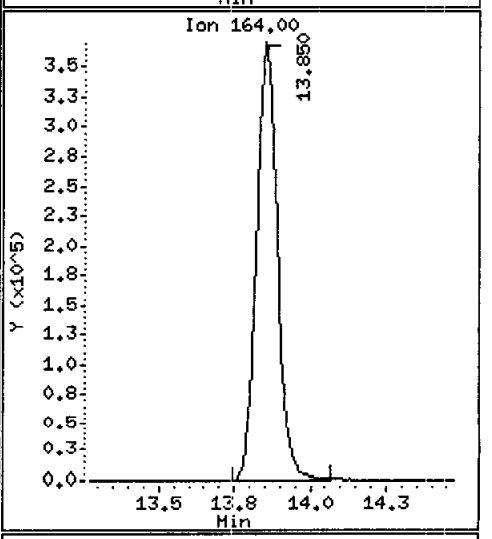


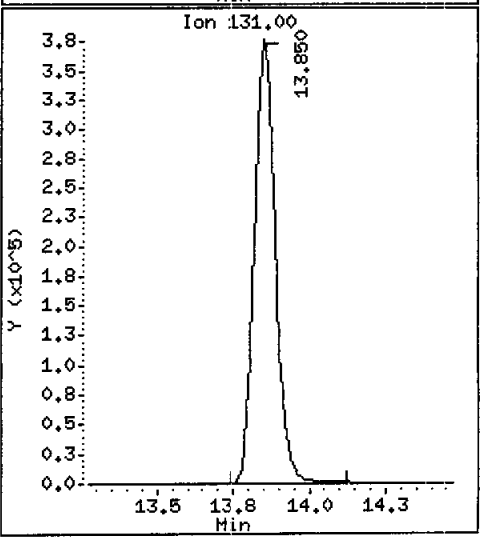












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

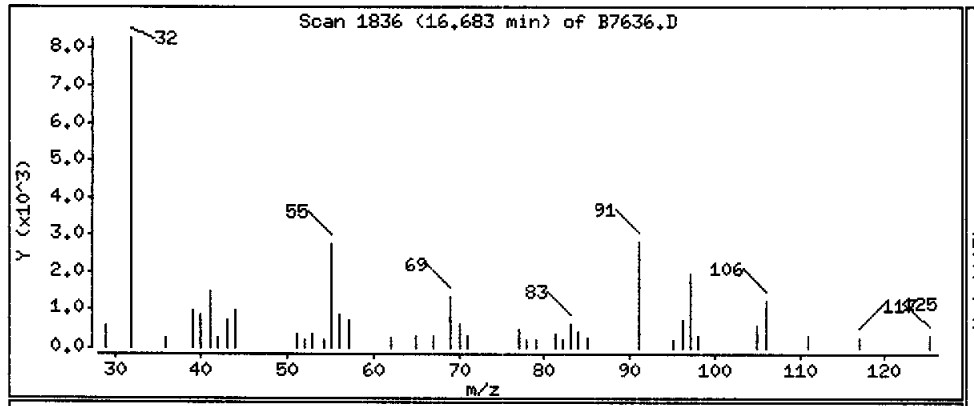
Operator: AA

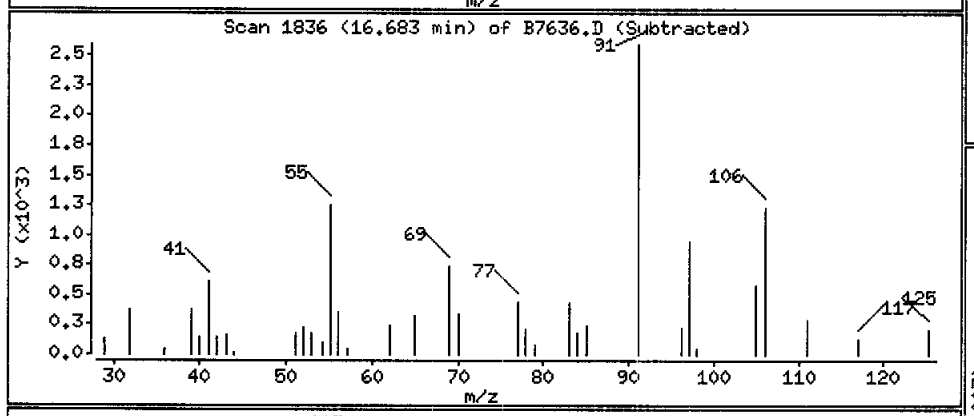
Column phase: J&W DB-624

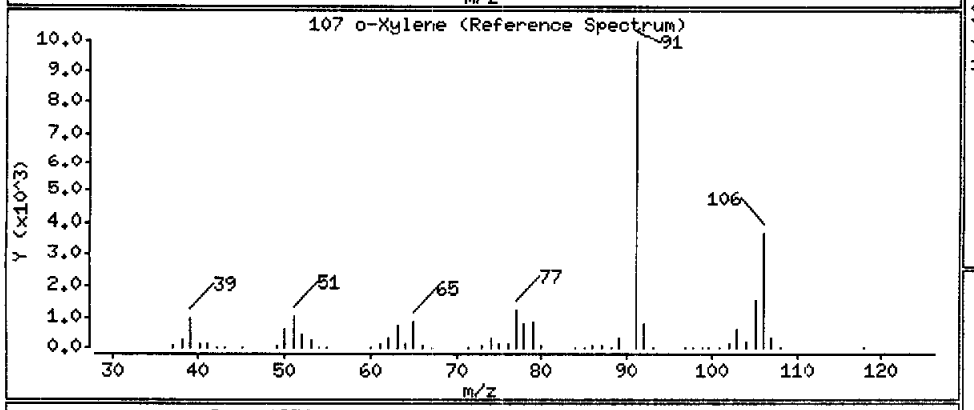
Column diameter: 0.53

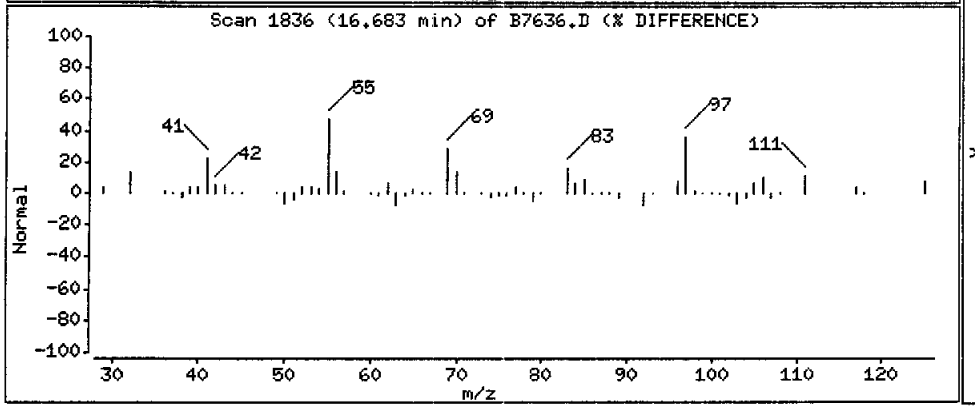
107 o-Xylene

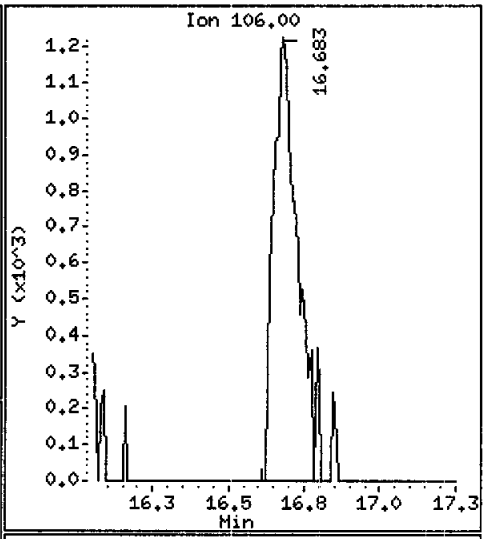
Concentration: 18.40 ppbv

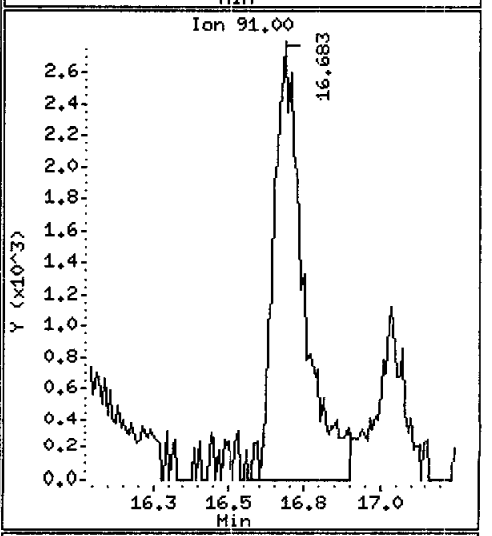


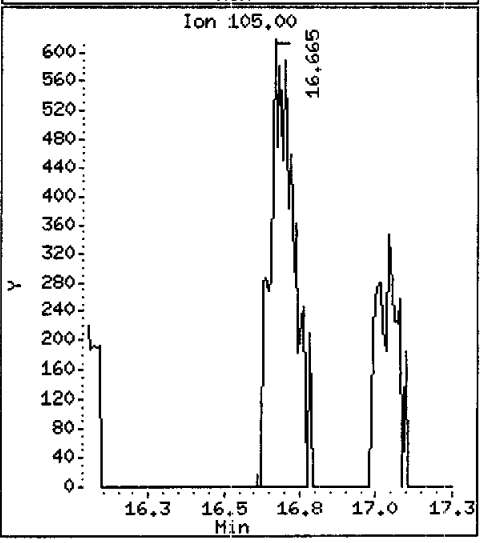












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7636.D

Date : 17-JAN-2005 11:41

Client ID: 066388-001

Instrument: gcmsb.i

Sample Info: G2DKQ1AD,066388-001,SANDIA,E5A100233-1

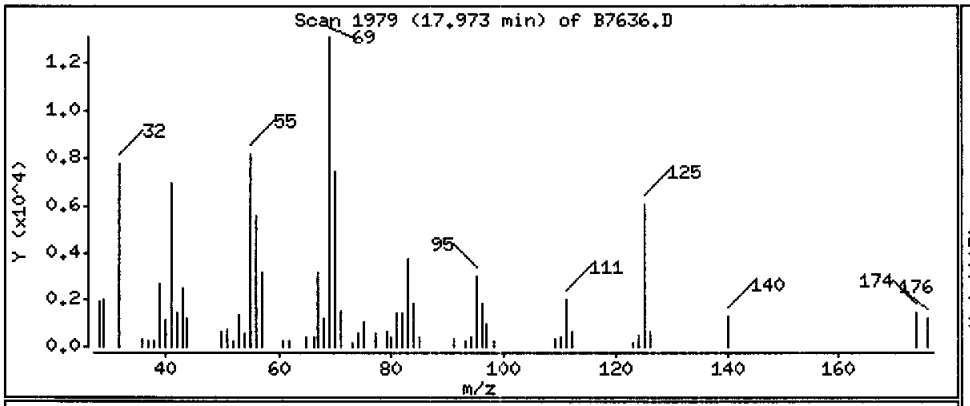
Operator: AA

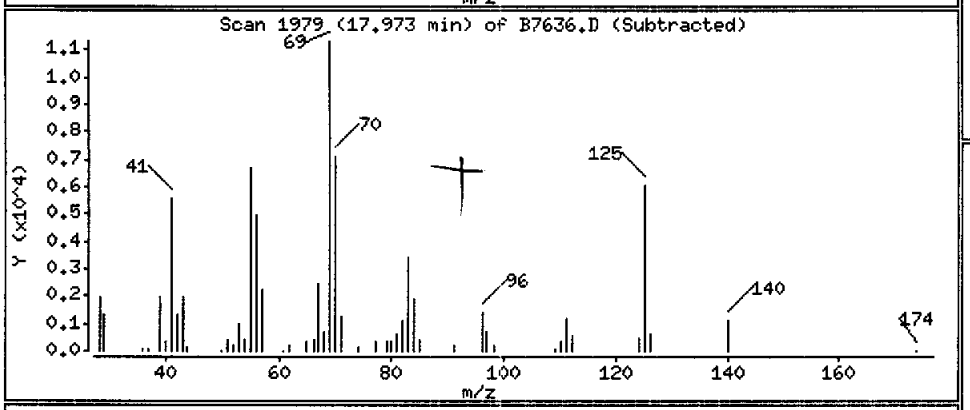
Column phase: J&W DB-624

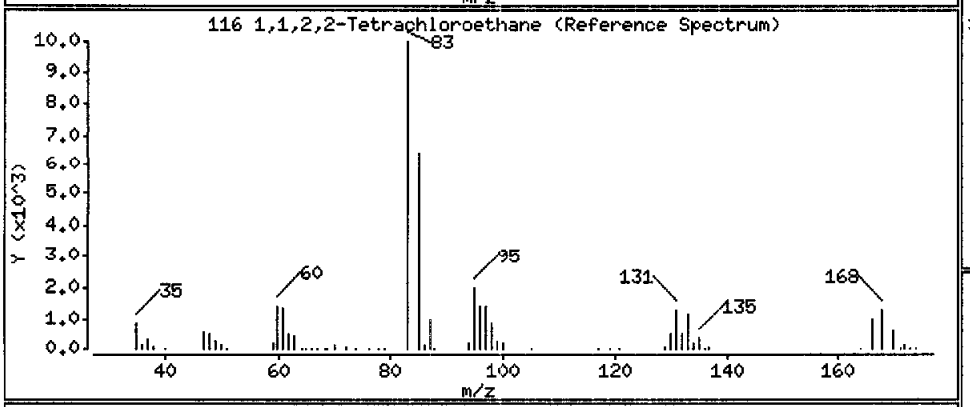
Column diameter: 0.53

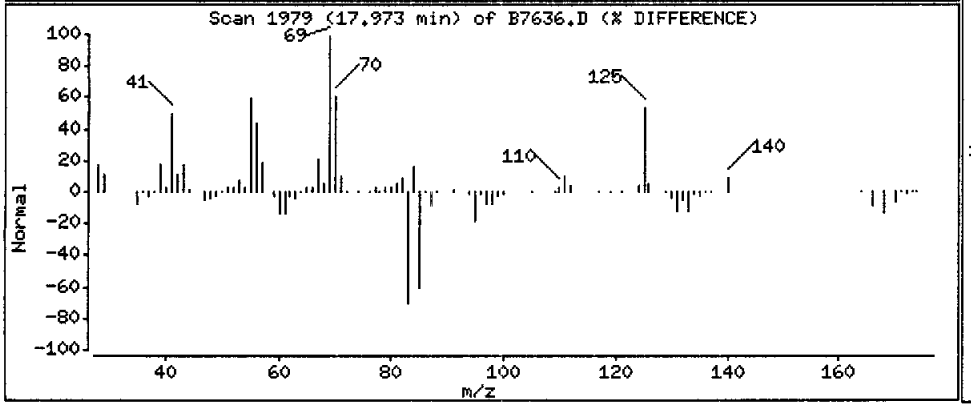
116 1,1,2,2-Tetrachloroethane

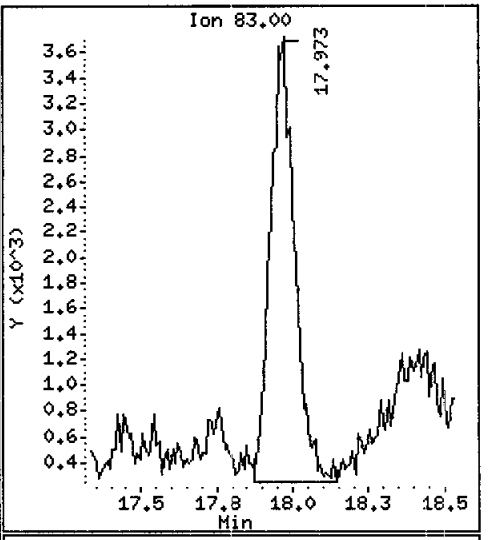
Concentration: 15.13 ppbv

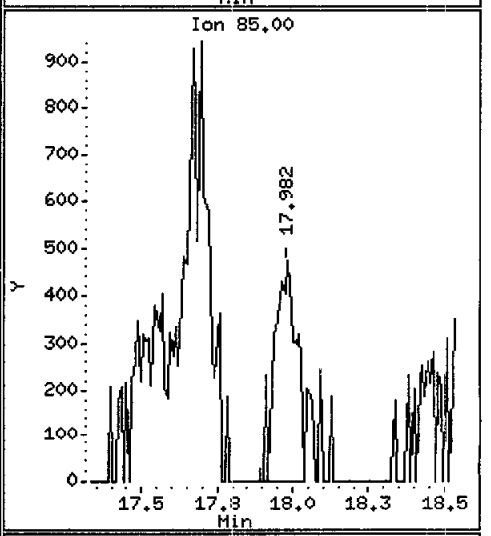


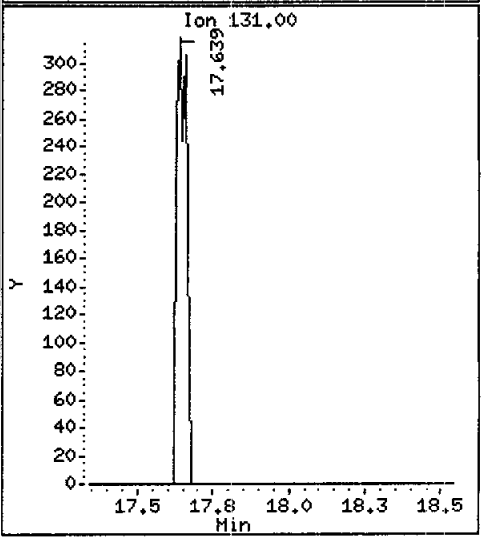












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D
Lab Smp Id: G2DKR1AD Client Smp ID: 066389-001
Inj Date : 17-JAN-2005 12:11
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DKR1AD,066389-001,SANDIA,E5A100233-2
Misc Info : 24.2,12.7,500,20,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	20.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.161	2.123	(0.259)	4529854	153.857	7329
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.357	(0.285)	225970	9.43883	449.6
8 Chloromethane	52	2.386	2.402	(0.286)	2486	1.90263	90.64(aQ)
9 Vinyl Chloride	62	2.621	2.592	(0.314)	35515	6.26131	298.3
21 Trichlorofluoromethane (F11)	101	3.776	3.756	(0.453)	478669	16.1265	768.2
28 1,1-Dichloroethene	61	4.714	4.685	(0.565)	1085796	68.9654	3285
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.750	4.739	(0.570)	1452081	42.5786	2028
31 Acetone	58	4.741	4.847	(0.568)	5286	2.36815	112.8(aQ)
37 Methylene Chloride	49	5.616	5.587	(0.673)	2586994	266.115	12680
44 1,1-Dichloroethane	63	6.871	6.850	(0.824)	2124430	123.138	5866
45 Vinyl Acetate	43	6.654	7.031	(0.798)	36963	2.22636	106.0(aQ)
53 cis-1,2-Dichloroethene	96	7.953	7.906	(0.953)	27121	3.04205	144.9
* 58 Bromochloromethane	49	8.341	8.321	(1.000)	697508	50.0000	
60 Chloroform	83	8.513	8.484	(1.021)	26294	1.18489	56.44(a)

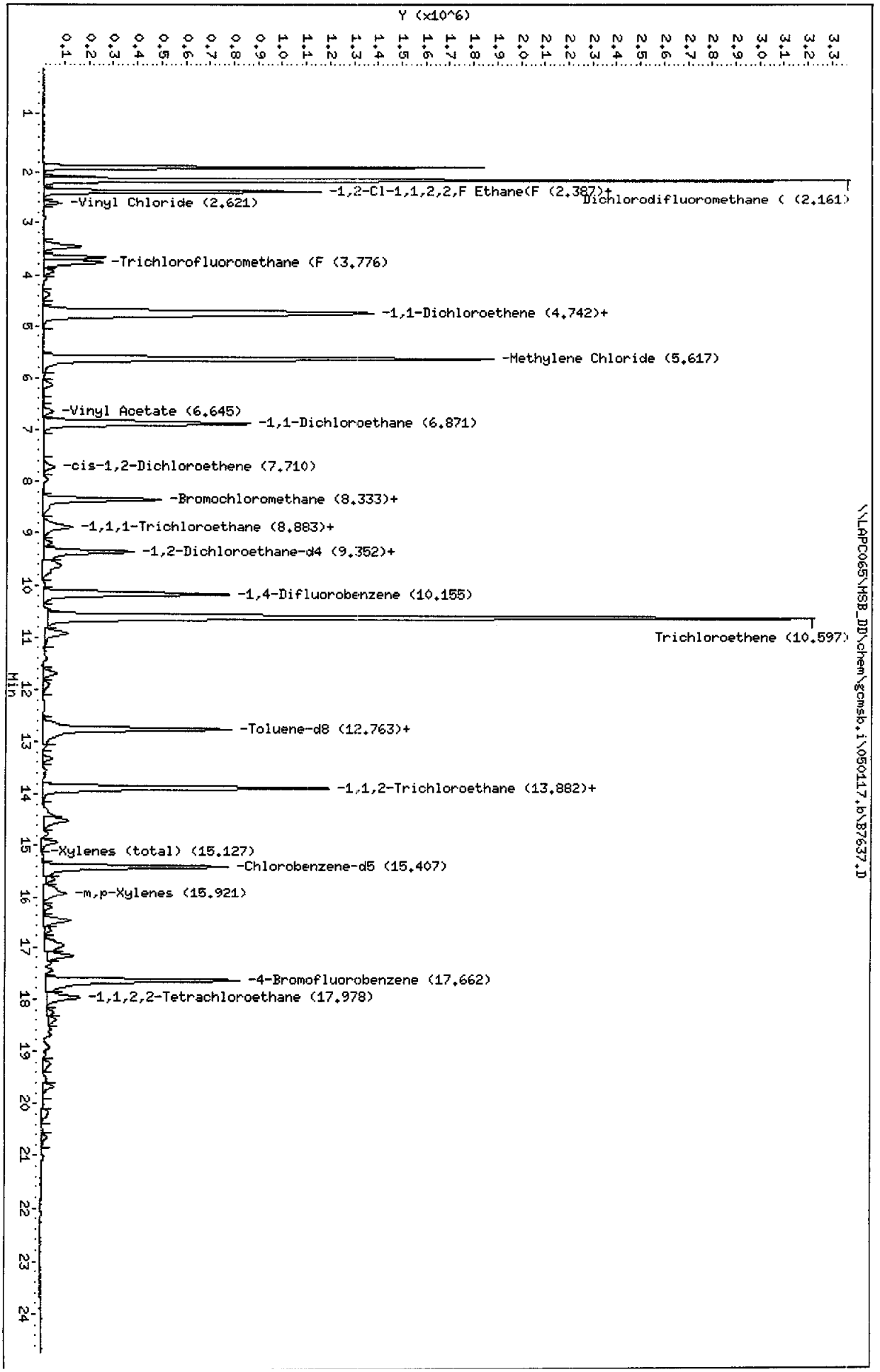
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	61 1,1,1-Trichloroethane	97	8.801	8.781	(1.055)	64707	2.91666	138.9
	64 Carbon Tetrachloride	117	8.792	9.079	(1.054)	8083	0.54835	26.12(a)
$	66 1,2-Dichloroethane-d4	65	9.352	9.341	(0.921)	557940	45.6370	2174
	68 Benzene	78	9.451	9.440	(0.931)	68760	3.39193	161.6
*	73 1,4-Difluorobenzene	114	10.155	10.144	(1.000)	1489730	50.0000	
	75 Trichloroethene	130	10.597	10.586	(1.044)	2567166	197.360	9402
$	88 Toluene-d8	100	12.762	12.751	(1.257)	780857	50.0572	2385
	89 Toluene	91	12.889	12.878	(1.269)	95362	3.63551	173.2
	93 1,1,2-Trichloroethane	97	13.881	13.608	(0.901)	8802	0.70634	33.65(aQ)
	95 Tetrachloroethene	166	13.881	13.870	(0.901)	873838	50.5244	2407
M	99 Xylenes (total)	106				9136	1.00192	47.73(a)
*	101 Chlorobenzene-d5	117	15.406	15.404	(1.000)	1104687	50.0000	
	105 m,p-Xylenes	106	15.983	15.891	(1.037)	9136	1.00192	47.73(aQ)
$	114 4-Bromofluorobenzene	95	17.653	17.651	(1.146)	958133	48.5529	2313
	116 1,1,2,2-Tetrachloroethane	83	17.977	17.930	(1.167)	29462	0.98465	46.91(aQ)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D
Date : 17-JAN-2005 12:11
Client ID: 066389-001
Sample Info: C2DKR1AD,066389-001,SANDIA,E5A100233-2
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: AA
Column diameter: 0.53



Page 7

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

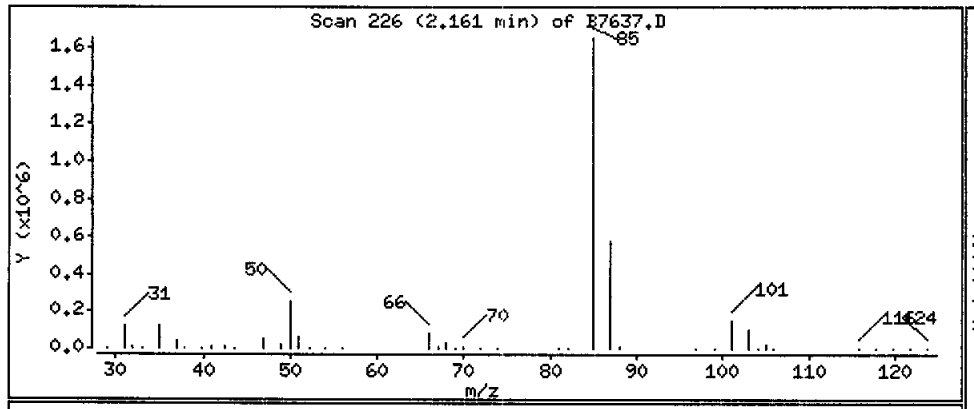
Operator: AA

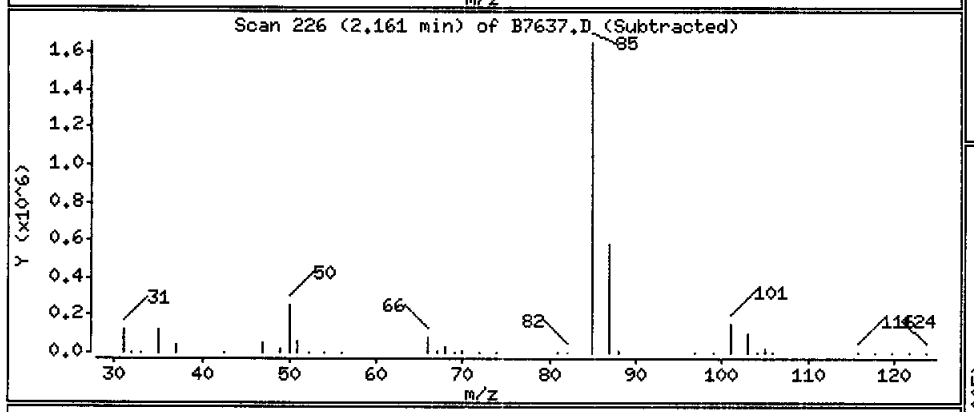
Column phase: J&W DB-624

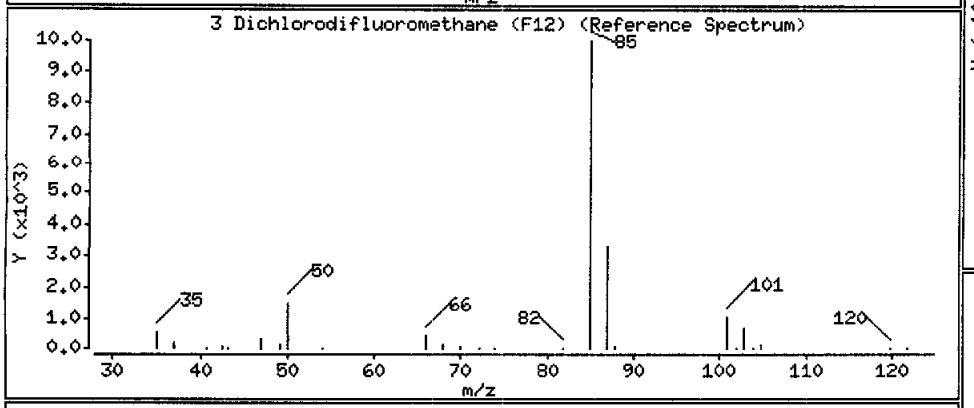
Column diameter: 0.53

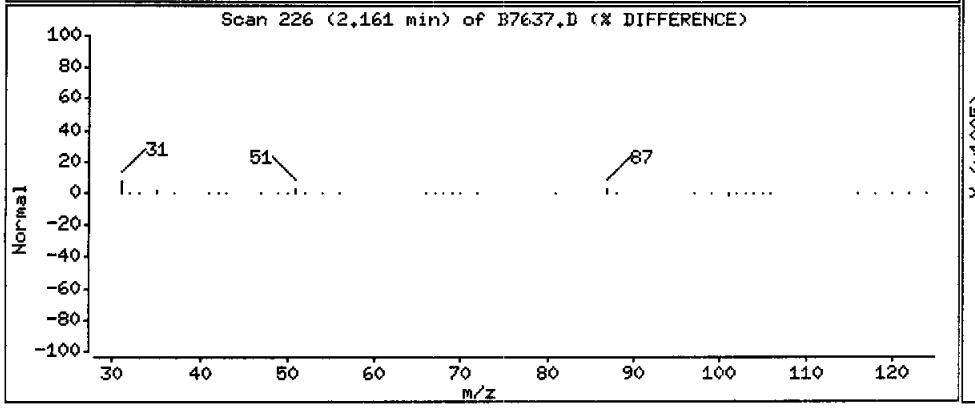
3 Dichlorodifluoromethane (F12)

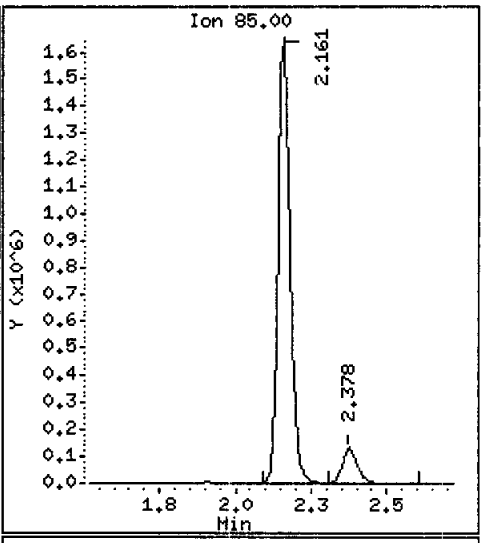
Concentration: 7329 ppbv

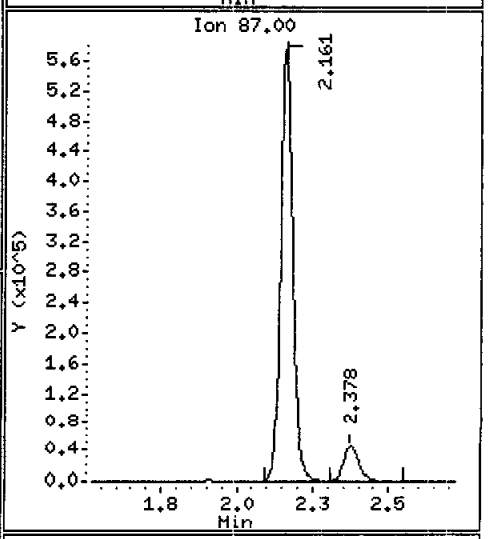


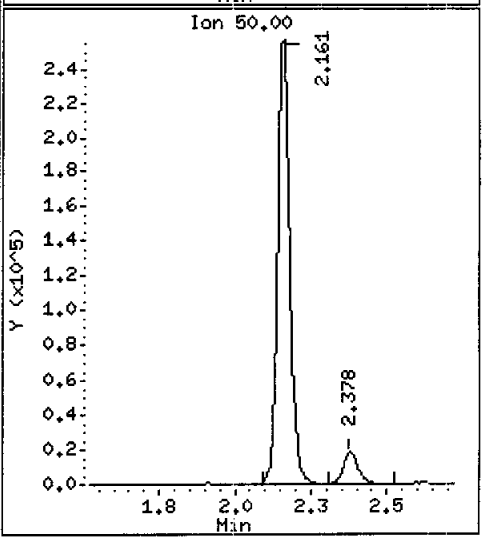












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

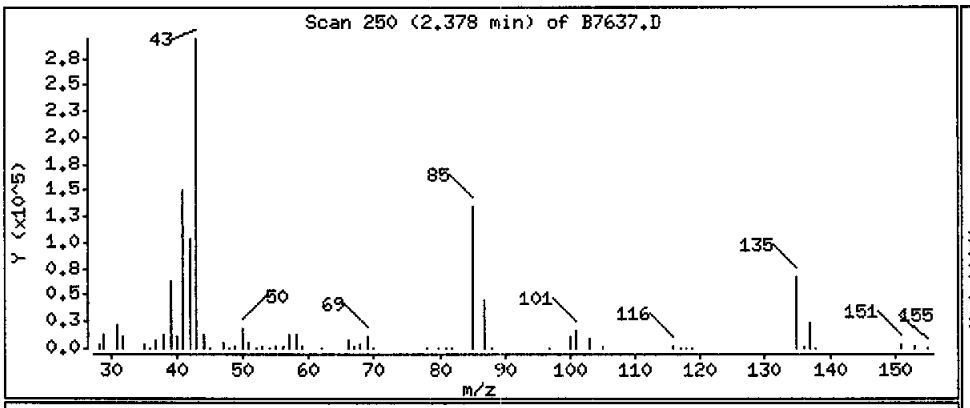
Operator: AA

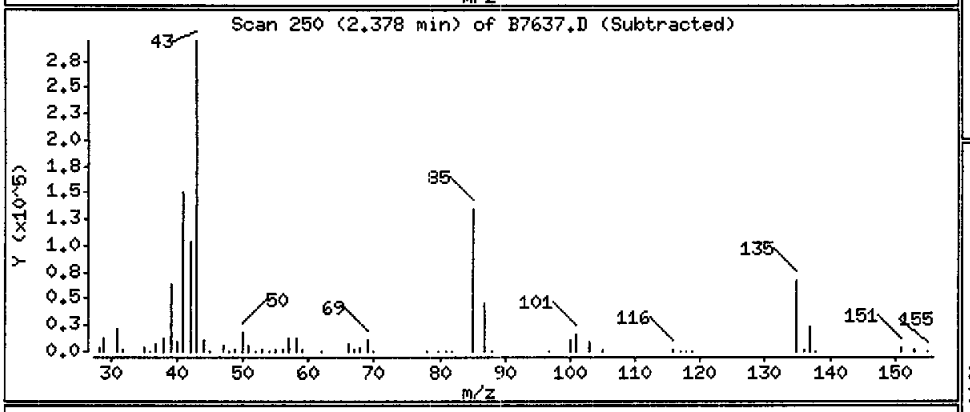
Column phase: J&W DB-624

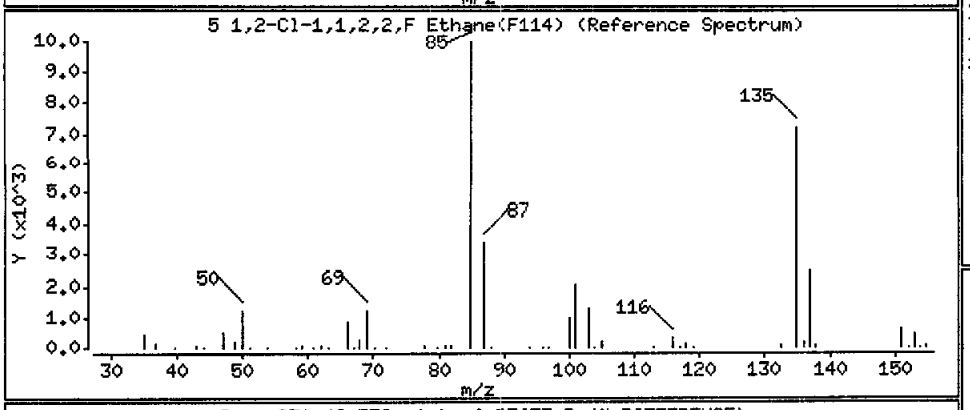
Column diameter: 0.53

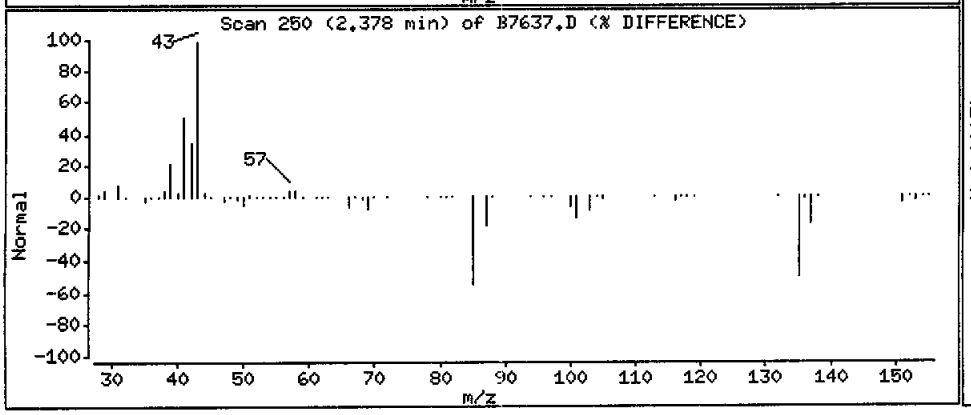
5 1,2-Cl-1,1,2,2,F Ethane(F114)

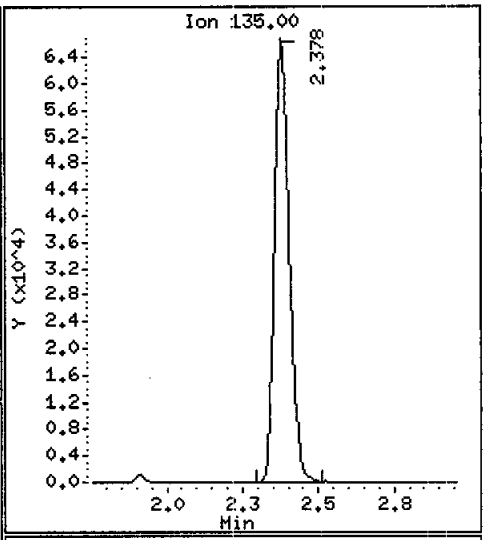
Concentration: 449.6 ppbv

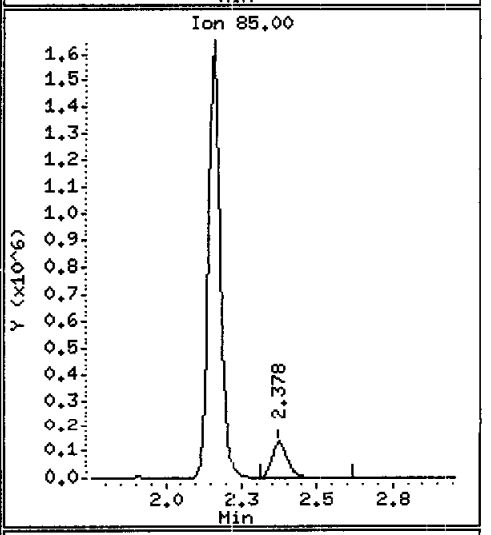


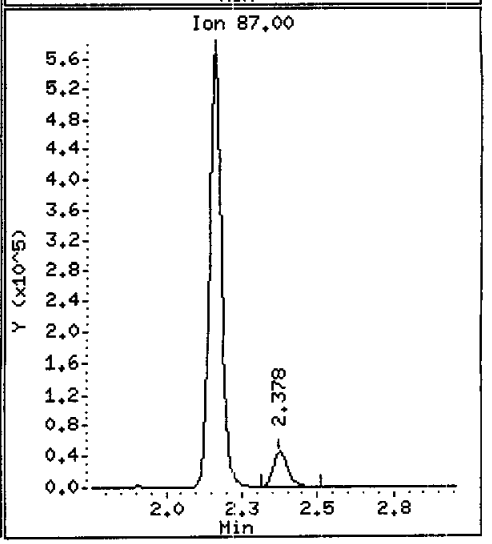












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

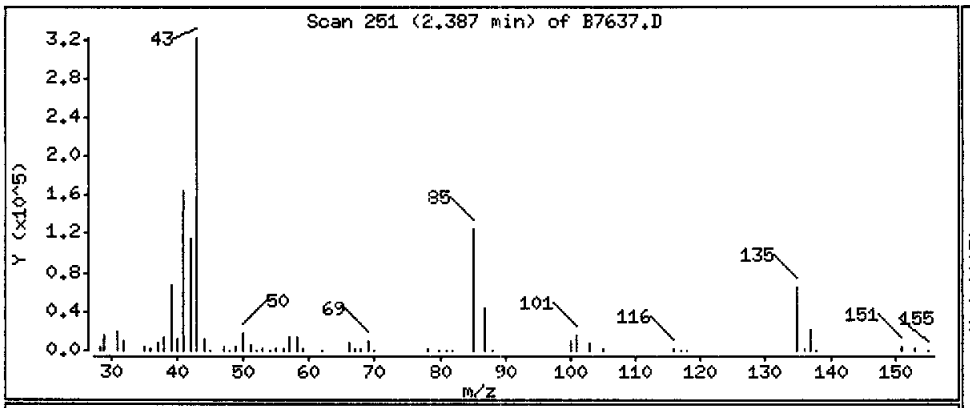
Operator: AA

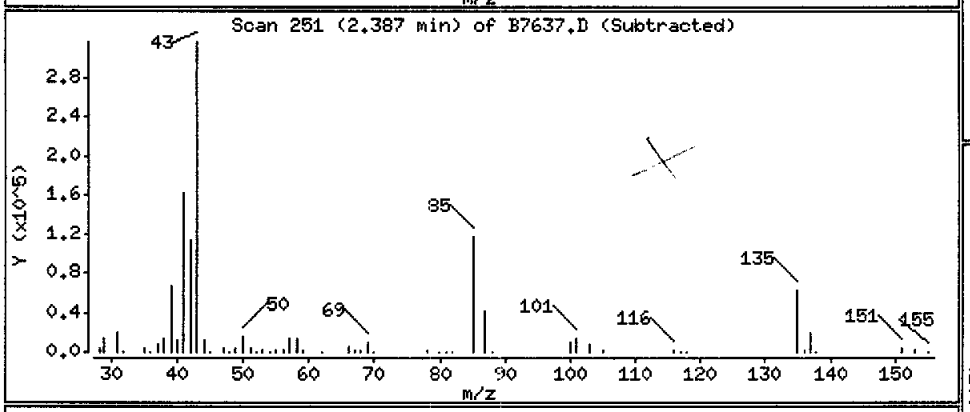
Column phase: J&W DB-624

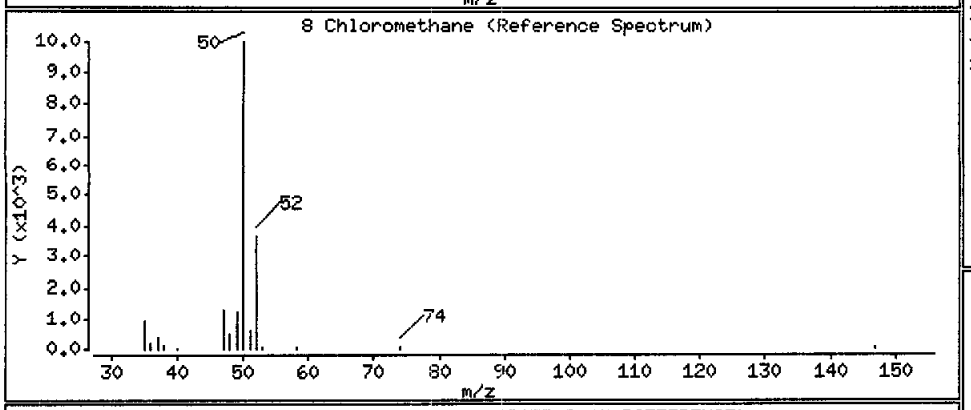
Column diameter: 0.53

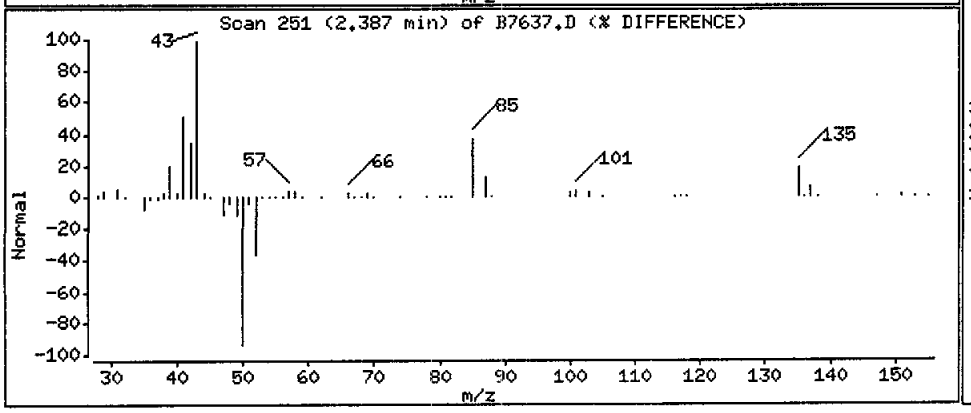
8 Chloromethane

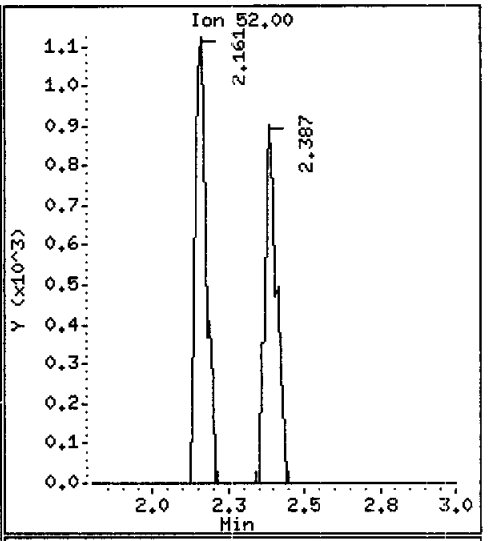
Concentration: 90.64 ppbv

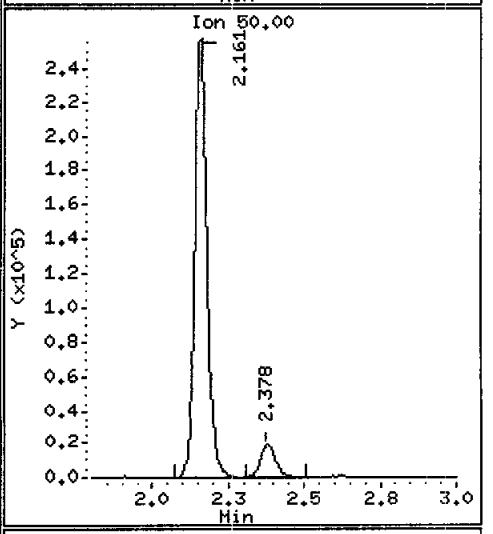


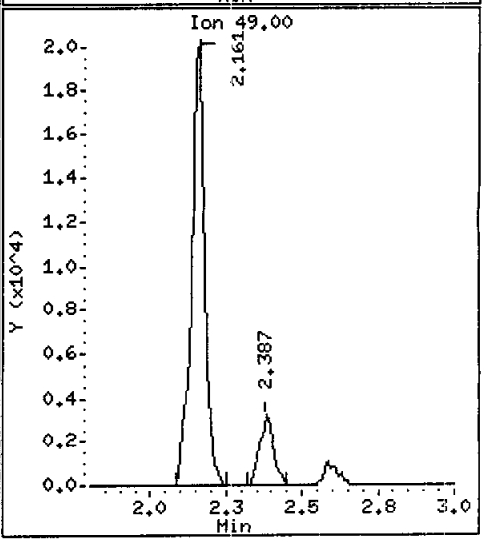












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

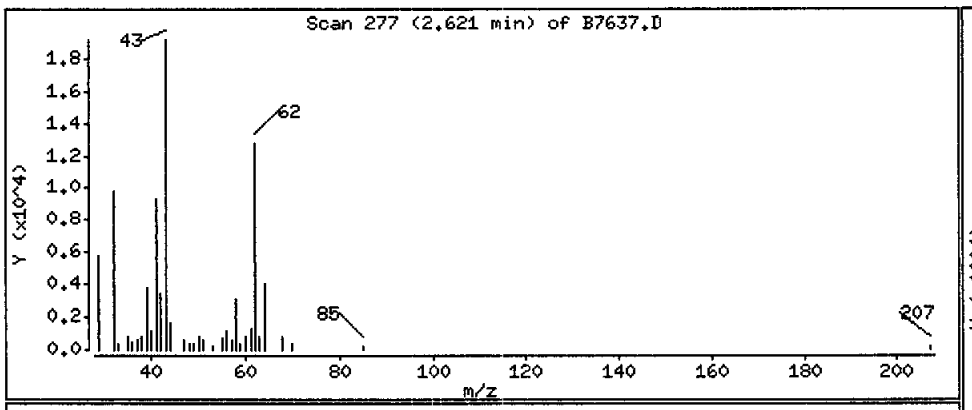
Operator: AA

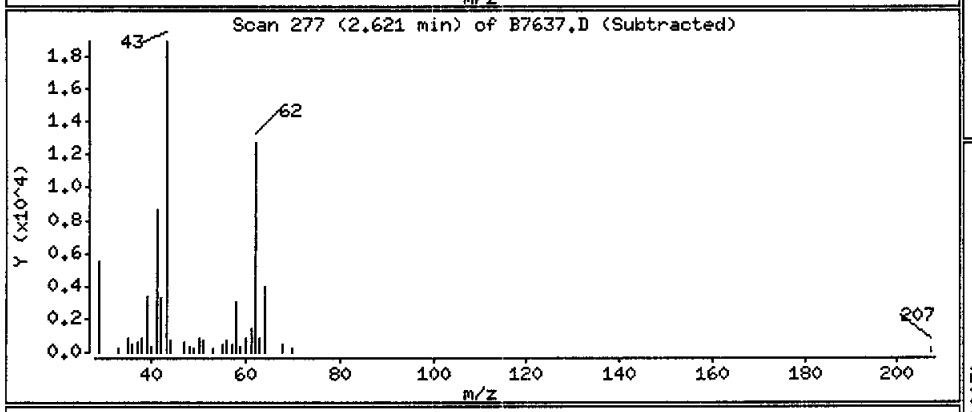
Column phase: J&W DB-624

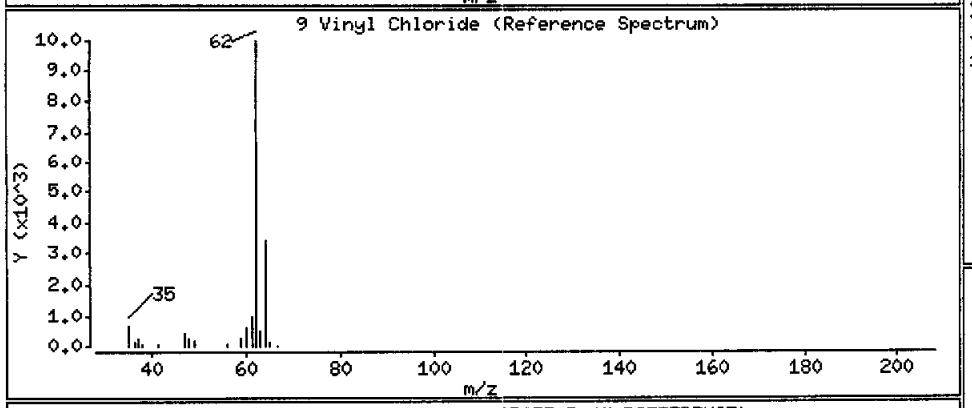
Column diameter: 0.53

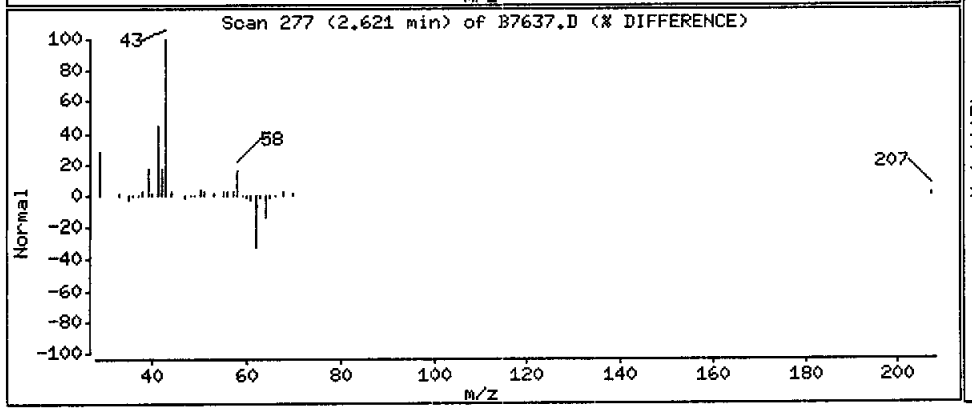
9 Vinyl Chloride

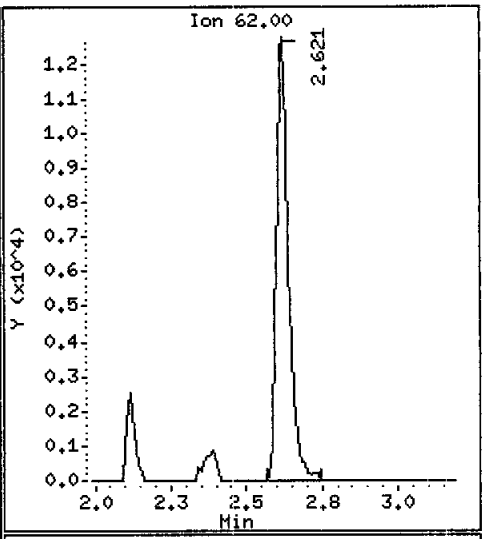
Concentration: 298.3 ppbv

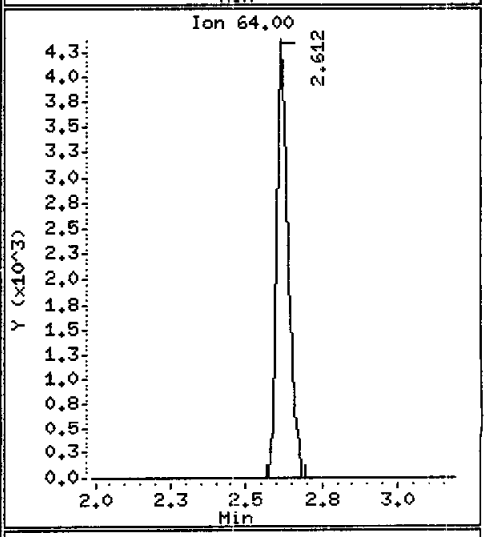


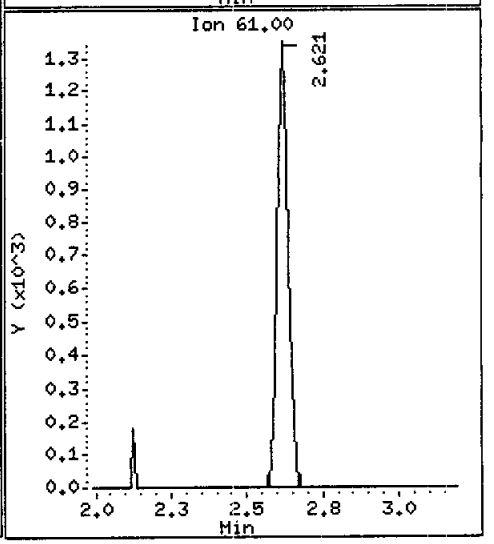












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

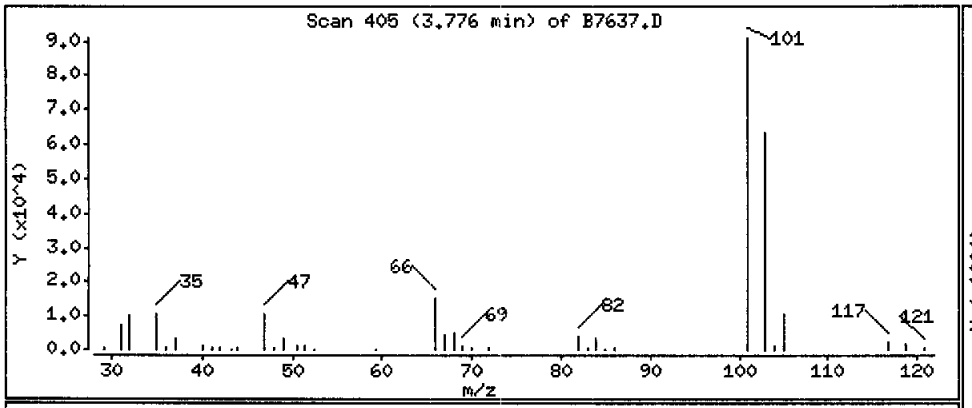
Operator: AA

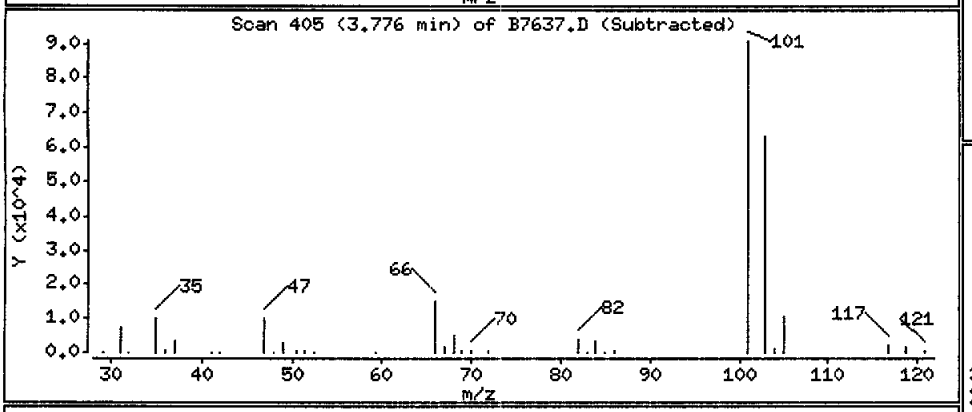
Column phase: J&W DB-624

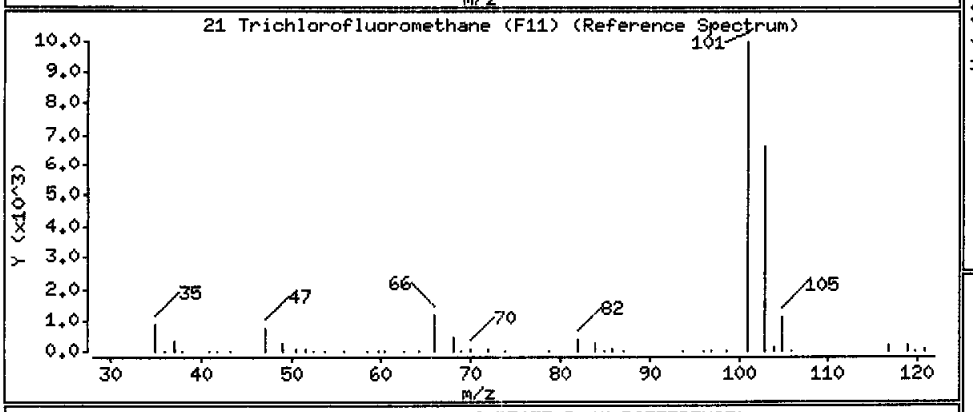
Column diameter: 0.53

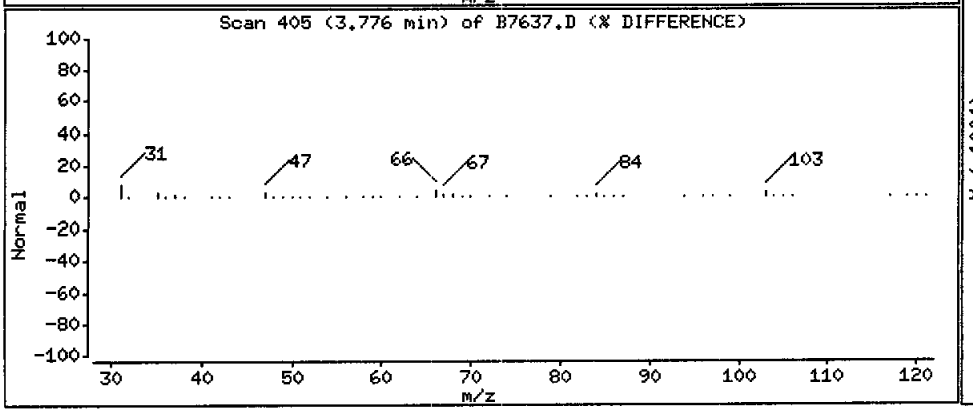
21 Trichlorofluoromethane (F11)

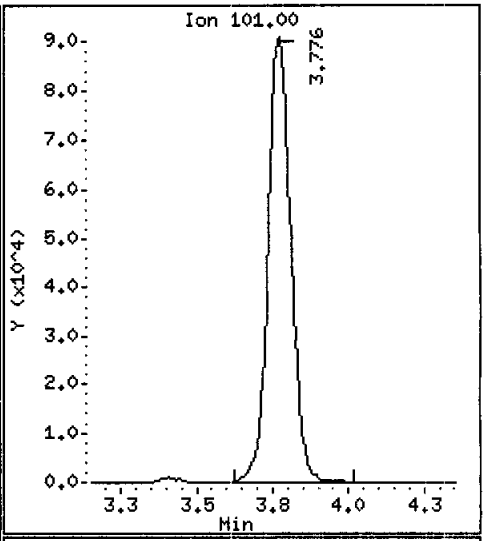
Concentration: 768.2 ppbv

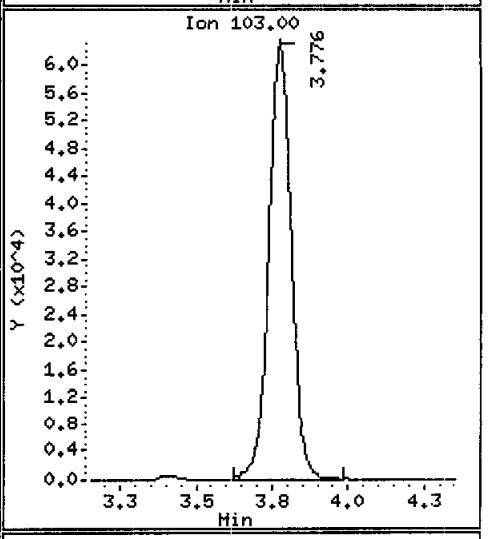


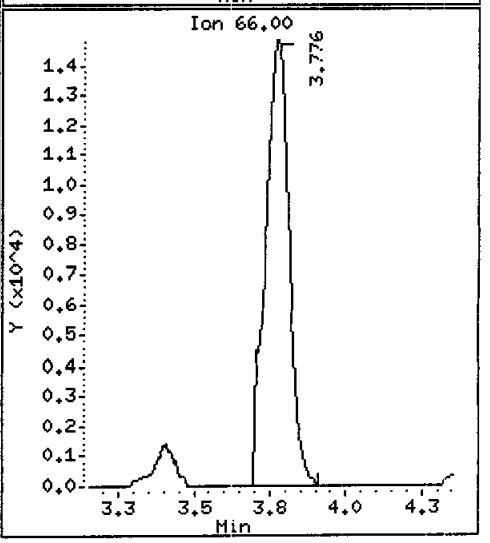












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

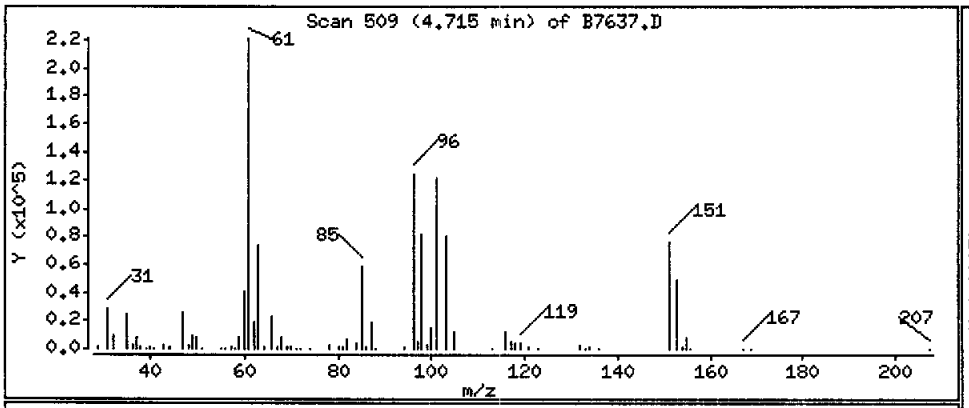
Operator: AA

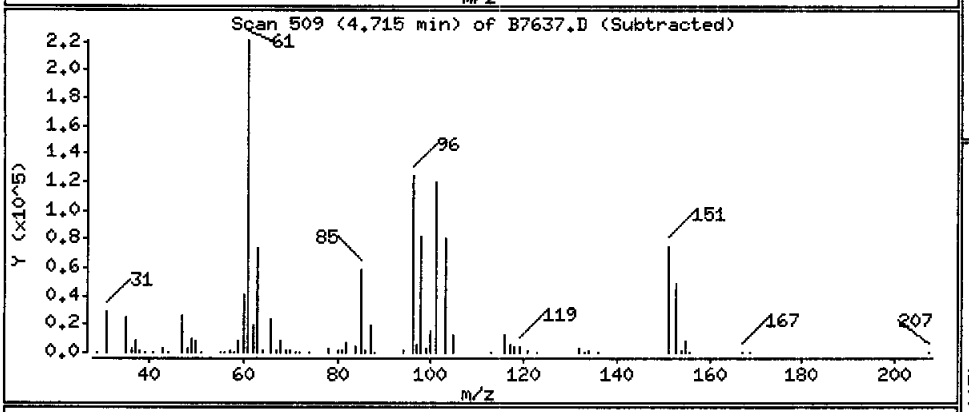
Column phase: J&W DB-624

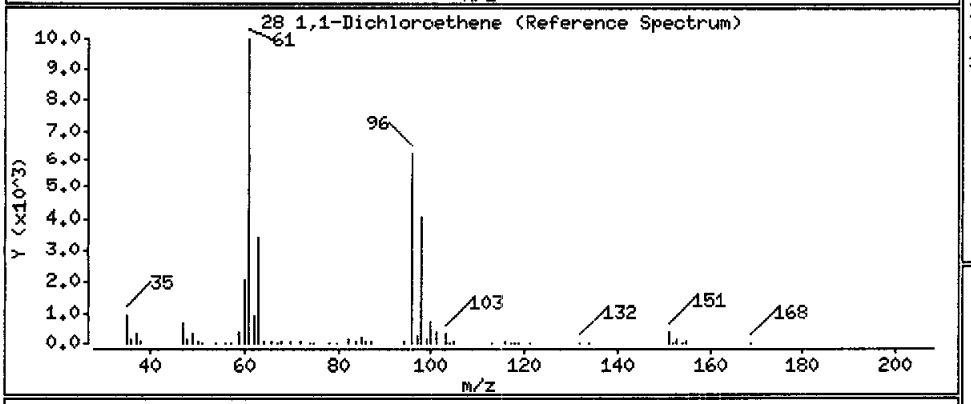
Column diameter: 0.53

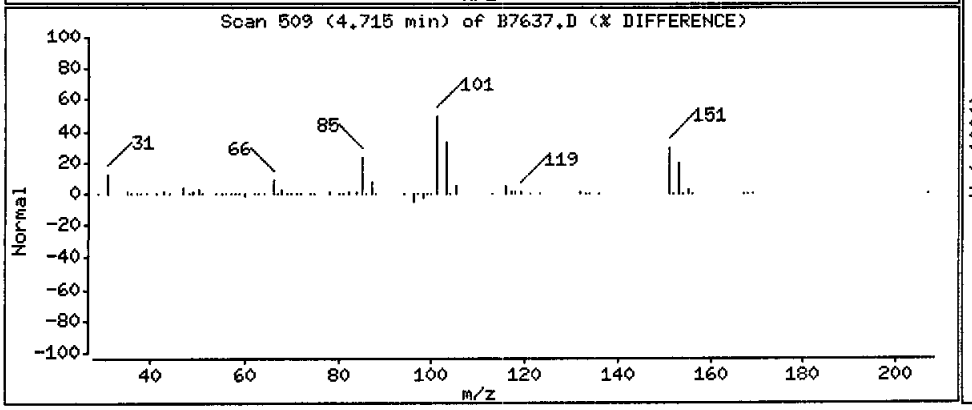
28 1,1-Dichloroethene

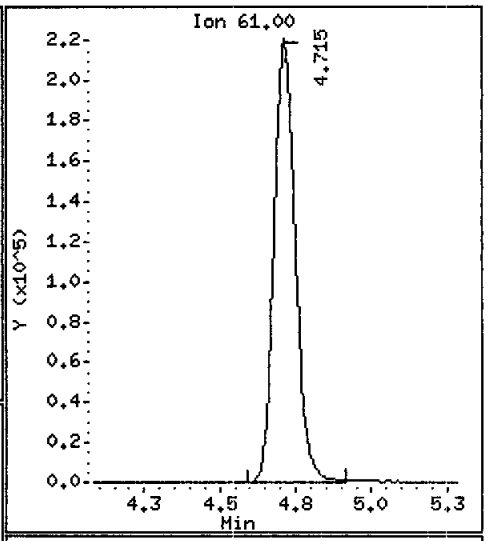
Concentration: 3285 ppbv

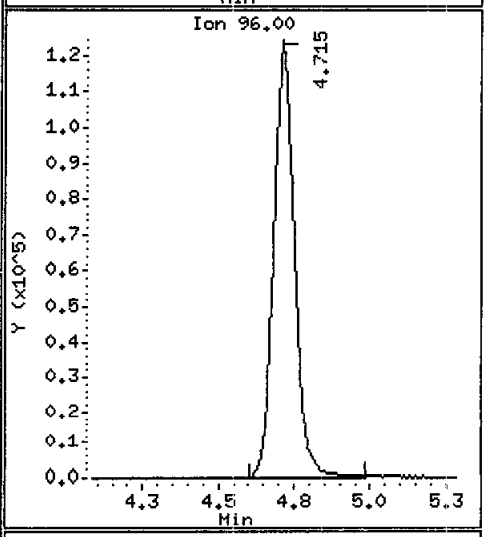


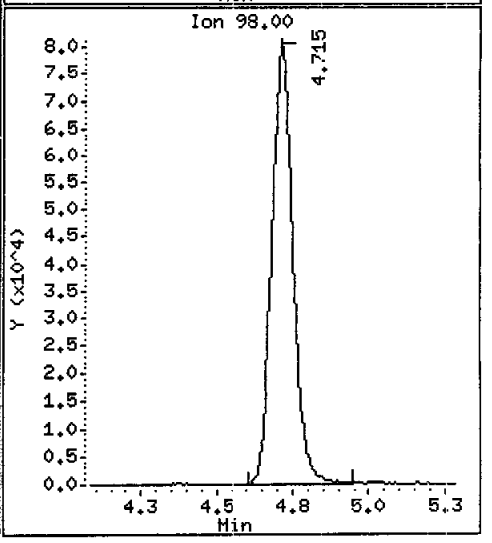












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

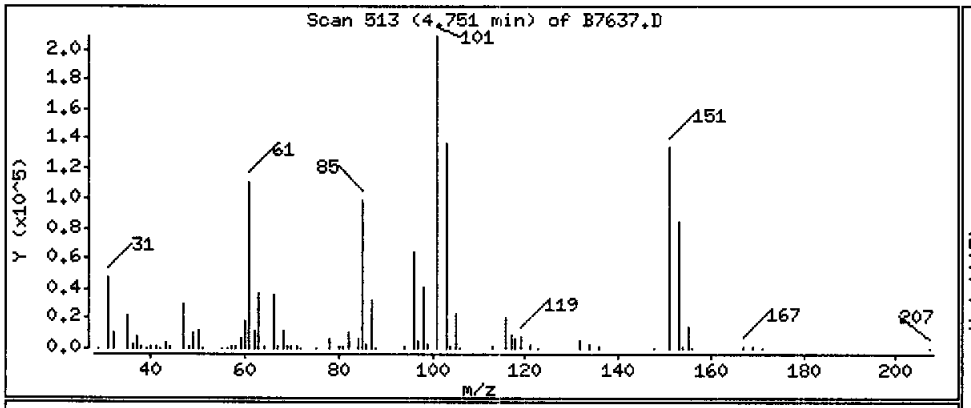
Operator: AA

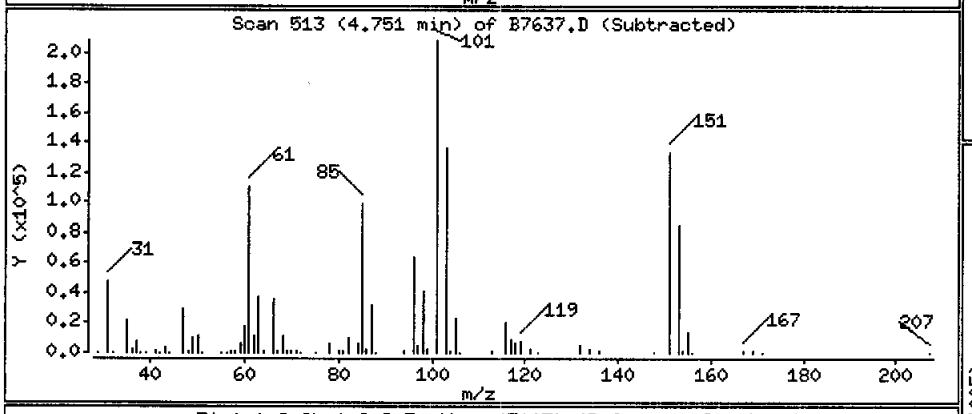
Column phase: J&W DB-624

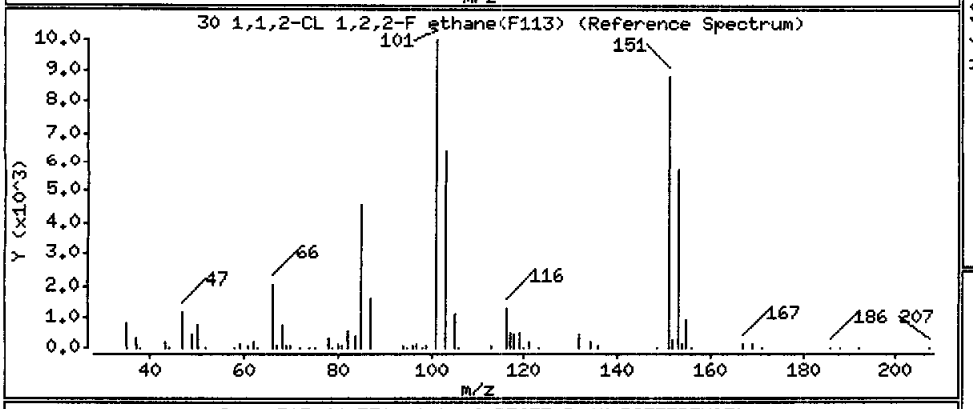
Column diameter: 0.53

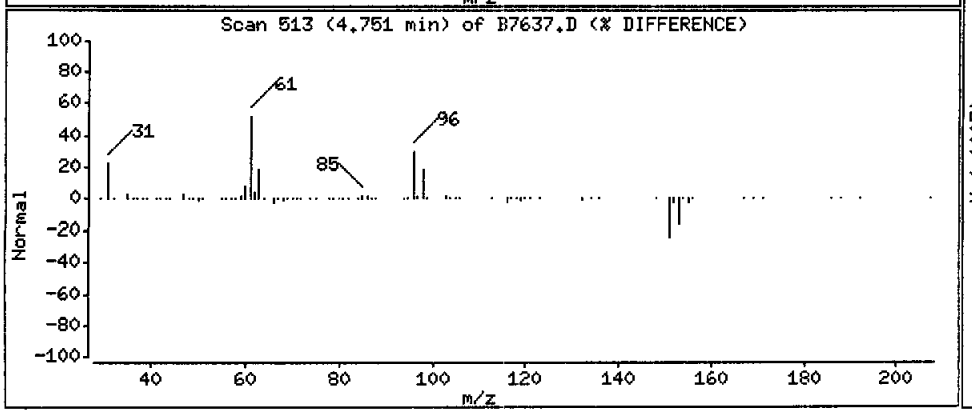
30 1,1,2-CL 1,2,2-F ethane(F113)

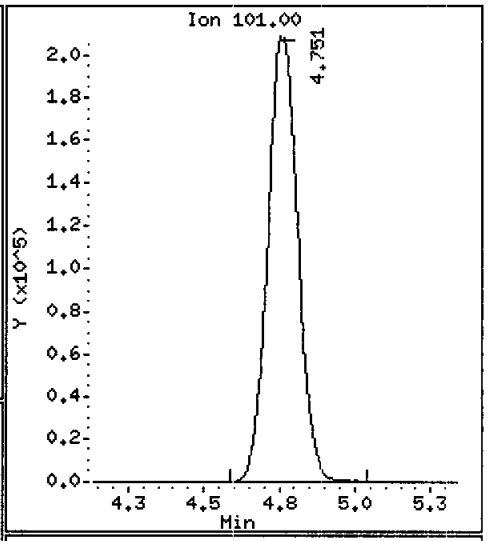
Concentration: 2028 ppbv

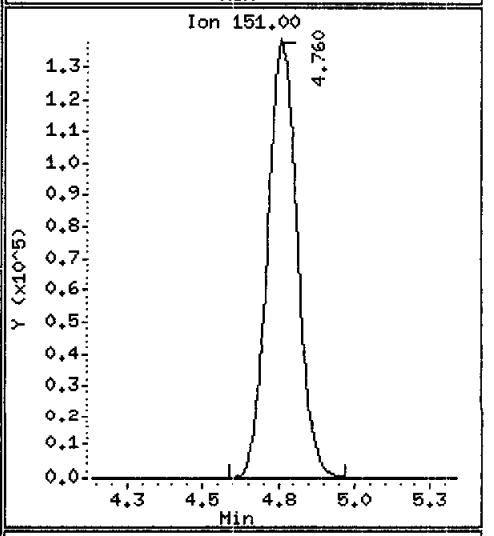


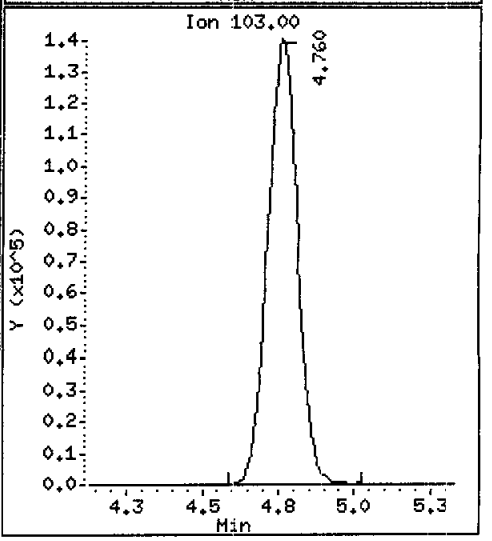












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

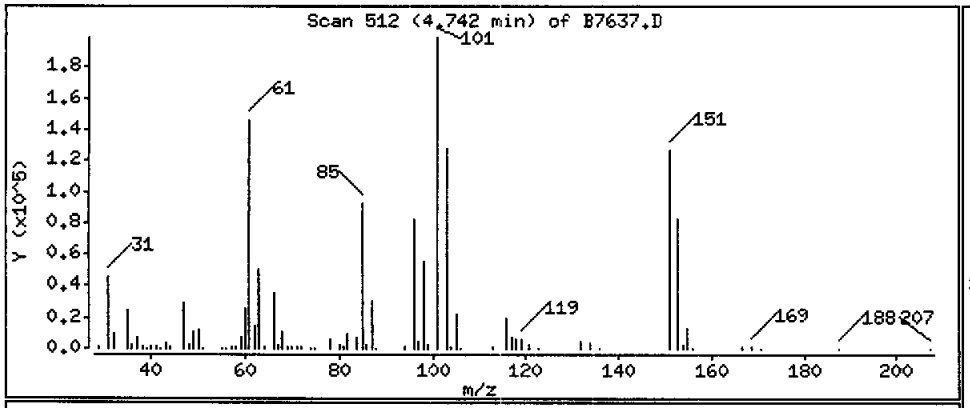
Operator: AA

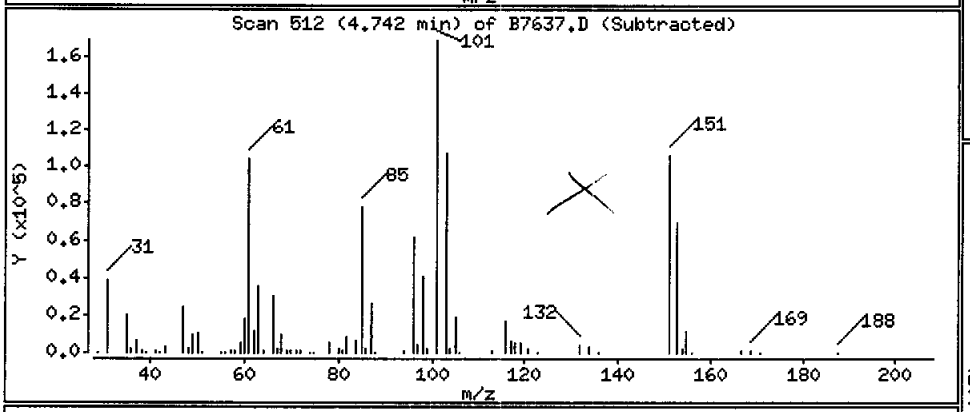
Column phase: J&W DB-624

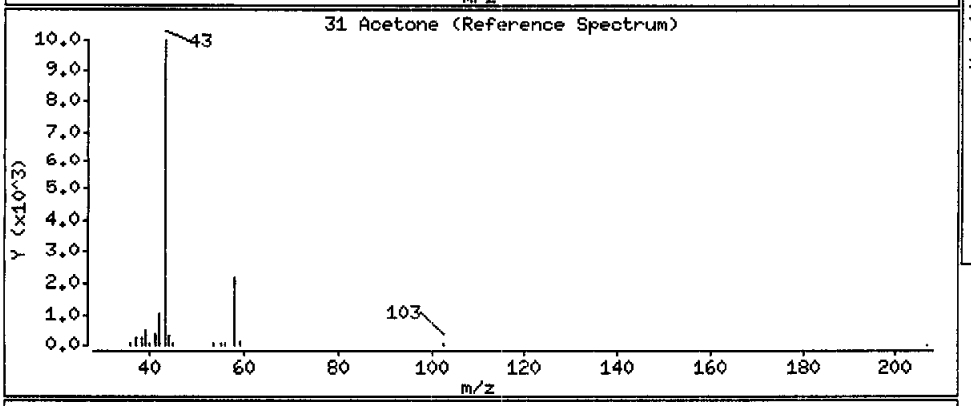
Column diameter: 0.53

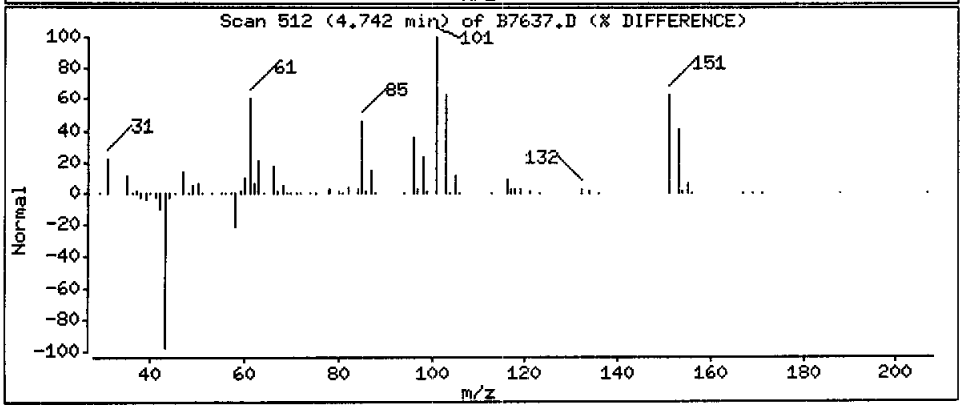
31 Acetone

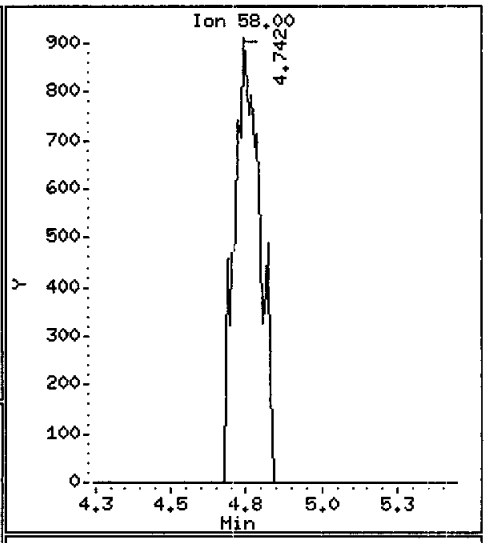
Concentration: 112.8 ppbv

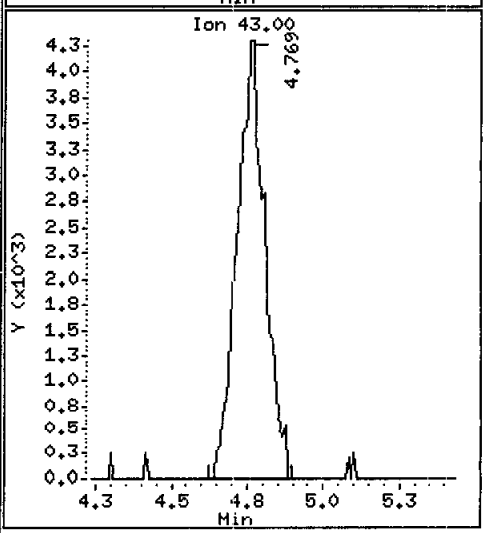












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

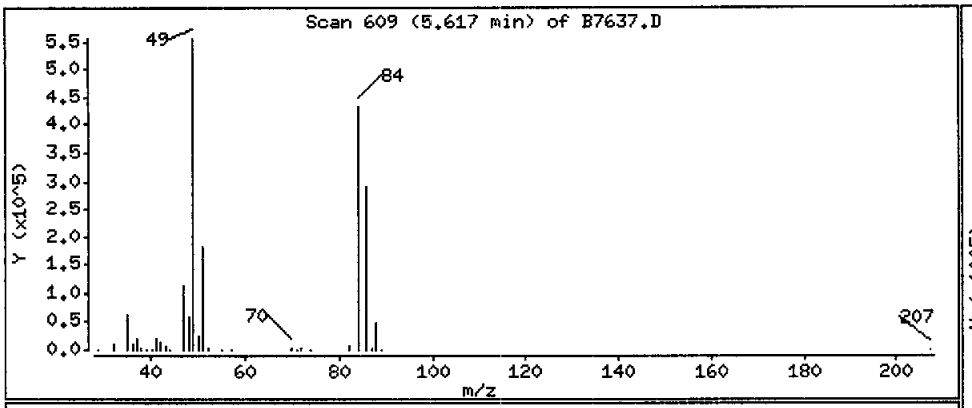
Operator: AA

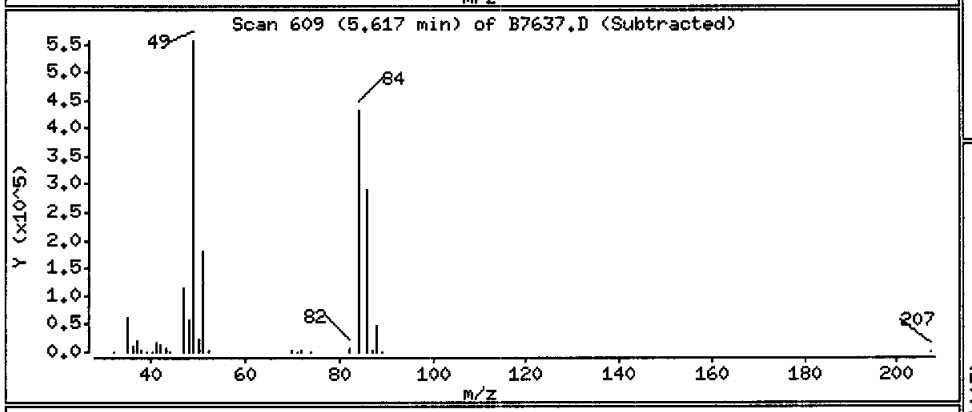
Column phase: J&W DB-624

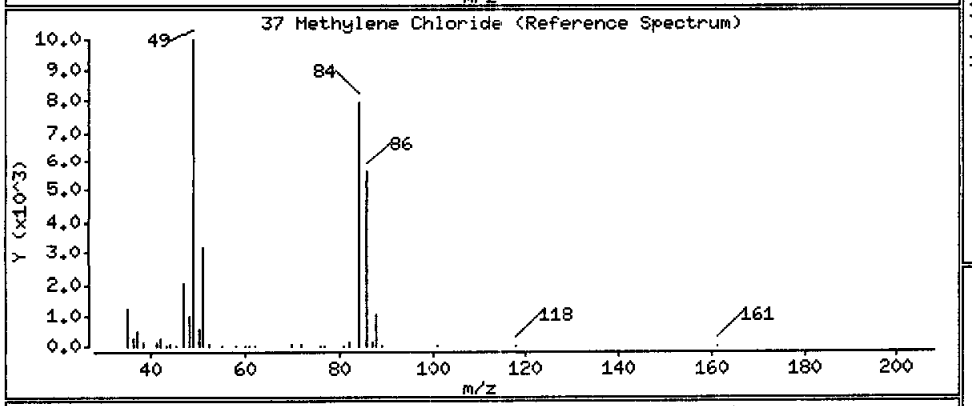
Column diameter: 0.53

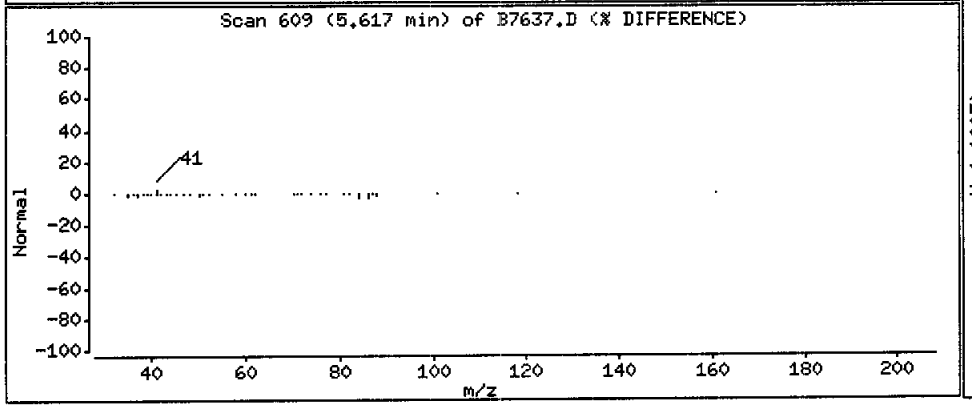
37 Methylene Chloride

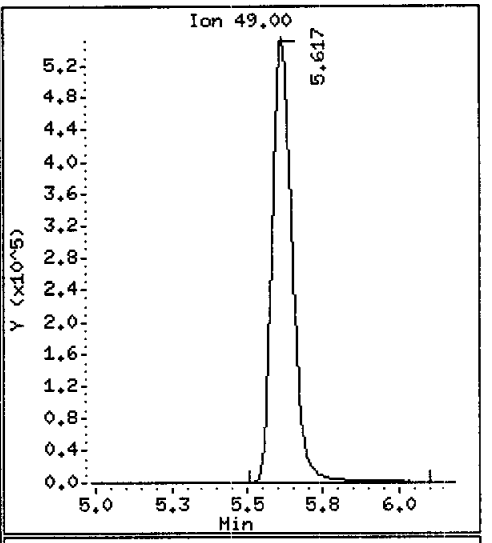
Concentration: 12680 ppbv

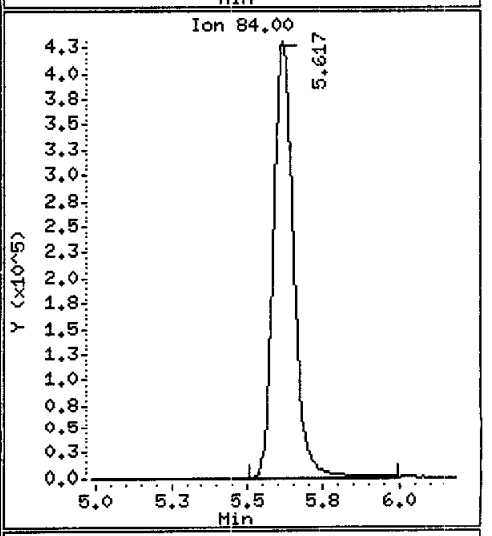


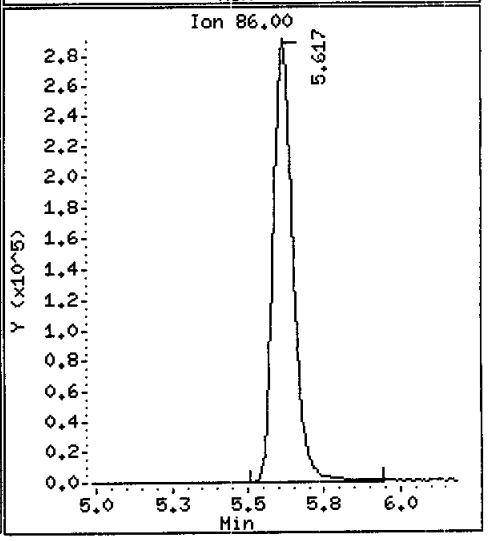












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

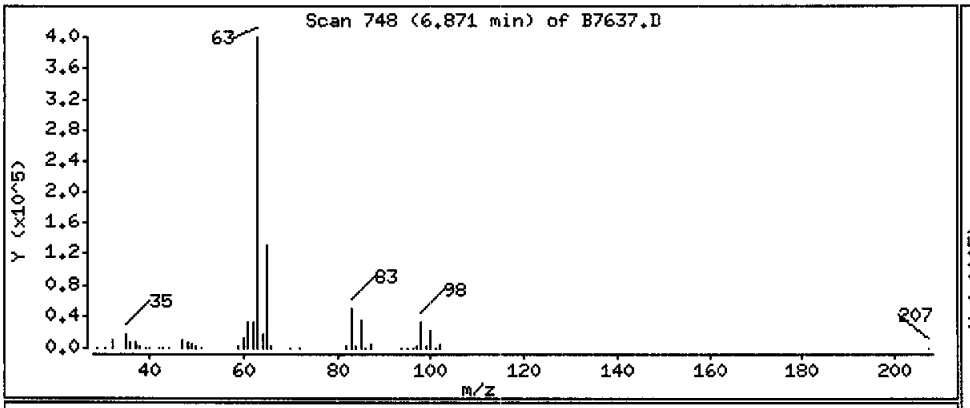
Operator: AA

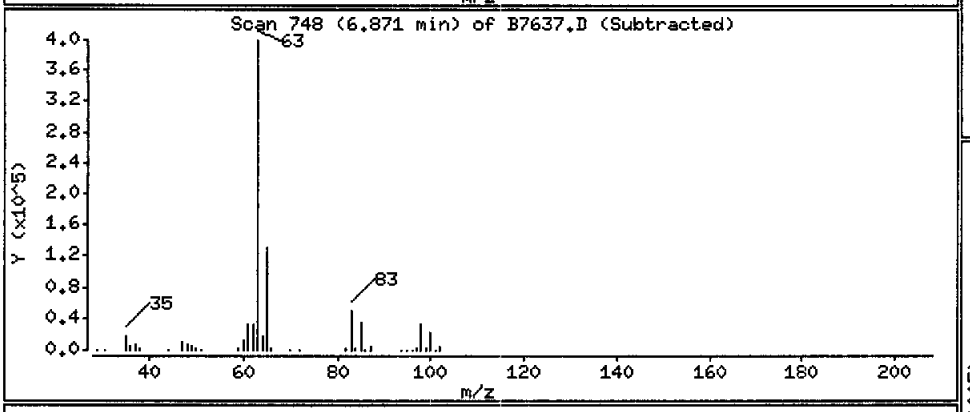
Column phase: J&W DB-624

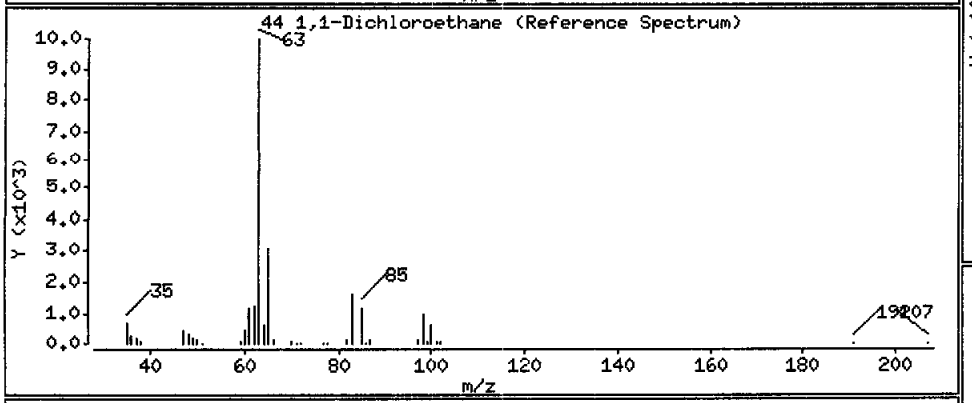
Column diameter: 0.53

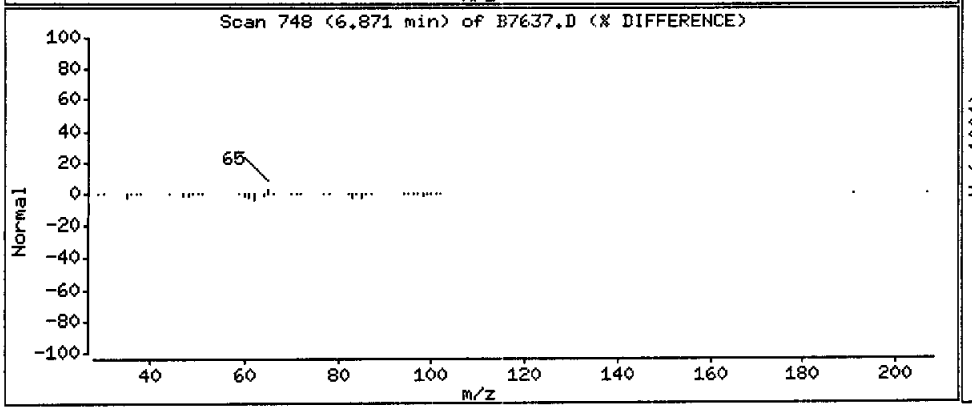
44 1,1-Dichloroethane

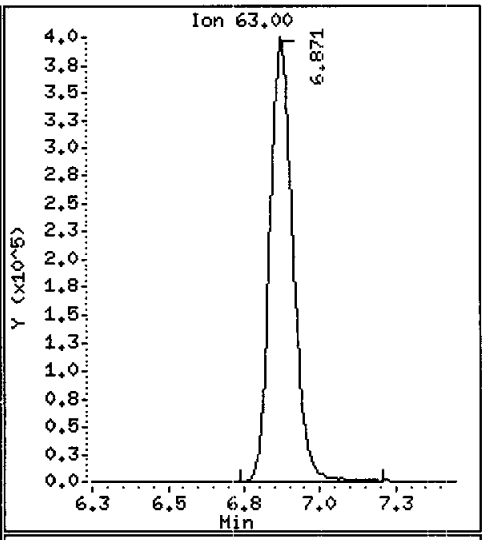
Concentration: 5866 ppbv

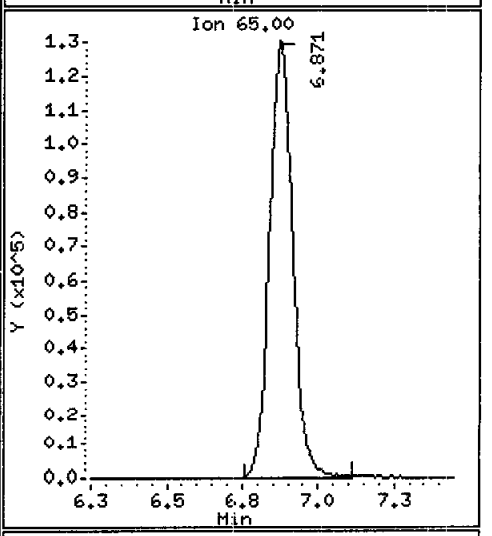


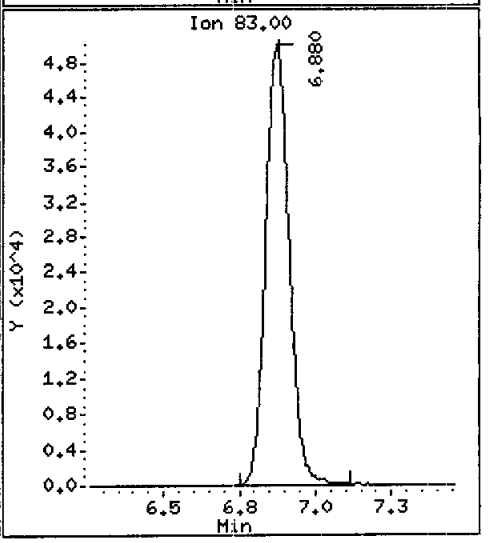












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

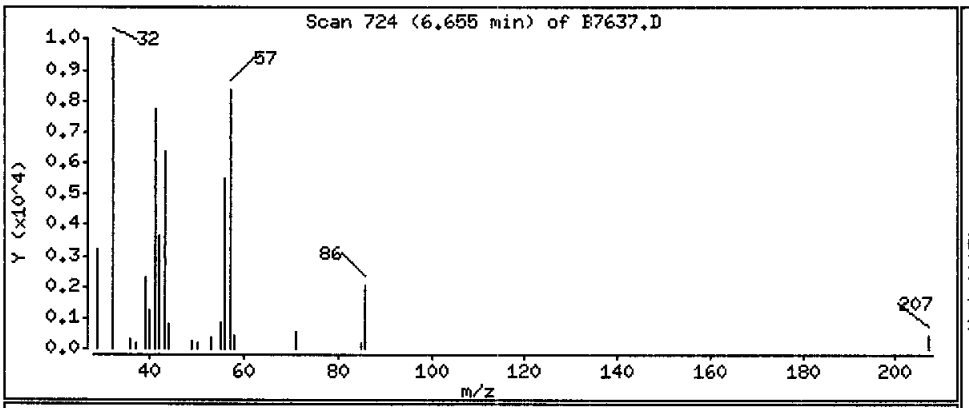
Operator: AA

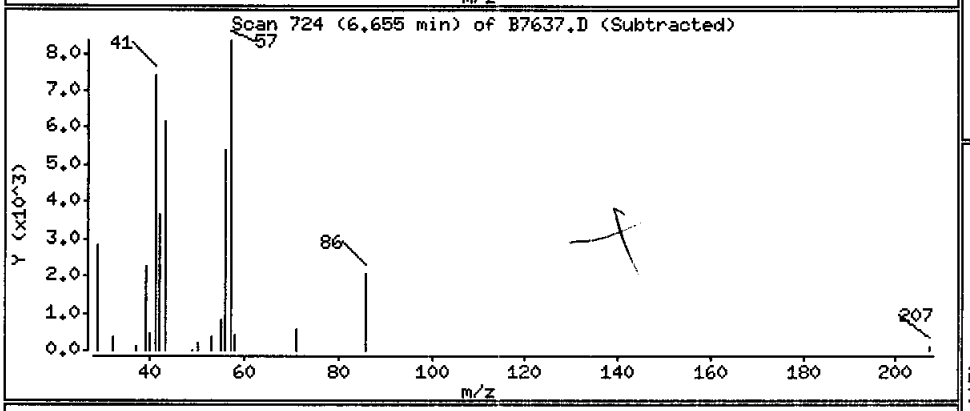
Column phase: J&W DB-624

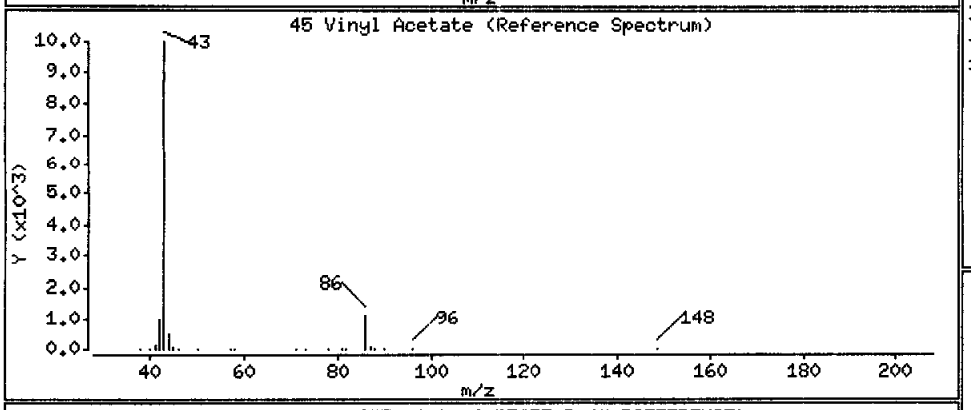
Column diameter: 0.53

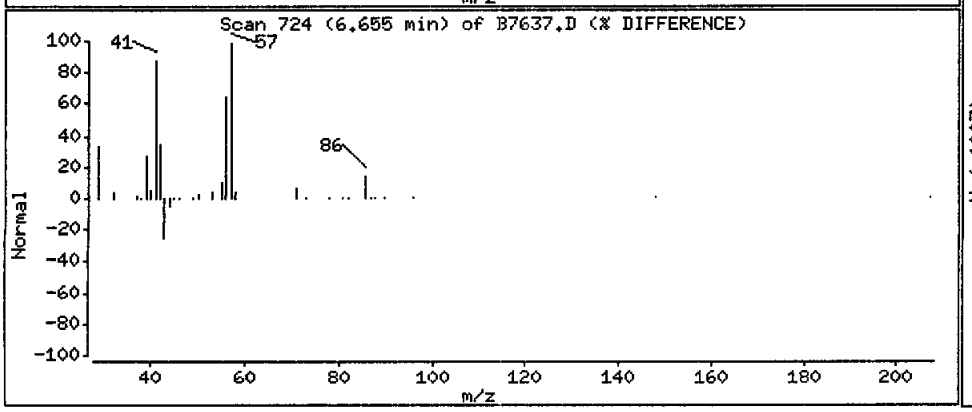
45 Vinyl Acetate

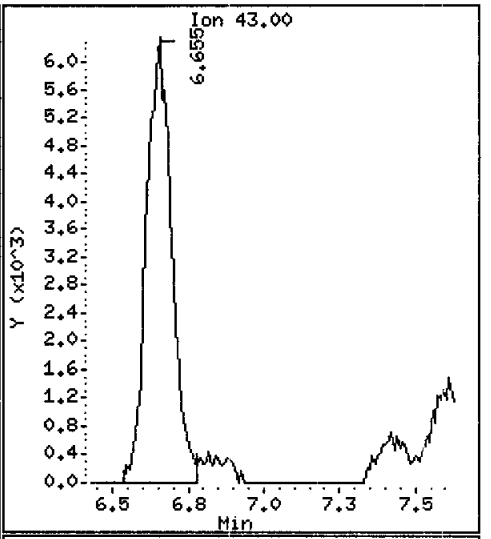
Concentration: 106.0 ppbv

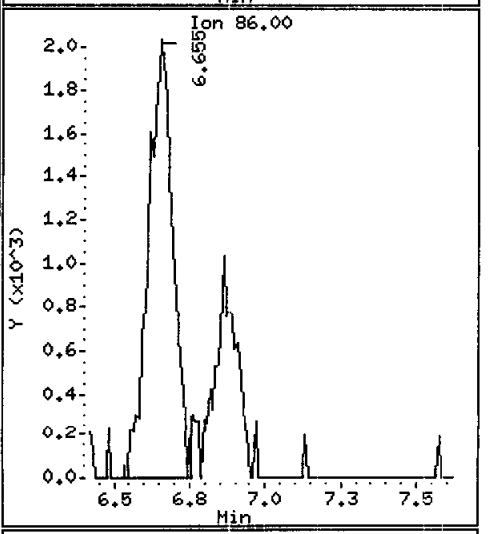


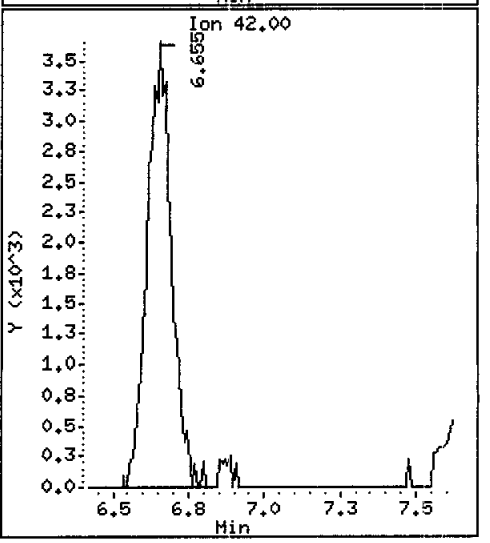












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

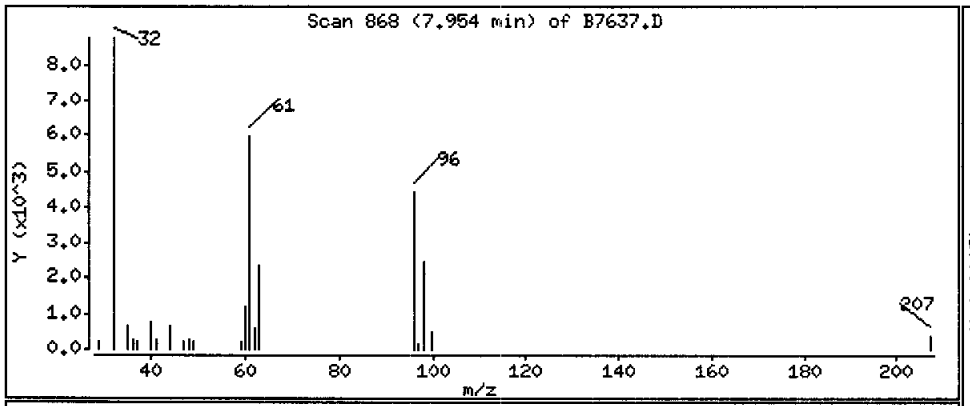
Operator: AA

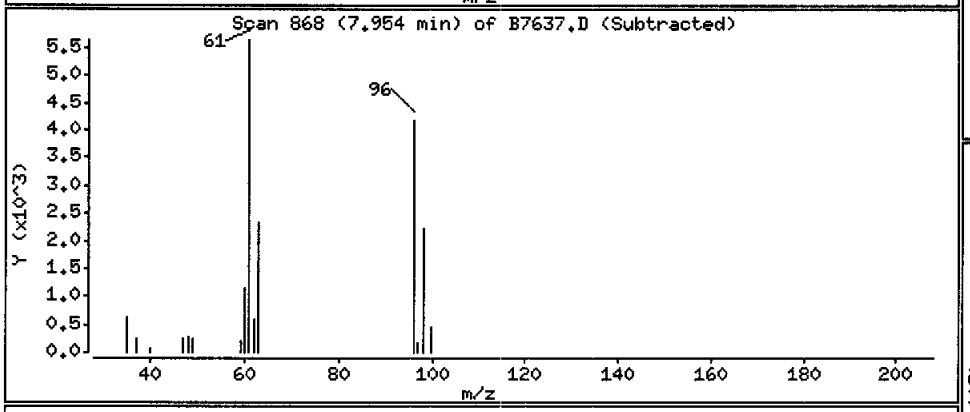
Column phase: J&W DB-624

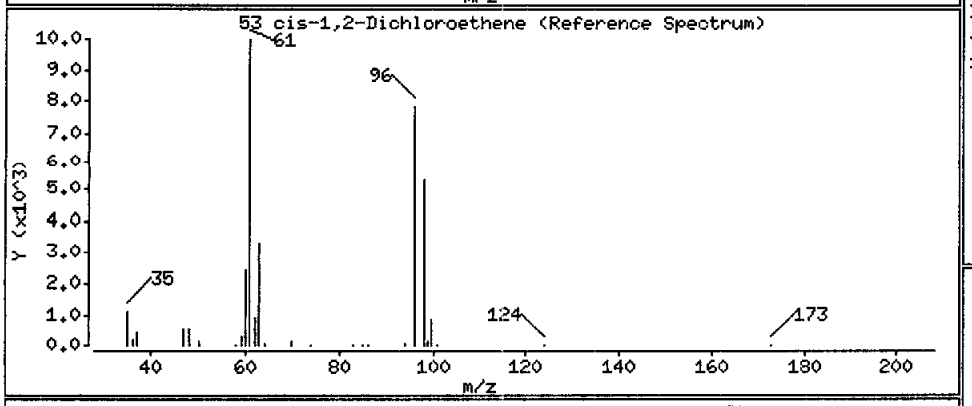
Column diameter: 0.53

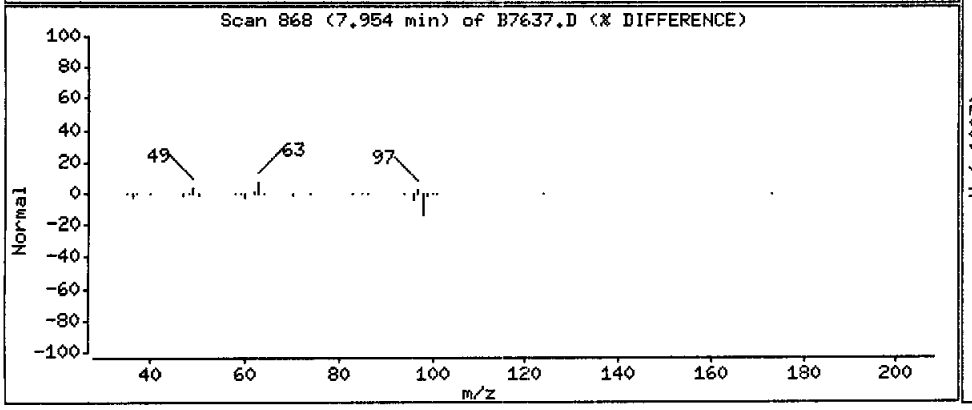
53 cis-1,2-Dichloroethene

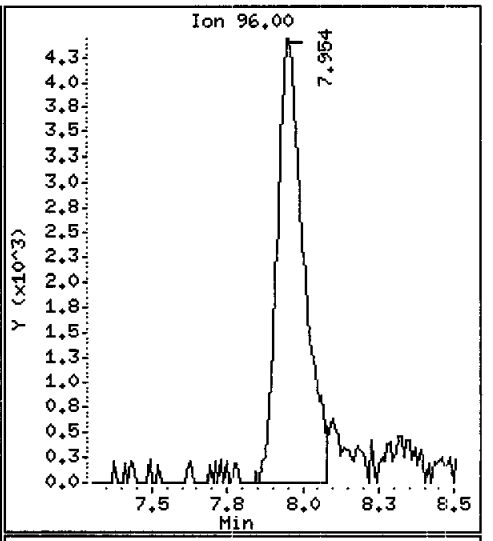
Concentration: 144.9 ppbv

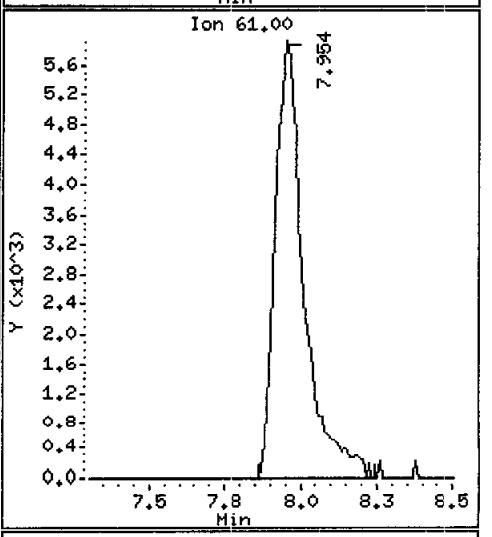


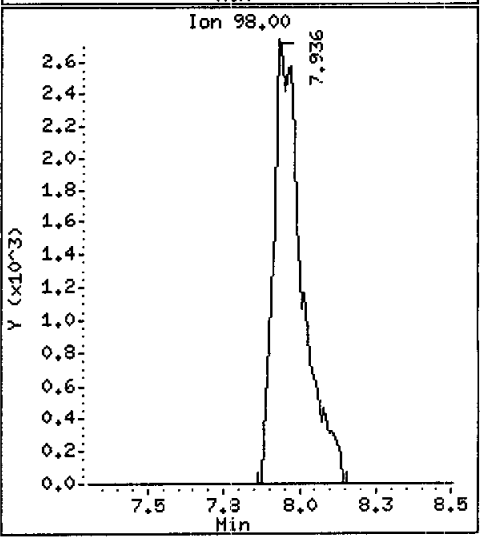












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

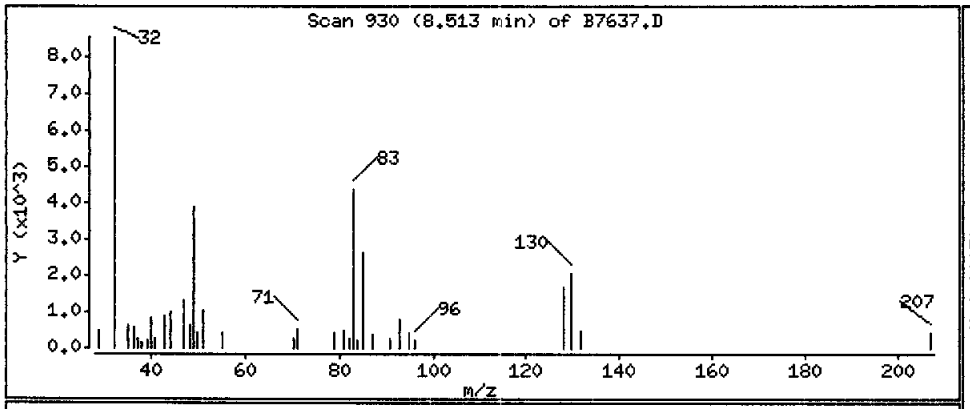
Operator: AA

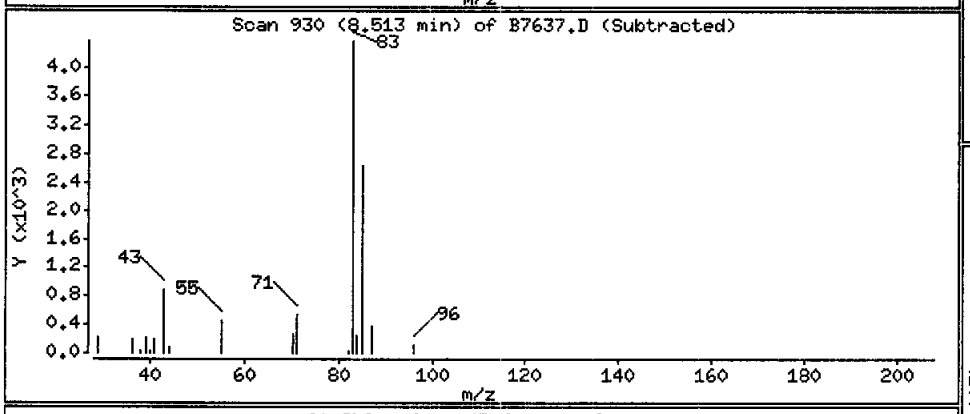
Column phase: J&W DB-624

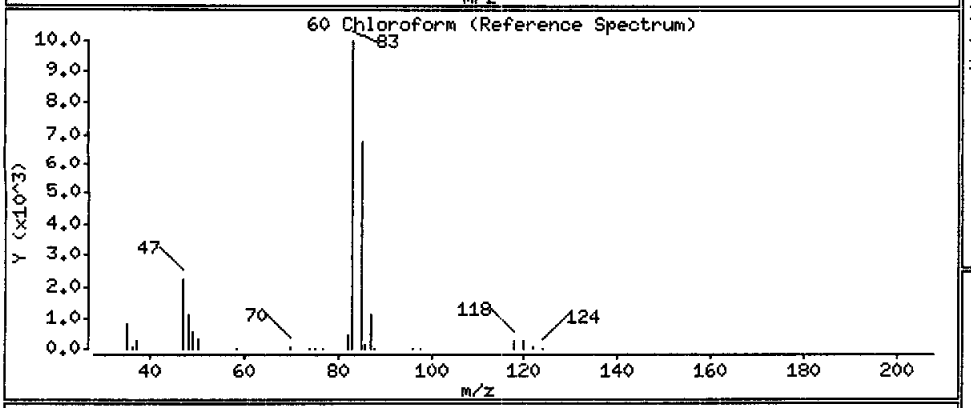
Column diameter: 0.53

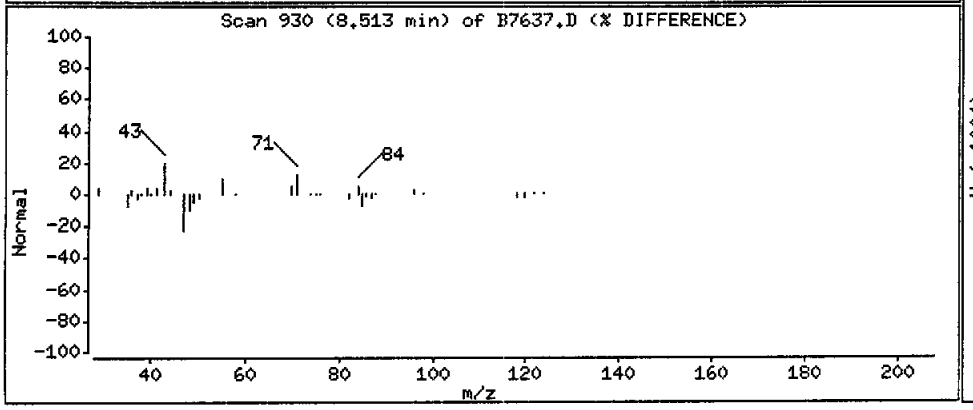
60 Chloroform

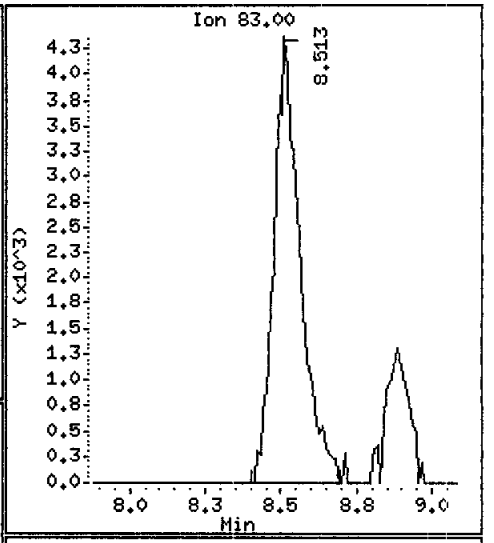
Concentration: 56.44 ppbv

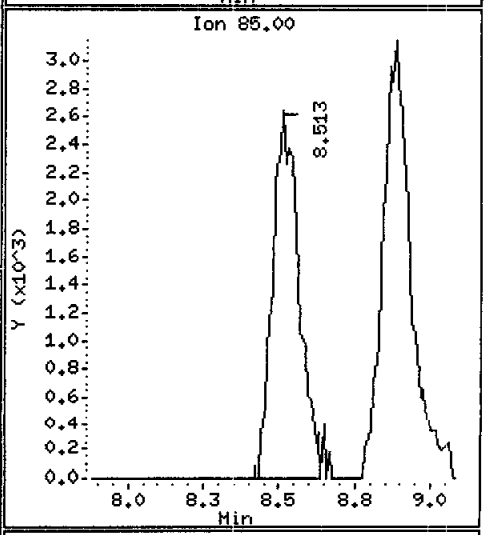


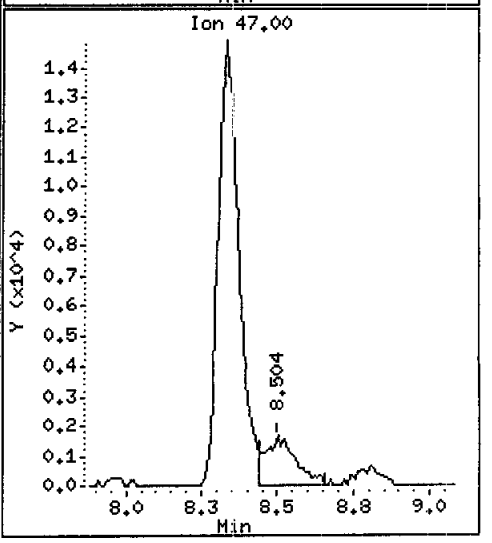












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

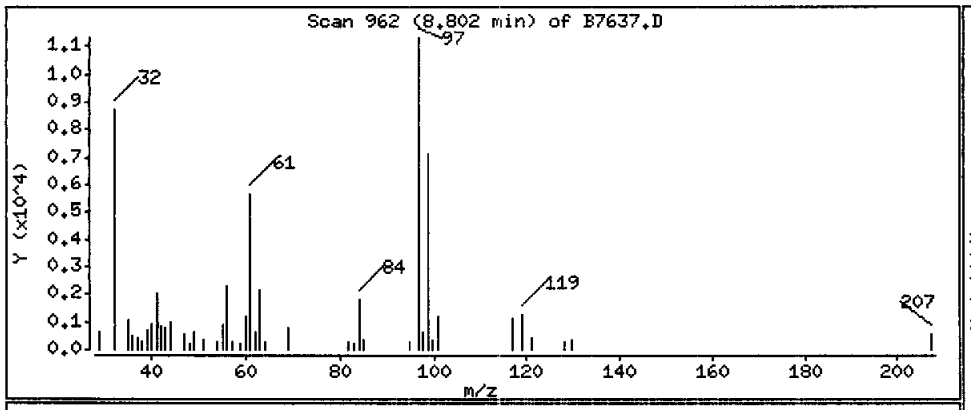
Operator: AA

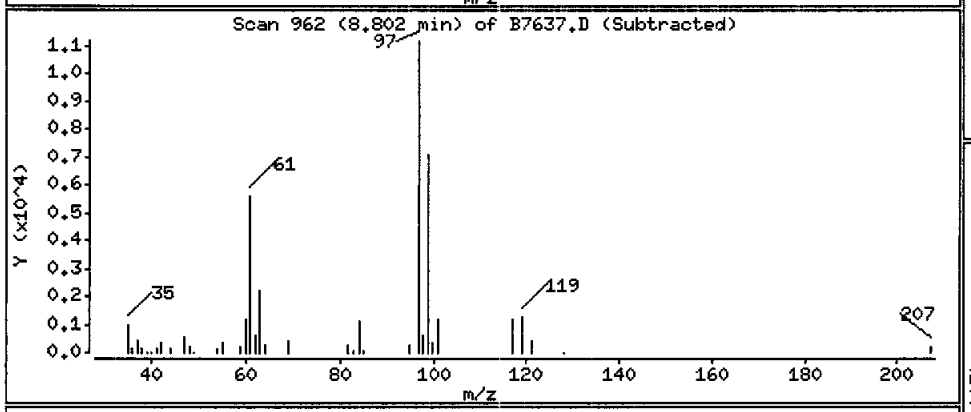
Column phase: J&W DB-624

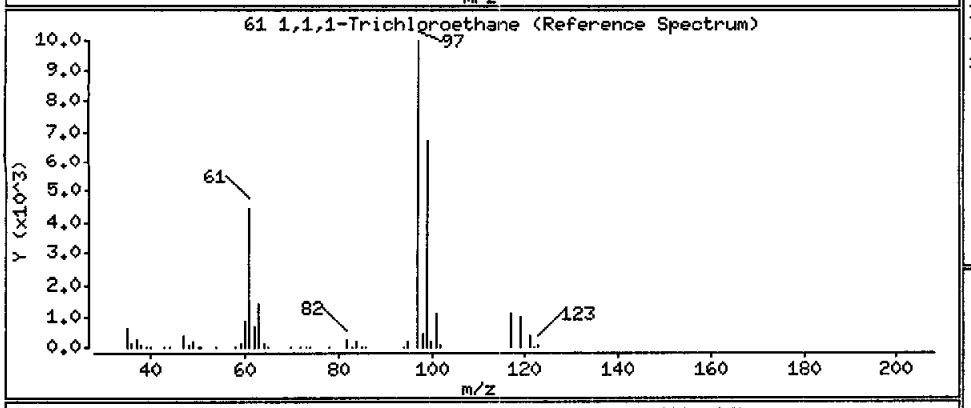
Column diameter: 0.53

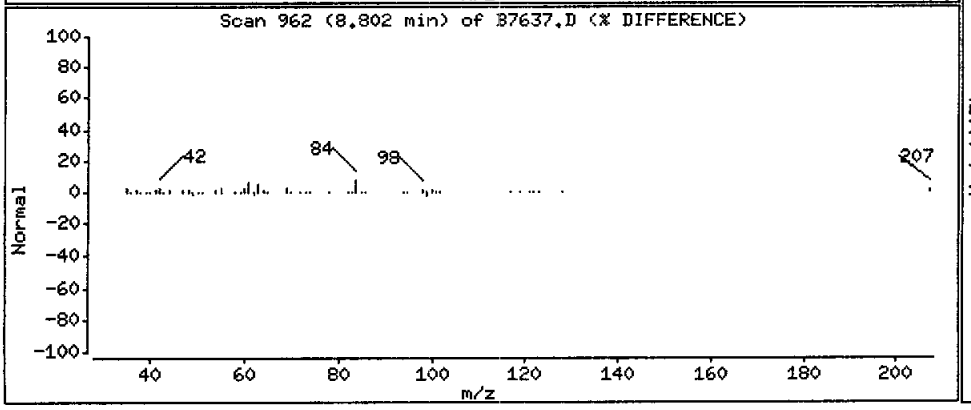
61 1,1,1-Trichloroethane

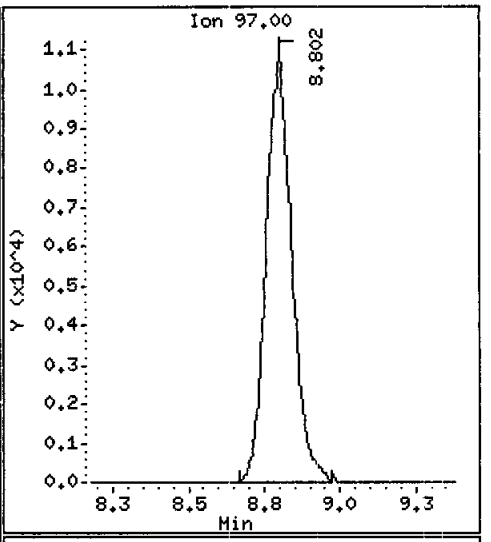
Concentration: 138.9 ppbv

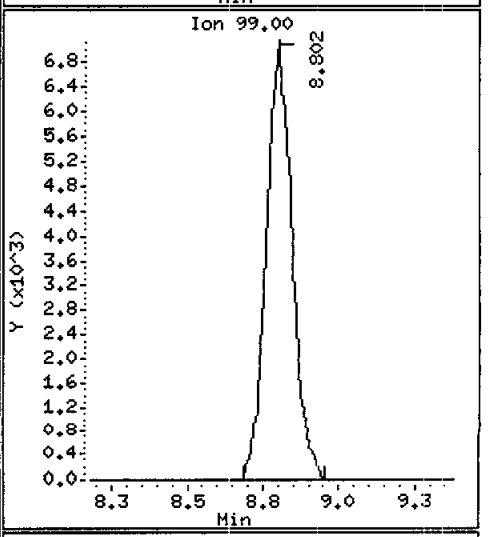


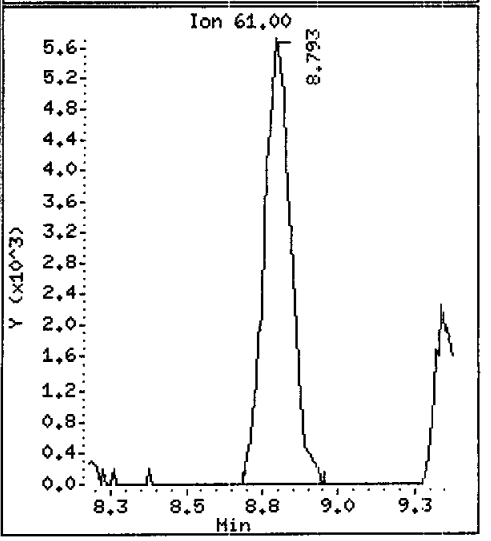












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

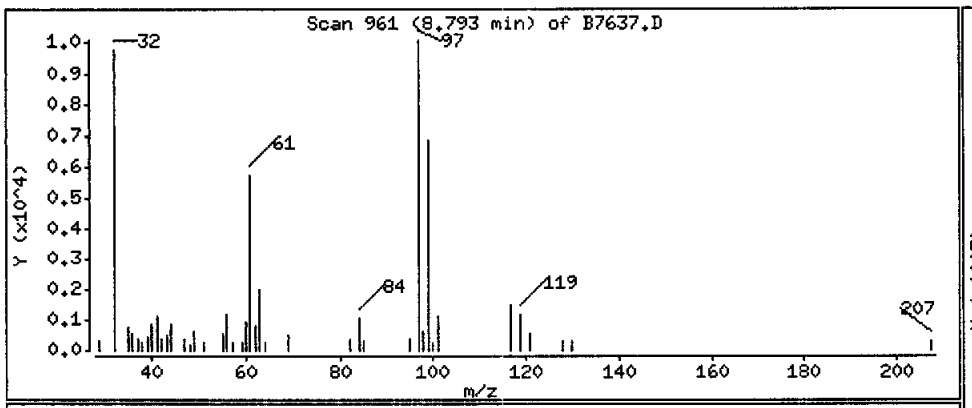
Operator: AA

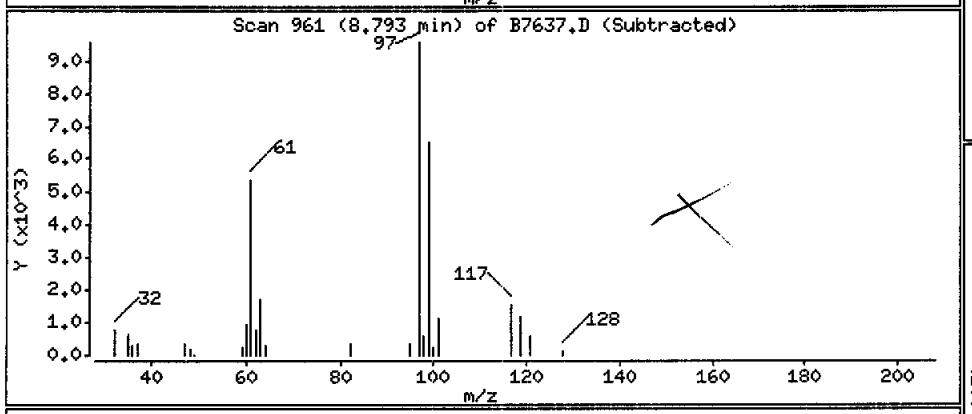
Column phase: J&W DB-624

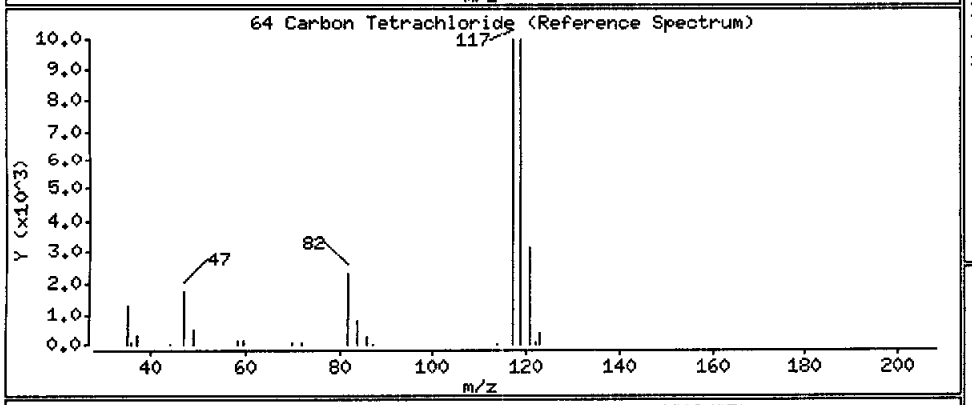
Column diameter: 0.53

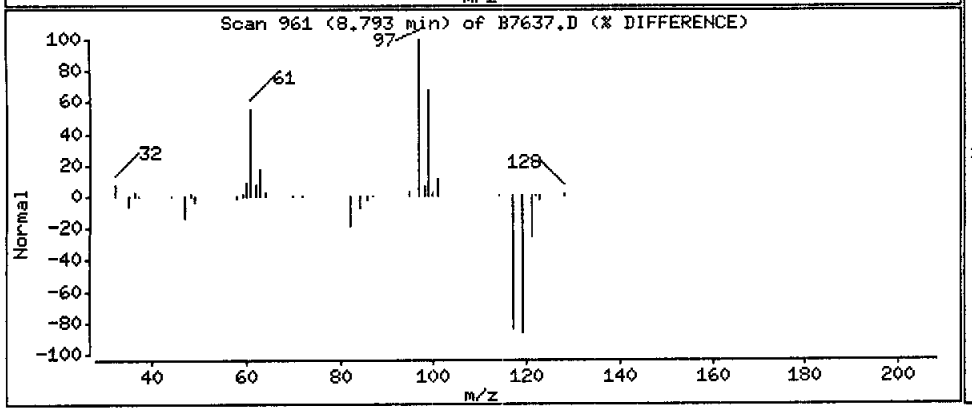
64 Carbon Tetrachloride

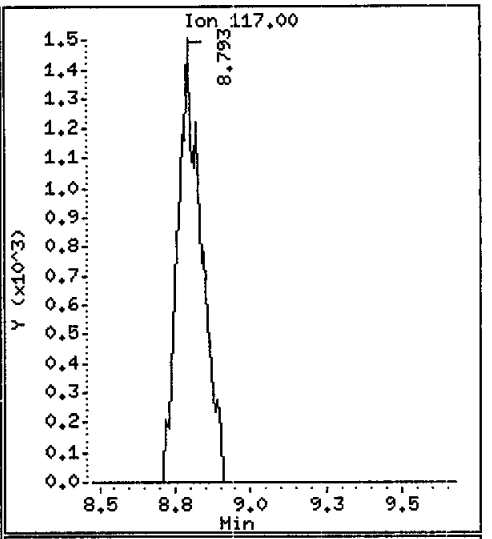
Concentration: 26.12 ppbv

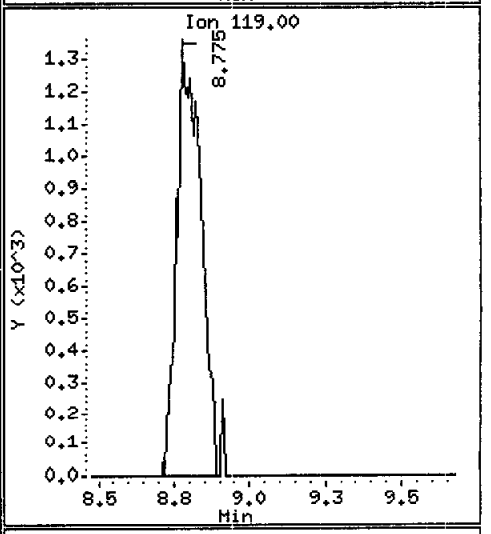


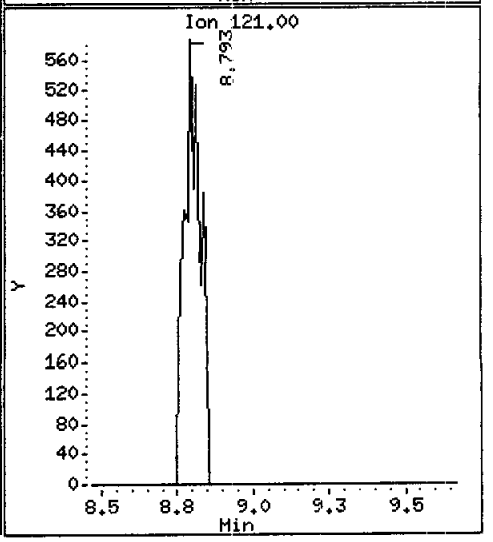












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

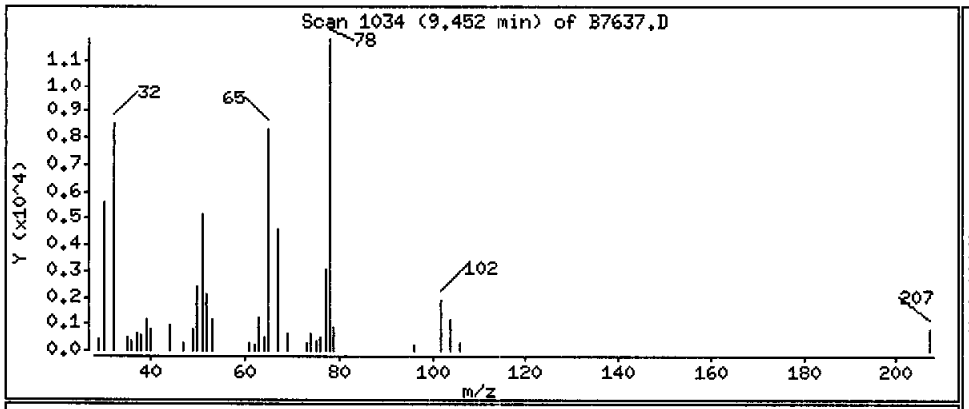
Operator: AA

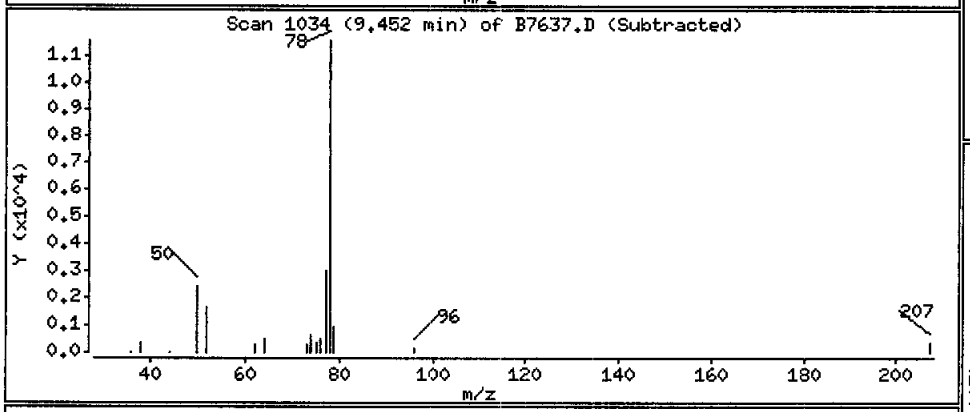
Column phase: J&W DB-624

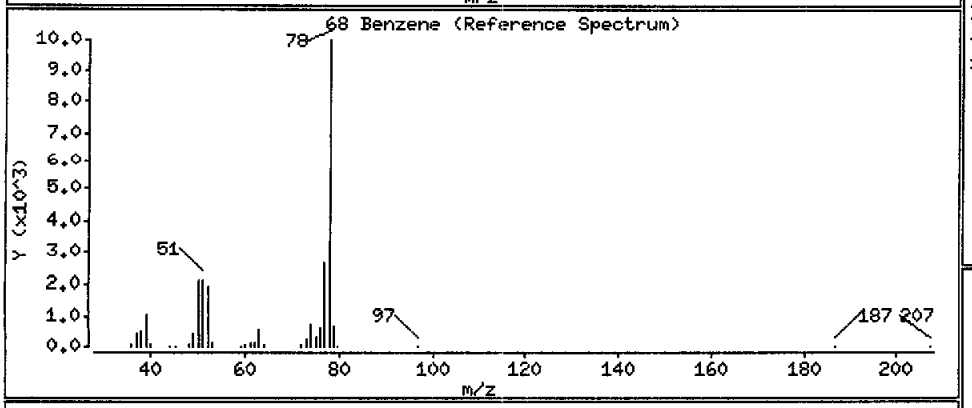
Column diameter: 0.53

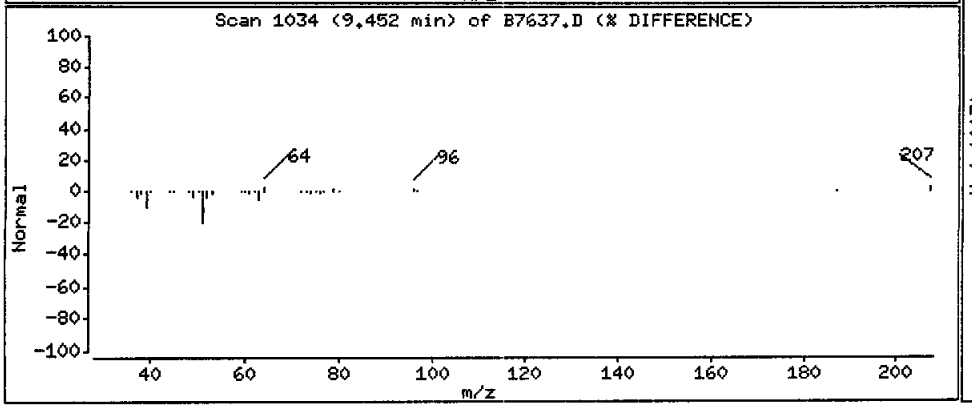
68 Benzene

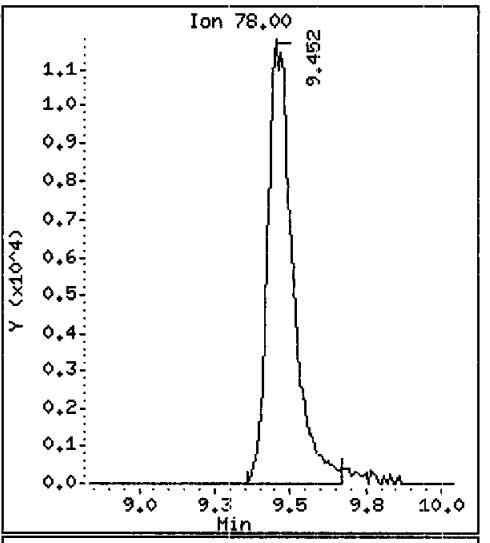
Concentration: 161.6 ppbv

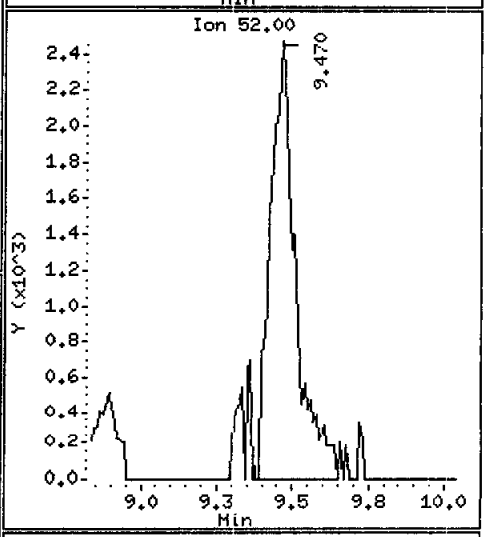


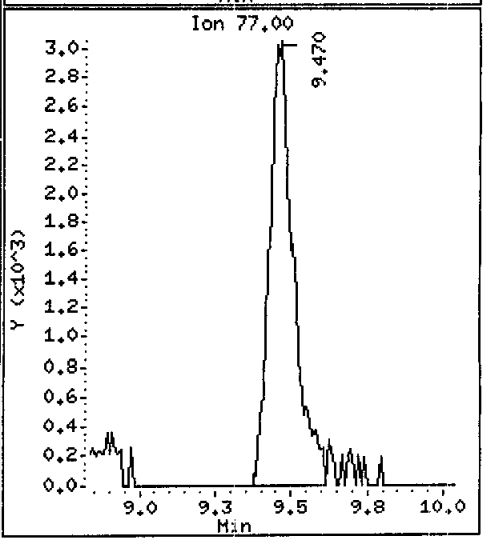












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

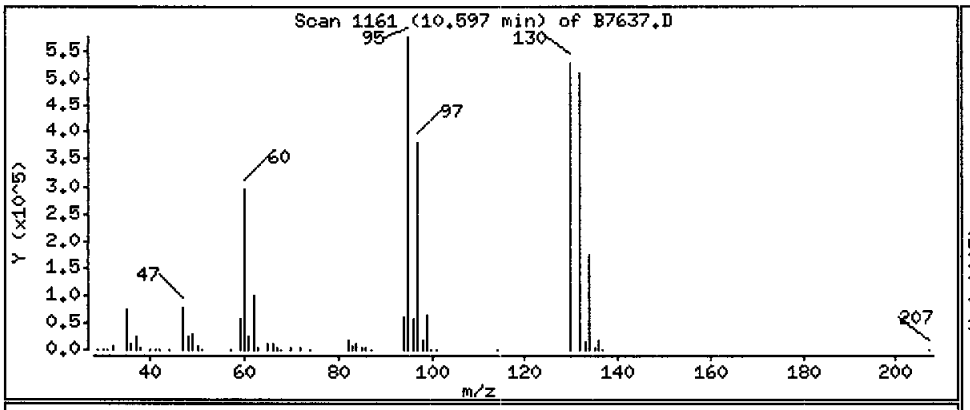
Operator: AA

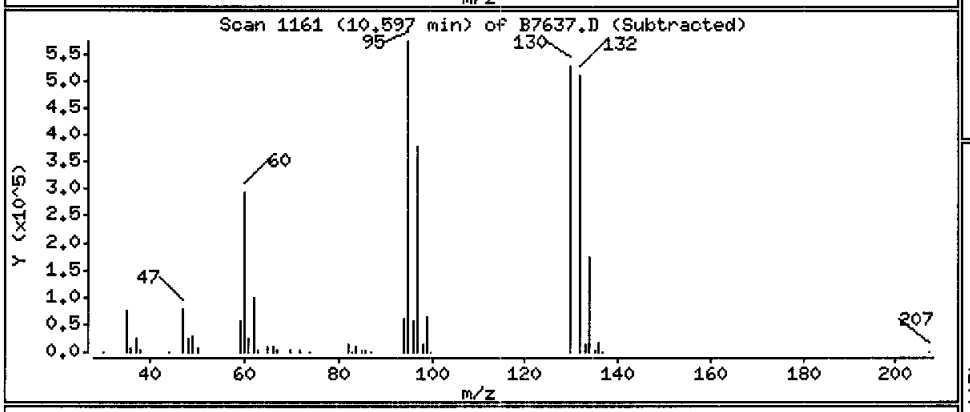
Column phase: J&W DB-624

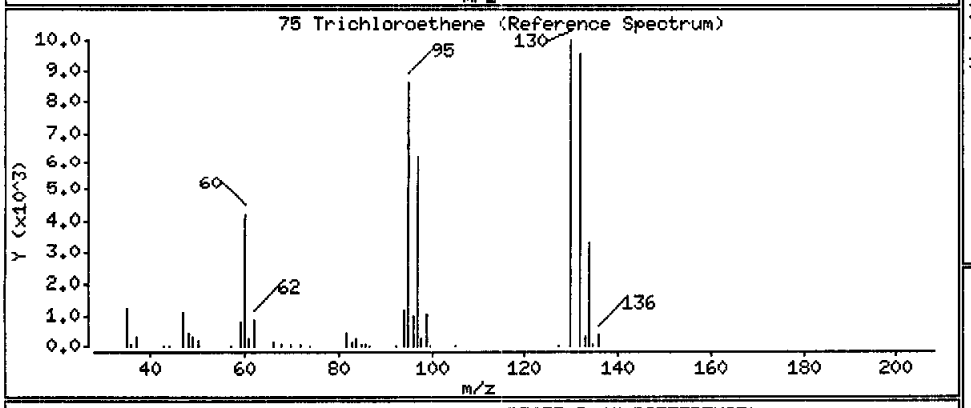
Column diameter: 0.53

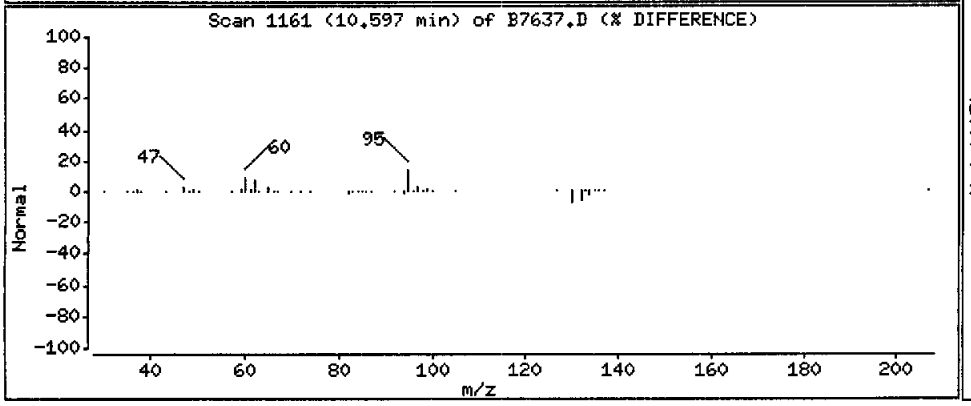
75 Trichloroethene

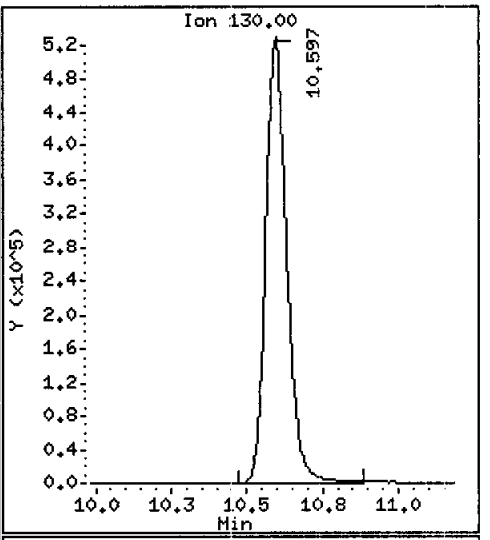
Concentration: 9402 ppbv

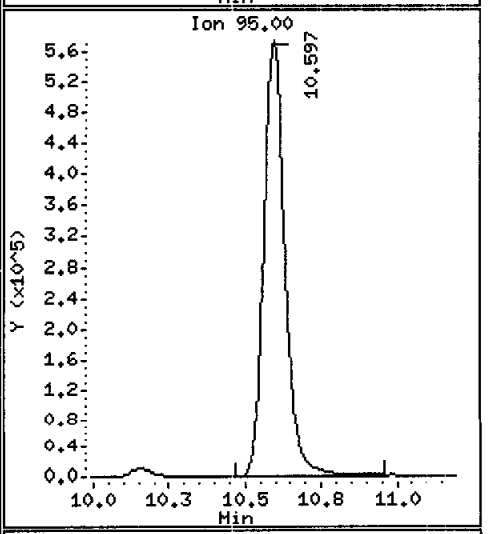


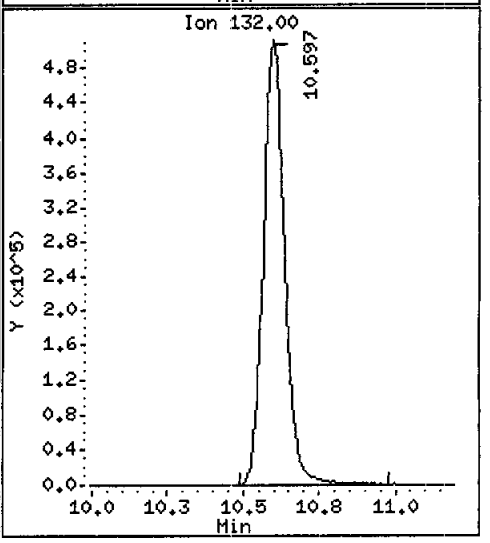












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

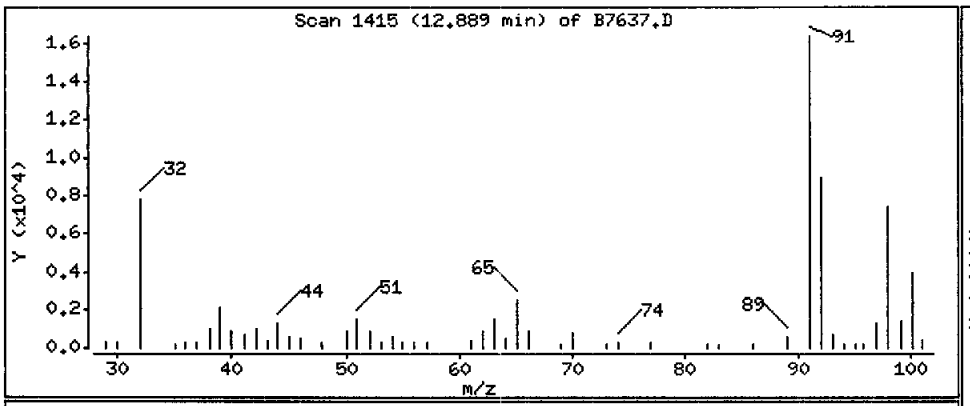
Operator: AA

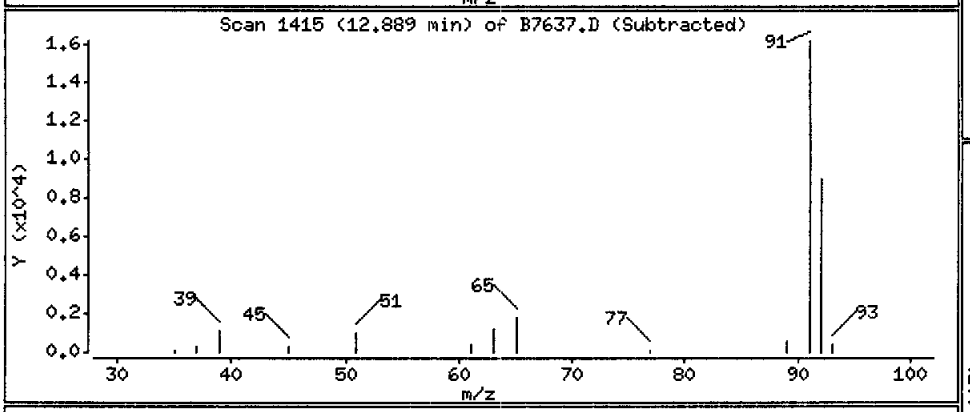
Column phase: J&W DB-624

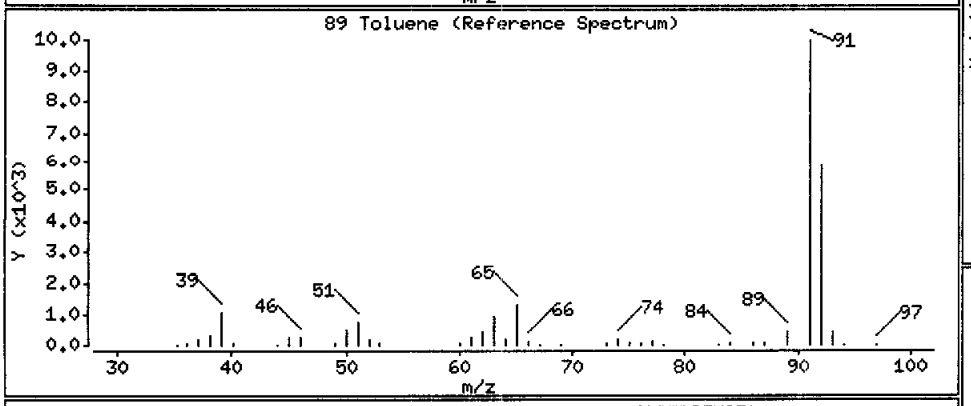
Column diameter: 0.53

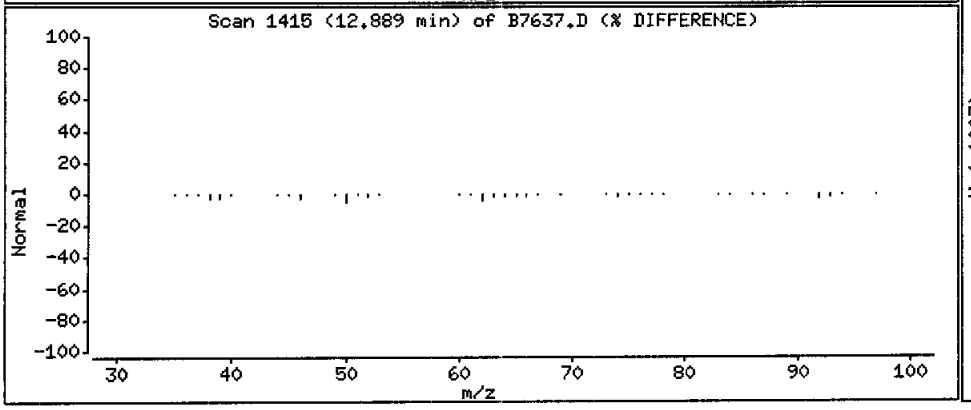
89 Toluene

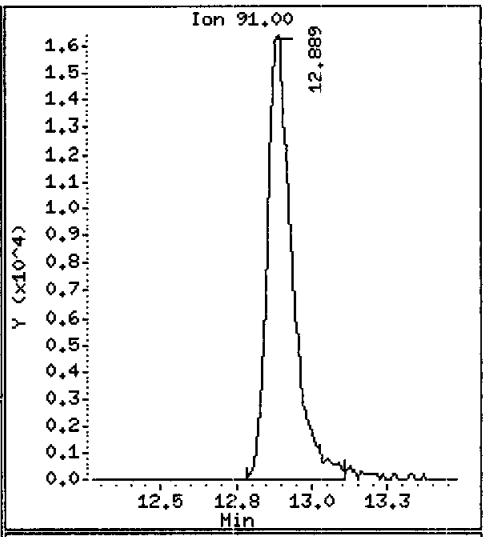
Concentration: 173.2 ppbv

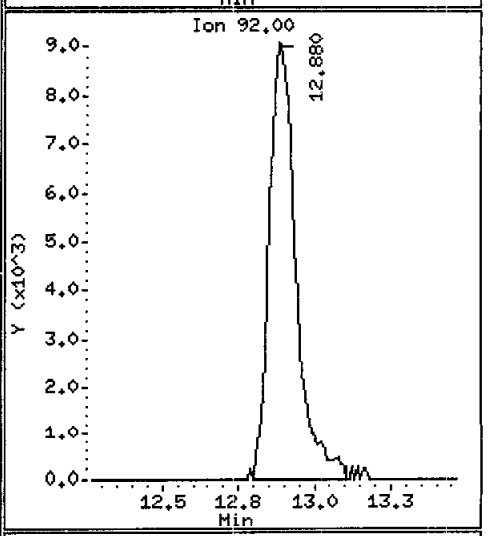


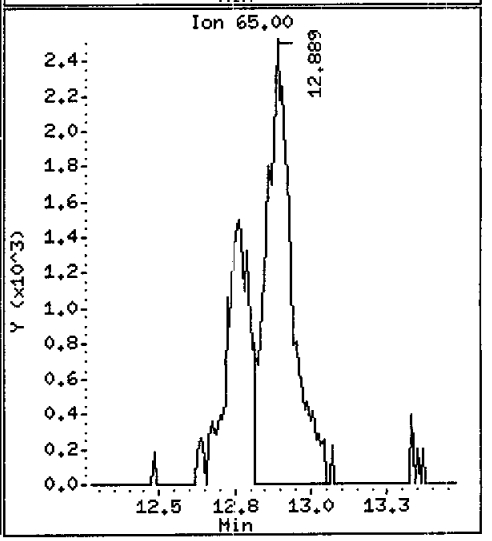












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

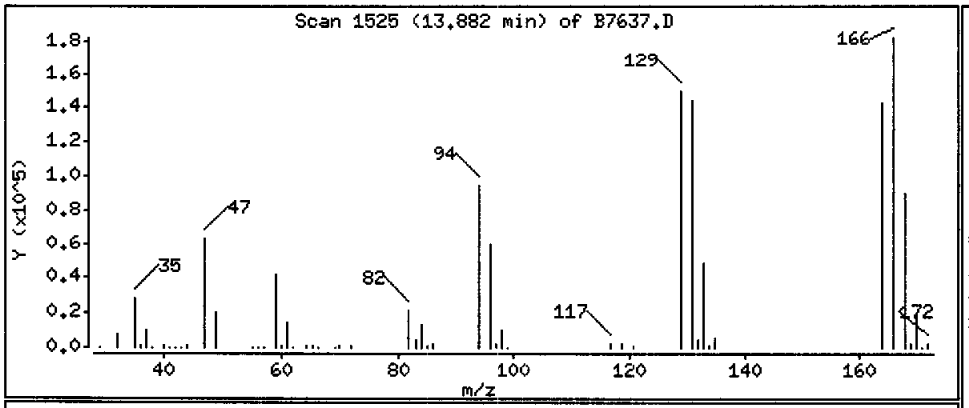
Operator: AA

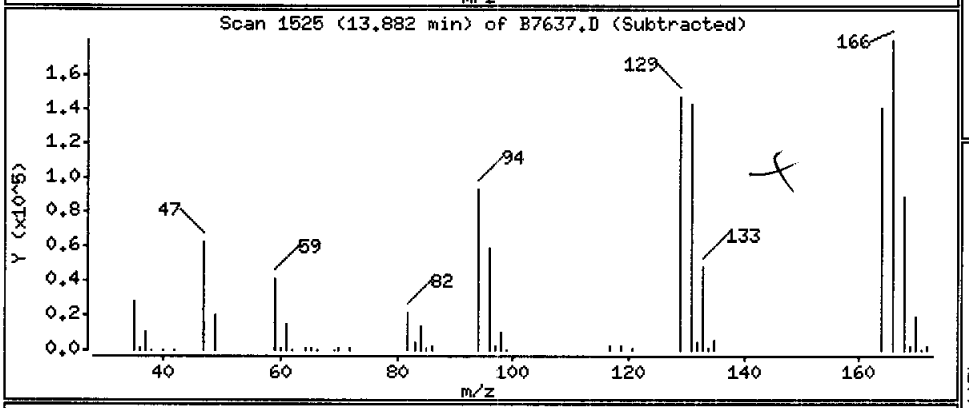
Column phase: J&W DB-624

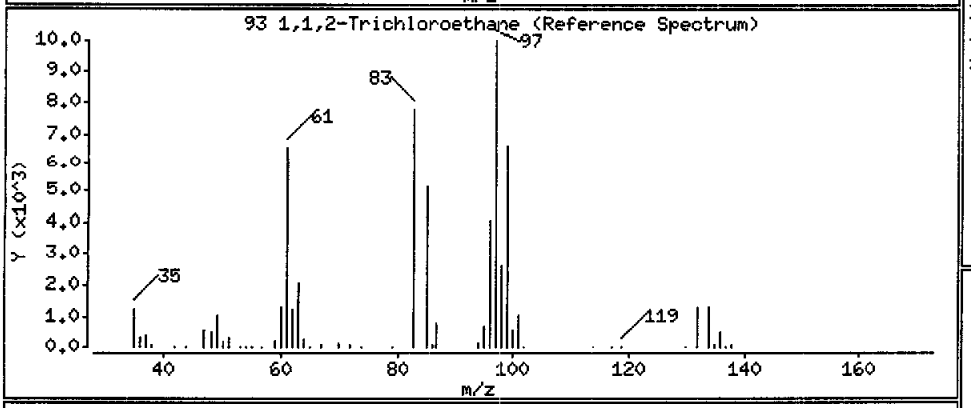
Column diameter: 0.53

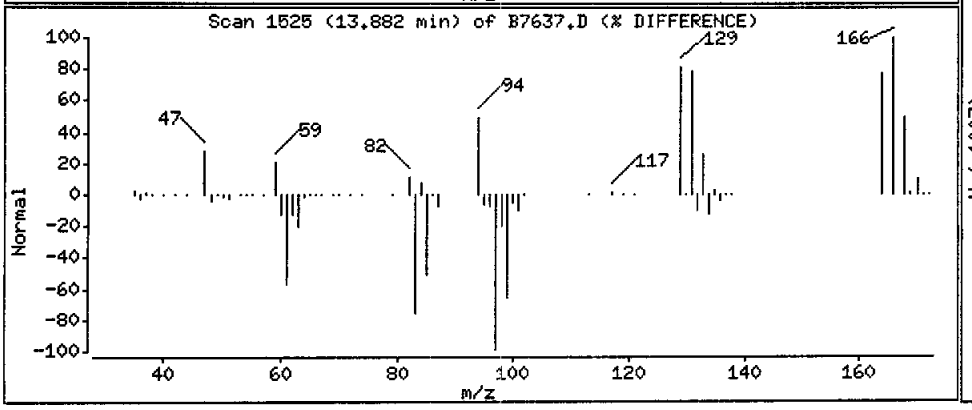
93 1,1,2-Trichloroethane

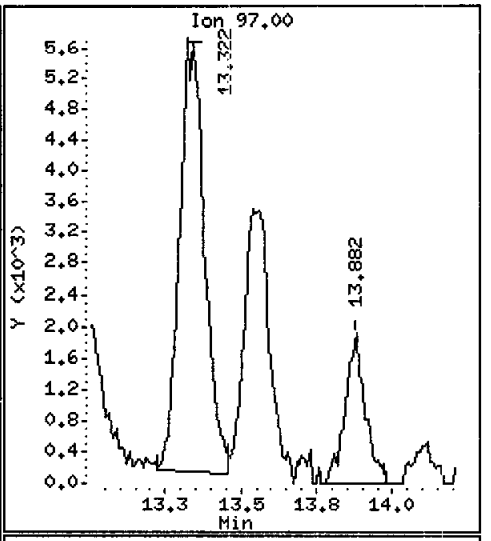
Concentration: 33.65 ppbv

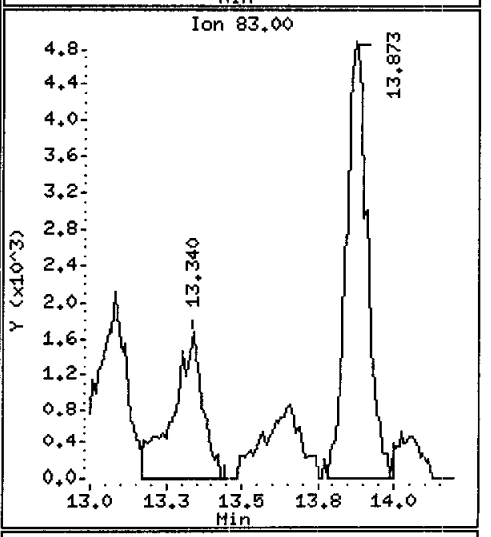


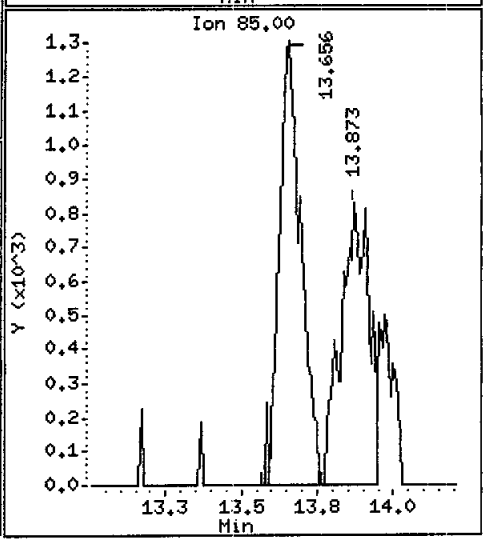












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

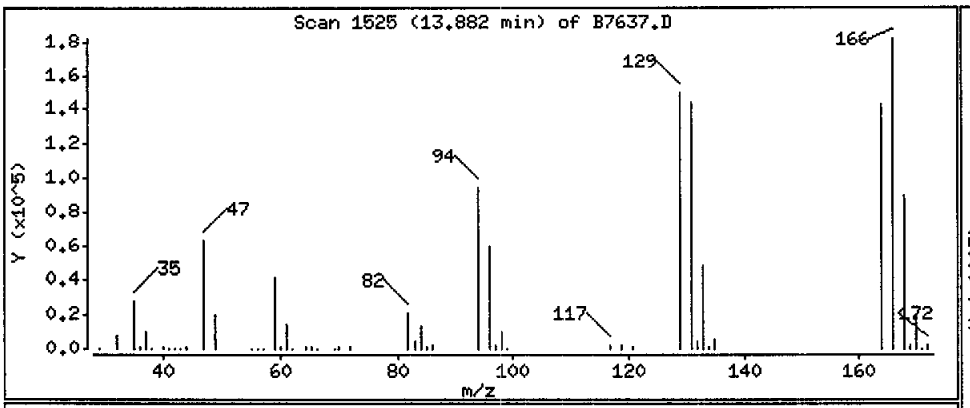
Operator: AA

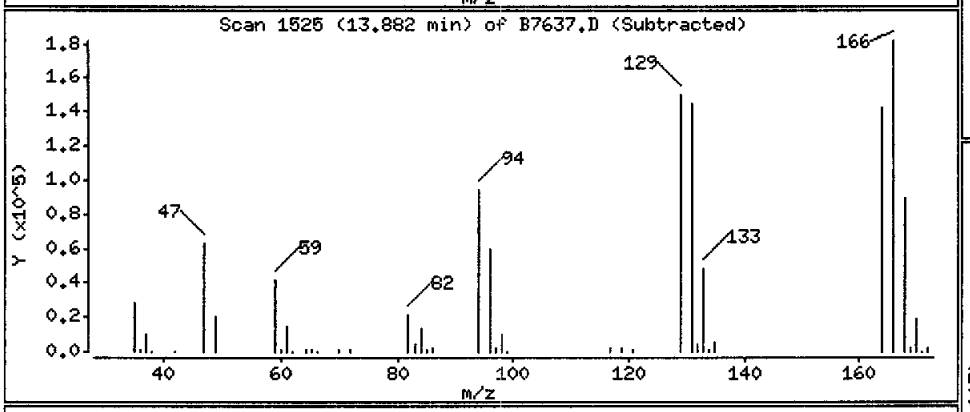
Column phase: J&W DB-624

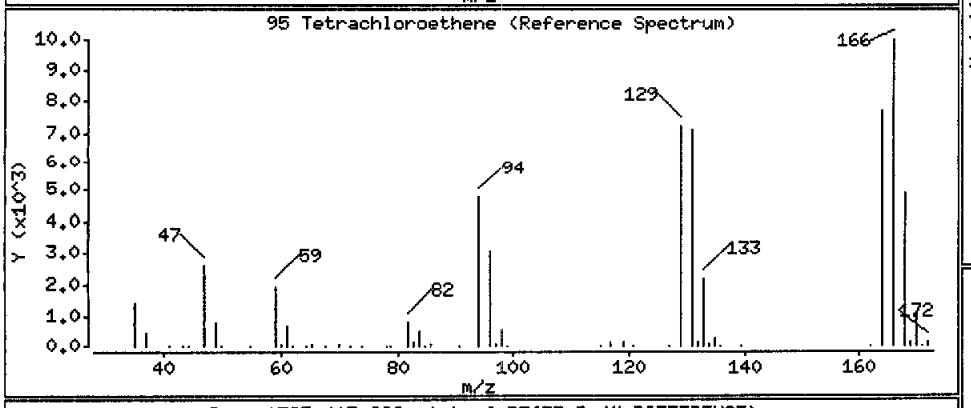
Column diameter: 0.53

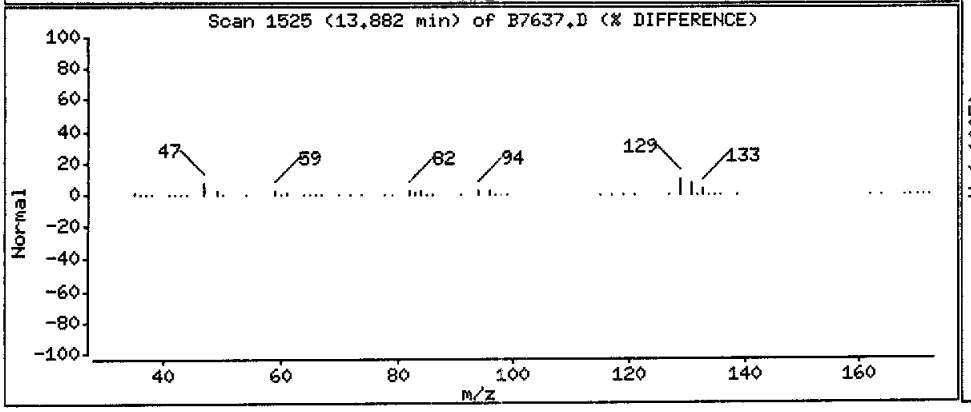
95 Tetrachloroethene

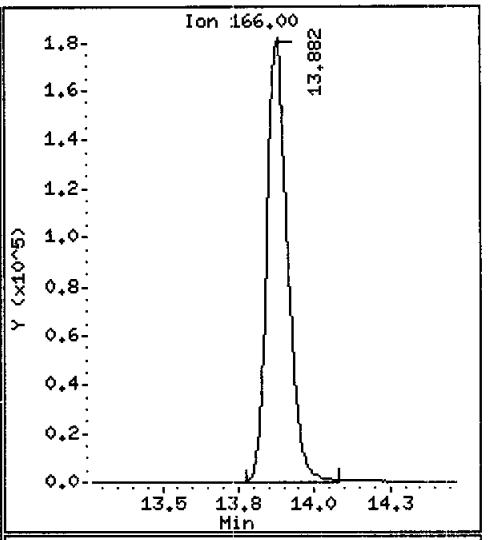
Concentration: 2407 ppbv

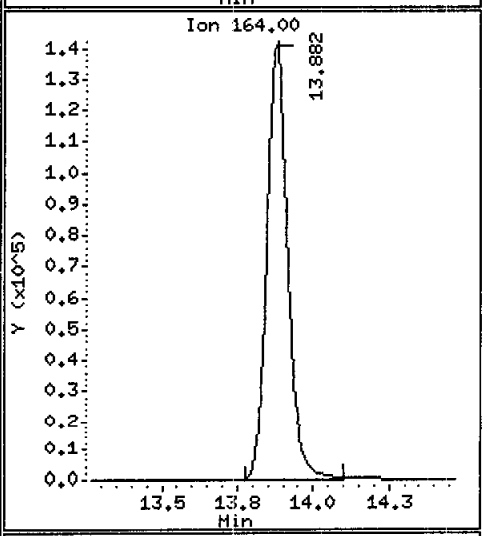


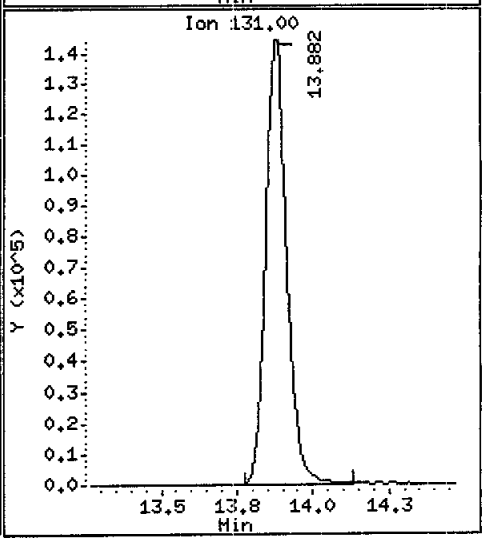












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

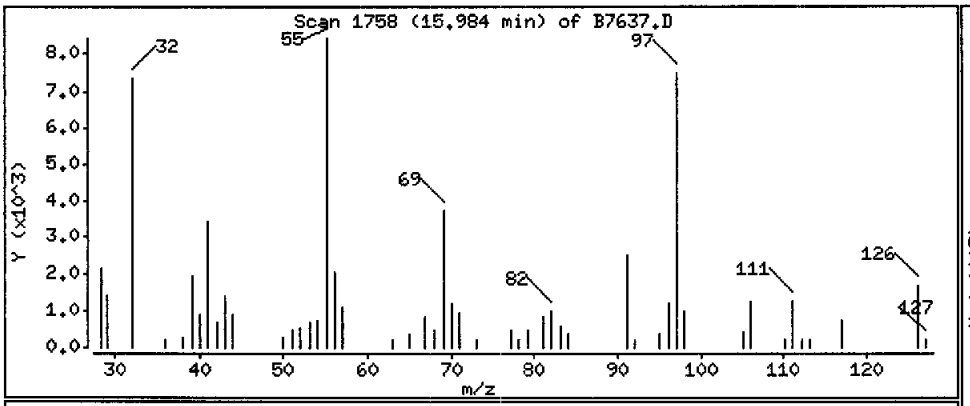
Operator: AA

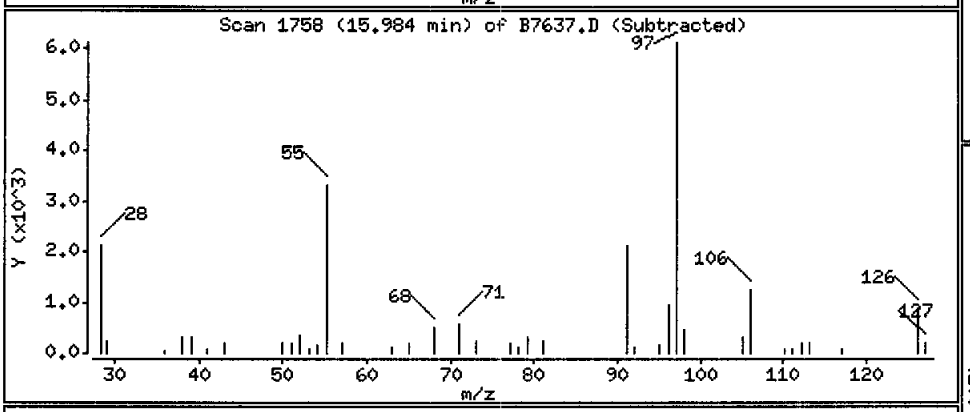
Column phase: J&W DB-624

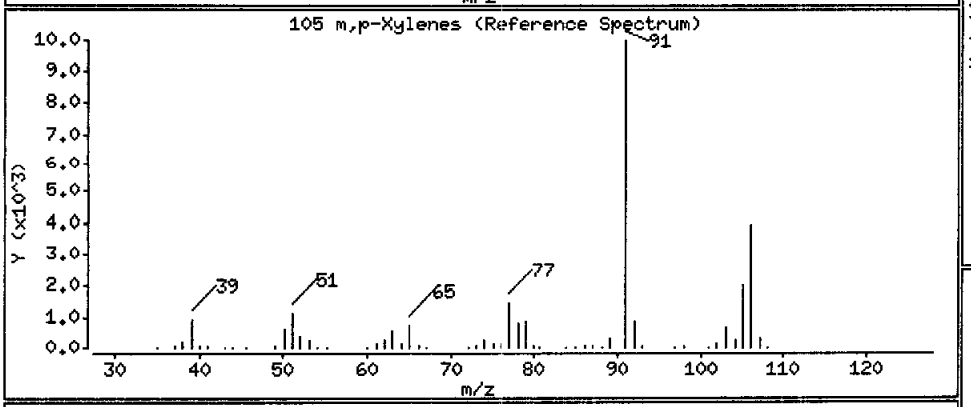
Column diameter: 0.53

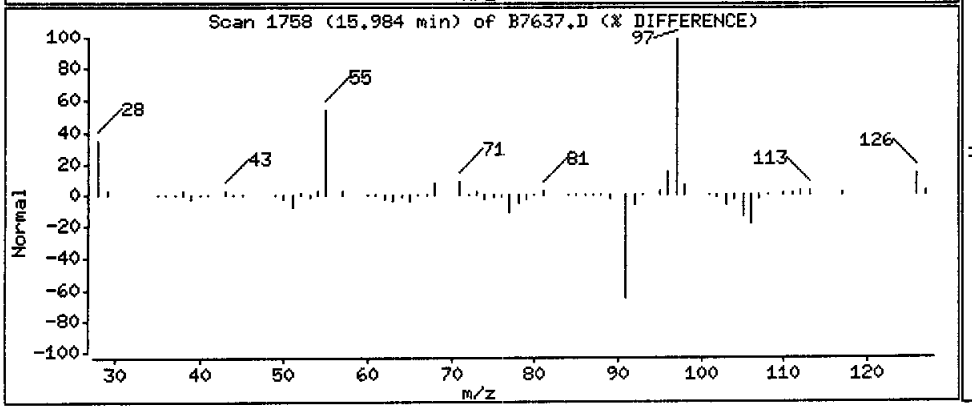
105 m,p-Xylenes

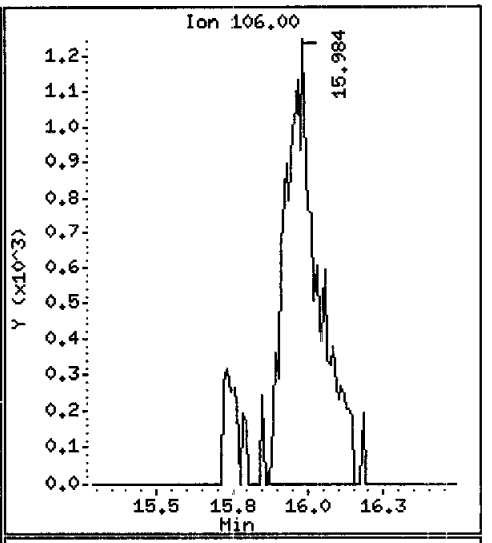
Concentration: 47.73 ppbv

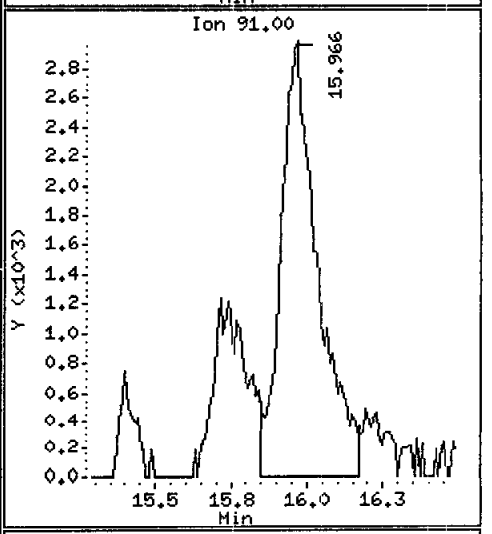


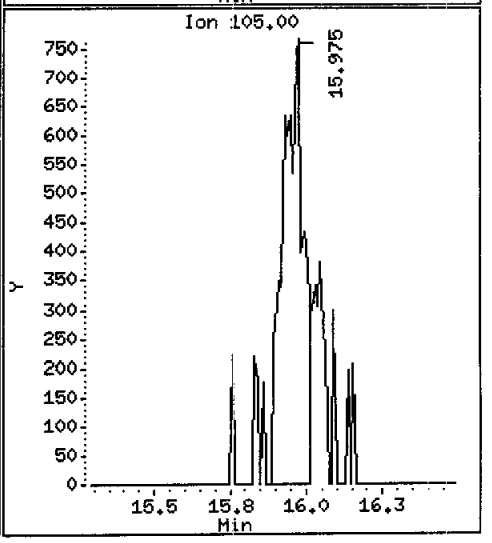












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7637.D

Date : 17-JAN-2005 12:11

Client ID: 066389-001

Instrument: gcmsb.i

Sample Info: G2DKR1AD,066389-001,SANDIA,E5A100233-2

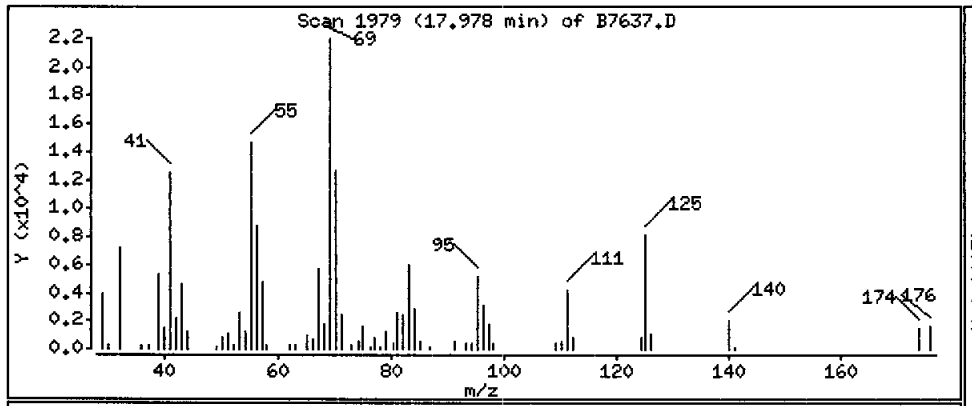
Operator: AA

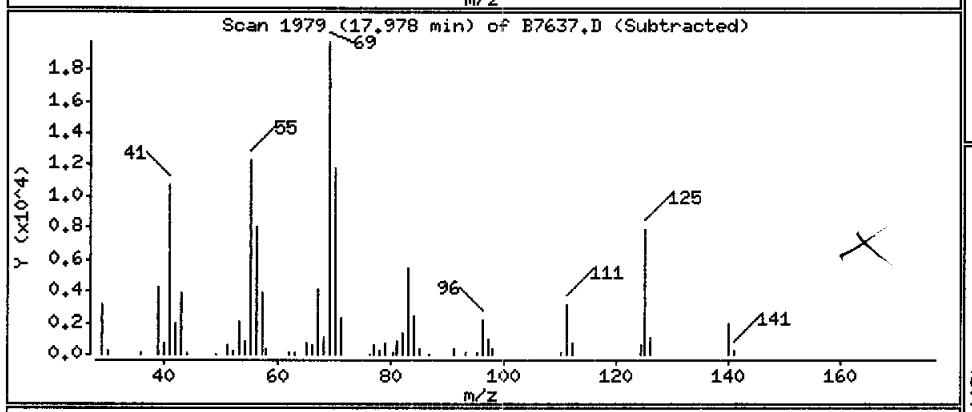
Column phase: J&W DB-624

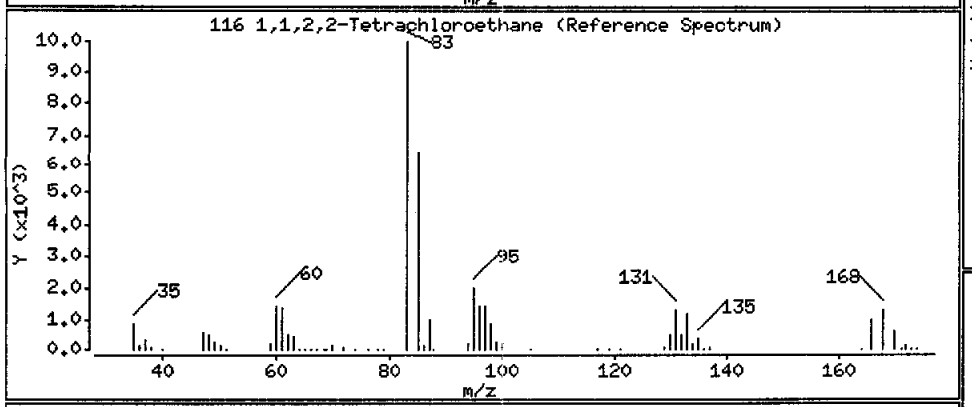
Column diameter: 0.53

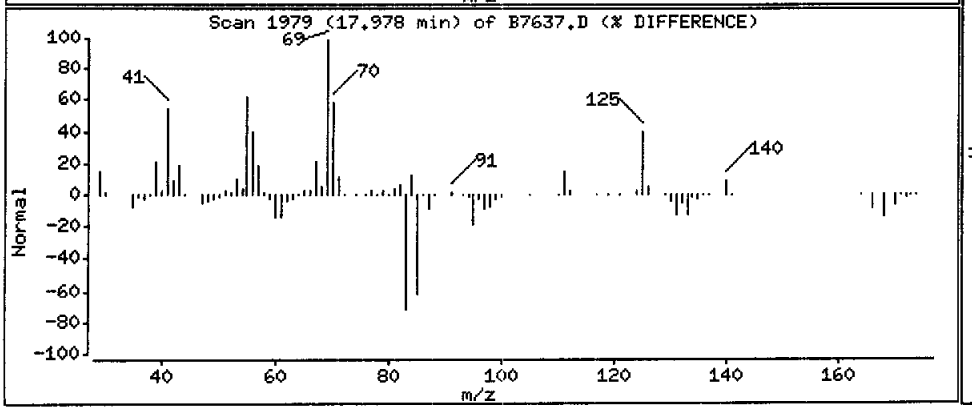
116 1,1,2,2-Tetrachloroethane

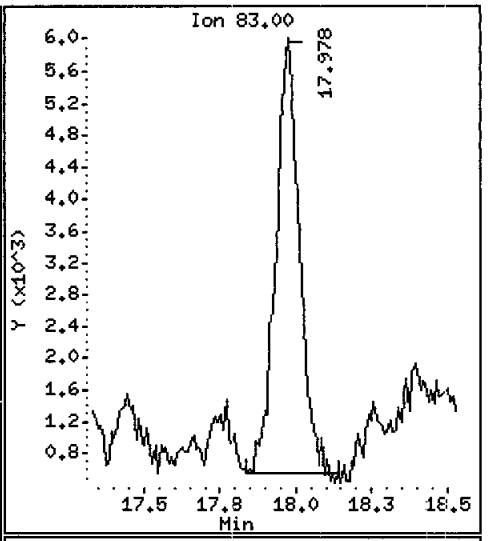
Concentration: 46.91 ppbv

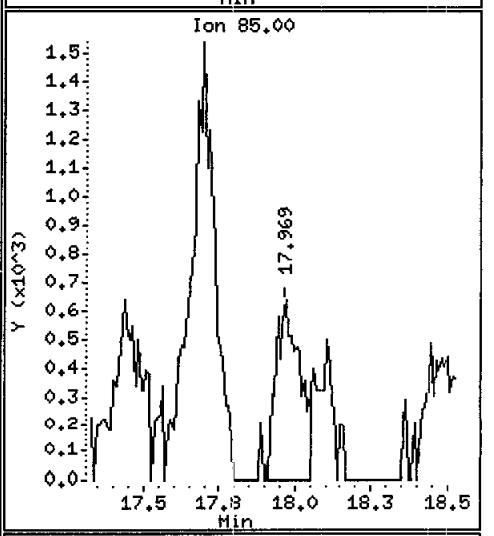


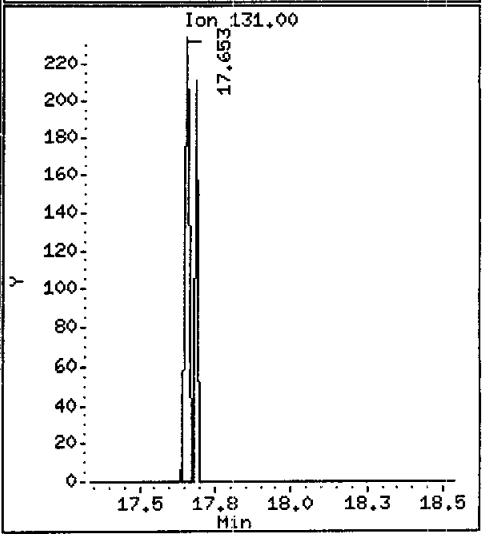












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D
Lab Smp Id: G2DKT1AD Client Smp ID: 066390-001
Inj Date : 17-JAN-2005 12:39
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DKT1AD,066390-001,SANDIA,E5A100233-3
Misc Info : 24.3,12.7,500,100,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.164	2.123	(0.264)	11825983	414.987	3970
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.363	2.357	(0.288)	591284	25.5169	244.1
8 Chloromethane	52	2.381	2.402	(0.290)	7082	5.59882	53.56(Q)
9 Vinyl Chloride	62	2.588	2.592	(0.315)	89955	16.3849	156.8
16 Chloroethane	64	3.247	3.304	(0.396)	3893	1.11964	10.71(aQ)
21 Trichlorofluoromethane (F11)	101	3.680	3.756	(0.448)	1460367	50.8312	486.3
28 1,1-Dichloroethene	61	4.582	4.685	(0.558)	4230404	277.607	2656
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.636	4.739	(0.565)	7758968	235.055	2249
31 Acetone	58	4.636	4.847	(0.565)	26402	12.2205	116.9(Q)
37 Methylene Chloride	49	5.466	5.587	(0.666)	1337172	142.111	1360
41 trans-1,2-Dichloroethene	61	6.008	6.102	(0.732)	16629	1.25419	12.00(a)
44 1,1-Dichloroethane	63	6.730	6.850	(0.820)	1183865	70.8951	678.2
53 cis-1,2-Dichloroethene	96	7.830	7.906	(0.954)	16348	1.89447	18.12(a)
* 58 Bromochloromethane	49	8.209	8.321	(1.000)	675125	50.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	60 Chloroform	83	8.381	8.484	(1.021)	19525	0.90906	8.697(a)
	61 1,1,1-Trichloroethane	97	8.687	8.781	(1.058)	159555	7.43040	71.09
	64 Carbon Tetrachloride	117	8.678	9.079	(1.057)	19768	1.38544	13.25(a)
$	66 1,2-Dichloroethane-d4	65	9.247	9.341	(0.919)	554232	45.7672	437.8
	68 Benzene	78	9.364	9.440	(0.931)	55400	2.75899	26.40
*	73 1,4-Difluorobenzene	114	10.059	10.144	(1.000)	1475621	50.0000	
	75 Trichloroethene	130	10.510	10.586	(1.045)	3425435	265.860	2543
$	88 Toluene-d8	100	12.712	12.751	(1.264)	777180	50.2979	481.2
	89 Toluene	91	12.829	12.878	(1.275)	253762	9.76671	93.44
	93 1,1,2-Trichloroethane	97	13.848	13.608	(0.900)	12659	1.02005	9.759(aQ)
	95 Tetrachloroethene	166	13.830	13.870	(0.899)	1431181	83.0873	794.9
M	99 Xylenes (total)	106				15484	1.70505	16.31(a)
*	101 Chlorobenzene-d5	117	15.382	15.404	(1.000)	1100195	50.0000	
	104 Ethylbenzene	91	15.689	15.675	(1.020)	21742	0.69526	6.651(a)
	105 m,p-Xylenes	106	15.924	15.891	(1.035)	15484	1.70505	16.31(a)
$	114 4-Bromofluorobenzene	95	17.638	17.651	(1.147)	957319	48.7097	466.0
	116 1,1,2,2-Tetrachloroethane	83	17.963	17.930	(1.168)	15140	0.50806	4.860(aQ)

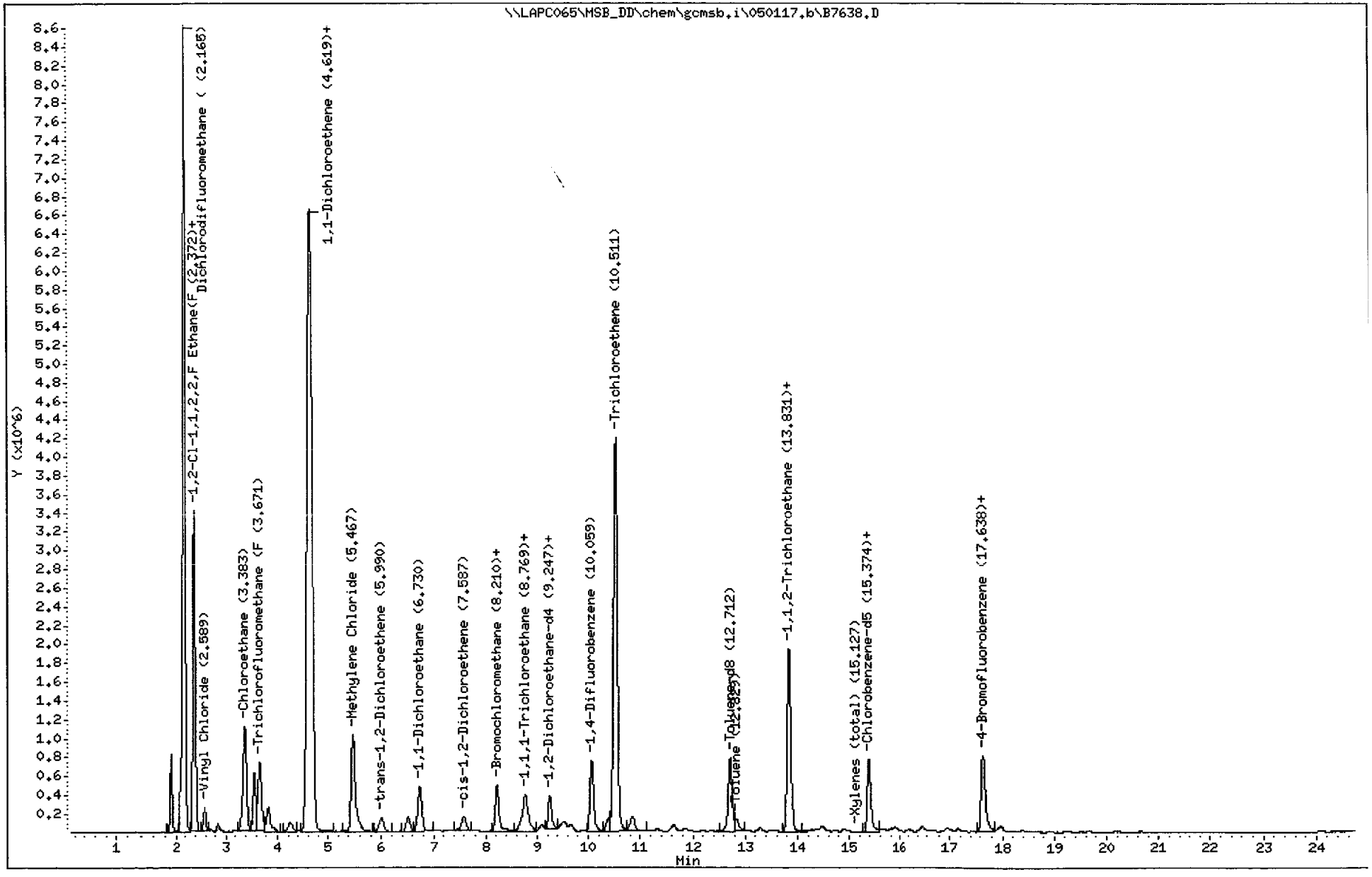
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D
Date : 17-JAN-2005 12:39
Client ID: 066390-001
Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

Instrument: gcmsb.i
Operator: AA
Column diameter: 0.53

Column phase: J&W DB-624



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

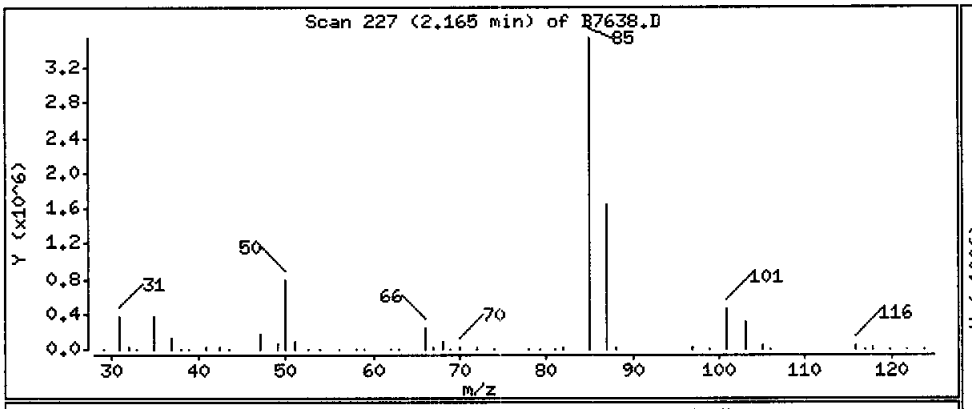
Operator: AA

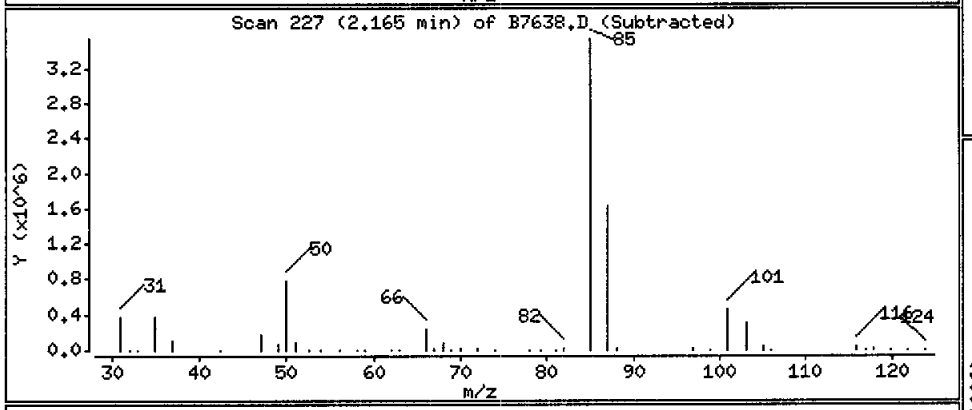
Column phase: J&W DB-624

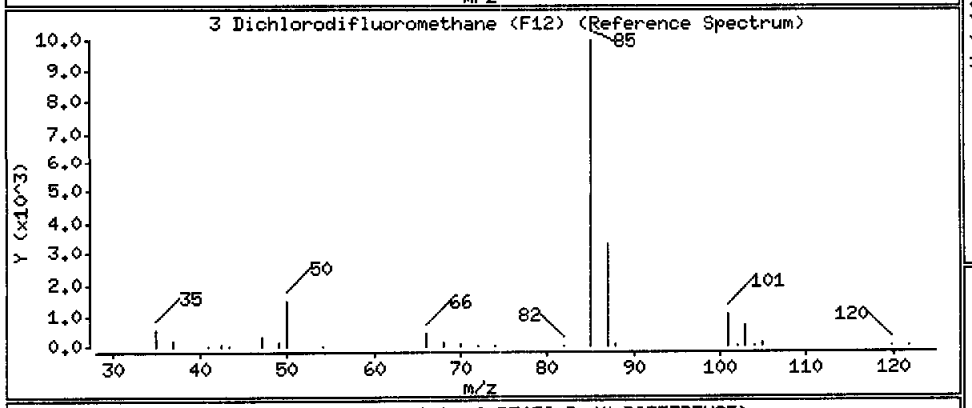
Column diameter: 0.53

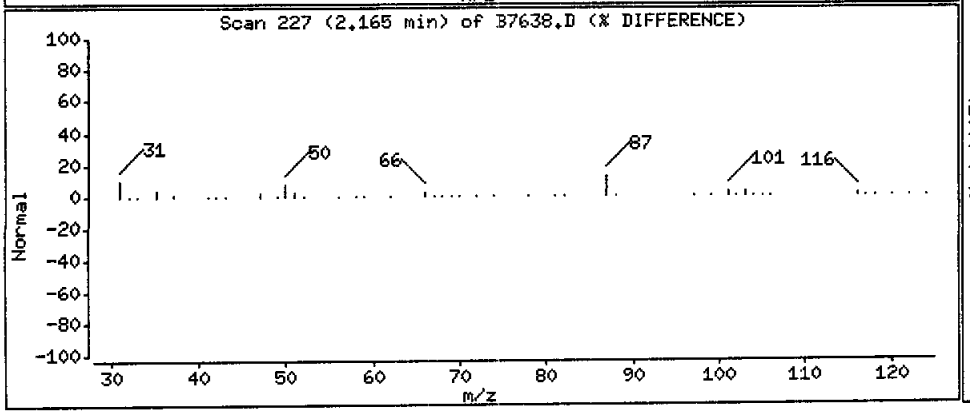
3 Dichlorodifluoromethane (F12)

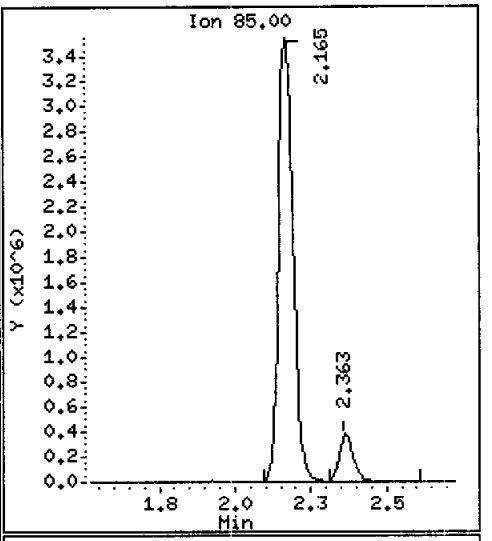
Concentration: 3970 ppbv

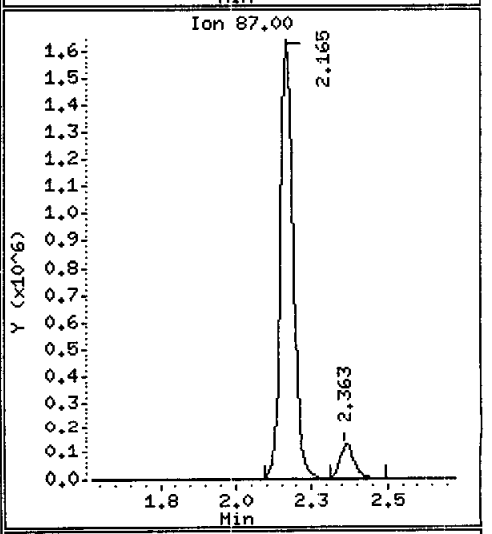


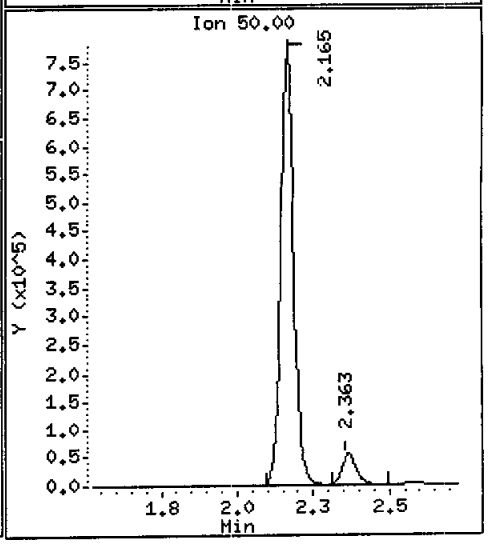












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

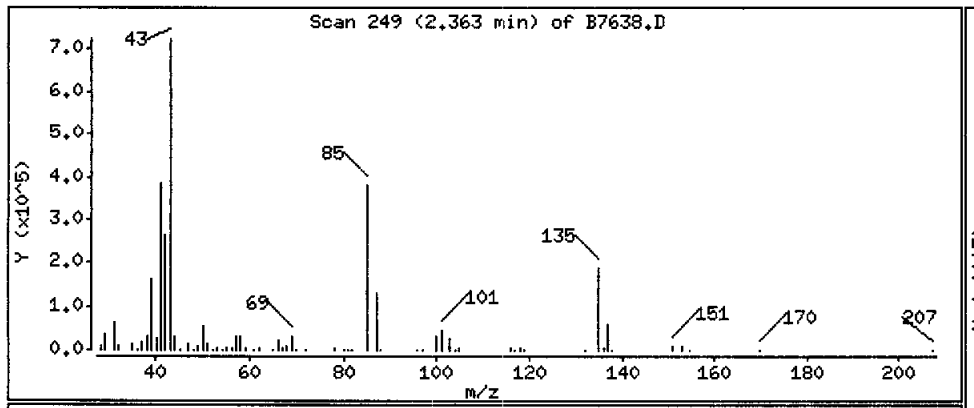
Operator: AA

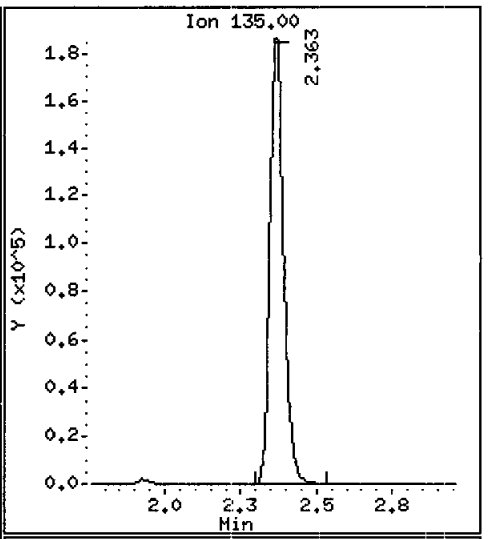
Column phase: J&W DB-624

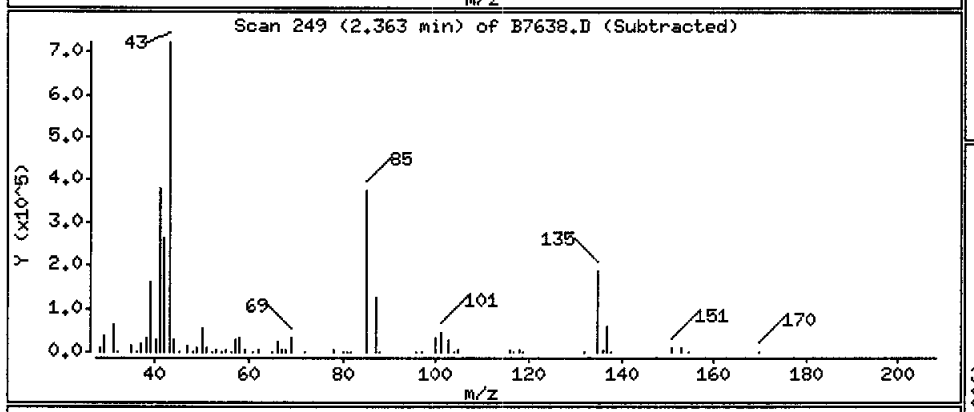
Column diameter: 0.53

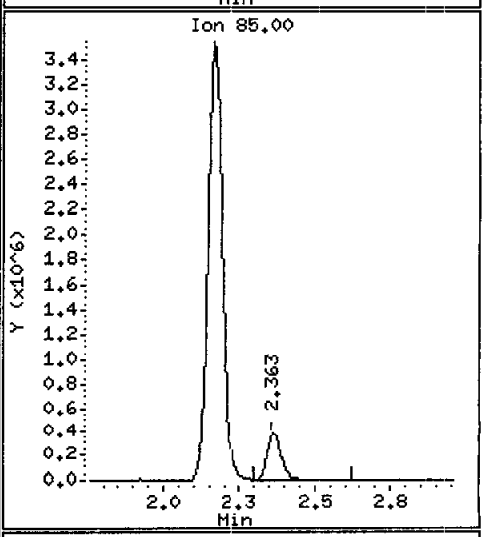
5 1,2-Cl-1,1,2,2,F Ethane(F114)

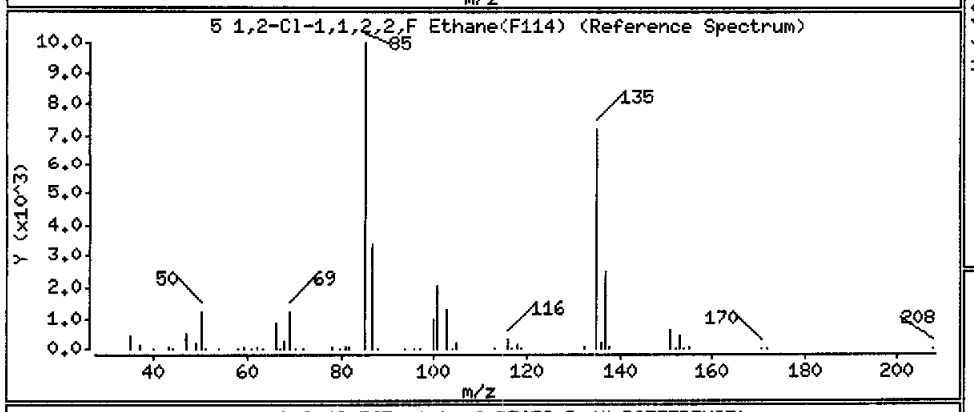
Concentration: 244.1 ppbv

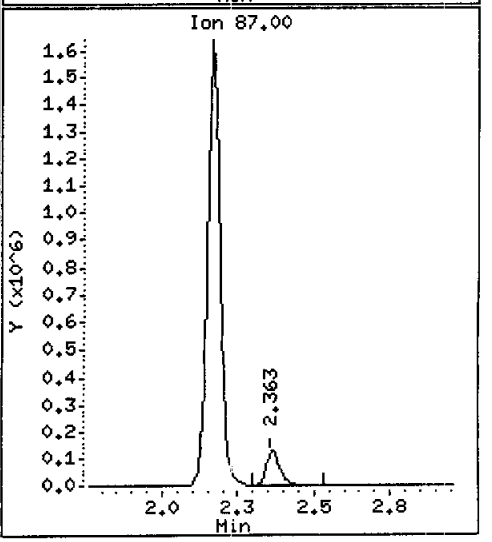


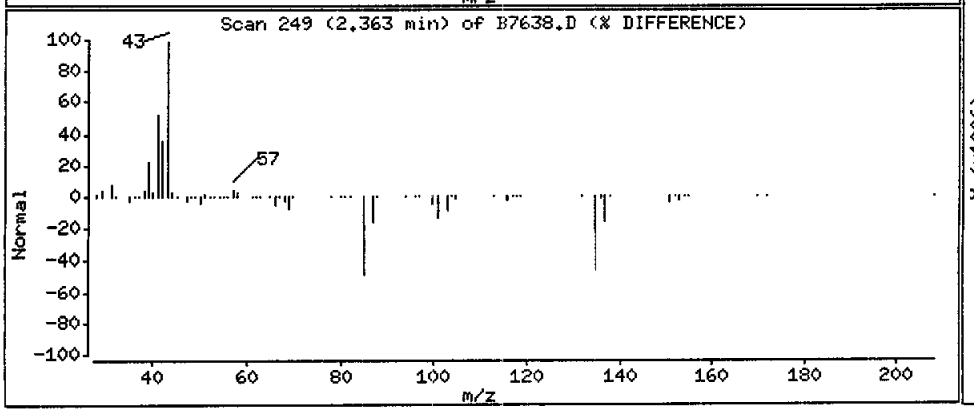












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

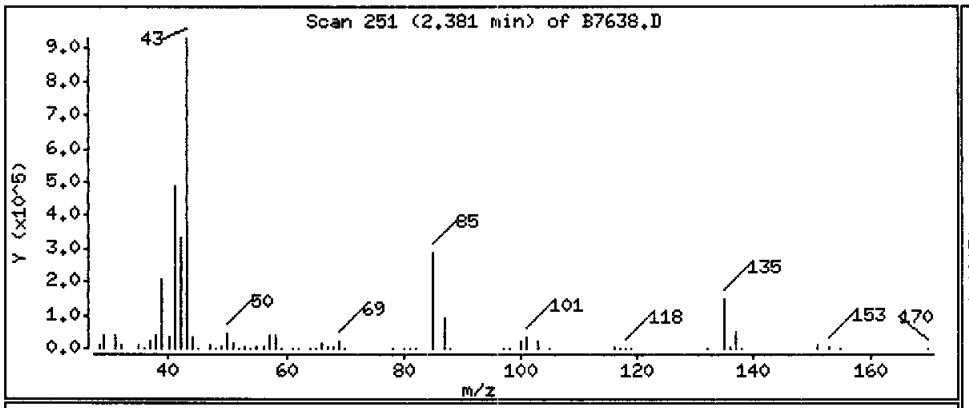
Operator: AA

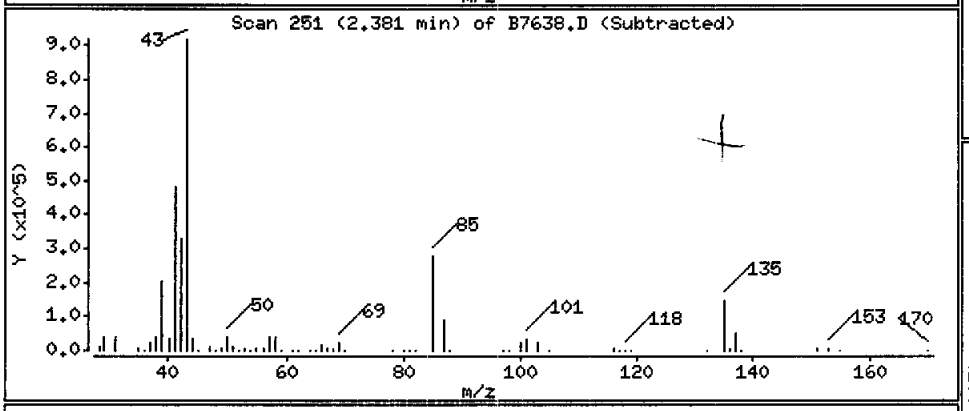
Column phase: J&W DB-624

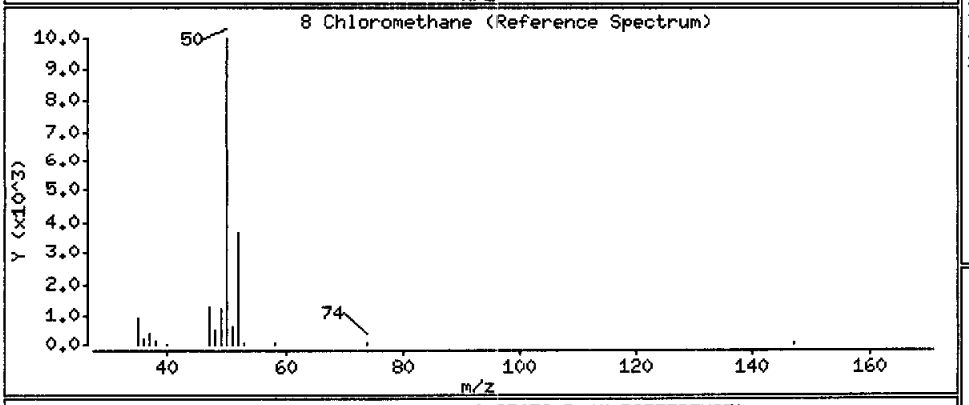
Column diameter: 0.53

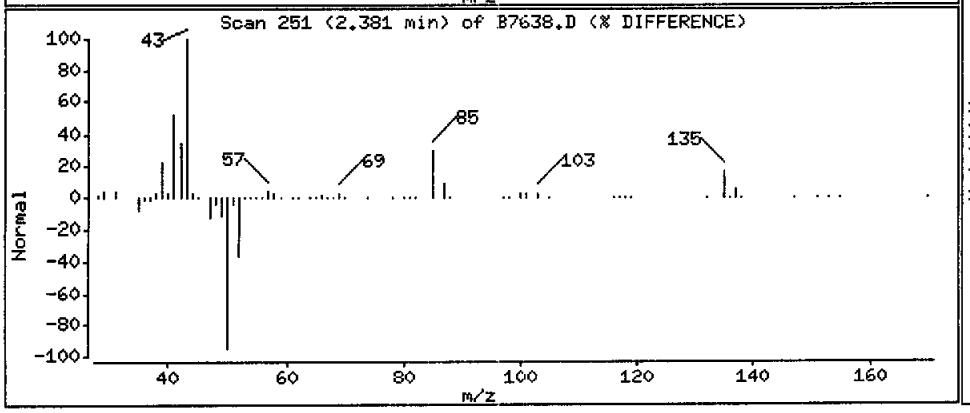
8 Chloromethane

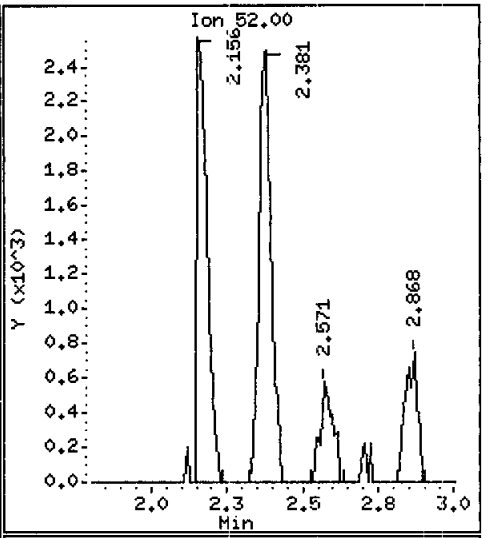
Concentration: 53.56 ppbv

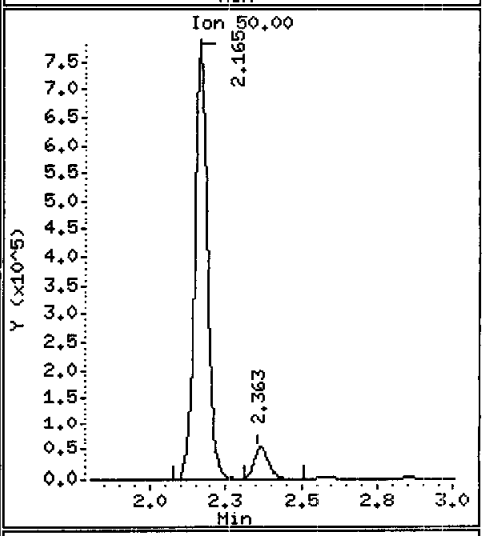


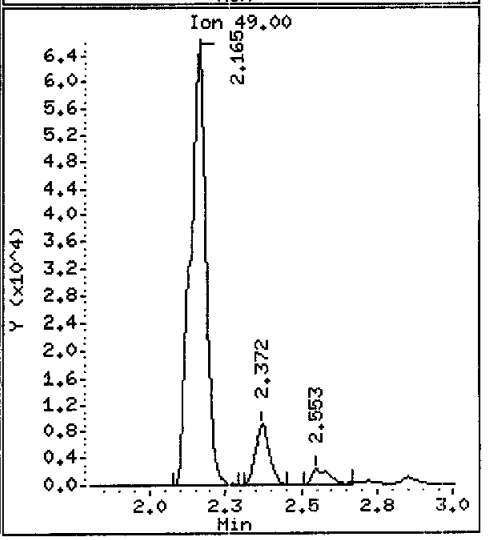












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

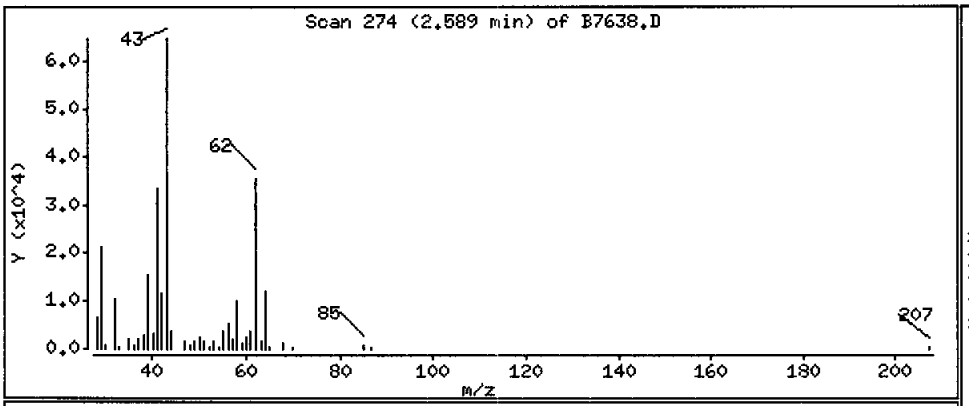
Operator: AA

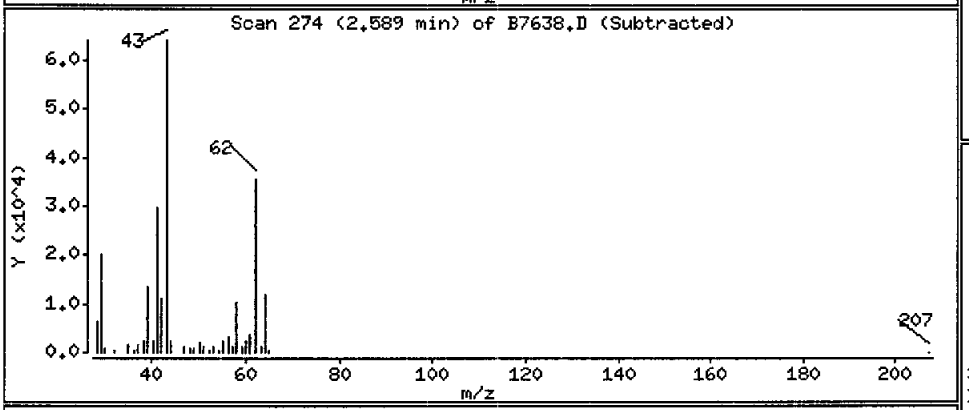
Column phase: J&W DB-624

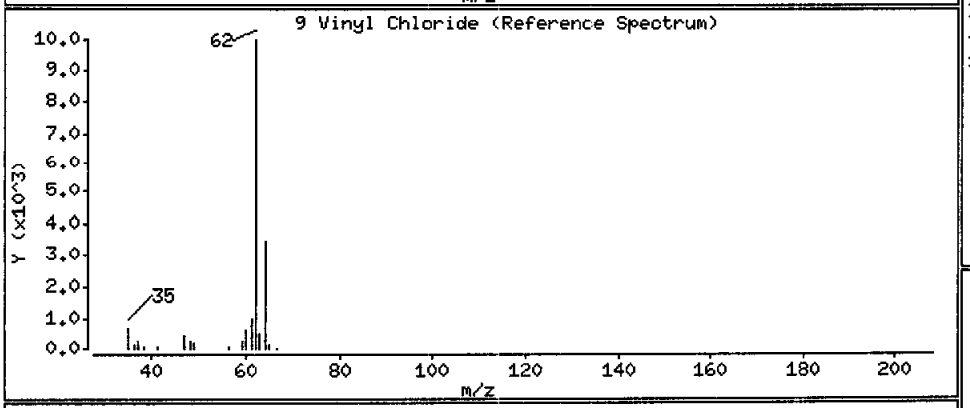
Column diameter: 0.53

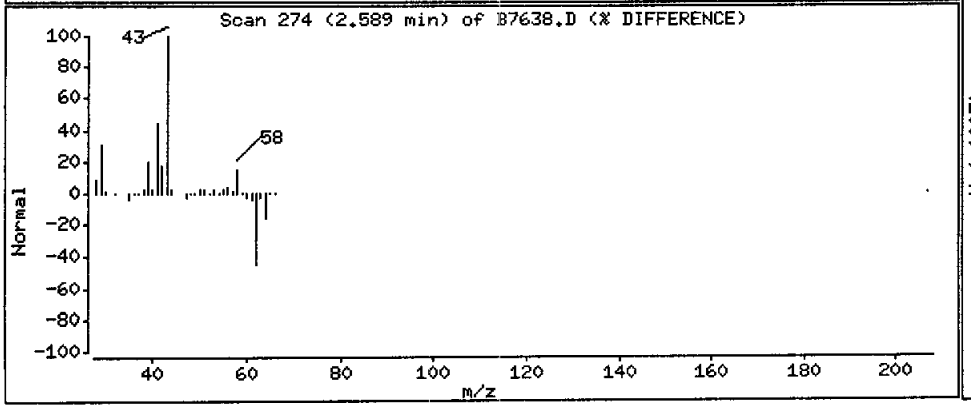
9 Vinyl Chloride

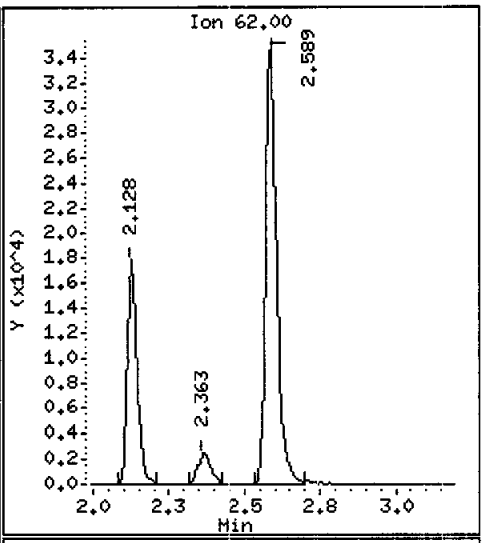
Concentration: 156.8 ppbv

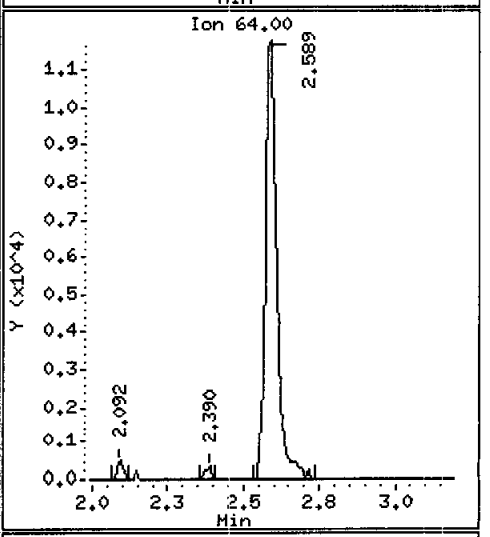


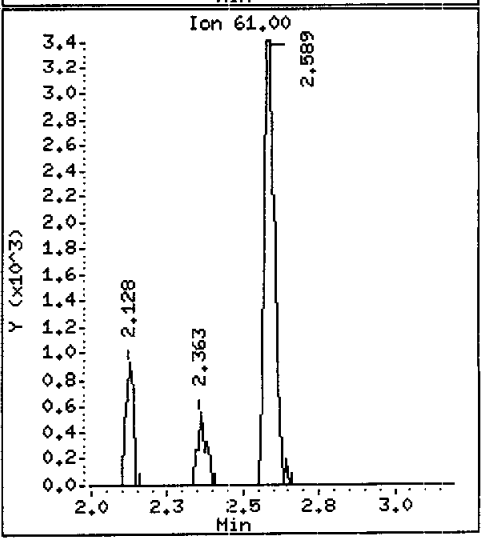












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

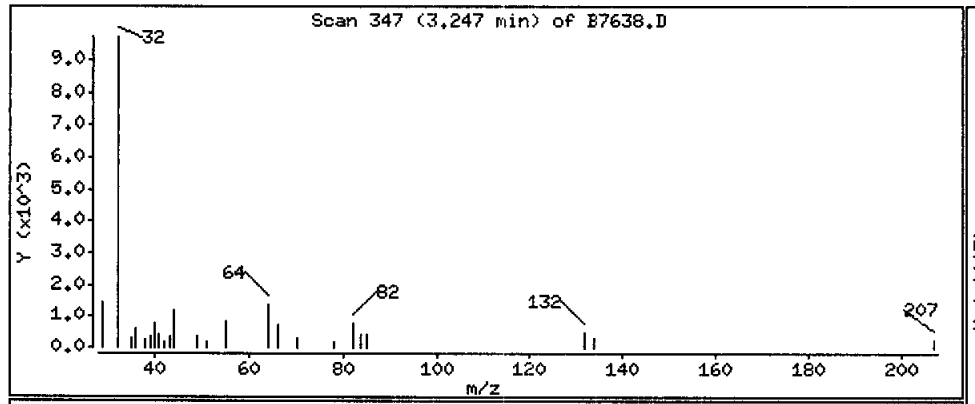
Operator: AA

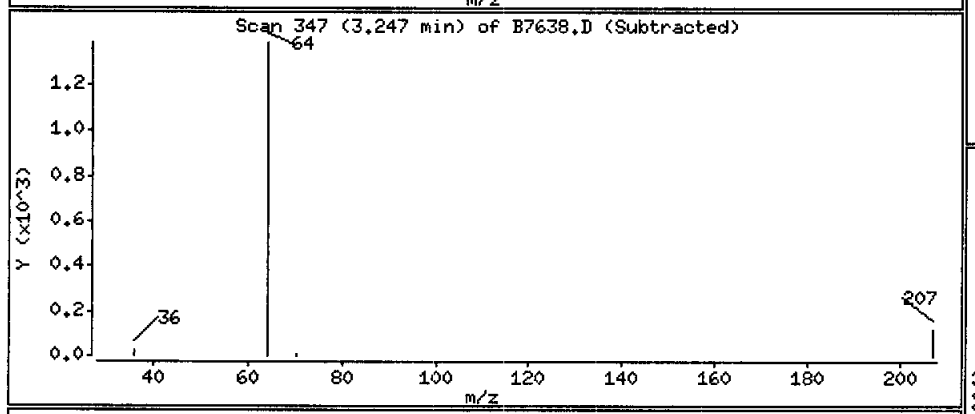
Column phase: J&W DB-624

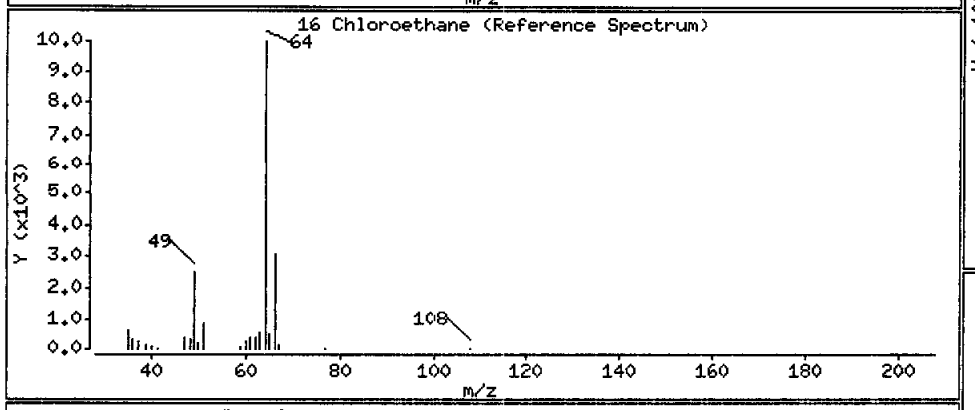
Column diameter: 0.53

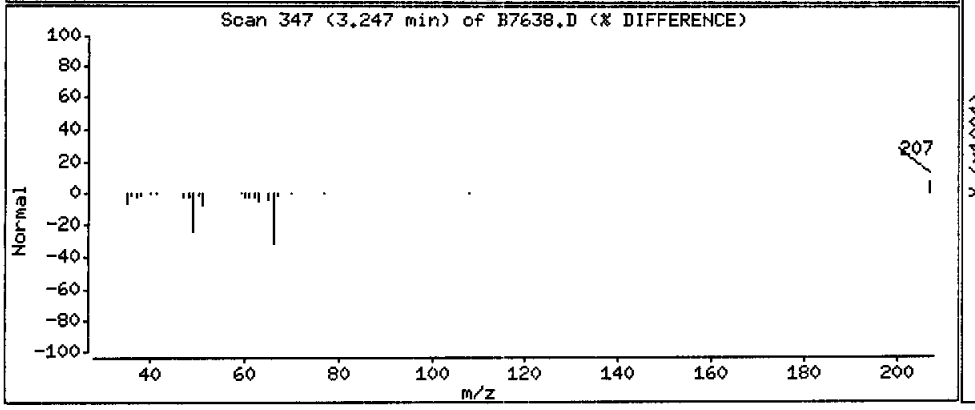
16 Chloroethane

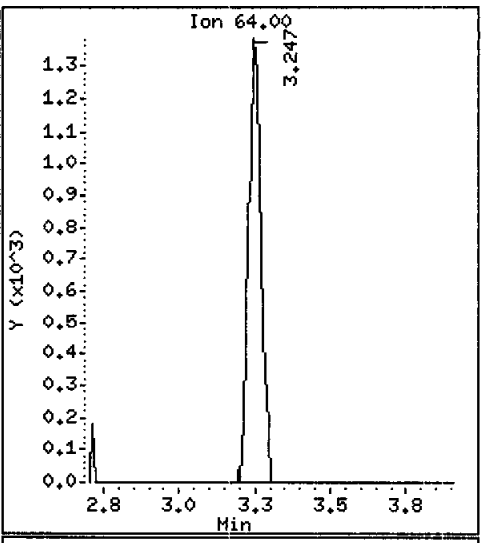
Concentration: 10.71 ppbv

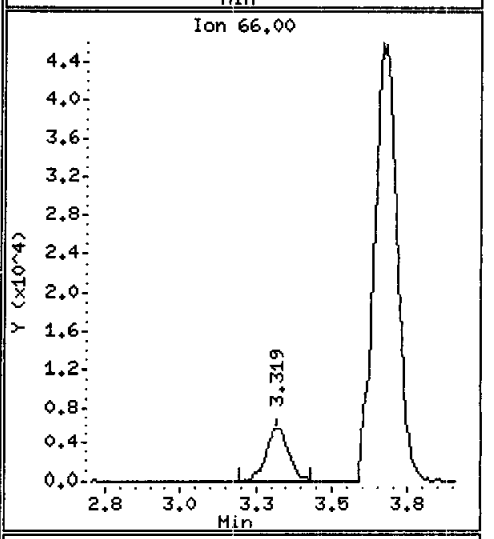


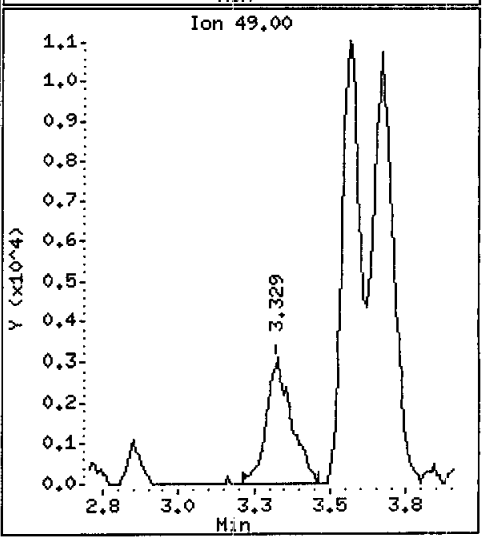












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Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

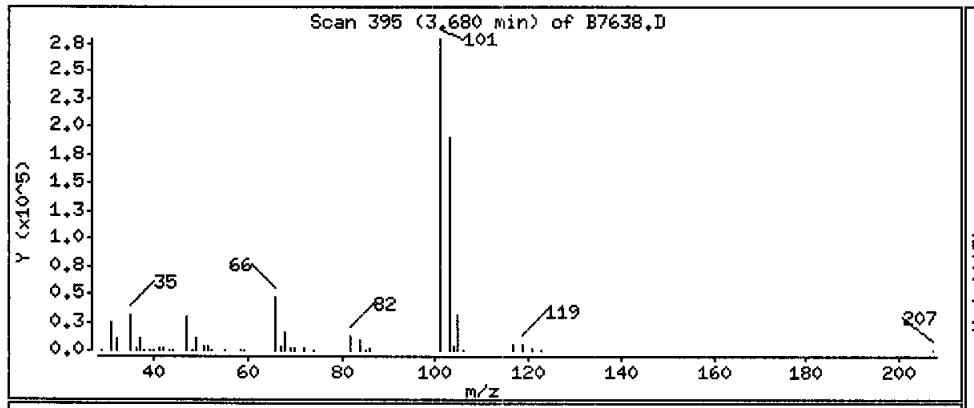
Operator: AA

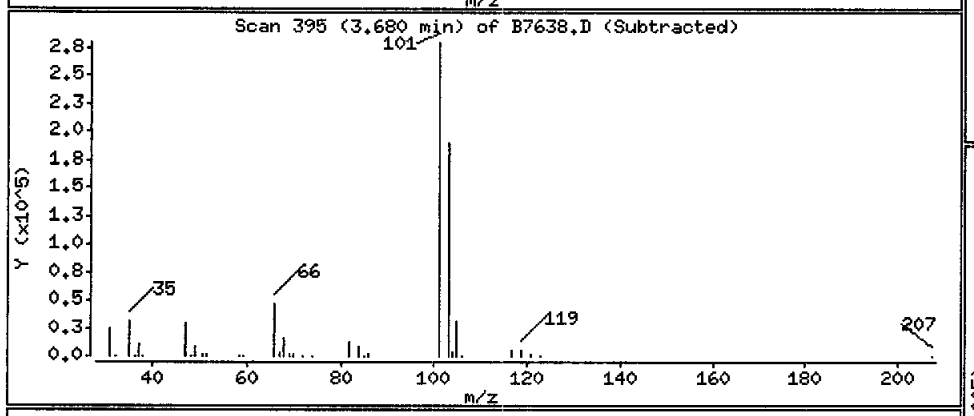
Column phase: J&W DB-624

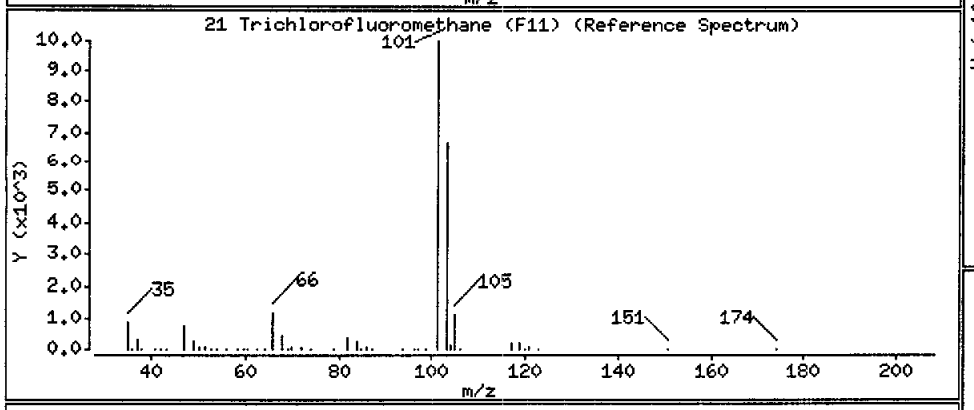
Column diameter: 0.53

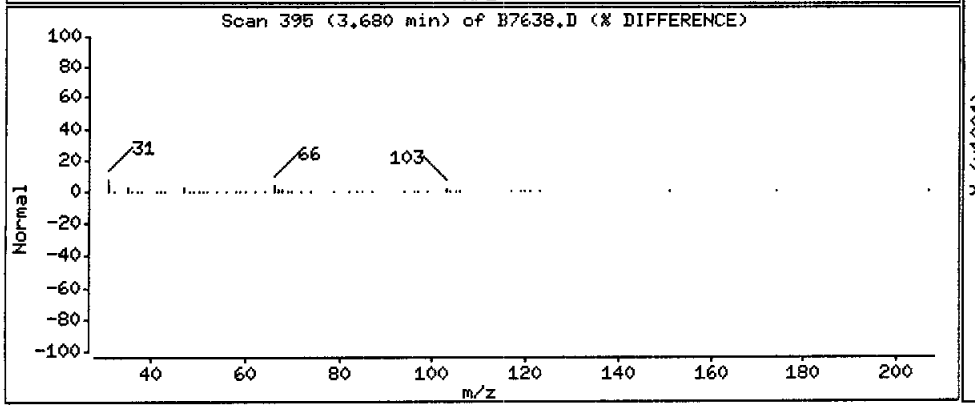
21 Trichlorofluoromethane (F11)

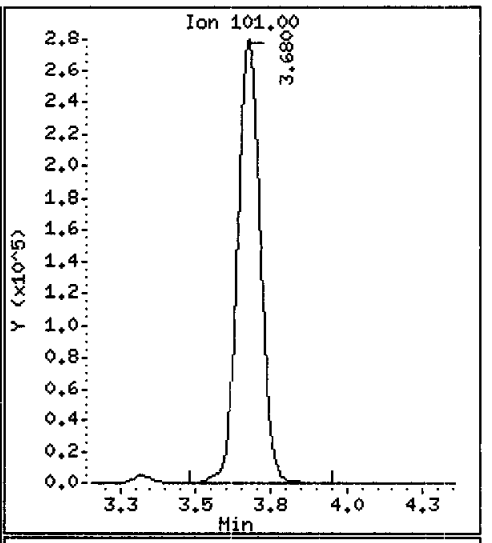
Concentration: 486.3 ppbv

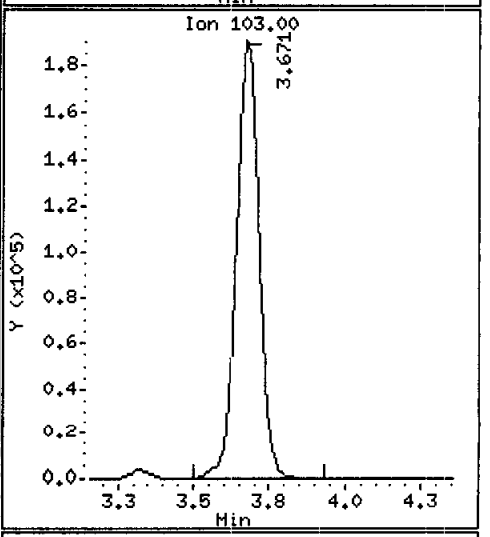


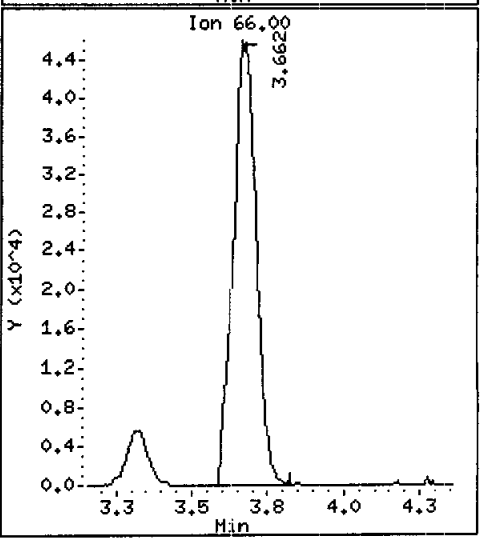












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

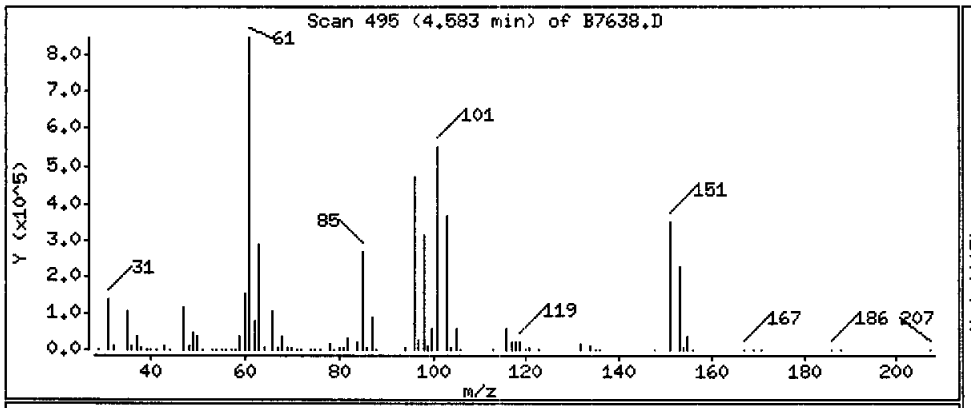
Operator: AA

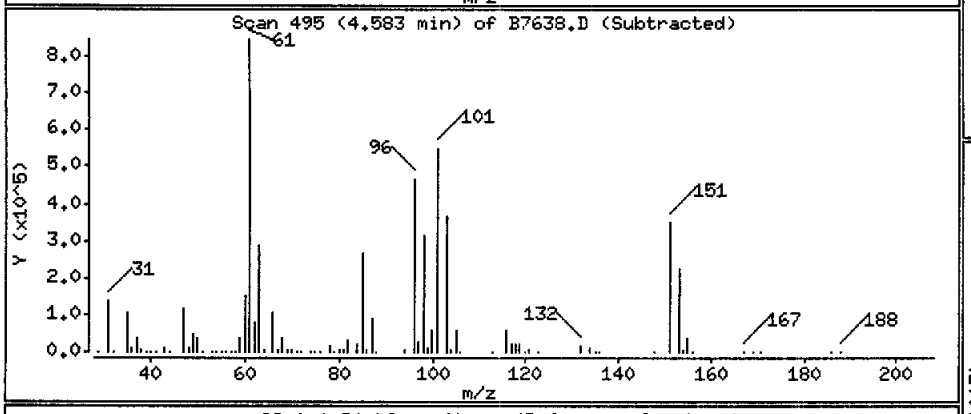
Column phase: J&W DB-624

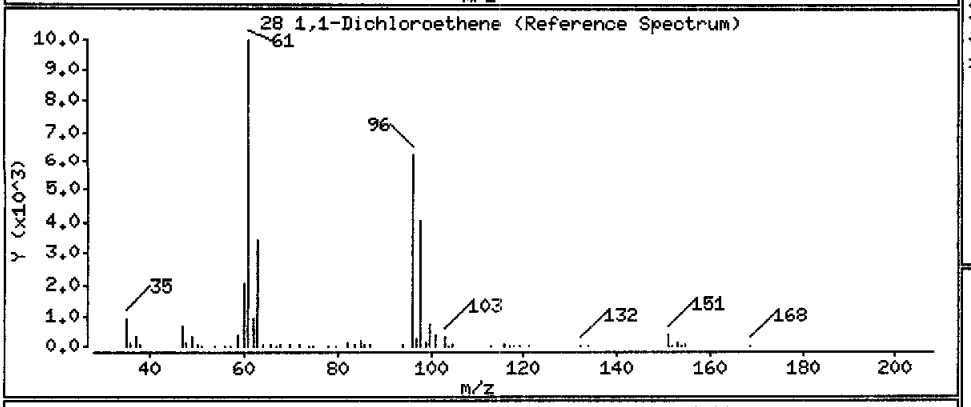
Column diameter: 0.53

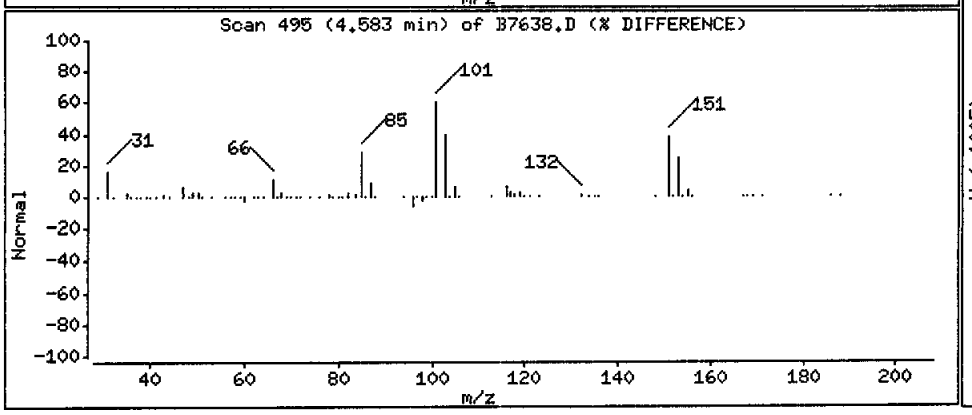
28 1,1-Dichloroethene

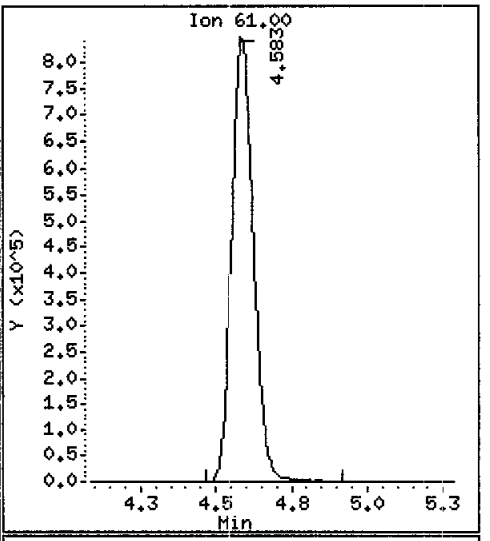
Concentration: 2656 ppbv

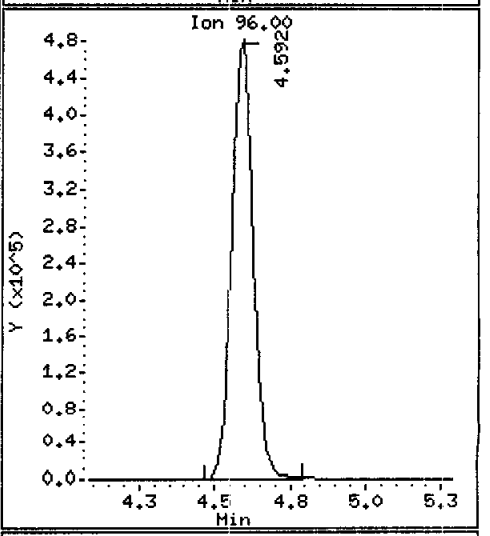


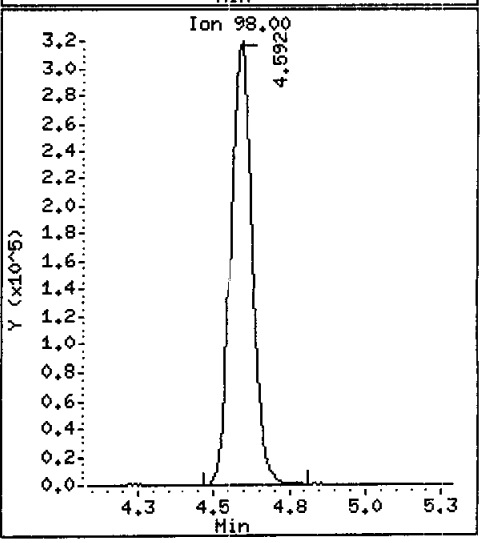












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

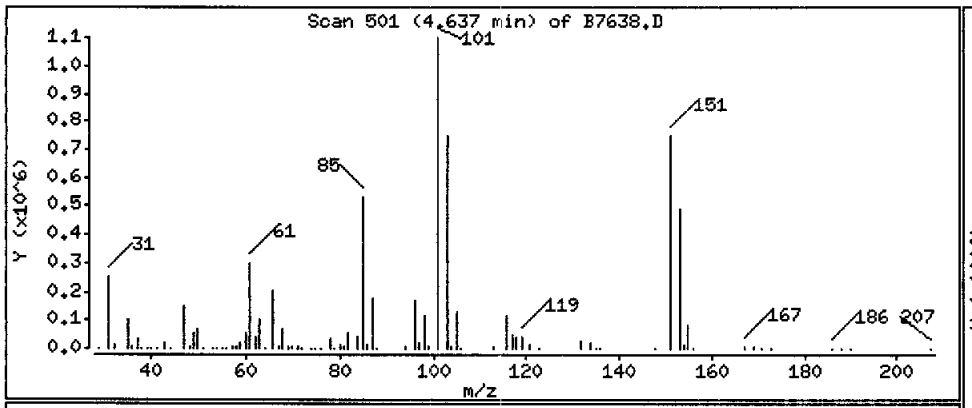
Operator: AA

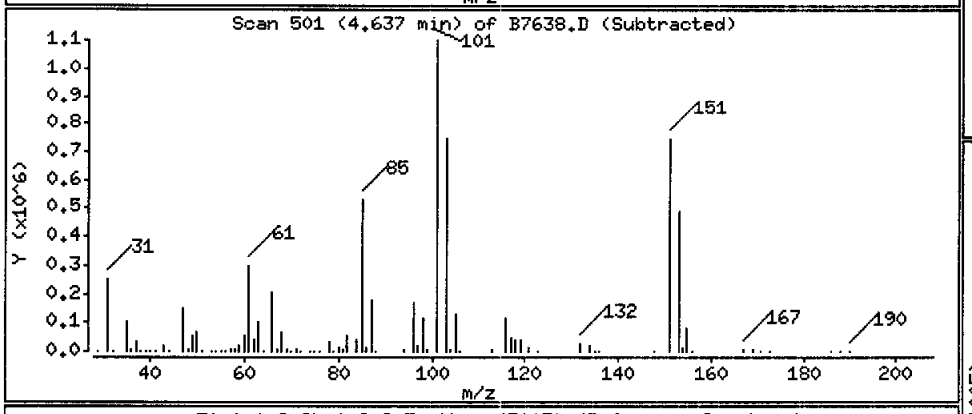
Column phase: J&W DB-624

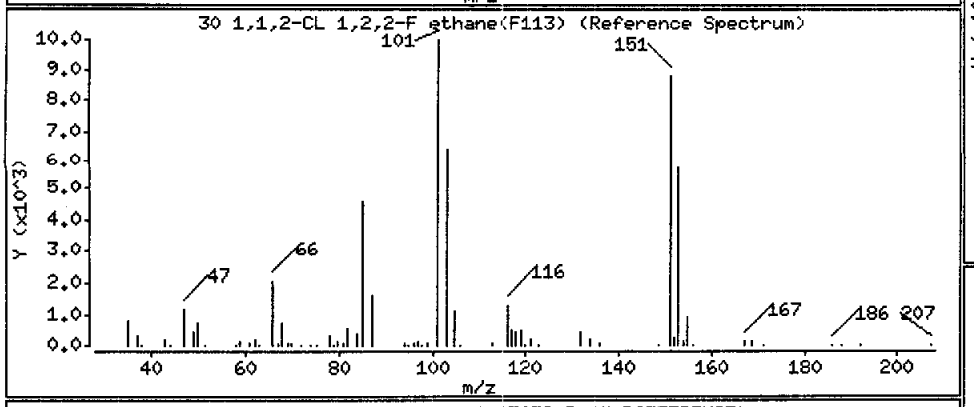
Column diameter: 0.53

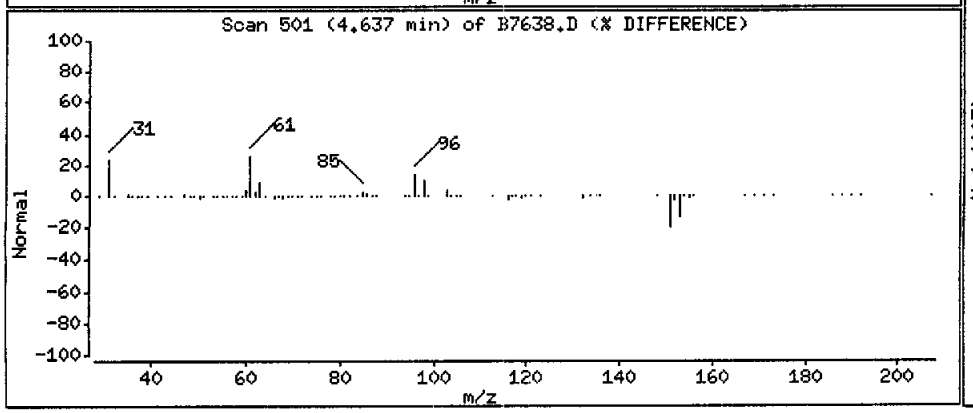
30 1,1,2-CL 1,2,2-F ethane(F113)

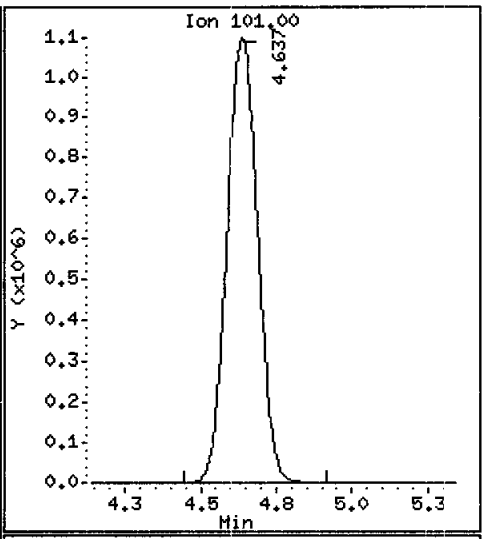
Concentration: 2249 ppbv

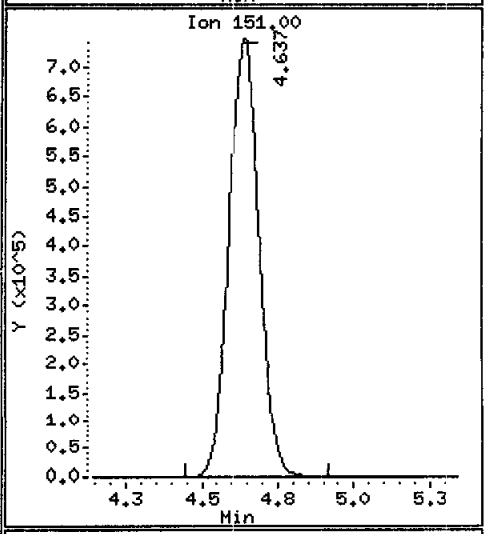


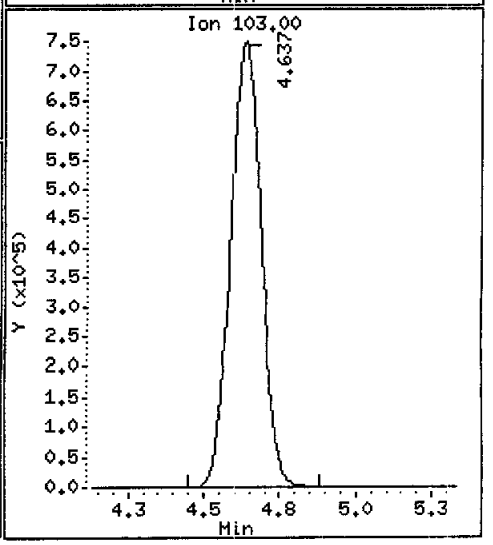












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

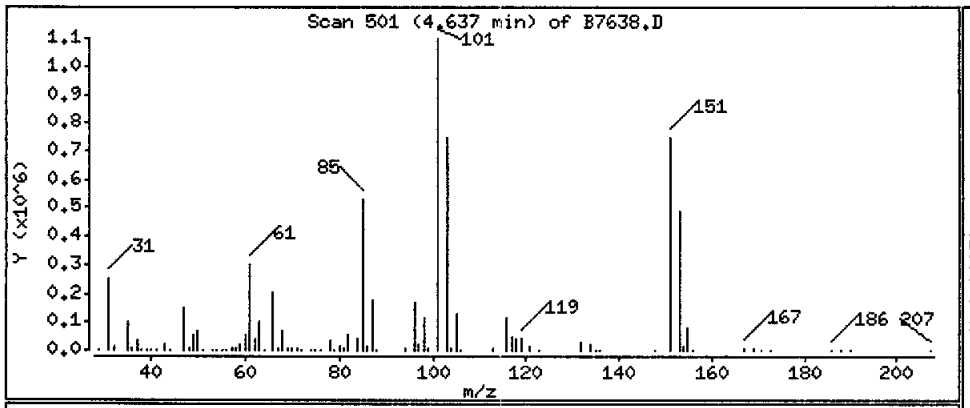
Client ID: 066390-001 Instrument: gcmsb.i

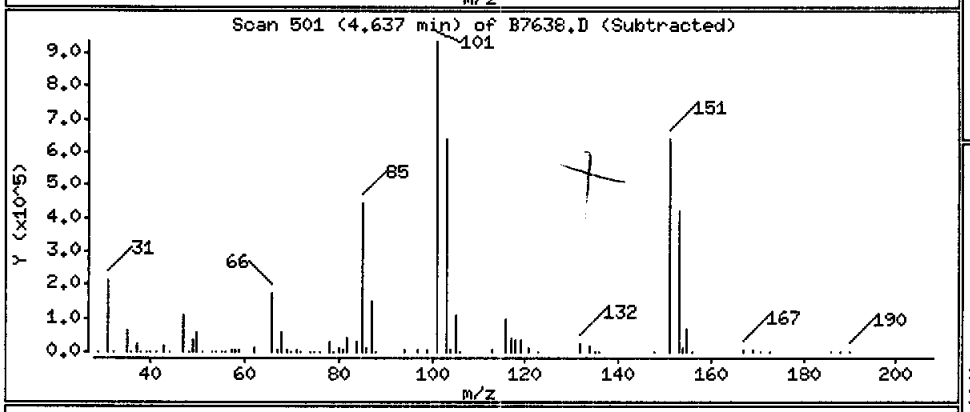
Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

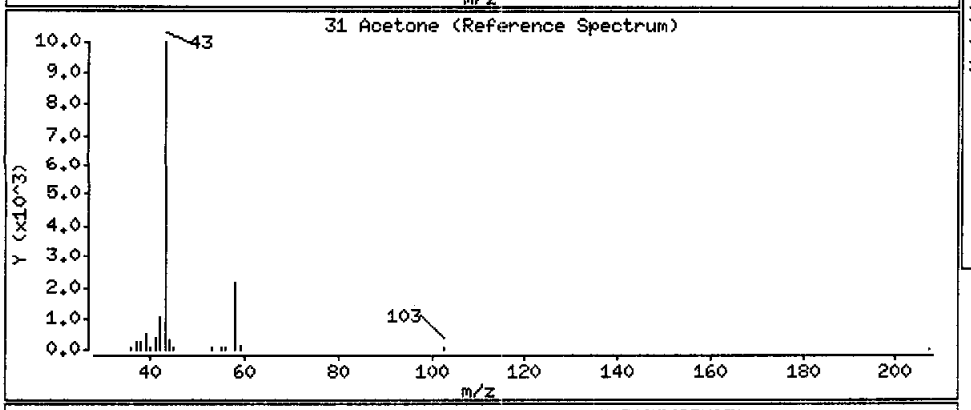
Operator: AA

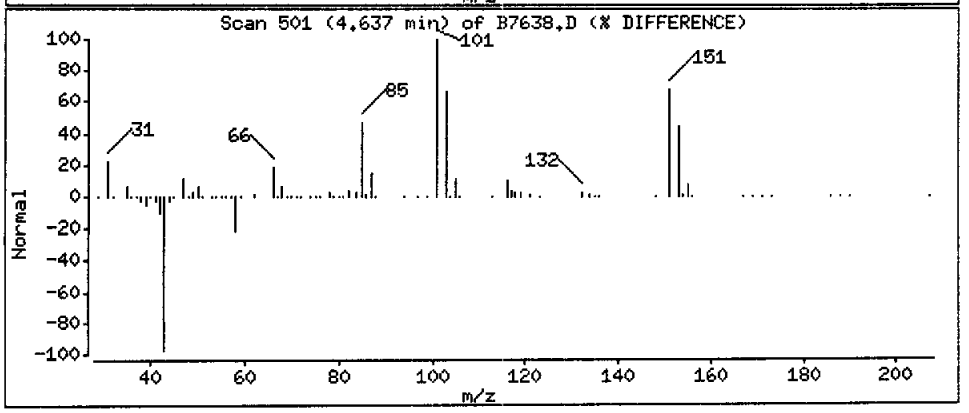
Column phase: J&W DB-624 Column diameter: 0.53

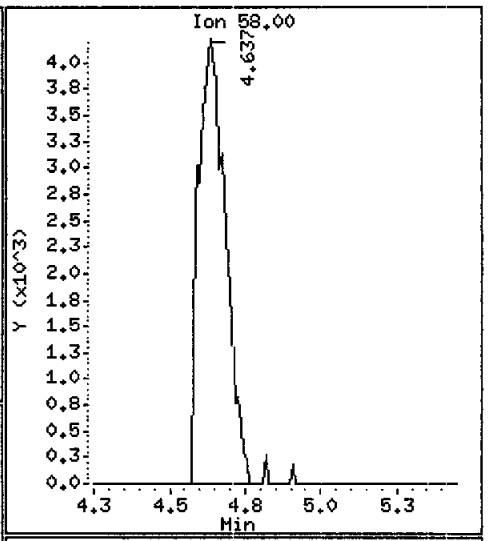
31 Acetone Concentration: 116.9 ppbv

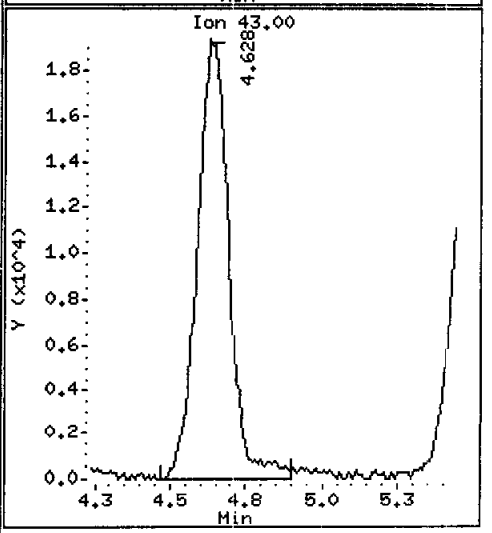












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Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

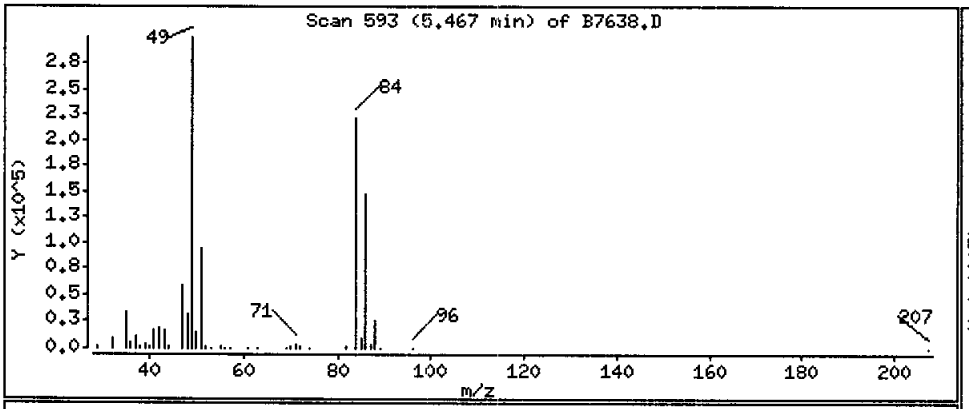
Operator: AA

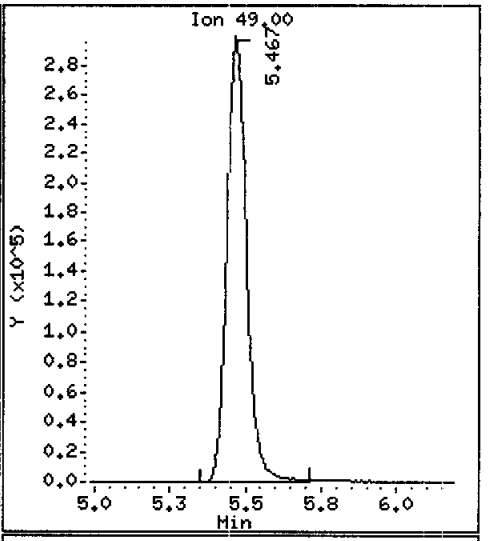
Column phase: J&W DB-624

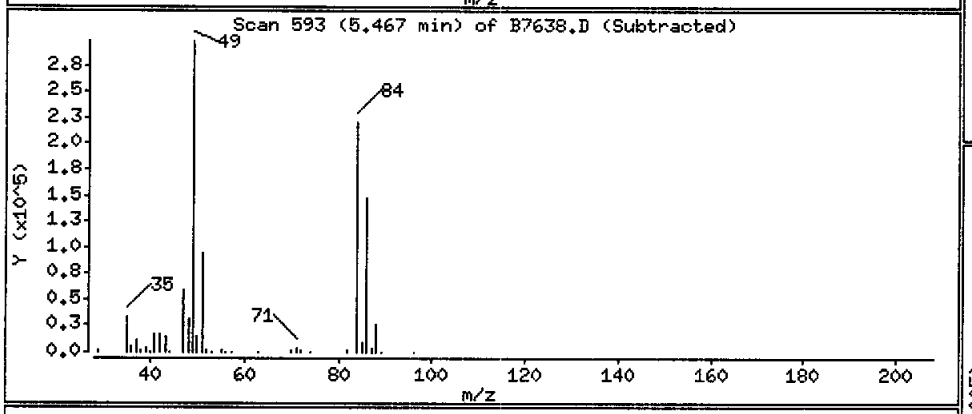
Column diameter: 0.53

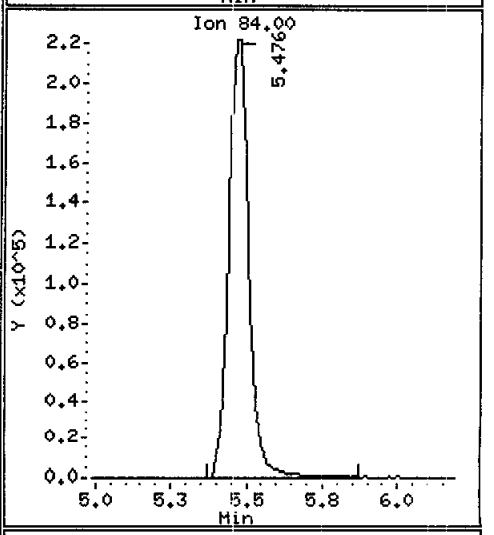
37 Methylene Chloride

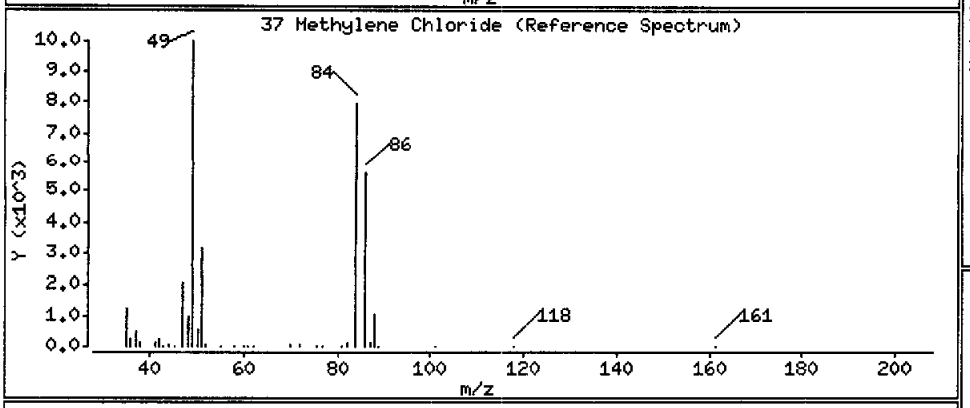
Concentration: 1360 ppbv

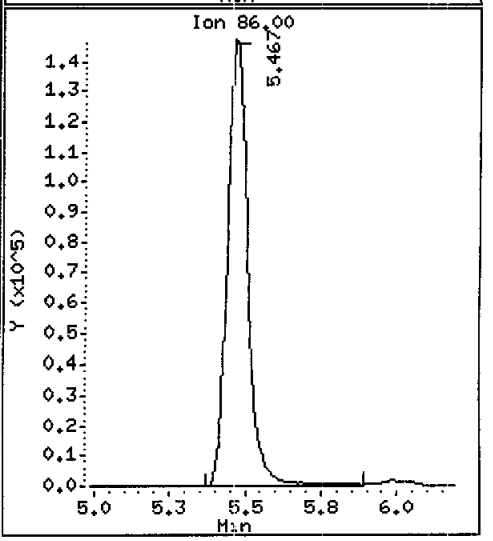


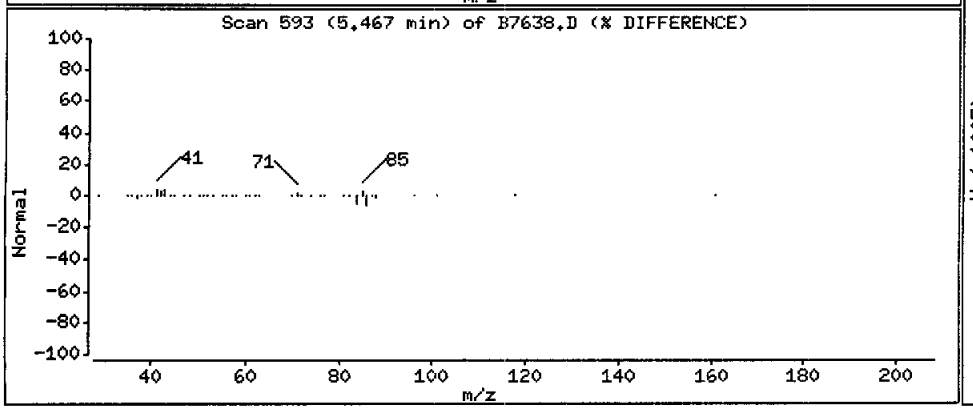












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

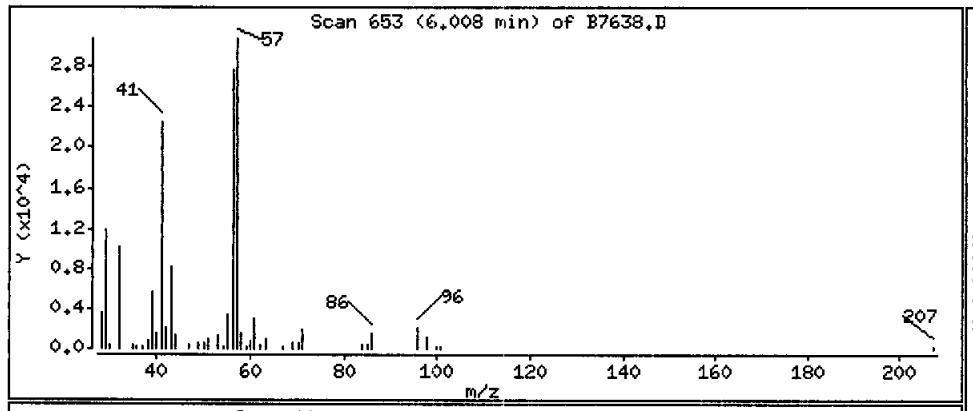
Operator: AA

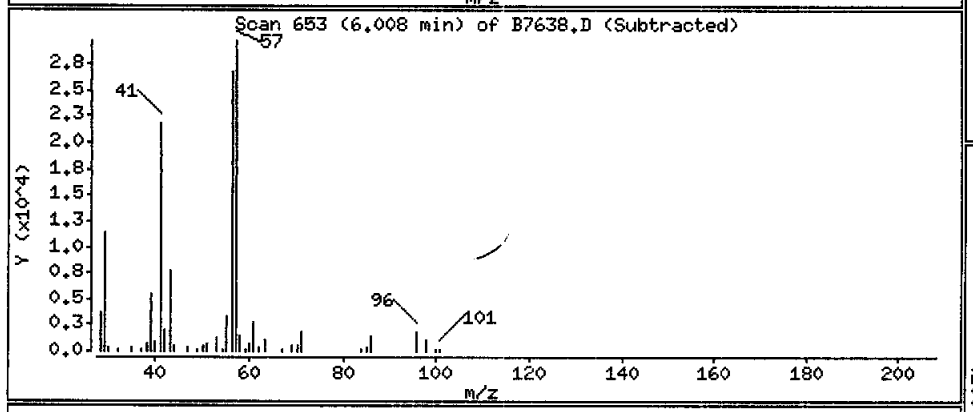
Column phase: J&W DB-624

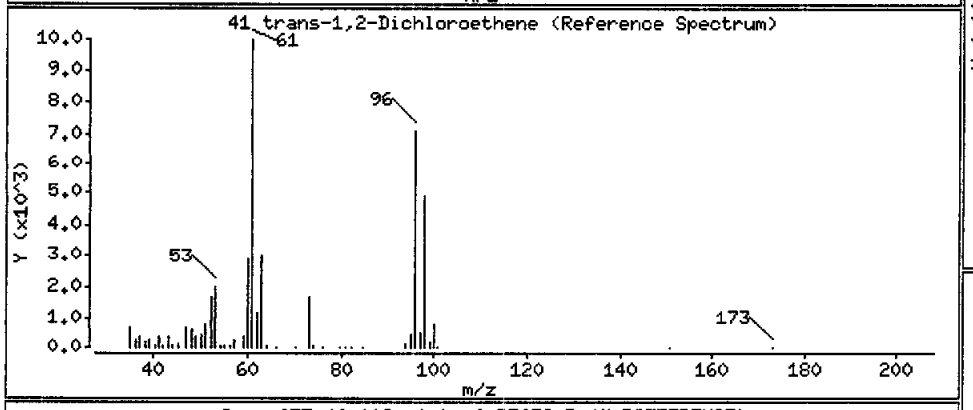
Column diameter: 0.53

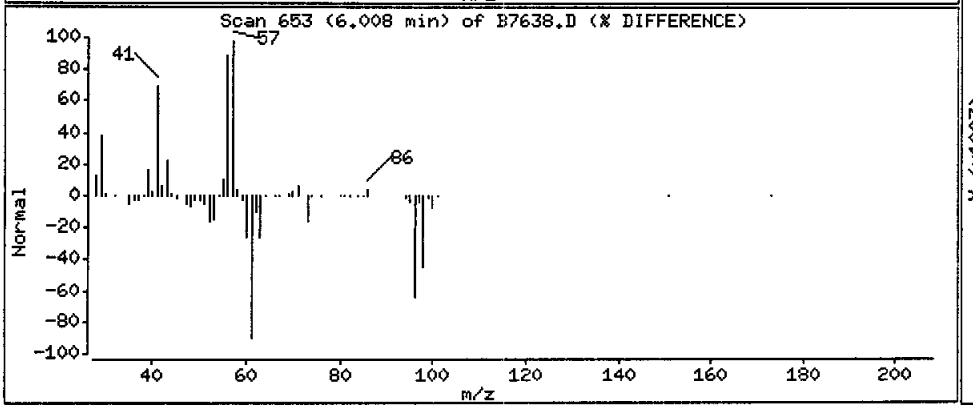
41 trans-1,2-Dichloroethene

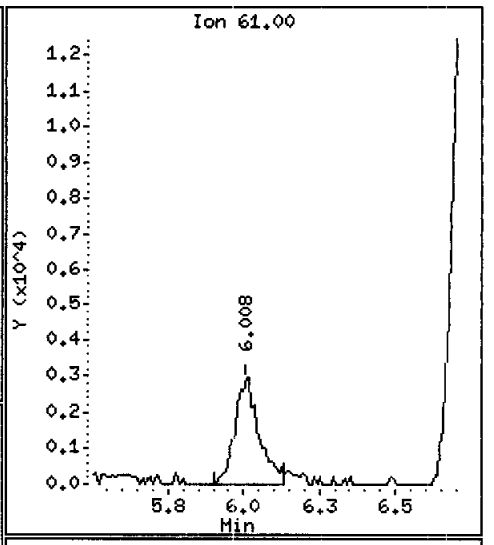
Concentration: 12.00 ppbv

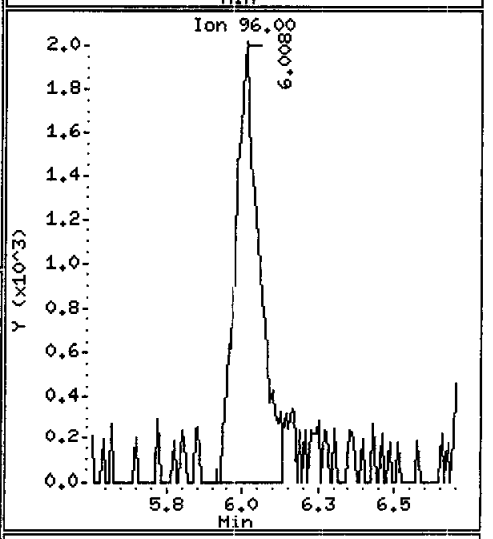


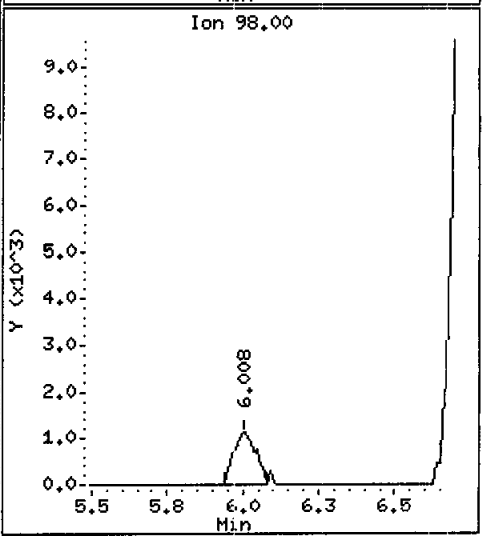












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

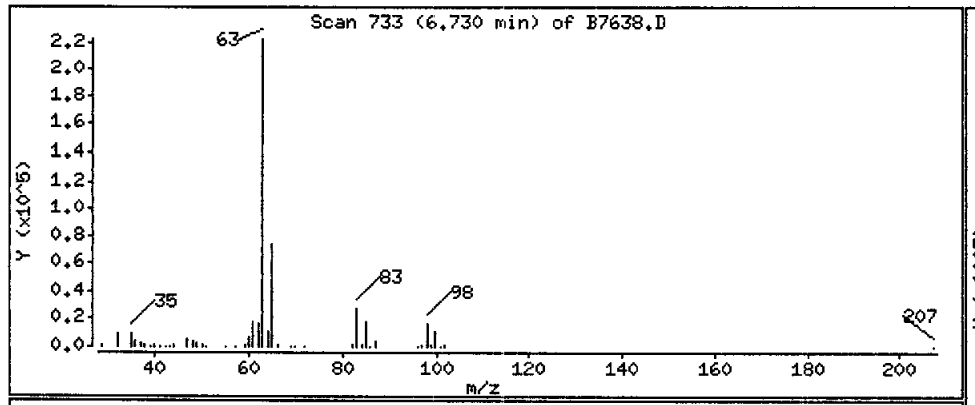
Operator: AA

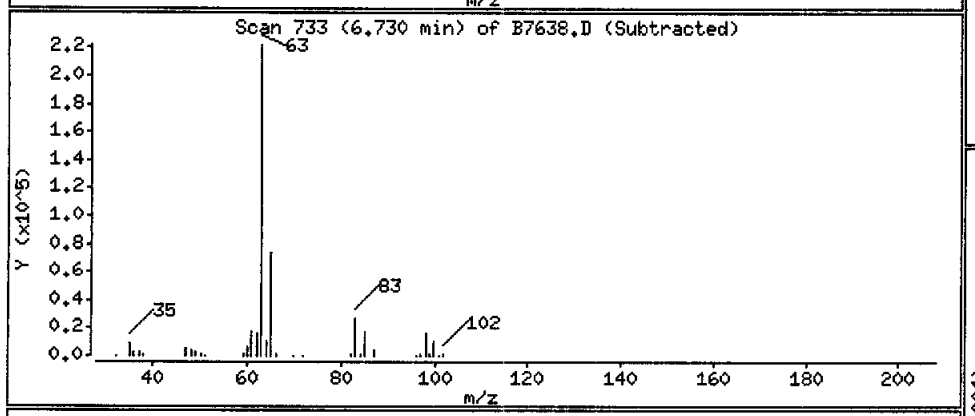
Column phase: J&W DB-624

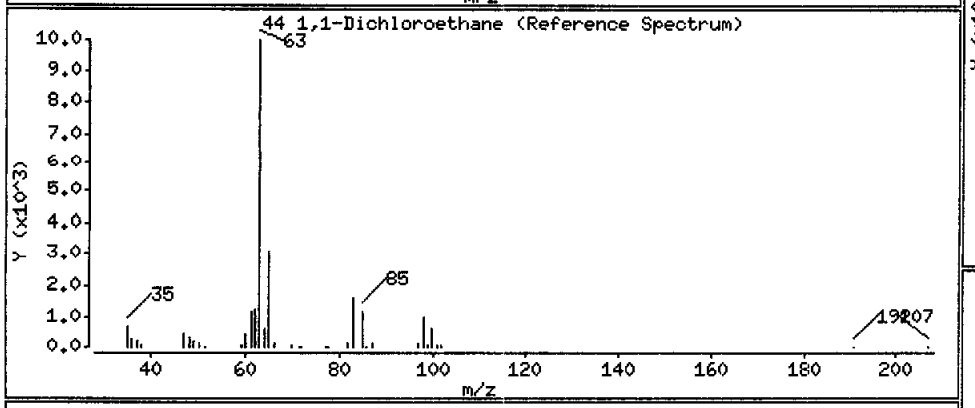
Column diameter: 0.53

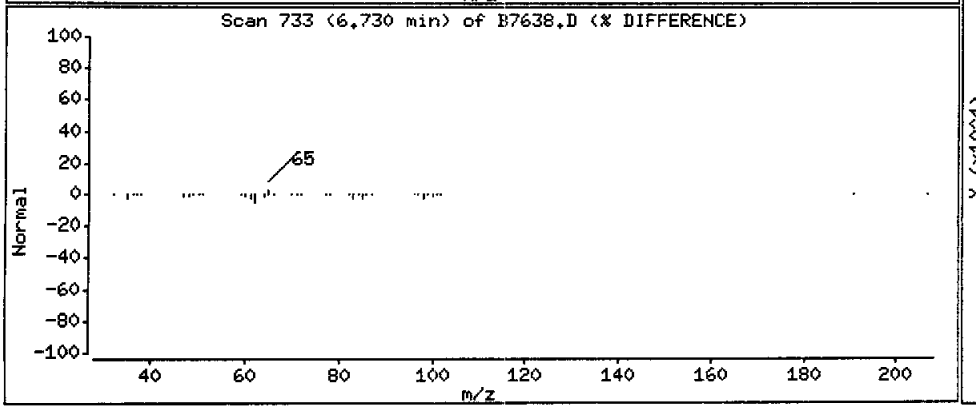
44 1,1-Dichloroethane

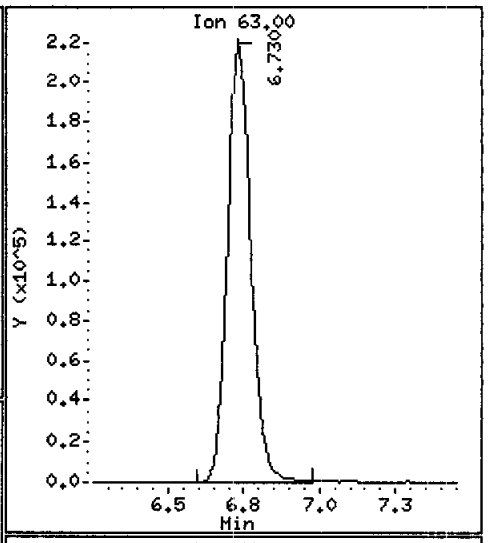
Concentration: 678.2 ppbv

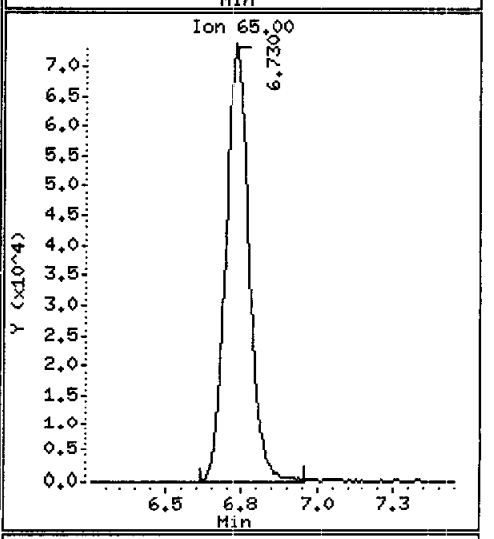


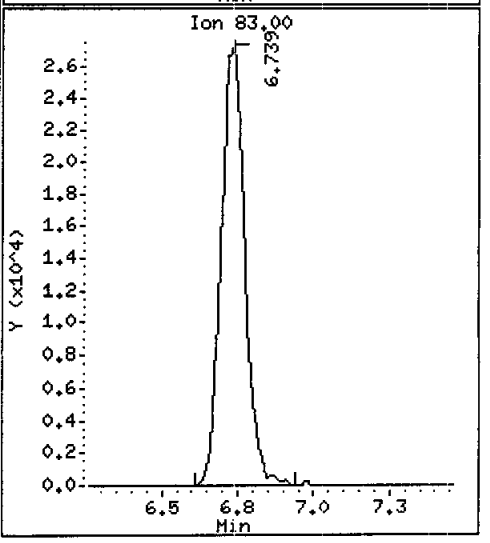












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

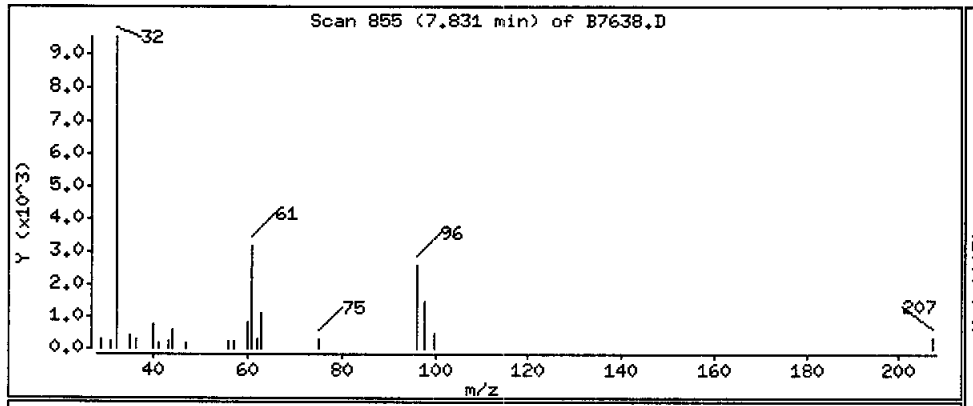
Operator: AA

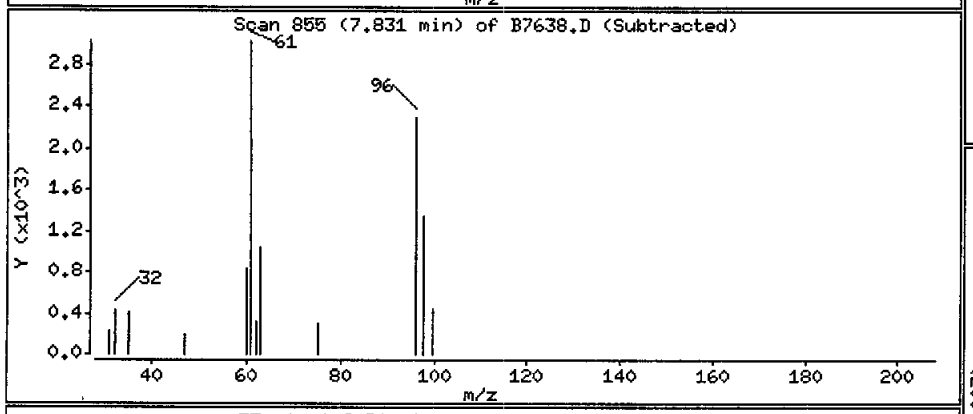
Column phase: J&W DB-624

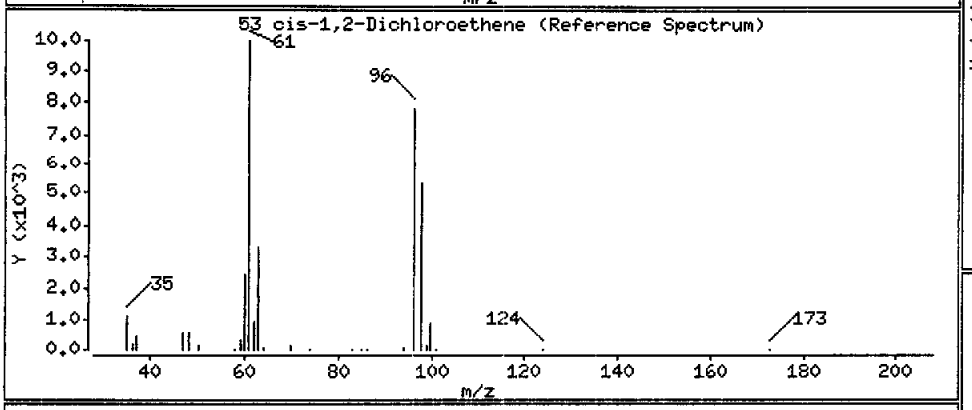
Column diameter: 0.53

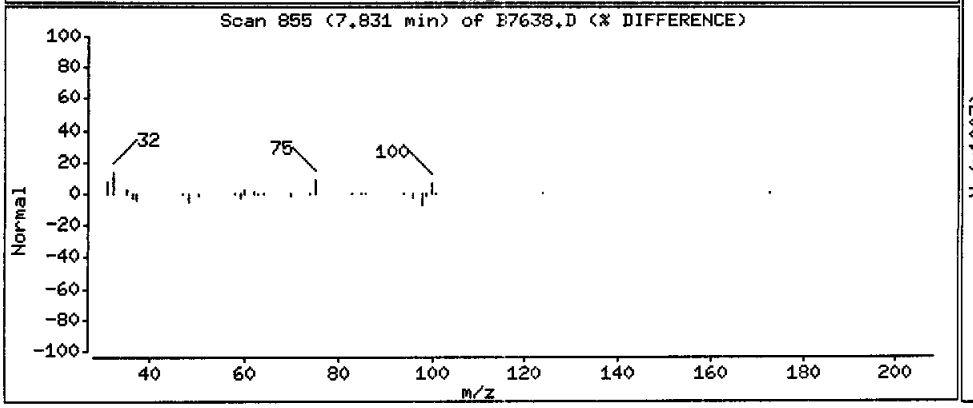
53 cis-1,2-Dichloroethene

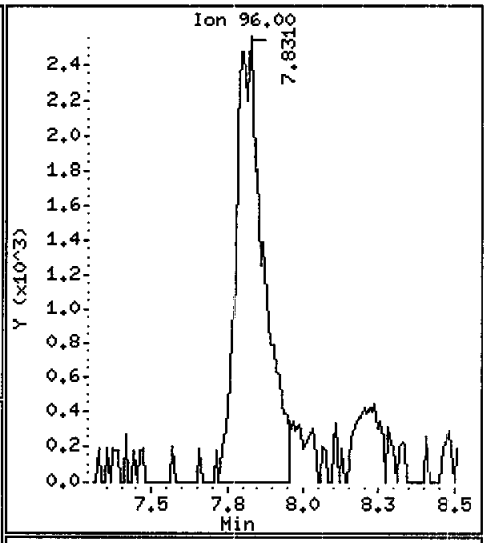
Concentration: 18.12 ppbv

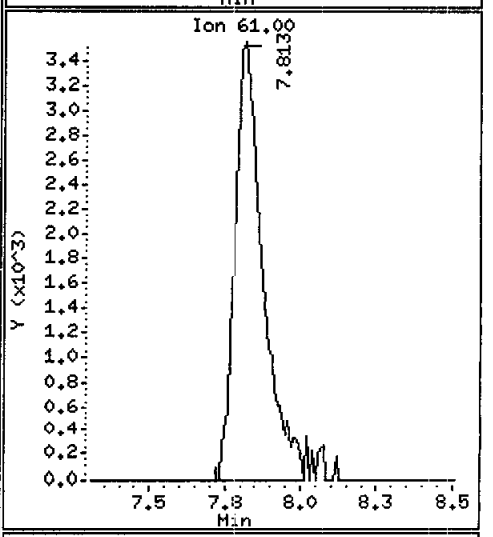


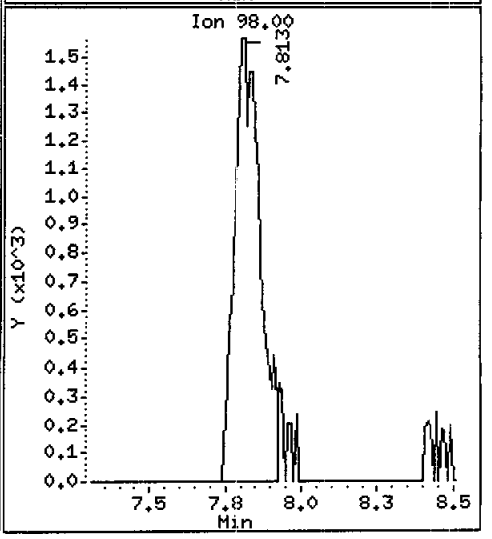












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

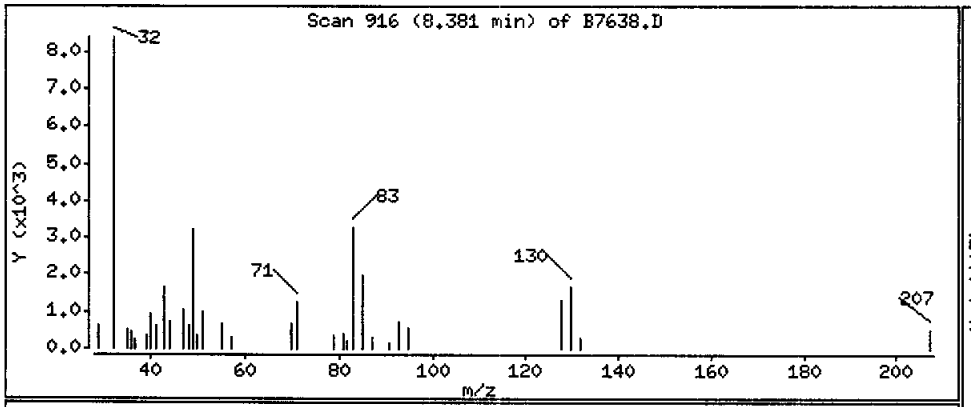
Operator: AA

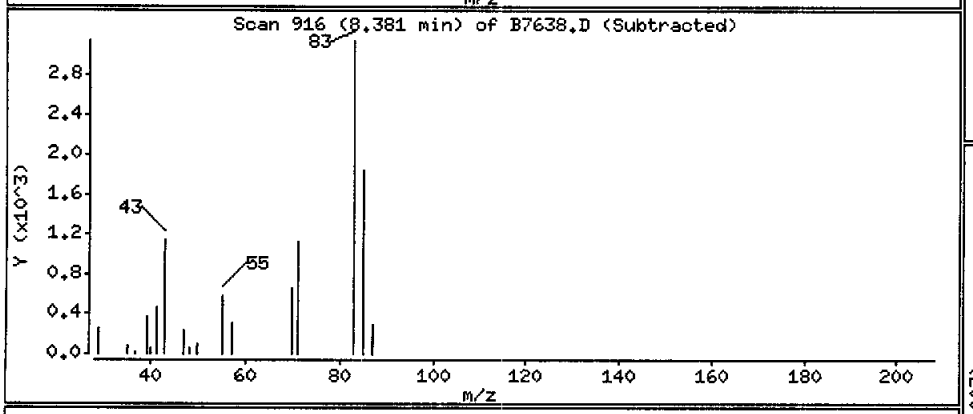
Column phase: J&W DB-624

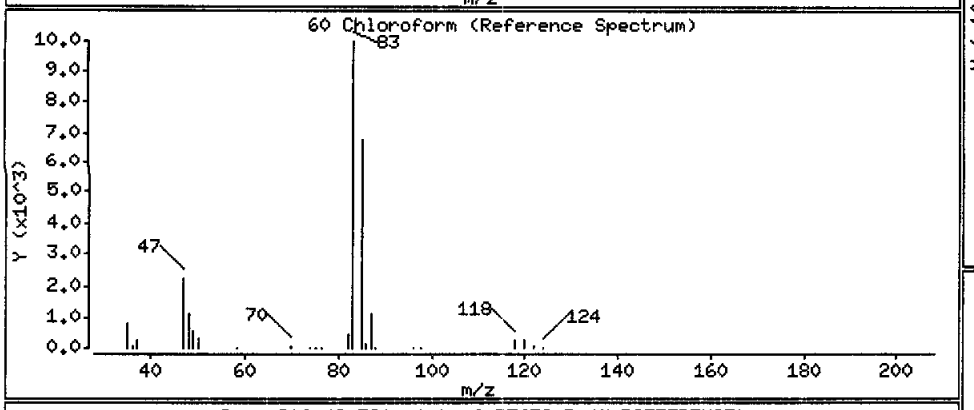
Column diameter: 0.53

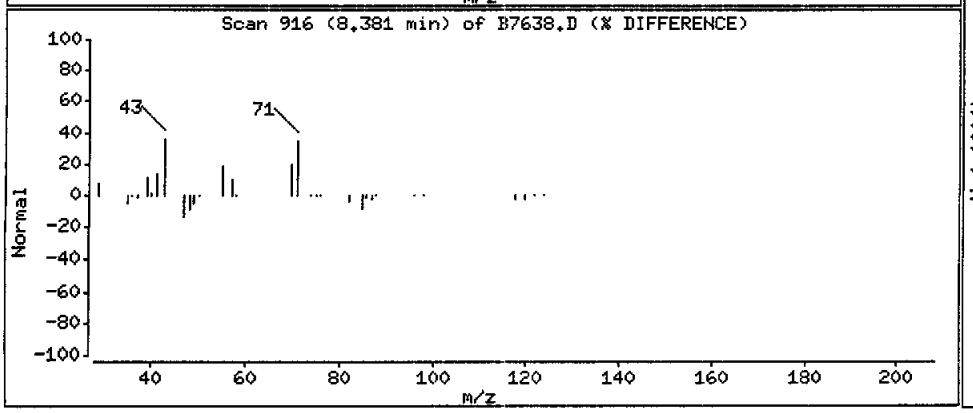
60 Chloroform

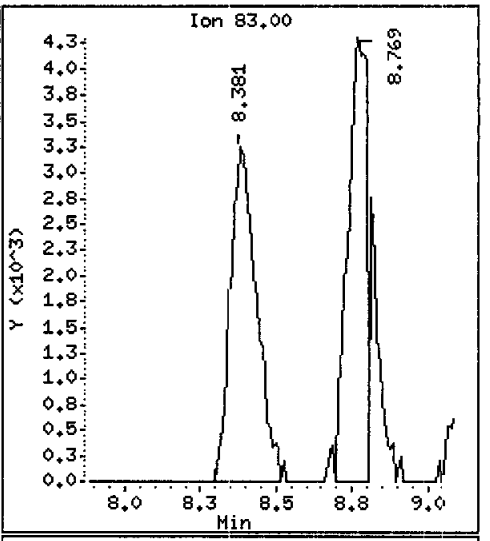
Concentration: 8.697 ppbv

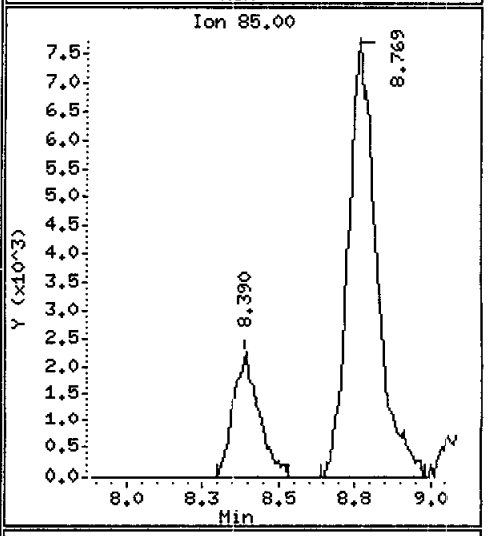


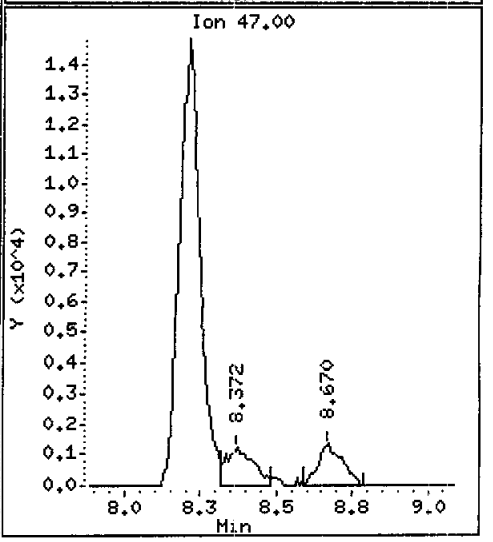












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

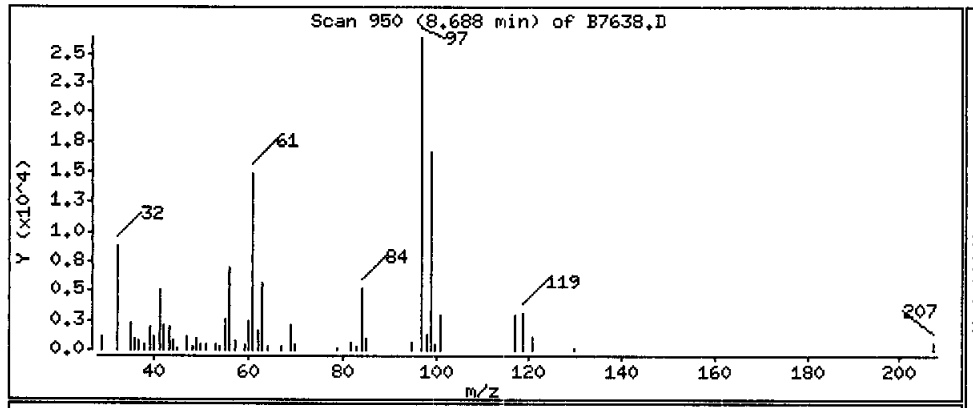
Operator: AA

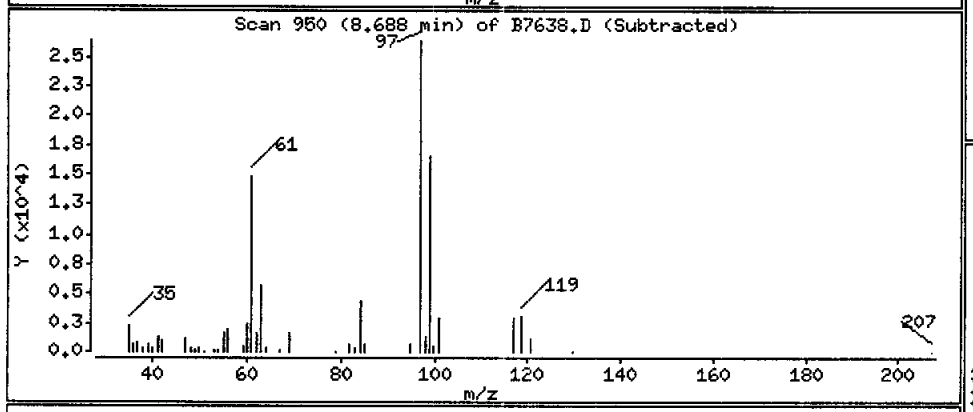
Column phase: J&W DB-624

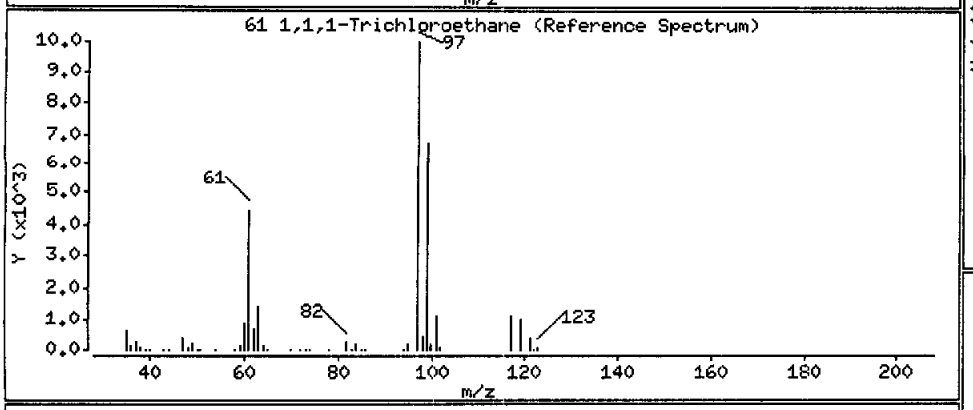
Column diameter: 0.53

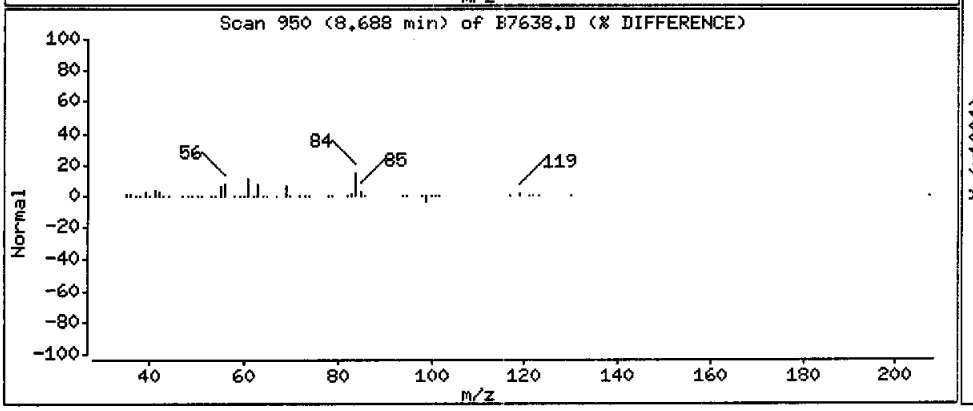
61 1,1,1-Trichloroethane

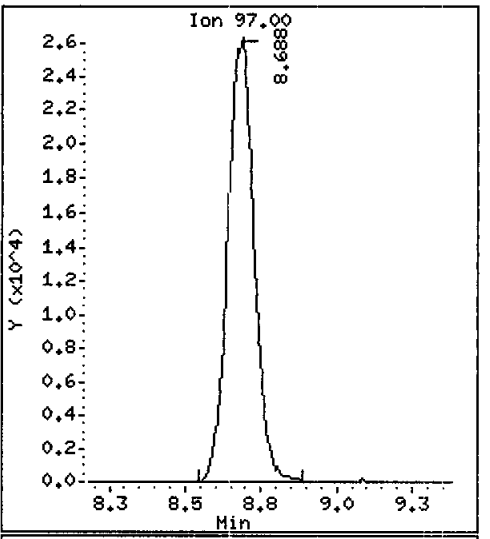
Concentration: 71.09 ppbv

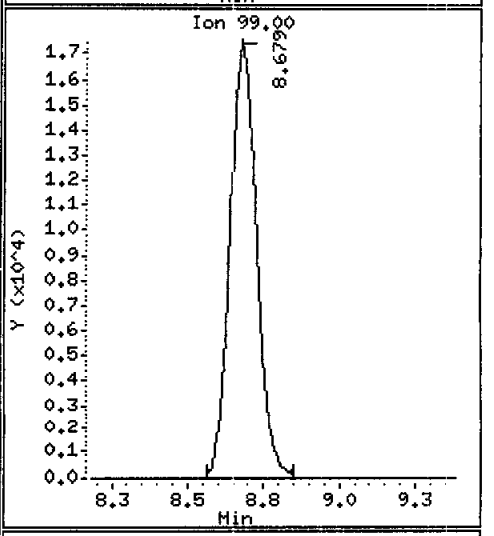


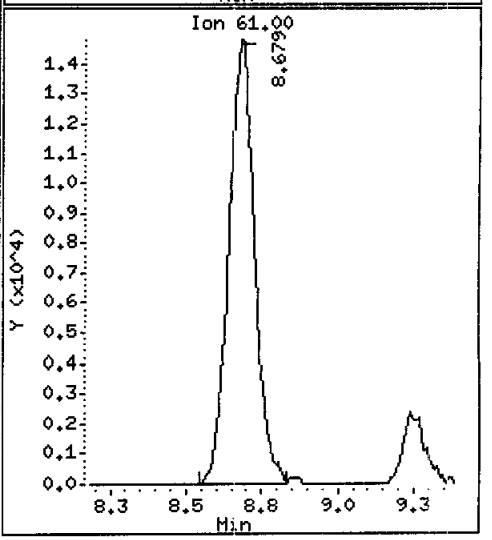












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

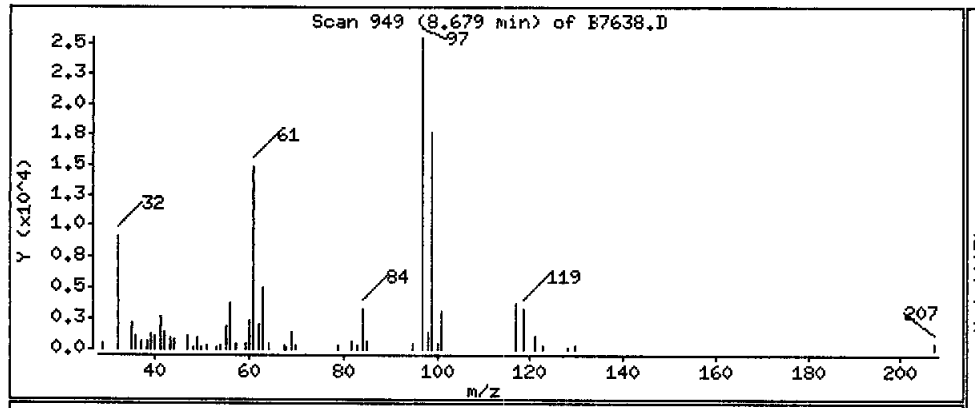
Operator: AA

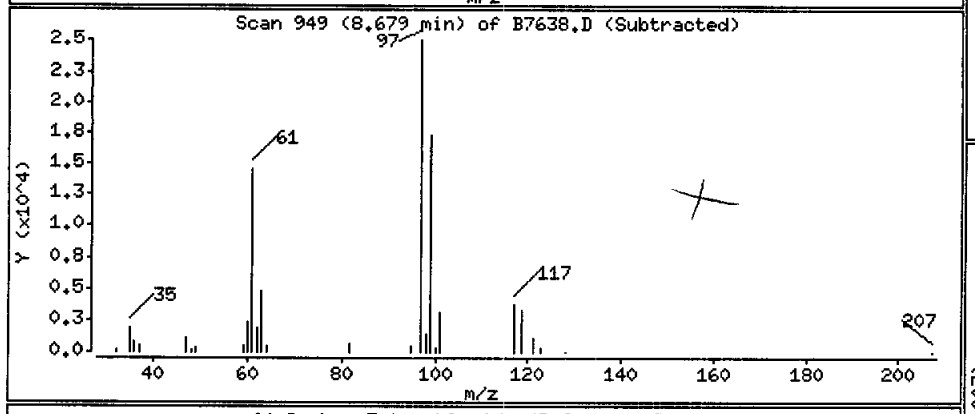
Column phase: J&W DB-624

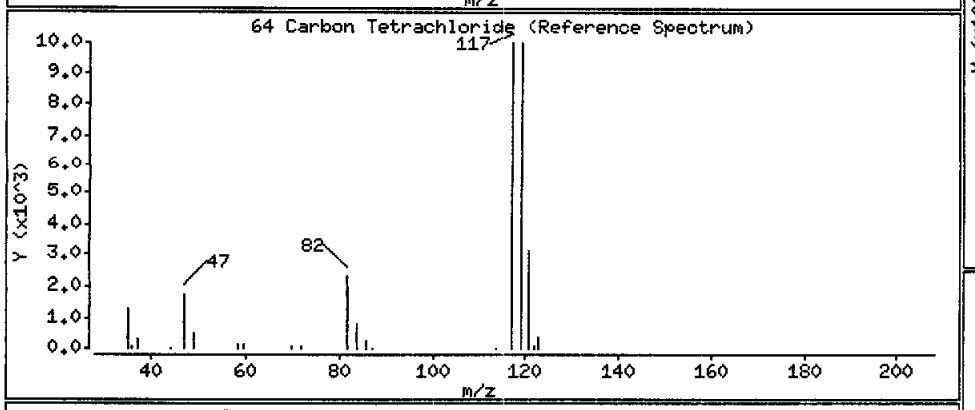
Column diameter: 0.53

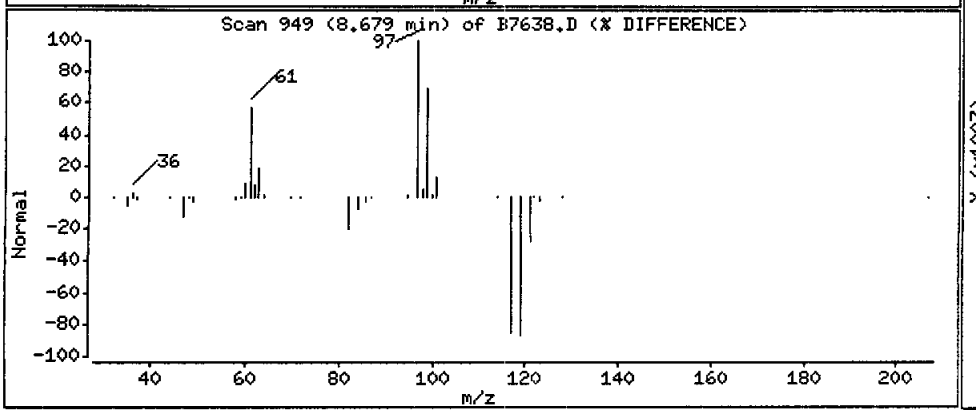
64 Carbon Tetrachloride

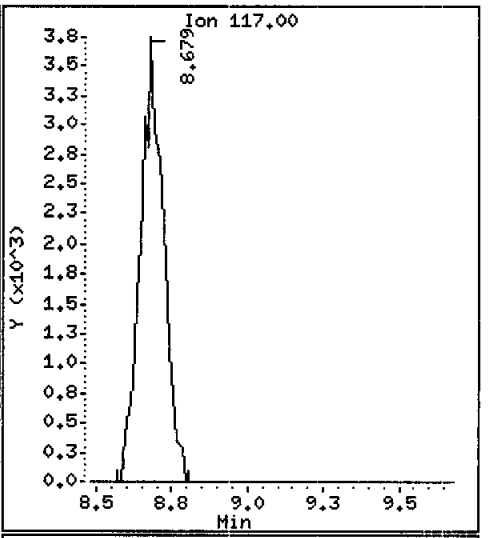
Concentration: 13.25 ppbv

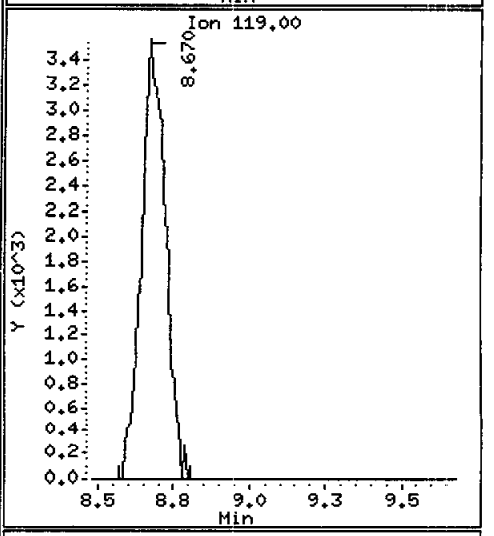


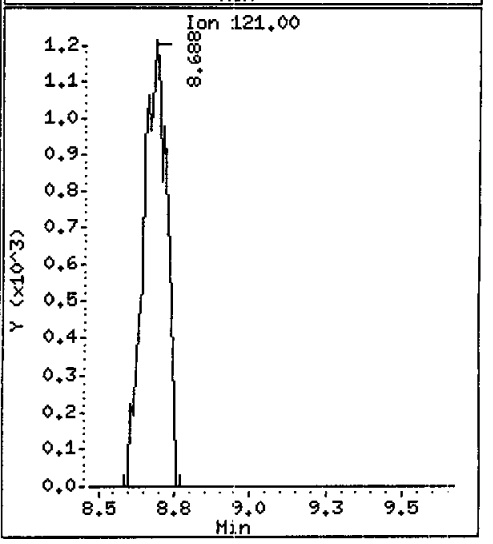












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

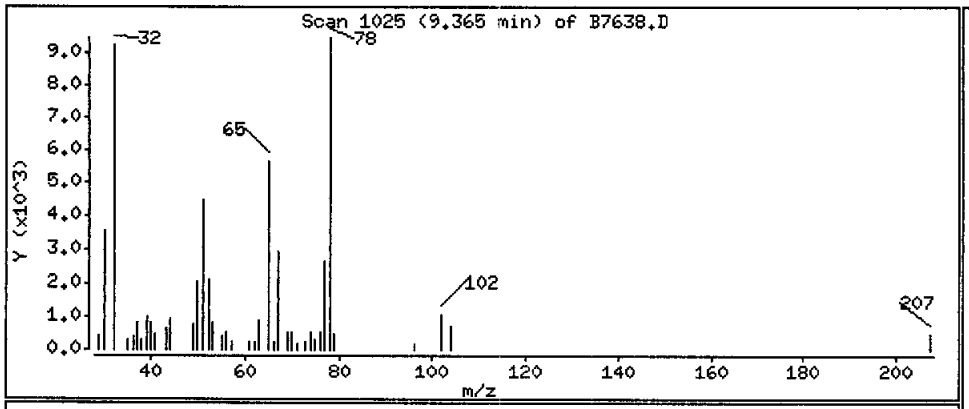
Operator: AA

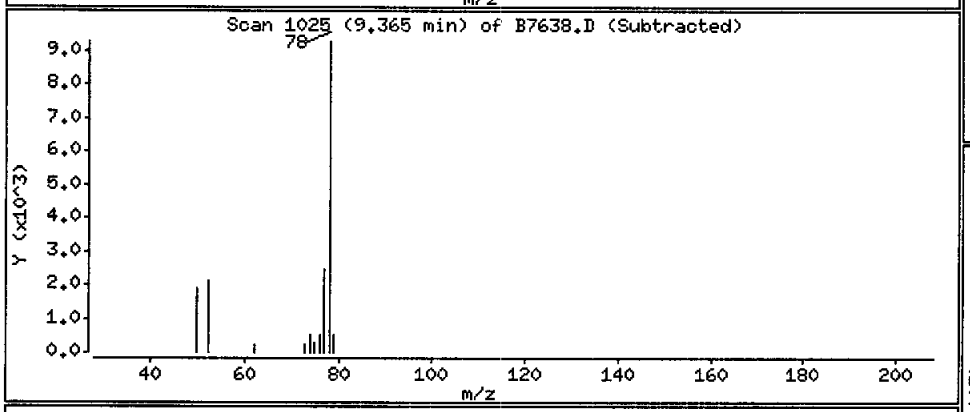
Column phase: J&W DB-624

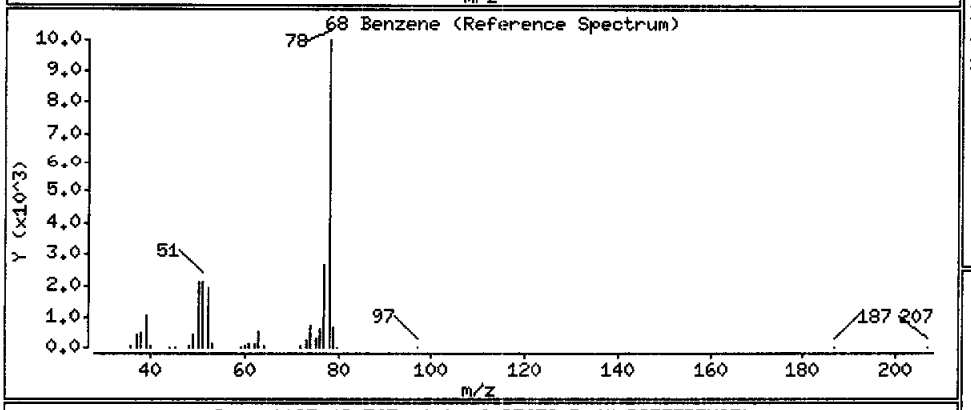
Column diameter: 0.53

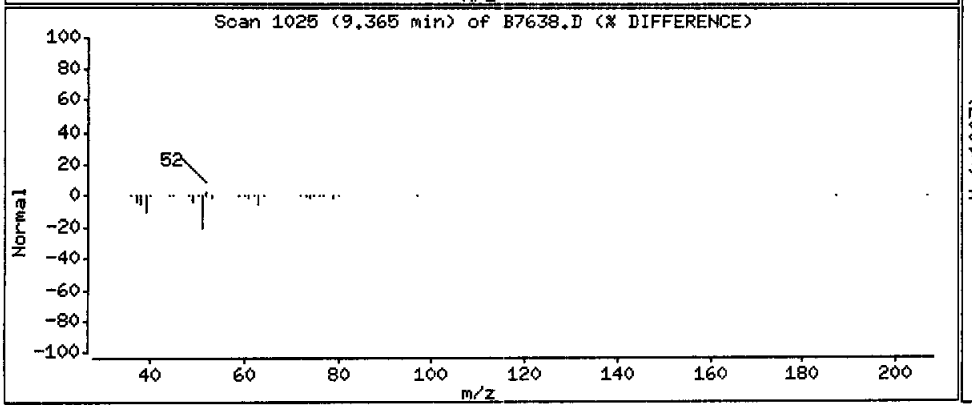
68 Benzene

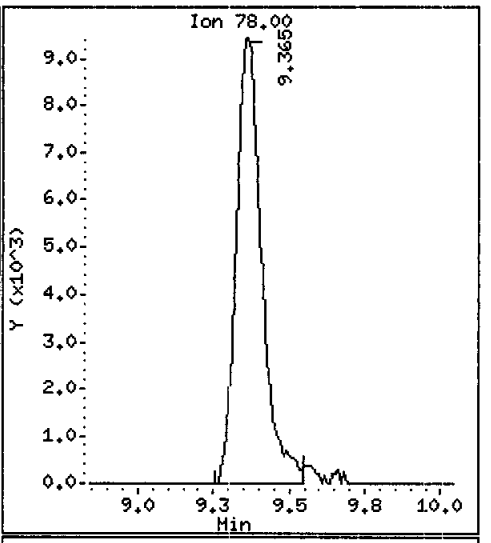
Concentration: 26.40 ppbv

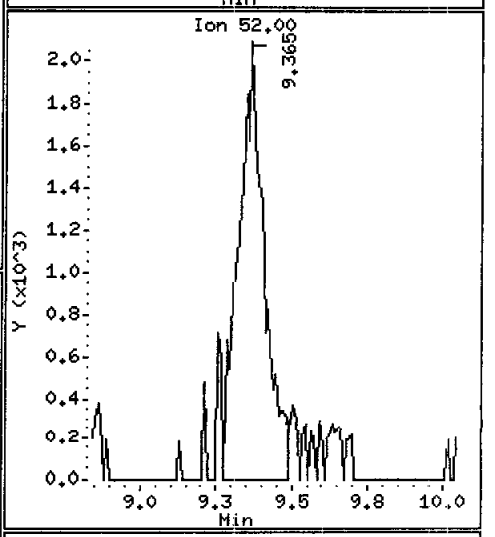


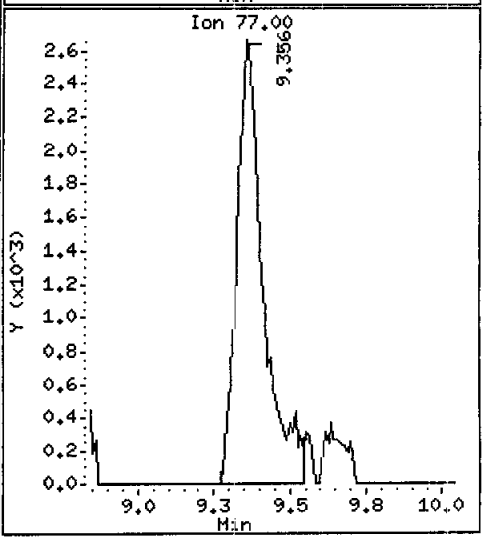












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

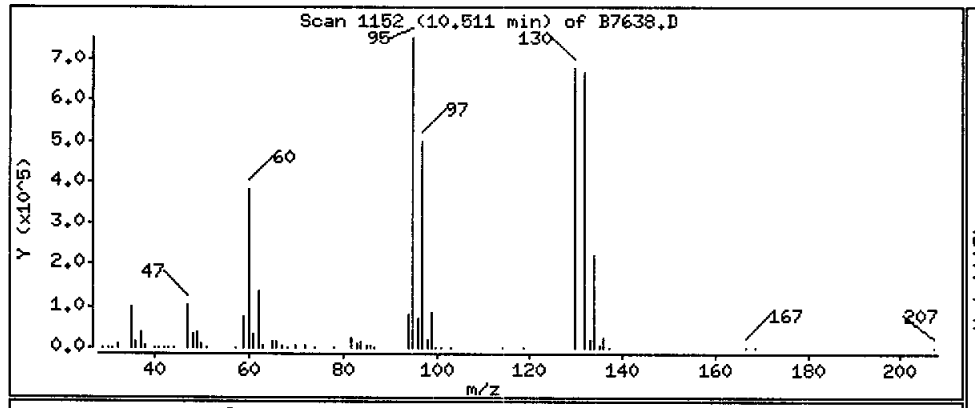
Operator: AA

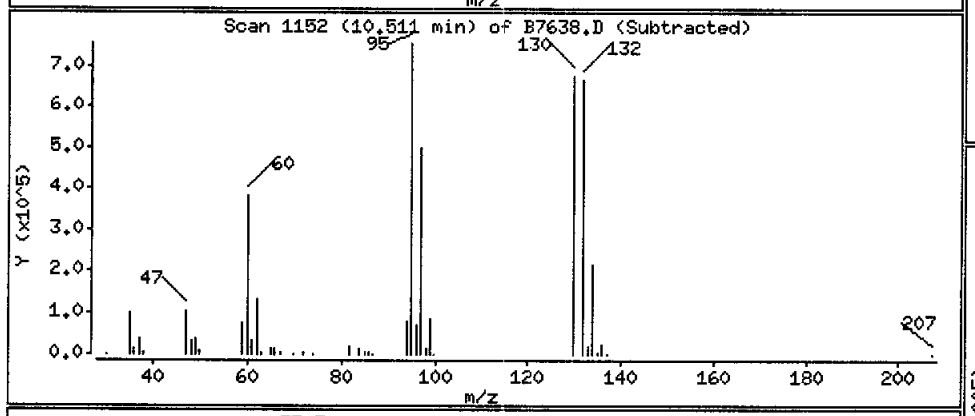
Column phase: J&W DB-624

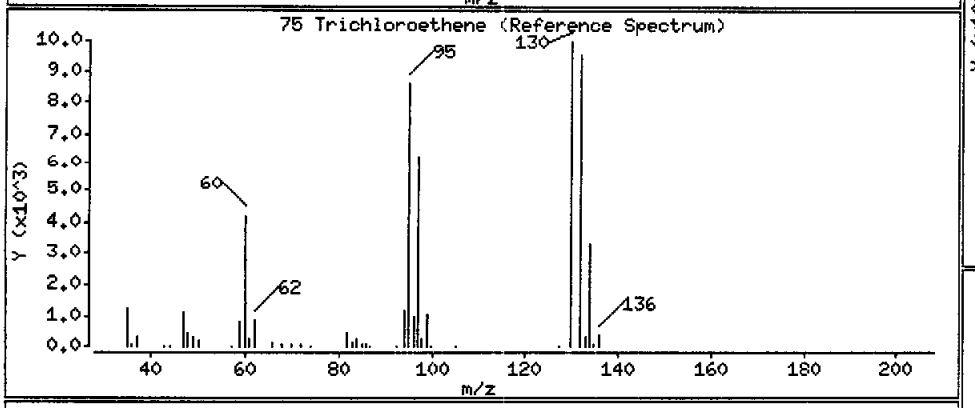
Column diameter: 0.53

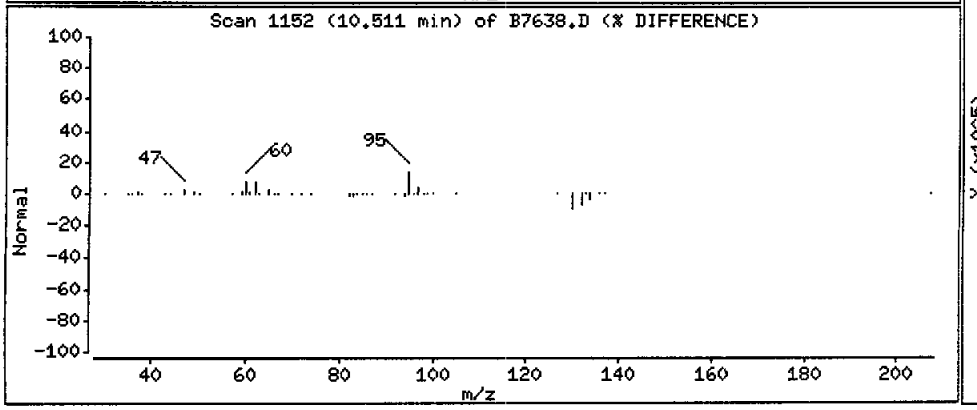
75 Trichloroethene

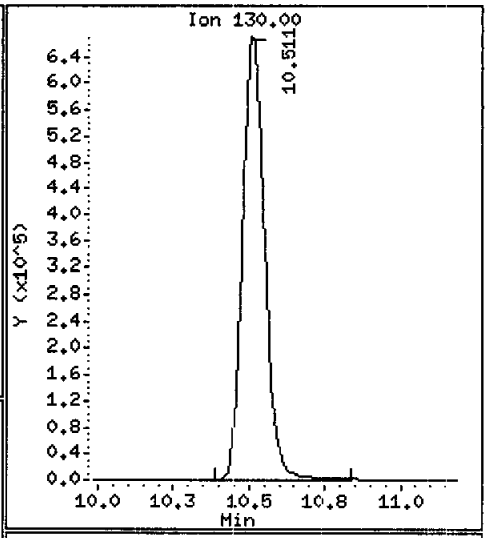
Concentration: 2543 ppbv

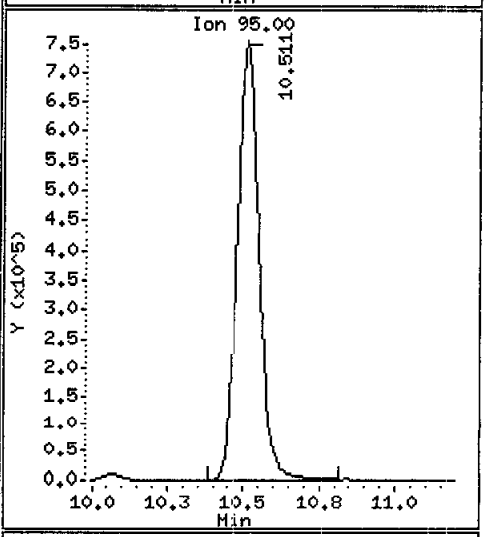


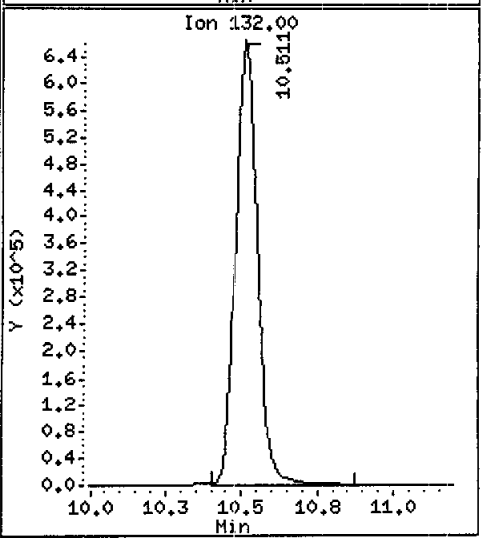












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

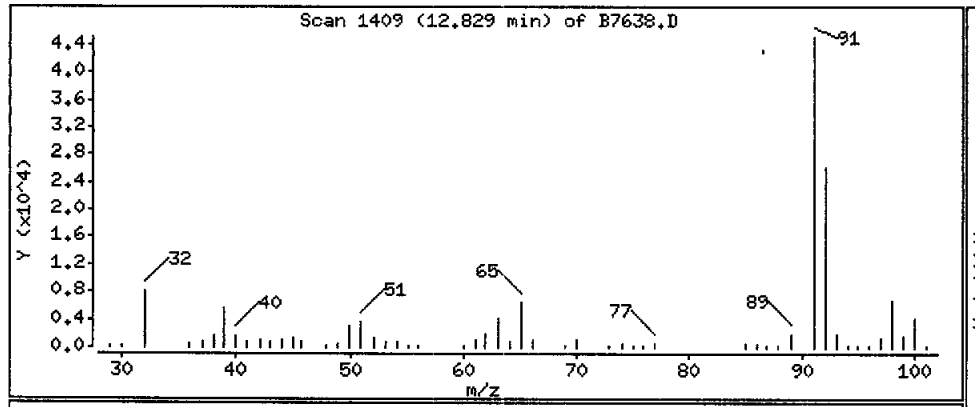
Operator: AA

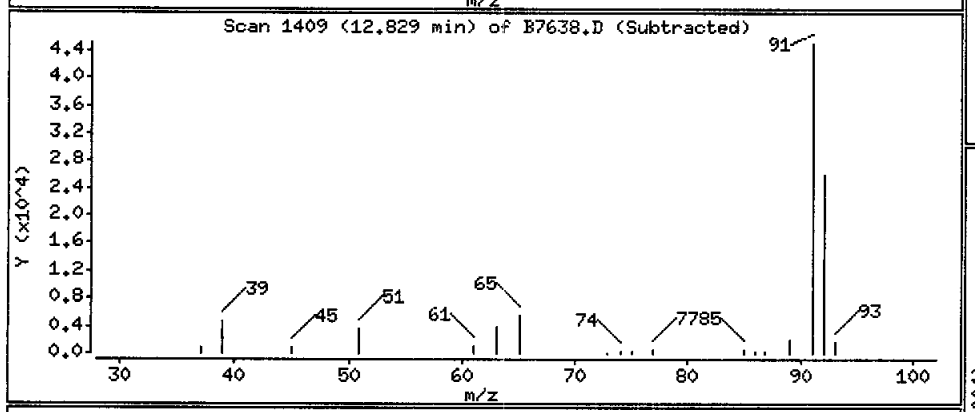
Column phase: J&W DB-624

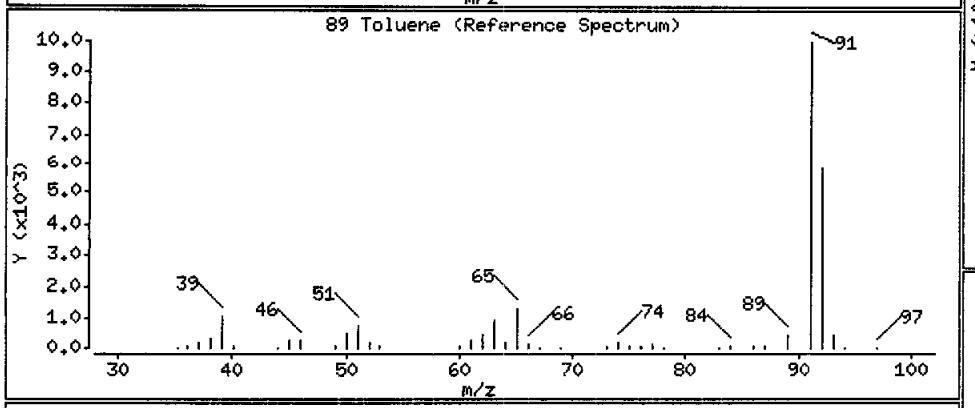
Column diameter: 0.53

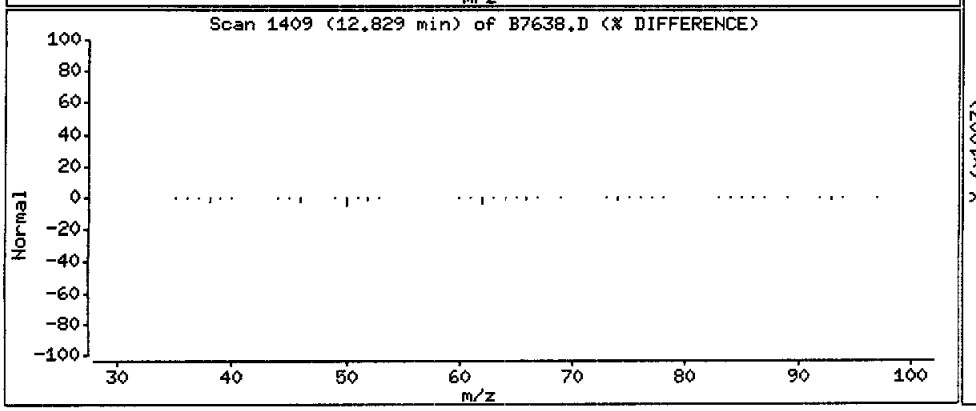
89 Toluene

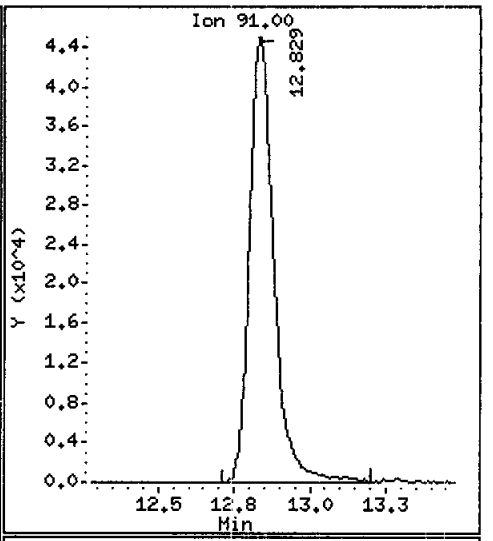
Concentration: 93.44 ppbv

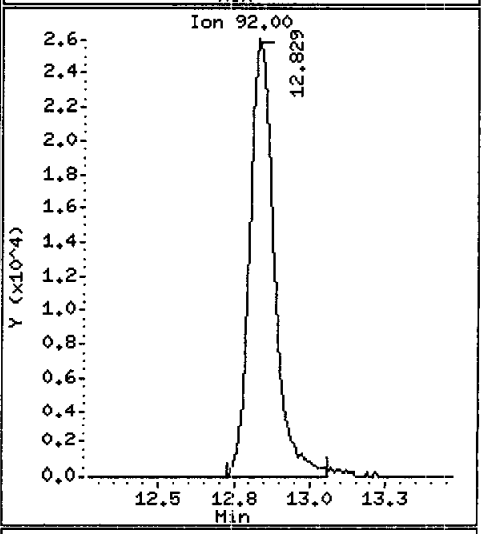


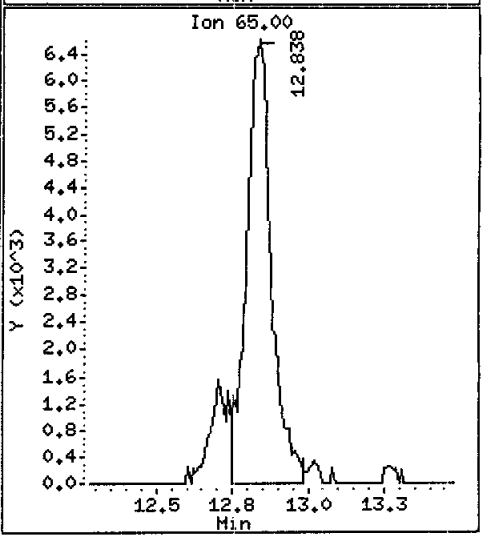












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

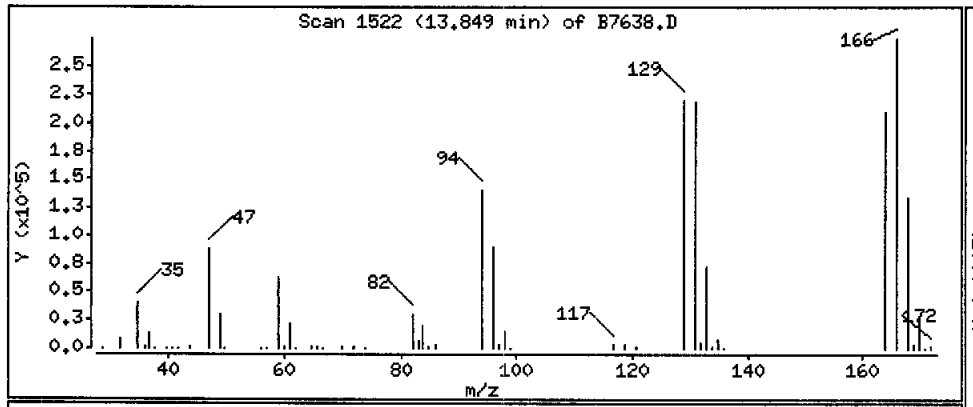
Operator: AA

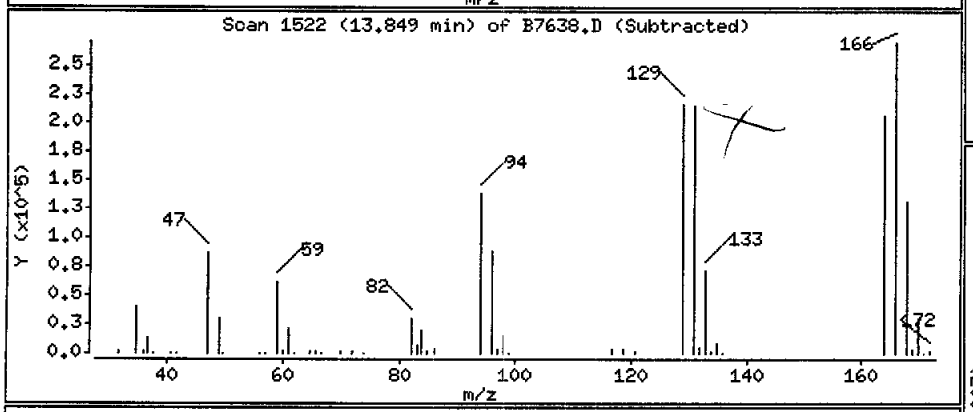
Column phase: J&W DB-624

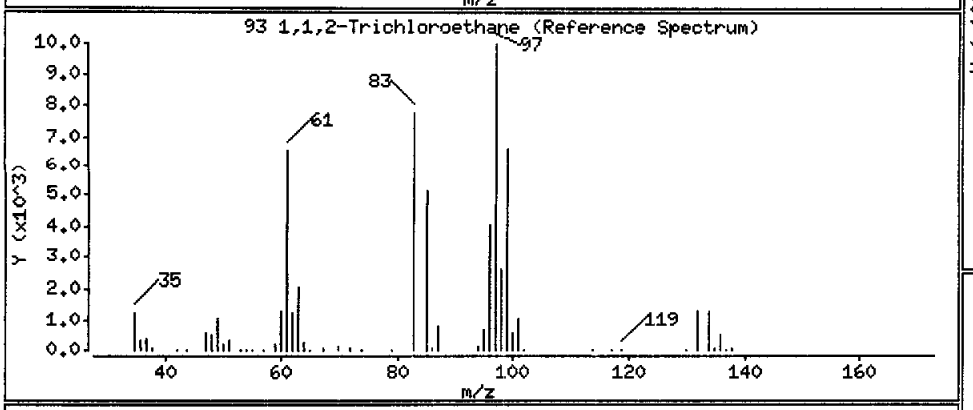
Column diameter: 0.53

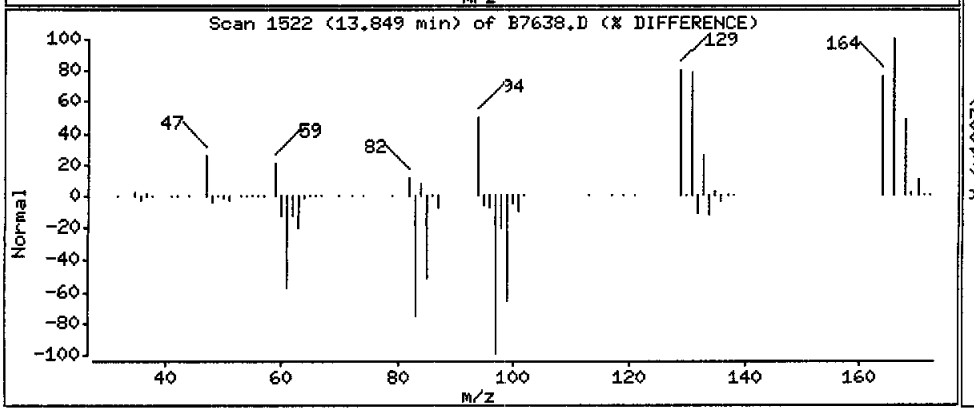
93 1,1,2-Trichloroethane

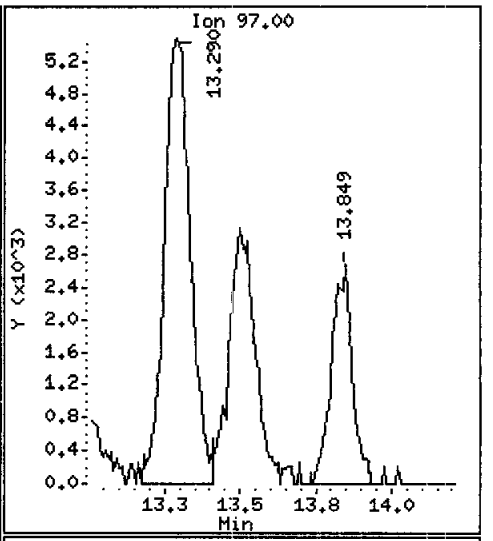
Concentration: 9.759 ppbv

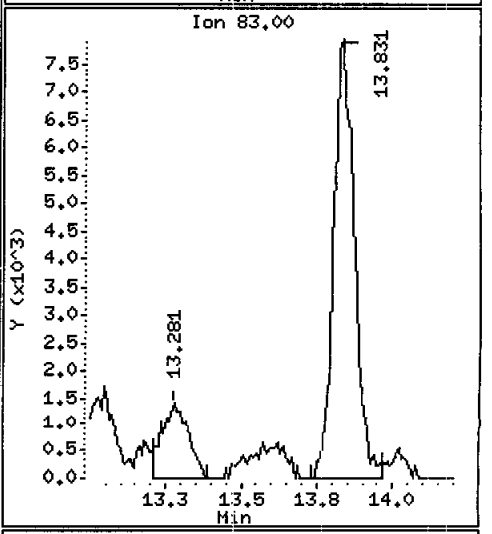


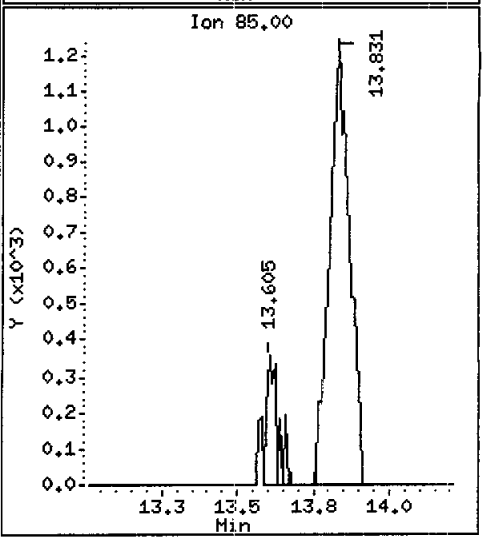












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

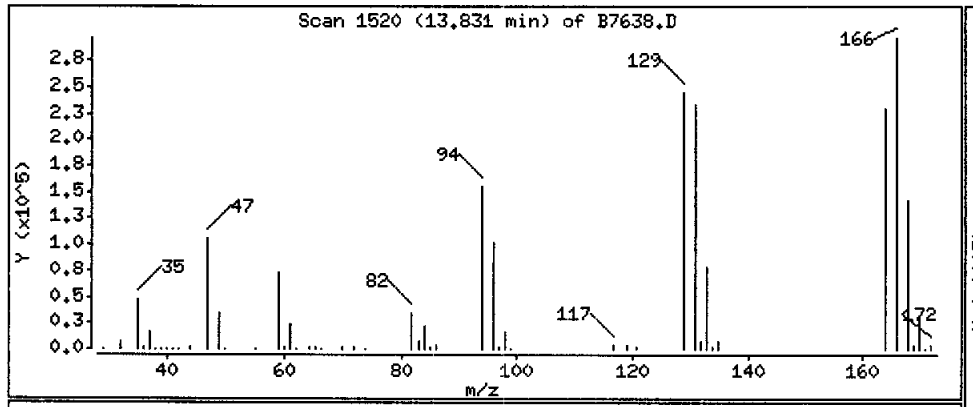
Operator: AA

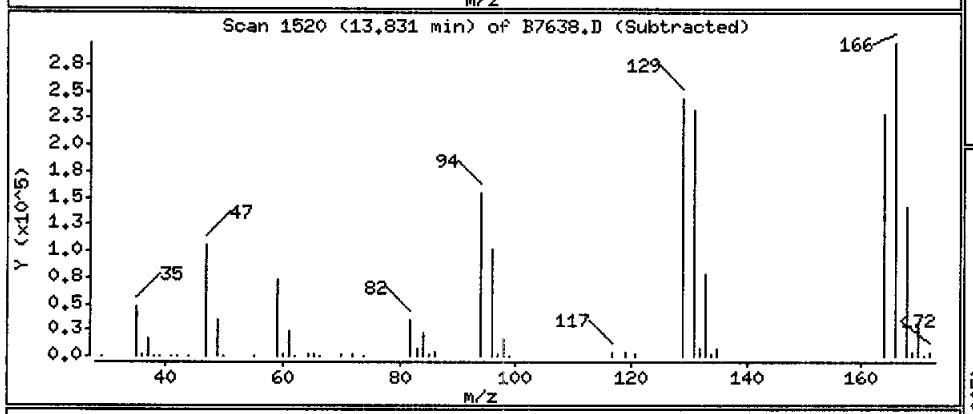
Column phase: J&W DB-624

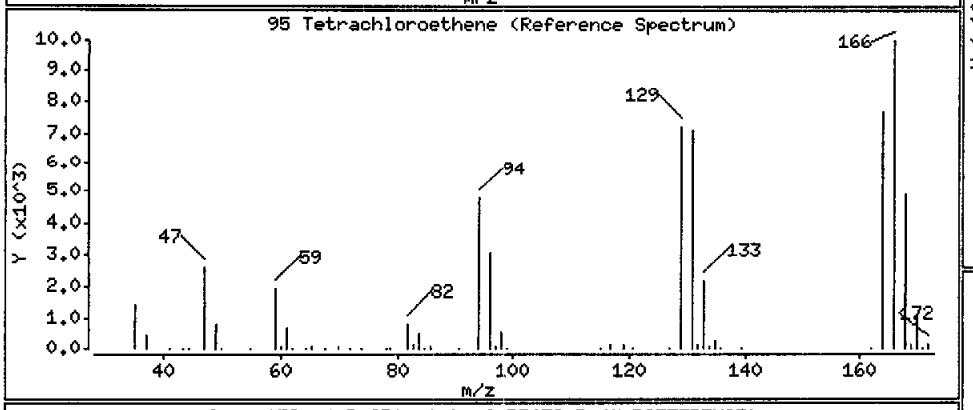
Column diameter: 0.53

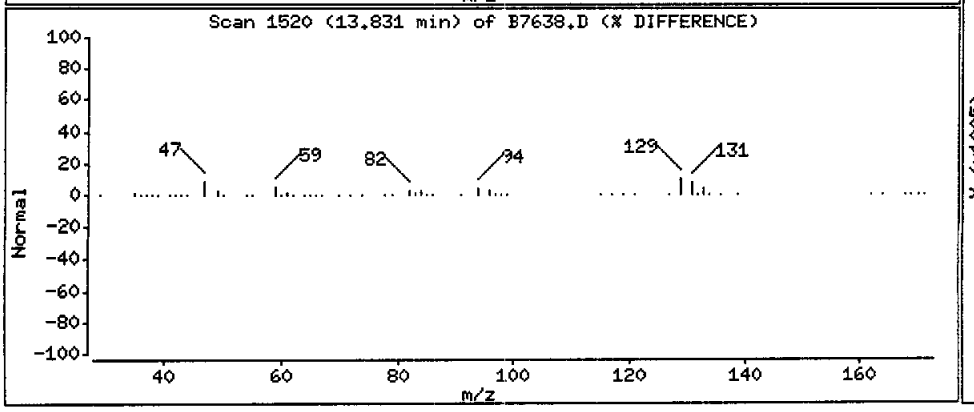
95 Tetrachloroethene

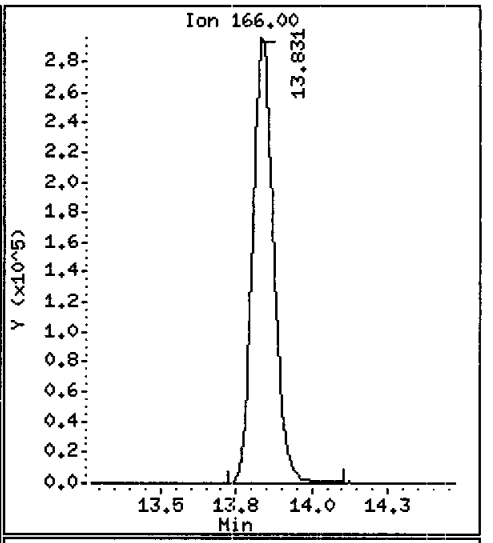
Concentration: 794.9 ppbv

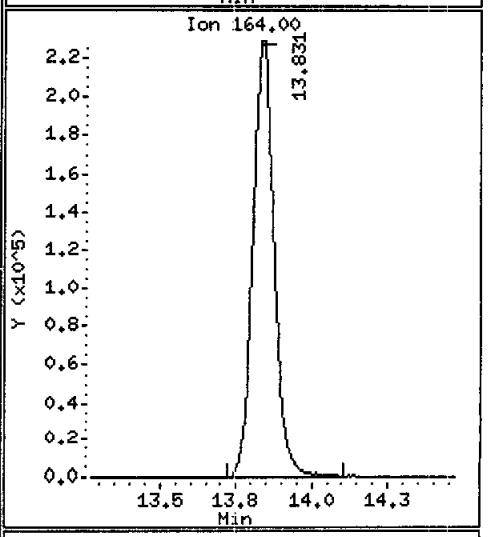


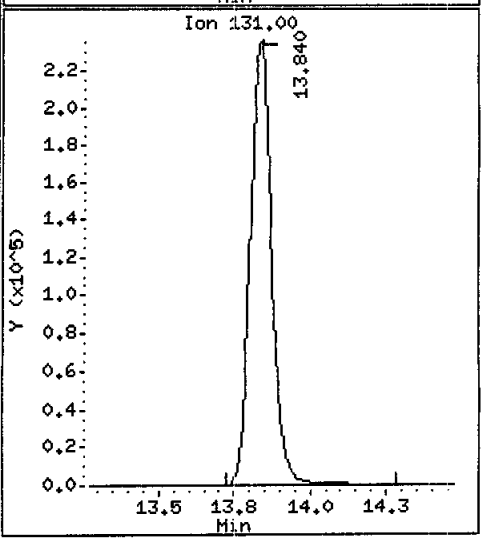












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

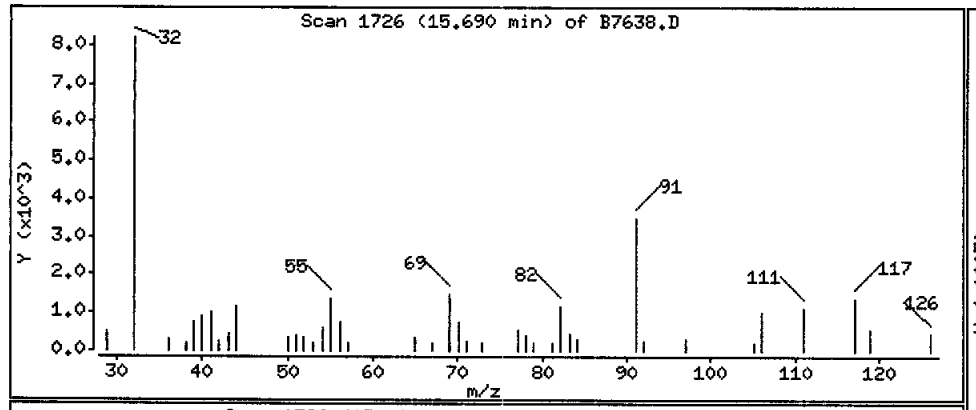
Operator: AA

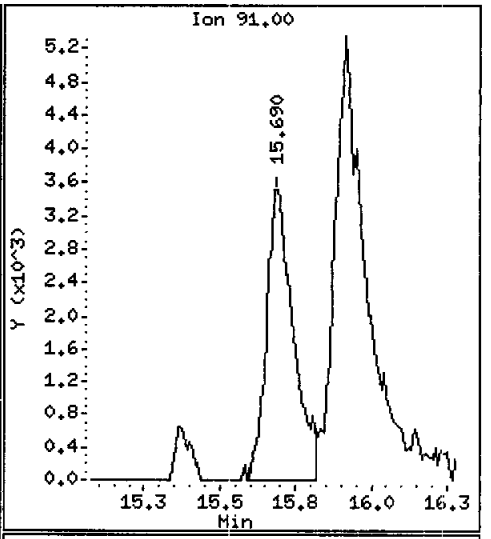
Column phase: J&W DB-624

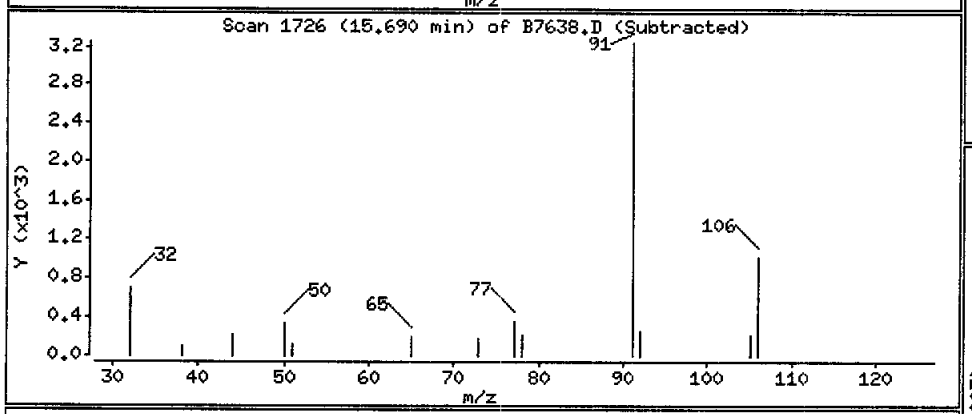
Column diameter: 0.53

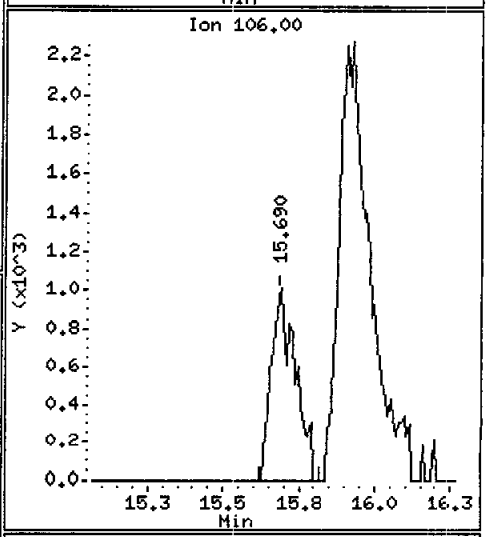
104 Ethylbenzene

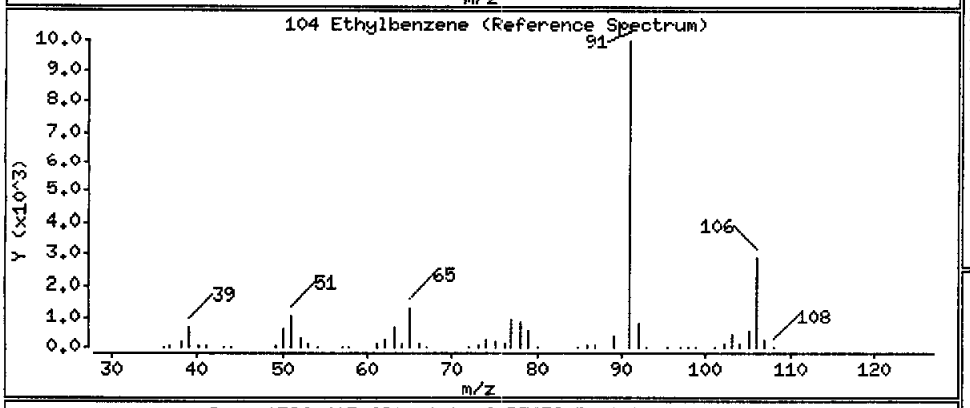
Concentration: 6.651 ppbv

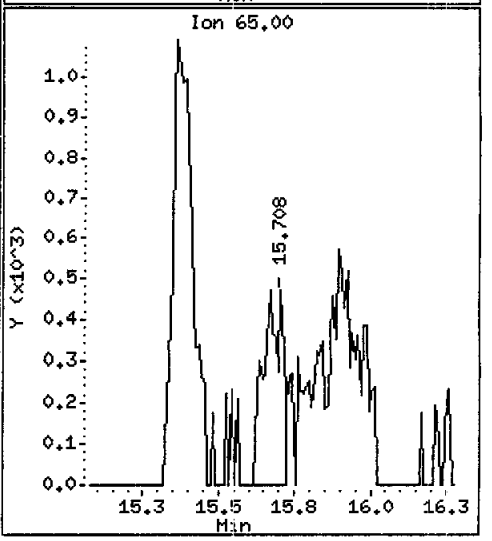


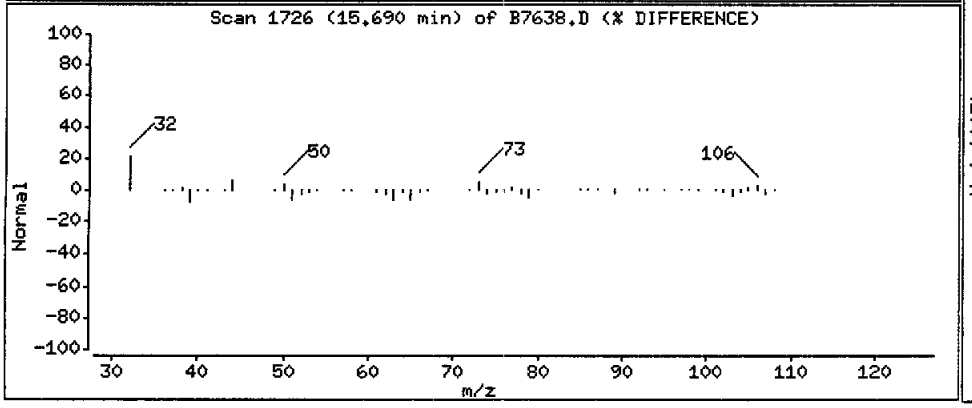












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

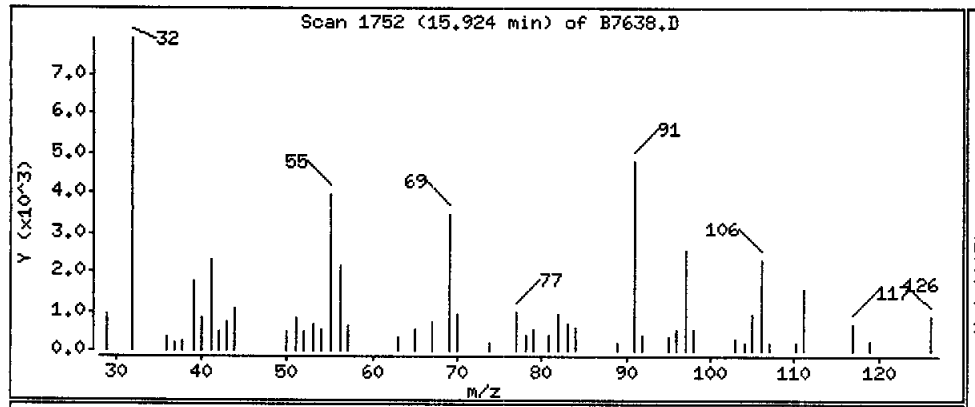
Operator: AA

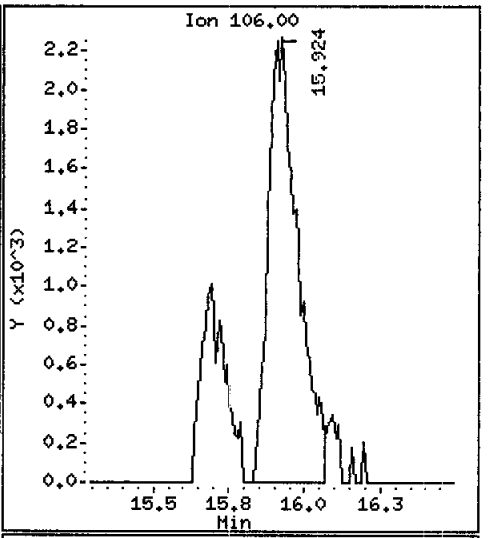
Column phase: J&W DB-624

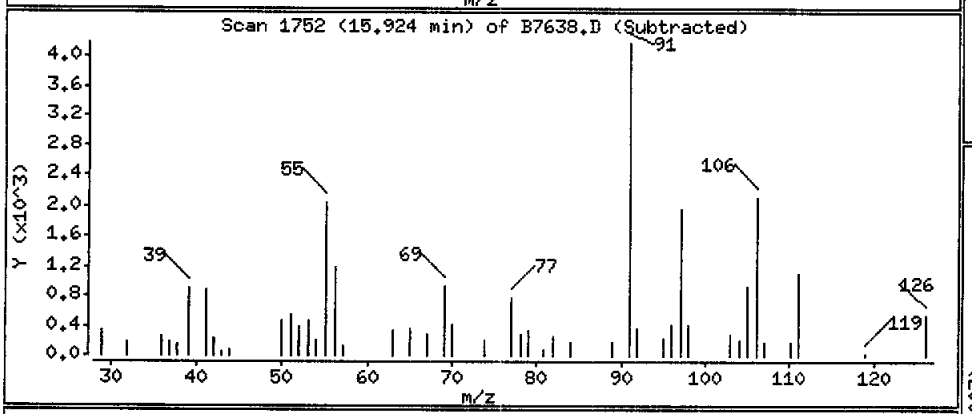
Column diameter: 0.53

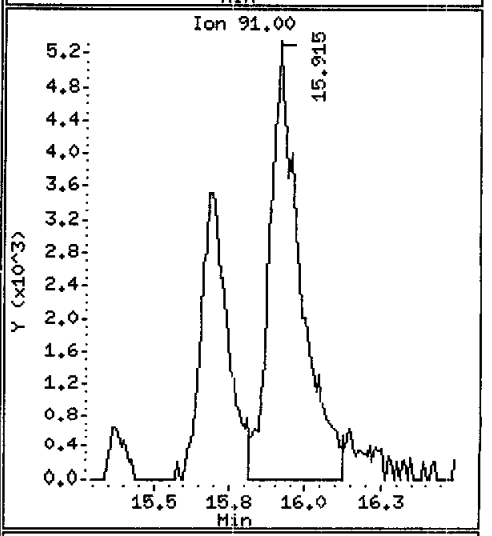
105 m,p-Xylenes

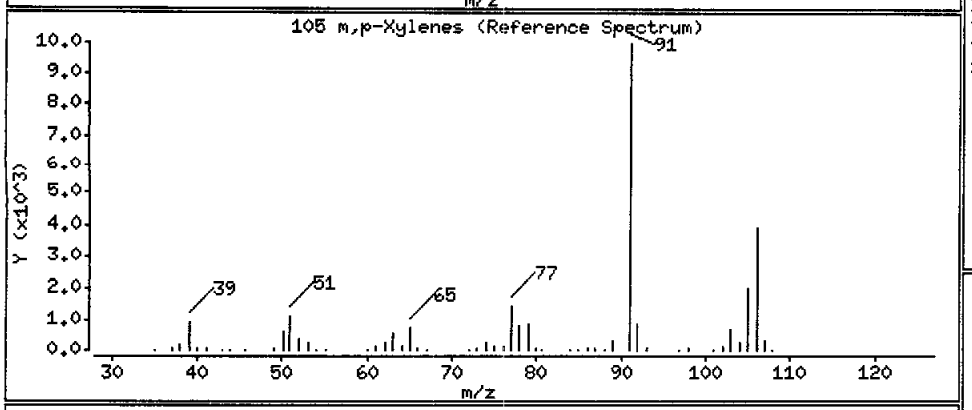
Concentration: 16.31 ppbv

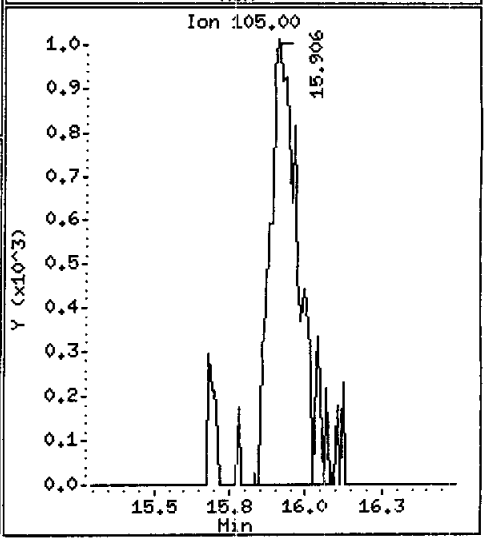


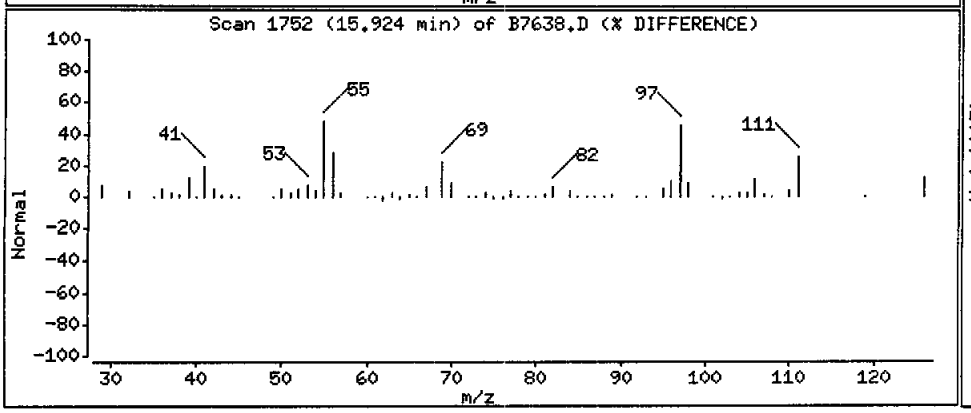












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7638.D

Date : 17-JAN-2005 12:39

Client ID: 066390-001

Instrument: gcmsb.i

Sample Info: G2DKT1AD,066390-001,SANDIA,E5A100233-3

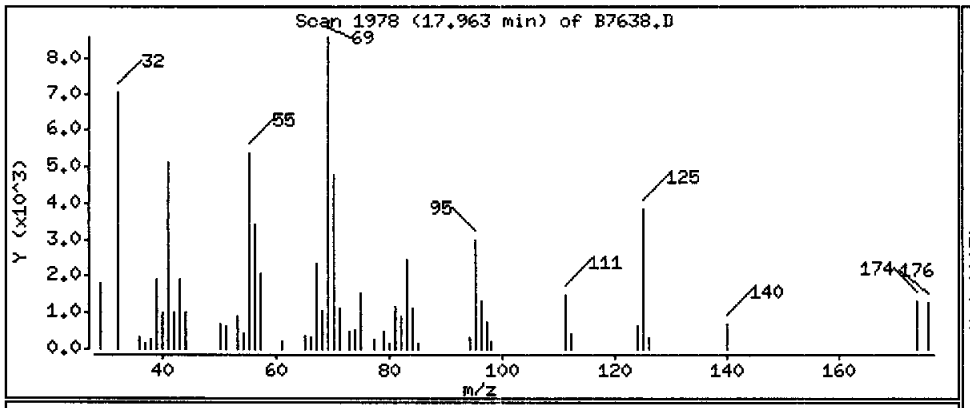
Operator: AA

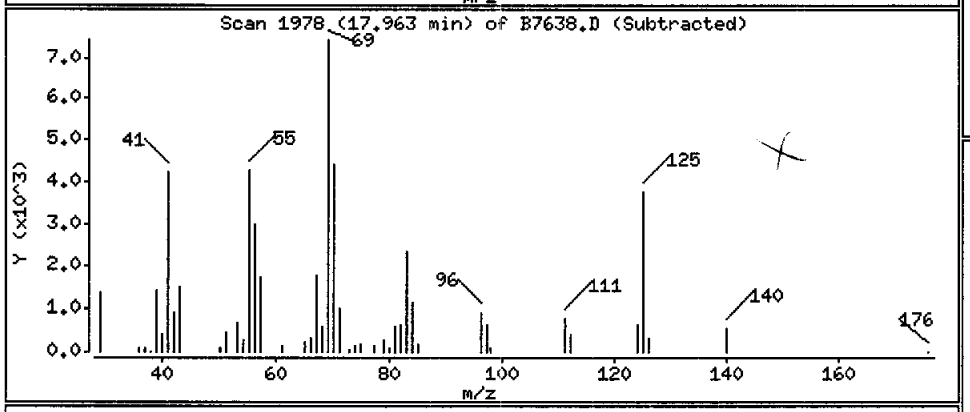
Column phase: J&W DB-624

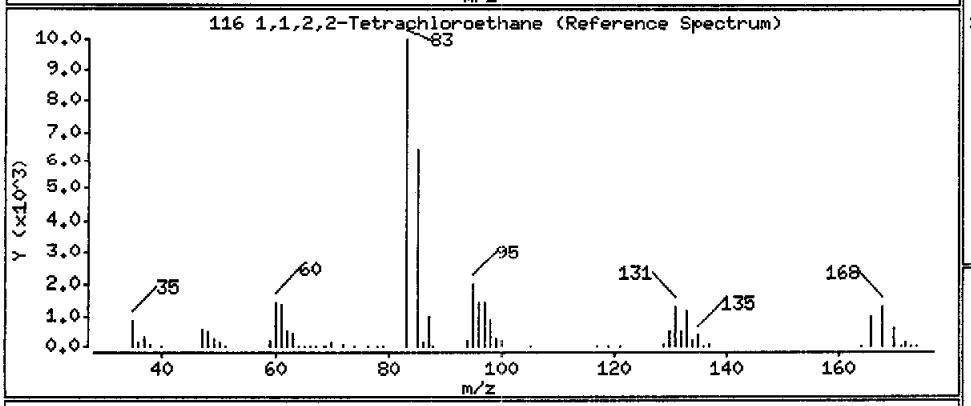
Column diameter: 0.53

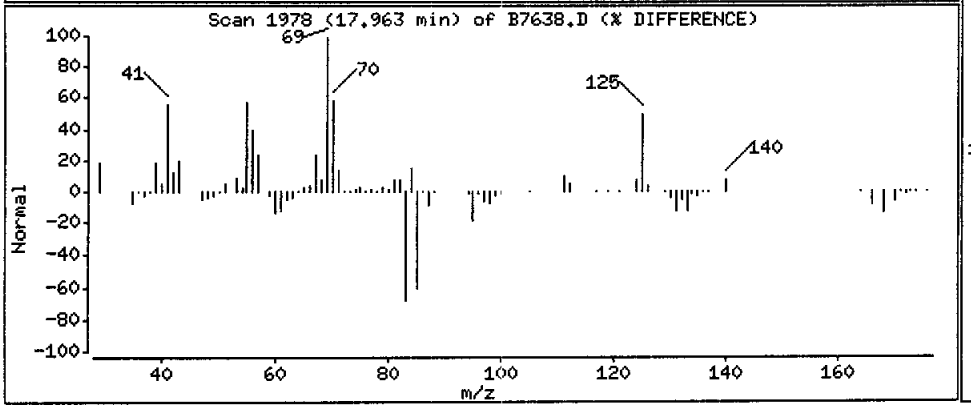
116 1,1,2,2-Tetrachloroethane

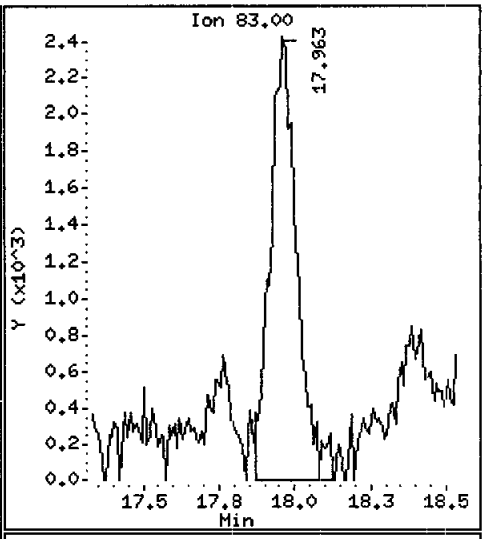
Concentration: 4.860 ppbv

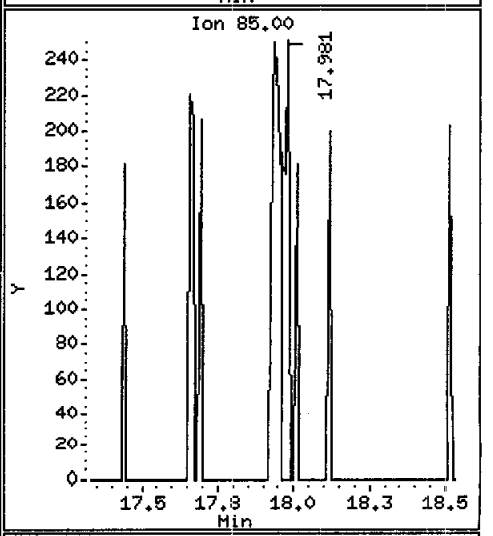


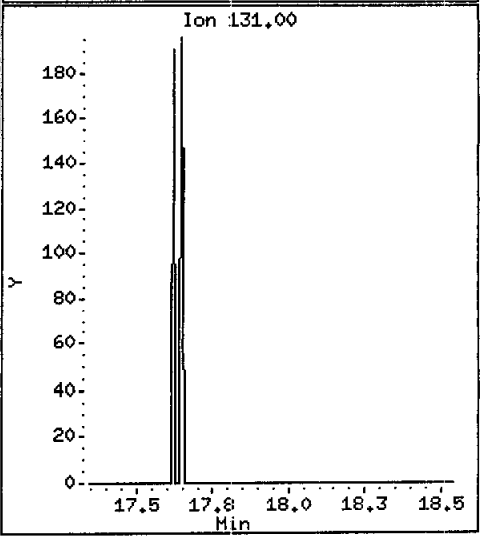












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D
Lab Smp Id: G2DKV1AD Client Smp ID: 066391-001
Inj Date : 17-JAN-2005 13:15
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DKV1AD,066391-001,SANDIA,E5A100233-4
Misc Info : 24.4,12.8,500,100,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	100.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.156	2.123	(0.259)	13120717	457.767	4363
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.372	2.357	(0.285)	673974	28.9178	275.6
8 Chloromethane	52	2.381	2.402	(0.286)	7998	6.28652	59.92(Q)
9 Vinyl Chloride	62	2.607	2.592	(0.313)	101677	18.4133	175.5
16 Chloroethane	64	3.311	3.304	(0.398)	4591	1.31274	12.51(aQ)
21 Trichlorofluoromethane (F11)	101	3.771	3.756	(0.453)	1666842	57.6836	549.8
28 1,1-Dichloroethene	61	4.700	4.685	(0.564)	4749161	309.853	2953
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.754	4.739	(0.571)	8684401	261.574	2493
31 Acetone	58	4.763	4.847	(0.572)	28473	13.1029	124.9(Q)
37 Methylene Chloride	49	5.593	5.587	(0.672)	1430992	151.205	1441
41 trans-1,2-Dichloroethene	61	6.135	6.102	(0.737)	19362	1.45191	13.84(a)
44 1,1-Dichloroethane	63	6.856	6.850	(0.823)	1272303	75.7521	722.0
45 Vinyl Acetate	43	6.640	7.031	(0.797)	136007	8.41480	80.20(aQ)
53 cis-1,2-Dichloroethene	96	7.939	7.906	(0.953)	16354	1.88433	17.96(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.327	8.321	(1.000)	679038	50.0000	
60 Chloroform	83	8.517	8.484	(1.023)	21540	0.99708	9.503(a)
61 1,1,1-Trichloroethane	97	8.787	8.781	(1.055)	181000	8.38045	79.88
64 Carbon Tetrachloride	117	8.796	9.079	(1.056)	21748	1.51541	14.44(a)
$ 66 1,2-Dichloroethane-d4	65	9.347	9.341	(0.921)	555846	46.0722	439.1
68 Benzene	78	9.464	9.440	(0.932)	59714	2.98498	28.45
* 73 1,4-Difluorobenzene	114	10.150	10.144	(1.000)	1470119	50.0000	
75 Trichloroethene	130	10.592	10.586	(1.044)	3746372	291.857	2782
$ 88 Toluene-d8	100	12.766	12.751	(1.258)	778179	50.5509	481.8
89 Toluene	91	12.884	12.878	(1.269)	272712	10.5353	100.4
93 1,1,2-Trichloroethane	97	13.867	13.608	(0.900)	15038	1.23312	11.75(aQ)
95 Tetrachloroethene	166	13.885	13.870	(0.901)	1526998	90.2180	859.9
M 99 Xylenes (total)	106				15405	1.72632	16.45(a)
* 101 Chlorobenzene-d5	117	15.410	15.404	(1.000)	1081073	50.0000	
104 Ethylbenzene	91	15.708	15.675	(1.019)	23696	0.77113	7.350(a)
105 m,p-Xylenes	106	15.951	15.891	(1.035)	15405	1.72632	16.45(a)
$ 114 4-Bromofluorobenzene	95	17.666	17.651	(1.146)	893535	46.2685	441.0
116 1,1,2,2-Tetrachloroethane	83	17.981	17.930	(1.167)	15298	0.52247	4.980(aQ)

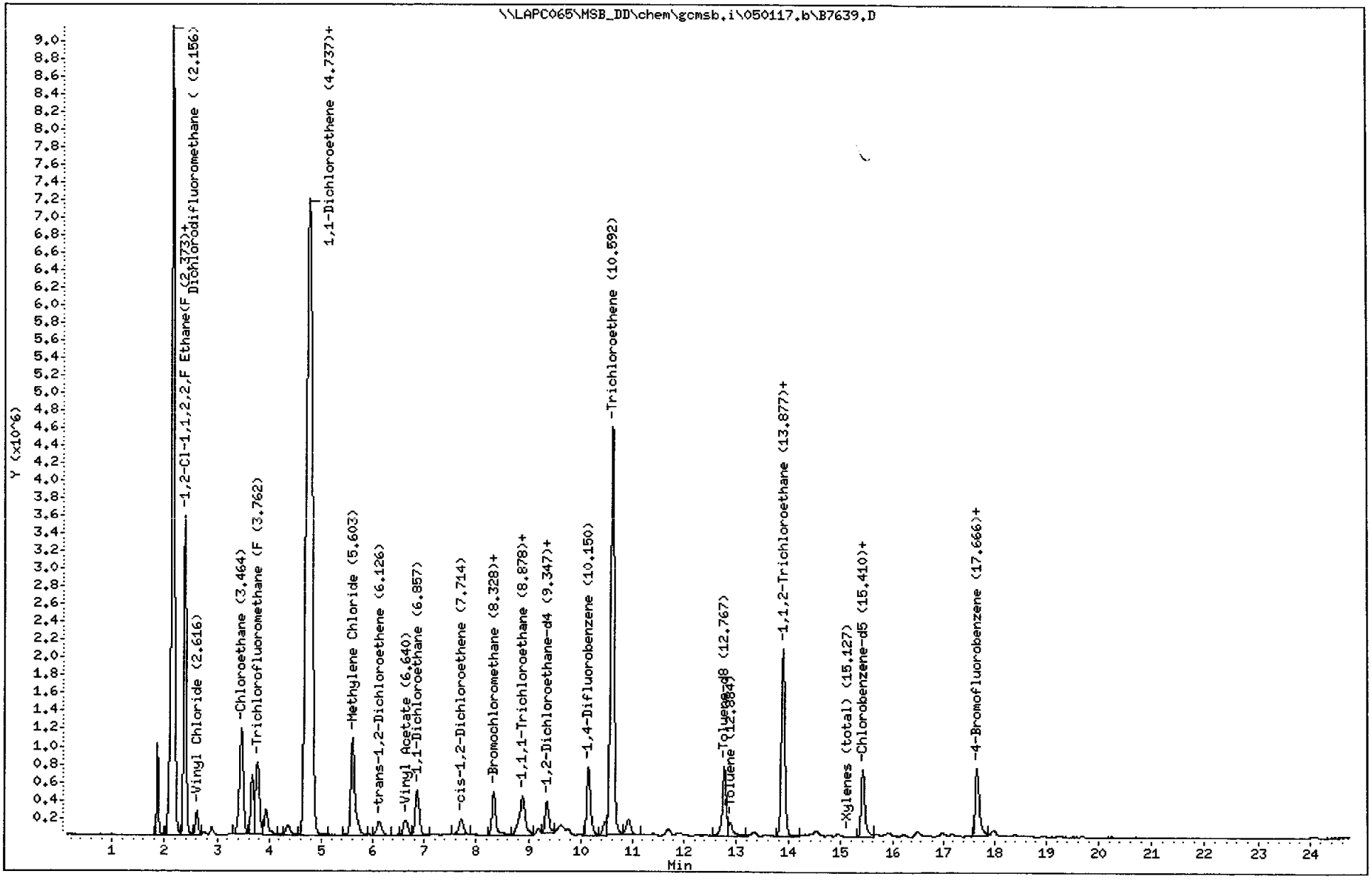
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D
Date : 17-JAN-2005 13:15
Client ID: 066391-001
Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

Instrument: gcmsb.i
Operator: AA
Column diameter: 0.53

Column phase: J&W DB-624



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

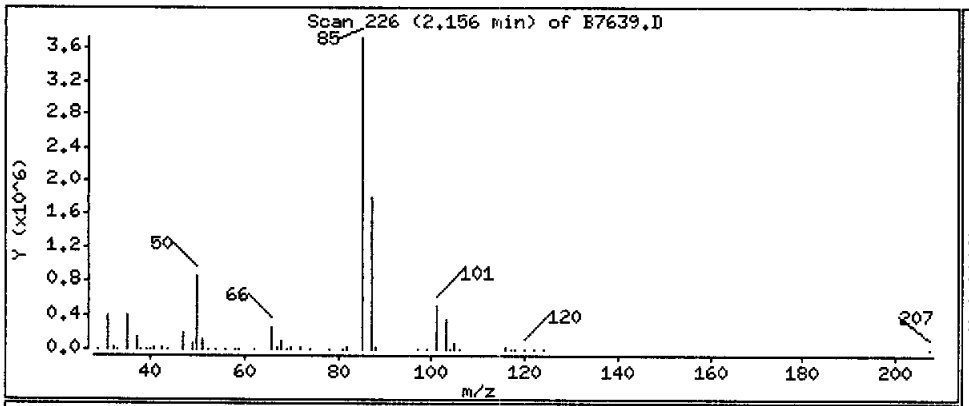
Operator: AA

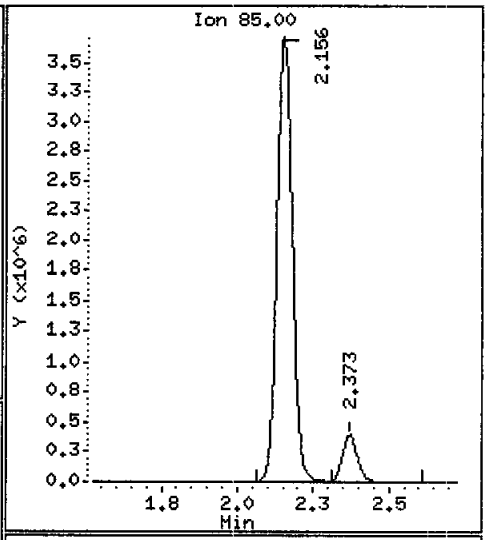
Column phase: J&W DB-624

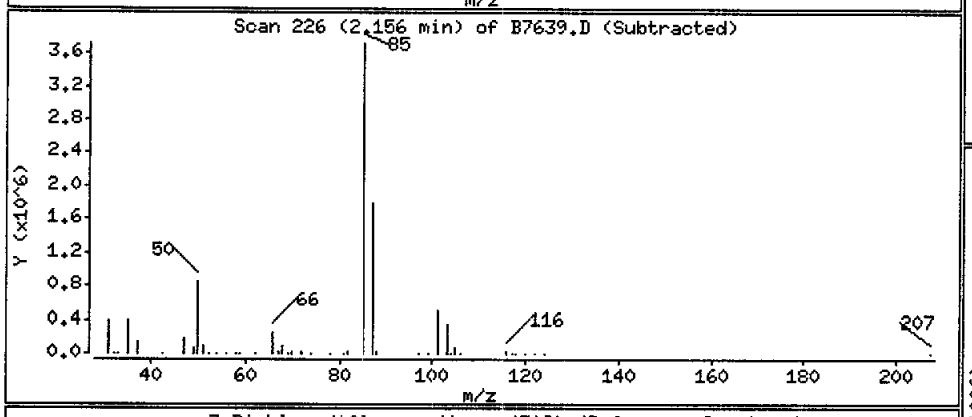
Column diameter: 0.53

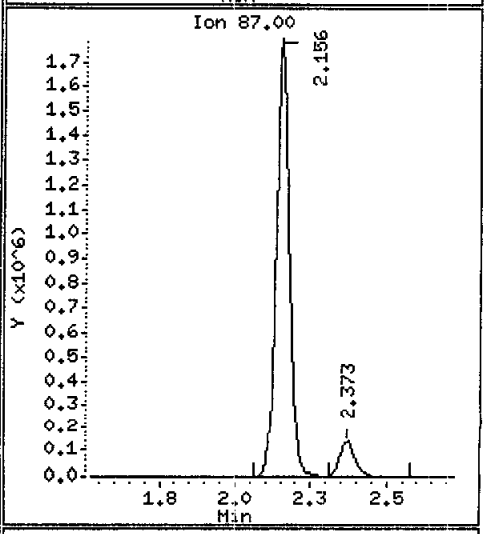
3 Dichlorodifluoromethane (F12)

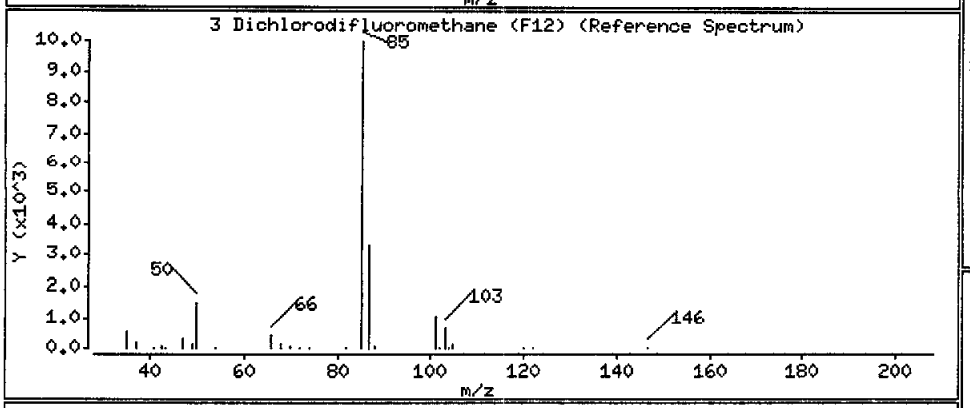
Concentration: 4363 ppbv

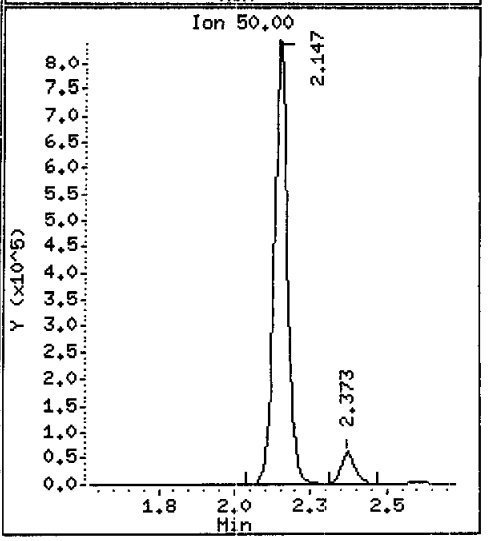


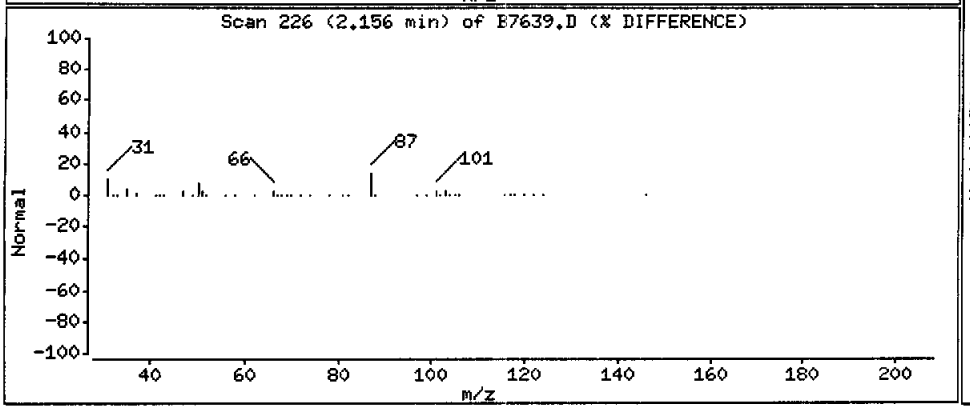












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: C2DKV1AD,066391-001,SANDIA,E5A100233-4

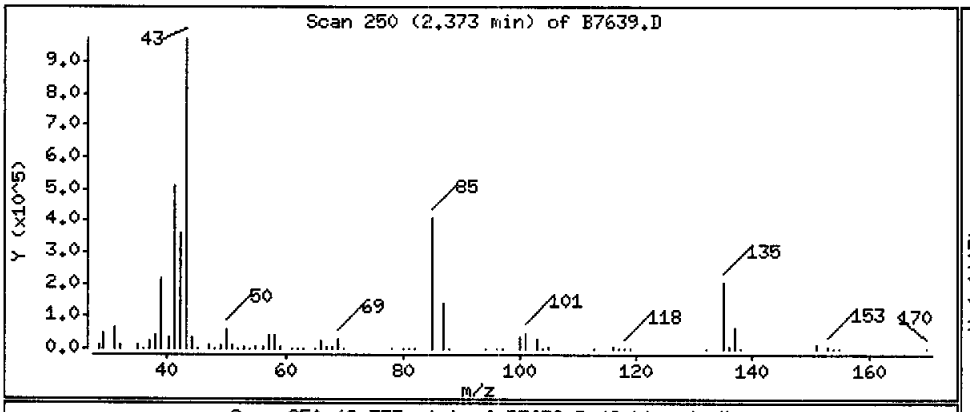
Operator: AA

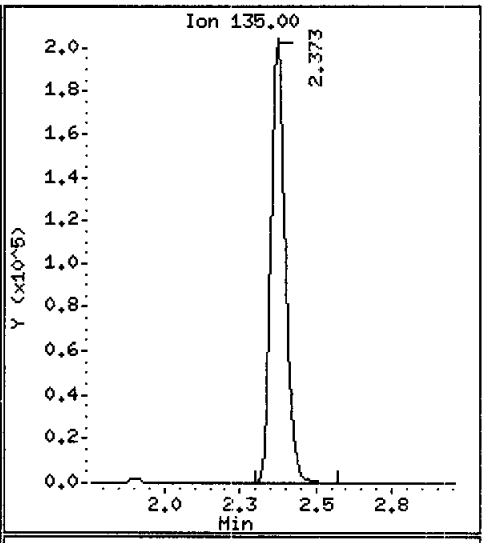
Column phase: J&W DB-624

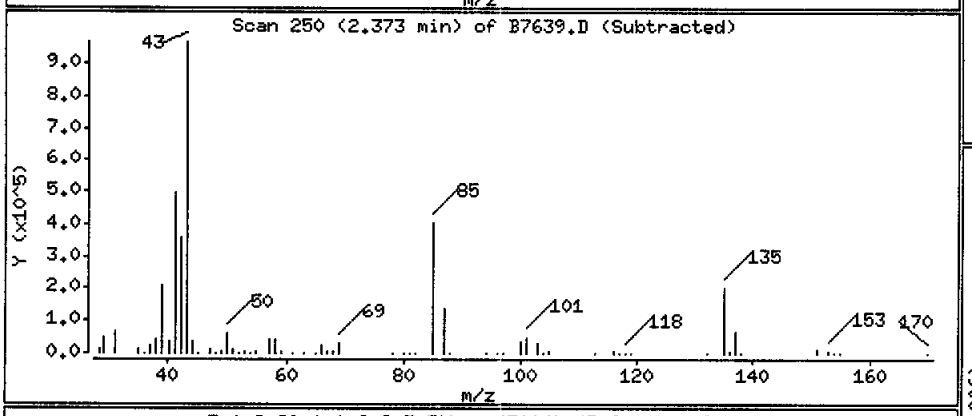
Column diameter: 0.53

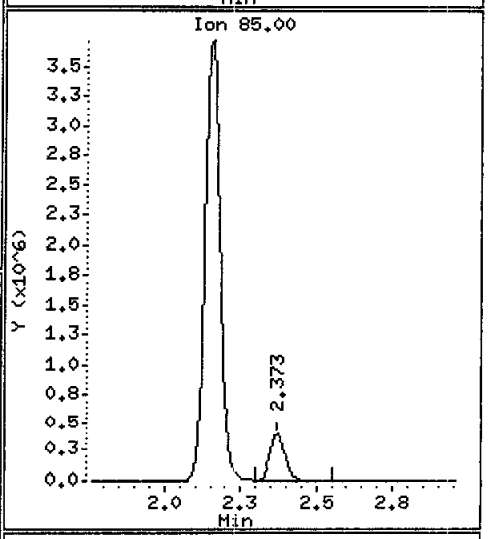
5 1,2-Cl-1,1,2,2,F Ethane(F114)

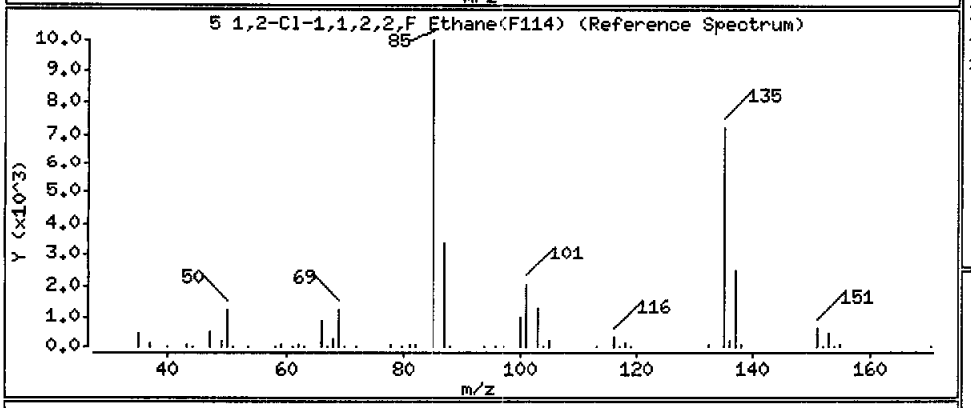
Concentration: 275.6 ppbv

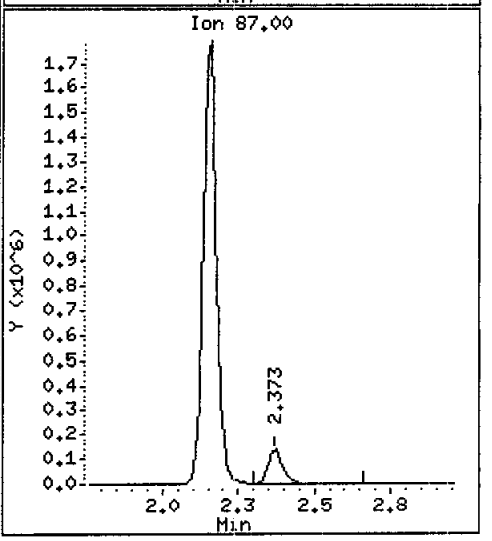


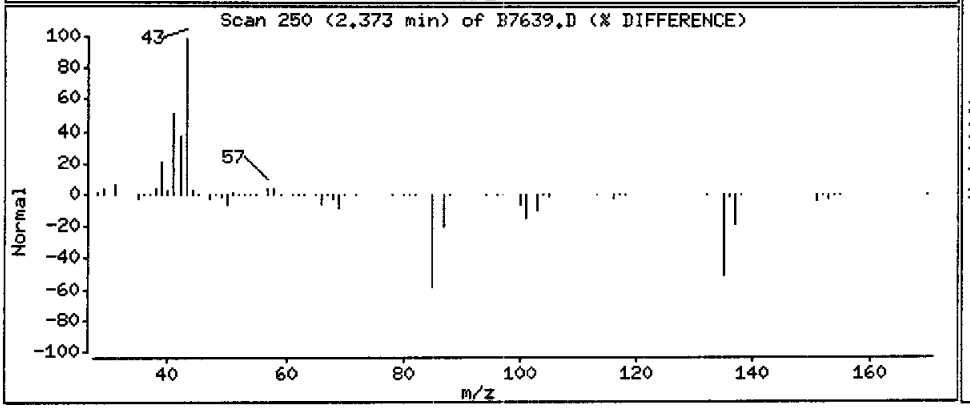












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

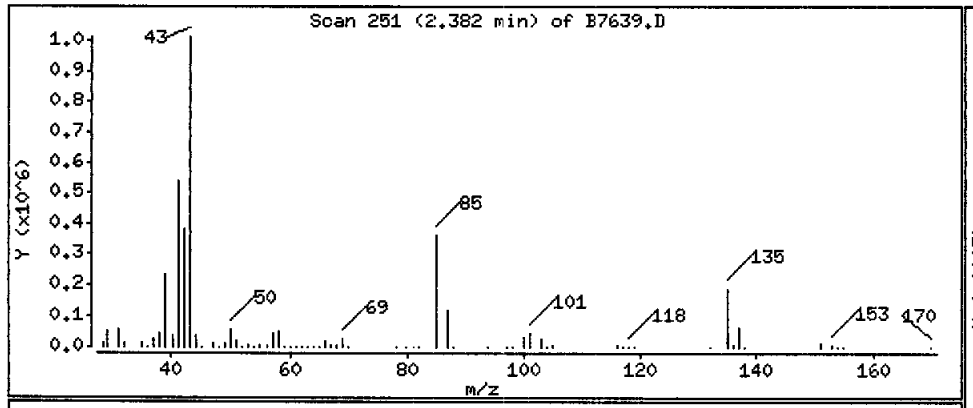
Operator: AA

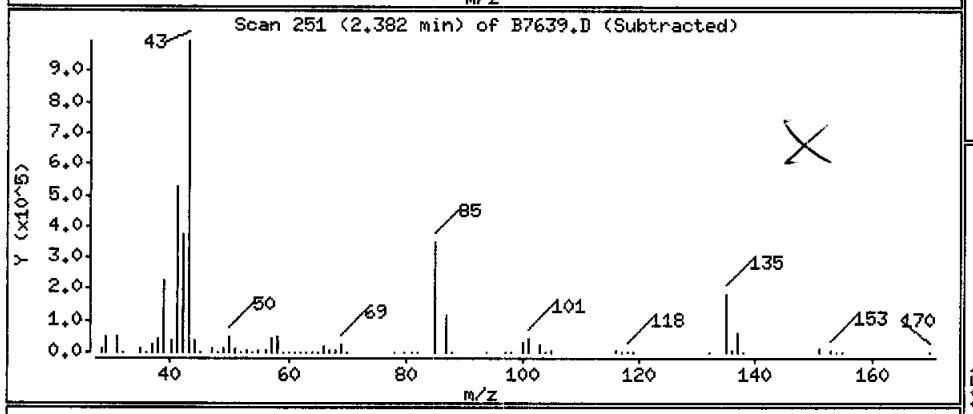
Column phase: J&W DB-624

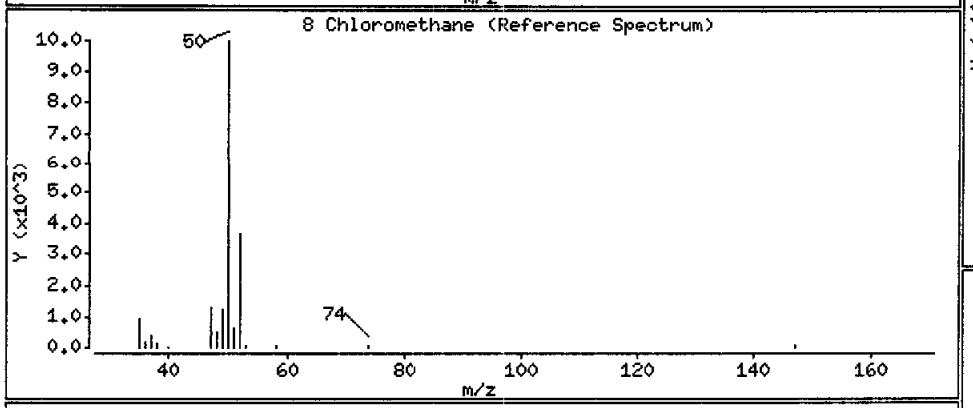
Column diameter: 0.53

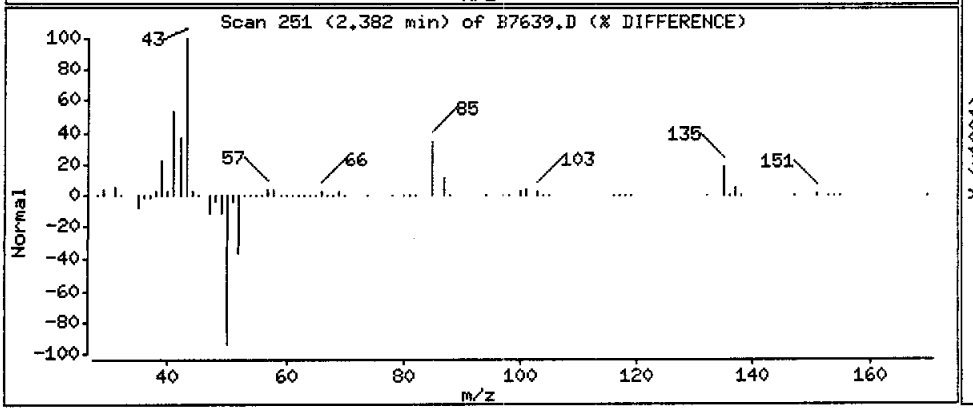
8 Chloromethane

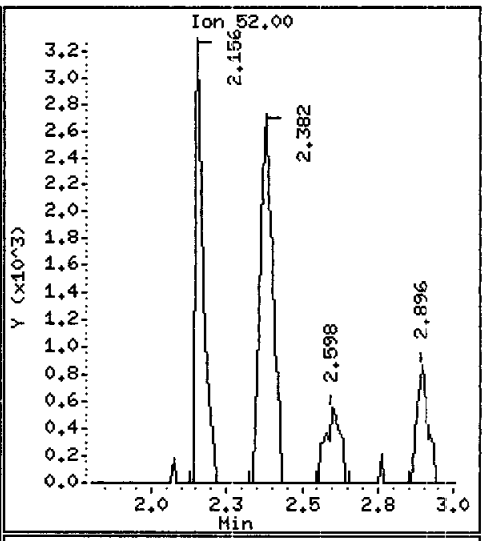
Concentration: 59.92 ppbv

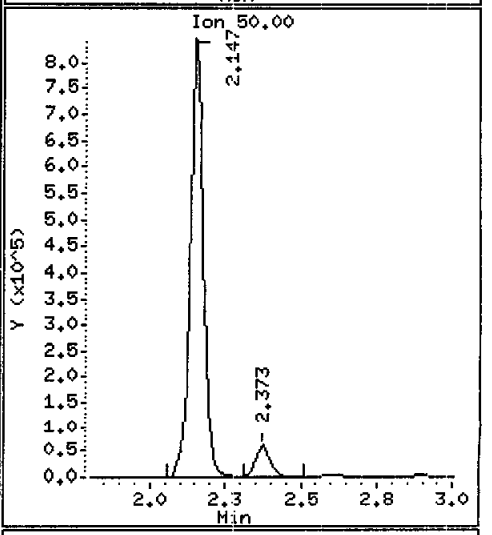


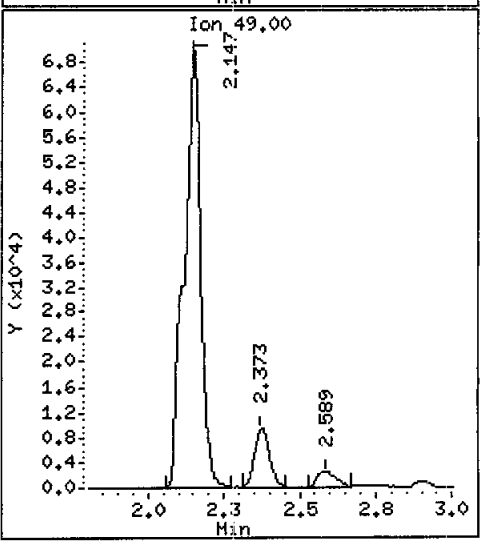












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

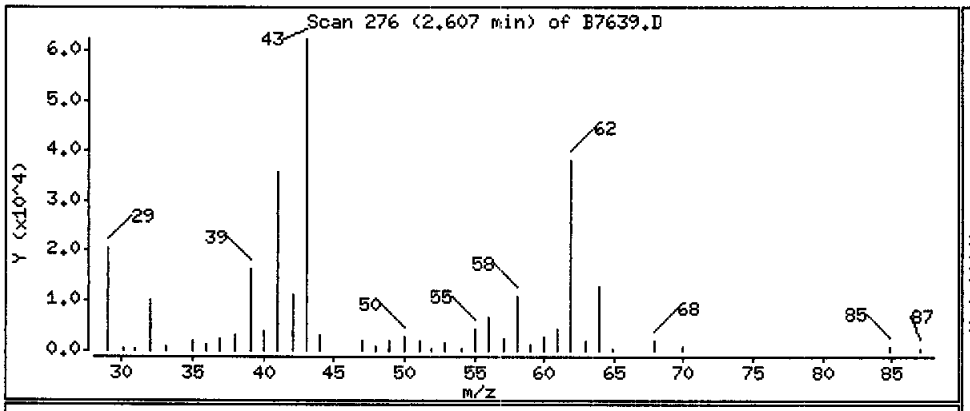
Operator: AA

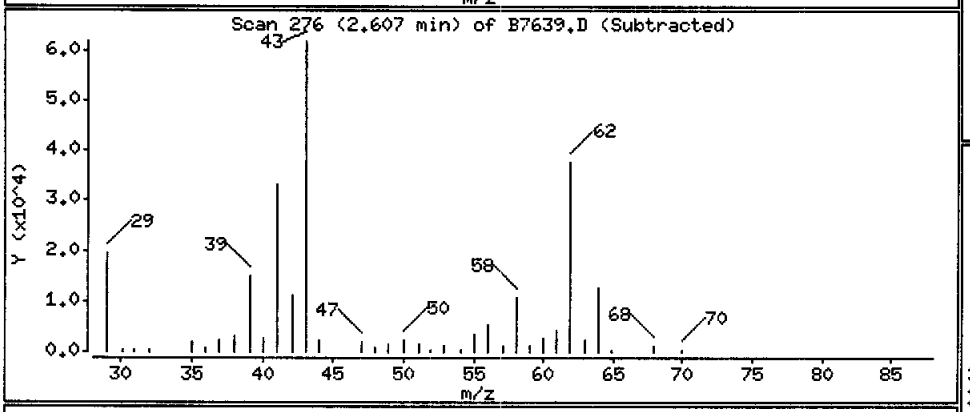
Column phase: J&W DB-624

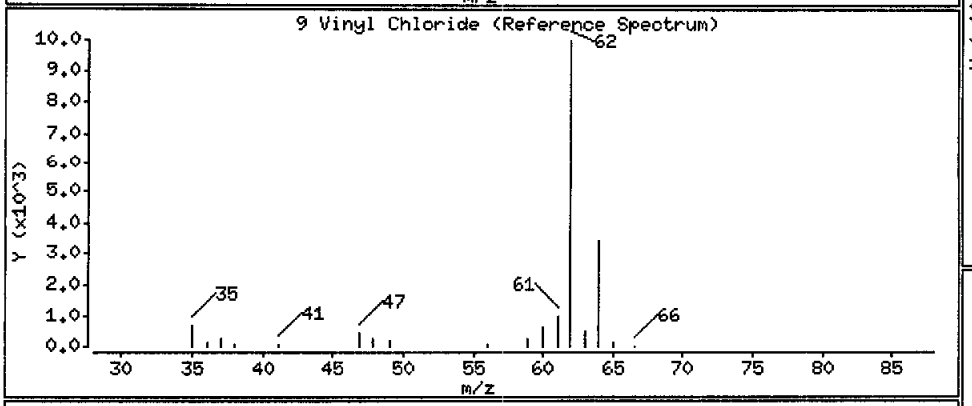
Column diameter: 0.53

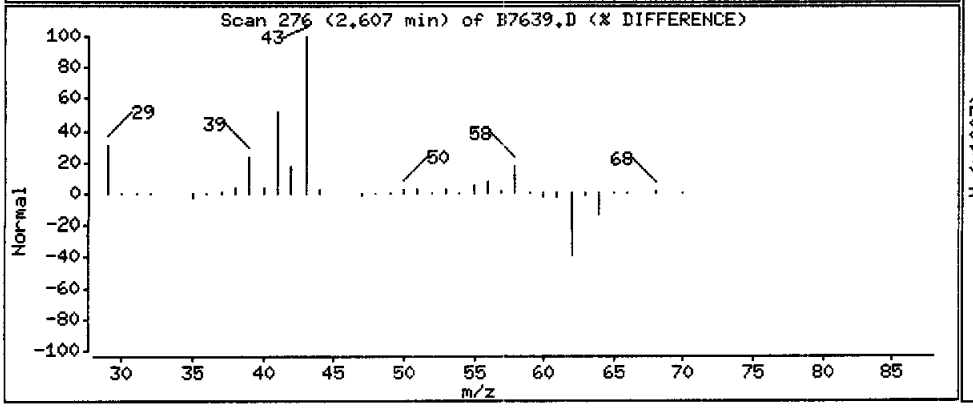
9 Vinyl Chloride

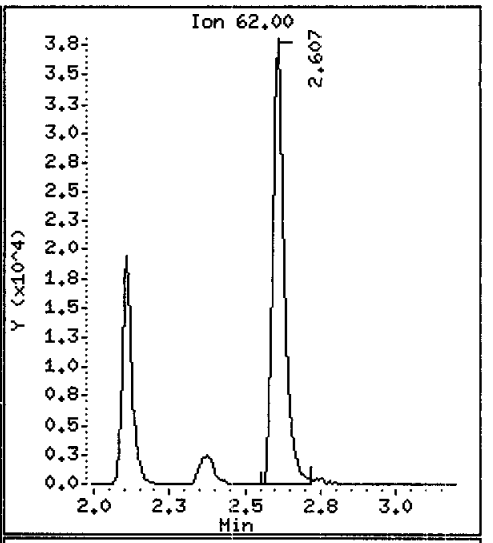
Concentration: 175.5 ppbv

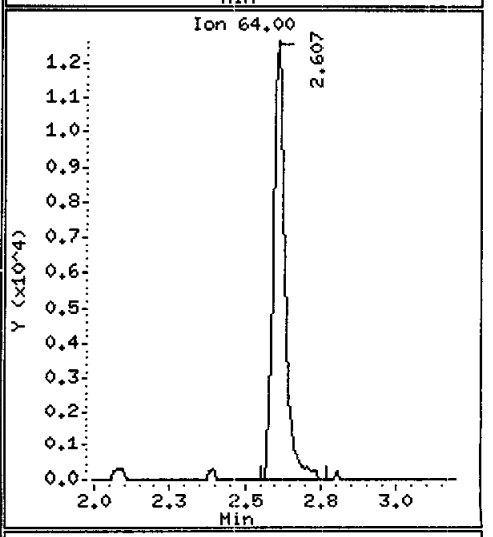


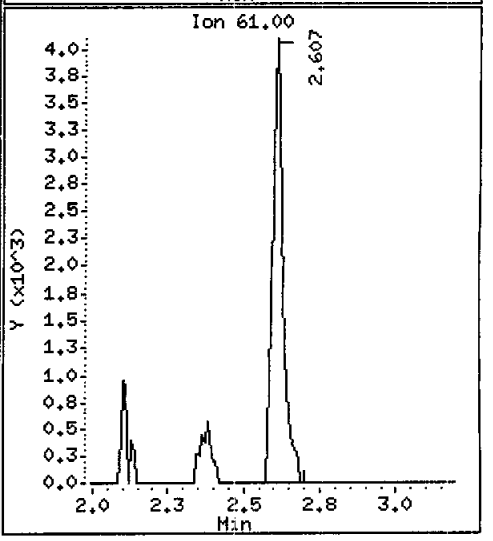












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

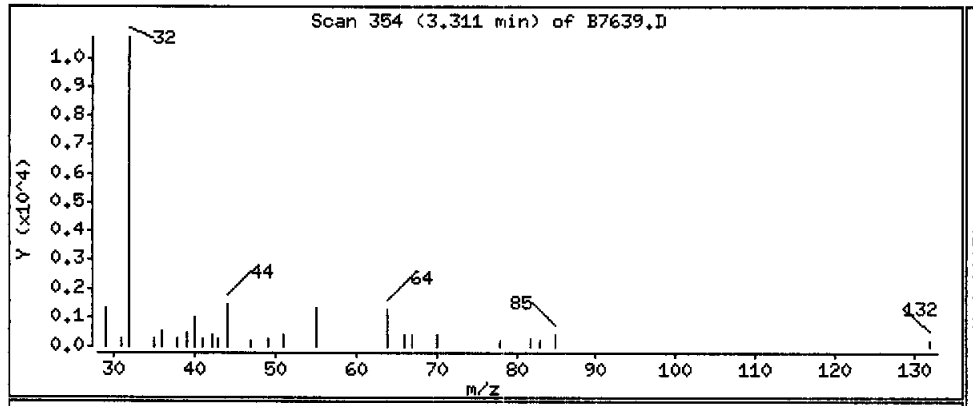
Operator: AA

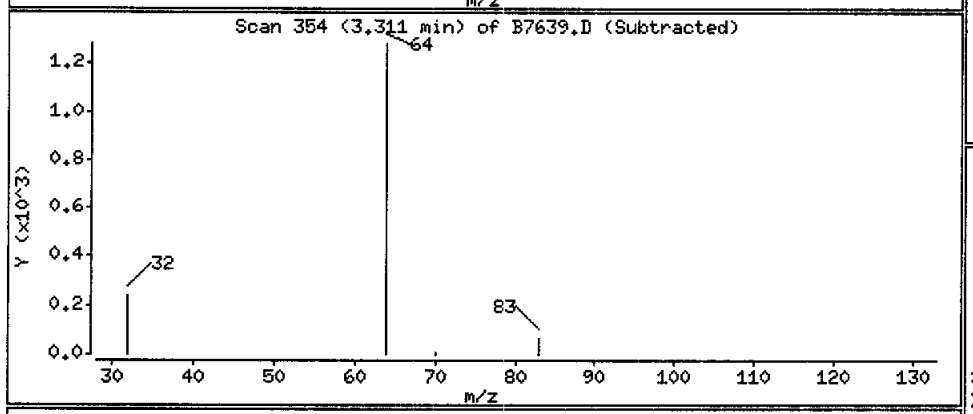
Column phase: J&W DB-624

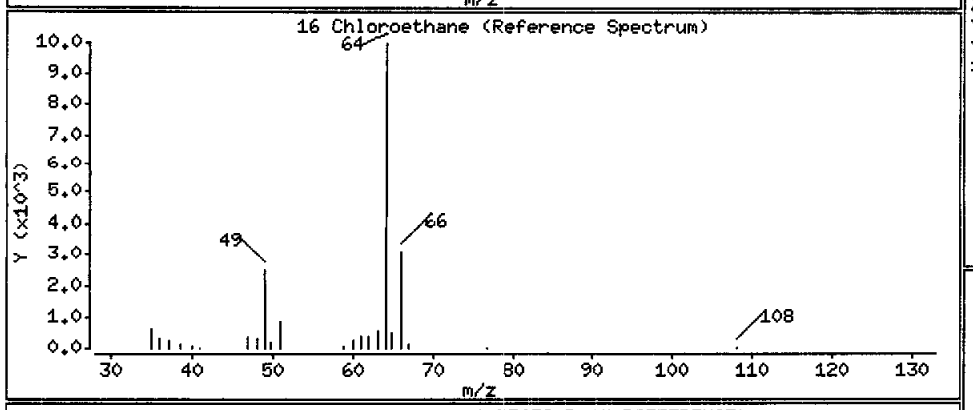
Column diameter: 0.53

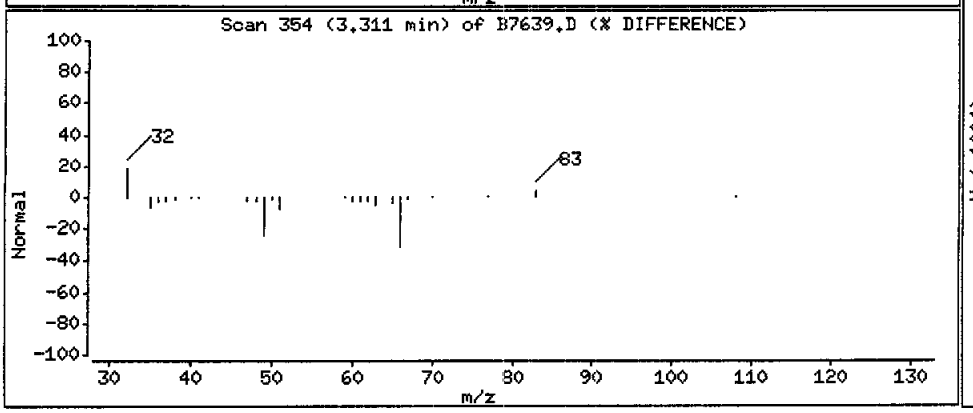
16 Chloroethane

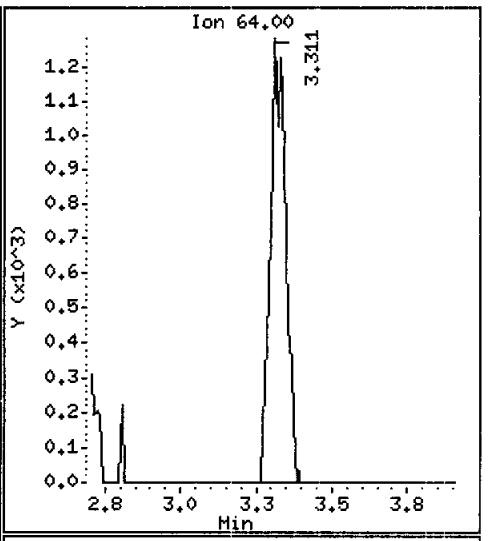
Concentration: 12.51 ppbv

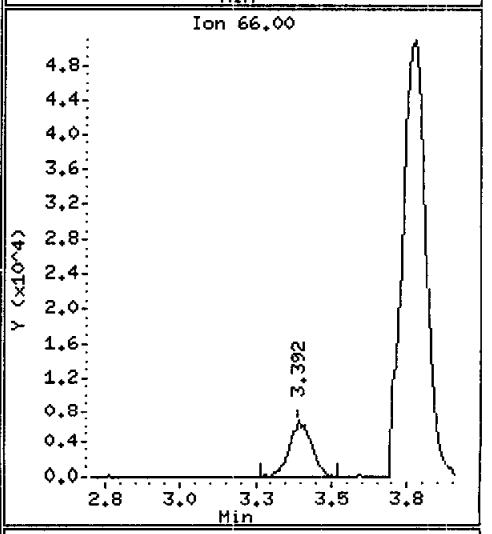


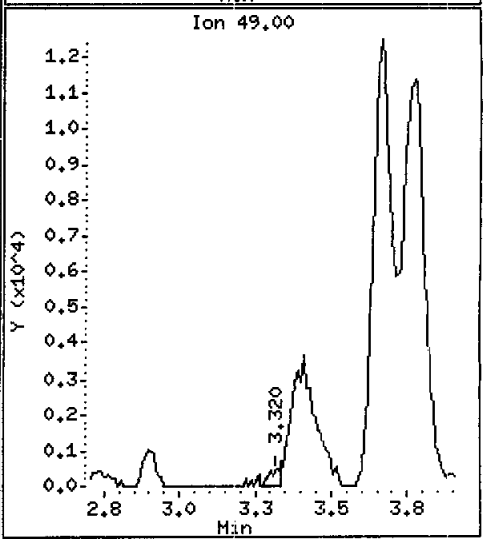












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

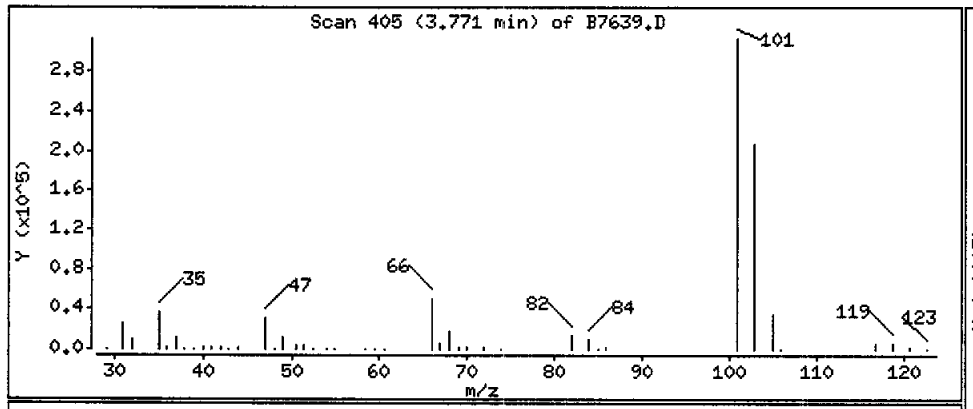
Operator: AA

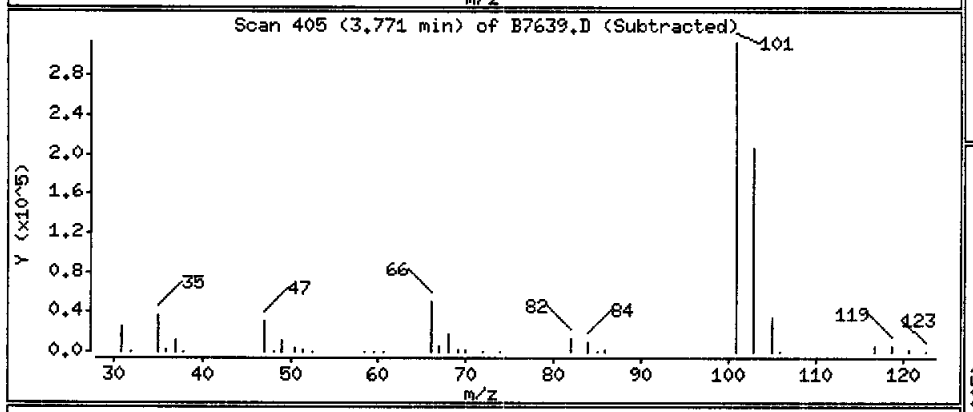
Column phase: J&W DB-624

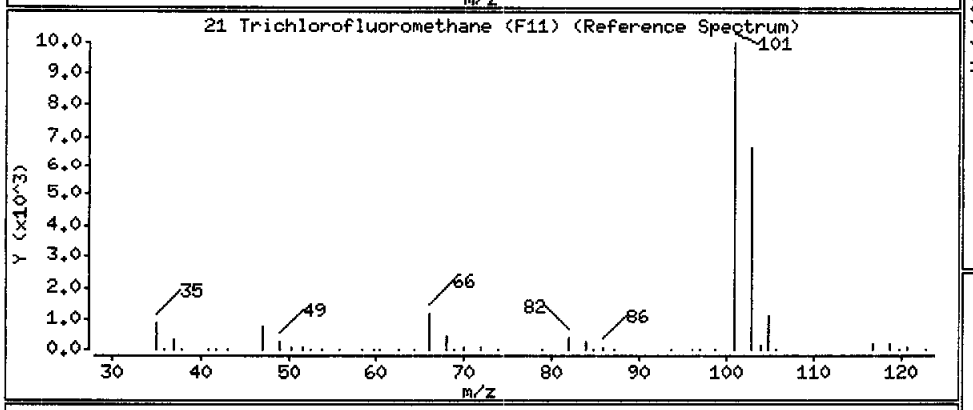
Column diameter: 0.53

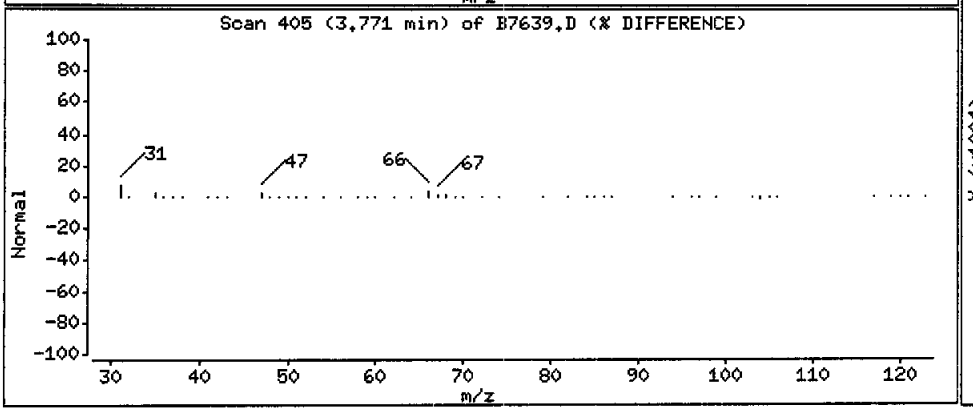
21 Trichlorofluoromethane (F11)

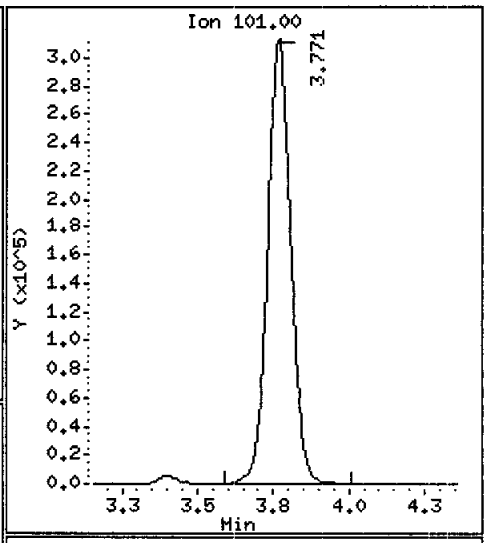
Concentration: 549.8 ppbv

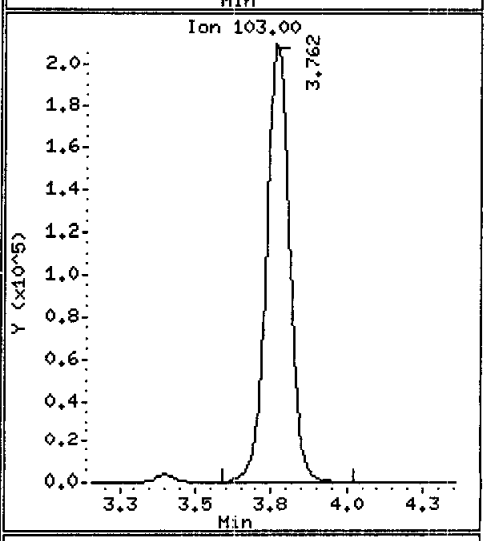


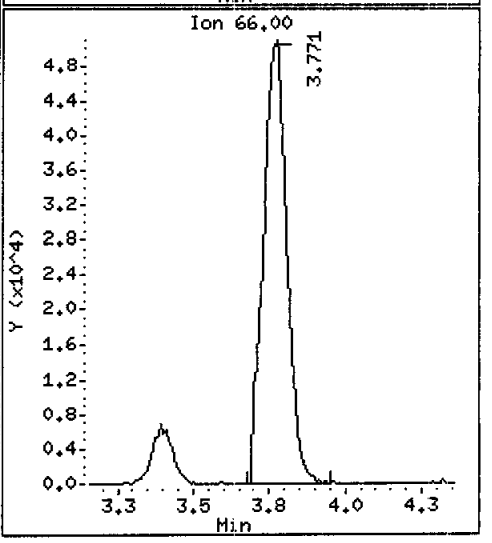












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

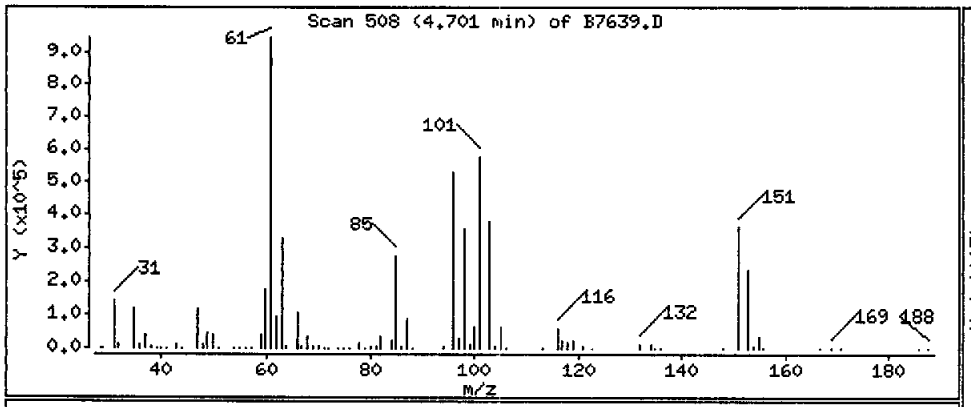
Operator: AA

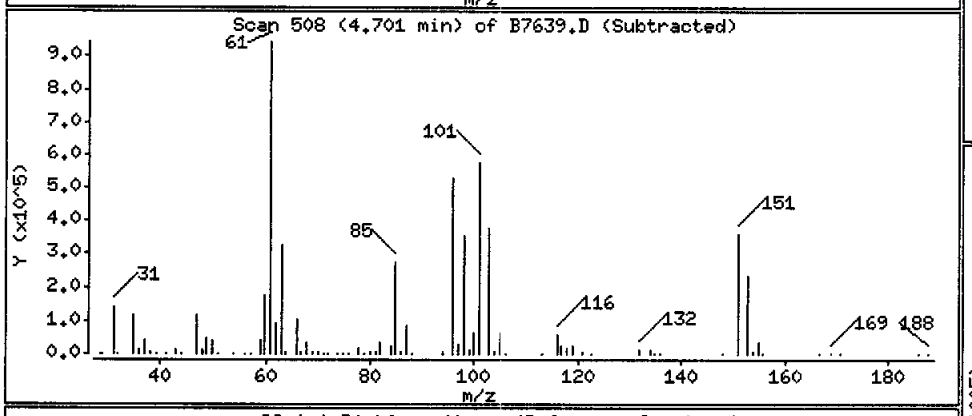
Column phase: J&W DB-624

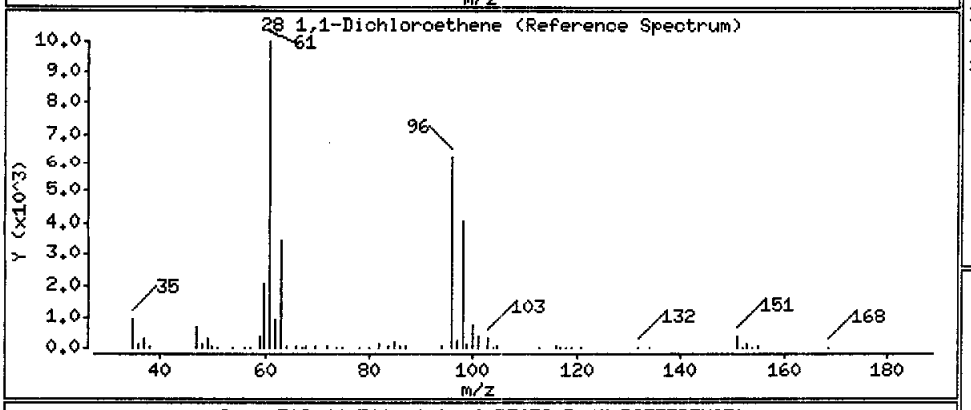
Column diameter: 0.53

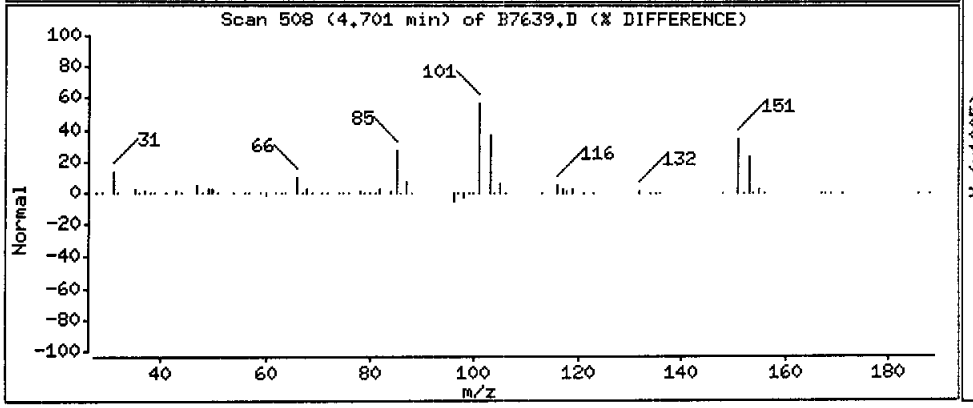
28 1,1-Dichloroethene

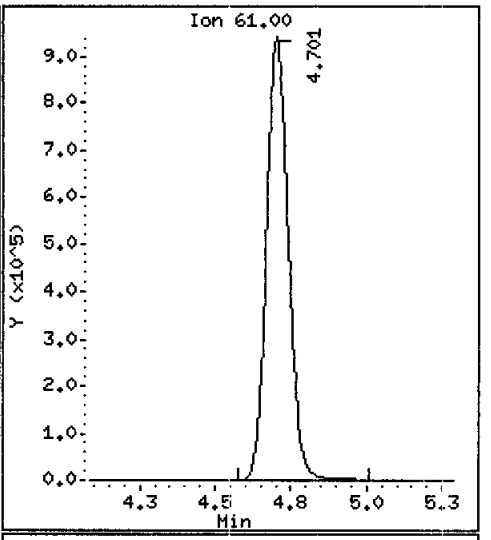
Concentration: 2953 ppbv

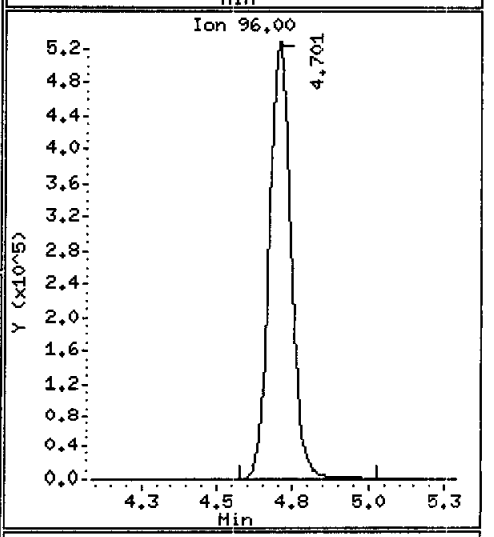


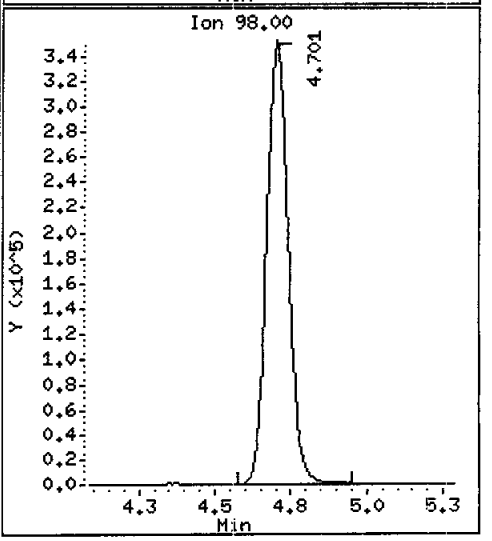












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

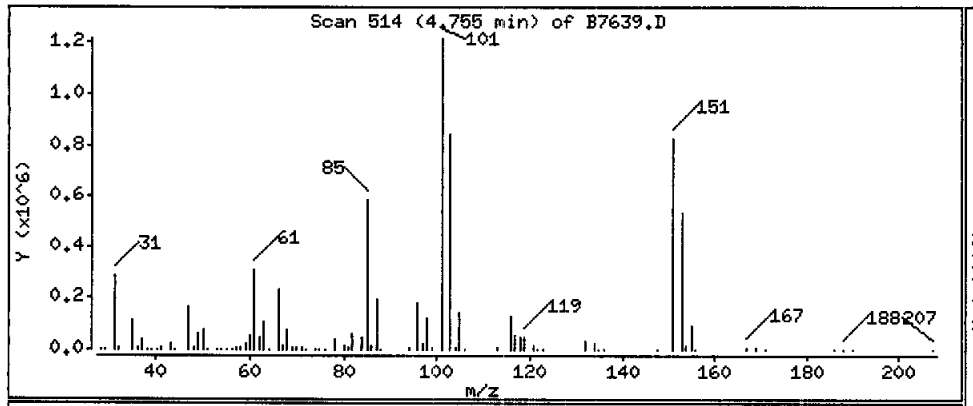
Operator: AA

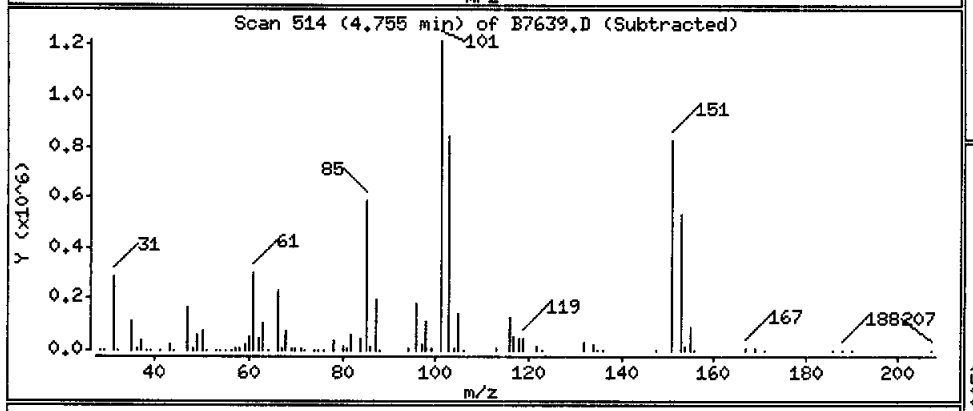
Column phase: J&W DB-624

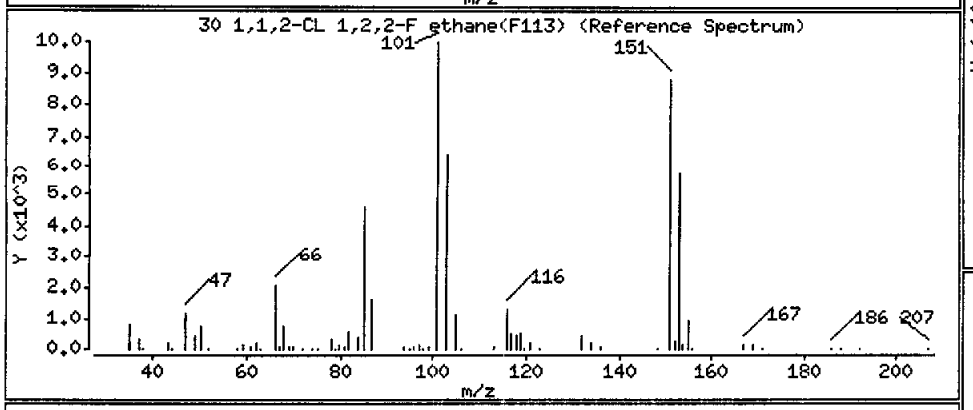
Column diameter: 0.53

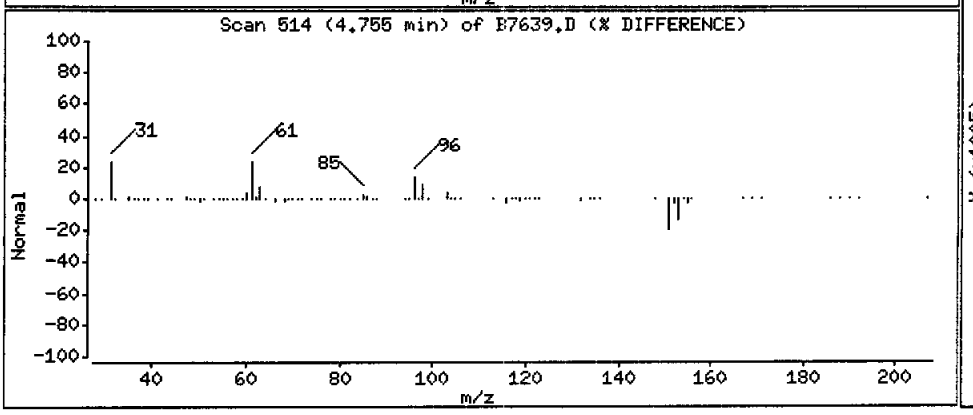
30 1,1,2-CL 1,2,2-F ethane(F113)

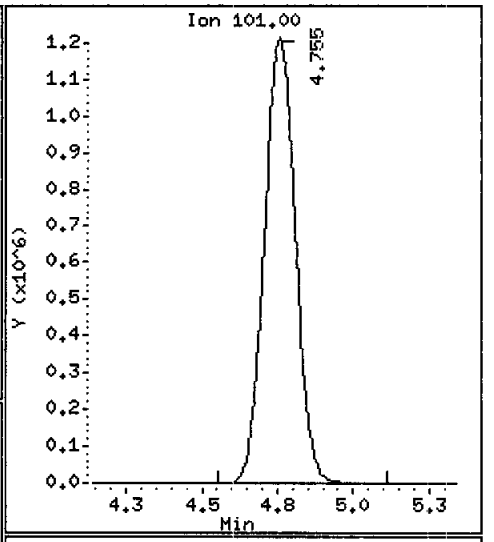
Concentration: 2493 ppbv

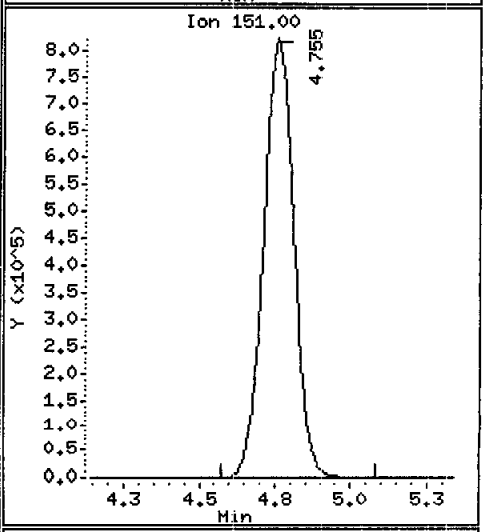


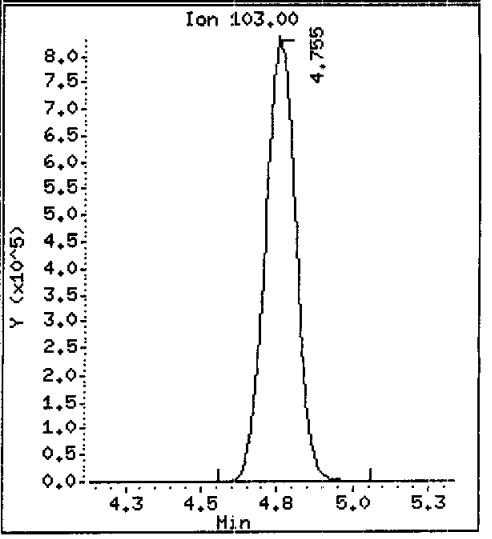












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

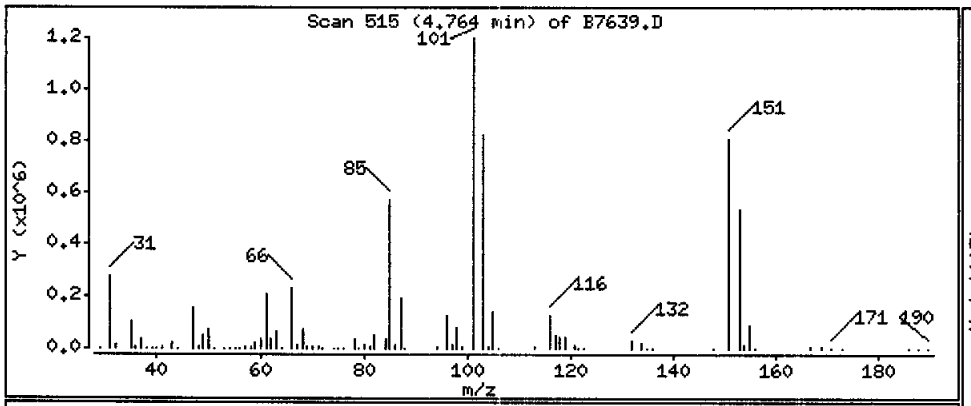
Operator: AA

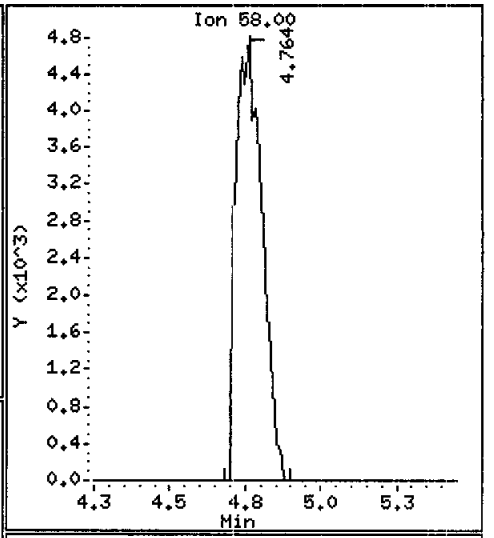
Column phase: J&W DB-624

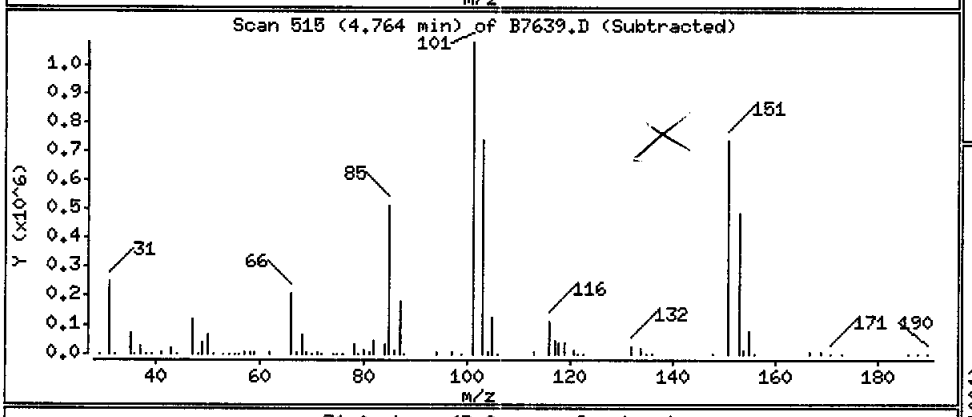
Column diameter: 0.53

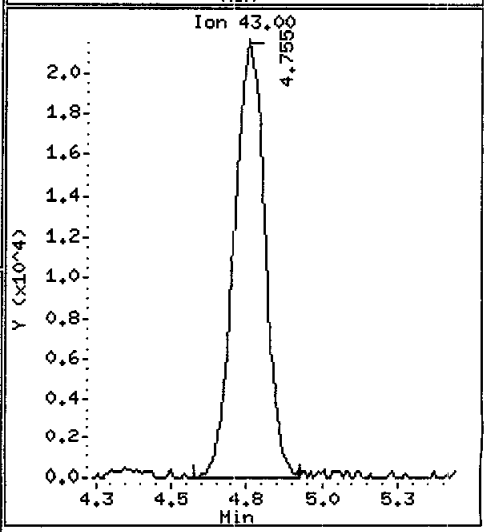
31 Acetone

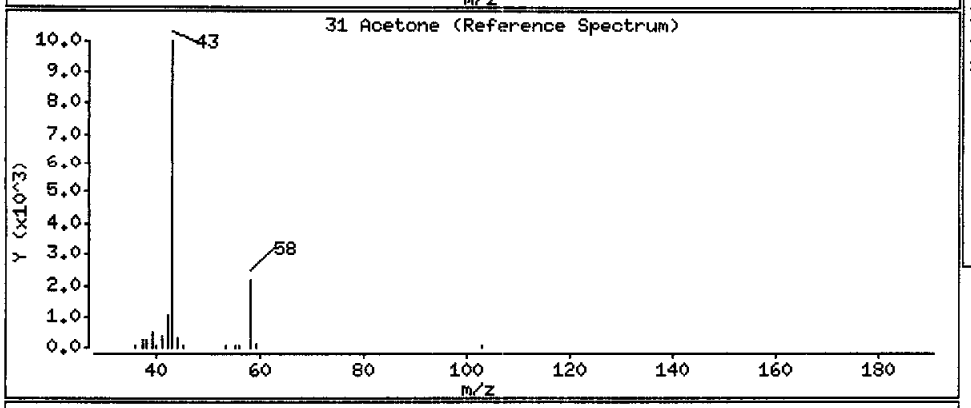
Concentration: 124.9 ppbv

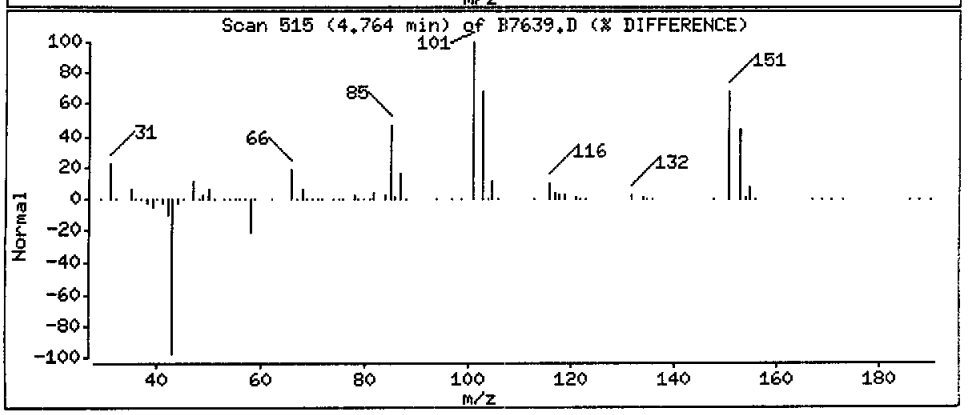












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

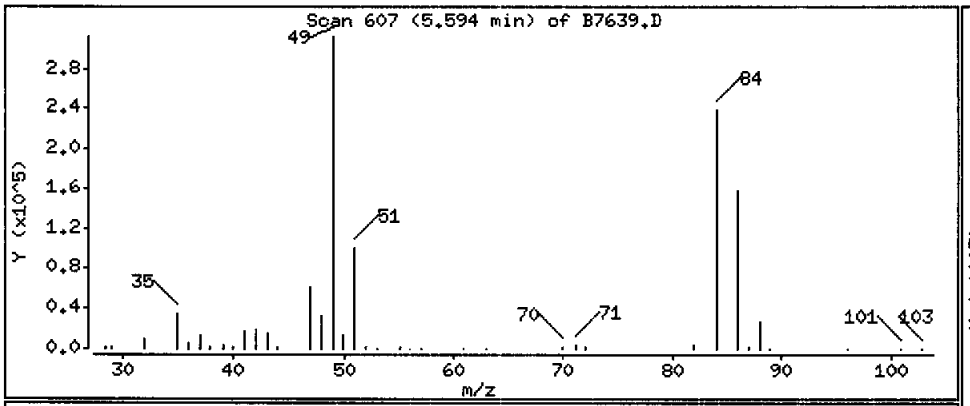
Operator: AA

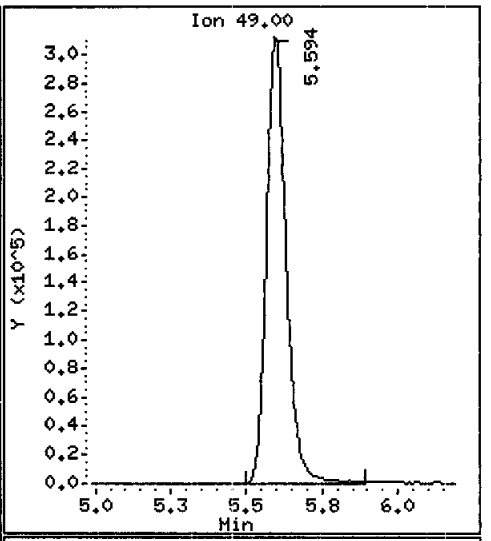
Column phase: J&W DB-624

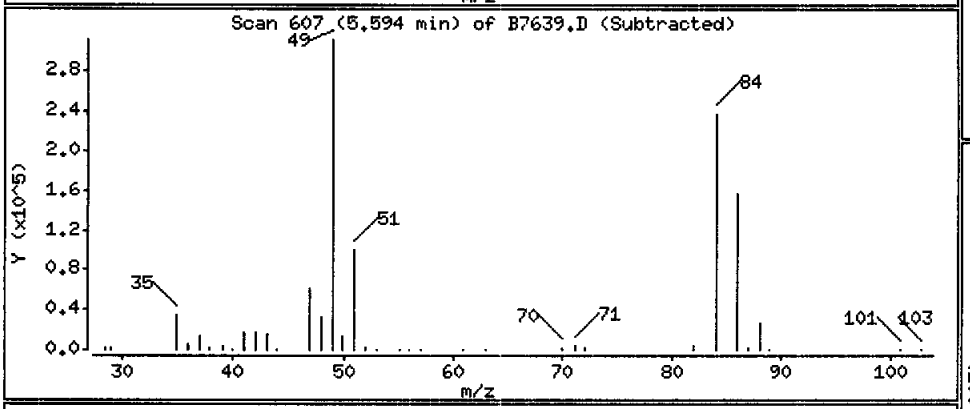
Column diameter: 0.53

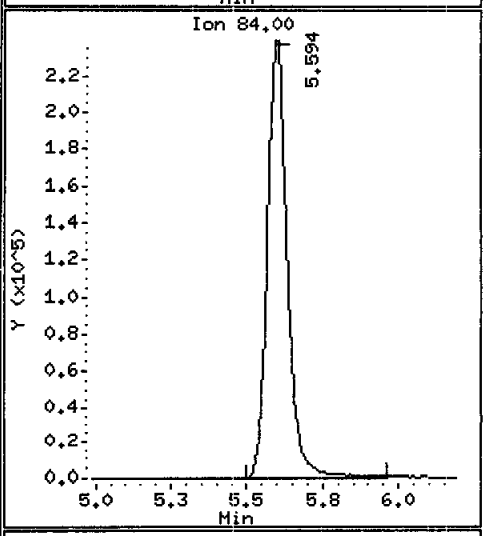
37 Methylene Chloride

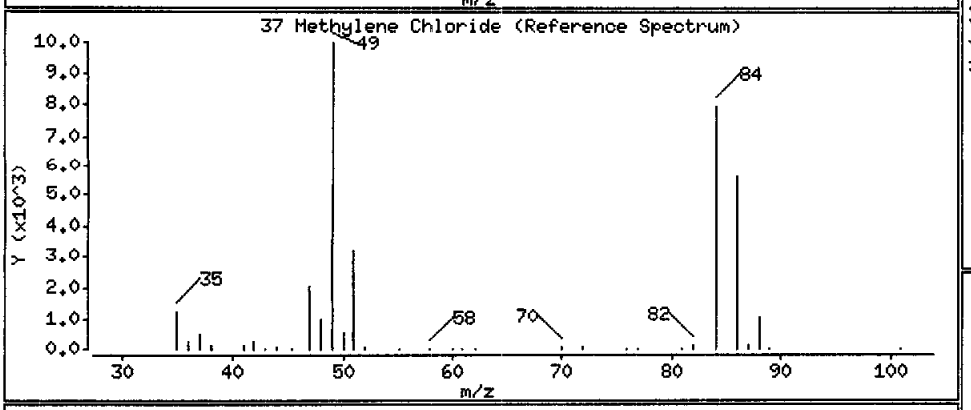
Concentration: 1441 ppbv

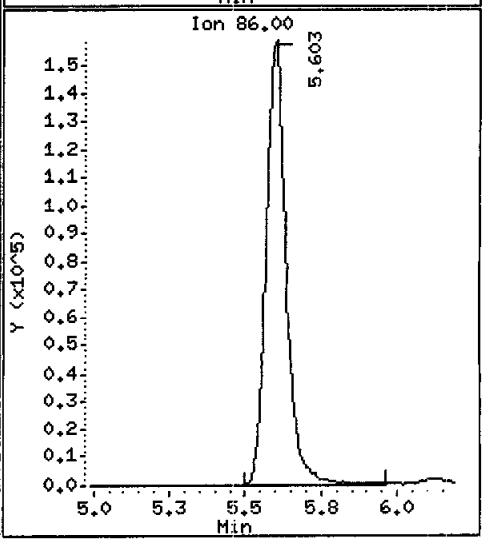


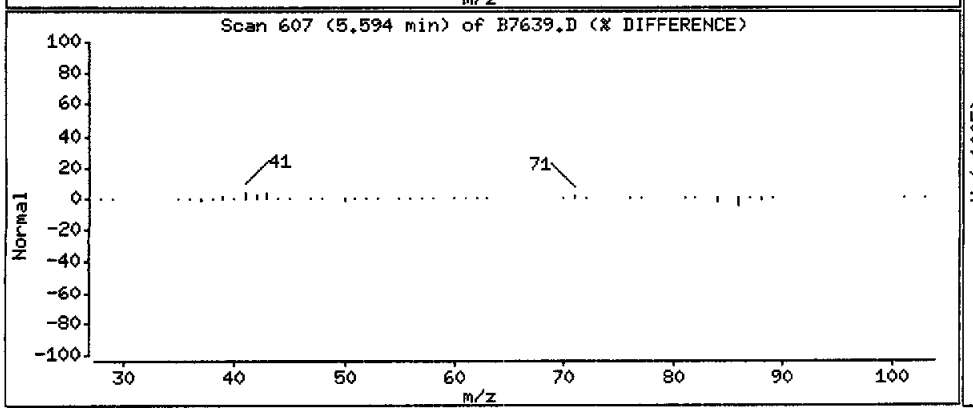












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

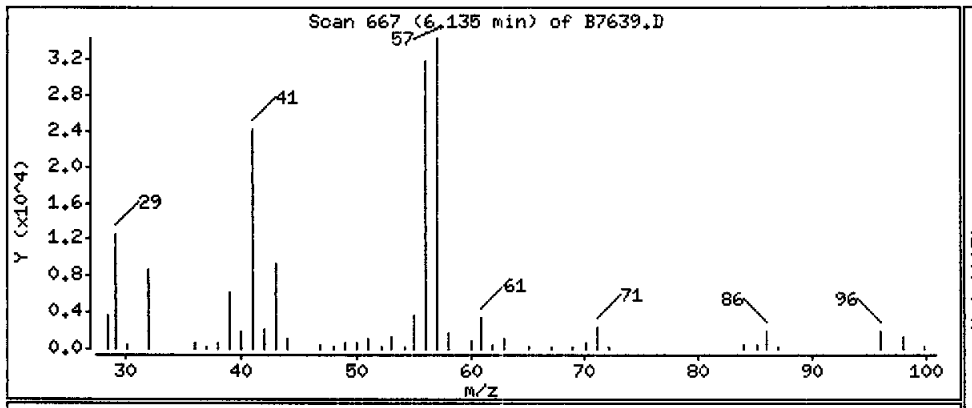
Operator: AA

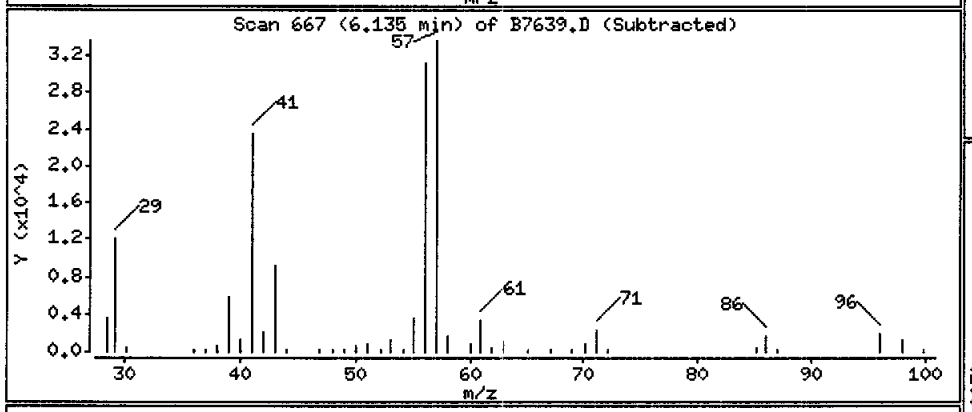
Column phase: J&W DB-624

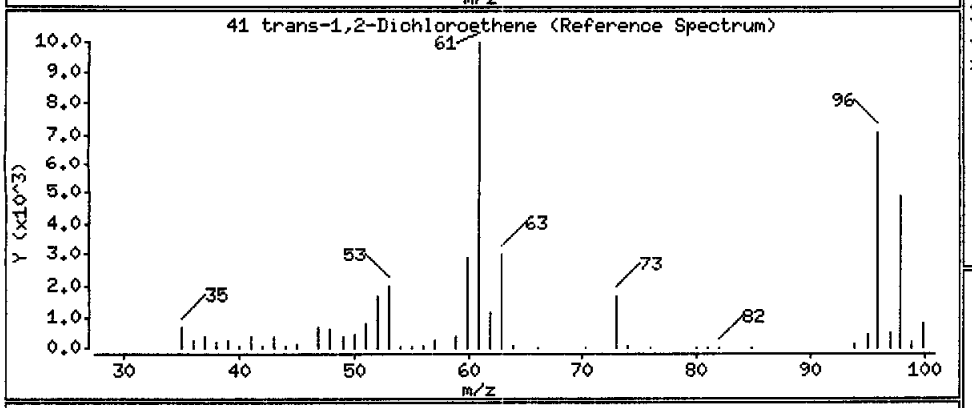
Column diameter: 0.53

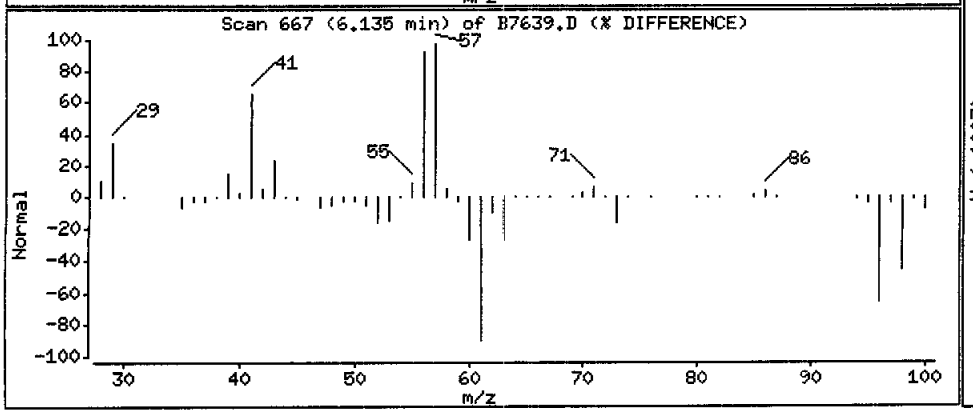
41 trans-1,2-Dichloroethene

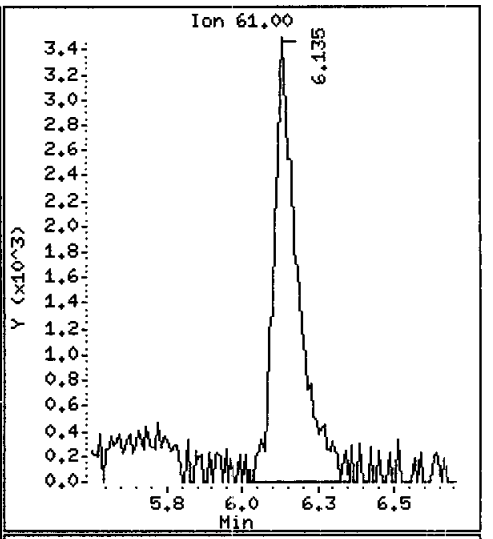
Concentration: 13.84 ppbv

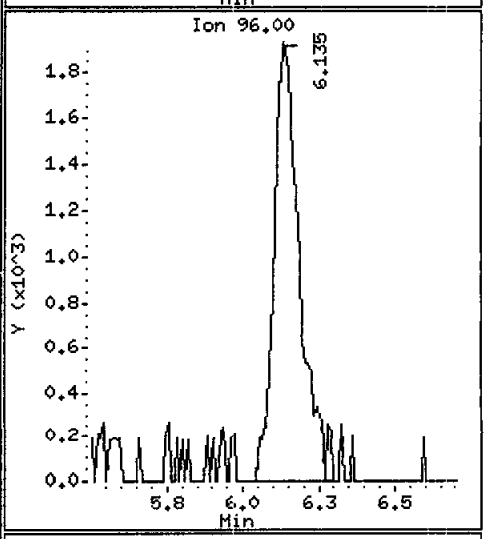


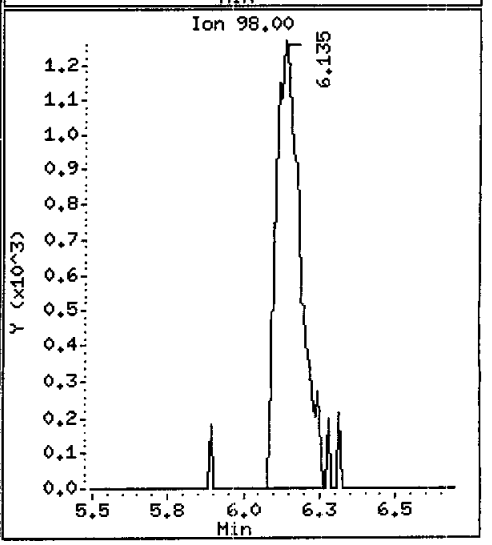












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

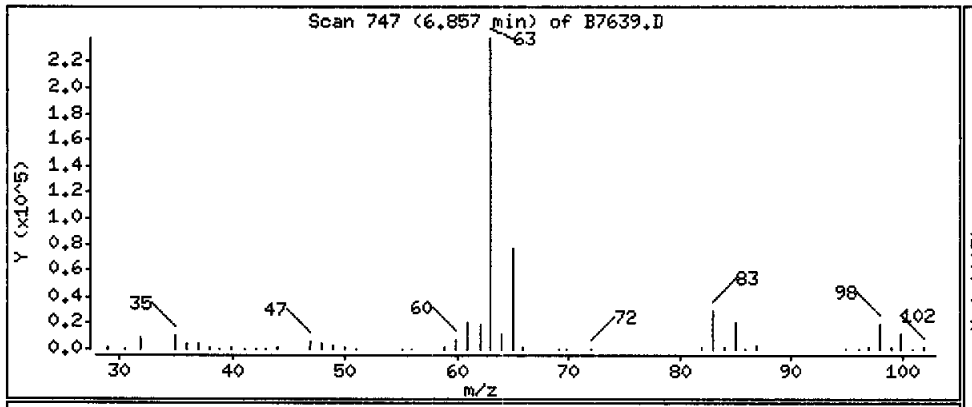
Operator: AA

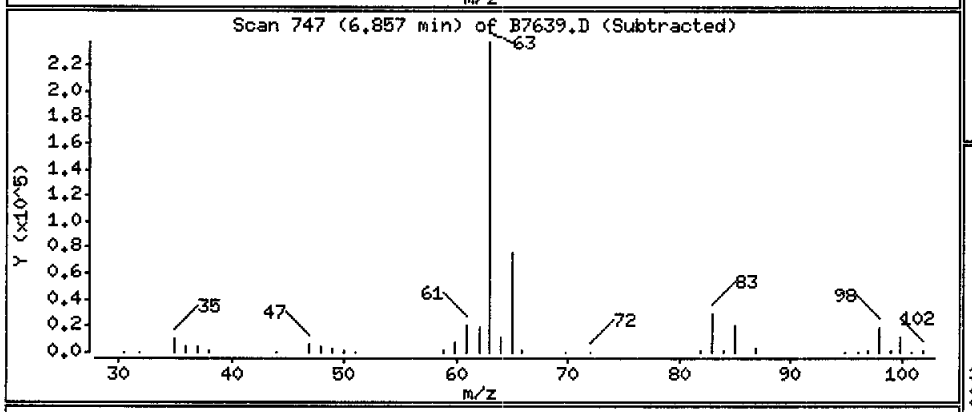
Column phase: J&W DB-624

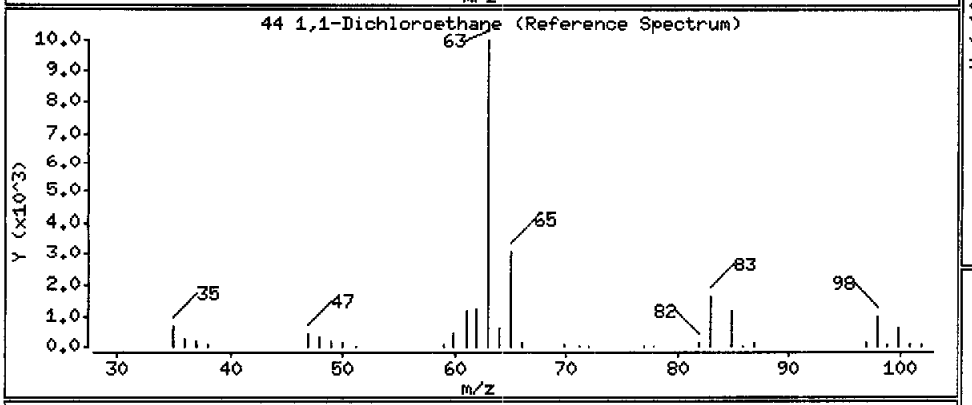
Column diameter: 0.53

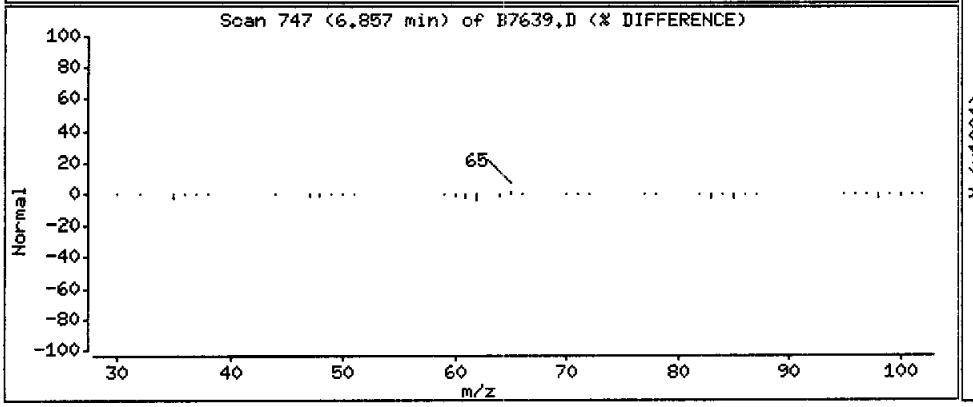
44 1,1-Dichloroethane

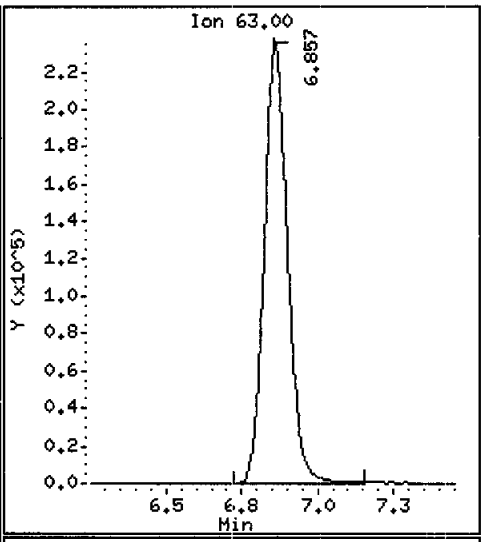
Concentration: 722.0 ppbv

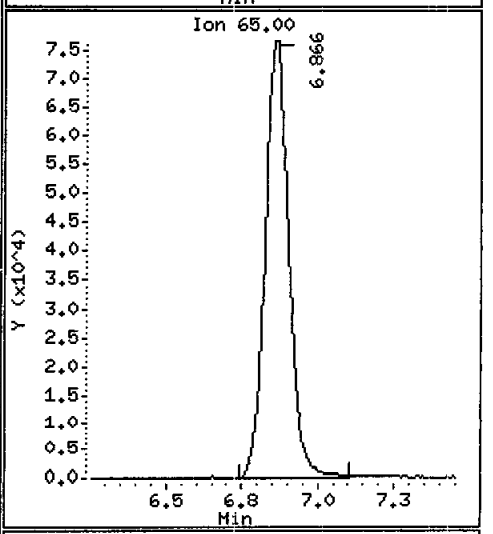


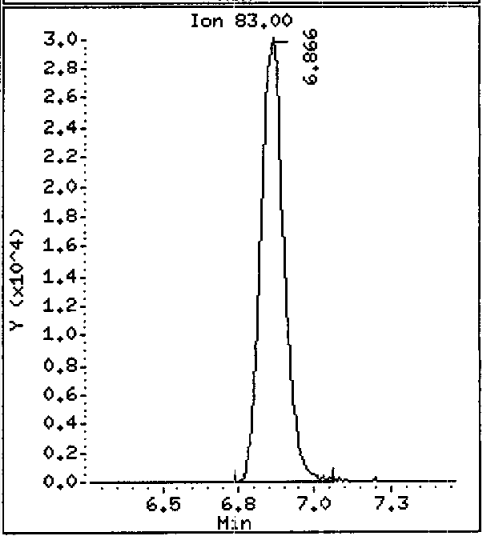












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

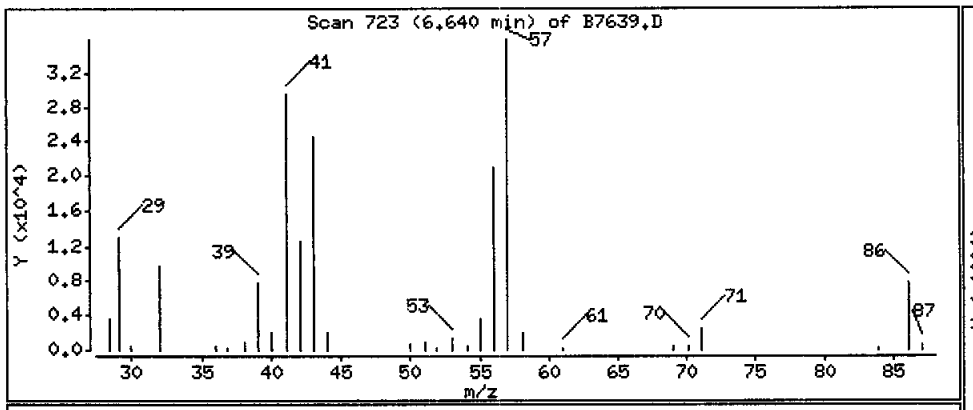
Operator: AA

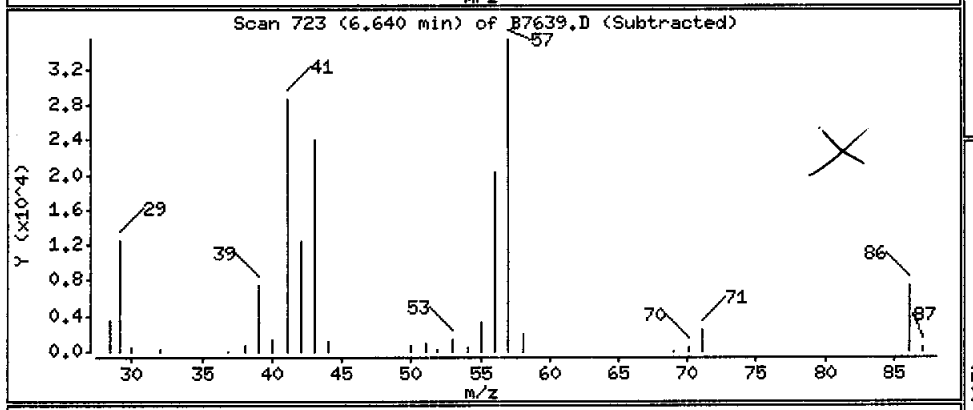
Column phase: J&W DB-624

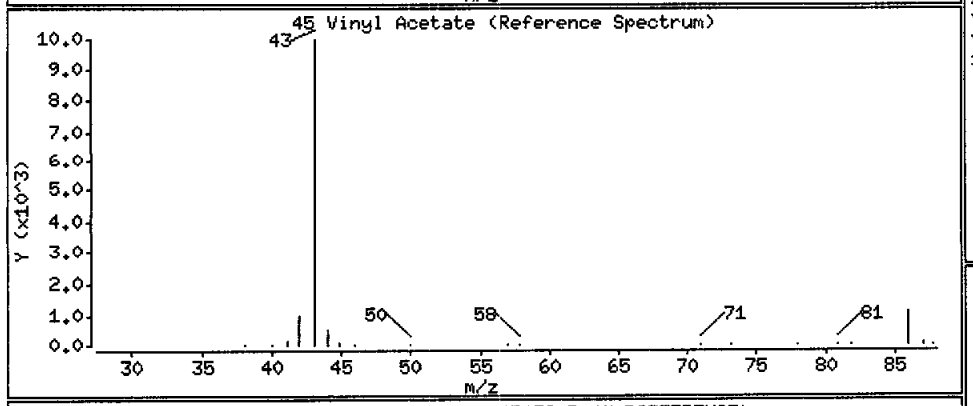
Column diameter: 0.53

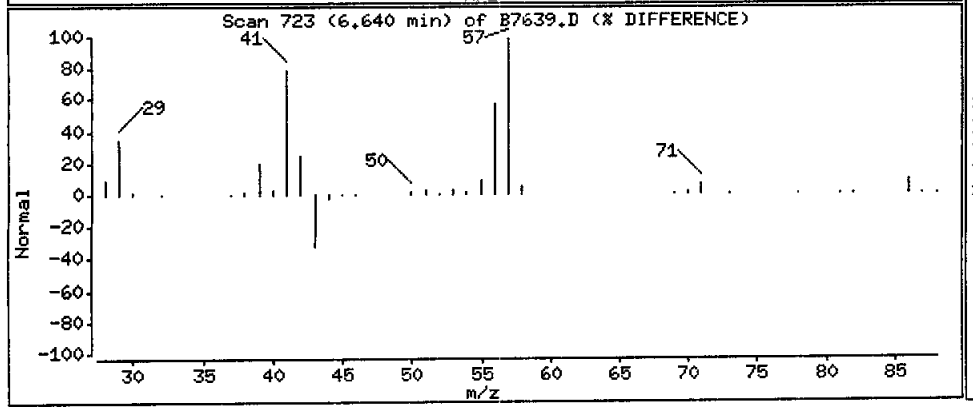
45 Vinyl Acetate

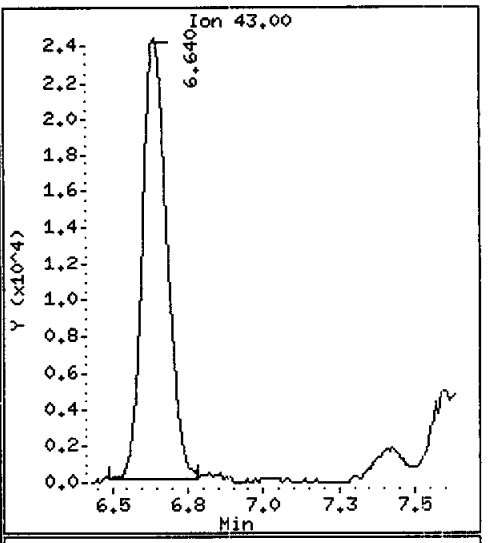
Concentration: 80.20 ppbv

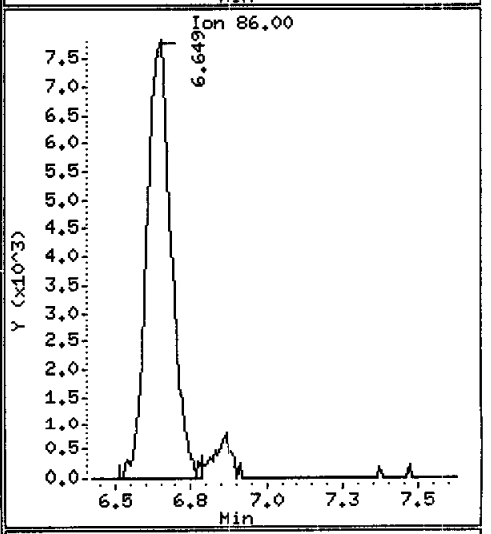


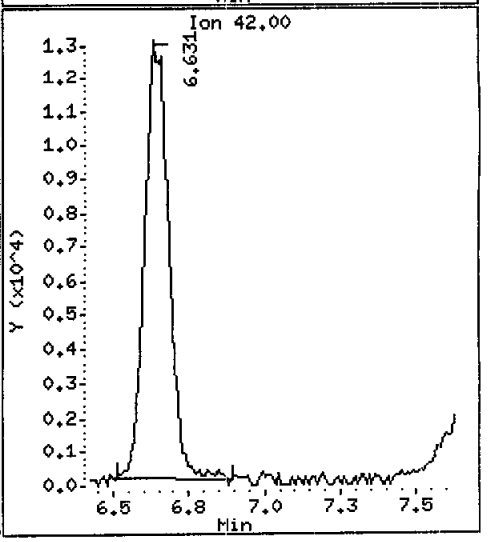












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

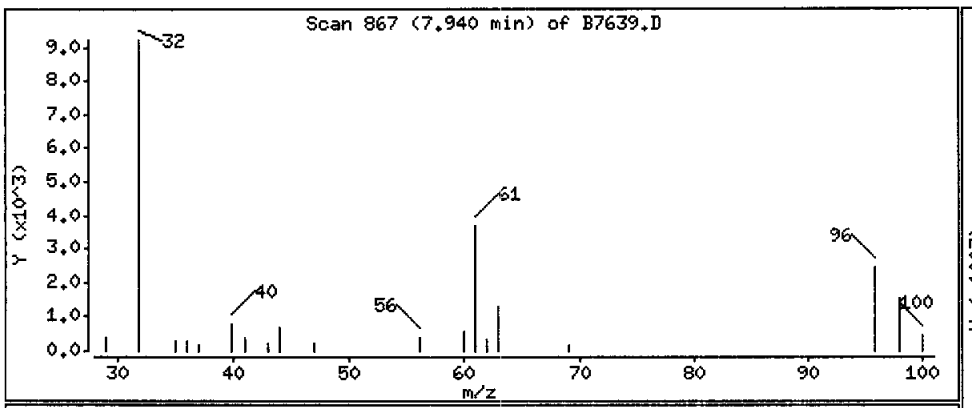
Operator: AA

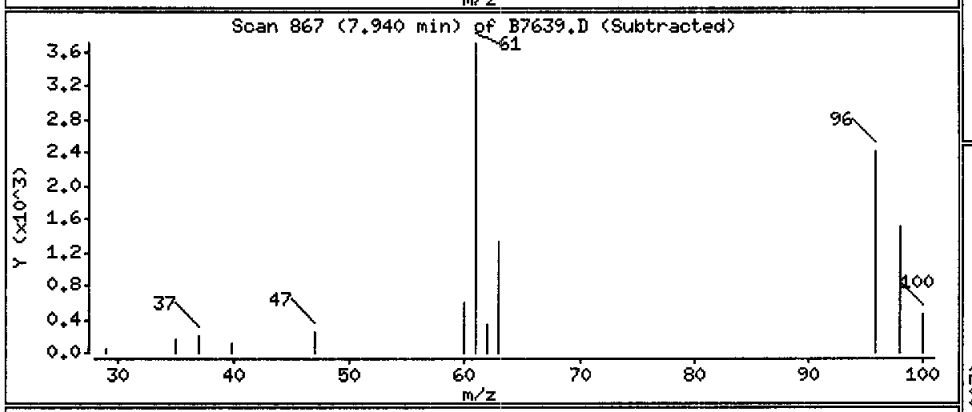
Column phase: J&W DB-624

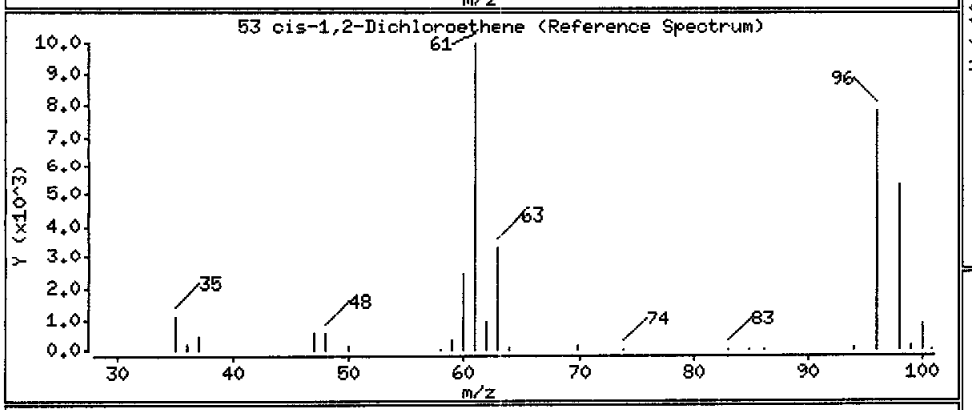
Column diameter: 0.53

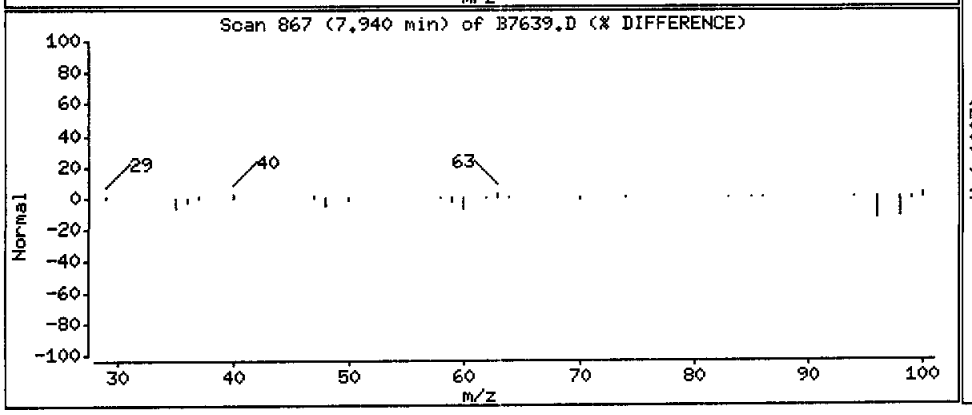
53 cis-1,2-Dichloroethene

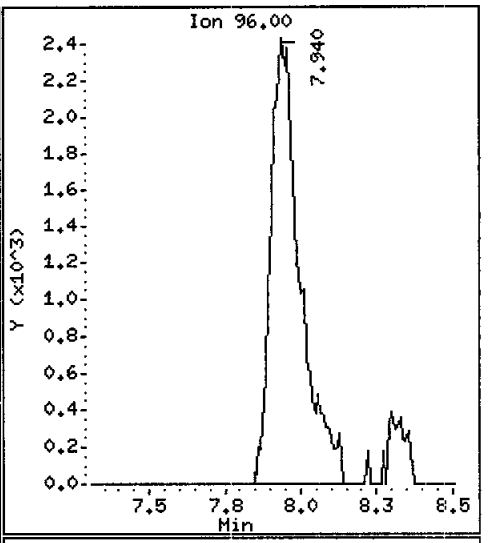
Concentration: 17.96 ppbv

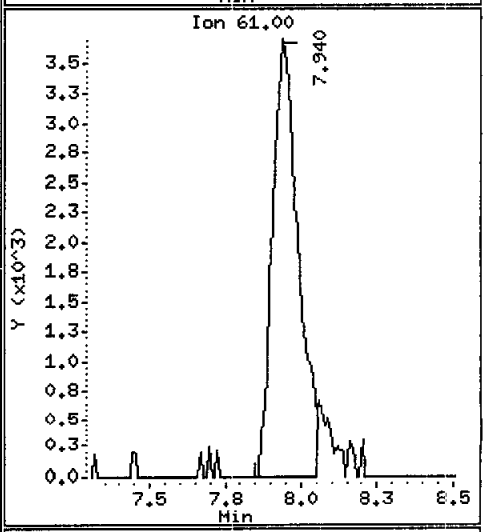


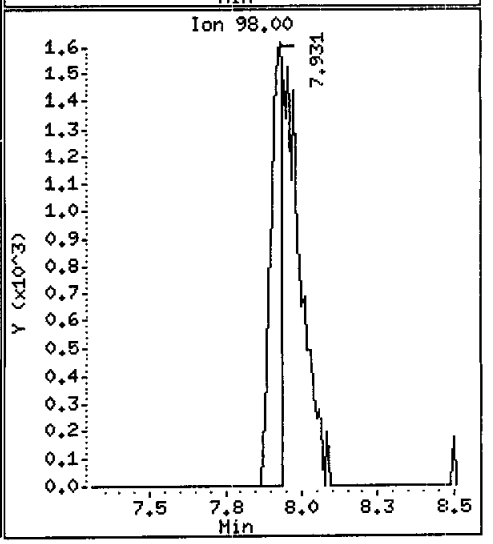












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

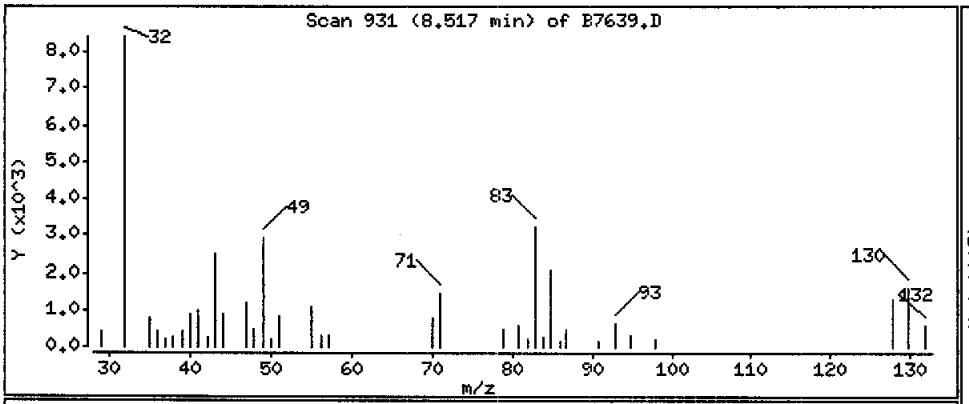
Operator: AA

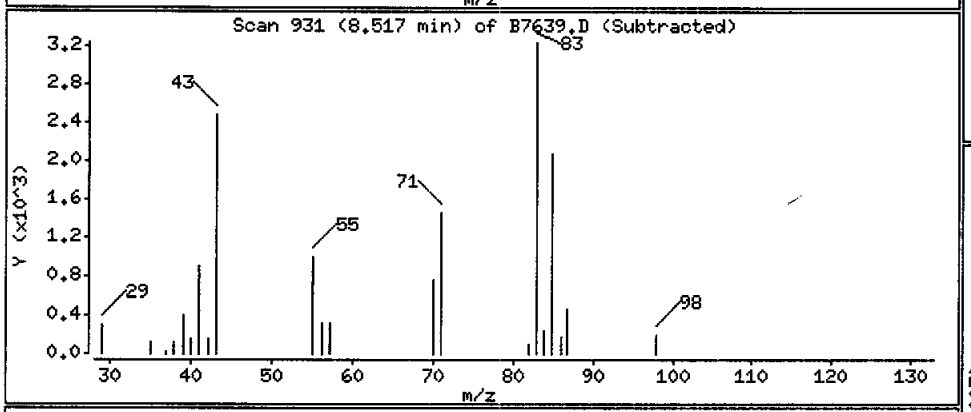
Column phase: J&W DB-624

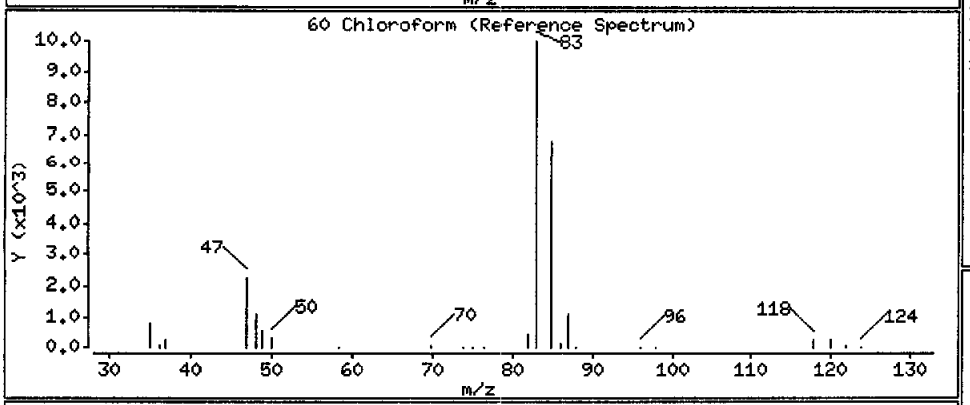
Column diameter: 0.53

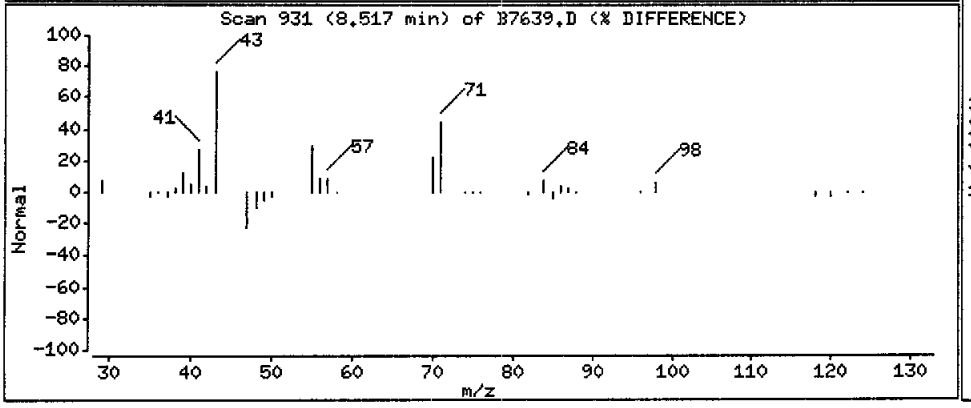
60 Chloroform

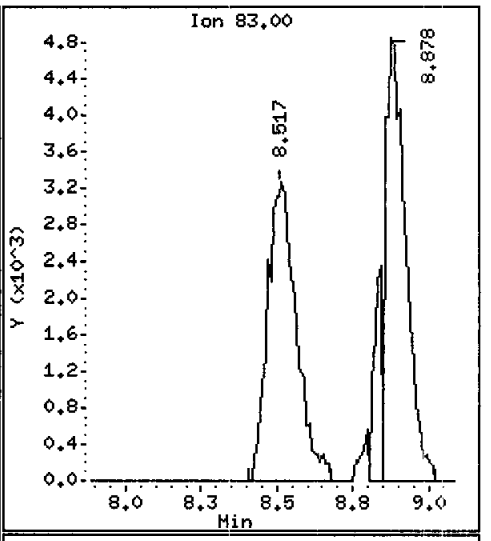
Concentration: 9.503 ppbv

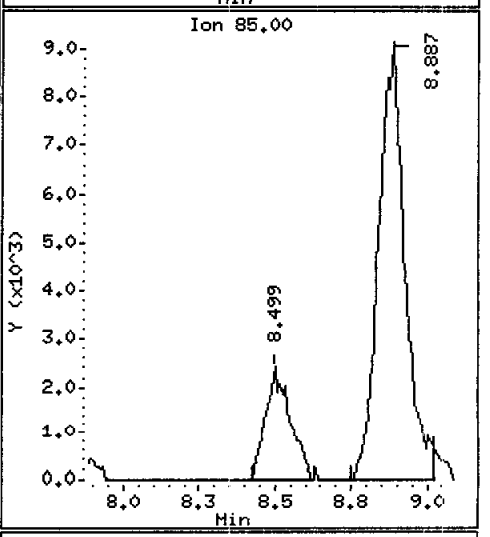


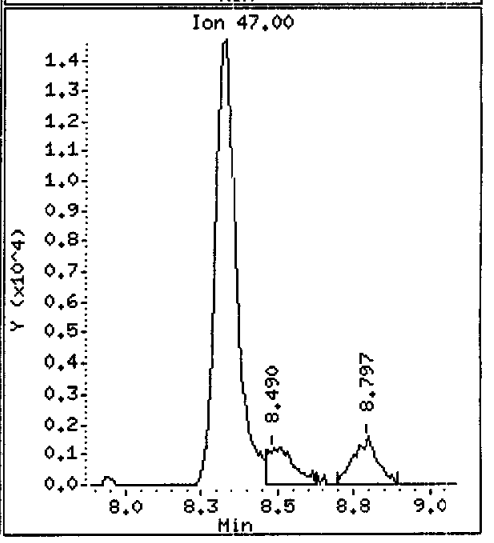












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

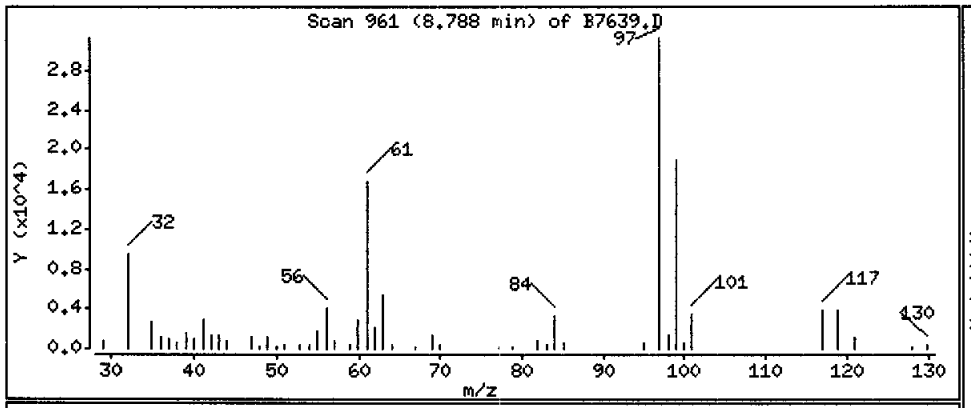
Operator: AA

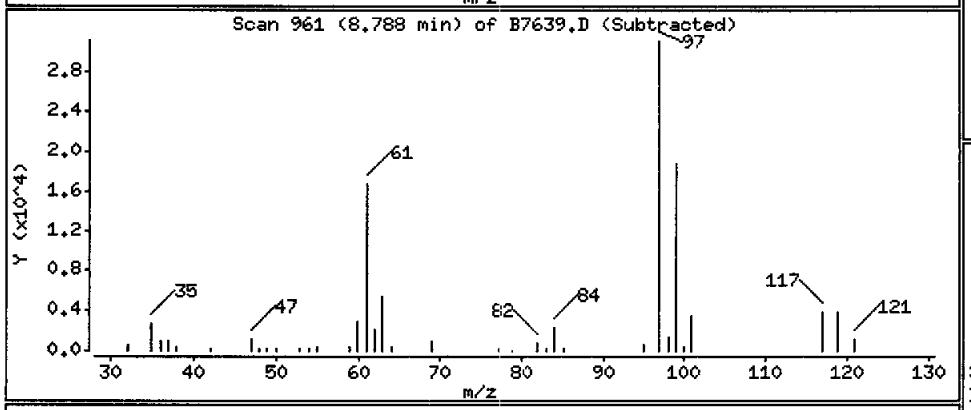
Column phase: J&W DB-624

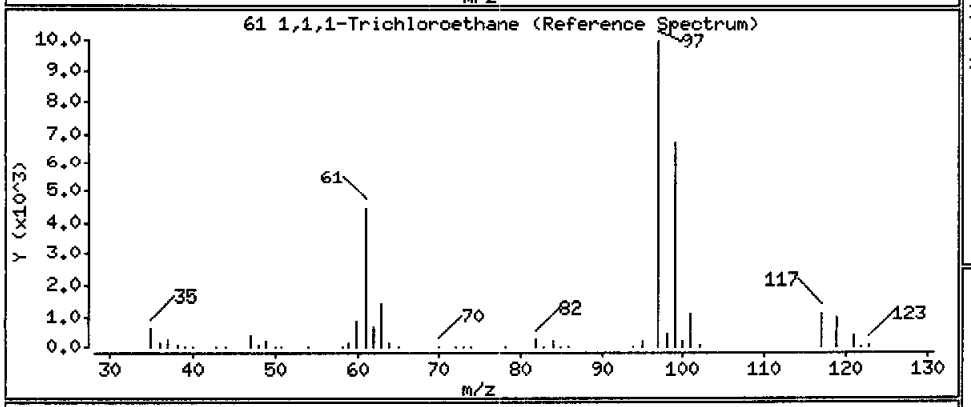
Column diameter: 0.53

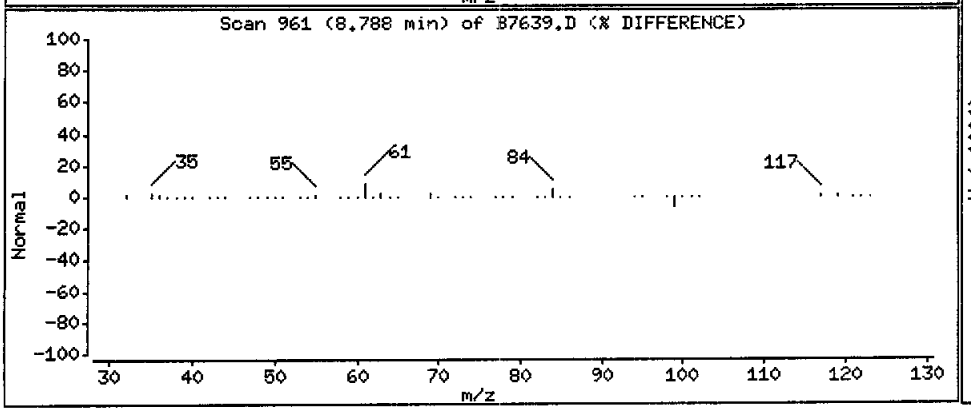
61 1,1,1-Trichloroethane

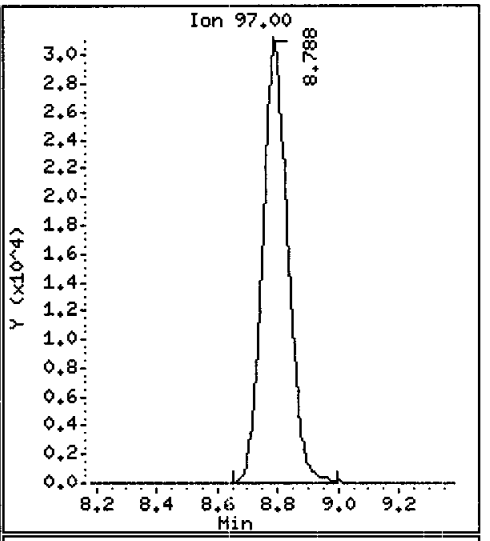
Concentration: 79.88 ppbv

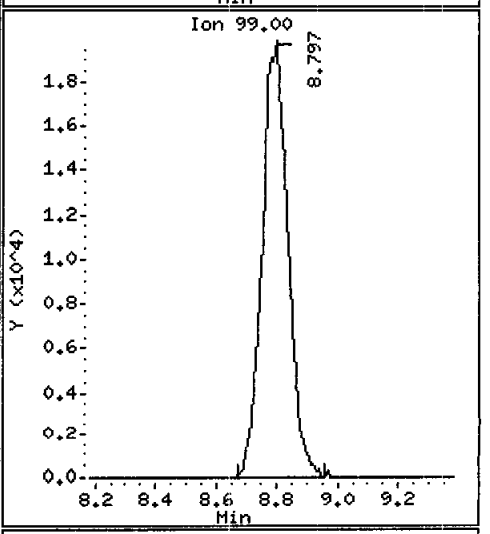


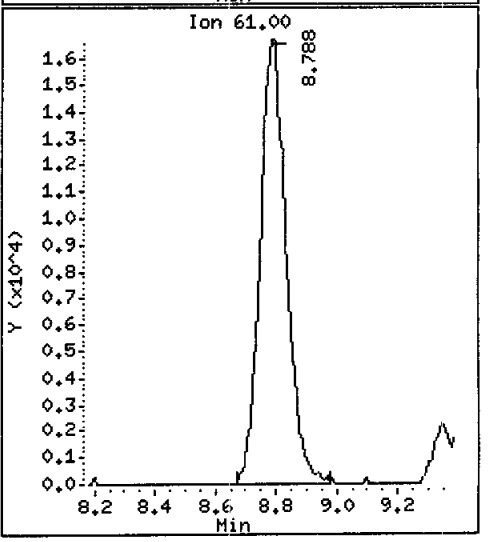












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Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

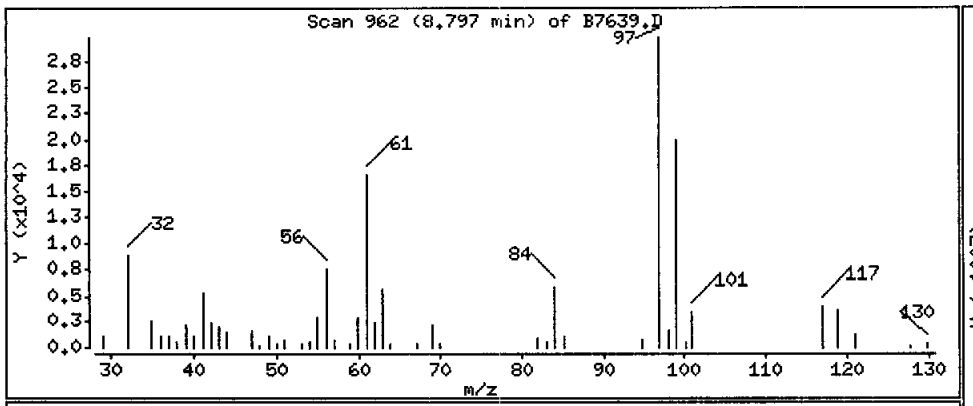
Operator: AA

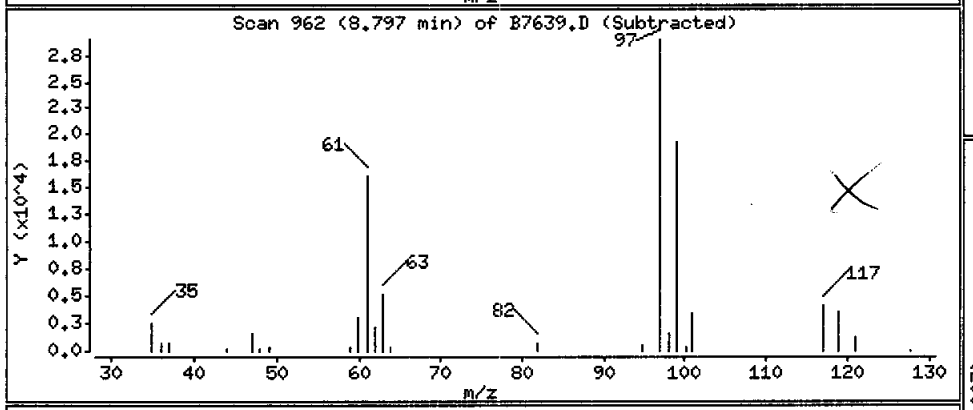
Column phase: J&W DB-624

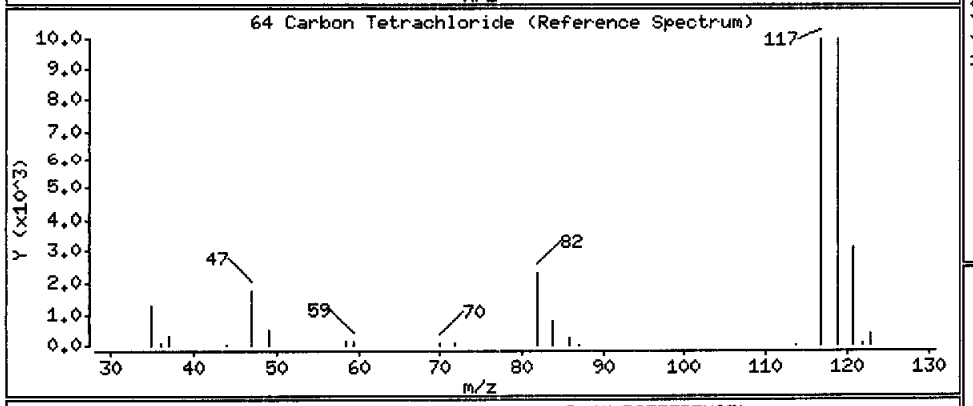
Column diameter: 0.53

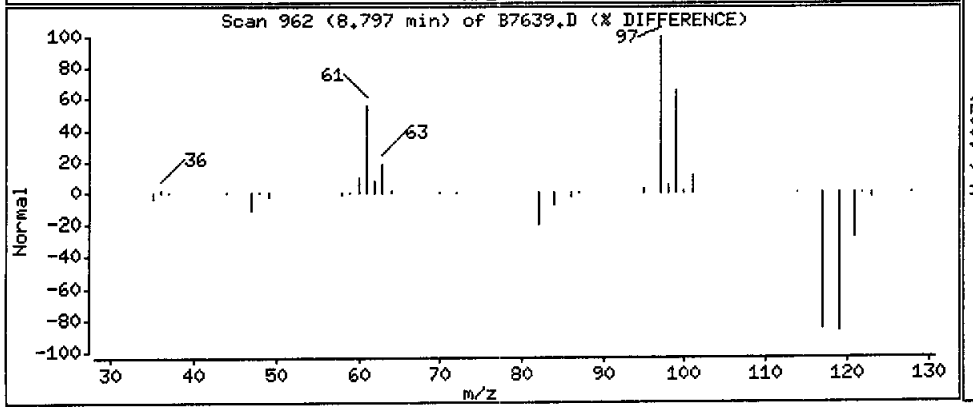
64 Carbon Tetrachloride

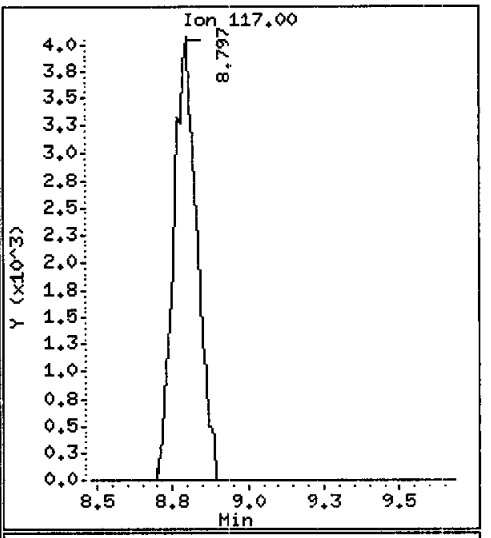
Concentration: 14.44 ppbv

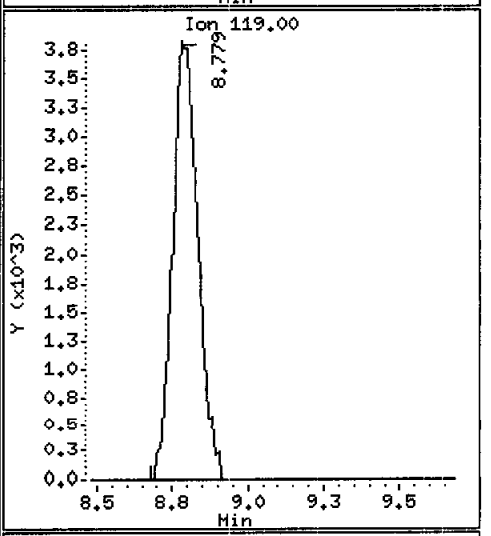


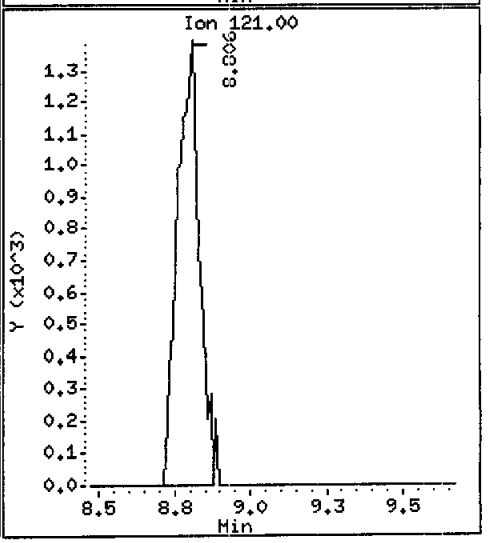












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

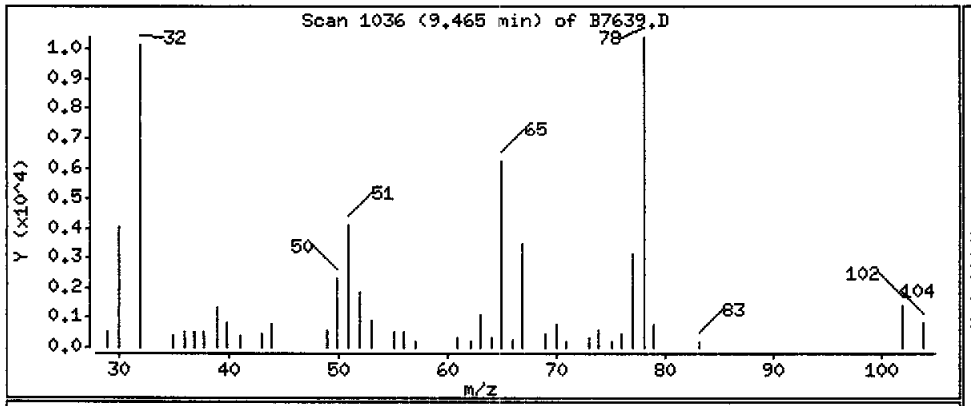
Operator: AA

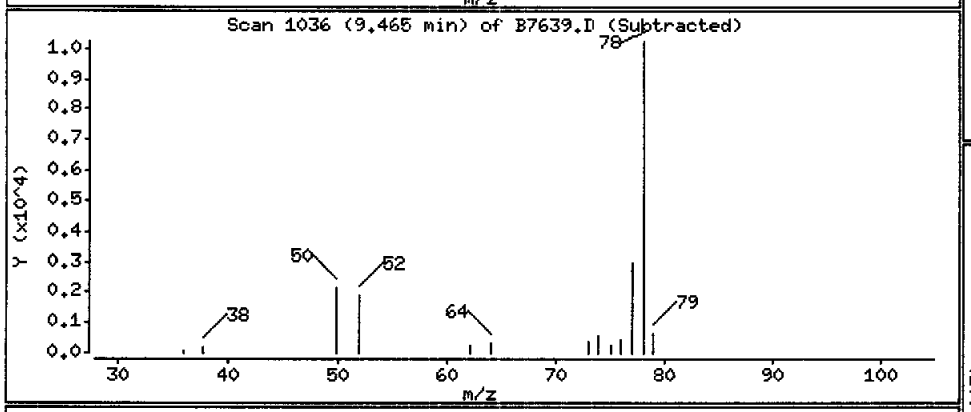
Column phase: J&W DB-624

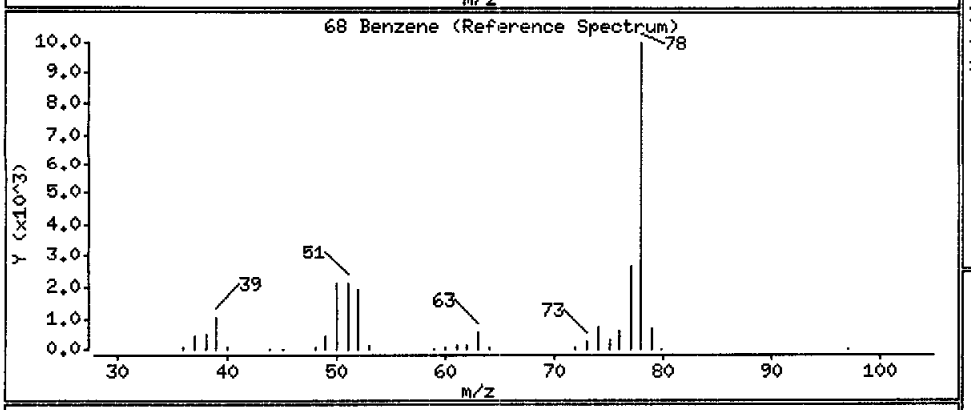
Column diameter: 0.53

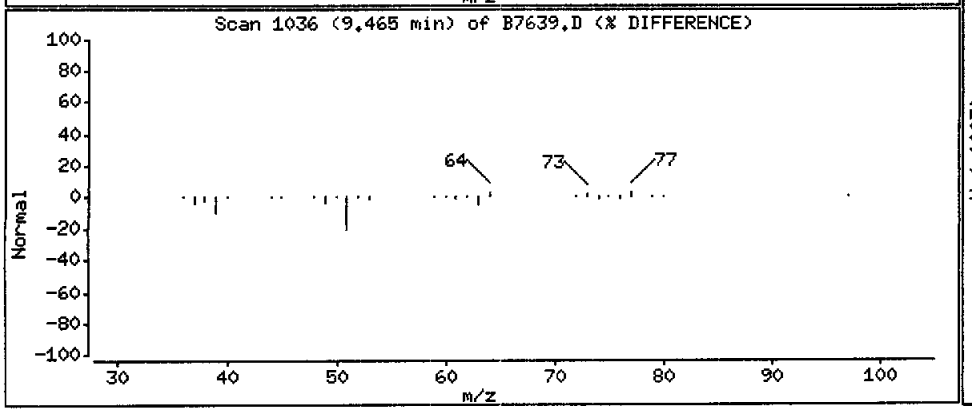
68 Benzene

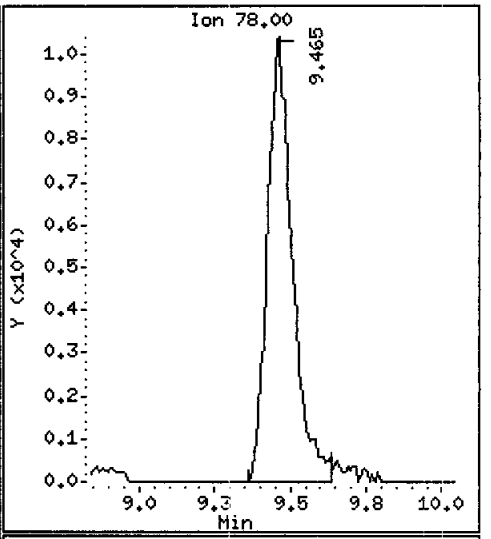
Concentration: 28.45 ppbv

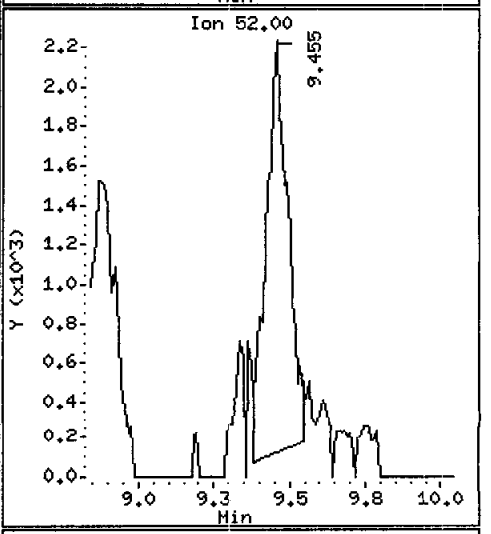


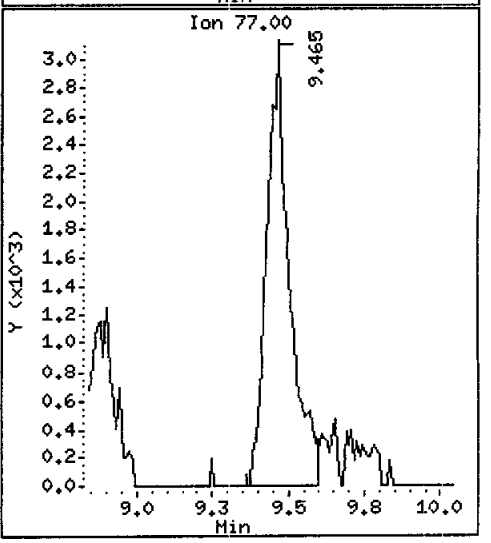












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

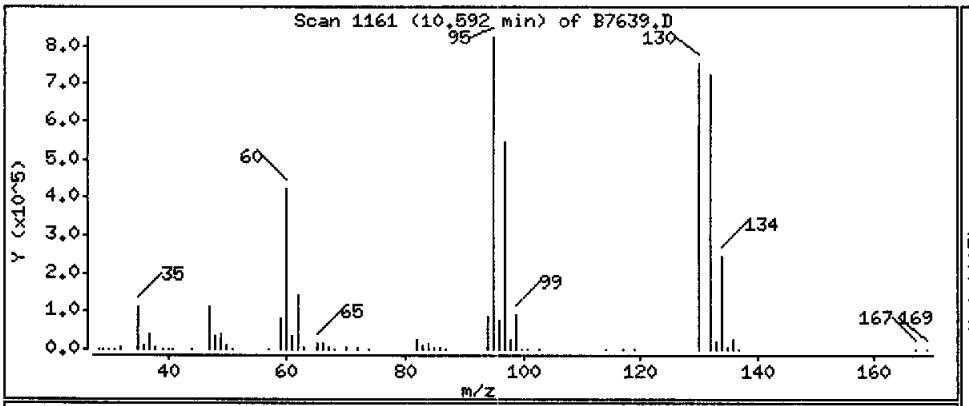
Operator: AA

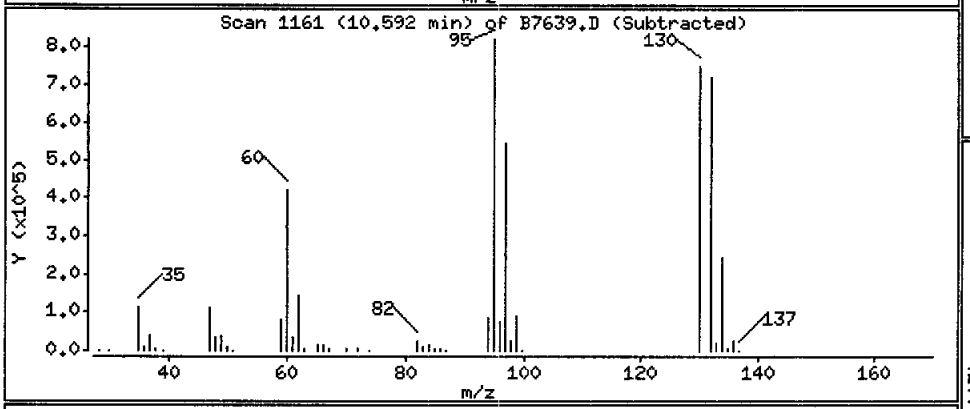
Column phase: J&W DB-624

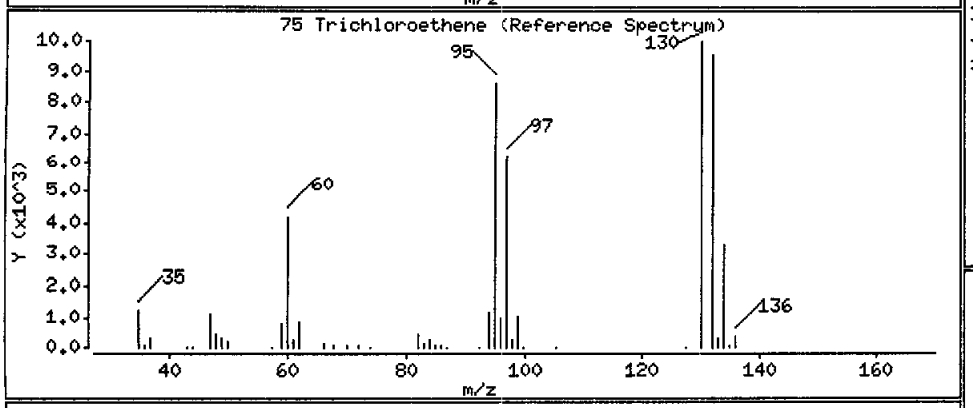
Column diameter: 0.53

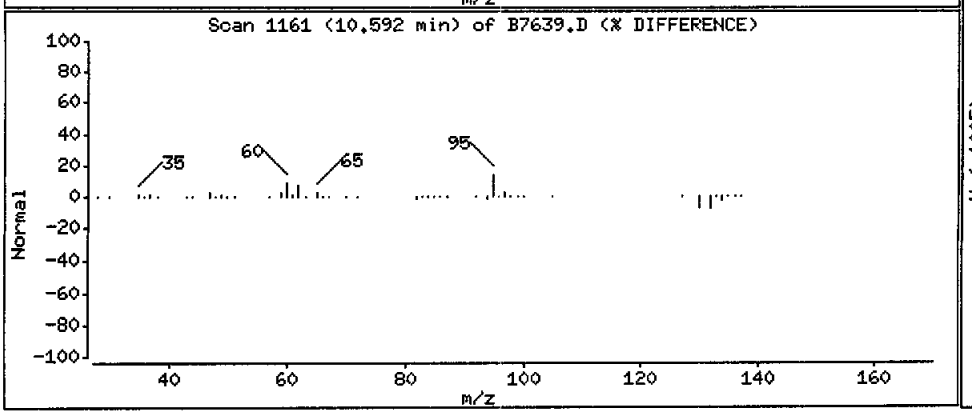
75 Trichloroethene

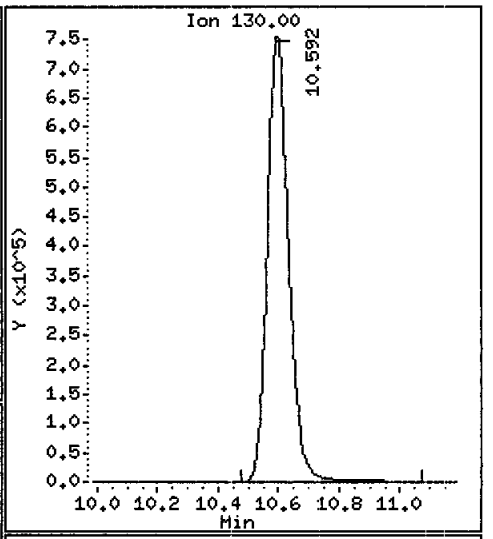
Concentration: 2782 ppbv

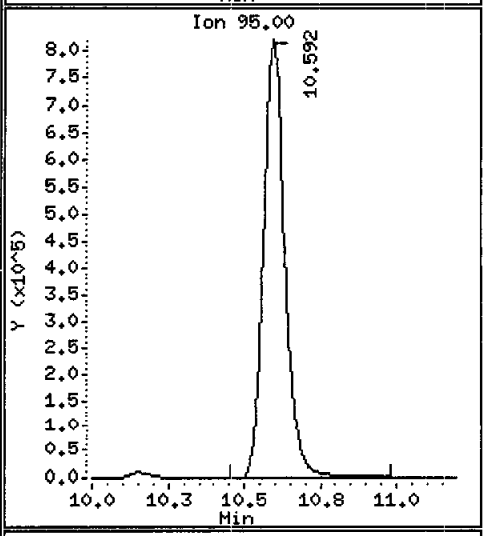


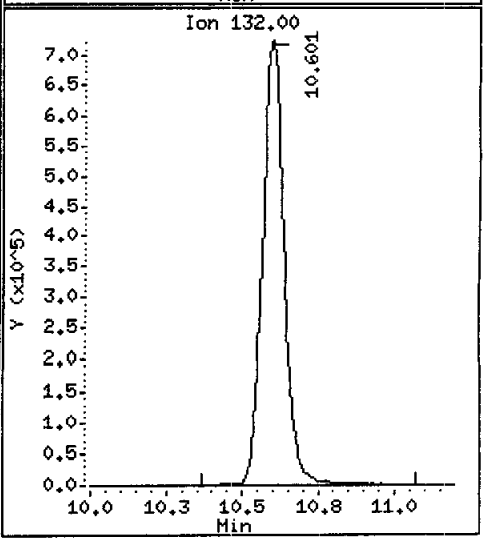












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

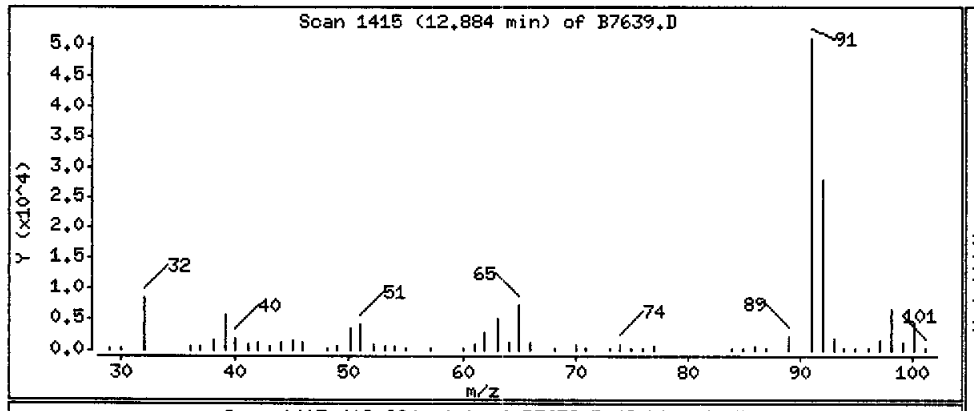
Operator: AA

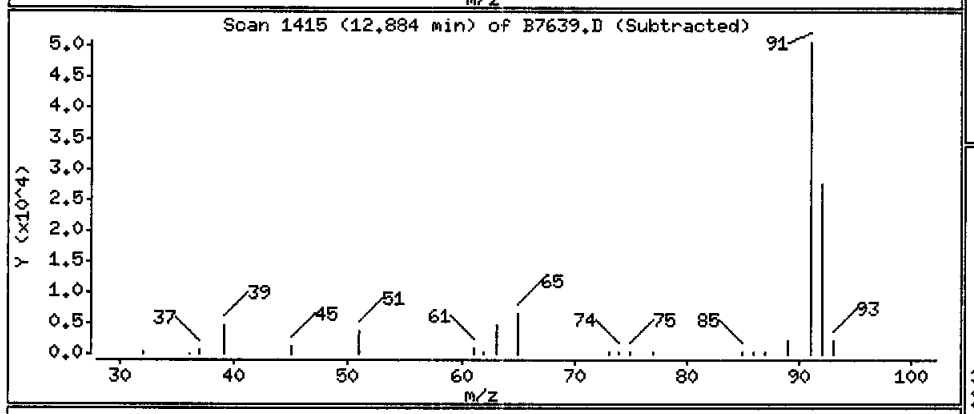
Column phase: J&W DB-624

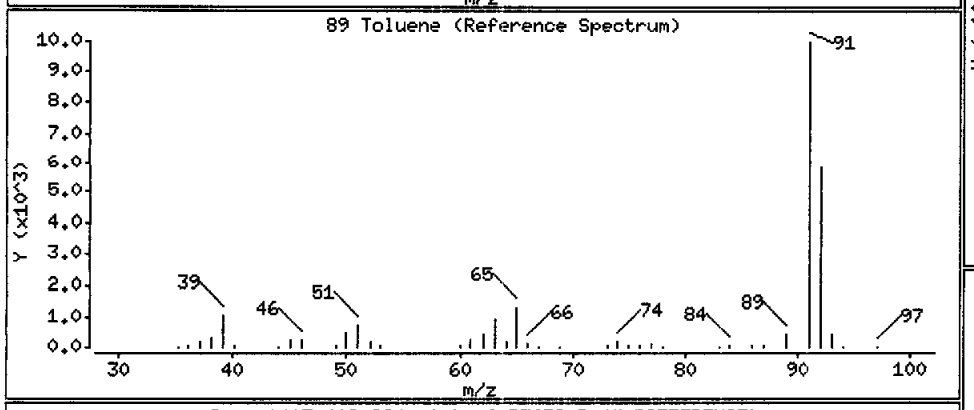
Column diameter: 0.53

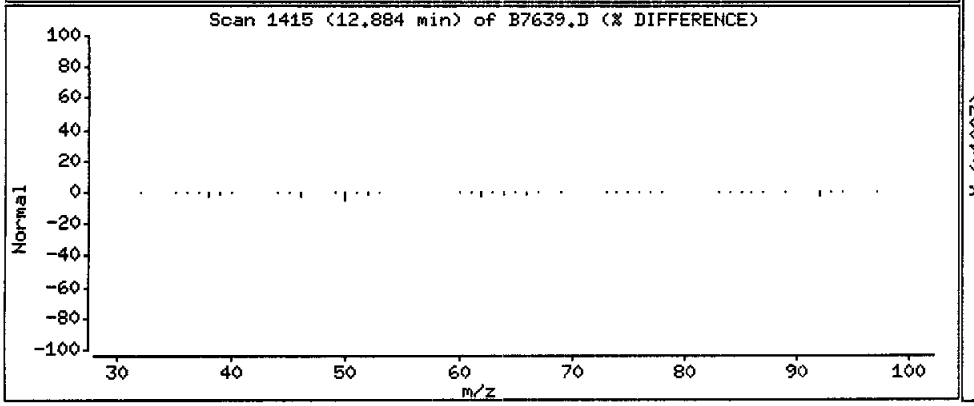
89 Toluene

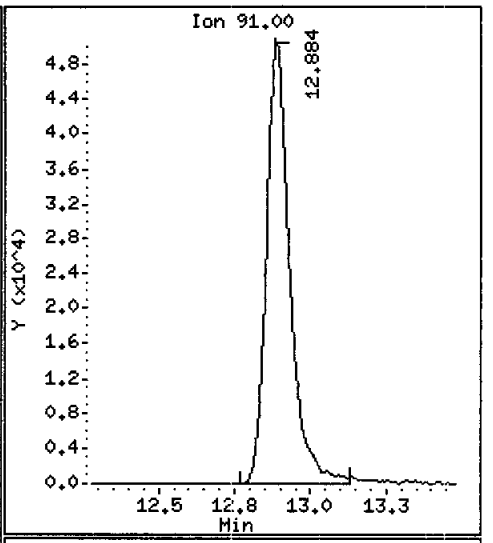
Concentration: 100.4 ppbv

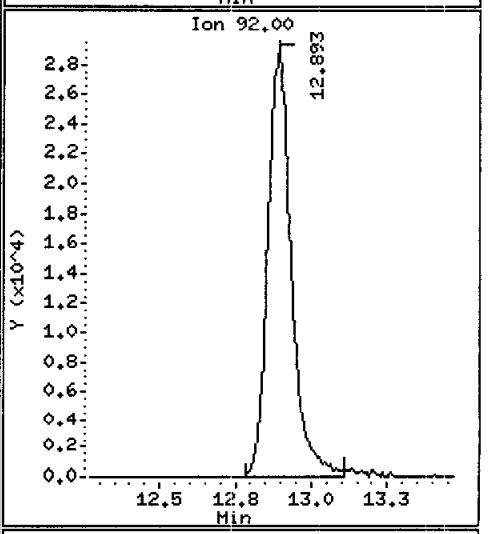


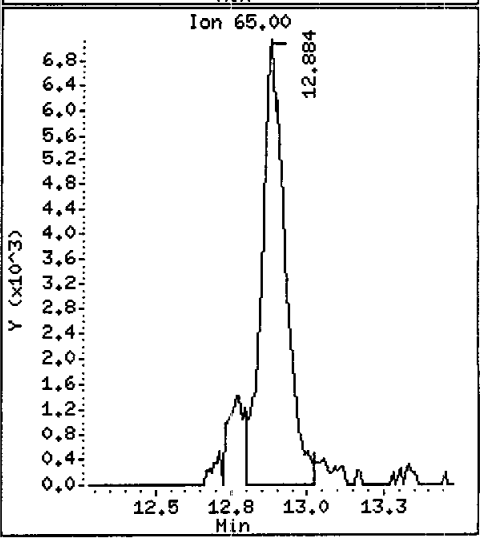












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: C2DKV1AD,066391-001,SANDIA,E5A100233-4

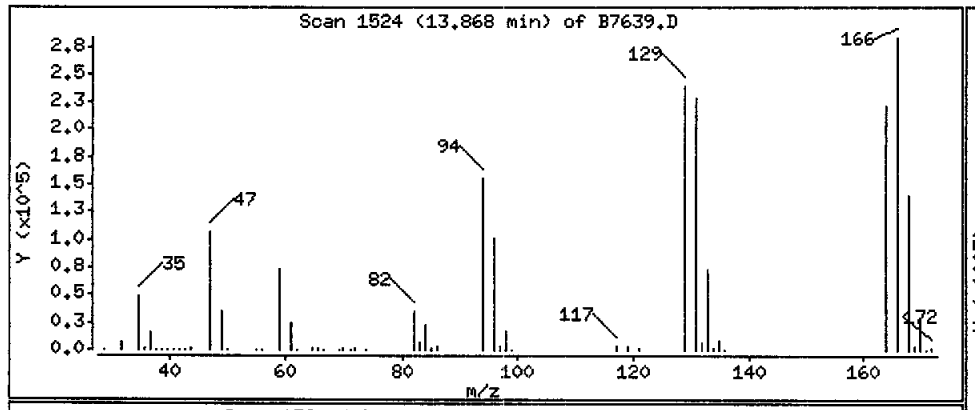
Operator: AA

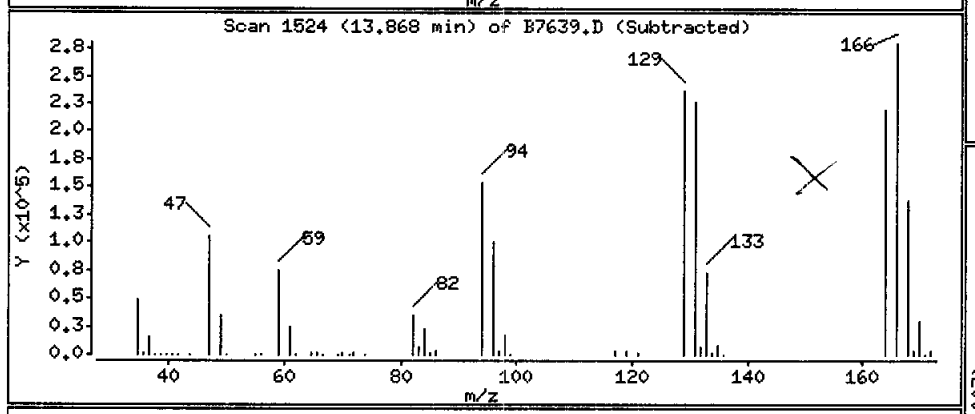
Column phase: J&W DB-624

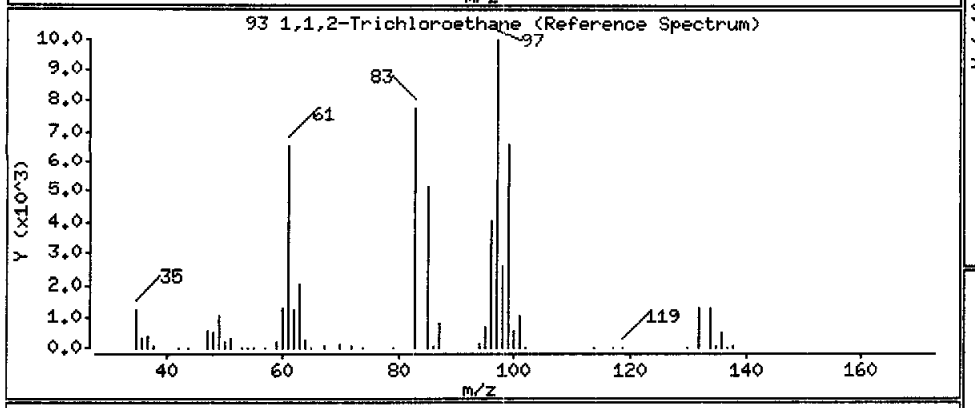
Column diameter: 0.53

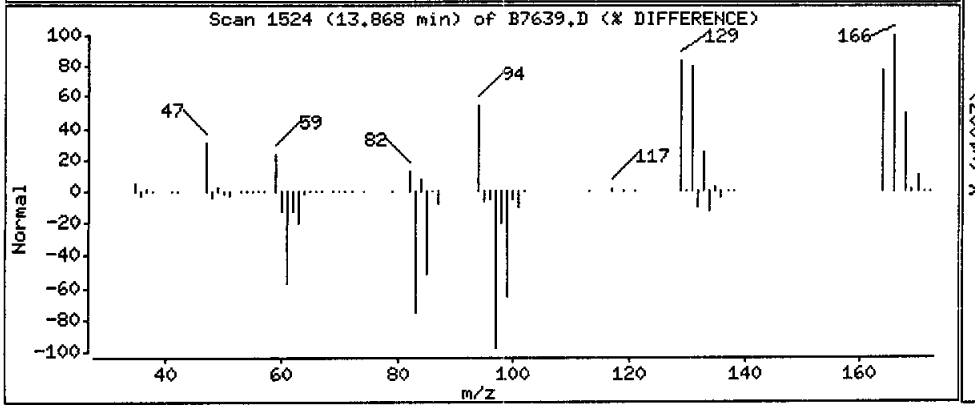
93 1,1,2-Trichloroethane

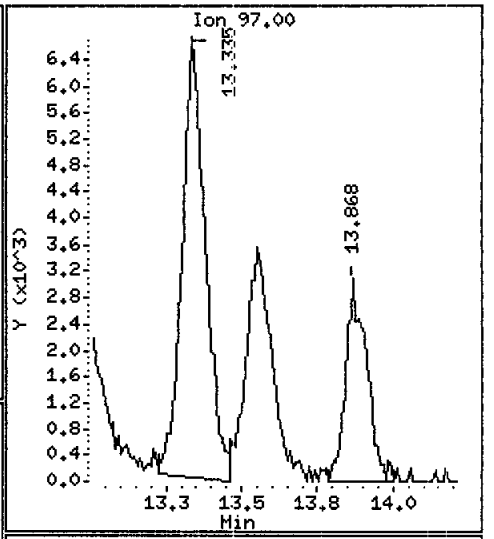
Concentration: 11.75 ppbv

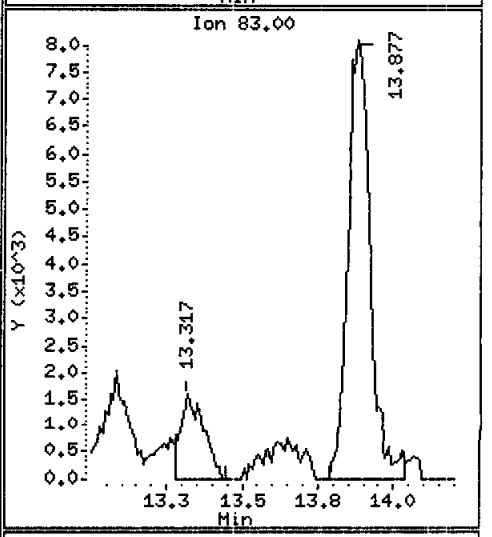


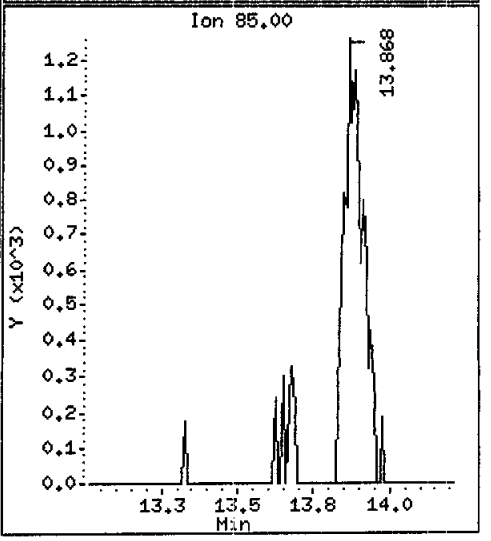












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

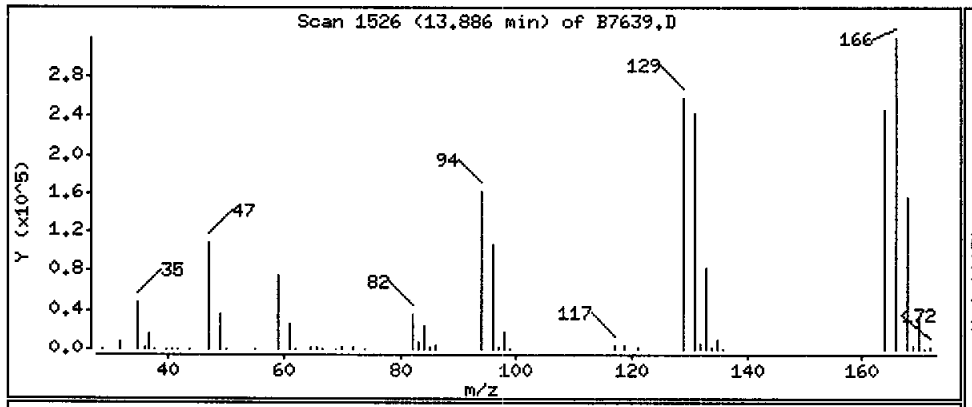
Operator: AA

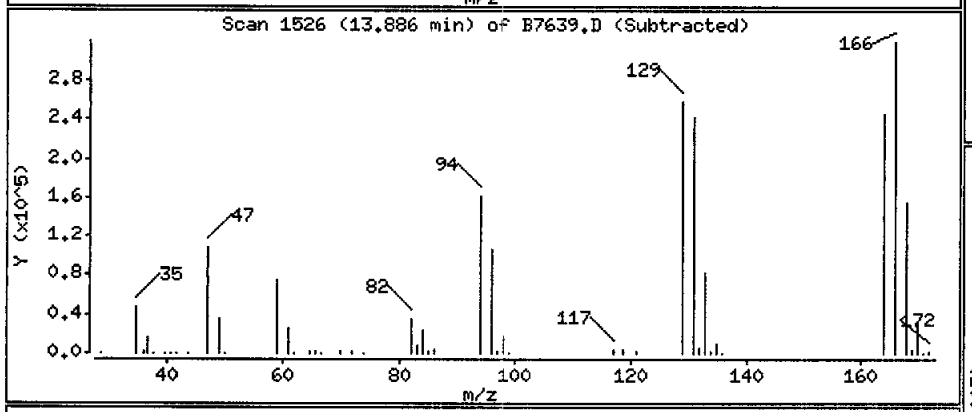
Column phase: J&W DB-624

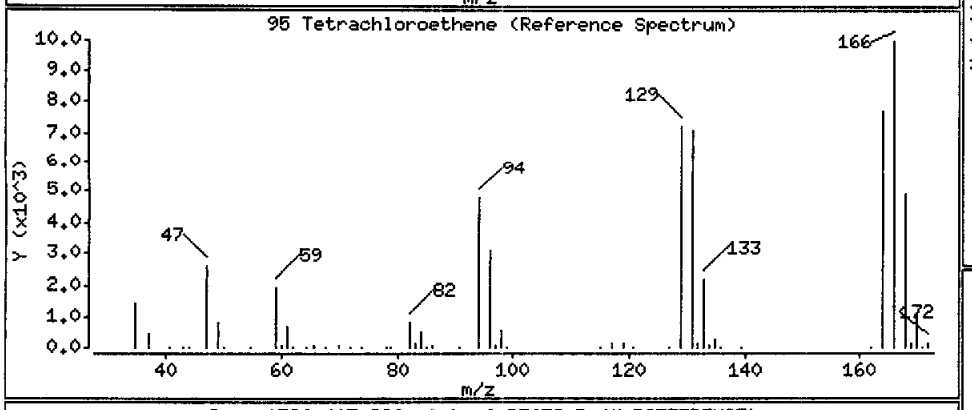
Column diameter: 0.53

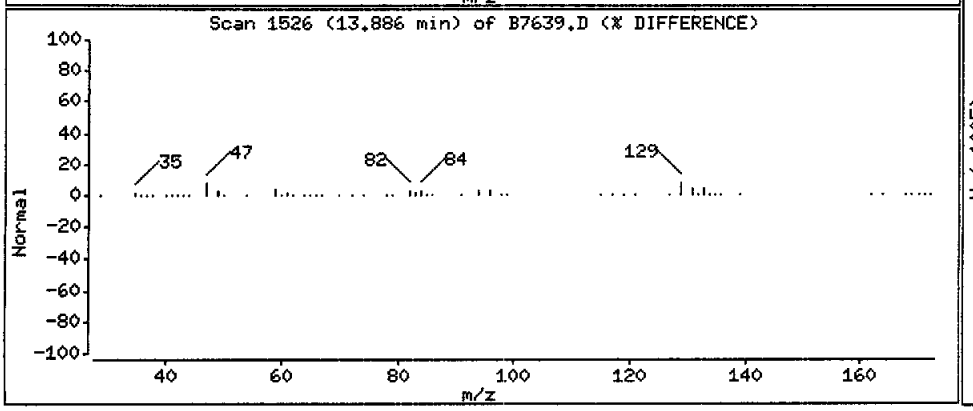
95 Tetrachloroethene

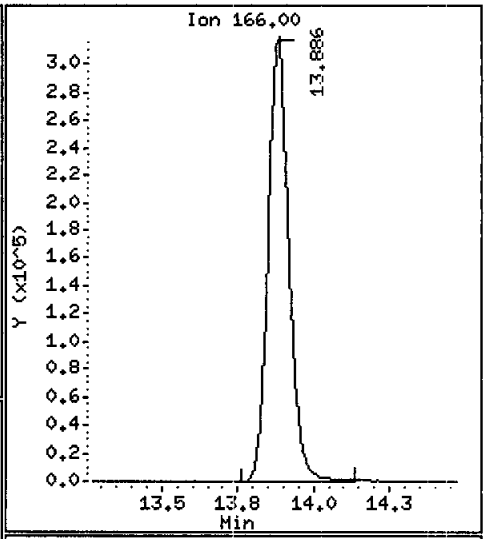
Concentration: 859.9 ppbv

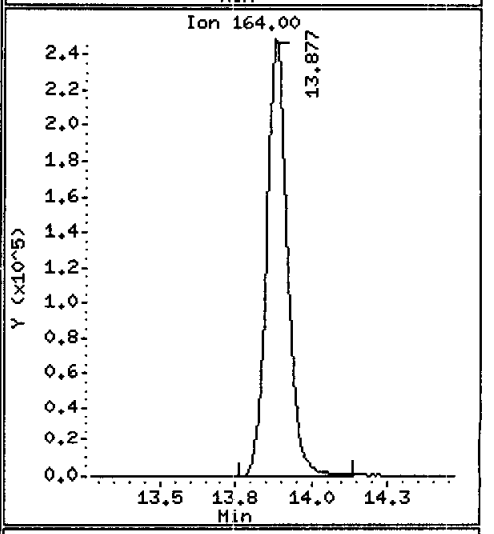


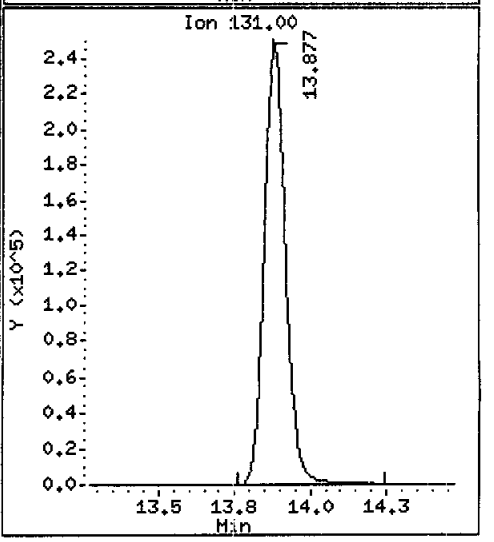












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

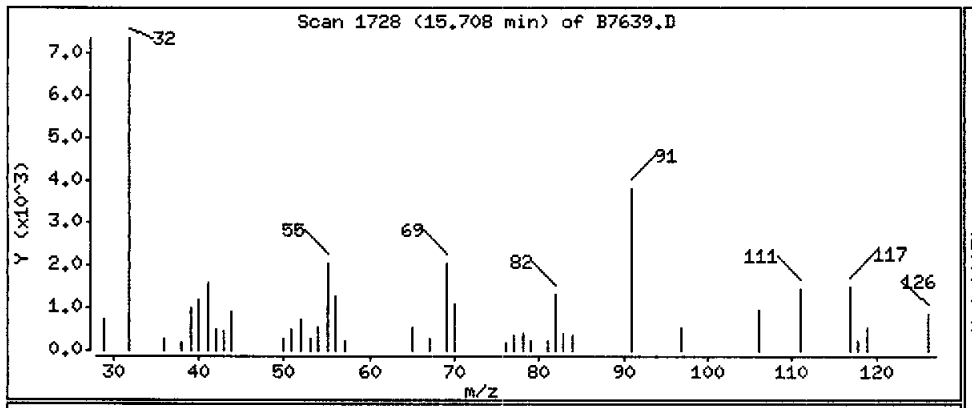
Operator: AA

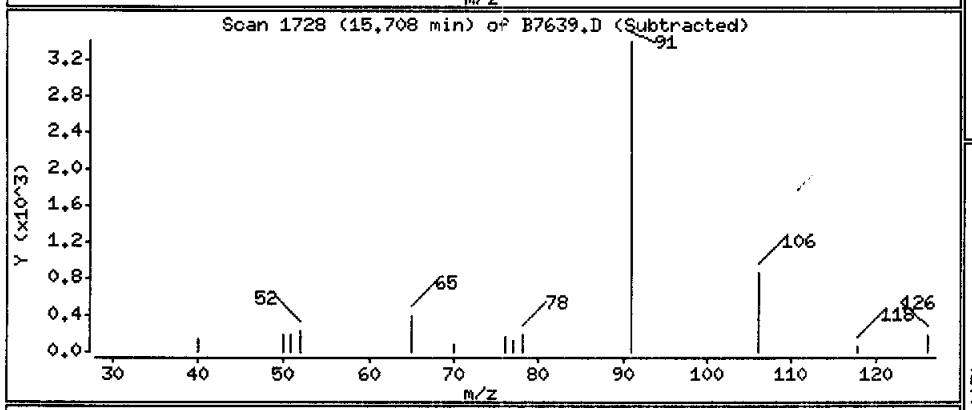
Column phase: J&W DB-624

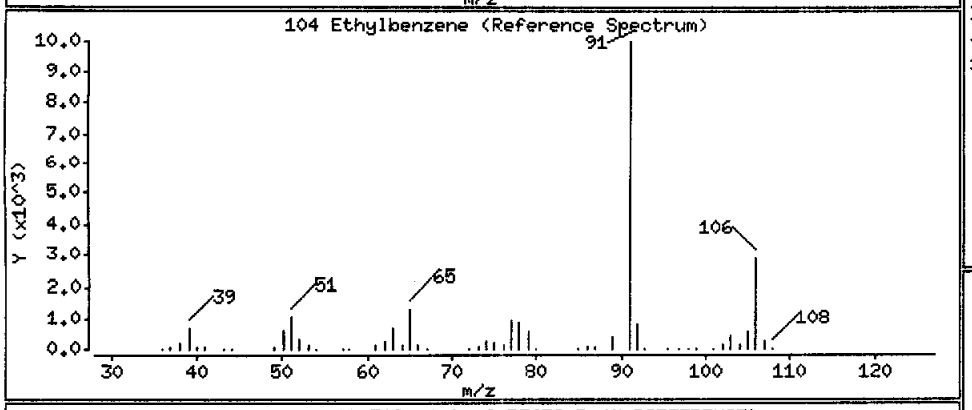
Column diameter: 0.53

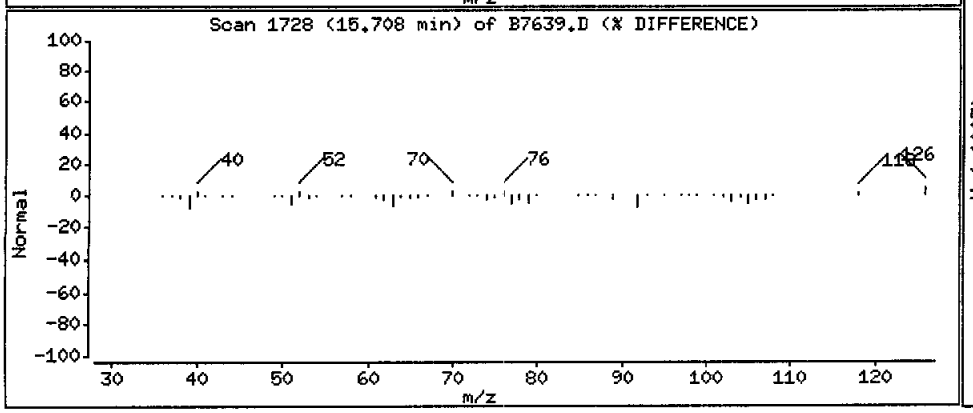
104 Ethylbenzene

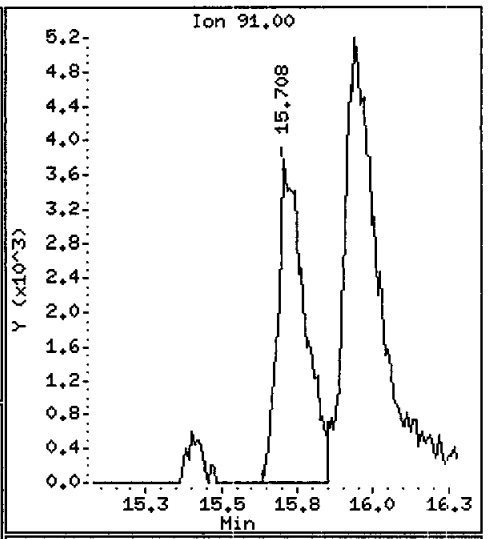
Concentration: 7.350 ppbv

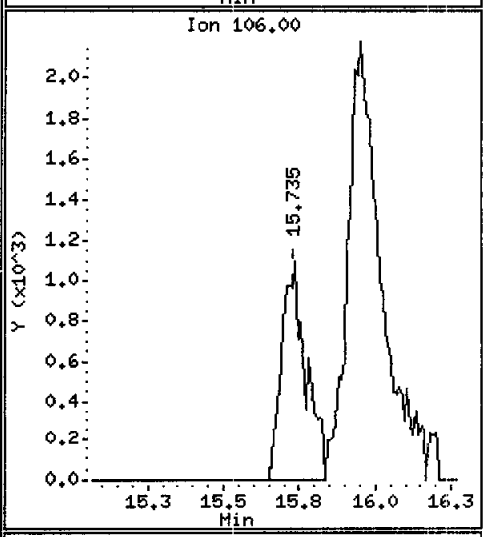


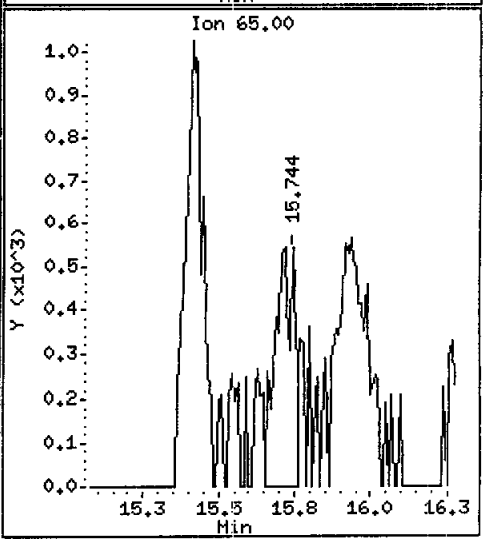












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

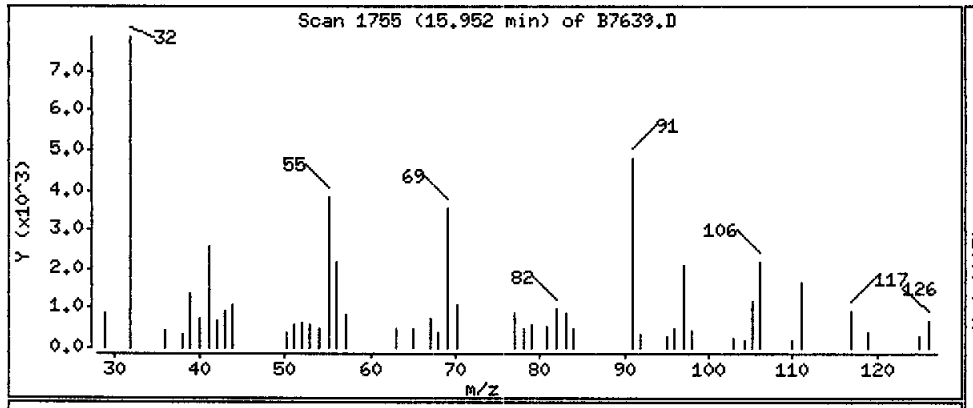
Operator: AA

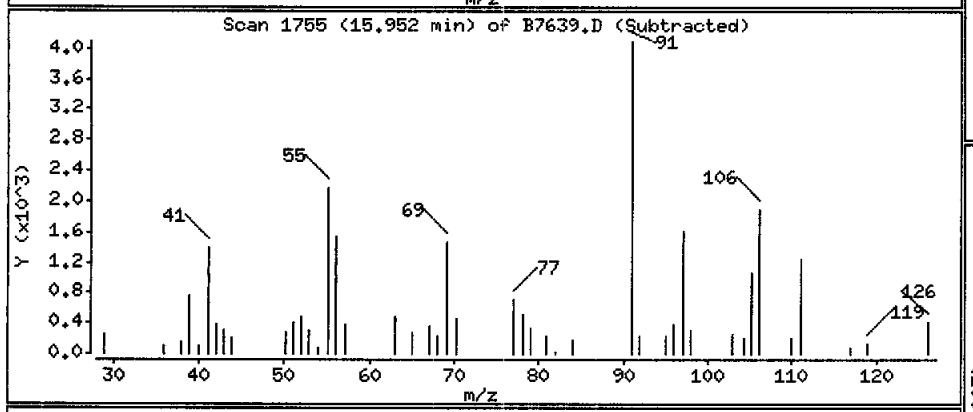
Column phase: J&W DB-624

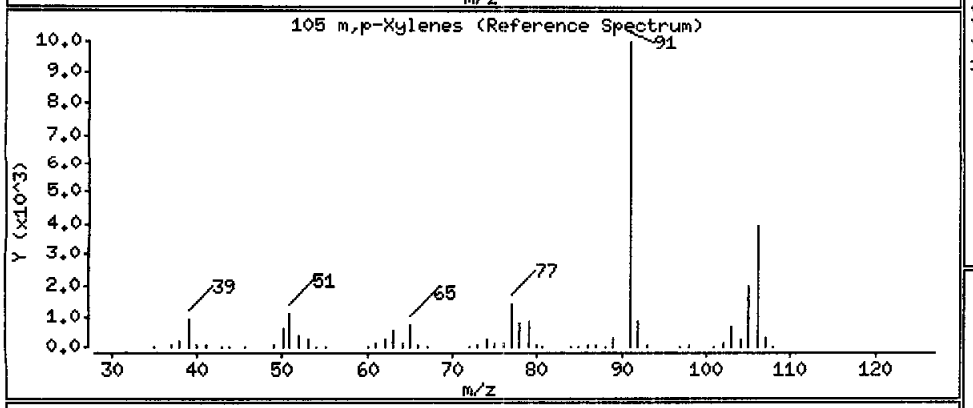
Column diameter: 0.53

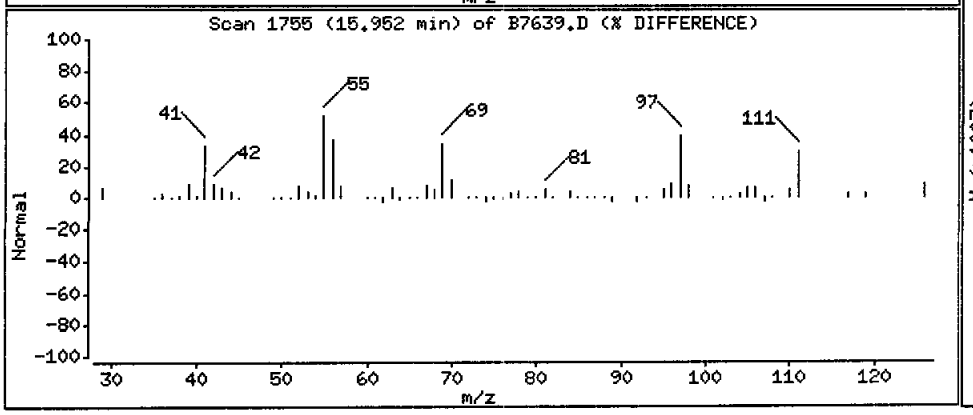
105 m,p-Xylenes

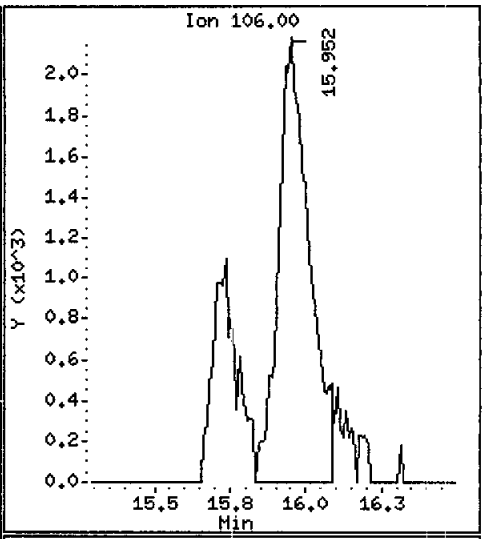
Concentration: 16.45 ppbv

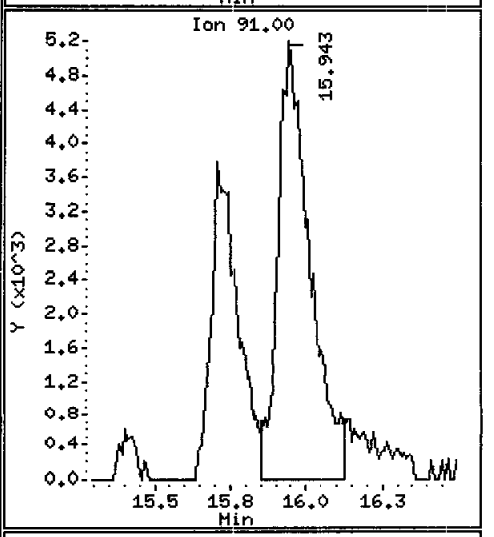


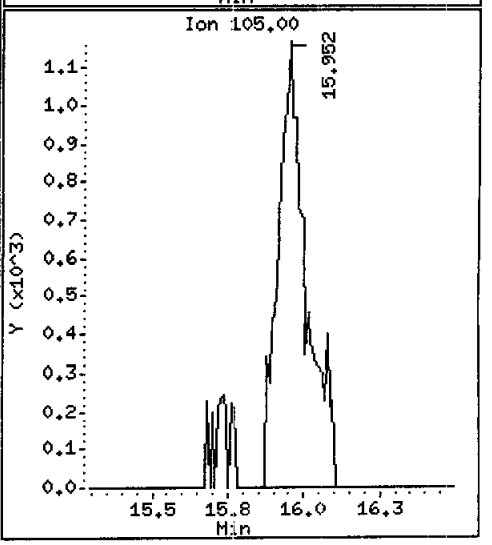












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7639.D

Date : 17-JAN-2005 13:15

Client ID: 066391-001

Instrument: gcmsb.i

Sample Info: G2DKV1AD,066391-001,SANDIA,E5A100233-4

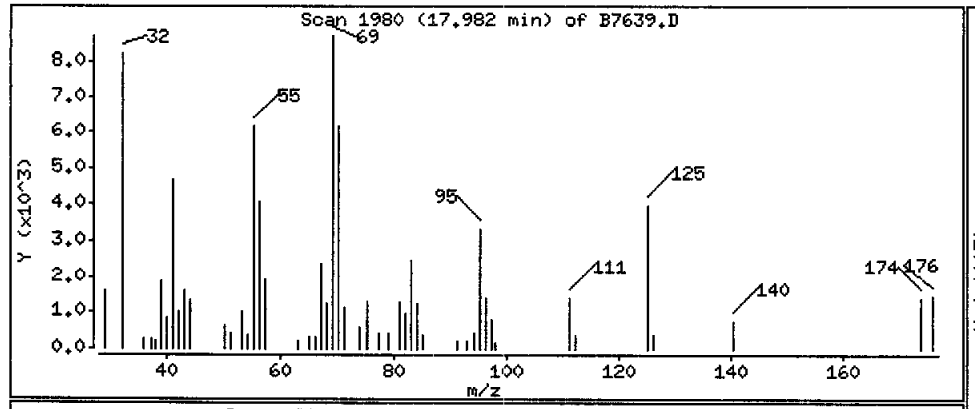
Operator: AA

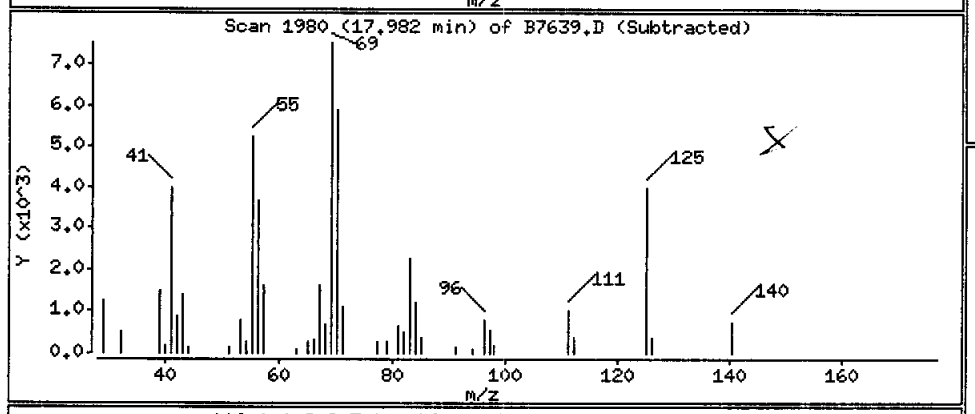
Column phase: J&W DB-624

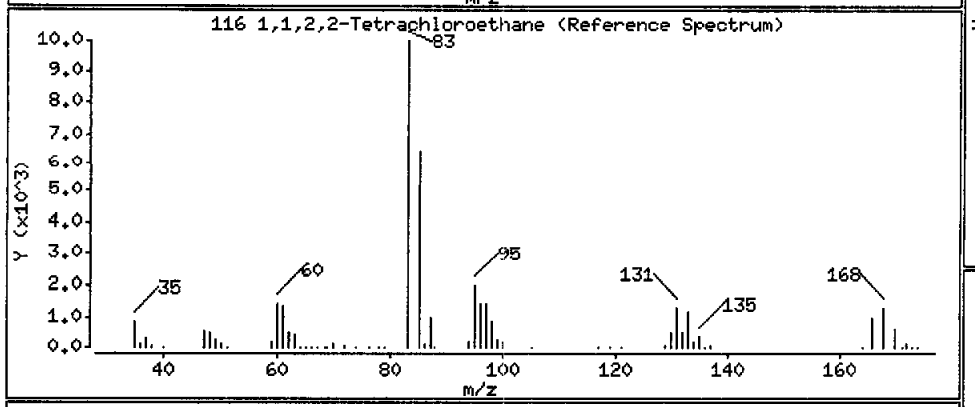
Column diameter: 0.53

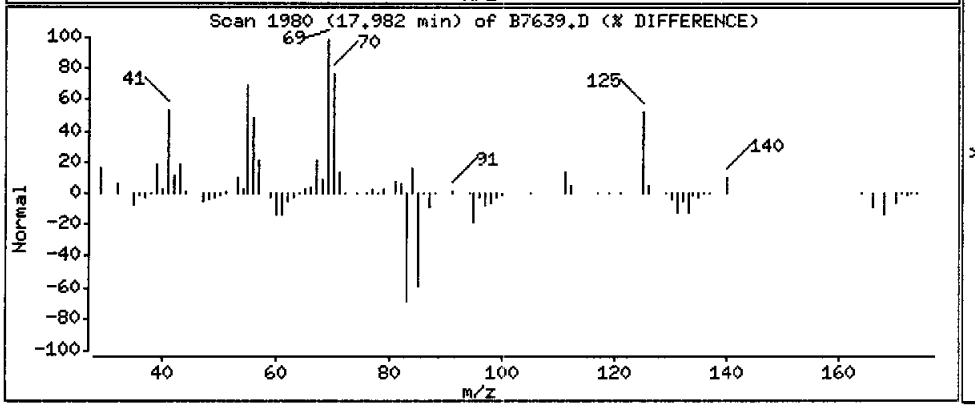
116 1,1,2,2-Tetrachloroethane

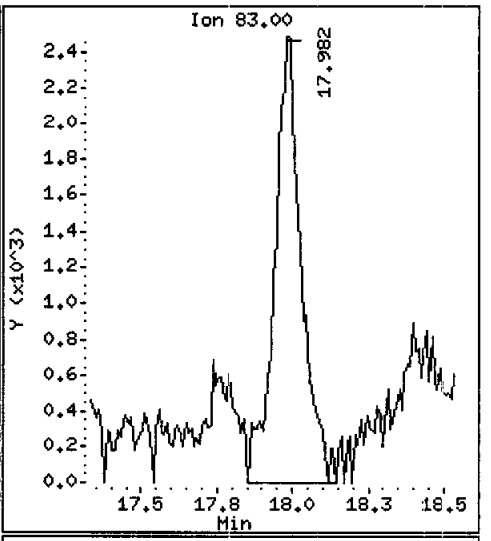
Concentration: 4.980 ppbv

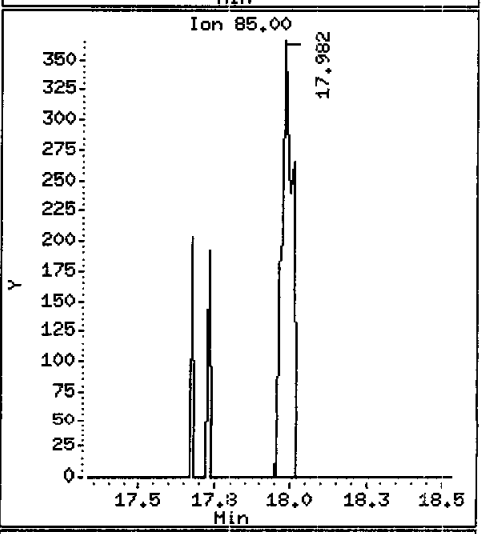


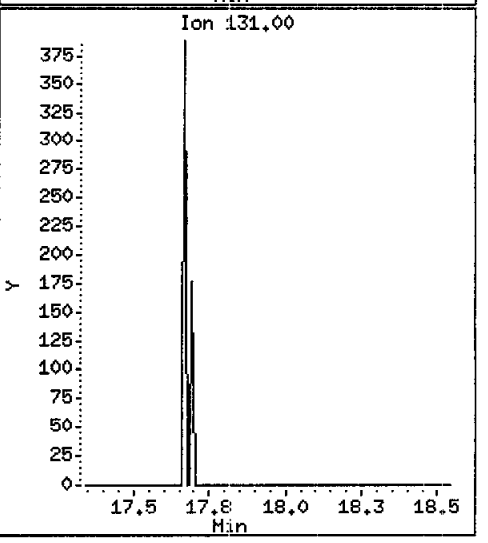












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D
Lab Smp Id: G2DKW1AD Client Smp ID: 066392-001
Inj Date : 17-JAN-2005 13:43
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DKW1AD,066392-001,SANDIA,E5A100233-5
Misc Info : 24.4,12.7,500,250,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.159	2.123	(0.261)	8856069	317.472	1220
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.375	2.357	(0.287)	337666	14.8863	57.20
8 Chloromethane	52	2.384	2.402	(0.288)	4440	3.58544	13.78(aQ)
9 Vinyl Chloride	62	2.601	2.592	(0.315)	34793	6.47414	24.88
21 Trichlorofluoromethane (F11)	101	3.711	3.756	(0.449)	910579	32.3782	124.4
28 1,1-Dichloroethene	61	4.649	4.685	(0.562)	2264087	151.778	583.2
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.694	4.739	(0.568)	4399411	136.153	523.2
31 Acetone	58	4.712	4.847	(0.570)	15429	7.29536	28.03(a)
37 Methylene Chloride	49	5.533	5.587	(0.669)	1786102	193.916	745.1
41 trans-1,2-Dichloroethene	61	6.075	6.102	(0.735)	12837	0.98911	3.801(a)
44 1,1-Dichloroethane	63	6.797	6.850	(0.822)	1236514	75.6450	290.7
45 Vinyl Acetate	43	6.571	7.031	(0.795)	51723	3.28810	12.63(aQ)
53 cis-1,2-Dichloroethene	96	7.879	7.906	(0.953)	25004	2.96012	11.37
* 58 Bromochloromethane	49	8.267	8.321	(1.000)	660872	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
60 Chloroform	83	8.457	8.484	(1.023)	22270	1.05923	4.070(a)
61 1,1,1-Trichloroethane	97	8.745	8.781	(1.058)	64767	3.08122	11.84
64 Carbon Tetrachloride	117	8.754	9.079	(1.059)	8014	0.57381	2.205(a)
$ 66 1,2-Dichloroethane-d4	65	9.296	9.341	(0.920)	537271	46.1176	177.2
68 Benzene	78	9.404	9.440	(0.931)	56165	2.90749	11.17
* 73 1,4-Difluorobenzene	114	10.099	10.144	(1.000)	1419594	50.0000	
75 Trichloroethene	130	10.550	10.586	(1.045)	3238533	261.274	1004
$ 88 Toluene-d8	100	12.733	12.751	(1.261)	757508	50.9595	195.8
89 Toluene	91	12.860	12.878	(1.273)	202472	8.10025	31.12
93 1,1,2-Trichloroethane	97	13.843	13.608	(0.899)	11302	0.93949	3.610(aQ)
95 Tetrachloroethene	166	13.852	13.870	(0.900)	1222441	73.2102	281.3
M 99 Xylenes (total)	106				14618	1.68467	6.473(a)
* 101 Chlorobenzene-d5	117	15.395	15.404	(1.000)	1066513	50.0000	
105 m,p-Xylenes	106	15.946	15.891	(1.036)	9004	1.02282	3.930(a)
107 o-Xylene	106	16.694	16.649	(1.084)	5613	0.66184	2.543(a)
$ 114 4-Bromofluorobenzene	95	17.651	17.651	(1.147)	916583	48.1099	184.9

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

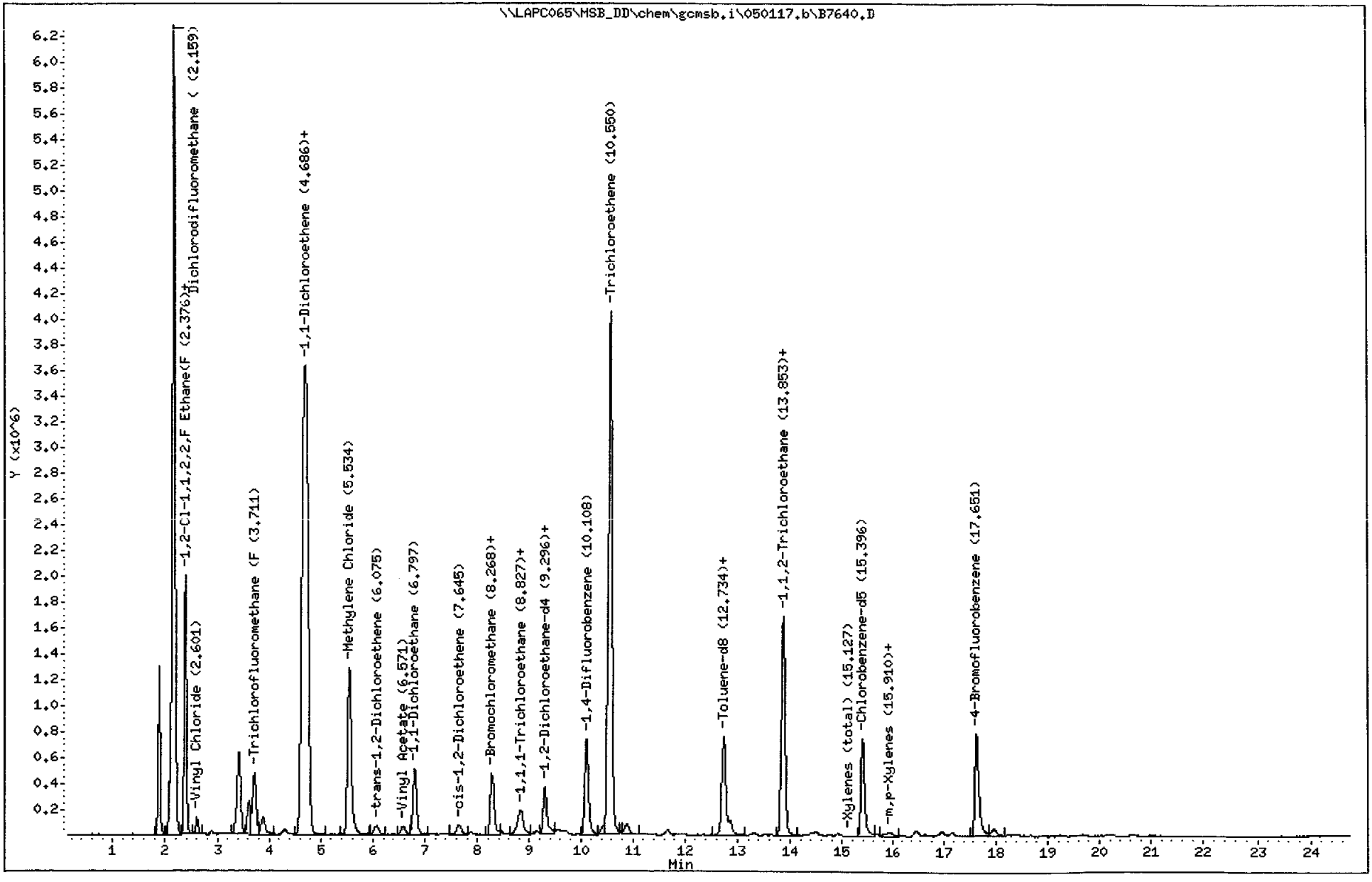
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D
Date : 17-JAN-2005 13:43
Client ID: 066392-001
Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

Instrument: gcmsb.i

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

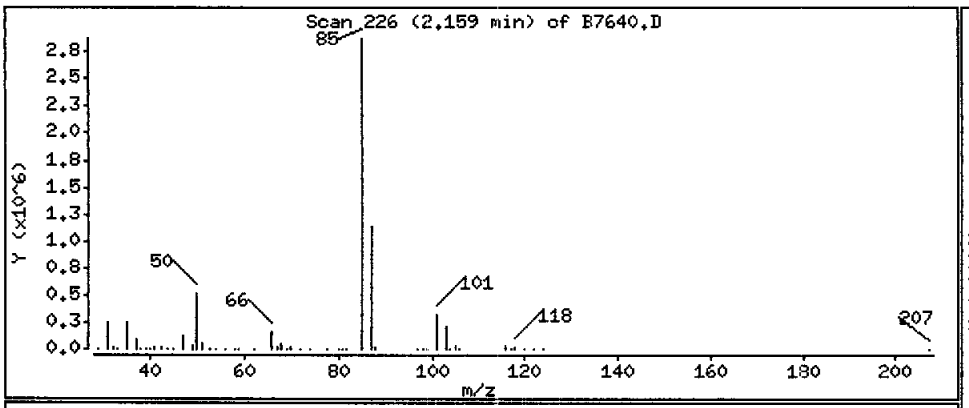
Operator: AA

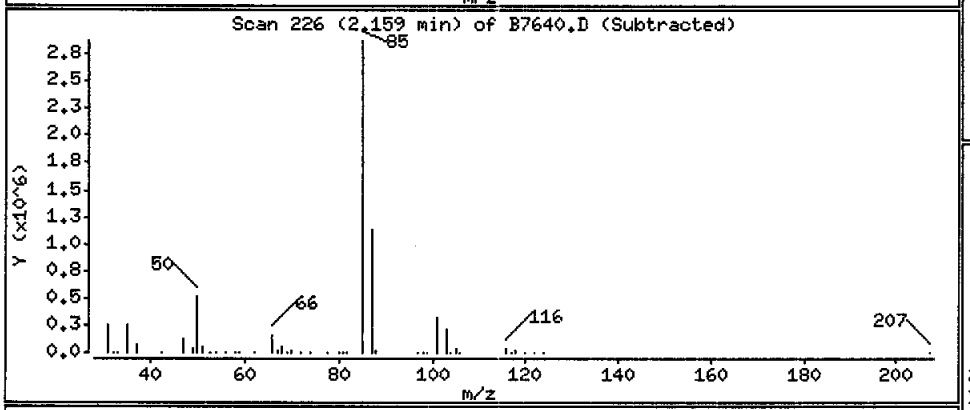
Column phase: J&W DB-624

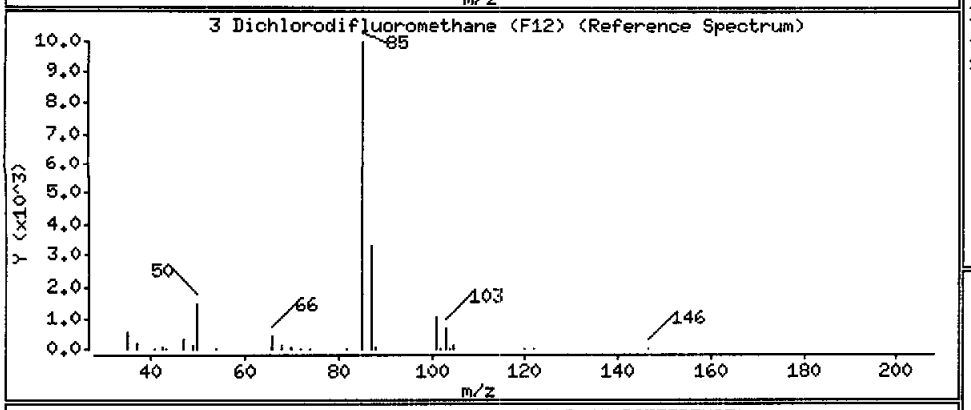
Column diameter: 0.53

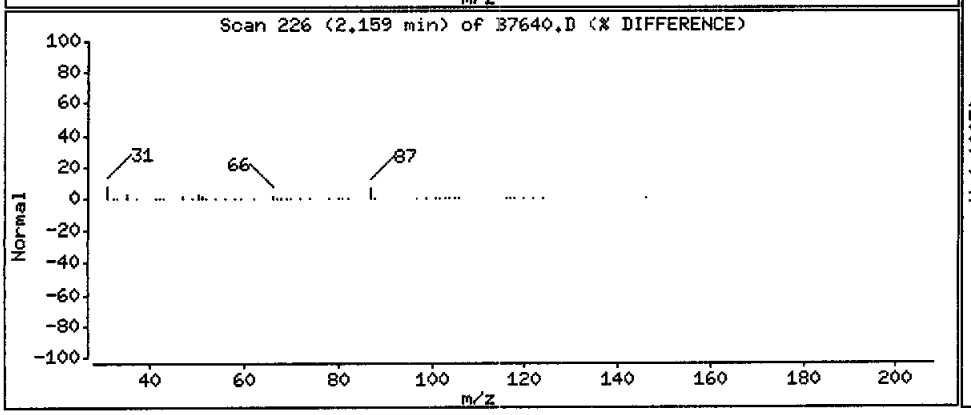
3 Dichlorodifluoromethane (F12)

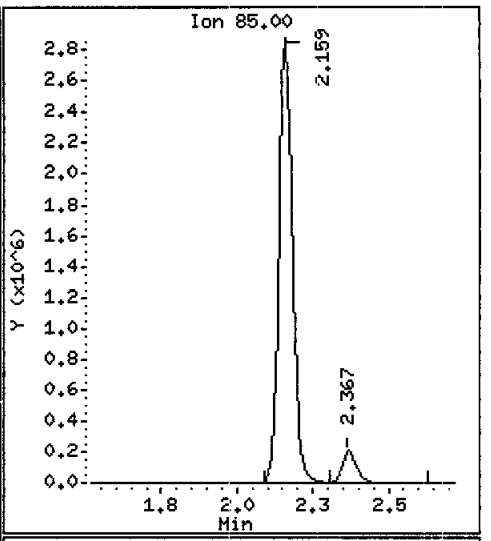
Concentration: 1220 ppbv

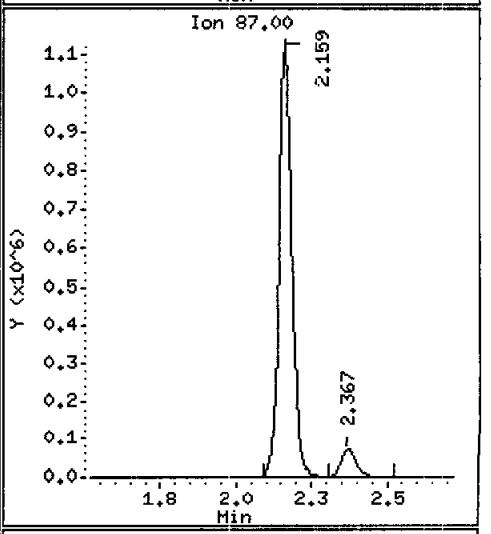


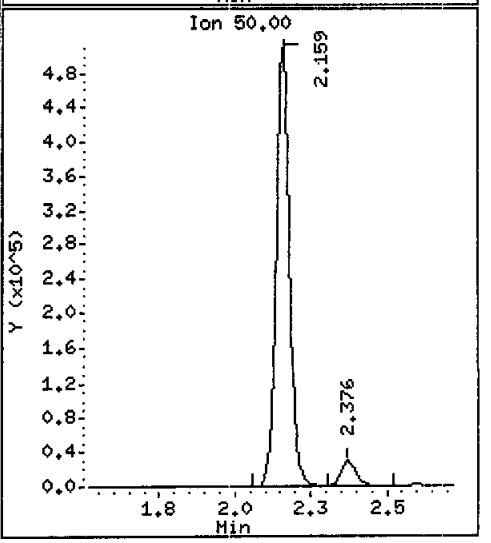












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

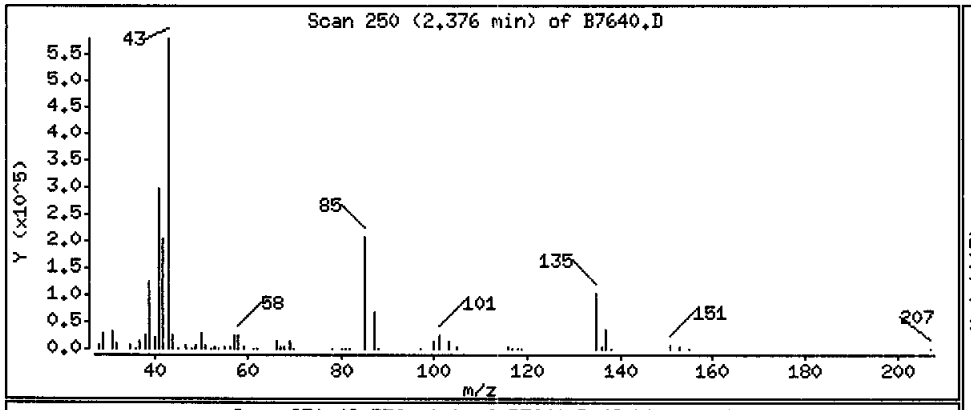
Operator: AA

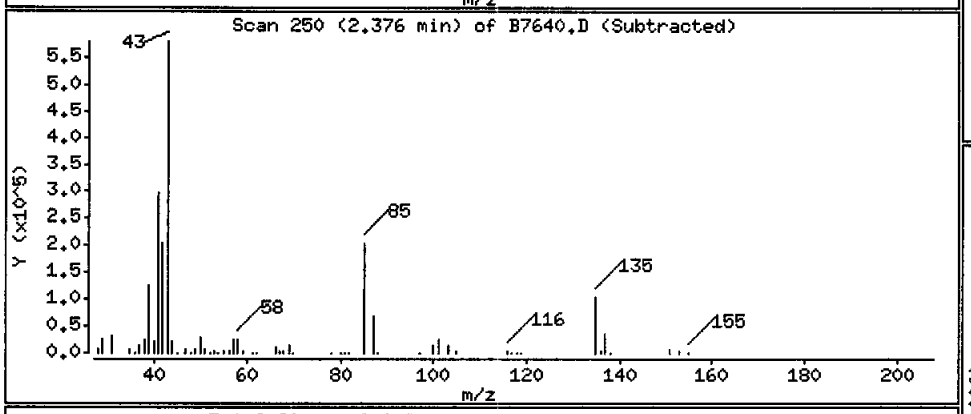
Column phase: J&W DB-624

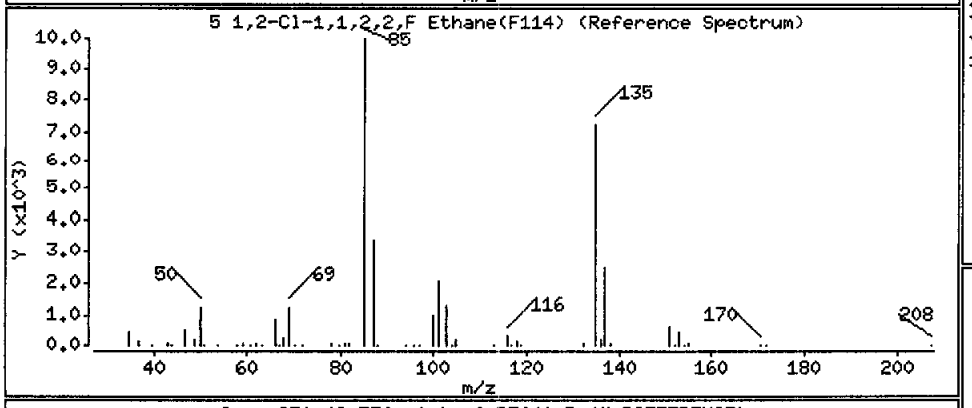
Column diameter: 0.53

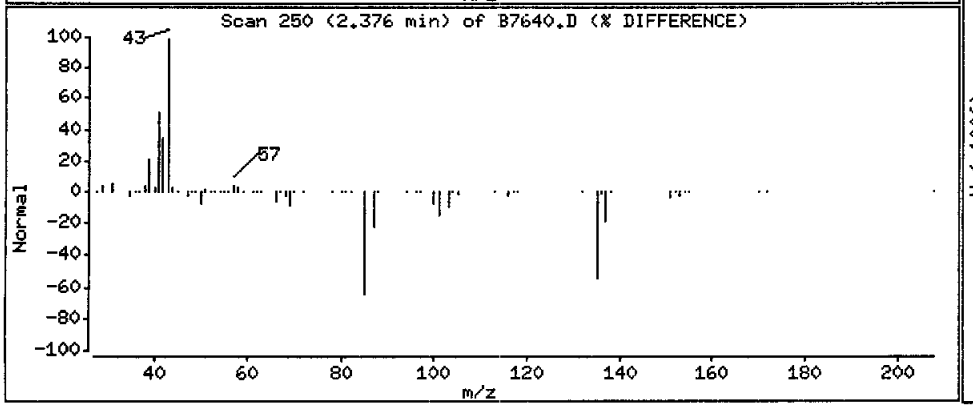
5 1,2-Cl-1,1,2,2,F Ethane(F114)

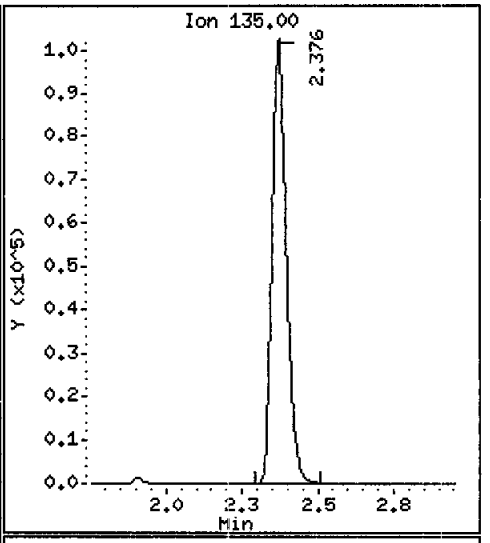
Concentration: 57.20 ppbv

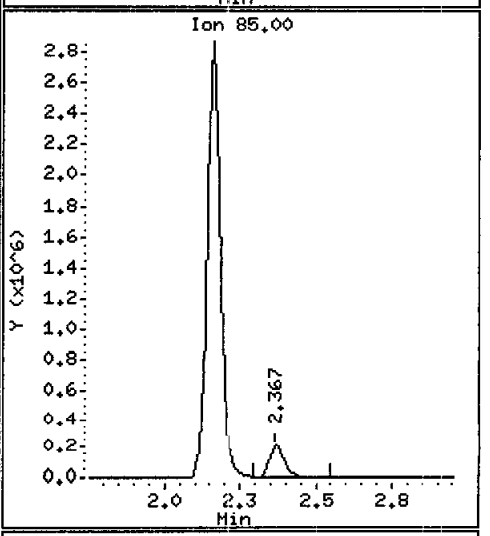


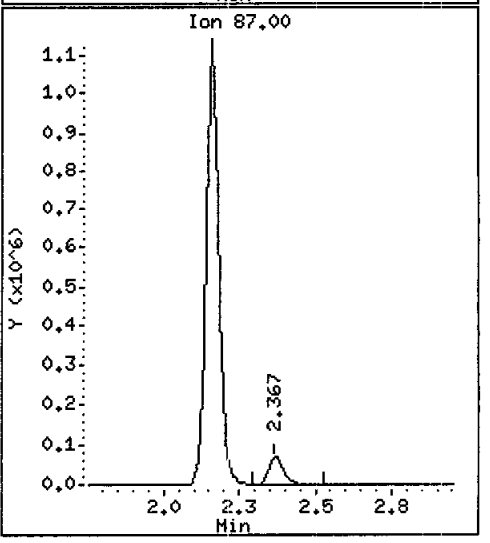












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

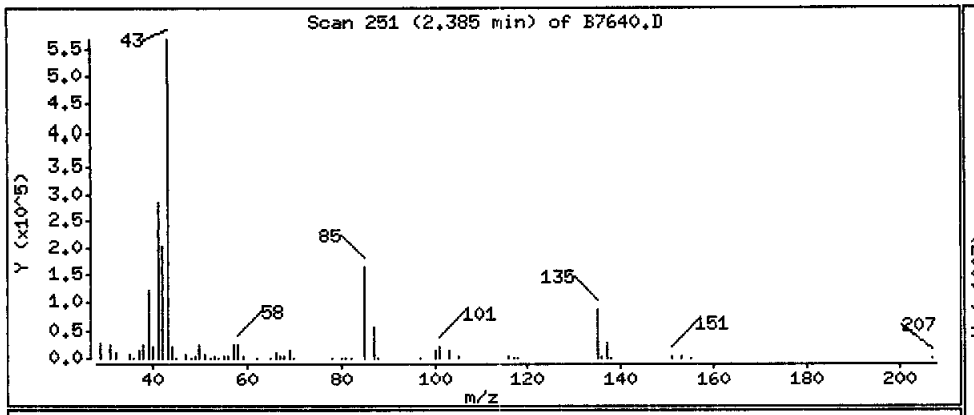
Operator: AA

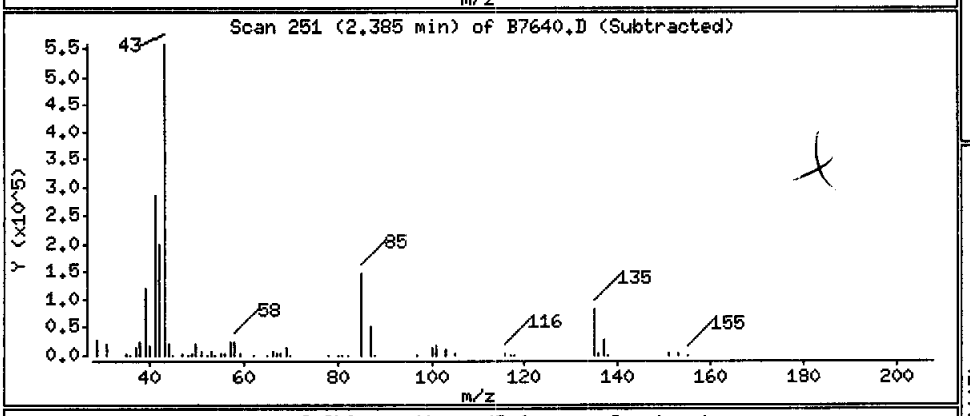
Column phase: J&W DB-624

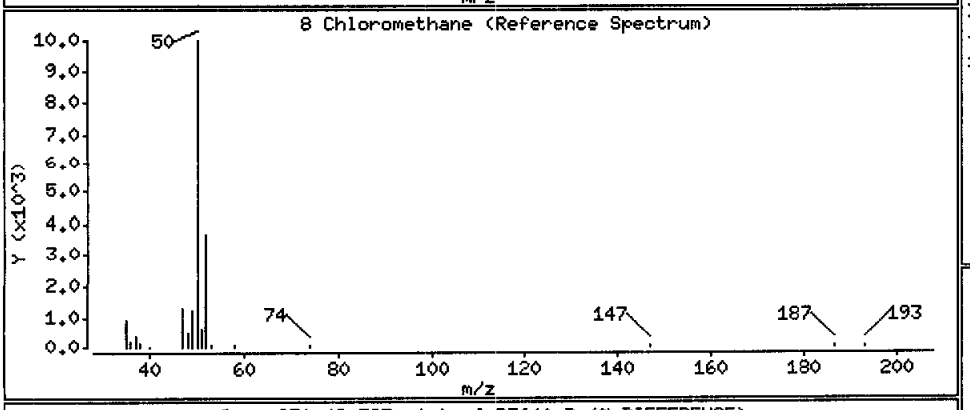
Column diameter: 0.53

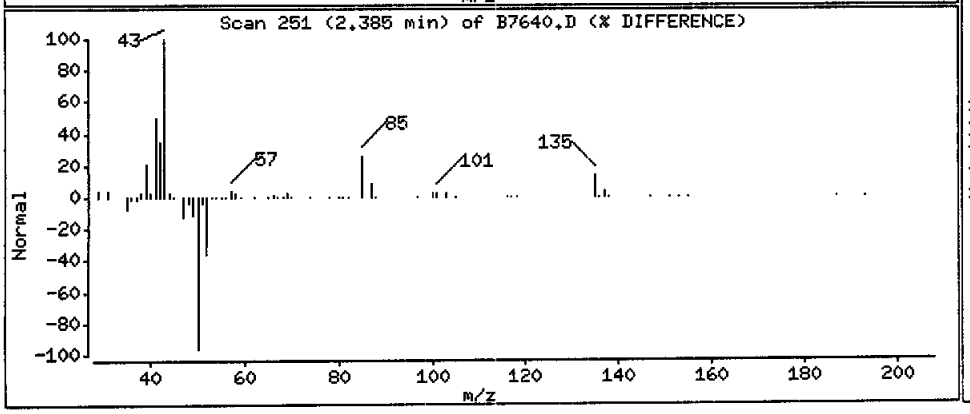
8 Chloromethane

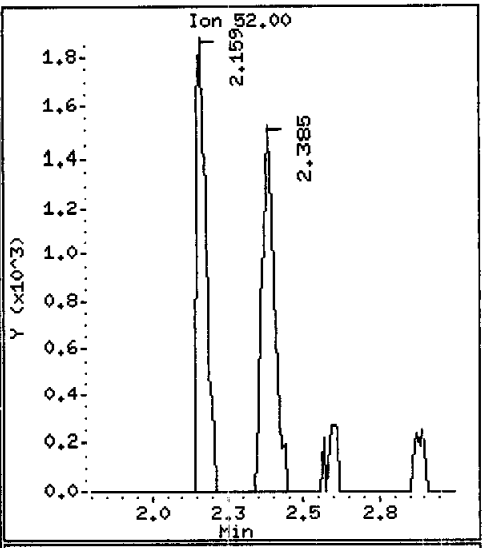
Concentration: 13.78 ppbv

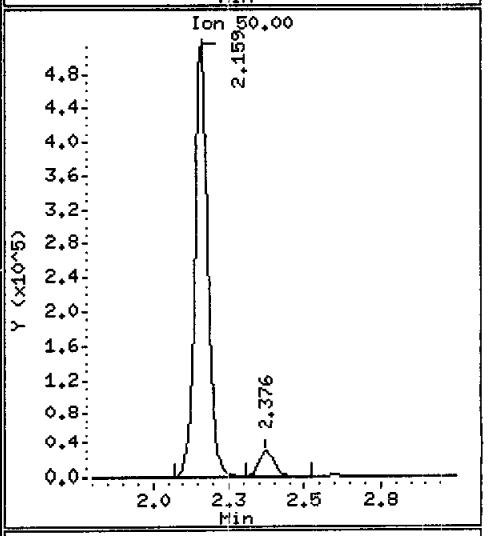


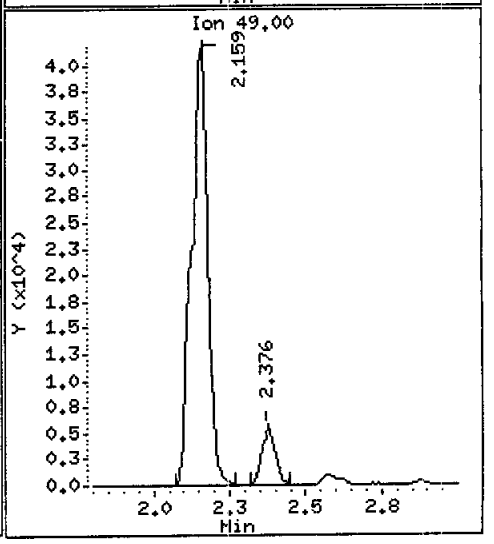












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

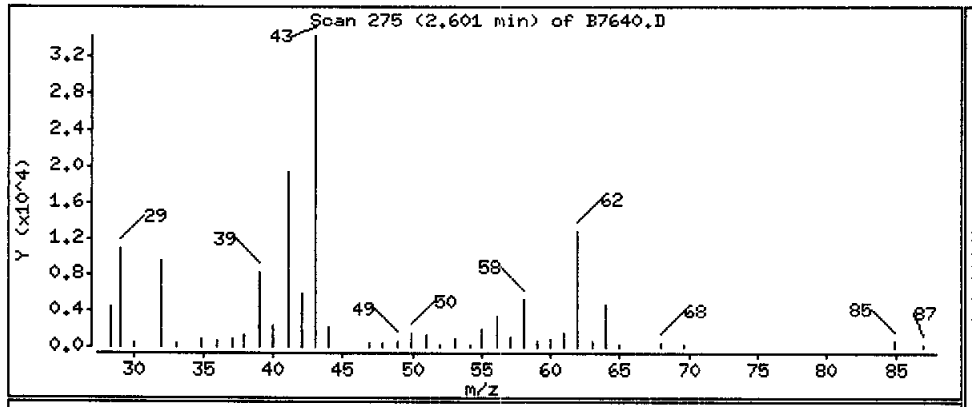
Operator: AA

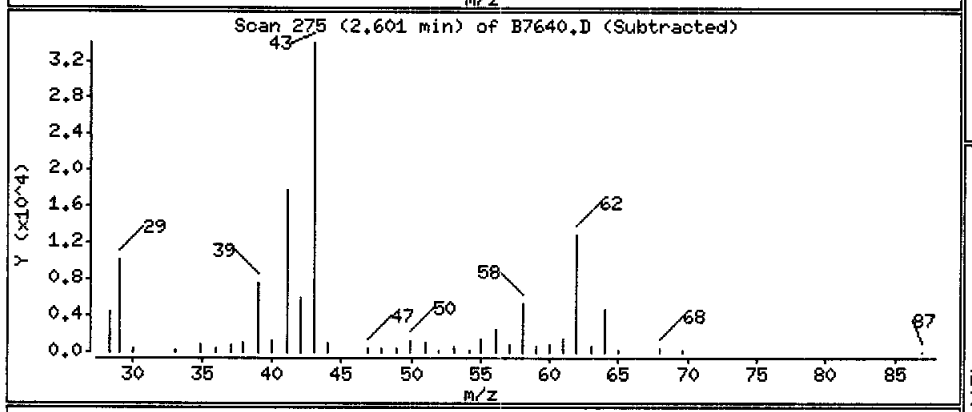
Column phase: J&W DB-624

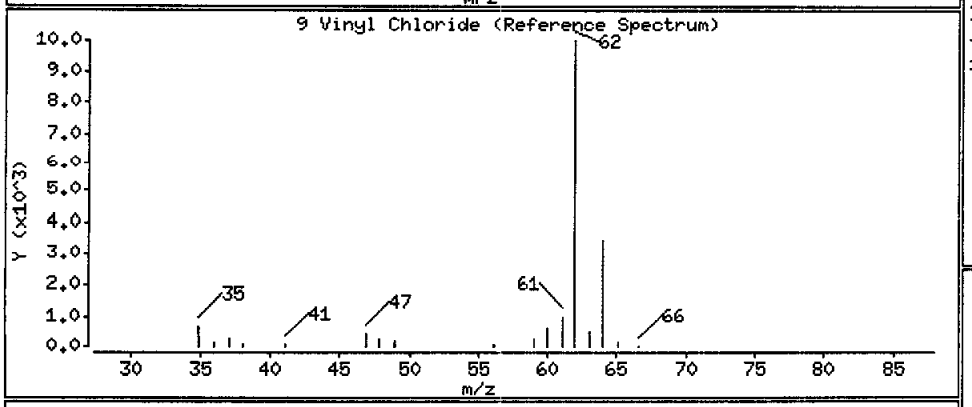
Column diameter: 0.53

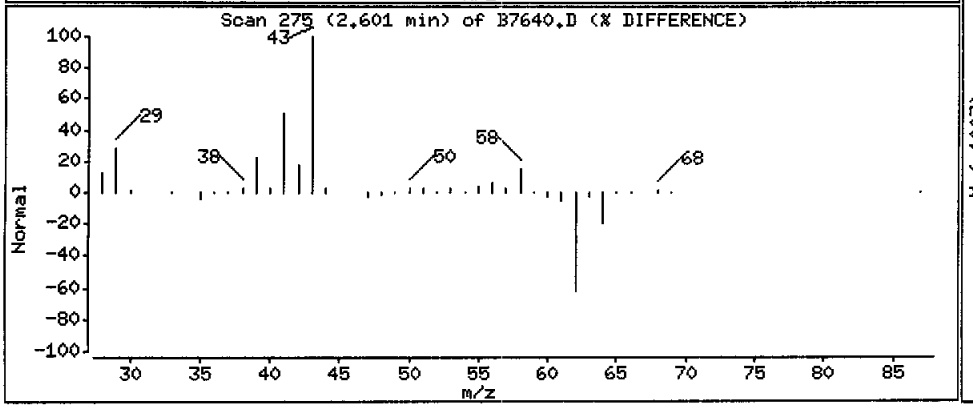
9 Vinyl Chloride

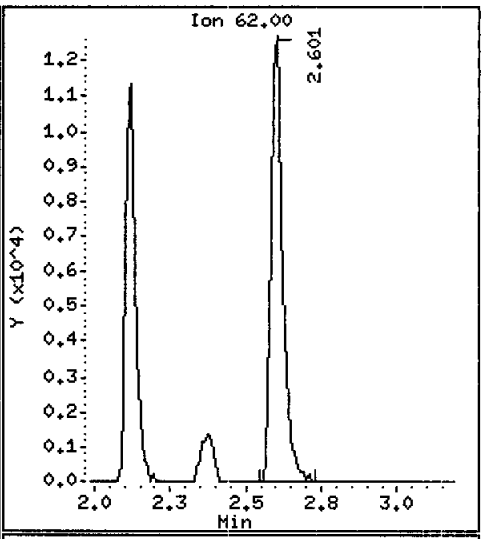
Concentration: 24.88 ppbv

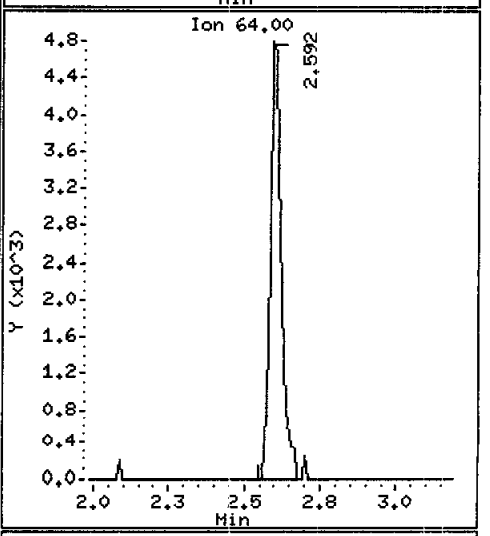


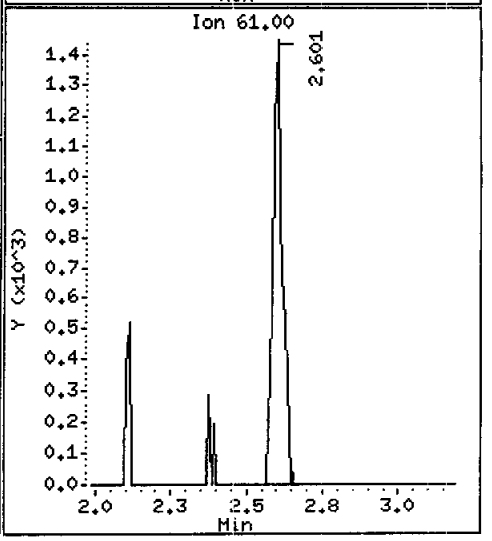












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

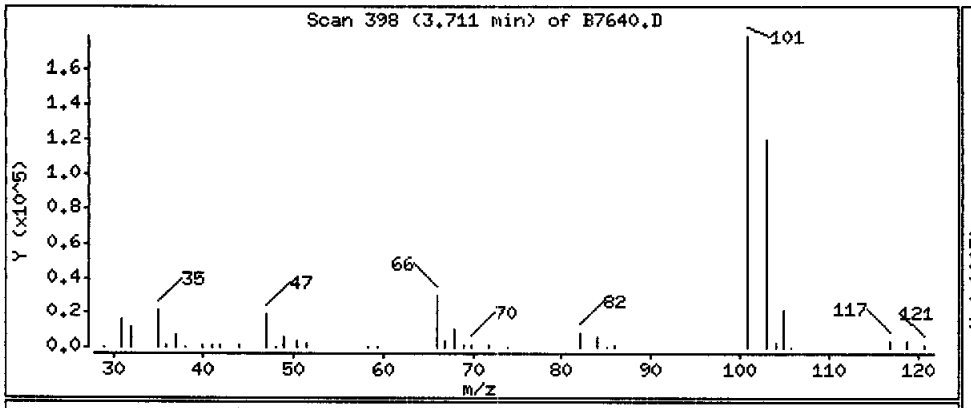
Operator: AA

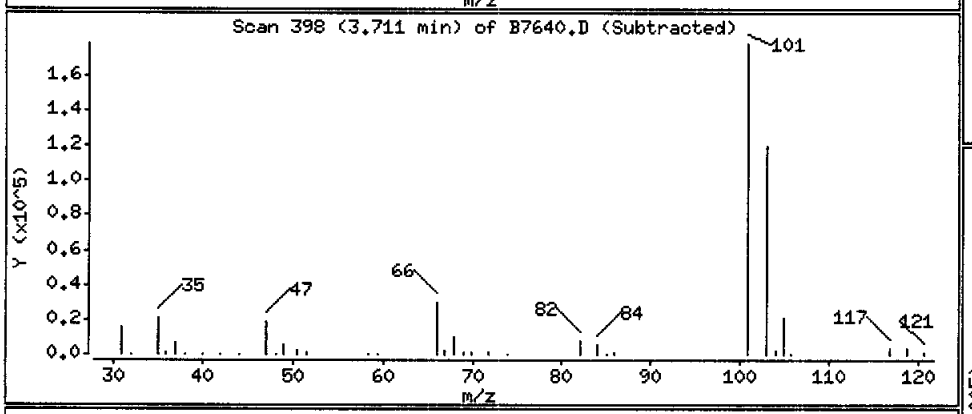
Column phase: J&W DB-624

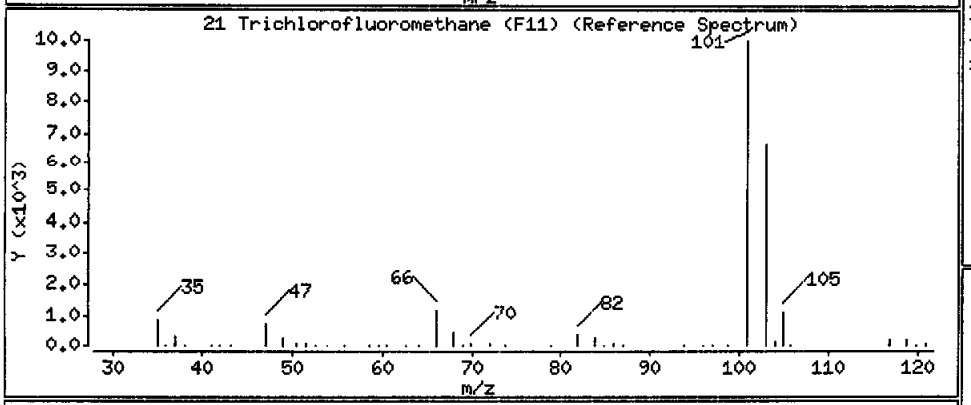
Column diameter: 0.53

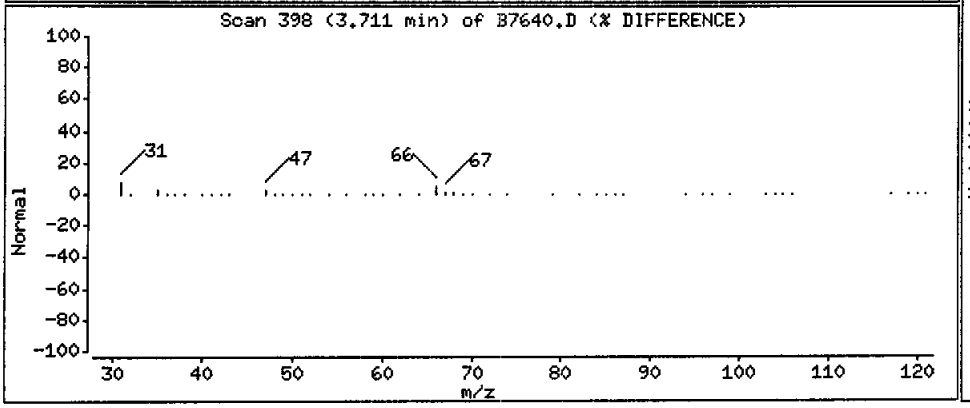
21 Trichlorofluoromethane (F11)

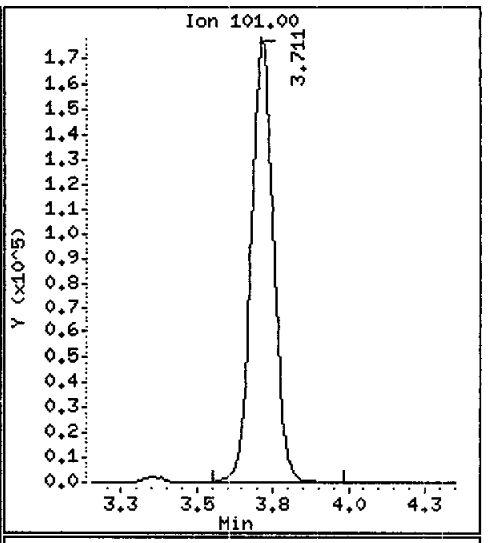
Concentration: 124.4 ppbv

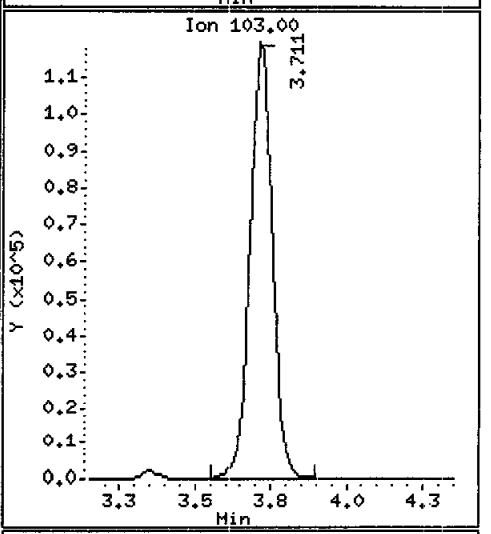


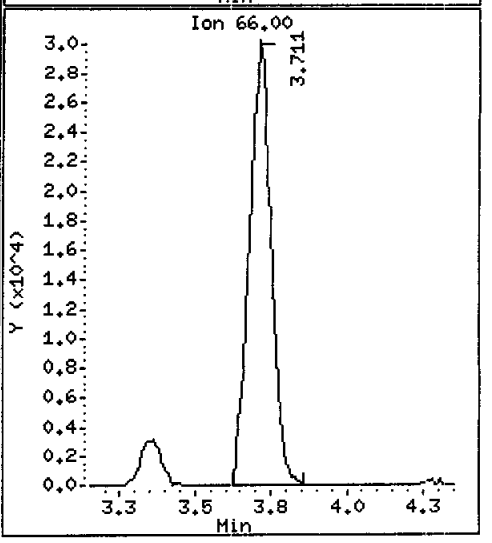












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

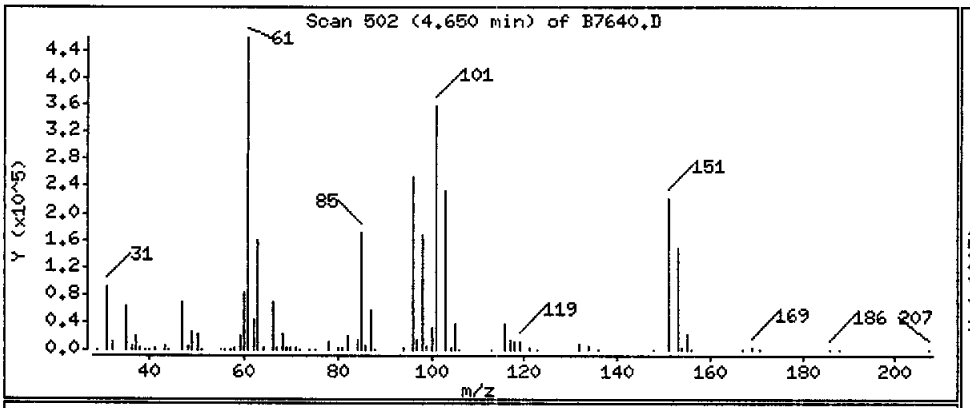
Operator: AA

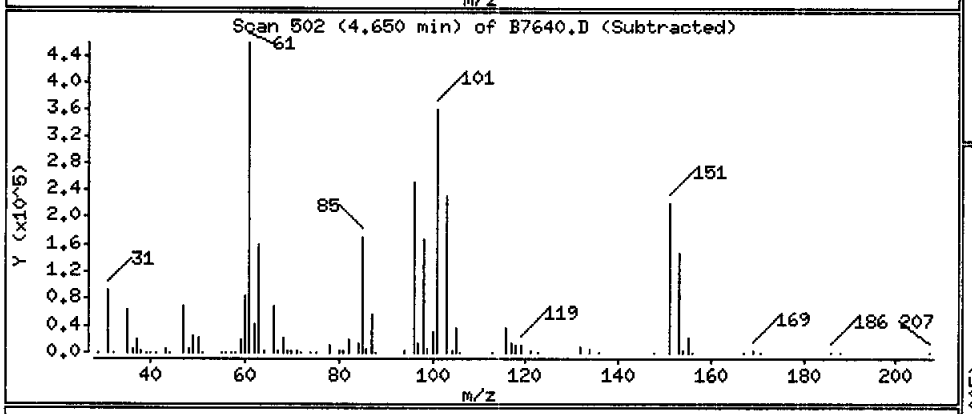
Column phase: J&W DB-624

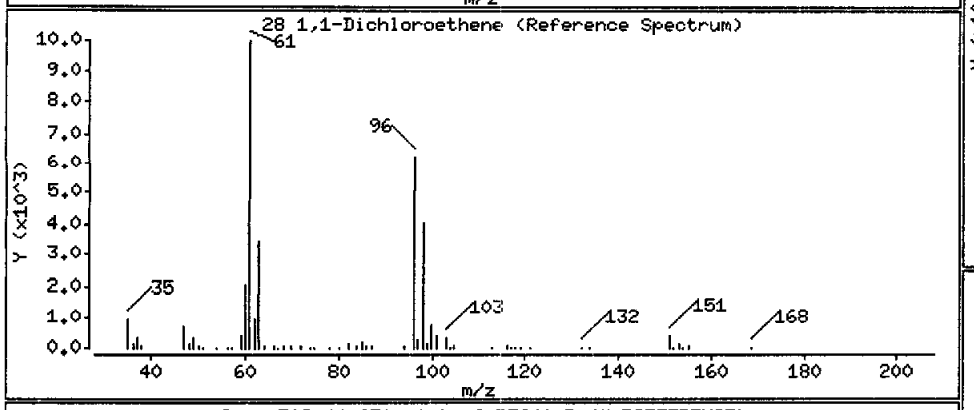
Column diameter: 0.53

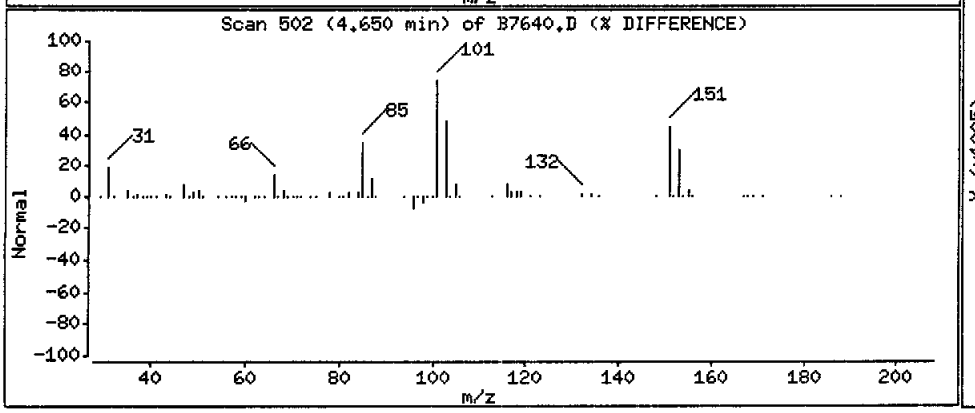
28 1,1-Dichloroethene

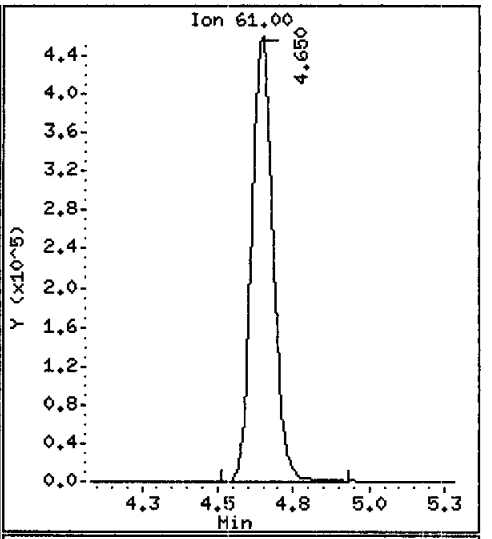
Concentration: 583.2 ppbv

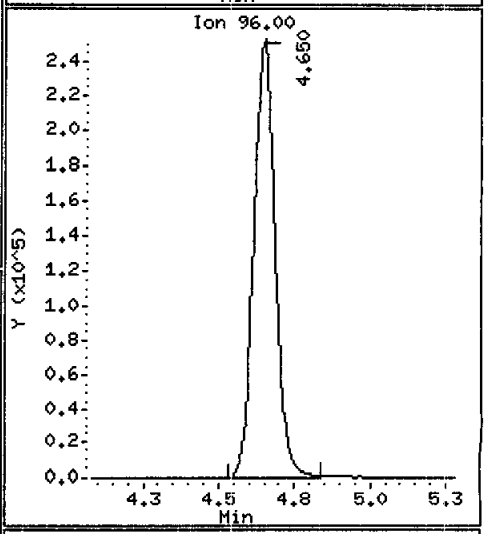


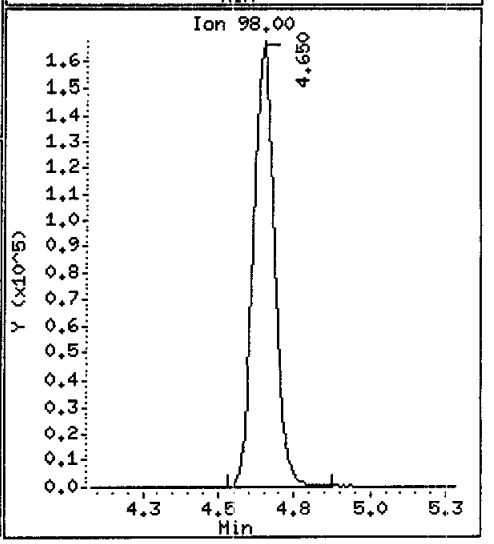












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

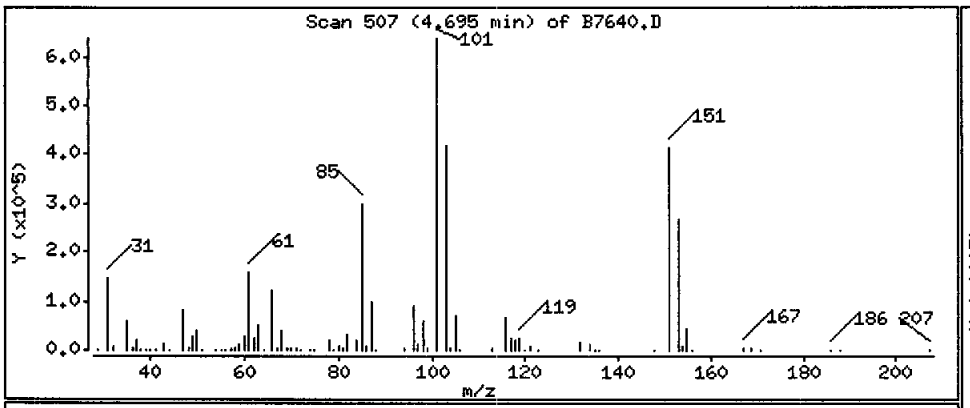
Operator: AA

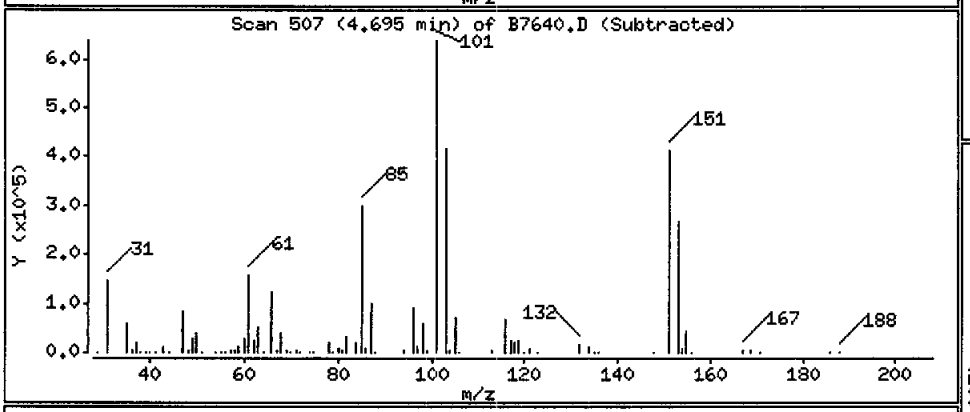
Column phase: J&W DB-624

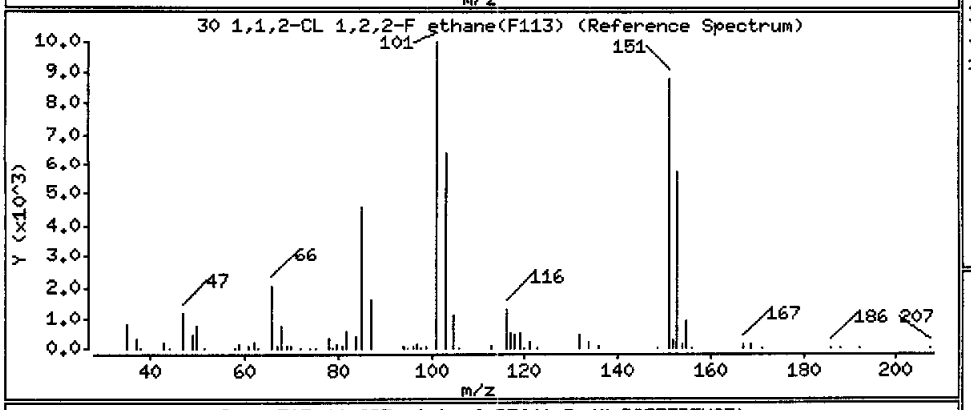
Column diameter: 0.53

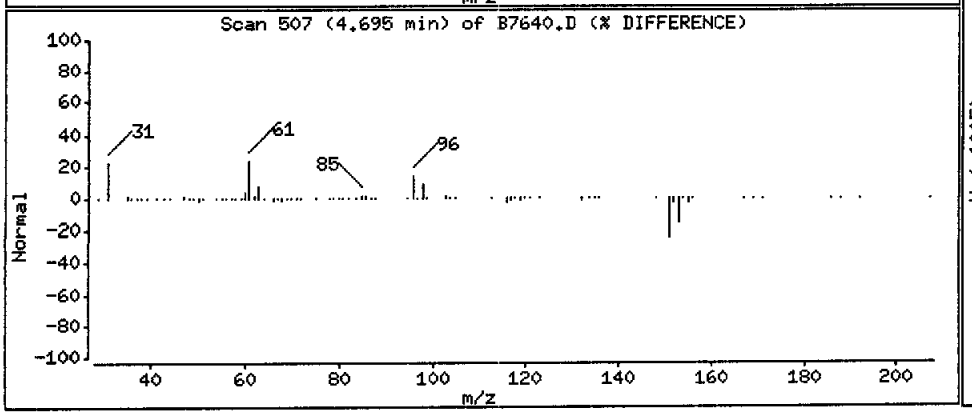
30 1,1,2-CL 1,2,2-F ethane(F113)

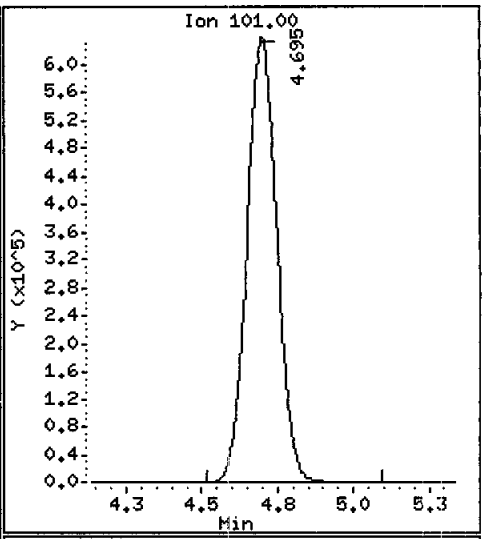
Concentration: 523.2 ppbv

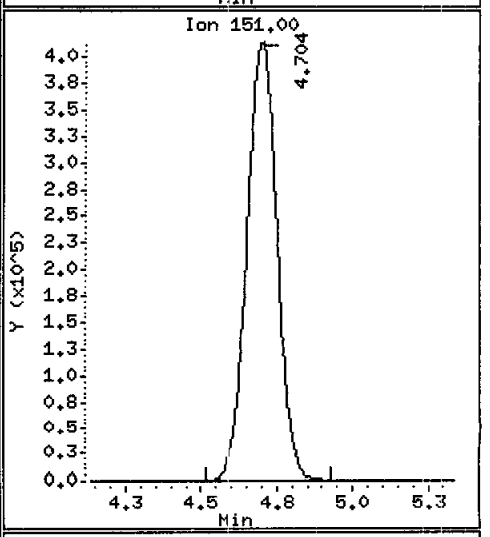


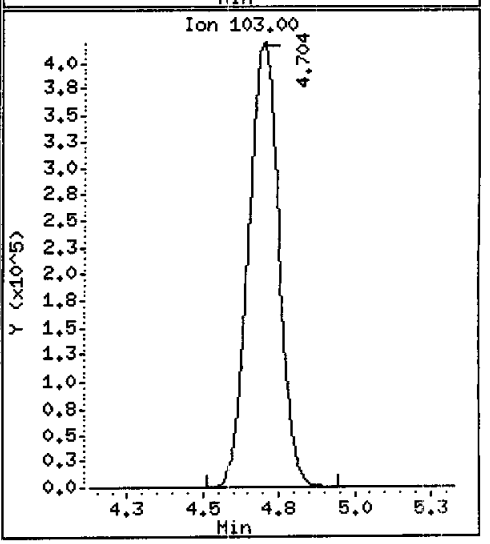












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

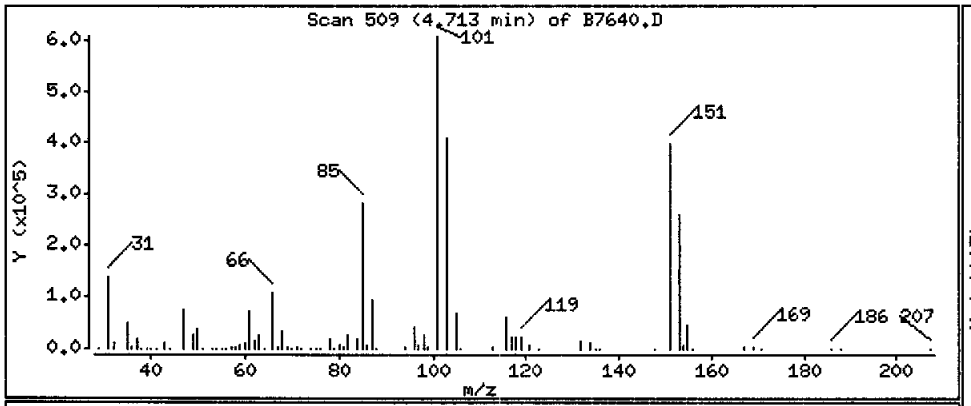
Operator: AA

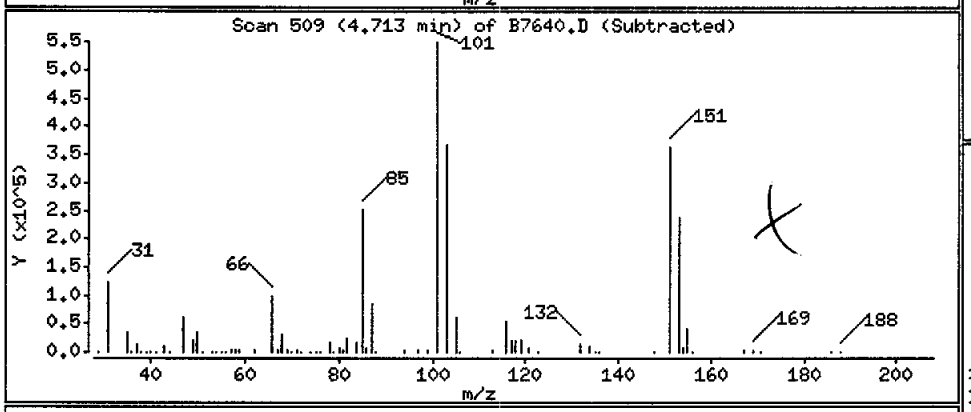
Column phase: J&W DB-624

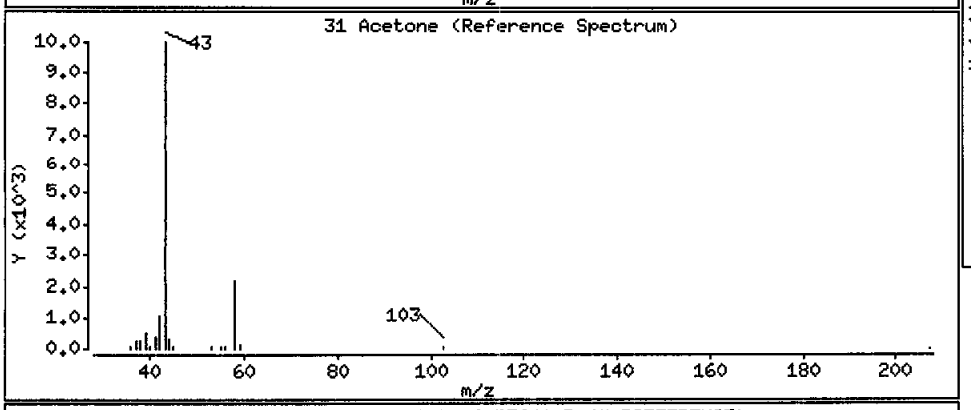
Column diameter: 0.53

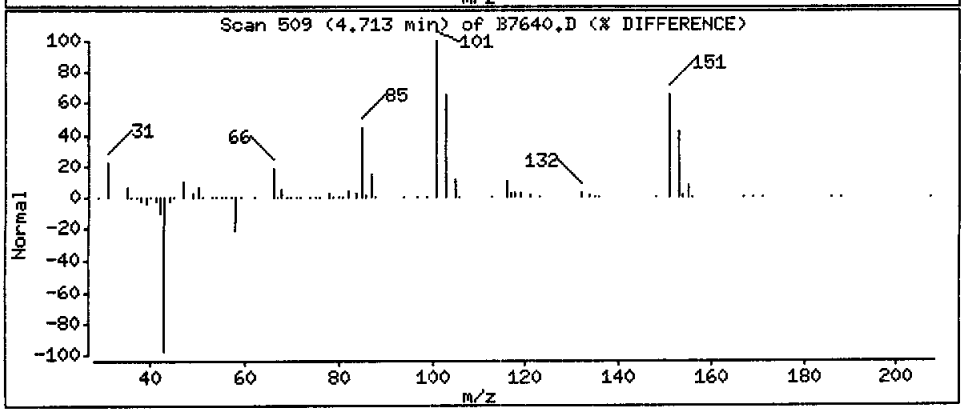
31 Acetone

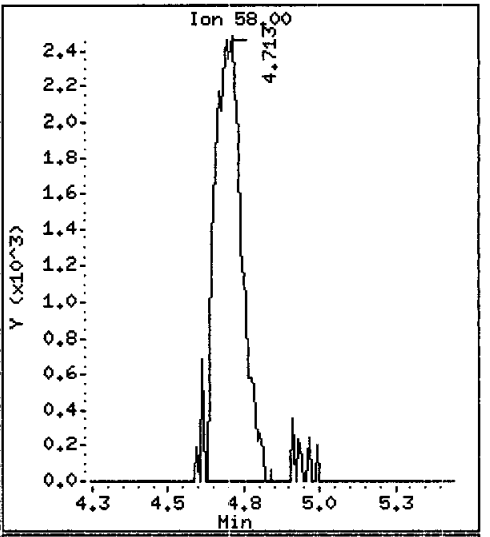
Concentration: 28.03 ppbv

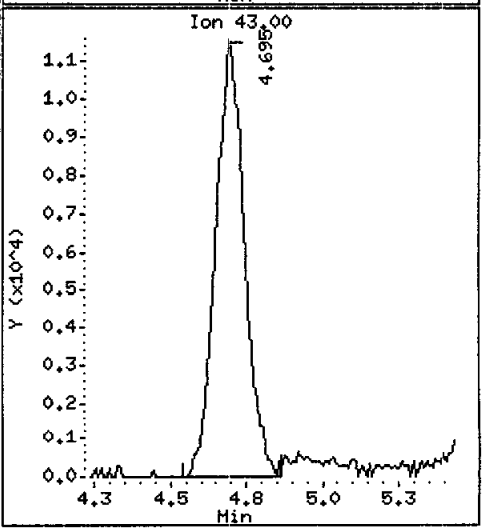












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

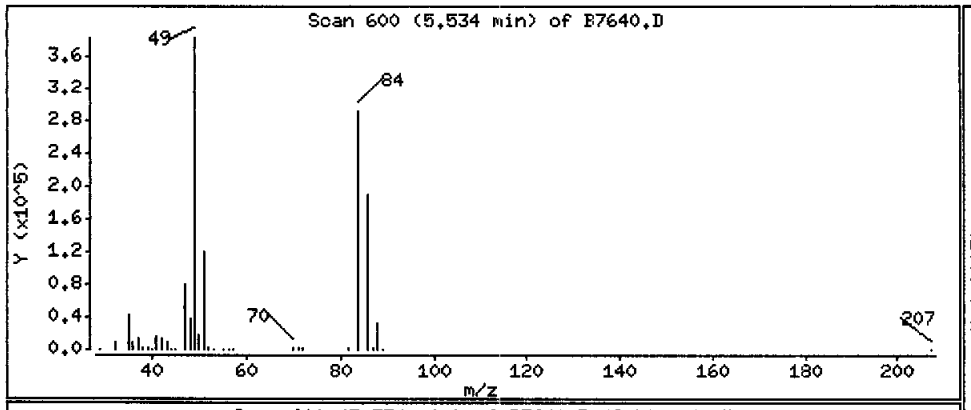
Operator: AA

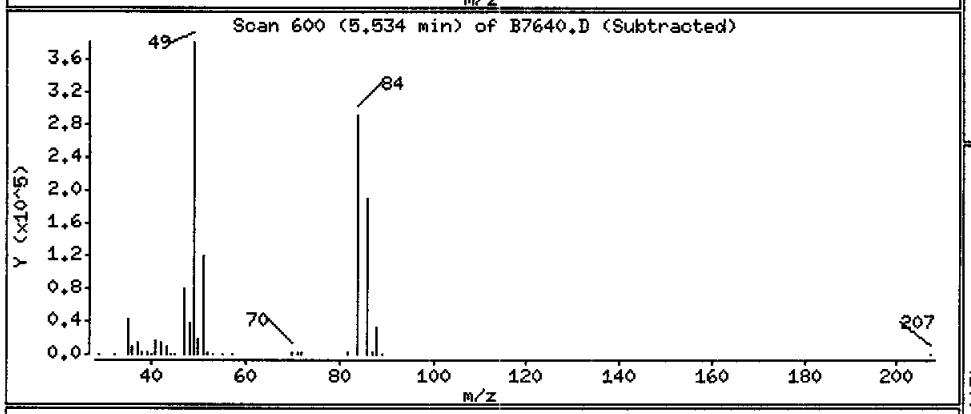
Column phase: J&W DB-624

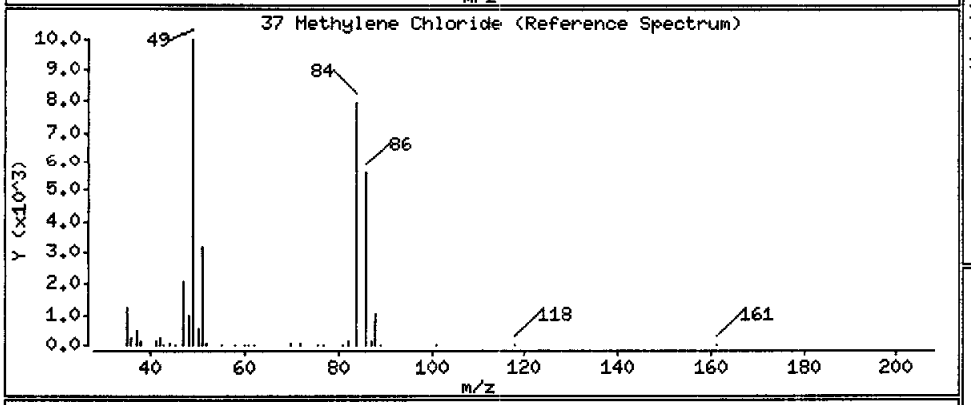
Column diameter: 0.53

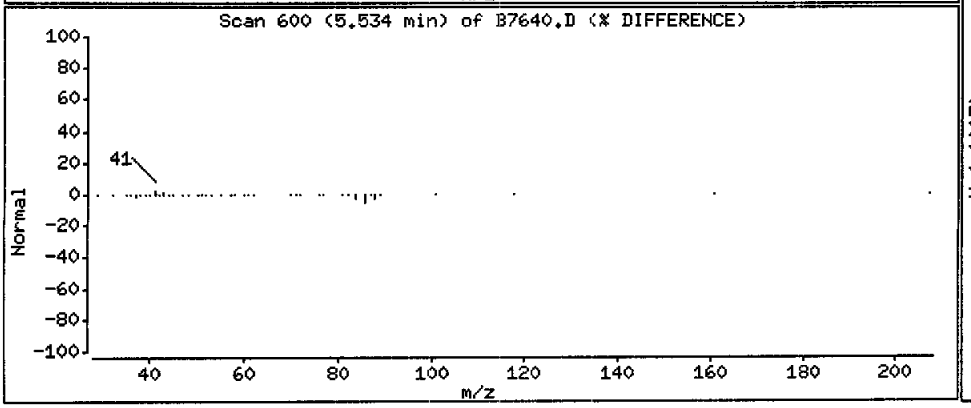
37 Methylene Chloride

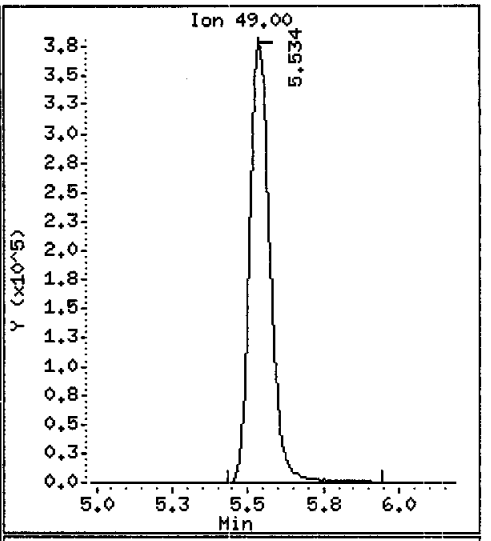
Concentration: 745.1 ppbv

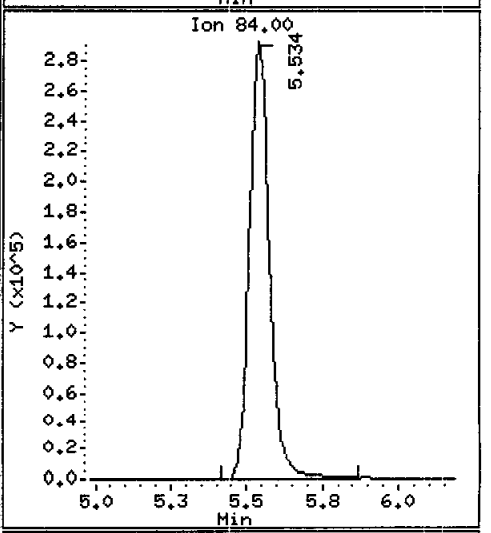


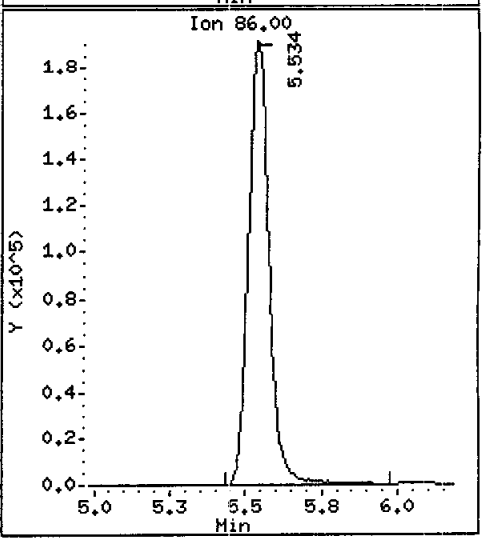












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Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

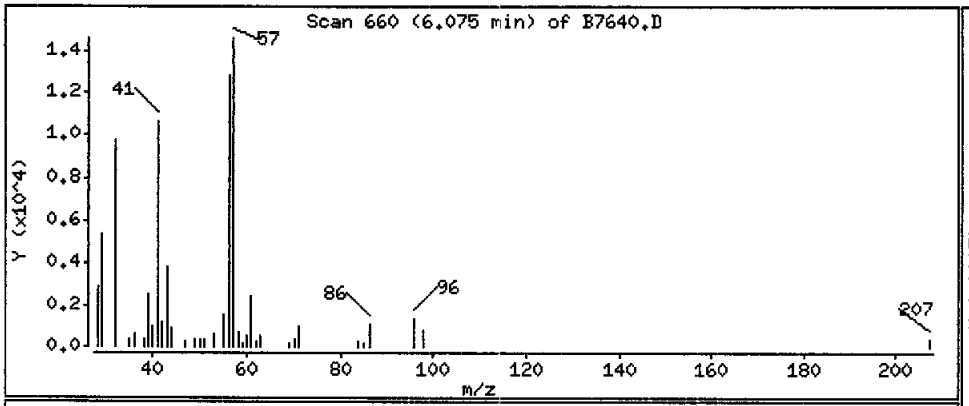
Operator: AA

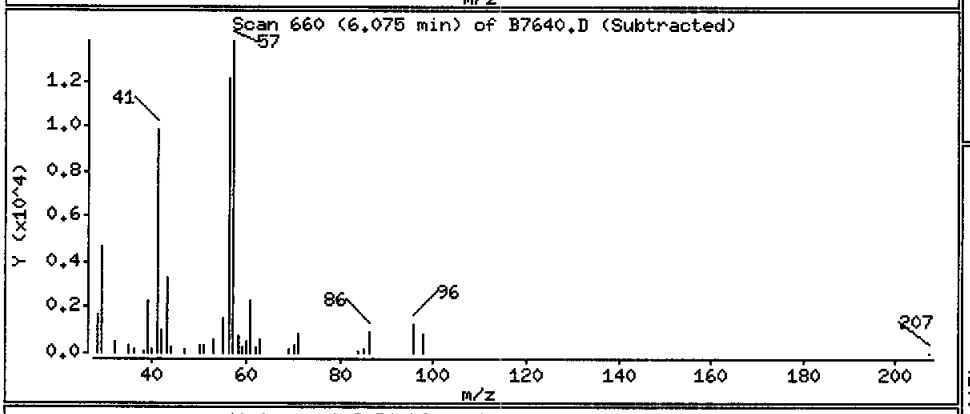
Column phase: J&W DB-624

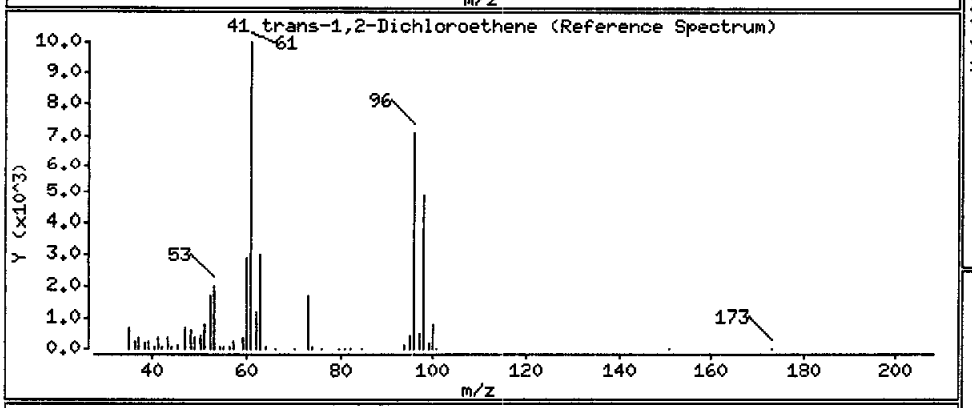
Column diameter: 0.53

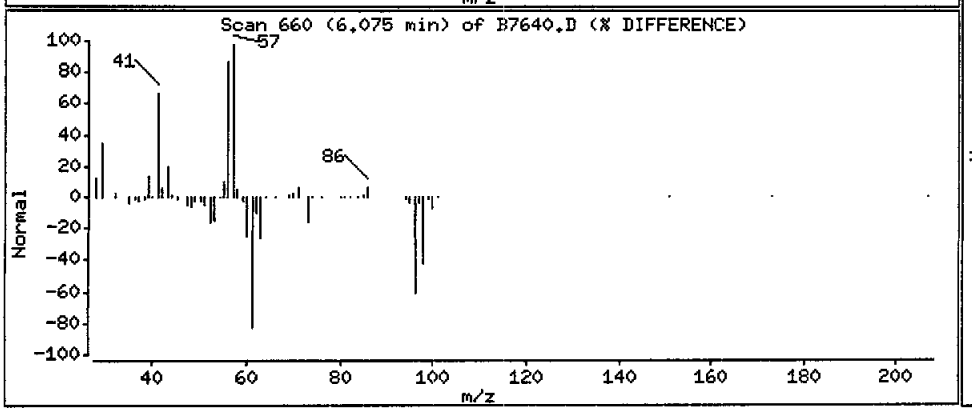
41 trans-1,2-Dichloroethene

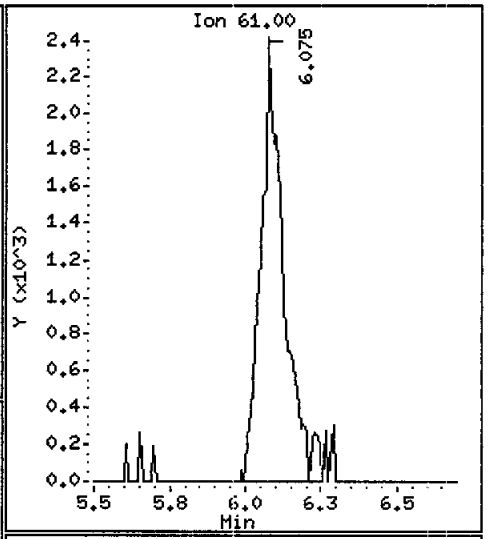
Concentration: 3.801 ppbv

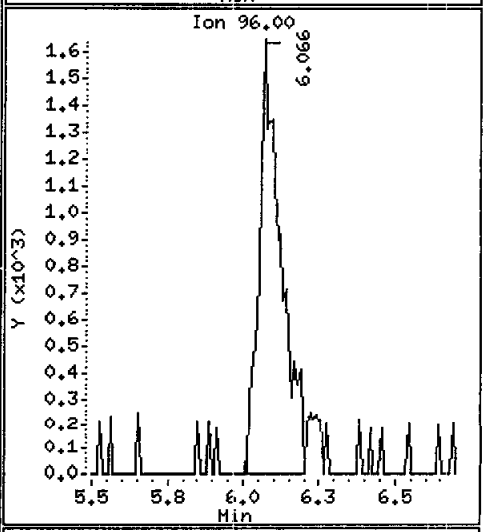


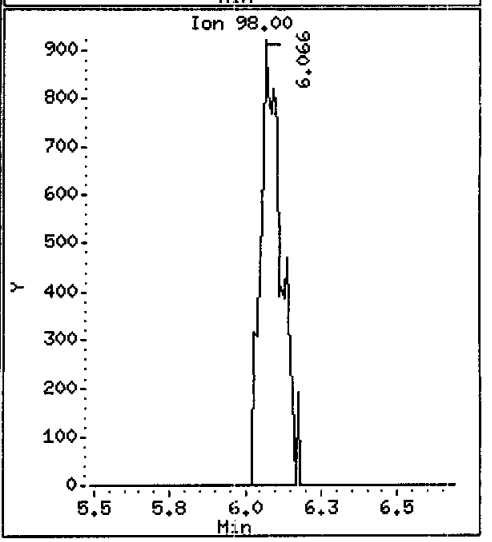












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

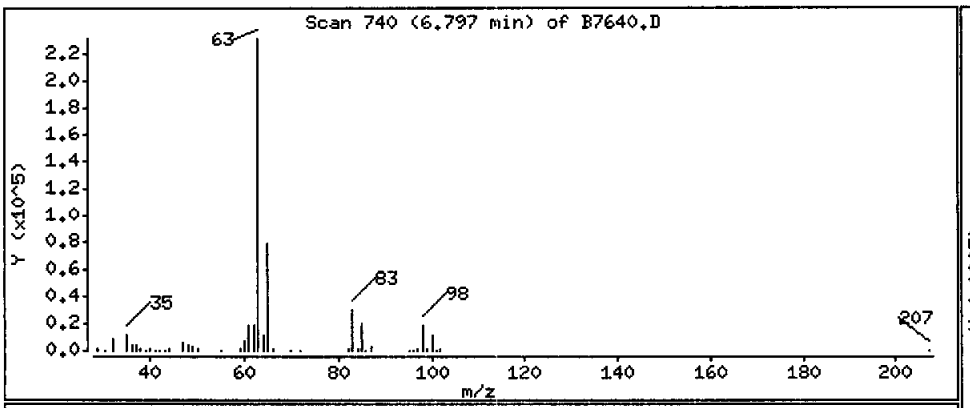
Operator: AA

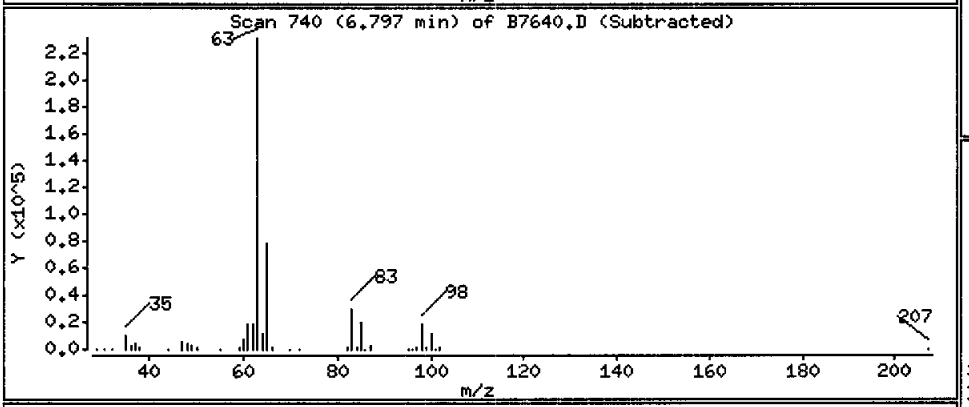
Column phase: J&W DB-624

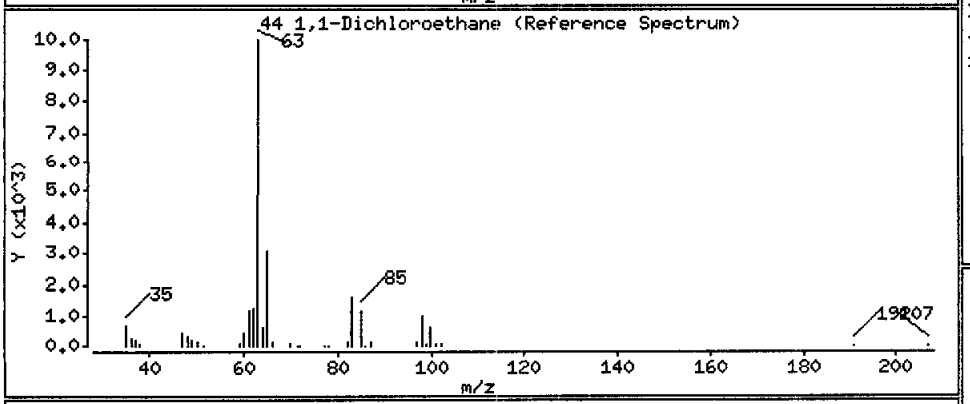
Column diameter: 0.53

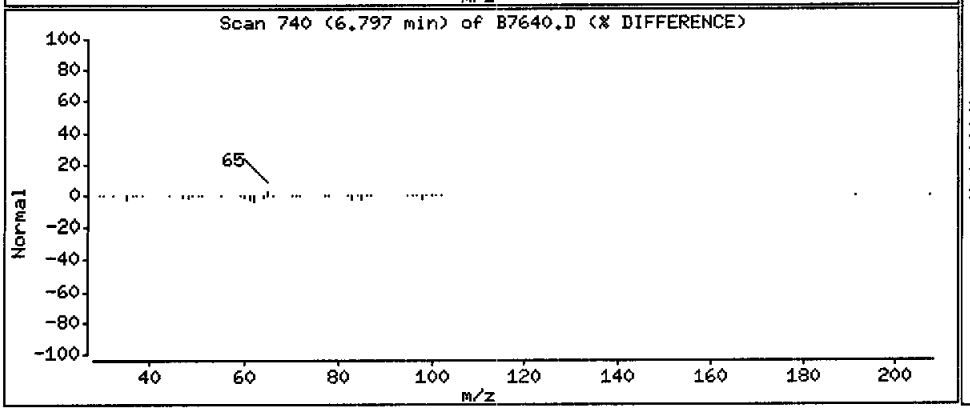
44 1,1-Dichloroethane

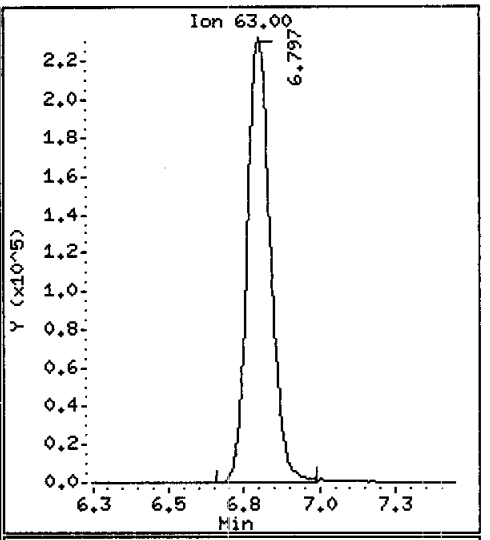
Concentration: 290.7 ppbv

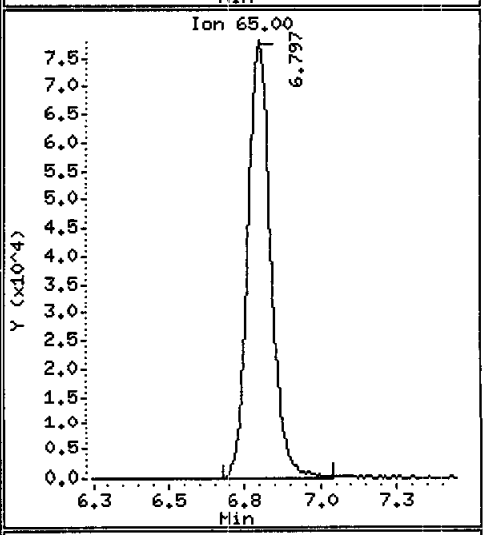


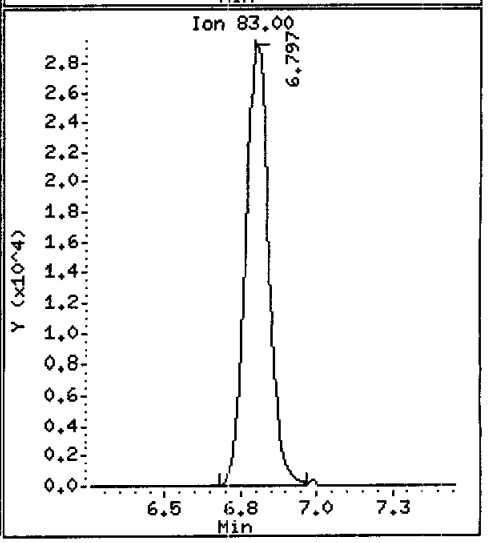












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

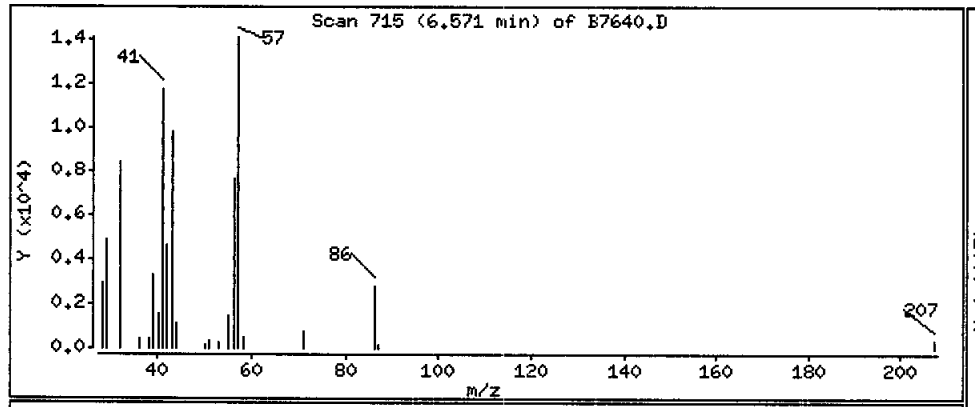
Operator: AA

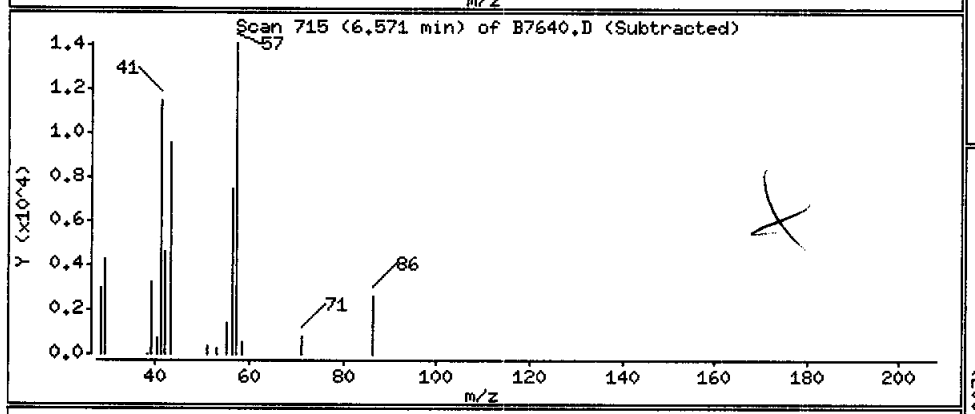
Column phase: J&W DB-624

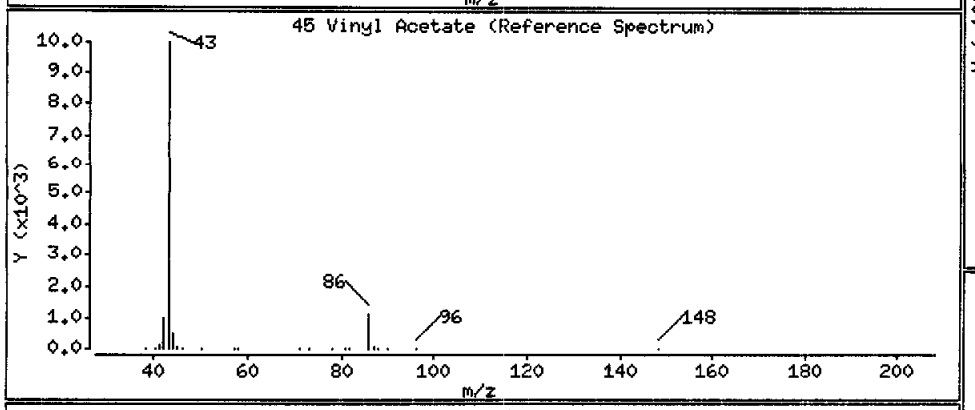
Column diameter: 0.53

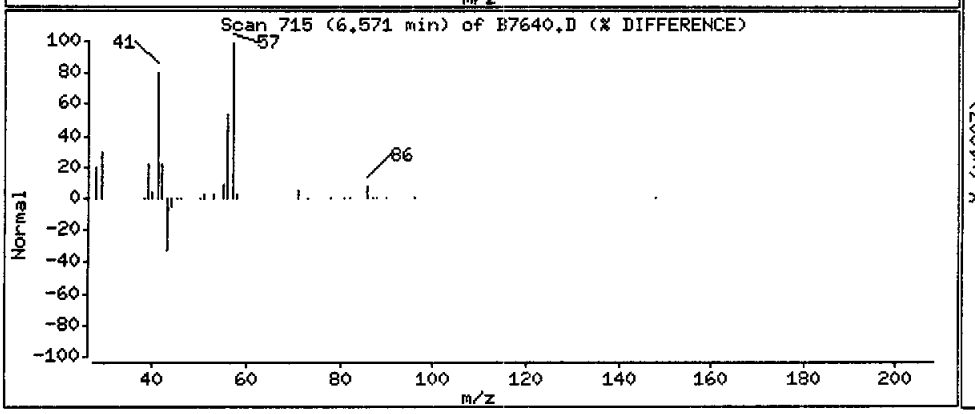
45 Vinyl Acetate

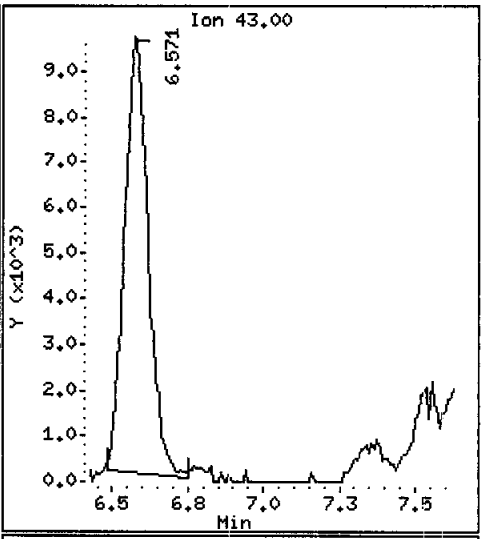
Concentration: 12.63 ppbv

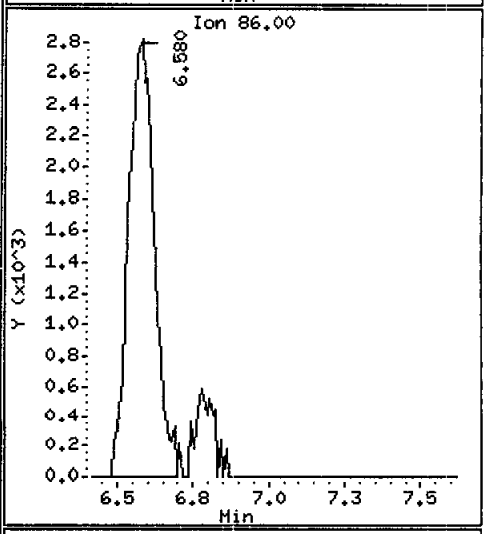


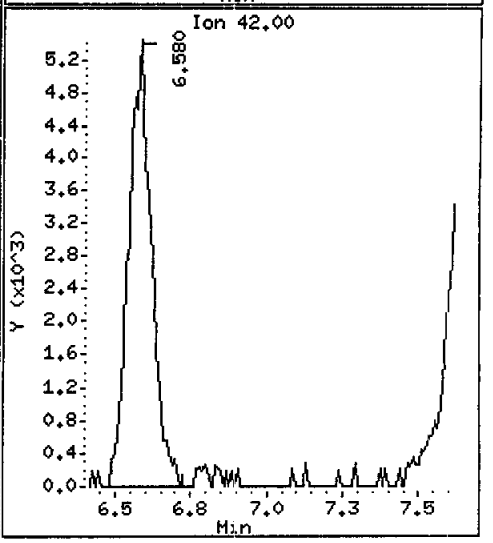












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

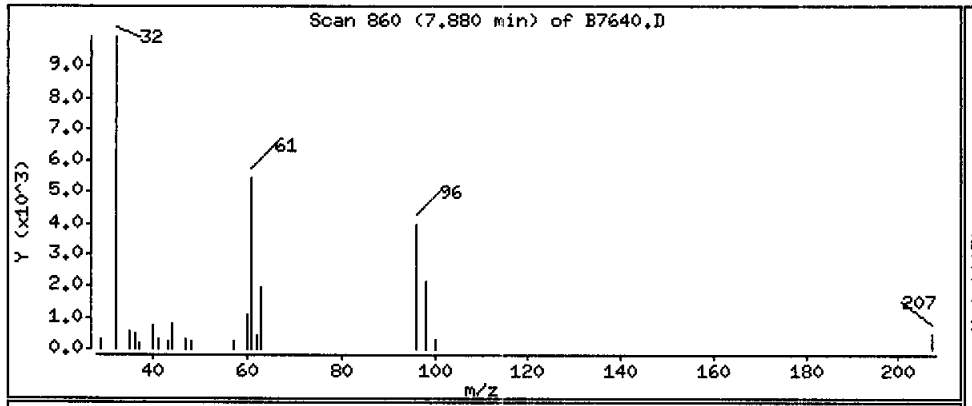
Operator: AA

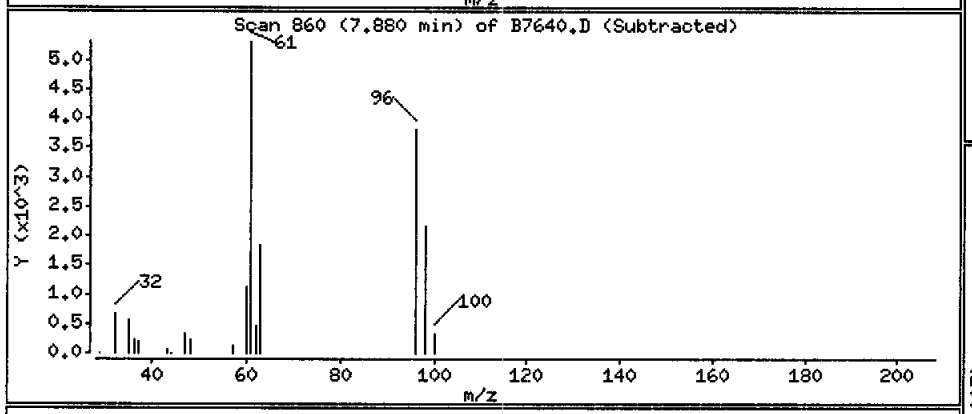
Column phase: J&W DB-624

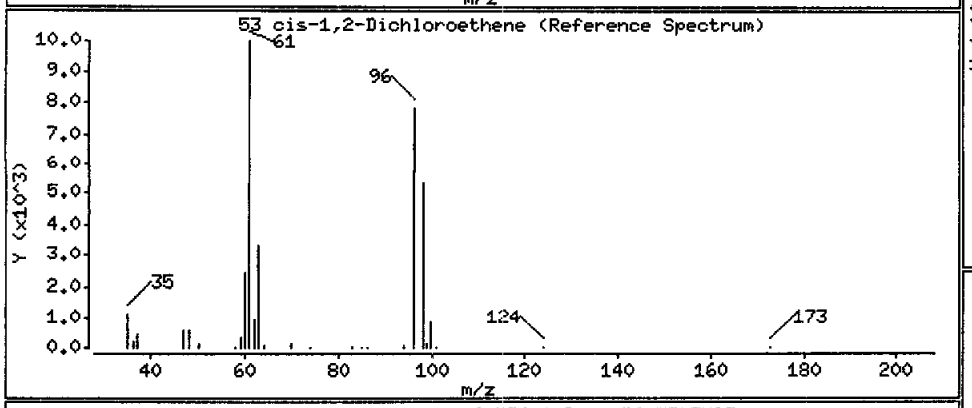
Column diameter: 0.53

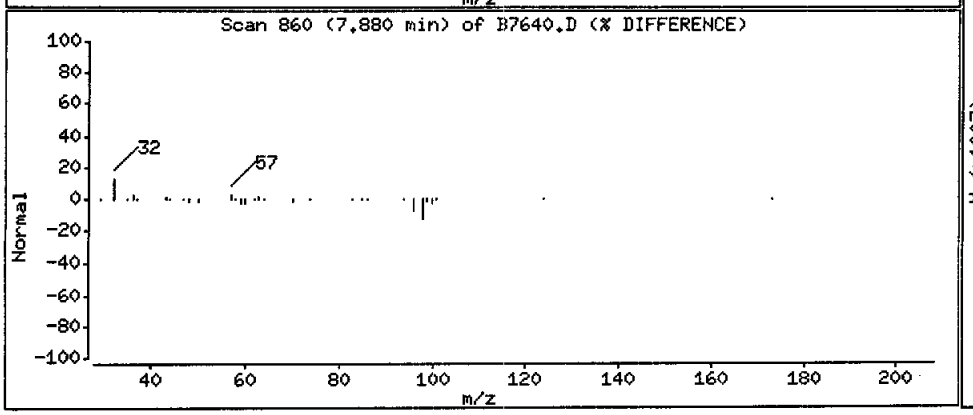
53 cis-1,2-Dichloroethene

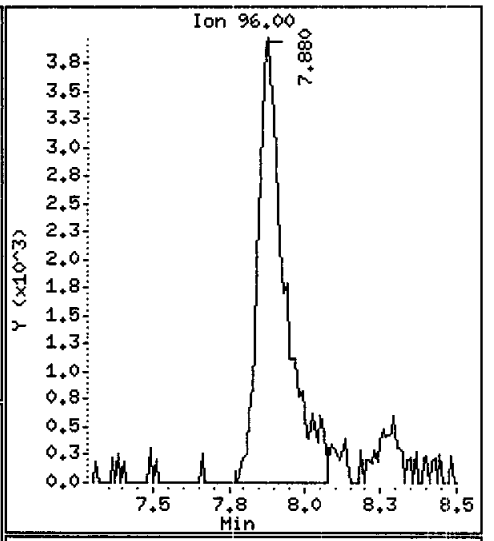
Concentration: 11.37 ppbv

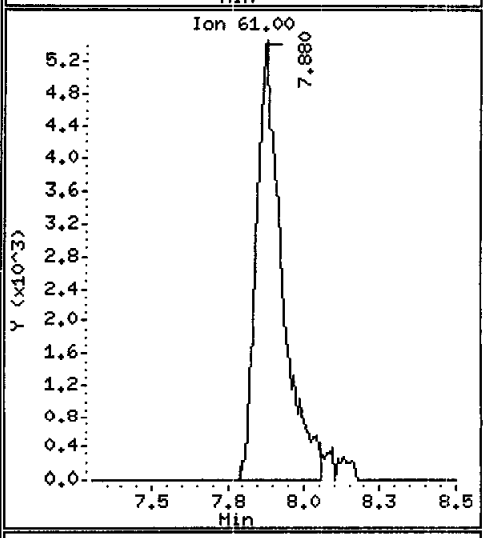


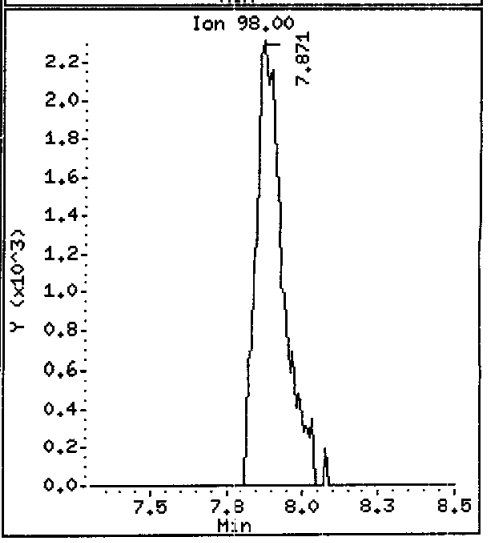












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

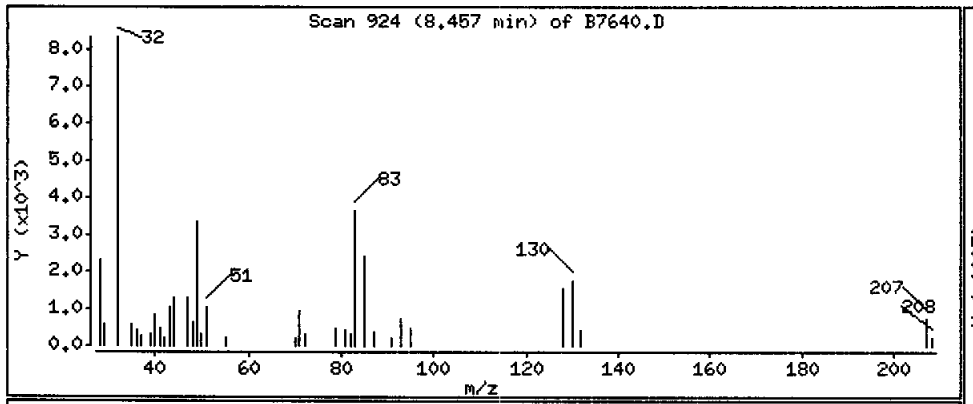
Operator: AA

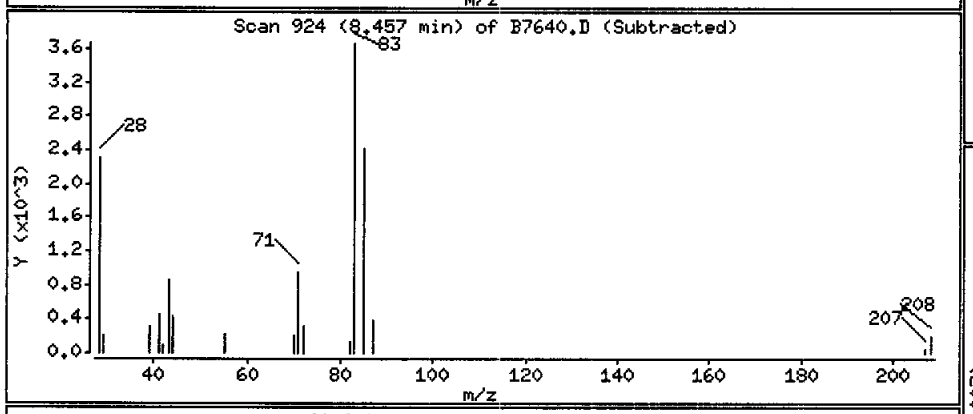
Column phase: J&W DB-624

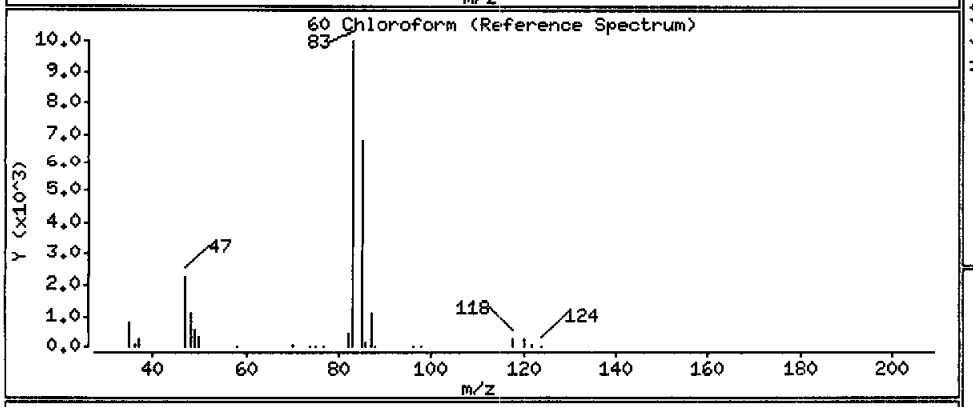
Column diameter: 0.53

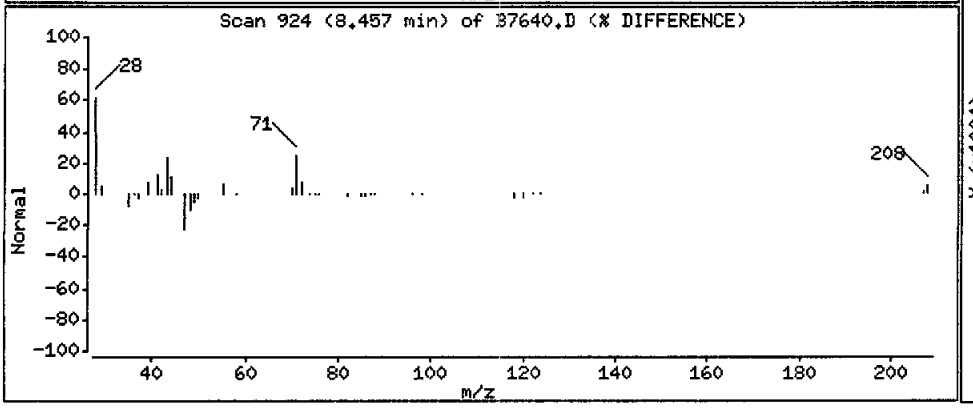
60 Chloroform

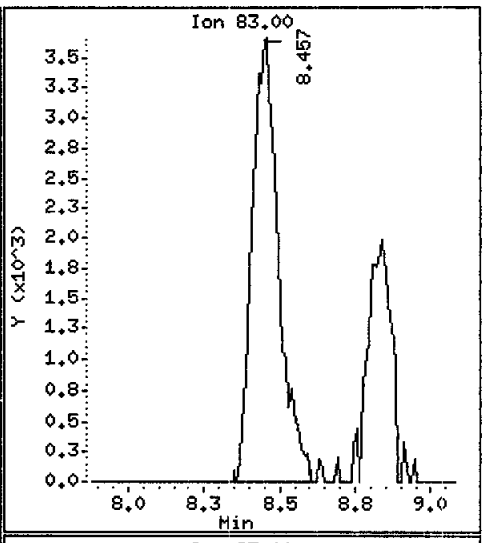
Concentration: 4.070 ppbv

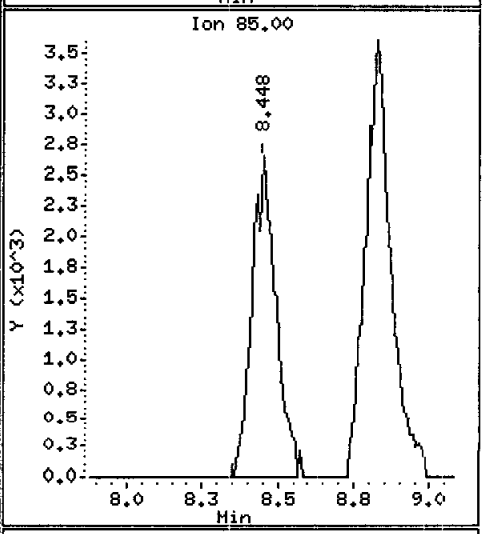


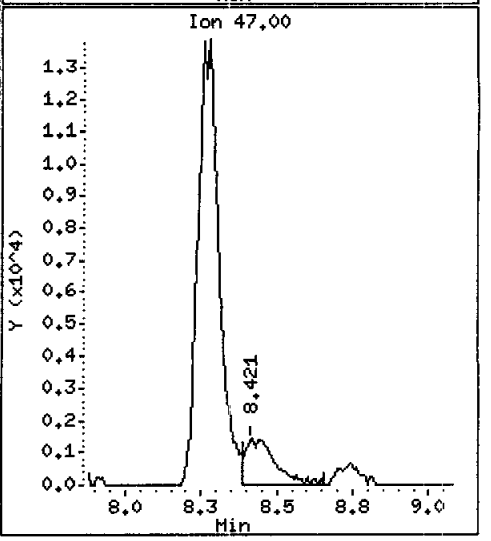












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

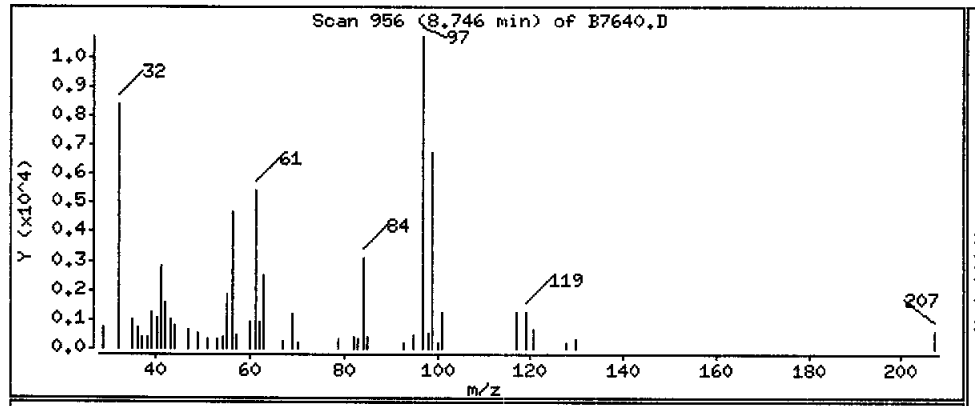
Operator: AA

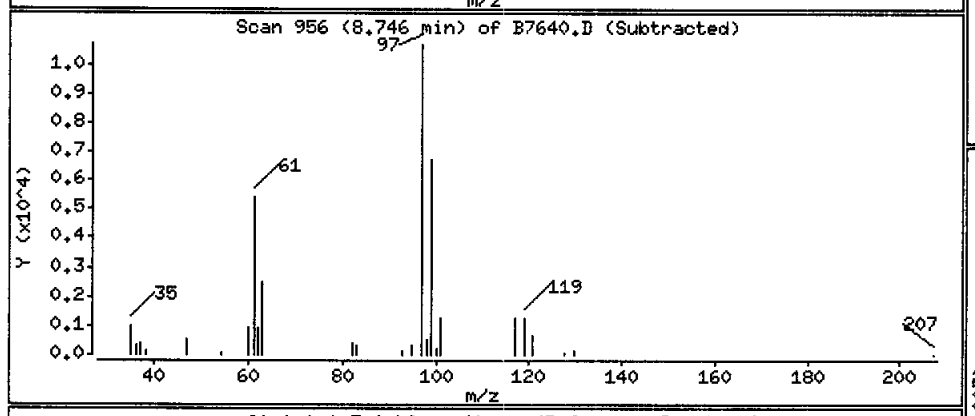
Column phase: J&W DB-624

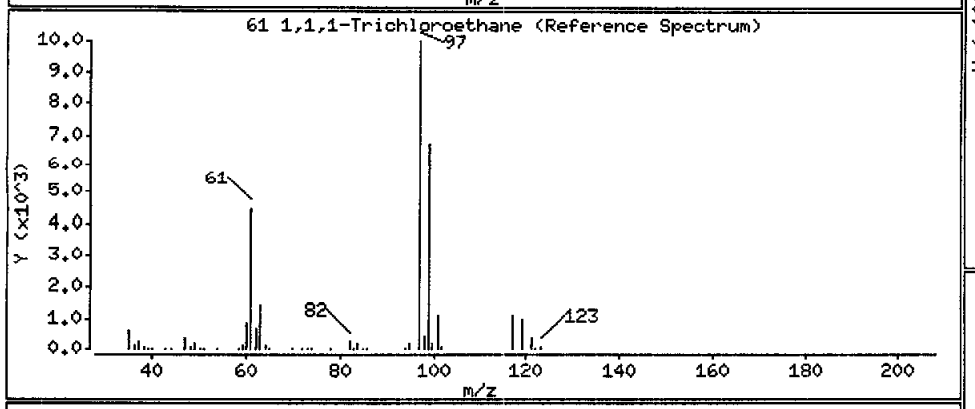
Column diameter: 0.53

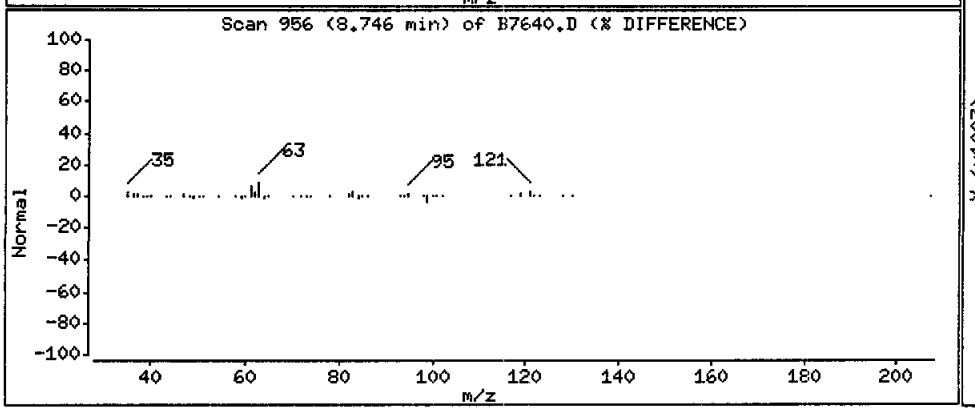
61 1,1,1-Trichloroethane

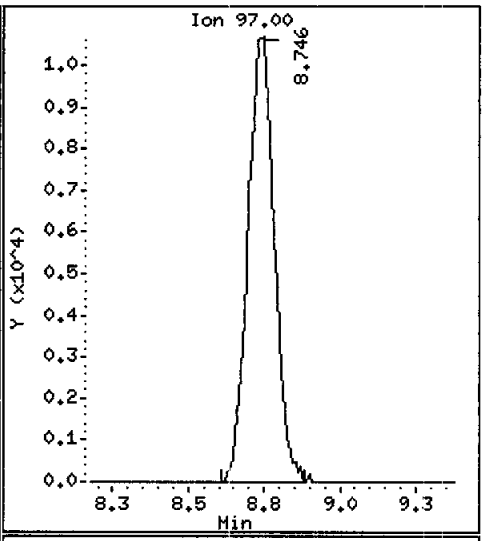
Concentration: 11.84 ppbv

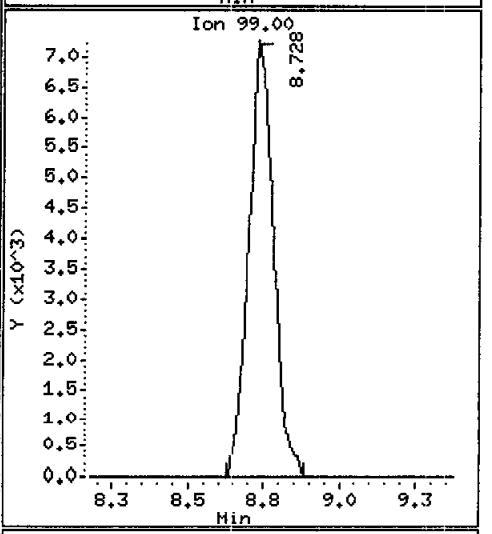


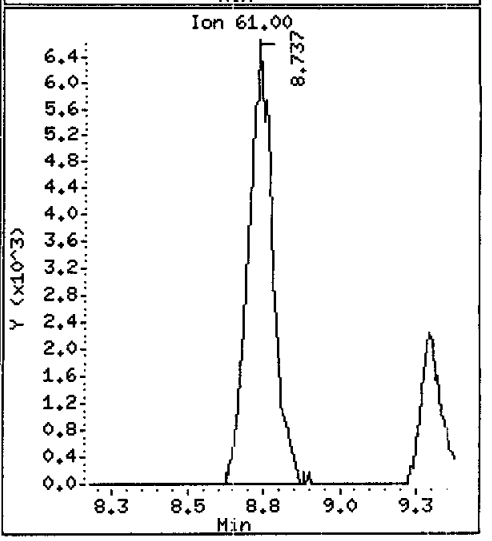












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

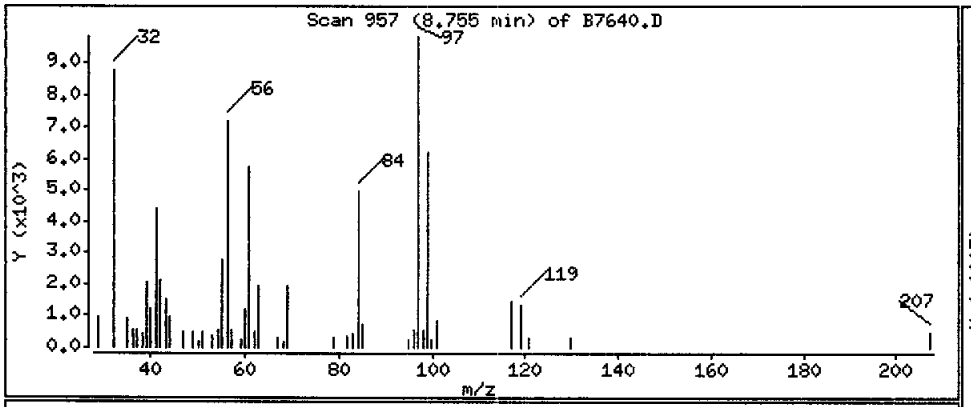
Operator: AA

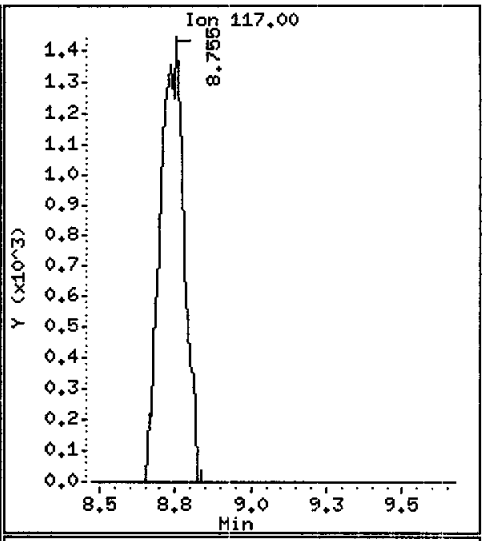
Column phase: J&W DB-624

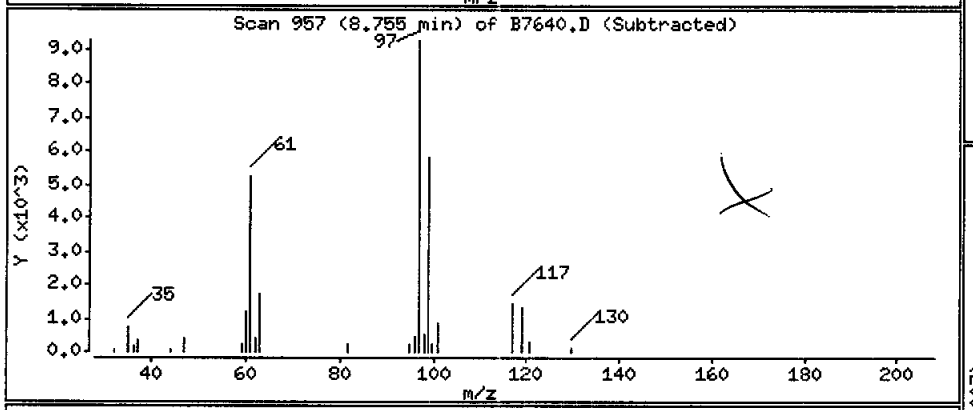
Column diameter: 0.53

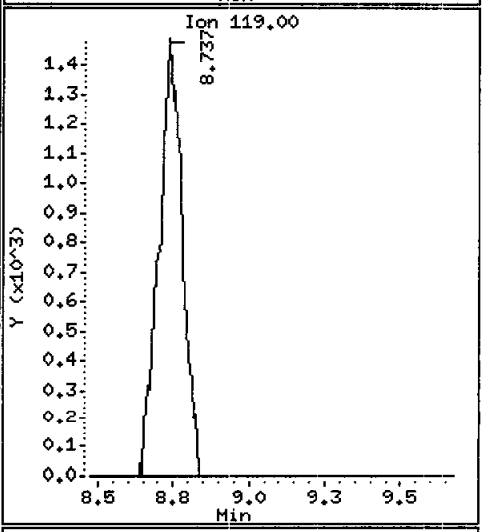
64 Carbon Tetrachloride

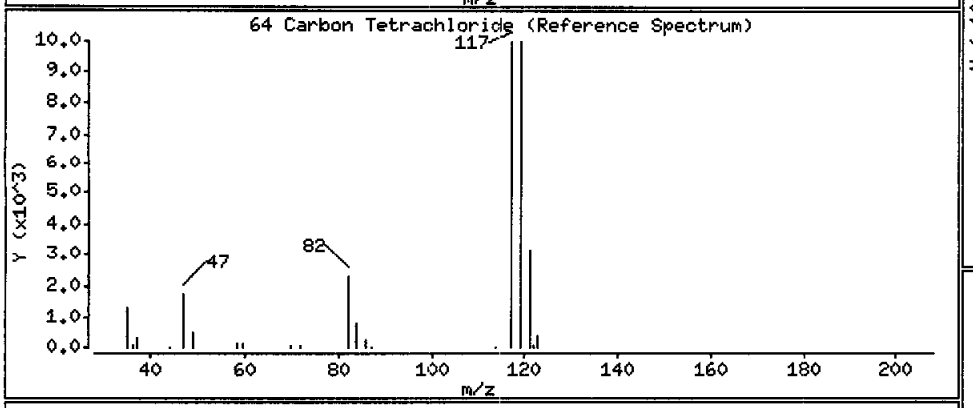
Concentration: 2.205 ppbv

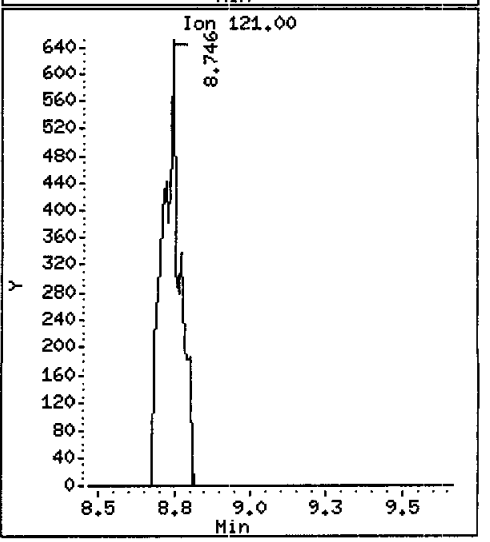


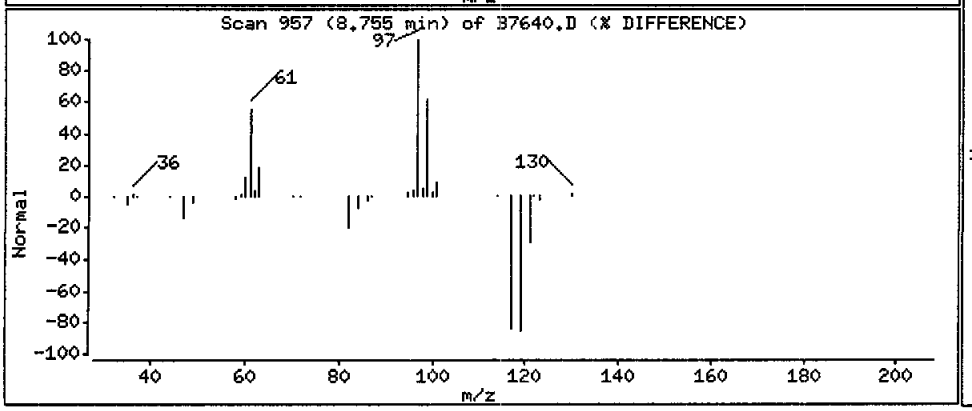












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

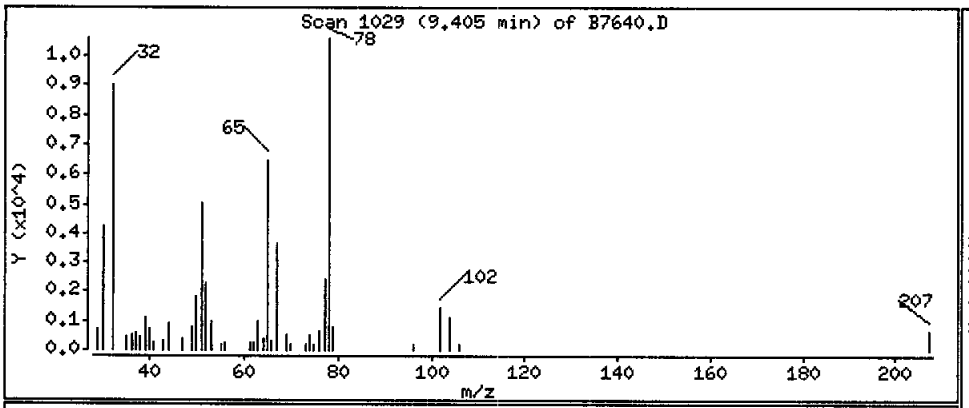
Operator: AA

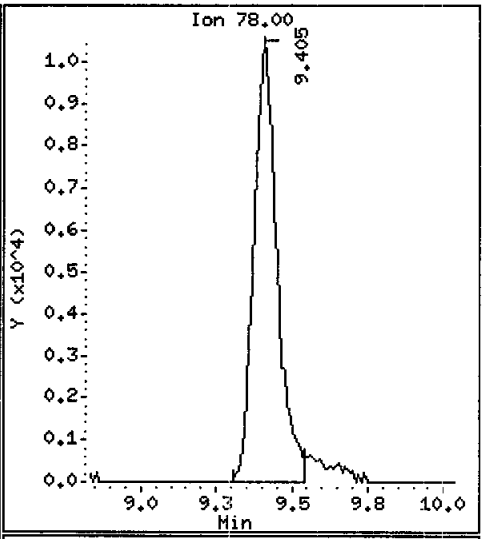
Column phase: J&W DB-624

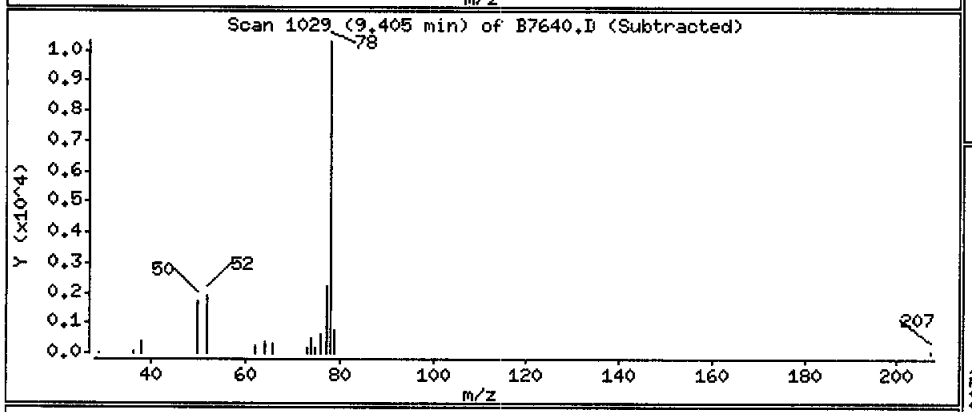
Column diameter: 0.53

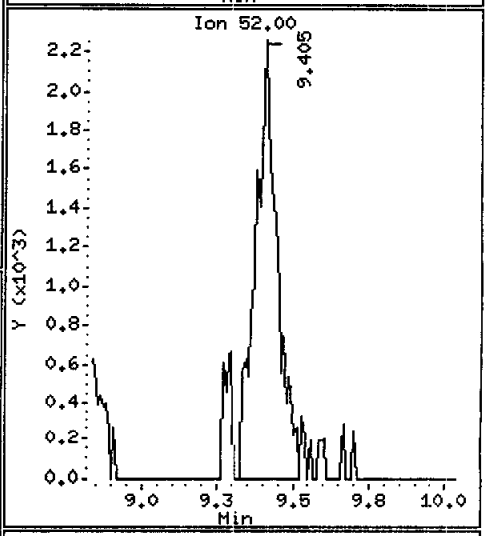
68 Benzene

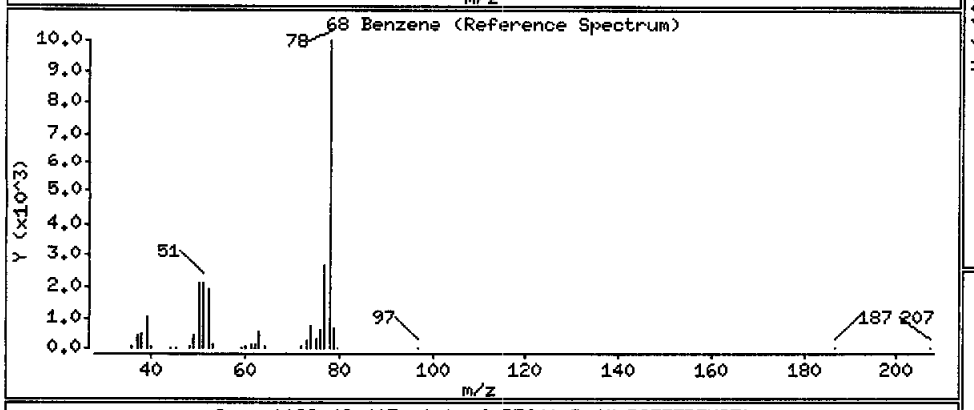
Concentration: 11.17 ppbv

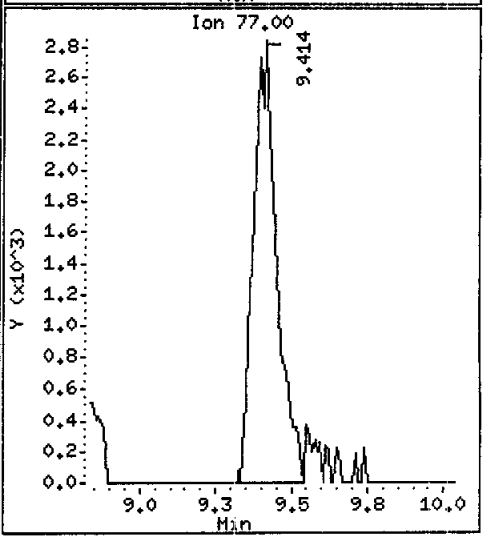


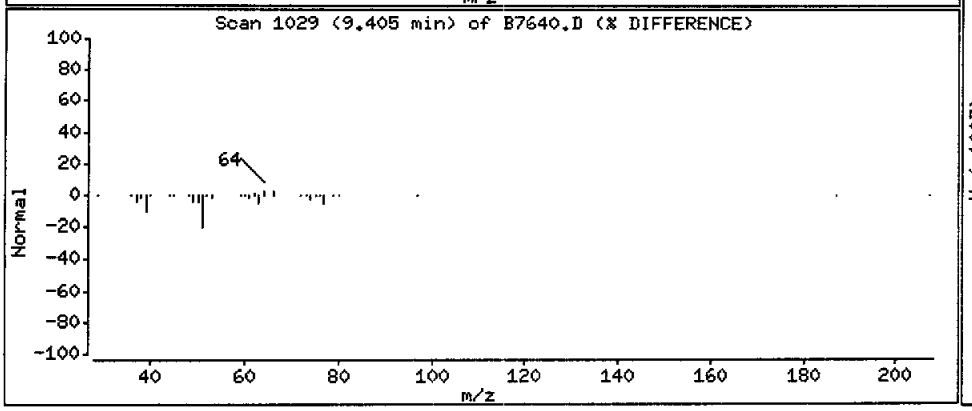












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

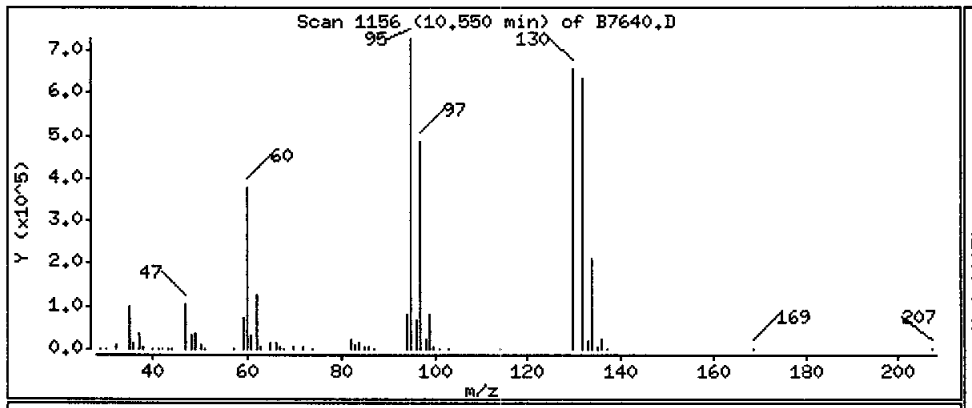
Operator: AA

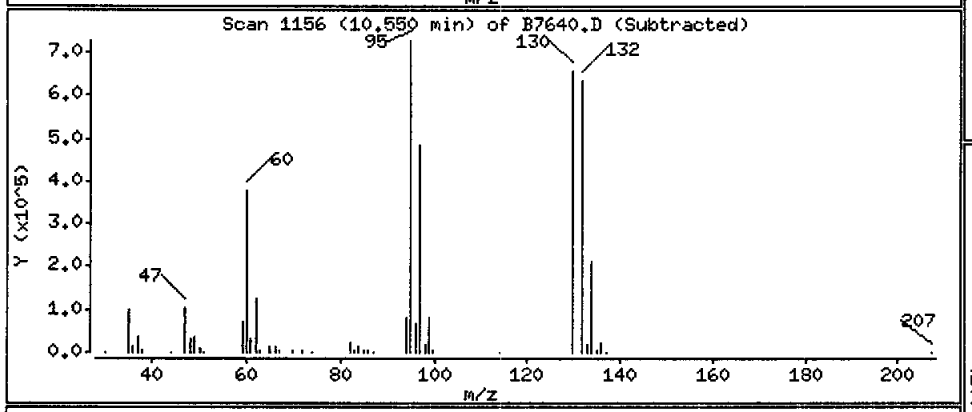
Column phase: J&W DB-624

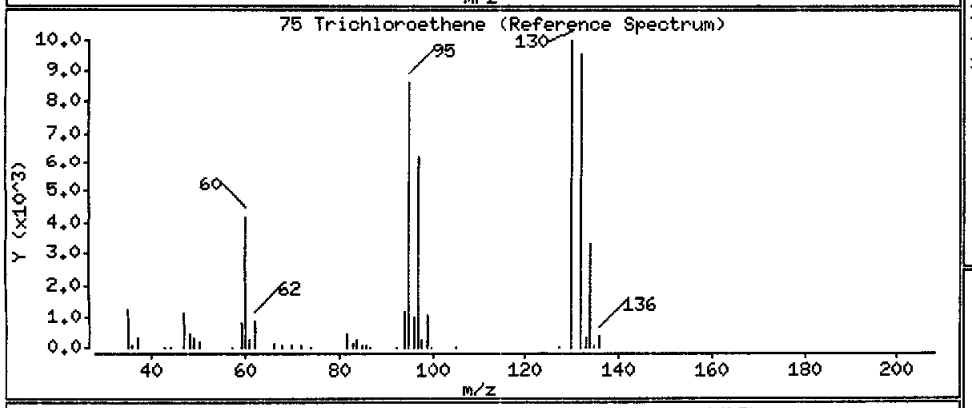
Column diameter: 0.53

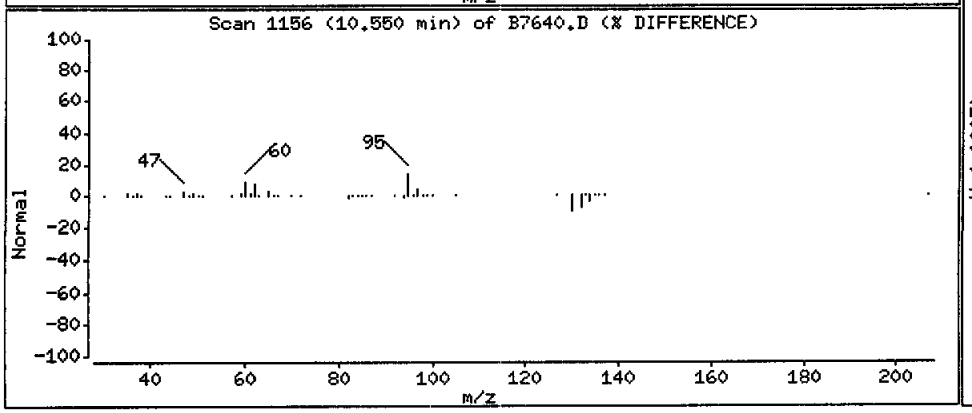
75 Trichloroethene

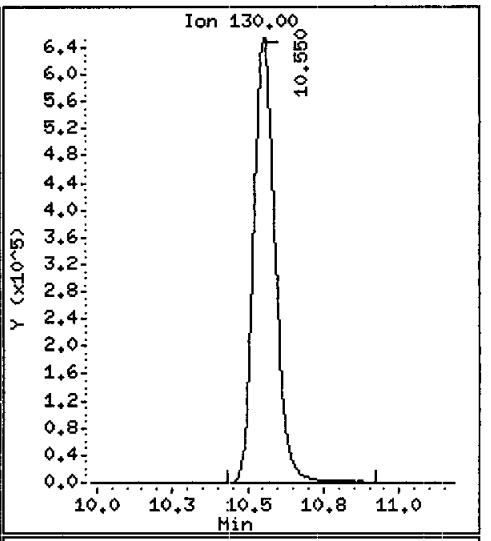
Concentration: 1004 ppbv

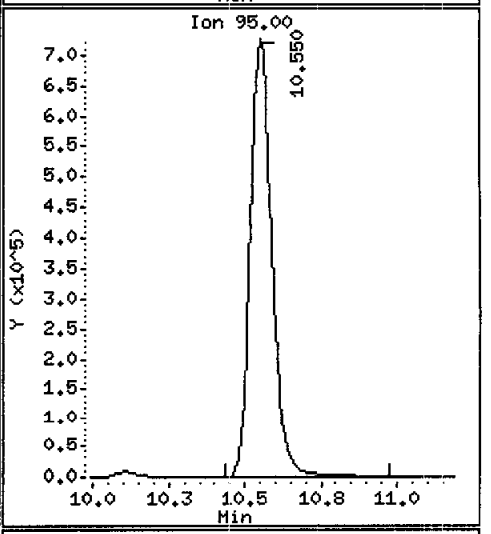


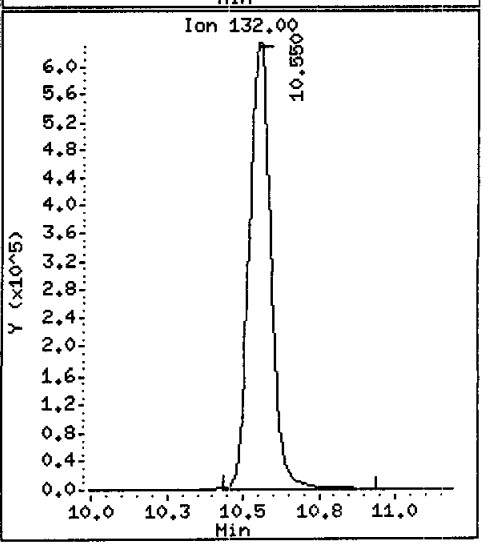












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

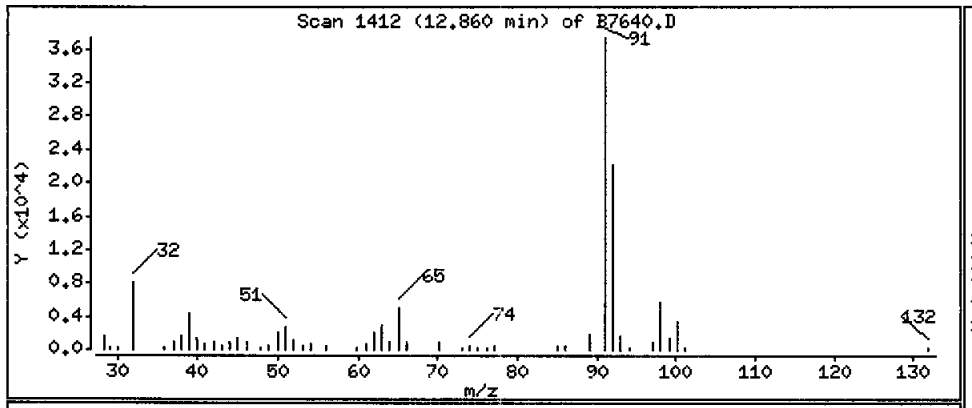
Operator: AA

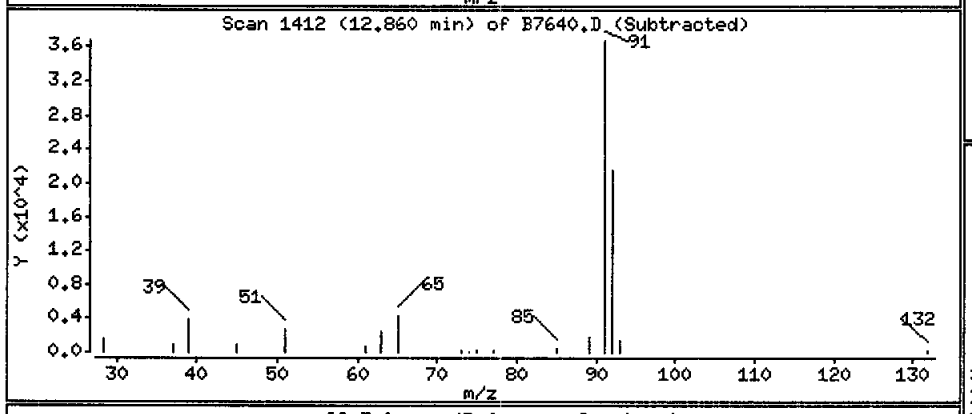
Column phase: J&W DB-624

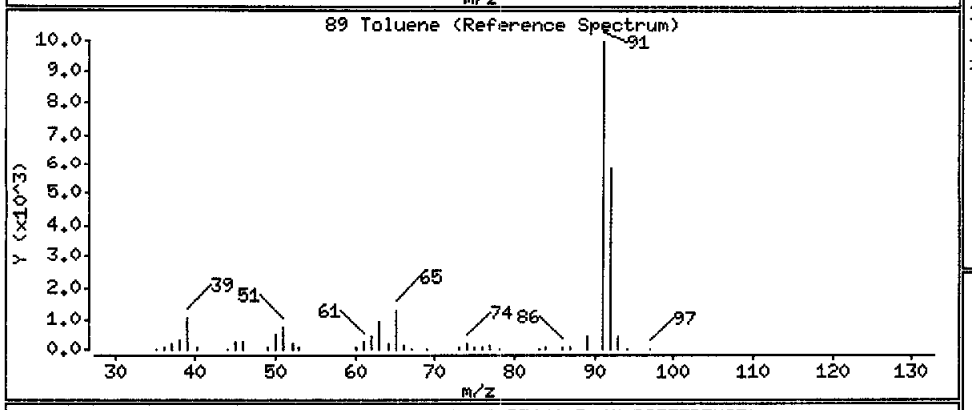
Column diameter: 0.53

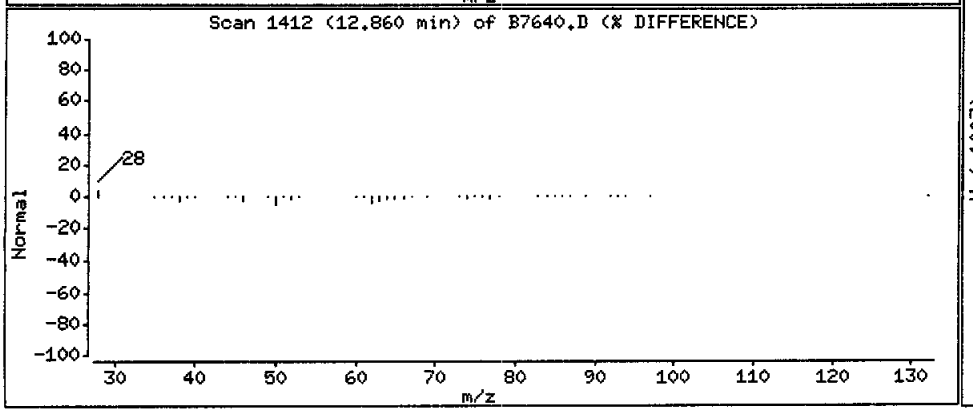
89 Toluene

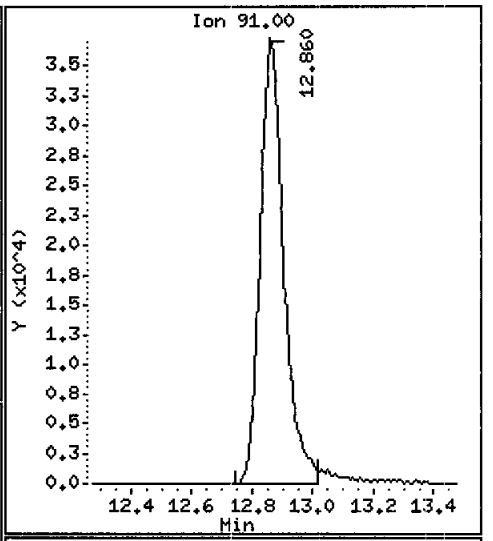
Concentration: 31.12 ppbv

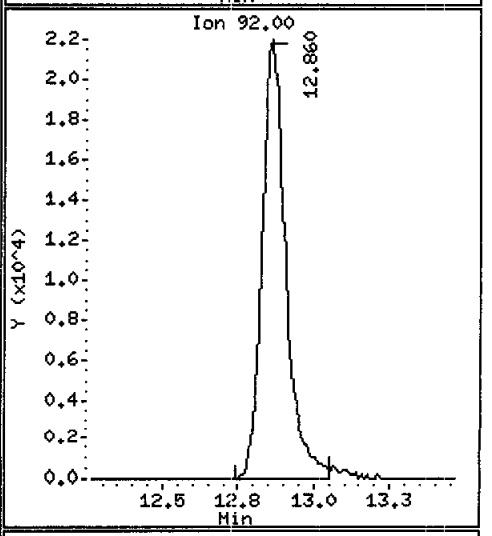


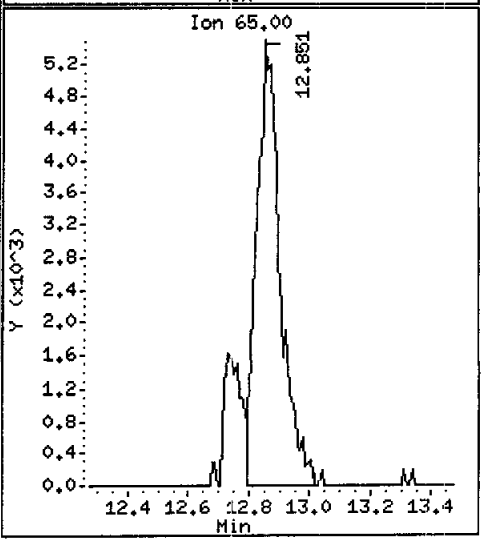












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

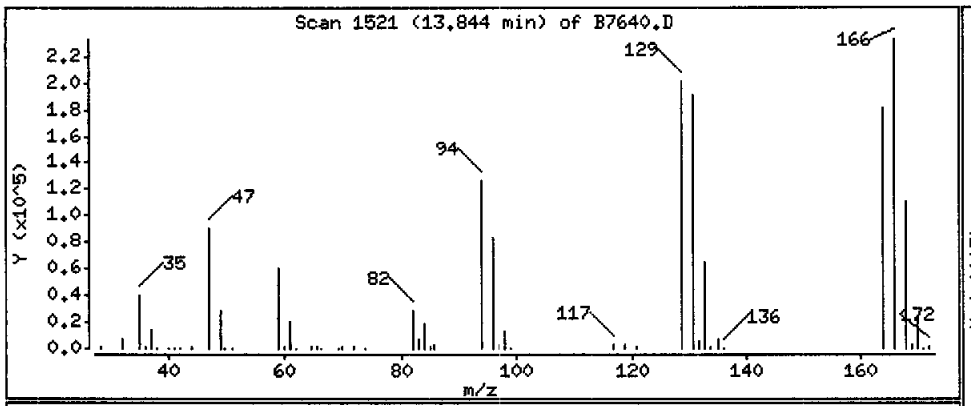
Operator: AA

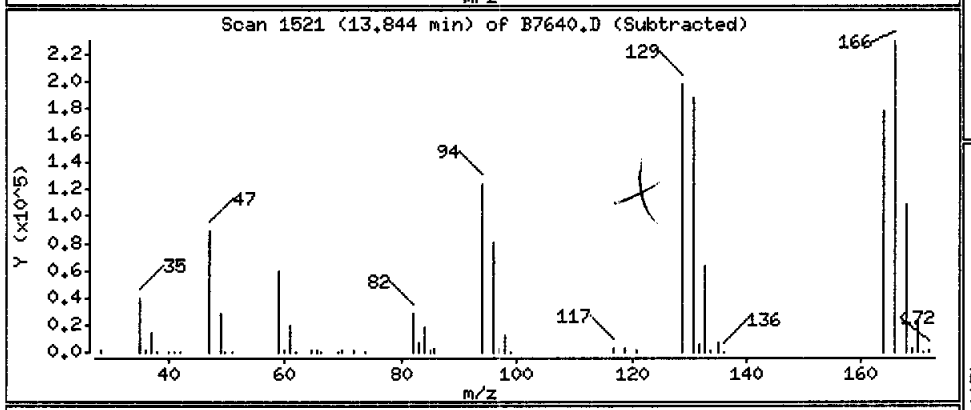
Column phase: J&W DB-624

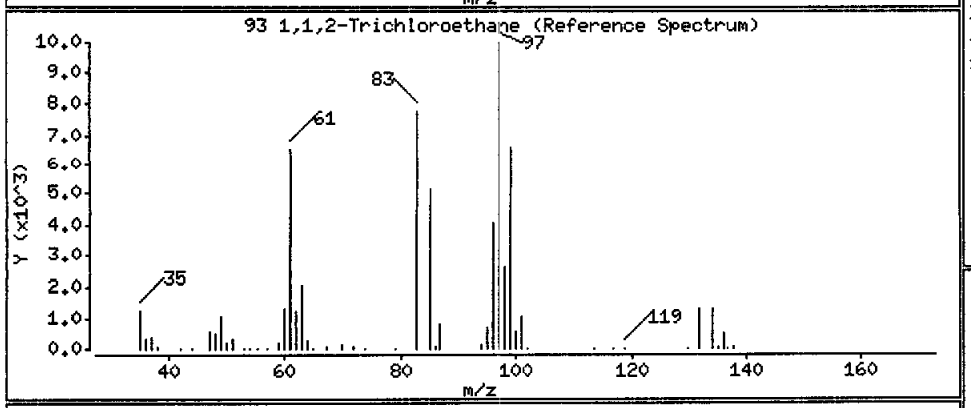
Column diameter: 0.53

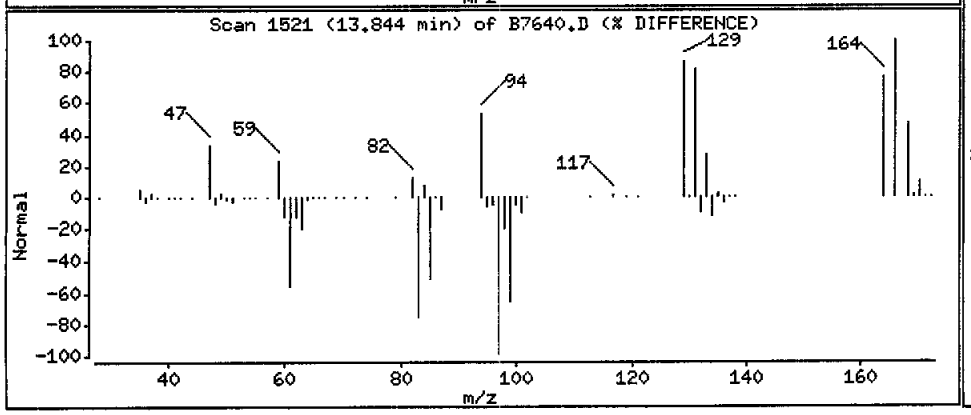
93 1,1,2-Trichloroethane

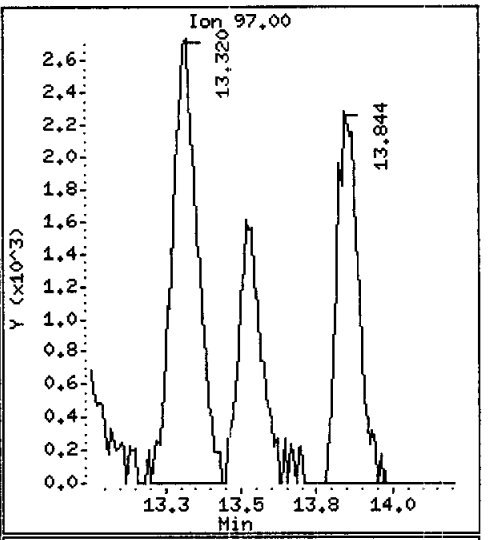
Concentration: 3.610 ppbv

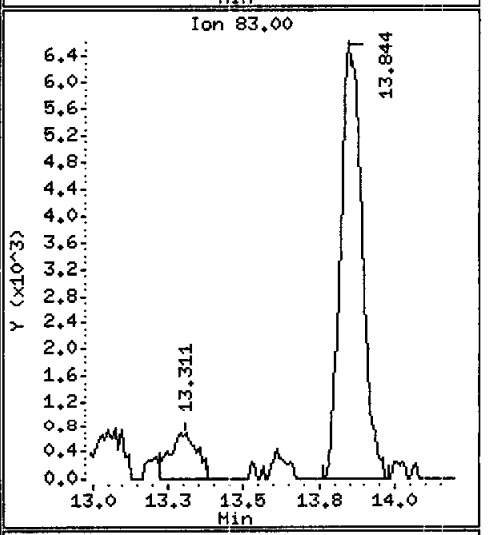


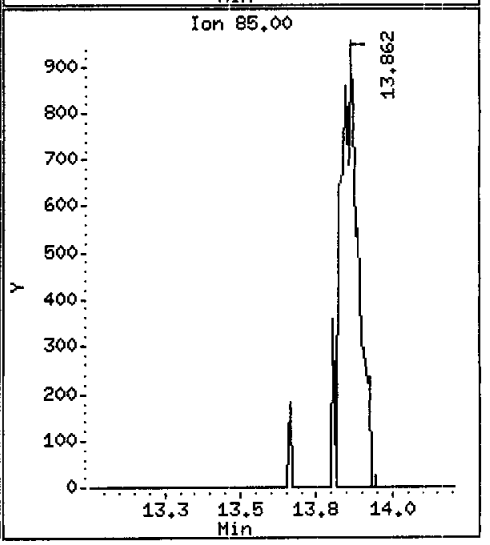












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Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

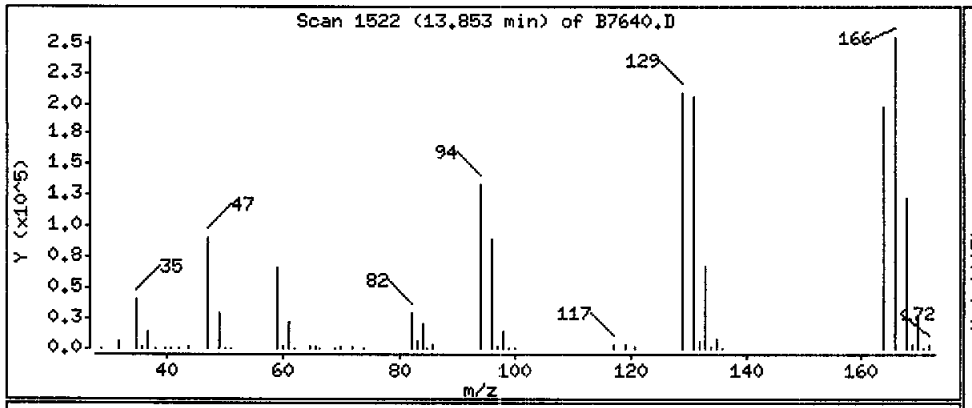
Operator: AA

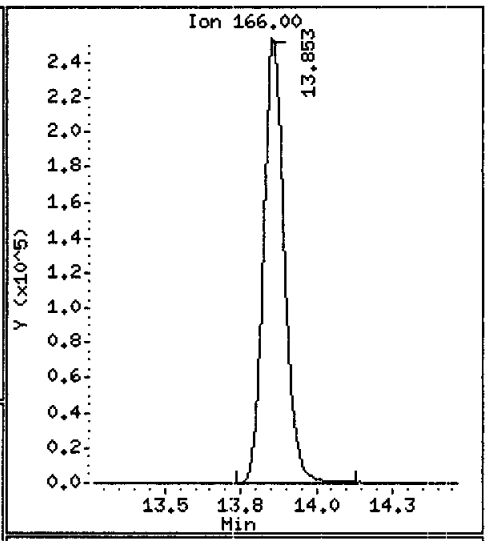
Column phase: J&W DB-624

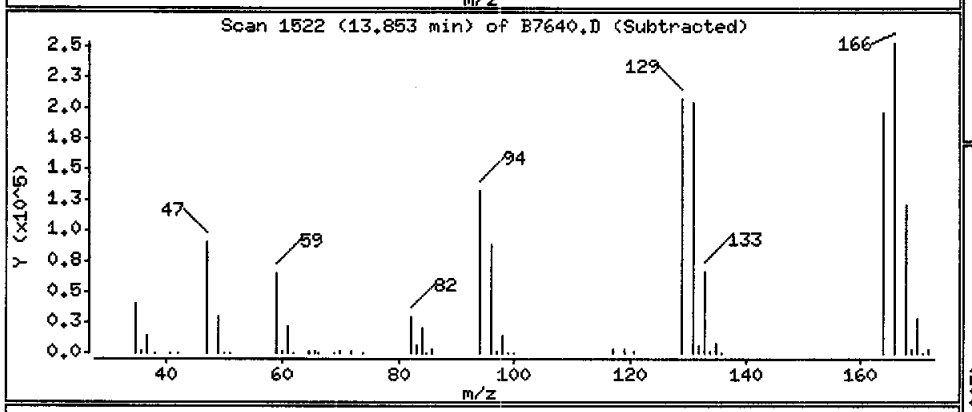
Column diameter: 0.53

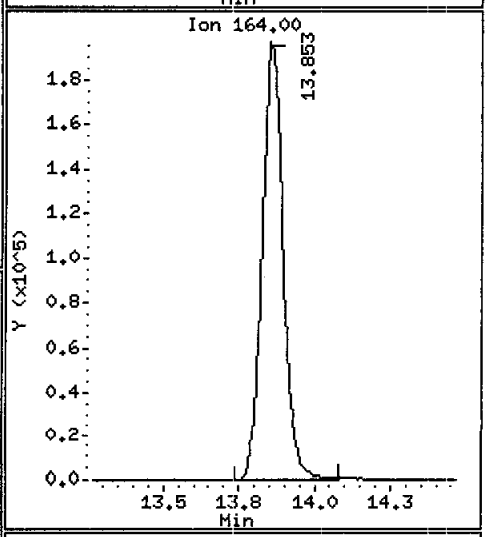
95 Tetrachloroethene

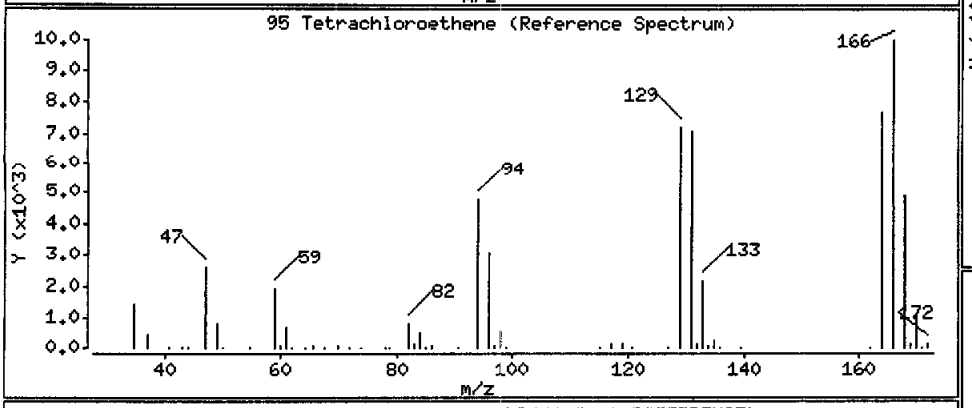
Concentration: 281.3 ppbv

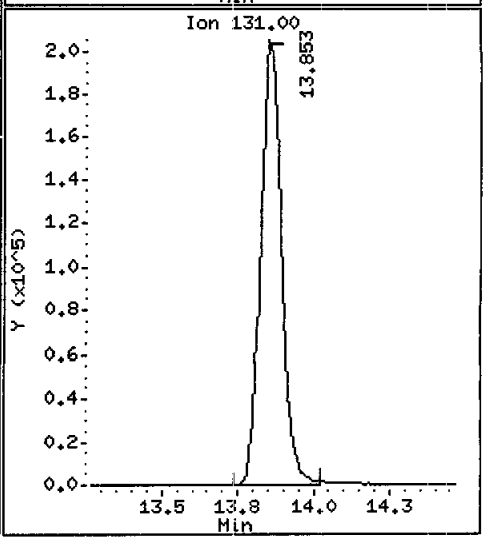


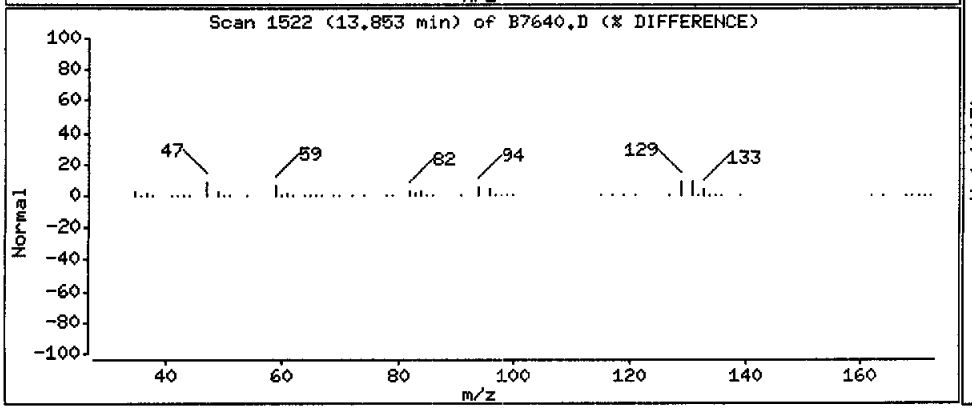












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Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: C2DKW1AD,066392-001,SANDIA,E5A100233-5

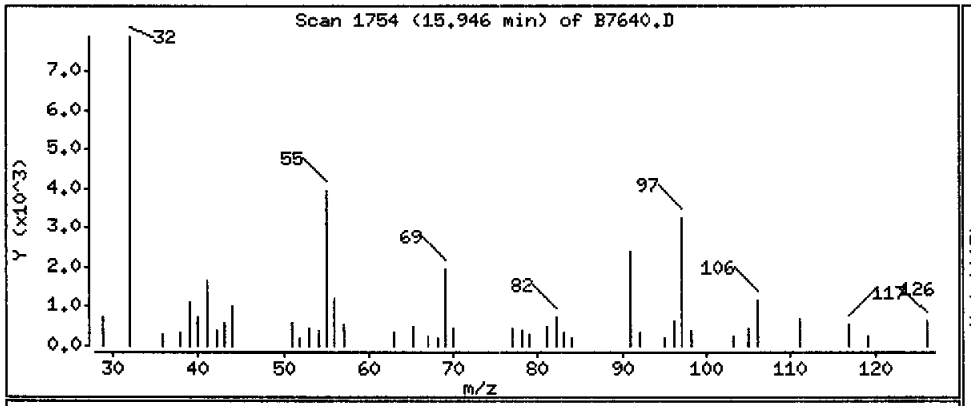
Operator: AA

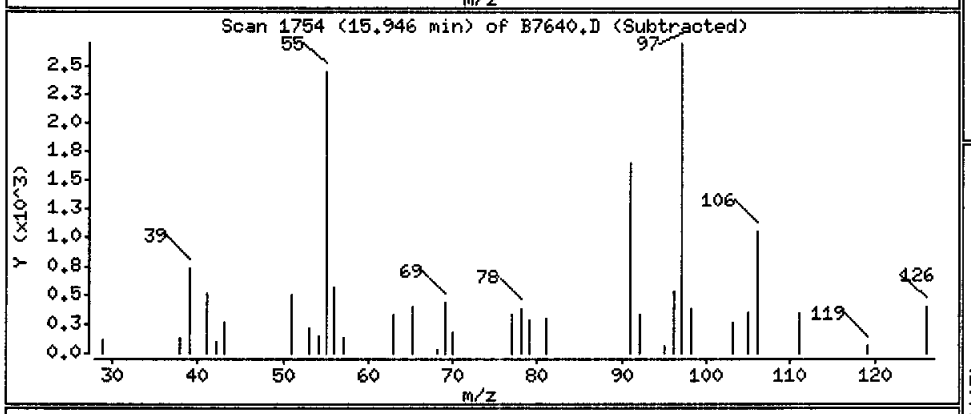
Column phase: J&W DB-624

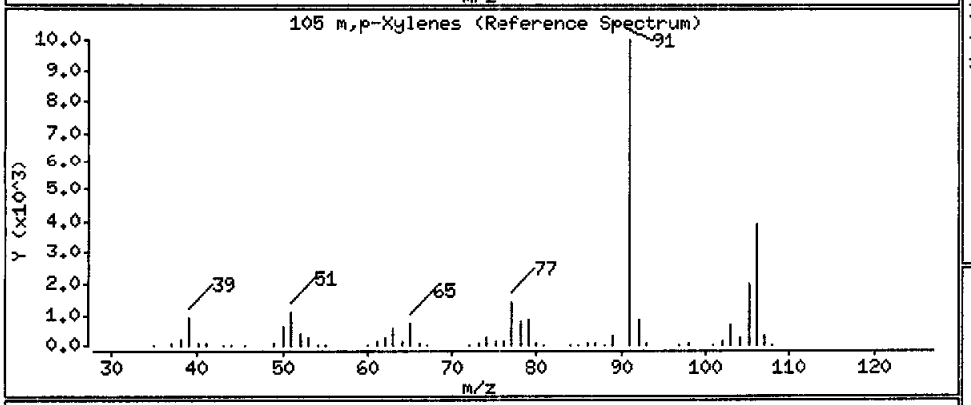
Column diameter: 0.53

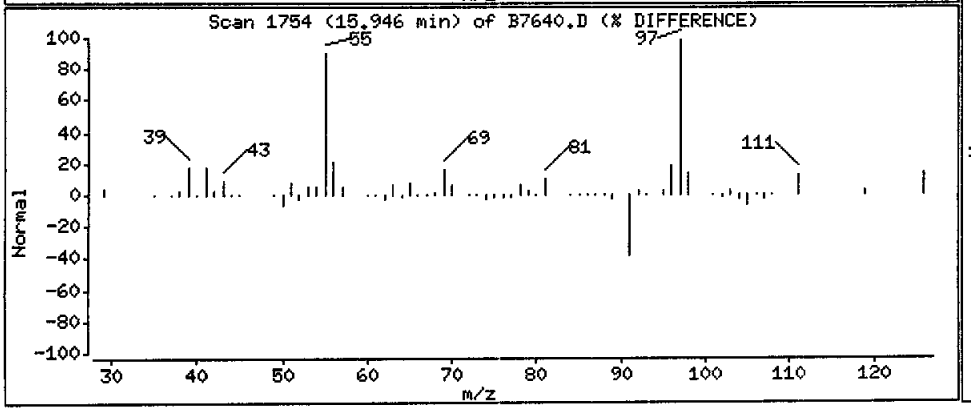
105 m,p-Xylenes

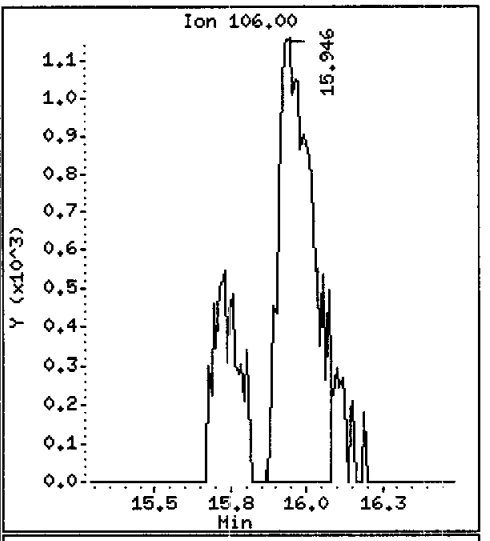
Concentration: 3.930 ppbv

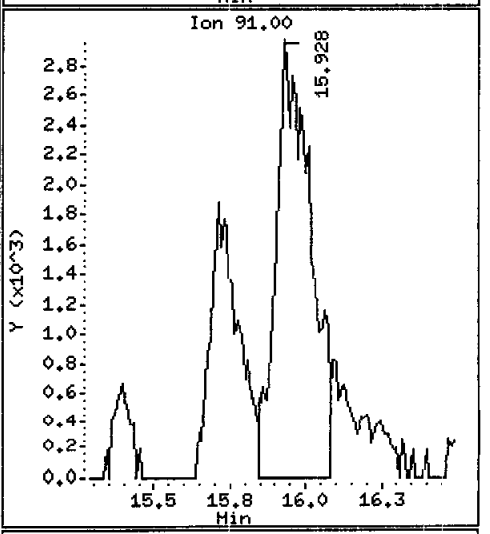


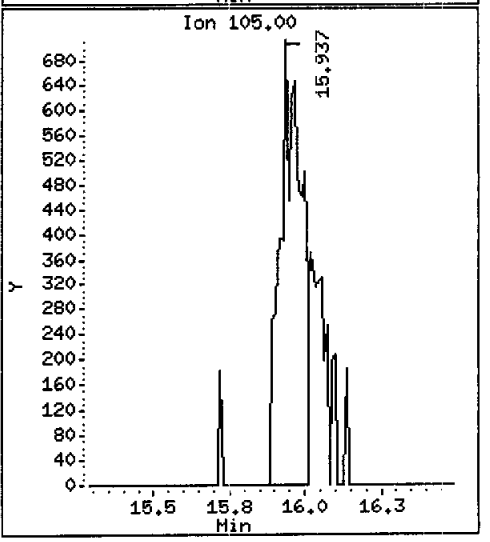












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7640.D

Date : 17-JAN-2005 13:43

Client ID: 066392-001

Instrument: gcmsb.i

Sample Info: G2DKW1AD,066392-001,SANDIA,E5A100233-5

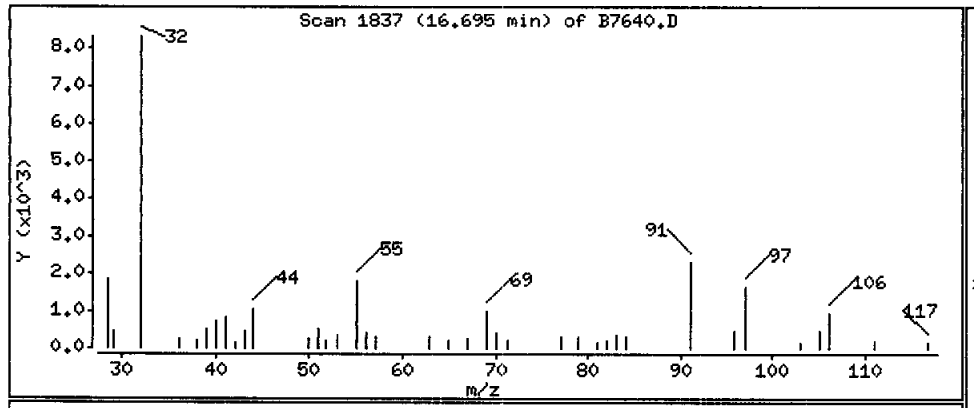
Operator: AA

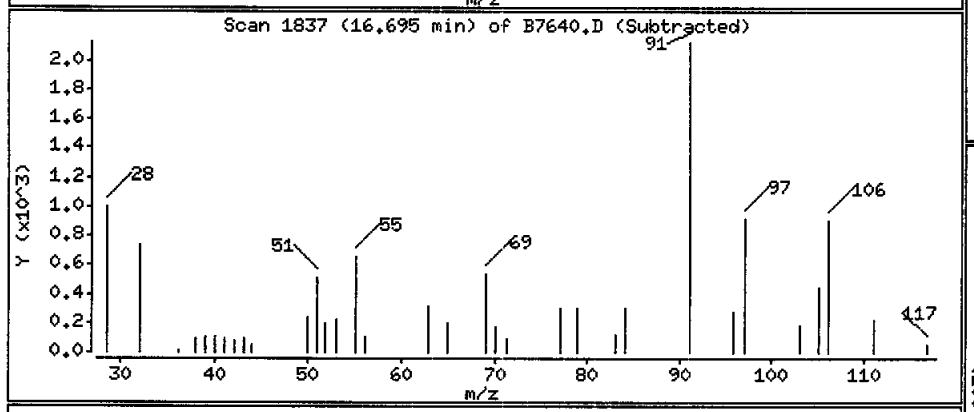
Column phase: J&W DB-624

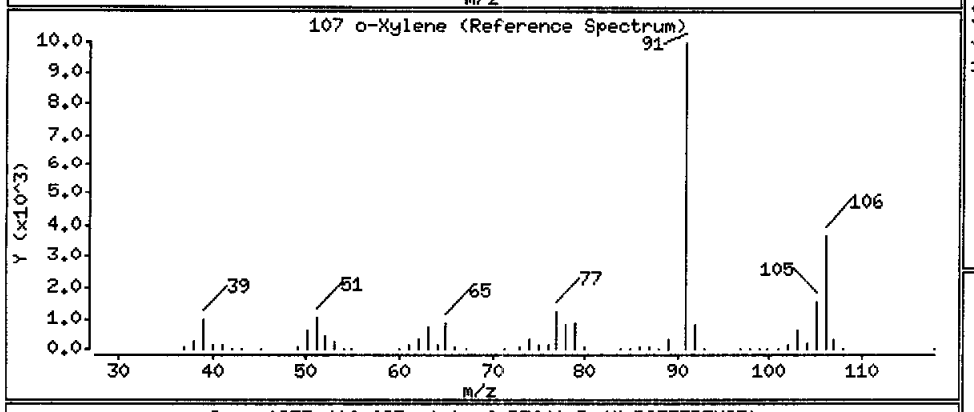
Column diameter: 0.53

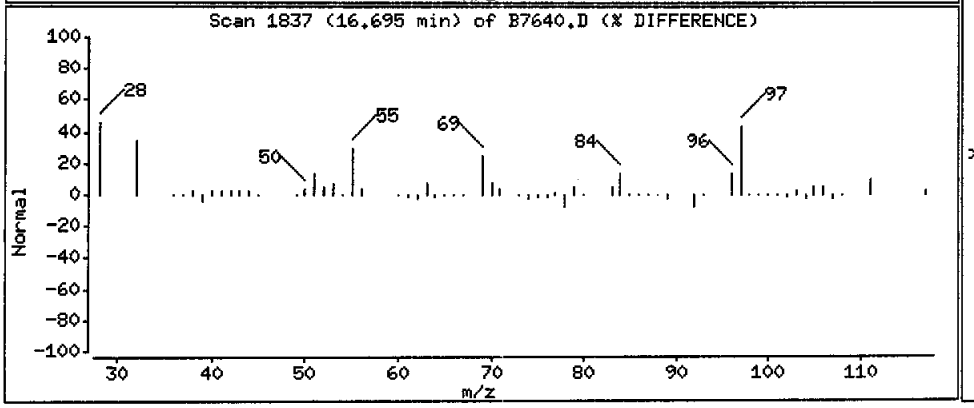
107 o-Xylene

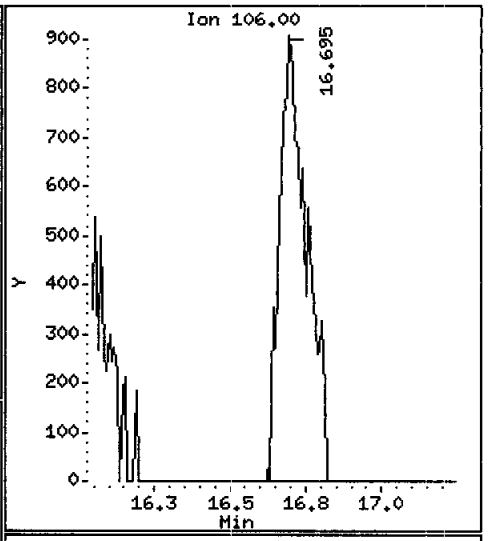
Concentration: 2.543 ppbv

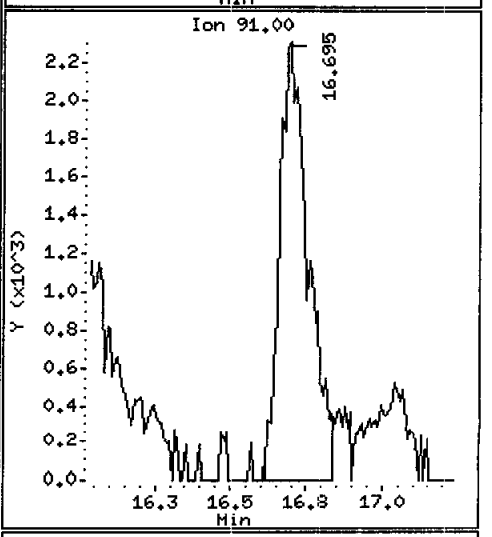


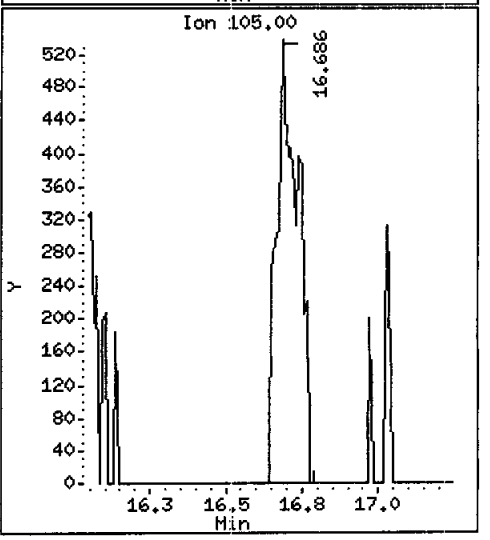












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D
Lab Smp Id: G2DKX1AD Client Smp ID: 066393-001
Inj Date : 17-JAN-2005 14:16
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DKX1AD,066393-001,SANDIA,E5A100233-6
Misc Info : 24.4,12.6,500,969,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.400	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	969.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.146	2.123	(0.258)	27921	1.01386	1.013(a)
28 1,1-Dichloroethene	61	4.709	4.685	(0.566)	17562	1.19254	1.192(a)
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.754	4.739	(0.571)	19744	0.61895	0.6185(a)
31 Acetone	58	4.907	4.847	(0.589)	4293	2.05615	2.054(a)
37 Methylene Chloride	49	5.620	5.587	(0.675)	25418	2.79536	2.793
44 1,1-Dichloroethane	63	6.883	6.850	(0.827)	16211	1.00457	1.004(a)
* 58 Bromochloromethane	49	8.327	8.321	(1.000)	652442	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.346	9.341	(0.920)	542077	47.3840	47.35
* 73 1,4-Difluorobenzene	114	10.159	10.144	(1.000)	1394013	50.0000	
75 Trichloroethene	130	10.601	10.586	(1.044)	126535	10.3958	10.39
$ 88 Toluene-d8	100	12.766	12.751	(1.257)	735190	50.3658	50.33
89 Toluene	91	12.901	12.878	(1.270)	34411	1.40193	1.401(a)
95 Tetrachloroethene	166	13.894	13.870	(0.902)	69697	4.34259	4.339
* 101 Chlorobenzene-d5	117	15.410	15.404	(1.000)	1025131	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 114 4-Bromofluorobenzene	95	17.665	17.651	(1.146)	865659	47.2712	47.23

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

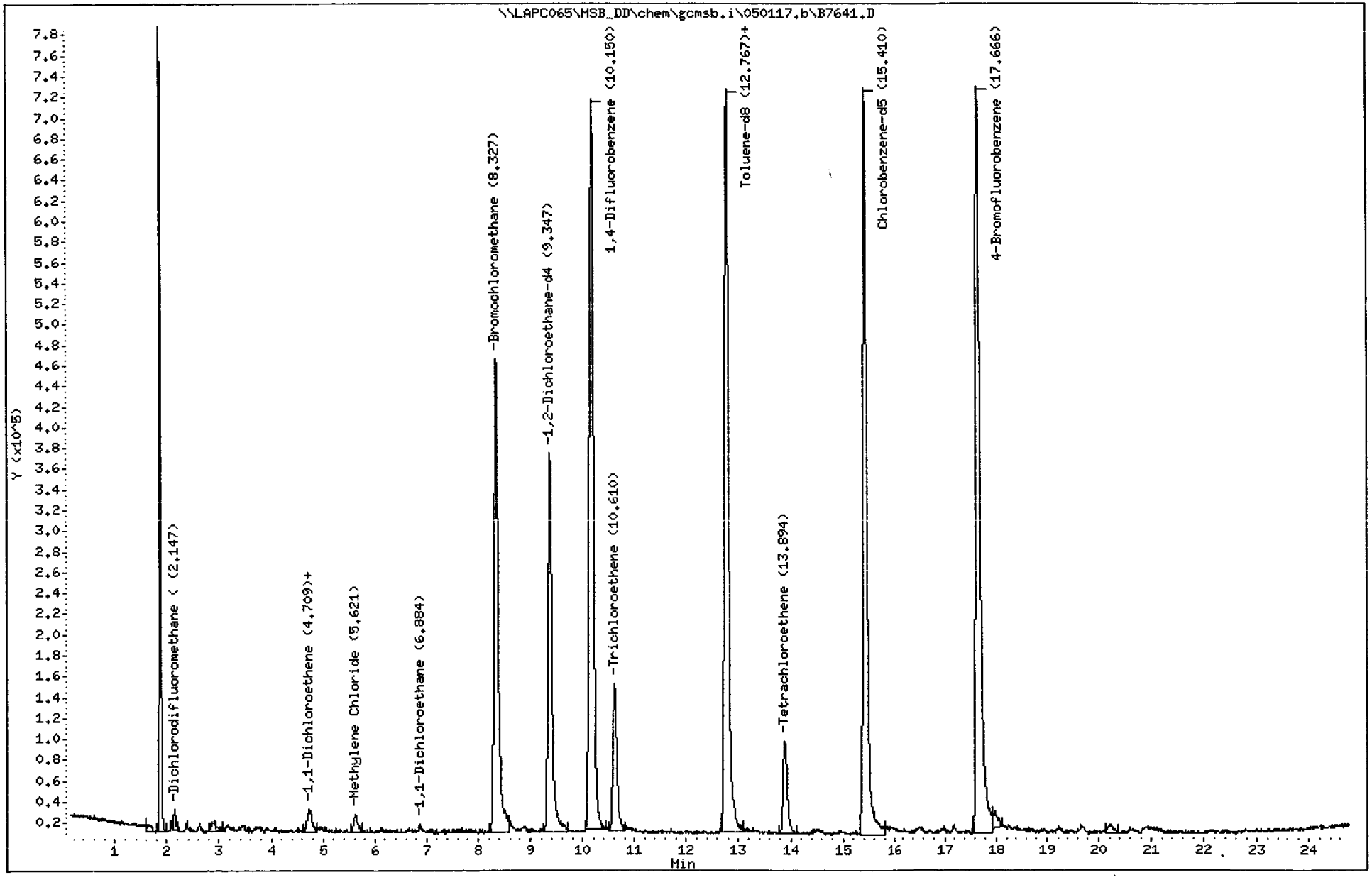
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D
Date : 17-JAN-2005 14:16
Client ID: 066393-001
Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

Instrument: gcmsb.i

Operator: AA

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

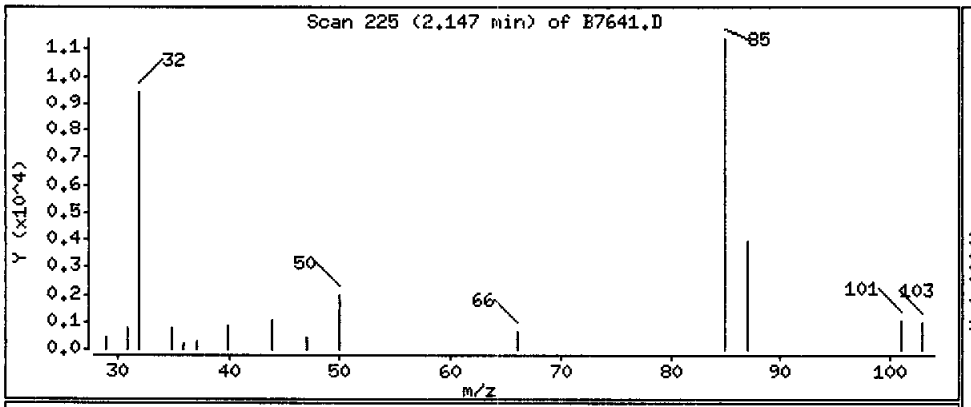
Operator: AA

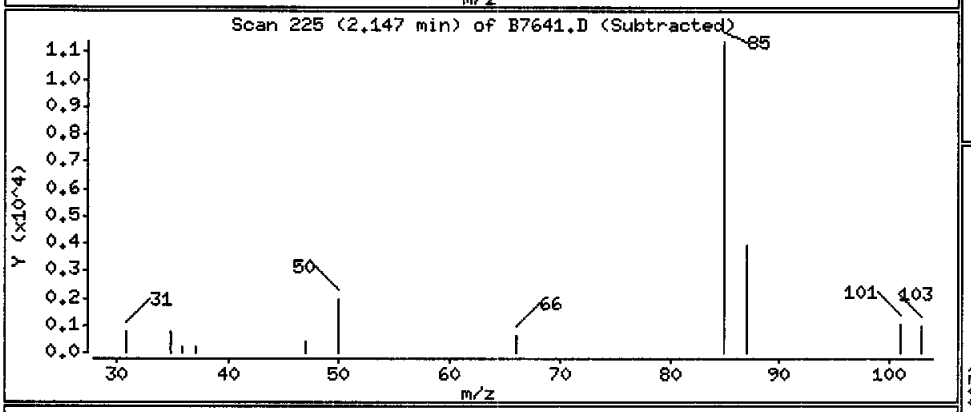
Column phase: J&W DB-624

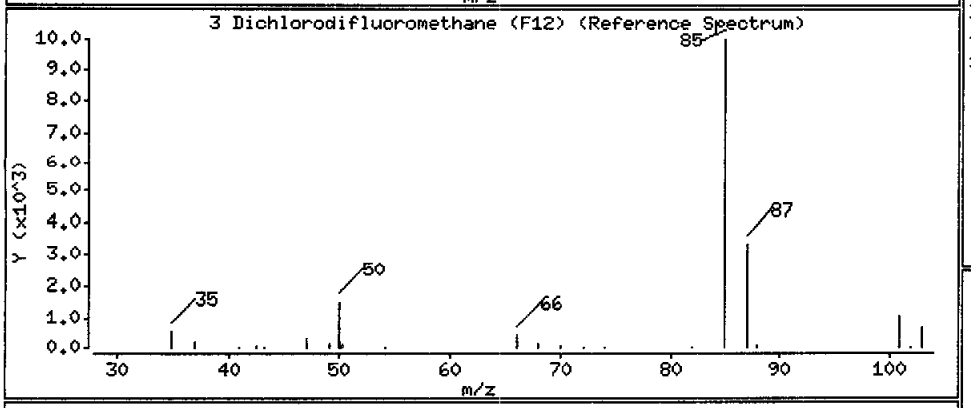
Column diameter: 0.53

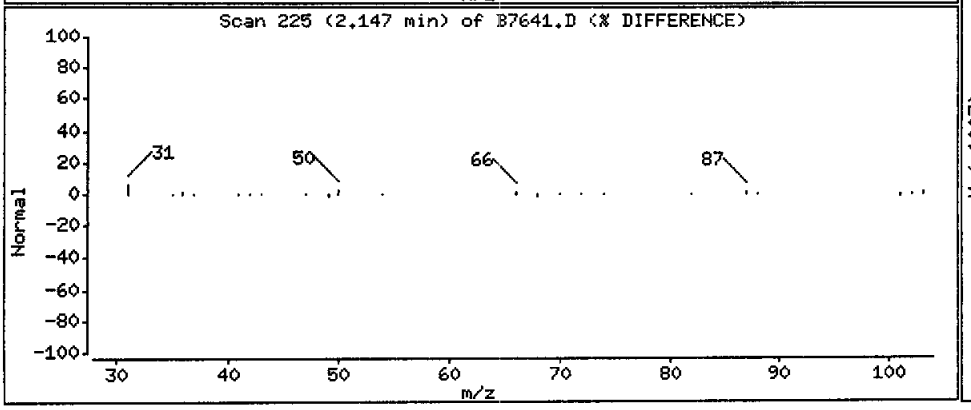
3 Dichlorodifluoromethane (F12)

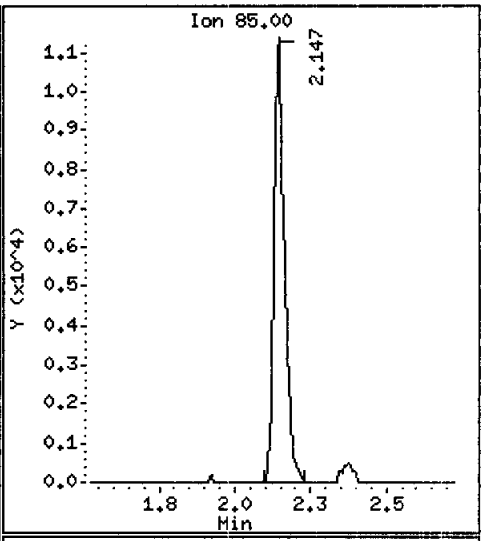
Concentration: 1.013 ppbv

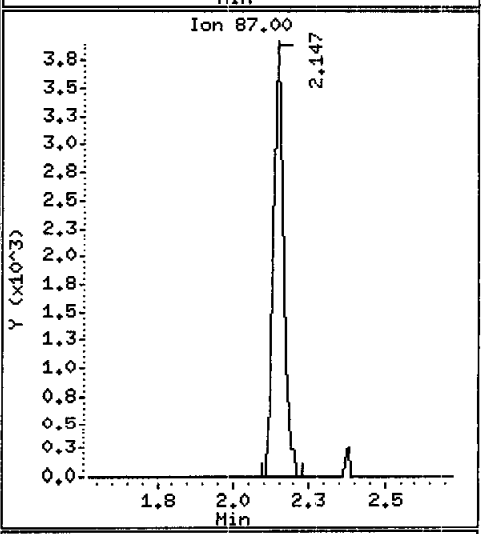


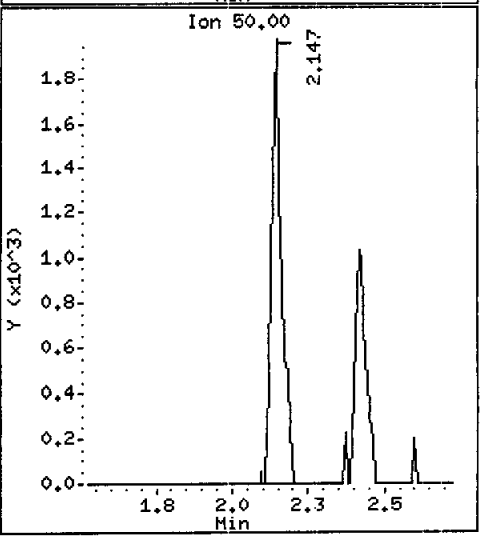












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

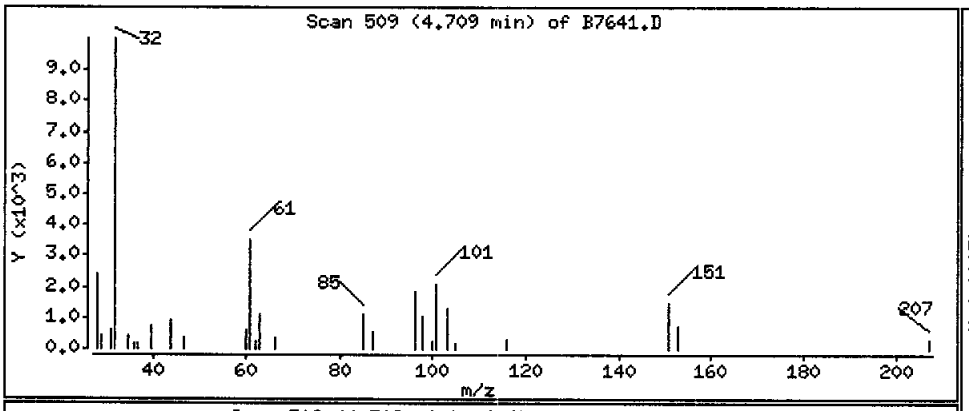
Operator: AA

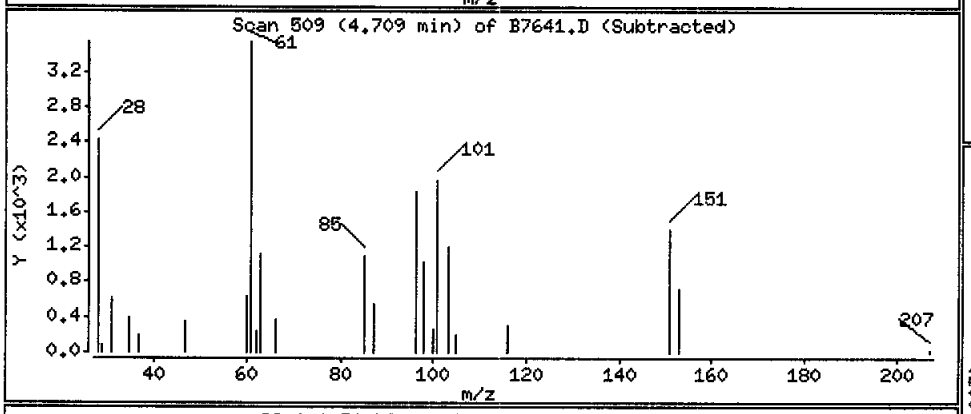
Column phase: J&W DB-624

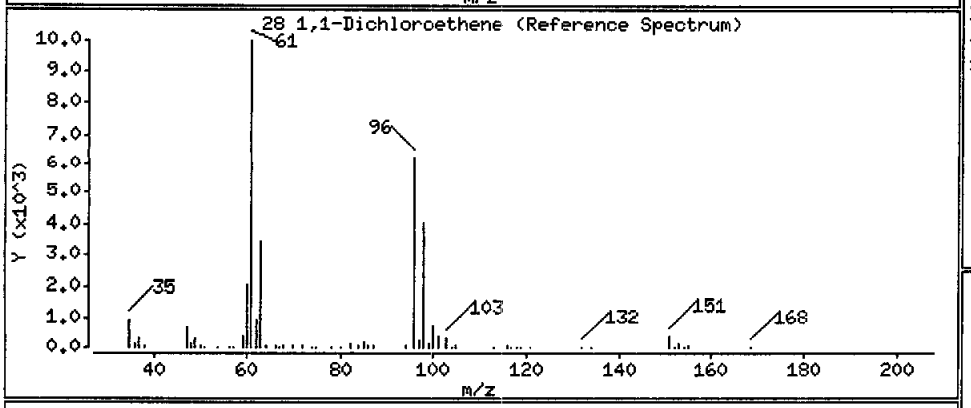
Column diameter: 0.53

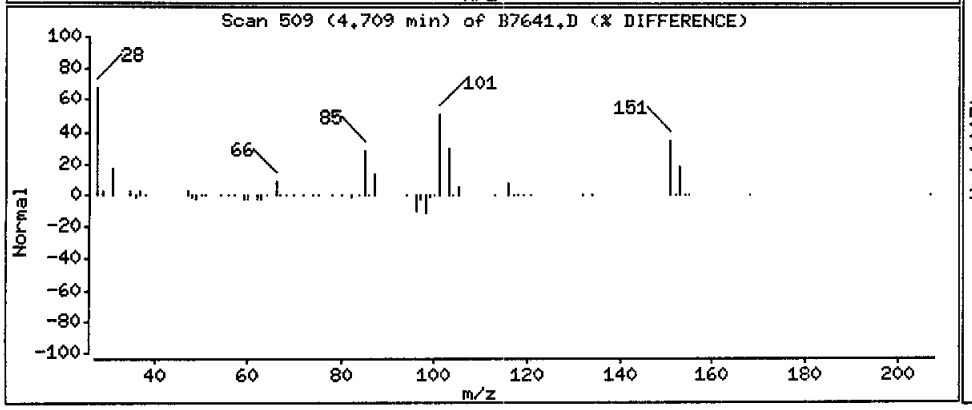
28 1,1-Dichloroethene

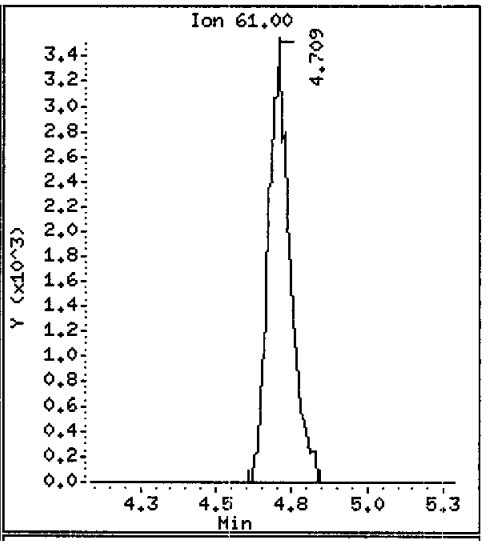
Concentration: 1.192 ppbv

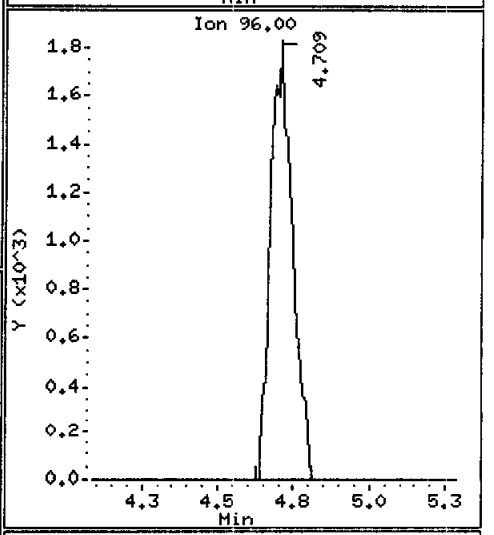


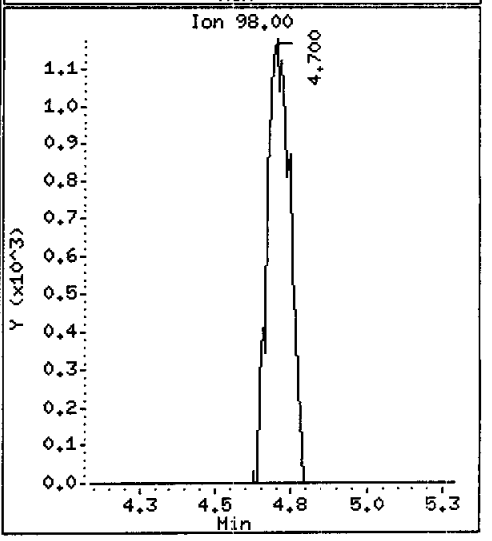












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

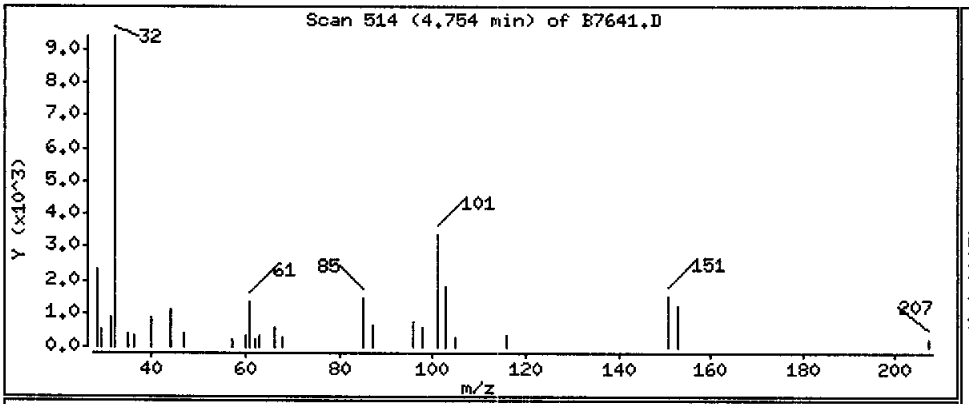
Operator: AA

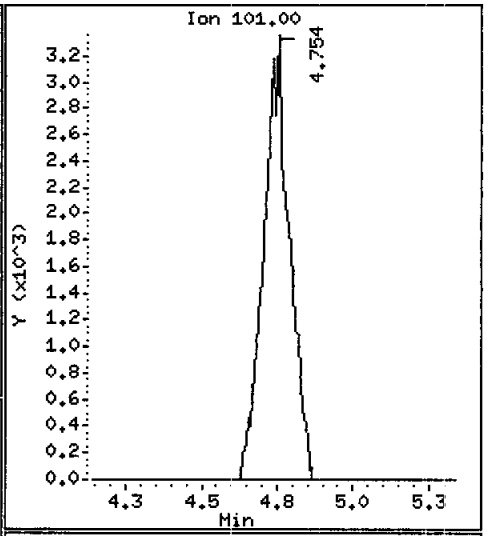
Column phase: J&W DB-624

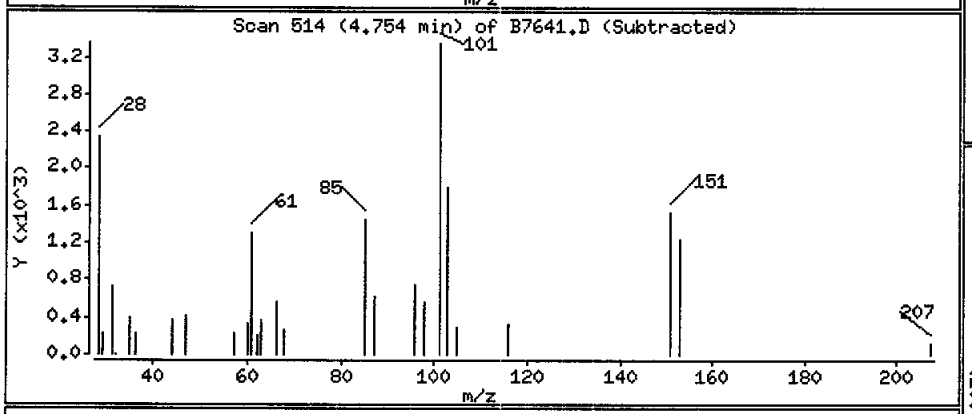
Column diameter: 0.53

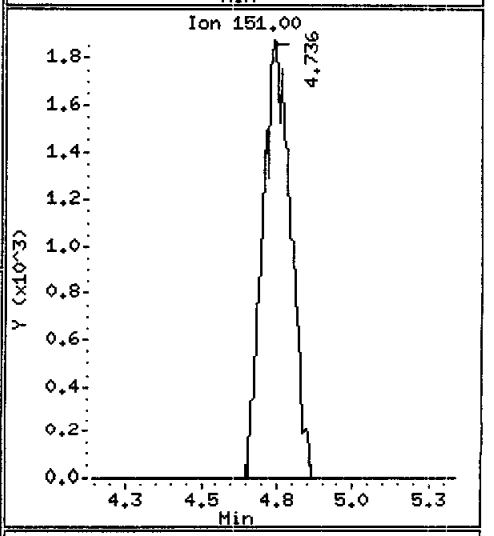
30 1,1,2-CL 1,2,2-F ethane(F113)

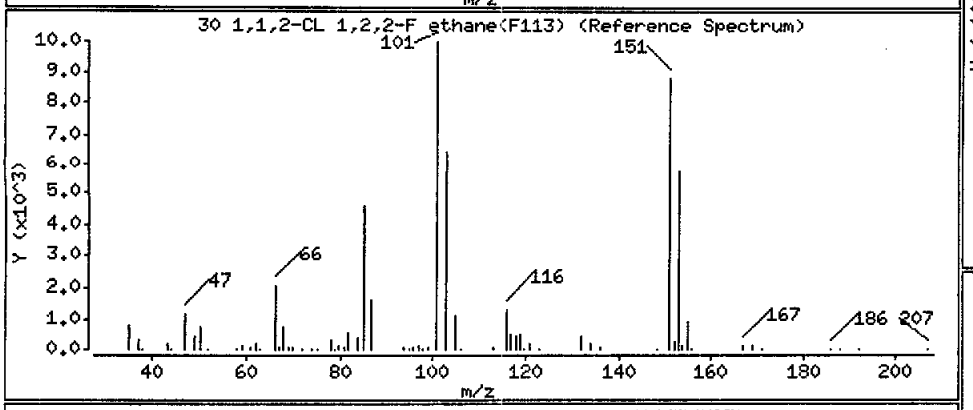
Concentration: 0.6185 ppbv

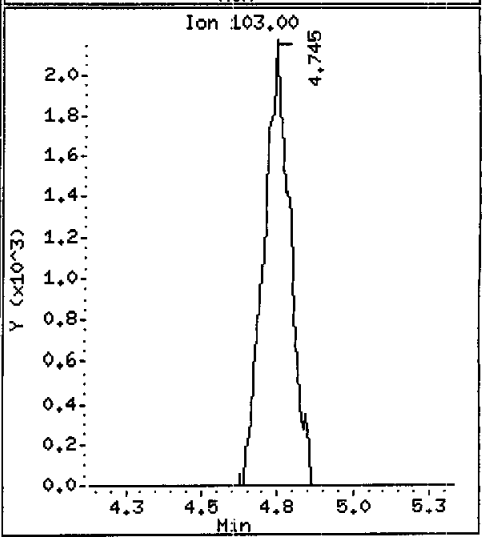


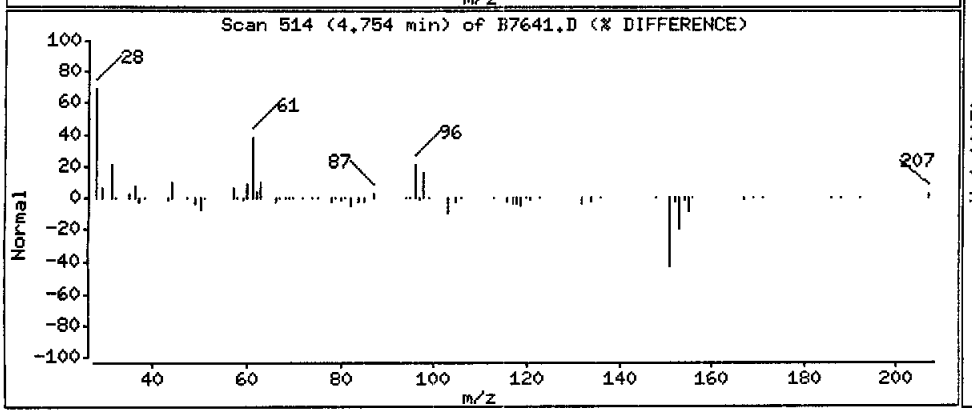












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

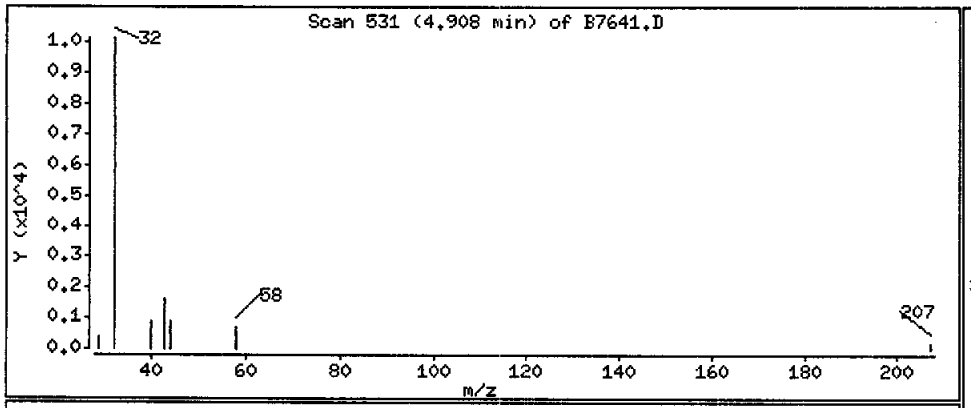
Operator: AA

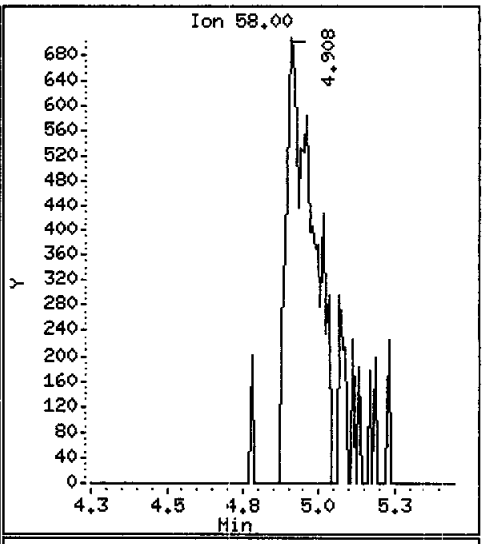
Column phase: J&W DB-624

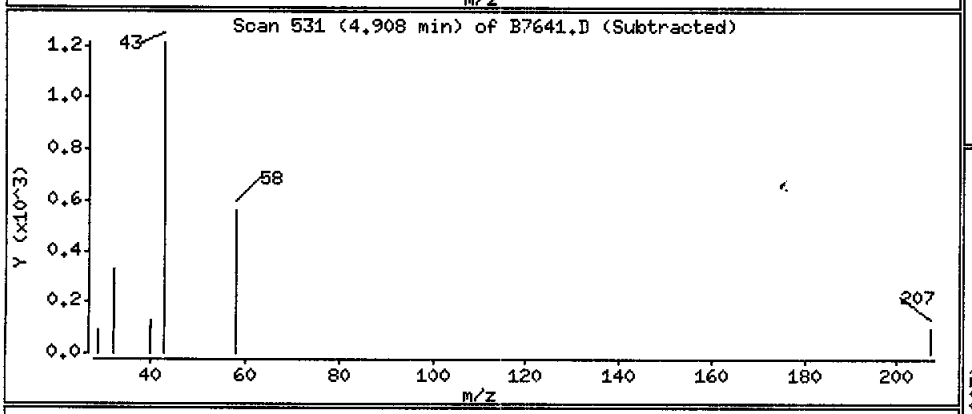
Column diameter: 0.53

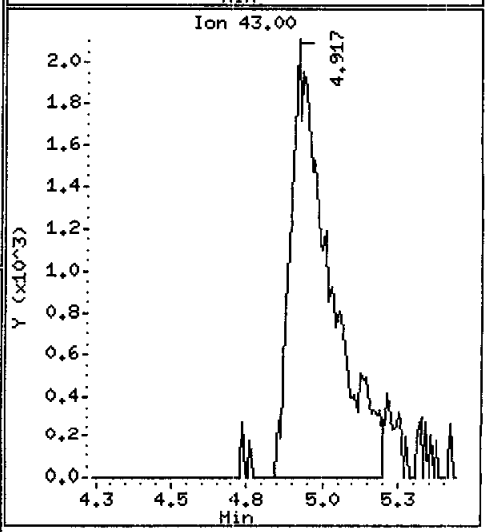
31 Acetone

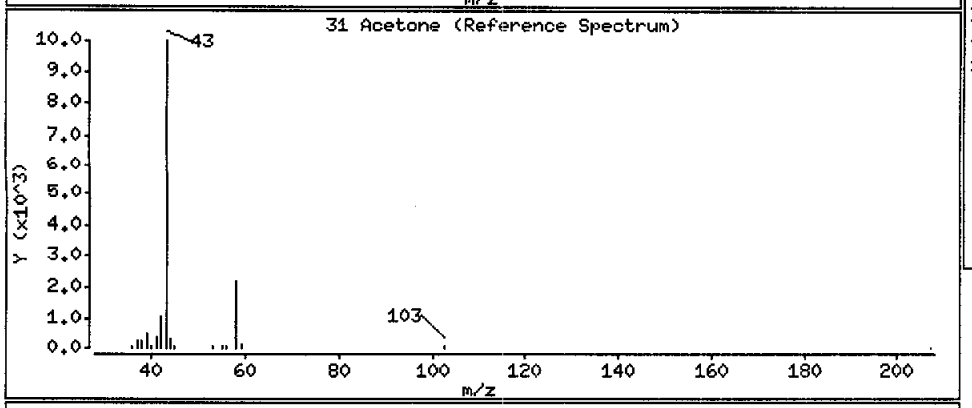
Concentration: 2.054 ppbv

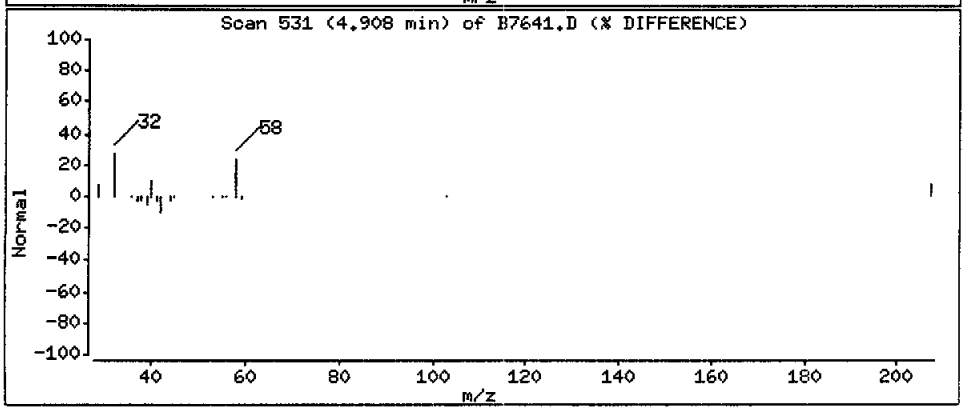












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

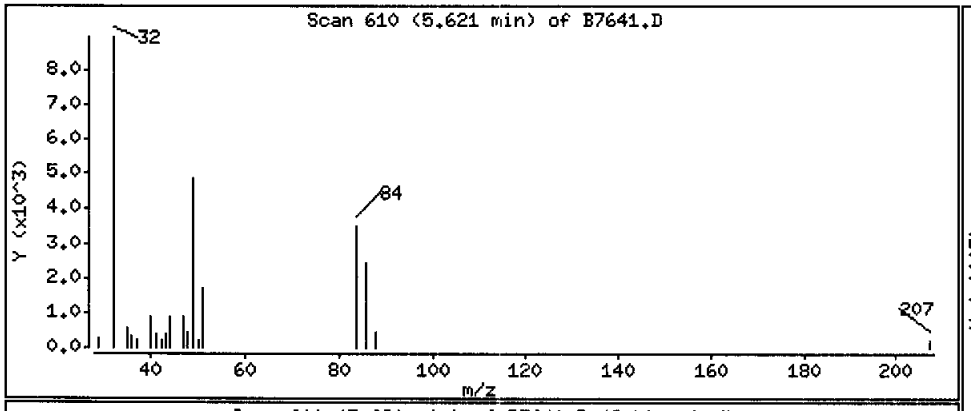
Operator: AA

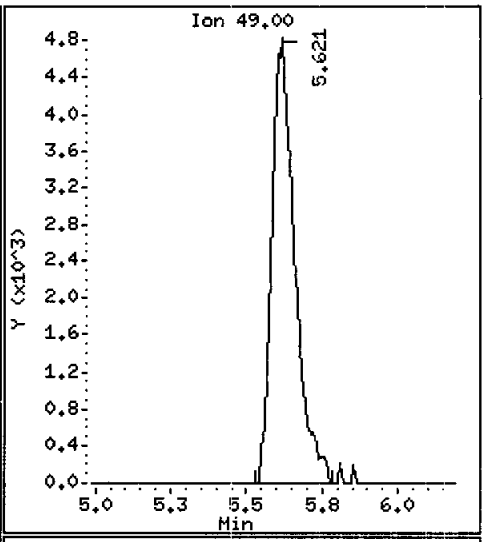
Column phase: J&W DB-624

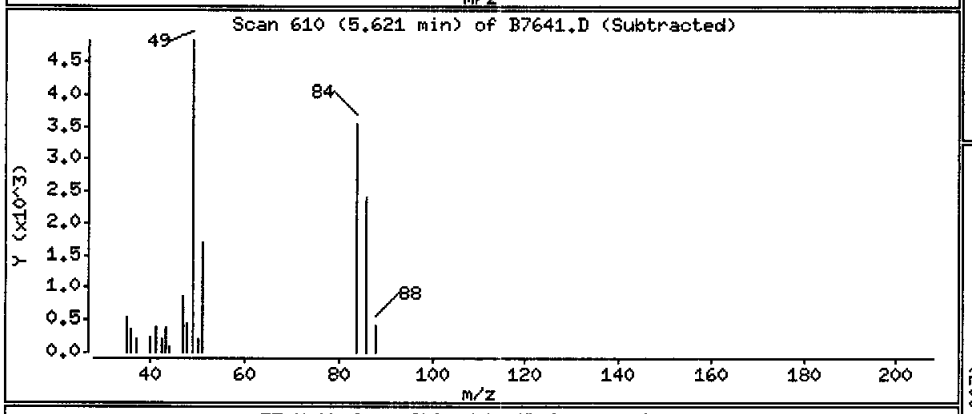
Column diameter: 0.53

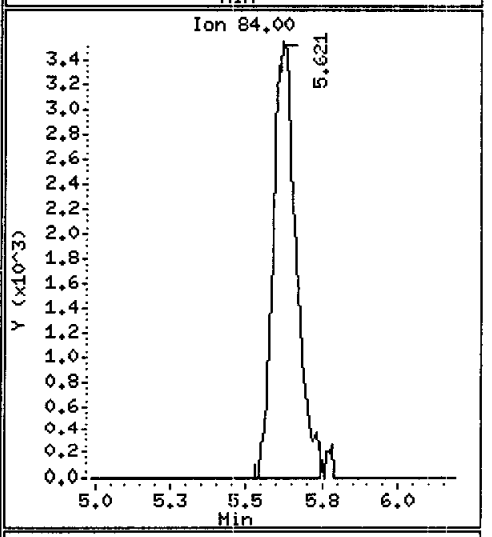
37 Methylene Chloride

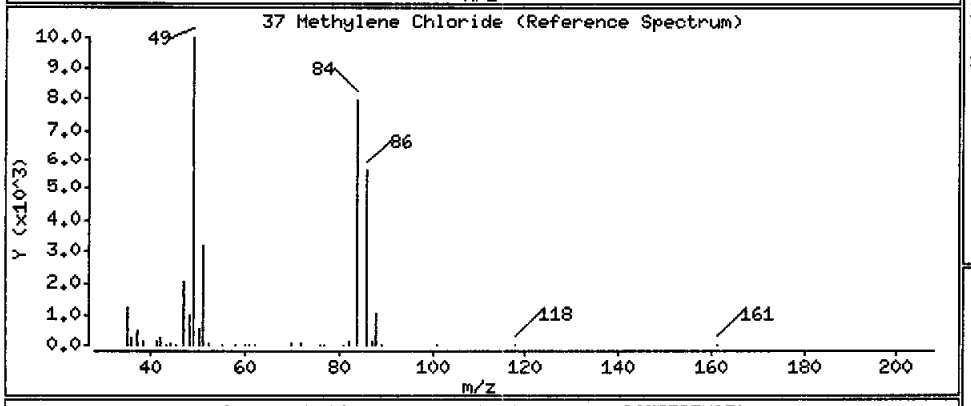
Concentration: 2.793 ppbv

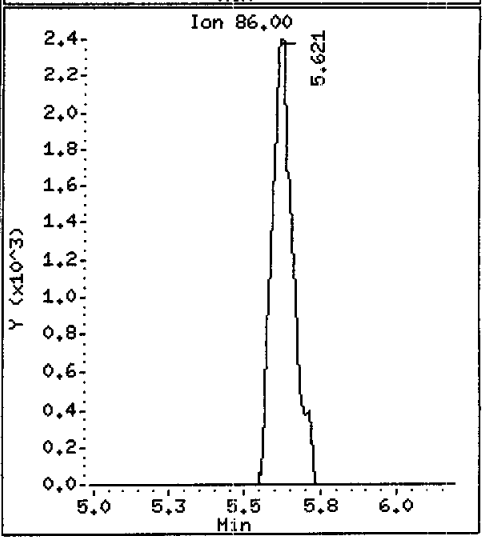


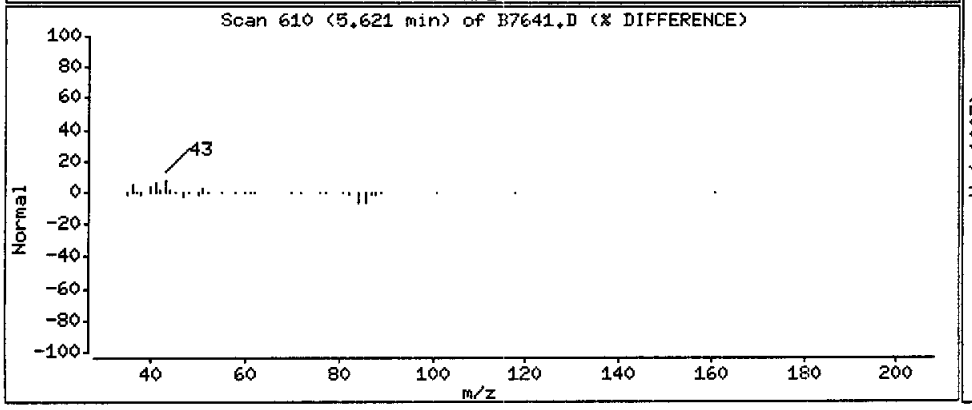












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

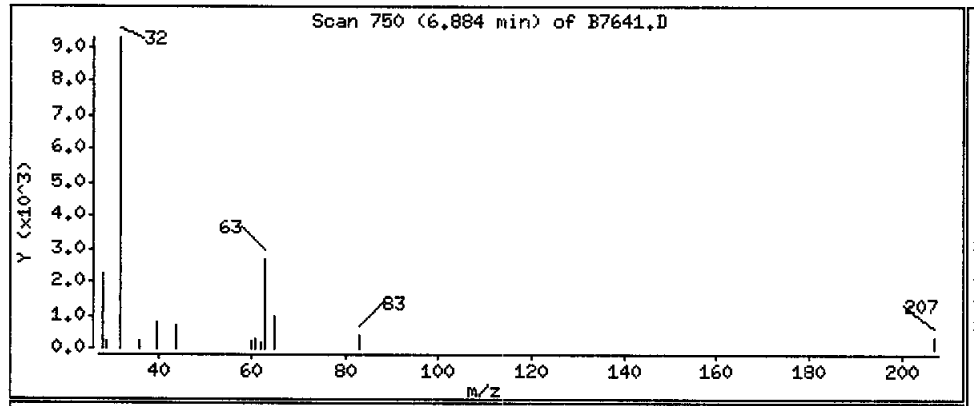
Operator: AA

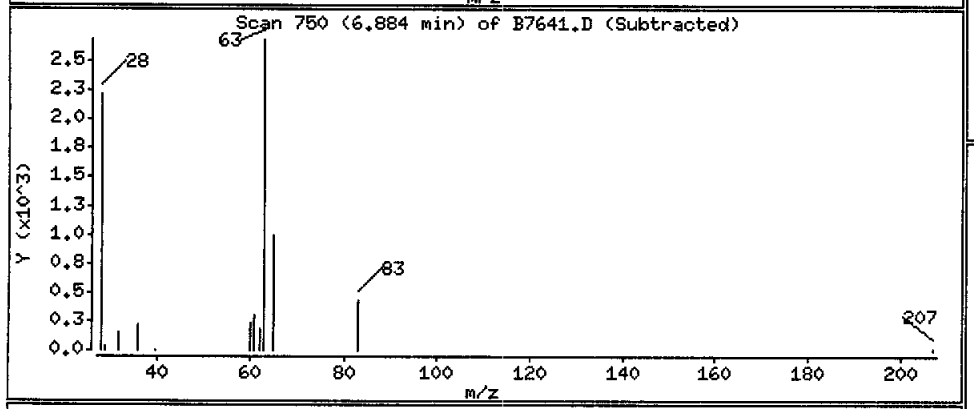
Column phase: J&W DB-624

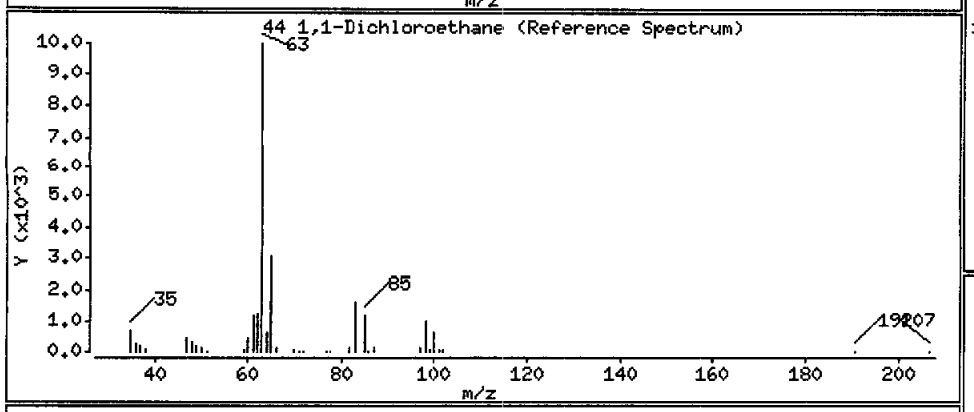
Column diameter: 0.53

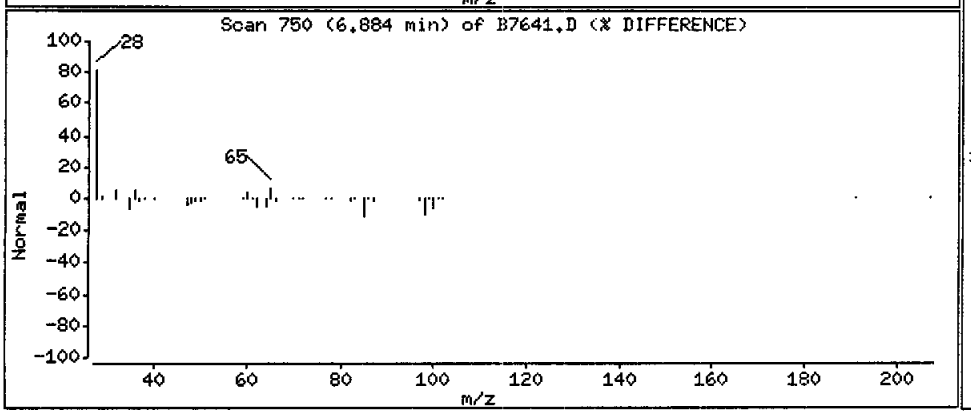
44 1,1-Dichloroethane

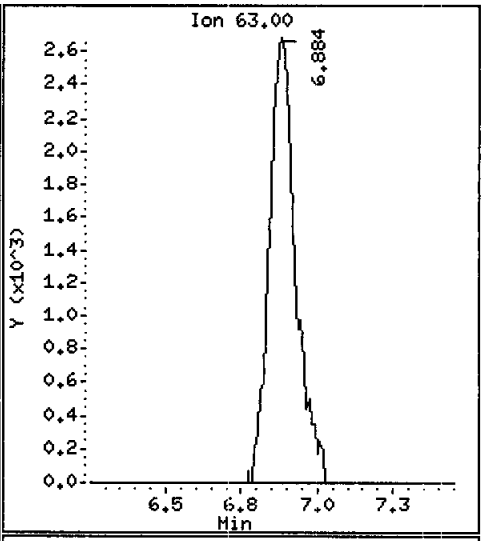
Concentration: 1.004 ppbv

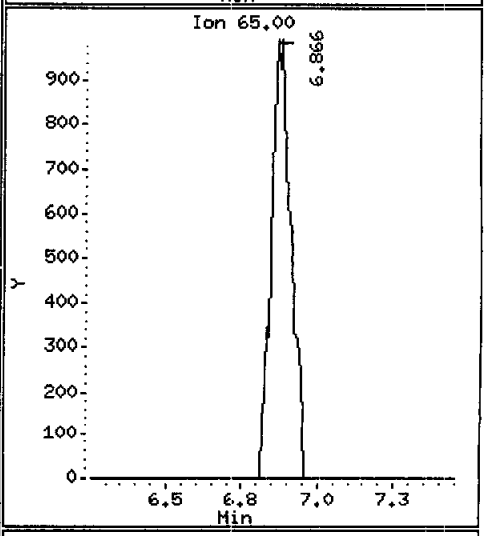


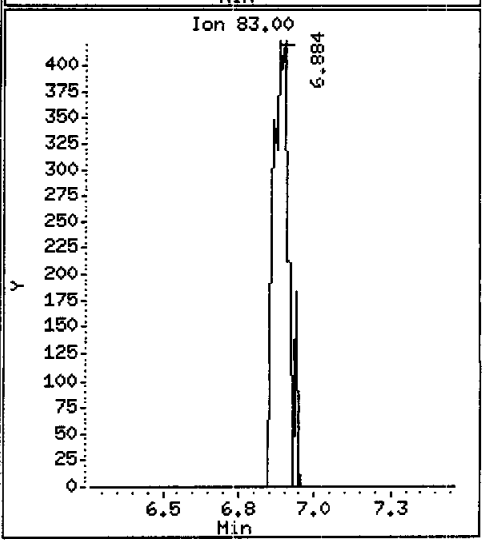












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

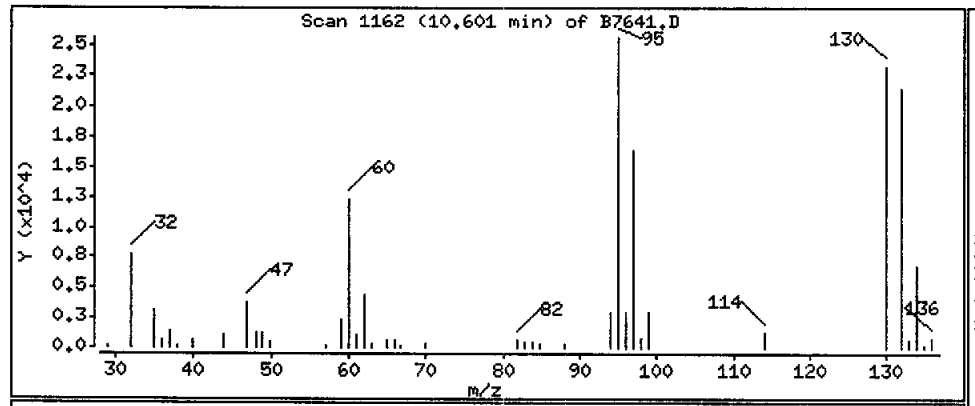
Operator: AA

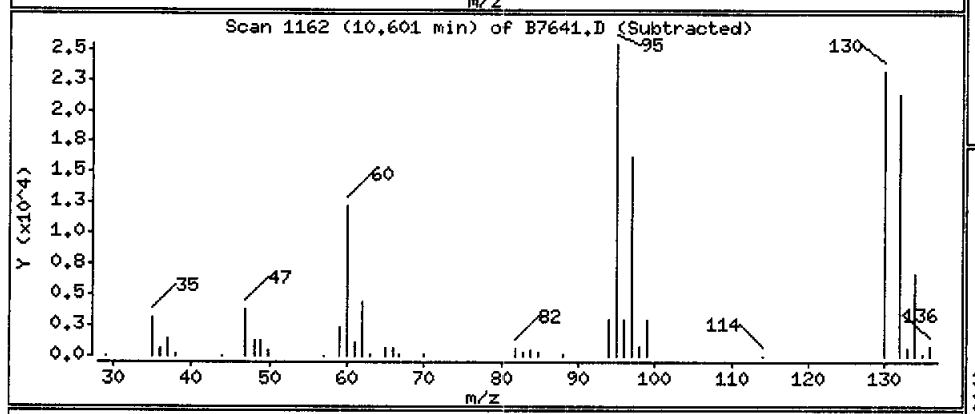
Column phase: J&W DB-624

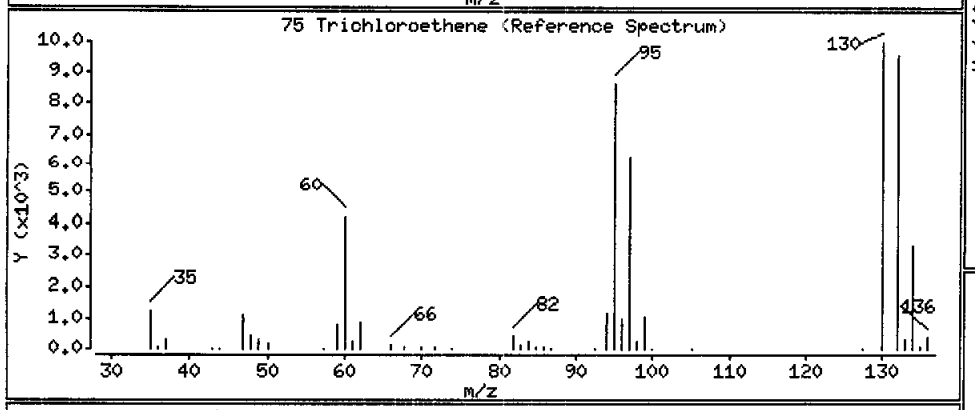
Column diameter: 0.53

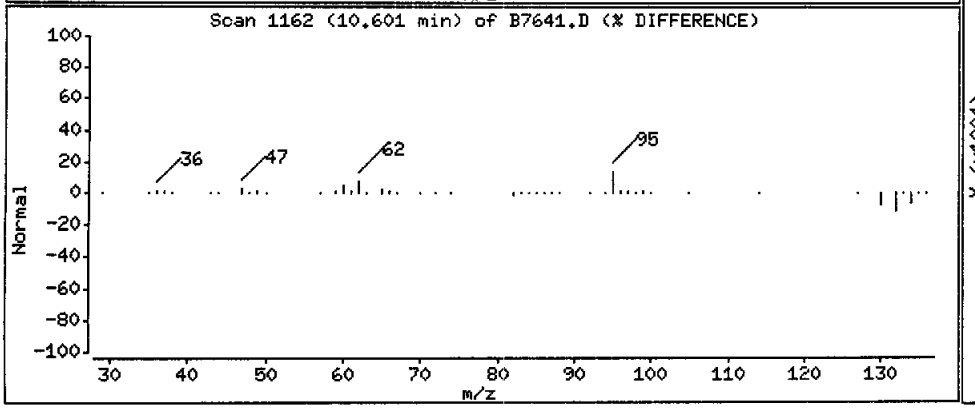
75 Trichloroethene

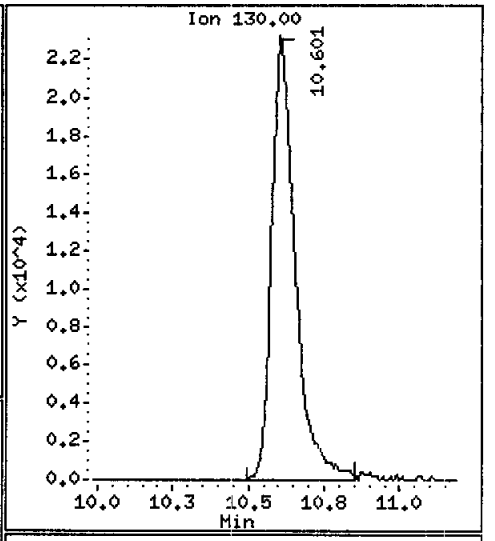
Concentration: 10.39 ppbv

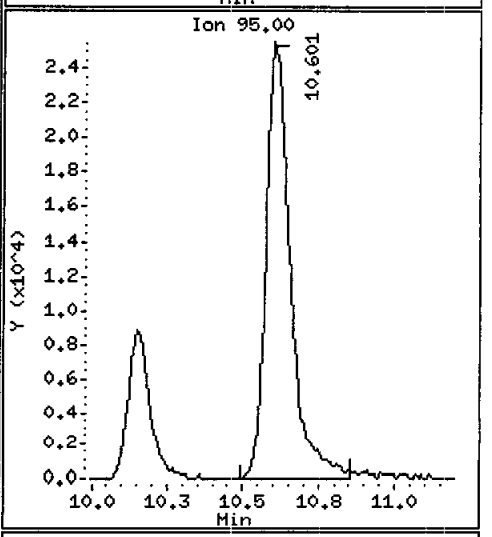


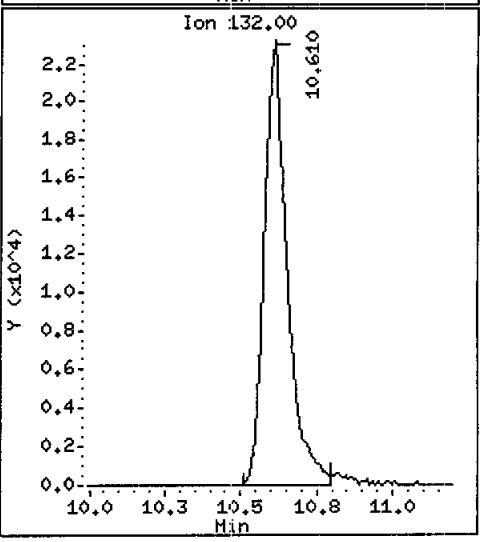












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

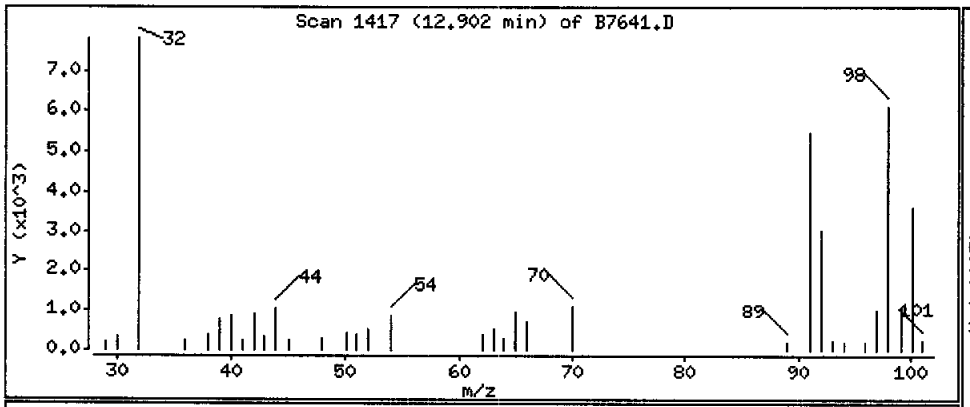
Operator: AA

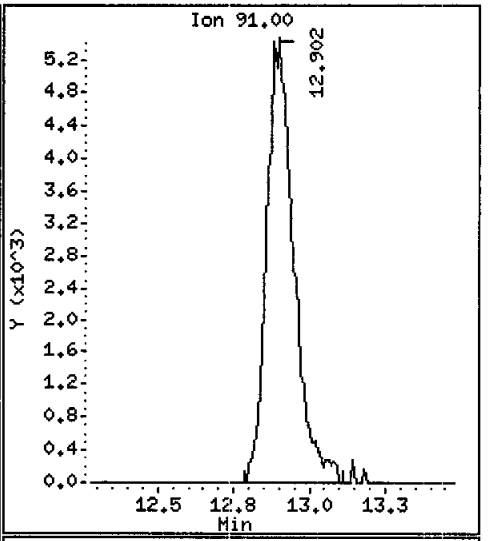
Column phase: J&W DB-624

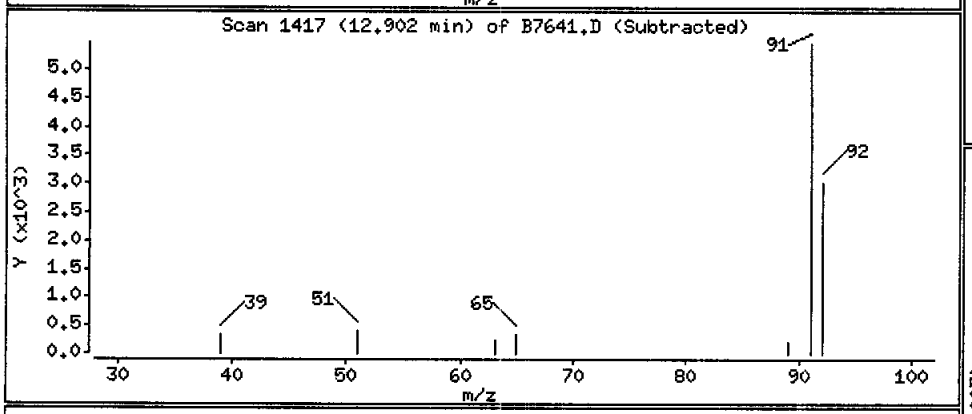
Column diameter: 0.53

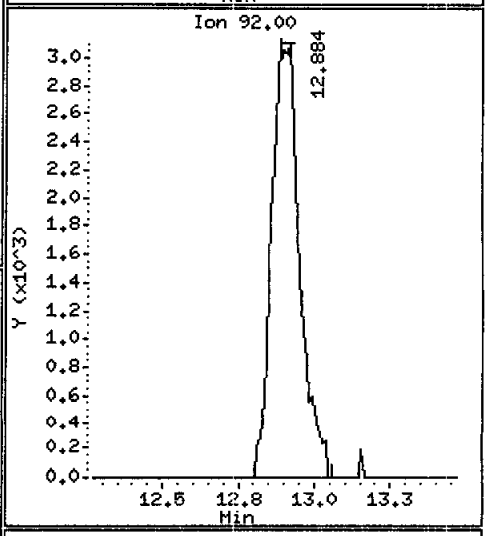
89 Toluene

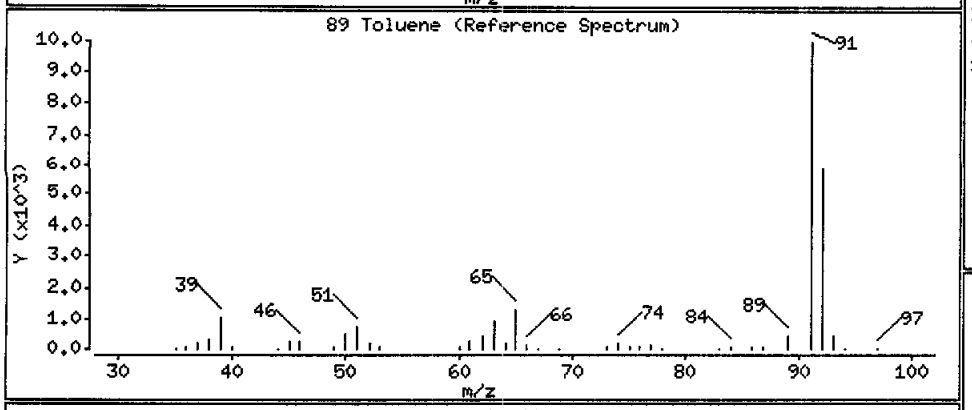
Concentration: 1.401 ppbv

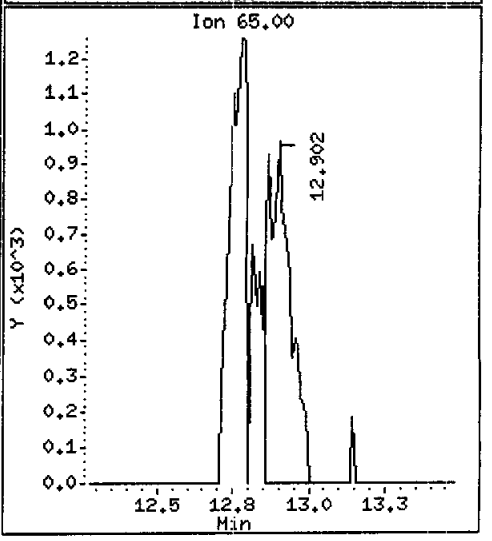


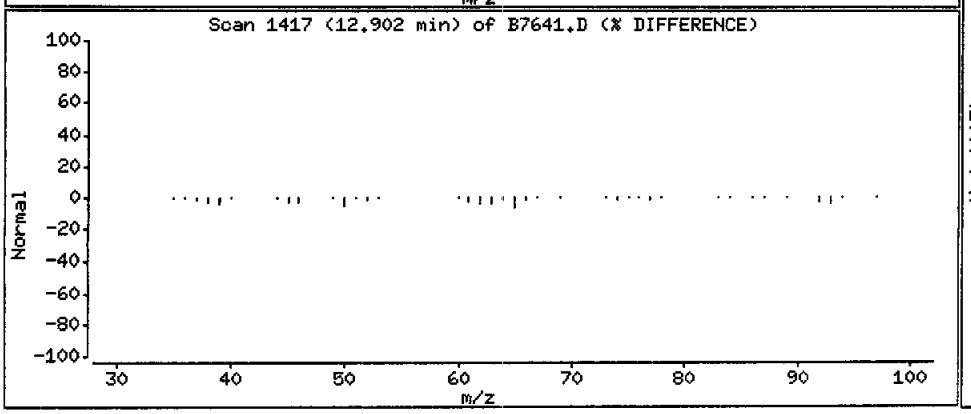












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7641.D

Date : 17-JAN-2005 14:16

Client ID: 066393-001

Instrument: gcmsb.i

Sample Info: G2DKX1AD,066393-001,SANDIA,E5A100233-6

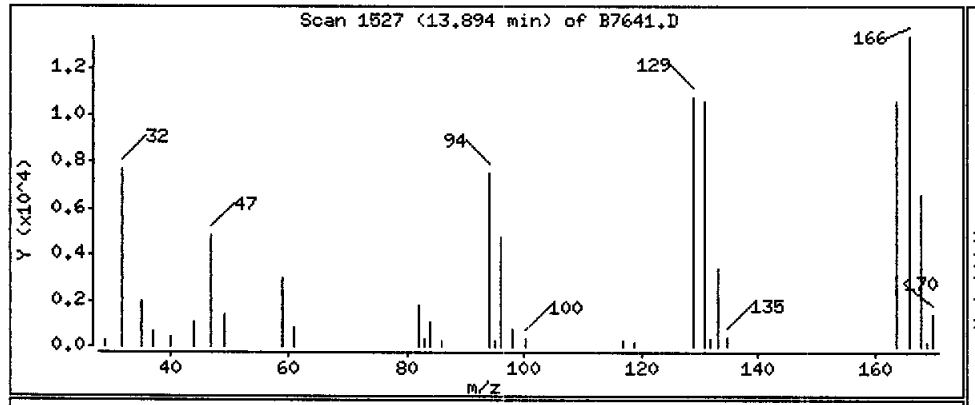
Operator: AA

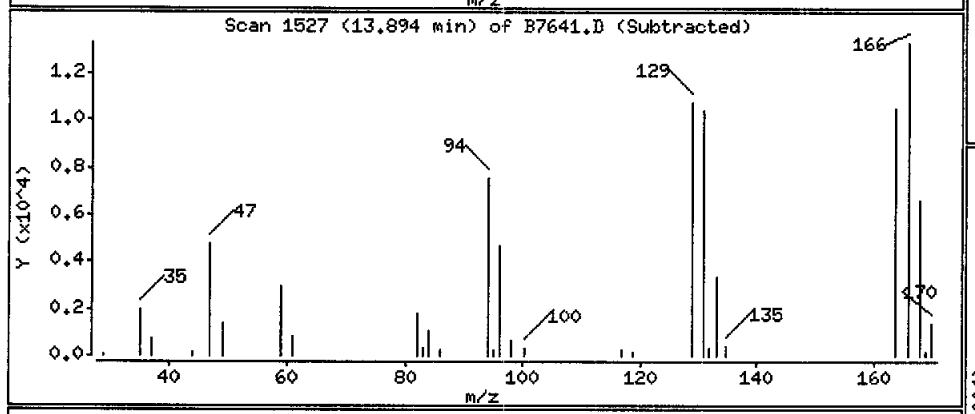
Column phase: J&W DB-624

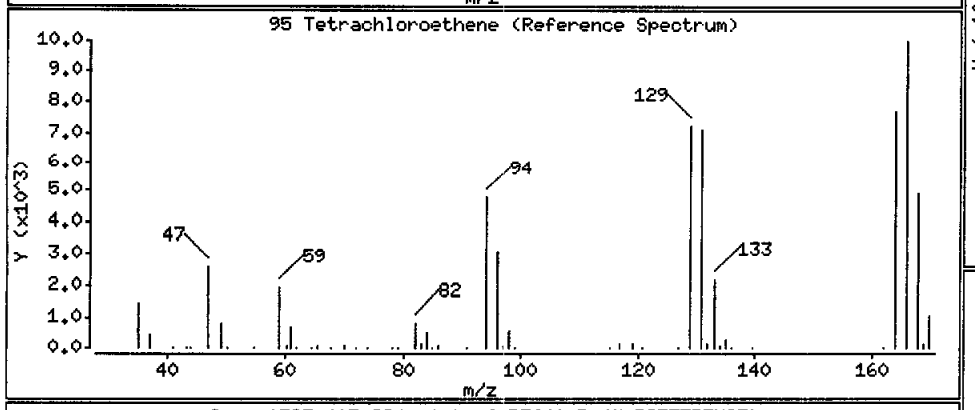
Column diameter: 0.53

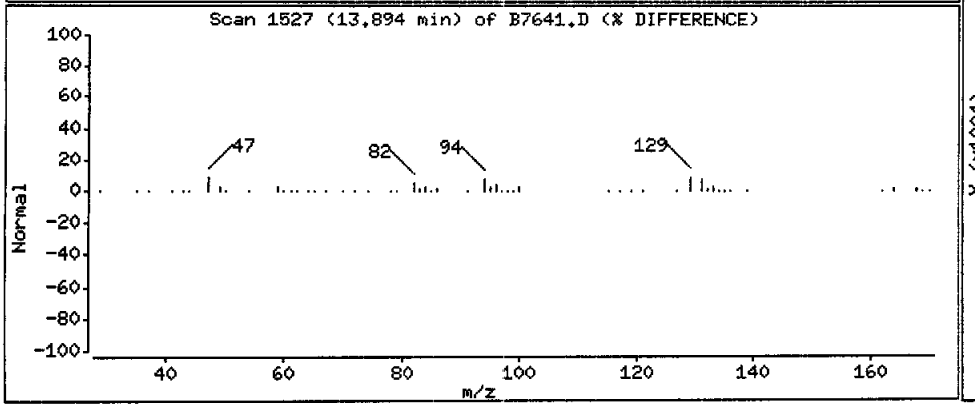
95 Tetrachloroethene

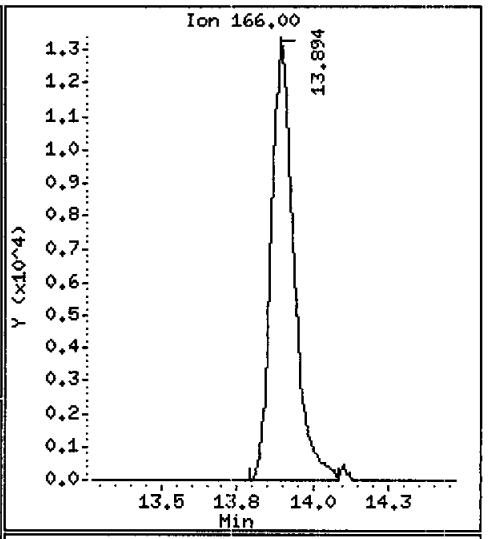
Concentration: 4.339 ppbv

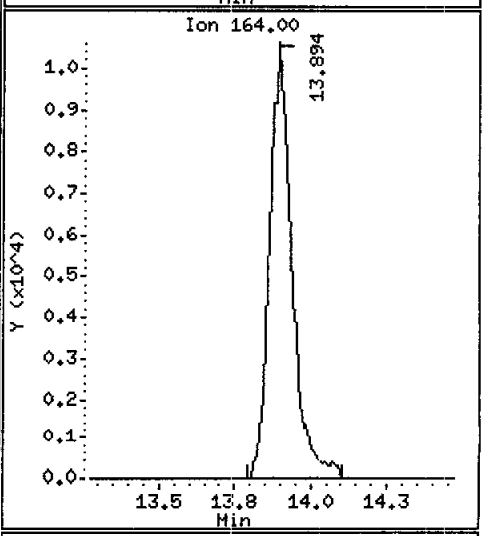


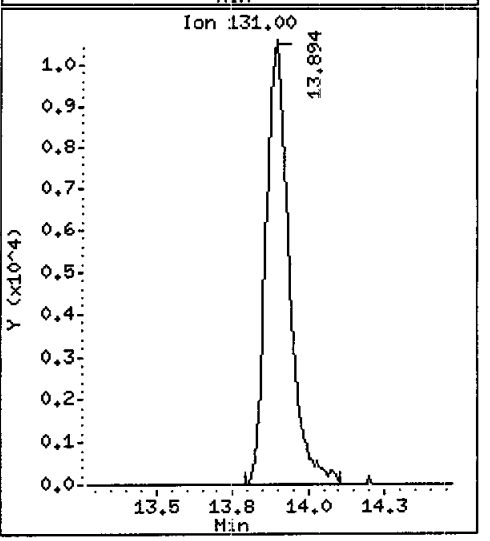












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D
Lab Smp Id: G2DK01AD Client Smp ID: 066394-001
Inj Date : 17-JAN-2005 14:45
Operator : AA Inst ID: gcmsb.i
Smp Info : G2DK01AD,066394-001,SANDIA,E5A100233-7
Misc Info : 24.2,12.7,500,953,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\TO14A.m
Meth Date : 17-Jan-2005 10:10 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	953.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.147	2.123	(0.258)	3095633	113.318	113.3
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.373	2.357	(0.285)	131011	5.89786	5.896
8 Chloromethane	52	2.373	2.402	(0.285)	1533	1.26461	1.264(aQ)
9 Vinyl Chloride	62	2.607	2.592	(0.313)	12407	2.35758	2.357
21 Trichlorofluoromethane (F11)	101	3.753	3.756	(0.451)	323866	11.7595	11.76
28 1,1-Dichloroethene	61	4.692	4.685	(0.564)	836606	57.2694	57.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.755	4.739	(0.572)	1833954	57.9571	57.94
31 Acetone	58	4.890	4.847	(0.588)	12603	6.08540	6.084(aQ)
37 Methylene Chloride	49	5.603	5.587	(0.674)	787547	87.3110	87.29
44 1,1-Dichloroethane	63	6.857	6.850	(0.824)	635620	39.7068	39.70
53 cis-1,2-Dichloroethene	96	7.940	7.906	(0.954)	14156	1.71135	1.711(a)
54 2-Butanone	72	8.048	7.969	(0.967)	7324	2.65838	2.658(aQ)
* 58 Bromochloromethane	49	8.319	8.321	(1.000)	647189	50.0000	
61 1,1,1-Trichloroethane	97	8.797	8.781	(1.057)	36307	1.76378	1.763(a)

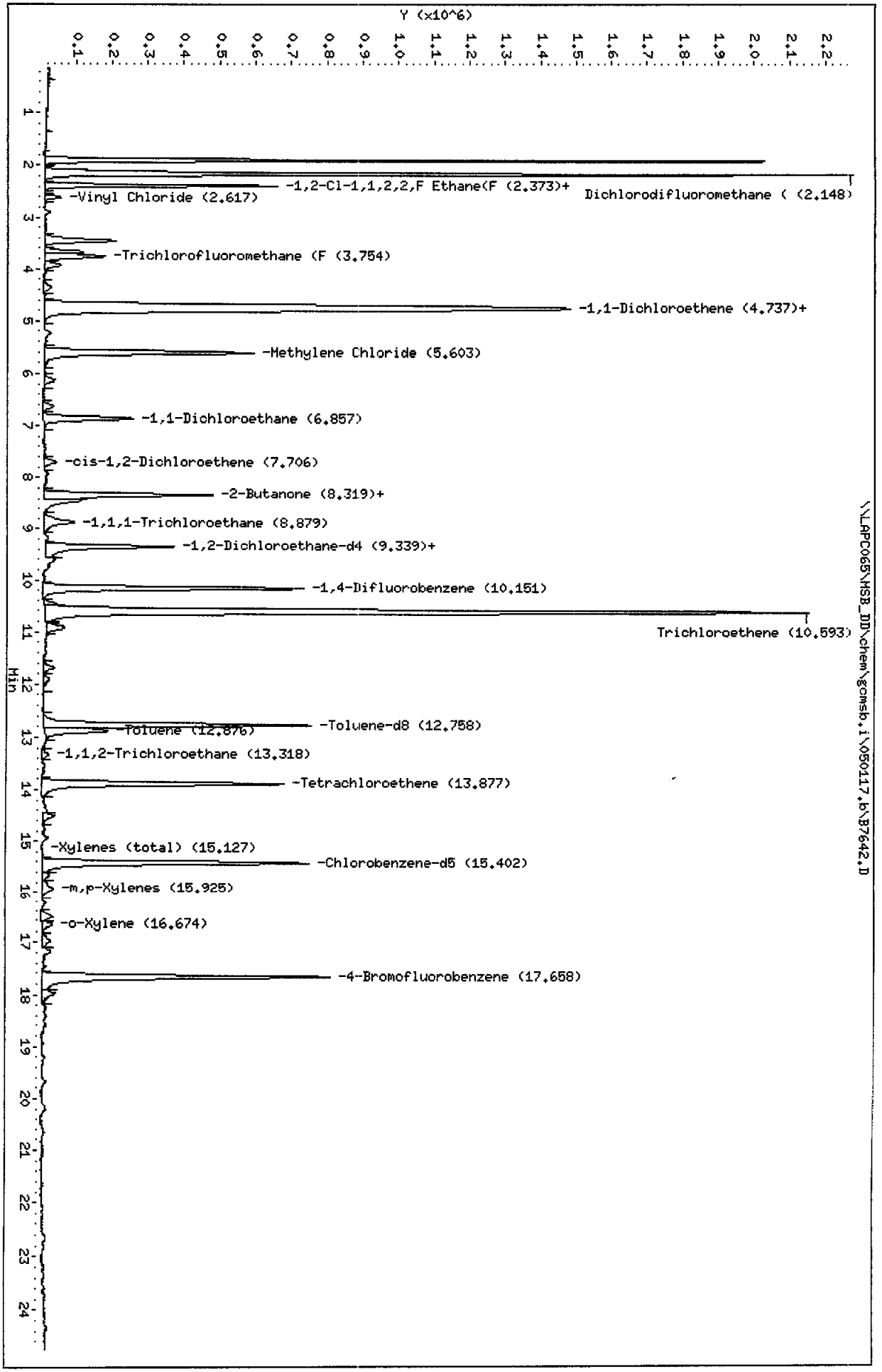
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 66 1,2-Dichloroethane-d4	65	9.338	9.341	(0.920)	523407	45.8702	45.86
68 Benzene	78	9.446	9.440	(0.931)	76994	4.06941	4.068
* 73 1,4-Difluorobenzene	114	10.150	10.144	(1.000)	1390420	50.0000	
75 Trichloroethene	130	10.592	10.586	(1.044)	1652142	136.086	136.0
$ 88 Toluene-d8	100	12.758	12.751	(1.257)	741007	50.8954	50.88
89 Toluene	91	12.875	12.878	(1.268)	335671	13.7108	13.71
93 1,1,2-Trichloroethane	97	13.335	13.608	(0.866)	13463	1.15488	1.154(aQ)
95 Tetrachloroethene	166	13.877	13.870	(0.901)	481791	29.7760	29.77
M 99 Xylenes (total)	106				30323	3.64043	3.639
* 101 Chlorobenzene-d5	117	15.401	15.404	(1.000)	1033482	50.0000	
105 m,p-Xylenes	106	15.934	15.891	(1.035)	10988	1.28803	1.288(a)
107 o-Xylene	106	16.674	16.649	(1.083)	19335	2.35240	2.352
$ 114 4-Bromofluorobenzene	95	17.657	17.651	(1.146)	904374	48.9862	48.97

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D
Date : 17-JAN-2005 14:45
Client ID: 066394-001
Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: AA
Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

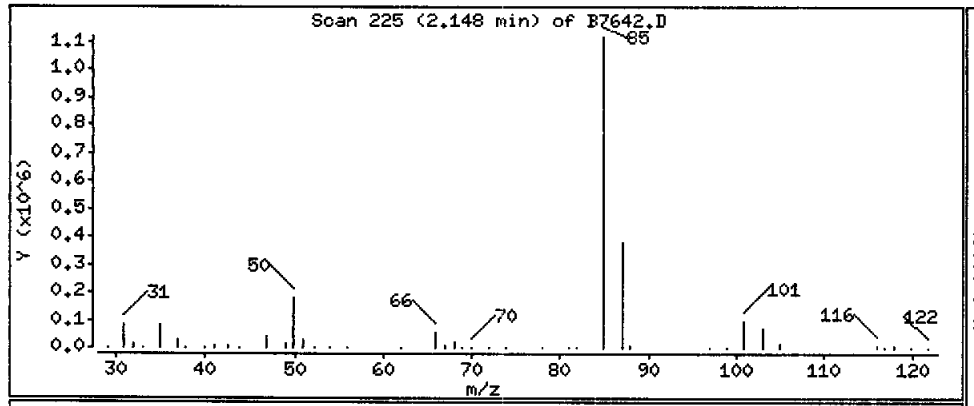
Operator: AA

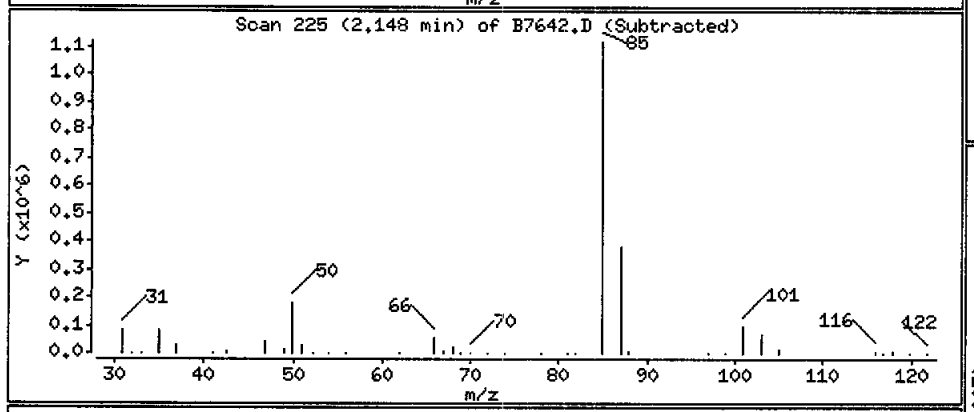
Column phase: J&W DB-624

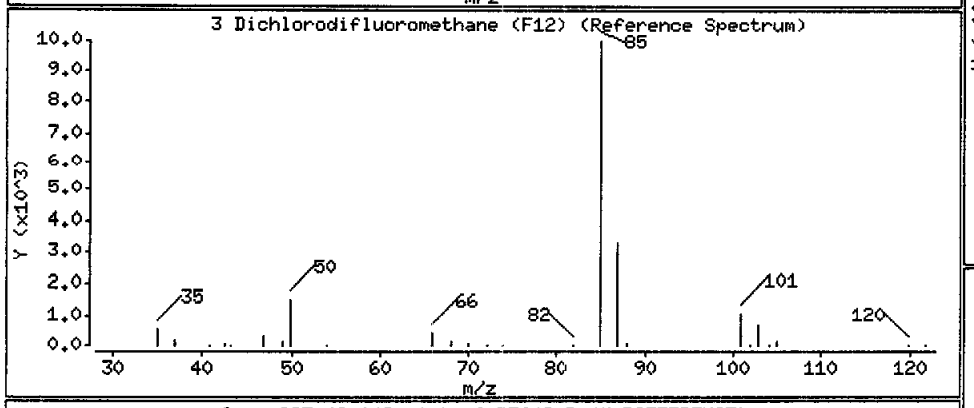
Column diameter: 0.53

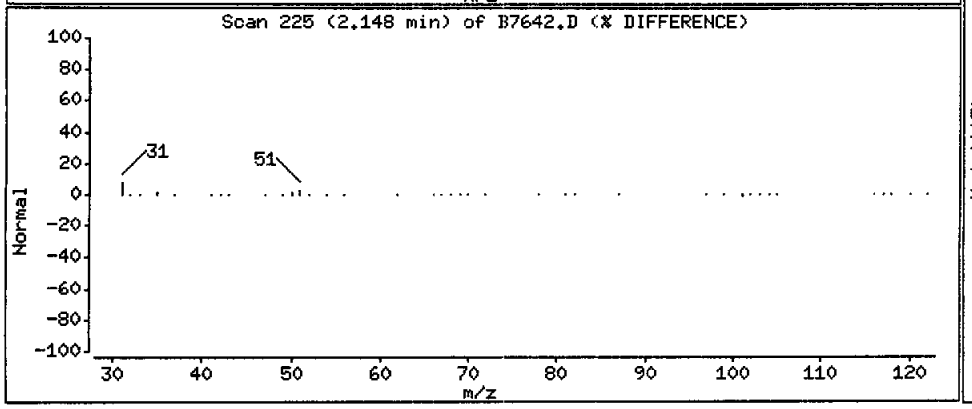
3 Dichlorodifluoromethane (F12)

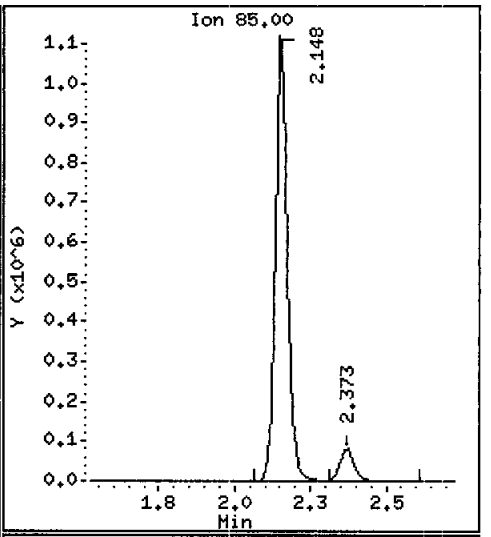
Concentration: 113.3 ppbv

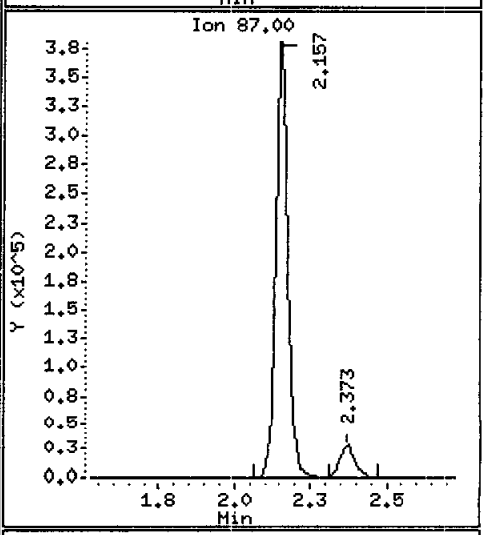


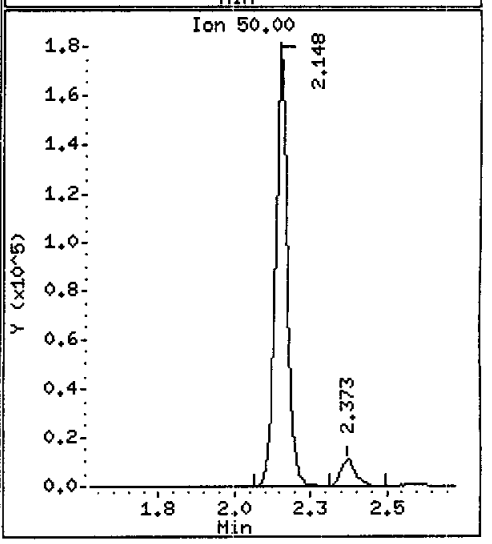












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

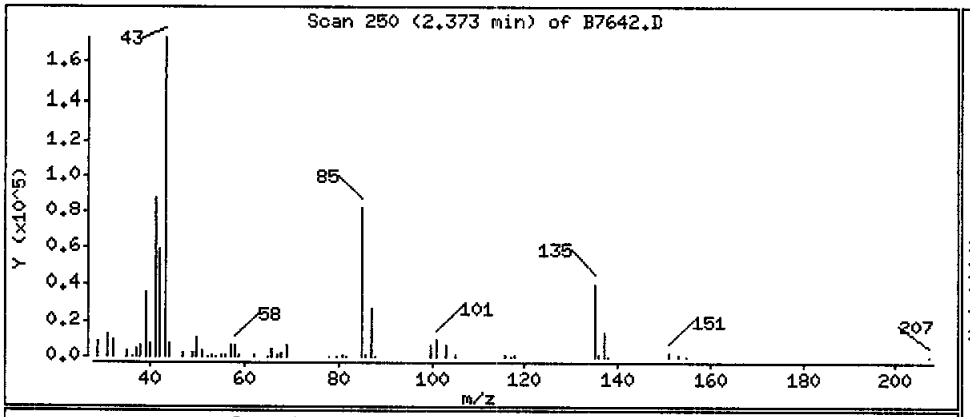
Operator: AA

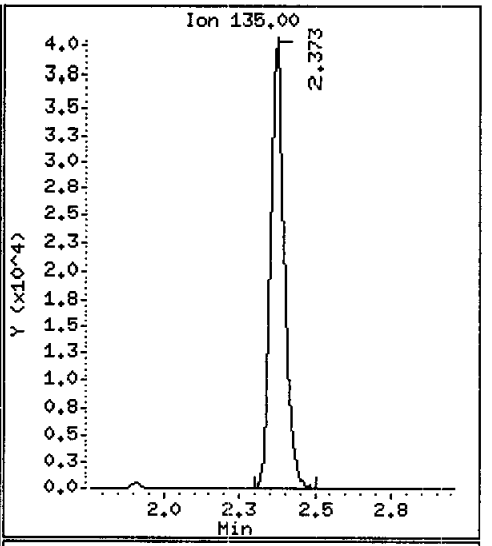
Column phase: J&W DB-624

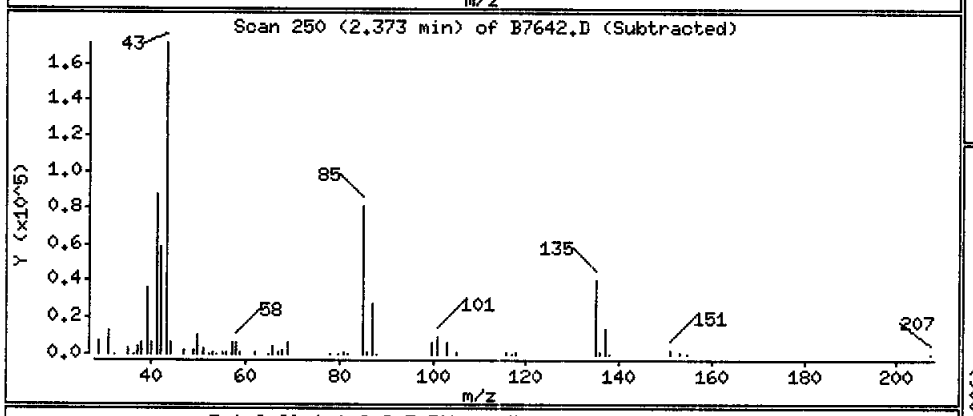
Column diameter: 0.53

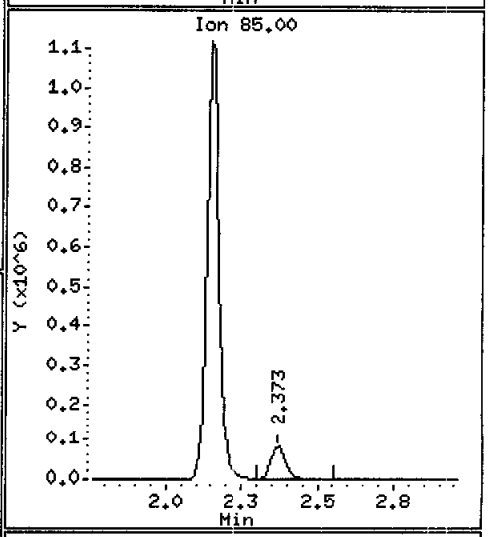
5 1,2-Cl-1,1,2,2,F Ethane(F114)

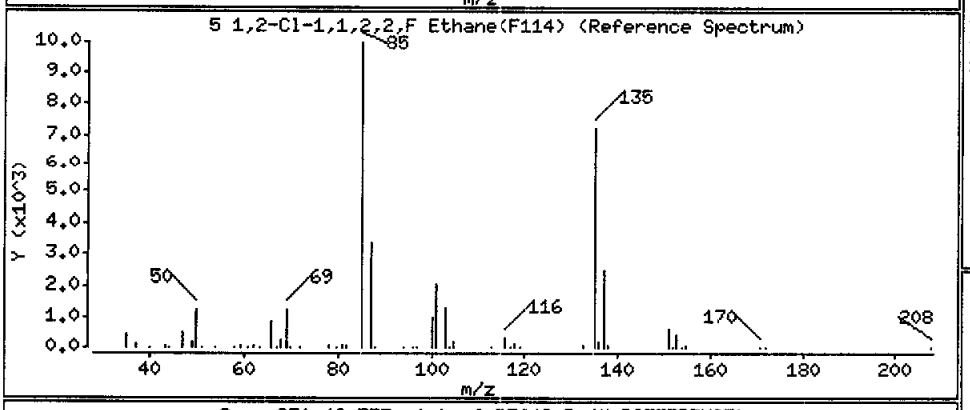
Concentration: 5.896 ppbv

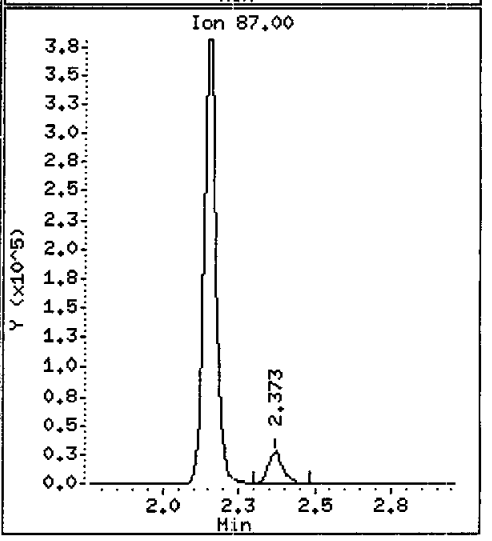


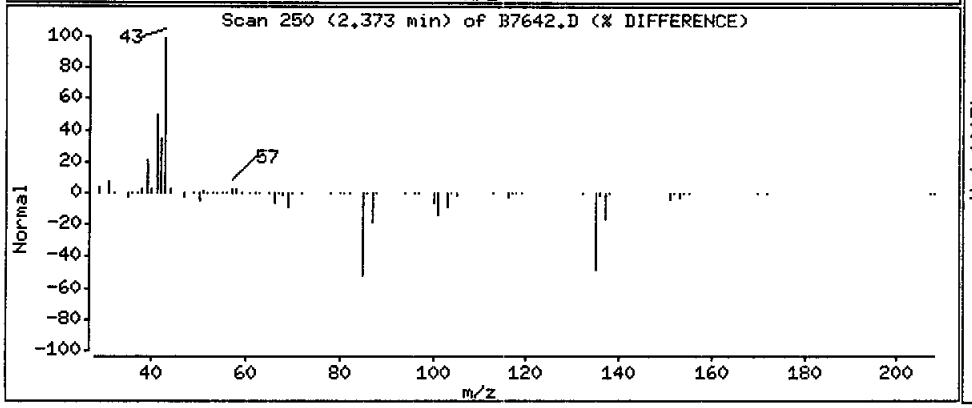












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

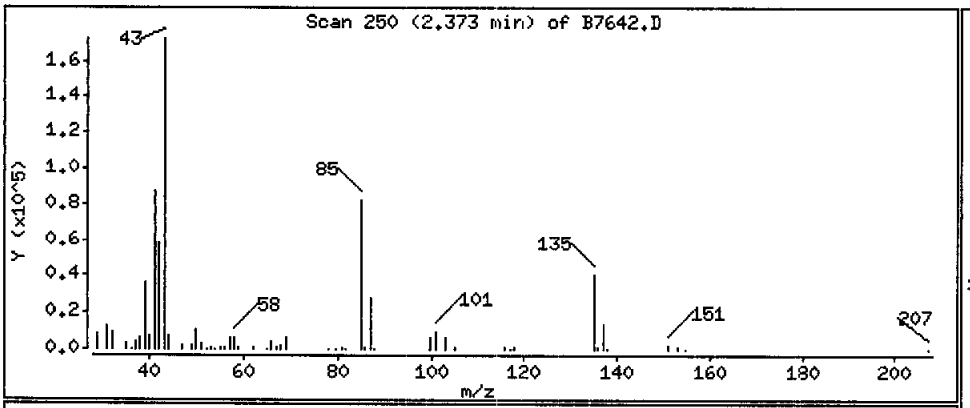
Operator: AA

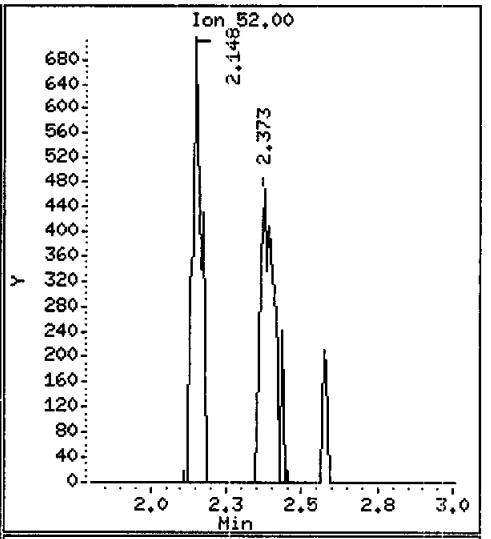
Column phase: J&W DB-624

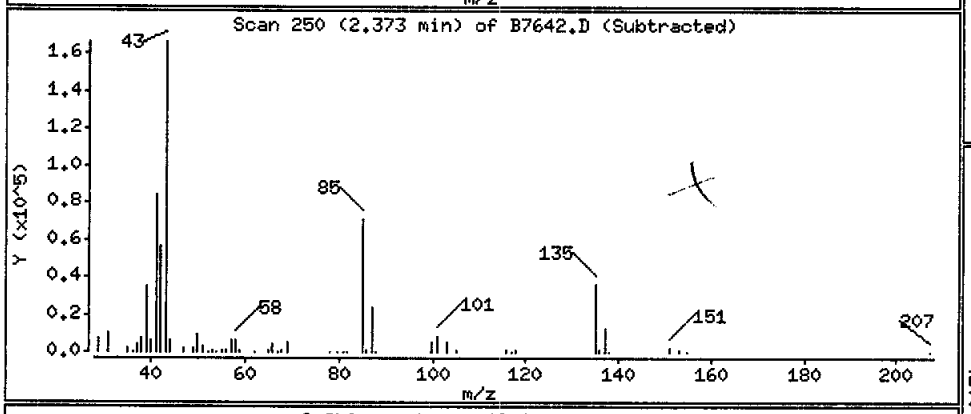
Column diameter: 0.53

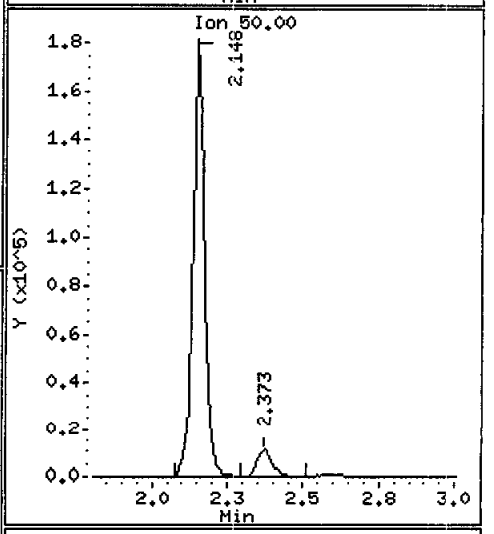
8 Chloromethane

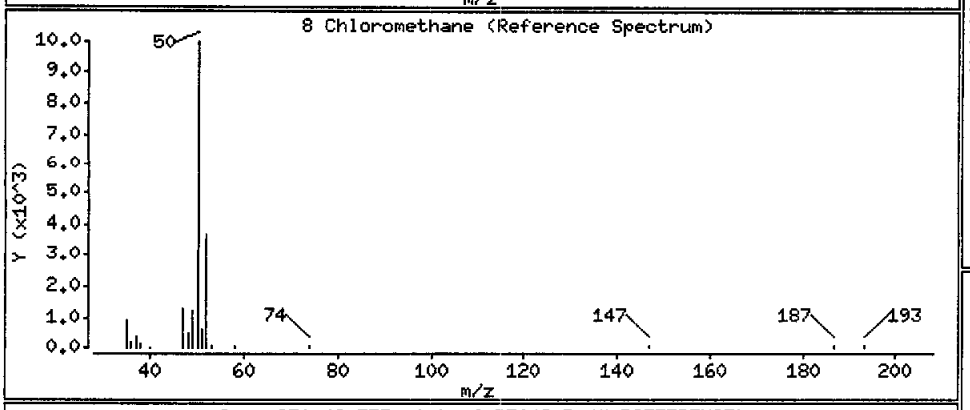
Concentration: 1.264 ppbv

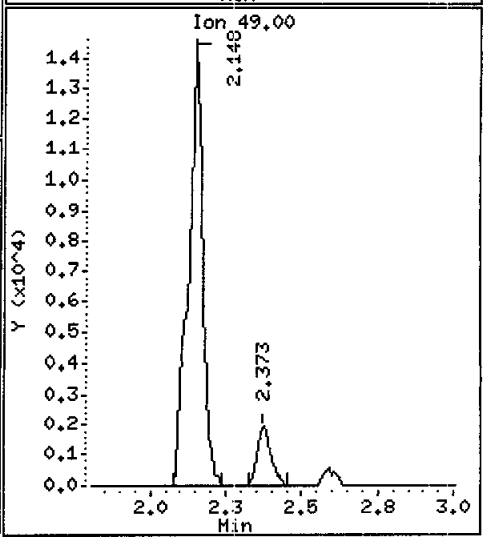


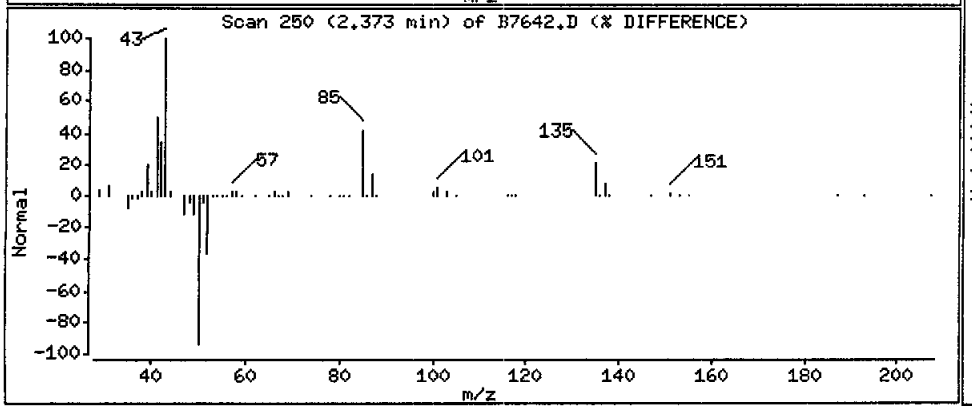












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

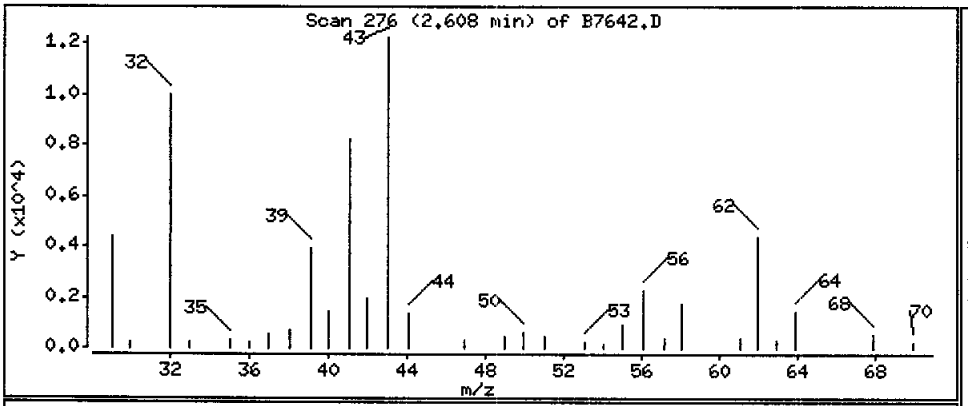
Operator: AA

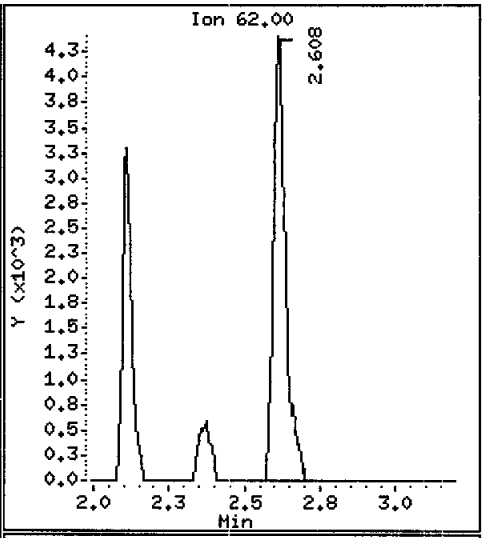
Column phase: J&W DB-624

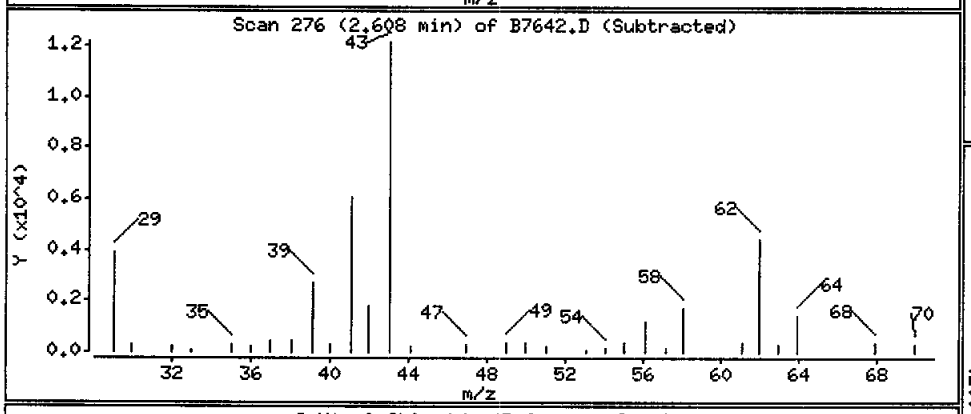
Column diameter: 0.53

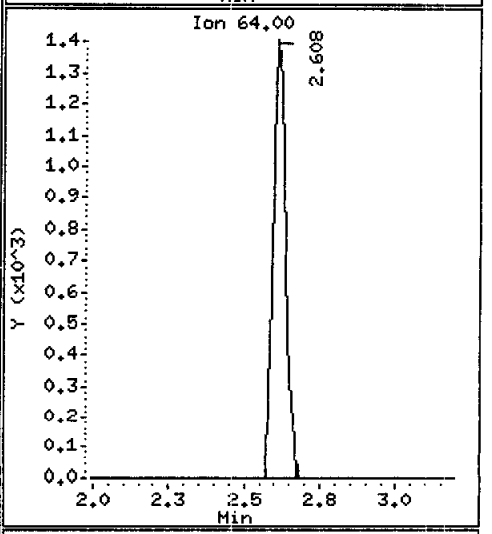
9 Vinyl Chloride

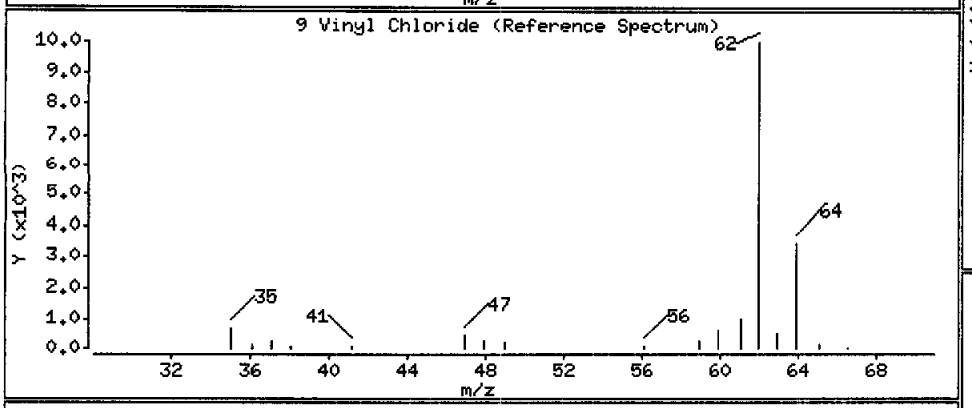
Concentration: 2.357 ppbv

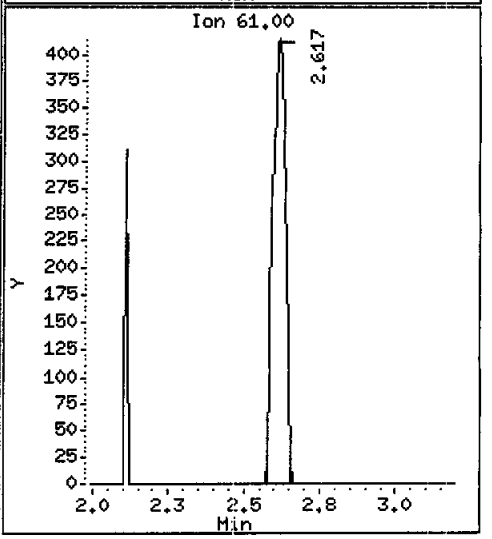


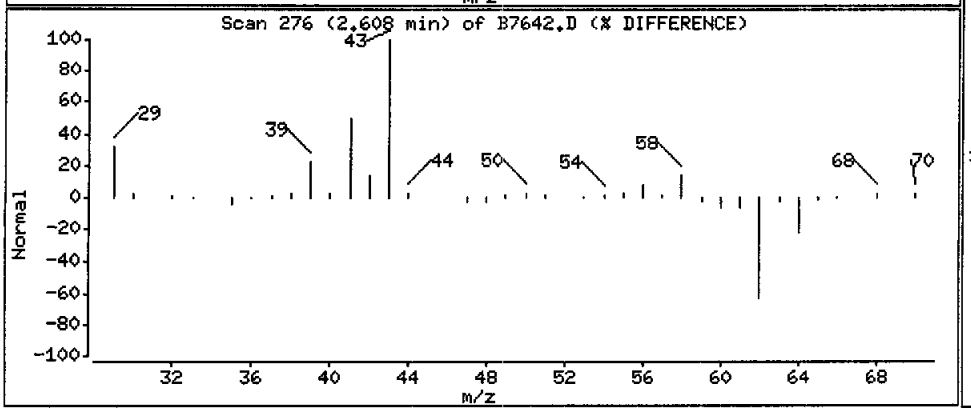












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

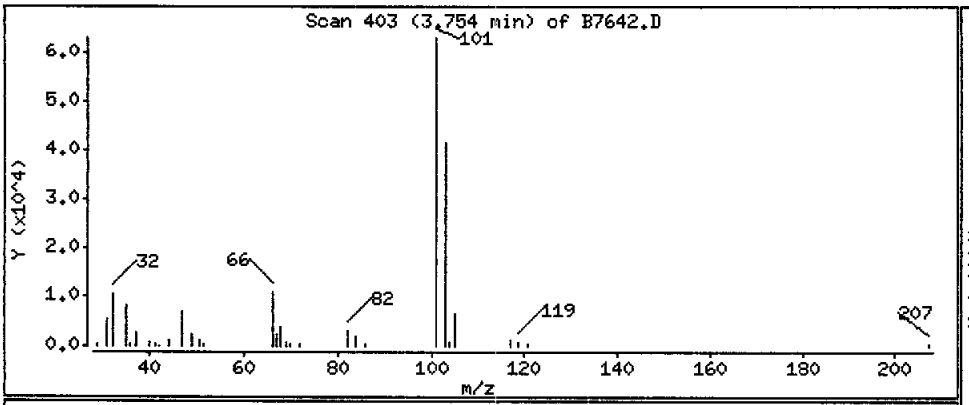
Operator: AA

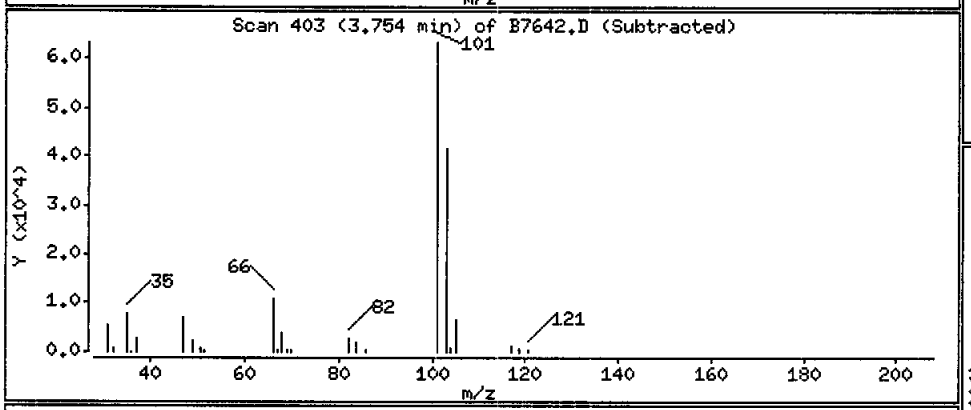
Column phase: J&W DB-624

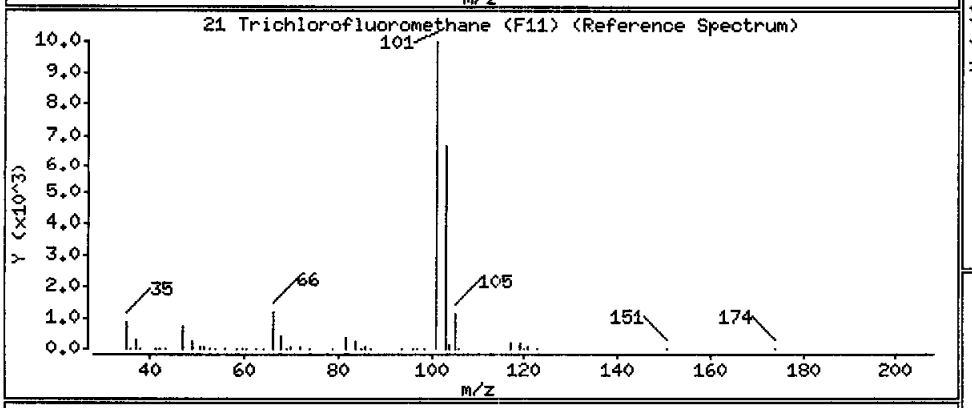
Column diameter: 0.53

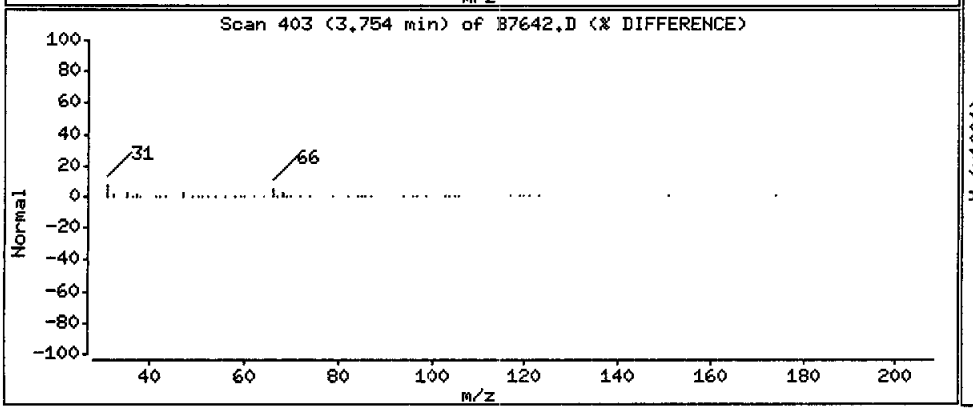
21 Trichlorofluoromethane (F11)

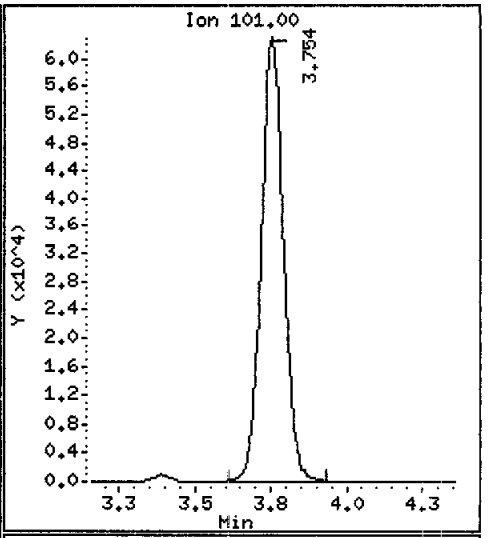
Concentration: 11.76 ppbv

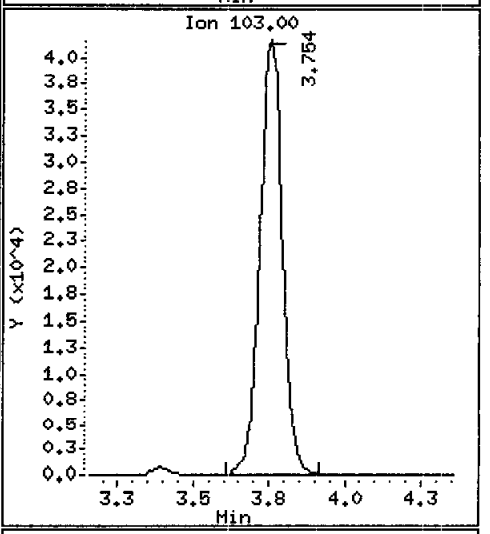


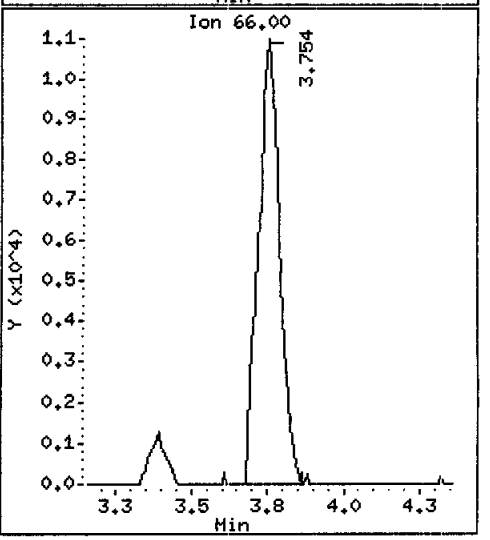












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

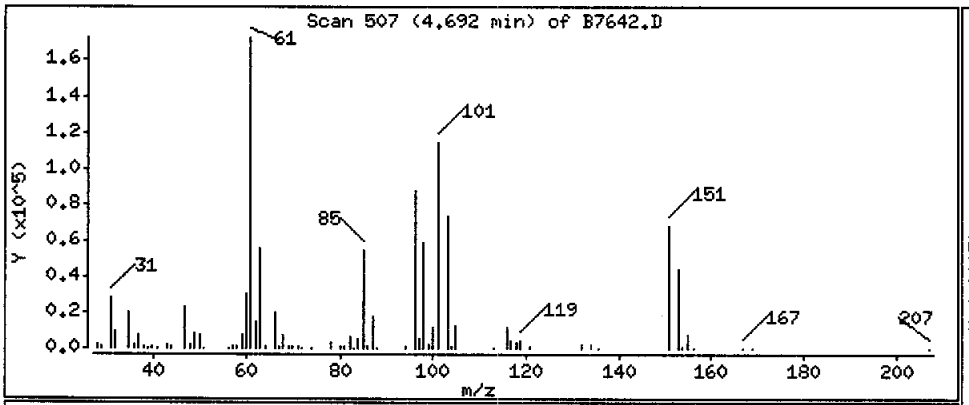
Operator: AA

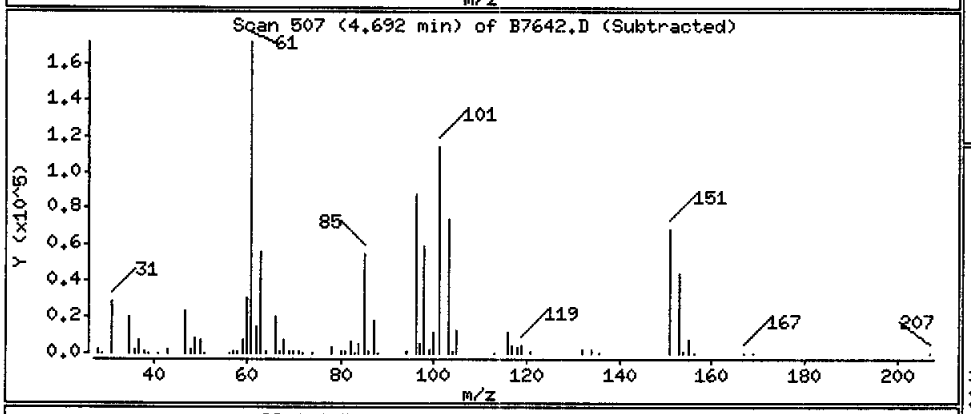
Column phase: J&W DB-624

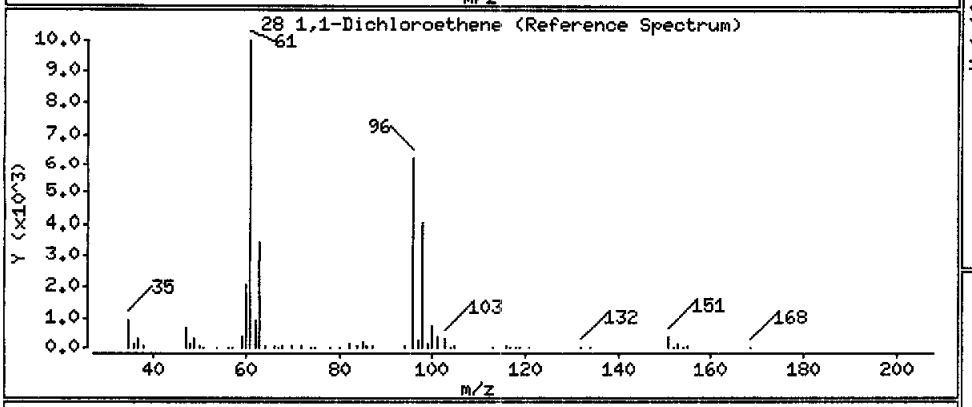
Column diameter: 0.53

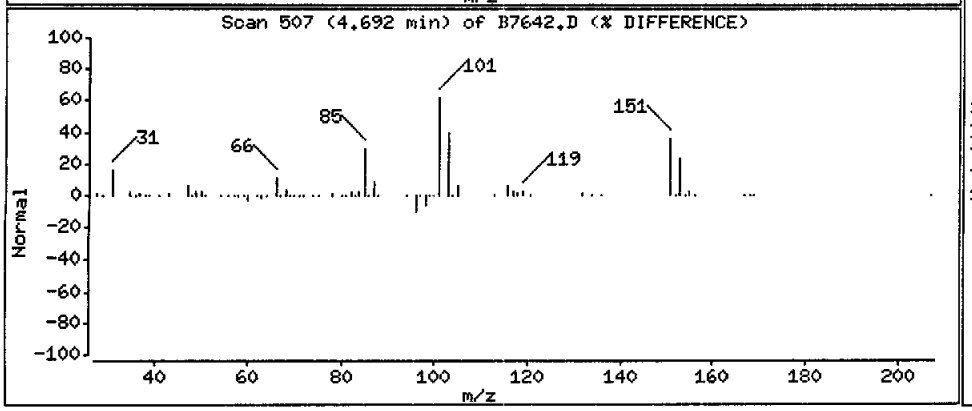
28 1,1-Dichloroethene

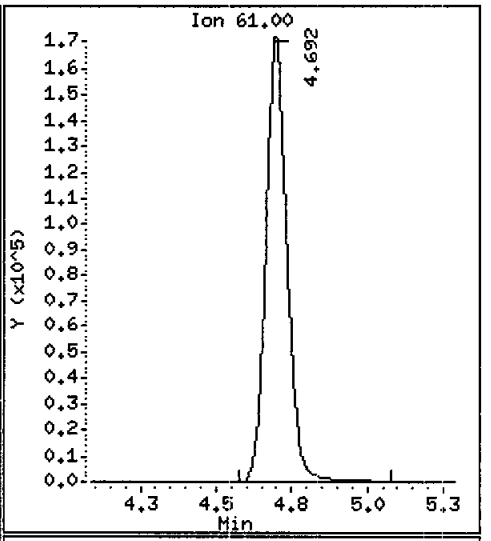
Concentration: 57.25 ppbv

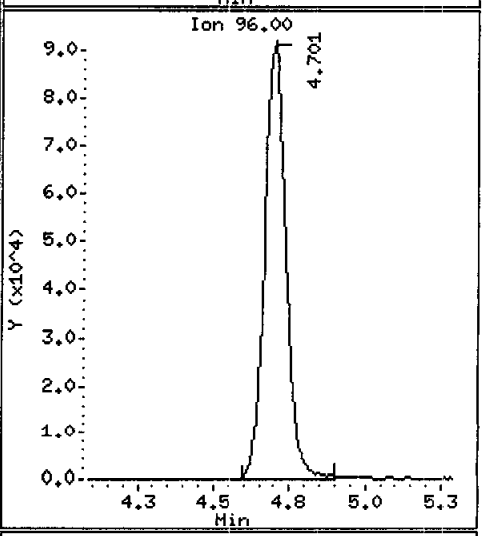


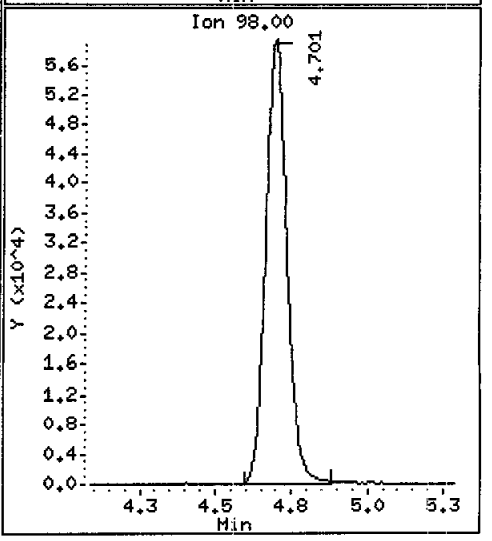












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

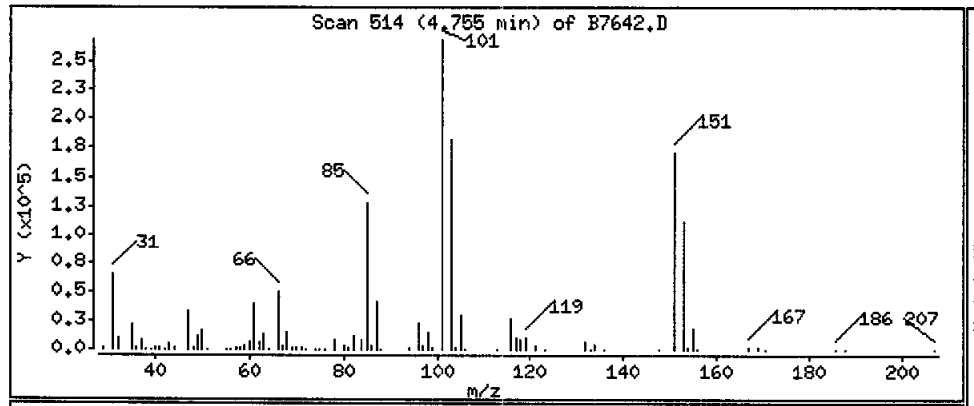
Operator: AA

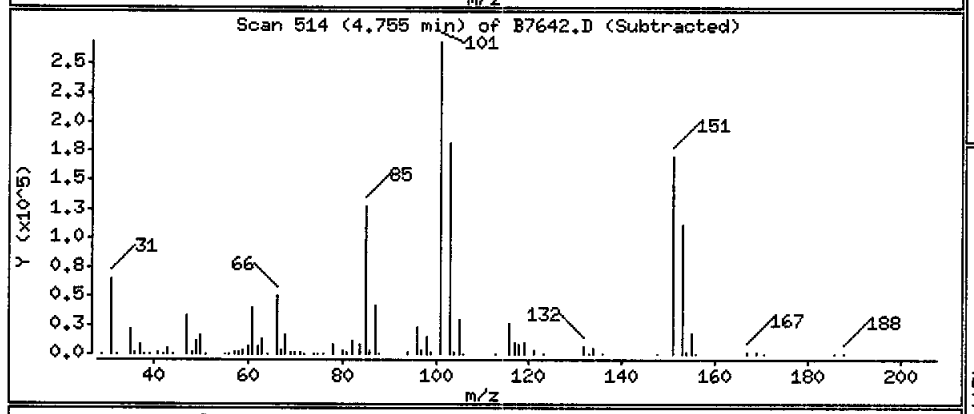
Column phase: J&W DB-624

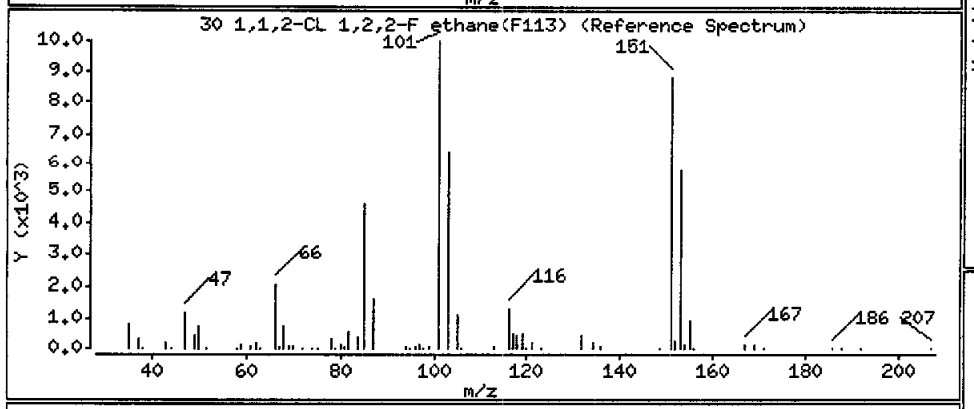
Column diameter: 0.53

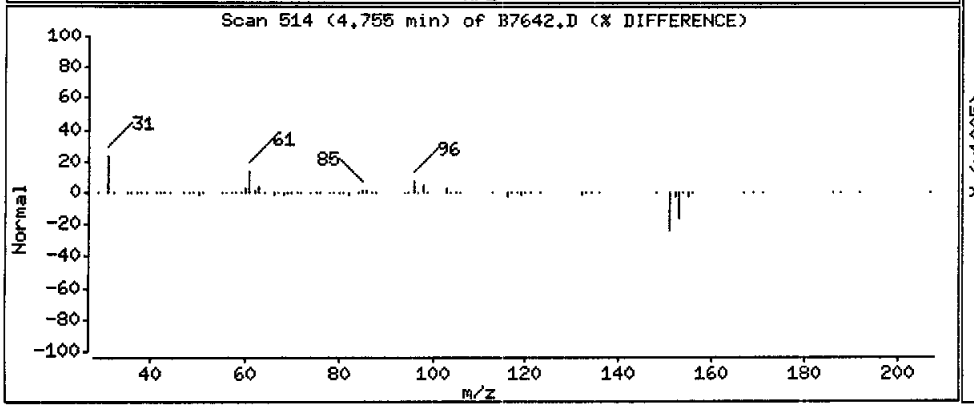
30 1,1,2-CL 1,2,2-F ethane(F113)

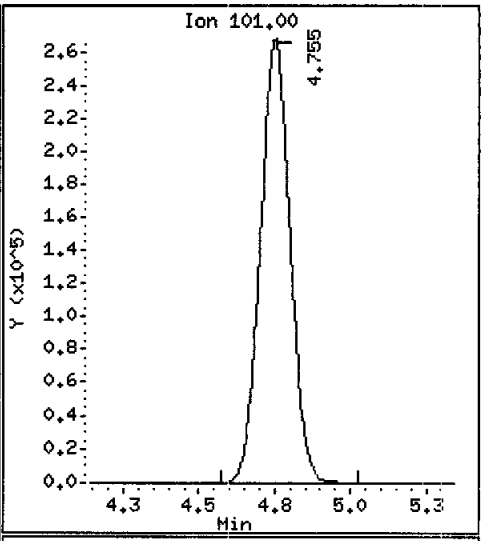
Concentration: 57.94 ppbv

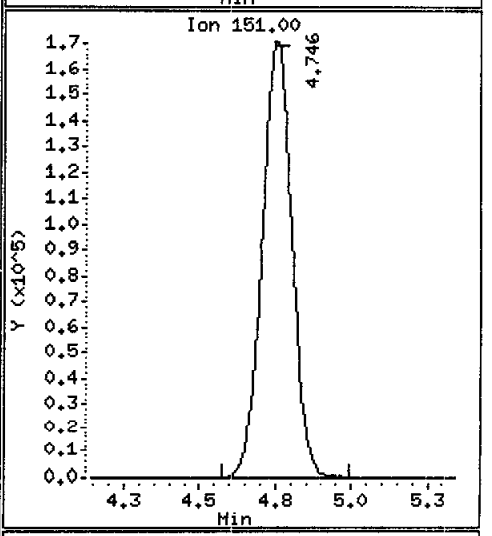


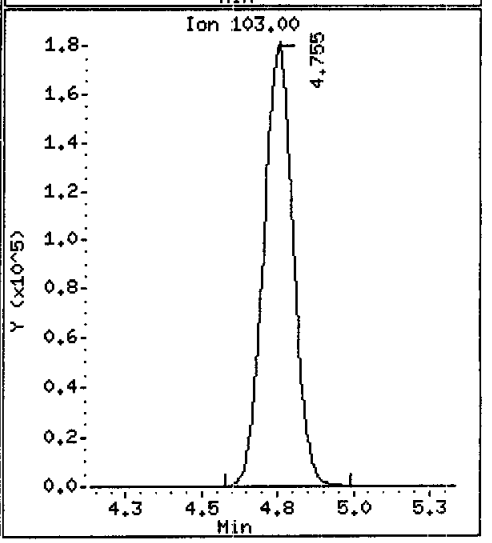












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

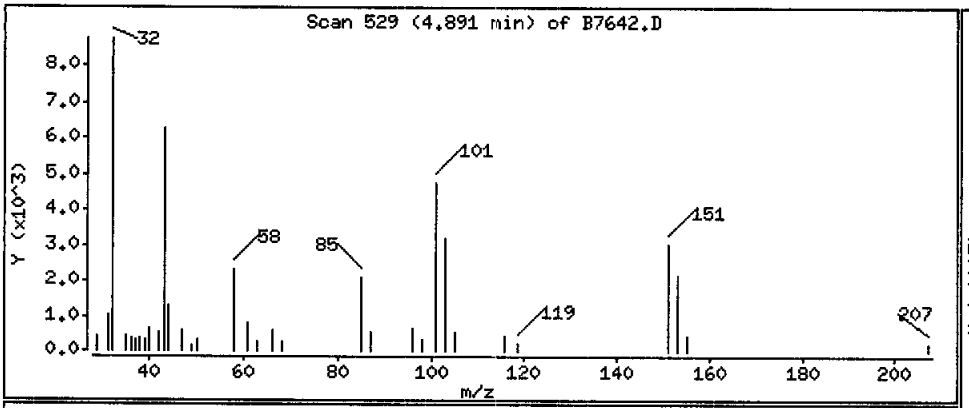
Operator: AA

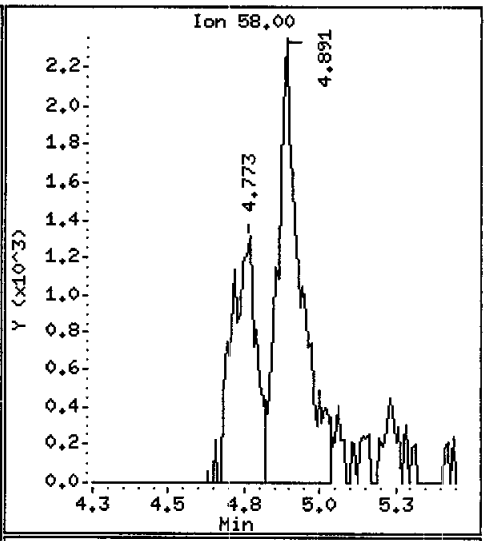
Column phase: J&W DB-624

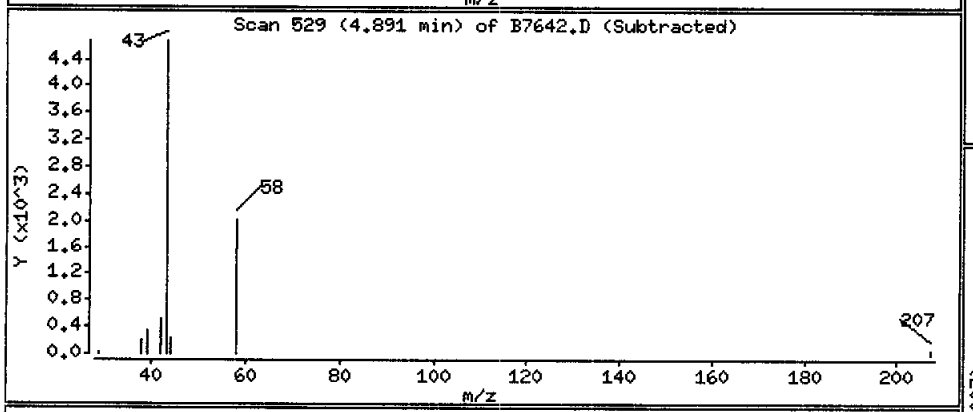
Column diameter: 0.53

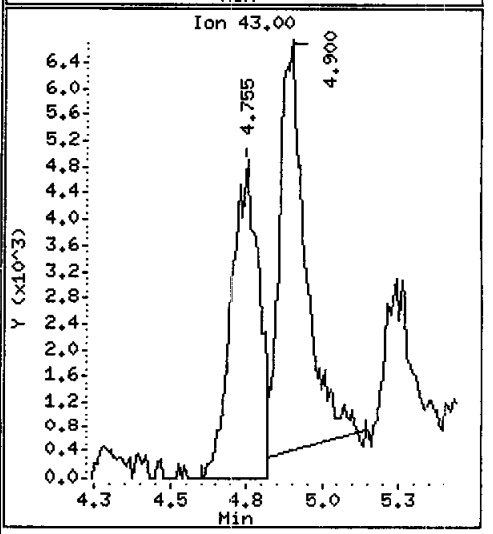
31 Acetone

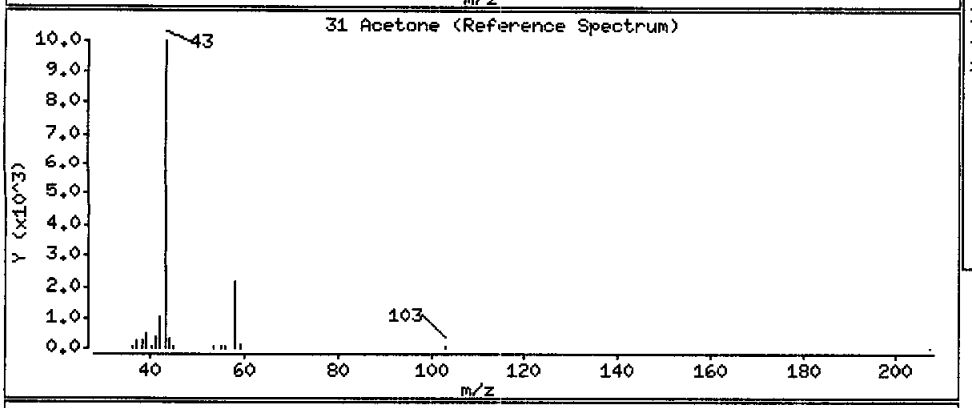
Concentration: 6.084 ppbv

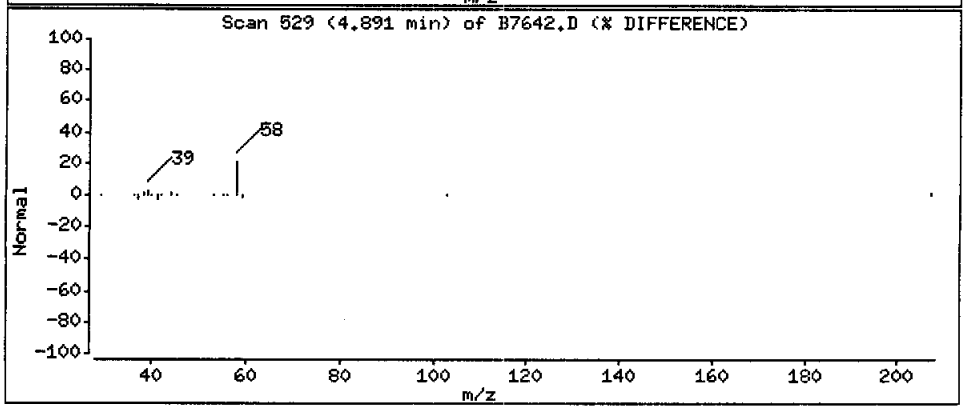












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

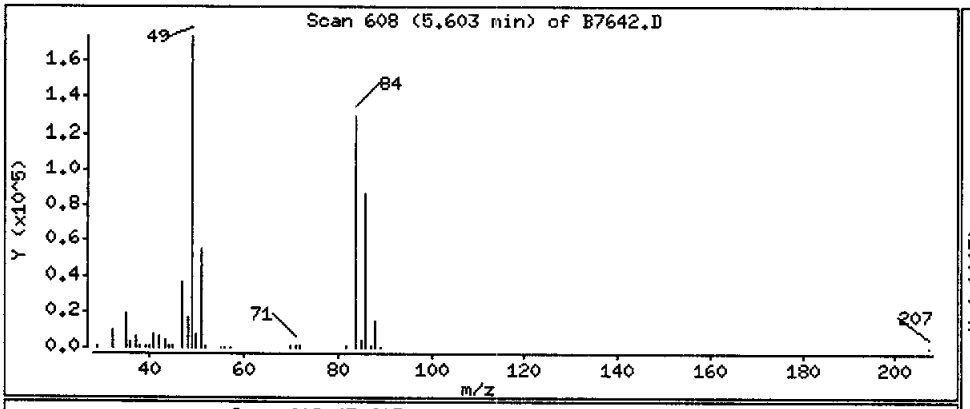
Operator: AA

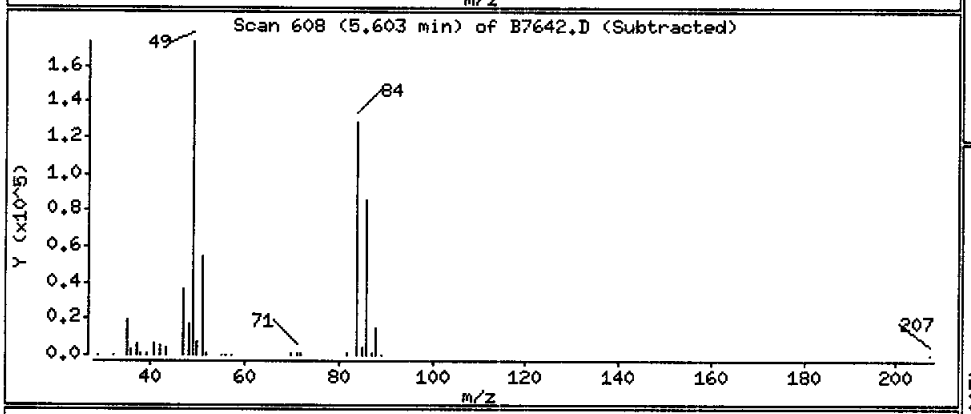
Column phase: J&W DB-624

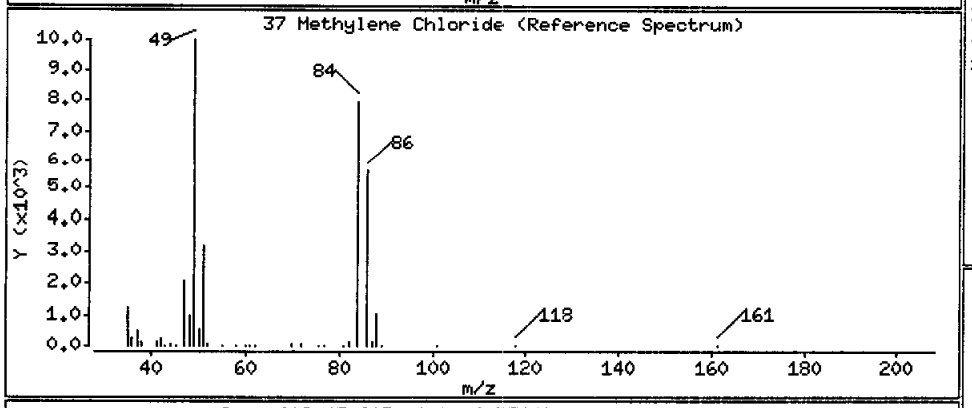
Column diameter: 0.53

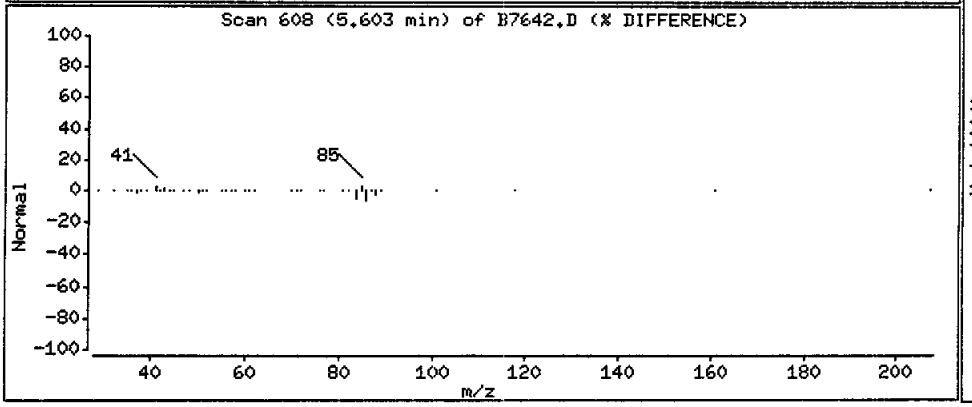
37 Methylene Chloride

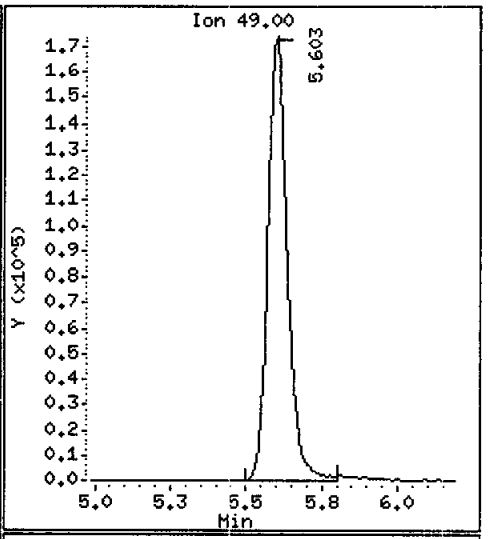
Concentration: 87.29 ppbv

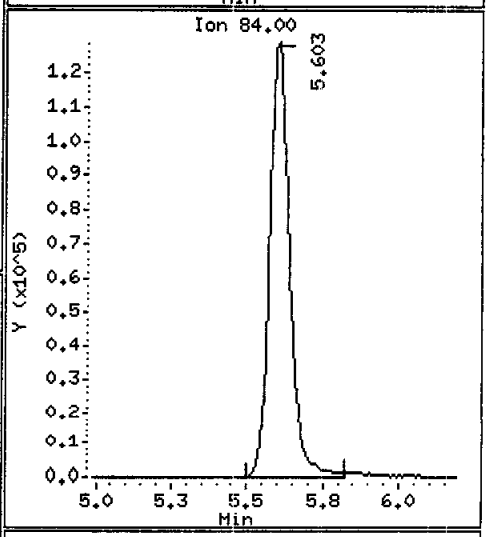


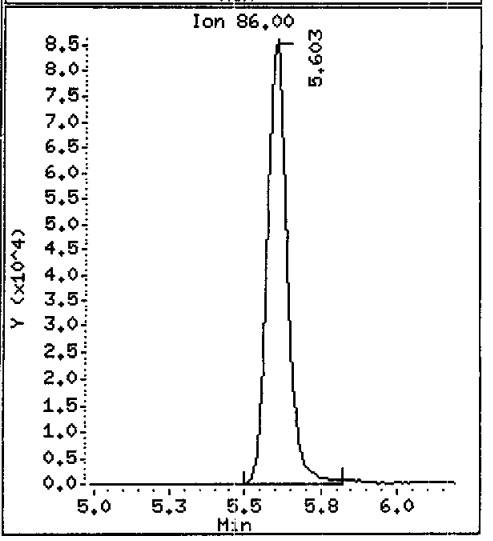












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

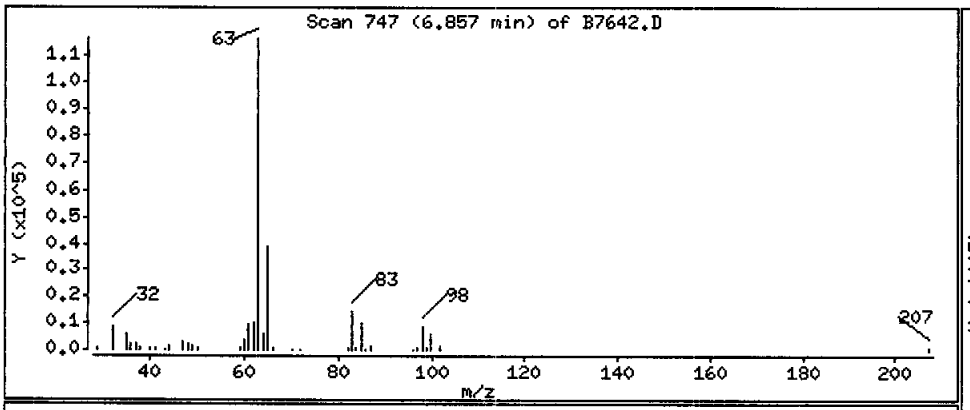
Operator: AA

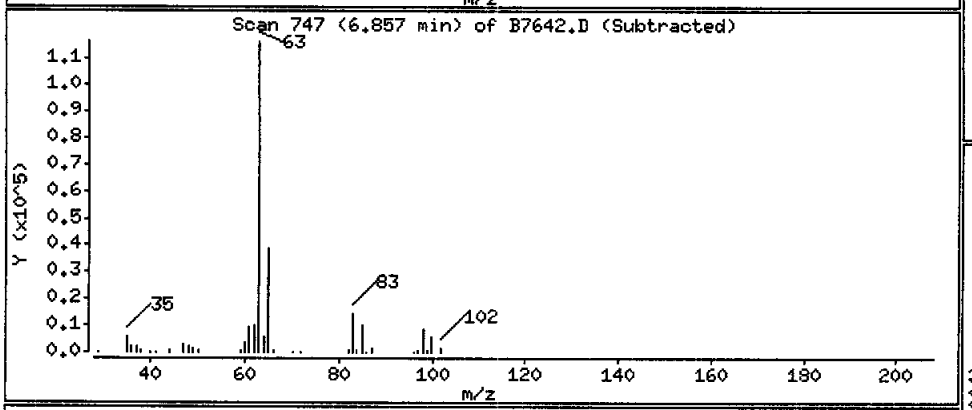
Column phase: J&W DB-624

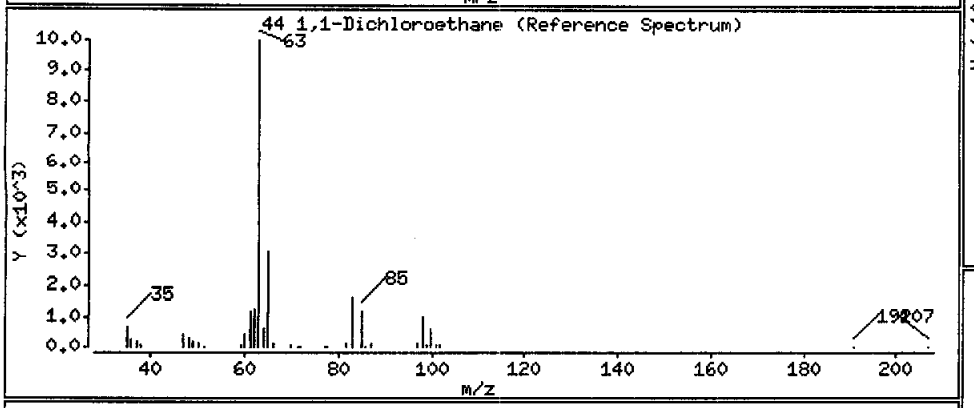
Column diameter: 0.53

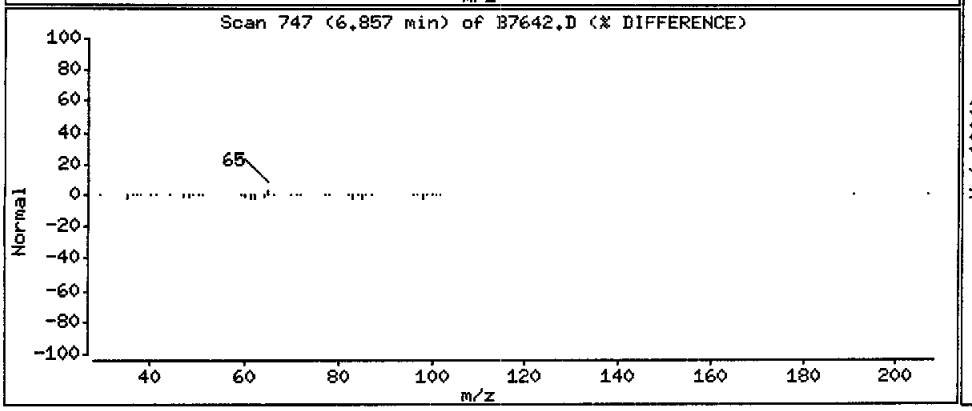
44 1,1-Dichloroethane

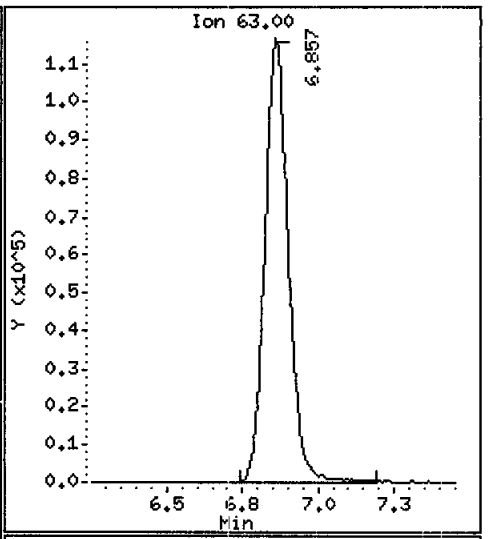
Concentration: 39.70 ppbv

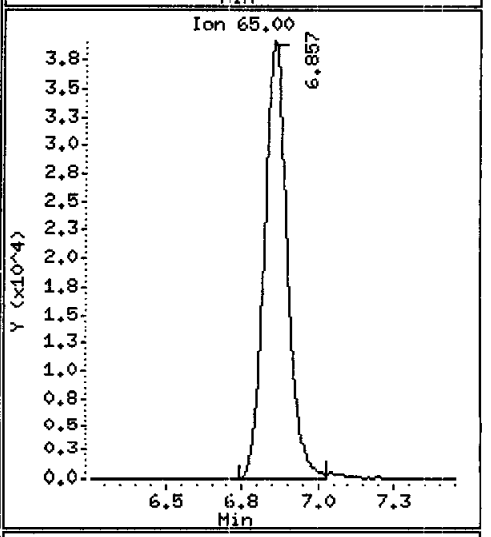


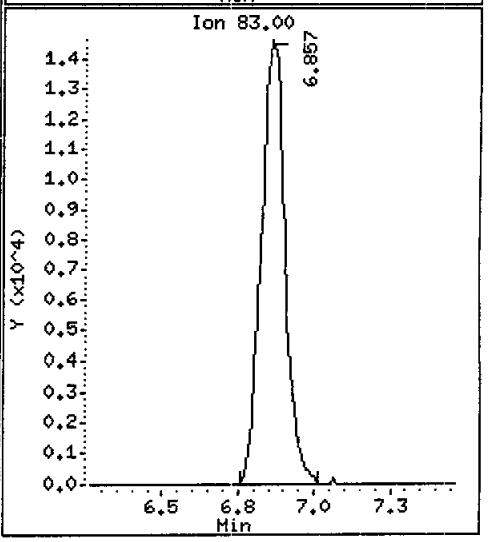












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

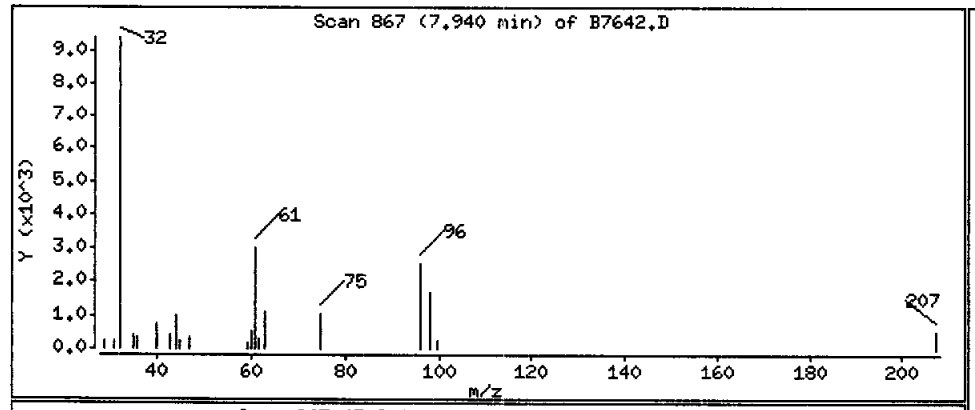
Operator: AA

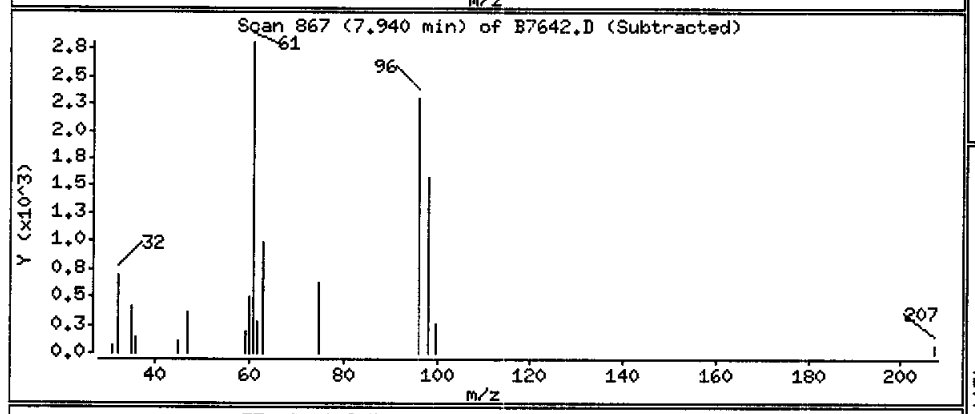
Column phase: J&W DB-624

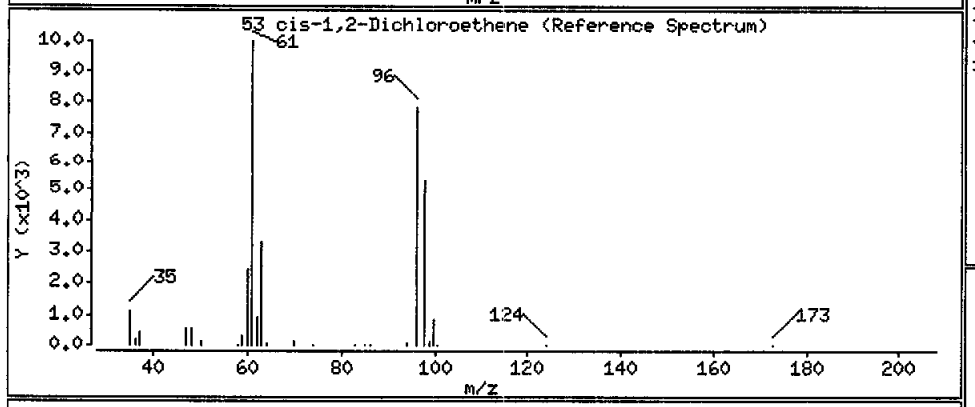
Column diameter: 0.53

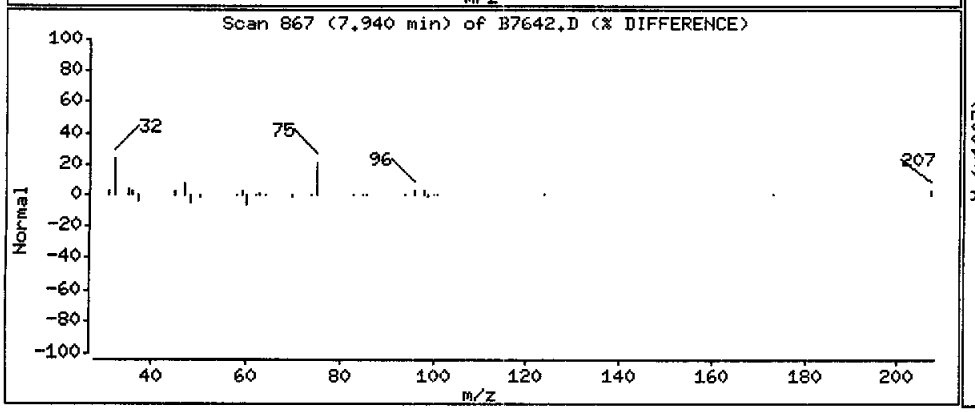
53 cis-1,2-Dichloroethene

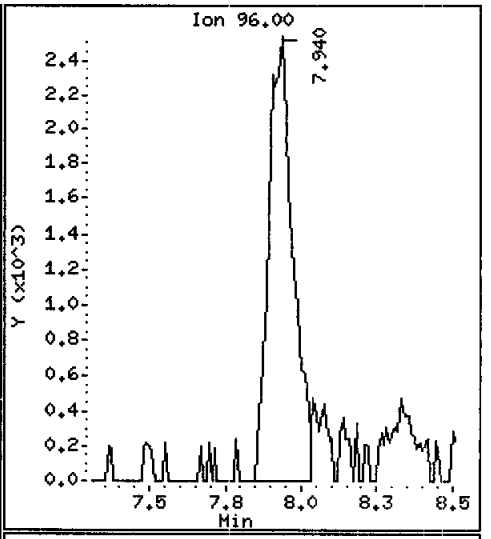
Concentration: 1.711 ppbv

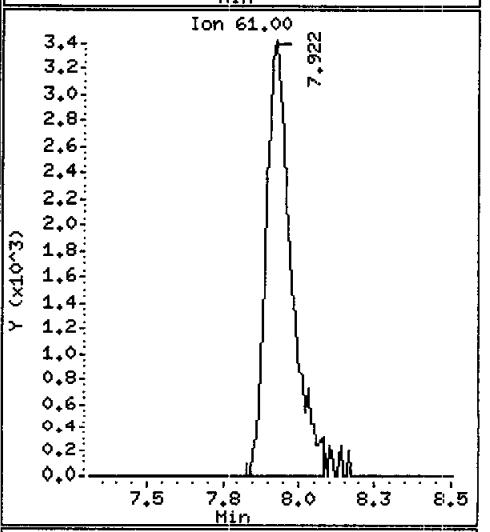


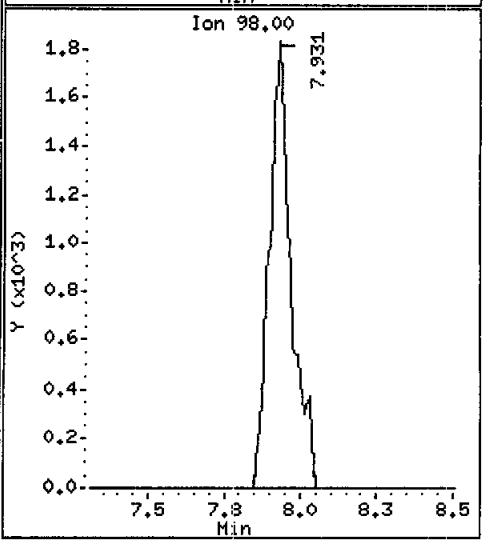












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

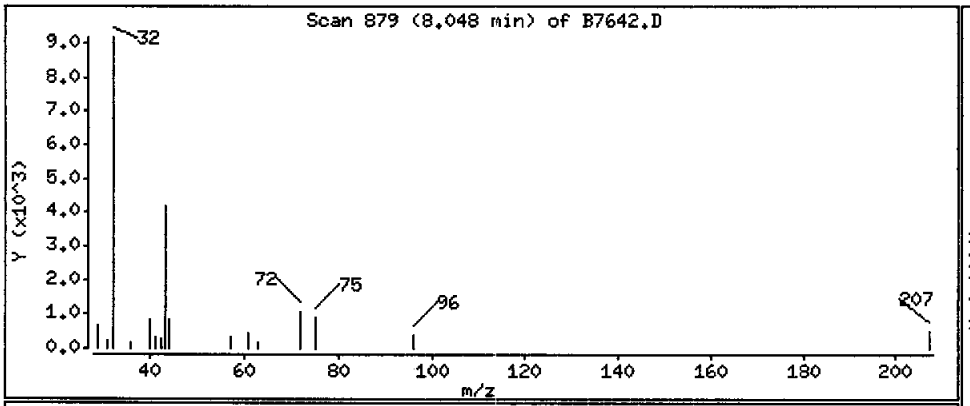
Operator: AA

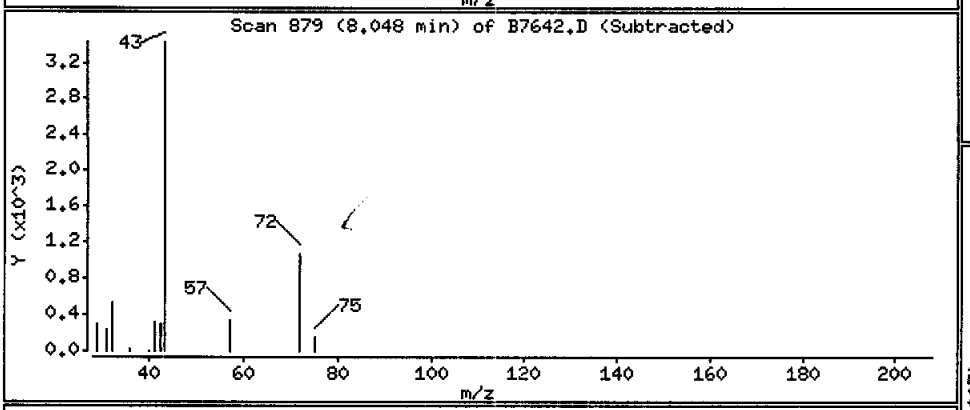
Column phase: J&W DB-624

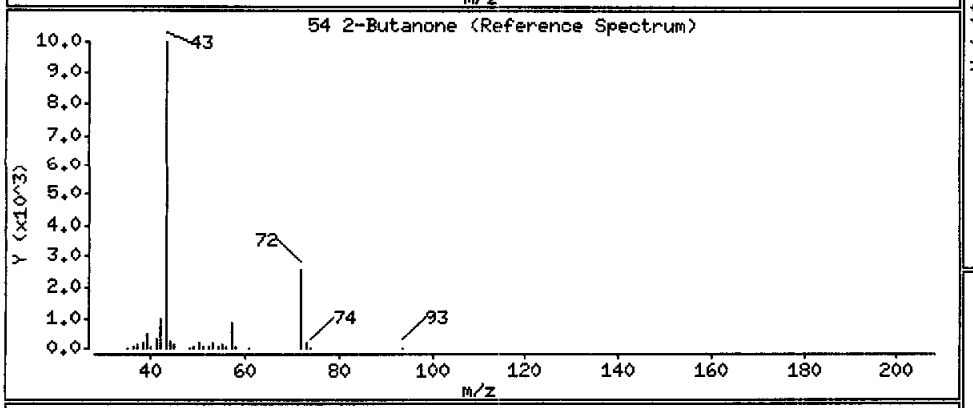
Column diameter: 0.53

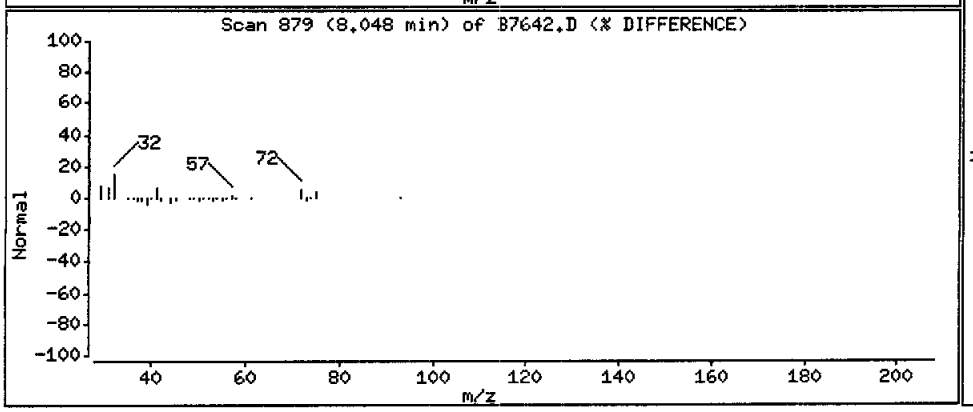
54 2-Butanone

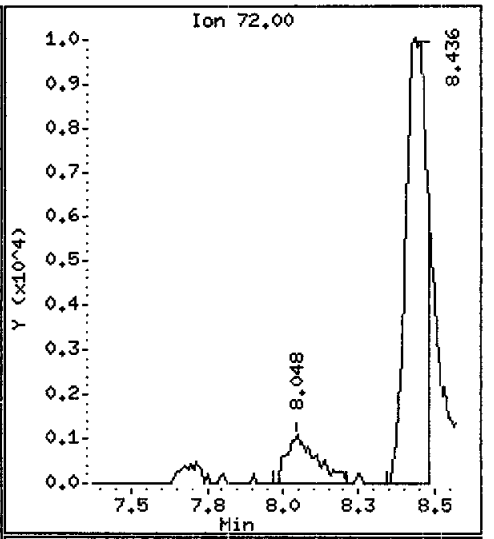
Concentration: 2.658 ppbv

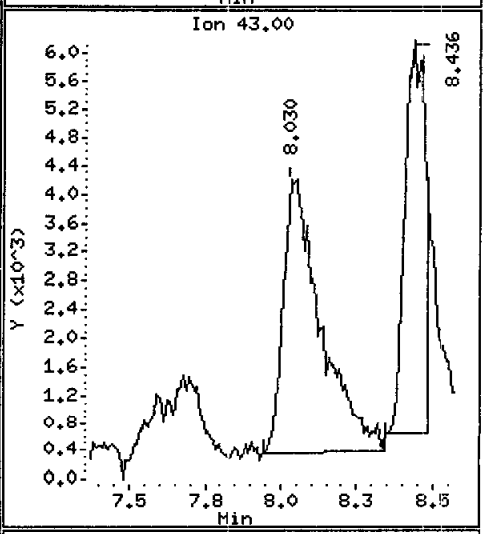


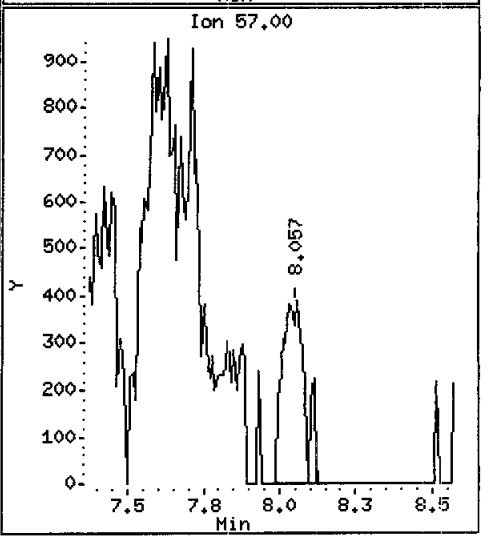












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

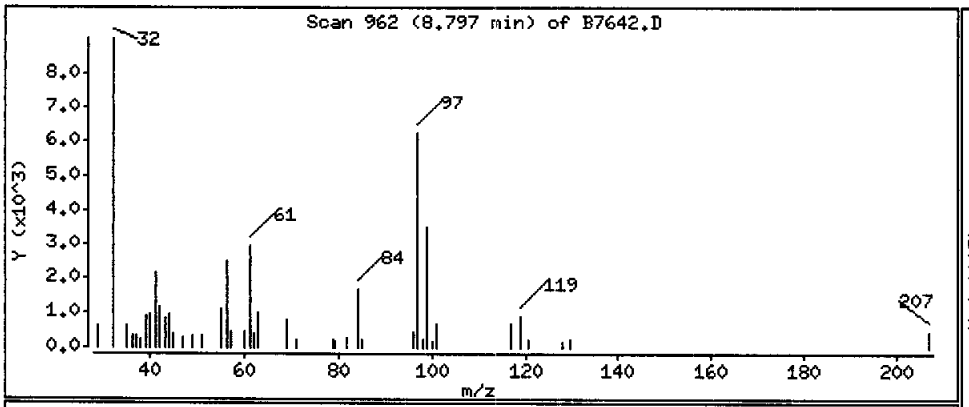
Operator: AA

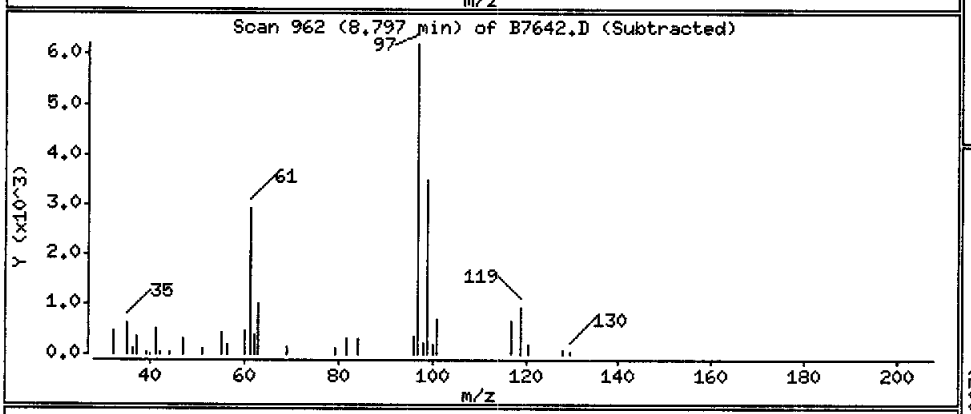
Column phase: J&W DB-624

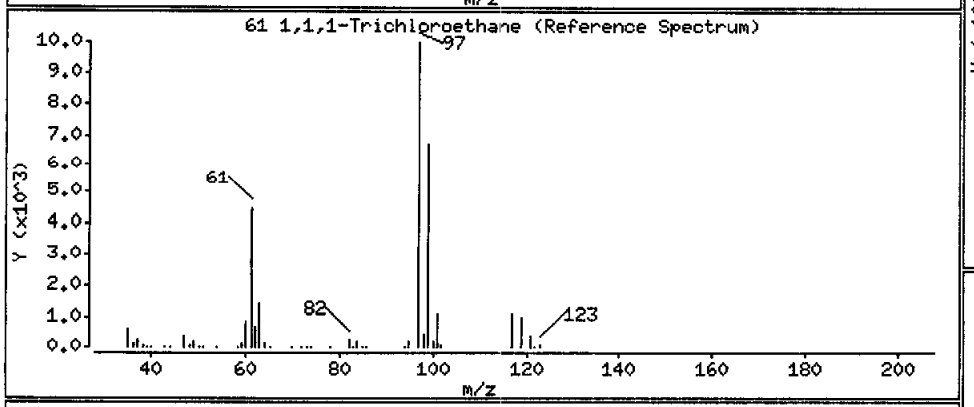
Column diameter: 0.53

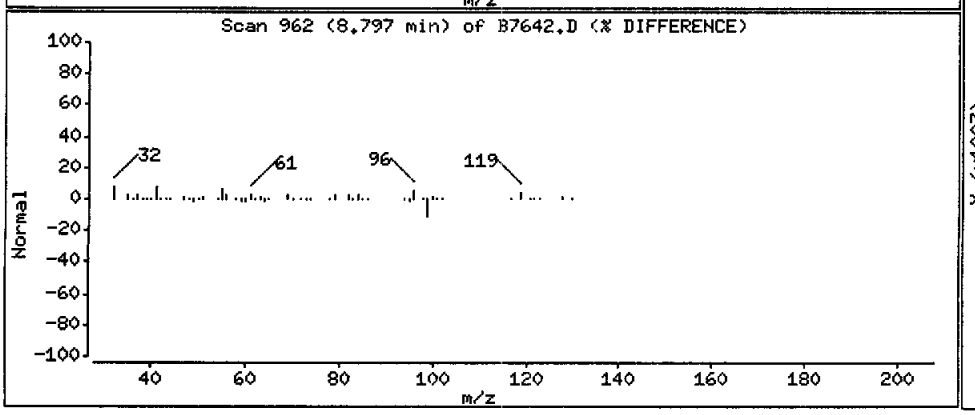
61 1,1,1-Trichloroethane

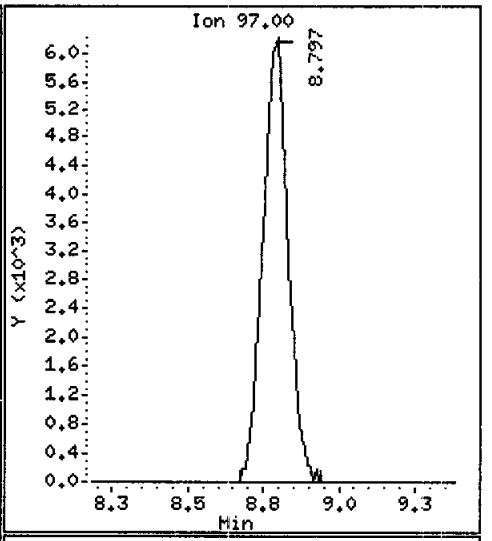
Concentration: 1.763 ppbv

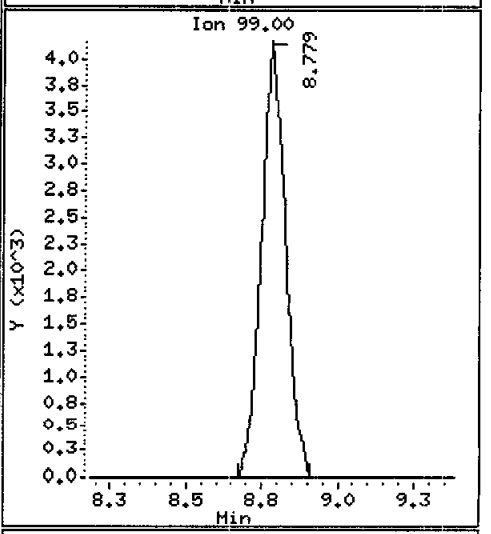


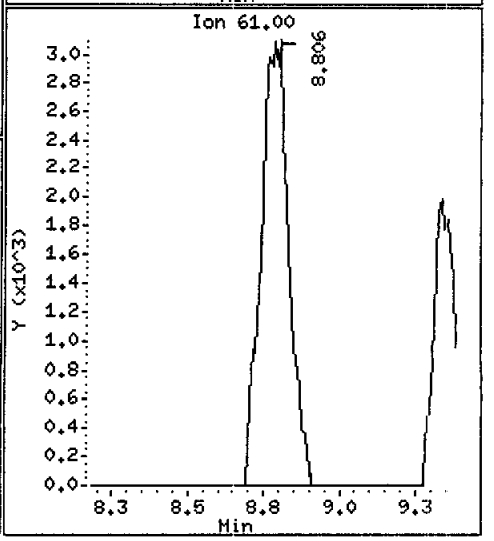












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

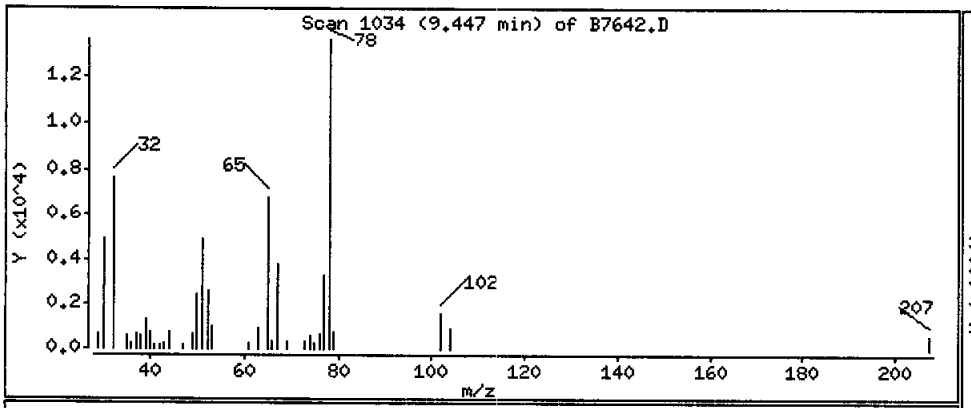
Operator: AA

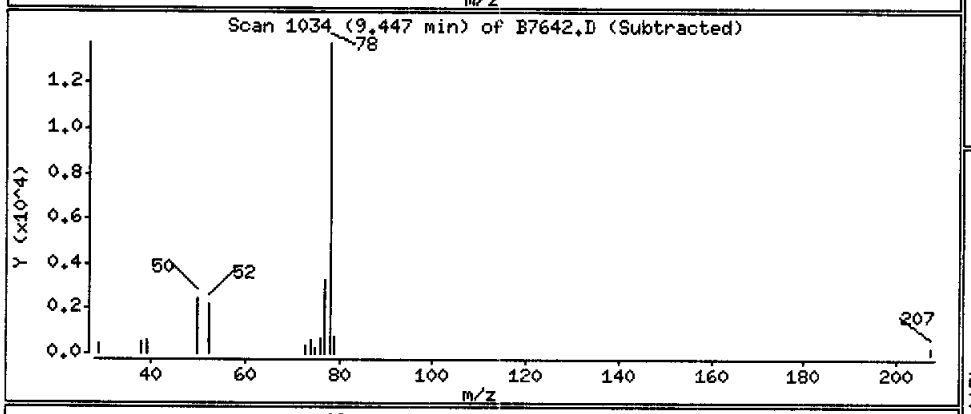
Column phase: J&W DB-624

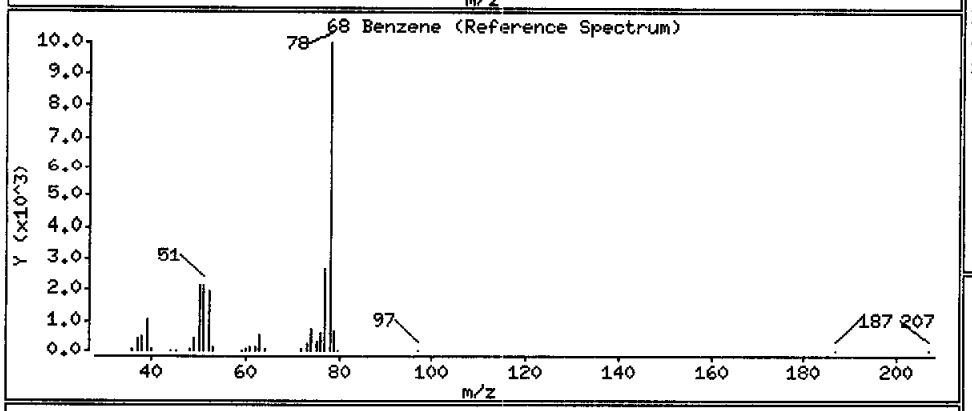
Column diameter: 0.53

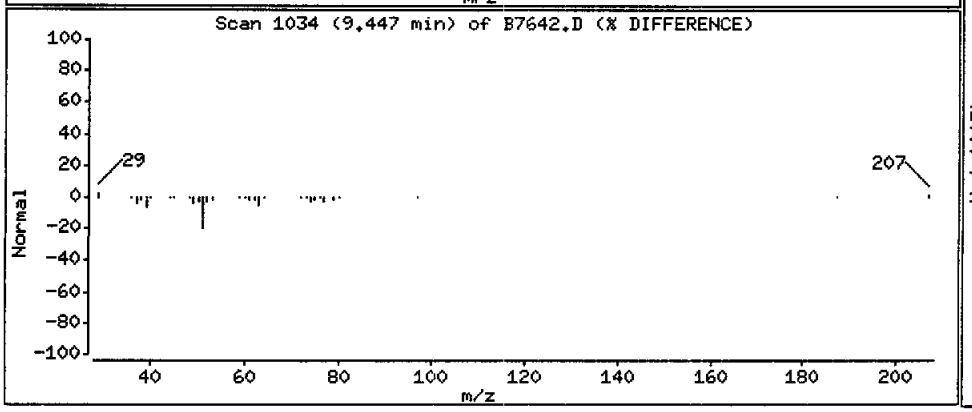
68 Benzene

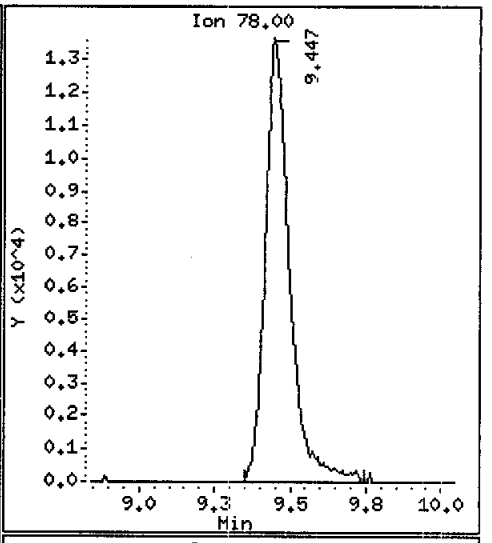
Concentration: 4.068 ppbv

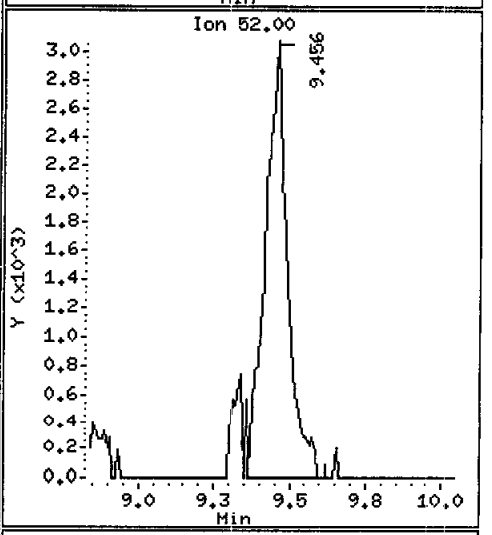


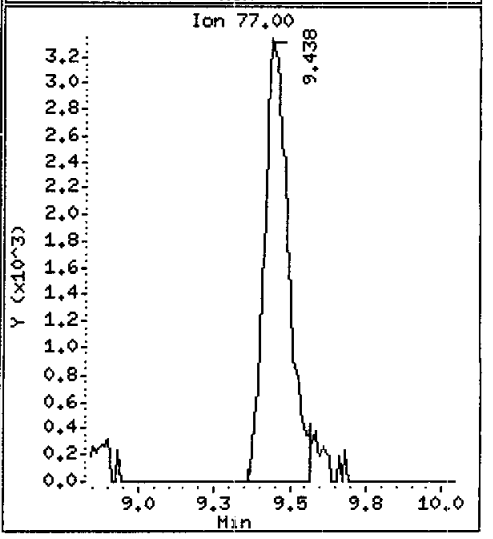












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

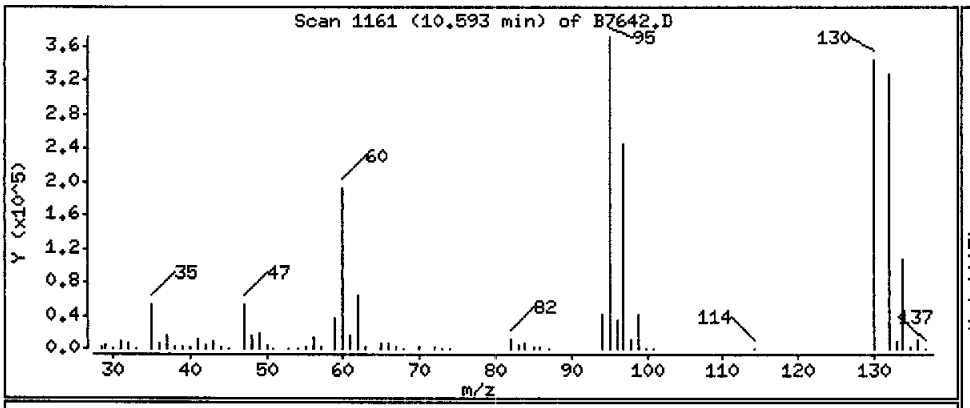
Operator: AA

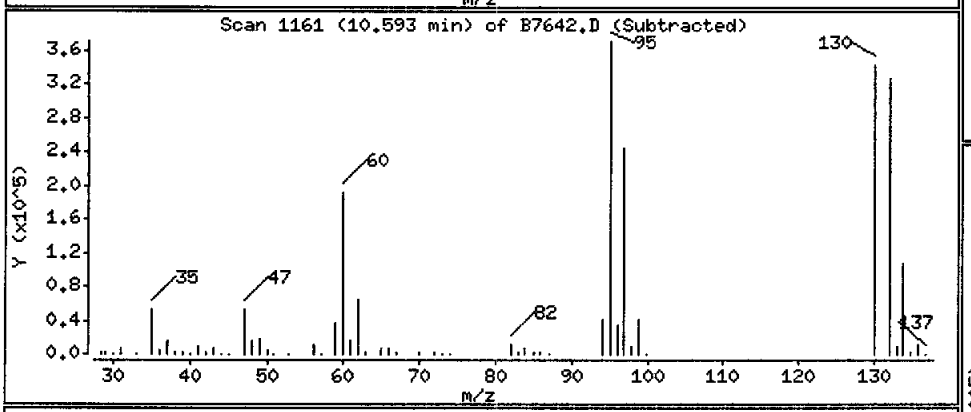
Column phase: J&W DB-624

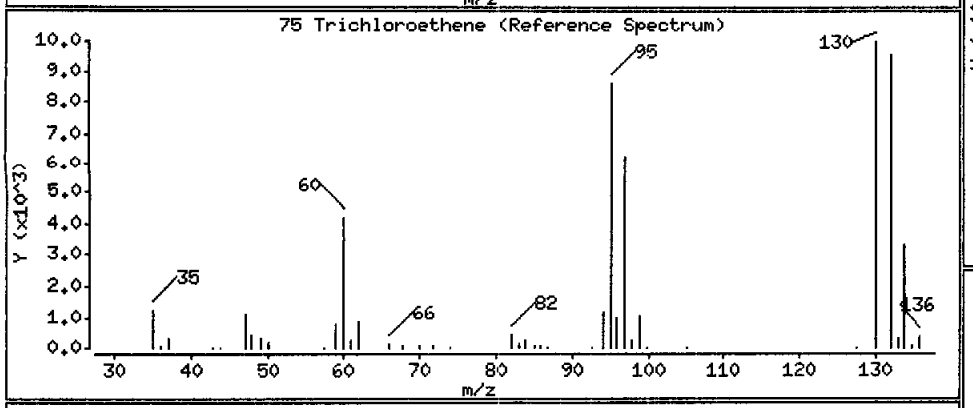
Column diameter: 0.53

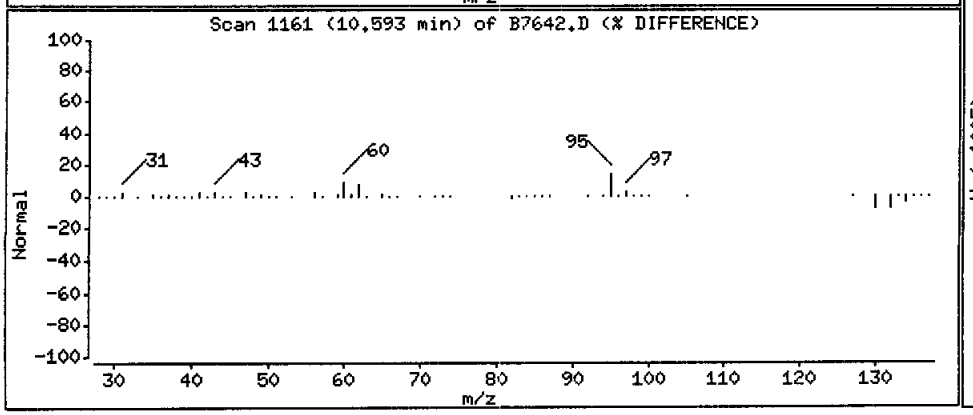
75 Trichloroethene

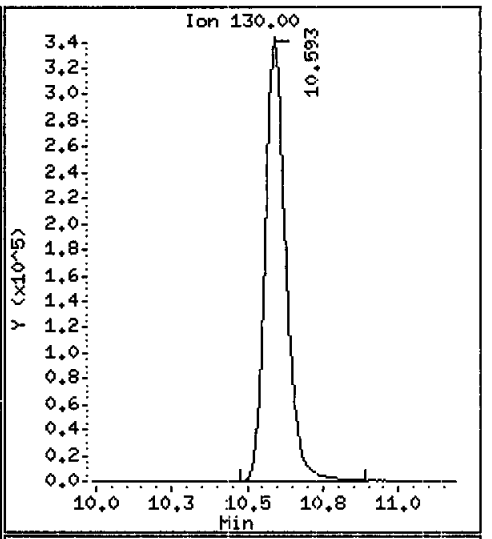
Concentration: 136.0 ppbv

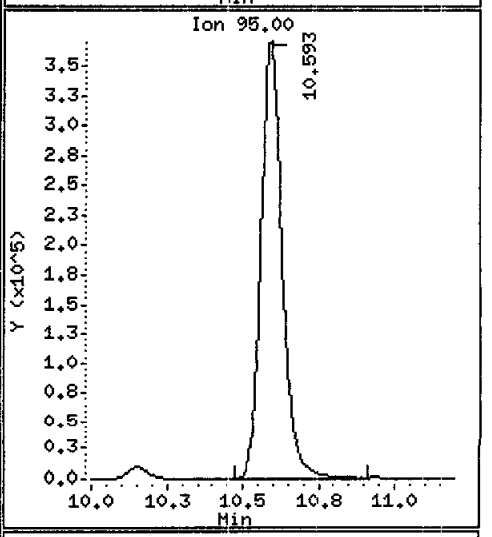


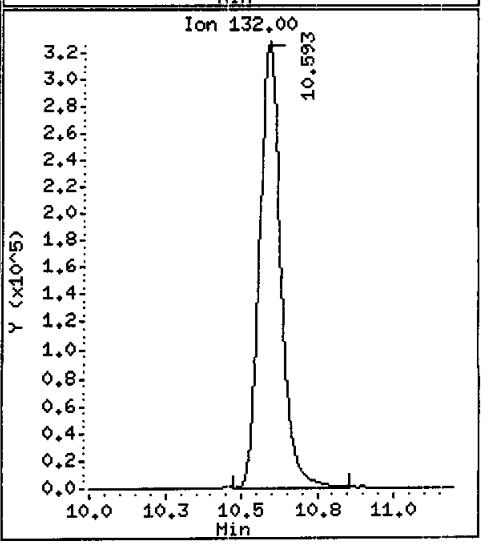












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

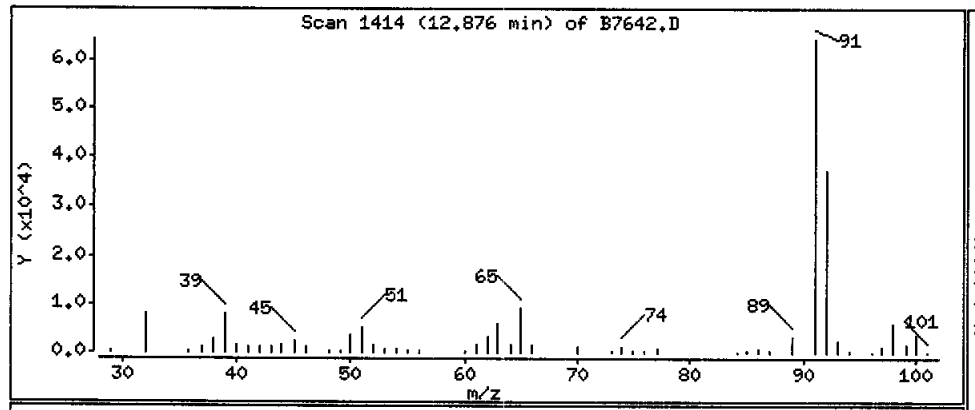
Operator: AA

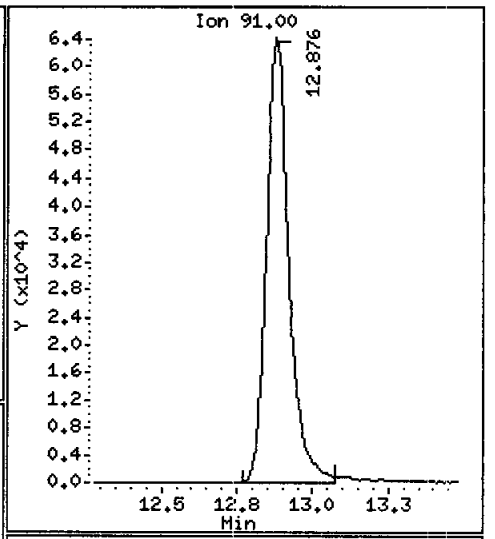
Column phase: J&W DB-624

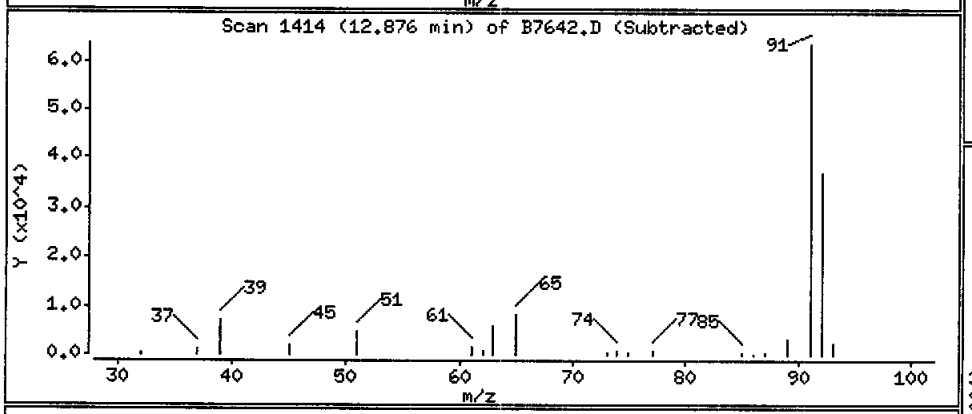
Column diameter: 0.53

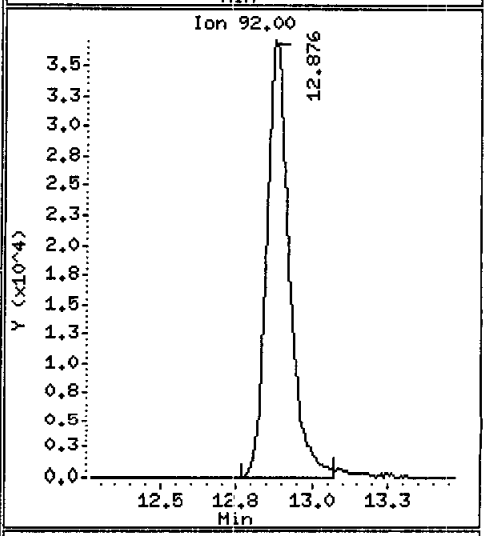
89 Toluene

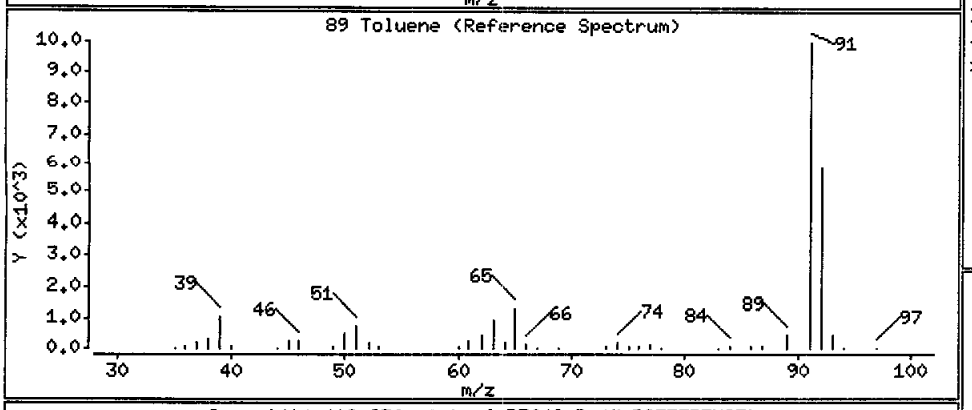
Concentration: 13.71 ppbv

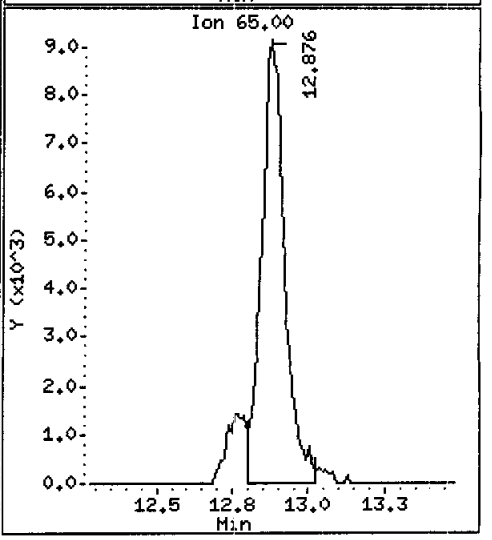


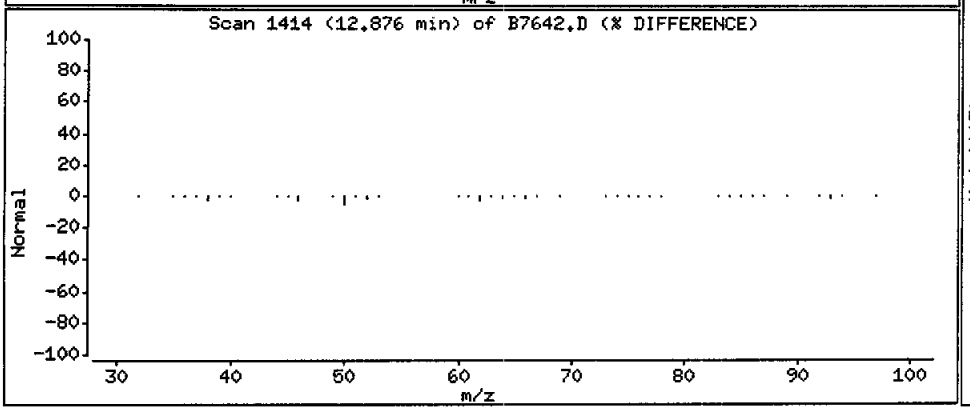












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

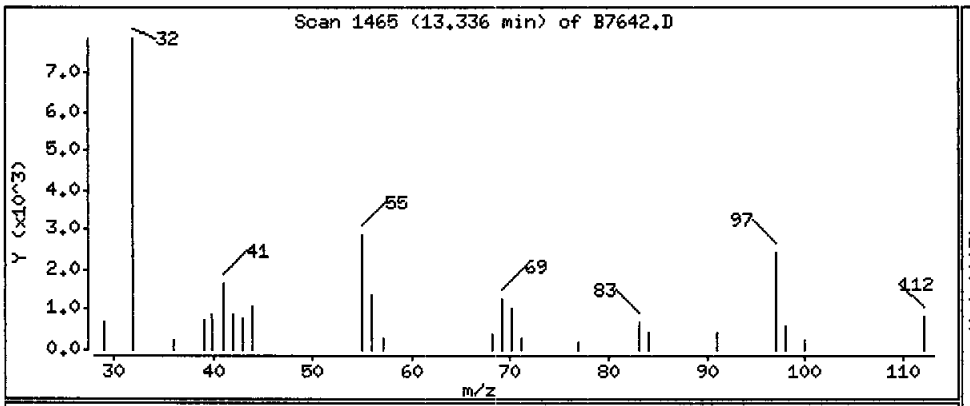
Operator: AA

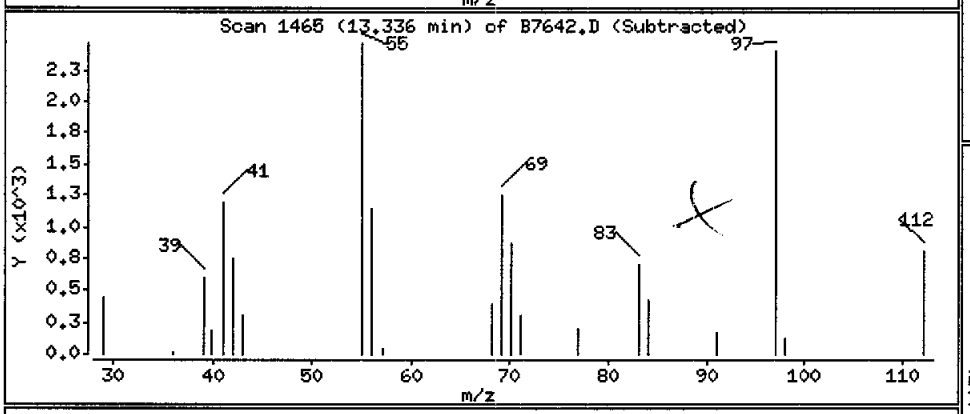
Column phase: J&W DB-624

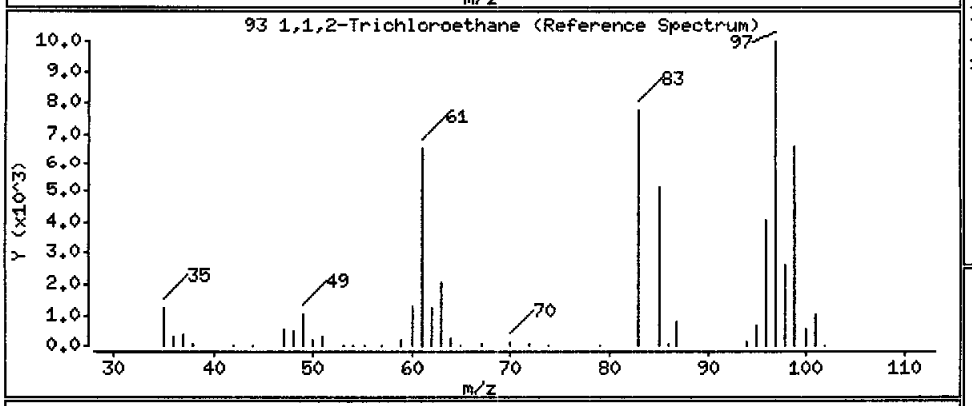
Column diameter: 0.53

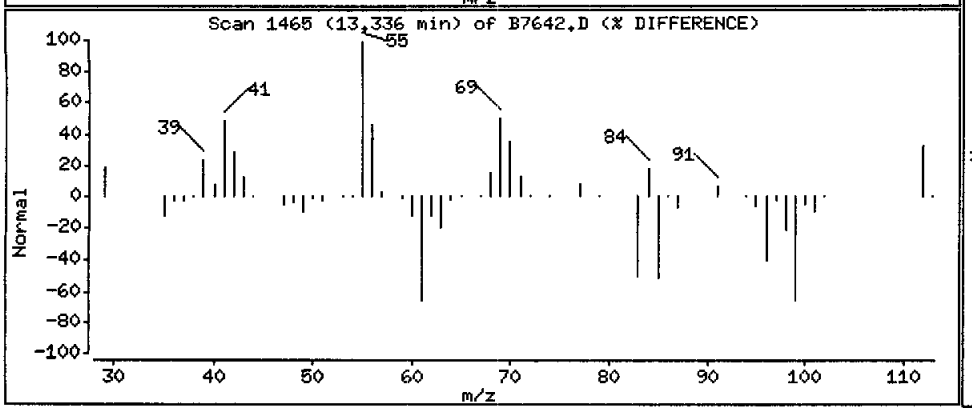
93 1,1,2-Trichloroethane

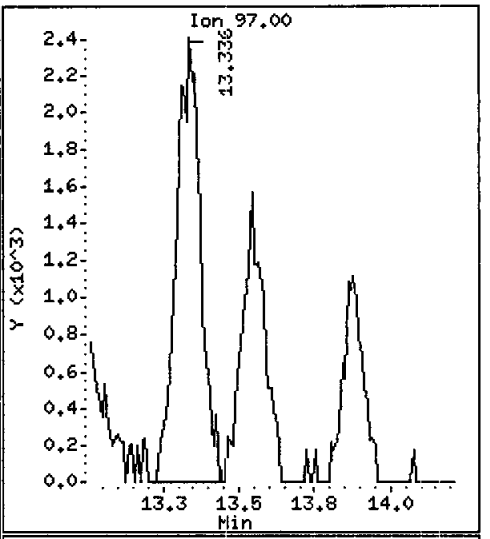
Concentration: 1.154 ppbv

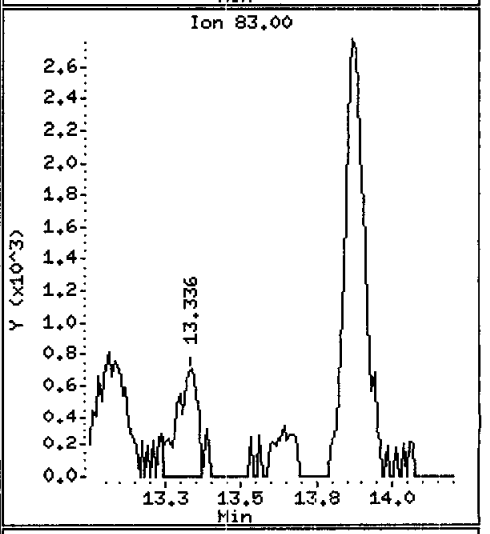


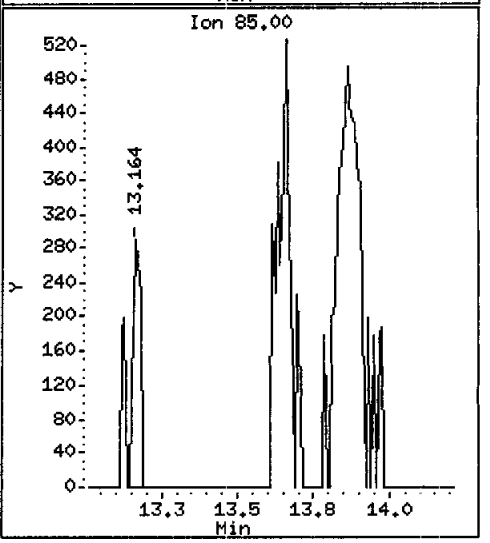












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

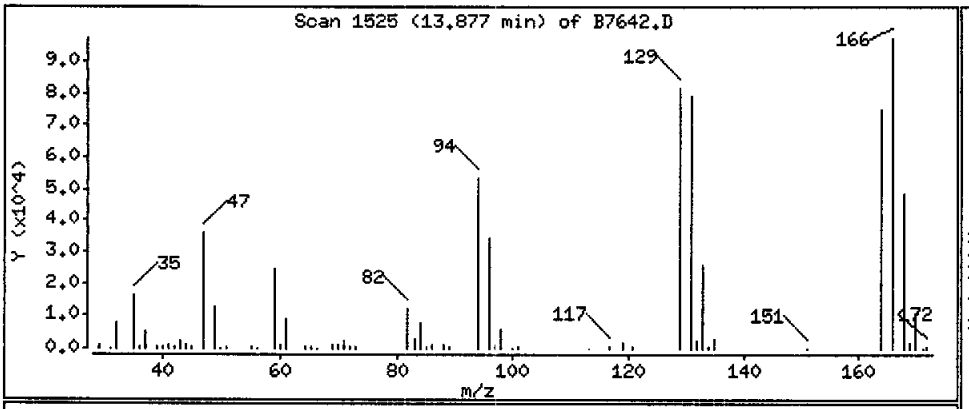
Operator: AA

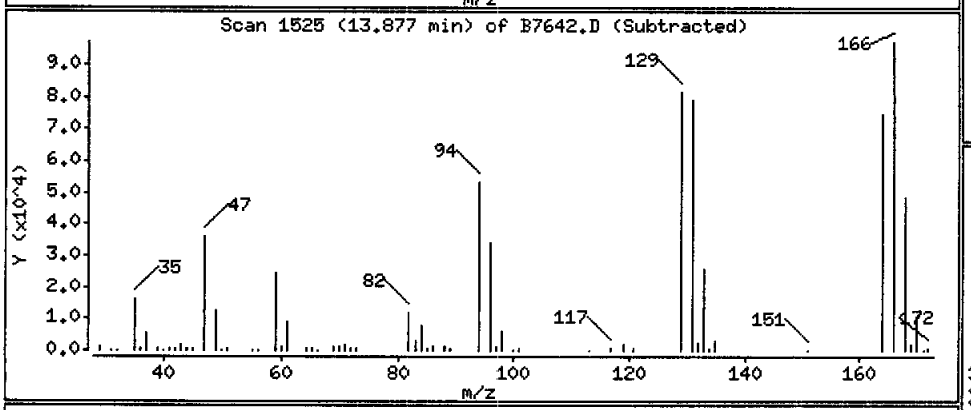
Column phase: J&W DB-624

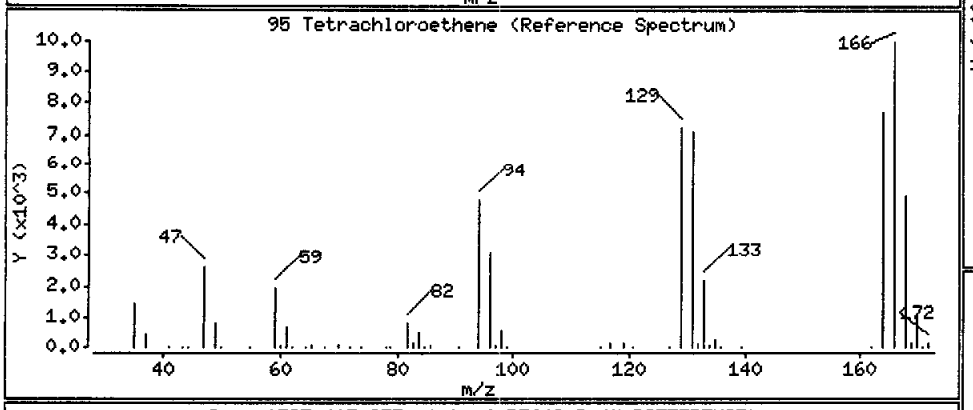
Column diameter: 0.53

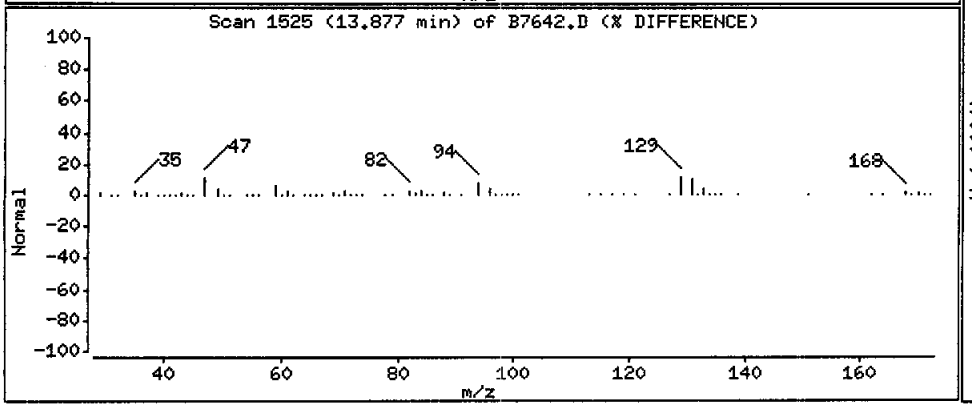
95 Tetrachloroethene

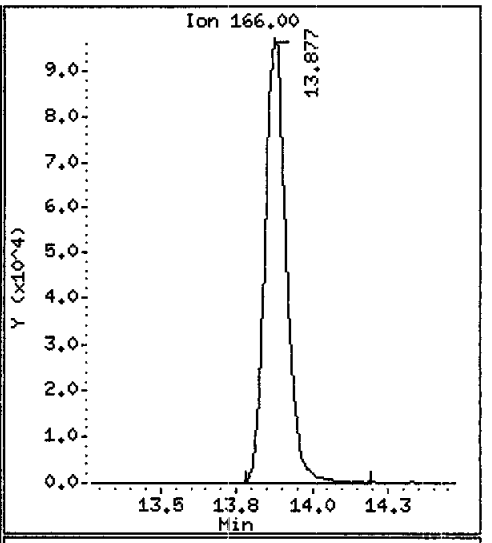
Concentration: 29.77 ppbv

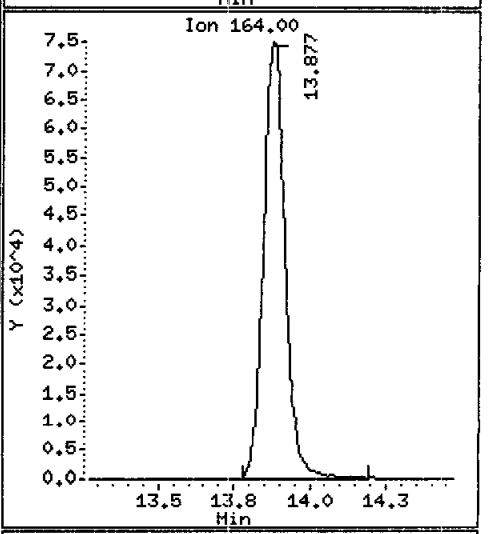


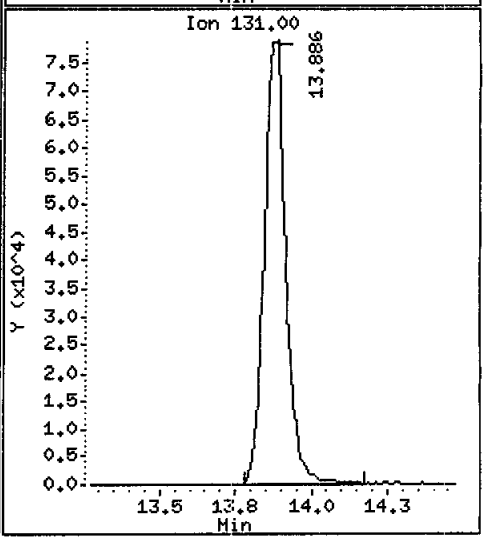












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

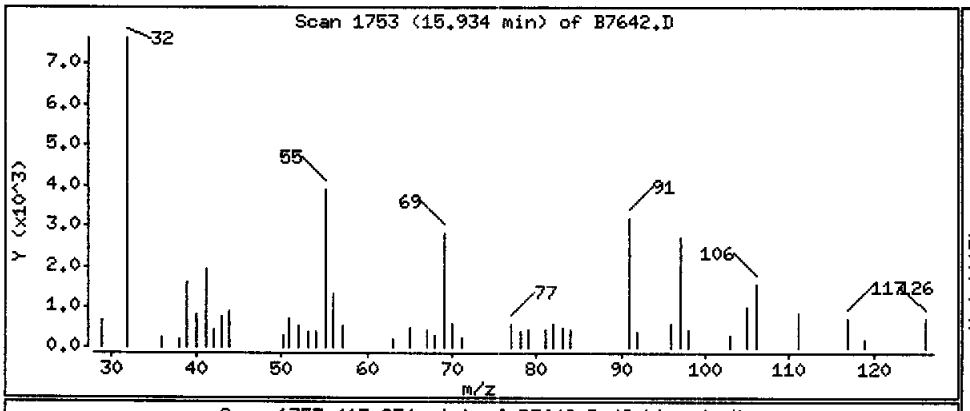
Operator: AA

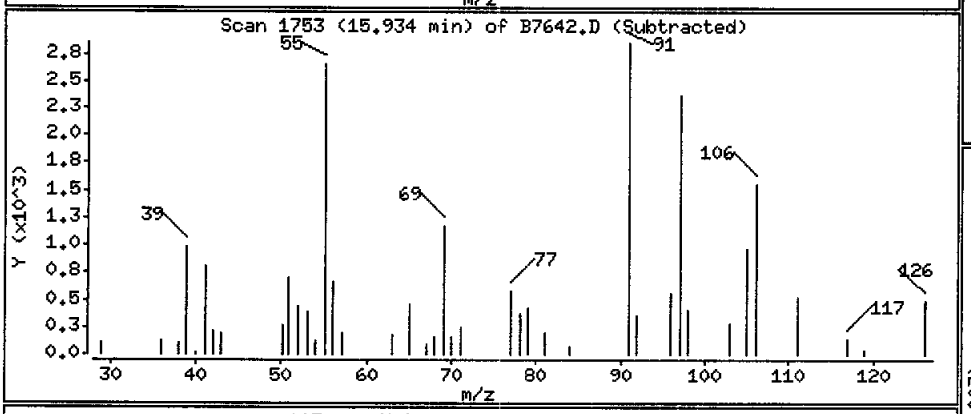
Column phase: J&W DB-624

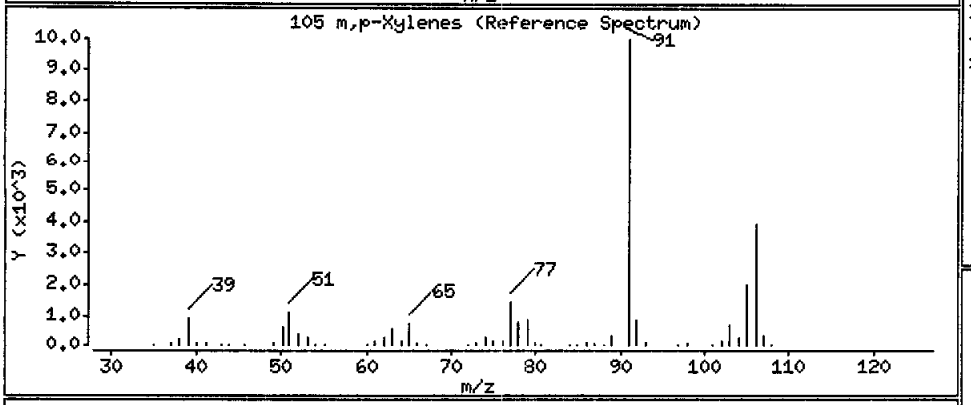
Column diameter: 0.53

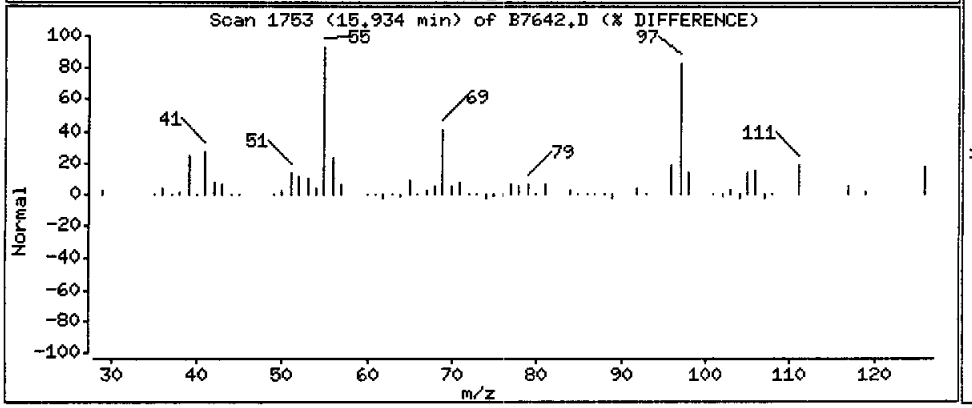
105 m,p-Xylenes

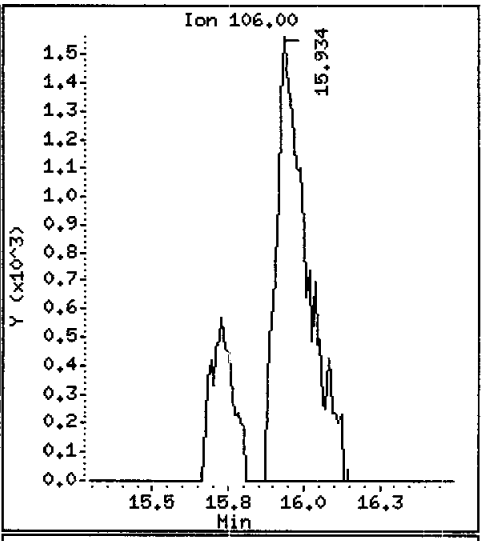
Concentration: 1.288 ppbv

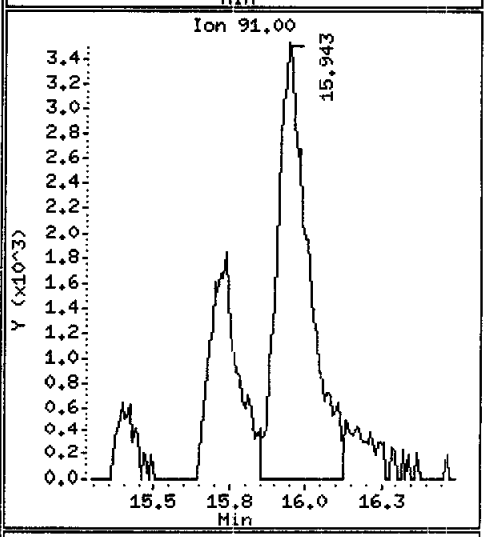


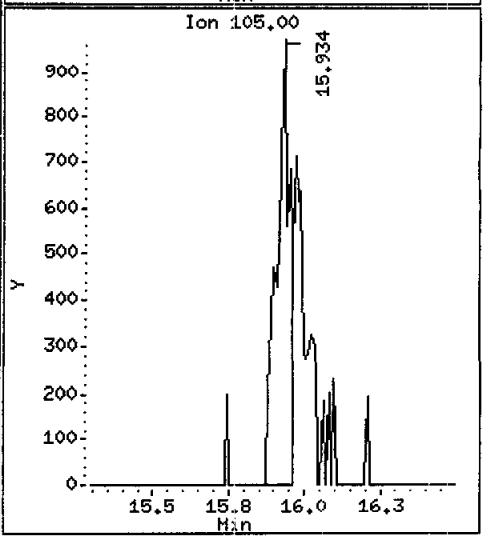












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050117.b\B7642.D

Date : 17-JAN-2005 14:45

Client ID: 066394-001

Instrument: gcmsb.i

Sample Info: G2DK01AD,066394-001,SANDIA,E5A100233-7

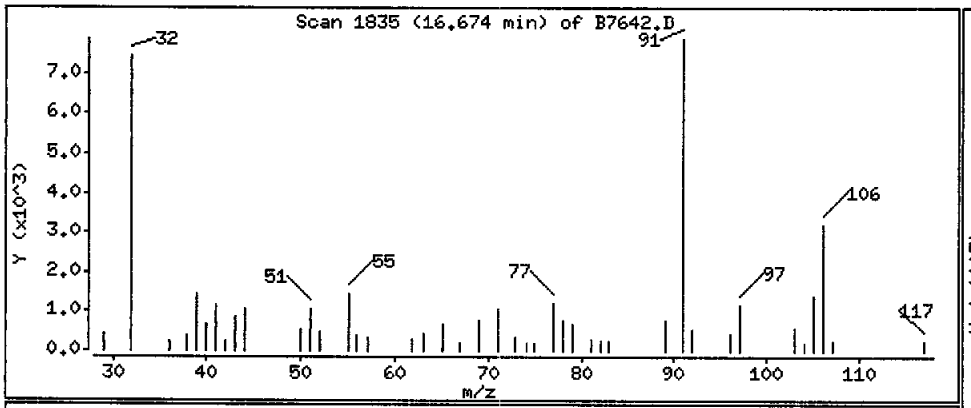
Operator: AA

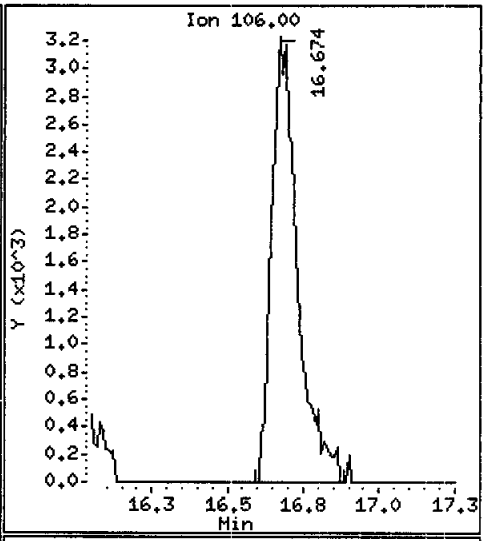
Column phase: J&W DB-624

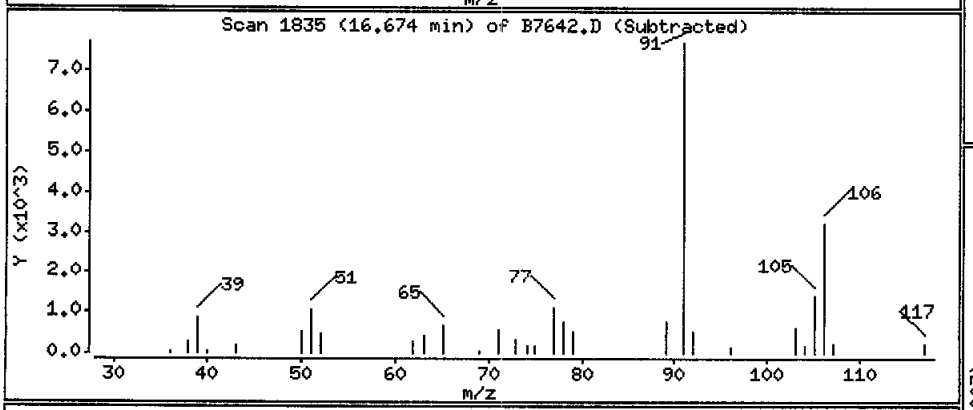
Column diameter: 0.53

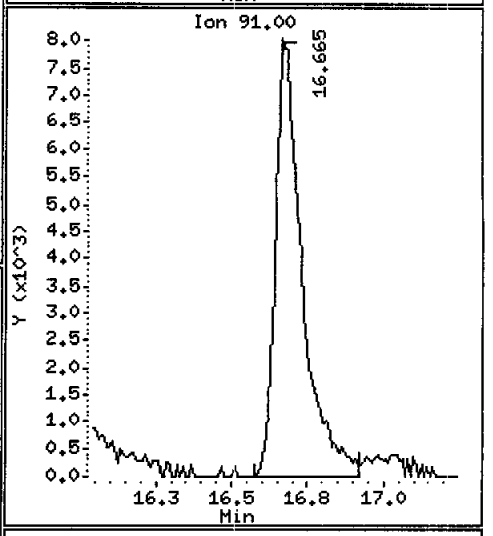
107 o-Xylene

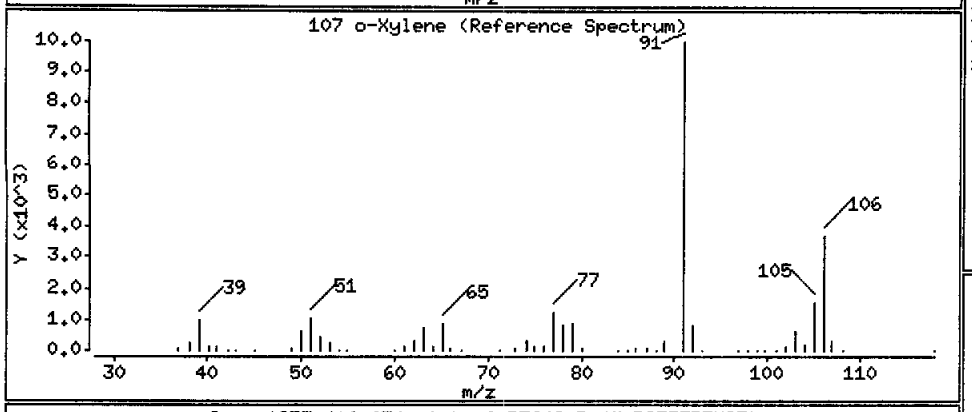
Concentration: 2.352 ppbv

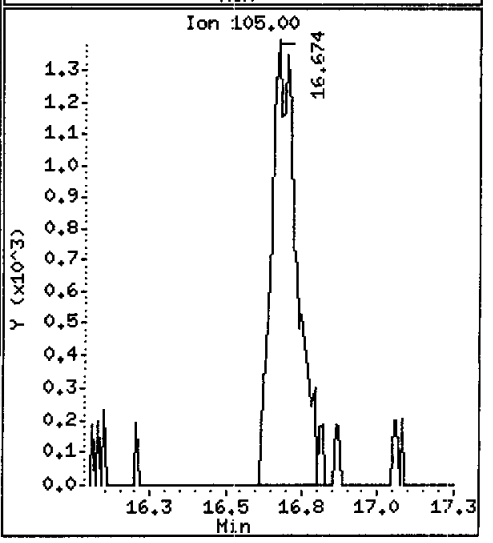


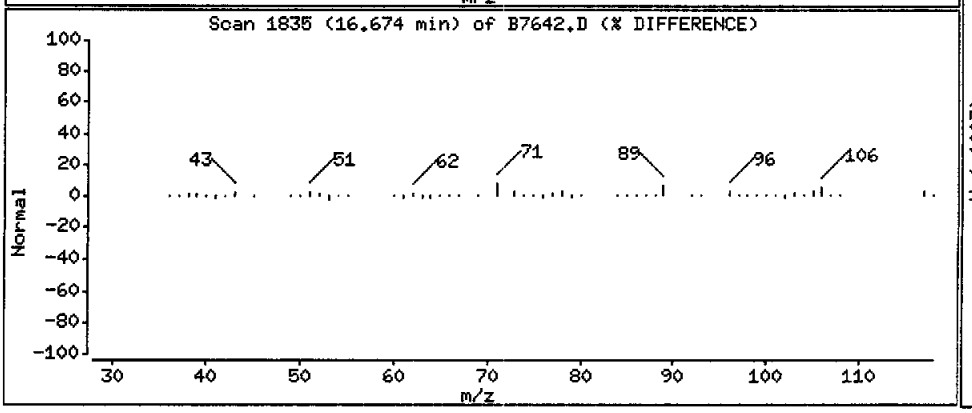












SEVERN TRENT STL

END OF RAW DATA

RECORDS CENTER CODE: _____

SMO ANALYTICAL DATA ROUTING FORM

PROJECT NAME: (TAG) vapor well sampling
PROJECT/TASK: 7222_01.05
SNL TASK LEADER: Collins
ORG/MS/CF0#: 6146/1087/CF038-05
SMO PROJECT LEAD: Palencia
SAMPLE SHIP DATE: 1/4/2005

ARCOC	LAB	LAB ID	PRELIM DATE	FINAL DATE	EDD	EDD ON Q	Cust CD	RC CD
608039	STCA	E5A100227		2/7/2005	X	X	X	X

DATA PACKAGE TAT:		RUSH	X	NORMAL
CORRECTIONS REQUESTED BY/DATE:				
PROBLEM #/DATE CORRECTION RECEIVED:				
CVR COMPLETED BY/DATE:	W. Palencia		2-8-05	
FINAL TRANSMITTED TO/DATE:	Skelly		2-8-05	
SENT TO VALIDATION BY/DATE:	N/A			
REVISIONS REQUESTED/REVISIONS RECEIVED (DATE):				
VALIDATION COMPLETED BY/DATE:				
COPY TO WM BY/DATE:				
CD REQUESTED BY/DATE				
CD RECEIVED BY/DATE				
TO ERDMS OR RECORDS CENTER BY/DATE:	R Kavanaugh		2-8-05	

COMMENTS:

Contract Verification Review (CVR)

Project Leader COLLINS | Project Name (TAG) VAPOR WELL SAMPLING | Case No. 7222_01.05

AR/COC No. 608039 | Analytical Lab SEVERN TRENT | SDG No. E5A100227

In the tables below, mark any information that is missing or incorrect and give an explanation.

1.0 Analysis Request and Chain of Custody Record and Log-In Information

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
1.1	All items on COC complete - data entry clerk initialed and dated	X				
1.2	Container type(s) correct for analyses requested	X				
1.3	Sample volume adequate for # and types of analyses requested	X				
1.4	Preservative correct for analyses requested	X				
1.5	Custody records continuous and complete	X				
1.6	Lab sample number(s) provided and SNL sample number(s) cross referenced and correct	X				
1.7	Date samples received	X				
1.8	Condition upon receipt information provided	X				

2.0 Analytical Laboratory Report

Line No.	Item	Complete? Yes	Complete? No	If no, explain	Resolved? Yes	Resolved? No
2.1	Data reviewed, signature	X				
2.2	Method reference number(s) complete and correct	X				
2.3	QC analysis and acceptance limits provided (MB, LCS, Replicate)	X				
2.4	Matrix spike/matrix spike duplicate data provided (if requested)	N/A				
2.5	Detection limits provided; PQL and MDL (or IDL), MDA and L_c	X				
2.6	QC batch numbers provided	X				
2.7	Dilution factors provided and all dilution levels reported	X				
2.8	Data reported in appropriate units and using correct significant figures	X				
2.9	Radiochemistry analysis uncertainty (2 sigma error) and tracer recovery (if applicable) reported	N/A				
2.10	Narrative provided	X				
2.11	TAT met	X				
2.12	Hold times met	X				
2.13	Contractual qualifiers provided	X				
2.14	All requested result and TIC (if requested) data provided	X				

Contract Verification Review (Continued)

3.0 Data Quality Evaluation

Item	Yes	No	If no, Sample ID No./Fraction(s) and Analysis
3.1 Are reporting units appropriate for the matrix and meet contract specified or project-specific requirements? Inorganics and metals reported as ppm (mg/liter or mg/Kg)? Tritium reported in picocuries per liter with percent moisture for soil samples? Units consistent between QC samples and sample data	X		
3.2 Quantitation limit met for all samples	X		
3.3 Accuracy a) Laboratory control samples accuracy reported and met for all samples	X		
b) Surrogate data reported and met for all organic samples analyzed by a gas chromatography technique	N/A		
c) Matrix spike recovery data reported and met	N/A		
3.4 Precision a) Replicate sample precision reported and met for all inorganic and radiochemistry samples	N/A		
b) Matrix spike duplicate RPD data reported and met for all organic samples	N/A		
3.5 Blank data a) Method or reagent blank data reported and met for all samples	X		
b) Sampling blank (e.g., field, trip, and equipment) data reported and met	N/A		
3.6 Contractual qualifiers provided: "J"- estimated quantity; "B"-analyte found in method blank above the MDL for organic or above the PQL for inorganic; "U"- analyte undetected (results are below the MDL, IDL, or MDA (radiochemical)); "H"-analysis done beyond the holding time	X		
3.7 Narrative addresses planchet flaming for gross alpha/beta	N/A		
3.8 Narrative included, correct, and complete	X		
3.9 Second column confirmation data provided for methods 8330 (high explosives) and 8082 (pesticides/PCBs)	N/A		

Contract Verification Review (Continued)

4.0 Calibration and Validation Documentation

Item	Yes	No	Comments
4.1 GC/MS (8260, 8270, etc.)			
a) 12-hour tune check provided	X		
b) Initial calibration provided	X		
c) Continuing calibration provided	X		
d) Internal standard performance data provided	X		
e) Instrument run logs provided	X		
4.2 GC/HPLC (8330 and 8010 and 8082)			
a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) Instrument run logs provided	N/A		
4.3 Inorganics (metals)			
a) Initial calibration provided	N/A		
b) Continuing calibration provided	N/A		
c) ICP interference check sample data provided	N/A		
d) ICP serial dilution provided	N/A		
e) Instrument run logs provided	N/A		
4.4 Radiochemistry			
a) Instrument run logs provided	N/A		

Contract Verification Review (Concluded)

5.0 Problem Resolution

Summarize the findings in the table below. List only samples/fractions for which deficiencies have been noted.

Sample/Fraction No.	Analysis	Problems/Comments/Resolutions

Were deficiencies unresolved? Yes (No)

Based on the review, this data package is complete. (Yes) No

If no, provide: nonconformance report or correction request number _____ and date correction request was submitted:_____

Reviewed by: W. Palencia Date: 2-8-05 Closed by:_____ Date:_____

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of 1

Batch No. N/A

SMO Use

AR/COC 608039

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-04-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	SB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21683
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SEE BOTTLE ORDER

☐ **Waste Characterization**
-Send preliminary/copy report to:

☐ **Released by COC No.:**
☐ **Validation Required**

Bill To:Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066382-001	TAG-SV04-46	46.5		12/28/2004 1000	SG	SC	6L	none	G	SA	TO-14 summa# A-247	
066383-001	TAG-SV04-96	96.5		12/28/2004 1005	SG	SC	6L	none	G	SA	TO-14 summa# 93012	
066384-001	TAG-SV04-146	146.5		12/28/2004 1010	SG	SC	6L	none	G	SA	TO-14 summa# 03855	
066385-001	TAG-SV04-196	196.5		12/28/2004 1020	SG	SC	6L	none	G	SA	TO-14 summa# 9243-B	
066386-001	TAG-SV04-246	246		12/28/2004 1025	SG	SC	6L	none	G	SA	TO-14 summa# 02471	
066387-001	TAG-SV04-246-SD	246		12/28/2004 1025	SG	SC	6L	none	G	SD	TO-14 summa# 93148	

RMMA ☐ Yes ☑ No Ref. No.

Sample Disposal ☐ Return to Client ☑ Disposal by lab

Turnaround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

Return Samples By: ☐ **Negotiated TAT**

Sample Tracking Smo Use
Date Entered(mm/dd/yy) 01/12/04
Entered by: JRC
QC inits. WJP

Special Instructions/QC Requirements
EDD ☑ **Yes** ☐ **No**
Level C Package ☑ **Yes** ☐ **No**

***Send report to:**
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members

Name	Signature	Init	Company/Organization/Phone/Cellular
J Lee		JDL	Weston Solutions 6146 (505-284-3309)
R Lynch		RL	Weston Solutions 6146 (505-250-7090)
W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org.	Date	Time	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

Sandia National Laboratories

P.O. Box 5800
Albuquerque, New Mexico 87185-0756

BOTTLE ORDER FROM: Severn Trent

RECEIVED
DEC 7,

FOR: Mike Skelly, Sue Collins

PROJECT: Tijeras Arroyo Assessment GWM

DELIVERY ON or BY: December 6, 2004

START DATE: Last week December 2004

ORDER PLACED BY: Wendy Palencia

SERVICE ORDER or SAR #: CF010-05

PROJECT/ TASK#: 7222_01.11

Qunty	Container	Parameter	Pres
52 Each	Summa Canisters	T014	None

This is an ER project; an EDD and Level C data package is required. Thirty day turnaround time will be needed for all analysis.

The estimated cost for the analysis is $ 225.00 per analysis plus $70.00 per summa rental, cleaning, and shipping.

The summa canisters are to be shipped to Sandia at the following address:

Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM, 87123
Attention: Doug Perry, Building 928

In order to meet customer requirements all parties on distribution should read, review, and submit any substitutions, discrepancies, or changes to the appropriate project coordinator as soon as possible.

Distribution:
Mike Skelly
Pam Puissant
Doug Perry
Maria Friedman, Severn Trent, Santa Ana
Ed Kao, Severn Trent, St. Louis

DATE: 12/08/04

P.U. BY:

Sandia National Laboratories
For the U.S. Department of Energy
1515 Eubank SE
Albuquerque, NM, 87123

SHIPPER **44649**

Commercial Invoice

Status: Approved

Ship to:

SEVERN TRENT - SANTA ANA
1721 SOUTH GRAND AVENUE

SANTA, ANA CA 92705
United States

RMA# or RGA#	
Deliver to:	Maria Friedman
Phone:	714-258-8610
Building:	Room:
Mail Stop:	
Company:	SEVERN TRENT
Department:	
Address Type:	Unclassified
Date Due at Destination:	1/11/2005
Production Related:	No

Origination Site:	SA
Form filled out by:	BENDER,GARY LEE
Phone:	5052843047
Date Prepared:	2005-01-04
Requester:	BENDER,GARY LEE
Phone:	5052843047
Org. #:	06339
For Shipment Processing Use	
Date Shipped:	
Carrier:	None Selected
Mode:	None Selected
Bill of Lading No.:	
Total # of Pkgs:	0
Total Weight:	0.0 lbs
Total Cubic Dim:	0.0
Advance Notification	**Contacted** Yes No
Name and Phone:	
741 Number:	
ATS:	
TID Numbers:	
RCT Initial/Dates	

Reason/Authority: To be Consumed in Testing / Incorporate into End Product
Return Date: NONE
Authority Number:
Freight Charge Payment: Sandia Pays
Project: 7234
Task: 05
Carrier: NONE
Account:

If shipping controlled property to a new Sandia location
Destination Bldg: **Room:**

If shipping to international destination:
Import duties and taxes will be paid by my project/task:
Export Authorization:

No freight charge reason: NONE
Is material being shipped from the Shipping Department building or the 6000 Igloo? Yes
Shipment Comments: Send FED-EX Ground
Transportation Pickup Requested: No pickup requested
Questions about pickup call Dispatcher 844-1448 non-hazardous materials. 844-2556 hazardous materials.

Shipper's Export Declaration prepared: WAYBILL # NEXT PAGE

10	Description: BOX #10; 2.7 CU/FT C0C608033 and COC608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 686	1	EACH	$1.00	$1.00
11	Description: BOX #11; 2.7 CU/FT C0C608037 and COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 716	1	EACH	$1.00	$1.00
12	Description: BOX #12; 2.7 CU/FT C0C608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 709	1	EACH	$1.00	$1.00
13	Description: BOX #13; 2.7 CU/FT C0C608039 and COC608040 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 723	1	EACH	$1.00	$1.00

PACKAGES									
				Dimensions					
Quantity	**Type**	**Contents**	**Weight**		**L**	**W**	**H**	**D**	**Cubic Feet**
No Packages Found									

Total Shipment Quantity and Value:	13	$13.00

LINE ITEM LIST FOR SHIPPER NUMBER 44649

Line Item #	Description/Comments For temporary transfer of items to international destinations, include item Manufacturer's Name, Category Domestic or Foreign, and Serial Number.	Classification Category/level	Qty	Unit	Unit Value	Total $
1	Description: BOX #1; 2.7 CU/FT C0C608038 and COC 608036 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 594	1	EACH	$1.00	$1.00
2	Description: BOX #2; 2.7 CU/FT C0C608034 and COC 608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 587	1	EACH	$1.00	$1.00
3	Description: BOX #3; 2.7 CU/FT C0C608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 617	1	EACH	$1.00	$1.00
4	Description: BOX #4; 2.7 CU/FT COC608035 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 600	1	EACH	$1.00	$1.00
5	Description: BOX #5; 2.7 CU/FT COC608034 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 631	1	EACH	$1.00	$1.00
6	Description: BOX #6; 2.7 CU/FT COC608032 and 608033 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 624	1	EACH	$1.00	$1.00
7	Description: BOX #7; 2.7 CU/FT COC608039 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 679	1	EACH	$1.00	$1.00
8	Description: BOX #8; 2.7 CU/FT COC608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 662	1	EACH	$1.00	$1.00
9	Description: Box #9: 2.7 cu/ft COC 608037 and 608038 Comments: 28 LBS. 2.7CU/FT = 19X19X13 SEND FED-EX GROUND	Unclassified 693	1	EACH	$1.00	$1.00

287 1040 300 50

Perry, Doug E

From: Bender, Gary
Sent: January 05, 2005 4:38 PM
To: Perry, Doug E
Subject: FW: (EW) Notice: WebShipper notification #3

FED-EX GROUND

here's the 3rd one from Tue. gl

-----Original Message-----
From: shp@sandia.gov [mailto:shp@sandia.gov]
Sent: Wednesday, January 05, 2005 4:20 PM
To: Bender, Gary
Subject: (EW) Notice: WebShipper email notification

Shipper 44649 was shipped on 01/04/2005.

Carrier: Federal Express
Destination: SANTA, ANA, CA United States
Tracking (Waybill) Number: 087104430050594,587,617,600,631,624,679,662,693,686,716,709,723

If the carrier is Federal Express, United Parcel, or Airborne Express, you can track your shipment from the carrier's web page. To access the carrier's web page, select the carrier from the bottom of this web page http://cfo.sandia.gov/logistics/Shipping/Shipment%20Tracking.htm

If you discover that your shipment has not reached its destination, please call the Shipping Department at 844-9270 (NM) or 294-2882 (CA).

To view and print the Shipper, select "Print Shipper" from the WebShipper Home Page at https://webprod.sandia.gov/WebShipper/Main then enter the shipper number and select "Submit"

Please call the Corporate Computing Help Desk at 845-2243 if you have questions or problems using the system.

ESA100227

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

Page 1 of 1

Internal Lab

Batch No. N/A

SMO Use

AR/COC 608039

Dept. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-04-05	Project/Task No.:	7222.01.05
Project/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization:	BB
Project Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #:	PO 21673
Record Center Code:		Lab Destination:	Severn Trent Santa Ana,CA		
Logbook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		
Service Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		
Location	Tech Area 2				
Building	Room				

SEE BOTTLE ORDER

☐ Waste Characterization
-Send preliminary/copy report to:

☐ Released by COC No.:
☐ Validation Required

Bill To: Sandia National Labs (Accounts Payable)
P.O. Box 5800 MS 0154
Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

Sample No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066382-001	TAG-SV04-46	46.5		12/28/2004 1000	SG	SC	6L	none	G	SA	TO-14 summa# A-247	
066383-001	TAG-SV04-96	96.5		12/28/2004 1005	SG	SC	6L	none	G	SA	TO-14 summa# 93012	
066384-001	TAG-SV04-146	146.5		12/28/2004 1010	SG	SC	6L	none	G	SA	TO-14 summa# 03855	
066385-001	TAG-SV04-196	196.5		12/28/2004 1020	SG	SC	6L	none	G	SA	TO-14 summa# 9243-B	
066386-001	TAG-SV04-246	246		12/28/2004 1025	SG	SC	6L	none	G	SA	TO-14 summa# 02471	
066387-001	TAG-SV04-246-SD	246		12/28/2004 1025	SG	SC	6L	none	G	SD	TO-14 summa# 93148	

RMMA	☐ Yes ☑ No Ref. No.	Sample Tracking	Smo Use
Sample Disposal	☐ Return to Client ☑ Disposal by lab	Date Entered(mm/dd/yy)	
Turnaround Time	☐ 7 Day ☐ 15 Day ☑ 30 Day	Entered by:	
Return Samples By:	☐ Negotiated TAT	QC Inits.	

Special Instructions/QC Requirements
EDD ☑ Yes ☐ No
Level C Package ☑ Yes ☐ No

*Send report to:
Mike Skelly
Dept.6146 Mail stop 1087
505-284-2483

*Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

Sample Team Members	Name	Signature	Init	Company/Organization/Phone/Cellular
	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
	W Gibson		WG	Weston Solutions 6146 (505-284-5232)

1.Relinquished by	Org. 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
1. Received by	Org. 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
2.Relinquished by	Org. 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
2. Received by	Org. SRL	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
3.Relinquished by	Org.	Date	Time	6.Relinquished by	Org.	Date	Time
3. Received by	Org.	Date	Time	6. Received by	Org.	Date	Time

COC 608039 E5A100227

RSR011

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Run Date: 1/21/05
Page : 1
Time : 19:31:23

The following samples have been received by Severn Trent Laboratories, Inc. at Santa Ana, California. Please verify that the sample ID's and the requested tests are correct. Contact the STL project manager listed below to resolve any discrepancies.

Report to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM87185-5130

Bill to:
Rita Kavanaugh
Sandia National Laboratories
Payment Processing, MS 0154
P.O. Box 5130
Albuquerque, NM 87185-5130

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066382-001/TAG-SV04-46
Date Sampled: 12/28/04 Time Sampled: 10:00
LAB ID: E5A100227-001 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066383-001/TAG-SV04-96
Date Sampled: 12/28/04 Time Sampled: 10:05
LAB ID: E5A100227-002 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066384-001/TAG-SV04-146
Date Sampled: 12/28/04 Time Sampled: 10:10
LAB ID: E5A100227-003 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066385-001/TAG-SV04-196
Date Sampled: 12/28/04 Time Sampled: 10:20
LAB ID: E5A100227-004 Matrix: AIR

Parameter	Method	Rep

SEVERN TRENT LABORATORIES, INC.
SAMPLE CONFIRMATION REPORT

Client
Project : TAG (VAPOR WELL SAMPLING)
Number : CF#038-05/7222.
Manager : Rita Kavanaugh

STL
Date Rec: 1/10/05
Quote No: 062434
Manager : Maria Friedman

Due Dates
Preliminary: 1/17/05
Hard Copy : 1/24/05

Analytical TAT: 7

Client ID: 066385-001/TAG-SV04-196
Date Sampled: 12/28/04 Time Sampled: 10:20
LAB ID: E5A100227-004 Matrix: AIR

Parameter	Method		Rep
* Continued*			
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066386-001/TAG-SV04-246
Date Sampled: 12/28/04 Time Sampled: 10:25
LAB ID: E5A100227-005 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Client ID: 066387-001/TAG-SV04-246-SD
Date Sampled: 12/28/04 Time Sampled: 10:25
LAB ID: E5A100227-006 Matrix: AIR

Parameter	Method		Rep
EPA TO-14A, Volatile Organics by GC/MS	EPA-21	TO-14A	
SUMMA canister rental (6-li)	NONE	NONE	
Raw data package	NONE	NONE	

Cover Letter 1
Case Narrative 2
Chain of Custody 3
Analytical Report 19
QA/QC 38
STL Los Angeles Raw Data 44
Raw Data: TO-14A 45

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

February 3, 2005

STL LOT NUMBER: **E5A100227**
PO/CONTRACT: **PO21673**

Ms. Rita Kavanaugh
Sandia National Laboratories
1515 Eubank SE Org. 6133
M/S 0756
Albuquerque, NM 87123

Dear Ms. Kavanaugh:

This report contains the analytical results for the six samples received under chain of custody by STL Los Angeles on January 10, 2005. These samples are associated with your TAG (VAPOR WELL SAMPLING) project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria. Any matrix related anomaly is footnoted within the report.

This report shall not be reproduced except in full, without the written approval of the laboratory.

This report contains 000222 pages.

CASE NARRATIVE

There are no anomalies associated with this report.

If you have any questions, please feel free to call me at (714) 258-8610 extension 325.

Sincerely,

Maria O. Friedman
Project Manager

cc: Project File

E5A100227

ESA100227

CONTRACT LABORATORY
ANALYSIS REQUEST AND CHAIN OF CUSTODY

nal Lab

n No. N/A

SMO Use

AR/COC 608039

. No./Mail Stop:	6146/1087	Date Samples Shipped:	1-04-05	Project/Task No.: 7222.01.05	☐ Waste Characterization
ct/Task Manager:	Sue Collins	Carrier/Waybill No.	44649	SMO Authorization: SB	-Send preliminary/copy report to:
ect Name:	(TAG)vapor well sampling	Lab Contact:	Maria Friedman	Contract #: PO 21673	
d Center Code:		Lab Destination:	Severn Trent Santa Ana,CA	SEE BOTTLE ORDER	☐ Released by COC No.:
ook Ref. No.:		SMO Contact/Phone:	Pam Puissant(505)844-3185		☐ Validation Required
ice Order No.	CF#038-05	Send Report to SMO:	Wendy Palencia(505)844-3132		Bill To: Sandia National Labs (Accounts Payable)
ation	Tech Area 2				P.O. Box 5800 MS 0154
ing	Room				Albuquerque, NM 87185-0154

Reference LOV(available at SMO)

ple No.-Fraction	ER Sample ID or Sample Location Detail	Pump Depth (ft)	ER Site No.	Date/Time(hr) Collected	Sample Matrix	Container Type	Container Volume	Preserv-ative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
066382-001	TAG-SV04-46	46.5		12/28/2004 1000	SG	SC	6L	none	G	SA	TO-14 summa# A-247	
066383-001	TAG-SV04-96	96.5		12/28/2004 1005	SG	SC	6L	none	G	SA	TO-14 summa# 93012	
066384-001	TAG-SV04-146	146.5		12/28/2004 1010	SG	SC	6L	none	G	SA	TO-14 summa# 03855	
066385-001	TAG-SV04-196	196.5		12/28/2004 1020	SG	SC	6L	none	G	SA	TO-14 summa# 9243-B	
066386-001	TAG-SV04-246	246		12/28/2004 1025	SG	SC	6L	none	G	SA	TO-14 summa# 02471	
066387-001	TAG-SV04-246-SD	246		12/28/2004 1025	SG	SC	6L	none	G	SD	TO-14 summa# 93148	

MA ☐ Yes ☑ No Ref. No.

ple Disposal ☐ Return to Client ☑ Disposal by lab

naround Time ☐ 7 Day ☐ 15 Day ☑ 30 Day

rn Samples By: ☐ **Negotiated TAT** QC inits.

	Name	Signature	Init	Company/Organization/Phone/Cellular
nple	J Lee		JDL	Weston Solutions 6146 (505-284-3309)
m	R Lynch		RL	Weston Solutions 6146 (505-250-7090)
mbers	W Gibson		WJG	Weston Solutions 6146 (505-284-5232)

Sample Tracking Smo Use

Date Entered(mm/dd/yy)

Entered by:

Special Instructions/QC Requirements

EDD ☑ **Yes** ☐ **No**

Level C Package ☑ **Yes** ☐ **No**

***Send report to:**

Mike Skelly

Dept.6146 Mail stop 1087

505-284-2483

Please list as separate report.

Abnormal Conditions on Receipt

Lab Use

elinquished by		Org 6146	Date 1/4/05	Time 0825	4.Relinquished by	Org.	Date	Time
eceived by		Org 6146	Date 1-4-05	Time 0825	4. Received by	Org.	Date	Time
elinquished by		Org 6146	Date 1-4-05	Time 1300	5.Relinquished by	Org.	Date	Time
eceived by		Org STR	Date 1-10-05	Time 1000	5. Received by	Org.	Date	Time
elinquished by		Org.	Date	Time	6.Relinquished by	Org.	Date	Time
eceived by		Org.	Date	Time	6. Received by	Org.	Date	Time

3

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: A-247
DATE CLEANED: 12/1/04A, 12/1/04C, 12/2/04A, 12/2/04A, 12/2/04C
CLIENT SAMPLE #: _____
SITE LOCATION: _____

VFR ID: _____
Duration of comp. : _____ hrs. / mins.
Flow setting: _____ ml/min
Initials: _____

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.76	1-12-05	"
FINAL PRESSURE (PSIA)	24.04	1-12-05	"

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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2

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories

CANISTER SERIAL #: 93012

DATE CLEANED: 12/1/04A, 12/1/04C, 10/29/04A, 12/6/04A, 10/2/04C

CLIENT SAMPLE #:

SITE LOCATION:

VFR ID:

Duration of comp. : hrs. / mins.

Flow setting: ml/min

Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK	[redacted]	30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.72	1-12-05	[illegible]
FINAL PRESSURE (PSIA)	24.31	1-12-05	[illegible]

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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5

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 03855
DATE CLEANED: ~~12/1/04 A, 12/1/04C, 10/28/04A, 12/3/04A~~, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.65	1-12-05	L
FINAL PRESSURE (PSIA)	24.12	1-12-05	L

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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4

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 9243B
DATE CLEANED: 12/1/04A, 12/1/04C, [illegible] 12/2/04A, 12/2/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	BB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.67	1-12-05	u
FINAL PRESSURE (PSIA)	24.72	1-12-05	u

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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5

SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: C2471
DATE CLEANED: 12/1/04 A, 12/1/04 C, 10/29/04 A, 12/2/04 A, 12/2/04 C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.60	1-12-05	"
FINAL PRESSURE (PSIA)	24.23	1-12-05	"

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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SEVERN TRENT STL

CANISTER FIELD DATA RECORD

CLIENT: Sandia National Laboratories
CANISTER SERIAL #: 93148
DATE CLEANED: 12/1/04A, 12/1/04C, 12/8/04A, 12/8/04A, 12/8/04C
CLIENT SAMPLE #:
SITE LOCATION:

VFR ID:
Duration of comp. : hrs. / mins.
Flow setting: ml/min
Initials:

READING	TIME	Vac. (inches Hg) Or PRESS. (psig)	DATE	INITIALS
INITIAL VACUUM CHECK		30"	12-3-04	RB
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY CANISTER PRESSURIZATION			
INITIAL VACUUM (PSIA)	12.36	1-12-05	m
FINAL PRESSURE (PSIA)	24.53	1-12-05	m

Pressurization Gas: N_2

COMMENTS:

COMPOSITE TIME (HOURS)	FLOW RATE RANGE (ml/min)
15 Min.	316 – 333
30 Min.	158 – 166.7
1	79.2 – 83.3
2	39.6 – 41.7
4	19.8 – 20.8
6	13.2 – 13.9
8	9.9 – 10.4
10	7.92 – 8.3
12	6.6 – 6.9
24	3.5 – 4.0

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CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 12·2·04A

Date of QC: 12-3-04

Data File Number: MB12031(MSB)

Canister ID Numbers

*G6141	12625
9243 B ✓	9145 B
02471 ✓	0041
93012 ✓	03855 ✓
04340	92012
93257	9631 B

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

Reviewed By: [signature]

Date: 12-3-04

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12031.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:18
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,GL0141
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.311	8.324	(1.000)	498682	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.340	9.352	(0.921)	590663	47.4850	47.48
* 72 1,4-Difluorobenzene	114	10.143	10.155	(1.000)	1587702	50.0000	
$ 87 Toluene-d8	100	12.760	12.763	(1.258)	730243	46.9185	46.92
* 99 Chlorobenzene-d5	117	15.412	15.406	(1.000)	1098670	50.0000	
$ 113 4-Bromofluorobenzene	95	17.668	17.662	(1.146)	726403	37.0409	37.04

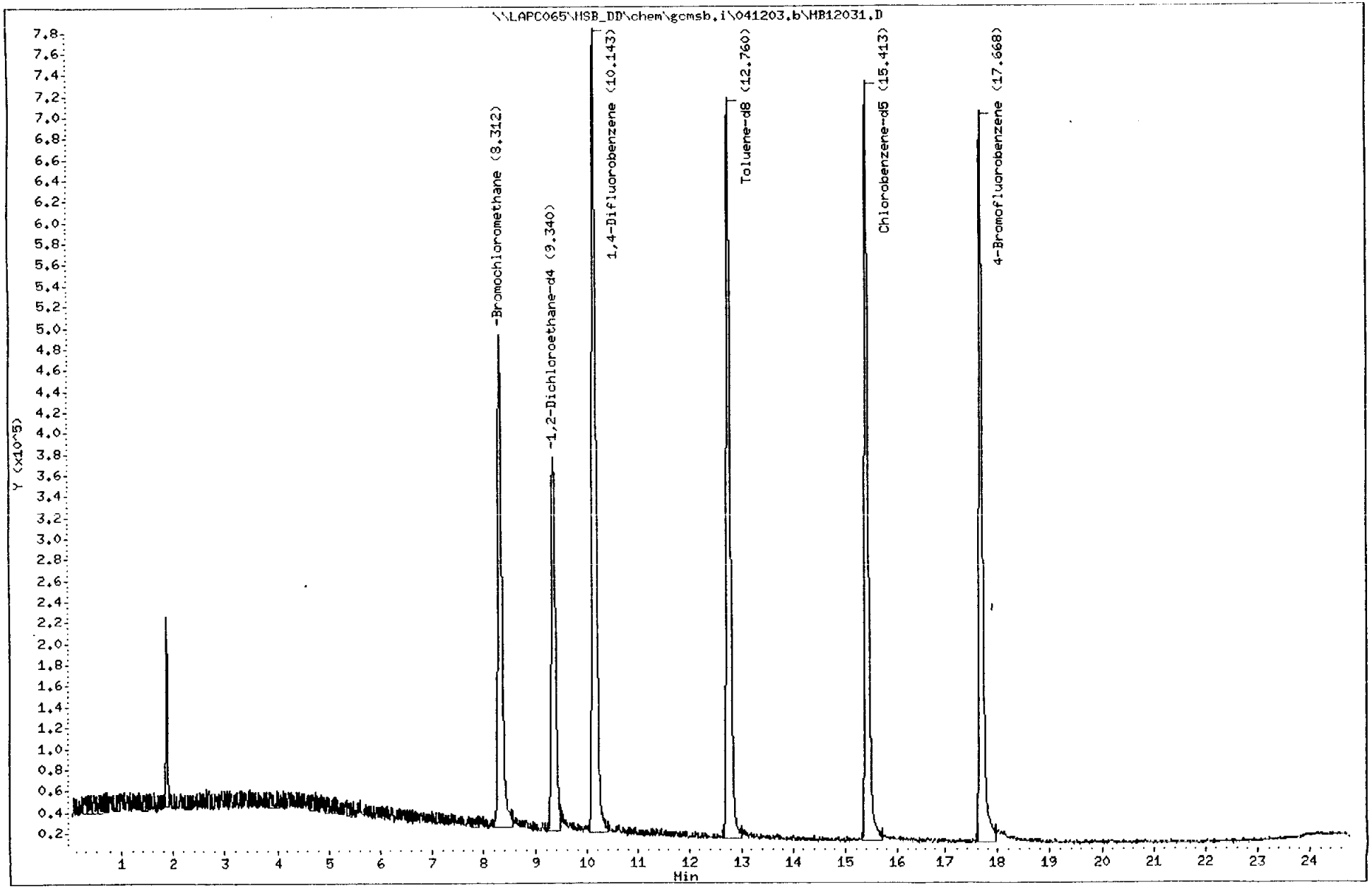
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12031.D
Date : 03-DEC-2004 12:18
Client ID: BLANK
Sample Info: BLANK,BLANK,GL0141

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch: 10-29-04 A

Date of QC: 11-3-04

Data File Number: MB11036

Canister ID Numbers

* 9129 B	A-247 ✓
A-318	02696
11346 ✓	9148 B ✓
GL0009	04145
9235 B	04416
0185 ✓	03845

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

AZ
Reviewed By:

11/4/04
Date:

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041103.b\MB11036.D
Lab Smp Id: BLANK Client Smp ID: blank
Inj Date : 04-NOV-2004 03:53
Operator : AA Inst ID: gcmsb.i
Smp Info : BLANK,blank,9129B
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041103.b\TO14A.m
Meth Date : 03-Nov-2004 12:17 almagroa Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

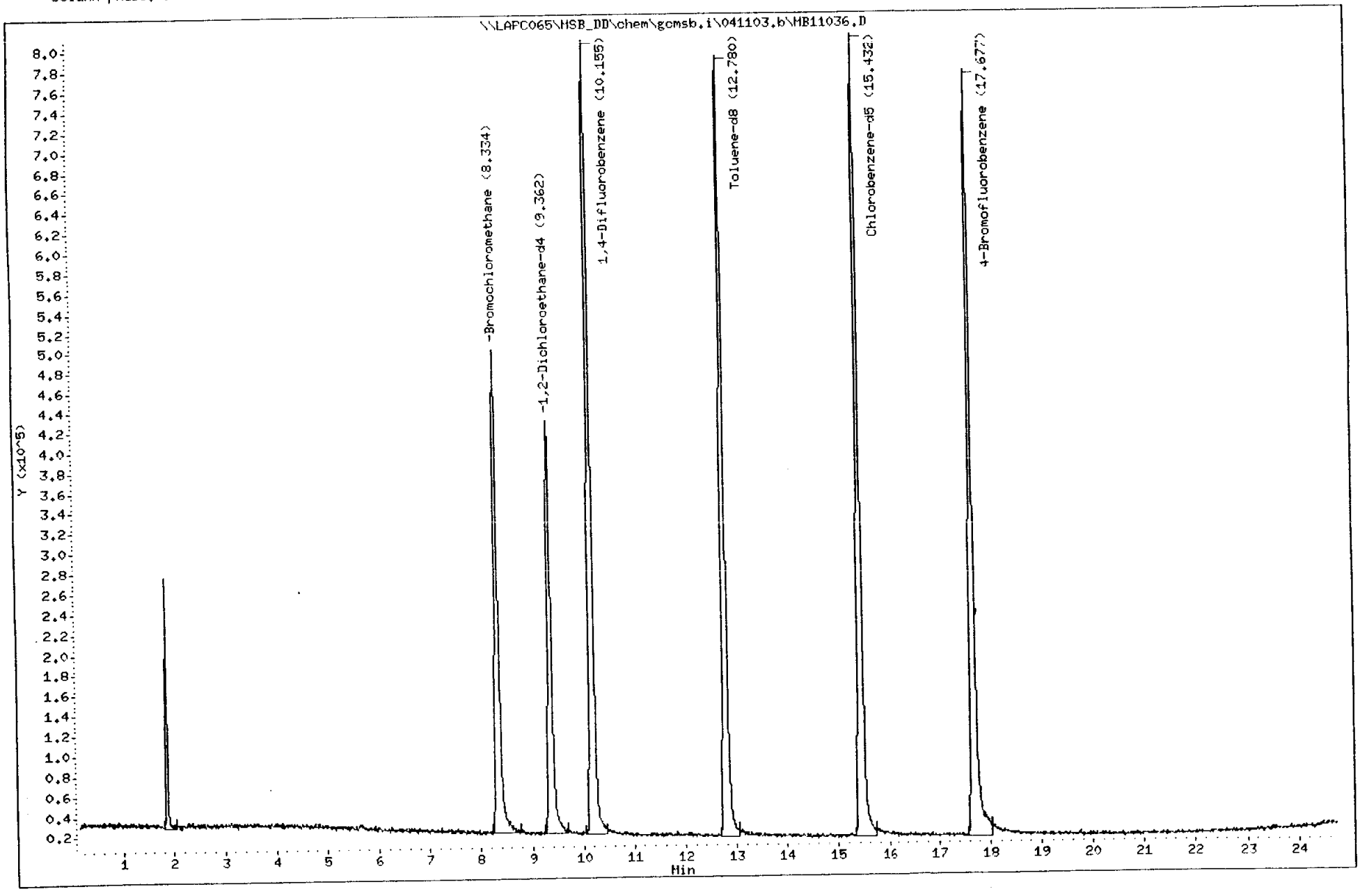
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.333	8.342	(1.000)	654560	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.352	9.370	(0.920)	647373	55.7101	55.71
* 72 1,4-Difluorobenzene	114	10.164	10.172	(1.000)	1480815	50.0000	
$ 87 Toluene-d8	100	12.779	12.779	(1.257)	762254	48.8563	48.86
* 99 Chlorobenzene-d5	117	15.431	15.422	(1.000)	1069829	50.0000	
$ 113 4-Bromofluorobenzene	95	17.677	17.676	(1.146)	860302	41.8962	41.90

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041103.b\MB11036.D
Date : 04-NOV-2004 03:53
Client ID: blank
Sample Info: BLANK,blank,9129B

Instrument: gcmsb.i

Operator: AA
Column diameter: 0.53

Column phase: J&W DB-624



CANISTER QC CERTIFICATION

SEVERN TRENT STL

Certification Type: TO-15 ML

Date Cleaned/Batch 12.2.04 C

Date of QC 12.3.04

Data File Number MW312032 (W15B)

Canister ID Numbers

* 03322	G10161
04398	A-263
92040	0117
93273	93148 ✓
A-272	G10054
93036	04736

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "*Certification Type*" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

M. [illegible] 12.3.04

Reviewed By: Date:

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STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 03-DEC-2004 12:46
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,03322
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\TO14A.m
Meth Date : 03-Dec-2004 12:16 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 56 Bromochloromethane	49	8.327	8.324	(1.000)	480472	50.0000	
$ 65 1,2-Dichloroethane-d4	65	9.346	9.352	(0.921)	580377	47.9120	47.91
* 72 1,4-Difluorobenzene	114	10.149	10.155	(1.000)	1546149	50.0000	
$ 87 Toluene-d8	100	12.766	12.763	(1.258)	726802	47.9524	47.95
* 99 Chlorobenzene-d5	117	15.419	15.406	(1.000)	1096086	50.0000	
$ 113 4-Bromofluorobenzene	95	17.665	17.662	(1.246)	755239	38.6021	38.60

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\041203.b\MB12032.D

Date : 03-DEC-2004 12:46

Client ID: BLANK

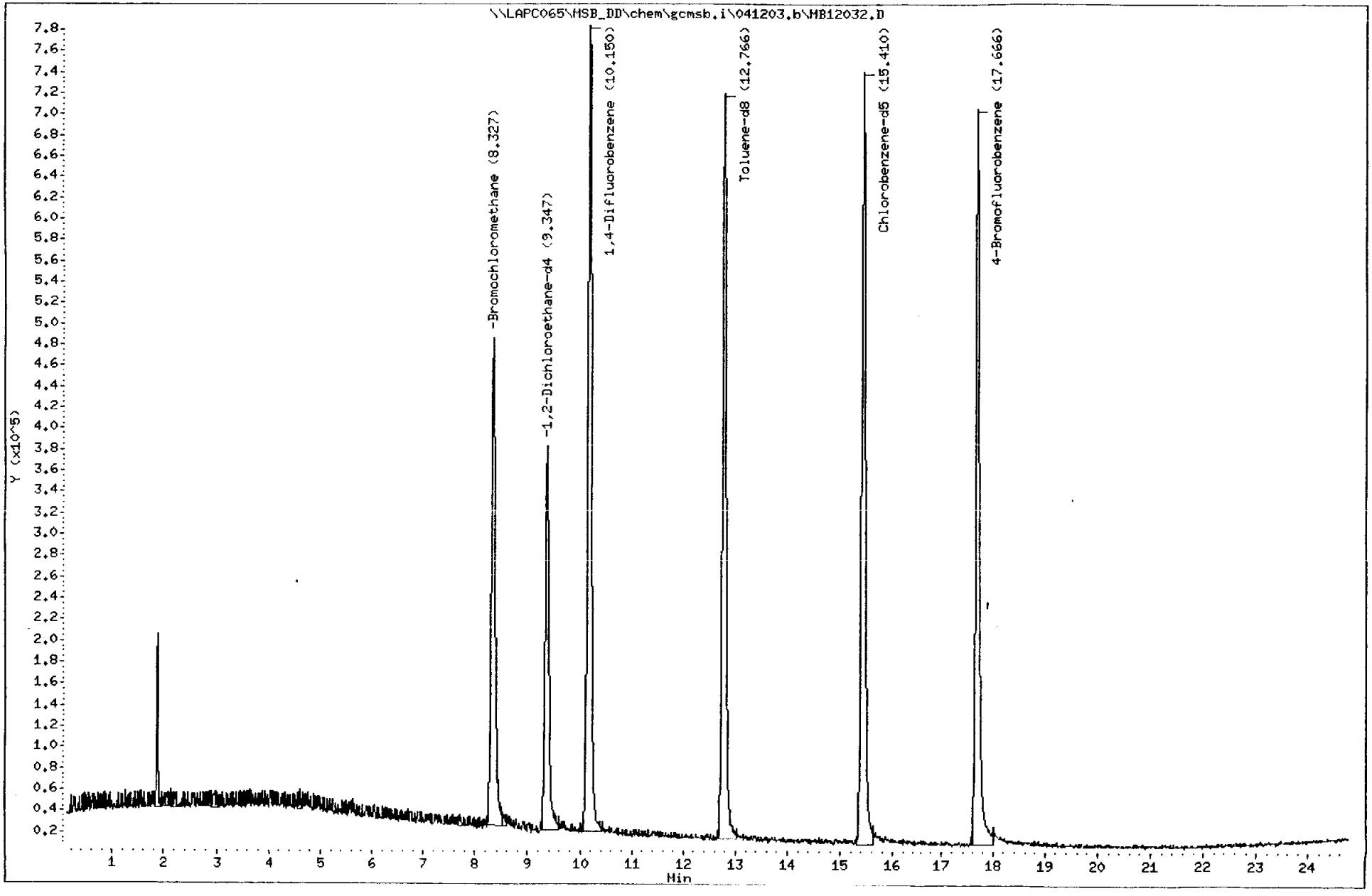
Sample Info: BLANK,BLANK,03322

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



SEVERN TRENT STL

Analytical Report

ANALYTICAL REPORT

PROJECT NO. CF#038-05/7222.01.05

TAG (VAPOR WELL SAMPLING)

Lot #: E5A100227

Rita Kavanaugh

Sandia National Laboratories

SEVERN TRENT LABORATORIES, INC.

Maria Friedman
Project Manager

January 28, 2005

EXECUTIVE SUMMARY - Detection Highlights

E5A100227

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066382-001/TAG-SV04-46 12/28/04 10:00 001				
Dichlorodifluoromethane	270	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	17	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	17	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	28	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	110	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.8 J	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	4.5	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	170	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	6.2	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	32	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	4.2	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	41	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	0.81 J	2.0	ppb(v/v)	EPA-21 TO-14A
066383-001/TAG-SV04-96 12/28/04 10:05 002				
Dichlorodifluoromethane	350	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	23	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	24	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	47	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	160	2.0	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	1.8 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	6.1	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	41	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	6.9	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	55	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	1.3 J	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	58	2.0	ppb(v/v)	EPA-21 TO-14A
066384-001/TAG-SV04-146 12/28/04 10:10 003				
Dichlorodifluoromethane	140	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	6.7	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	7.1	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	5.4	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	55	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

E5A100227

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066384-001/TAG-SV04-146 12/28/04 10:10 003				
1,1-Dichloroethane	0.81 J	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	11	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	0.81 J	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	14	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	3.1	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	14	2.0	ppb(v/v)	EPA-21 TO-14A
066385-001/TAG-SV04-196 12/28/04 10:20 004				
Dichlorodifluoromethane	14	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	0.61 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	1.4 J	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	3.8	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	3.8	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	0.96 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	4.2	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	2.9	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	5.3	2.0	ppb(v/v)	EPA-21 TO-14A
066386-001/TAG-SV04-246 12/28/04 10:25 005				
Dichlorodifluoromethane	67	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.9	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	6.4	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	10	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	36	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	2.3 J	10	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	0.68 J	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	11	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	1.2 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	8.4	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	4.2	2.0	ppb(v/v)	EPA-21 TO-14A
066387-001/TAG-SV04-246-SD 12/28/04 10:25 006				
Dichlorodifluoromethane	76	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	4.4	2.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	7.0	2.0	ppb(v/v)	EPA-21 TO-14A

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EXECUTIVE SUMMARY - Detection Highlights

E5A100227

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
066387-001/TAG-SV04-246-SD 12/28/04 10:25 006				
1,1-Dichloroethene	12	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	41	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	0.85 J	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroform	13	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	1.1 J	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	11	2.0	ppb(v/v)	EPA-21 TO-14A
Toluene	2.6	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	13	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	0.75 J	2.0	ppb(v/v)	EPA-21 TO-14A

METHODS SUMMARY

E5A100227

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by TO-14A	EPA-21 TO-14A	

References:

EPA-21 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", Second Edition, EPA/625/R-96/010b, January 1999

SAMPLE SUMMARY

E5A100227

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G2DJC	001	066382-001/TAG-SV04-46	12/28/04	10:00
G2DJE	002	066383-001/TAG-SV04-96	12/28/04	10:05
G2DJF	003	066384-001/TAG-SV04-146	12/28/04	10:10
G2DJJ	004	066385-001/TAG-SV04-196	12/28/04	10:20
G2DJK	005	066386-001/TAG-SV04-246	12/28/04	10:25
G2DJM	006	066387-001/TAG-SV04-246-SD	12/28/04	10:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066382-001/TAG-SV04-46

GC/MS Volatiles

Lot-Sample #...: E5A100227-001 **Work Order #...:** G2DJC1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 10:00 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017259 **Analysis Time..:** 02:38
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**270**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**17**	**2.0**	**ppb(v/v)**	**0.80**
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**17**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**28**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**110**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**2.8 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	**1.2 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	**4.5**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**170**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	**6.2**	**2.0**	**ppb(v/v)**	**0.50**
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**32**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	**4.2**	**2.0**	**ppb(v/v)**	**0.80**
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**41**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066382-001/TAG-SV04-46

GC/MS Volatiles

Lot-Sample #...: E5A100227-001 **Work Order #...:** G2DJC1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	**0.81 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066383-001/TAG-SV04-96

GC/MS Volatiles

Lot-Sample #...: E5A100227-002 **Work Order #...:** G2DJE1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 10:05 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017259 **Analysis Time..:** 03:14
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**350**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**23**	**2.0**	**ppb(v/v)**	**0.80**
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**24**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**47**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**160**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	**1.8 J**	**2.0**	**ppb(v/v)**	**0.80**
1,1-Dichloroethane	**6.1**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**41**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	**6.9**	**2.0**	**ppb(v/v)**	**0.50**
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**55**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**1.3 J**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**58**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066383-001/TAG-SV04-96

GC/MS Volatiles

Lot-Sample #...: E5A100227-002 **Work Order #...:** G2DJE1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066384-001/TAG-SV04-146

GC/MS Volatiles

Lot-Sample #...: E5A100227-003 **Work Order #...:** G2DJF1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 10:10 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017259 **Analysis Time..:** 03:49
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**140**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**6.7**	**2.0**	**ppb(v/v)**	**0.80**
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**7.1**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**5.4**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**55**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**0.81 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**11**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	**0.81 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**1.1 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**14**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**3.1**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**14**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066384-001/TAG-SV04-146

GC/MS Volatiles

Lot-Sample #...: E5A100227-003 **Work Order #...:** G2DJF1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066385-001/TAG-SV04-196

GC/MS Volatiles

Lot-Sample #...: E5A100227-004 **Work Order #...:** G2DJJ1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 10:20 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017259 **Analysis Time..:** 04:24
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**14**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	0.80
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**0.61 J**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**1.4 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**3.8**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	ND	2.0	ppb(v/v)	0.50
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**3.8**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	0.50
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	**0.96 J**	**2.0**	**ppb(v/v)**	**0.80**
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**4.2**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**2.9**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**5.3**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066385-001/TAG-SV04-196

GC/MS Volatiles

Lot-Sample #...: E5A100227-004 **Work Order #...:** G2DJJ1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066386-001/TAG-SV04-246

GC/MS Volatiles

Lot-Sample #...: E5A100227-005 **Work Order #...:** G2DJK1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 10:25 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017259 **Analysis Time..:** 04:59
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**67**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**3.9**	**2.0**	**ppb(v/v)**	**0.80**
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**6.4**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**10**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**36**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	**2.3 J**	**10**	**ppb(v/v)**	**2.0**
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**0.68 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**11**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	**1.2 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**8.4**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	ND	2.0	ppb(v/v)	0.50
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**4.2**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

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SANDIA NATIONAL LABORATORIES

Client Sample ID: 066386-001/TAG-SV04-246

GC/MS Volatiles

Lot-Sample #...: E5A100227-005 **Work Order #...:** G2DJK1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	ND	2.0	ppb(v/v)	0.60
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066387-001/TAG-SV04-246-SD

GC/MS Volatiles

Lot-Sample #...: E5A100227-006 **Work Order #...:** G2DJM1AD **Matrix.....:** AE
Date Sampled...: 12/28/04 10:25 **Date Received..:** 01/10/05 10:00 **MS Run #.....:**
Prep Date.....: 01/14/05 **Analysis Date..:** 01/14/05
Prep Batch #...: 5017259 **Analysis Time..:** 05:35
Dilution Factor: 1
Analyst ID.....: 101605 **Instrument ID..:** MSB
Method.....: EPA-21 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Dichlorodifluoromethane	**76**	**2.0**	**ppb(v/v)**	**0.50**
Chloromethane	ND	4.0	ppb(v/v)	1.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	**4.4**	**2.0**	**ppb(v/v)**	**0.80**
Vinyl chloride	ND	2.0	ppb(v/v)	0.80
Bromomethane	ND	2.0	ppb(v/v)	1.0
Chloroethane	ND	4.0	ppb(v/v)	0.80
Trichlorofluoromethane	**7.0**	**2.0**	**ppb(v/v)**	**0.50**
1,1-Dichloroethene	**12**	**2.0**	**ppb(v/v)**	**0.50**
Carbon disulfide	ND	10	ppb(v/v)	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	**41**	**2.0**	**ppb(v/v)**	**0.50**
Acetone	ND	10	ppb(v/v)	2.0
Methylene chloride	ND	2.0	ppb(v/v)	0.80
1,1-Dichloroethane	**0.85 J**	**2.0**	**ppb(v/v)**	**0.50**
Vinyl acetate	ND	10	ppb(v/v)	2.0
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	0.80
2-Butanone (MEK)	ND	10	ppb(v/v)	2.0
Chloroform	**13**	**2.0**	**ppb(v/v)**	**0.80**
1,1,1-Trichloroethane	**1.1 J**	**2.0**	**ppb(v/v)**	**0.50**
Carbon tetrachloride	ND	2.0	ppb(v/v)	0.50
Benzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichloroethane	ND	2.0	ppb(v/v)	0.80
Trichloroethene	**11**	**2.0**	**ppb(v/v)**	**0.50**
1,2-Dichloropropane	ND	2.0	ppb(v/v)	0.80
Bromodichloromethane	ND	2.0	ppb(v/v)	0.80
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.50
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	2.0
Toluene	**2.6**	**2.0**	**ppb(v/v)**	**0.50**
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	0.80
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	0.60
Tetrachloroethene	**13**	**2.0**	**ppb(v/v)**	**0.60**
2-Hexanone	ND	10	ppb(v/v)	1.0
Dibromochloromethane	ND	2.0	ppb(v/v)	0.50
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	0.50
Chlorobenzene	ND	2.0	ppb(v/v)	0.50

(Continued on next page)

SANDIA NATIONAL LABORATORIES

Client Sample ID: 066387-001/TAG-SV04-246-SD

GC/MS Volatiles

Lot-Sample #...: E5A100227-006 **Work Order #...:** G2DJM1AD **Matrix.....:** AE

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethylbenzene	ND	2.0	ppb(v/v)	0.50
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	1.0
o-Xylene	**0.75 J**	**2.0**	**ppb(v/v)**	**0.60**
Styrene	ND	2.0	ppb(v/v)	0.60
Bromoform	ND	2.0	ppb(v/v)	0.50
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	0.50
Benzyl chloride	ND	10	ppb(v/v)	0.80
4-Ethyltoluene	ND	2.0	ppb(v/v)	0.70
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	0.80
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	0.70
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	0.80
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	1.0
Hexachlorobutadiene	ND	4.0	ppb(v/v)	1.0

NOTE(S):

J Estimated result. Result is less than RL.

SEVERN TRENT STL

QA/QC

QC DATA ASSOCIATION SUMMARY

E5A100227

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	AE	EPA-21 TO-14A		5017259	
002	AE	EPA-21 TO-14A		5017259	
003	AE	EPA-21 TO-14A		5017259	
004	AE	EPA-21 TO-14A		5017259	
005	AE	EPA-21 TO-14A		5017259	
006	AE	EPA-21 TO-14A		5017259	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100227 **Work Order #...:** G2P0P1AA **Matrix.....:** AIR
MB Lot-Sample #: M5A170000-259

Prep Date.....: 01/13/05 **Analysis Time..:** 23:04
Analysis Date..: 01/13/05 **Prep Batch #...:** 5017259 **Instrument ID..:** MSB
Dilution Factor: 1

Analyst ID.....: 101605

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloromethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromomethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chloroethane	ND	4.0	ppb(v/v)	EPA-21 TO-14A
Trichlorofluoromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon disulfide	ND	10	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Acetone	ND	10	ppb(v/v)	EPA-21 TO-14A
Methylene chloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Vinyl acetate	ND	10	ppb(v/v)	EPA-21 TO-14A
cis-1,2-Dichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Butanone (MEK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Chloroform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,1-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Carbon tetrachloride	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Trichloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichloropropane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromodichloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
cis-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
4-Methyl-2-pentanone (MIBK)	ND	10	ppb(v/v)	EPA-21 TO-14A
Toluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
trans-1,3-Dichloropropene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2-Trichloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Tetrachloroethene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
2-Hexanone	ND	10	ppb(v/v)	EPA-21 TO-14A
Dibromochloromethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dibromoethane (EDB)	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Chlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Ethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
m-Xylene & p-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
o-Xylene	ND	2.0	ppb(v/v)	EPA-21 TO-14A

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: E5A100227 **Work Order #...:** G2P0P1AA **Matrix.....:** AIR

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Bromoform	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,1,2,2-Tetrachloroethane	ND	2.0	ppb(v/v)	EPA-21 TO-14A
Benzyl chloride	ND	10	ppb(v/v)	EPA-21 TO-14A
4-Ethyltoluene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3,5-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trimethylbenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,3-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,4-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2-Dichlorobenzene	ND	2.0	ppb(v/v)	EPA-21 TO-14A
1,2,4-Trichloro-benzene	ND	5.0	ppb(v/v)	EPA-21 TO-14A
Hexachlorobutadiene	ND	4.0	ppb(v/v)	EPA-21 TO-14A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: E5A100227 **Work Order #...:** G2P0P1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-259 G2P0P1AD-LCSD
Prep Date.....: 01/13/05 **Analysis Date..:** 01/13/05
Prep Batch #...: 5017259 **Analysis Time..:** 21:53
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**104**	**(70 - 125)**			**EPA-21 TO-14A**
	104	**(70 - 125)**	**0.15**	**(0-20)**	**EPA-21 TO-14A**
Methylene chloride	**105**	**(75 - 120)**			**EPA-21 TO-14A**
	104	**(75 - 120)**	**0.36**	**(0-20)**	**EPA-21 TO-14A**
Trichloroethene	**102**	**(70 - 125)**			**EPA-21 TO-14A**
	101	**(70 - 125)**	**1.1**	**(0-20)**	**EPA-21 TO-14A**
Toluene	**98**	**(75 - 125)**			**EPA-21 TO-14A**
	99	**(75 - 125)**	**0.59**	**(0-20)**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**98**	**(65 - 130)**			**EPA-21 TO-14A**
	101	**(65 - 130)**	**2.7**	**(0-20)**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: E5A100227 **Work Order #...:** G2P0P1AC-LCS **Matrix.....:** AIR
LCS Lot-Sample#: M5A170000-259 G2P0P1AD-LCSD
Prep Date.....: 01/13/05 **Analysis Date..:** 01/13/05
Prep Batch #...: 5017259 **Analysis Time..:** 21:53
Dilution Factor: 1 **Instrument ID..:** MSB
Analyst ID.....: 101605

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**50.5**	**52.6**	**ppb(v/v)**	**104**		**EPA-21 TO-14A**
	50.5	**52.6**	**ppb(v/v)**	**104**	**0.15**	**EPA-21 TO-14A**
Methylene chloride	**54.5**	**57.0**	**ppb(v/v)**	**105**		**EPA-21 TO-14A**
	54.5	**56.8**	**ppb(v/v)**	**104**	**0.36**	**EPA-21 TO-14A**
Trichloroethene	**49.5**	**50.6**	**ppb(v/v)**	**102**		**EPA-21 TO-14A**
	49.5	**50.0**	**ppb(v/v)**	**101**	**1.1**	**EPA-21 TO-14A**
Toluene	**49.5**	**48.7**	**ppb(v/v)**	**98**		**EPA-21 TO-14A**
	49.5	**49.0**	**ppb(v/v)**	**99**	**0.59**	**EPA-21 TO-14A**
1,1,2,2-Tetrachloroethane	**50.0**	**49.0**	**ppb(v/v)**	**98**		**EPA-21 TO-14A**
	50.0	**50.3**	**ppb(v/v)**	**101**	**2.7**	**EPA-21 TO-14A**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SEVERN TRENT STL

STL Los Angeles
Raw Data

SEVERN TRENT STL

TO-14A - Extended Raw Data

Lot ID: E5A100227

I certify that, to the best of my knowledge, the attached package is a complete and accurate representation of the original data.

Signature / Date: 01/18/05

SEVERN TRENT STL

TO-14A - Initial Calibration

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Calibration File Names:
Level 1: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12291.D
Level 2: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12292.D
Level 3: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12293.D
Level 4: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12294.D
Level 5: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12295.D
Level 6: \\LAPC065\MSB_DD\chem\gcmsb.i\041229.B\IC12296.D
Level 7: \\LAPC065\MSB_DD\chem\gcmsb.i\041101.B\IC11016.D

Primary Curve 1/4/05 AA

Compound	2.000 Level 1	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	500.000 Level 7							
1 Propene	0.19327	0.18168	0.18289	0.17632	0.18120	0.17659		
	0.19221						0.18345	3.720
2 Propane	0.10762	0.10090	0.08193	0.07279	0.08773	0.08349		
	0.06207						0.08522	18.292
3 Dichlorodifluoromethane (F12)	2.54143	2.27300	2.07819	2.10083	2.03924	1.93780		
	1.80312						2.11052	11.323
4 Chlorodifluoromethane (F22)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
5 1,2-Cl-1,1,2,2,F Ethane(F114)	2.06930	1.87384	1.66897	1.68434	1.63955	1.57599		
	1.50102						1.71614	11.274
6 2-Methylpropane (Isobutane)	0.82357	0.72602	0.63311	0.59781	0.74543	0.71071		
	0.52233						0.67985	14.924
7 Dimethyl ether (DME)	0.32260	0.26274	0.23873	0.22457	0.27348	0.27160		
	0.20216						0.25656	15.273

STL Los Angeles

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
8 Chloromethane	0.11174 0.07215	0.09503	0.09627	0.09303	0.09518	0.09243	0.09369	12.344
9 Vinyl Chloride	0.44242 0.42047	0.41143	0.38835	0.39845	0.39759	0.38750	0.40660	4.861
10 n-Butane	0.62727 0.43640	0.57900	0.54623	0.50691	0.60872	0.59000	0.55636	11.912
11 2-Methylpropene (Isobutylene)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
12 1,3-Butadiene	0.28308 0.28848	0.27476	0.25635	0.27624	0.27811	0.27157	0.27551	3.677
13 Acetaldehyde	+++++ +++++	+++++	+++++	+++++	0.05788	+++++	0.05788	0.000
14 Methanol	0.04169 0.04950	0.04801	0.05160	0.05241	0.07195	0.06538	0.05436	19.393
15 Bromomethane	0.53114 0.52690	0.52479	0.47987	0.49112	0.49197	0.49280	0.50552	4.193
16 Chloroethane	0.27607 0.26101	0.27427	0.24332	0.24839	0.25392	0.24572	0.25753	5.197
17 2-Methylbutane (Isopentane)	0.59570 0.32216	0.45177	0.43126	0.39841	0.47650	0.43057	0.44377	18.717

STL Los Angeles

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
18 1,1-Difluoroethane	+++++ +++++	0.83932	0.68757	0.62197	0.58987	0.54653	0.65705	17.372	
19 Vinyl Bromide	0.62278 0.62107	0.56455	0.53870	0.56539	0.57273	0.56881	0.57915	5.391	
20 Dichlorofluoromethane (F21)	1.78533 1.13113	1.50223	1.39821	1.34166	1.65446	1.49514	1.47259	14.446	
21 Trichlorofluoromethane (F11)	2.44228 2.05644	2.19307	2.04879	2.09644	2.05197	2.00515	2.12773	7.083	
22 n-Pentane	1.21122 0.63205	0.91843	0.83705	0.76734	0.91893	0.83317	0.87403	20.395	
23 1,1-DC-1-flouroethane(F141b)	2.58910 +++++	2.46384	2.73685	2.65312	2.66299	2.44988	2.59263	4.444	
24 Ethanol	+++++ 0.04475	0.03096	0.04049	0.04678	0.06130	0.05751	0.04697	23.705	
25 Ether (Diethyl ether)	0.49364 0.37446	0.50122	0.46318	0.44008	0.54085	0.49061	0.47201	11.284	
26 Acrolein	0.20601 0.10903	0.05556	0.08013	0.08246	0.09423	0.10125	0.10410	46.263	<-
27 Propionaldehyde (Propanal)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	++++-	+++++	

STL Los Angeles

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
28 1,1-Dichloroethene	1.26790	1.17864	1.08330	1.12535	1.10018	1.07502			
	1.06973						1.12859	6.381	
29 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	
30 1,1,2-CL 1,2,2-F ethane(F113)	2.89715	2.59937	2.38876	2.40025	2.34655	2.25977			
	2.22085						2.44467	9.559	
31 Acetone	+++++	0.12242	0.14598	0.16090	0.16041	0.16574			
	0.20458						0.16001	16.836	
32 Iodomethane	1.11548	1.03774	1.38752	1.40857	2.82193	2.47154			
	1.87248						1.73075	39.751	<-
33 Carbon Disulfide	0.84200	0.90775	0.92884	1.06258	1.12947	1.19849			
	1.35974						1.06127	17.279	
34 2-Propanol	+++++	0.45343	0.48827	0.55577	0.58306	0.59777			
	0.71716						0.56591	16.380	
35 Acetonitrile	0.04928	0.08266	0.12149	0.13210	0.18434	0.18610			
	0.15546						0.13021	39.137	<-
36 Allyl Chloride	0.54011	0.56312	0.52171	0.54469	0.60226	0.61352			
	0.71567						0.58587	11.302	
37 Methylene Chloride	0.81147	0.73641	0.65629	0.67719	0.66235	0.64310			
	0.69121						0.69686	8.458	

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
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Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
38 Cyclopentane	1.03899	0.77957	0.71432	0.68643	0.82498	0.73694		
	0.57332						0.76494	18.881
39 tert-Butyl alcohol (TBA)	1.86309	1.72376	1.66232	1.57743	1.92906	1.72523		
	1.08163						1.65179	16.814
40 Acrylonitrile	+++++	+++++	0.10900	0.15907	0.19291	0.21017		
	0.26841						0.18791	31.549 <-
41 trans-1,2-Dichloroethene	1.04616	0.98328	0.90820	0.97628	0.98022	0.97358		
	1.00617						0.98199	4.210
42 Methyl-tert-butyl ether[MTBE]	1.83282	1.67414	1.56955	1.62001	1.65137	1.62540		
	1.68918						1.66607	5.005
43 n-Hexane	0.82470	0.77675	0.74026	0.74593	0.77139	0.74136		
	0.79541						0.77083	4.090
44 1,1-Dichloroethane	1.34494	1.26054	1.18276	1.21641	1.21113	1.18403		
	1.25722						1.23672	4.604
45 Vinyl Acetate	+++++	+++++	0.87700	1.06721	1.21073	1.28738		
	1.50832						1.19013	19.897
46 Diisopropyl ether (DIPE)	3.29844	2.95540	2.82049	2.70989	3.30941	2.93906		
	2.16172						2.88491	13.550
47 1-Propanol	0.50102	0.39064	0.41962	0.42491	0.55844	0.52799		
	0.41314						0.46225	14.194

STL Los Angeles

INITIAL CALIBRATION DATA

Start Cal Date : 29-SEP-2004 14:40
End Cal Date : 03-JAN-2005 23:34
Quant Method : ISTD
Origin : Disabled
Target Version : 4.04
Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
48 2,4-Dimethylpentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Methylcyclopentane	0.29986 / 0.14314	0.24839	0.22788	0.18990	0.21747	0.19606	0.21753	22.674
50 Ethyl tert-butyl ether (ETBE)	4.00260 / 2.51403	3.48127	3.29239	3.13410	3.84165	3.47700	3.39186	14.431
51 Nitromethane	+++++ / 0.16132	0.16872	0.08831	0.09748	0.10867	0.13567	0.12670	26.645
52 2,2-Dichloropropane	2.07653 / 1.48895	1.80830	1.67473	1.58543	2.16105	1.96094	1.82228	13.951
53 cis-1,2-Dichloroethene	0.71397 / 0.66208	0.63187	0.60049	0.61799	0.62662	0.62064	0.63910	5.930
54 2-Butanone	+++++ / 0.26201	+++++	0.15344	0.19947	0.22036	0.22907	0.21287	18.856
55 Propionitrile (Ethyl cyanide)	0.09053 / 0.22800	0.14454	0.16846	0.20644	0.27892	0.26206	0.19699	33.987 <-
56 Ethyl Acetate	+++++ / 1.44220	0.78164	0.95864	1.15998	1.31325	1.24398	1.14995	21.061
57 Methacrylonitrile	0.07711 / 0.25307	0.19822	0.21967	0.25899	0.33760	0.30806	0.23510	35.970 <-

STL Los Angeles

INITIAL CALIBRATION DATA

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
59 Tetrahydrofuran	+++++ / 0.61004	0.53842	0.53670	0.53599	0.54216	0.54824	0.55193	5.223
60 Chloroform	1.78301 / 1.57221	1.62525	1.51870	1.58202	1.54590	1.50815	1.59075	5.886
61 1,1,1-Trichloroethane	1.71160 / 1.62464	1.56999	1.52136	1.58538	1.57224	1.54706	1.59033	3.917
62 Cyclohexane	0.90339 / 0.79530	0.81253	0.76571	0.77495	0.77958	0.75429	0.79797	6.297
63 1,1-Dichloro-1-propene	1.81425 / 1.17020	1.58797	1.49427	1.40260	1.70362	1.54820	1.53159	13.633
64 Carbon Tetrachloride	0.87038 / 1.30056	0.83983	0.95046	1.00920	1.21360	1.21313	1.05674	17.442
65 1-Heptene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Isobutyl alcohol	0.03509 / 0.02042	0.02042	0.02058	0.02152	0.02706	0.02526	0.02433	22.298
68 Benzene	0.78780 / 0.58386	0.71899	0.68753	0.67115	0.66598	0.64737	0.68038	9.253
69 1,2-Dichloroethane	0.48487 / 0.39352	0.47290	0.45586	0.43340	0.43308	0.42901	0.44323	6.921

STL Los Angeles

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
70 2,2,4-Trimethylpentane	2.04384 / 1.43818	1.84557	1.78175	1.69840	1.73692	1.68874	1.74763	10.454
71 tert-Amyl methyl ether (TAME)	1.02680 / 0.81576	0.92384	0.86786	0.85814	1.07070	0.99994	0.93758	10.283
72 n-Heptane	0.65292 / 0.52727	0.59087	0.57809	0.57044	0.59474	0.58371	0.58544	6.367
74 2,3,4-Trimethylpentane	++++++ / ++++++	++++++	++++++	++++++	++++++	++++++	++++++	++++++
75 Trichloroethene	0.49675 / 0.38637	0.44912	0.44758	0.42160	0.43287	0.42172	0.43657	7.756
76 Methylcyclohexane	0.42140 / 0.29346	0.36653	0.33095	0.30891	0.38179	0.35467	0.35110	12.546
77 1-Butanol	++++++ / 0.01390	0.02081	0.01680	0.01594	0.01842	0.01675	0.01710	13.662
78 1,2-Dichloropropane	0.16774 / 0.15399	0.15879	0.17082	0.16553	0.16628	0.16412	0.16390	3.481
79 Dibromomethane	0.53415 / 0.44421	0.48041	0.44691	0.42596	0.54917	0.51576	0.48522	9.991
80 Methyl methacrylate	++++++ / 0.31492	0.23366	0.24181	++++++	0.31202	0.30819	0.28212	14.422

STL Los Angeles

INITIAL CALIBRATION DATA

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
81 1,4-Dioxane	+++++ / 0.16962	0.12593	0.15230	0.15893	0.16896	0.17203	0.15796	11.014	
82 Bromodichloromethane	0.49808 / 0.55167	0.50550	0.52561	0.54819	0.59184	0.59358	0.54492	7.007	
83 1-Bromo-2-chloroethane	0.08427 / 0.08679	0.08575	0.08922	0.08796	0.10824	0.10176	0.09200	10.014	
84 2-Chloroethylvinyl ether	+++++ / 0.04137	+++++	0.00529	0.00839	0.01628	0.02467	0.01920	75.497	<-
85 cis-1,3-Dichloropropene	0.34414 / 0.50210	0.37747	0.43712	0.47488	0.49476	0.51468	0.44931	14.693	
86 4-Methyl-2-Pentanone	+++++ / 0.27292	+++++	+++++	0.17847	0.22374	0.24354	0.22967	17.270	
87 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Toluene	1.01334 / 0.76479	0.91538	0.88423	0.85555	0.87314	0.85627	0.88039	8.491	
90 n-Octane	0.59003 / 0.56563	0.53603	0.54695	0.55948	0.73478	0.68532	0.60260	12.716	
91 trans-1,3-Dichloropropene	0.29058 / 0.51792	0.33347	0.38018	0.44019	0.49187	0.50533	0.42279	21.201	

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
92 Ethyl methacrylate	+++++ / 0.70016	0.43783	0.49371	0.60033	0.82761	0.80134	0.64350	24.924
93 1,1,2-Trichloroethane	0.61878 / 0.48182	0.60883	0.58026	0.57107	0.55612	0.53136	0.56403	8.318
94 1,3-Dichloropropane	0.69617 / 0.54479	0.64285	0.59370	0.56549	0.70784	0.65124	0.62887	10.012
95 Tetrachloroethene	0.91266 / 0.61982	0.87257	0.82493	0.78006	0.75451	0.71516	0.78282	12.629
96 2-Hexanone	+++++ / 0.37703	+++++	0.15338	0.19060	0.25602	0.28482	0.25237	34.442 <-
97 Dibromochloromethane	0.78993 / 0.93269	0.32338	0.94305	0.99419	1.07413	1.06868	0.94658	11.682
98 1,2-Dibromoethane	0.91324 / 0.85734	0.94281	0.96570	0.97781	0.98546	0.97568	0.94544	4.882
M 99 Xylenes (total)	0.41650 / 0.42479	0.37835	0.38910	0.37063	0.43924	0.43533	0.40771	6.871
100 1-Chlorohexane	0.67959 / 0.54704	0.60195	0.56163	0.56717	0.70682	0.65981	0.61772	10.341
102 Chlorobenzene	1.04688 / 0.80831	0.94435	0.92214	0.89483	0.91484	0.89472	0.91801	7.759

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
103 1,1,1,2-Tetrachloroethane	0.73399	0.67808	0.65687	0.64348	0.83647	0.77817		
	0.63674						0.70912	10.747
104 Ethylbenzene	1.48707	1.34401	1.41692	1.38759	1.49715	1.49088		
	1.32506						1.42124	5.083
105 m,p-Xylenes	0.43284	0.38311	0.39595	0.37173	0.44264	0.44083		
	0.42199						0.41273	7.004
106 n-Nonane	0.33479	0.34111	0.32217	0.36948	0.52167	0.50256		
	0.48463						0.41092	21.391
107 o-Xylene	0.38382	0.36883	0.37541	0.36844	0.43243	0.42433		
	0.43040						0.39767	7.519
108 Styrene	0.44849	0.44593	0.42772	0.43223	0.53258	0.56302		
	0.63806						0.49829	16.276
109 Cellosolve Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
110 Bromoform	0.49988	0.55334	0.68024	0.76140	0.93008	0.95119		
	0.83533						0.74450	23.663
111 .alpha.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
112 Isopropylbenzene (Cumene)	0.44369	0.39983	0.39673	0.42797	0.55736	0.52118		
	0.44192						0.45552	13.391

STL Los Angeles

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Integrator : HP RTE
Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	___ RRF	% RSD
113 Cyclohexanone	+++++ 0.31380	0.16737	0.13623	0.16986	0.30769	0.30915	0.23402	36.036 <-
115 Bromobenzene	0.62810 0.64313	0.54939	0.53490	0.56999	0.74532	0.71345	0.62633	12.953
116 1,1,2,2-Tetrachloroethane	1.35006 1.15903	1.36835	1.40167	1.40654	1.41590	1.37850	1.35429	6.584
117 1,2,3-Trichloropropane	0.40312 0.33139	0.37856	0.36846	0.35405	0.43674	0.40744	0.38282	9.311
118 trans-1,4-Dichloro-2-butene	+++++ +++++	0.03166	0.04163	0.05764	0.09751	0.10698	0.06708	50.055 <-
119 n-Propylbenzene	1.28187 1.44875	1.16227	1.17752	1.29846	1.76716	1.67802	1.40201	17.097
120 2-Chlorotoluene	0.34395 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365
121 4-Chlorotoluene	0.34395 0.36367	0.31308	0.29196	0.31871	0.42215	0.39436	0.34970	13.365
122 3-Ethyltoluene	1.05354 1.17775	0.92205	0.91423	1.00617	1.36657	1.29121	1.10450	16.139
123 4-Ethyl Toluene	0.81519 1.08888	0.81347	0.65696	0.67163	0.91104	0.97223	0.84706	18.497

STL Los Angeles

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Method file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Cal Date : 04-Jan-2005 08:45 kammererd
Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
124 1,3,5-Trimethylbenzene	1.37558	1.21368	0.81082	0.65064	0.83940	0.78774		
	+++++						0.94631	29.818
125 n-Decane	0.46267	0.34922	0.25520	0.27626	0.36839	0.34720		
	0.32620						0.34073	19.844
126 .beta.-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
127 2-Ethyltoluene	1.11542	0.94881	0.85458	0.95853	1.30303	1.23402		
	1.16620						1.08294	15.307
128 .alpha.-Methylstyrene	0.43803	0.36069	0.33804	0.37867	0.54465	0.52825		
	0.54809						0.44806	20.459
129 tert-Butylbenzene	0.80994	0.73130	0.67470	0.76818	1.05286	1.00081		
	0.87914						0.84528	16.570
130 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
131 1,2,4-Trimethylbenzene	0.34955	0.35806	0.23173	0.19988	0.25825	0.25412		
	+++++						0.27527	23.368
132 sec-Butylbenzene	1.53068	1.27842	1.22547	1.37218	1.91352	1.87496		
	1.68519						1.55435	17.948
133 D-Limonene	0.56335	0.44070	0.33104	0.35410	0.48917	0.46237		
	0.43408						0.43926	17.978

STL Los Angeles

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Curve Type : Average

Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
134 1,3-Dichlorobenzene	0.45191	0.50407	0.43975	0.43319	0.56651	0.59030			
	0.69853						0.52632	18.610	
135 p-Isopropyltoluene (p-Cymene)	1.33372	0.96781	0.87807	0.95477	1.33198	1.28222			
	1.26479						1.14477	17.565	
136 1,4-Dichlorobenzene	0.66866	0.52286	0.43933	0.41001	0.52783	0.54895			
	0.67222						0.54141	18.711	
137 1,2,3-Trimethylbenzene	0.80522	0.58005	0.50314	0.55097	0.70831	0.66417			
	0.67804						0.64142	16.131	
138 Benzyl Chloride	+++++	+++++	0.25069	0.31600	0.53098	0.69209			
	1.02647						0.56325	55.511	<-
139 n-Butylbenzene	0.62397	0.47374	0.36689	0.37472	0.49773	0.50348			
	0.55025						0.48440	18.904	
140 1,2-Dichlorobenzene	0.56155	0.57169	0.44978	0.42863	0.54379	0.56253			
	0.64790						0.53798	14.023	
141 n-Undecane	+++++	+++++	0.35517	0.25771	0.28445	0.24416			
	0.23934						0.27616	17.206	
142 1,2-Dibromo-3-chloropropane	0.63793	0.58033	0.59161	0.65977	0.92587	0.90159			
	0.79399						0.72730	19.989	
143 n-Dodecane	+++++	+++++	0.59443	0.41483	0.40612	0.28136			
	0.17470						0.37429	42.157	<-

STL Los Angeles

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Compound	2.000 Level 1 / 500.000 Level 7	4.000 Level 2	10.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
144 1,2,4-Trichlorobenzene	+++++ / 0.27629	0.26338	0.25799	0.22180	0.31565	0.26332	0.26641	11.388
145 Hexachlorobutadiene	0.56644 / 0.51820	0.58610	0.42156	0.35251	0.47676	0.47942	0.48586	16.727
146 Naphthalene	+++++ / 0.49153	0.70441	0.53060	0.46537	0.55710	0.47106	0.53668	16.670
147 1,2,3-Trichlorobenzene	0.44850 / 0.25906	0.48714	0.49598	+++++	0.42244	0.27752	0.39844	26.206
$ 66 1,2-Dichloroethane-d4	0.39014 / 0.39572	0.40234	0.40611	0.41316	0.41851	0.44633	0.41033	4.531
$ 88 Toluene-d8	0.51061 / 0.54926	0.50803	0.52649	0.50915	0.52457	0.53681	0.52356	2.982
$ 114 4-Bromofluorobenzene	0.81642 / 1.09717	0.79382	0.81777	0.80936	0.95153	0.96622	0.89318	12.833

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Propene	3.7
Dichlorodifluoromethane (F12)	11.3
1,2-Cl-1,1,2,2,F Ethane(F114)	11.3
Chloromethane	12.3
Vinyl Chloride	4.9
1,3-Butadiene	3.7
Bromomethane	4.2
Chloroethane	5.2
Vinyl Bromide	5.4
Trichlorofluoromethane (F11)	7.1
1,1-Dichloroethene	6.4
1,1,2-CL 1,2,2-F ethane(F113)	9.6
Acetone	16.8
Carbon Disulfide	17.3
2-Propanol	16.4
Allyl Chloride	11.3
Methylene Chloride	8.5
Acrylonitrile	31.5
trans-1,2-Dichloroethene	4.2
Methyl-tert-butyl ether[MTBE]	5.0
n-Hexane	4.1
1,1-Dichloroethane	4.6
Vinyl Acetate	19.9
cis-1,2-Dichloroethene	5.9
2-Butanone	18.9
Ethyl Acetate	21.1
Tetrahydrofuran	5.2
Chloroform	5.9
1,1,1-Trichloroethane	3.9
Cyclohexane	6.3
Carbon Tetrachloride	17.4
1,2-Dichloroethane-d4	4.5
Benzene	9.3
1,2-Dichloroethane	6.9
2,2,4-Trimethylpentane	10.5
n-Heptane	6.4
Trichloroethene	7.8
1,2-Dichloropropane	3.5
1,4-Dioxane	11.0

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B/IC01035.D
Report Date: 01/04/2005

INITIAL CALIBRATION REPORT

Method File : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Instrument ID: gcmsb.i Injection Date: 03-JAN-2005 22:23
Lab File ID : IC01035.D Lab Sample ID : 50 PPBV STD
Analysis Type: AIR

COMPOUND	%RSD
Bromodichloromethane	7.0
cis-1,3-Dichloropropene	14.7
4-Methyl-2-Pentanone	17.3
Toluene-d8	3.0
Toluene	8.5
trans-1,3-Dichloropropene	21.2
1,1,2-Trichloroethane	8.3
Tetrachloroethene	12.6
2-Hexanone	34.4
Dibromochloromethane	11.7
1,2-Dibromoethane	4.9
Xylenes (total)	6.9
Chlorobenzene	7.8
Ethylbenzene	5.1
m,p-Xylenes	7.0
o-Xylene	7.5
Styrene	16.3
Bromoform	23.7
4-Bromofluorobenzene	12.8
1,1,2,2-Tetrachloroethane	6.6
4-Ethyl Toluene	18.5
1,3,5-Trimethylbenzene	29.8
1,2,4-Trimethylbenzene	23.4
1,3-Dichlorobenzene	18.6
1,4-Dichlorobenzene	18.7
Benzyl Chloride	55.5
1,2-Dichlorobenzene	14.0
1,2,4-Trichlorobenzene	11.4
Hexachlorobutadiene	16.7

The average of all %RSD's in the initial calibration is 12.0

MA 01/04/05

E5A100227

STL Los Angeles
Air Toxics Lab GC/MS Run Log

strument ID: CMS-B	Data Directory: D:\GCMSB\ 050103A-B	BFB Standard: PSL99112B3	Initial Calibration ID: 1-3 05
	Method File: TO14A	Daily Standard: MSL04011028	SOP: CQI-MS-013
gbook ID: -AMS-041	Tune File: BF041123	LCS Standard: MSL04011043	MDL Date: 01-28-01
		I.S. Standard: PSL99112B3	Blank Lot No. G050301-00

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1305	1909	BF01032	-	-	-	BFB	28	-	-	-	m	OK	A	
	1927	MB01032	-	-	-	BLANK	500	-	-	-	m	OK	9	GL00571
	2002	IC01031	-	-	-	20 PIBV STD	40	-	-	-	m	OK	10	MSL04011043
	2037	IC01032	-	-	-	40	80	-	-	-	m	OK	10	
	2112	IC01033	-	-	-	10	200	-	-	-	m	OK	10	
	2148	IC01034	-	-	-	25	500	-	-	-	m	OK	10	
	2223	IC01035	-	-	-	50	125	-	-	-	m	OK	11	MSL04011028
	2258	IC01036	-	-	-	100	250	-	-	-	m	OK	11	
	2334	IC01037	-	-	-	500	1250	-	-	-	m	OK	11	
1405	0009	MB01033	-	-	-	BLANK	500	-	-	-	m	NO	12	02311 c/o?
	0014	LC01033	-	-	-	ICV/LCS	500	-	-	-	m	OK	13	MSL04011043
	0119	LC01034	-	-	-	LCSD	500	-	-	-	m	OK	13	
	0305	MB01034	-	-	-	METHOD BLANK	500	-	-	-	m	OK	15	
	0342	B7371	G1PG5AA	001	CRA	A-17178-BW-001	1200	24.4/10.2	-	1.00	m	OK	16	EYL220306-1
	0417	B7372	G1PG7AA			002	872	24.4/14.0	-		m	OK	1	-2
	0452	B7373	G1PH1AA			003	1130	24.4/10.9	-		m	OK	2	-3
	0527	B7374	G1PH7AA			004	100	24.4/10.5	-	11.6	m	O/R	3	-4
	0602	B7375	G1PH4AA			005	1040	24.5/11.6	-	1.00	m	O/R	4	-5

viewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

rument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
book ID:	Tune File:	LCS Standard: 1-4-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-4-05	0637	B7576	G1PA11AA	CCA	CRA	A 17178-BW CCC	1150	244/102	—	1.00	W	OK	5	E4L22036-6
↓	0712	B7577	G1Q191AD	↓	TAST	LG1SVLCC1SB 0712	40	244/11.1	100/10	2730	W	O/R	6	E4L23056-1
	0741	B7578	G1Q2A1AD	↓	↓	LG1SVLCC1SB 1030	40	244/11.2	100/10	2720	W	OK	7	↓ -2

viewed: _____

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D
Lab Smp Id:
Inj Date : 03-JAN-2005 19:09
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.097	4.200	(0.000)	95	55224			0.00- 100.00	100.00
4.097	4.200	(0.000)	50	12169			15.00- 40.00	22.04
4.097	4.200	(0.000)	75	29888			30.00- 60.00	54.12
4.097	4.200	(0.000)	96	3827			5.00- 9.00	6.93
4.097	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.097	4.200	(0.000)	174	31234			50.00- 120.00	56.56
4.097	4.200	(0.000)	175	2671			5.00- 9.00	8.55
4.097	4.200	(0.000)	176	30768			95.00- 101.00	98.51
4.097	4.200	(0.000)	177	2146			5.00- 9.00	6.97

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

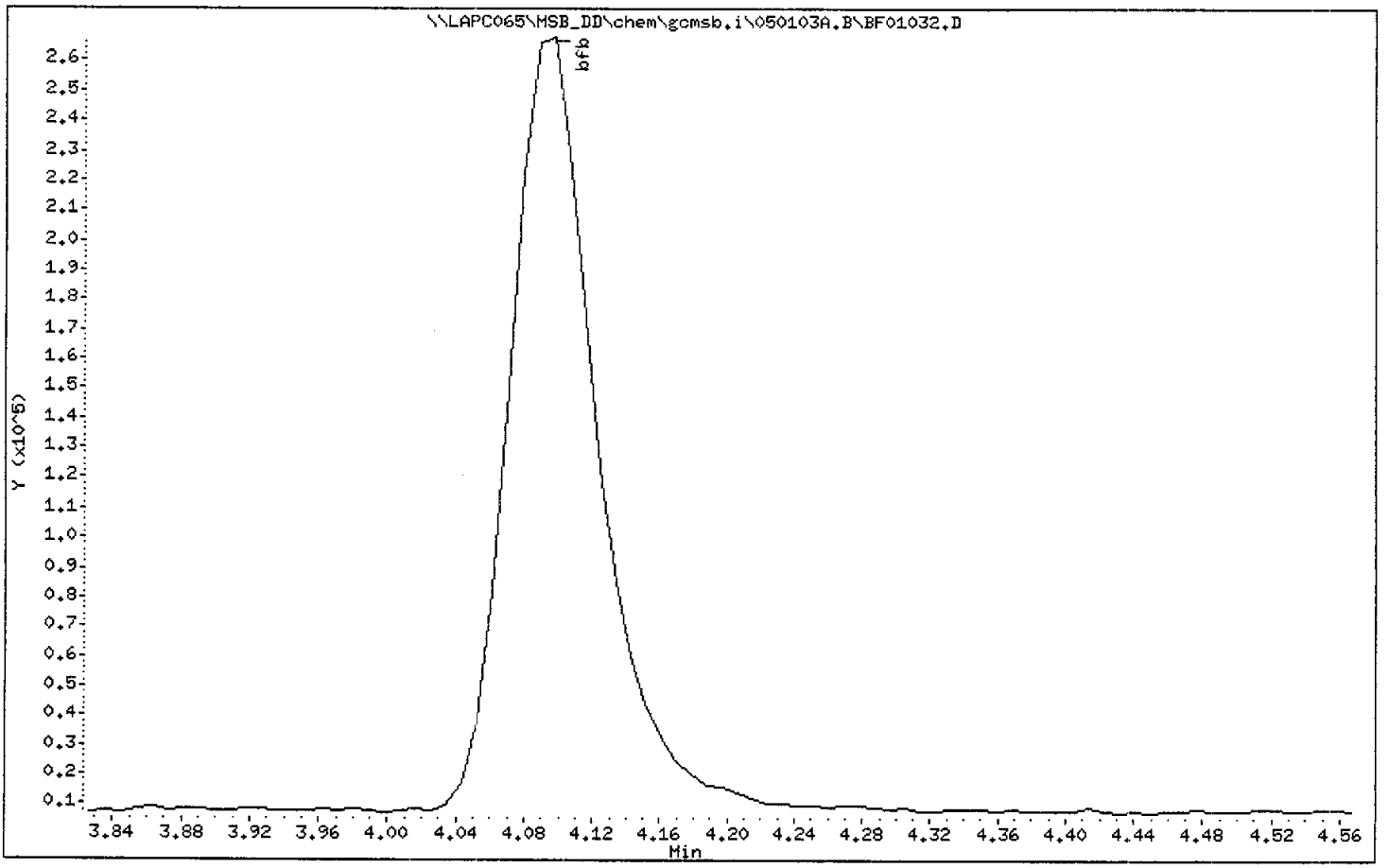
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

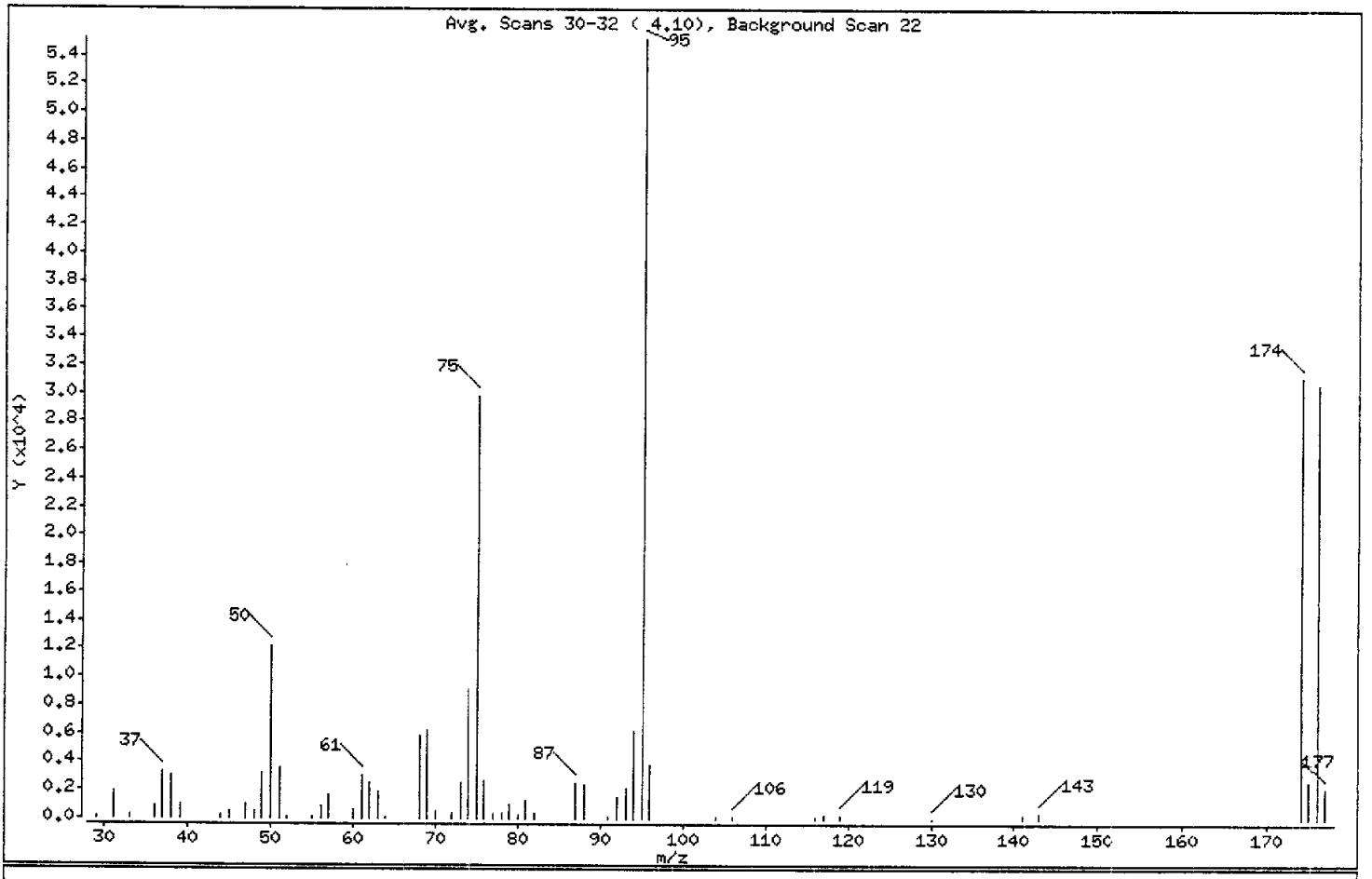
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.04
75	30.00 - 60.00% of mass 95	54.12
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	56.56
175	5.00 - 9.00% of mass 174	4.84 (8.55)
176	95.00 - 101.00% of mass 174	55.71 (98.51)
177	5.00 - 9.00% of mass 176	3.89 (6.97)

AA 1/4/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\BF01032.D

Date : 03-JAN-2005 19:09

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01032.D
Spectrum: Avg. Scans 30-32 (4.10), Background Scan 22
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	66	55.00	167	76.00	2670	104.00	64
31.00	1923	56.00	941	77.00	365	106.00	68
33.00	240	57.00	1620	78.00	335	116.00	141
36.00	872	60.00	689	79.00	1053	117.00	193
37.00	3353	61.00	3019	80.00	251	119.00	233
38.00	3034	62.00	2598	81.00	1213	130.00	62
39.00	1053	63.00	1942	82.00	341	141.00	284
44.00	291	64.00	69	87.00	2595	143.00	386
45.00	569	68.00	5885	88.00	2423	174.00	31232
47.00	987	69.00	6221	91.00	153	175.00	2671
48.00	518	70.00	507	92.00	1494	176.00	30768
49.00	3154	72.00	424	93.00	2164	177.00	2146
50.00	12169	73.00	2510	94.00	6249		
51.00	3593	74.00	9191	95.00	55224		
52.00	159	75.00	29888	96.00	3827		

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Lab Smp Id: 2.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:02
Operator : DLK Inst ID: gcmsb.i
Smp Info : 2.0 PPBV STD,MSL0501043
Misc Info : 1,1,40,40,1,1,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	40.000	CalVol
SmpVol	40.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.089	2.080	(0.251)	4222	2.00000	2.107
3 Dichlorodifluoromethane (F12)	85	2.152	2.143	(0.258)	55519	2.00000	2.408
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.377	2.368	(0.285)	45205	2.00000	2.412
8 Chloromethane	52	2.423	2.414	(0.291)	2441	2.00000	2.385(aQ)
9 Vinyl Chloride	62	2.621	2.603	(0.315)	9665	2.00000	2.176
12 1,3-Butadiene	39	2.693	2.675	(0.323)	12368	4.00000	4.110(a)
15 Bromomethane	94	3.135	3.126	(0.376)	11603	2.00000	2.101
16 Chloroethane	64	3.325	3.307	(0.399)	6031	2.00000	2.144(a)
19 Vinyl Bromide	106	3.641	3.623	(0.437)	13605	2.00000	2.151
21 Trichlorofluoromethane (F11)	101	3.758	3.749	(0.451)	53353	2.00000	2.296
28 1,1-Dichloroethene	61	4.705	4.696	(0.565)	27698	2.00000	2.247
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.741	4.732	(0.569)	63290	2.00000	2.370
31 Acetone	58	4.985	4.895	(0.598)	1492	2.00000	0.8537(aQ)
33 Carbon Disulfide	76	5.057	5.048	(0.607)	18394	2.00000	1.587(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.472	5.454	(0.657)	8806	2.00000	1.425(a)
	36 Allyl Chloride	41	5.400	5.391	(0.648)	11799	2.00000	1.844(a)
	37 Methylene Chloride	49	5.608	5.599	(0.673)	17727	2.00000	2.329
	41 trans-1,2-Dichloroethene	61	6.140	6.113	(0.737)	22854	2.00000	2.131
	42 Methyl-tert-butyl ether[MTBE]	73	6.158	6.131	(0.739)	40039	2.00000	2.200(a)
	43 n-Hexane	41	6.636	6.636	(0.796)	18016	2.00000	2.140(a)
	44 1,1-Dichloroethane	63	6.871	6.853	(0.825)	29381	2.00000	2.175
	45 Vinyl Acetate	43	7.259	7.123	(0.871)	15807	2.00000	1.216(a)
	53 cis-1,2-Dichloroethene	96	7.935	7.917	(0.952)	15597	2.00000	2.234
	54 2-Butanone	72	8.098	8.044	(0.972)	1379	2.00000	0.5931(aQ)
	56 Ethyl Acetate	43	8.242	8.170	(0.989)	40097	2.00000	3.192
*	58 Bromochloromethane	49	8.332	8.323	(1.000)	546140	50.0000	
	59 Tetrahydrofuran	42	8.504	8.468	(1.021)	11835	2.00000	1.963(a)
	60 Chloroform	83	8.504	8.495	(1.021)	38951	2.00000	2.242
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.055)	37391	2.00000	2.152
	62 Cyclohexane	84	8.874	8.865	(1.065)	19735	2.00000	2.264(a)
	64 Carbon Tetrachloride	117	9.090	9.081	(1.091)	19014	2.00000	1.647(a)
$	66 1,2-Dichloroethane-d4	65	9.361	9.343	(0.922)	463723	50.0000	47.54
	68 Benzene	78	9.469	9.451	(0.932)	37456	2.00000	2.316
	69 1,2-Dichloroethane	62	9.505	9.487	(0.936)	23053	2.00000	2.188
	70 2,2,4-Trimethylpentane	57	9.632	9.605	(0.948)	97174	2.00000	2.339(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	31043	2.00000	2.230(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1188620	50.0000	
	75 Trichloroethene	130	10.642	10.606	(1.048)	23618	2.00000	2.276
	78 1,2-Dichloropropane	76	11.012	10.994	(1.084)	7975	2.00000	2.047
	81 1,4-Dioxane	88	11.400	11.319	(1.123)	5603	2.00000	1.492(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	23681	2.00000	1.828(a)
	85 cis-1,3-Dichloropropene	75	12.366	12.329	(1.218)	16362	2.00000	1.532(a)
	86 4-Methyl-2-Pentanone	58	12.645	12.600	(1.245)	3168	2.00000	0.5802(aQ)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606925	50.0000	48.76
	89 Toluene	91	12.907	12.889	(1.271)	48179	2.00000	2.302
	91 trans-1,3-Dichloropropene	75	13.376	13.349	(0.867)	10032	2.00000	1.374(a)
	93 1,1,2-Trichloroethane	97	13.665	13.638	(0.885)	21363	2.00000	2.194
	95 Tetrachloroethene	166	13.917	13.890	(0.902)	31509	2.00000	2.332
	96 2-Hexanone	58	14.477	14.233	(0.938)	401	2.00000	0.09205(aQ)
	97 Dibromochloromethane	129	14.387	14.360	(0.932)	27272	2.00000	1.669(a)
	98 1,2-Dibromoethane	107	14.621	14.594	(0.947)	31529	2.00000	1.932(a)
*	101 Chlorobenzene-d5	117	15.433	15.424	(1.000)	863109	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.003)	36143	2.00000	2.281
M	99 Xylenes (total)	106				43138	6.00000	6.125
	104 Ethylbenzene	91	15.722	15.704	(1.019)	51340	2.00000	2.093
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	29887	4.00000	4.195
	107 o-Xylene	106	16.696	16.687	(1.082)	13251	2.00000	1.930(a)
	108 Styrene	104	16.778	16.760	(1.087)	15484	2.00000	1.800(a)
	110 Bromoform	173	17.084	17.066	(1.107)	17258	2.00000	1.343(a)
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	704658	50.0000	45.70
	116 1,1,2,2-Tetrachloroethane	83	17.987	17.969	(1.165)	46610	2.00000	1.994(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.465	18.438	(1.196)	28144	2.00000	1.925(a)
124 1,3,5-Trimethylbenzene	105	18.564	18.555	(1.203)	47491	2.00000	2.907
131 1,2,4-Trimethylbenzene	120	19.322	19.295	(1.252)	12068	2.00000	2.540
134 1,3-Dichlorobenzene	146	19.908	19.872	(1.290)	15602	2.00000	1.717(a)
136 1,4-Dichlorobenzene	146	20.107	20.053	(1.303)	23085	2.00000	2.470
140 1,2-Dichlorobenzene	146	20.847	20.811	(1.351)	19387	2.00000	2.088
145 Hexachlorobutadiene	225	23.436	23.418	(1.519)	19556	2.00000	2.332(a)

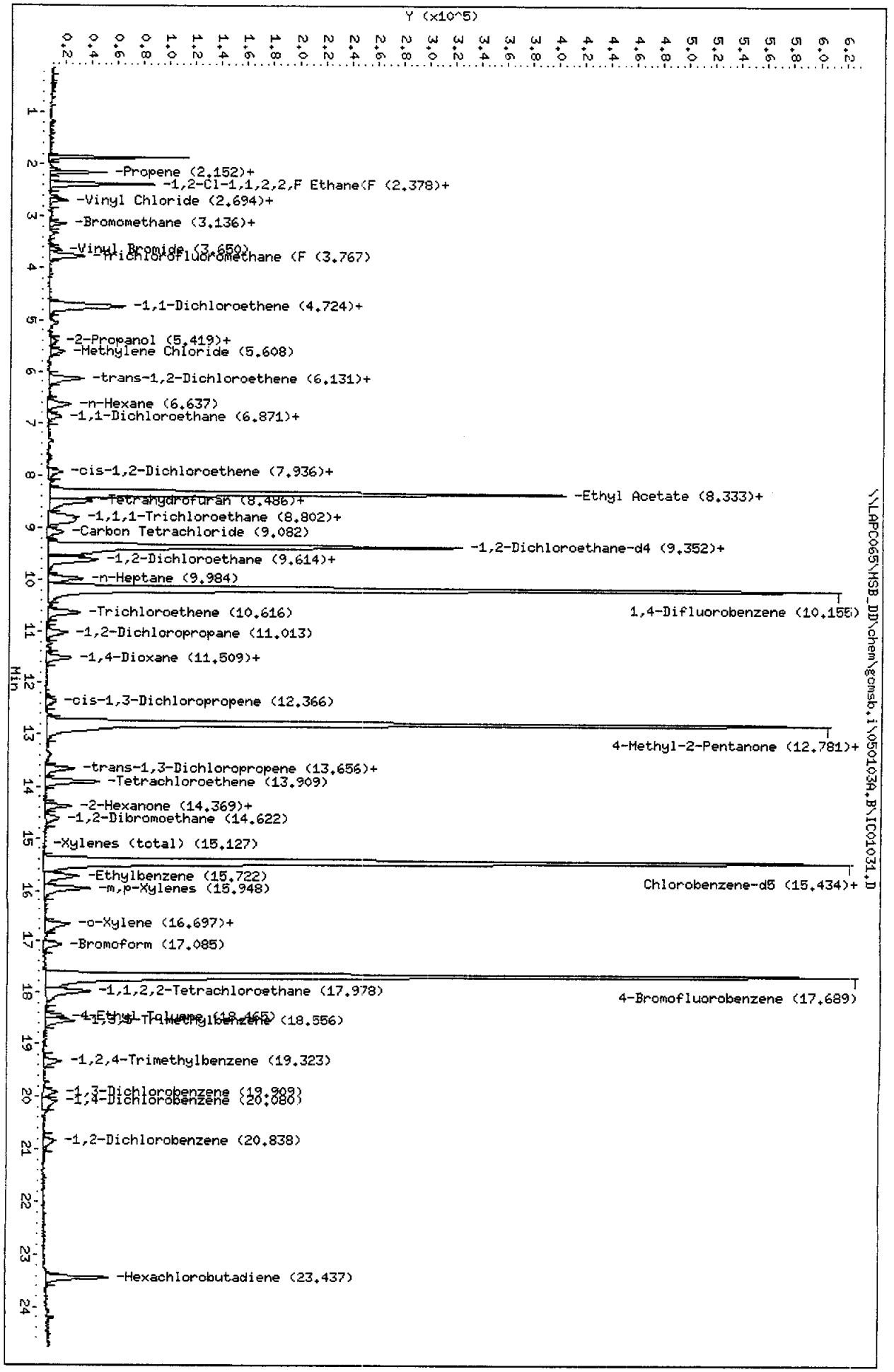
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01031.D
Date : 03-JAN-2005 20:02
Client ID: MSL0501043
Sample Info: 2.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Lab Smp Id: 4.0 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 20:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 4.0 PPBV STD,MSL0501043
Misc Info : 1,1,80,80,1,2,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 12 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	80.000	CalVol
SmpVol	80.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.080	(0.250)	8033	4.00000	3.961
3 Dichlorodifluoromethane (F12)	85	2.143	2.143	(0.257)	100503	4.00000	4.308
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.368	2.368	(0.285)	82854	4.00000	4.368
8 Chloromethane	52	2.414	2.414	(0.290)	4202	4.00000	4.057
9 Vinyl Chloride	62	2.603	2.603	(0.313)	18192	4.00000	4.048
12 1,3-Butadiene	39	2.675	2.675	(0.321)	24298	8.00000	7.978(a)
15 Bromomethane	94	3.126	3.126	(0.376)	23204	4.00000	4.152
16 Chloroethane	64	3.307	3.307	(0.397)	12127	4.00000	4.260
19 Vinyl Bromide	106	3.623	3.623	(0.435)	24962	4.00000	3.899
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.450)	96969	4.00000	4.123
28 1,1-Dichloroethene	61	4.696	4.696	(0.564)	52115	4.00000	4.177
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.732	4.732	(0.569)	114934	4.00000	4.253
31 Acetone	58	4.895	4.895	(0.588)	5413	4.00000	3.060(a)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	40137	4.00000	3.421(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.454	5.454	(0.655)	20049	4.00000	3.205
	36 Allyl Chloride	41	5.391	5.391	(0.648)	24899	4.00000	3.845(a)
	37 Methylene Chloride	49	5.599	5.599	(0.673)	32561	4.00000	4.227
	41 trans-1,2-Dichloroethene	61	6.113	6.113	(0.734)	43477	4.00000	4.005
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	74024	4.00000	4.019(a)
	43 n-Hexane	41	6.636	6.636	(0.797)	34345	4.00000	4.031(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.823)	55736	4.00000	4.077
	45 Vinyl Acetate	43	7.123	7.123	(0.856)	31418	4.00000	2.388(a)
	53 cis-1,2-Dichloroethene	96	7.917	7.917	(0.951)	27939	4.00000	3.955
	54 2-Butanone	72	8.044	8.044	(0.966)	5364	4.00000	2.280(a)
	56 Ethyl Acetate	43	8.170	8.170	(0.982)	34561	4.00000	2.719
*	58 Bromochloromethane	49	8.323	8.323	(1.000)	552701	50.0000	
	59 Tetrahydrofuran	42	8.468	8.468	(1.017)	23807	4.00000	3.902(a)
	60 Chloroform	83	8.495	8.495	(1.021)	71862	4.00000	4.087
	61 1,1,1-Trichloroethane	97	8.784	8.784	(1.055)	69419	4.00000	3.949
	62 Cyclohexane	84	8.865	8.865	(1.065)	35927	4.00000	4.073(a)
	64 Carbon Tetrachloride	117	9.081	9.081	(1.091)	37134	4.00000	3.179
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	474841	50.0000	49.03
	68 Benzene	78	9.451	9.451	(0.931)	67884	4.00000	4.227
	69 1,2-Dichloroethane	62	9.487	9.487	(0.934)	44649	4.00000	4.268
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	174252	4.00000	4.224(a)
	72 n-Heptane	43	9.975	9.975	(0.982)	55788	4.00000	4.037(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1180202	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	42404	4.00000	4.115
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	14992	4.00000	3.875
	81 1,4-Dioxane	88	11.319	11.319	(1.115)	11890	4.00000	3.189(a)
	82 Bromodichloromethane	85	11.499	11.499	(1.132)	47727	4.00000	3.710
	85 cis-1,3-Dichloropropene	75	12.329	12.329	(1.214)	35639	4.00000	3.360
	86 4-Methyl-2-Pentanone	58	12.600	12.600	(1.241)	9081	4.00000	1.675(a)
$	88 Toluene-d8	100	12.772	12.772	(1.258)	599578	50.0000	48.52
	89 Toluene	91	12.889	12.889	(1.269)	86427	4.00000	4.159
	91 trans-1,3-Dichloropropene	75	13.349	13.349	(0.865)	22232	4.00000	3.155
	93 1,1,2-Trichloroethane	97	13.638	13.638	(0.884)	40589	4.00000	4.318
	95 Tetrachloroethene	166	13.890	13.890	(0.901)	58172	4.00000	4.458
	96 2-Hexanone	58	14.233	14.233	(0.923)	4880	4.00000	1.160(a)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	54893	4.00000	3.479
	98 1,2-Dibromoethane	107	14.594	14.594	(0.946)	62855	4.00000	3.989
*	101 Chlorobenzene-d5	117	15.424	15.424	(1.000)	833347	50.0000	
	102 Chlorobenzene	112	15.478	15.478	(1.004)	62958	4.00000	4.115
M	99 Xylenes (total)	106				75671	12.0000	11.14
	104 Ethylbenzene	91	15.704	15.704	(1.018)	89602	4.00000	3.783
	105 m,p-Xylenes	106	15.939	15.939	(1.033)	51082	8.00000	7.426
	107 o-Xylene	106	16.687	16.687	(1.082)	24589	4.00000	3.710
	108 Styrene	104	16.760	16.760	(1.087)	29729	4.00000	3.580
	110 Bromoform	173	17.066	17.066	(1.106)	36890	4.00000	2.973
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	661529	50.0000	44.44
	116 1,1,2,2-Tetrachloroethane	83	17.969	17.969	(1.165)	91225	4.00000	4.042

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.438	18.438	(1.195)	54232	4.00000	3.841
124 1,3,5-Trimethylbenzene	105	18.555	18.555	(1.203)	80913	4.00000	5.130
131 1,2,4-Trimethylbenzene	120	19.295	19.295	(1.251)	23871	4.00000	5.203
134 1,3-Dichlorobenzene	146	19.872	19.872	(1.288)	33605	4.00000	3.831
136 1,4-Dichlorobenzene	146	20.053	20.053	(1.300)	34858	4.00000	3.863
140 1,2-Dichlorobenzene	146	20.811	20.811	(1.349)	38113	4.00000	4.251
144 1,2,4-Trichlorobenzene	180	23.301	23.301	(1.511)	17559	4.00000	3.954(a)
145 Hexachlorobutadiene	225	23.418	23.418	(1.518)	39074	4.00000	4.825

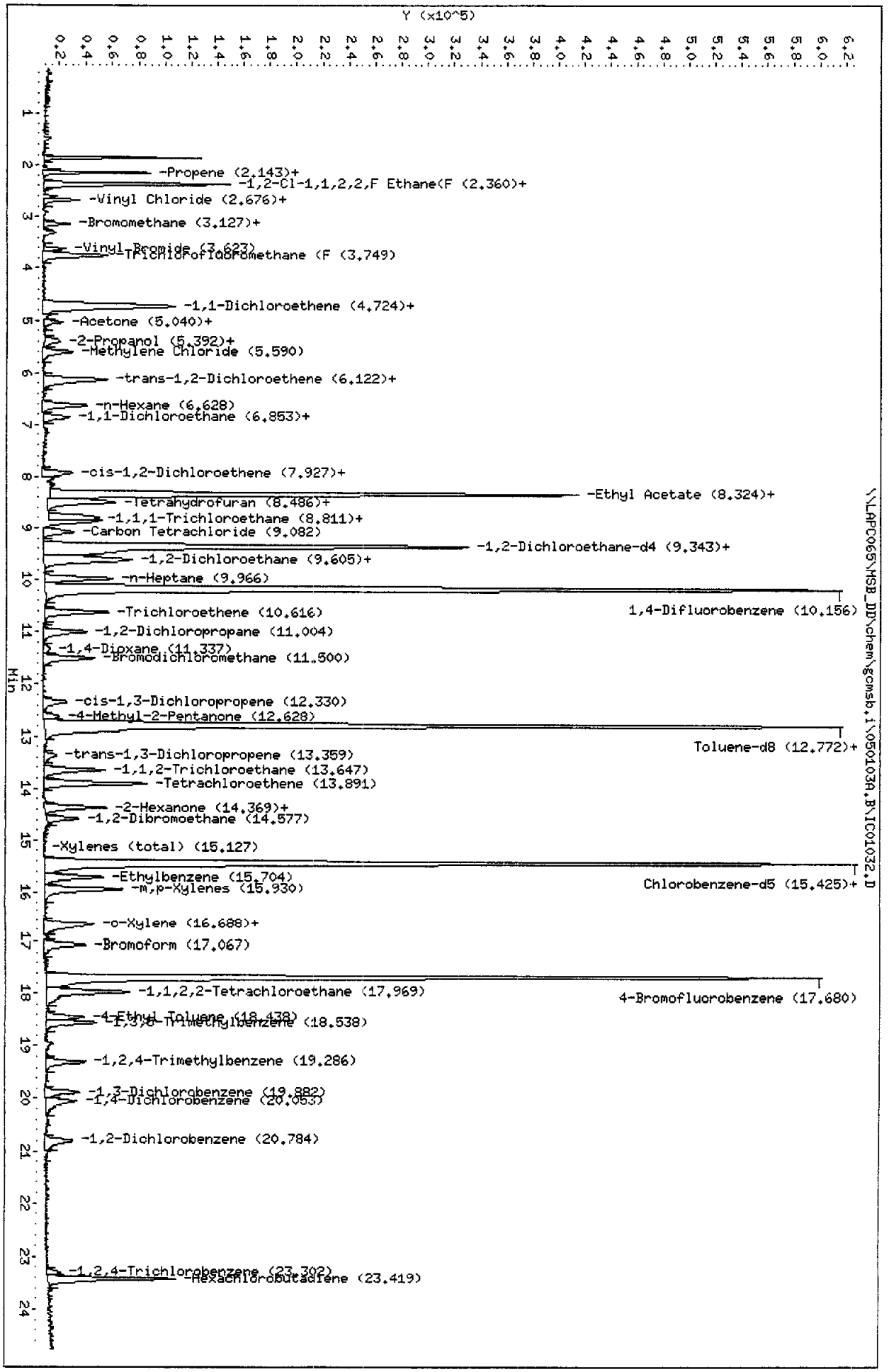
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01032.D
Date : 03-JAN-2005 20:37
Client ID: MSL0501043
Sample Info: 4.0 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01033.D
Lab Smp Id: 10 PPBV STD Client Smp ID: MSL0501043
Inj Date : 03-JAN-2005 21:12
Operator : DLK Inst ID: gcmsb.i
Smp Info : 10 PPBV STD,MSL0501043
Misc Info : 1,1,200,200,1,3,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	200.000	CalVol
SmpVol	200.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.071	2.080	(0.249)	20322	10.0000	9.969
3 Dichlorodifluoromethane (F12)	85	2.134	2.143	(0.257)	230925	10.0000	9.847
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.360	2.368	(0.284)	185453	10.0000	9.725
8 Chloromethane	52	2.405	2.414	(0.289)	10697	10.0000	10.27(Q)
9 Vinyl Chloride	62	2.594	2.603	(0.312)	43153	10.0000	9.551
12 1,3-Butadiene	39	2.676	2.675	(0.322)	56971	20.0000	18.61
15 Bromomethane	94	3.127	3.126	(0.376)	53322	10.0000	9.493
16 Chloroethane	64	3.307	3.307	(0.398)	27037	10.0000	9.448
19 Vinyl Bromide	106	3.632	3.623	(0.437)	59859	10.0000	9.302
21 Trichlorofluoromethane (F11)	101	3.749	3.749	(0.451)	227658	10.0000	9.629
28 1,1-Dichloroethene	61	4.688	4.696	(0.564)	120375	10.0000	9.599
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.733	4.732	(0.569)	265435	10.0000	9.771
31 Acetone	58	4.886	4.895	(0.588)	16221	10.0000	9.123(aQ)
33 Carbon Disulfide	76	5.048	5.048	(0.607)	103211	10.0000	8.752(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.418	5.454	(0.652)	54256	10.0000	8.628(Q)
	36 Allyl Chloride	41	5.382	5.391	(0.647)	57972	10.0000	8.905
	37 Methylene Chloride	49	5.581	5.599	(0.671)	72926	10.0000	9.418
	40 Acrylonitrile	53	6.158	6.158	(0.741)	12112	10.0000	5.801
	41 trans-1,2-Dichloroethene	61	6.104	6.113	(0.734)	100918	10.0000	9.249
	42 Methyl-tert-butyl ether[MTBE]	73	6.131	6.131	(0.737)	174406	10.0000	9.421(a)
	43 n-Hexane	41	6.627	6.636	(0.797)	82257	10.0000	9.603(a)
	44 1,1-Dichloroethane	63	6.853	6.853	(0.824)	131426	10.0000	9.564
	45 Vinyl Acetate	43	7.079	7.123	(0.851)	97451	10.0000	7.369(a)
	53 cis-1,2-Dichloroethene	96	7.918	7.917	(0.952)	66726	10.0000	9.396
	54 2-Butanone	72	8.017	8.044	(0.964)	17050	10.0000	7.208(a)
	56 Ethyl Acetate	43	8.134	8.170	(0.978)	106523	10.0000	8.336
*	58 Bromochloromethane	49	8.315	8.323	(1.000)	555592	50.0000	
	59 Tetrahydrofuran	42	8.441	8.468	(1.015)	59637	10.0000	9.724(a)
	60 Chloroform	83	8.486	8.495	(1.021)	168755	10.0000	9.547
	61 1,1,1-Trichloroethane	97	8.793	8.784	(1.058)	169051	10.0000	9.566
	62 Cyclohexane	84	8.874	8.865	(1.067)	85085	10.0000	9.596(a)
	64 Carbon Tetrachloride	117	9.082	9.081	(1.092)	105614	10.0000	8.994
$	66 1,2-Dichloroethane-d4	65	9.343	9.343	(0.920)	468038	50.0000	49.48
	68 Benzene	78	9.443	9.451	(0.930)	158474	10.0000	10.10
	69 1,2-Dichloroethane	62	9.488	9.487	(0.934)	105074	10.0000	10.28
	70 2,2,4-Trimethylpentane	57	9.605	9.605	(0.946)	410688	10.0000	10.20
	72 n-Heptane	43	9.966	9.975	(0.981)	133248	10.0000	9.874(a)
*	73 1,4-Difluorobenzene	114	10.155	10.155	(1.000)	1152487	50.0000	
	75 Trichloroethene	130	10.606	10.606	(1.044)	103166	10.0000	10.25
	78 1,2-Dichloropropane	76	10.994	10.994	(1.083)	39374	10.0000	10.42
	81 1,4-Dioxane	88	11.274	11.319	(1.110)	35104	10.0000	9.641(a)
	82 Bromodichloromethane	85	11.500	11.499	(1.132)	121152	10.0000	9.646
	85 cis-1,3-Dichloropropene	75	12.312	12.329	(1.212)	100755	10.0000	9.729
$	88 Toluene-d8	100	12.772	12.772	(1.258)	606774	50.0000	50.28
	89 Toluene	91	12.889	12.889	(1.269)	203813	10.0000	10.04
	91 trans-1,3-Dichloropropene	75	13.331	13.349	(0.864)	64065	10.0000	8.992
	93 1,1,2-Trichloroethane	97	13.629	13.638	(0.884)	97781	10.0000	10.29
	95 Tetrachloroethene	166	13.900	13.890	(0.901)	139012	10.0000	10.54
	96 2-Hexanone	58	14.152	14.233	(0.918)	25846	10.0000	6.077(aQ)
	97 Dibromochloromethane	129	14.360	14.360	(0.931)	158916	10.0000	9.963
	98 1,2-Dibromoethane	107	14.558	14.594	(0.944)	162733	10.0000	10.21
*	101 Chlorobenzene-d5	117	15.425	15.424	(1.000)	842564	50.0000	
	102 Chlorobenzene	112	15.479	15.478	(1.004)	155392	10.0000	10.04
M	99 Xylenes (total)	106				196706	30.0000	28.63
	104 Ethylbenzene	91	15.695	15.704	(1.018)	238769	10.0000	9.970
	105 m,p-Xylenes	106	15.921	15.939	(1.032)	133445	20.0000	19.19
	107 o-Xylene	106	16.679	16.687	(1.081)	63261	10.0000	9.440
	108 Styrene	104	16.733	16.760	(1.085)	72076	10.0000	8.584
	110 Bromoform	173	17.049	17.066	(1.105)	114629	10.0000	9.137
$	114 4-Bromofluorobenzene	95	17.680	17.680	(1.146)	689020	50.0000	45.78
	116 1,1,2,2-Tetrachloroethane	83	17.960	17.969	(1.164)	236200	10.0000	10.35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
123 4-Ethyl Toluene	105	18.420	18.438	(1.194)	110706	10.0000	7.756
124 1,3,5-Trimethylbenzene	105	18.537	18.555	(1.202)	136633	10.0000	8.568
131 1,2,4-Trimethylbenzene	120	19.286	19.295	(1.250)	39050	10.0000	8.418
134 1,3-Dichlorobenzene	146	19.855	19.872	(1.287)	74104	10.0000	8.355
136 1,4-Dichlorobenzene	146	20.026	20.053	(1.298)	74032	10.0000	8.114
138 Benzyl Chloride	91	20.333	20.333	(1.318)	42244	10.0000	4.451(a)
140 1,2-Dichlorobenzene	146	20.766	20.811	(1.346)	75793	10.0000	8.360
144 1,2,4-Trichlorobenzene	180	23.238	23.301	(1.507)	43475	10.0000	9.684(a)
145 Hexachlorobutadiene	225	23.419	23.418	(1.518)	71039	10.0000	8.677

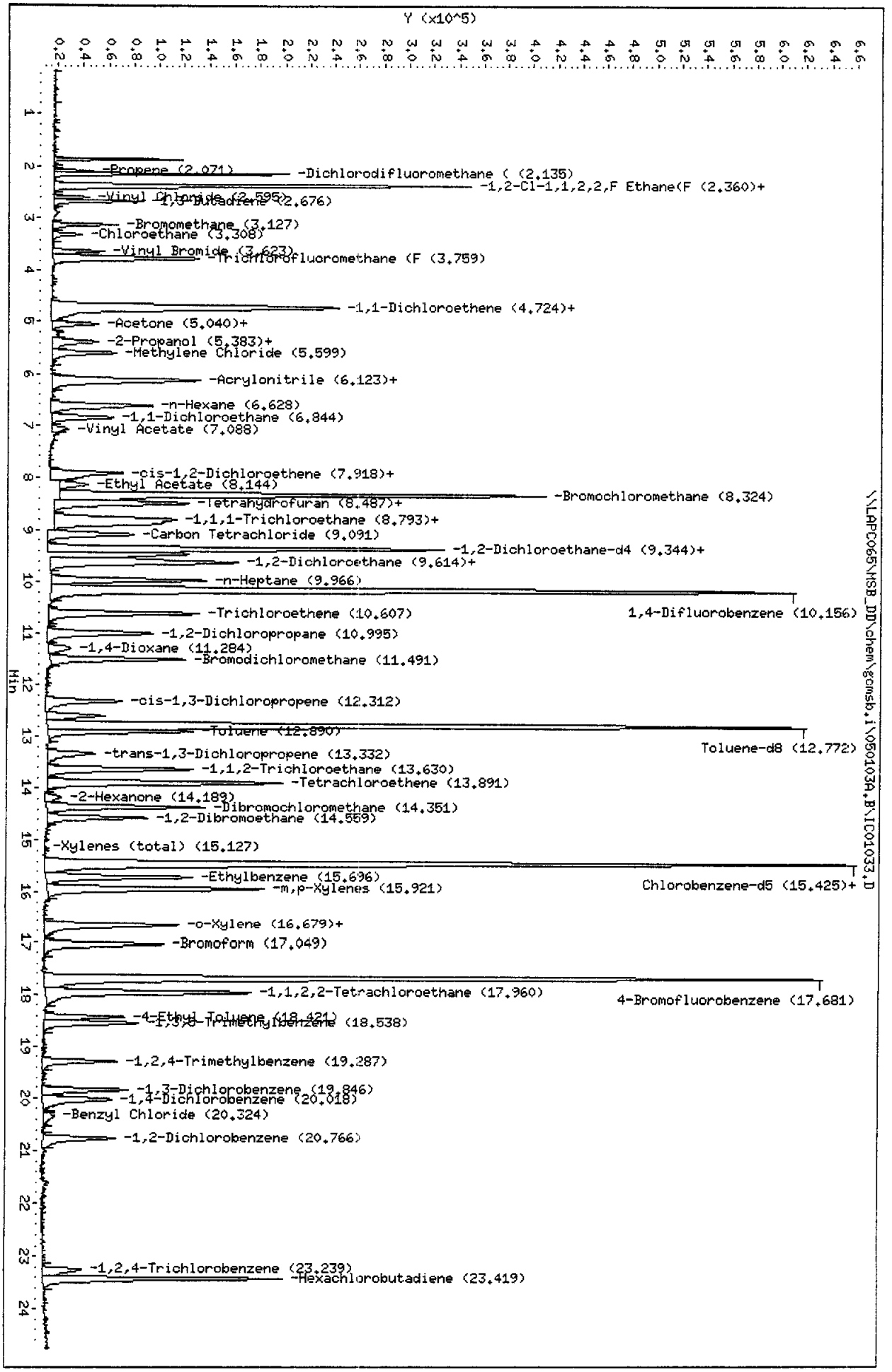
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\0501033A.B\IC01033.D
Date : 03-JAN-2005 21:12
Client ID: MSL0501043
Sample Info: 10 PPBV STD,MSL0501043

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Lab Smp Id: 25 PPBV STD Client Smp ID: MSL04011026
Inj Date : 03-JAN-2005 21:48
Operator : DLK Inst ID: gcmsb.i
Smp Info : 25 PPBV STD,MSL04011026
Misc Info : 1,1,500,500,1,4,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	ON-COL (ppbv)
1 Propene	41	2.069	2.080	(0.248)	46120	25.0000	24.03
3 Dichlorodifluoromethane (F12)	85	2.141	2.143	(0.257)	549503	25.0000	24.88
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.368	(0.285)	440564	25.0000	24.54
8 Chloromethane	52	2.412	2.414	(0.290)	24334	25.0000	24.82
9 Vinyl Chloride	62	2.610	2.603	(0.313)	104221	25.0000	24.50
12 1,3-Butadiene	39	2.682	2.675	(0.322)	144508	50.0000	50.13
15 Bromomethane	94	3.134	3.126	(0.376)	128461	25.0000	24.29
16 Chloroethane	64	3.314	3.307	(0.398)	64970	25.0000	24.11
19 Vinyl Bromide	106	3.639	3.623	(0.437)	147885	25.0000	24.40
21 Trichlorofluoromethane (F11)	101	3.765	3.749	(0.452)	548356	25.0000	24.63
28 1,1-Dichloroethene	61	4.703	4.696	(0.565)	294353	25.0000	24.93
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.740	4.732	(0.569)	627821	25.0000	24.54
31 Acetone	58	4.857	4.895	(0.583)	42087	25.0000	25.14(Q)
33 Carbon Disulfide	76	5.055	5.048	(0.607)	277934	25.0000	25.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.218	5.454	(0.626)	145370	25.0000	24.55
	36 Allyl Chloride	41	5.389	5.391	(0.647)	142472	25.0000	23.24
	37 Methylene Chloride	49	5.597	5.599	(0.672)	177128	25.0000	24.29
	40 Acrylonitrile	53	6.129	6.158	(0.736)	41607	25.0000	21.16
	41 trans-1,2-Dichloroethene	61	6.111	6.113	(0.734)	255360	25.0000	24.85
	42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.131	(0.738)	423737	25.0000	24.31
	43 n-Hexane	41	6.634	6.636	(0.796)	195109	25.0000	24.19
	44 1,1-Dichloroethane	63	6.860	6.853	(0.823)	318170	25.0000	24.59
	45 Vinyl Acetate	43	7.049	7.123	(0.846)	279144	25.0000	22.42
	53 cis-1,2-Dichloroethene	96	7.916	7.917	(0.950)	161644	25.0000	24.17
	54 2-Butanone	72	7.988	8.044	(0.959)	52174	25.0000	23.43
	56 Ethyl Acetate	43	8.123	8.170	(0.975)	303411	25.0000	25.22
*	58 Bromochloromethane	49	8.331	8.323	(1.000)	523130	50.0000	
	59 Tetrahydrofuran	42	8.439	8.468	(1.013)	140197	25.0000	24.28
	60 Chloroform	83	8.493	8.495	(1.019)	413801	25.0000	24.86
	61 1,1,1-Trichloroethane	97	8.791	8.784	(1.055)	414680	25.0000	24.92
	62 Cyclohexane	84	8.872	8.865	(1.065)	202700	25.0000	24.28
	64 Carbon Tetrachloride	117	9.088	9.081	(1.091)	263971	25.0000	23.88
$	66 1,2-Dichloroethane-d4	65	9.350	9.343	(0.921)	478879	50.0000	50.34
	68 Benzene	78	9.449	9.451	(0.931)	388950	25.0000	24.66
	69 1,2-Dichloroethane	62	9.494	9.487	(0.935)	251169	25.0000	24.44
	70 2,2,4-Trimethylpentane	57	9.630	9.605	(0.948)	984271	25.0000	24.30
	72 n-Heptane	43	9.964	9.975	(0.981)	330589	25.0000	24.36
*	73 1,4-Difluorobenzene	114	10.153	10.155	(1.000)	1159058	50.0000	
	75 Trichloroethene	130	10.604	10.606	(1.044)	244329	25.0000	24.14
	78 1,2-Dichloropropane	76	10.992	10.994	(1.083)	95931	25.0000	25.25
	81 1,4-Dioxane	88	11.263	11.319	(1.109)	92105	25.0000	25.15
	82 Bromodichloromethane	85	11.489	11.499	(1.132)	317692	25.0000	25.15
	85 cis-1,3-Dichloropropene	75	12.301	12.329	(1.211)	275204	25.0000	26.42
	86 4-Methyl-2-Pentanone	58	12.589	12.600	(1.240)	103428	25.0000	19.43(Q)
$	88 Toluene-d8	100	12.779	12.772	(1.259)	590134	50.0000	48.62
	89 Toluene	91	12.896	12.889	(1.270)	495817	25.0000	24.29
	91 trans-1,3-Dichloropropene	75	13.311	13.349	(0.863)	189226	25.0000	26.03
	93 1,1,2-Trichloroethane	97	13.627	13.638	(0.884)	245488	25.0000	25.31
	95 Tetrachloroethene	166	13.898	13.890	(0.901)	335324	25.0000	24.91
	96 2-Hexanone	58	14.123	14.233	(0.916)	81934	25.0000	18.88(aQ)
	97 Dibromochloromethane	129	14.349	14.360	(0.930)	427375	25.0000	26.26
	98 1,2-Dibromoethane	107	14.556	14.594	(0.944)	420332	25.0000	25.86
*	101 Chlorobenzene-d5	117	15.422	15.424	(1.000)	859741	50.0000	
	102 Chlorobenzene	112	15.477	15.478	(1.004)	384662	25.0000	24.37
M	99 Xylenes (total)	106				477975	75.0000	68.20
	104 Ethylbenzene	91	15.693	15.704	(1.018)	596482	25.0000	24.41
	105 m,p-Xylenes	106	15.919	15.939	(1.032)	319594	50.0000	45.03
	107 o-Xylene	106	16.668	16.687	(1.081)	158381	25.0000	23.16
	108 Styrene	104	16.704	16.760	(1.083)	185804	25.0000	21.68
	110 Bromoform	173	17.046	17.066	(1.105)	327302	25.0000	25.57
$	114 4-Bromofluorobenzene	95	17.678	17.680	(1.146)	695842	50.0000	45.31

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.969	(1.164)	604630	25.0000	25.96
123 4-Ethyl Toluene	105	18.409	18.438	(1.194)	288713	25.0000	19.82
124 1,3,5-Trimethylbenzene	105	18.535	18.555	(1.202)	279691	25.0000	17.19
131 1,2,4-Trimethylbenzene	120	19.284	19.295	(1.250)	85922	25.0000	18.15
134 1,3-Dichlorobenzene	146	19.825	19.872	(1.285)	186214	25.0000	20.58
136 1,4-Dichlorobenzene	146	20.006	20.053	(1.297)	176251	25.0000	18.93
138 Benzyl Chloride	91	20.286	20.333	(1.315)	135840	25.0000	14.02
140 1,2-Dichlorobenzene	146	20.755	20.811	(1.346)	184255	25.0000	19.92
144 1,2,4-Trichlorobenzene	180	23.218	23.301	(1.505)	95344	25.0000	20.81
145 Hexachlorobutadiene	225	23.416	23.418	(1.518)	151532	25.0000	18.14

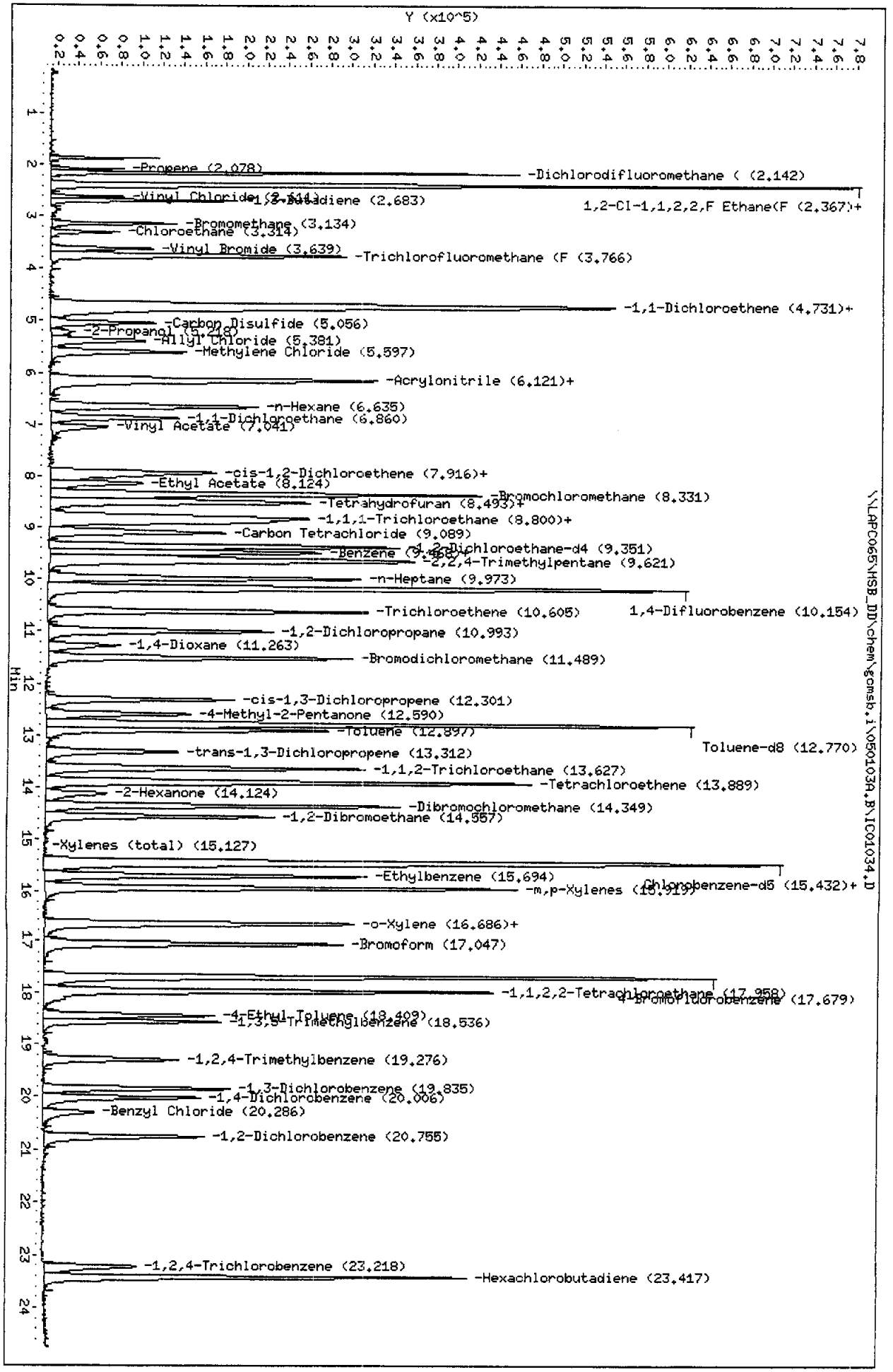
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01034.D
Date : 03-JAN-2005 21:48
Client ID: MSL04011026
Sample Info: 25 PPBV STD,MSL04011026

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:23
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,1,5,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:44 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.057	2.057	(0.247)	96508	50.0000	49.38
3 Dichlorodifluoromethane (F12)	85	2.129	2.129	(0.256)	1086128	50.0000	48.31
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.364	2.364	(0.284)	873243	50.0000	47.77
8 Chloromethane	52	2.409	2.409	(0.289)	50694	50.0000	50.79
9 Vinyl Chloride	62	2.598	2.598	(0.312)	211761	50.0000	48.89
12 1,3-Butadiene	39	2.679	2.679	(0.322)	296245	100.000	100.9
15 Bromomethane	94	3.131	3.131	(0.376)	262028	50.0000	48.66
16 Chloroethane	64	3.311	3.311	(0.398)	135239	50.0000	49.30
19 Vinyl Bromide	106	3.636	3.636	(0.437)	305041	50.0000	49.44
21 Trichlorofluoromethane (F11)	101	3.762	3.762	(0.452)	1092906	50.0000	48.22
28 1,1-Dichloroethene	61	4.700	4.700	(0.564)	585971	50.0000	48.74
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.737	4.737	(0.569)	1249802	50.0000	47.99
31 Acetone	58	4.863	4.863	(0.584)	85437	50.0000	50.12(Q)
33 Carbon Disulfide	76	5.052	5.052	(0.607)	601570	50.0000	53.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.224	5.224	(0.627)	310543	50.0000	51.51
	36 Allyl Chloride	41	5.377	5.377	(0.646)	320770	50.0000	51.40
	37 Methylene Chloride	49	5.594	5.594	(0.672)	352775	50.0000	47.52
	40 Acrylonitrile	53	6.090	6.090	(0.731)	102745	50.0000	51.33
	41 trans-1,2-Dichloroethene	61	6.108	6.108	(0.733)	522077	50.0000	49.91
	42 Methyl-tert-butyl ether[MTBE]	73	6.144	6.144	(0.738)	879541	50.0000	49.56
	43 n-Hexane	41	6.640	6.640	(0.797)	410853	50.0000	50.04
	44 1,1-Dichloroethane	63	6.866	6.866	(0.824)	645065	50.0000	48.96
	45 Vinyl Acetate	43	7.037	7.037	(0.845)	644852	50.0000	50.86
	53 cis-1,2-Dichloroethene	96	7.913	7.913	(0.950)	333748	50.0000	49.02
	54 2-Butanone	72	7.976	7.976	(0.958)	117368	50.0000	51.76
	56 Ethyl Acetate	43	8.129	8.129	(0.976)	699453	50.0000	57.10
*	58 Bromochloromethane	49	8.328	8.328	(1.000)	532613	50.0000	
	59 Tetrahydrofuran	42	8.427	8.427	(1.012)	288761	50.0000	49.12
	60 Chloroform	83	8.499	8.499	(1.021)	823364	50.0000	48.59
	61 1,1,1-Trichloroethane	97	8.797	8.797	(1.056)	837393	50.0000	49.43
	62 Cyclohexane	84	8.887	8.887	(1.067)	415212	50.0000	48.85
	64 Carbon Tetrachloride	117	9.095	9.095	(1.092)	646381	50.0000	57.42
$	66 1,2-Dichloroethane-d4	65	9.356	9.356	(0.921)	487227	50.0000	51.00
	68 Benzene	78	9.455	9.455	(0.931)	775330	50.0000	48.94
	69 1,2-Dichloroethane	62	9.483	9.483	(0.933)	504186	50.0000	48.85
	70 2,2,4-Trimethylpentane	57	9.627	9.627	(0.948)	2022110	50.0000	49.69
	72 n-Heptane	43	9.979	9.979	(0.982)	692395	50.0000	50.79
*	73 1,4-Difluorobenzene	114	10.159	10.159	(1.000)	1164191	50.0000	
	75 Trichloroethene	130	10.610	10.610	(1.044)	503948	50.0000	49.58
	78 1,2-Dichloropropane	76	10.989	10.989	(1.082)	193580	50.0000	50.73
	81 1,4-Dioxane	88	11.260	11.260	(1.108)	196707	50.0000	53.48
	82 Bromodichloromethane	85	11.495	11.495	(1.131)	689015	50.0000	54.30
	85 cis-1,3-Dichloropropene	75	12.298	12.298	(1.210)	575991	50.0000	55.06
	86 4-Methyl-2-Pentanone	58	12.586	12.586	(1.239)	260479	50.0000	48.71(Q)
$	88 Toluene-d8	100	12.776	12.776	(1.258)	610705	50.0000	50.10
	89 Toluene	91	12.893	12.893	(1.269)	1016504	50.0000	49.59
	91 trans-1,3-Dichloropropene	75	13.308	13.308	(0.863)	436329	50.0000	58.17
	93 1,1,2-Trichloroethane	97	13.624	13.624	(0.883)	493328	50.0000	49.30
	95 Tetrachloroethene	166	13.895	13.895	(0.901)	669320	50.0000	48.19
	96 2-Hexanone	58	14.102	14.102	(0.914)	227111	50.0000	50.72(Q)
	97 Dibromochloromethane	129	14.346	14.346	(0.930)	952847	50.0000	56.74
	98 1,2-Dibromoethane	107	14.553	14.553	(0.943)	874194	50.0000	52.12
*	101 Chlorobenzene-d5	117	15.428	15.428	(1.000)	887088	50.0000	
	102 Chlorobenzene	112	15.483	15.483	(1.004)	811545	50.0000	49.83
M	99 Xylenes (total)	106				1168928	150.000	161.6
	104 Ethylbenzene	91	15.690	15.690	(1.017)	1328107	50.0000	52.67
	105 m,p-Xylenes	106	15.916	15.916	(1.032)	785323	100.000	107.2
	107 o-Xylene	106	16.674	16.674	(1.081)	383605	50.0000	54.37
	108 Styrene	104	16.701	16.701	(1.082)	472447	50.0000	53.44
	110 Bromoform	173	17.044	17.044	(1.105)	825067	50.0000	62.46
$	114 4-Bromofluorobenzene	95	17.684	17.684	(1.146)	844088	50.0000	53.26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.955	17.955	(1.164)	1256025	50.0000	52.27
123 4-Ethyl Toluene	105	18.415	18.415	(1.194)	808174	50.0000	53.78
124 1,3,5-Trimethylbenzene	105	18.532	18.532	(1.201)	744618	50.0000	44.35
131 1,2,4-Trimethylbenzene	120	19.281	19.281	(1.250)	229090	50.0000	46.91
134 1,3-Dichlorobenzene	146	19.832	19.832	(1.285)	502543	50.0000	53.82
136 1,4-Dichlorobenzene	146	20.003	20.003	(1.296)	468231	50.0000	48.74
138 Benzyl Chloride	91	20.274	20.274	(1.314)	471028	50.0000	47.14
140 1,2-Dichlorobenzene	146	20.743	20.743	(1.344)	482390	50.0000	50.54
144 1,2,4-Trichlorobenzene	180	23.197	23.197	(1.504)	280011	50.0000	59.24
145 Hexachlorobutadiene	225	23.423	23.423	(1.518)	422932	50.0000	49.06

QC Flag Legend

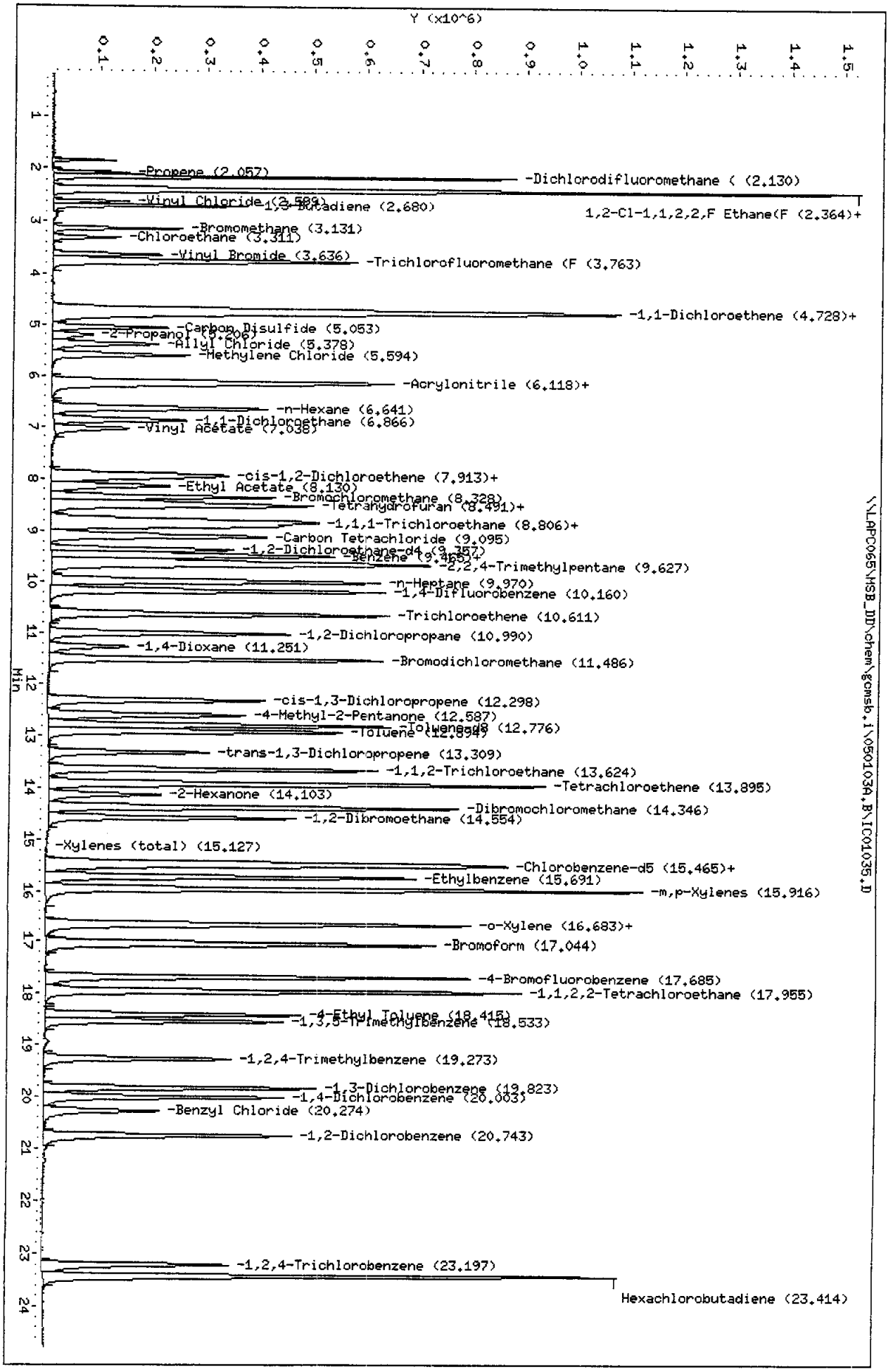
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01035.D
Date : 03-JAN-2005 22:23
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Lab Smp Id: 100 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 22:58
Operator : DLK Inst ID: gcmsb.i
Smp Info : 100 PPBV STD,MSL04011028
Misc Info : 1,1,250,250,1,6,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.069	2.057	(0.248)	189244	100.000	96.26
3 Dichlorodifluoromethane (F12)	85	2.141	2.129	(0.257)	2076660	100.000	91.82
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.376	2.364	(0.285)	1688922	100.000	91.83
8 Chloromethane	52	2.421	2.409	(0.290)	99055	100.000	98.66(Q)
9 Vinyl Chloride	62	2.610	2.598	(0.313)	415272	100.000	95.30
12 1,3-Butadiene	39	2.691	2.679	(0.323)	582068	200.000	197.1
15 Bromomethane	94	3.143	3.131	(0.377)	528116	100.000	97.48
16 Chloroethane	64	3.332	3.311	(0.400)	263327	100.000	95.41
19 Vinyl Bromide	106	3.648	3.636	(0.437)	609576	100.000	98.22
21 Trichlorofluoromethane (F11)	101	3.774	3.762	(0.453)	2148835	100.000	94.24
28 1,1-Dichloroethene	61	4.713	4.700	(0.565)	1152051	100.000	95.25
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.758	4.737	(0.571)	2421700	100.000	92.44
31 Acetone	58	4.857	4.863	(0.582)	177622	100.000	103.6(Q)
33 Carbon Disulfide	76	5.064	5.052	(0.607)	1284372	100.000	112.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
34 2-Propanol	45	5.227	5.224	(0.627)	640603	100.000	105.6
36 Allyl Chloride	41	5.389	5.377	(0.646)	657485	100.000	104.7
37 Methylene Chloride	49	5.597	5.594	(0.671)	689188	100.000	92.28
40 Acrylonitrile	53	6.093	6.090	(0.731)	225232	100.000	111.8
41 trans-1,2-Dichloroethene	61	6.120	6.108	(0.734)	1043351	100.000	99.14
42 Methyl-tert-butyl ether[MTBE]	73	6.147	6.144	(0.737)	1741881	100.000	97.56
43 n-Hexane	41	6.643	6.640	(0.797)	794486	100.000	96.18
44 1,1-Dichloroethane	63	6.869	6.866	(0.824)	1268876	100.000	95.74
45 Vinyl Acetate	43	7.040	7.037	(0.844)	1379631	100.000	108.2
53 cis-1,2-Dichloroethene	96	7.916	7.913	(0.949)	665114	100.000	97.11
54 2-Butanone	72	7.979	7.976	(0.957)	245480	100.000	107.6
56 Ethyl Acetate	43	8.123	8.129	(0.974)	1333121	100.000	108.2
* 58 Bromochloromethane	49	8.340	8.328	(1.000)	535830	50.0000	
59 Tetrahydrofuran	42	8.430	8.427	(1.011)	587529	100.000	99.33
60 Chloroform	83	8.502	8.499	(1.019)	1616225	100.000	94.81
61 1,1,1-Trichloroethane	97	8.800	8.797	(1.055)	1657925	100.000	97.28
62 Cyclohexane	84	8.890	8.887	(1.066)	808343	100.000	94.53
64 Carbon Tetrachloride	117	9.098	9.095	(1.091)	1300058	100.000	114.8
$ 66 1,2-Dichloroethane-d4	65	9.359	9.356	(0.921)	522238	50.0000	54.39
68 Benzene	78	9.458	9.455	(0.931)	1514953	100.000	95.15
69 1,2-Dichloroethane	62	9.486	9.483	(0.933)	1003959	100.000	96.79
70 2,2,4-Trimethylpentane	57	9.630	9.627	(0.948)	3951927	100.000	96.63
72 n-Heptane	43	9.973	9.979	(0.981)	1365984	100.000	99.70
* 73 1,4-Difluorobenzene	114	10.162	10.159	(1.000)	1170080	50.0000	
75 Trichloroethene	130	10.613	10.610	(1.044)	986892	100.000	96.60
78 1,2-Dichloropropane	76	10.992	10.989	(1.082)	384077	100.000	100.1
81 1,4-Dioxane	88	11.254	11.260	(1.107)	402572	100.000	108.9
82 Bromodichloromethane	85	11.489	11.495	(1.131)	1389072	100.000	108.9
85 cis-1,3-Dichloropropene	75	12.301	12.298	(1.210)	1204442	100.000	114.6
86 4-Methyl-2-Pentanone	58	12.589	12.586	(1.239)	569934	100.000	106.0(Q)
$ 88 Toluene-d8	100	12.779	12.776	(1.257)	628112	50.0000	51.26
89 Toluene	91	12.896	12.893	(1.269)	2003818	100.000	97.26
91 trans-1,3-Dichloropropene	75	13.302	13.308	(0.863)	922486	100.000	119.5
93 1,1,2-Trichloroethane	97	13.627	13.624	(0.884)	970008	100.000	94.21
95 Tetrachloroethene	166	13.898	13.895	(0.901)	1305543	100.000	91.36
96 2-Hexanone	58	14.105	14.102	(0.915)	519949	100.000	112.8(Q)
97 Dibromochloromethane	129	14.349	14.346	(0.930)	1950897	100.000	112.9
98 1,2-Dibromoethane	107	14.547	14.553	(0.943)	1781118	100.000	103.2
* 101 Chlorobenzene-d5	117	15.422	15.428	(1.000)	912757	50.0000	
102 Chlorobenzene	112	15.477	15.483	(1.004)	1633325	100.000	97.46
M 99 Xylenes (total)	106				2384108	300.000	320.3
104 Ethylbenzene	91	15.693	15.690	(1.018)	2721615	100.000	104.9
105 m,p-Xylenes	106	15.919	15.916	(1.032)	1609491	200.000	213.6
107 o-Xylene	106	16.668	16.674	(1.081)	774617	100.000	106.7
108 Styrene	104	16.695	16.701	(1.082)	1027810	100.000	113.0
110 Bromoform	173	17.038	17.044	(1.105)	1736418	100.000	127.8
$ 114 4-Bromofluorobenzene	95	17.678	17.684	(1.146)	881926	50.0000	54.09

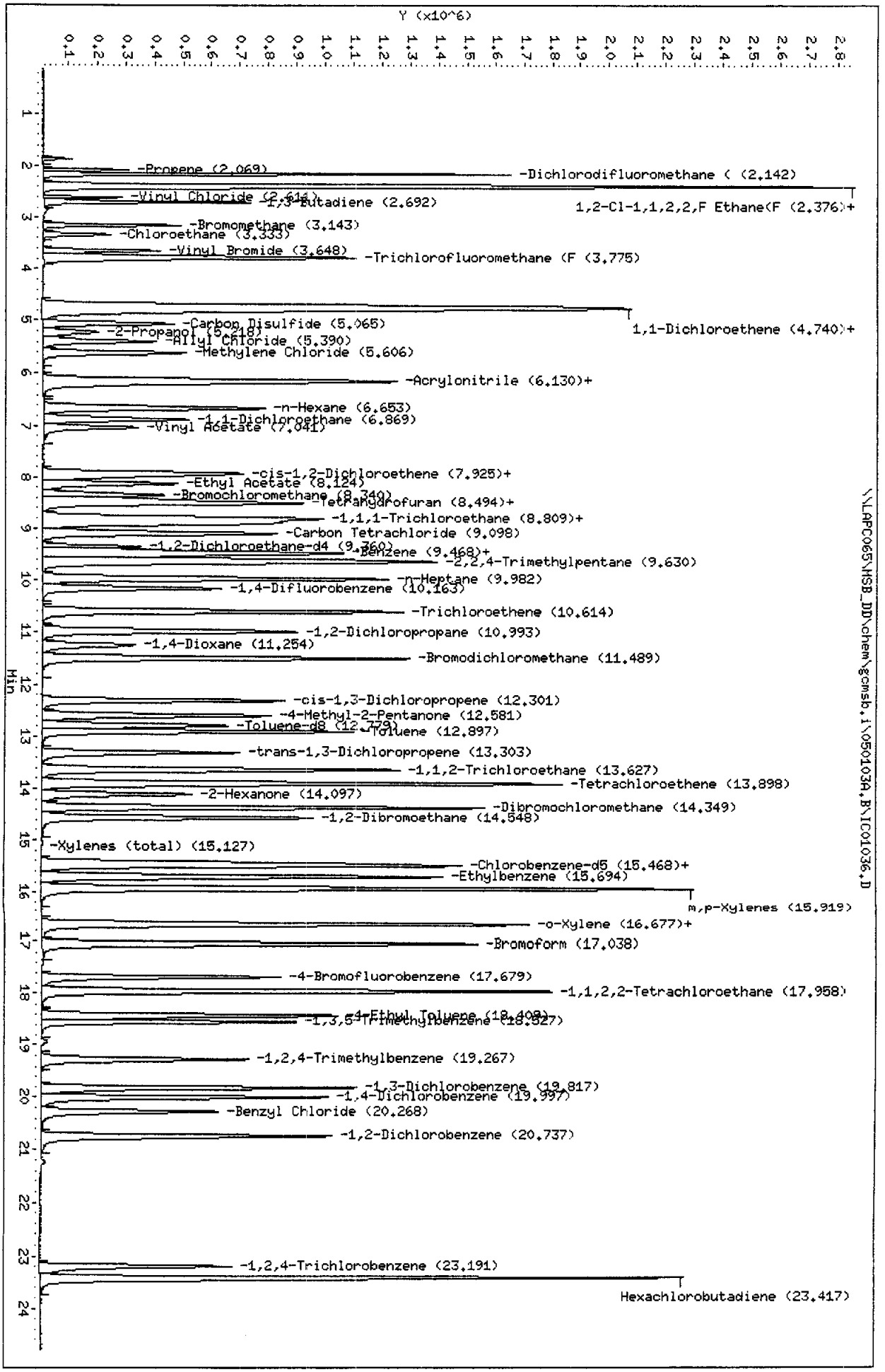
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.958	17.955	(1.164)	2516469	100.000	101.8
123 4-Ethyl Toluene	105	18.409	18.415	(1.194)	1774813	100.000	114.8
124 1,3,5-Trimethylbenzene	105	18.526	18.532	(1.201)	1438038	100.000	83.24
131 1,2,4-Trimethylbenzene	120	19.266	19.281	(1.249)	463898	100.000	92.32
134 1,3-Dichlorobenzene	146	19.826	19.832	(1.285)	1077602	100.000	112.2
136 1,4-Dichlorobenzene	146	19.997	20.003	(1.297)	1002124	100.000	101.4
138 Benzyl Chloride	91	20.268	20.274	(1.314)	1263424	100.000	122.9
140 1,2-Dichlorobenzene	146	20.737	20.743	(1.345)	1026914	100.000	104.6
144 1,2,4-Trichlorobenzene	180	23.191	23.197	(1.504)	480689	100.000	98.84
145 Hexachlorobutadiene	225	23.417	23.423	(1.518)	875187	100.000	98.68

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01036.D
Date : 03-JAN-2005 22:58
Client ID: MSL04011028
Sample Info: 100 PPBV STD,MSL04011028
Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Lab Smp Id: 500 PPBV STD Client Smp ID: MSL04011028
Inj Date : 03-JAN-2005 23:34
Operator : DLK Inst ID: gcmsb.i
Smp Info : 500 PPBV STD,MSL04011028
Misc Info : 1,1,1250,1250,1,7,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\TO14A.M
Meth Date : 04-Jan-2005 08:45 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 17 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	1250.000	CalVol
SmpVol	1250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.080	2.057	(0.249)	912247	500.000	523.9(A)
3 Dichlorodifluoromethane (F12)	85	2.161	2.129	(0.259)	8557866	500.000	427.2
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.396	2.364	(0.287)	7124078	500.000	437.3
8 Chloromethane	52	2.432	2.409	(0.291)	342418	500.000	385.0(Q)
9 Vinyl Chloride	62	2.630	2.598	(0.315)	1995598	500.000	517.0(A)
12 1,3-Butadiene	39	2.712	2.679	(0.325)	2738300	1000.00	1047(A)
15 Bromomethane	94	3.172	3.131	(0.380)	2500764	500.000	521.2(A)
16 Chloroethane	64	3.361	3.311	(0.403)	1238795	500.000	506.8(A)
19 Vinyl Bromide	106	3.677	3.636	(0.440)	2947696	500.000	536.2(A)
21 Trichlorofluoromethane (F11)	101	3.812	3.762	(0.457)	9760157	500.000	483.2
28 1,1-Dichloroethene	61	4.742	4.700	(0.568)	5077095	500.000	473.9
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.796	4.737	(0.574)	10540471	500.000	454.2
31 Acetone	58	4.868	4.863	(0.583)	970980	500.000	639.3(AQ)
33 Carbon Disulfide	76	5.094	5.052	(0.610)	6453553	500.000	640.6(A)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.238	5.224	(0.627)	3403766	500.000	633.6(A)
	36 Allyl Chloride	41	5.418	5.377	(0.649)	3396693	500.000	610.8(A)
	37 Methylene Chloride	49	5.635	5.594	(0.675)	3280596	500.000	495.9
	40 Acrylonitrile	53	6.095	6.090	(0.730)	1273899	500.000	714.2(A)
	41 trans-1,2-Dichloroethene	61	6.140	6.108	(0.735)	4775432	500.000	512.3(A)
	42 Methyl-tert-butyl ether[MTBE]	73	6.167	6.144	(0.739)	8017115	500.000	506.9(A)
	43 n-Hexane	41	6.672	6.640	(0.799)	3775147	500.000	515.9(A)
	44 1,1-Dichloroethane	63	6.889	6.866	(0.825)	5966964	500.000	508.3(A)
	45 Vinyl Acetate	43	7.042	7.037	(0.843)	7158712	500.000	633.7(A)
	53 cis-1,2-Dichloroethene	96	7.927	7.913	(0.949)	3142349	500.000	518.0(A)
	54 2-Butanone	72	7.990	7.976	(0.957)	1243543	500.000	615.4(A)
	56 Ethyl Acetate	43	8.125	8.129	(0.973)	6844902	500.000	627.1(A)
*	58 Bromochloromethane	49	8.351	8.328	(1.000)	474615	50.0000	
	59 Tetrahydrofuran	42	8.432	8.427	(1.010)	2895347	500.000	552.6(A)
	60 Chloroform	83	8.513	8.499	(1.019)	7461951	500.000	494.2
	61 1,1,1-Trichloroethane	97	8.811	8.797	(1.055)	7710784	500.000	510.8(A)
	62 Cyclohexane	84	8.910	8.887	(1.067)	3774634	500.000	498.3
	64 Carbon Tetrachloride	117	9.109	9.095	(1.091)	6172638	500.000	615.4(A)
$	66 1,2-Dichloroethane-d4	65	9.370	9.356	(0.921)	469660	50.0000	48.22
	68 Benzene	78	9.470	9.455	(0.931)	6929528	500.000	429.1
	69 1,2-Dichloroethane	62	9.497	9.483	(0.933)	4670462	500.000	443.9
	70 2,2,4-Trimethylpentane	57	9.650	9.627	(0.949)	17068896	500.000	411.5
	72 n-Heptane	43	9.993	9.979	(0.982)	6257879	500.000	450.3
*	73 1,4-Difluorobenzene	114	10.173	10.159	(1.000)	1186842	50.0000	
	75 Trichloroethene	130	10.615	10.610	(1.043)	4585547	500.000	442.5
	78 1,2-Dichloropropane	76	10.994	10.989	(1.081)	1827675	500.000	469.8
	81 1,4-Dioxane	88	11.274	11.260	(1.108)	2013118	500.000	536.9(A)
	82 Bromodichloromethane	85	11.500	11.495	(1.130)	6547423	500.000	506.2(A)
	85 cis-1,3-Dichloropropene	75	12.312	12.298	(1.210)	5959121	500.000	558.7(A)
	86 4-Methyl-2-Pentanone	58	12.600	12.586	(1.239)	3239152	500.000	594.2(AQ)
$	88 Toluene-d8	100	12.790	12.776	(1.257)	651886	50.0000	52.45
	89 Toluene	91	12.907	12.893	(1.269)	9076851	500.000	434.3
	91 trans-1,3-Dichloropropene	75	13.313	13.308	(0.863)	4868372	500.000	612.5(A)
	93 1,1,2-Trichloroethane	97	13.638	13.624	(0.884)	4529019	500.000	427.1
	95 Tetrachloroethene	166	13.909	13.895	(0.901)	5826240	500.000	395.9
	96 2-Hexanone	58	14.116	14.102	(0.915)	3544030	500.000	747.0(AQ)
	97 Dibromochloromethane	129	14.360	14.346	(0.930)	8767135	500.000	492.7
	98 1,2-Dibromoethane	107	14.567	14.553	(0.944)	8058885	500.000	453.4
*	101 Chlorobenzene-d5	117	15.434	15.428	(1.000)	939988	50.0000	
	102 Chlorobenzene	112	15.488	15.483	(1.004)	7598003	500.000	440.2
M	99 Xylenes (total)	106				11979064	1500.00	1564
	104 Ethylbenzene	91	15.695	15.690	(1.017)	12455445	500.000	466.2
	105 m,p-Xylenes	106	15.930	15.916	(1.032)	7933324	1000.00	1022(A)
	107 o-Xylene	106	16.679	16.674	(1.081)	4045740	500.000	541.2(A)
	108 Styrene	104	16.706	16.701	(1.082)	5997659	500.000	640.2(A)
	110 Bromoform	173	17.049	17.044	(1.105)	7852018	500.000	561.0(A)
$	114 4-Bromofluorobenzene	95	17.680	17.684	(1.146)	1031328	50.0000	61.42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.960	17.955	(1.164)	10894735	500.000	427.9
123 4-Ethyl Toluene	105	18.420	18.415	(1.194)	10235320	500.000	642.7(A)
124 1,3,5-Trimethylbenzene	105	18.537	18.532	(1.201)	8029334	500.000	451.3
131 1,2,4-Trimethylbenzene	120	19.268	19.281	(1.248)	2828080	500.000	546.5(A)
134 1,3-Dichlorobenzene	146	19.828	19.832	(1.285)	6566111	500.000	663.6(A)
136 1,4-Dichlorobenzene	146	19.999	20.003	(1.296)	6318750	500.000	620.8(A)
138 Benzyl Chloride	91	20.270	20.274	(1.313)	9648681	500.000	911.2(A)
140 1,2-Dichlorobenzene	146	20.739	20.743	(1.344)	6090156	500.000	602.2(A)
144 1,2,4-Trichlorobenzene	180	23.184	23.197	(1.502)	2597052	500.000	518.5(A)
145 Hexachlorobutadiene	225	23.419	23.423	(1.517)	4871006	500.000	533.3(A)

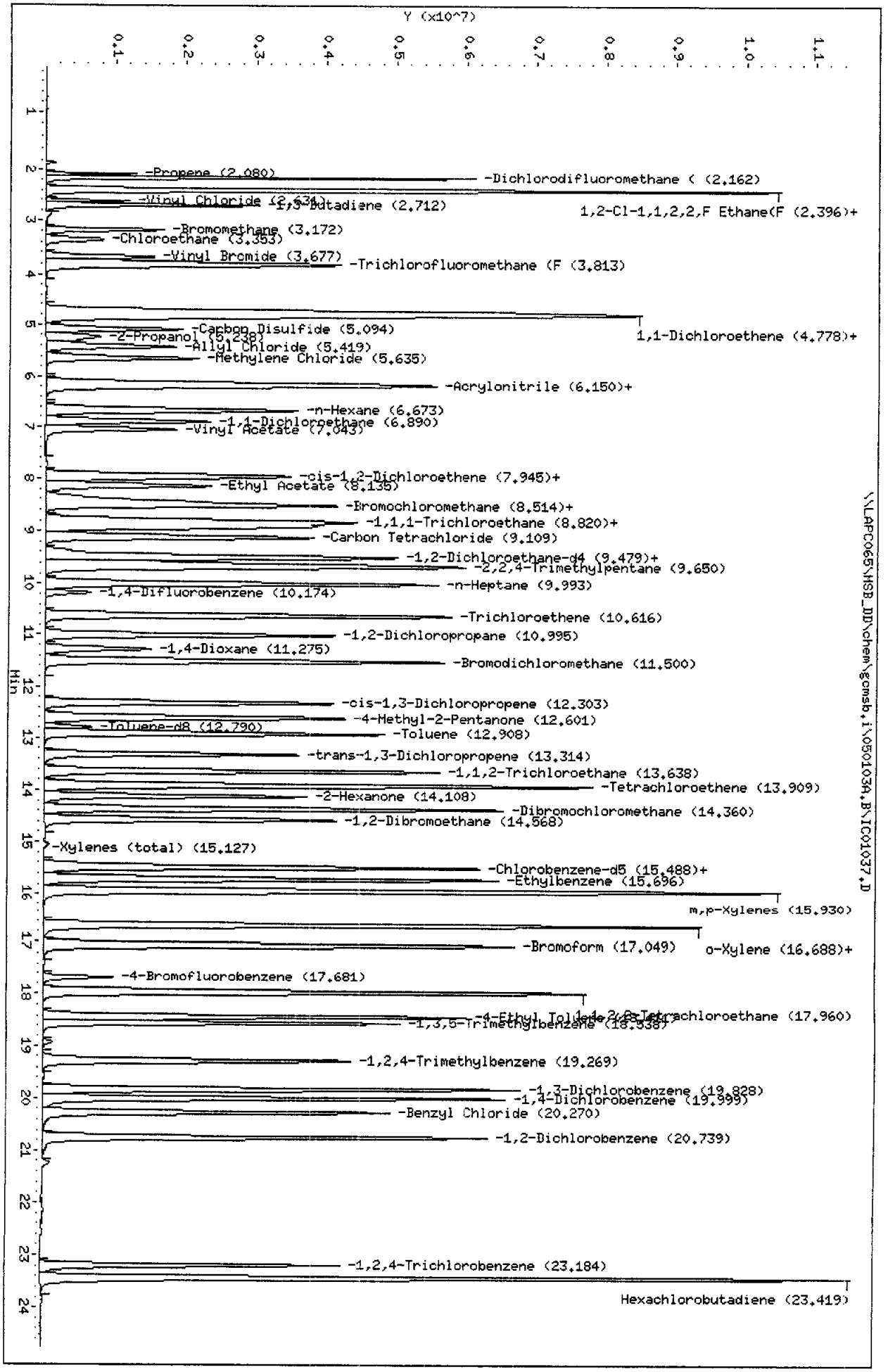
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050103A.B\IC01037.D
Date : 03-JAN-2005 23:34
Client ID: MSL04011028
Sample Info: 500 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i
Operator: DLK
Column diameter: 0.53



Page 7

SEVERN TRENT STL

TO-14A - Sample / QC Data

Date Analyzed / QC Batch: 011405 / 5017259

ESA100227

STL Los Angeles
Air Toxics Lab GC/MS Run Log

Instrument ID:	Data Directory: D:\GCMSB\ 05D113.B	BFB Standard: PSL9911283	Initial Calibration ID: 1-3-05
GCMS-B	Method File: TOMA	Daily Standard: MSL0401102B	SOP: COI-MS-003
Logbook ID:	Tune File:	LCS Standard: PSL9911359	MDL Date: 1-28-05
R-AMS-041	BF0401123.m	I.S. Standard: PSL9911283	Blank Lot No. 9050301-00

#	Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
	1-13-05	0751	BF01131	-	-	-	BFB	28	-	-	-	m	OK	A	
		0808	CC01131	-	-	-	CW. ADDS	~~125~~ 500	-	-	-	m	OK	B	MSL0501089
		0837	CC01132	-	-	-	CW	125	-	-	-	m	OK	B	
		0905	LC01131	-	-	-	FULL LCS	250	-	-	-	m	OK	4	MSL0401043
		0933	LC01132	-	-	-	FULL LCSD	↓	-	-	-	m	OK	4	↓
		1004	LC01133	-	-	-	ADD LCS	↓	-	-	-	m	OK	5	MSL0501045
		1035	LC01134	-	-	-	ADD LCSD	↓	-	-	-	m	OK	5	↓
		1110	MB01135	-	-	-	METHOD BLANK	500	-	-	-	m	OK	6	
		1138	B7584	G2EN31AC	001	SECOR	SYS. INF	25	TENAX	-	20.0	m	OK	7	ESA110252-1
0		1210	B7585	G2EN31AC	002		↓ EFF	250		-	2.00	m	W/R	8	↓ -2
1		1240	B7586	G2FTM2AC	001		VE. EFF	50		-	10.0	m	OK	9	ESA120154-3
2		1308	B7587	G2F6X1AC	↓		SYS. INF	20		-	25.0	m	OK	10	ESA120206-1
3		1337	B7588	G2F7R1AC	↓	↓	↓ EFF	250		-	2.00	m	OK	11	↓ -2
4		1500	B7590	G17TM1AE	001	MITKEM	C1616-06A	~~250~~ 805	23.5/14.6	-	~~2.00~~ 1	m	NO	12	ESA061248-6 ~~ESA110252-2~~
5		1408	B7589	G2EN31AC	001	SECOR	SYS EFF	250	TENAX	-	2.00	m	OK	8	ESA110252-2
6		1534	B7591	G2JLX1AC	↓	↓	VE-EFF	500	↓	-	1	AA	No	13	close? ESA130
7		1611	B7592	G17TM1AE	↓	MITKEM	C1616.06A	805	23.5/14.6	-	1	AA	OK	13	ESA061248-6
8		1645	B7593	G2JLX1AC	↓	SECOR	VE-EFF	500	TENAX	-	1	AA	OK	13	ESA130268-3

Reviewed: _____

STL Los Angeles
Air Toxics Lab GC/MS Run Log

trument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard:	SOP:
gbook ID:	Tune File:	LCS Standard:	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1/13/05	1713	B7594	G2JLW1AL	001	SECOR	VE-PROC	200	TEDLAR	–	2.5	AA	OK	14	ESA130268-2
	1743	B7595	G2JLQ1AL			VE-SRC	100		–	5.00	"	OK	15	" -1
	1819	B7596	G2JHM1AL			VE-EFF	500		–	1.00	"	OK	16	ESA130250-3
	1855	B7597	G2JHL1AL			VE-PROC	150		–	3.33	"	O/R	1	" -2
	1930	B7598	G2JHF1AL			VE-SRC	80		–	6.25	"	OK	2	" -1
	2006	B7599	G2JG11AL			VE-EFF	500		–	1.00	"	OK	3	ESA130241-3
	2042	B7600	G2JG1AL			VE-PROC	100		–	5.00	"	U/R	4	ESA130241-2
	2117	B7601	G2JGD1AL			VE-SRC	100		–	5.00	"	U/R	5	" -1
	2153	B7605	–	–	–	LCS	250	–	–	–	"	OK	6	PSL99117759
	2228	LC0136	–	–	–	LCSD	250	–	–	–	"	OK	6	"
	2301	MB01132	–	–	–	METHOD BLANK	500	–	–	–	"	OK	7	
	2340	B7602	G2G7K2AA	001	CRM	INLET T.O.	10	TEDLAR	1000/100	500	"	U/R	8	ESA120363-1
1-14-05	0015	B7603	G2G8A1AA			OUTLET SCRUBBER	500		–	1.00	"	OK	9	" -2
	0051	B7604	G2G8C1AA			TOU INLET	10	15.5/15.5	1000/100	500	"	U/R	10	" -3
	0127	B7605	G2JEL1AA		HSW	CAP AIR	500	TEDLAR	–	1.00	"	OK	11	ESA130221-1
	0202	B7606	G2JEM1AA		"	IM7505	456	"	–	.	"	OK	12	" -2
	0238	B7607	G2DJC1AL		SANDIA	066382-0001	940	24.9/12.8	–	1.00	"	OK	13	ESA100227-1
	0314	B7608	G2DJE1AL		"	066383 "	958	24.3/12.7	–	"	"	OK	14	" -2

Reviewed: _____

E5A100227

STL Los Angeles
Air Toxics Lab GC/MS Run Log

rument ID:	Data Directory: D:\GCMSB\	BFB Standard:	Initial Calibration ID:
CMS-B	Method File:	Daily Standard: See Previous Page	SOP:
book ID:	Tune File:	LCS Standard: 1-14-05	MDL Date:
AMS-041		I.S. Standard:	Blank Lot No.

Date	Time	Data File	Work Order No.	Container No.	Client	Client Sample ID	Sample Volume (mL)	Pressure Dilution	Samp. Dilution	Dilution Factor	Init	Status	Line No.	Comments
1-14-05	0849	B7609	G2DJF1AD	001	SANDIA	066384-001	957	29.1/126	-	1.00	m	ok	15	ESA100227-3
	0924	B7610	G2DJN1XD			066385	973	24.7/127	-		m	ok	16	-4
	0959	B7611	G2DJK1AD			066386	961	24.2/126	-		m	ok	1	-5
	0535	B7612	G2DJW1AD			066387	988	29.5/124	-		m	ok	2	-6
	2010	B7613	G2F8Q1AC		KJ	INFLUENT	50	8.37 (38.1)	100/100	2.84	m	ok	3	ESA120221-1
	0946	B7614	G2F8X1AC		1	EFFLUENT	965	29.1/125	-	1.00	m	ok	4	-2

m 1-14-05

viewed: _____

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A120221-2

Lab File ID (Standard): CC01132 Date Analyzed: 01/13/05

Instrument ID: GCMSB Time Analyzed: 0837

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	567671	8.30	1226931	10.12	977435	15.37
	UPPER LIMIT	794739	8.80	1717703	10.62	1368409	15.87
	LOWER LIMIT	340603	7.80	736159	9.62	586461	14.87
	EPA SAMPLE NO.						
01	LCS	579420	8.29	1283733	10.12	1009890	15.37
02	LCSD	607092	8.29	1350312	10.12	1049146	15.37
03	LCSD	630701	8.31	1358822	10.13	1040464	15.39
04	LCS	632674	8.30	1388485	10.13	1048041	15.38
05	BLANK	597814	8.29	1319443	10.12	965004	15.38
06	SYS INF	588950	8.31	1305775	10.14	1012410	15.39
07	SYS EFF	597383	8.31	1344429	10.14	1008349	15.39
08	VE-EFF	595627	8.31	1338563	10.14	1022477	15.39
09	SYS INF	588822	8.32	1354777	10.14	1062674	15.40
10	SYS EFF	564648	8.30	1302957	10.13	999448	15.38
11	SYS EFF	599569	8.31	1349533	10.13	1036265	15.39
12	C1616-06A	504181	8.31	1410923	10.13	926062	15.39
13	VE-EFF	594459	8.30	1338705	10.14	893816	15.40
14	C1616-06A	578273	8.30	1231994	10.14	973724	15.40
15	VE-EFF	573493	8.31	1284177	10.13	941397	15.40
16	VE-PROC	552262	8.26	1308796	10.10	1039662	15.39
17	VE-SRC	583765	8.31	1369066	10.14	1056953	15.40
18	VE-EFF	592822	8.30	1371184	10.14	1075180	15.40
19	VE-PROC	580849	8.31	1366832	10.14	1024616	15.40
20	VE-SRC	591596	8.32	1382567	10.14	1055569	15.39
21	VE-EFF	600706	8.32	1387442	10.14	1073982	15.39
22	VE-PROC	595457	8.30	1377026	10.14	1030049	15.40

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: E5A120221-2

Lab File ID (Standard): CC01132 Date Analyzed: 01/13/05

Instrument ID: GCMSB Time Analyzed: 0837

Matrix:(soil/water) AIR Level:(low/med) LOW Column:(pack/cap) CAP

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	567671	8.30	1226931	10.12	977435	15.37
	UPPER LIMIT	794739	8.80	1717703	10.62	1368409	15.87
	LOWER LIMIT	340603	7.80	736159	9.62	586461	14.87
	EPA SAMPLE NO.						
01	VE-SRC	589126	8.31	1368880	10.13	1033465	15.40
02	LCS	586573	8.30	1375271	10.14	1003634	15.40
03	LCSD	585798	8.31	1362237	10.14	975109	15.40
04	BLANK	588149	8.31	1336764	10.13	951084	15.39
05	INLET T.O	588403	8.31	1349190	10.14	977666	15.40
06	OUTLET SCRUB	592261	8.30	1336149	10.13	1033970	15.39
07	TOU INLET TA	590588	8.30	1318631	10.13	975158	15.40
08	CHP AIR	581031	8.30	1324882	10.13	1002594	15.39
09	M7505	584662	8.31	1320317	10.13	987974	15.40
10	066382-001	481584	8.31	1322208	10.13	948766	15.39
11	066383-001	557933	8.30	1324479	10.13	969305	15.39
12	066384-001	610432	8.31	1337543	10.14	945694	15.39
13	066385-001	585821	8.30	1321417	10.13	932669	15.39
14	066386-001	600127	8.30	1303127	10.13	923735	15.39
15	066386-001	559596	8.30	1295716	10.13	928347	15.39
16	INFLUENT	584001	8.30	1290531	10.13	997206	15.39
17	EFFLUENT	579215	8.30	1280263	10.13	905565	15.39
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 40% of internal standard area.
LOWER LIMIT = - 40% of internal standard area.

Column used to flag internal standard area values with an asterisk.

STL Los Angeles

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01131.D
Lab Smp Id:
Inj Date : 13-JAN-2005 07:51
Operator : DLK Inst ID: gcmsb.i
Smp Info : BFB,PSL9911283
Misc Info : ,,,,3,,BFB,,,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BFB.M
Meth Date : 07-Sep-2004 09:37 Quant Type: ISTD
Cal Date : Cal File:
Als bottle: 2 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.04 Sample Matrix: WATER
Processing Host: LAPC065

Concentration Formula: Amt * DF * Uf * Vf * VI

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vf	1.000	Volumetric correction factor
VI	1.000	Injection Volume

RT	EXP RT	REL RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
4.047	4.200	(0.000)	95	51594			0.00- 100.00	100.00
4.047	4.200	(0.000)	50	12907			15.00- 40.00	25.02
4.047	4.200	(0.000)	75	30018			30.00- 60.00	58.18
4.047	4.200	(0.000)	96	3783			5.00- 9.00	7.33
4.047	4.200	(0.000)	173	0			0.00- 2.00	0.00
4.047	4.200	(0.000)	174	29584			50.00- 120.00	57.34
4.047	4.200	(0.000)	175	2400			5.00- 9.00	8.11
4.047	4.200	(0.000)	176	28610			95.00- 101.00	96.71
4.047	4.200	(0.000)	177	2031			5.00- 9.00	7.10

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01131.D

Date : 13-JAN-2005 07:51

Client ID:

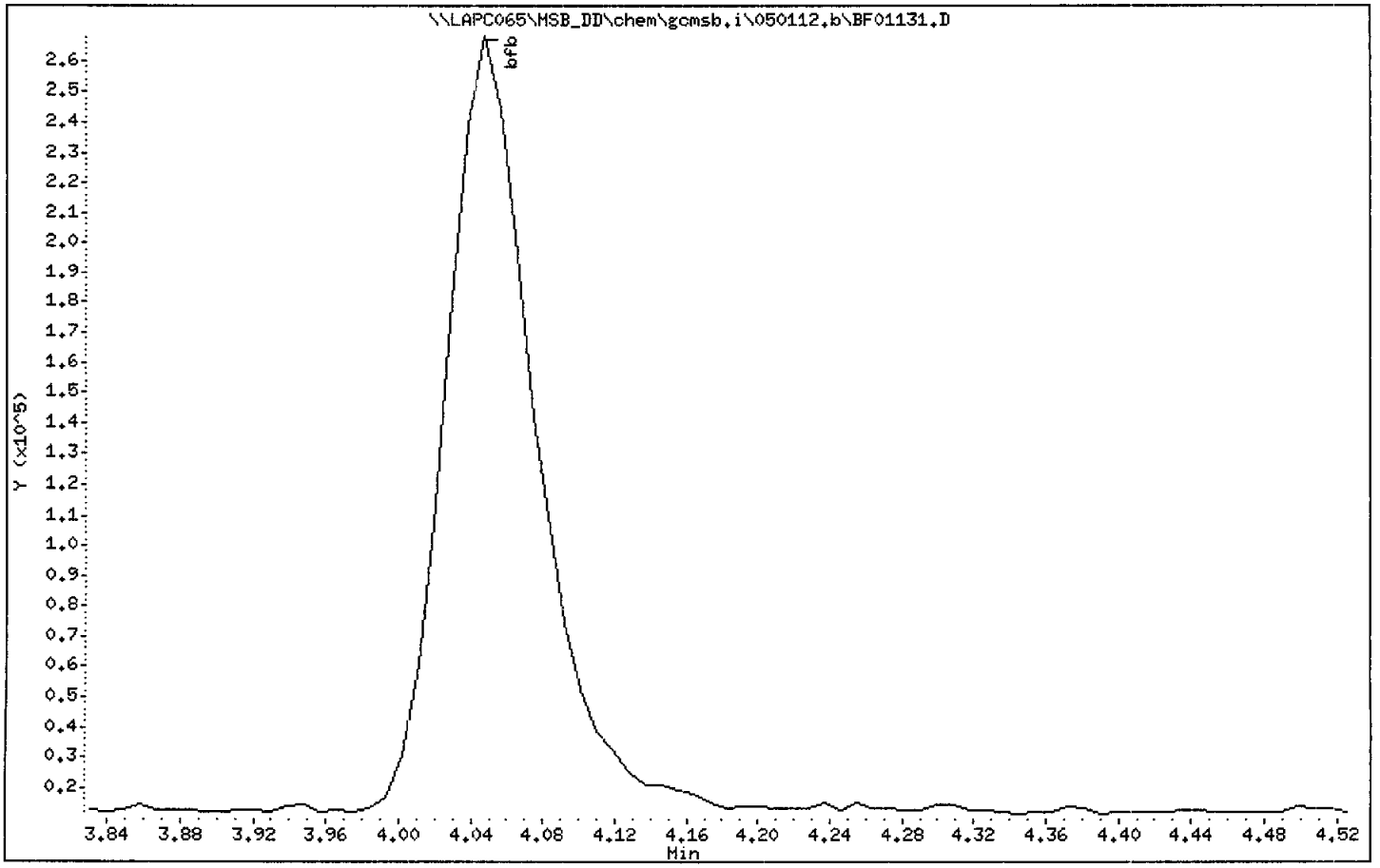
Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01131.D

Date : 13-JAN-2005 07:51

Client ID:

Instrument: gcmsb.i

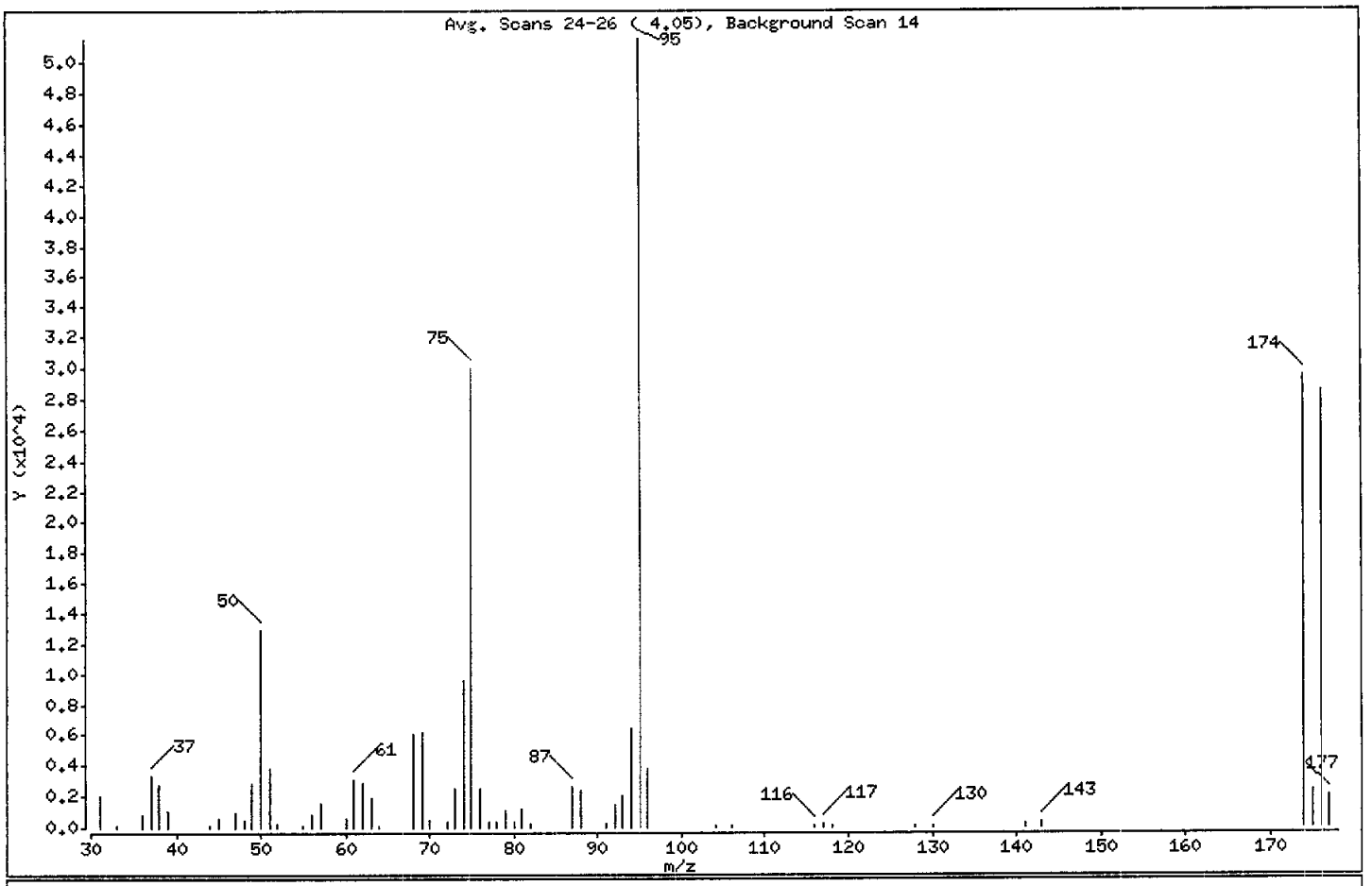
Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	25.02
75	30.00 - 60.00% of mass 95	58.18
96	5.00 - 9.00% of mass 95	7.33
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	57.34
175	5.00 - 9.00% of mass 174	4.65 (8.11)
176	95.00 - 101.00% of mass 174	55.45 (96.71)
177	5.00 - 9.00% of mass 176	3.94 (7.10)

LR 1/13/05

LE 1/18/05

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050112.b\BF01131.D

Date : 13-JAN-2005 07:51

Client ID:

Instrument: gcmsb.i

Sample Info: BFB,PSL9911283

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

Data File: BF01131.D
Spectrum: Avg. Scans 24-26 (4.05), Background Scan 14
Location of Maximum: 95.00
Number of points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2038	56.00	784	77.00	395	106.00	75
33.00	157	57.00	1555	78.00	338	116.00	129
36.00	854	60.00	633	79.00	1117	117.00	246
37.00	3281	61.00	3073	80.00	301	118.00	68
38.00	2750	62.00	2808	81.00	1231	128.00	65
39.00	1107	63.00	1857	82.00	274	130.00	79
44.00	149	64.00	123	87.00	2647	141.00	279
45.00	617	68.00	6098	88.00	2317	143.00	307
47.00	958	69.00	6208	91.00	190	174.00	29584
48.00	503	70.00	431	92.00	1479	175.00	2400
49.00	2802	72.00	347	93.00	2066	176.00	28608
50.00	12907	73.00	2453	94.00	6411	177.00	2031
51.00	3826	74.00	9619	95.00	51592		
52.00	230	75.00	30016	96.00	3783		
55.00	75	76.00	2536	104.00	67		

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 13-JAN-2005 08:37
Lab File ID: CC01132.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	1 Propene	0.18345	0.17850	0.010	-2.7	30.0	
	3 Dichlorodifluoromethane (F1	2.11052	2.02507	0.010	-4.0	30.0	
	5 1,2-Cl-1,1,2,2,F Ethane(F11	1.71614	1.68223	0.010	-2.0	30.0	
	8 Chloromethane	0.09369	0.09555	0.100	2.0	30.0	
	9 Vinyl Chloride	0.40660	0.39934	0.010	-1.8	30.0	
	12 1,3-Butadiene	0.27551	0.27283	0.010	-1.0	30.0	
	15 Bromomethane	0.50552	0.50113	0.010	-0.9	30.0	
	16 Chloroethane	0.25753	0.26055	0.010	1.2	30.0	
	19 Vinyl Bromide	0.57915	0.58425	0.010	0.9	30.0	
	21 Trichlorofluoromethane (F11	2.12773	2.05961	0.010	-3.2	30.0	
	28 1,1-Dichlorcethene	1.12859	1.09884	0.010	-2.6	30.0	
	30 1,1,2-CL 1,2,2-F ethane(F11	2.44467	2.34633	0.010	-4.0	30.0	
	31 Acetone	0.16001	0.17811	0.010	11.3	30.0	
	33 Carbon Disulfide	1.06127	1.15644	0.010	9.0	30.0	
	34 2-Propanol	0.56591	0.59522	0.010	5.2	30.0	
	36 Allyl Chloride	0.58587	0.62189	0.010	6.1	30.0	
	37 Methylene Chloride	0.69686	0.66234	0.010	-5.0	30.0	
	40 Acrylonitrile	0.18791	0.21144	0.010	12.5	30.0	
	41 trans-1,2-Dichloroethene	0.98199	0.99622	0.010	1.4	30.0	
	42 Methyl-tert-butyl ether[MTB	1.66607	1.67548	0.010	0.6	30.0	
	43 n-Hexane	0.77083	0.73262	0.010	-5.0	30.0	
	44 1,1-Dichloroethane	1.23672	1.23642	0.100	-0.0	30.0	
	45 Vinyl Acetate	1.19013	1.29675	0.010	9.0	30.0	
	53 cis-1,2-Dichloroethene	0.63910	0.63200	0.010	-1.1	30.0	
	54 2-Butanone	0.21287	0.22738	0.010	6.8	30.0	
	56 Ethyl Acetate	1.14995	1.30095	0.010	13.1	30.0	
	59 Tetrahydrofuran	0.55193	0.55893	0.010	1.3	30.0	
	60 Chloroform	1.59075	1.55361	0.010	-2.3	30.0	
	61 1,1,1-Trichloroethane	1.59033	1.59226	0.010	0.1	30.0	
	62 Cyclohexane	0.79797	0.79118	0.010	-0.9	30.0	
	64 Carbon Tetrachloride	1.05674	1.47290	0.010	39.4	30.0	<-
$	66 1,2-Dichloroethane-d4	0.41033	0.42126	0.010	2.7	30.0	
	68 Benzene	0.68038	0.67429	0.010	-0.9	30.0	
	69 1,2-Dichloroethane	0.44323	0.44574	0.010	0.6	30.0	
	70 2,2,4-Trimethylpentane	1.74763	1.75375	0.010	0.4	30.0	

LR 1/13/05

1-18-05

STL Los Angeles

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcmsb.i Injection Date: 13-JAN-2005 08:37
Lab File ID: CC01132.D Init. Cal. Date(s): 29-SEP-2004 03-JAN-2005
Analysis Type: AIR Init. Cal. Times: 14:40 23:34
Lab Sample ID: 50 PPBV STD Quant Type: ISTD
Method: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	72 n-Heptane	0.58544	0.58882	0.010	0.6	30.0	
	75 Trichloroethene	0.43657	0.44257	0.010	1.4	30.0	
	78 1,2-Dichloropropane	0.16390	0.16981	0.010	3.6	30.0	
	81 1,4-Dioxane	0.15796	0.17880	0.010	13.2	30.0	
	82 Bromodichloromethane	0.54492	0.60806	0.010	11.6	30.0	
	85 cis-1,3-Dichloropropene	0.44931	0.53936	0.010	20.0	30.0	
	86 4-Methyl-2-Pentanone	0.22967	0.25737	0.010	12.1	30.0	
$	88 Toluene-d8	0.52356	0.55312	0.010	5.6	30.0	
	89 Toluene	0.88039	0.89719	0.010	1.9	30.0	
	91 trans-1,3-Dichloropropene	0.42279	0.51002	0.010	20.6	30.0	
	93 1,1,2-Trichloroethane	0.56403	0.55238	0.010	-2.1	30.0	
	95 Tetrachloroethene	0.78282	0.75801	0.010	-3.2	30.0	
	96 2-Hexanone	0.25237	0.28256	0.010	12.0	30.0	
	97 Dibromochloromethane	0.94658	1.12250	0.010	18.6	30.0	
	98 1,2-Dibromoethane	0.94544	1.01575	0.010	7.4	30.0	
	102 Chlorobenzene	0.91801	0.93034	0.300	1.3	30.0	
M	99 Xylenes (total)	0.40771	0.46545	0.010	14.2	30.0	
	104 Ethylbenzene	1.42124	1.53013	0.010	7.7	30.0	
	105 m,p-Xylenes	0.41273	0.47212	0.010	14.4	30.0	
	107 o-Xylene	0.39767	0.45211	0.010	13.7	30.0	
	108 Styrene	0.49829	0.58679	0.010	17.8	30.0	
	110 Bromoform	0.74450	0.97053	0.100	30.4	30.0	<-
$	114 4-Bromofluorobenzene	0.89318	0.94448	0.010	5.7	30.0	
	116 1,1,2,2-Tetrachloroethane	1.35429	1.41410	0.300	4.4	30.0	
	123 4-Ethyl Toluene	0.84706	1.04901	0.010	23.8	30.0	
	124 1,3,5-Trimethylbenzene	0.94631	0.92090	0.010	-2.7	30.0	
	131 1,2,4-Trimethylbenzene	0.27527	0.29581	0.010	7.5	30.0	
	134 1,3-Dichlorobenzene	0.52632	0.61065	0.010	16.0	30.0	
	136 1,4-Dichlorobenzene	0.54141	0.55801	0.010	3.1	30.0	
	138 Benzyl Chloride	0.56325	0.64111	0.010	13.8	30.0	
	140 1,2-Dichlorobenzene	0.53798	0.58374	0.010	8.5	30.0	
	144 1,2,4-Trichlorobenzene	0.26641	0.31270	0.010	17.4	30.0	
	145 Hexachlorobutadiene	0.48586	0.48425	0.010	-0.3	30.0	

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\CC01132.D
Lab Smp Id: 50 PPBV STD Client Smp ID: MSL04011028
Inj Date : 13-JAN-2005 08:37
Operator : DLK Inst ID: gcmsb.i
Smp Info : 50 PPBV STD,MSL04011028
Misc Info : 1,1,125,125,2,,,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 09:01 kammererd Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	125.000	CalVol
SmpVol	125.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
1 Propene	41	2.043	2.043	(0.246)	101327	50.0000	48.65
3 Dichlorodifluoromethane (F12)	85	2.115	2.115	(0.255)	1149574	50.0000	47.98
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.350	2.350	(0.283)	954954	50.0000	49.01
8 Chloromethane	52	2.386	2.386	(0.288)	54238	50.0000	50.99(Q)
9 Vinyl Chloride	62	2.575	2.575	(0.310)	226696	50.0000	49.11
12 1,3-Butadiene	39	2.656	2.656	(0.320)	309752	100.000	99.02
15 Bromomethane	94	3.107	3.107	(0.375)	284476	50.0000	49.57
16 Chloroethane	64	3.288	3.288	(0.396)	147906	50.0000	50.59
19 Vinyl Bromide	106	3.604	3.604	(0.434)	331664	50.0000	50.44
21 Trichlorofluoromethane (F11)	101	3.730	3.730	(0.450)	1169183	50.0000	48.40
28 1,1-Dichloroethene	61	4.659	4.659	(0.562)	623781	50.0000	48.68
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.713	4.713	(0.568)	1331945	50.0000	47.99
31 Acetone	58	4.822	4.822	(0.581)	101106	50.0000	55.65(Q)
33 Carbon Disulfide	76	5.020	5.020	(0.605)	656479	50.0000	54.48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
	34 2-Propanol	45	5.183	5.183	(0.625)	337890	50.0000	52.59
	36 Allyl Chloride	41	5.345	5.345	(0.644)	353031	50.0000	53.07
	37 Methylene Chloride	49	5.562	5.562	(0.670)	375990	50.0000	47.52
	40 Acrylonitrile	53	6.067	6.067	(0.731)	120030	50.0000	56.26
	41 trans-1,2-Dichloroethene	61	6.076	6.076	(0.732)	565524	50.0000	50.72
	42 Methyl-tert-butyl ether[MTBE]	73	6.112	6.112	(0.737)	951121	50.0000	50.28
	43 n-Hexane	41	6.608	6.608	(0.797)	415889	50.0000	47.52
	44 1,1-Dichloroethane	63	6.825	6.825	(0.823)	701880	50.0000	49.99
	45 Vinyl Acetate	43	7.005	7.005	(0.844)	736128	50.0000	54.48
	53 cis-1,2-Dichloroethene	96	7.880	7.880	(0.950)	358770	50.0000	49.44
	54 2-Butanone	72	7.944	7.944	(0.958)	129077	50.0000	53.41
	56 Ethyl Acetate	43	8.088	8.088	(0.975)	738513	50.0000	56.56
*	58 Bromochloromethane	49	8.295	8.295	(1.000)	567671	50.0000	
	59 Tetrahydrofuran	42	8.395	8.395	(1.012)	317286	50.0000	50.63
	60 Chloroform	83	8.458	8.458	(1.020)	881938	50.0000	48.83
	61 1,1,1-Trichloroethane	97	8.756	8.756	(1.055)	903880	50.0000	50.06
	62 Cyclohexane	84	8.846	8.846	(1.066)	449130	50.0000	49.57
	64 Carbon Tetrachloride	117	9.053	9.053	(1.091)	836123	50.0000	69.69
$	66 1,2-Dichloroethane-d4	65	9.315	9.315	(0.921)	516852	50.0000	51.33
	68 Benzene	78	9.414	9.414	(0.930)	827309	50.0000	49.55
	69 1,2-Dichloroethane	62	9.450	9.450	(0.934)	546889	50.0000	50.28
	70 2,2,4-Trimethylpentane	57	9.586	9.586	(0.947)	2151733	50.0000	50.18
	72 n-Heptane	43	9.938	9.938	(0.982)	722447	50.0000	50.29
*	73 1,4-Difluorobenzene	114	10.118	10.118	(1.000)	1226931	50.0000	
	75 Trichloroethene	130	10.569	10.569	(1.045)	543004	50.0000	50.69
	78 1,2-Dichloropropane	76	10.948	10.948	(1.082)	208345	50.0000	51.80
	81 1,4-Dioxane	88	11.210	11.210	(1.108)	219370	50.0000	56.59
	82 Bromodichloromethane	85	11.444	11.444	(1.131)	746052	50.0000	55.79
	85 cis-1,3-Dichloropropene	75	12.256	12.256	(1.211)	661761	50.0000	60.02
	86 4-Methyl-2-Pentanone	58	12.536	12.536	(1.239)	315780	50.0000	56.03(Q)
$	88 Toluene-d8	100	12.726	12.726	(1.258)	678639	50.0000	52.82
	89 Toluene	91	12.843	12.843	(1.269)	1100787	50.0000	50.95
	91 trans-1,3-Dichloropropene	75	13.258	13.258	(0.863)	498513	50.0000	60.32
	93 1,1,2-Trichloroethane	97	13.583	13.583	(0.884)	539917	50.0000	48.97
	95 Tetrachloroethene	166	13.844	13.844	(0.901)	740904	50.0000	48.42
	96 2-Hexanone	58	14.052	14.052	(0.914)	276180	50.0000	55.98(Q)
	97 Dibromochloromethane	129	14.296	14.296	(0.930)	1097169	50.0000	59.29
	98 1,2-Dibromoethane	107	14.494	14.494	(0.943)	992828	50.0000	53.72
*	101 Chlorobenzene-d5	117	15.369	15.369	(1.000)	977435	50.0000	
	102 Chlorobenzene	112	15.423	15.423	(1.004)	909344	50.0000	50.67
M	99 Xylenes (total)	106				1364854	150.000	171.2
	104 Ethylbenzene	91	15.640	15.640	(1.018)	1495600	50.0000	53.83
	105 m,p-Xylenes	106	15.856	15.856	(1.032)	922942	100.000	114.4
	107 o-Xylene	106	16.614	16.614	(1.081)	441912	50.0000	56.85
	108 Styrene	104	16.641	16.641	(1.083)	573553	50.0000	58.88
	110 Bromoform	173	16.984	16.984	(1.105)	948633	50.0000	65.18
$	114 4-Bromofluorobenzene	95	17.625	17.625	(1.147)	923168	50.0000	52.87

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppbv)	AMOUNTS ON-COL (ppbv)
116 1,1,2,2-Tetrachloroethane	83	17.896	17.896	(1.164)	1382189	50.0000	52.21
123 4-Ethyl Toluene	105	18.347	18.347	(1.194)	1025343	50.0000	61.92
124 1,3,5-Trimethylbenzene	105	18.473	18.473	(1.202)	900119	50.0000	48.66
131 1,2,4-Trimethylbenzene	120	19.213	19.213	(1.250)	289136	50.0000	53.73
134 1,3-Dichlorobenzene	146	19.763	19.763	(1.286)	596872	50.0000	58.01
136 1,4-Dichlorobenzene	146	19.935	19.935	(1.297)	545423	50.0000	51.53
138 Benzyl Chloride	91	20.205	20.205	(1.315)	626643	50.0000	56.91
140 1,2-Dichlorobenzene	146	20.675	20.675	(1.345)	570568	50.0000	54.25
144 1,2,4-Trichlorobenzene	180	23.138	23.138	(1.505)	305645	50.0000	58.69
145 Hexachlorobutadiene	225	23.363	23.363	(1.520)	473326	50.0000	49.83

QC Flag Legend

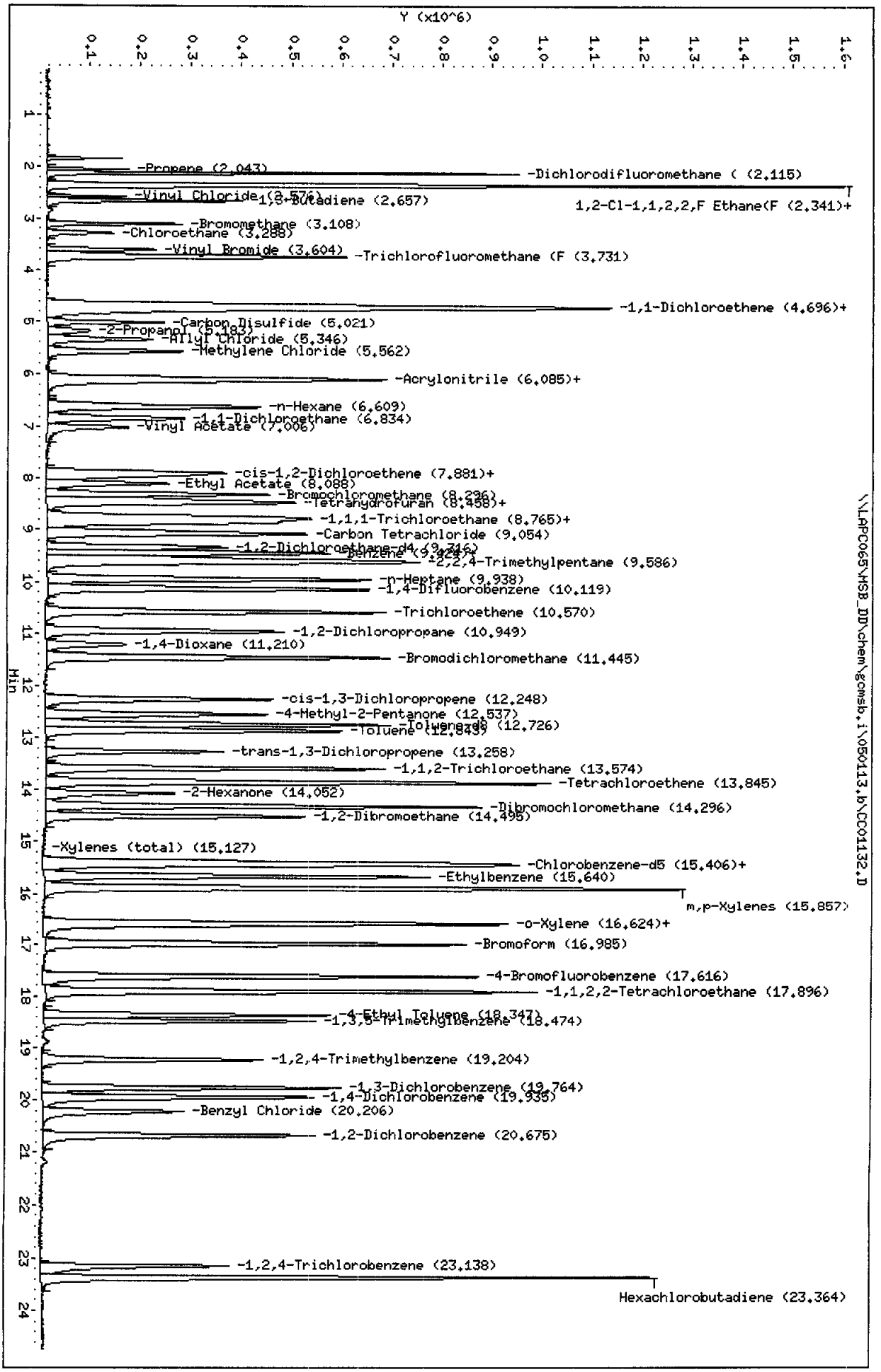
Q - Qualifier signal failed the ratio test.

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\CC01132.D
Date : 13-JAN-2005 08:37
Client ID: MSL04011028
Sample Info: 50 PPBV STD,MSL04011028

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK
Column diameter: 0.53



Reduced By: W Date: 1-14-05 LCSD Report
Reviewed By: [illegible] Date: 1/18/05

QC Category: _____ QC Lot: _____

LCS SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.B/LC01135.D
Samp Info : LCS,LCS,PSL9911359
Inj Date : 13-JAN-2005 21:53

LCSD SAMPLE
Data File : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.B/LC01136.D
Samp Info : LCSD,LCSD,PSL9911359
Inj Date : 13-JAN-2005 22:28

	Concentration								
	Mass Spiked		Measured			%Recovery			RPD	
Spiked	(ug/m3)	LCS	LCSD	Avg.	Meas.	Min	Max	Meas.	Max
1,1-Dichloroethene									
50.5	199.83	52.6	52.6	52.6	104.2	70	125	0	20
Methylene Chloride									
54.5	188.95	57.0	56.8	56.9	104.3	75	120	0	20
Trichloroethene									
49.5	265.47	50.5	50.0	50.3	101.6	70	125	1	20
Toluene									
49.5	186.17	48.7	49.0	48.9	98.7	75	125	1	20
1,1,2,2-Tetrachloroethane									
50.0	342.55	49.0	50.3	49.6	99.2	65	130	3	20

100.0 Percent of recoveries are within control limits.
100.0 Percent of RPD values are within control limits.

STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\LC01135.D
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 13-JAN-2005 21:53
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCS,LCS,PSL9911359
Misc Info : 1,1,250,250,3,,LCS,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.672	4.659	(0.563)	697015	52.6445	52.64
37 Methylene Chloride	49	5.574	5.562	(0.672)	465631	56.9565	56.96
* 58 Bromochloromethane	49	8.299	8.295	(1.000)	586573	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.337	9.315	(0.921)	502929	44.5611	44.56
* 73 1,4-Difluorobenzene	114	10.140	10.118	(1.000)	1375271	50.0000	
75 Trichloroethene	130	10.582	10.569	(1.044)	606995	50.5486	50.55
$ 88 Toluene-d8	100	12.756	12.726	(1.258)	720128	50.0062	50.01
89 Toluene	91	12.865	12.843	(1.269)	1179961	48.7276	48.73
* 101 Chlorobenzene-d5	117	15.400	15.369	(1.000)	1003634	50.0000	
$ 114 4-Bromofluorobenzene	95	17.656	17.625	(1.146)	774341	43.1902	43.19
116 1,1,2,2-Tetrachloroethane	83	17.926	17.896	(1.164)	1330721	48.9518	48.95

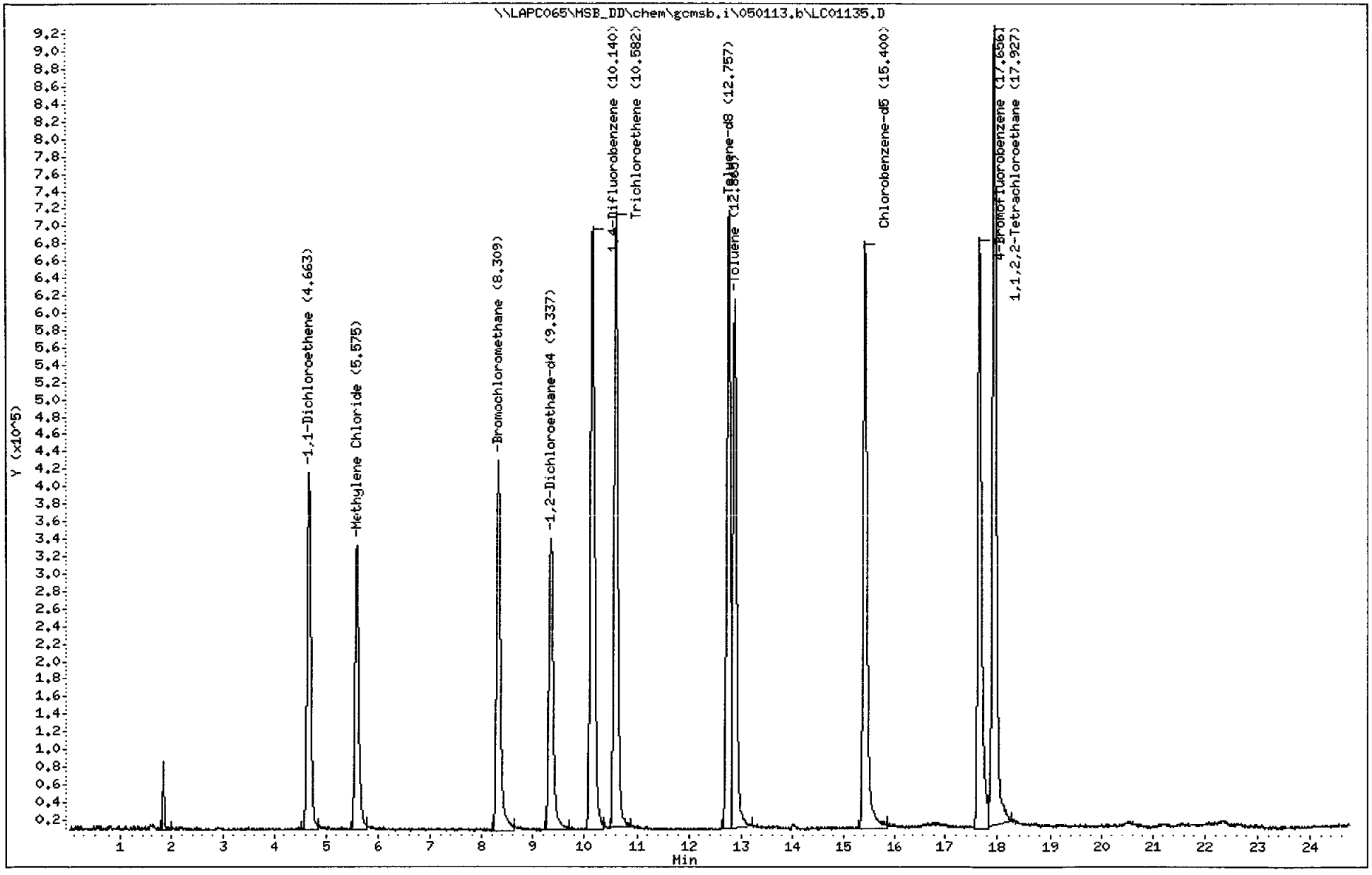
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\LC01135.D
Date : 13-JAN-2005 21:53
Client ID: LCS
Sample Info: LCS,LCS,PSL9911359

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\LC01136.D
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 13-JAN-2005 22:28
Operator : DLK Inst ID: gcmsb.i
Smp Info : LCSD,LCSD,PSL9911359
Misc Info : 1,1,250,250,3,,LCSD,SPK.sub,1,SH.SPK
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SPK.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	250.000	CalVol
SmpVol	250.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
28 1,1-Dichloroethene	61	4.672	4.659	(0.562)	694926	52.5561	52.56
37 Methylene Chloride	49	5.583	5.562	(0.672)	463359	56.7536	56.75
* 58 Bromochloromethane	49	8.308	8.295	(1.000)	585798	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.328	9.315	(0.920)	502446	44.9442	44.94
* 73 1,4-Difluorobenzene	114	10.140	10.118	(1.000)	1362237	50.0000	
75 Trichloroethene	130	10.582	10.569	(1.044)	594599	49.9901	49.99
$ 88 Toluene-d8	100	12.747	12.726	(1.257)	708572	49.6745	49.67
89 Toluene	91	12.865	12.843	(1.269)	1175880	49.0237	49.02
* 101 Chlorobenzene-d5	117	15.400	15.369	(1.000)	975109	50.0000	
$ 114 4-Bromofluorobenzene	95	17.647	17.625	(1.146)	740611	42.5173	42.52
116 1,1,2,2-Tetrachloroethane	83	17.926	17.896	(1.164)	1328230	50.2895	50.29

Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\LC01136.D

Date : 13-JAN-2005 22:28

Client ID: LCSD

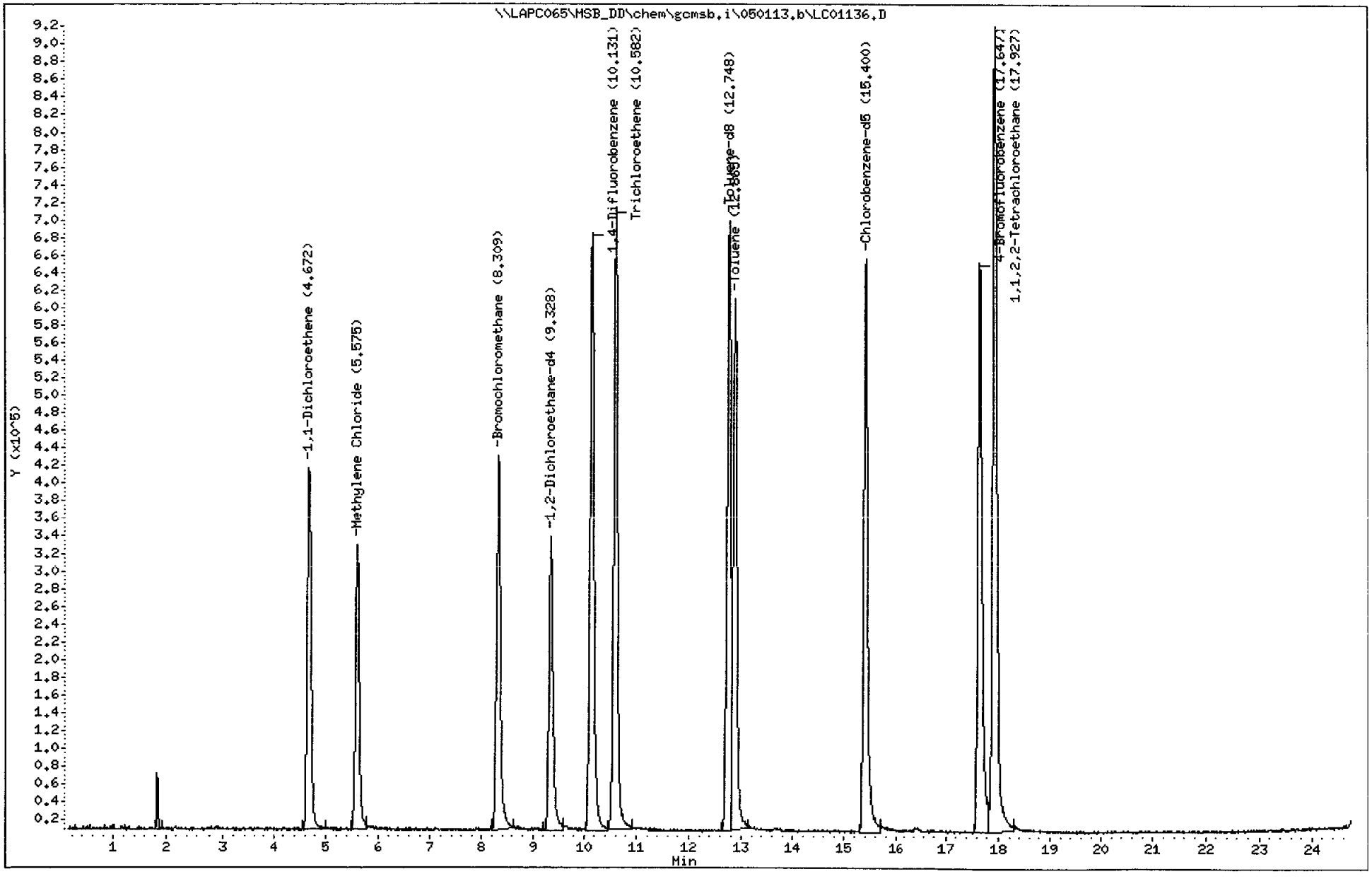
Sample Info: LCSD,LCSD,PSL9911359

Column phase: J&W DB-624

Instrument: gcmsb.i

Operator: DLK

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\MB01132.D
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 13-JAN-2005 23:04
Operator : DLK Inst ID: gcmsb.i
Smp Info : BLANK,BLANK,
Misc Info : 1,1,500,500,3,,BLANK,TO14ALONG.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14ALONG.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	1.000	FinalPres
InitPres	1.000	InitPres
CalVol	500.000	CalVol
SmpVol	500.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 58 Bromochloromethane	49	8.308	8.295	(1.000)	588149	50.0000	
$ 66 1,2-Dichloroethane-d4	65	9.327	9.315	(0.921)	506519	46.1719	46.17
* 73 1,4-Difluorobenzene	114	10.130	10.118	(1.000)	1336764	50.0000	
$ 88 Toluene-d8	100	12.738	12.726	(1.257)	679147	48.5190	48.52
* 101 Chlorobenzene-d5	117	15.390	15.369	(1.000)	951084	50.0000	
$ 114 4-Bromofluorobenzene	95	17.646	17.625	(1.147)	718675	42.3002	42.30

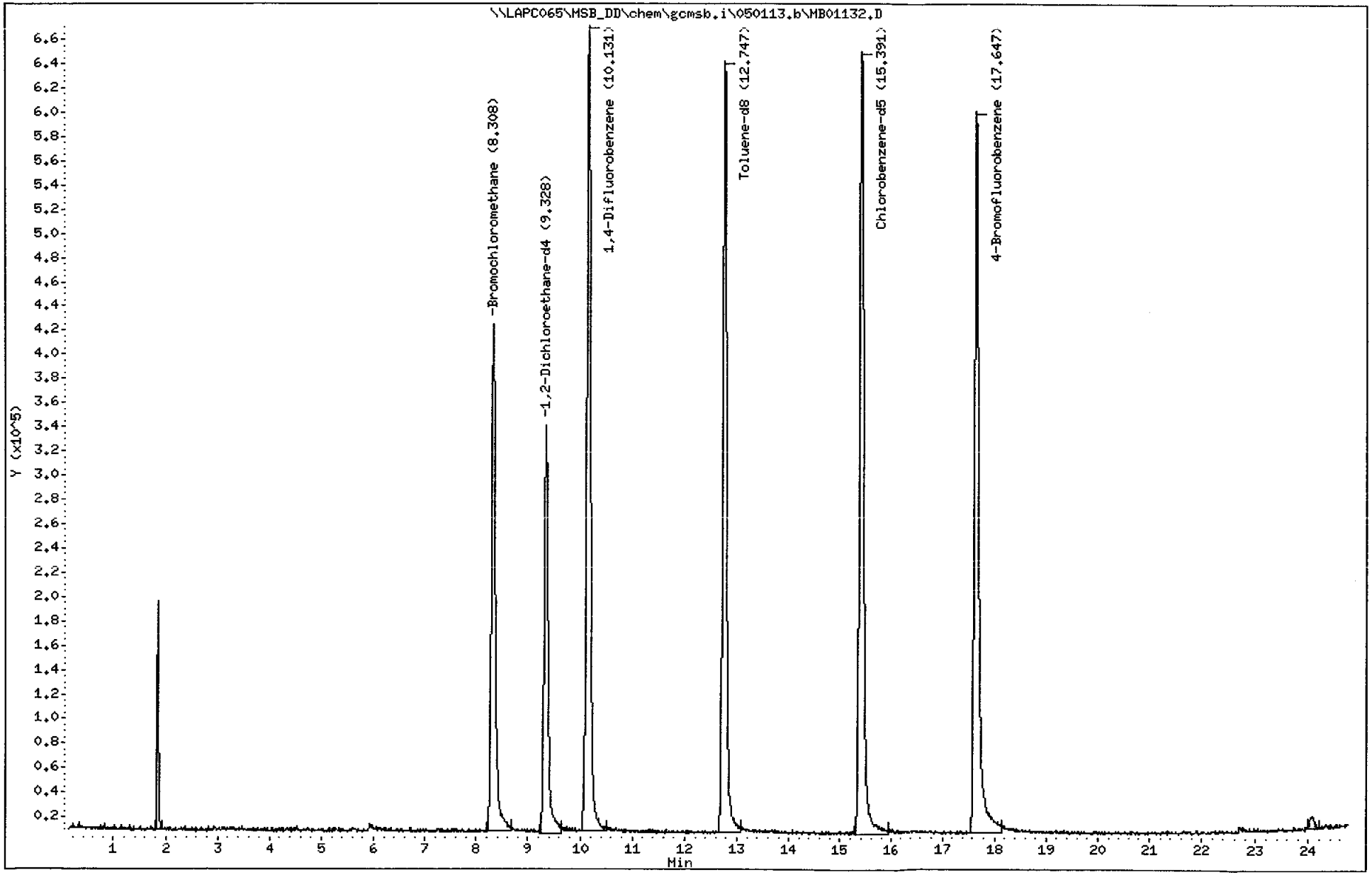
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\MB01132.D
Date : 13-JAN-2005 23:04
Client ID: BLANK
Sample Info: BLANK,BLANK,

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D
Lab Smp Id: G2DJC1AD Client Smp ID: 066382-001
Inj Date : 14-JAN-2005 02:38
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DJC1AD,066382-001,SANDIA,E5A100227-1
Misc Info : 24.0,12.8,500,940,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.000	FinalPres
InitPres	12.800	InitPres
CalVol	500.000	CalVol
SmpVol	940.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.137	2.115	(0.257)	5429452	267.094	266.4
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.353	2.350	(0.283)	289491	17.5137	17.47
8 Chloromethane	52	2.362	2.386	(0.284)	935	1.03660	1.034(aQ)
9 Vinyl Chloride	62	2.353	2.575	(0.283)	3649	0.93192	0.9294(a)
21 Trichlorofluoromethane (F11)	101	3.734	3.730	(0.449)	347301	16.9468	16.90
28 1,1-Dichloroethene	61	4.672	4.659	(0.562)	309432	28.4659	28.39
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.717	4.713	(0.568)	2596610	110.277	110.0
31 Acetone	58	4.907	4.822	(0.591)	4285	2.78069	2.773(aQ)
37 Methylene Chloride	49	5.593	5.562	(0.673)	8286	1.23458	1.231(a)
44 1,1-Dichloroethane	63	6.838	6.825	(0.823)	53348	4.47863	4.467
* 58 Bromochloromethane	49	8.308	8.295	(1.000)	481584	50.0000	
60 Chloroform	83	8.462	8.458	(1.018)	2552089	166.568	166.1
61 1,1,1-Trichloroethane	97	8.778	8.756	(1.056)	95404	6.22846	6.212
64 Carbon Tetrachloride	117	8.778	9.053	(1.056)	11895	1.16868	1.166(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 66 1,2-Dichloroethane-d4	65	9.337	9.315	(0.922)	502017	46.2653	46.14
* 73 1,4-Difluorobenzene	114	10.131	10.118	(1.000)	1322208	50.0000	
75 Trichloroethene	130	10.591	10.569	(1.045)	375718	32.5443	32.46
82 Bromodichloromethane	85	11.484	11.444	(1.134)	61348	4.25732	4.246
$ 88 Toluene-d8	100	12.748	12.726	(1.258)	689792	49.8220	49.69
89 Toluene	91	12.874	12.843	(1.271)	25431	1.09238	1.089(a)
95 Tetrachloroethene	166	13.866	13.844	(0.901)	605049	40.7326	40.62
* 101 Chlorobenzene-d5	117	15.391	15.369	(1.000)	948766	50.0000	
$ 114 4-Bromofluorobenzene	95	17.647	17.625	(1.147)	735837	43.4162	43.30
140 1,2-Dichlorobenzene	146	20.859	20.675	(1.355)	8246	0.80785	0.8057(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

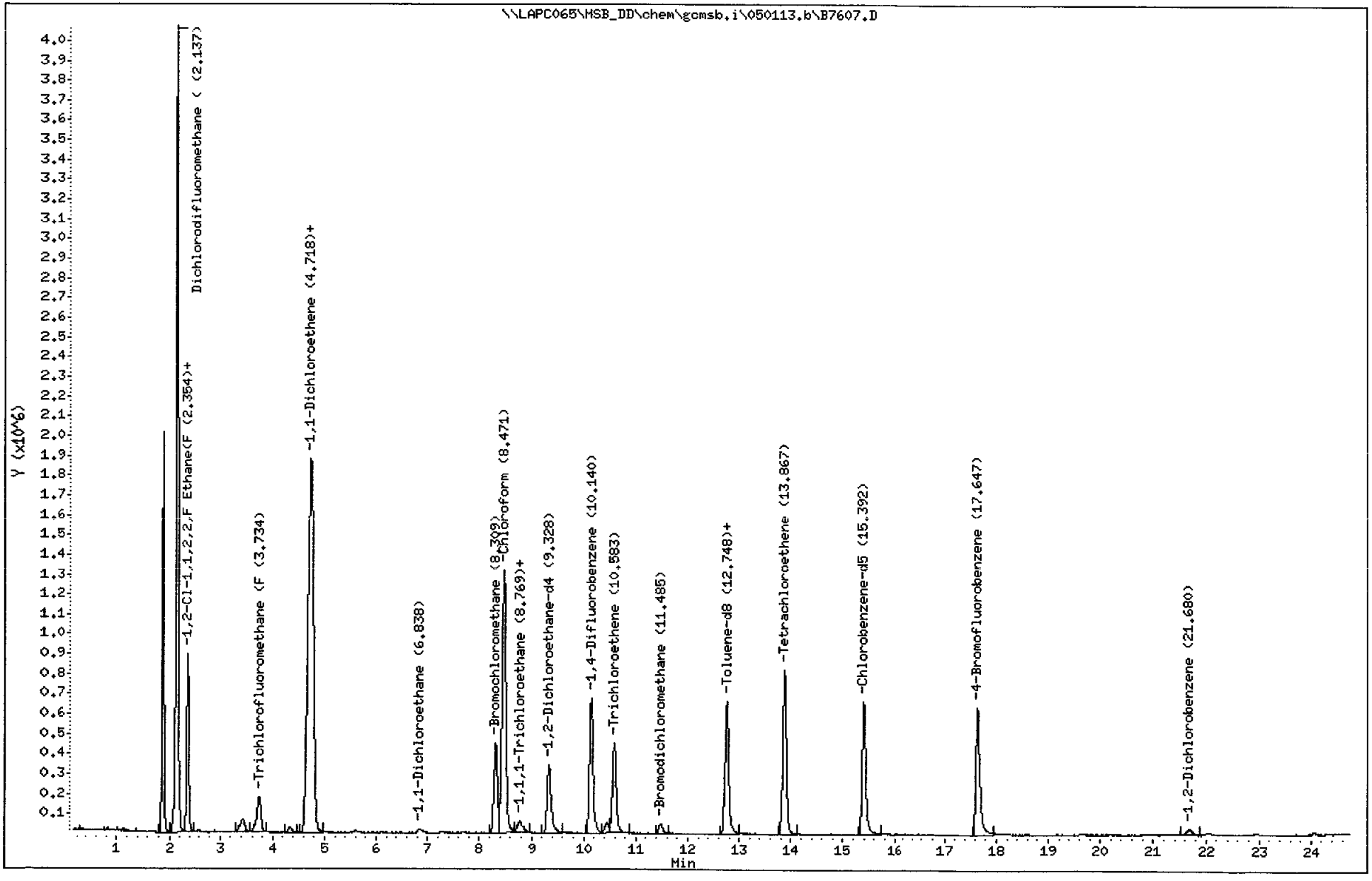
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D
Date : 14-JAN-2005 02:38
Client ID: 066382-001
Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

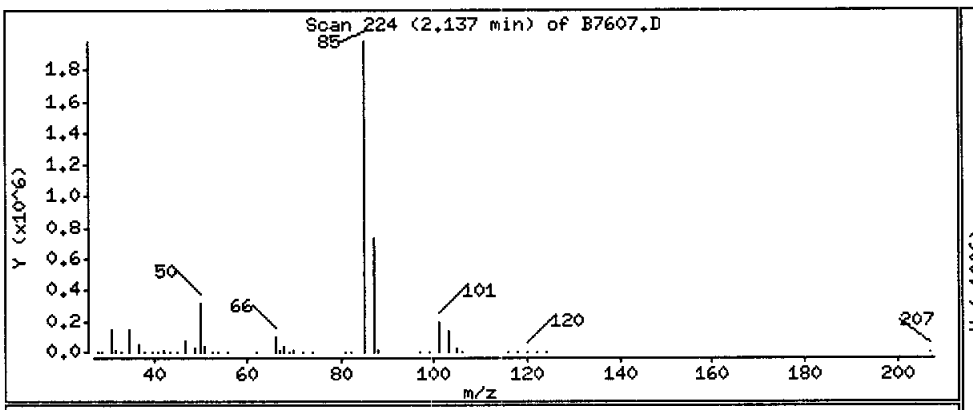
Operator: DLK

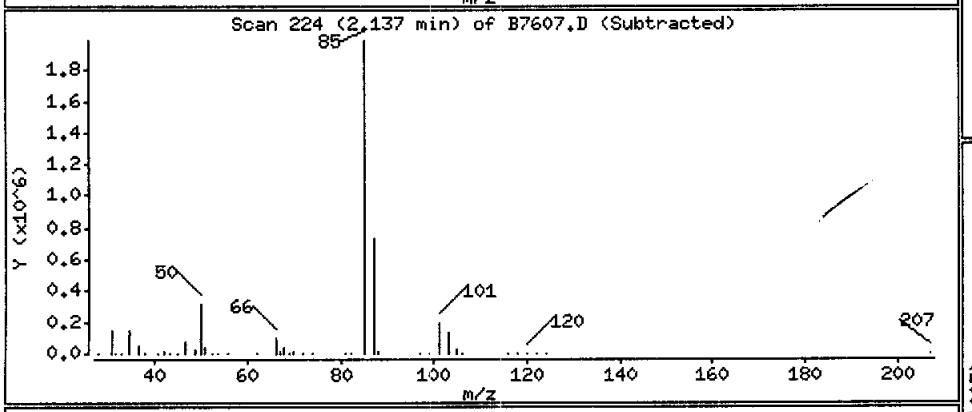
Column phase: J&W DB-624

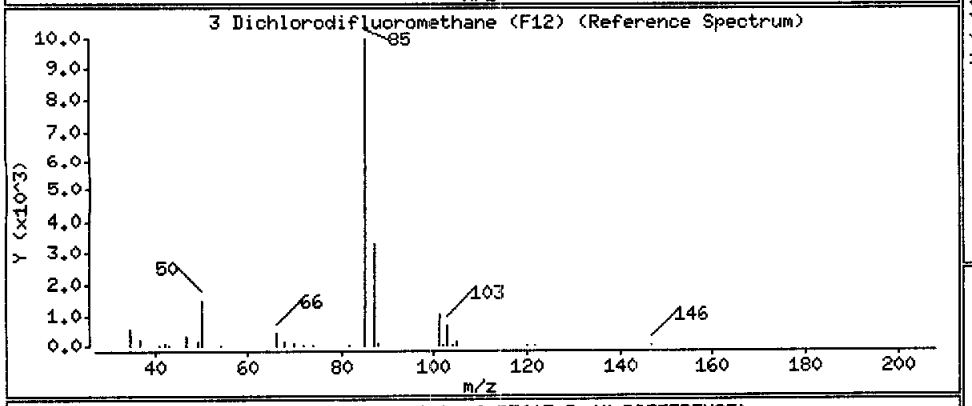
Column diameter: 0.53

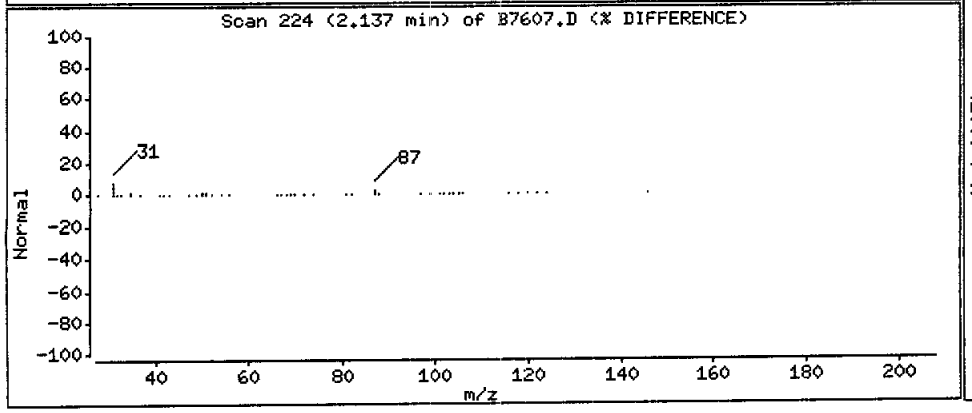
3 Dichlorodifluoromethane (F12)

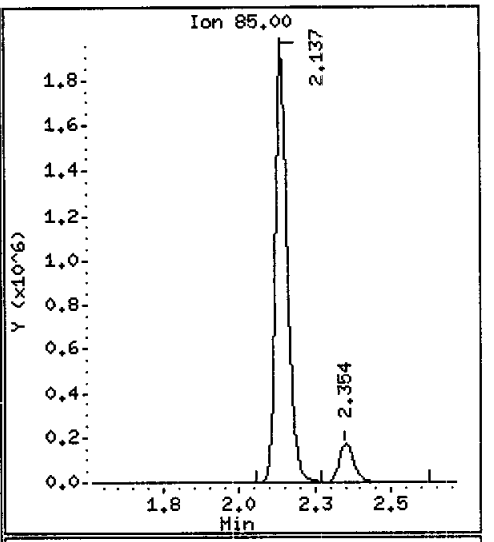
Concentration: 266.4 ppbv

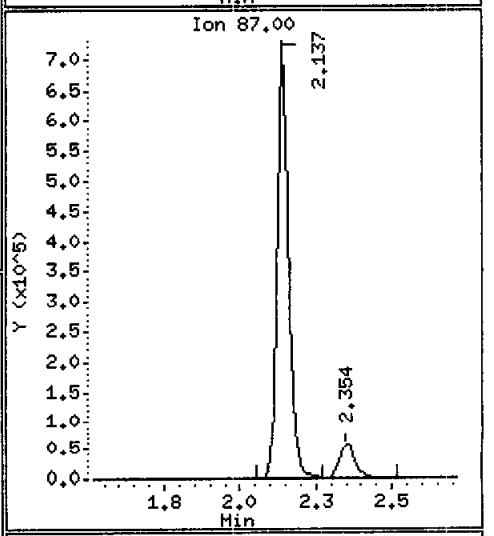


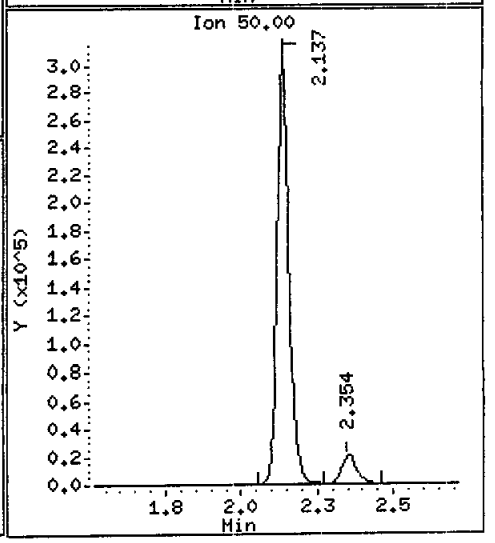












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

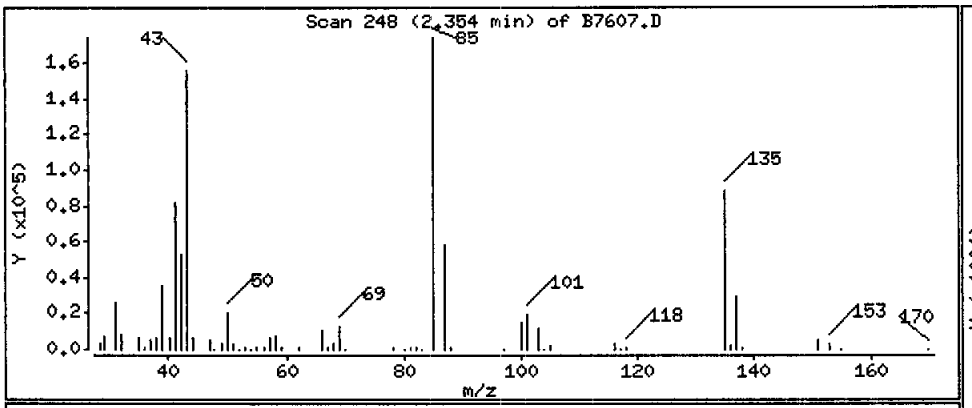
Operator: DLK

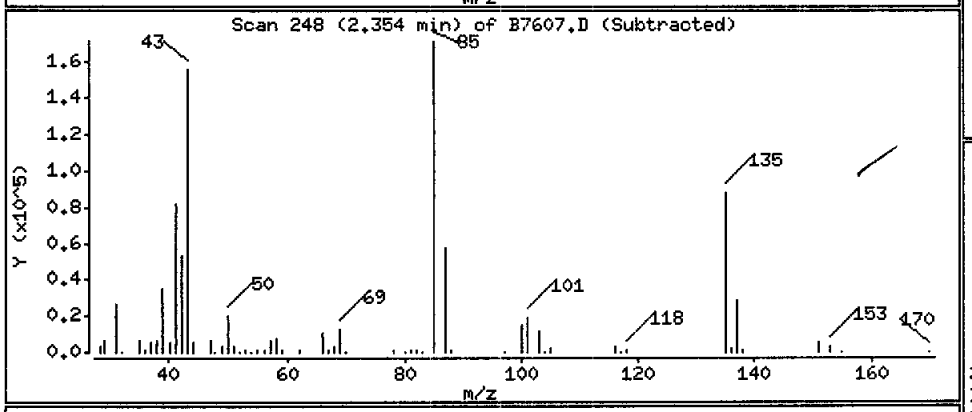
Column phase: J&W DB-624

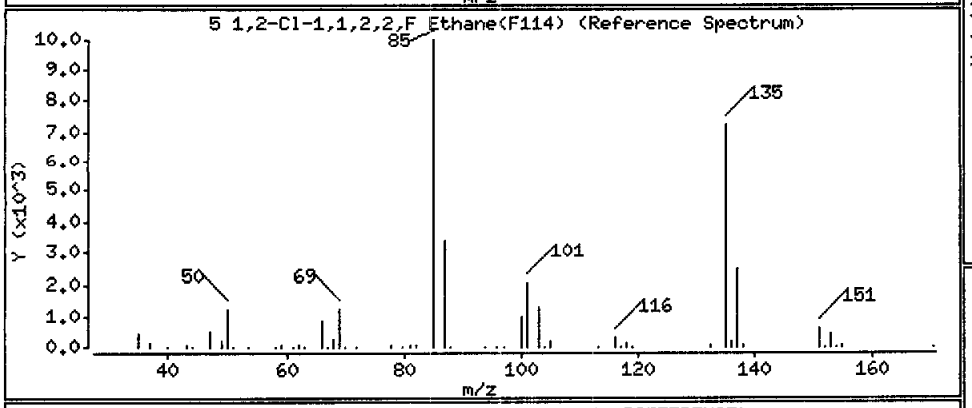
Column diameter: 0.53

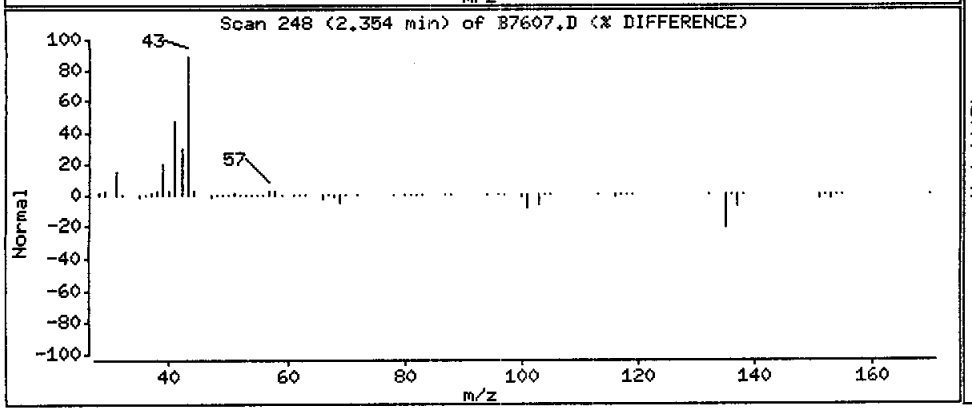
5 1,2-Cl-1,1,2,2,F Ethane(F114)

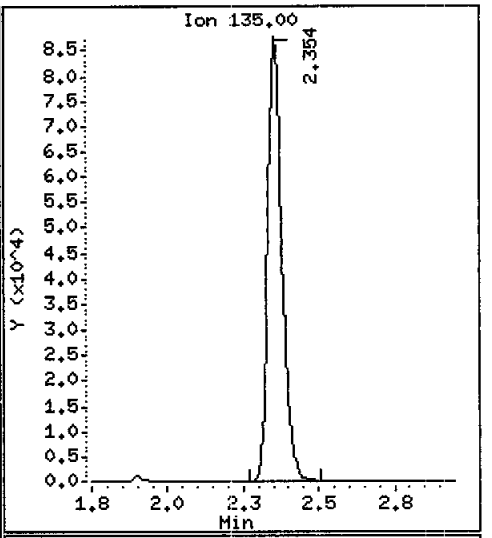
Concentration: 17.47 ppbv

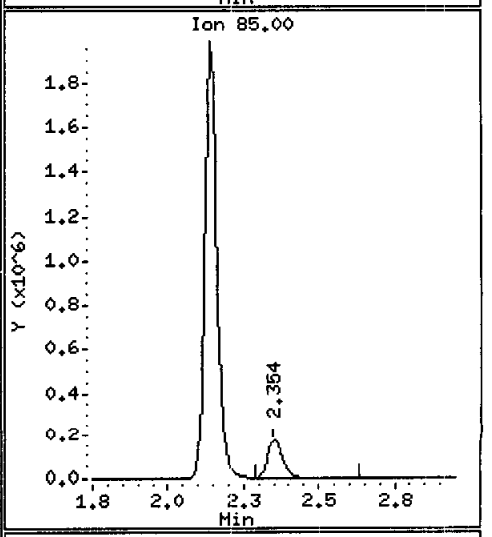


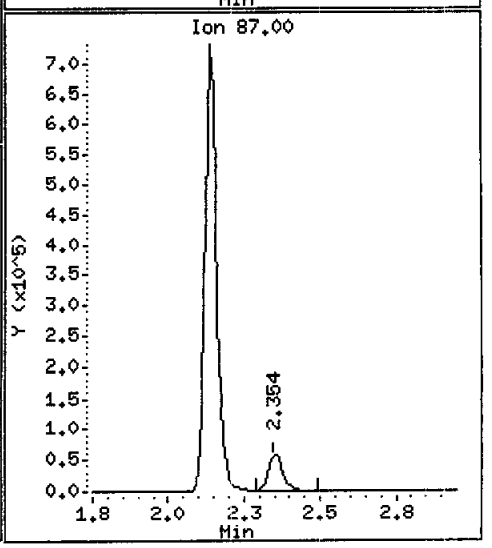












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

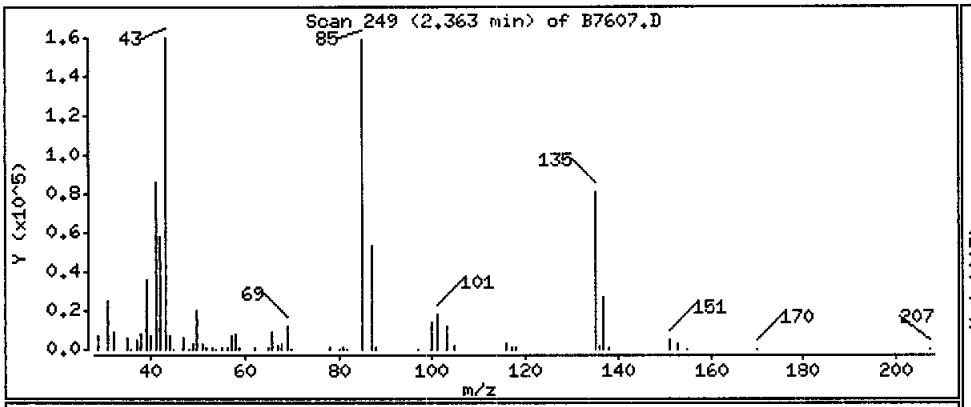
Operator: DLK

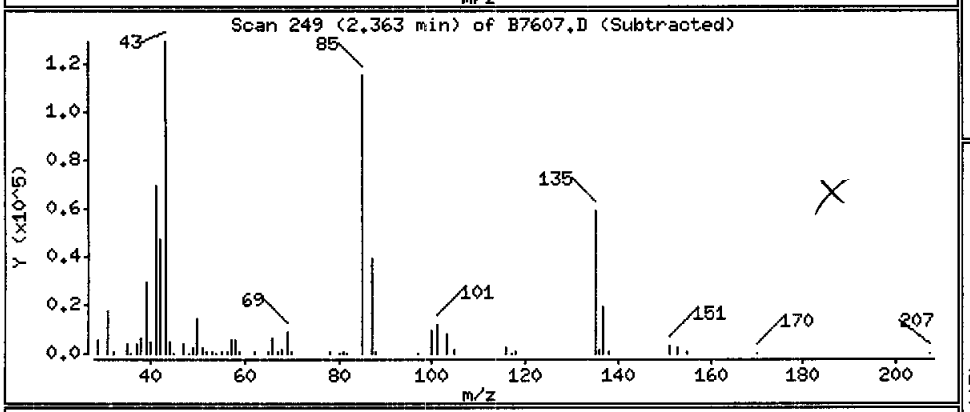
Column phase: J&W DB-624

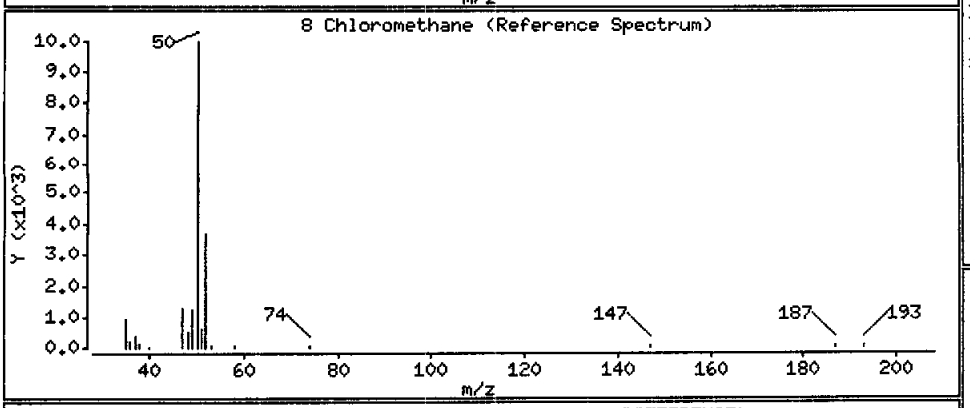
Column diameter: 0.53

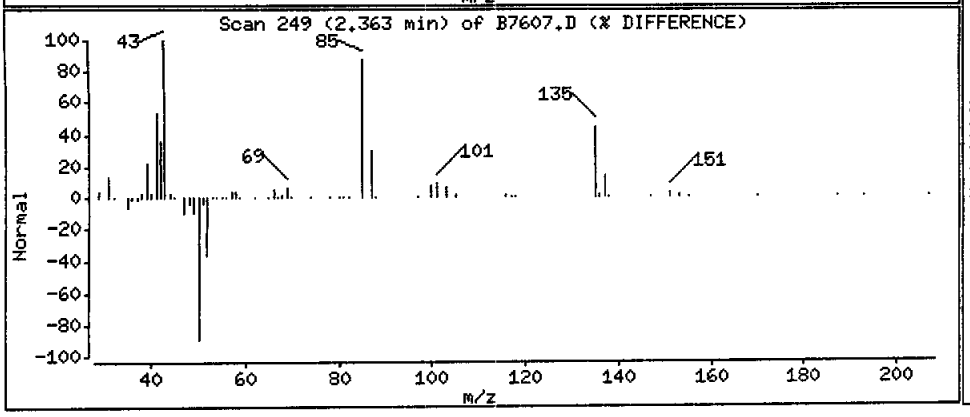
8 Chloromethane

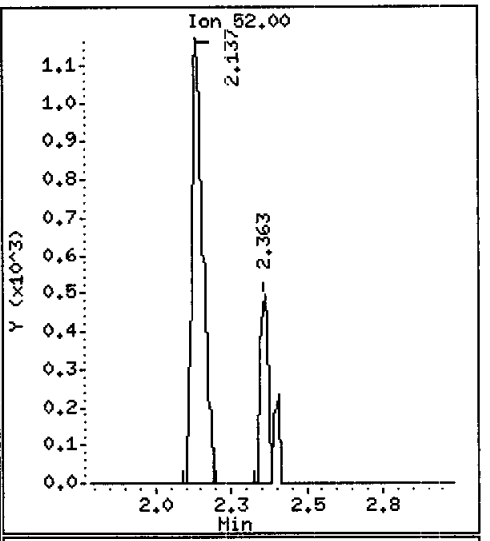
Concentration: 1.034 ppbv

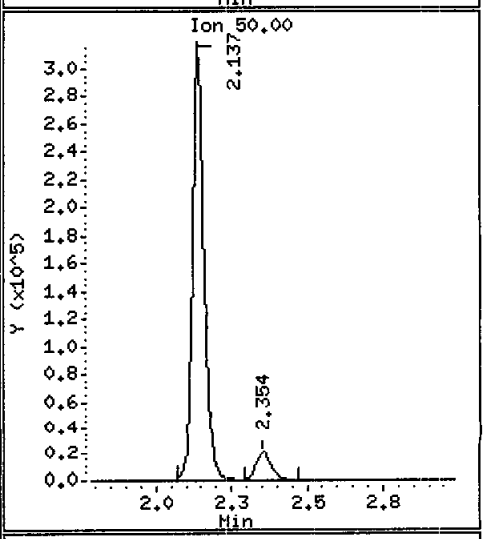


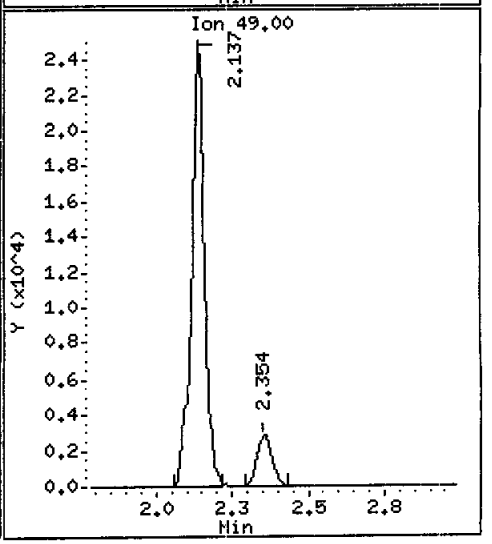












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

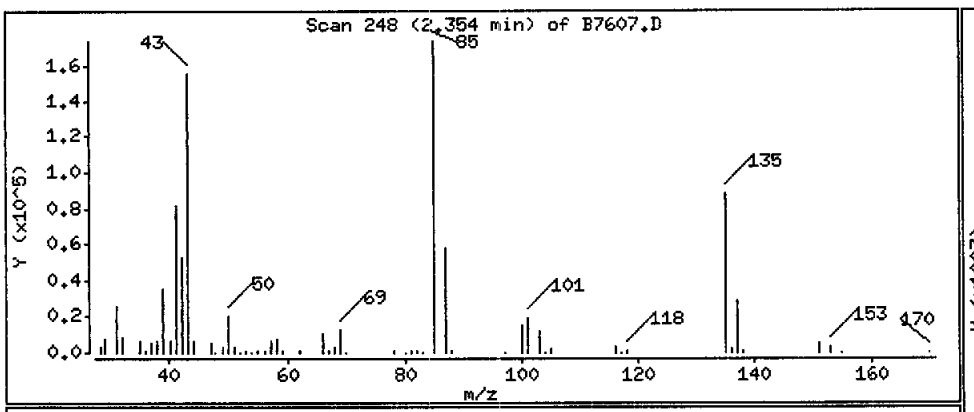
Operator: DLK

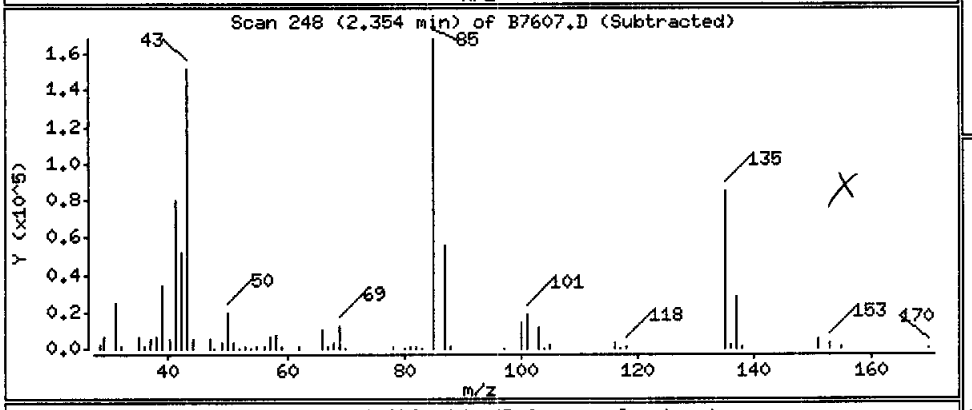
Column phase: J&W DB-624

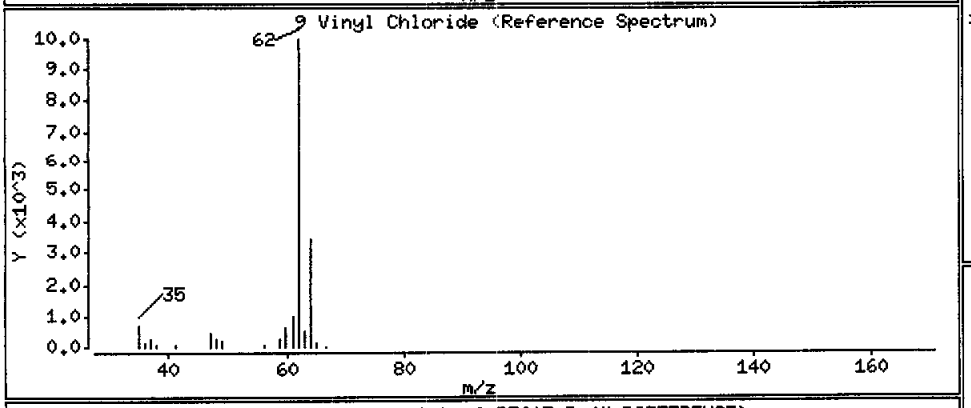
Column diameter: 0.53

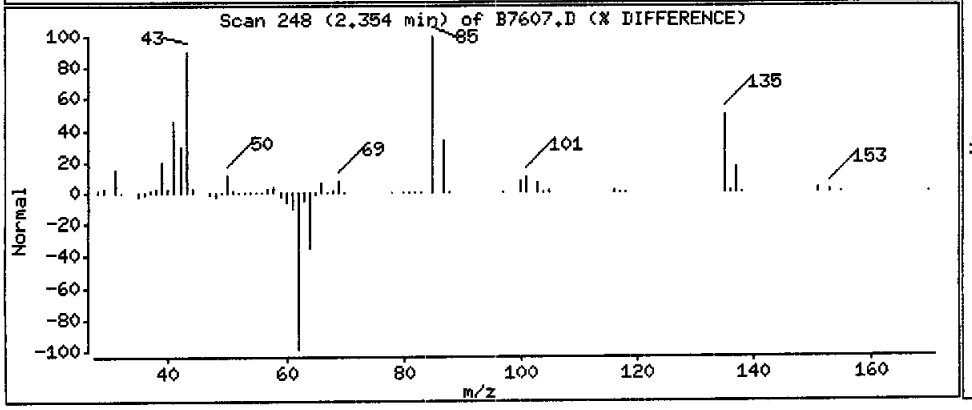
9 Vinyl Chloride

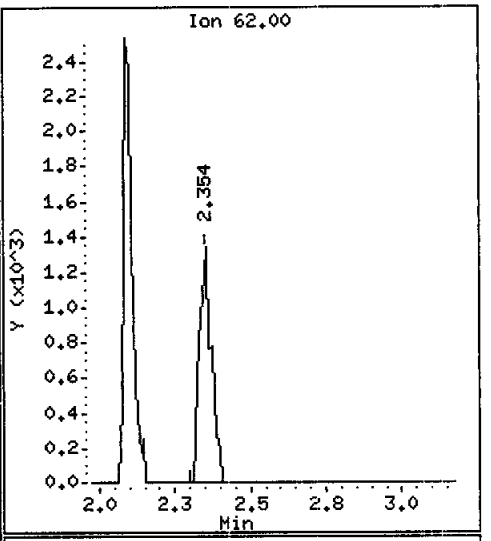
Concentration: 0.9294 ppbv

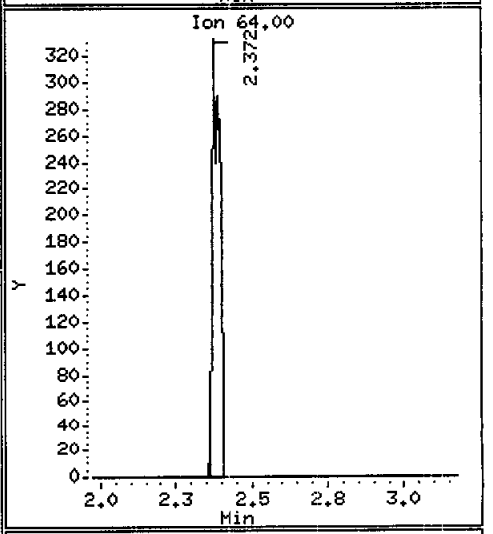


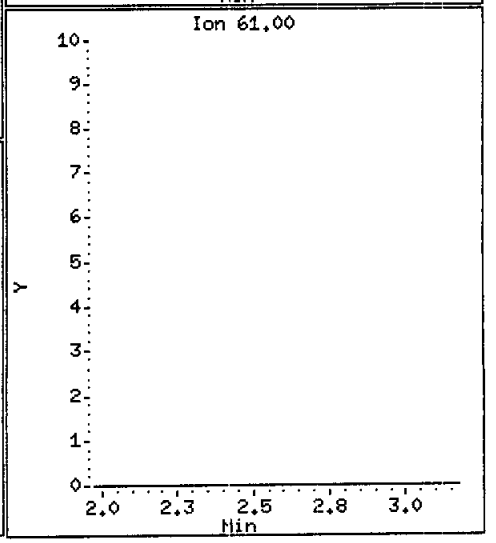












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

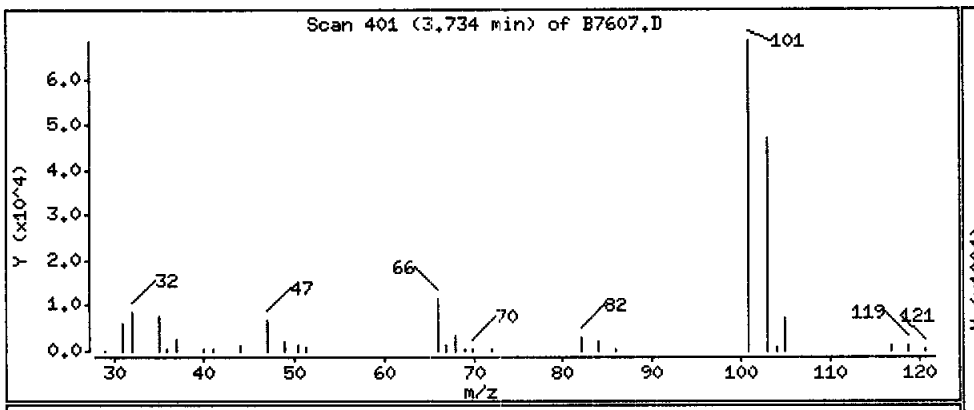
Operator: DLK

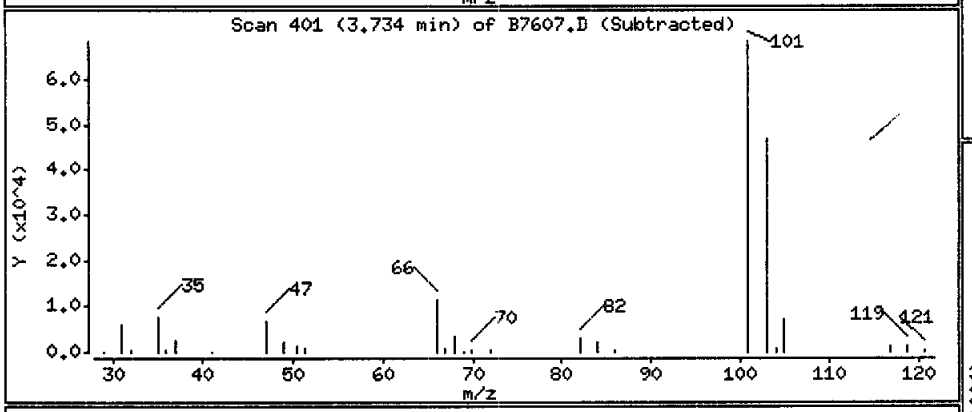
Column phase: J&W DB-624

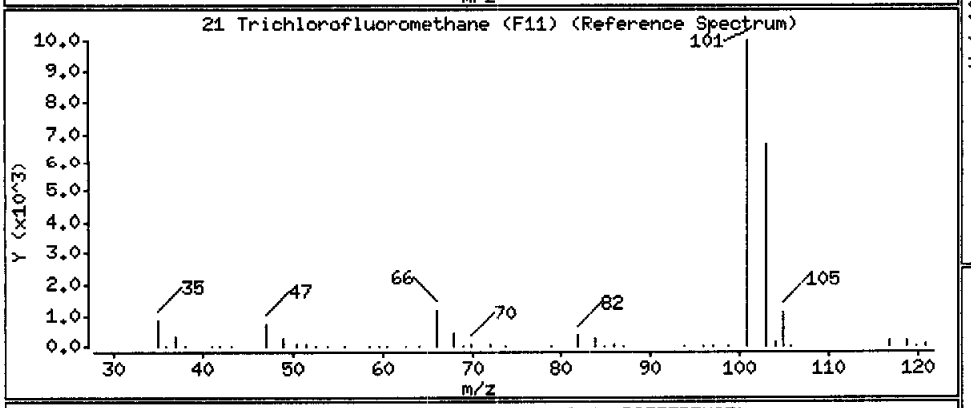
Column diameter: 0.53

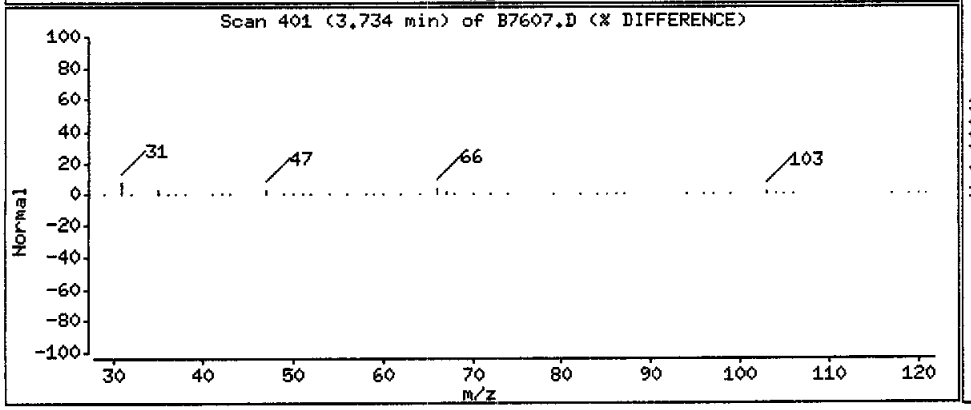
21 Trichlorofluoromethane (F11)

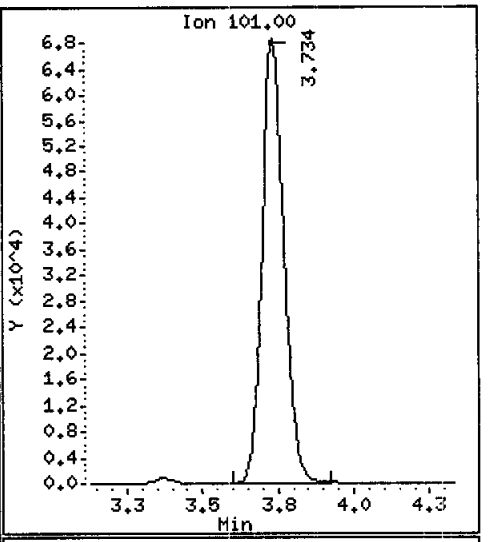
Concentration: 16.90 ppbv

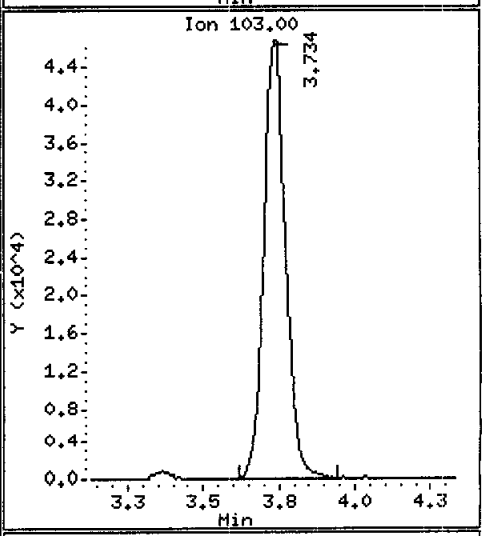


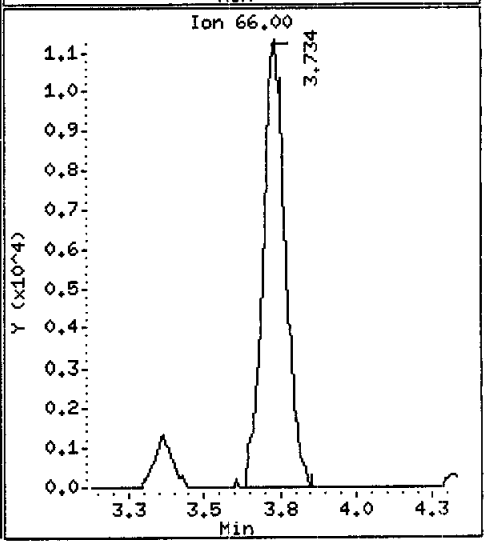












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

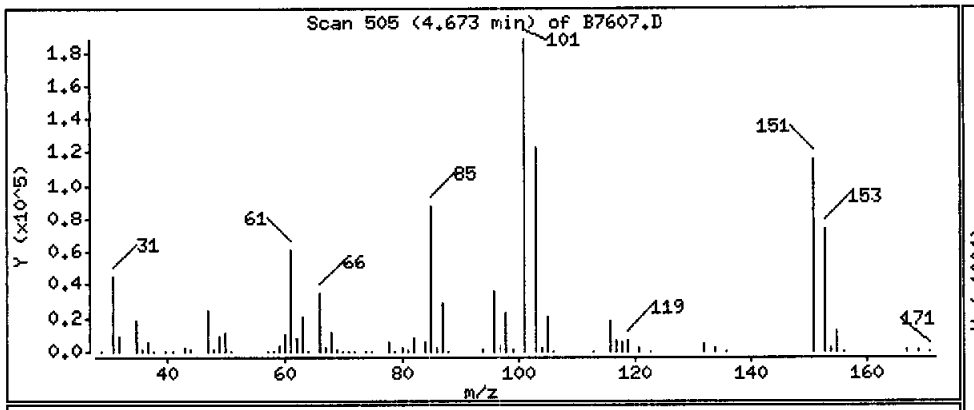
Operator: DLK

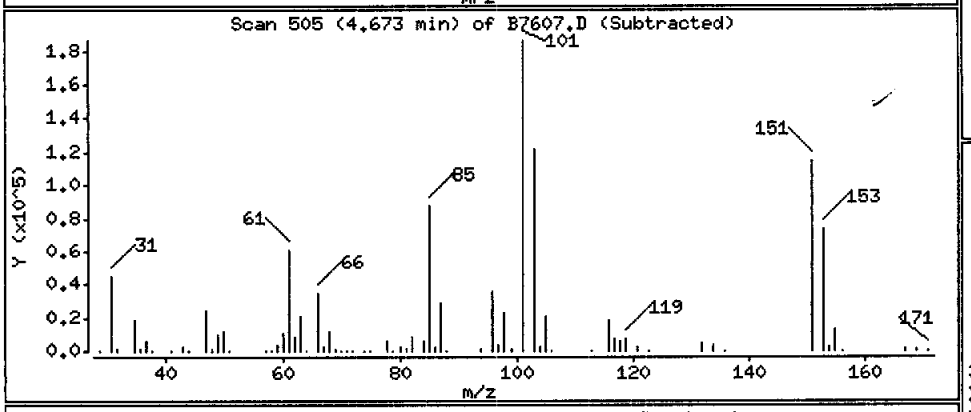
Column phase: J&W DB-624

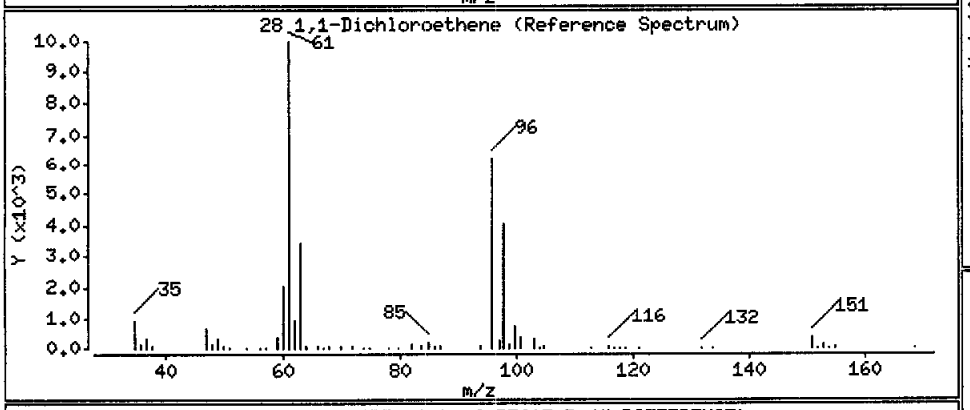
Column diameter: 0.53

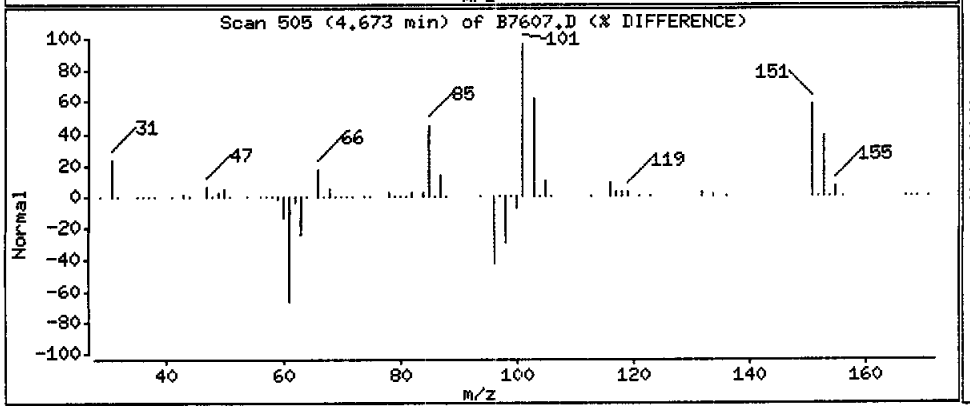
28 1,1-Dichloroethene

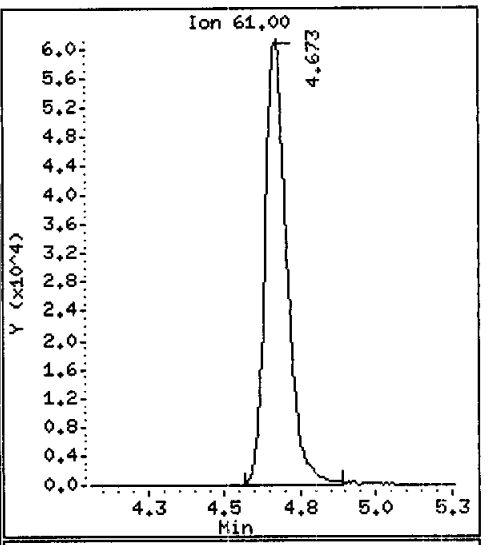
Concentration: 28.39 ppbv

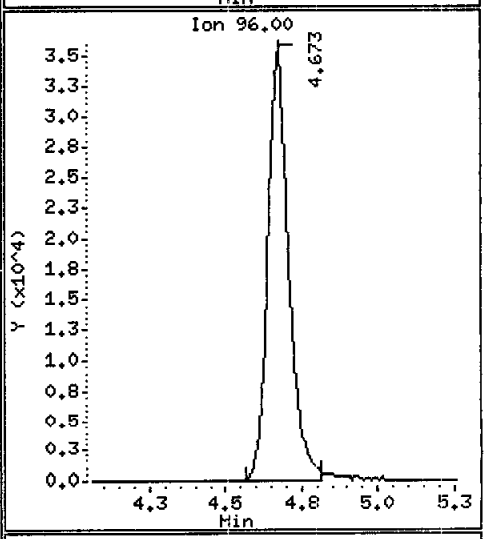


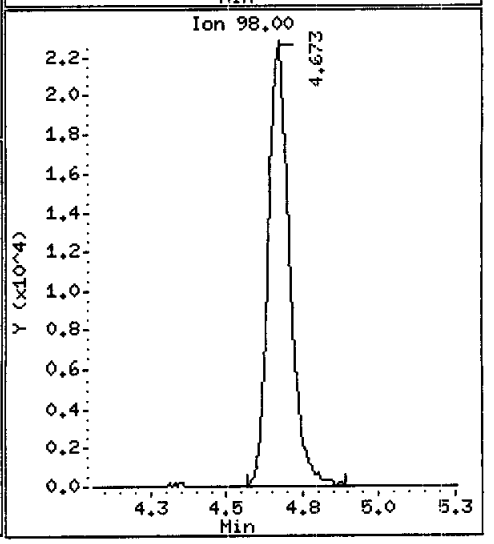












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

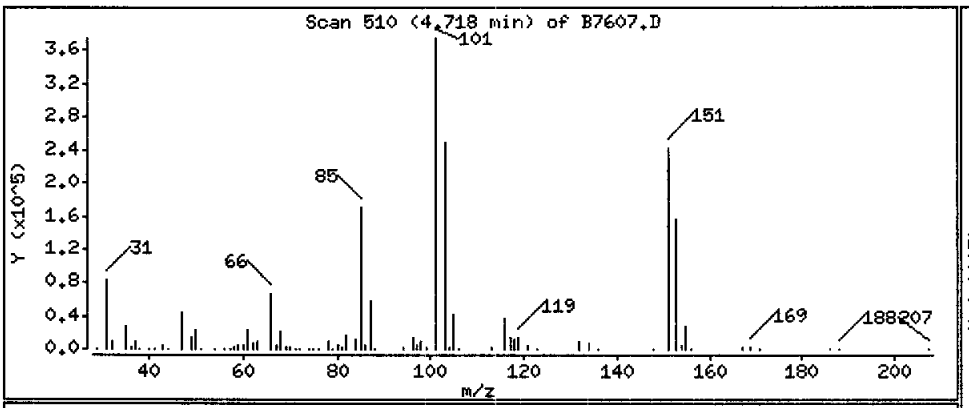
Operator: DLK

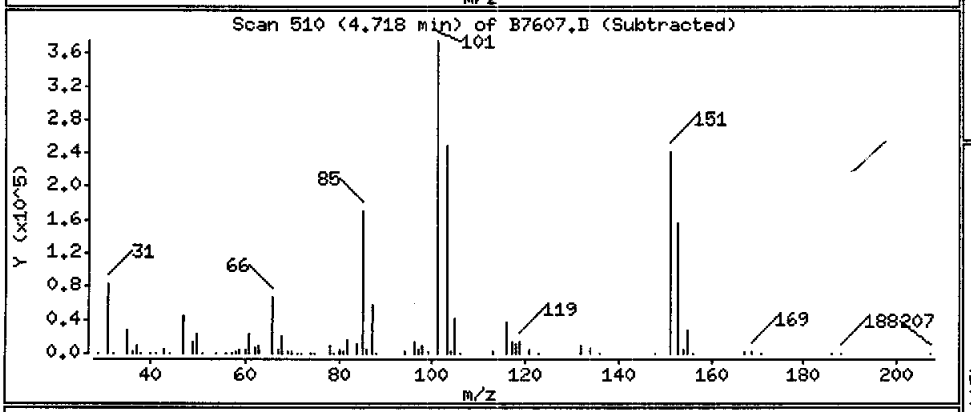
Column phase: J&W DB-624

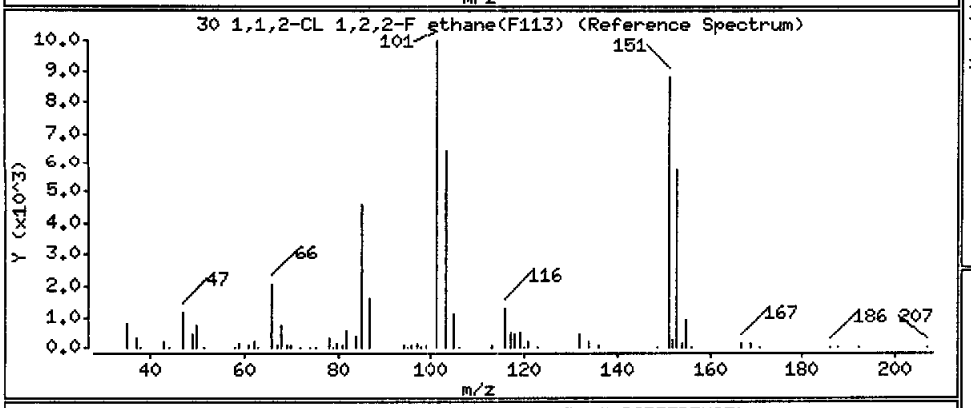
Column diameter: 0.53

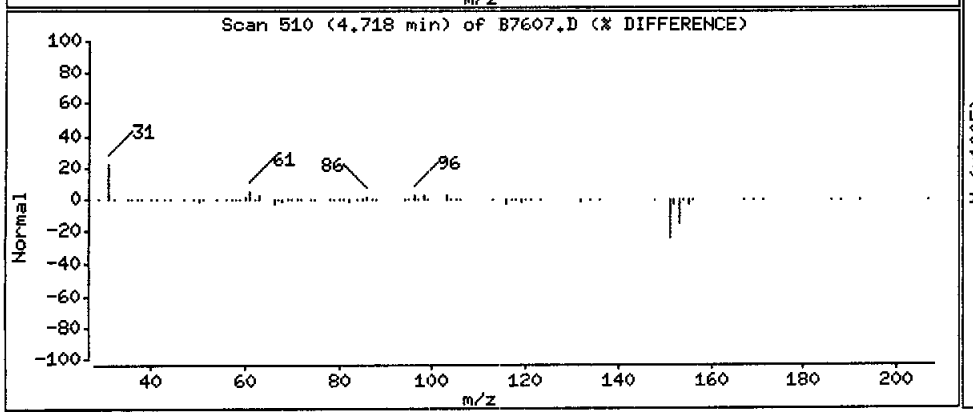
30 1,1,2-CL 1,2,2-F ethane(F113)

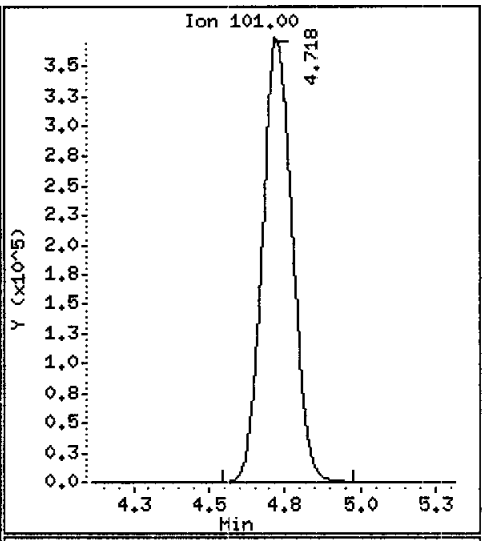
Concentration: 110.0 ppbv

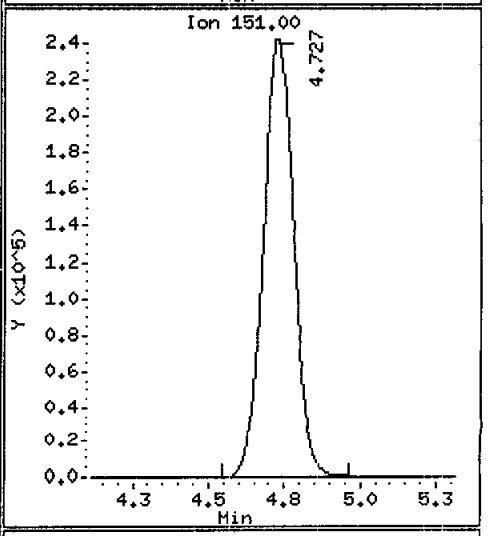


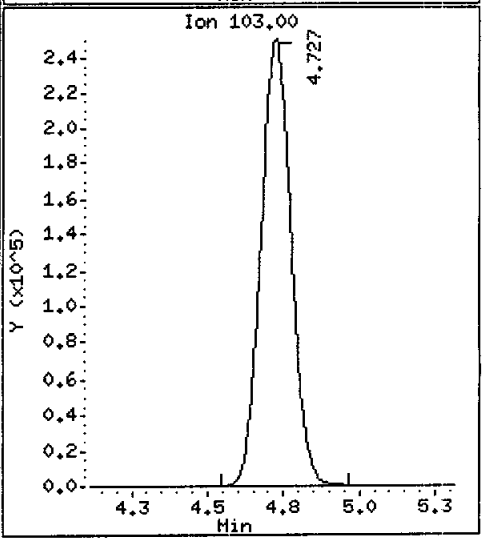












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

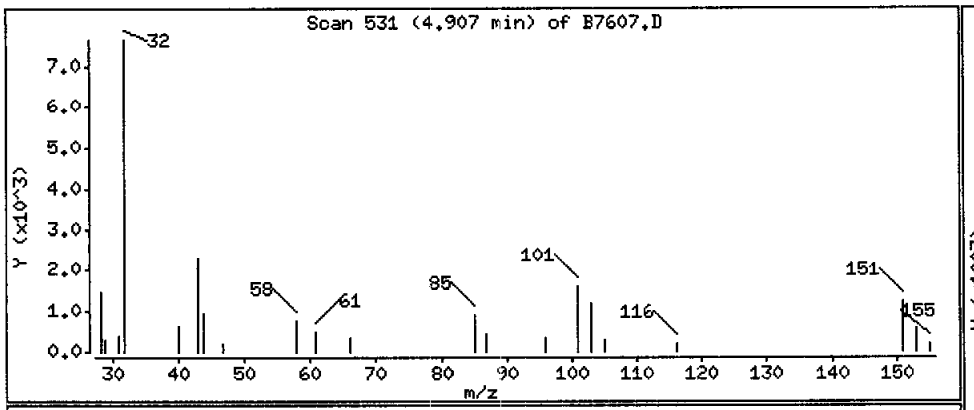
Operator: DLK

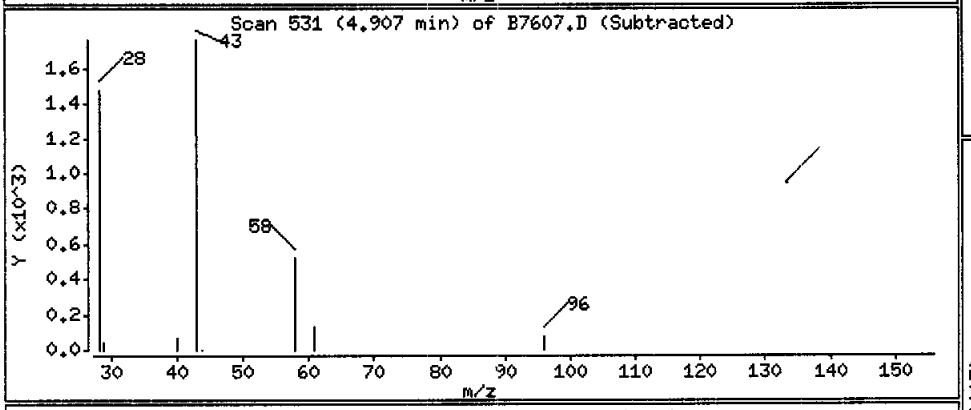
Column phase: J&W DB-624

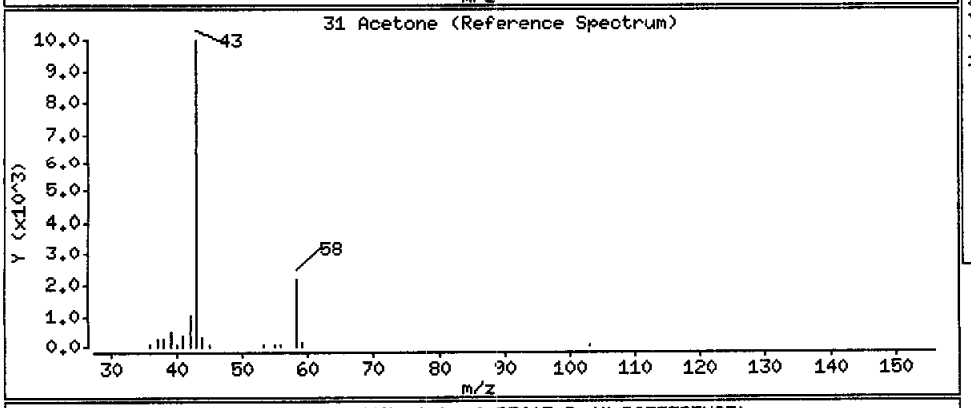
Column diameter: 0.53

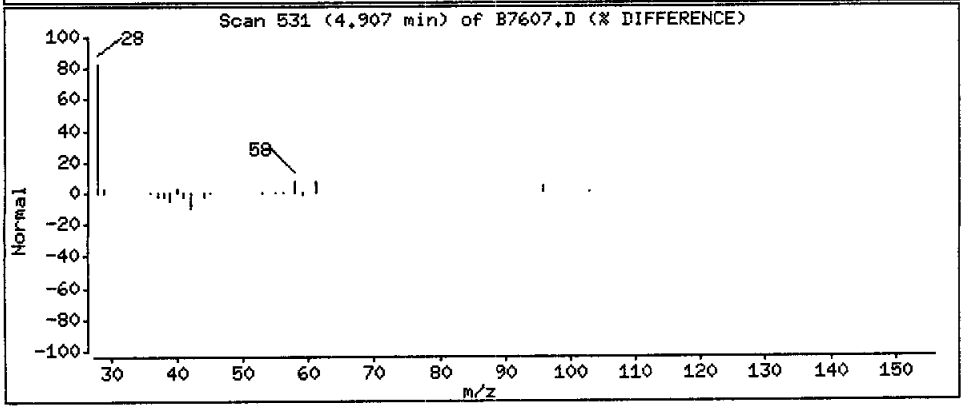
31 Acetone

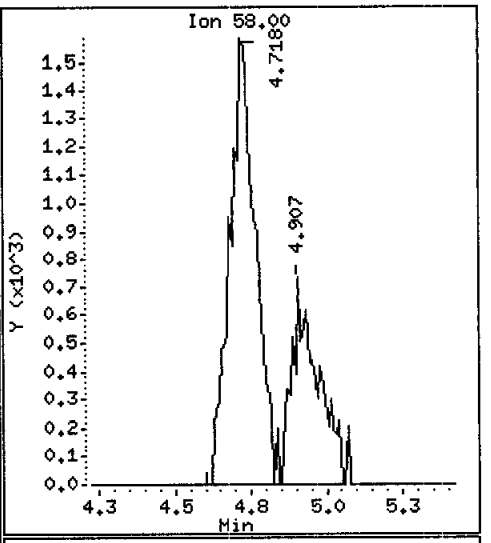
Concentration: 2.773 ppbv

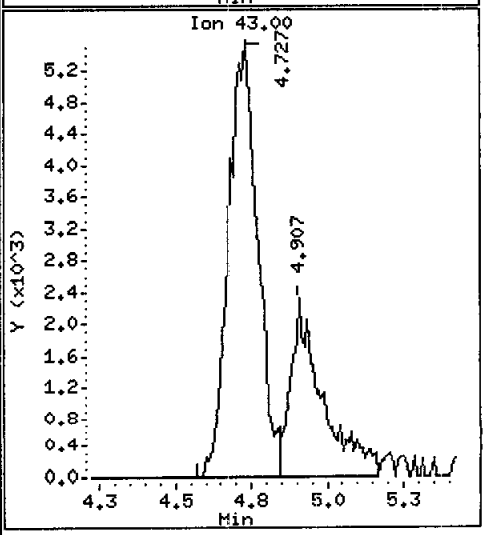












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Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

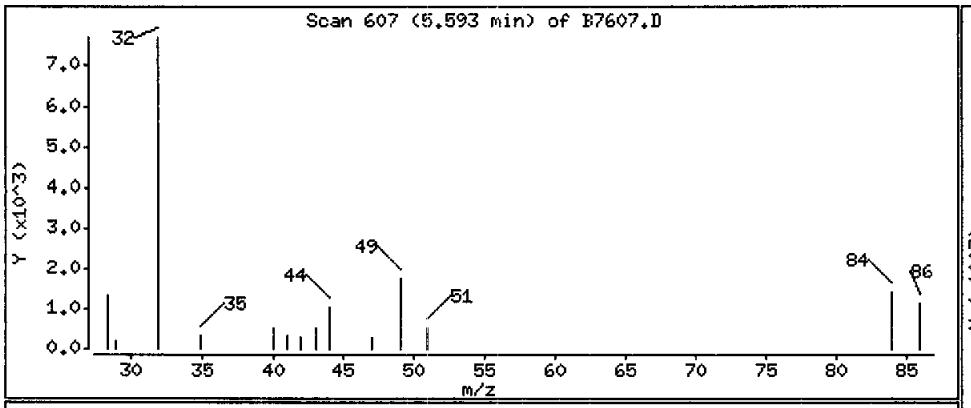
Operator: DLK

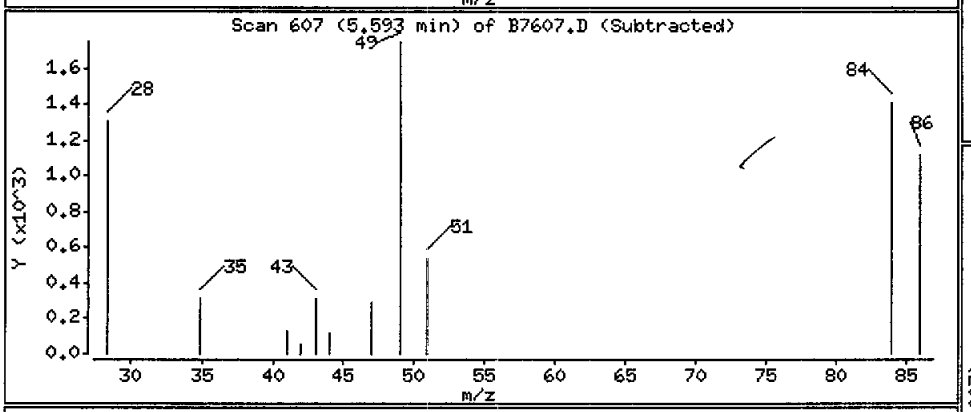
Column phase: J&W DB-624

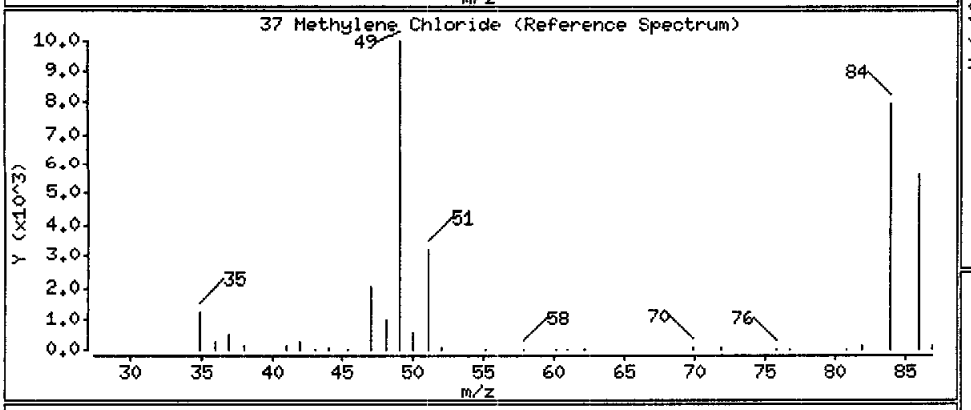
Column diameter: 0.53

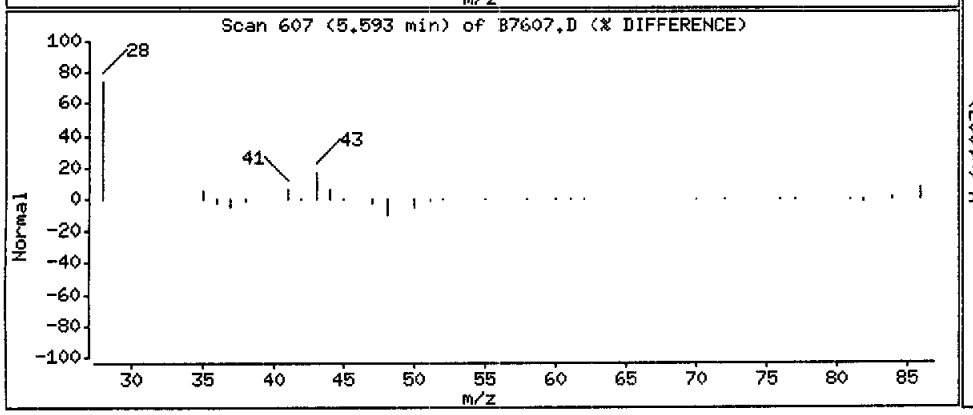
37 Methylene Chloride

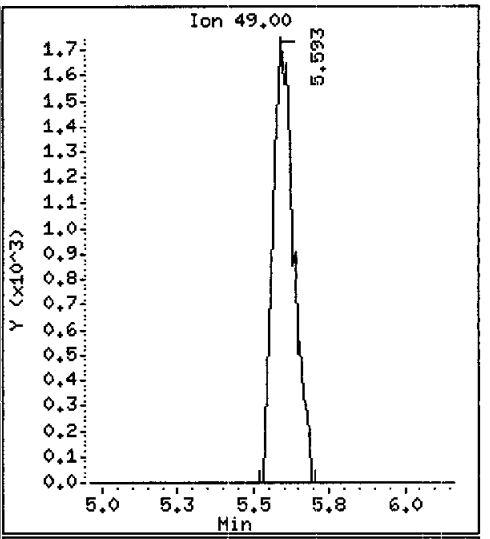
Concentration: 1.231 ppbv

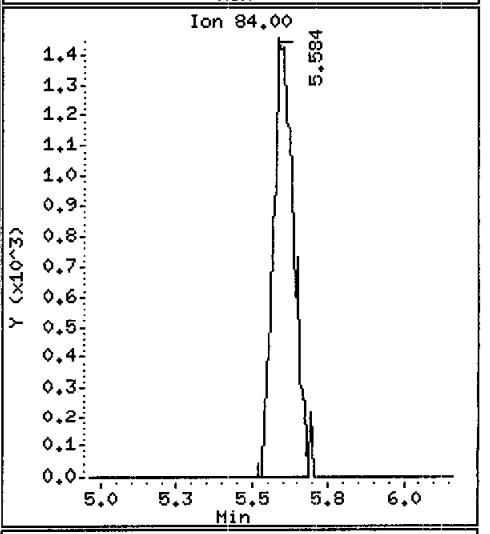


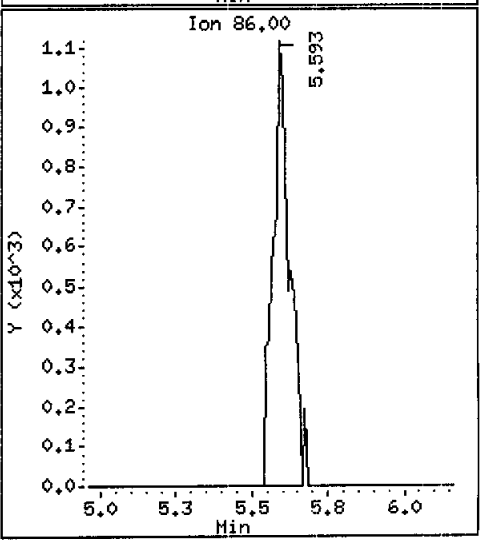












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

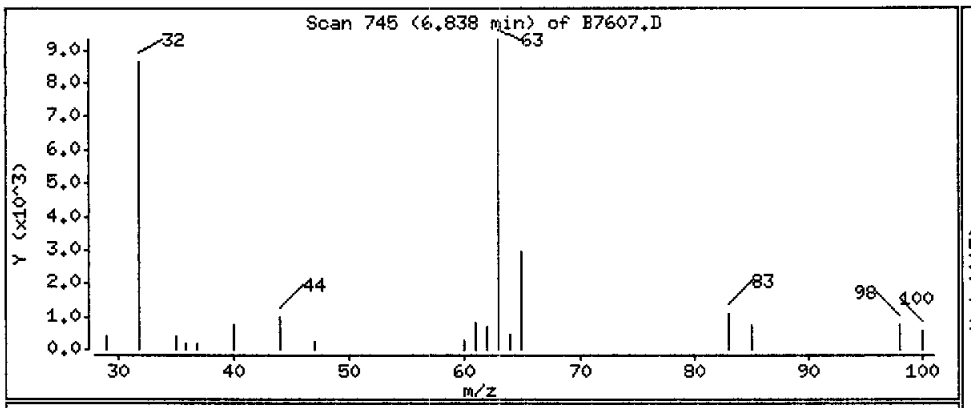
Operator: DLK

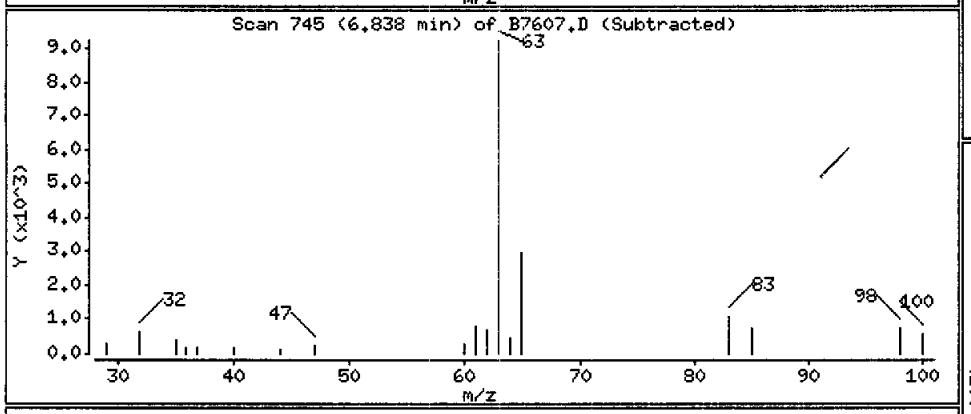
Column phase: J&W DB-624

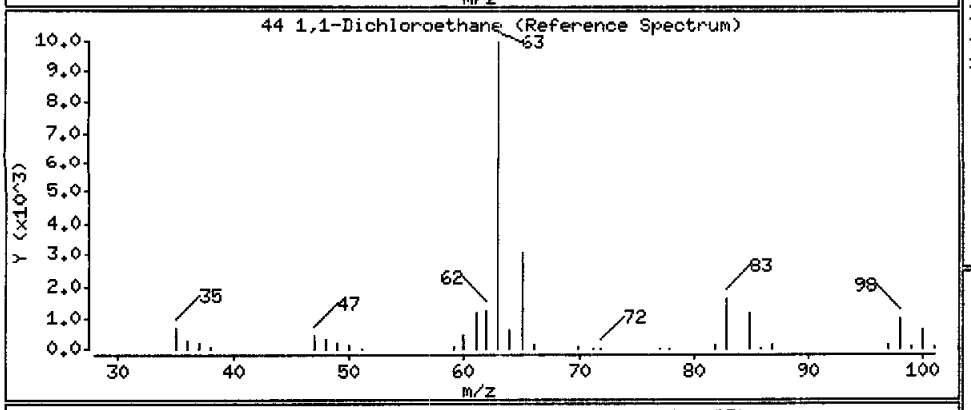
Column diameter: 0.53

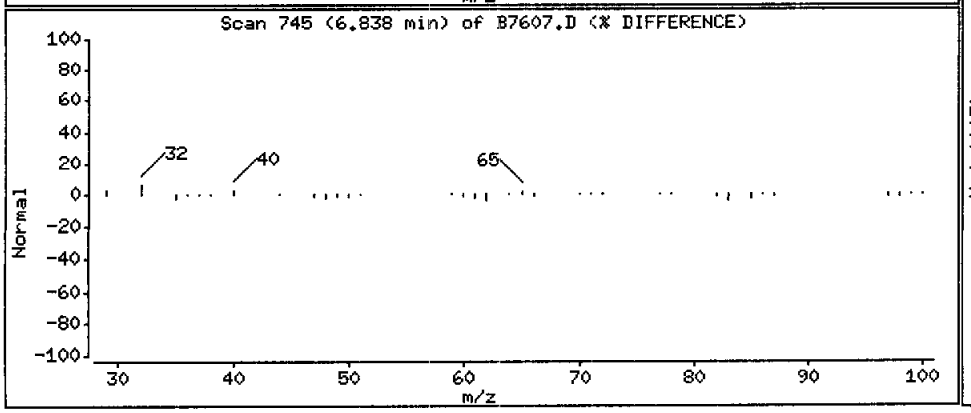
44 1,1-Dichloroethane

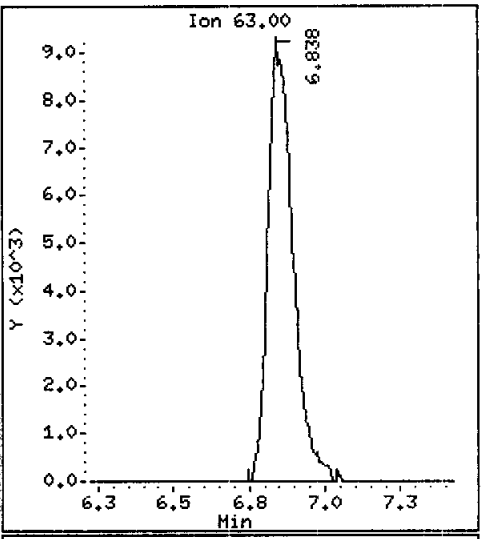
Concentration: 4.467 ppbv

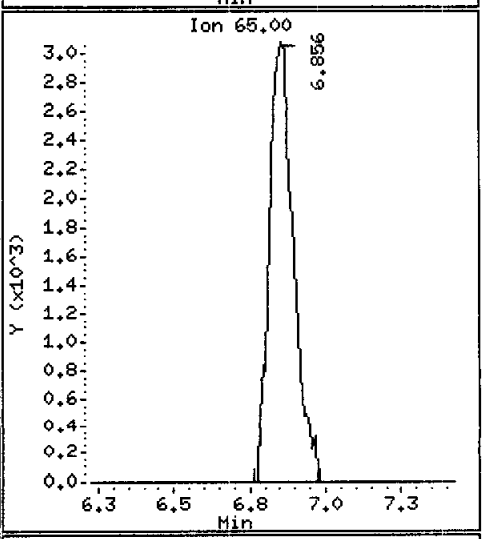


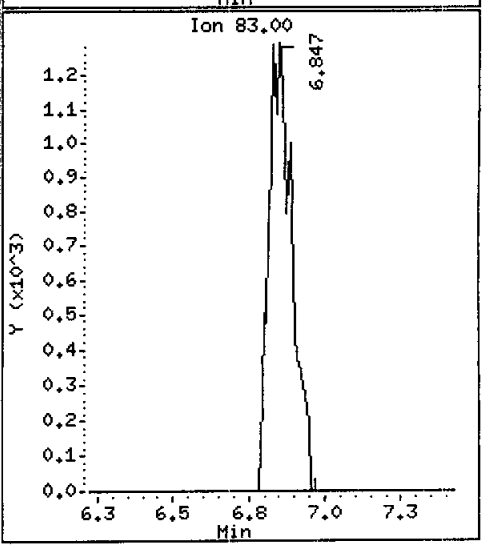












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Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

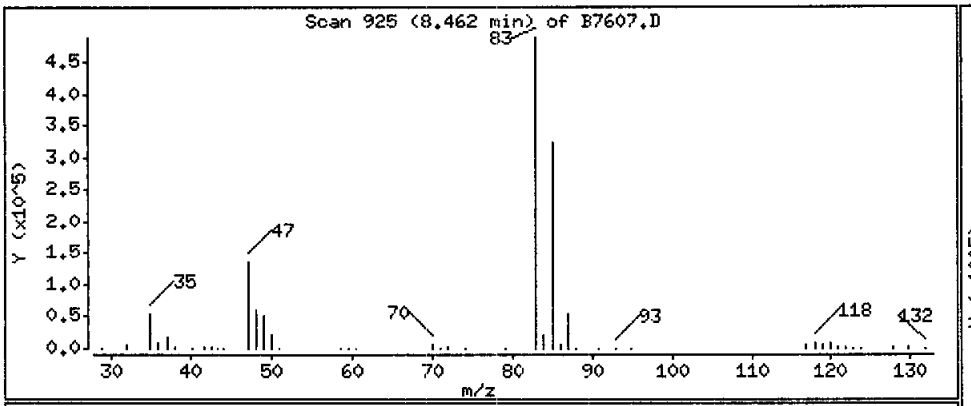
Operator: DLK

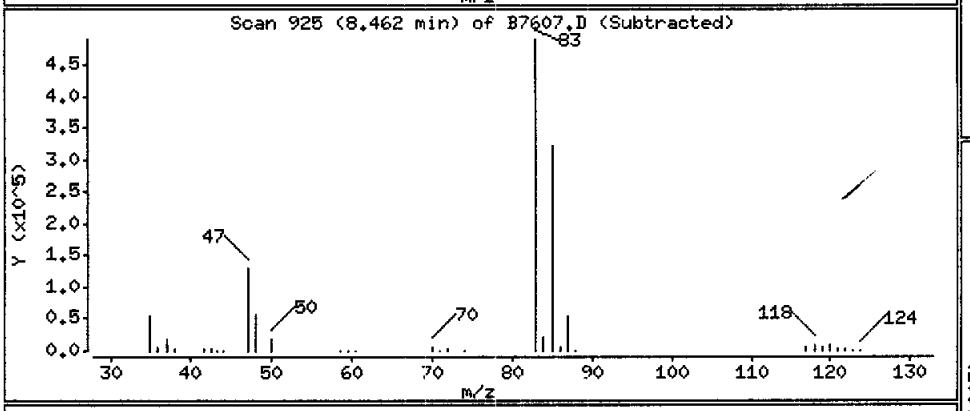
Column phase: J&W DB-624

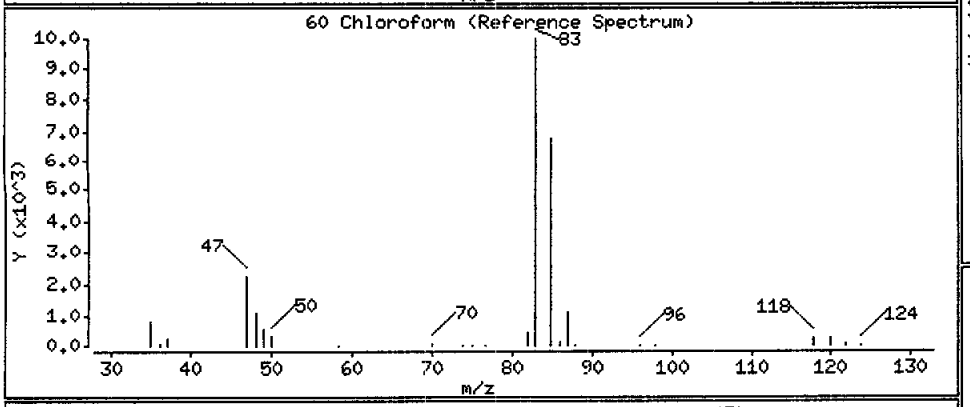
Column diameter: 0.53

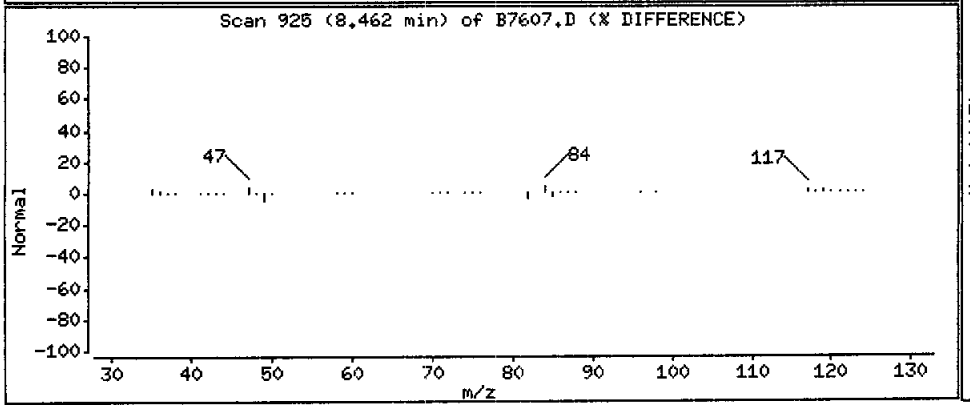
60 Chloroform

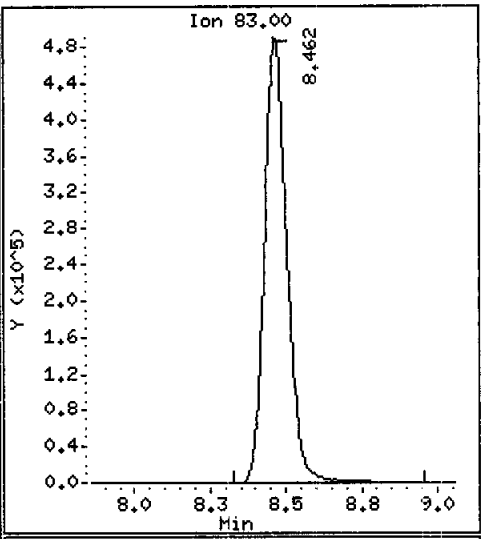
Concentration: 166.1 ppbv

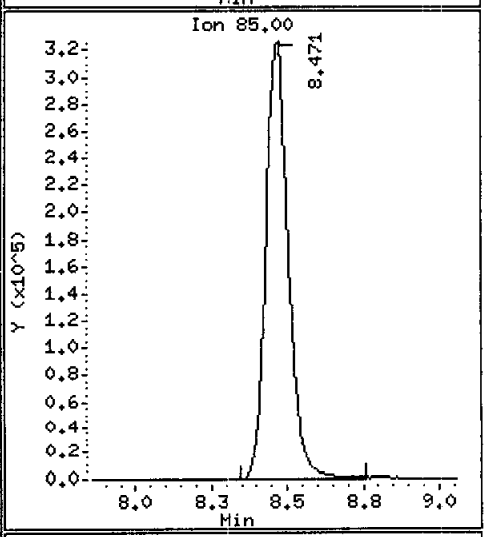


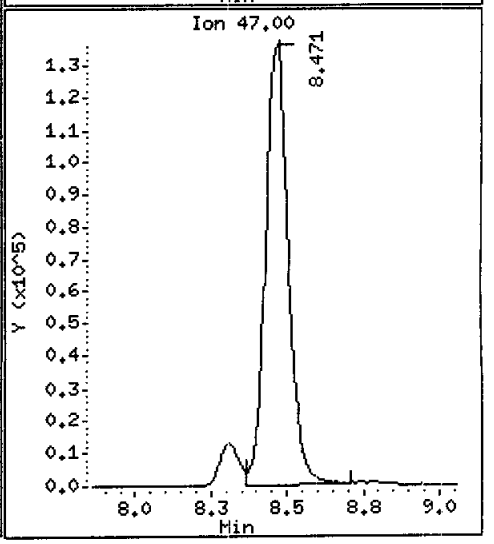












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

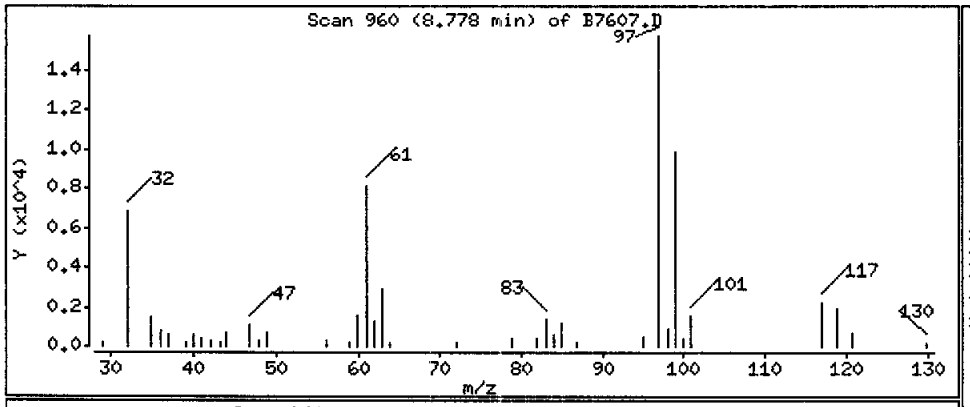
Operator: DLK

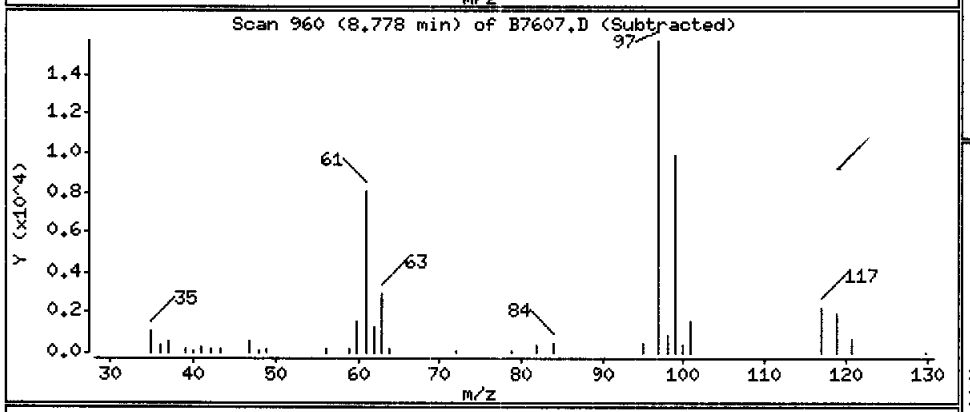
Column phase: J&W DB-624

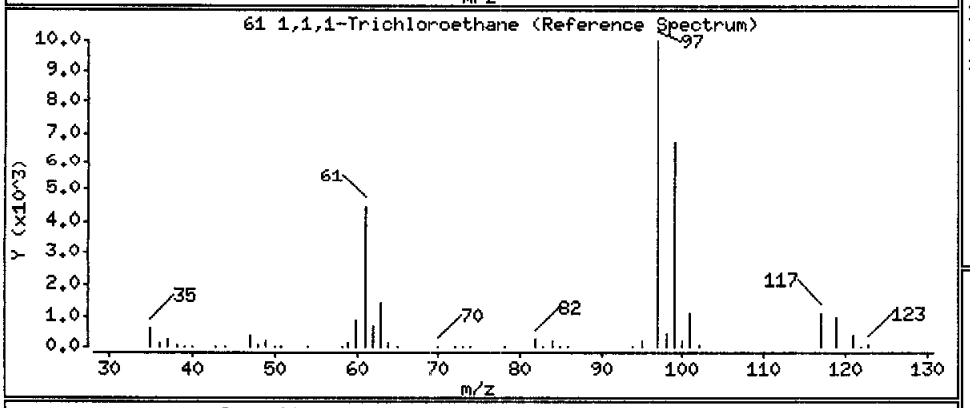
Column diameter: 0.53

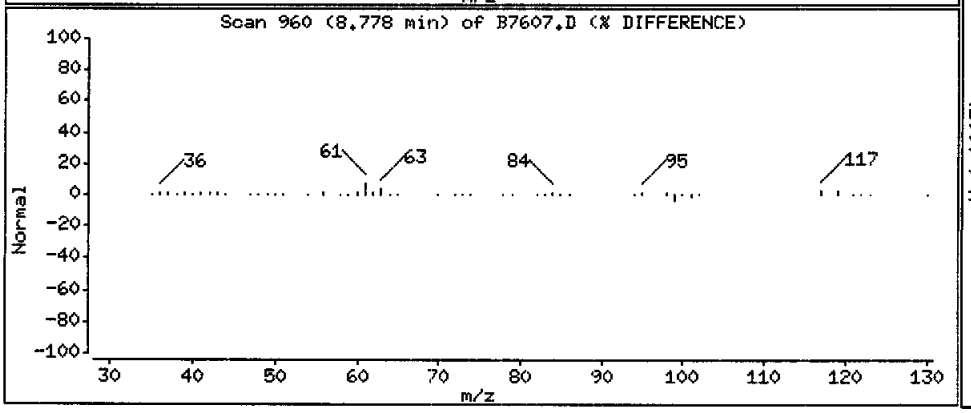
61 1,1,1-Trichloroethane

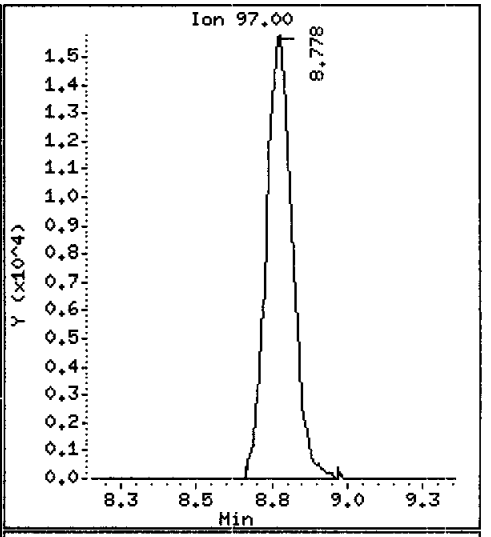
Concentration: 6.212 ppbv

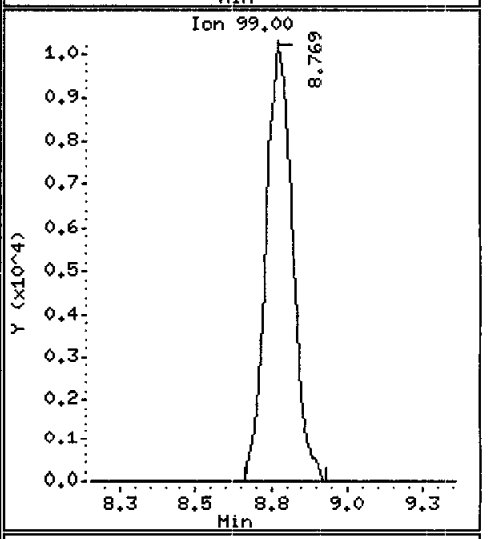


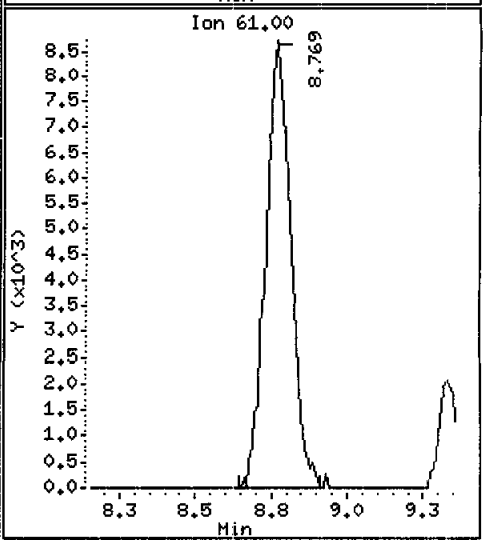












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

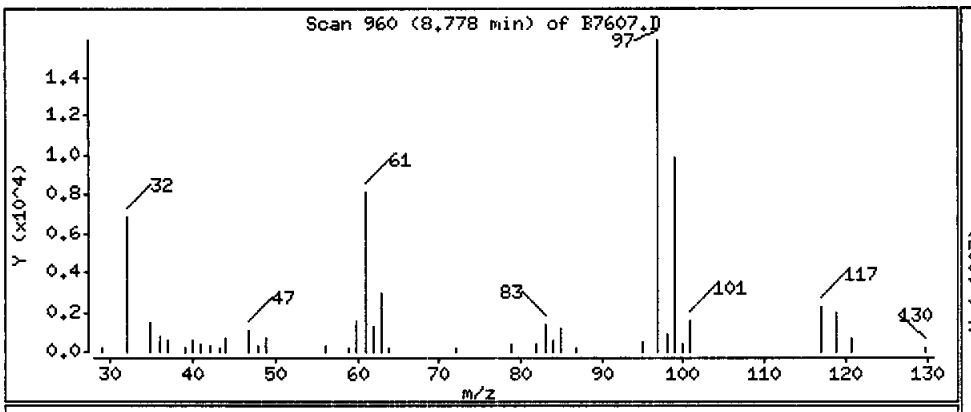
Operator: DLK

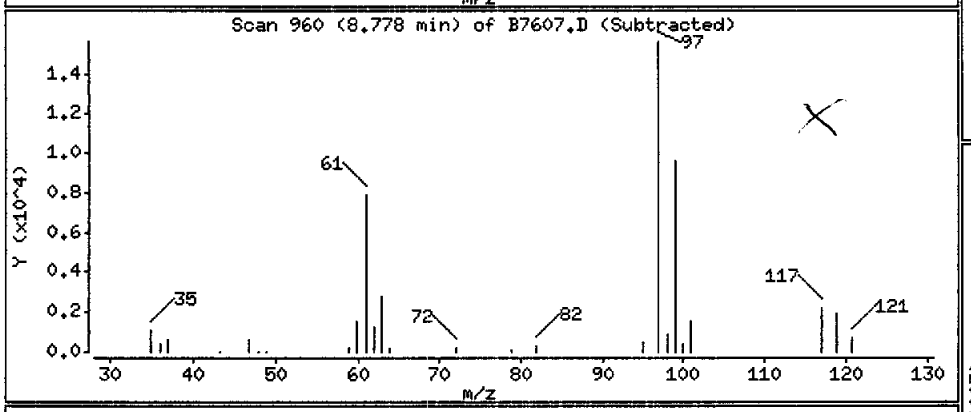
Column phase: J&W DB-624

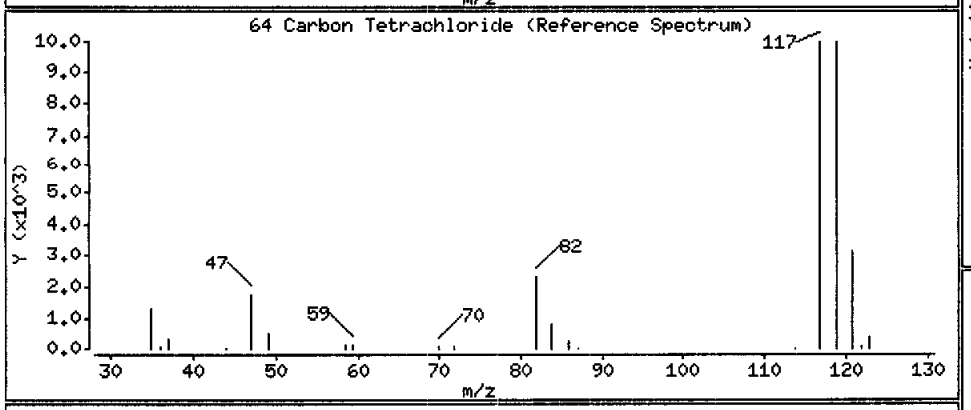
Column diameter: 0.53

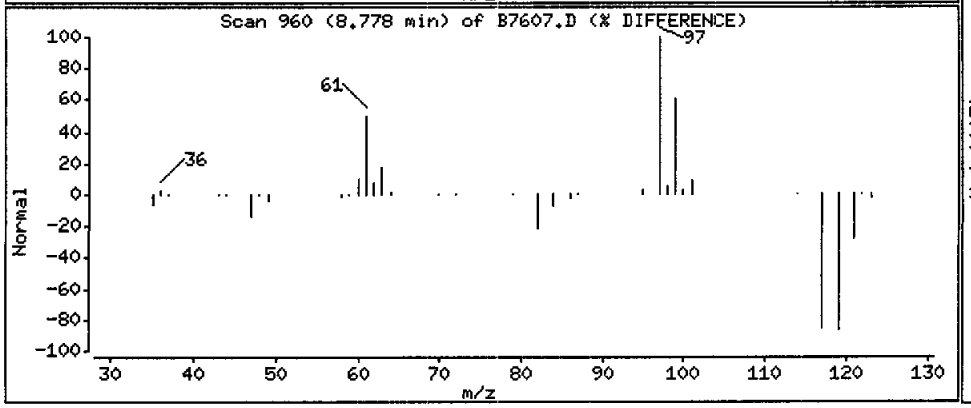
64 Carbon Tetrachloride

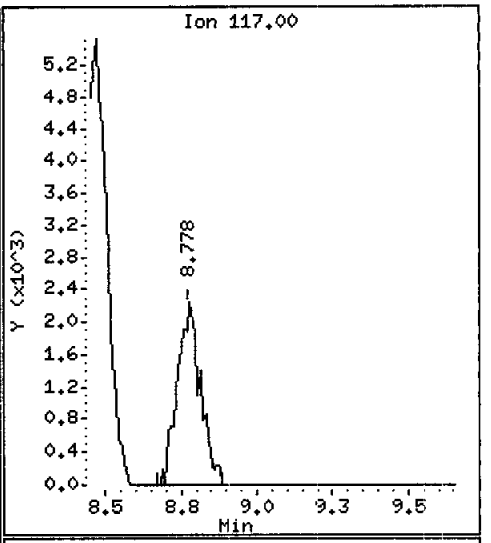
Concentration: 1.166 ppbv

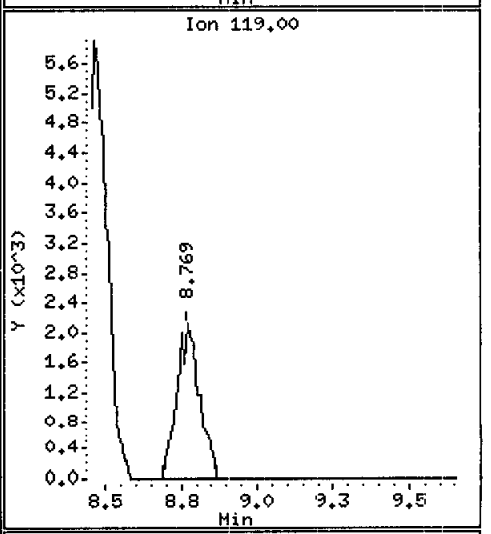


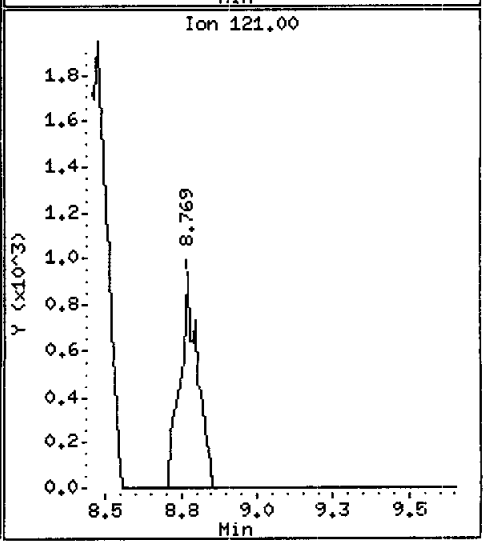












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

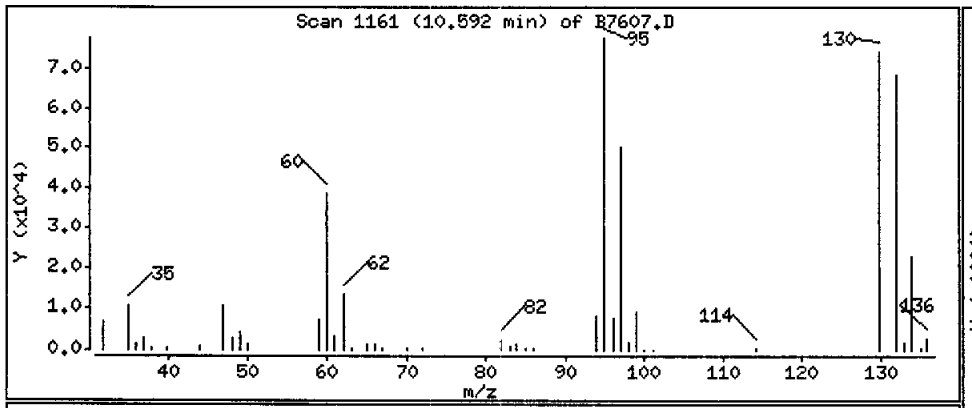
Operator: DLK

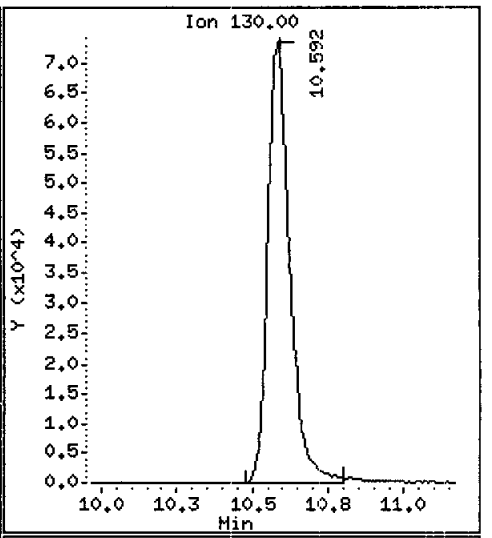
Column phase: J&W DB-624

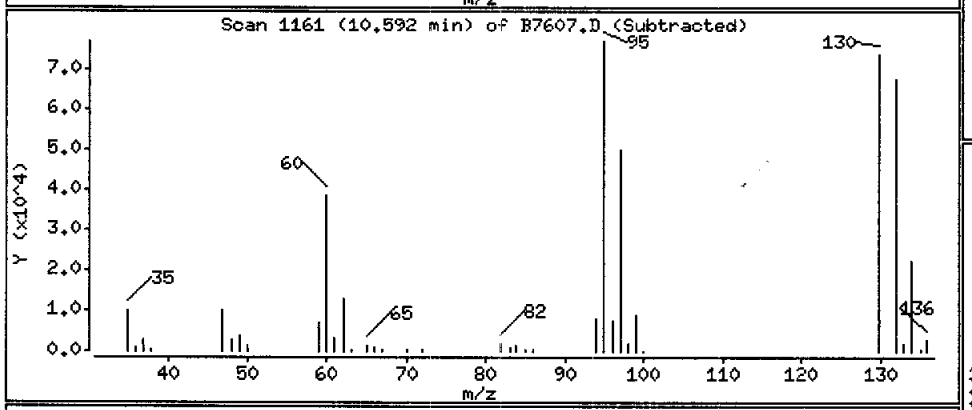
Column diameter: 0.53

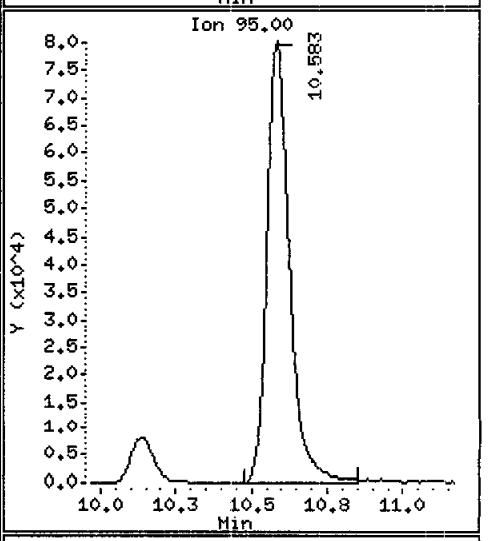
75 Trichloroethene

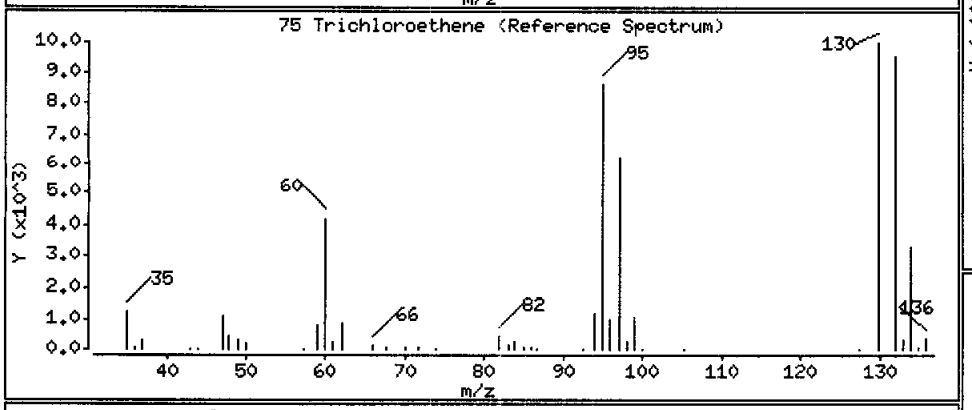
Concentration: 32.46 ppbv

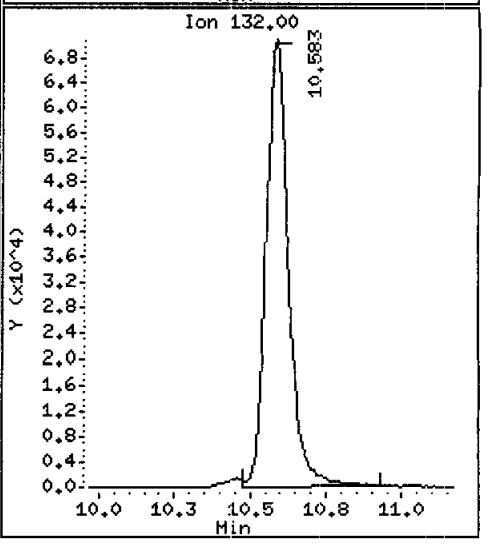


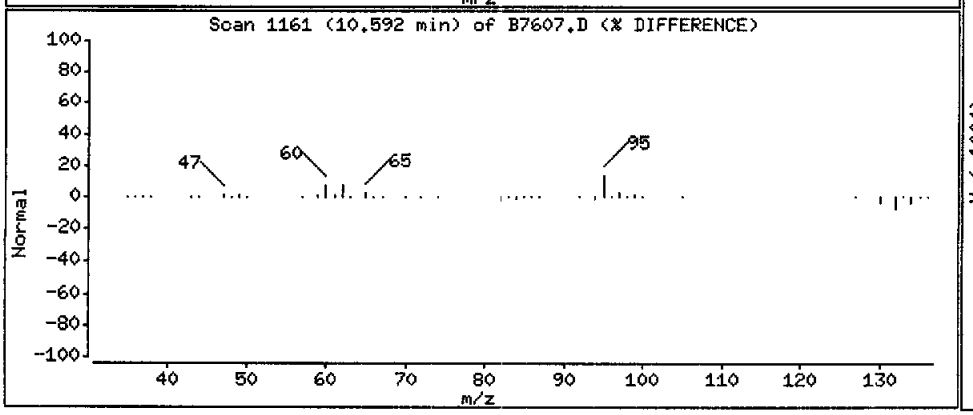












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

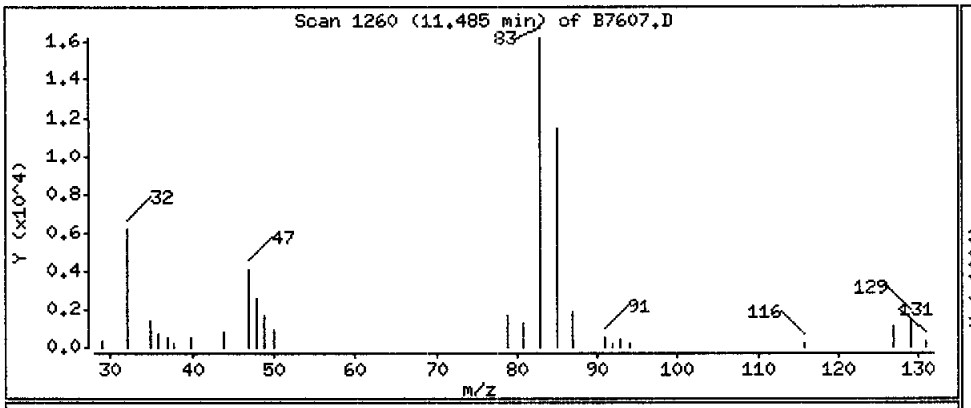
Operator: DLK

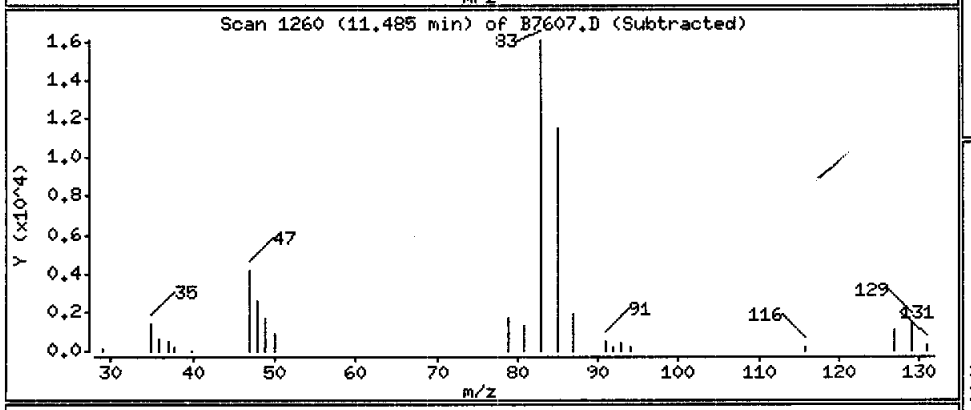
Column phase: J&W DB-624

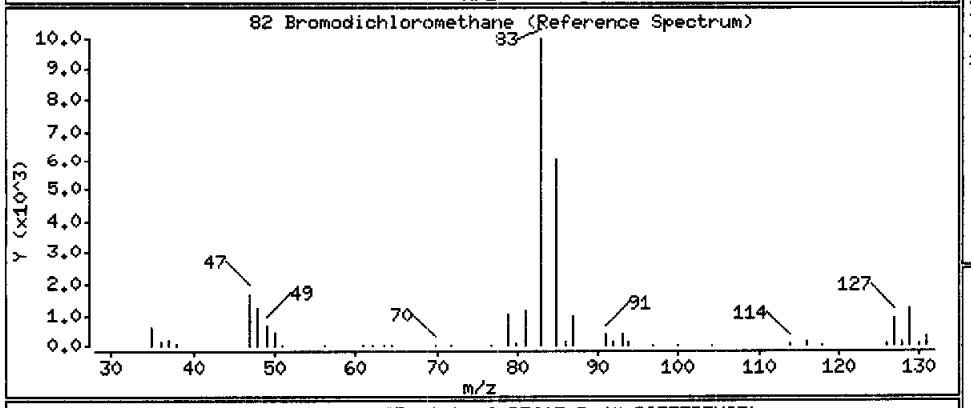
Column diameter: 0.53

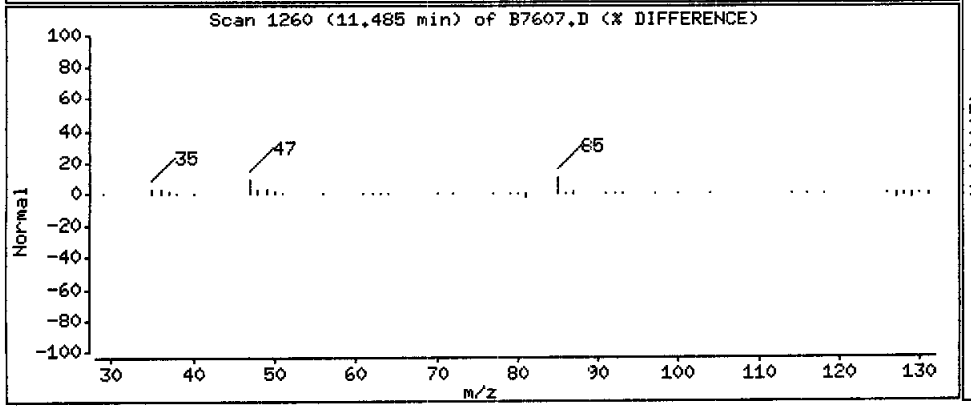
82 Bromodichloromethane

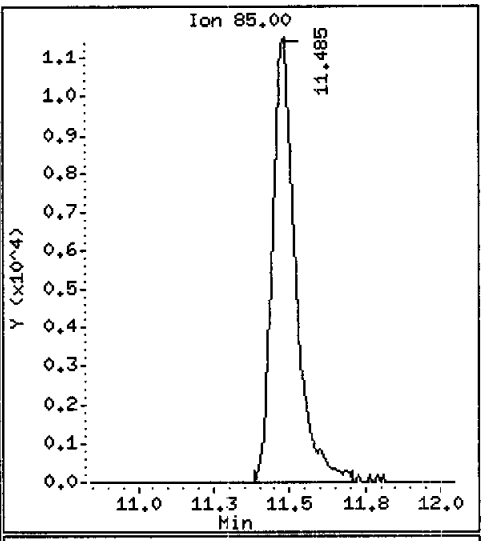
Concentration: 4.246 ppbv

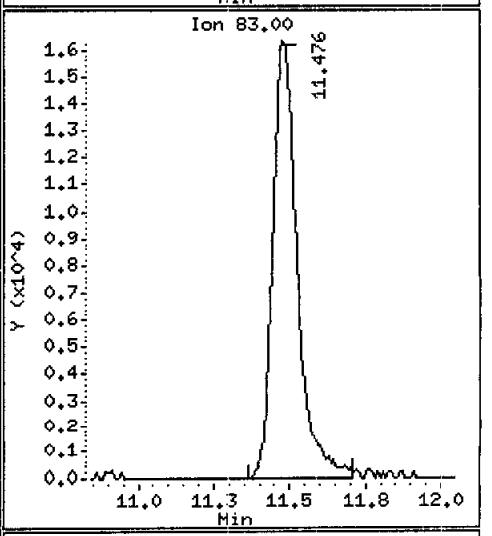


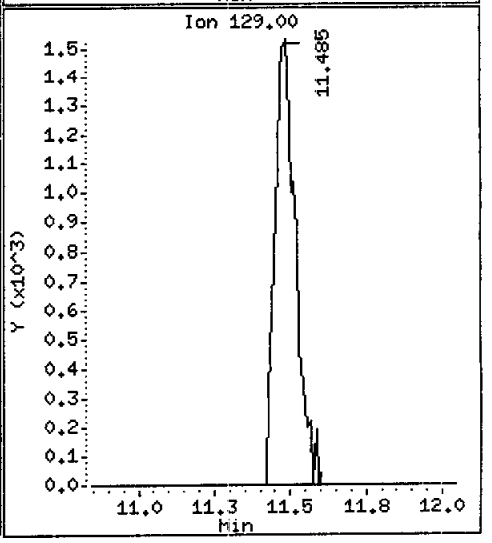












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

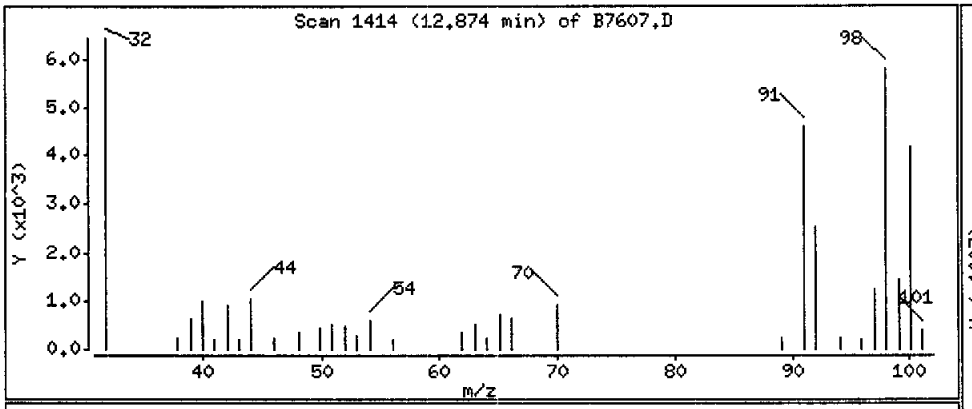
Operator: DLK

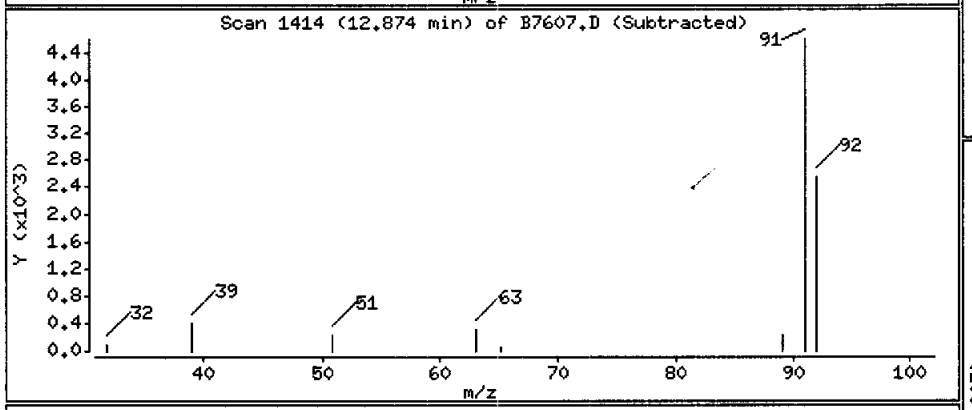
Column phase: J&W DB-624

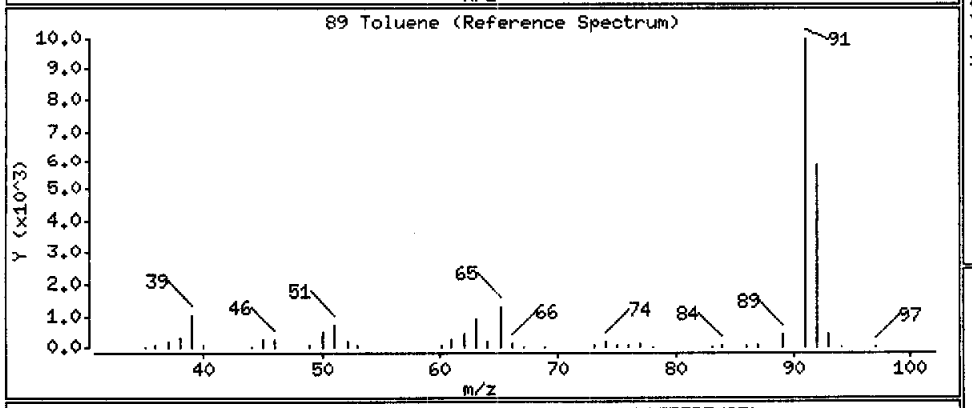
Column diameter: 0.53

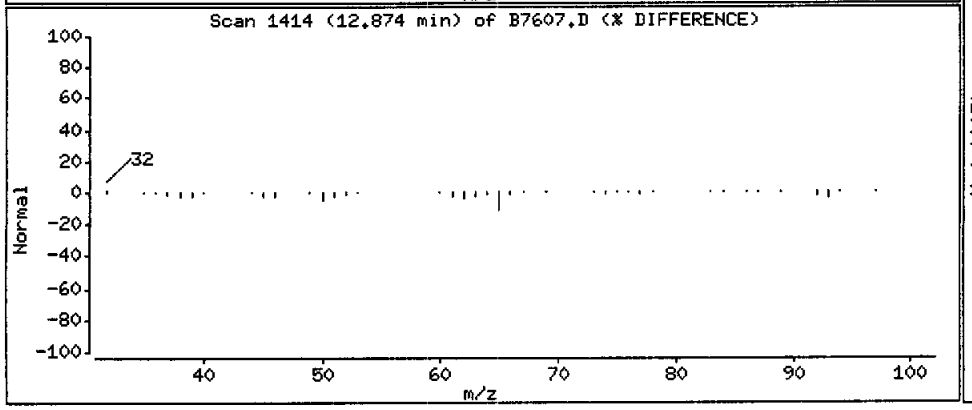
89 Toluene

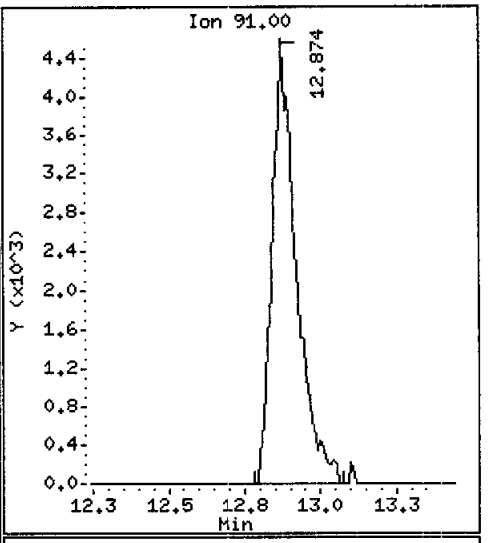
Concentration: 1.089 ppbv

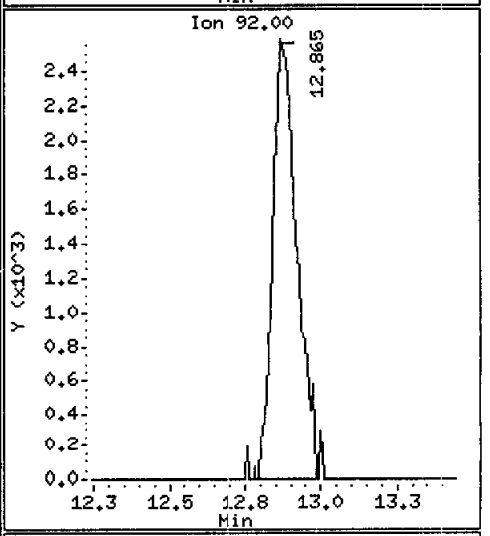


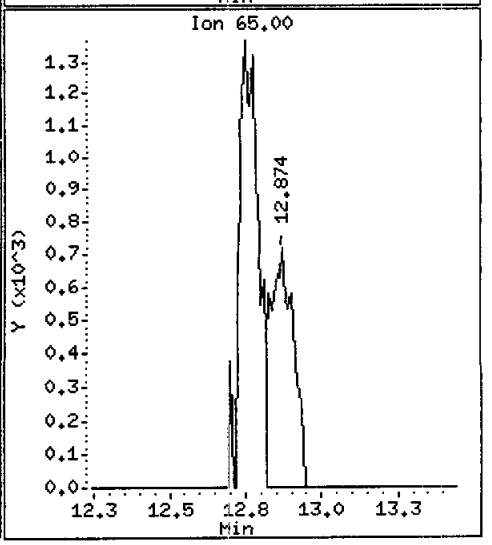












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

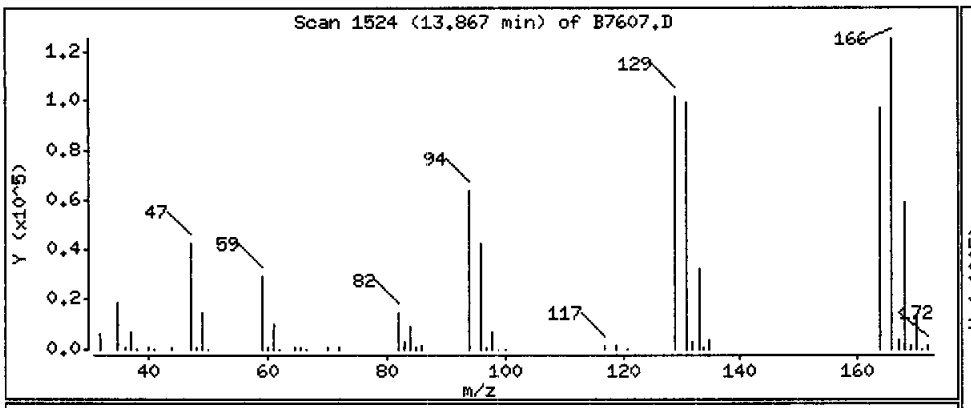
Operator: DLK

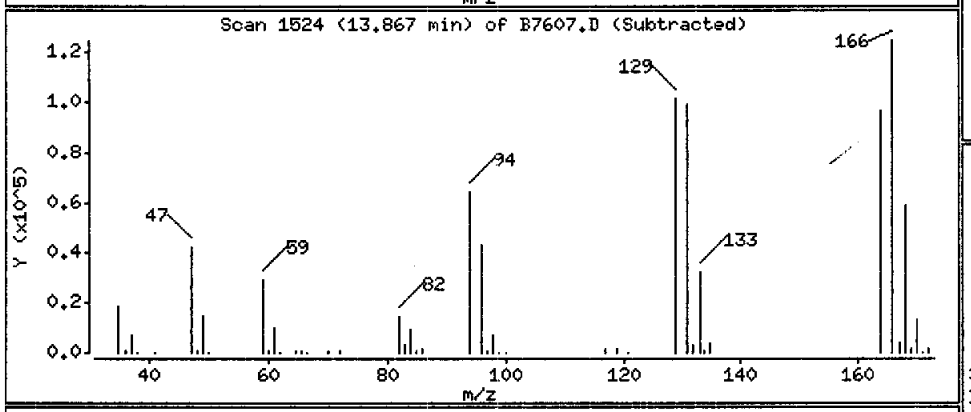
Column phase: J&W DB-624

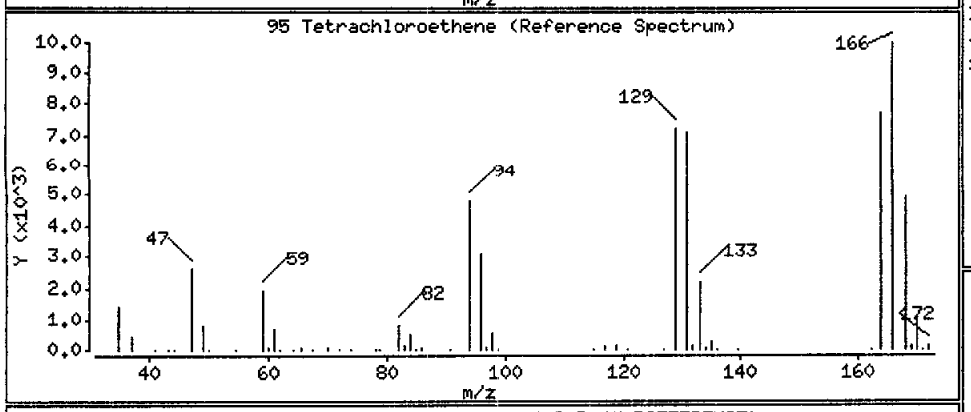
Column diameter: 0.53

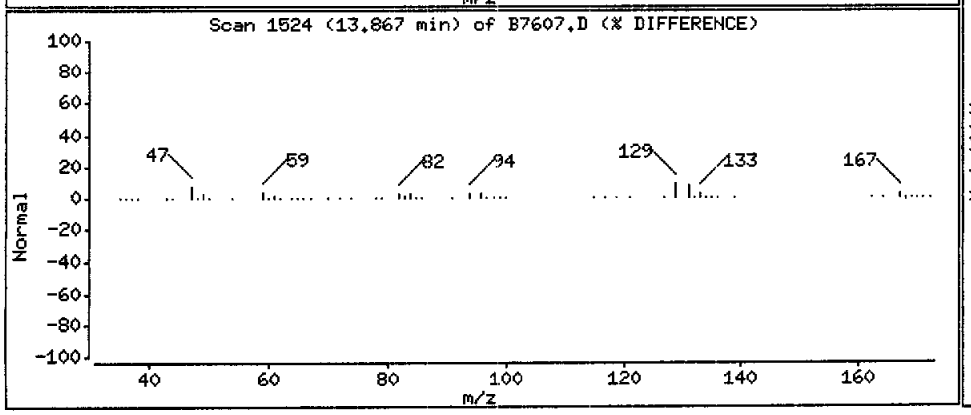
95 Tetrachloroethene

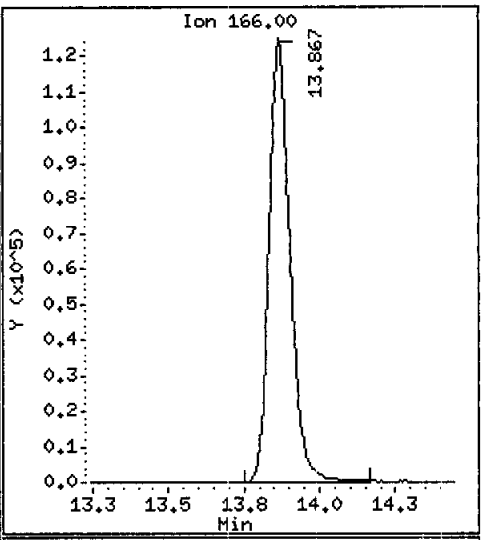
Concentration: 40.62 ppbv

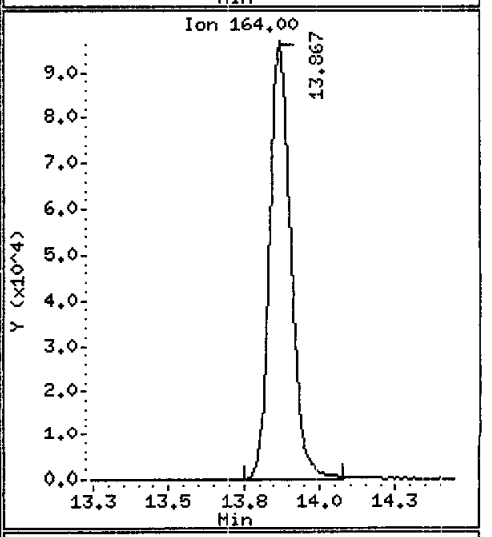


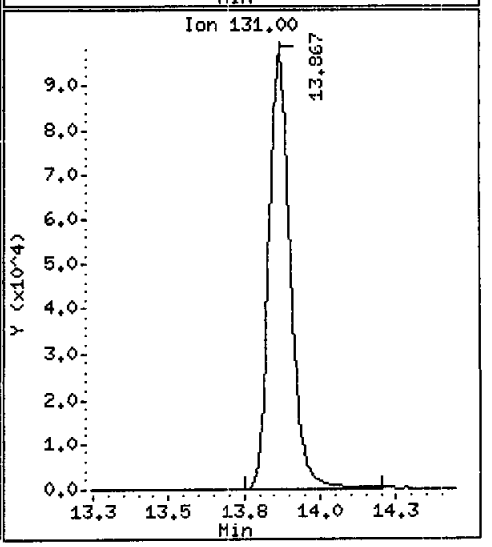












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7607.D

Date : 14-JAN-2005 02:38

Client ID: 066382-001

Instrument: gcmsb.i

Sample Info: G2DJC1AD,066382-001,SANDIA,E5A100227-1

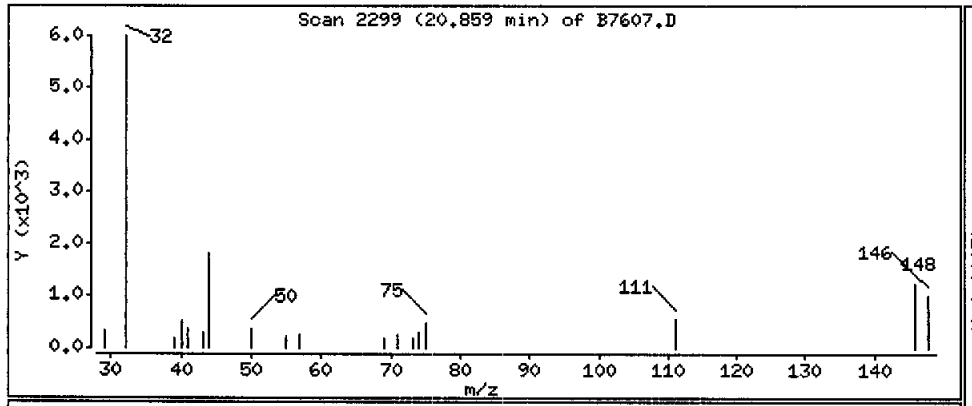
Operator: DLK

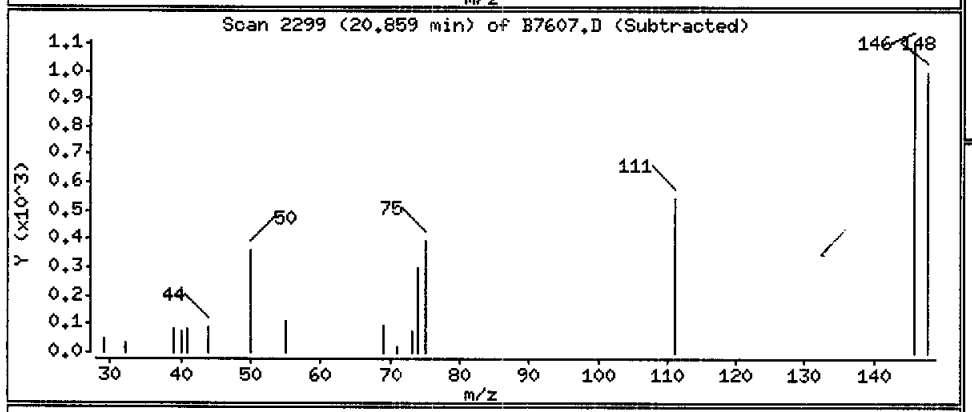
Column phase: J&W DB-624

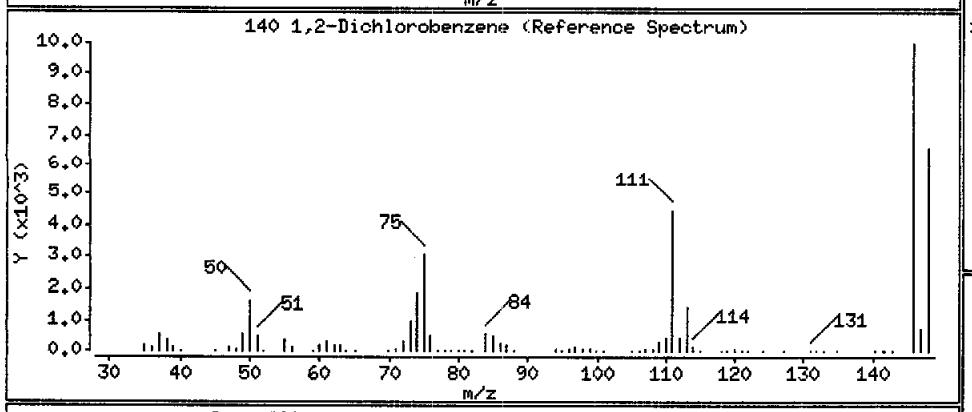
Column diameter: 0.53

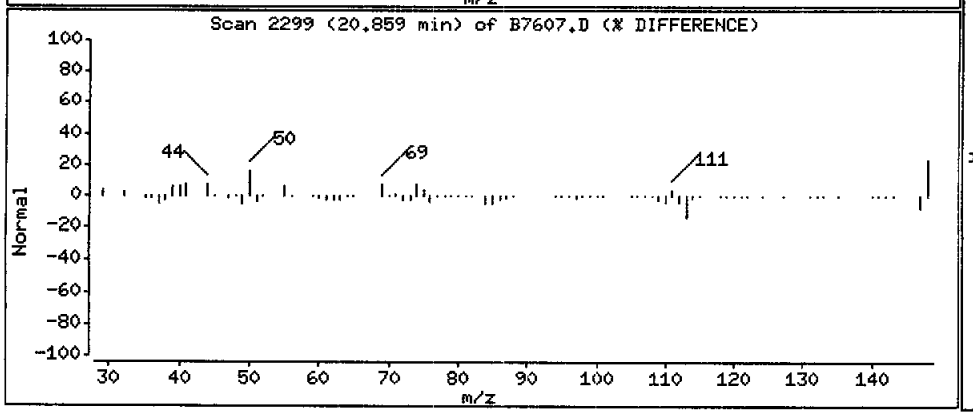
140 1,2-Dichlorobenzene

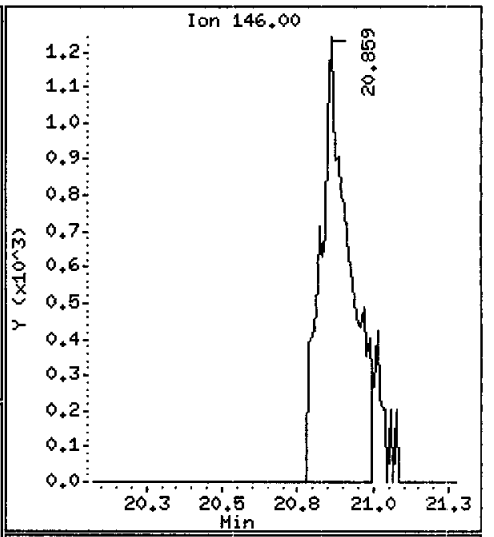
Concentration: 0.8057 ppbv

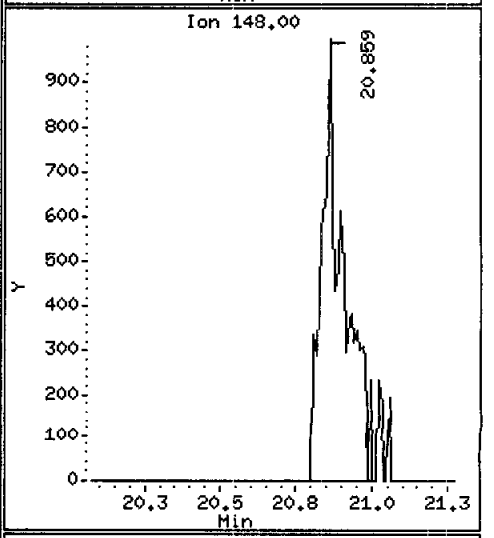


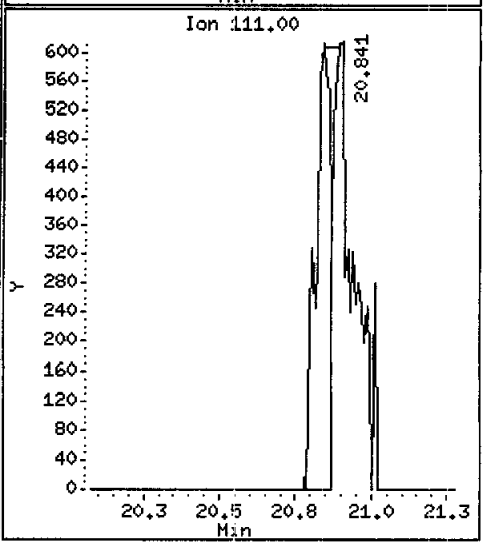












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D
Lab Smp Id: G2DJE1AD Client Smp ID: 066383-001
Inj Date : 14-JAN-2005 03:14
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DJE1AD,066383-001,SANDIA,E5A100227-2
Misc Info : 24.3,12.7,500,958,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.300	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	958.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.137	2.115	(0.258)	8219387	349.011	348.5
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.345	2.350	(0.283)	433563	22.6405	22.61
8 Chloromethane	52	2.363	2.386	(0.285)	1812	1.73358	1.731(aQ)
21 Trichlorofluoromethane (F11)	101	3.734	3.730	(0.450)	575872	24.2548	24.22
28 1,1-Dichloroethene	61	4.664	4.659	(0.562)	588746	46.7497	46.68
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.727	4.713	(0.570)	4393985	161.074	160.8
31 Acetone	58	4.727	4.822	(0.570)	15407	8.62916	8.617(a)
37 Methylene Chloride	49	5.584	5.562	(0.673)	14389	1.85046	1.848(a)
44 1,1-Dichloroethane	63	6.847	6.825	(0.825)	84364	6.11331	6.105
* 58 Bromochloromethane	49	8.300	8.295	(1.000)	557933	50.0000	
60 Chloroform	83	8.462	8.458	(1.020)	725392	40.8657	40.81
61 1,1,1-Trichloroethane	97	8.769	8.756	(1.057)	121793	6.86318	6.854
64 Carbon Tetrachloride	117	8.778	9.053	(1.058)	14453	1.22574	1.224(a)
$ 66 1,2-Dichloroethane-d4	65	9.328	9.315	(0.921)	506859	46.6315	46.57

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
* 73 1,4-Difluorobenzene	114	10.131	10.118	(1.000)	1324479	50.0000	
75 Trichloroethene	130	10.573	10.569	(1.044)	640061	55.3464	55.27
$ 88 Toluene-d8	100	12.748	12.726	(1.258)	686410	49.4926	49.42
89 Toluene	91	12.883	12.843	(1.272)	29982	1.28563	1.284(a)
93 1,1,2-Trichloroethane	97	13.849	13.583	(0.900)	8066	0.73776	0.7367(aQ)
95 Tetrachloroethene	166	13.867	13.844	(0.901)	880032	57.9893	57.91
* 101 Chlorobenzene-d5	117	15.391	15.369	(1.000)	969305	50.0000	
$ 114 4-Bromofluorobenzene	95	17.647	17.625	(1.147)	787387	45.4733	45.41

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

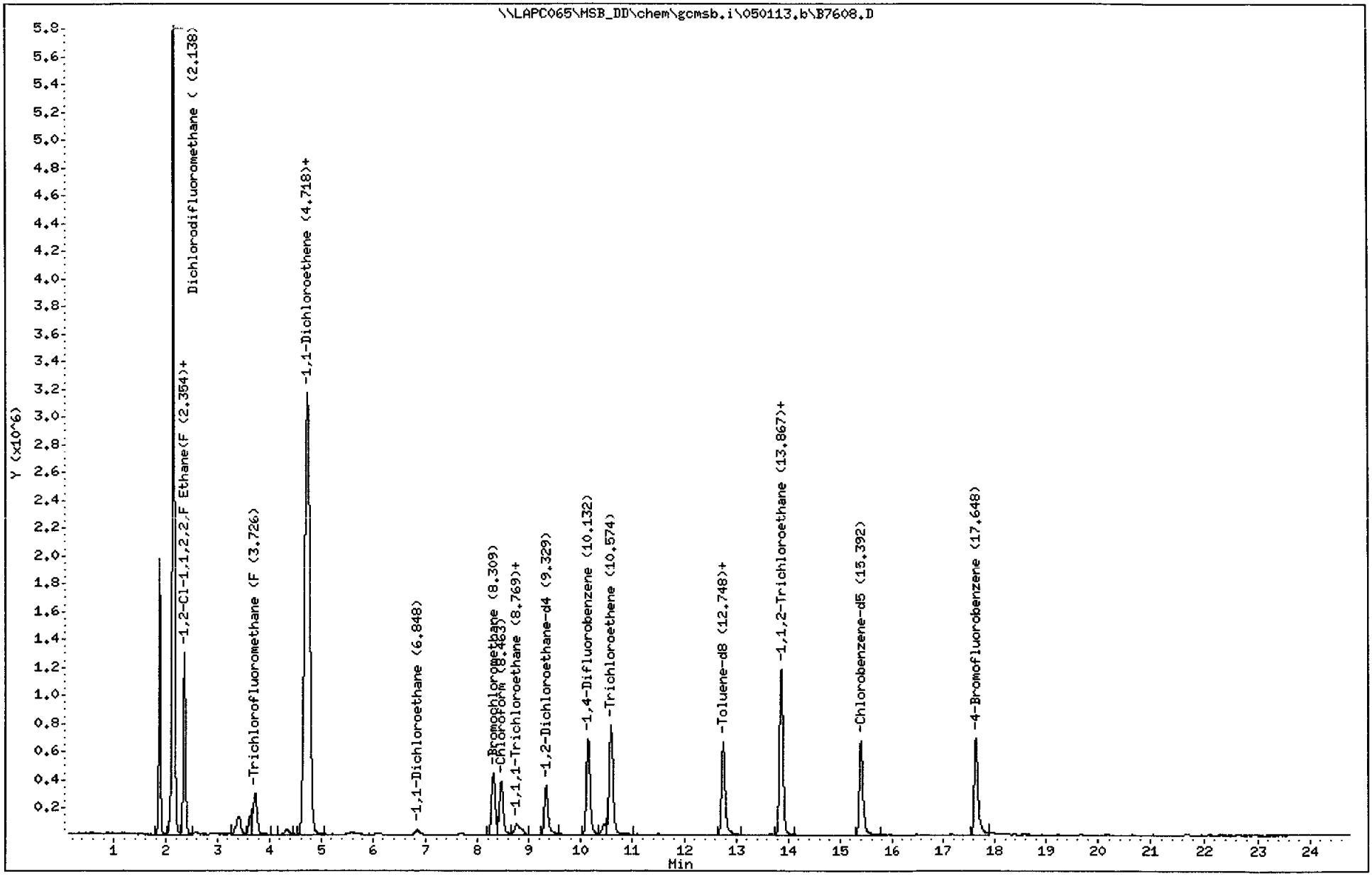
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D
Date : 14-JAN-2005 03:14
Client ID: 066383-001
Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gomsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gomsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

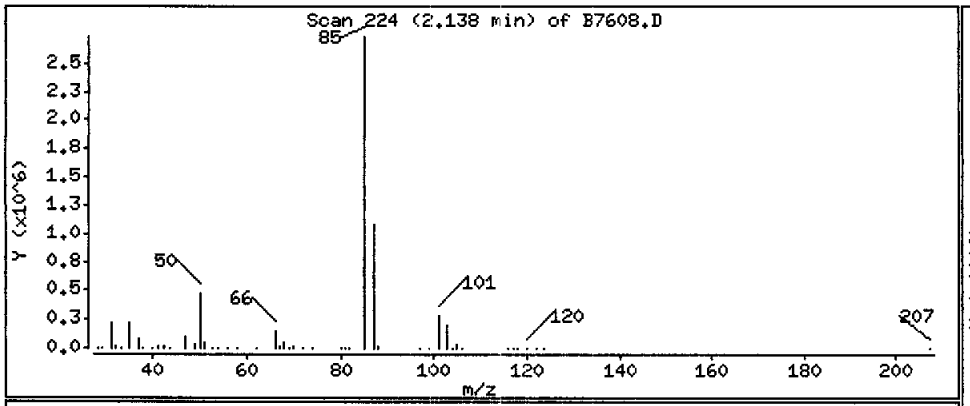
Operator: DLK

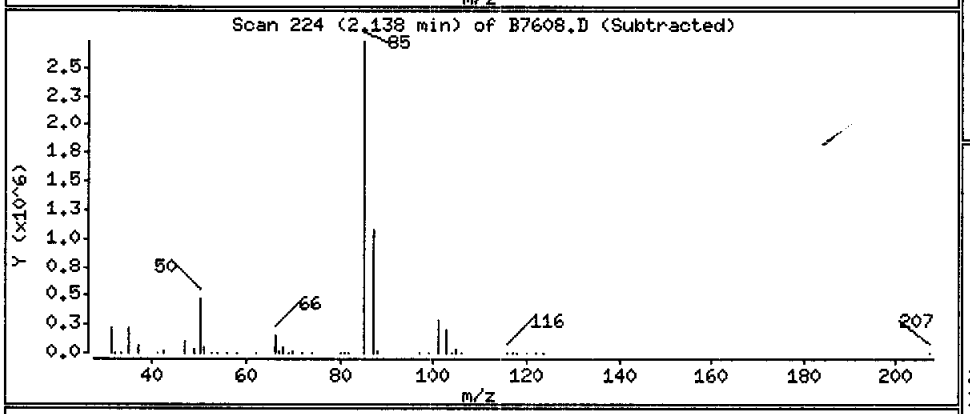
Column phase: J&W DB-624

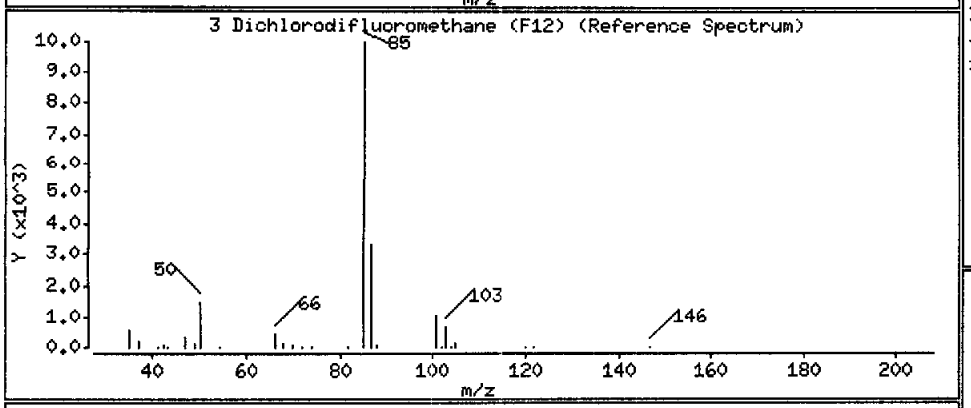
Column diameter: 0.53

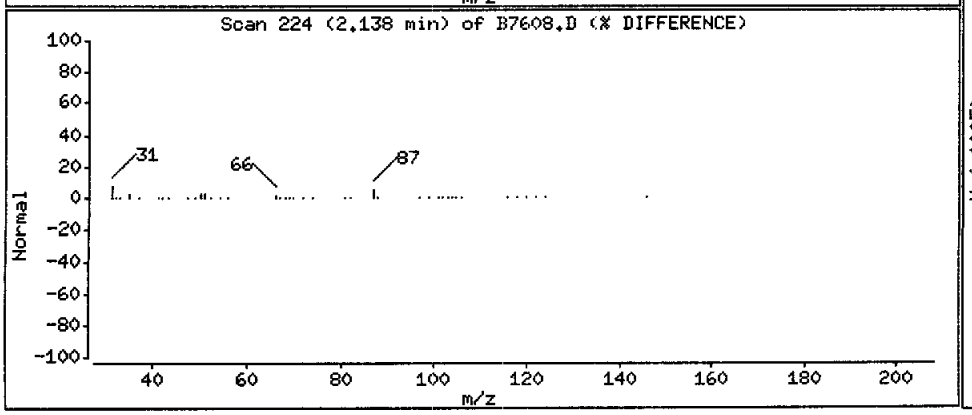
3 Dichlorodifluoromethane (F12)

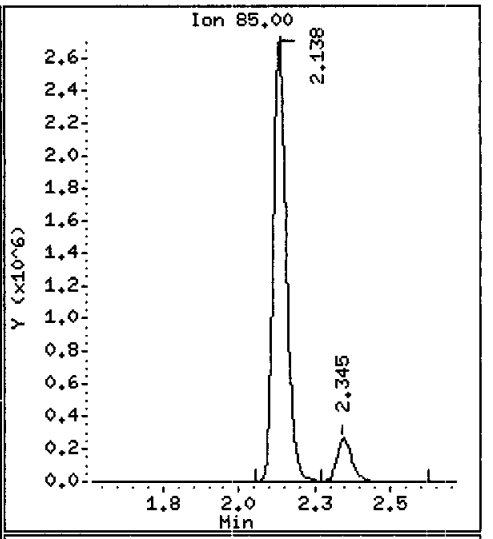
Concentration: 348.5 ppbv

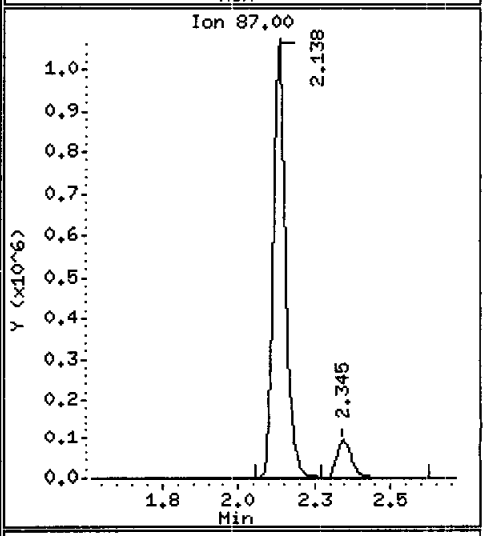


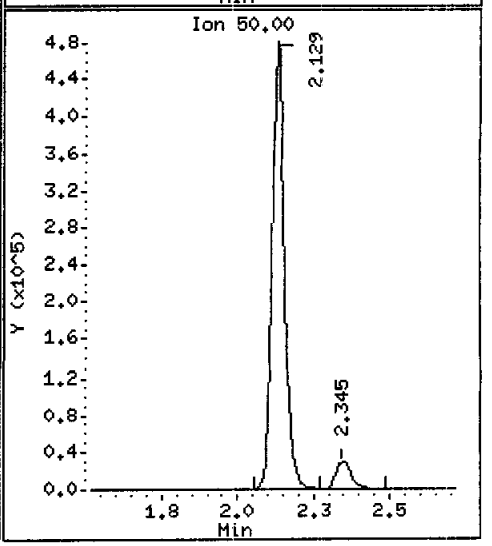












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

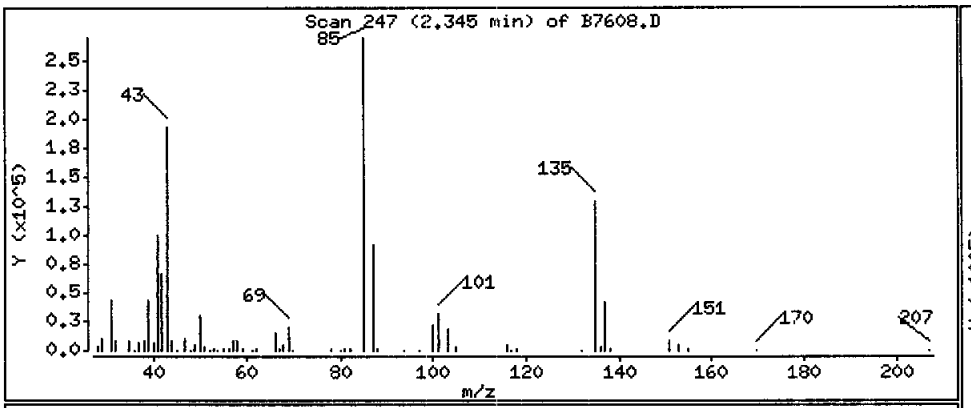
Operator: DLK

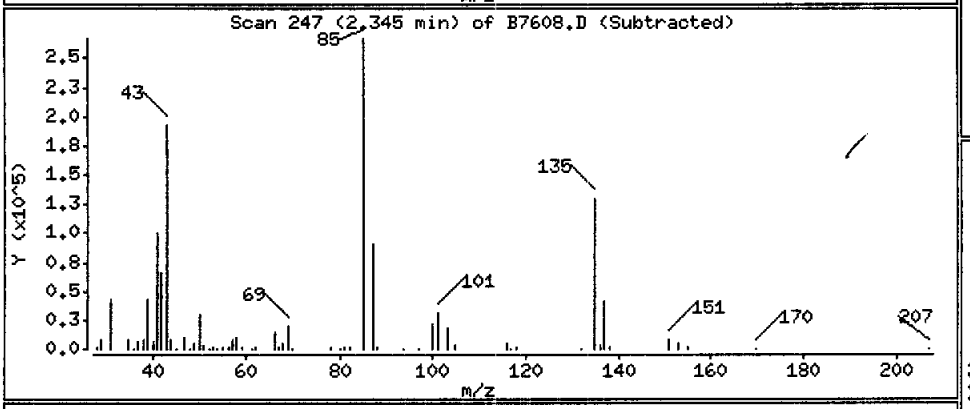
Column phase: J&W DB-624

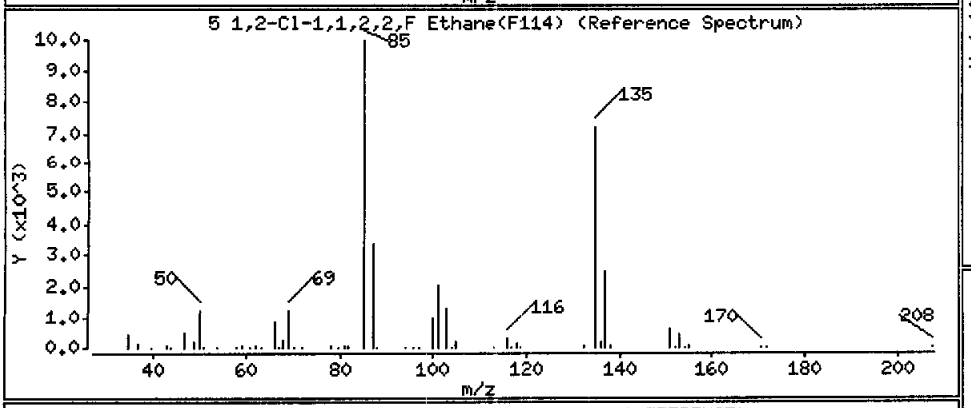
Column diameter: 0.53

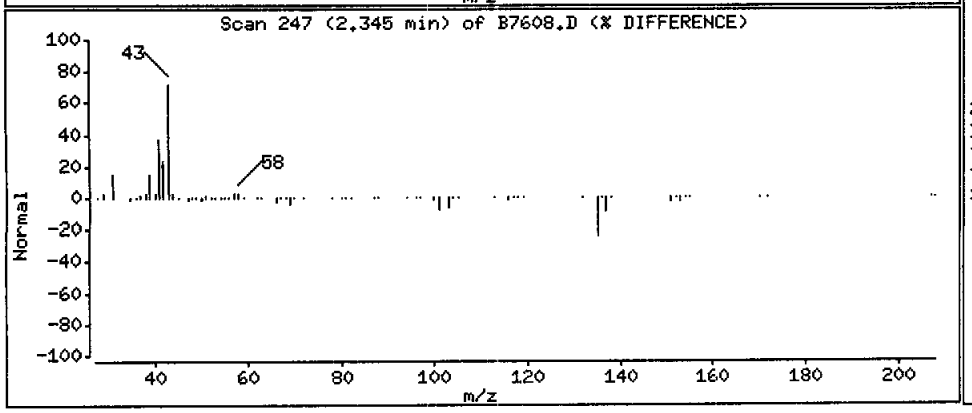
5 1,2-Cl-1,1,2,2,F Ethane(F114)

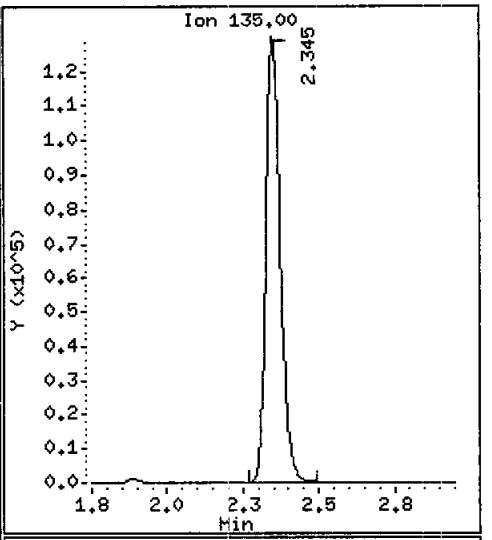
Concentration: 22.61 ppbv

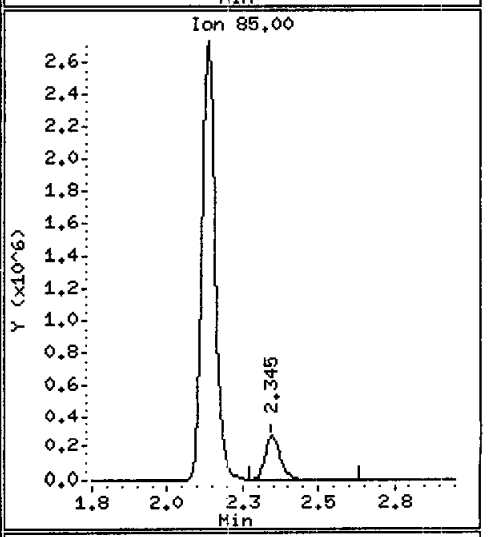


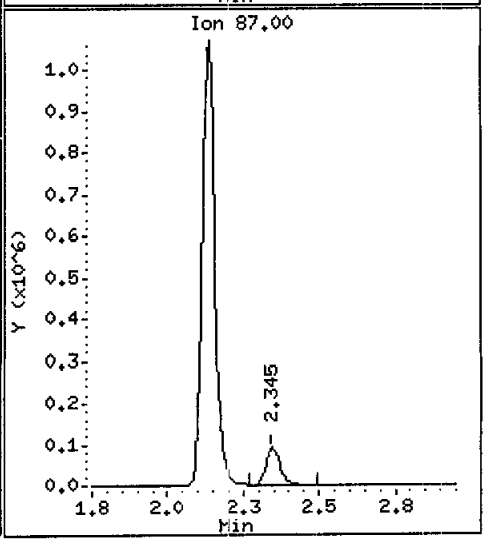












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

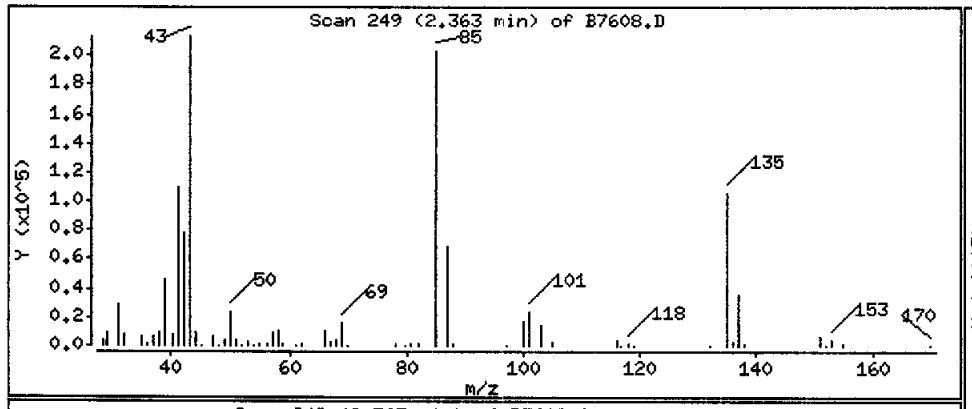
Operator: DLK

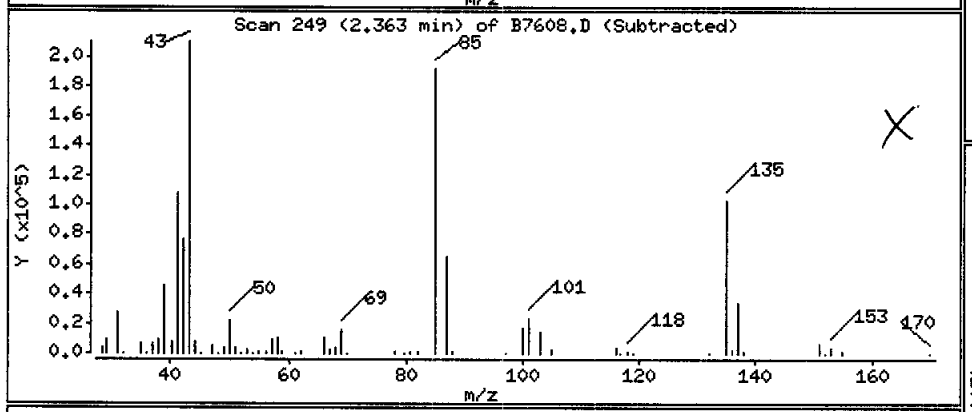
Column phase: J&W DB-624

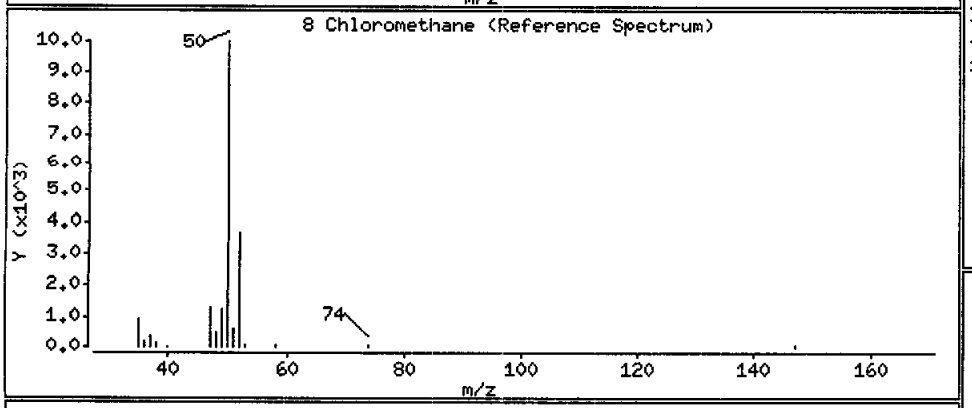
Column diameter: 0.53

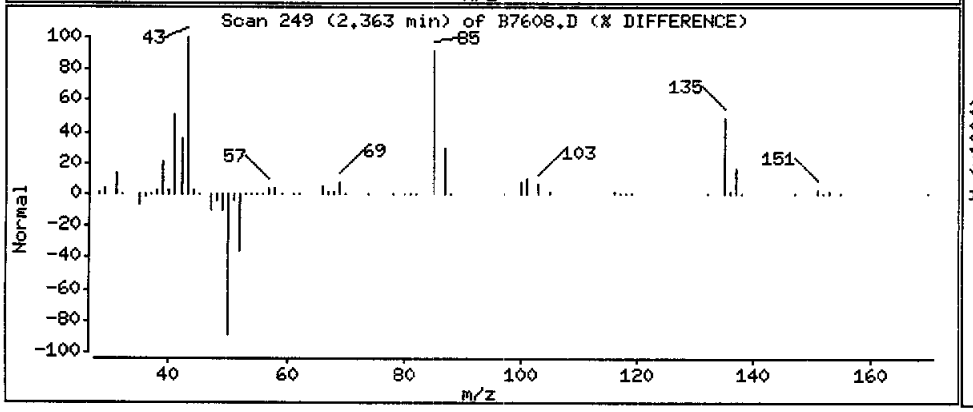
8 Chloromethane

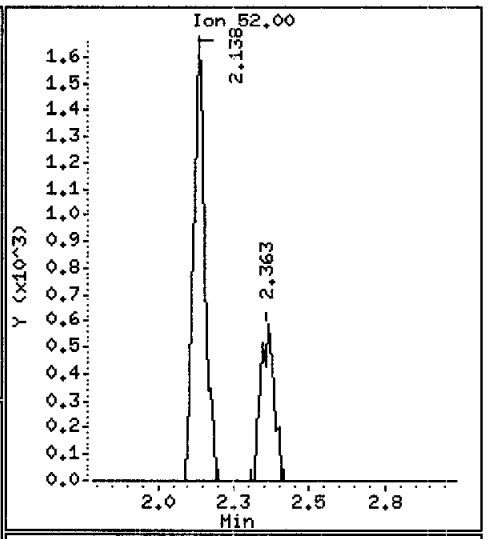
Concentration: 1.731 ppbv

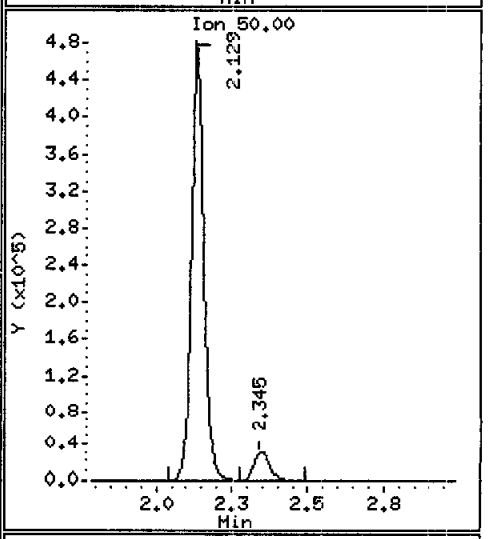


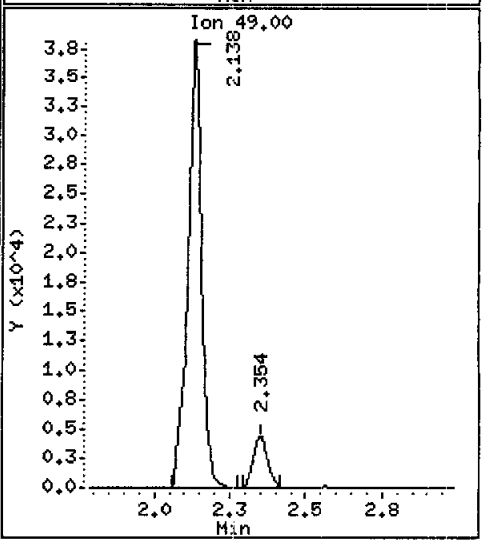












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

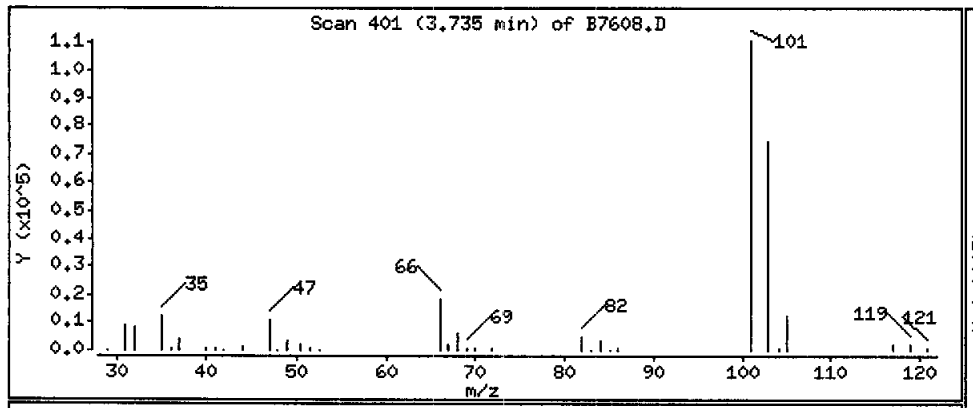
Operator: DLK

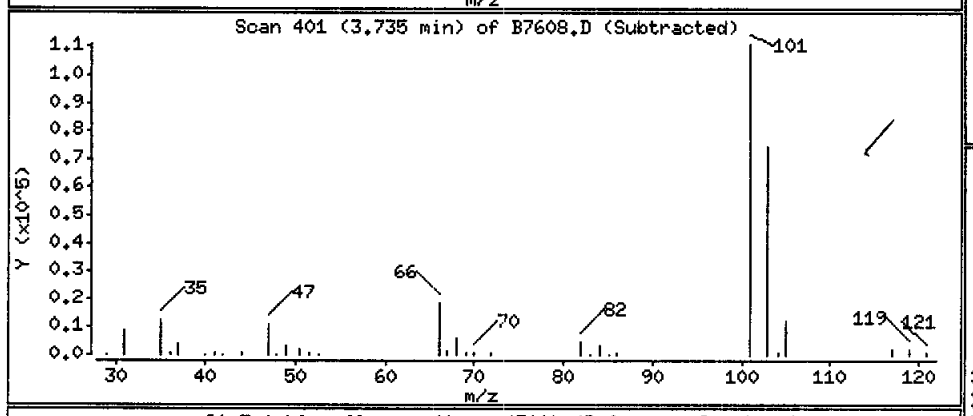
Column phase: J&W DB-624

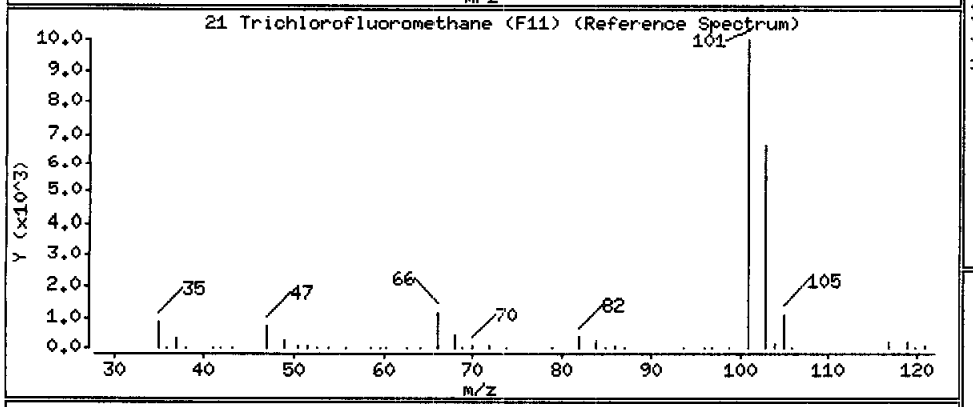
Column diameter: 0.53

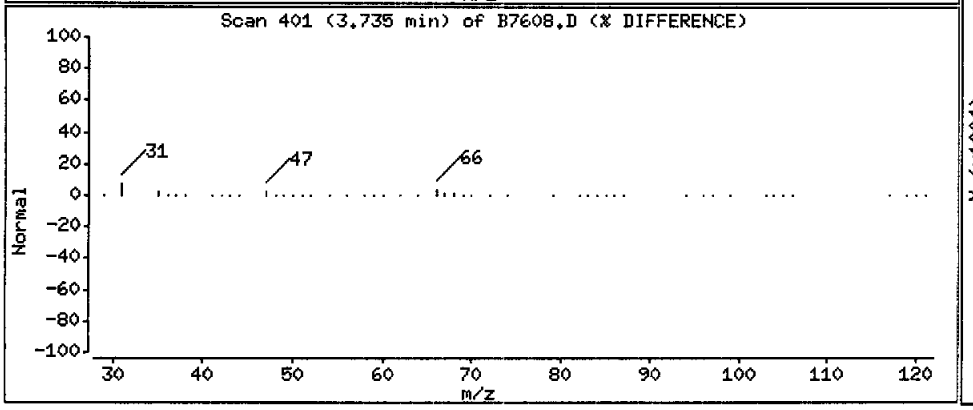
21 Trichlorofluoromethane (F11)

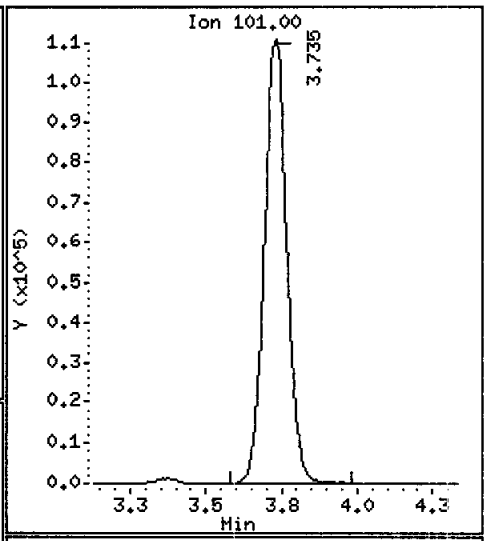
Concentration: 24.22 ppbv

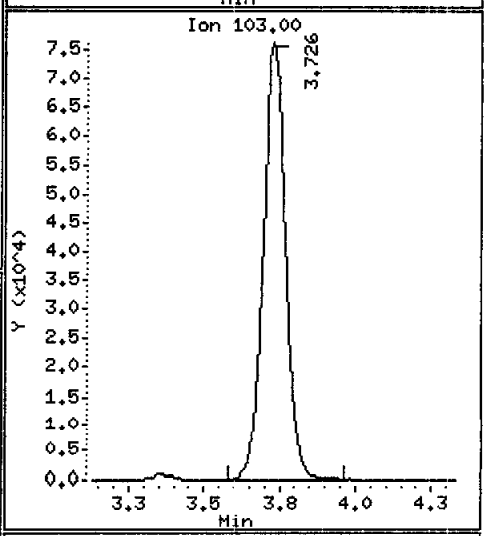


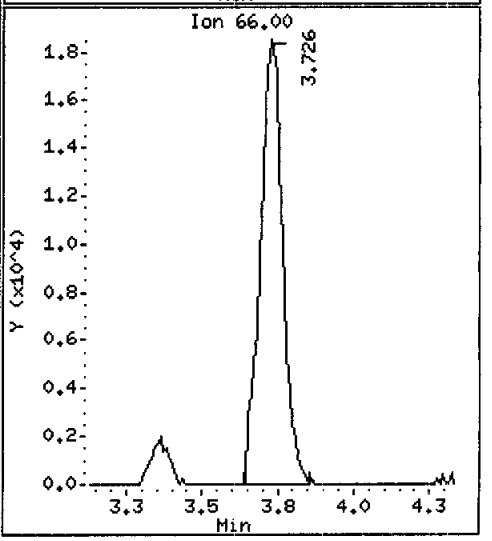












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

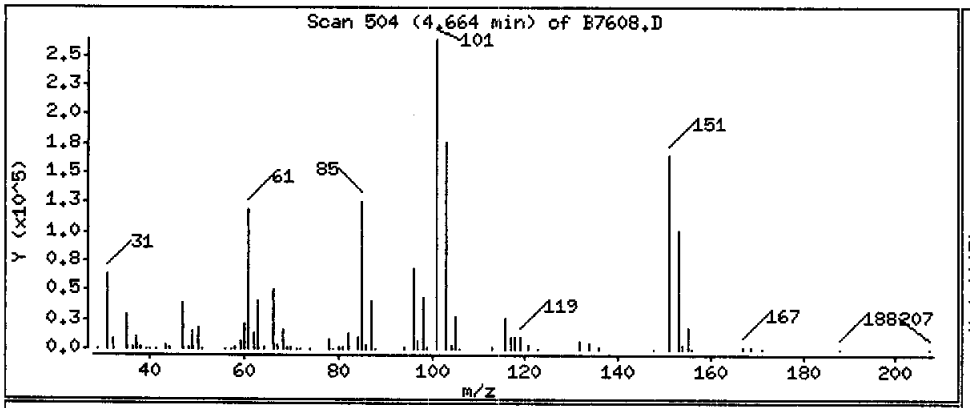
Operator: DLK

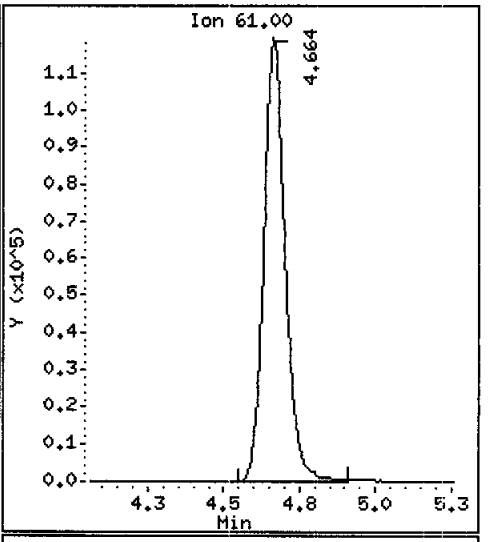
Column phase: J&W DB-624

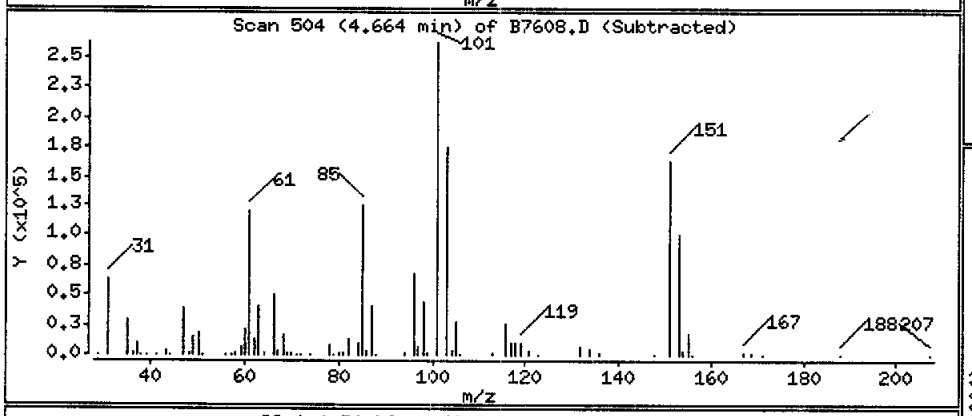
Column diameter: 0.53

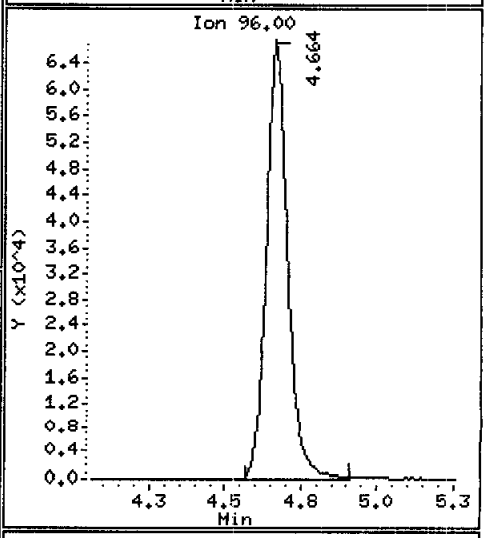
28 1,1-Dichloroethene

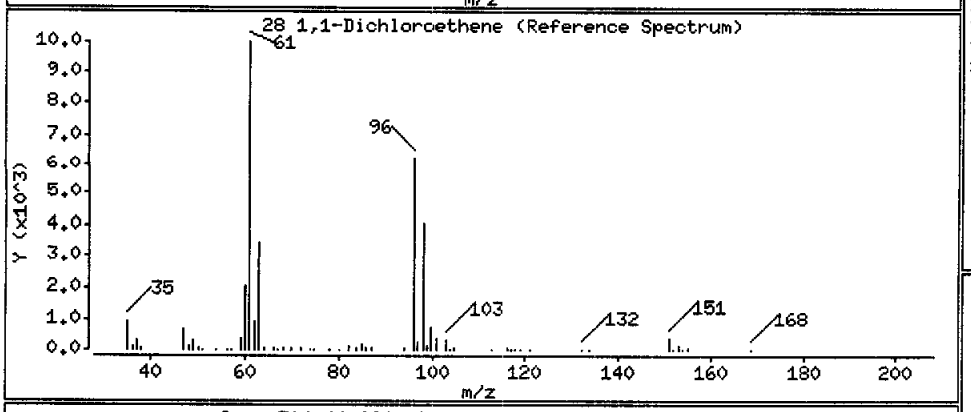
Concentration: 46.68 ppbv

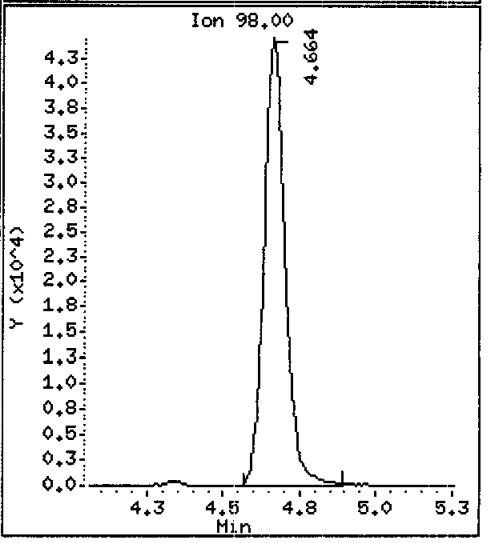


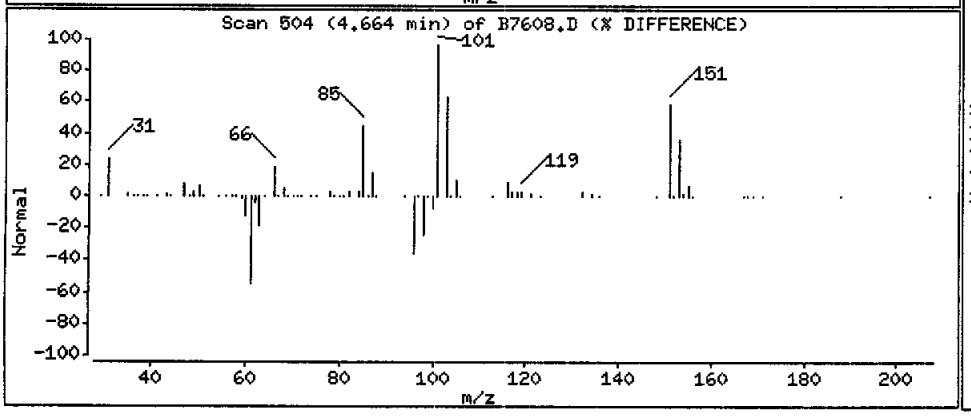












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

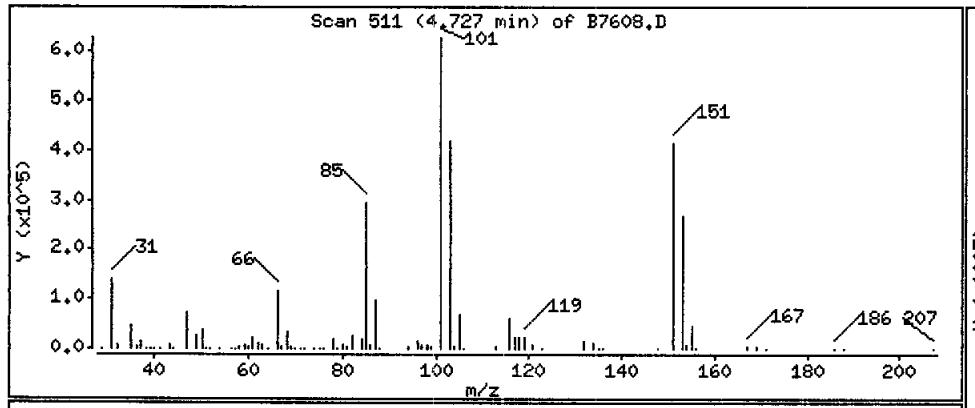
Operator: DLK

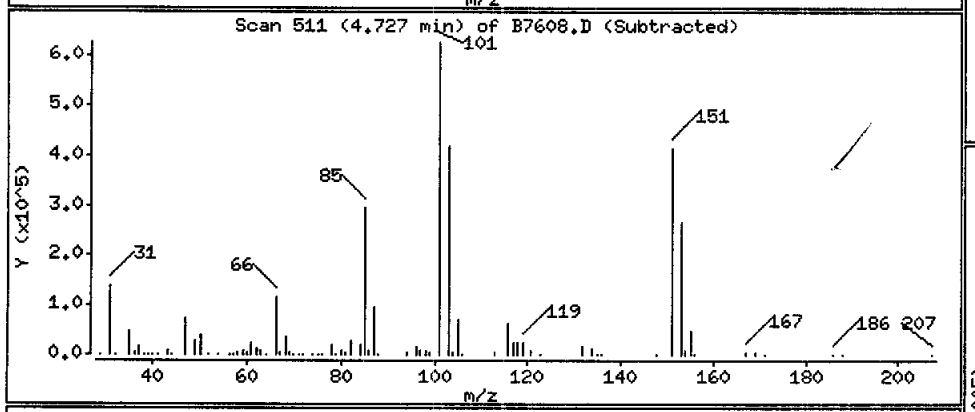
Column phase: J&W DB-624

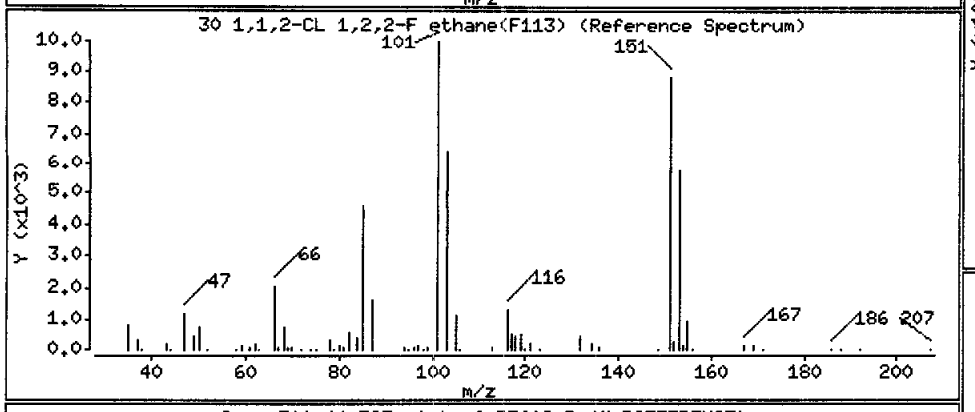
Column diameter: 0.53

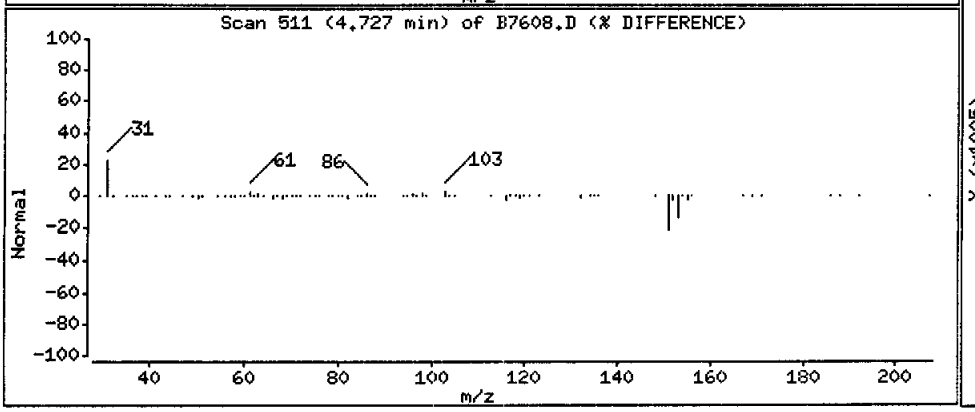
30 1,1,2-CL 1,2,2-F ethane(F113)

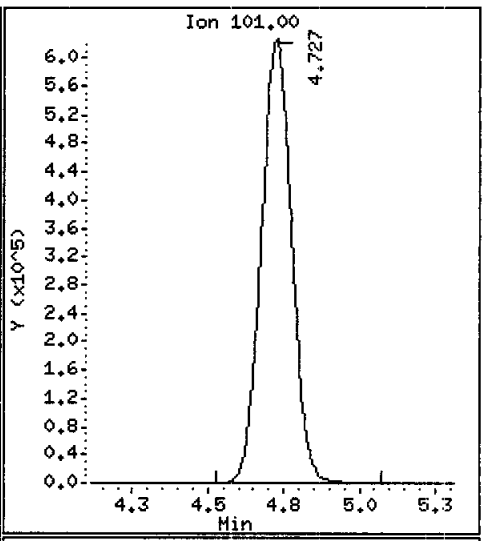
Concentration: 160.8 ppbv

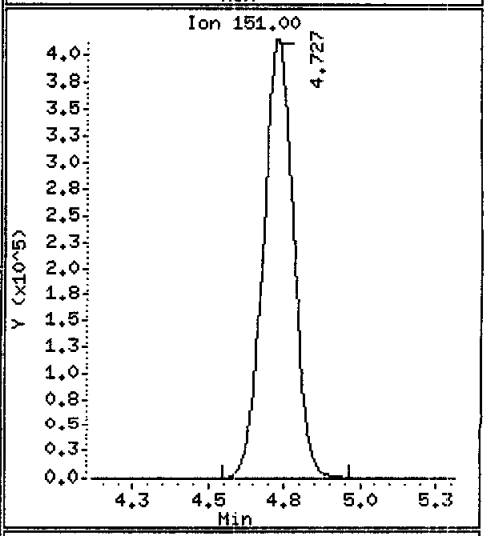


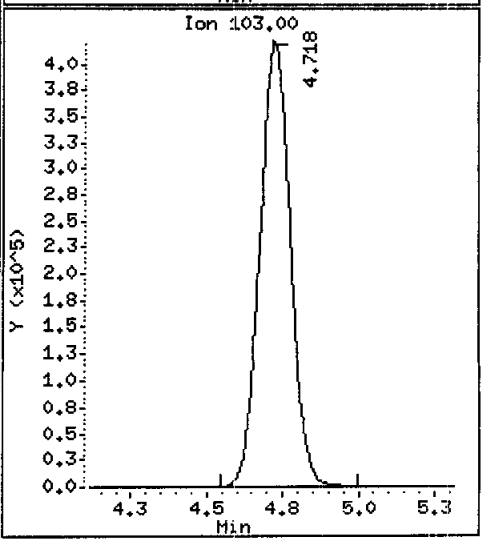












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

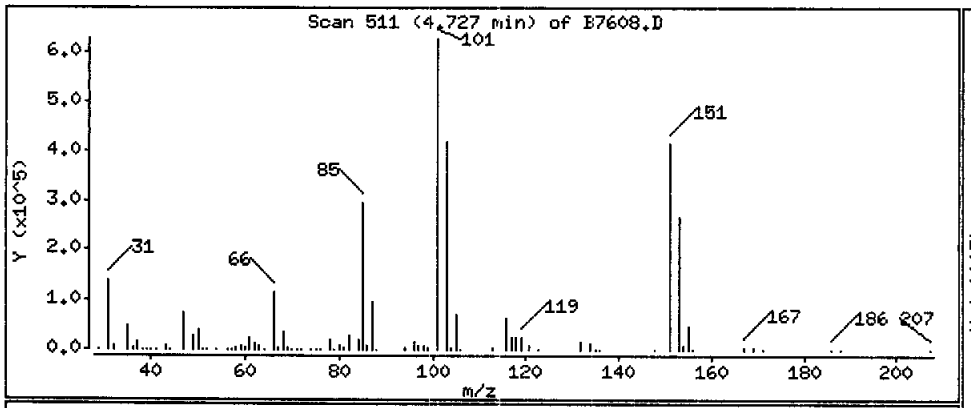
Operator: DLK

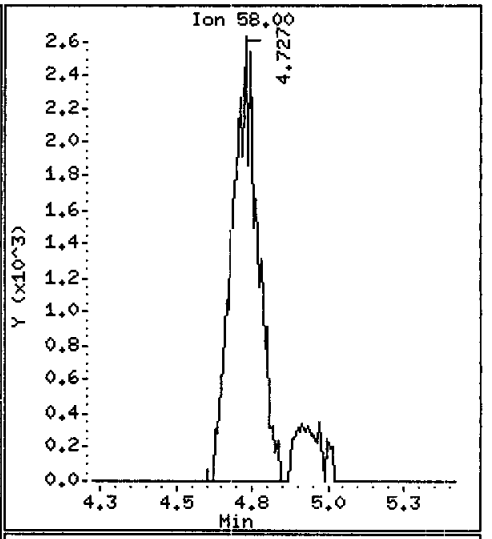
Column phase: J&W DB-624

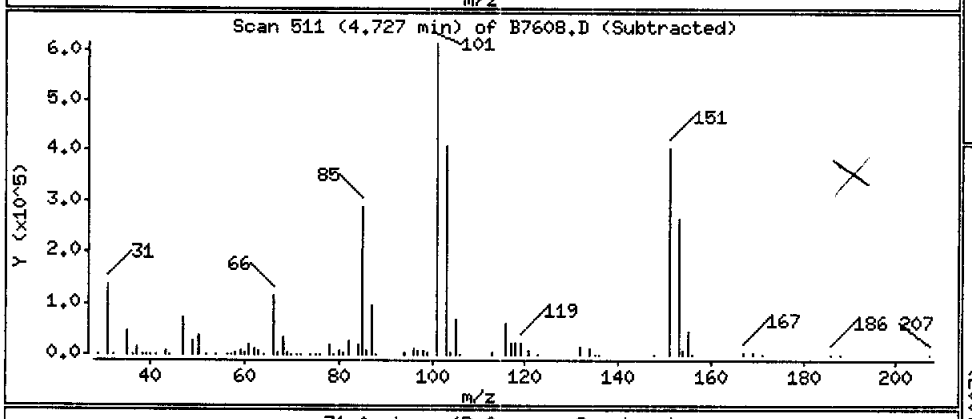
Column diameter: 0.53

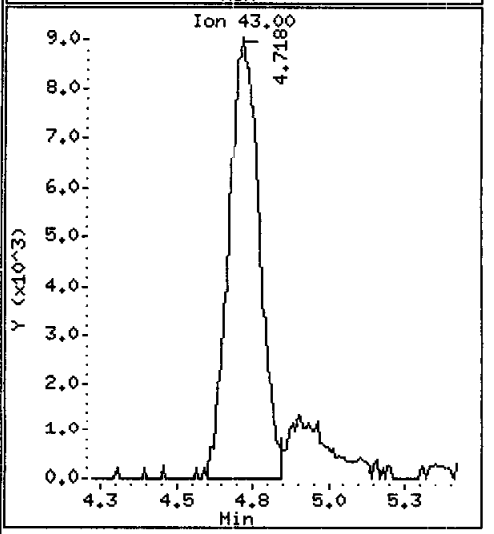
31 Acetone

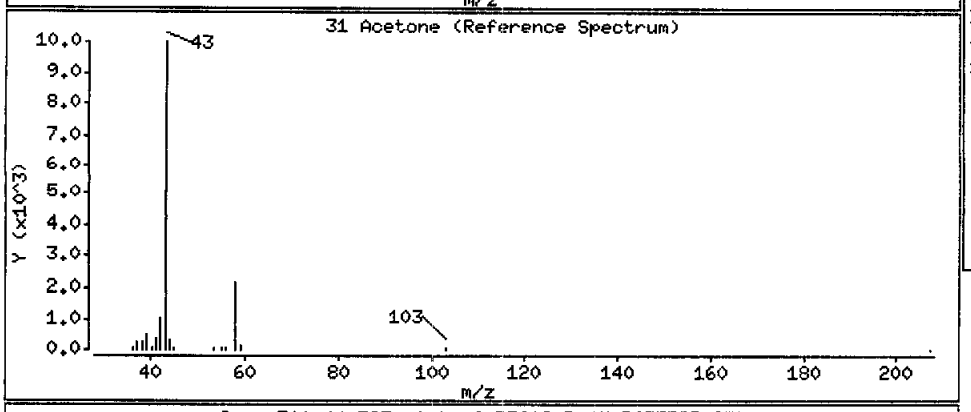
Concentration: 8.617 ppbv

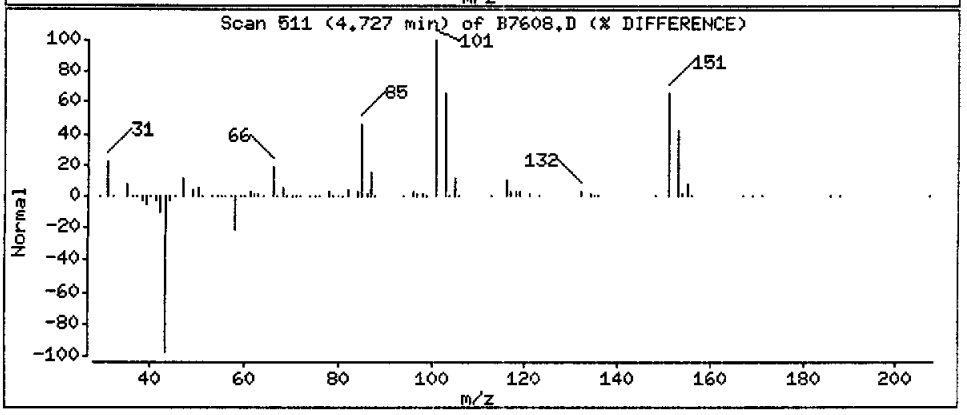












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

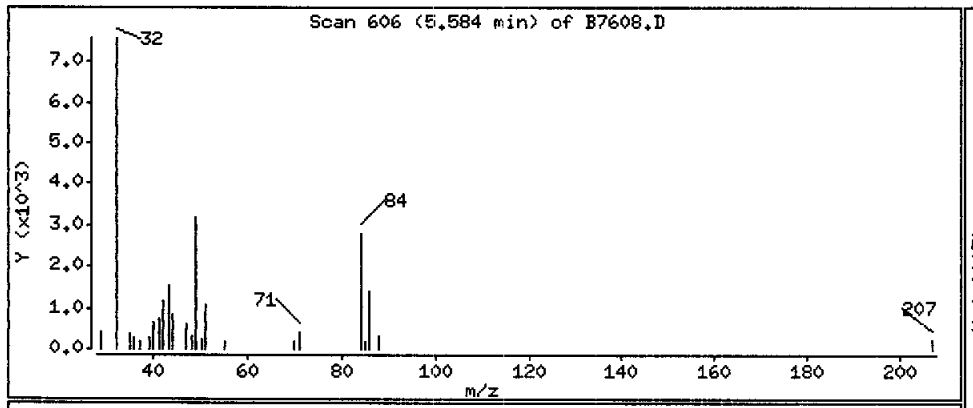
Operator: DLK

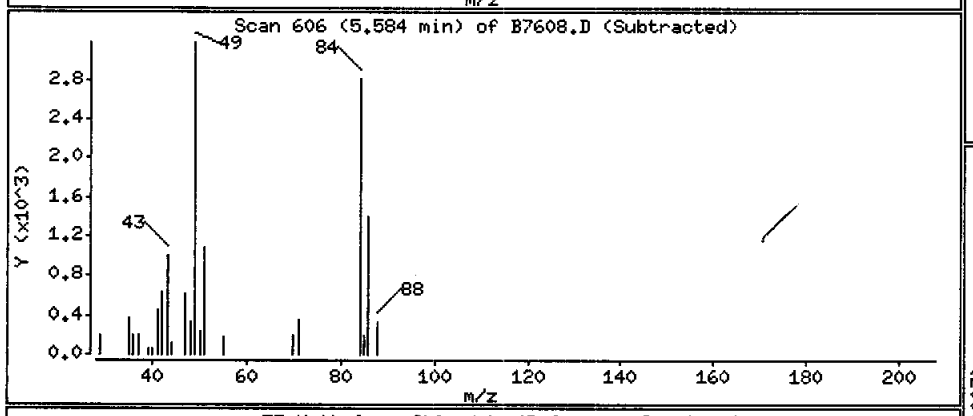
Column phase: J&W DB-624

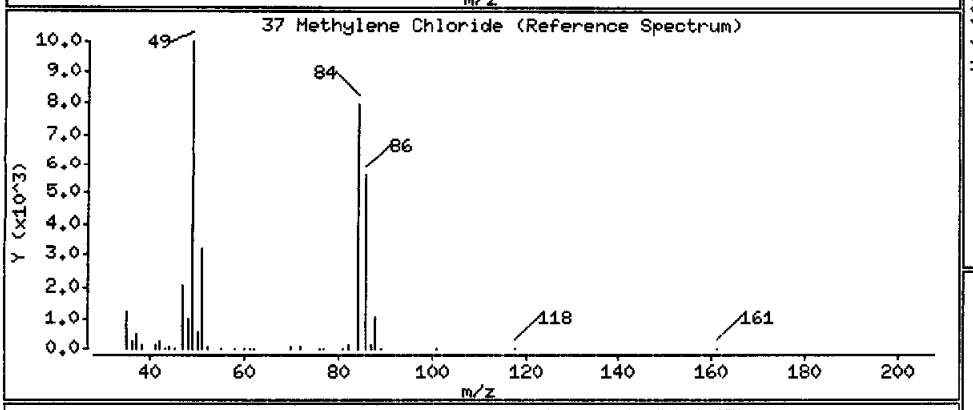
Column diameter: 0.53

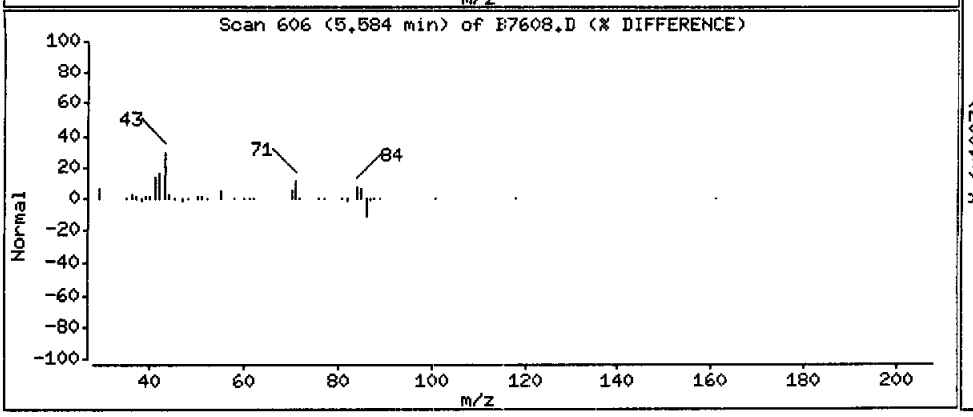
37 Methylene Chloride

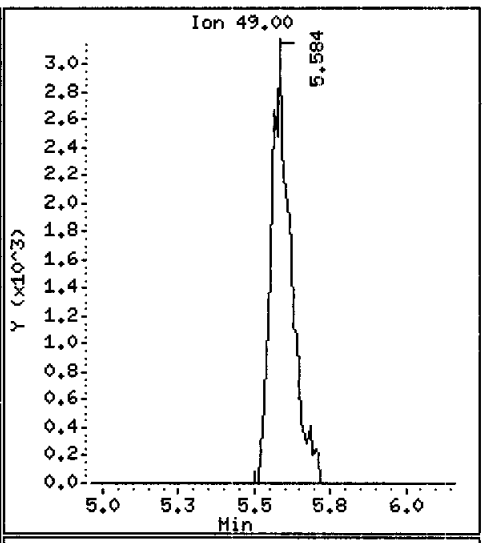
Concentration: 1.848 ppbv

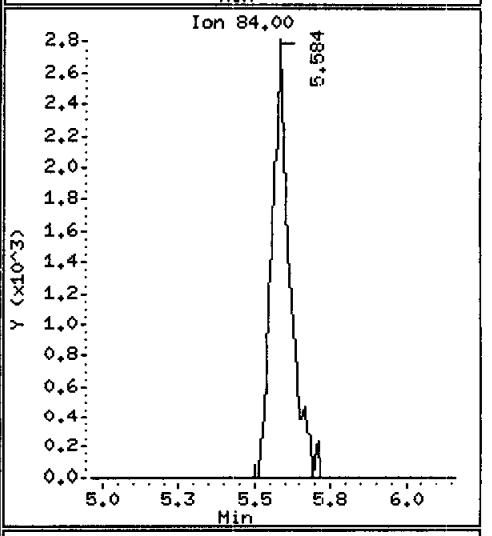


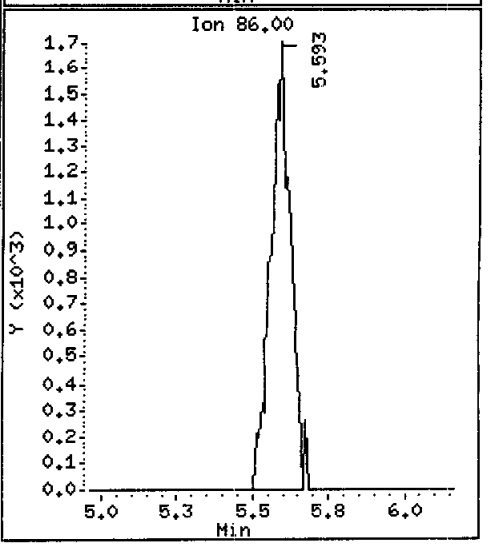












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

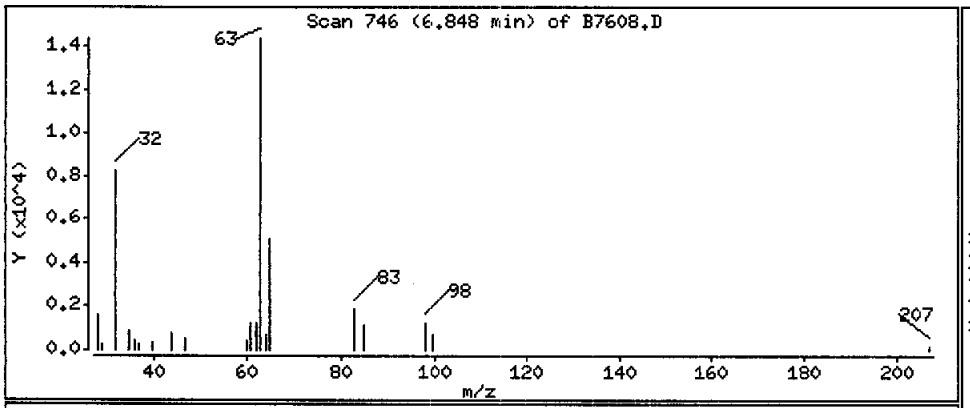
Operator: DLK

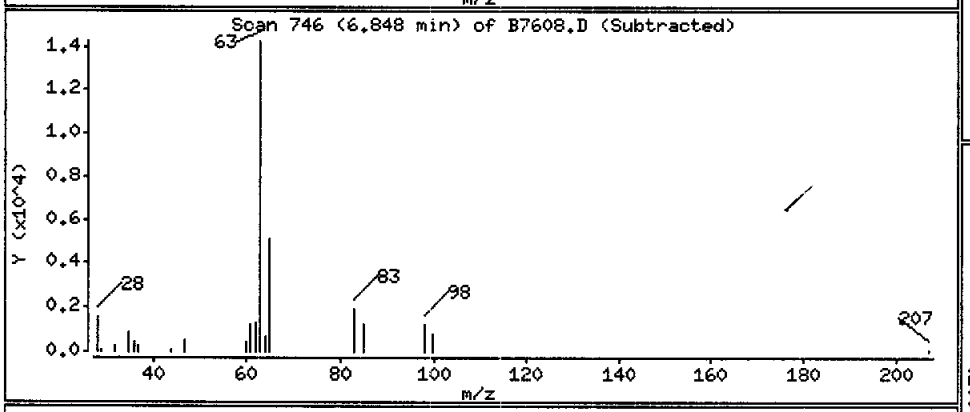
Column phase: J&W DB-624

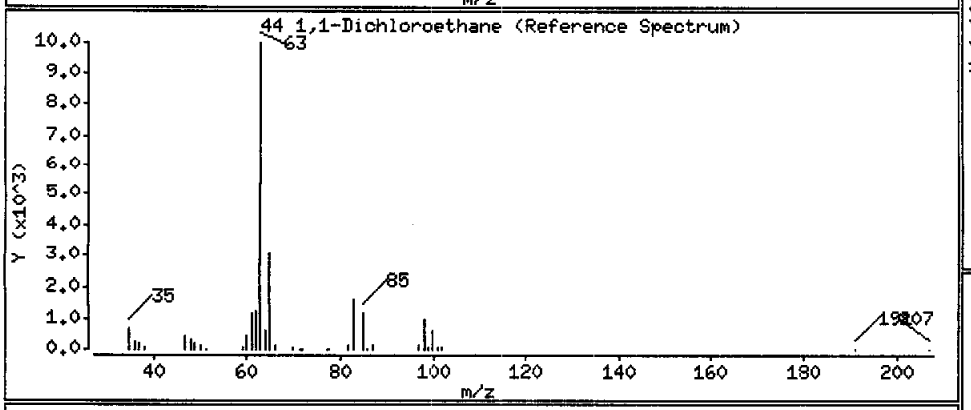
Column diameter: 0.53

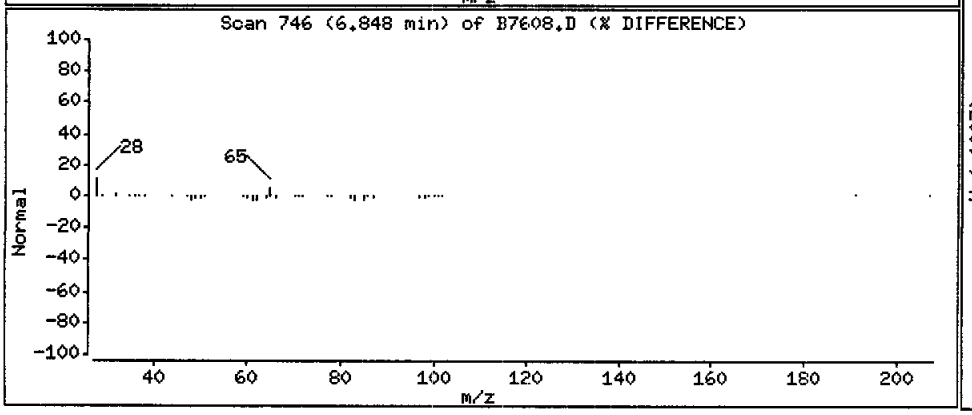
44 1,1-Dichloroethane

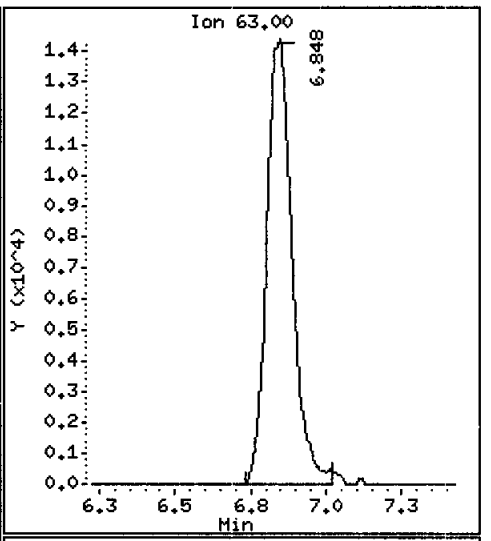
Concentration: 6.105 ppbv

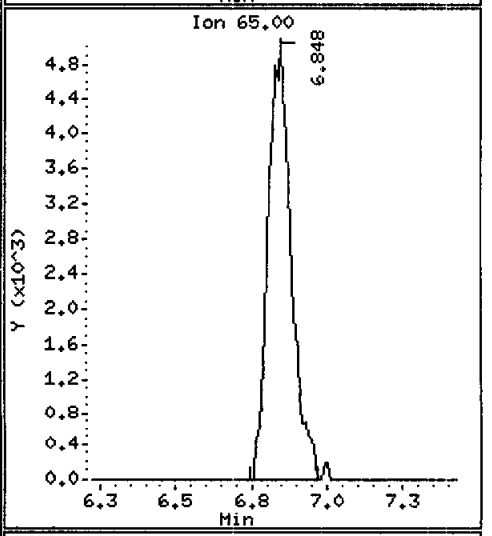


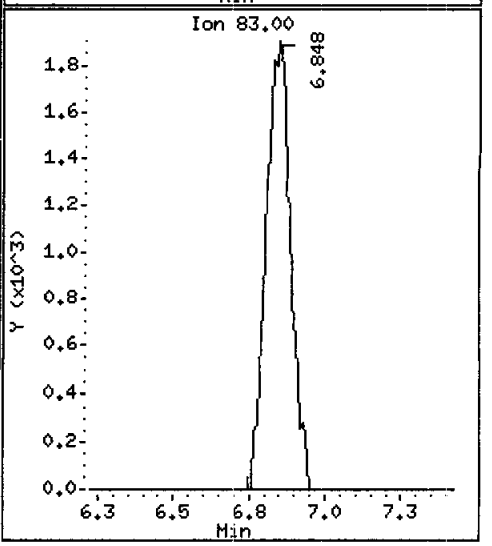












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

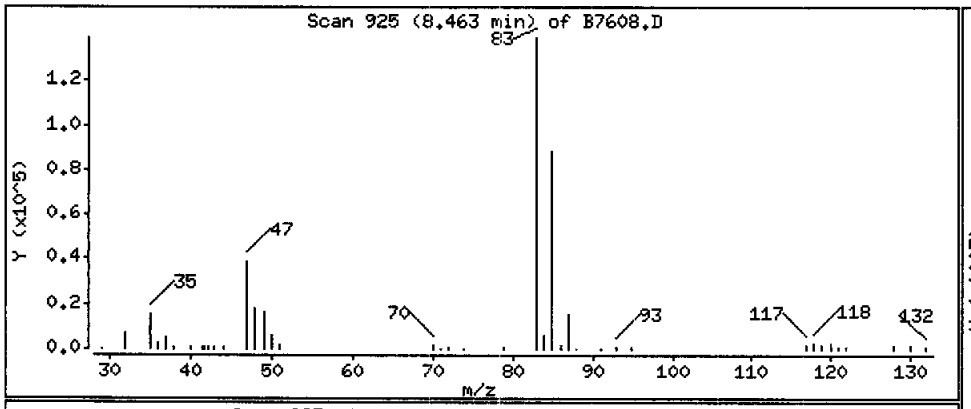
Operator: DLK

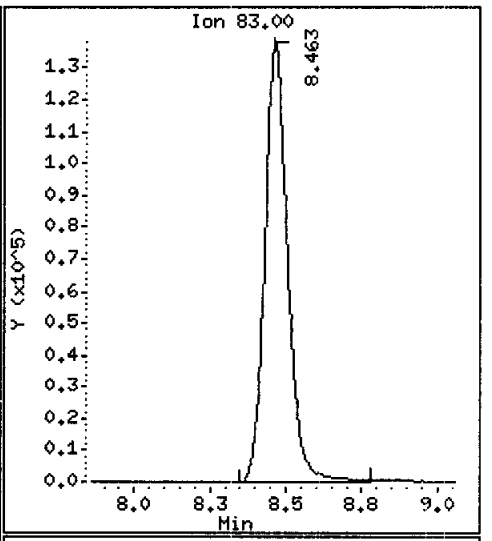
Column phase: J&W DB-624

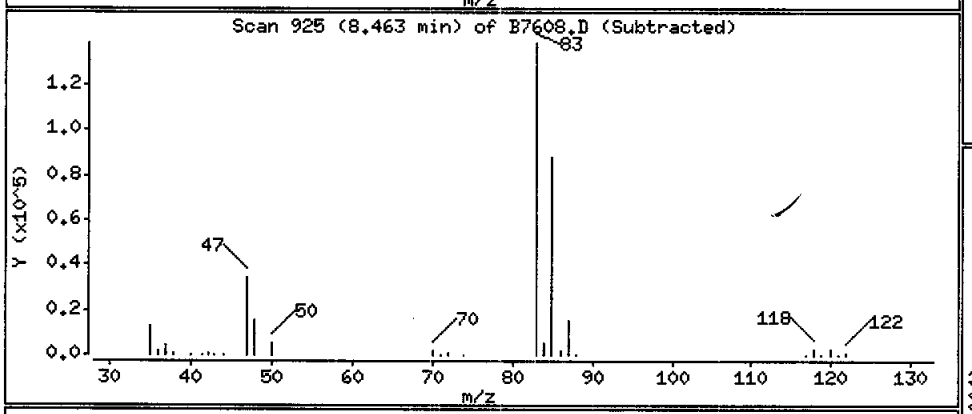
Column diameter: 0.53

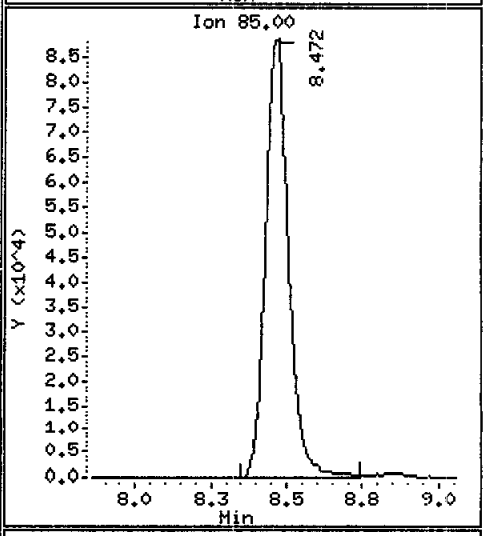
60 Chloroform

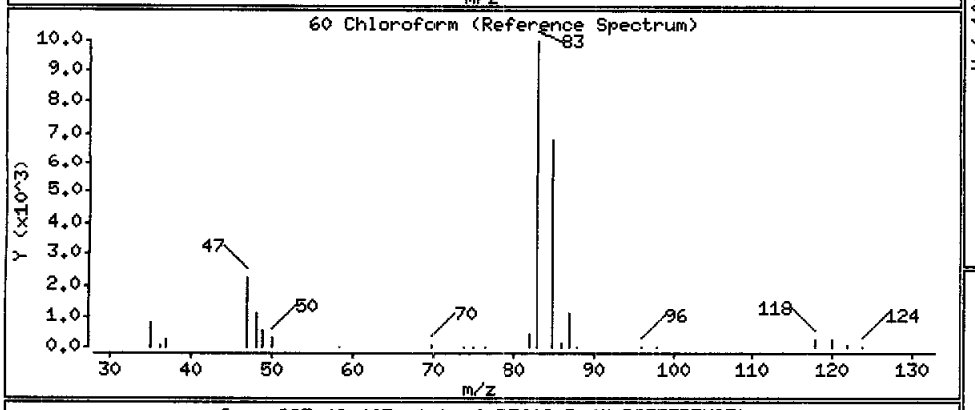
Concentration: 40.81 ppbv

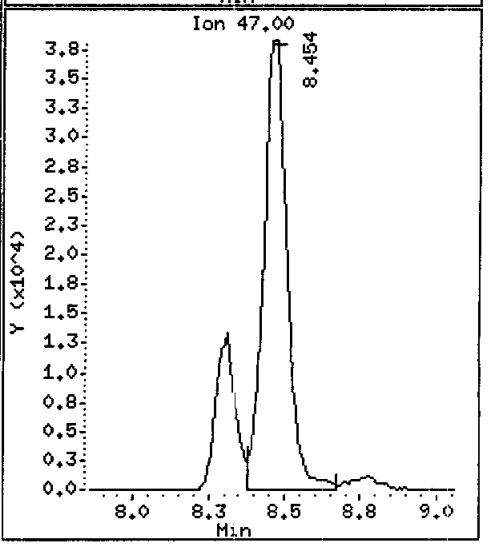


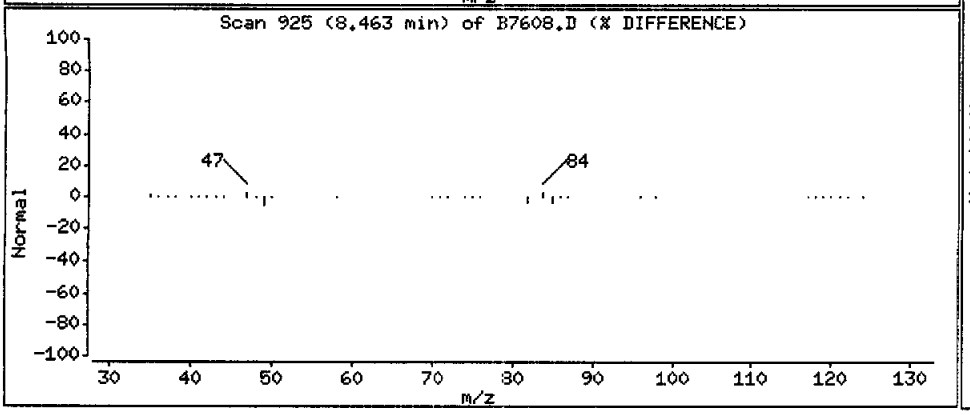












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

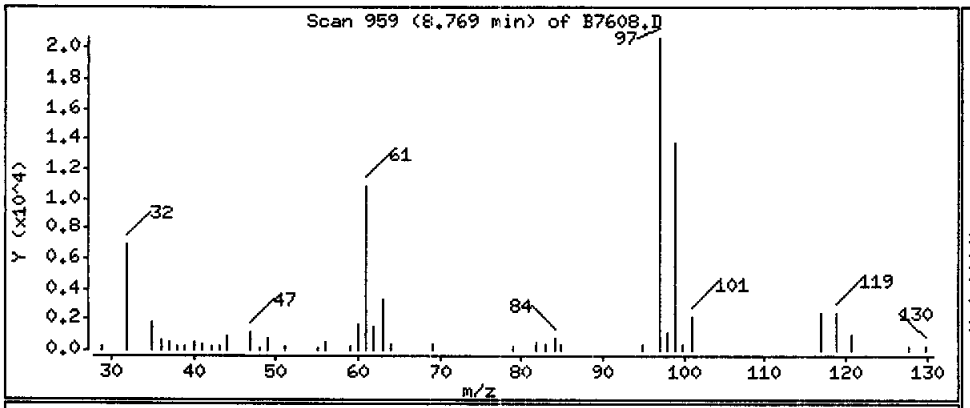
Operator: DLK

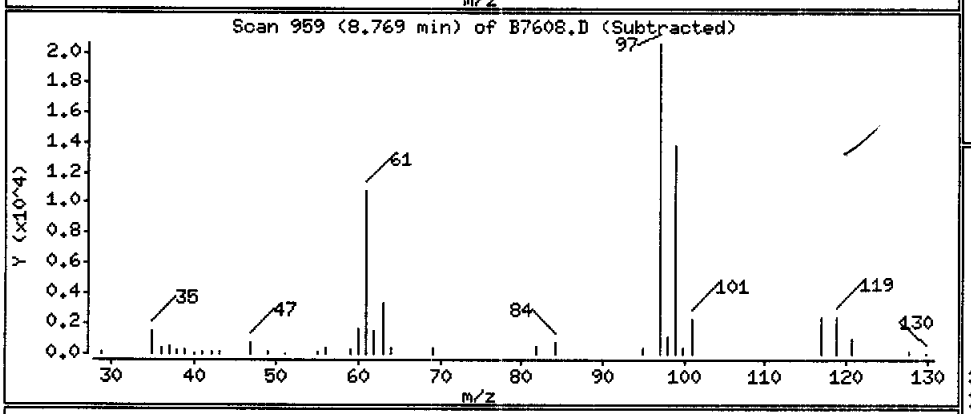
Column phase: J&W DB-624

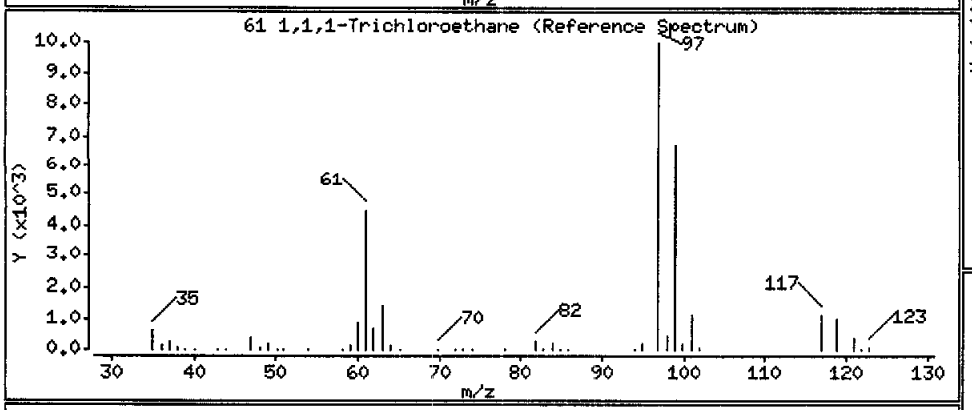
Column diameter: 0.53

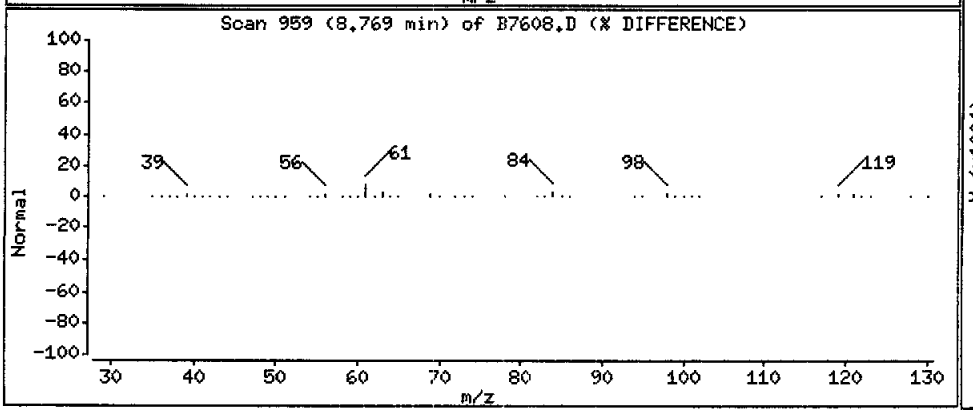
61 1,1,1-Trichloroethane

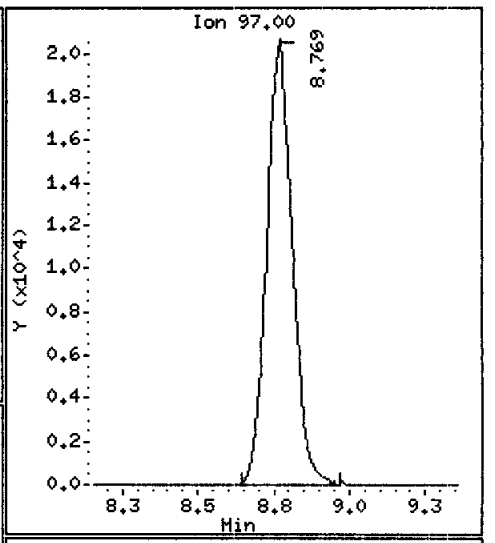
Concentration: 6.854 ppbv

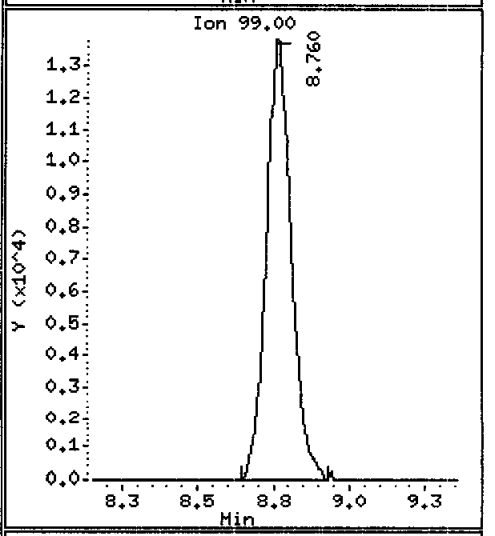


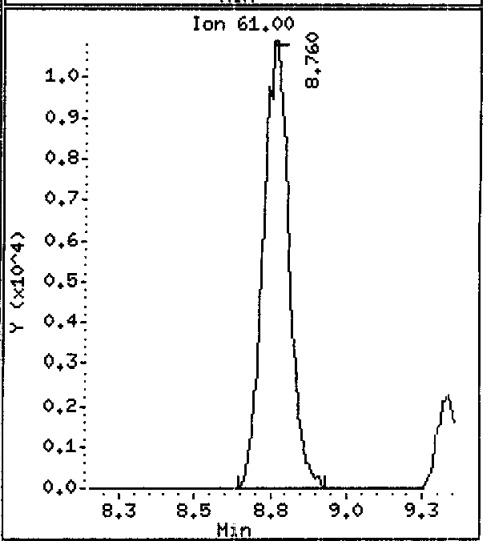












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

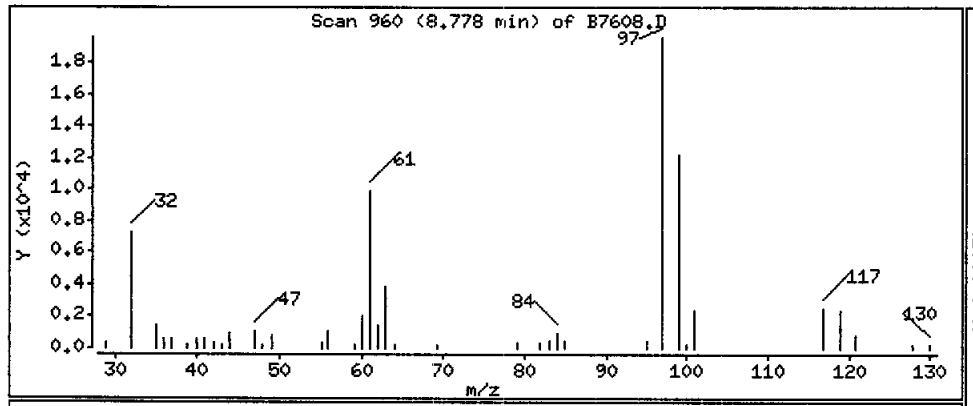
Operator: DLK

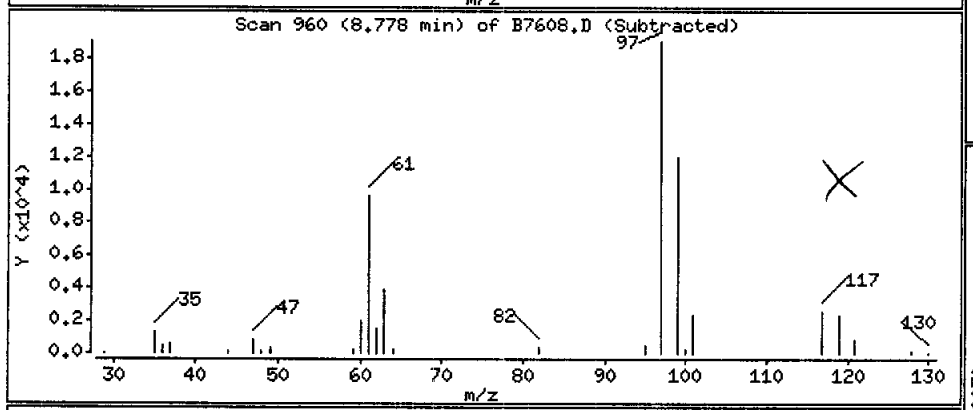
Column phase: J&W DB-624

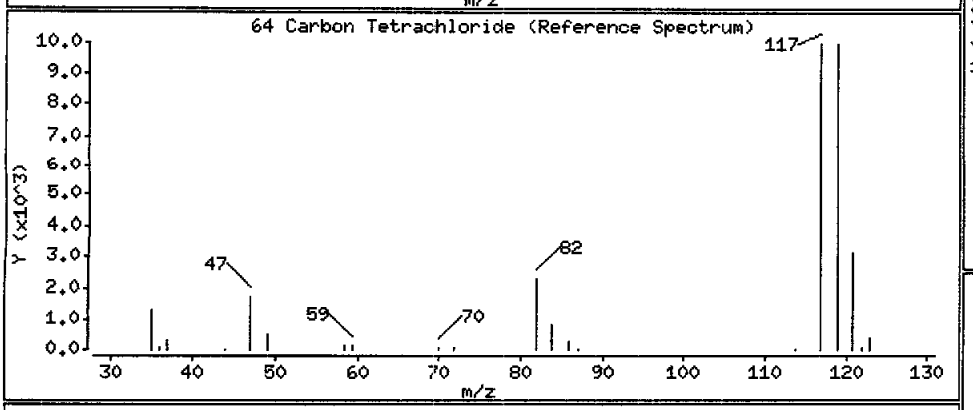
Column diameter: 0.53

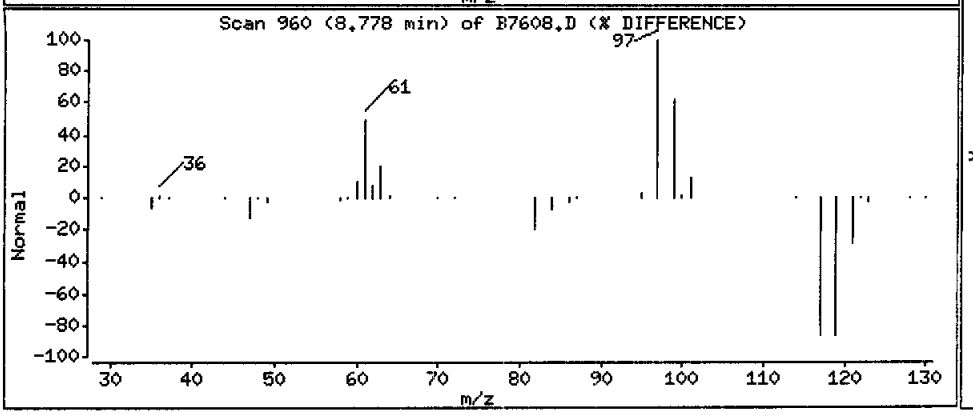
64 Carbon Tetrachloride

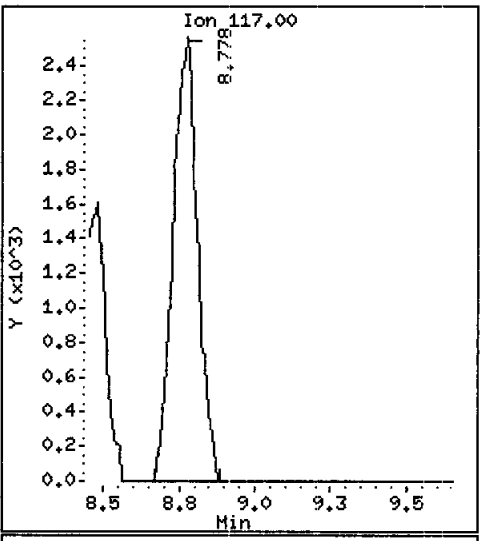
Concentration: 1.224 ppbv

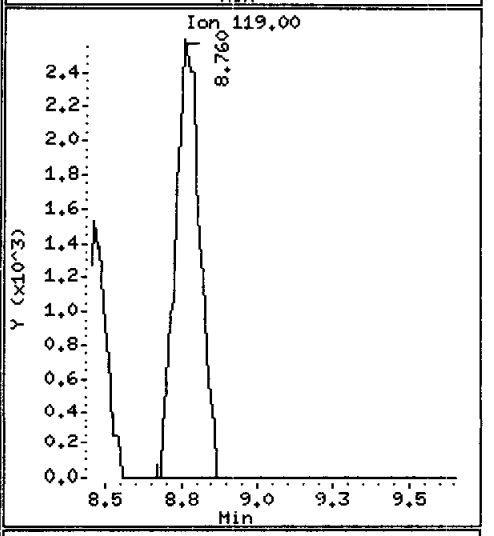


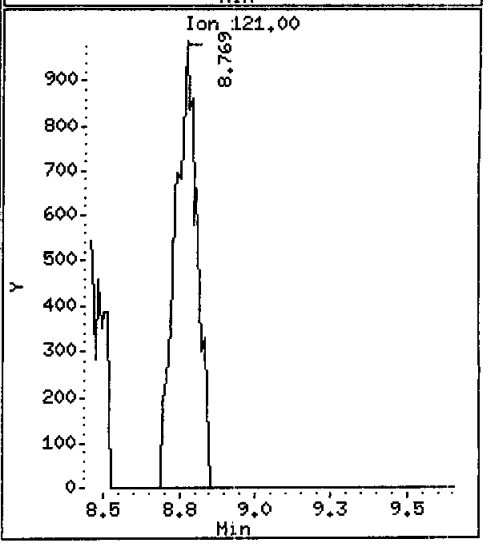












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

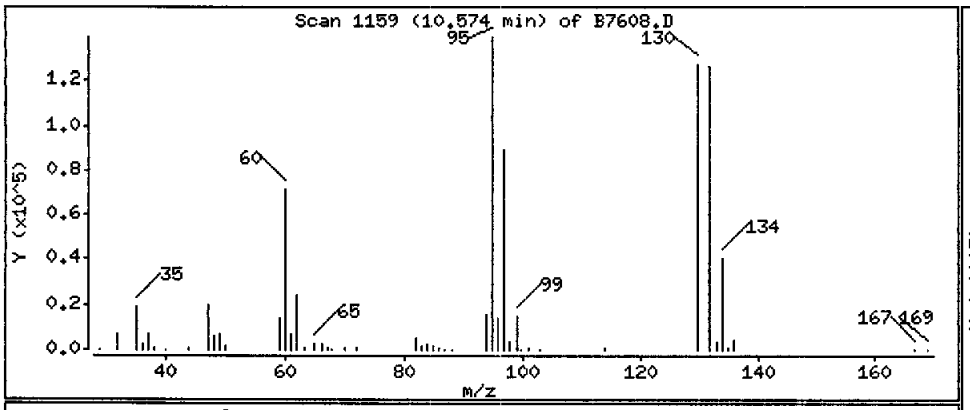
Operator: DLK

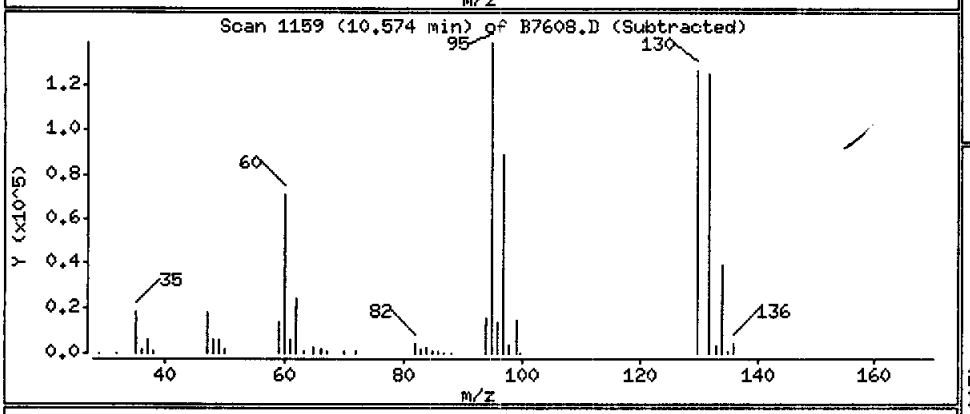
Column phase: J&W DB-624

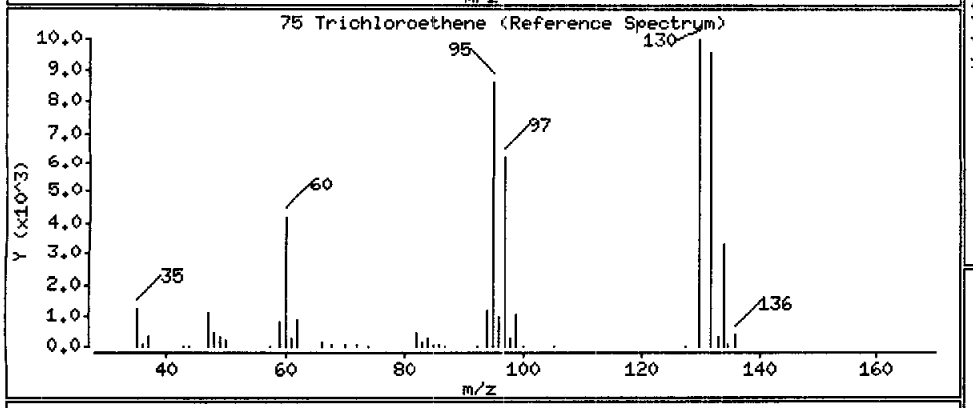
Column diameter: 0.53

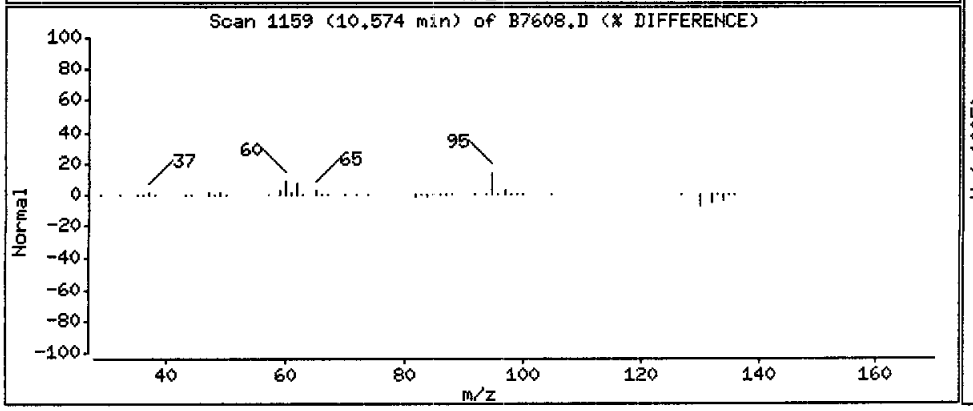
75 Trichloroethene

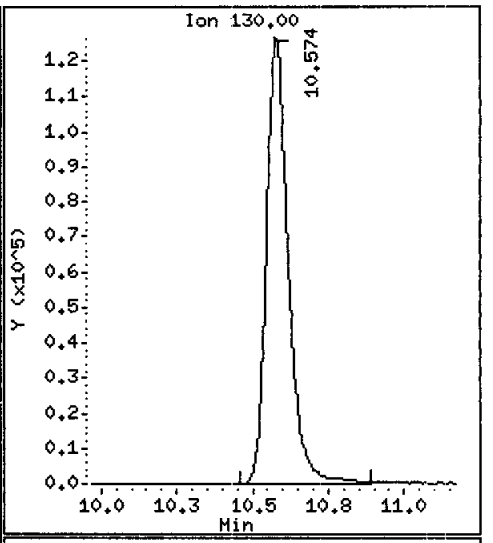
Concentration: 55.27 ppbv

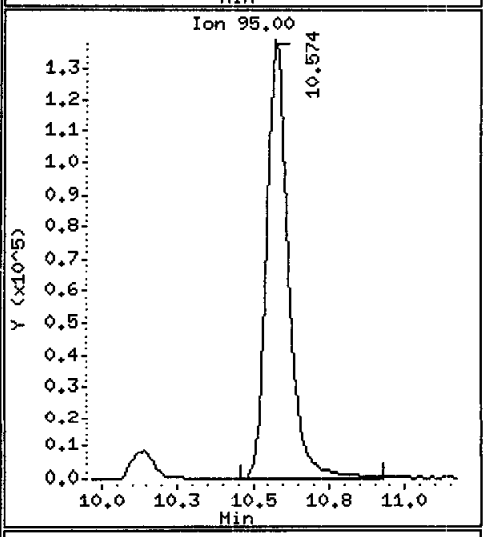


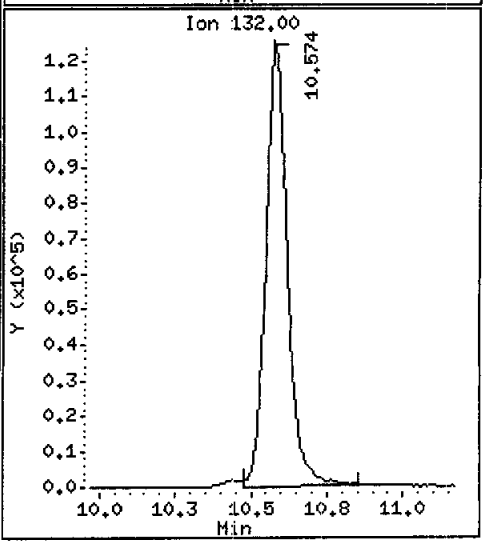












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

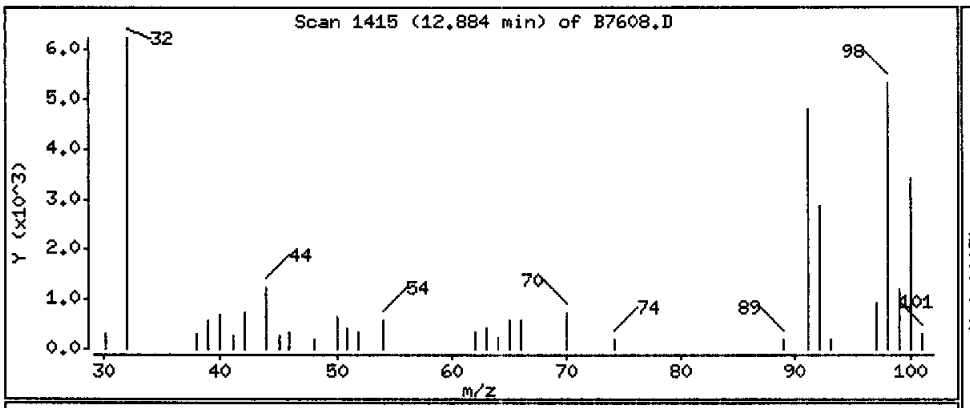
Operator: DLK

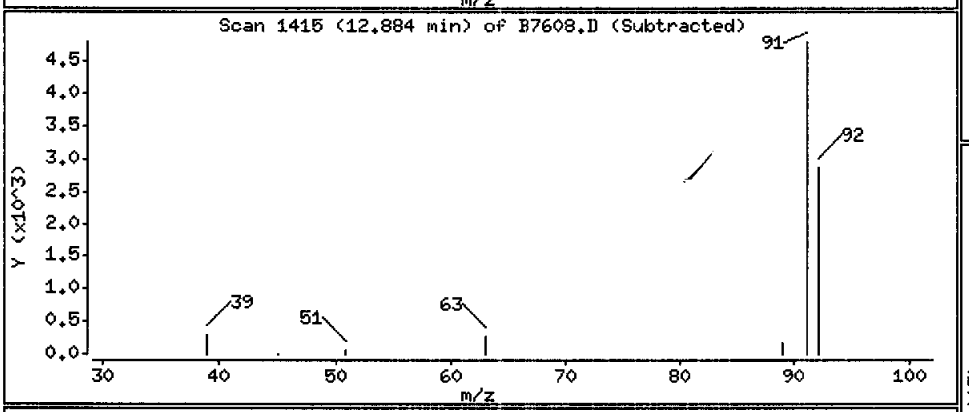
Column phase: J&W DB-624

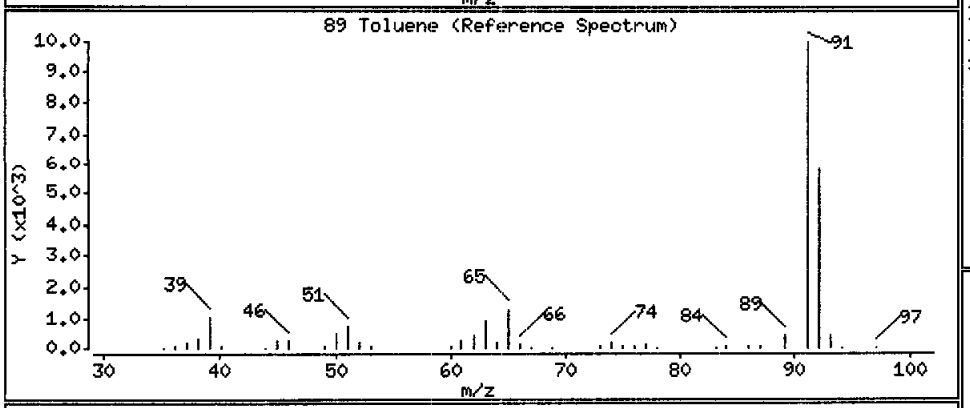
Column diameter: 0.53

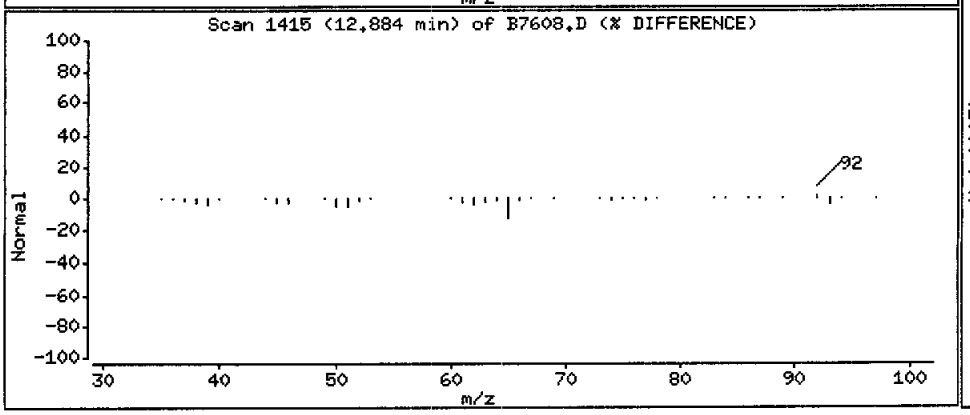
89 Toluene

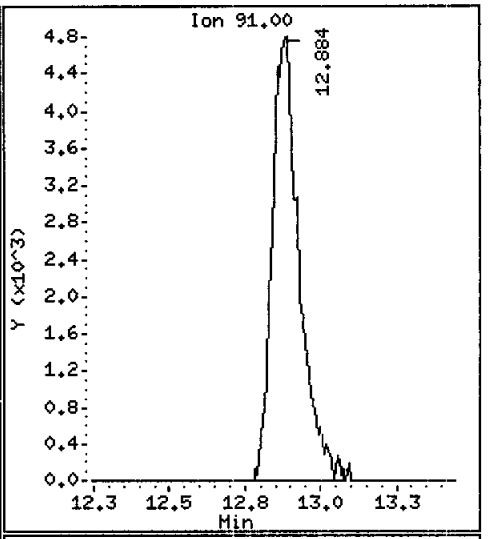
Concentration: 1.284 ppbv

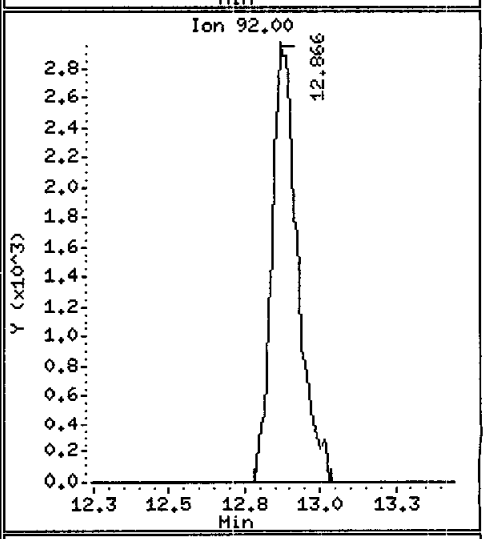


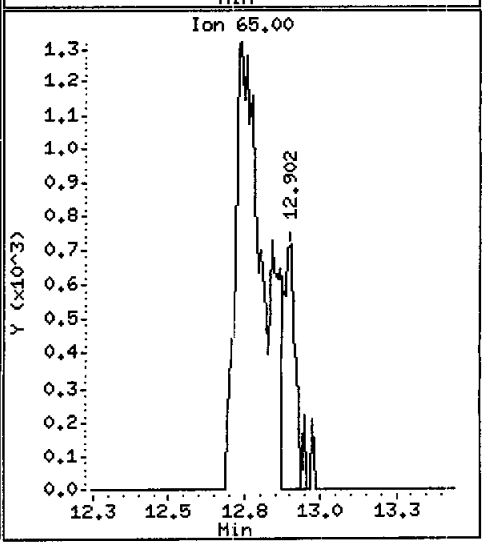












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

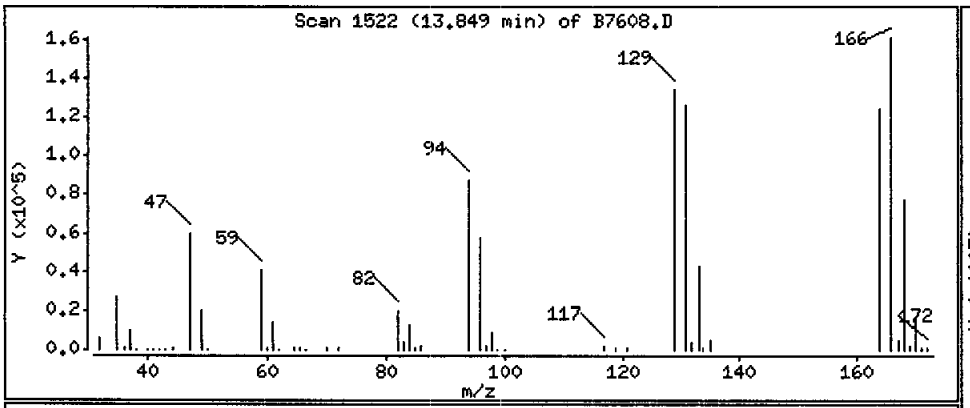
Operator: DLK

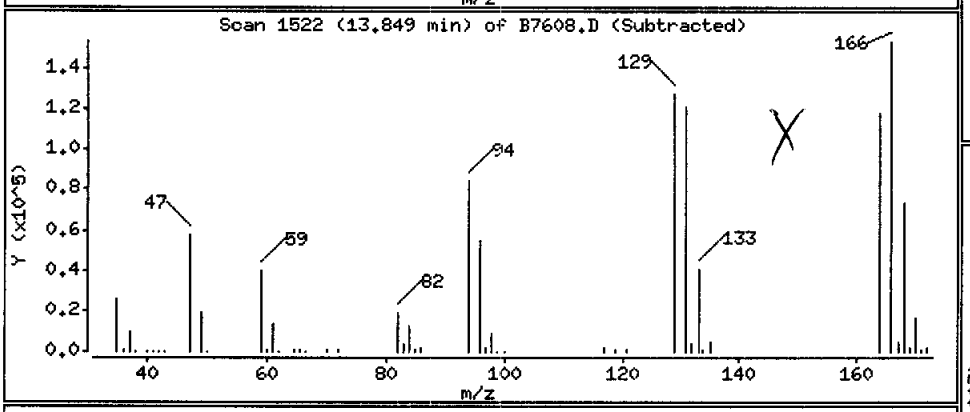
Column phase: J&W DB-624

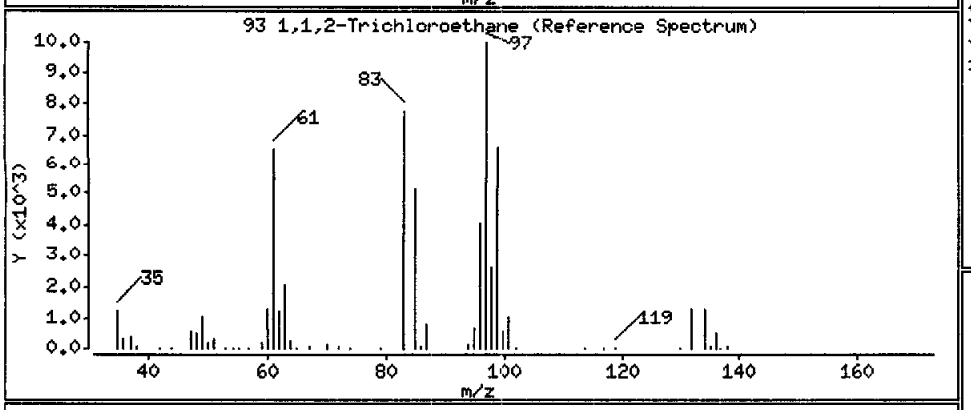
Column diameter: 0.53

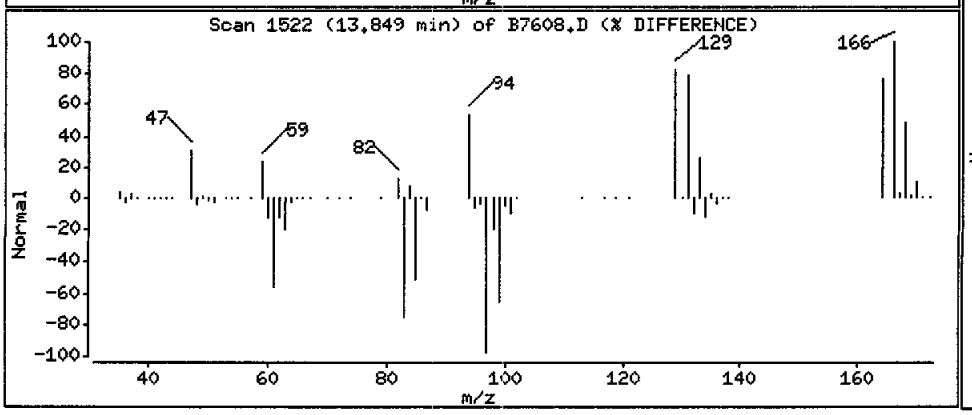
93 1,1,2-Trichloroethane

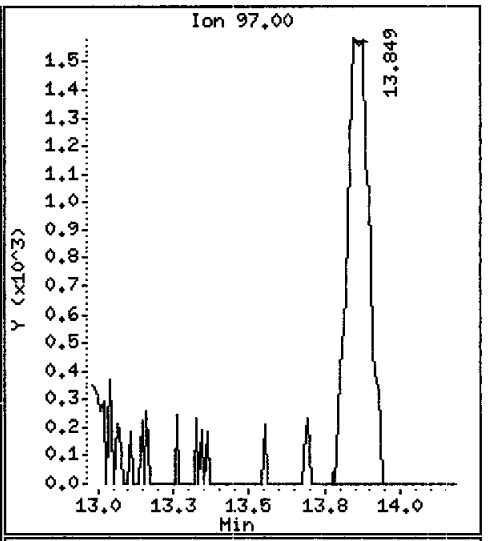
Concentration: 0.7367 ppbv

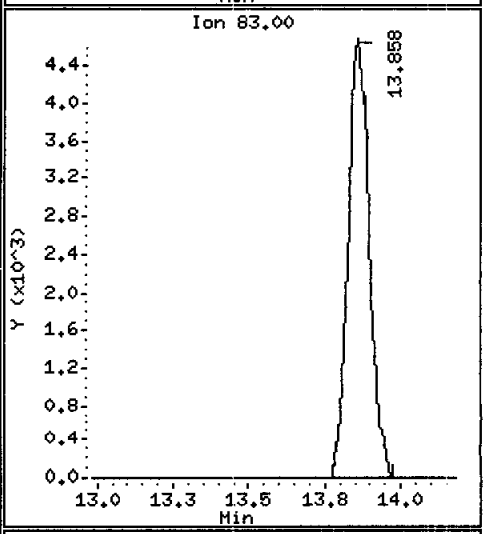


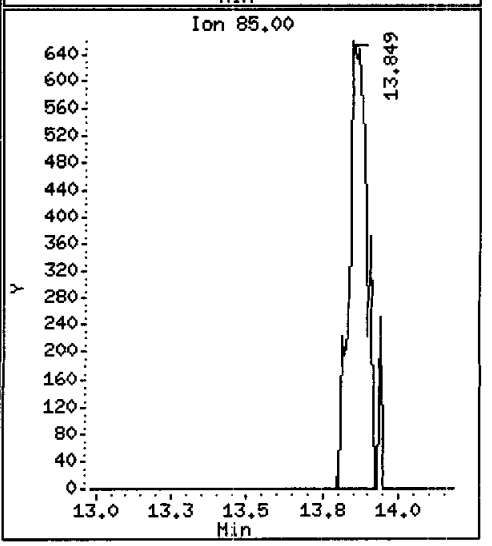












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7608.D

Date : 14-JAN-2005 03:14

Client ID: 066383-001

Instrument: gcmsb.i

Sample Info: G2DJE1AD,066383-001,SANDIA,E5A100227-2

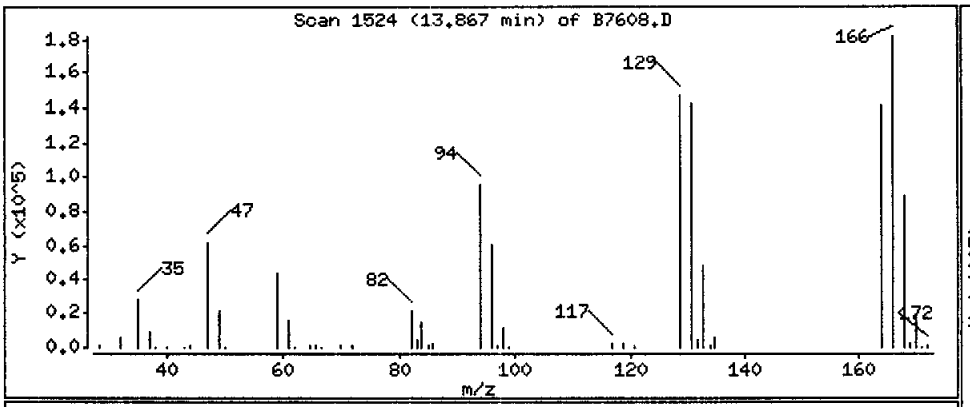
Operator: DLK

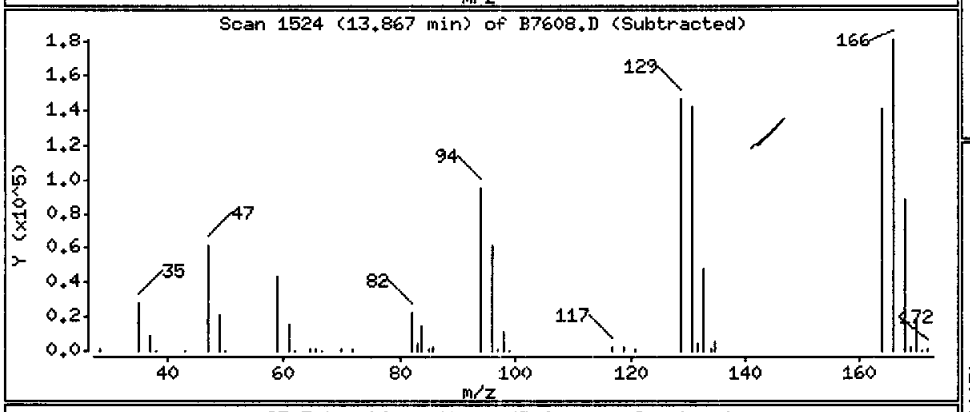
Column phase: J&W DB-624

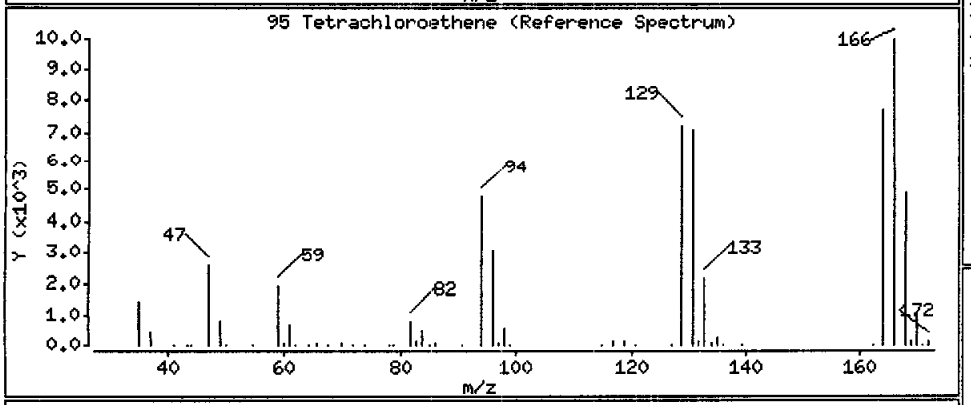
Column diameter: 0.53

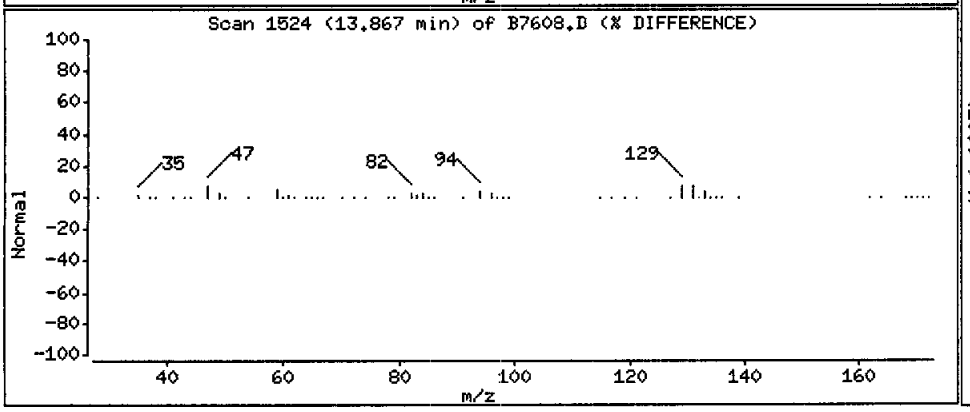
95 Tetrachloroethene

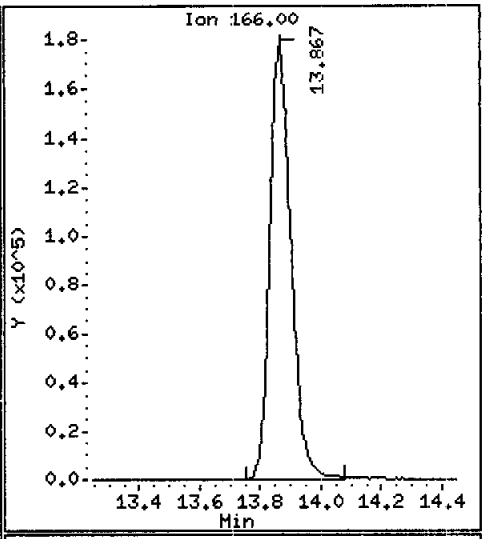
Concentration: 57.91 ppbv

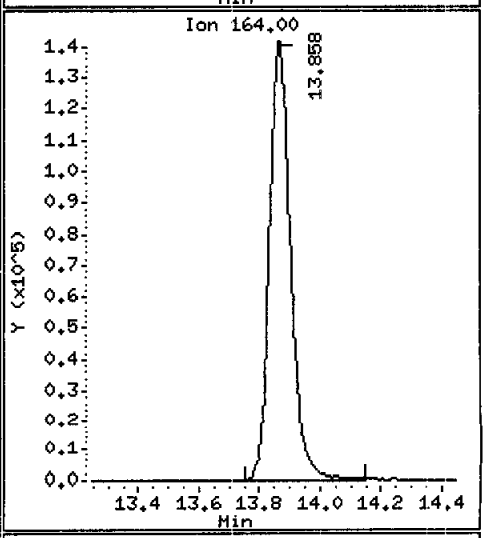


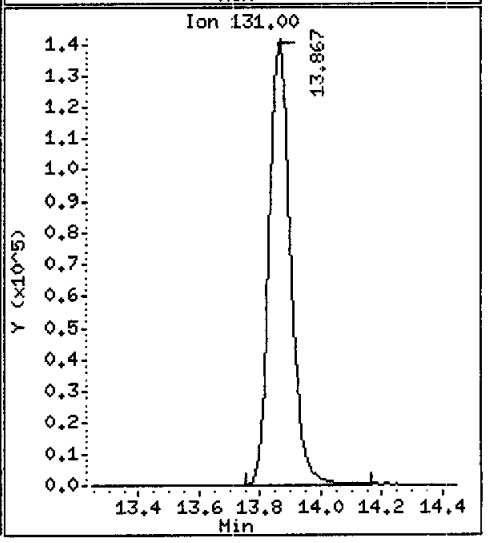












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D
Lab Smp Id: G2DJF1AD Client Smp ID: 066384-001
Inj Date : 14-JAN-2005 03:49
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DJF1AD,066384-001,SANDIA,E5A100227-3
Misc Info : 24.1,12.6,500,957,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.100	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	957.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.125	2.115	(0.256)	3626893	140.760	140.7
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.350	2.350	(0.283)	140709	6.71588	6.711
8 Chloromethane	52	2.134	2.386	(0.257)	1559	1.36310	1.362(aQ)
21 Trichlorofluoromethane (F11)	101	3.722	3.730	(0.448)	185702	7.14880	7.144
28 1,1-Dichloroethene	61	4.669	4.659	(0.562)	73811	5.35694	5.353
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.714	4.713	(0.568)	1655640	55.4726	55.43
31 Acetone	58	4.696	4.822	(0.565)	4983	2.55128	2.550(a)
44 1,1-Dichloroethane	63	6.835	6.825	(0.823)	12291	0.81408	0.8135(a)
* 58 Bromochloromethane	49	8.305	8.295	(1.000)	610432	50.0000	
60 Chloroform	83	8.468	8.458	(1.020)	209450	10.7848	10.78
61 1,1,1-Trichloroethane	97	8.765	8.756	(1.055)	15746	0.81101	0.8105(a)
$ 66 1,2-Dichloroethane-d4	65	9.325	9.315	(0.920)	515389	46.9531	46.92
68 Benzene	78	9.433	9.414	(0.931)	19206	1.05526	1.054(a)
* 73 1,4-Difluorobenzene	114	10.137	10.118	(1.000)	1337543	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
75 Trichloroethene	130	10.588	10.569	(1.045)	162422	13.9075	13.90
$ 88 Toluene-d8	100	12.744	12.726	(1.257)	691485	49.3716	49.34
89 Toluene	91	12.862	12.843	(1.269)	72559	3.08092	3.079
95 Tetrachloroethene	166	13.872	13.844	(0.901)	202479	13.6754	13.67
* 101 Chlorobenzene-d5	117	15.388	15.369	(1.000)	945694	50.0000	
$ 114 4-Bromofluorobenzene	95	17.644	17.625	(1.147)	730620	43.2484	43.22

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

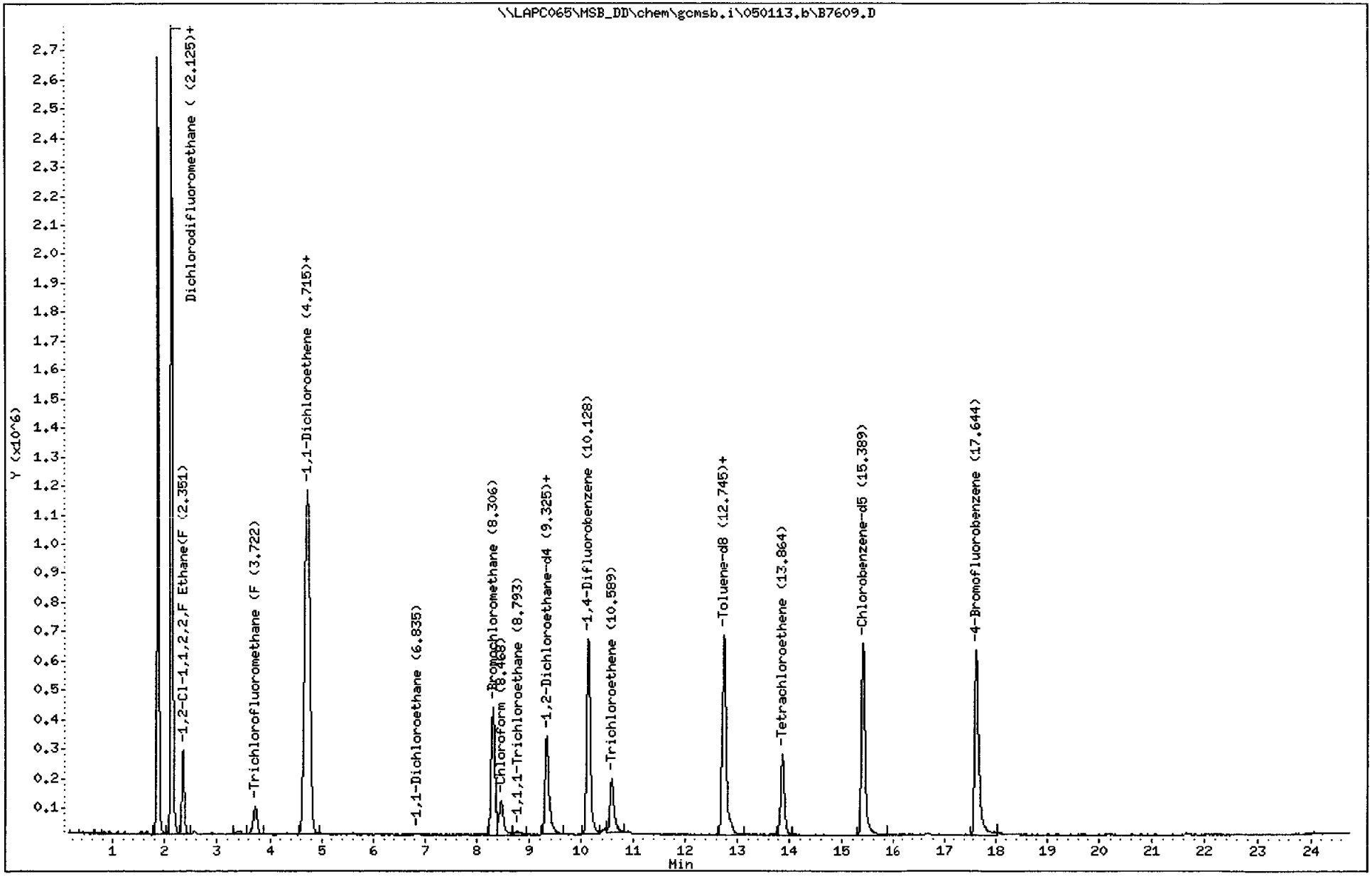
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D
Date : 14-JAN-2005 03:49
Client ID: 066384-001
Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

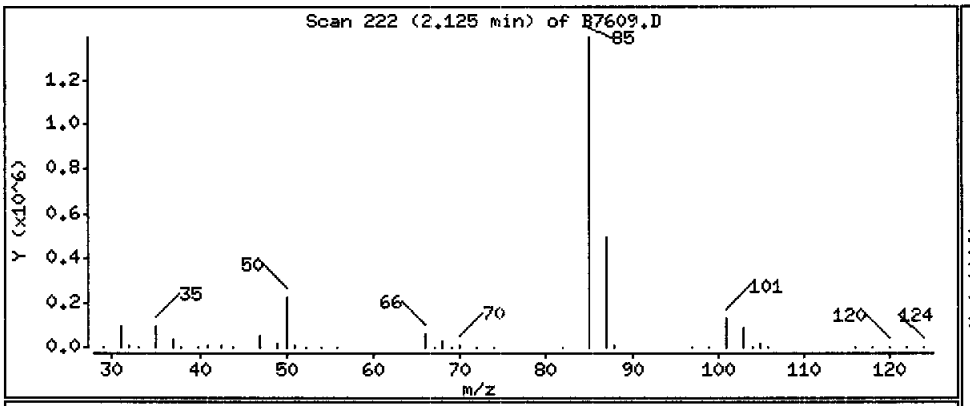
Operator: DLK

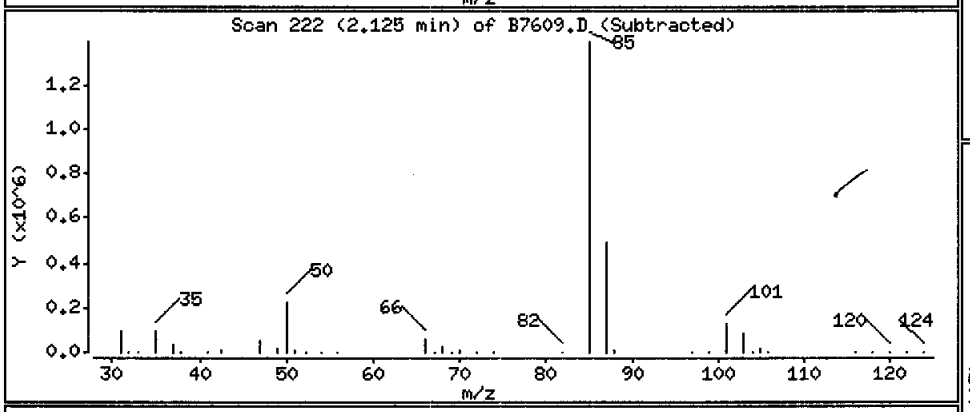
Column phase: J&W DB-624

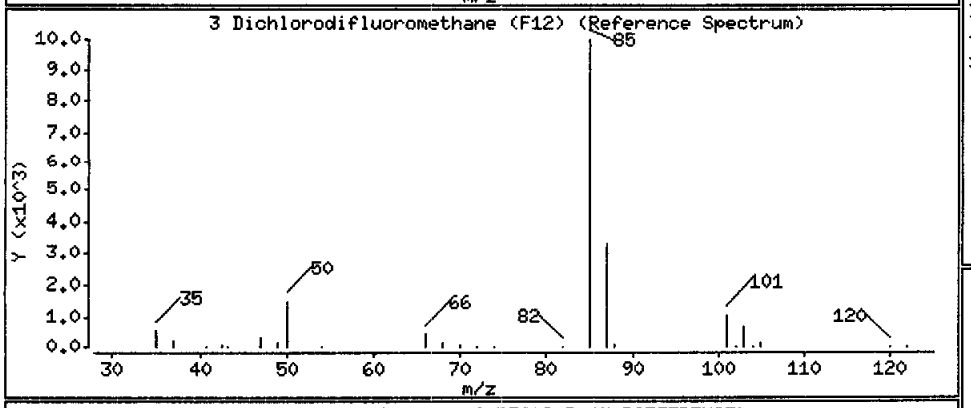
Column diameter: 0.53

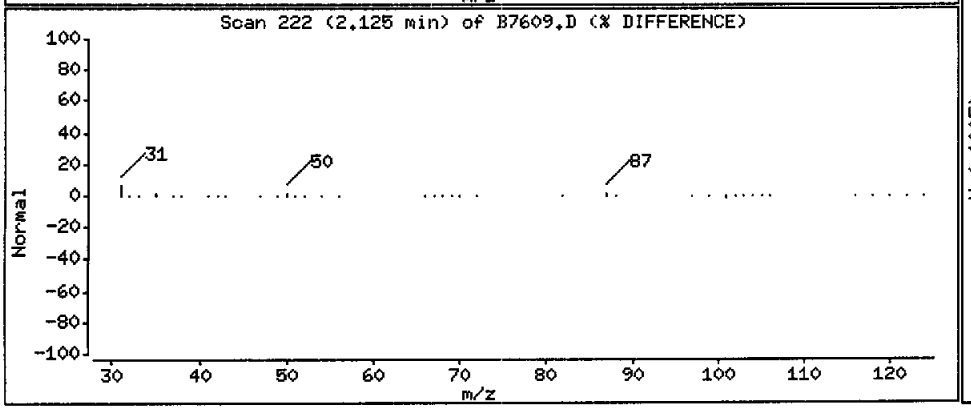
3 Dichlorodifluoromethane (F12)

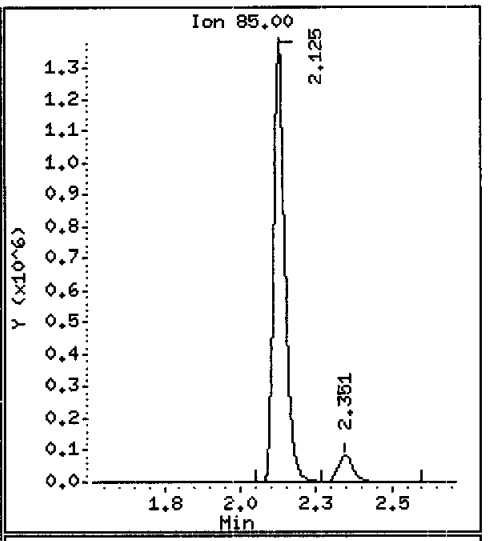
Concentration: 140.7 ppbv

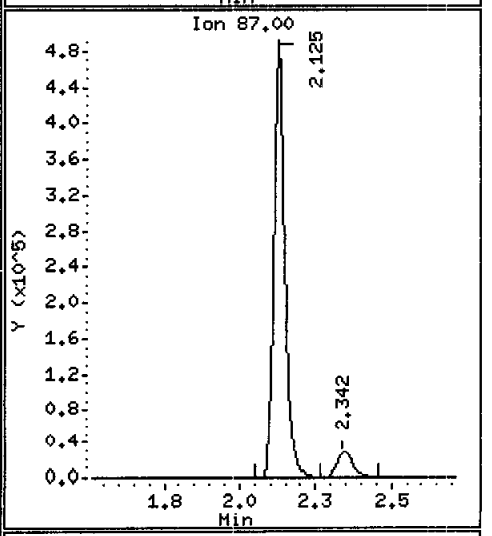


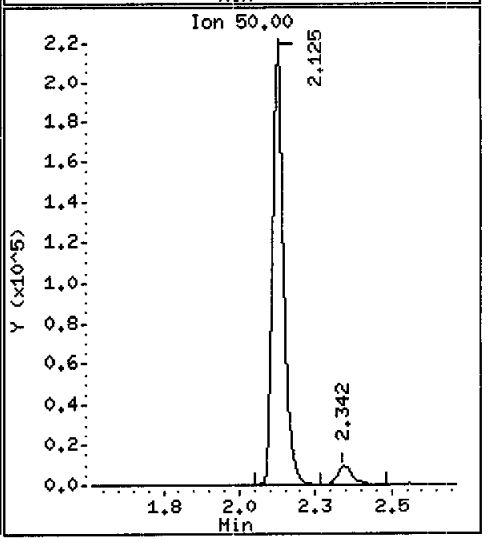












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

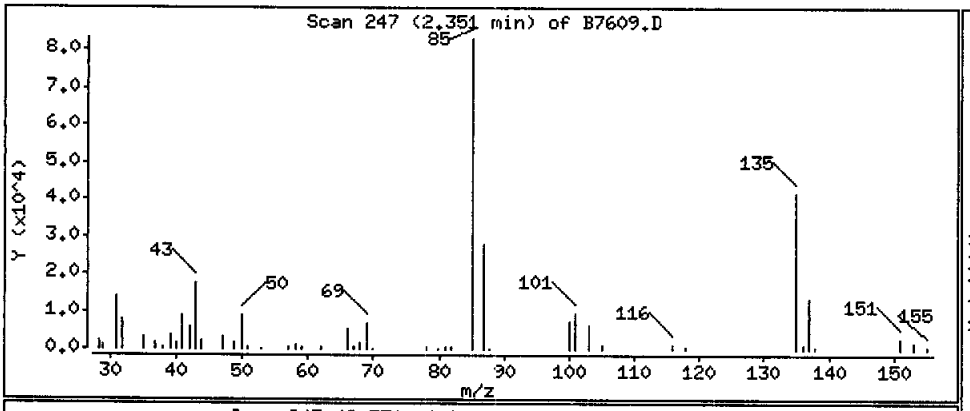
Operator: DLK

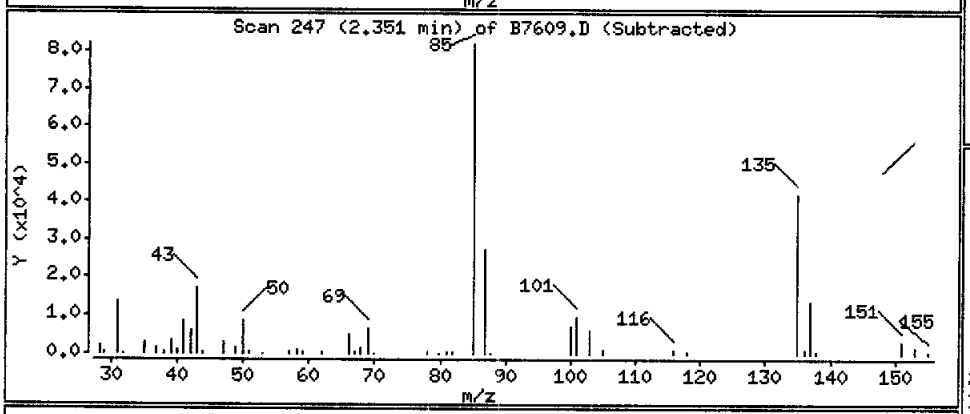
Column phase: J&W DB-624

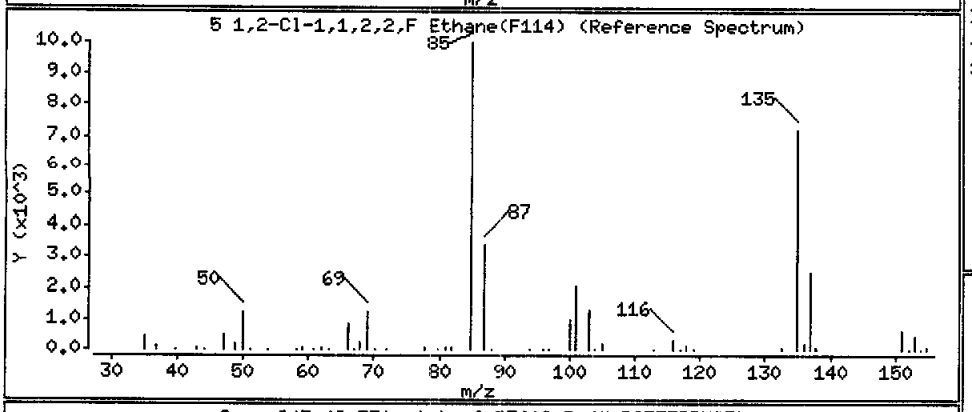
Column diameter: 0.53

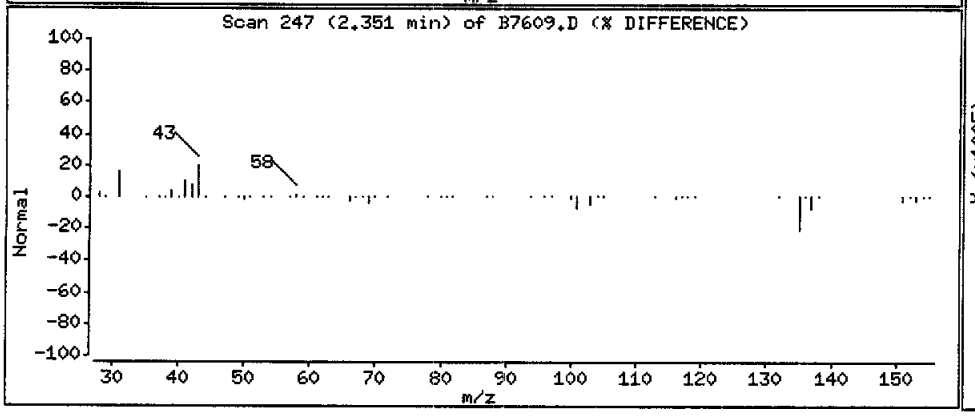
5 1,2-Cl-1,1,2,2,F Ethane(F114)

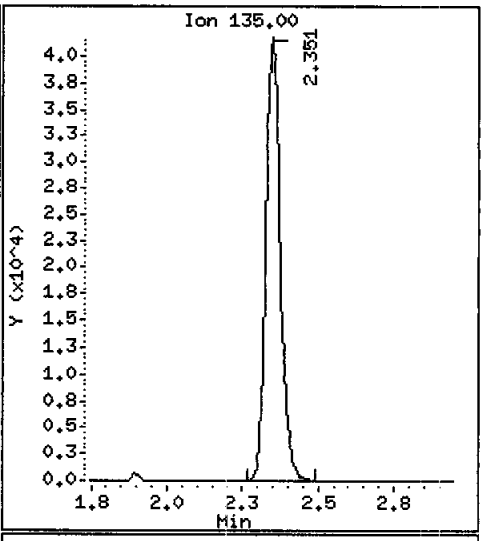
Concentration: 6.711 ppbv

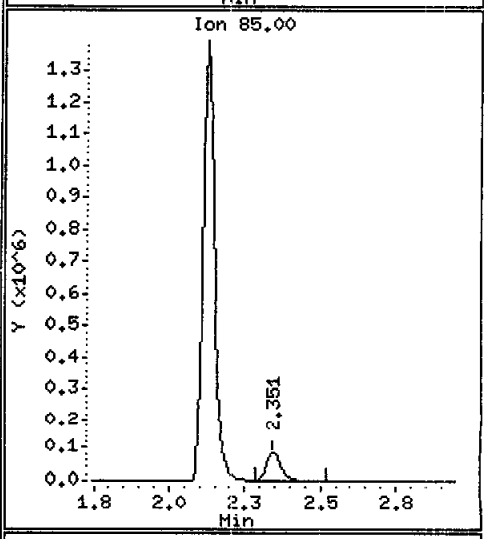


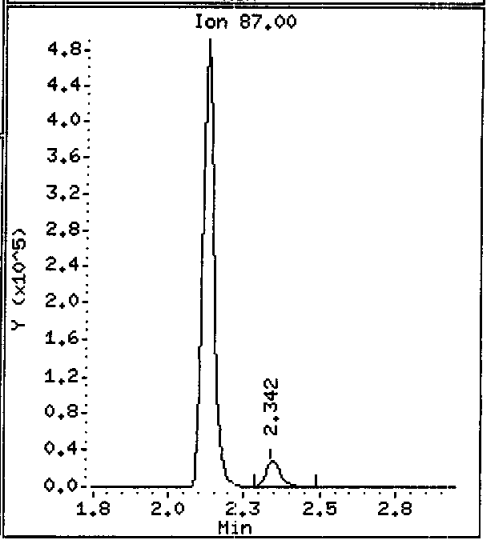












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

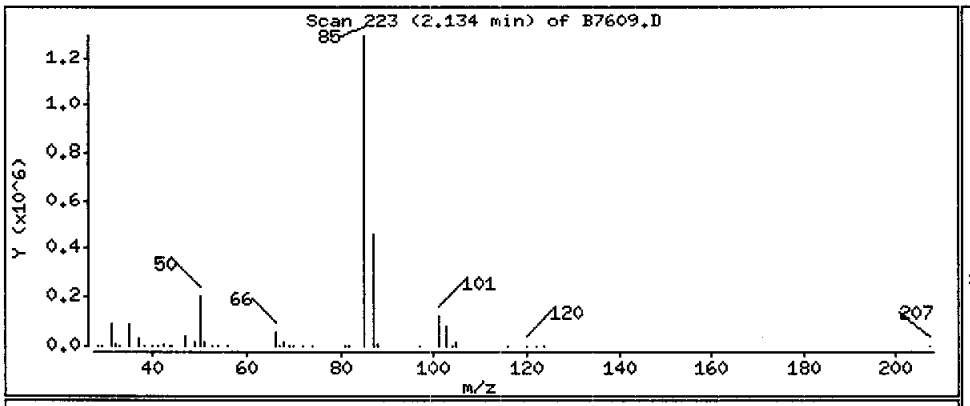
Operator: DLK

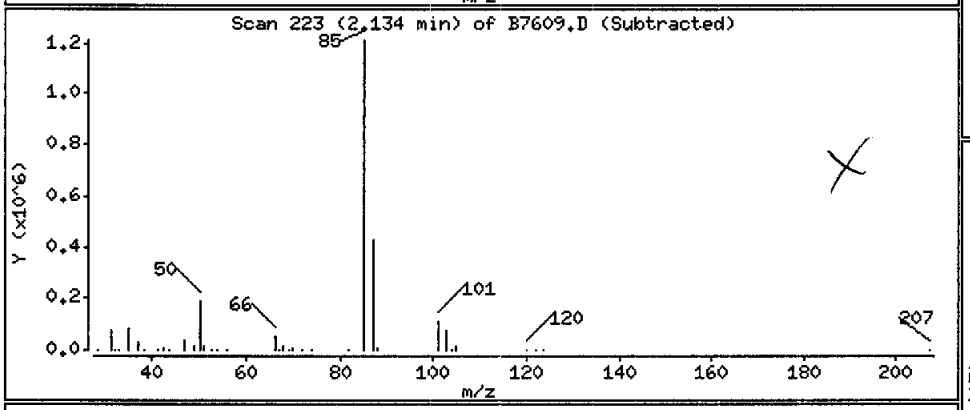
Column phase: J&W DB-624

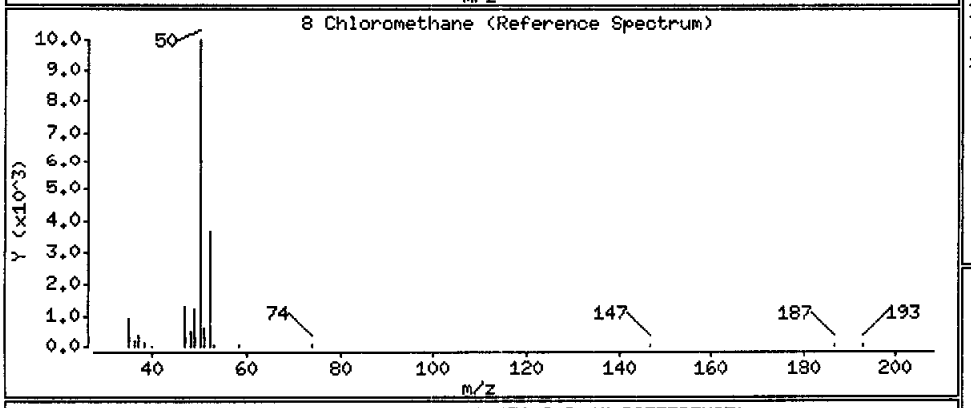
Column diameter: 0.53

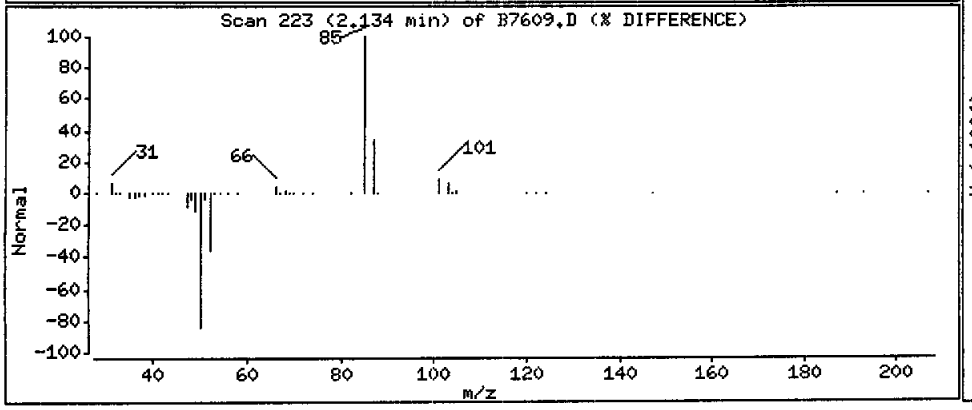
8 Chloromethane

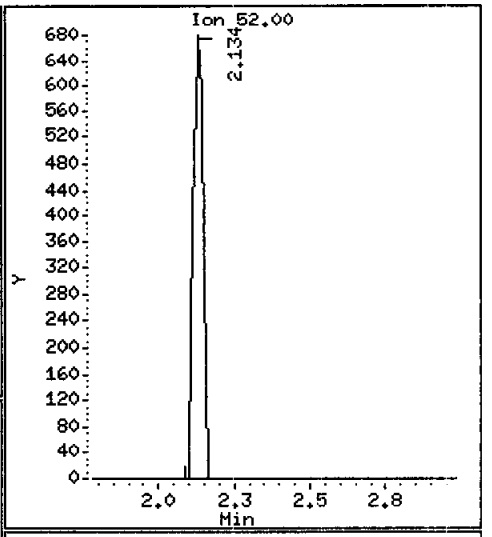
Concentration: 1.362 ppbv

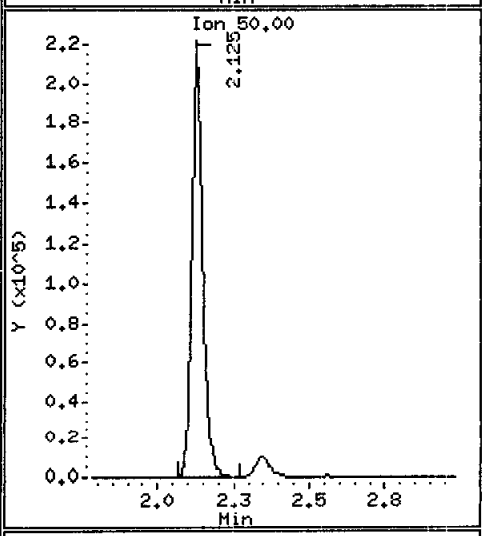


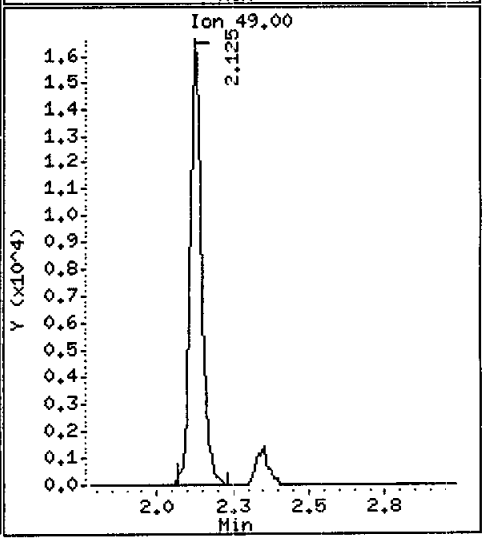












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

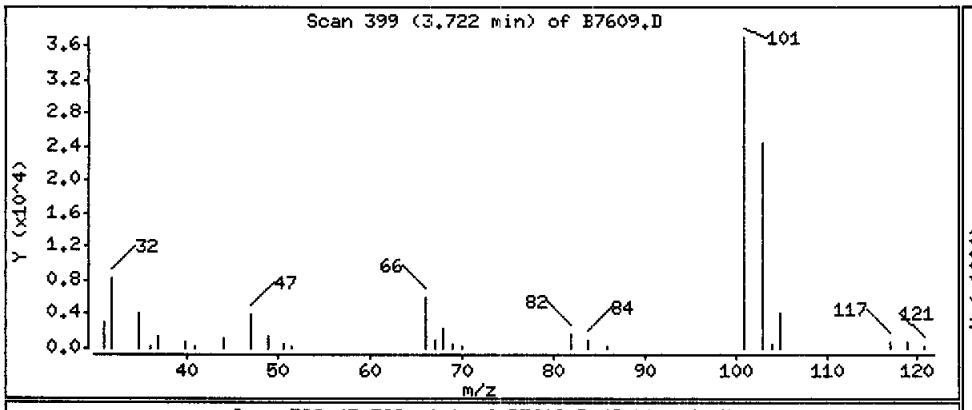
Operator: DLK

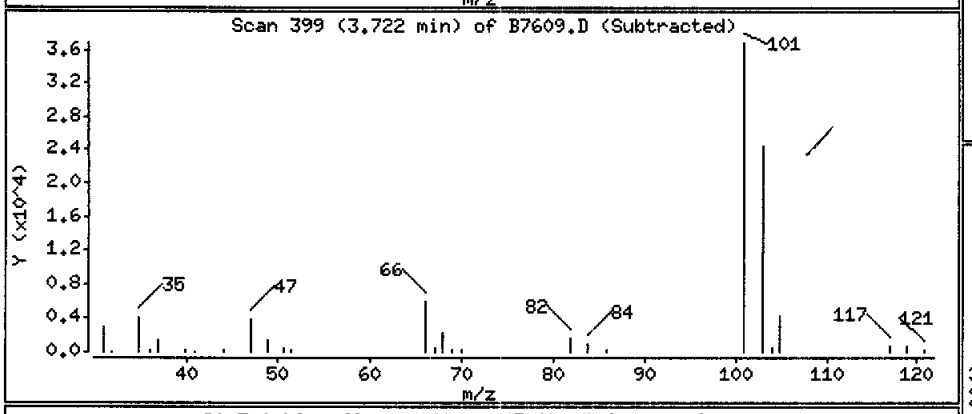
Column phase: J&W DB-624

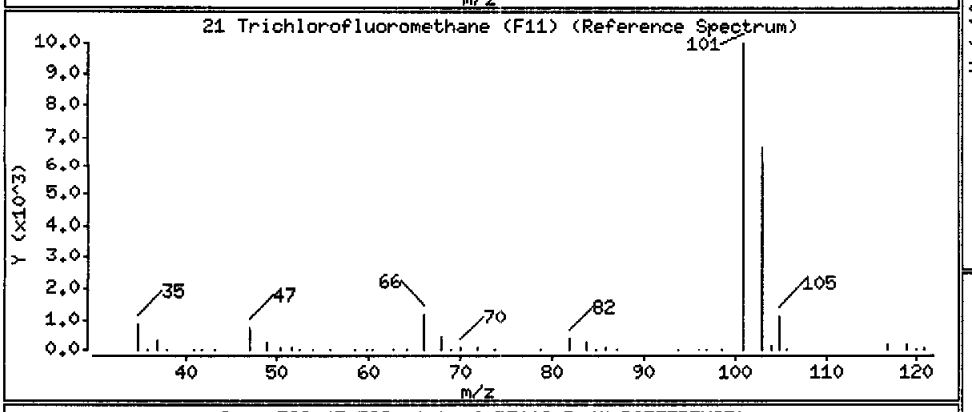
Column diameter: 0.53

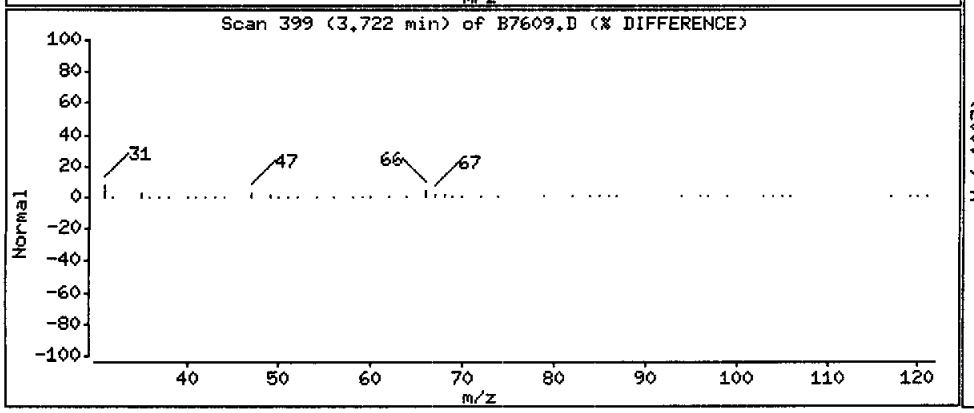
21 Trichlorofluoromethane (F11)

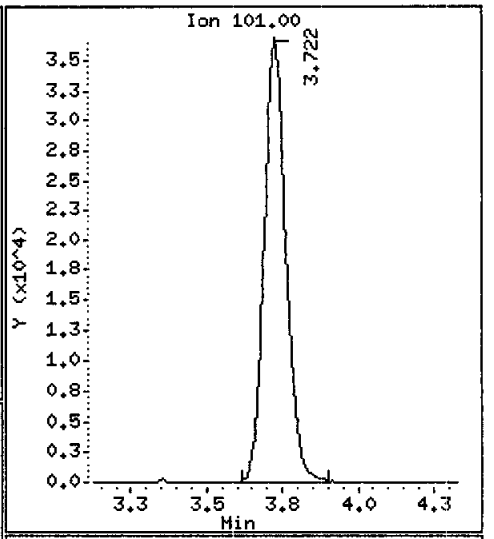
Concentration: 7.144 ppbv

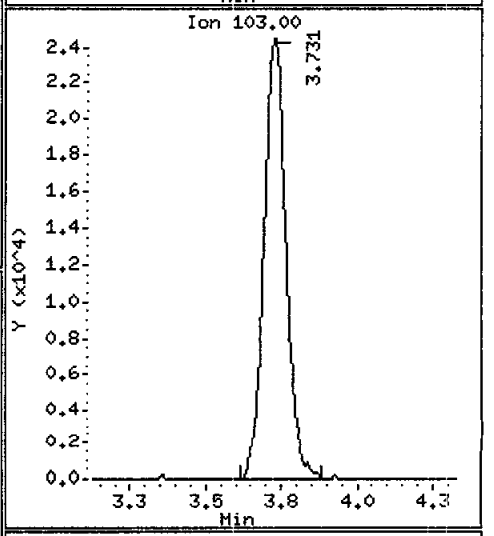


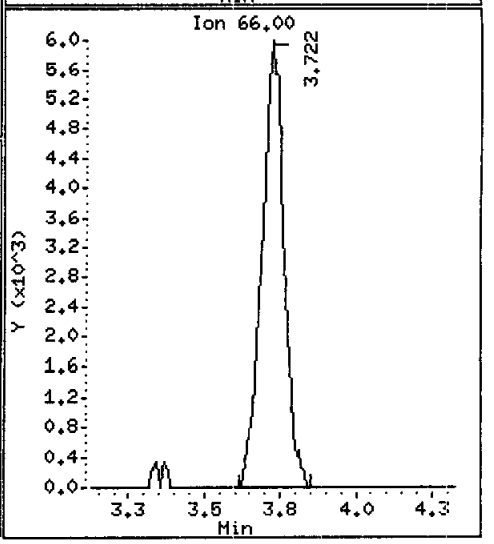












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

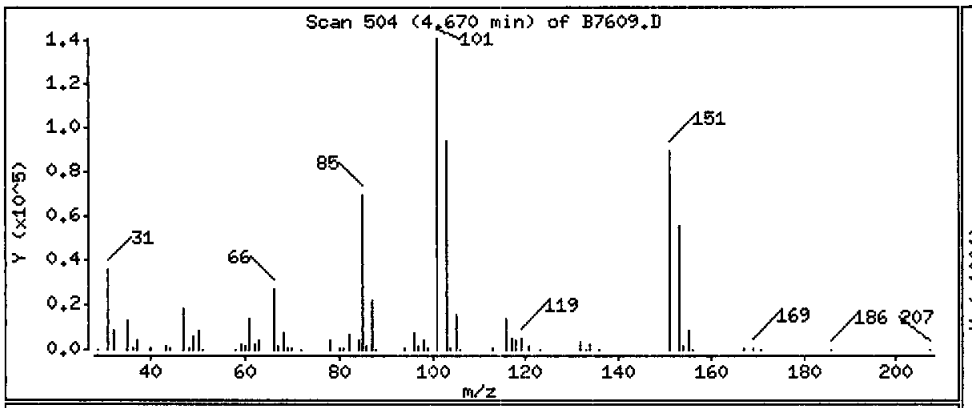
Operator: DLK

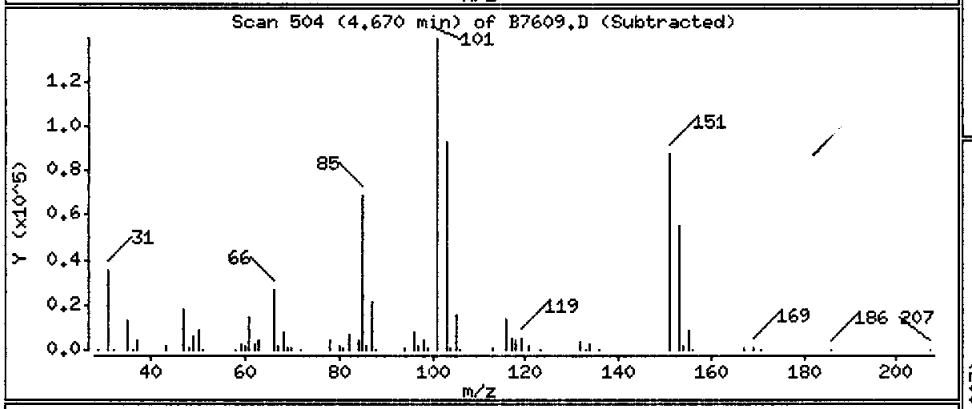
Column phase: J&W DB-624

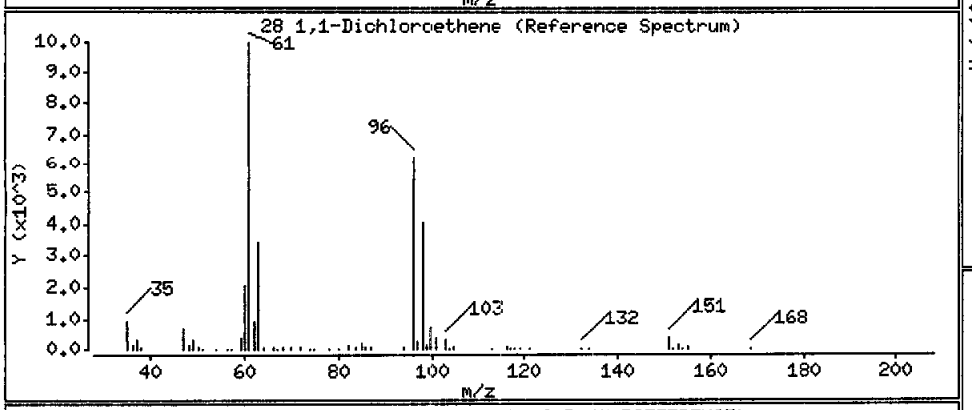
Column diameter: 0.53

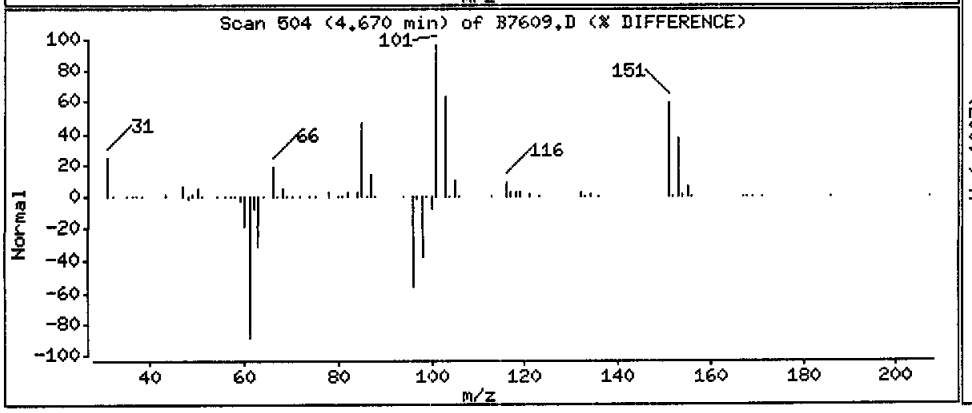
28 1,1-Dichloroethene

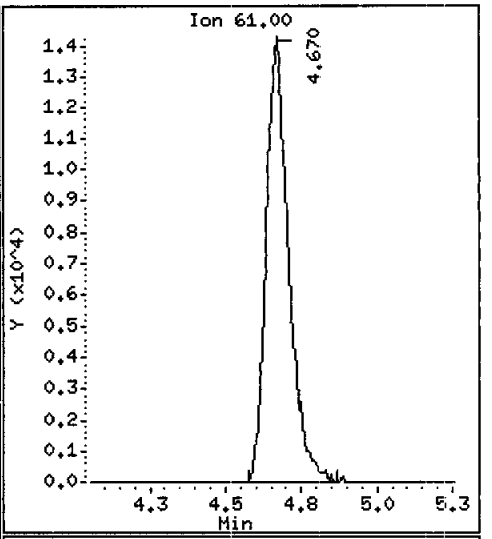
Concentration: 5.353 ppbv

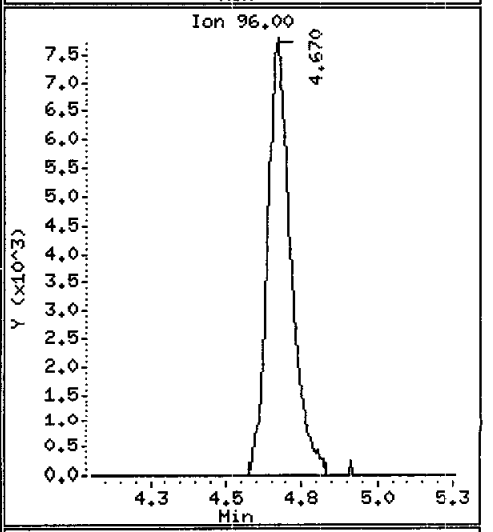


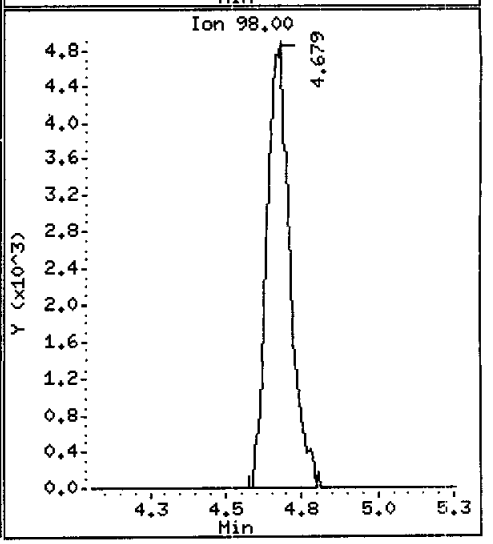












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Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

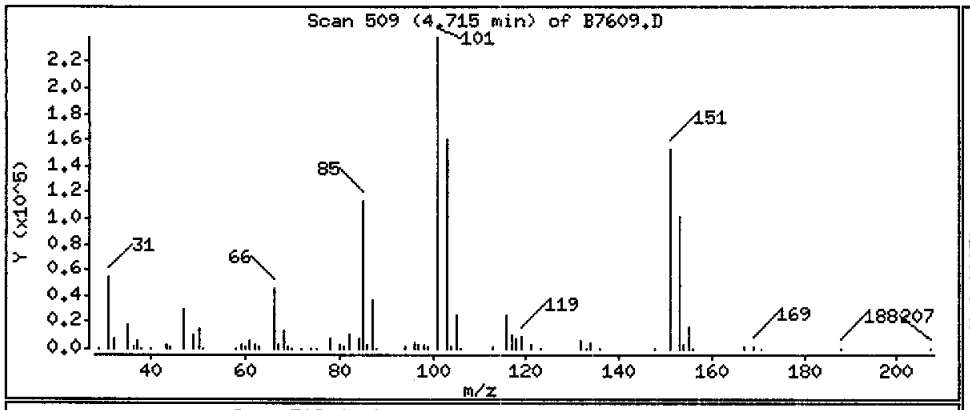
Operator: DLK

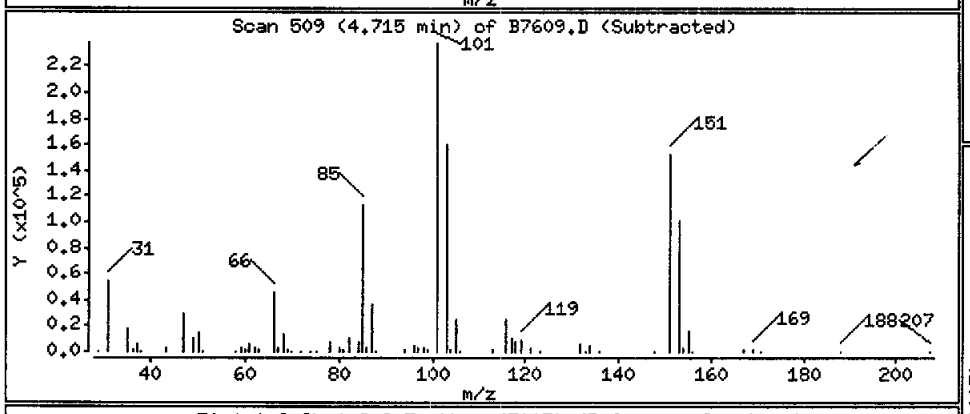
Column phase: J&W DB-624

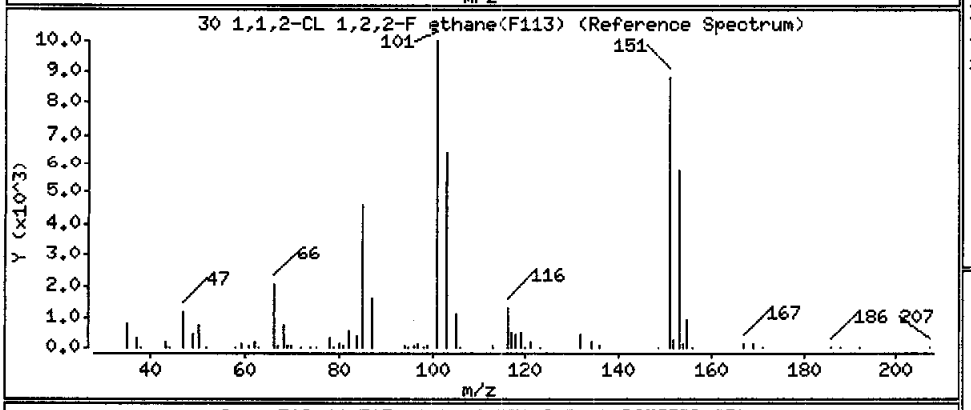
Column diameter: 0.53

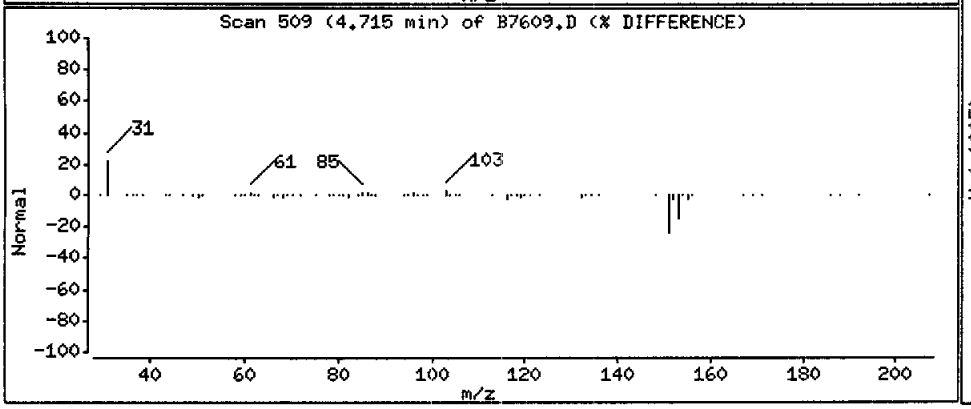
30 1,1,2-CL 1,2,2-F ethane(F113)

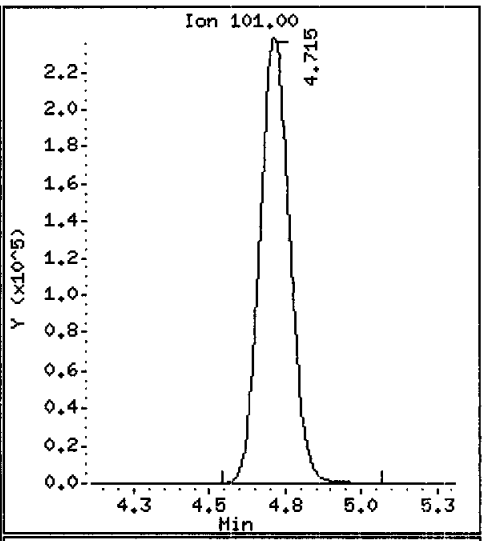
Concentration: 55.43 ppbv

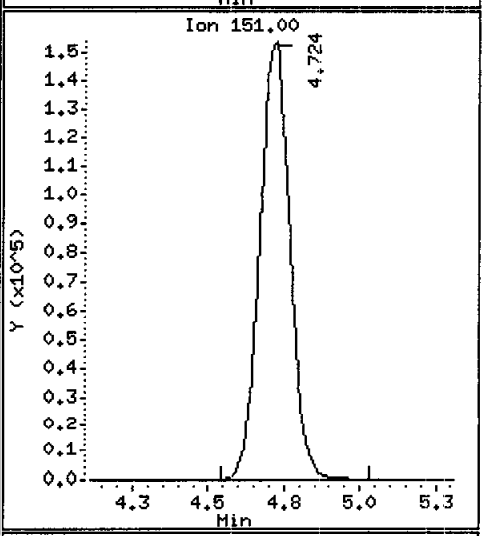


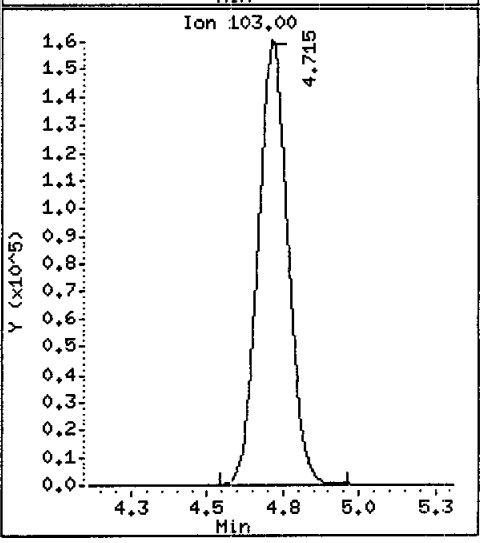












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

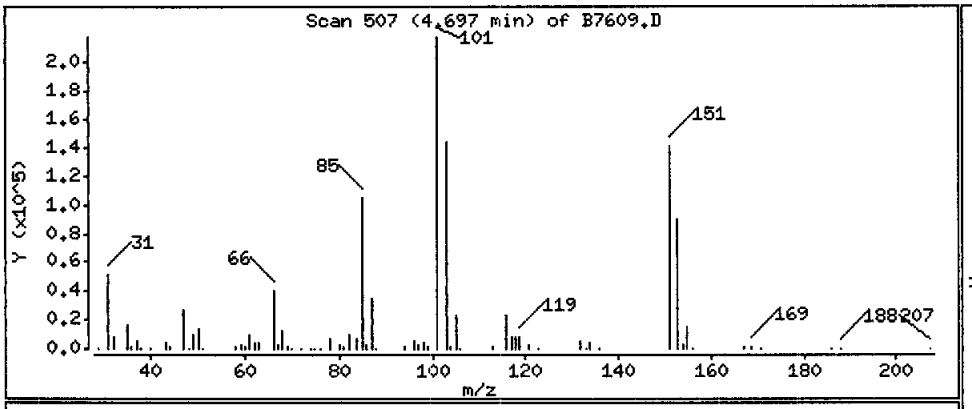
Operator: DLK

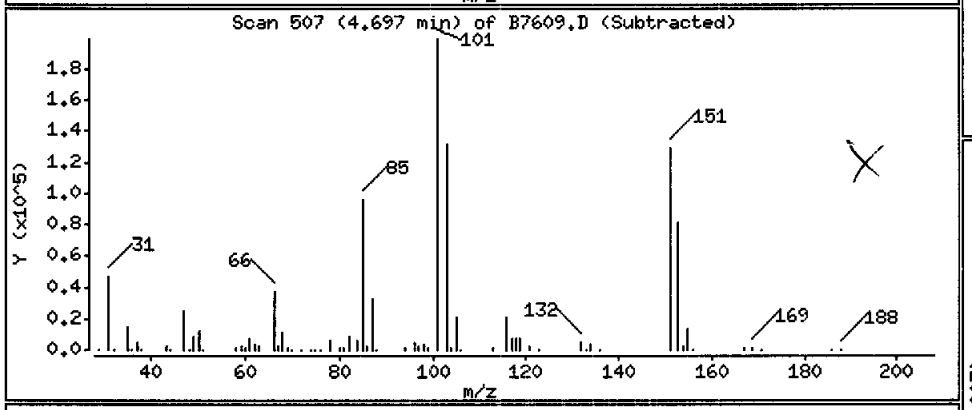
Column phase: J&W DB-624

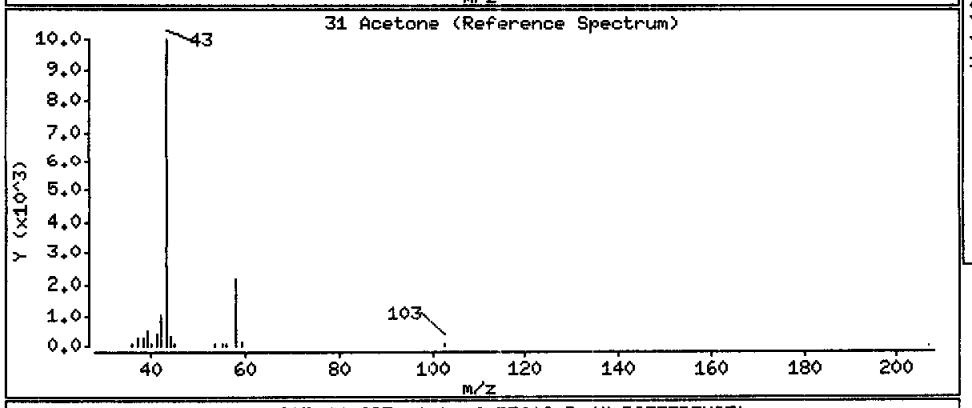
Column diameter: 0.53

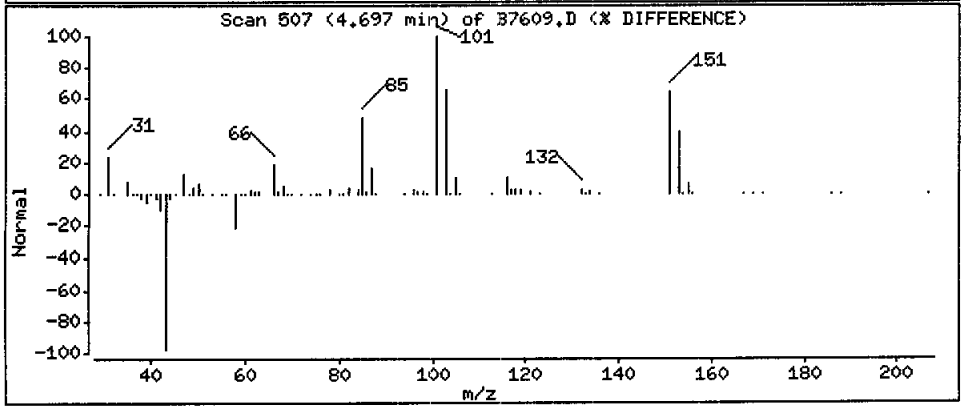
31 Acetone

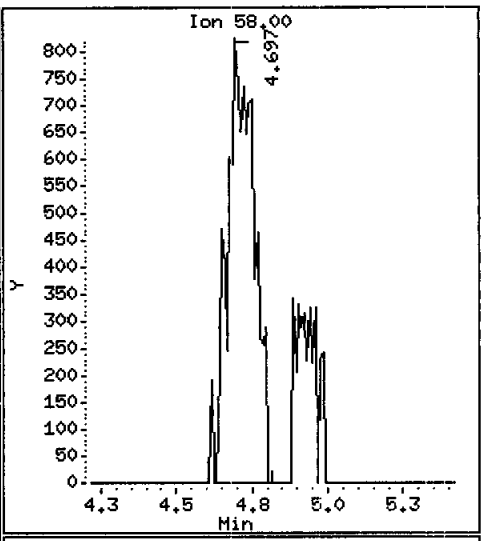
Concentration: 2.550 ppbv

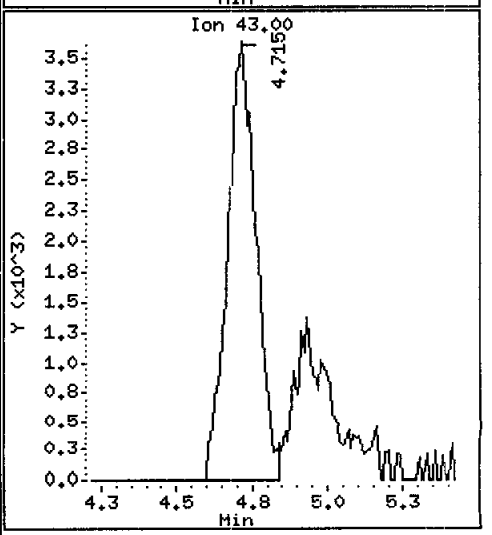












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

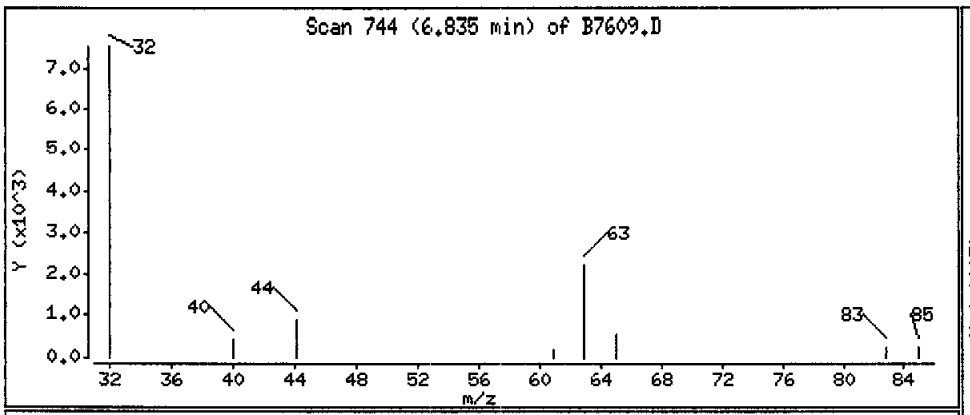
Operator: DLK

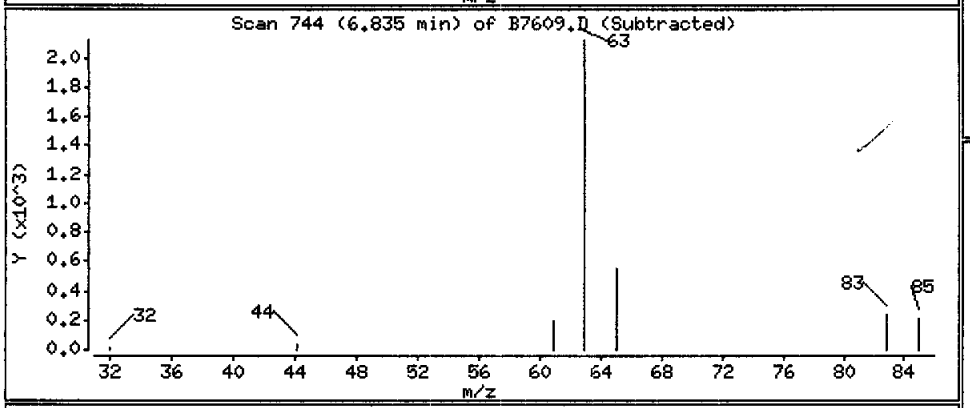
Column phase: J&W DB-624

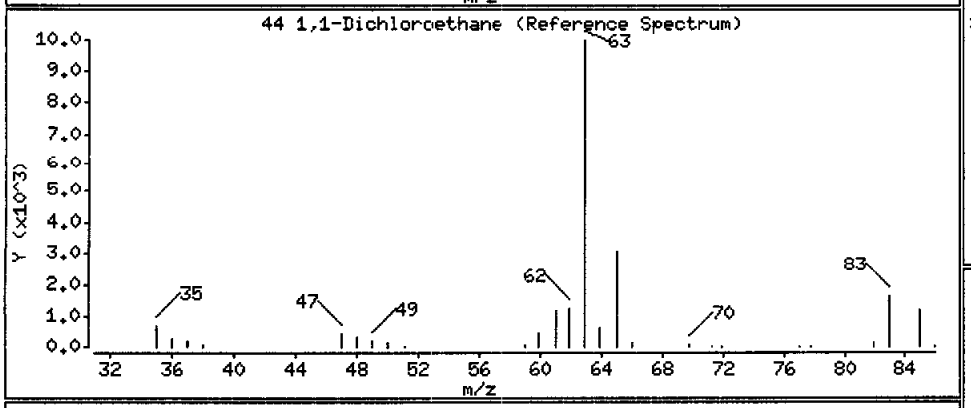
Column diameter: 0.53

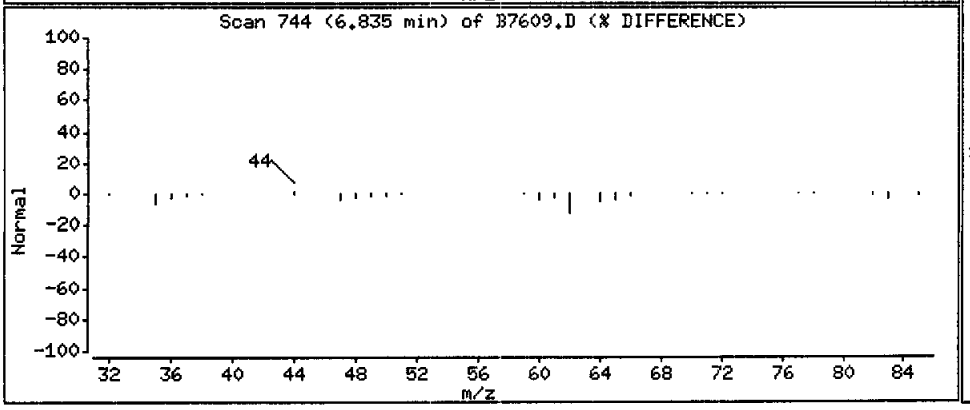
44 1,1-Dichloroethane

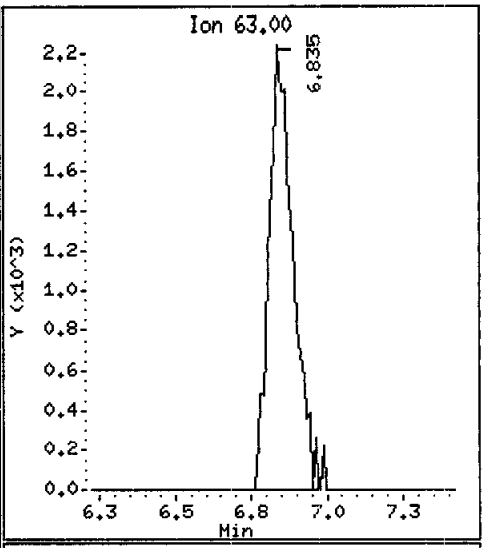
Concentration: 0.8135 ppbv

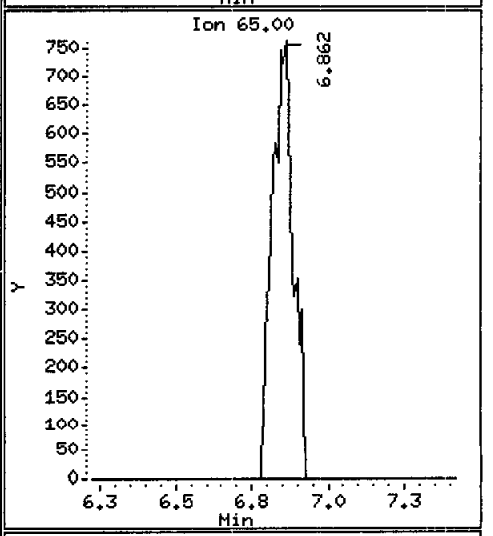


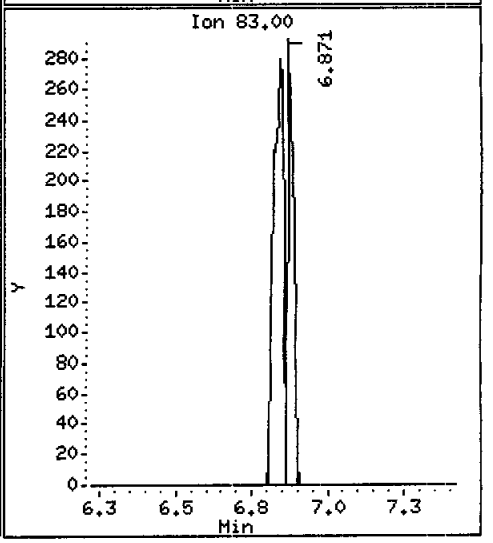












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

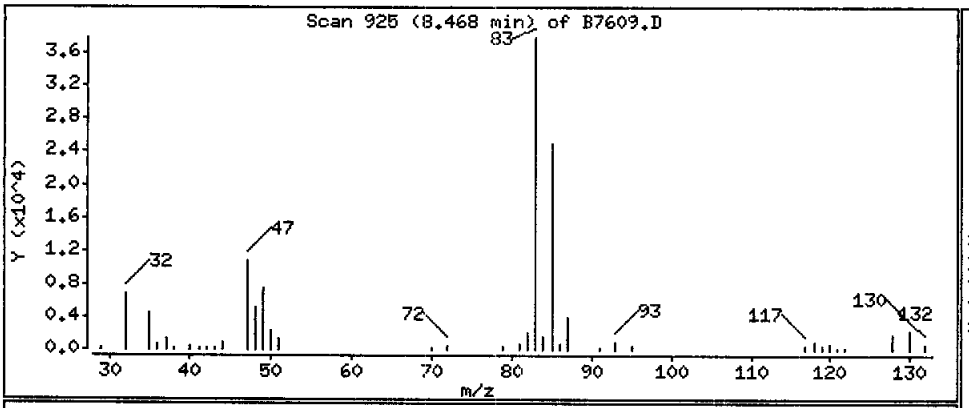
Operator: DLK

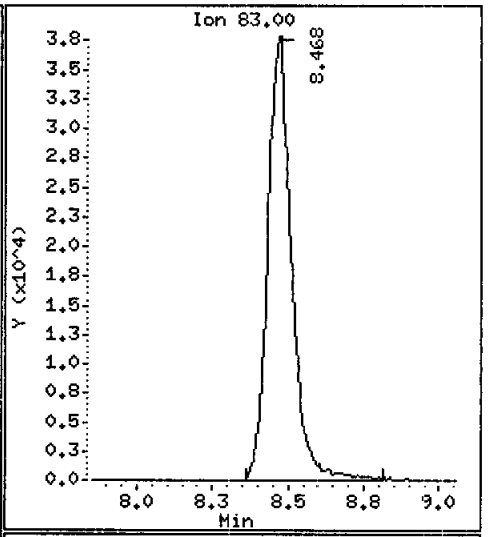
Column phase: J&W DB-624

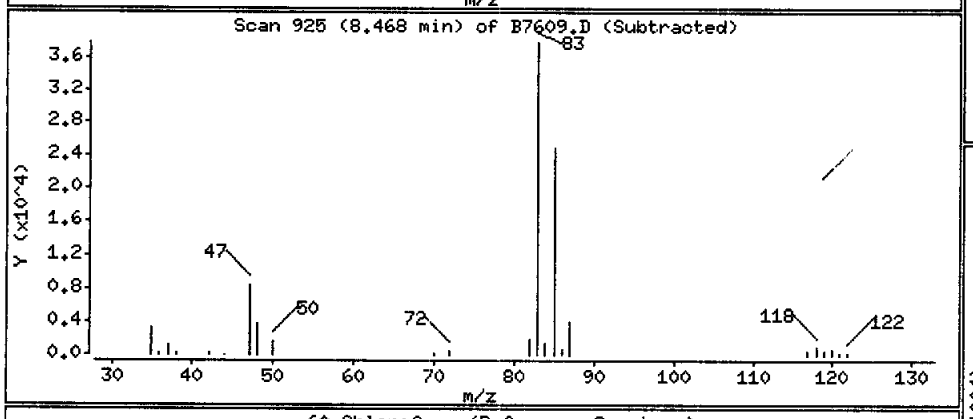
Column diameter: 0.53

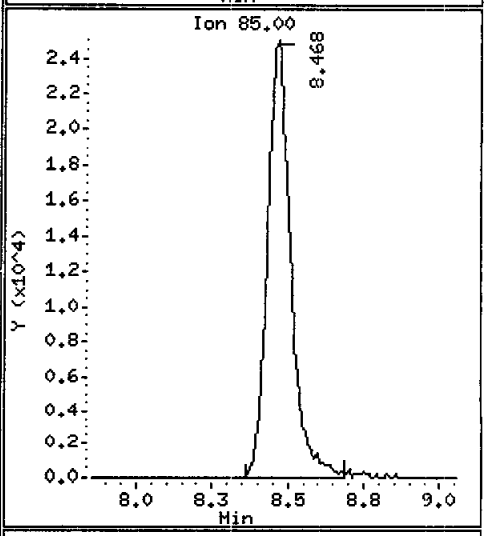
60 Chloroform

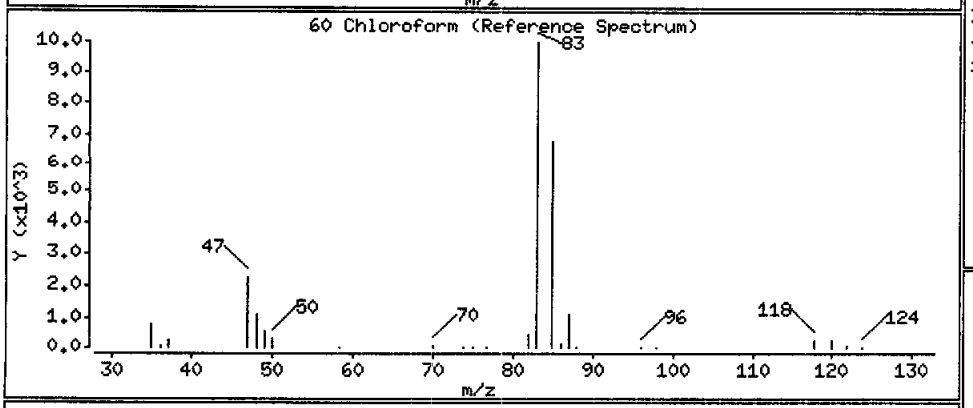
Concentration: 10.78 ppbv

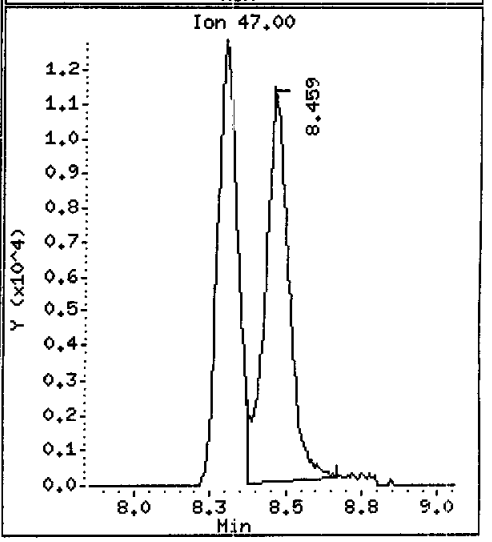


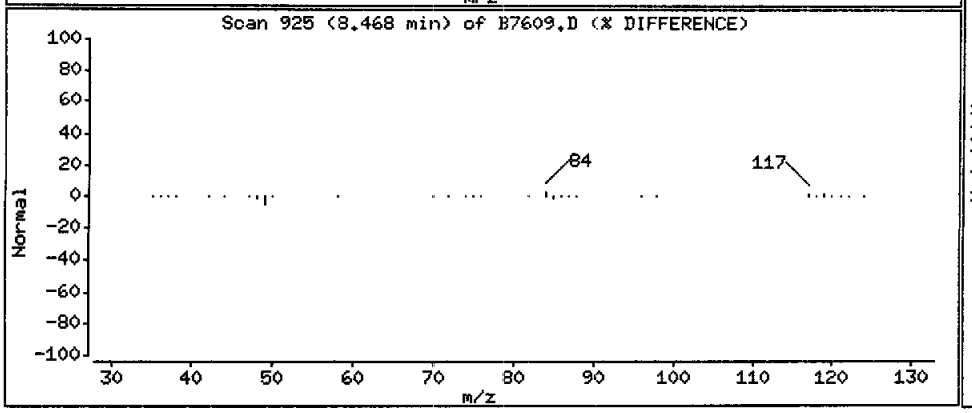












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

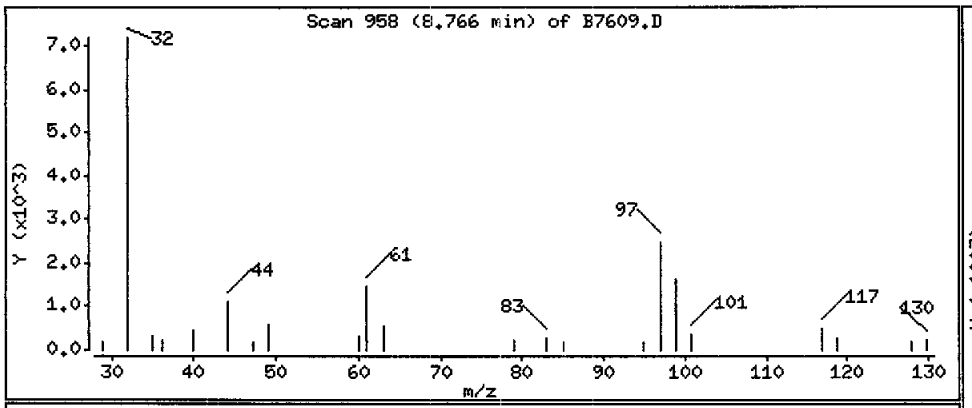
Operator: DLK

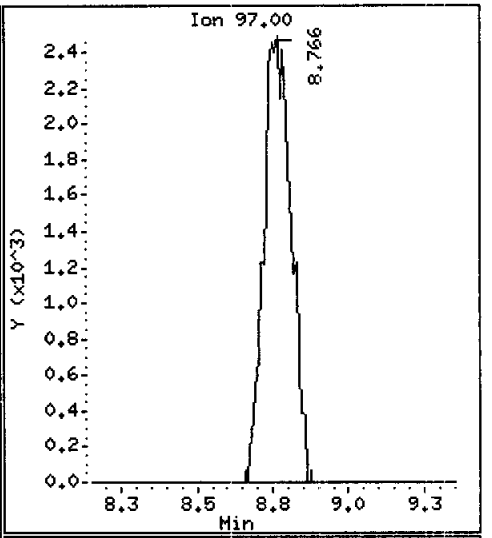
Column phase: J&W DB-624

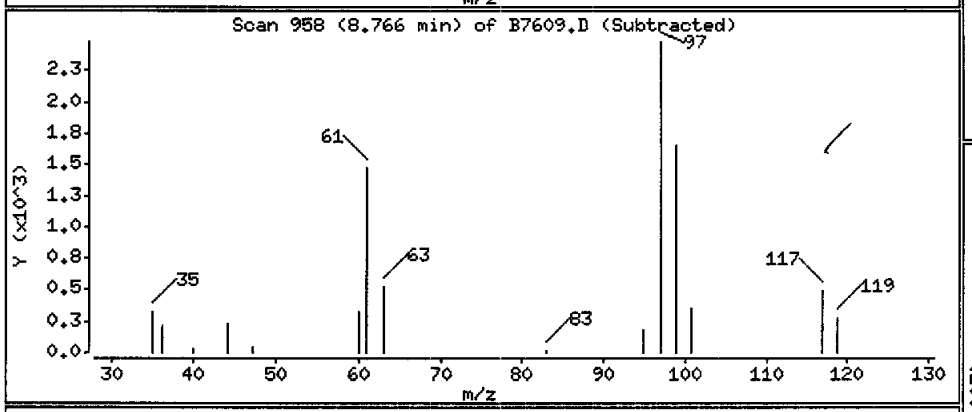
Column diameter: 0.53

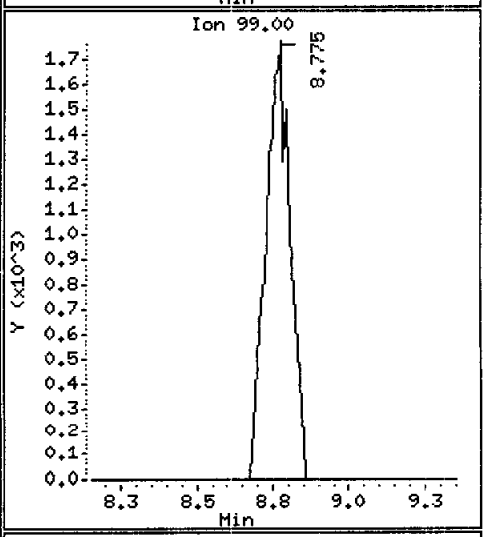
61 1,1,1-Trichloroethane

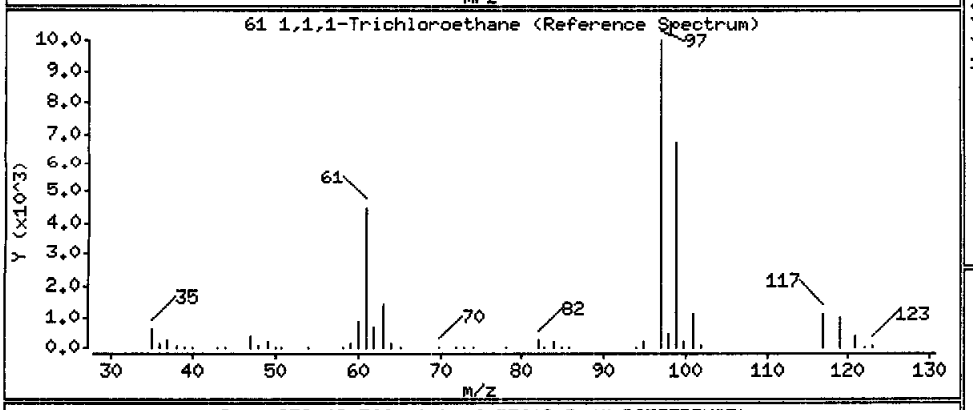
Concentration: 0.8105 ppbv

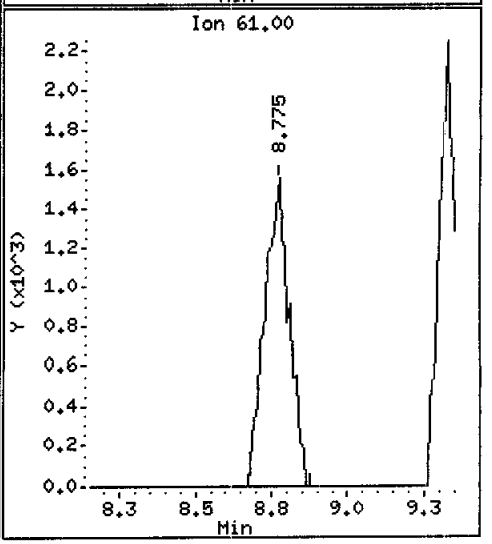


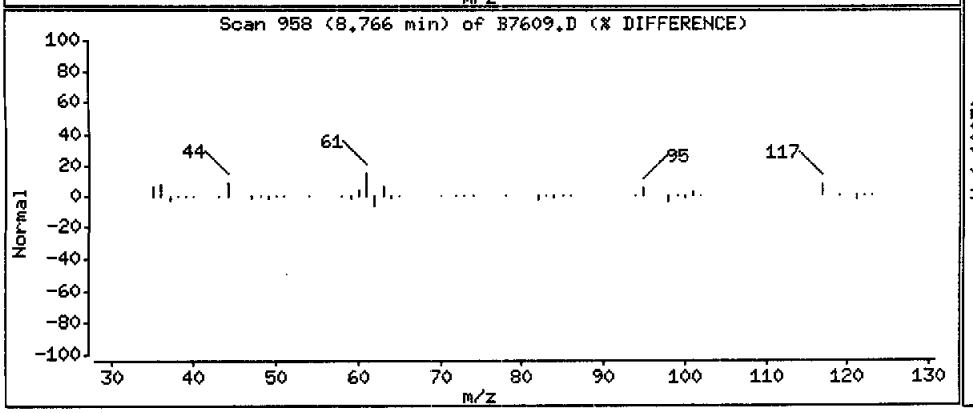












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

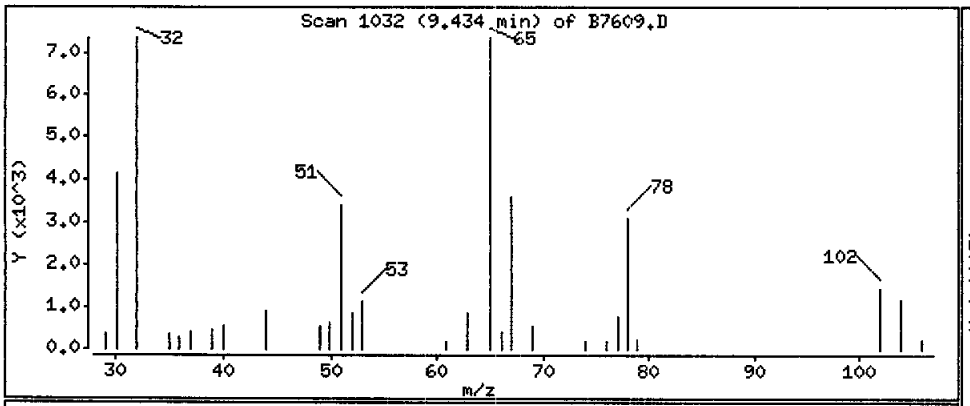
Operator: DLK

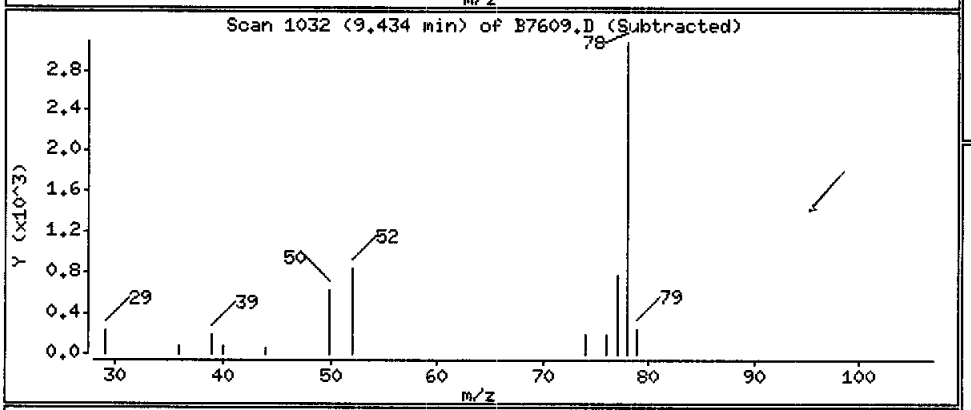
Column phase: J&W DB-624

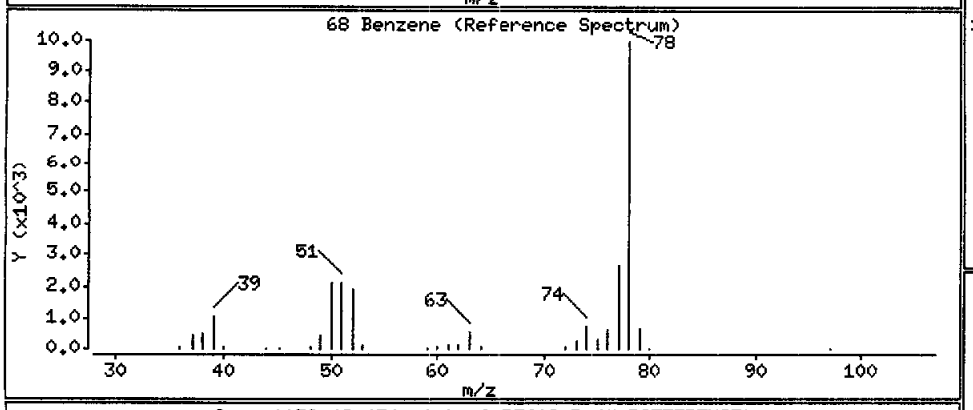
Column diameter: 0.53

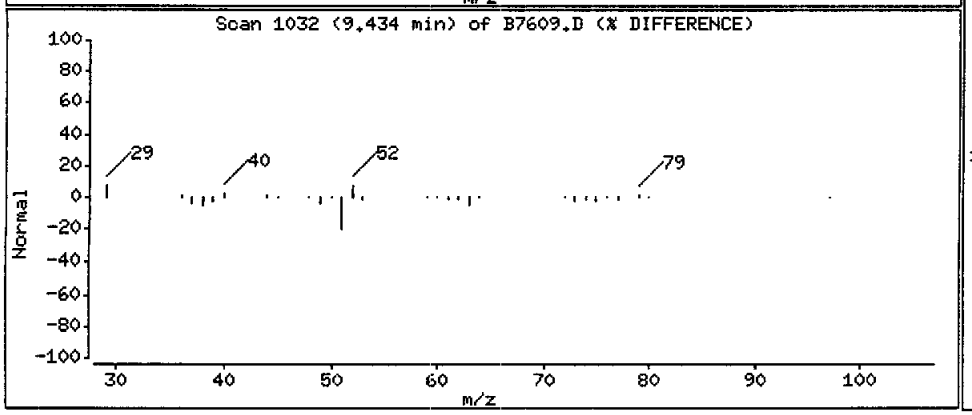
68 Benzene

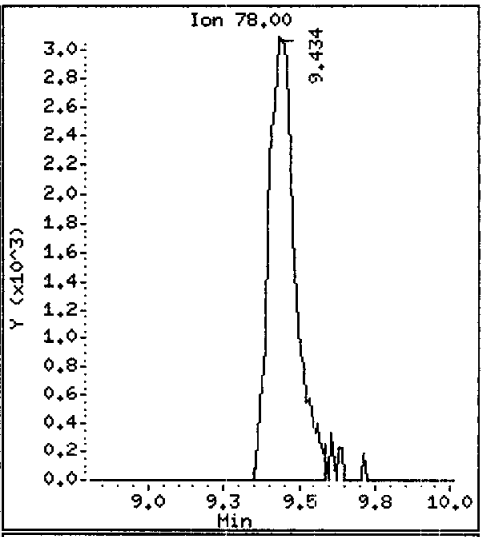
Concentration: 1.054 ppbv

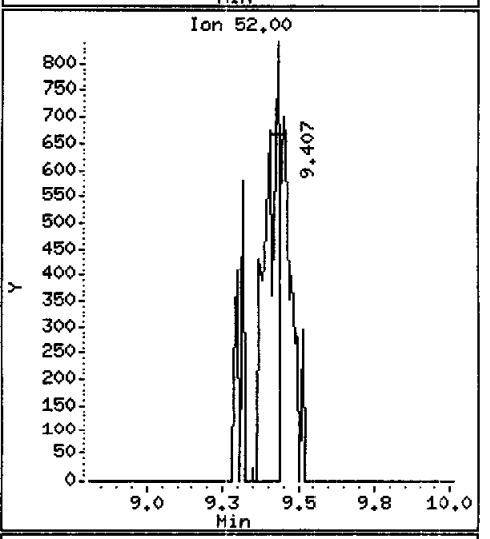


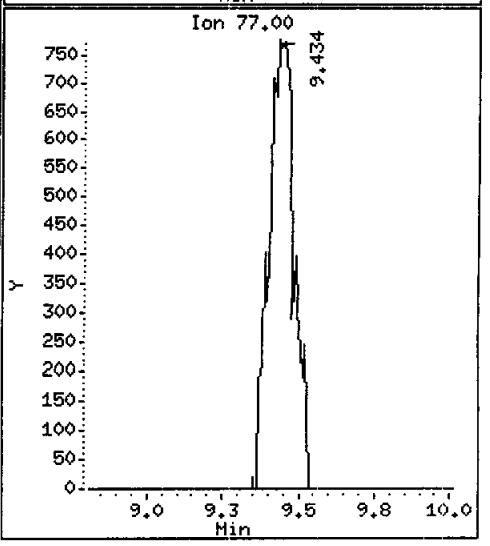












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

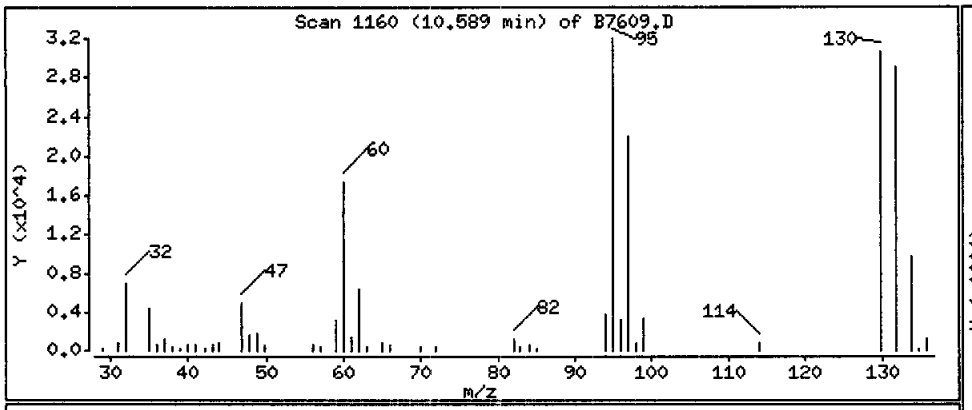
Operator: DLK

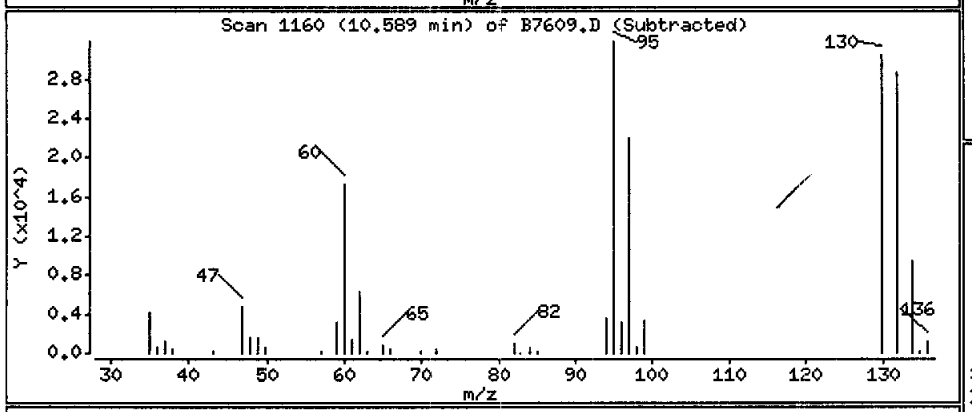
Column phase: J&W DB-624

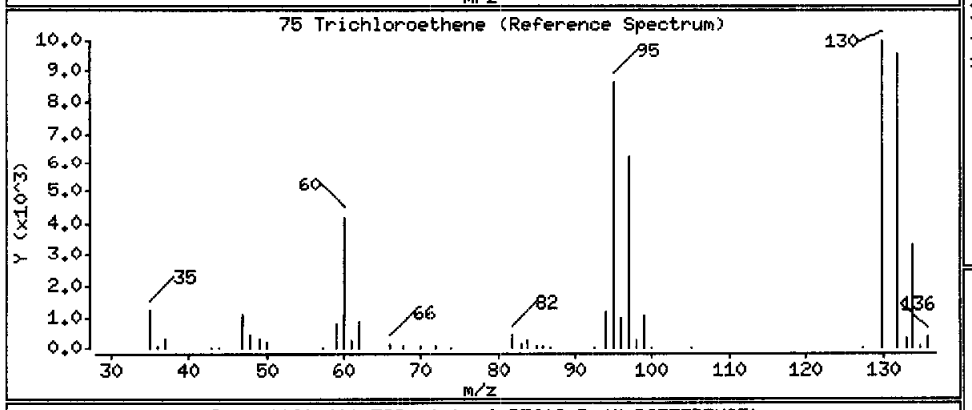
Column diameter: 0.53

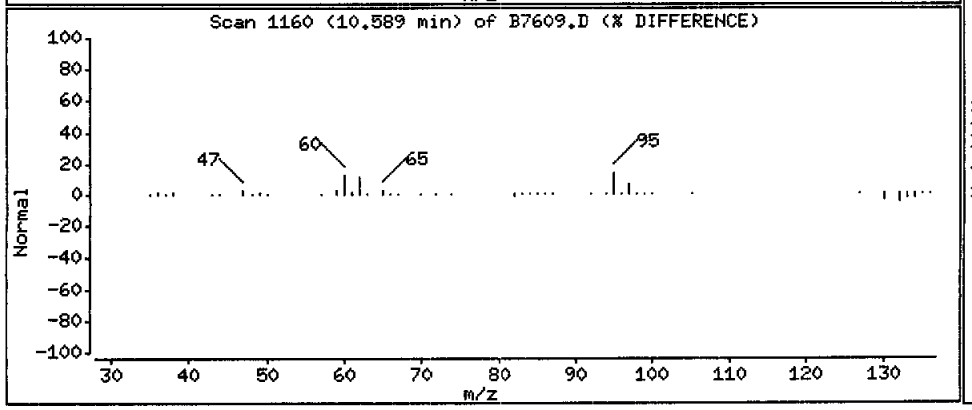
75 Trichloroethene

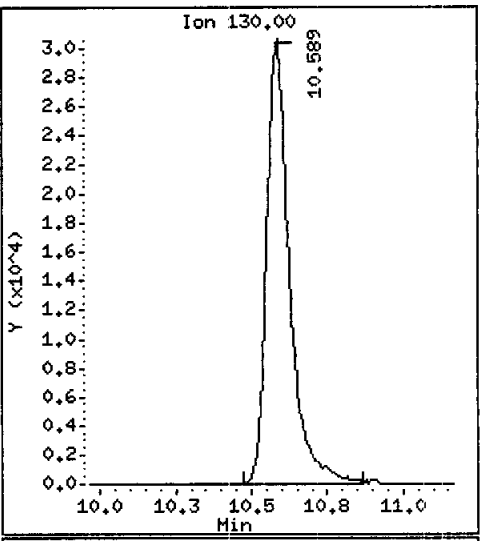
Concentration: 13.90 ppbv

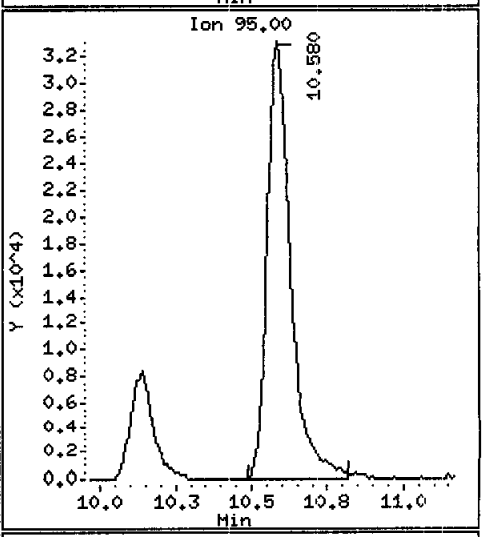


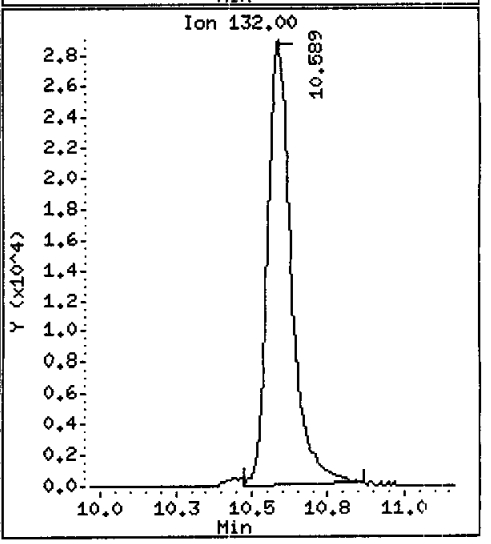












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

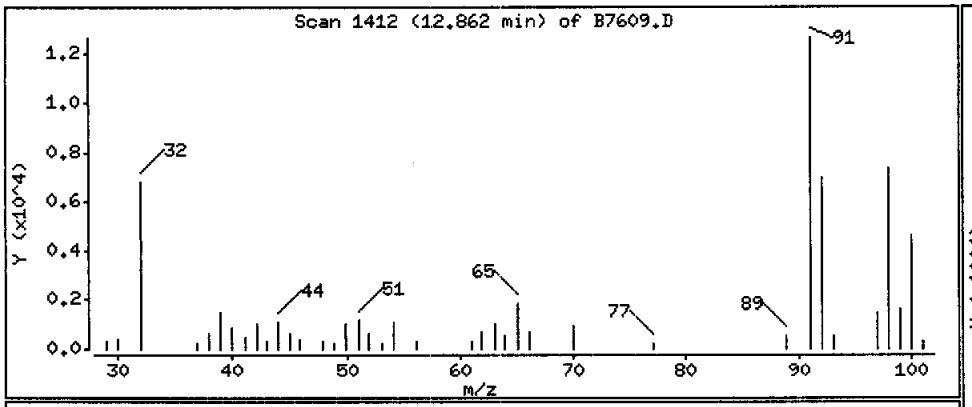
Operator: DLK

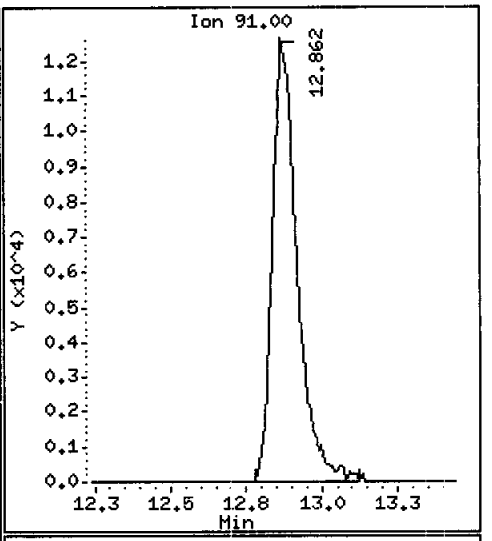
Column phase: J&W DB-624

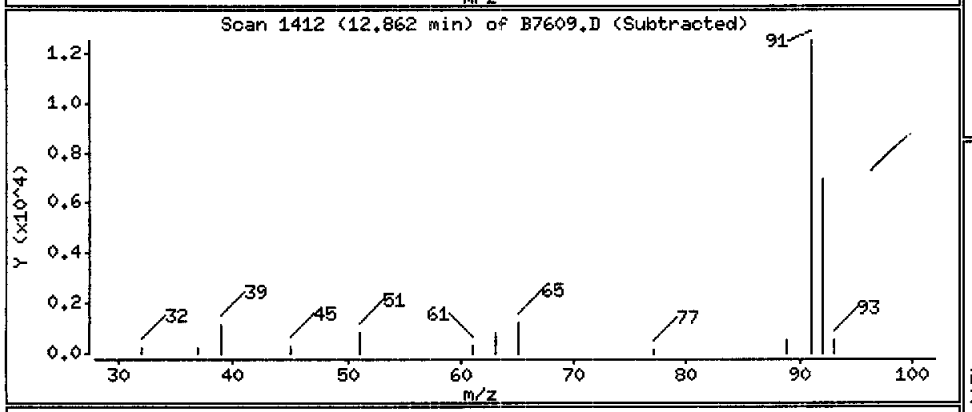
Column diameter: 0.53

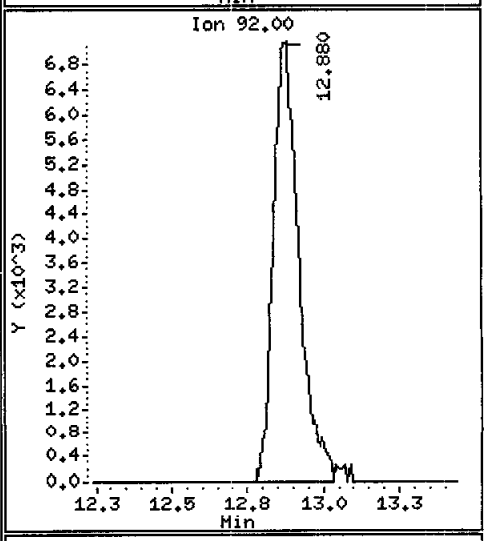
89 Toluene

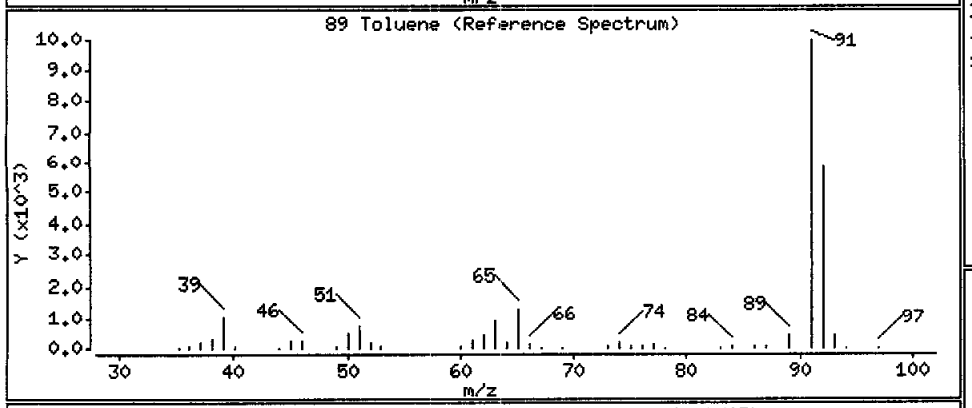
Concentration: 3.079 ppbv

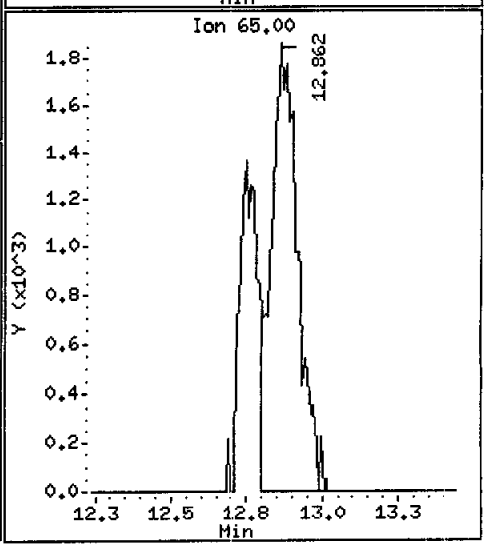


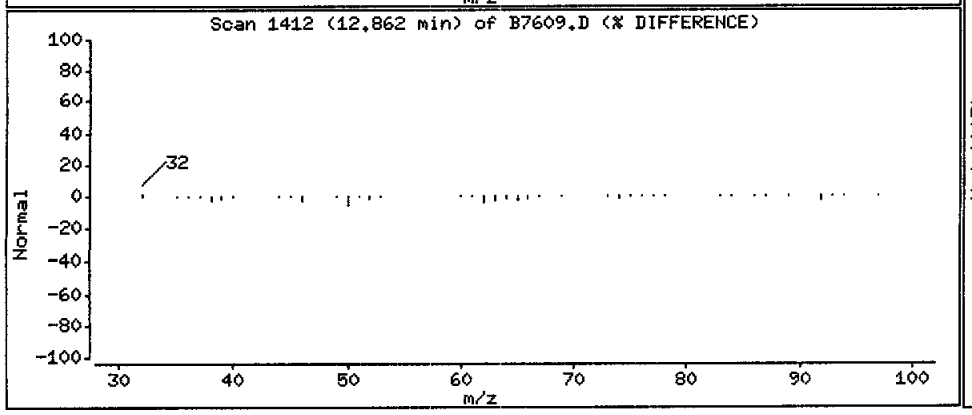












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7609.D

Date : 14-JAN-2005 03:49

Client ID: 066384-001

Instrument: gcmsb.i

Sample Info: G2DJF1AD,066384-001,SANDIA,E5A100227-3

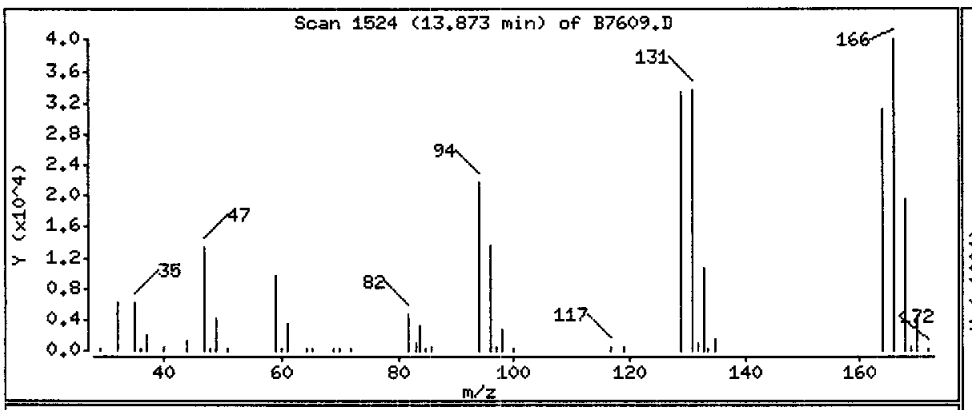
Operator: DLK

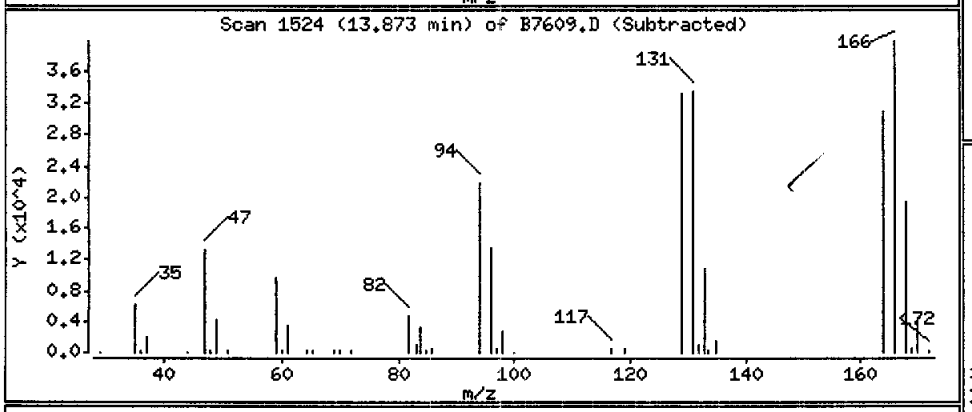
Column phase: J&W DB-624

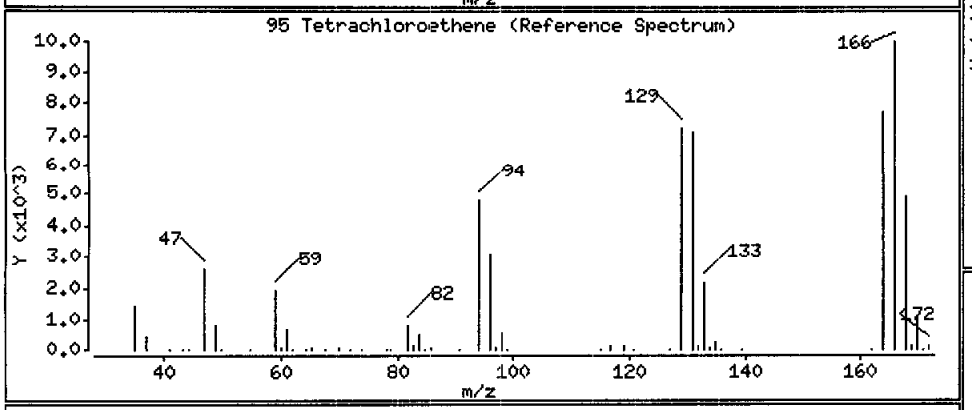
Column diameter: 0.53

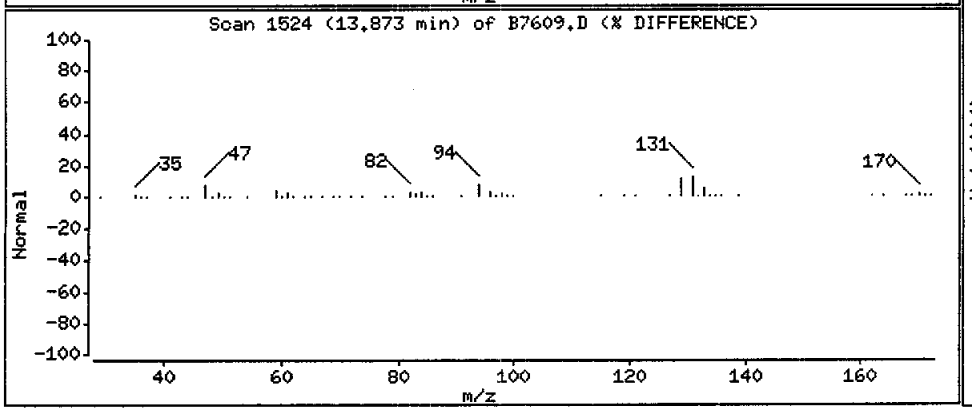
95 Tetrachloroethene

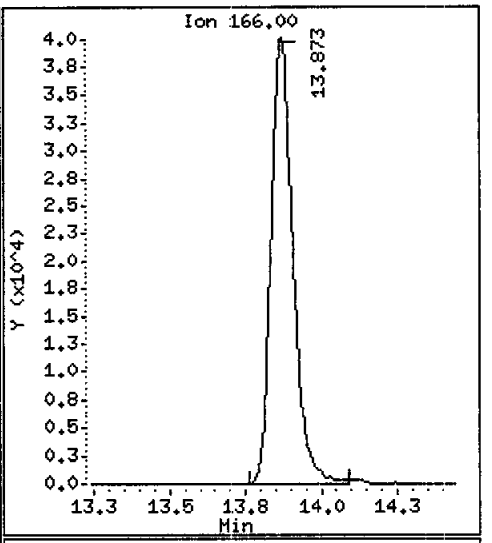
Concentration: 13.67 ppbv

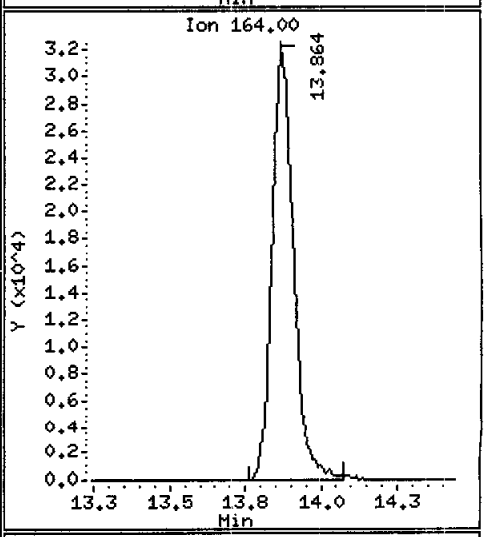


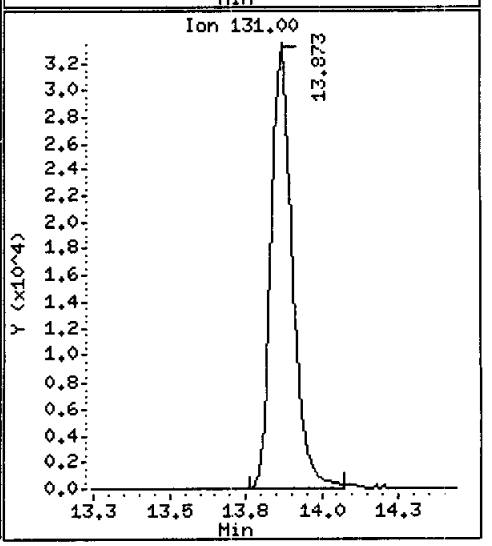












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D
Lab Smp Id: G2DJJ1AD Client Smp ID: 066385-001
Inj Date : 14-JAN-2005 04:24
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DJJ1AD,066385-001,SANDIA,E5A100227-4
Misc Info : 24.7,12.7,500,973,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.700	FinalPres
InitPres	12.700	InitPres
CalVol	500.000	CalVol
SmpVol	973.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.120	2.115	(0.255)	346758	14.0231	14.02
21 Trichlorofluoromethane (F11)	101	3.736	3.730	(0.450)	15141	0.60737	0.6070(a)
28 1,1-Dichloroethene	61	4.683	4.659	(0.564)	18600	1.40665	1.406(a)
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.719	4.713	(0.569)	108119	3.77476	3.772
* 58 Bromochloromethane	49	8.301	8.295	(1.000)	585821	50.0000	
60 Chloroform	83	8.472	8.458	(1.021)	70502	3.78273	3.780
$ 66 1,2-Dichloroethane-d4	65	9.321	9.315	(0.920)	495518	45.6937	45.67
68 Benzene	78	9.438	9.414	(0.931)	17267	0.96029	0.9597(a)
* 73 1,4-Difluorobenzene	114	10.133	10.118	(1.000)	1321417	50.0000	
75 Trichloroethene	130	10.593	10.569	(1.045)	48082	4.16733	4.165
$ 88 Toluene-d8	100	12.740	12.726	(1.257)	692219	50.0272	50.00
89 Toluene	91	12.866	12.843	(1.270)	66837	2.87262	2.871
95 Tetrachloroethene	166	13.868	13.844	(0.901)	77076	5.27841	5.275
* 101 Chlorobenzene-d5	117	15.393	15.369	(1.000)	932669	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 114 4-Bromofluorobenzene	95	17.648	17.625	(1.147)	703582	42.2296	42.20

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

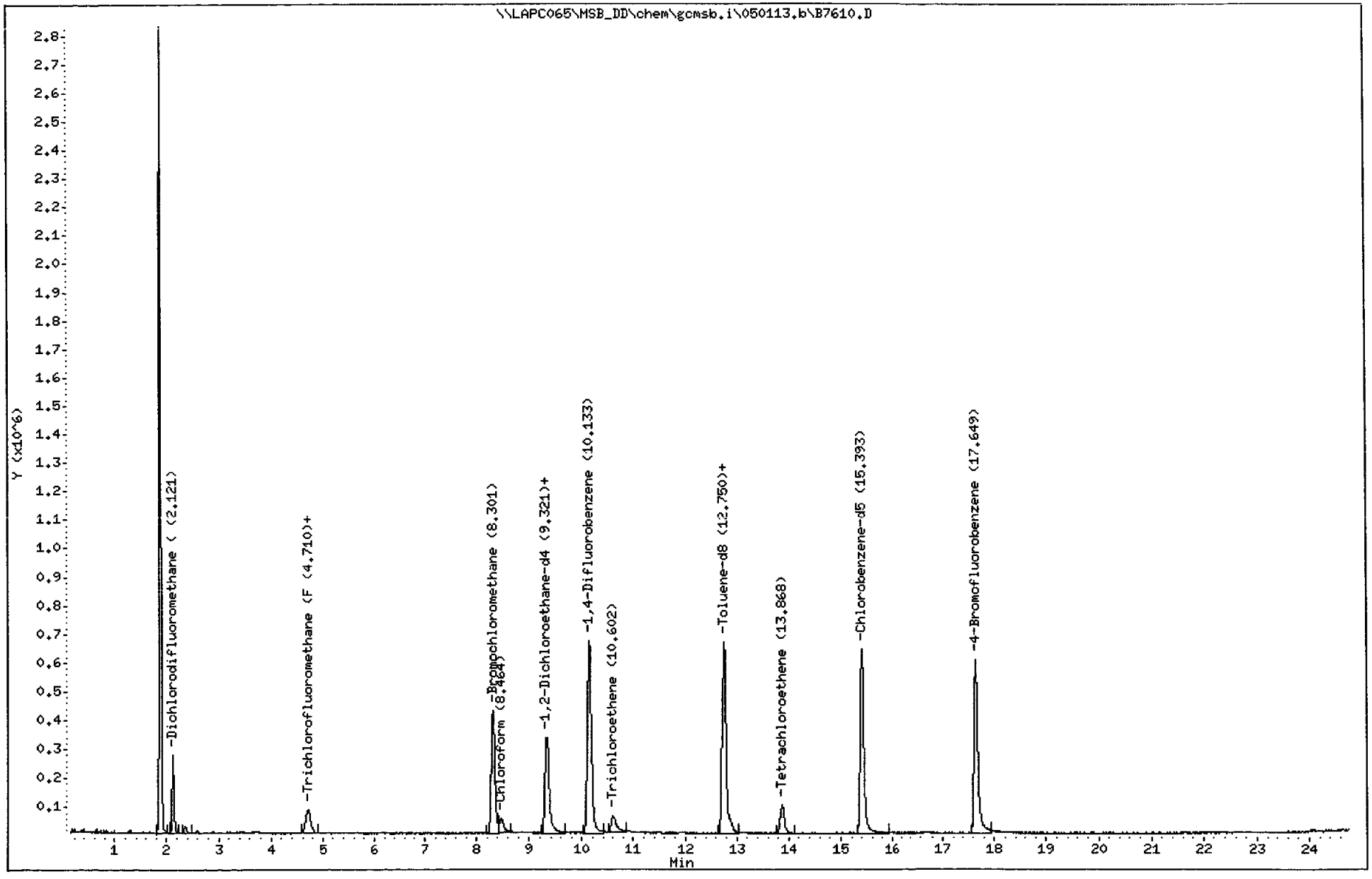
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D
Date : 14-JAN-2005 04:24
Client ID: 066385-001
Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

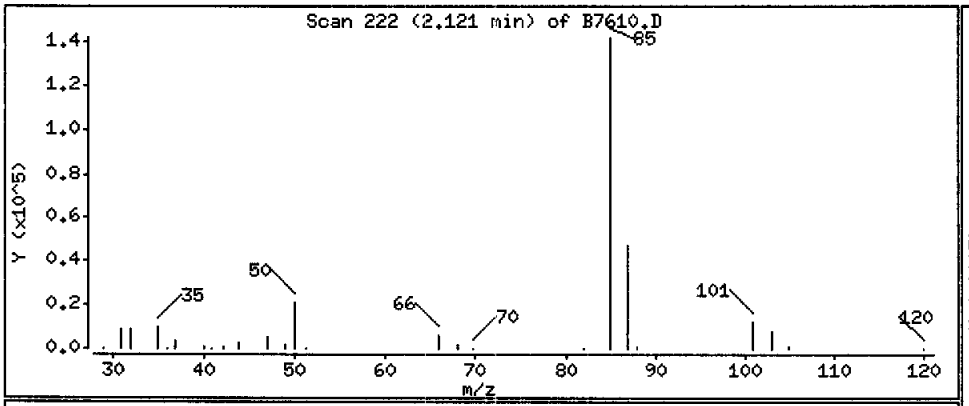
Operator: DLK

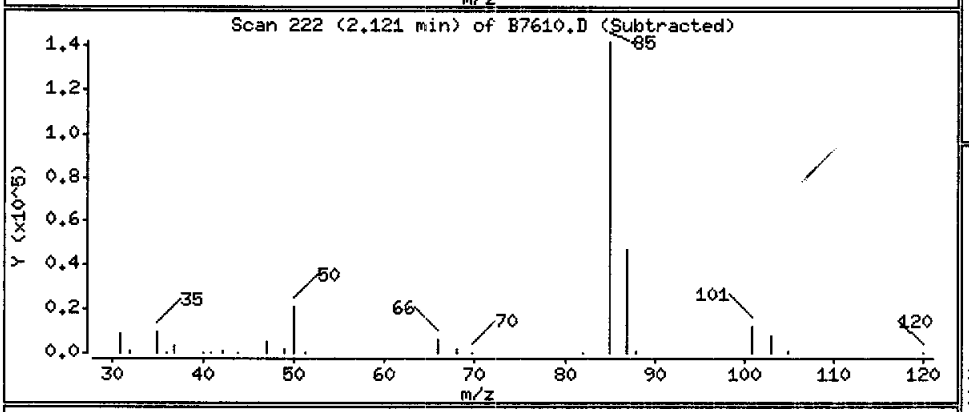
Column phase: J&W DB-624

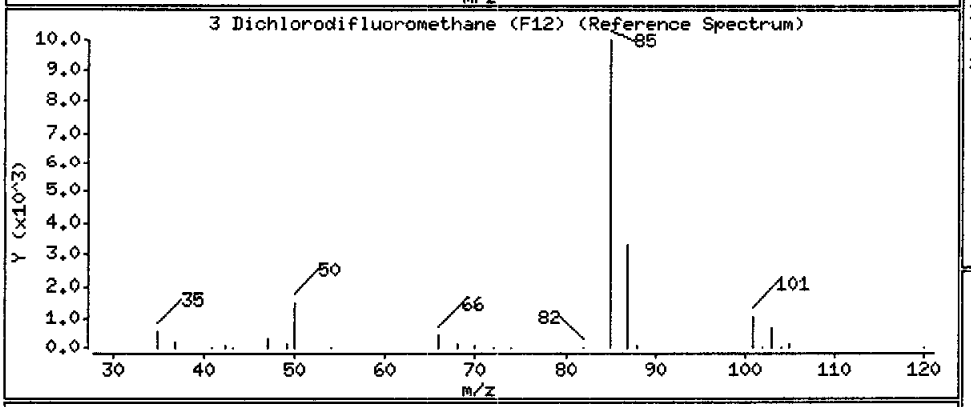
Column diameter: 0.53

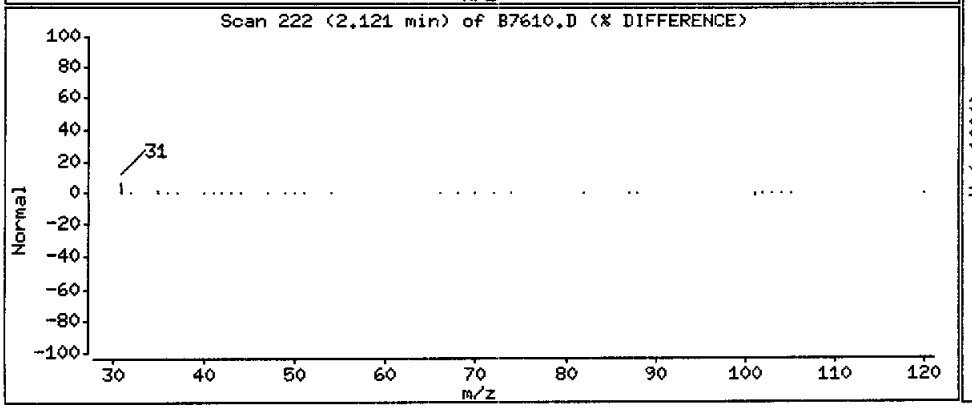
3 Dichlorodifluoromethane (F12)

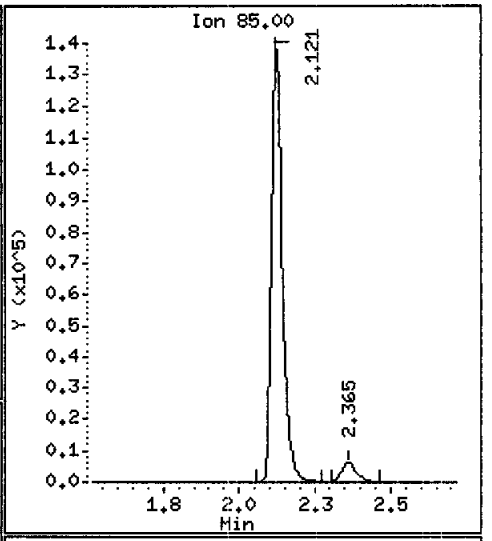
Concentration: 14.02 ppbv

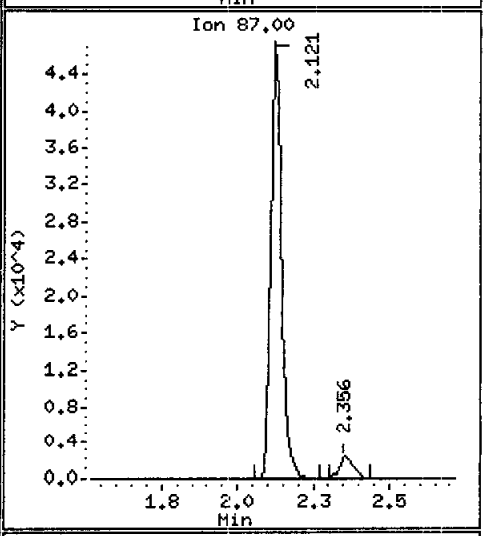


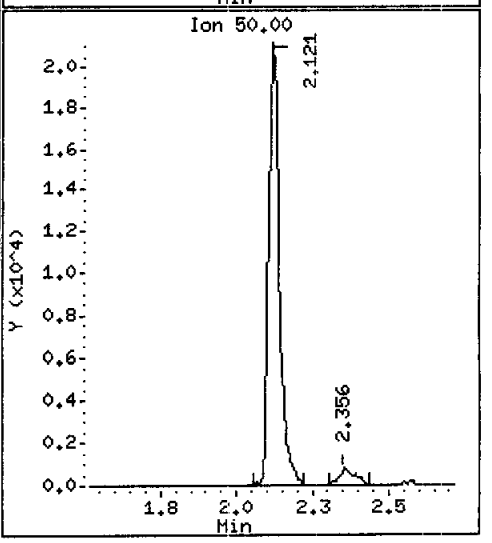












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

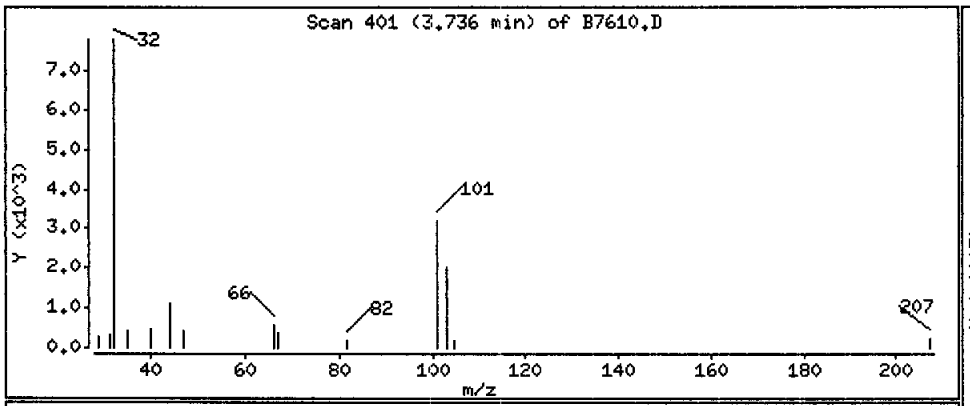
Operator: DLK

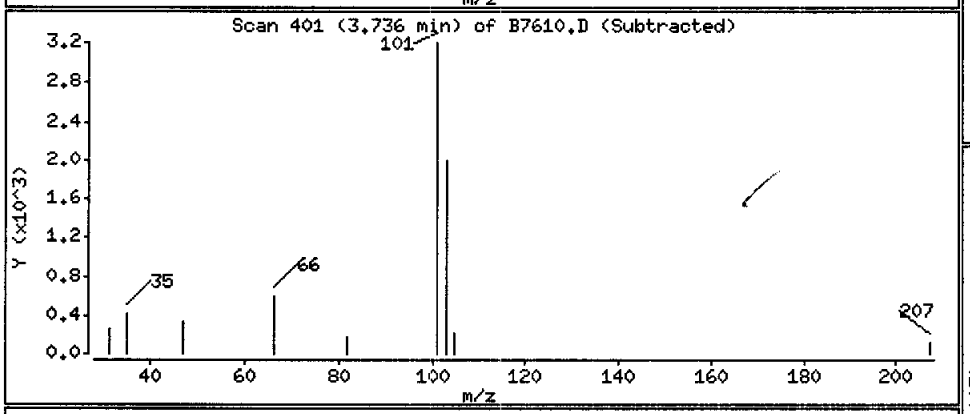
Column phase: J&W DB-624

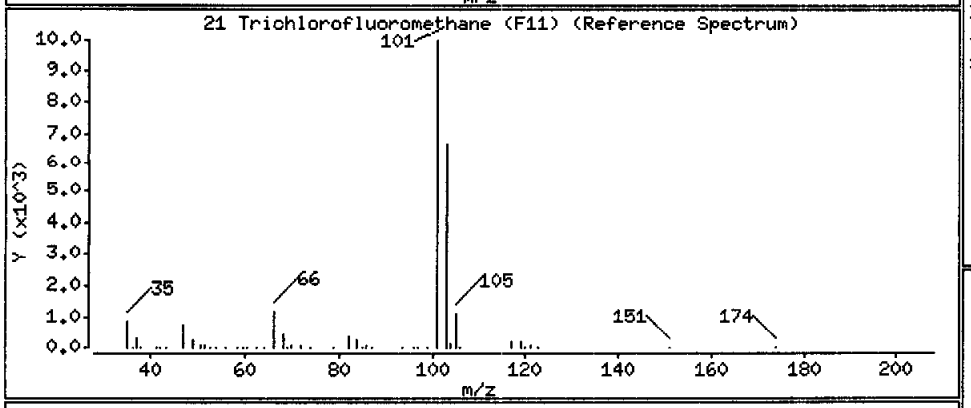
Column diameter: 0.53

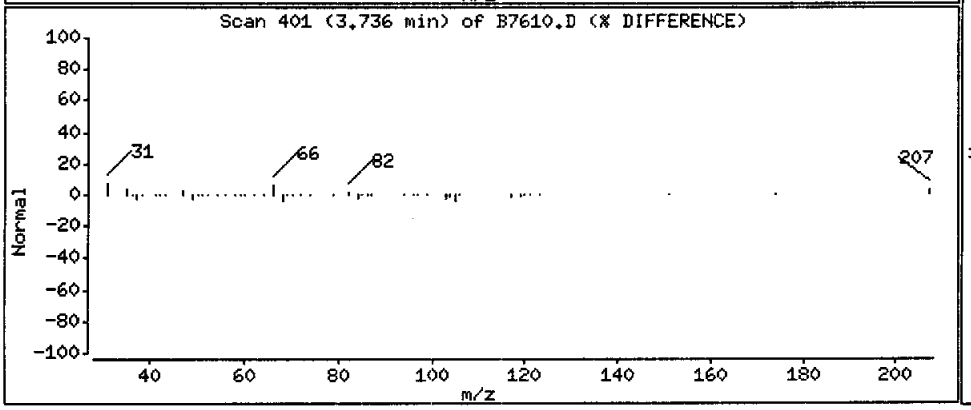
21 Trichlorofluoromethane (F11)

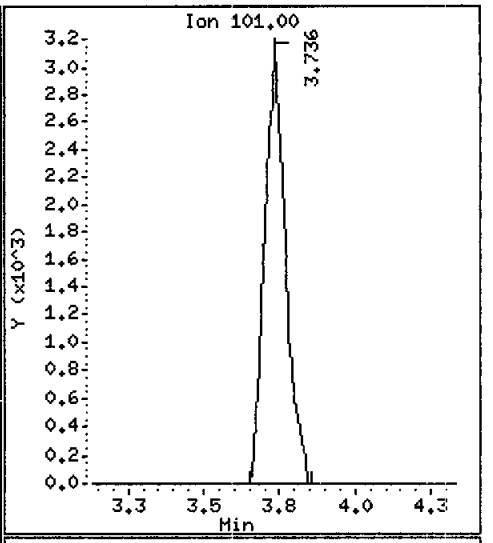
Concentration: 0.6070 ppbv

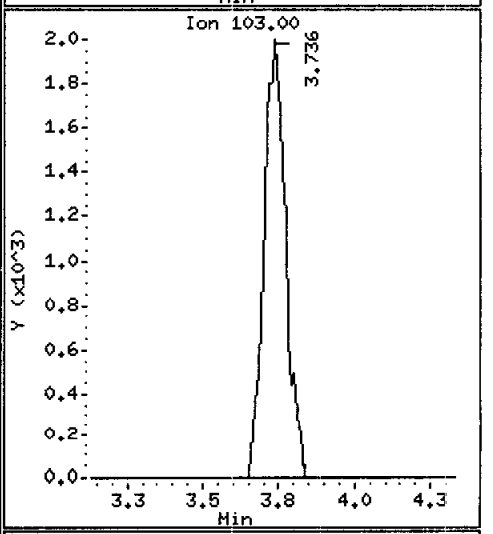


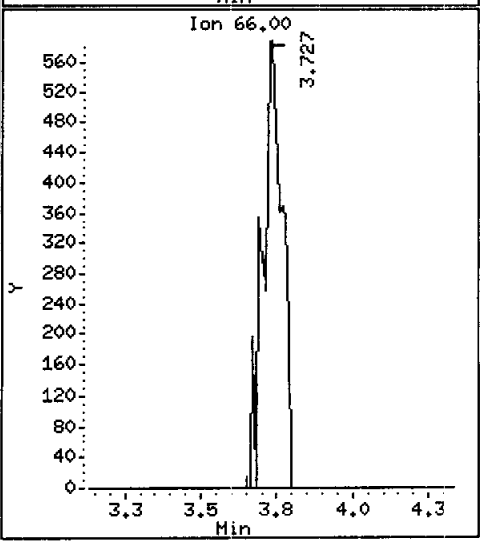












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

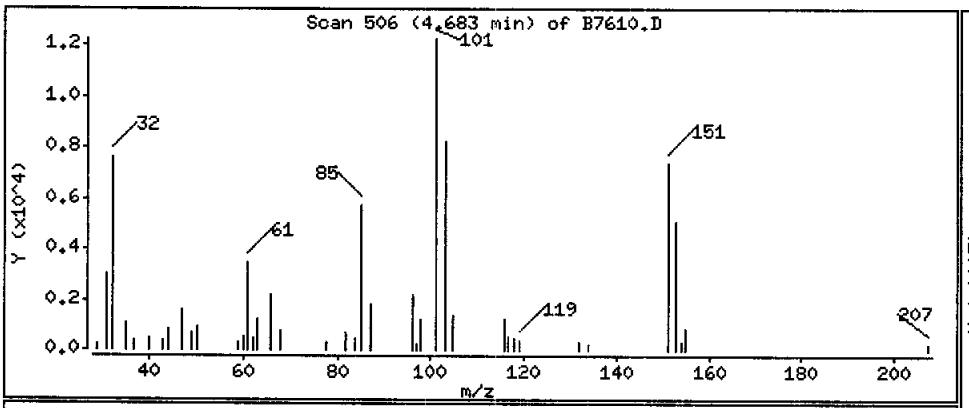
Operator: DLK

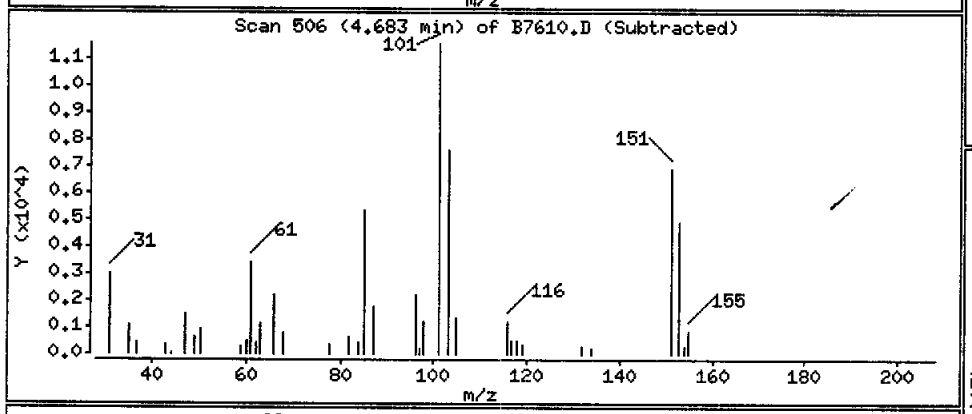
Column phase: J&W DB-624

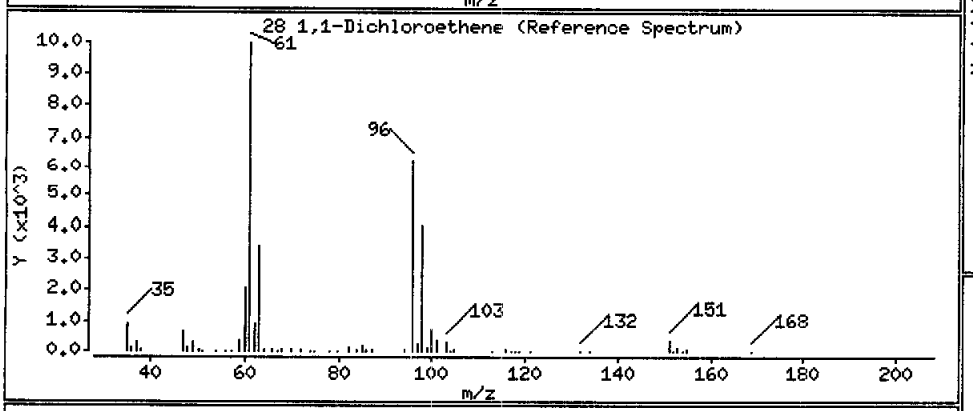
Column diameter: 0.53

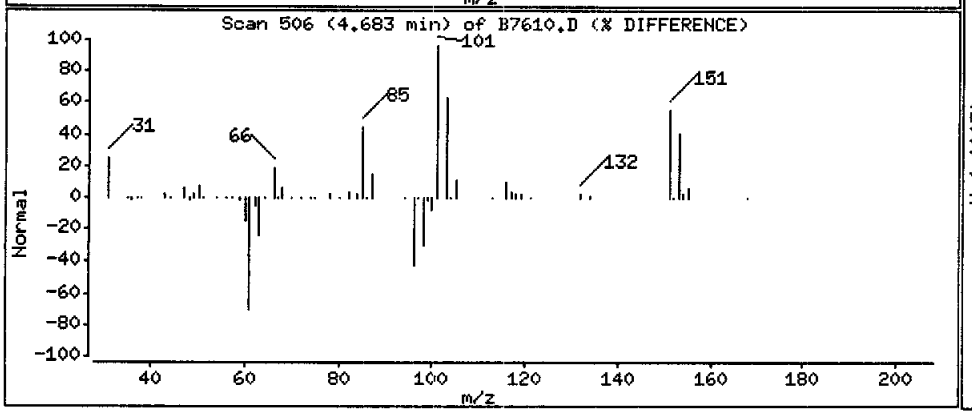
28 1,1-Dichloroethene

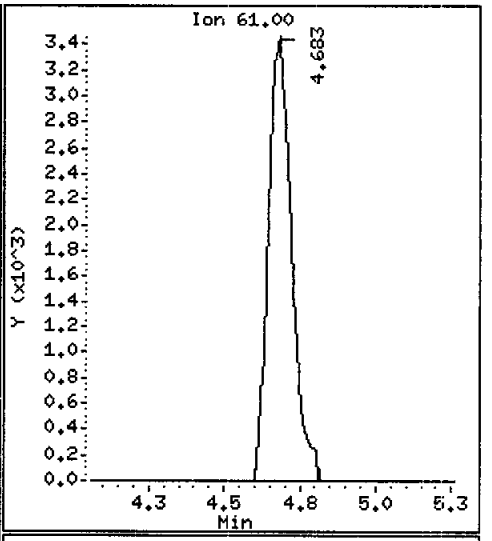
Concentration: 1.406 ppbv

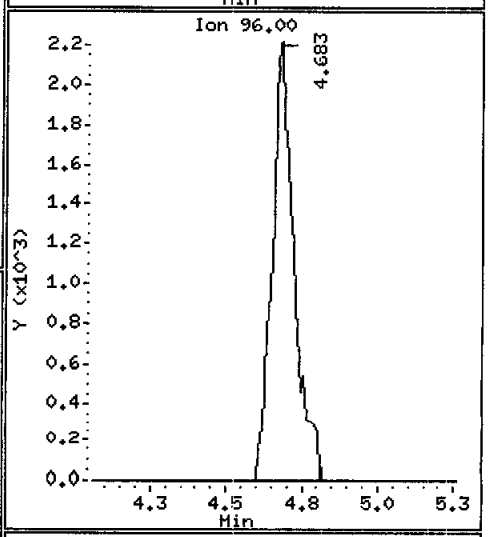


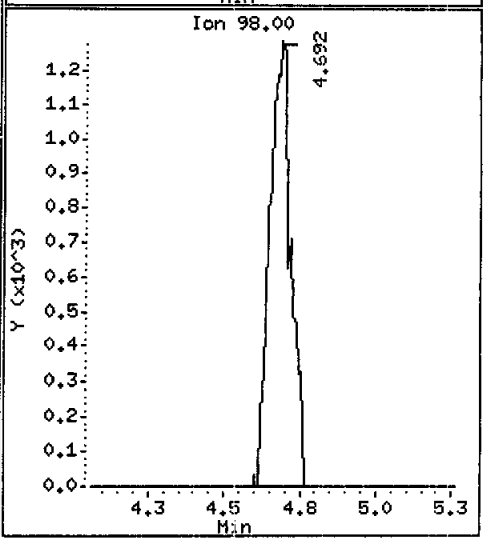












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

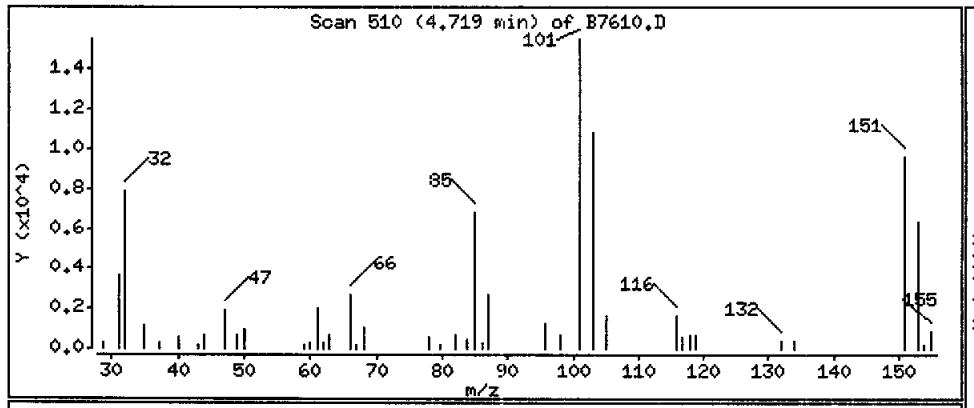
Operator: DLK

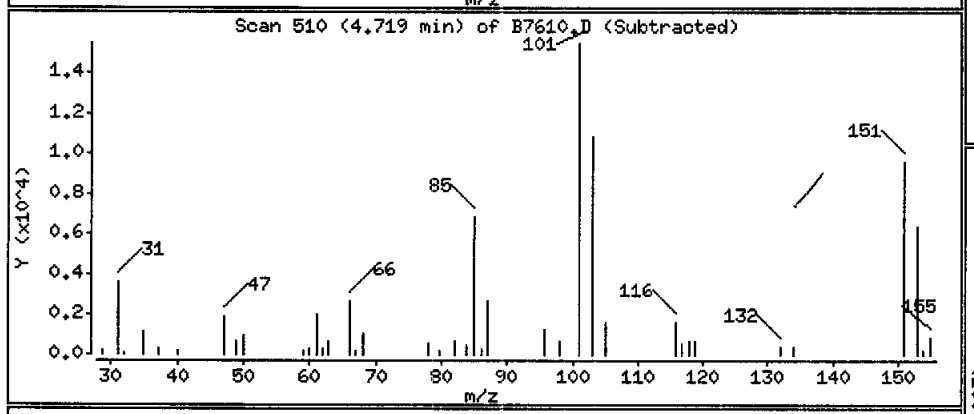
Column phase: J&W DB-624

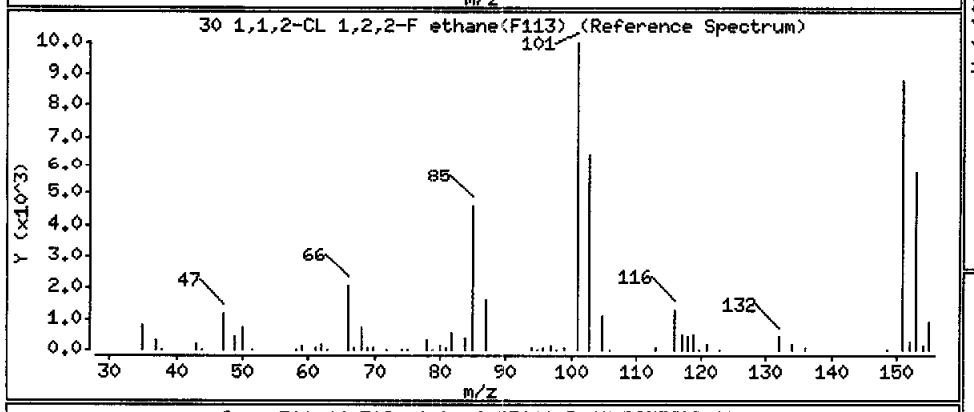
Column diameter: 0.53

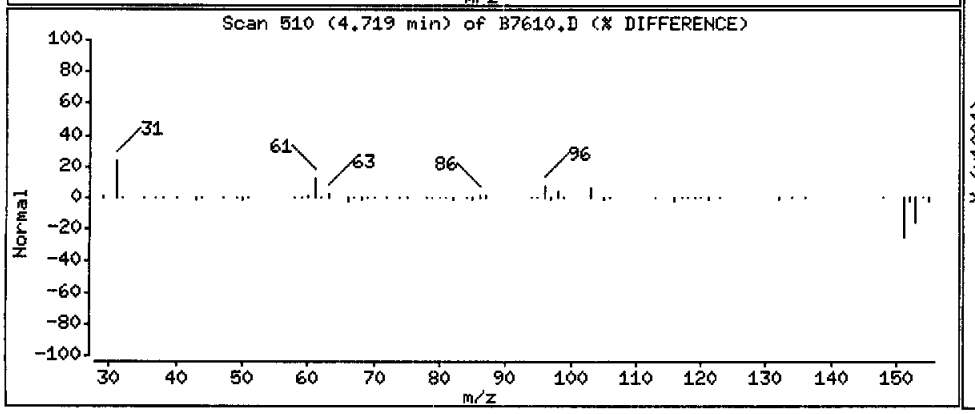
30 1,1,2-CL 1,2,2-F ethane(F113)

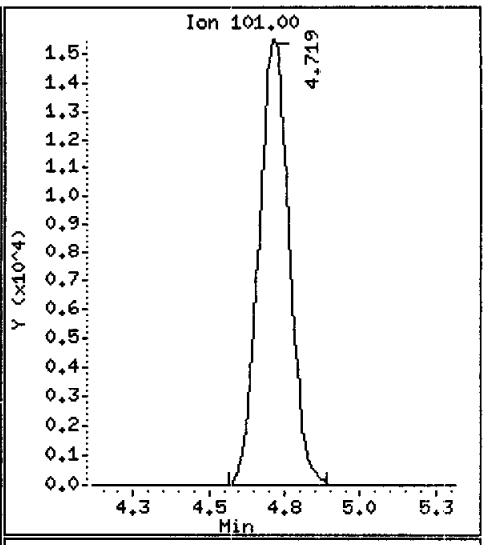
Concentration: 3.772 ppbv

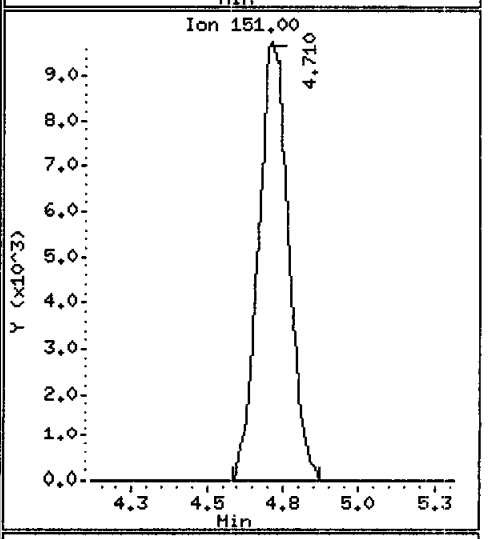


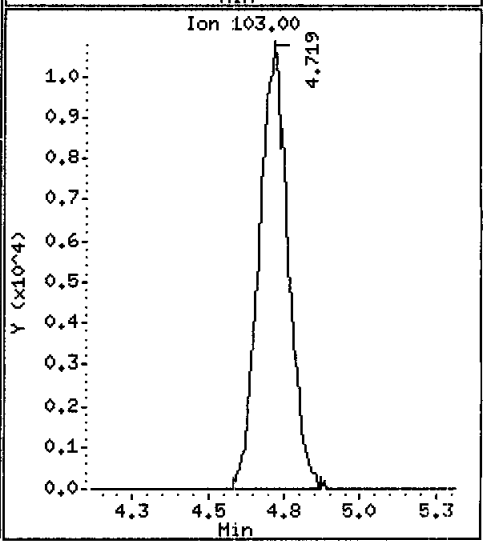












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

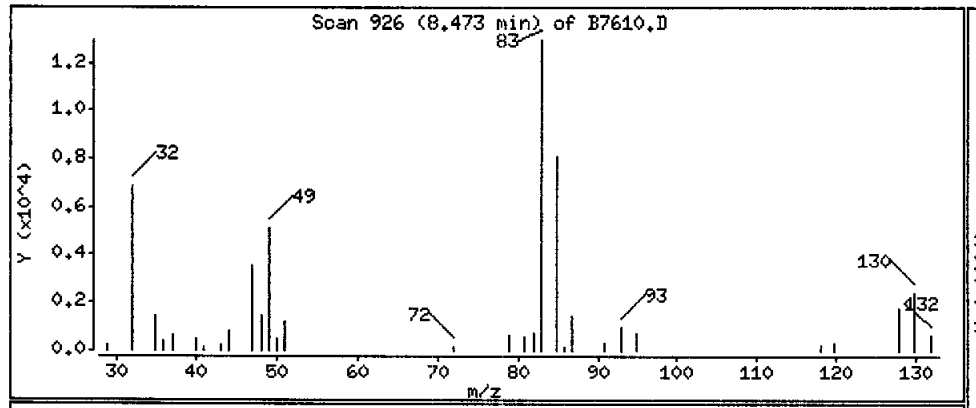
Operator: DLK

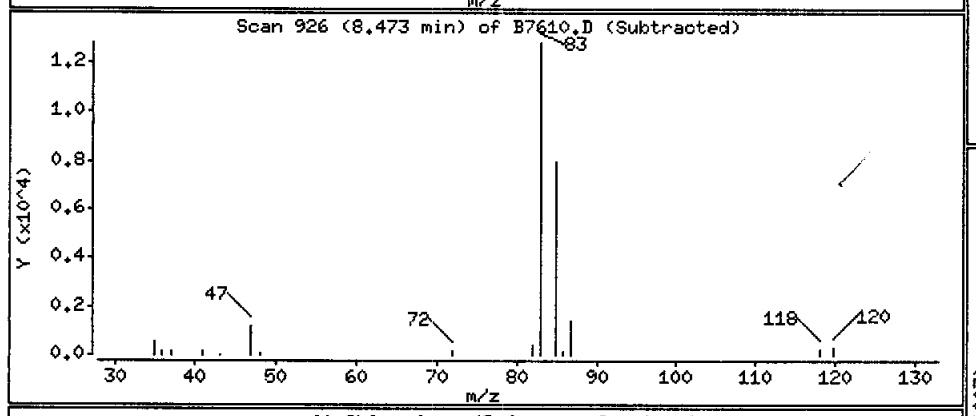
Column phase: J&W DB-624

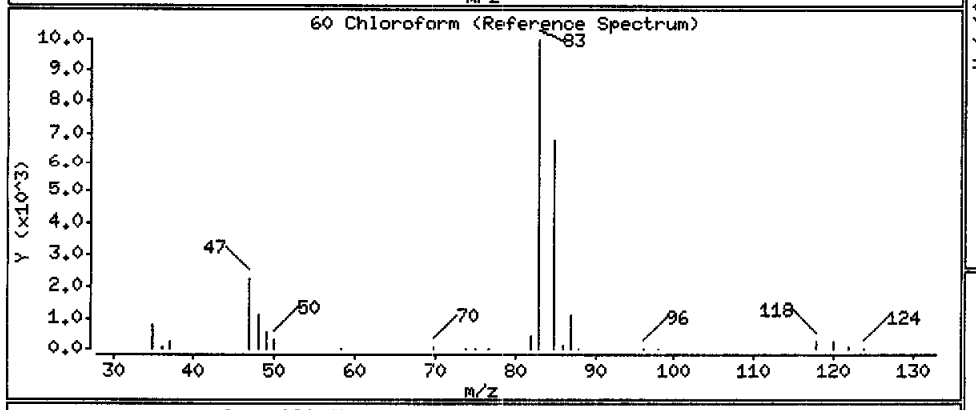
Column diameter: 0.53

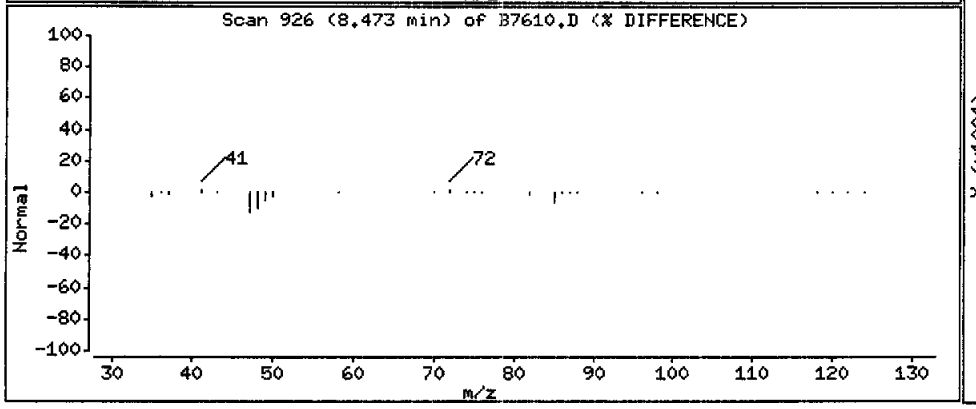
60 Chloroform

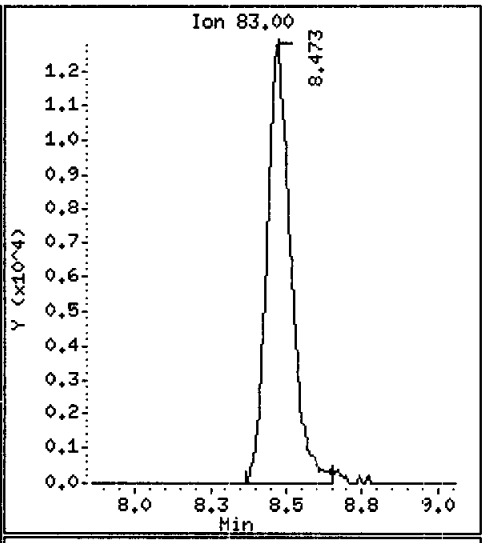
Concentration: 3.780 ppbv

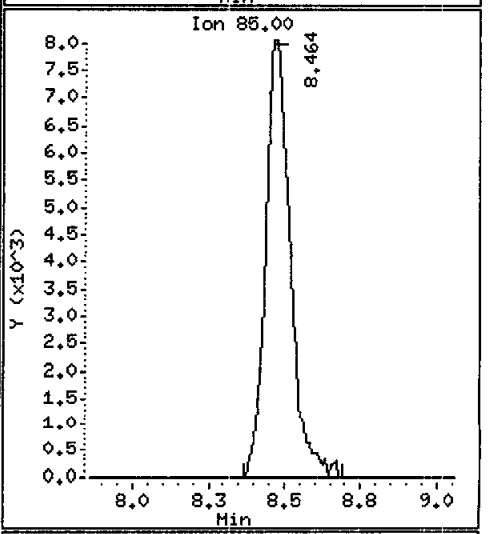


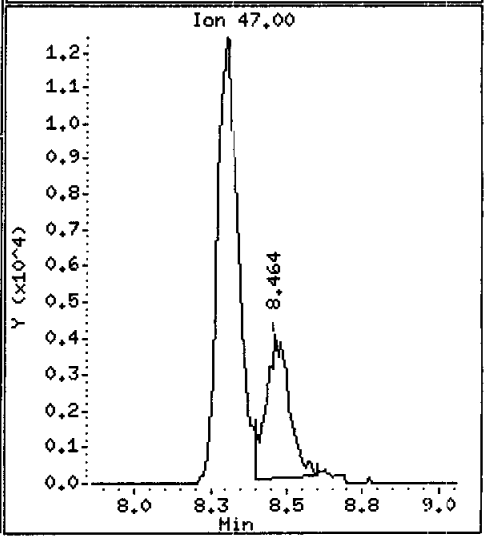












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

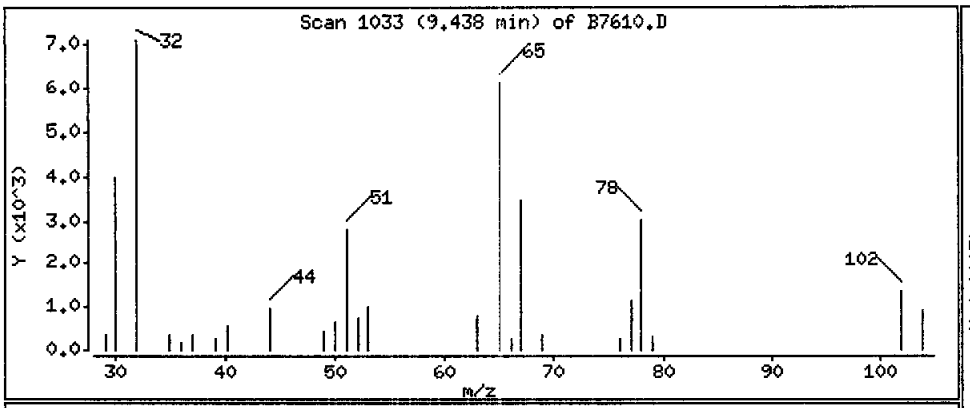
Operator: DLK

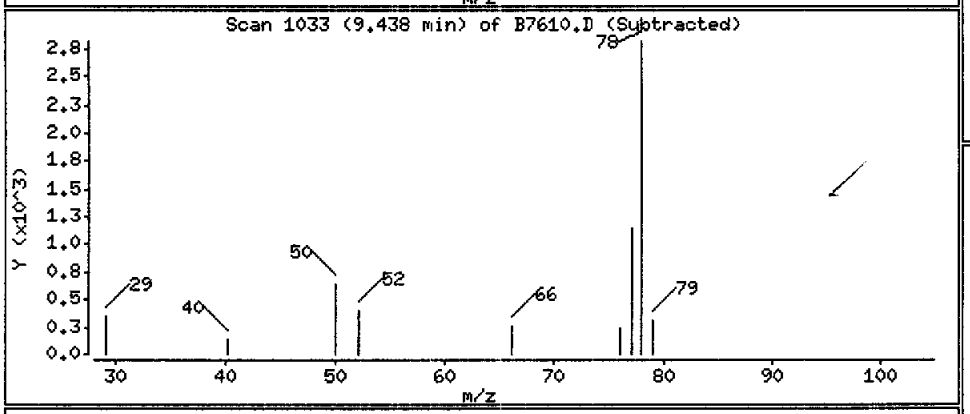
Column phase: J&W DB-624

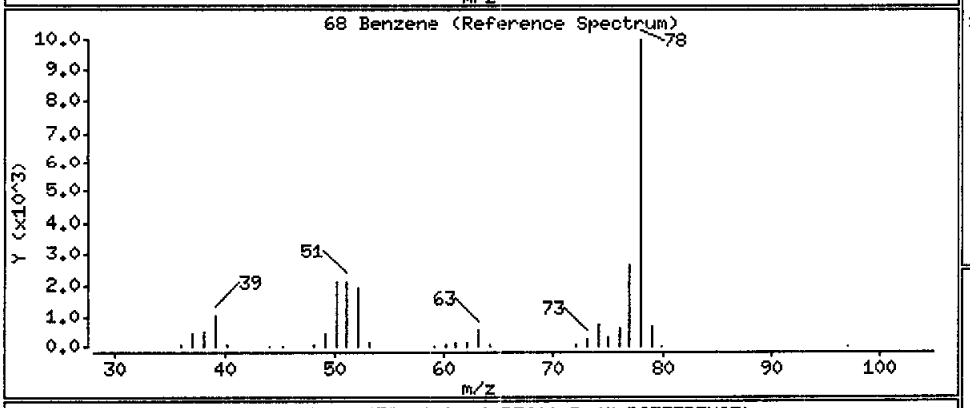
Column diameter: 0.53

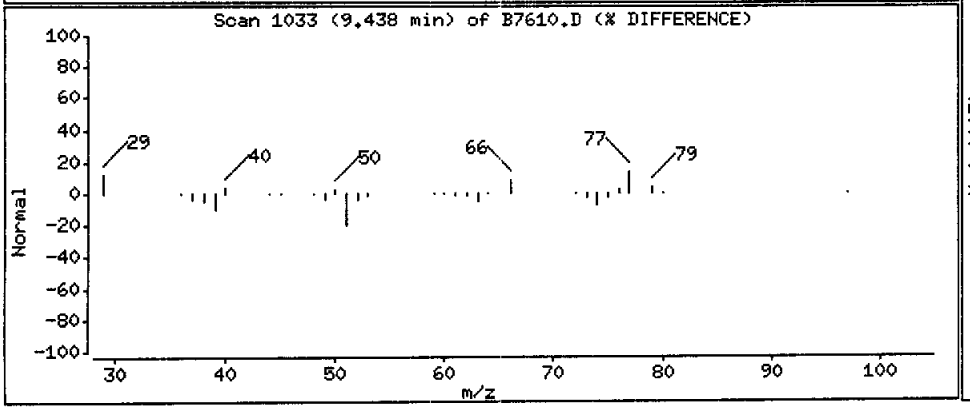
68 Benzene

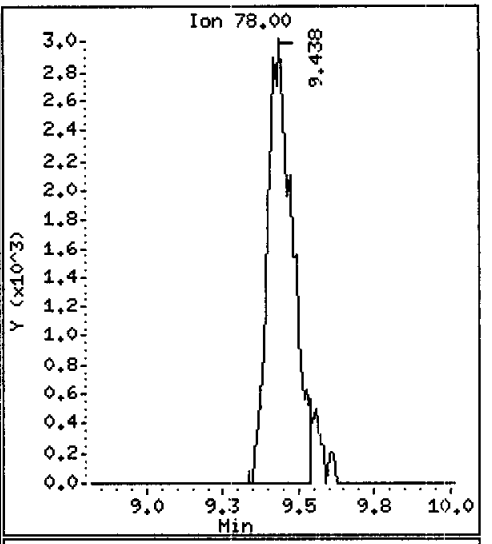
Concentration: 0.9597 ppbv

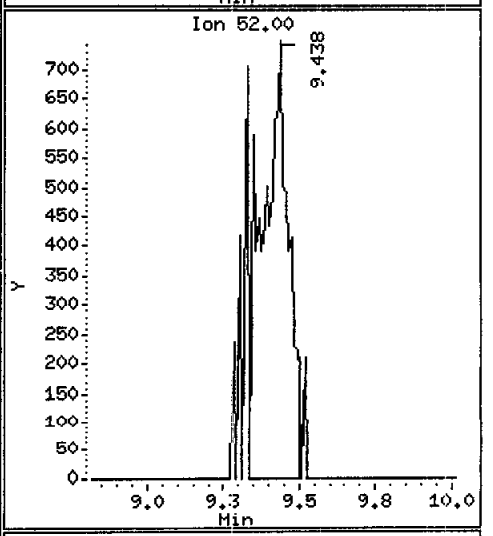


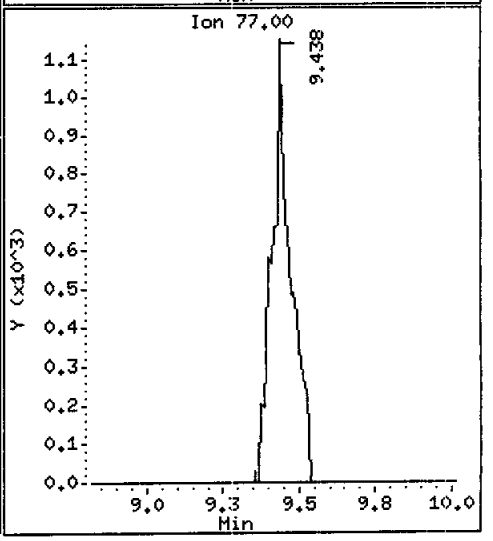












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

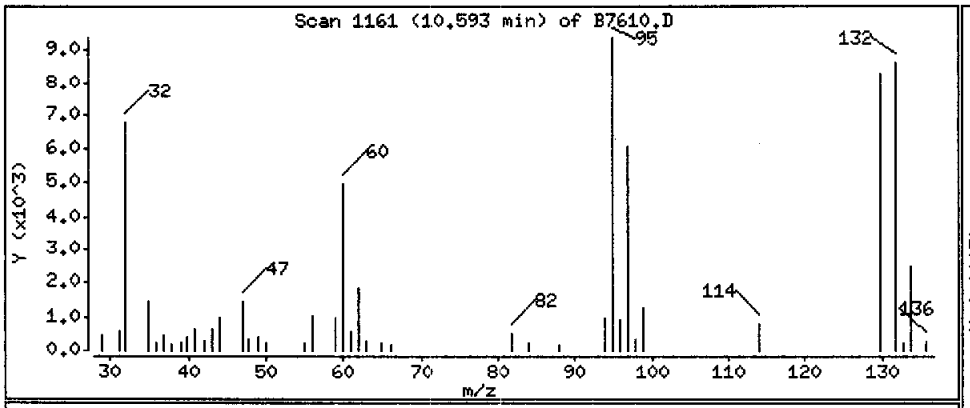
Operator: DLK

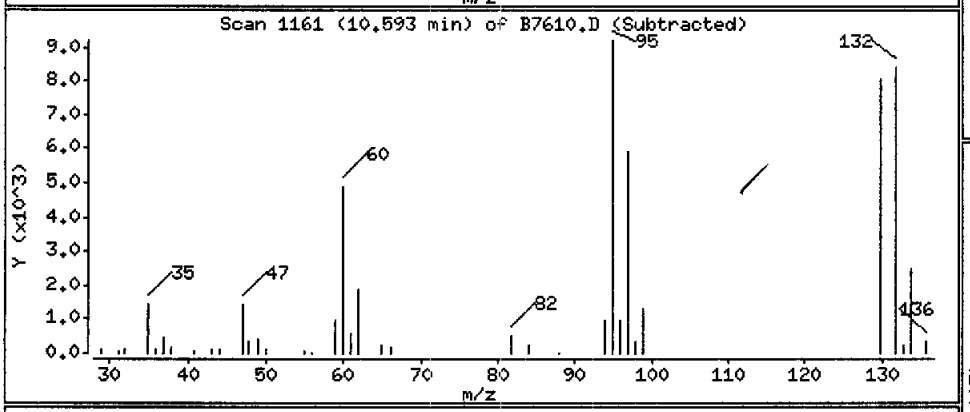
Column phase: J&W DB-624

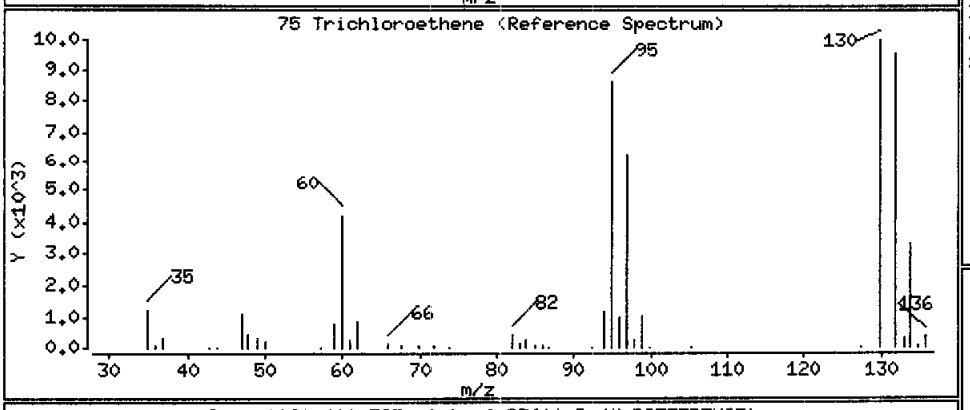
Column diameter: 0.53

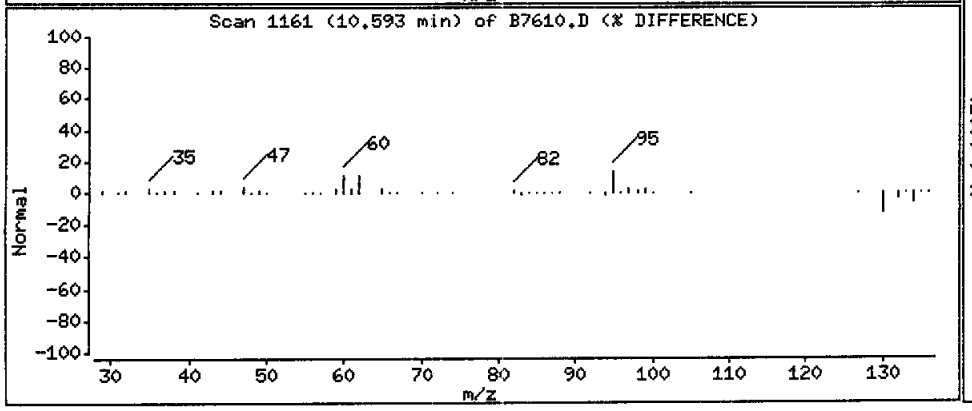
75 Trichloroethene

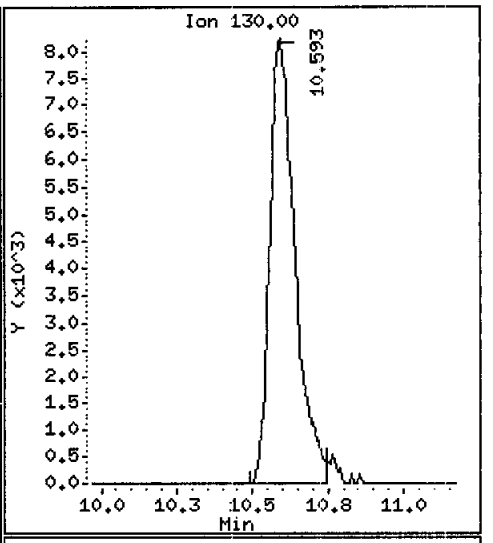
Concentration: 4.165 ppbv

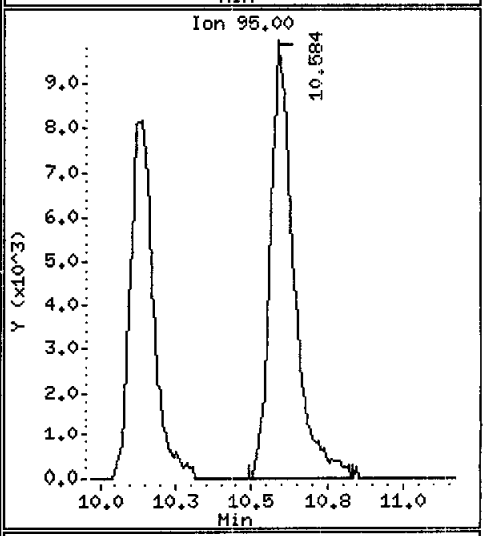


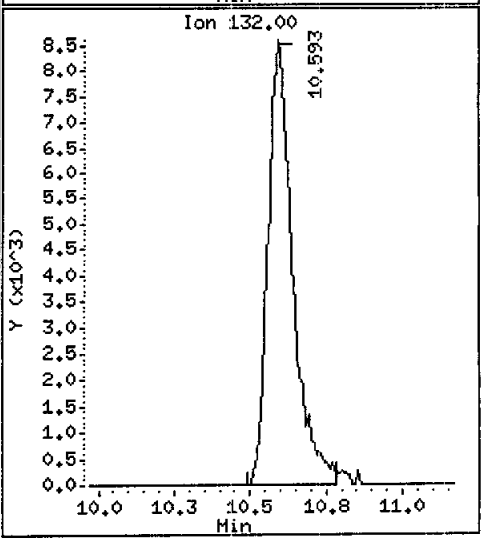












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

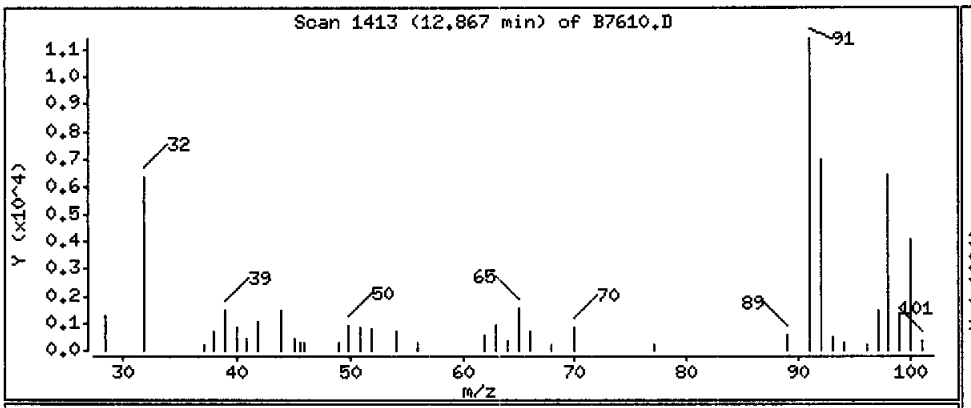
Operator: DLK

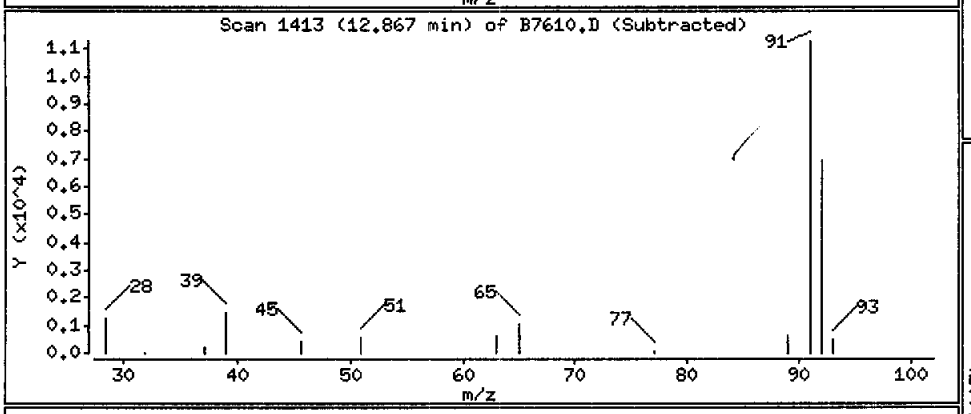
Column phase: J&W DB-624

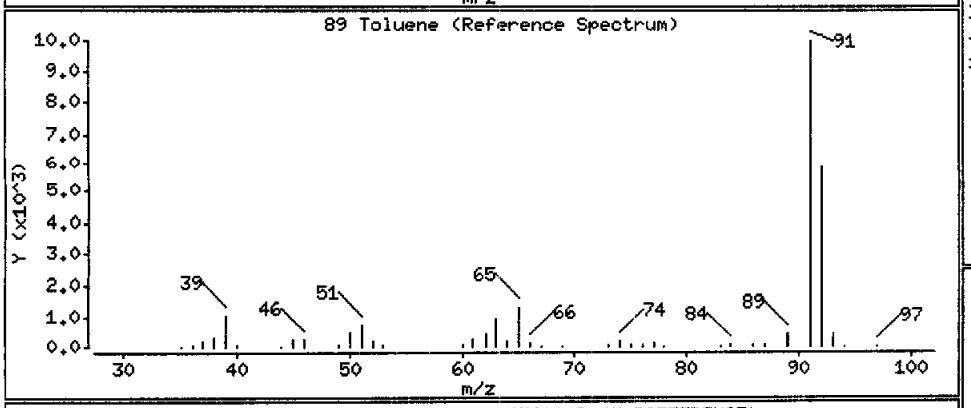
Column diameter: 0.53

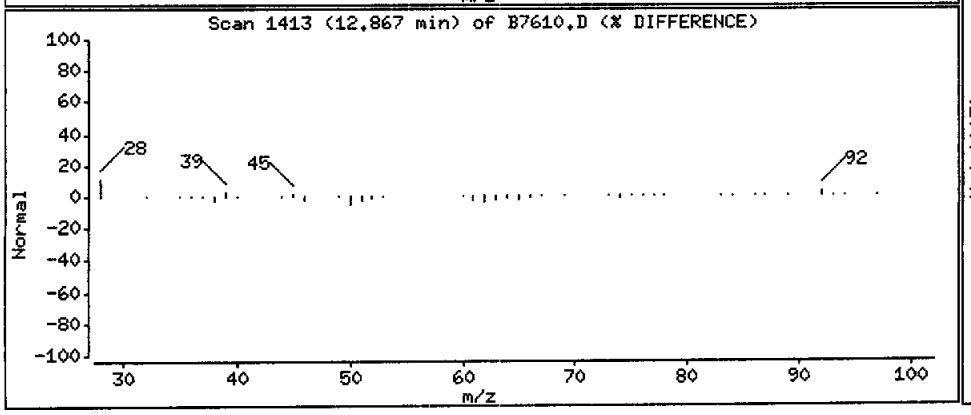
89 Toluene

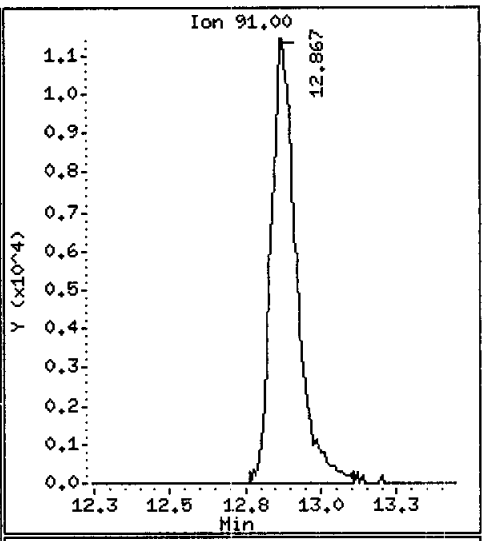
Concentration: 2.871 ppbv

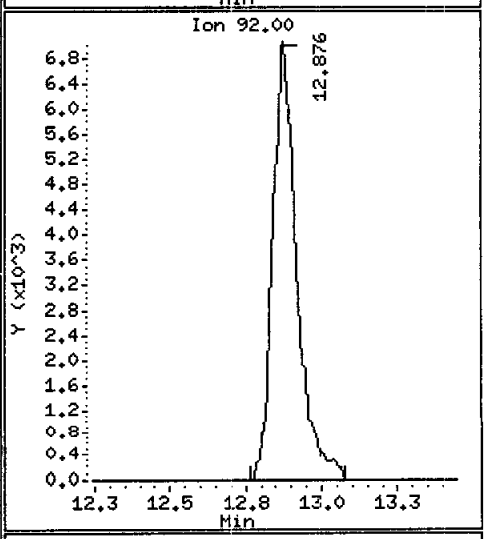


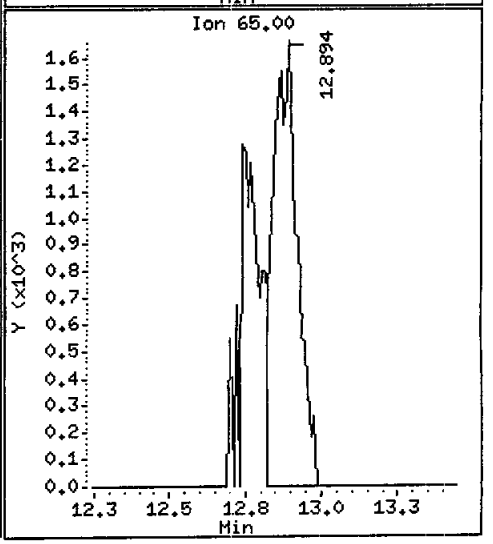












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7610.D

Date : 14-JAN-2005 04:24

Client ID: 066385-001

Instrument: gcmsb.i

Sample Info: G2DJJ1AD,066385-001,SANDIA,E5A100227-4

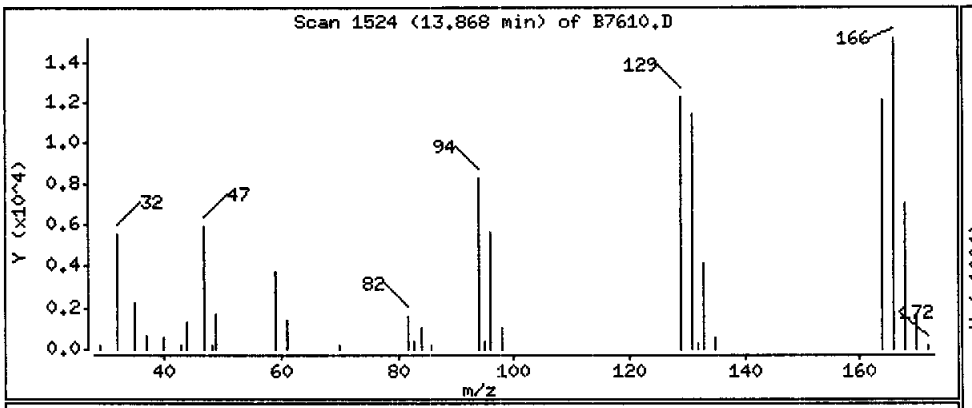
Operator: DLK

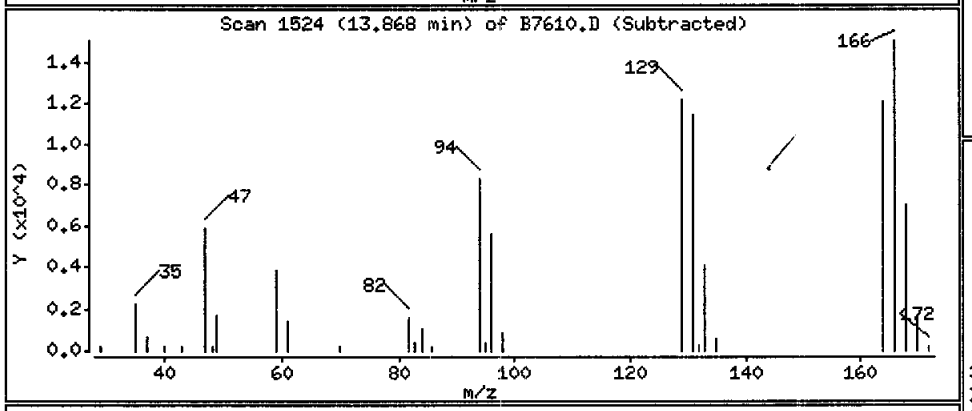
Column phase: J&W DB-624

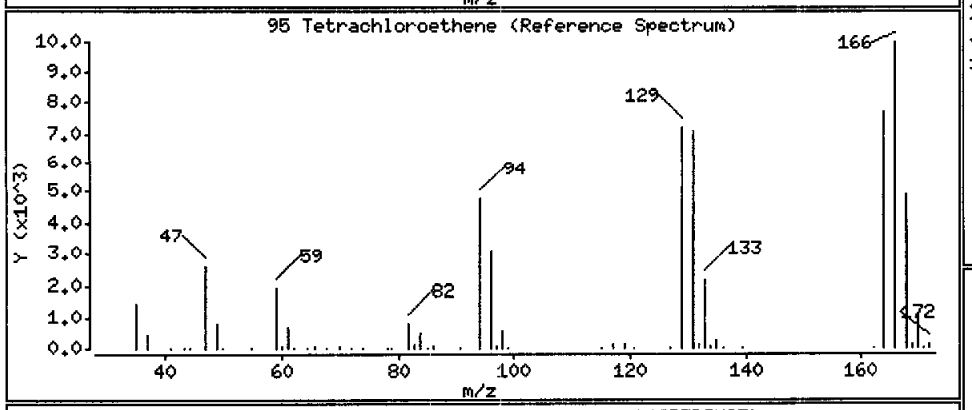
Column diameter: 0.53

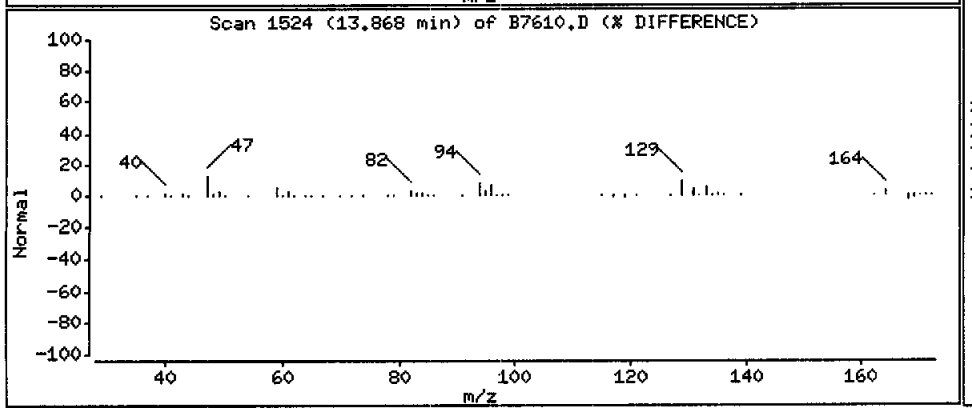
95 Tetrachloroethene

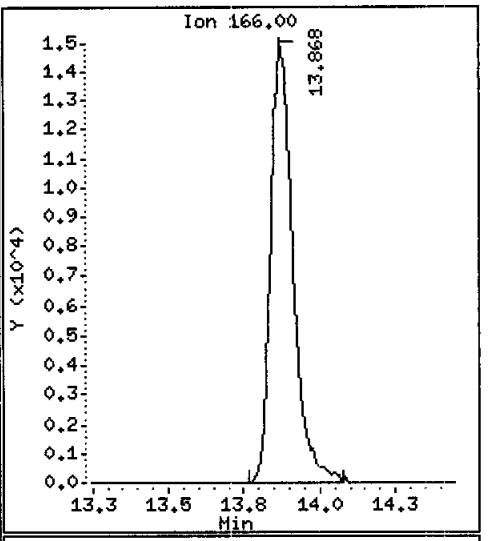
Concentration: 5.275 ppbv

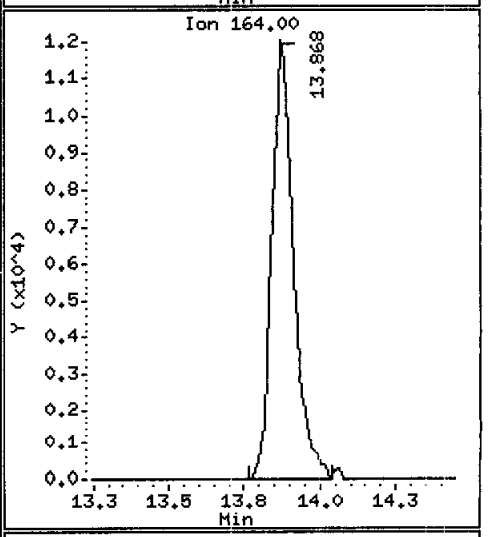


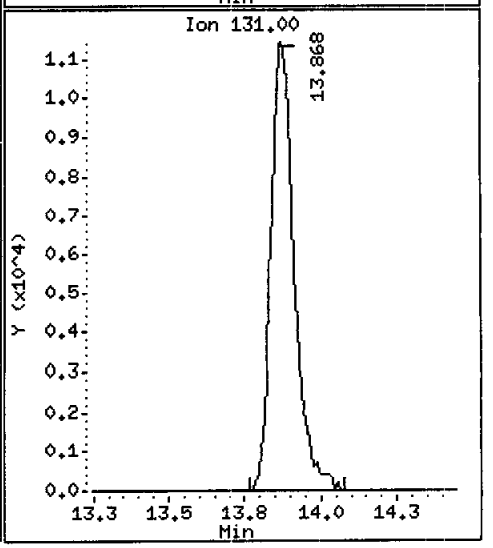












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D
Lab Smp Id: G2DJK1AD Client Smp ID: 066386-001
Inj Date : 14-JAN-2005 04:59
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DJK1AD,066386-001,SANDIA,E5A100227-5
Misc Info : 24.2,12.6,500,961,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.200	FinalPres
InitPres	12.600	InitPres
CalVol	500.000	CalVol
SmpVol	961.000	SmpVol

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
	3 Dichlorodifluoromethane (F12)	85	2.119	2.115	(0.255)	1693379	66.8485	66.80
	5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.345	2.350	(0.283)	79708	3.86969	3.867
	21 Trichlorofluoromethane (F11)	101	3.725	3.730	(0.449)	162903	6.37882	6.374
	28 1,1-Dichloroethene	61	4.655	4.659	(0.561)	137706	10.1659	10.16
	30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.718	4.713	(0.568)	1065810	36.3234	36.30
	31 Acetone	58	4.889	4.822	(0.589)	4397	2.28988	2.288(aQ)
	44 1,1-Dichloroethane	63	6.829	6.825	(0.823)	10155	0.68414	0.6836(a)
	54 2-Butanone	72	8.417	7.944	(1.014)	9606	3.75992	3.757(aQ)
*	58 Bromochloromethane	49	8.300	8.295	(1.000)	600127	50.0000	
	60 Chloroform	83	8.462	8.458	(1.020)	208017	10.8949	10.89
	61 1,1,1-Trichloroethane	97	8.769	8.756	(1.057)	22101	1.15787	1.157(a)
$	66 1,2-Dichloroethane-d4	65	9.328	9.315	(0.921)	512563	47.9289	47.89
*	73 1,4-Difluorobenzene	114	10.131	10.118	(1.000)	1303127	50.0000	
	75 Trichloroethene	130	10.582	10.569	(1.045)	95715	8.41220	8.406

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 88 Toluene-d8	100	12.739	12.726	(1.257)	681652	49.9550	49.92
95 Tetrachloroethene	166	13.876	13.844	(0.902)	61242	4.23463	4.232
* 101 Chlorobenzene-d5	117	15.392	15.369	(1.000)	923735	50.0000	
$ 114 4-Bromofluorobenzene	95	17.647	17.625	(1.147)	685158	41.5214	41.49

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

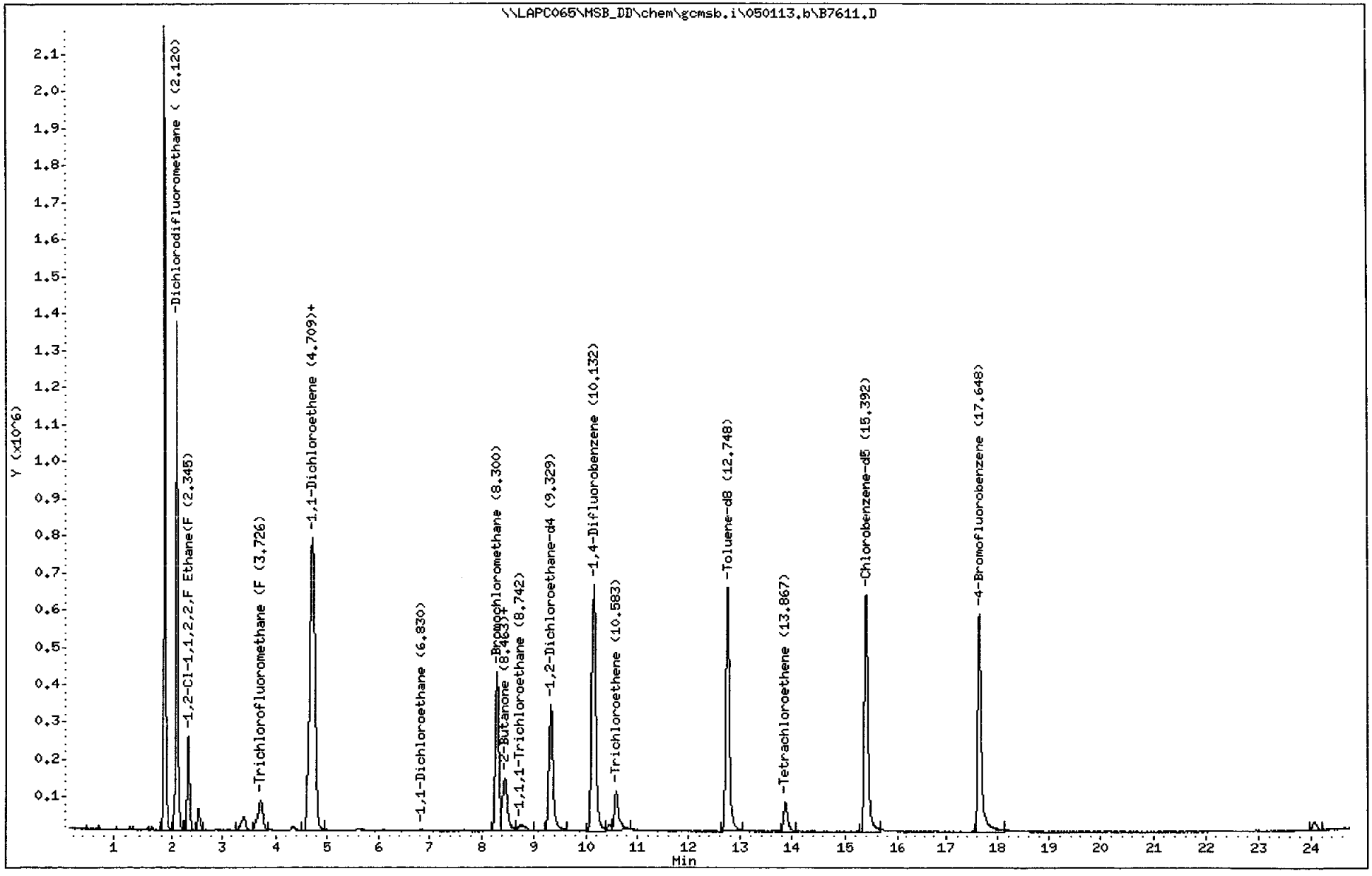
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D
Date : 14-JAN-2005 04:59
Client ID: 066386-001
Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

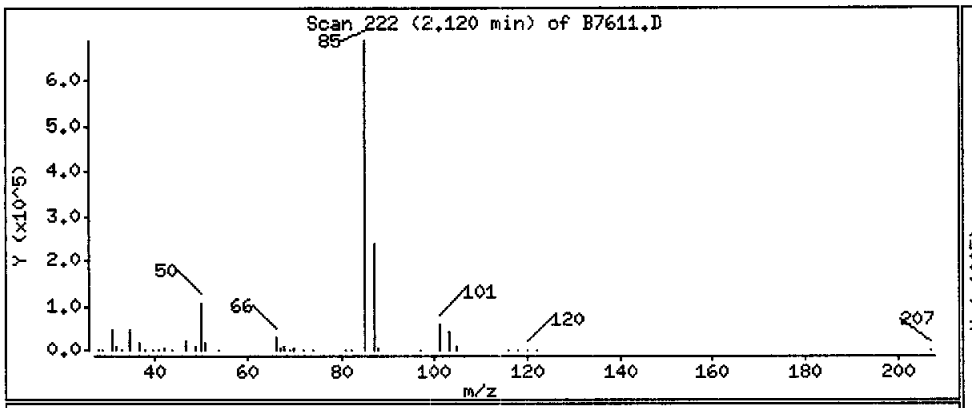
Operator: DLK

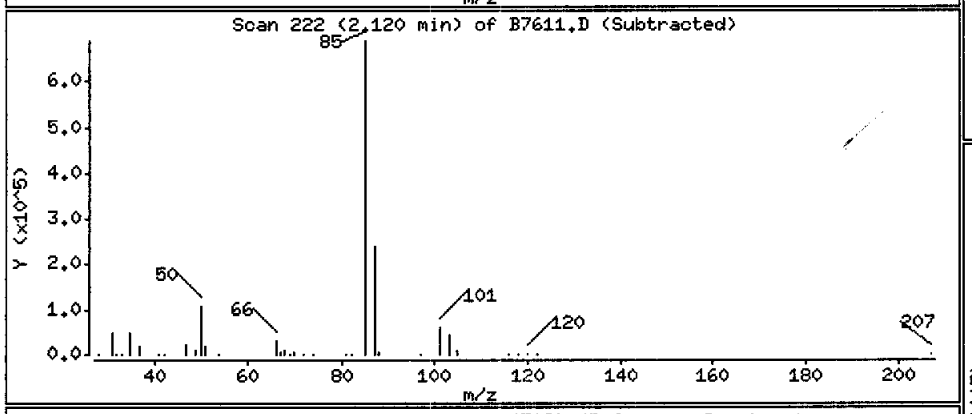
Column phase: J&W DB-624

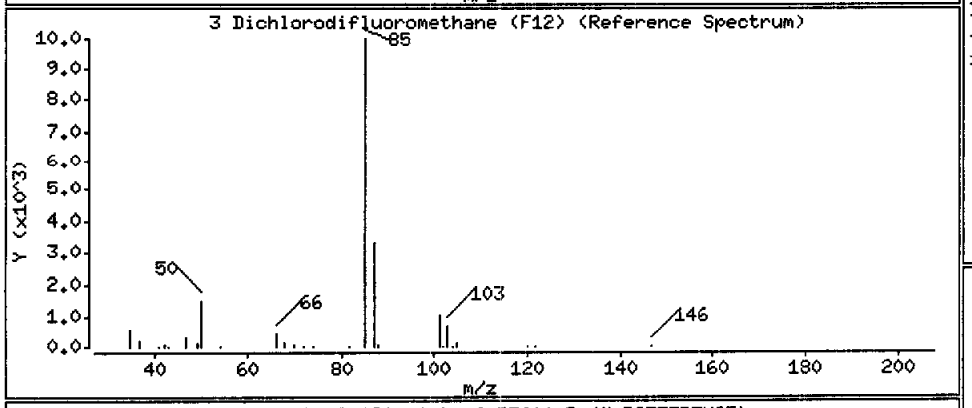
Column diameter: 0.53

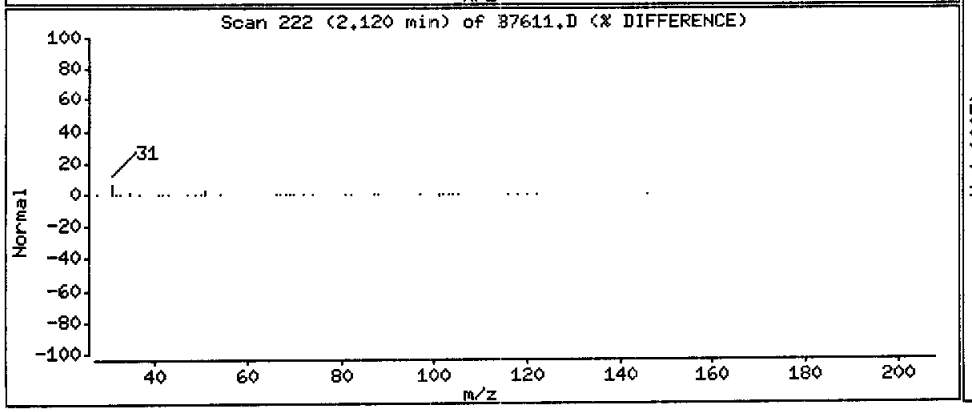
3 Dichlorodifluoromethane (F12)

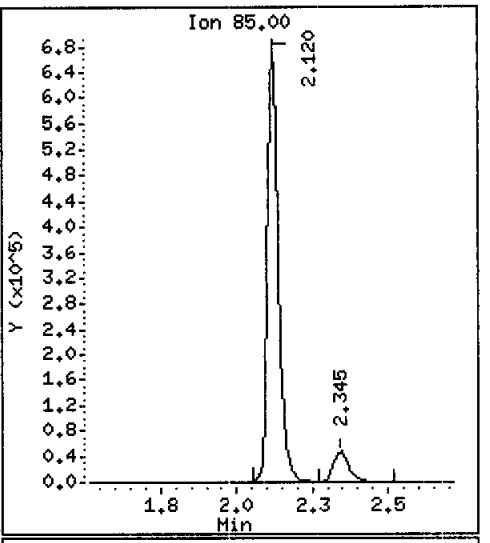
Concentration: 66.80 ppbv

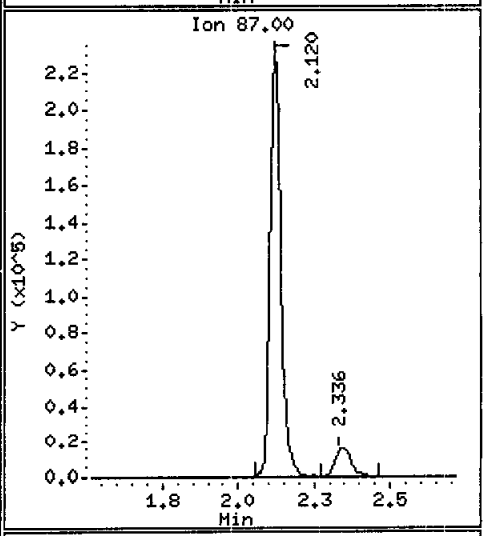


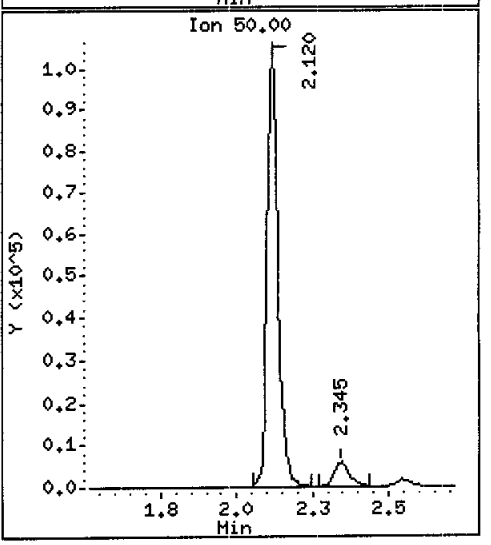












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

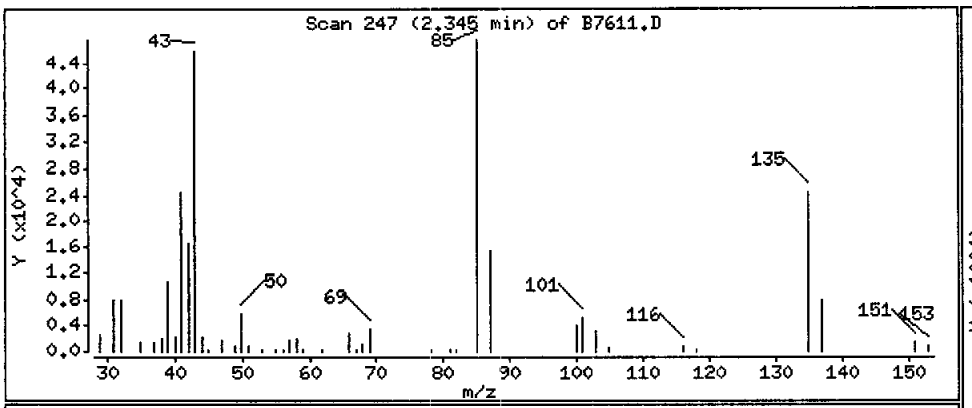
Operator: DLK

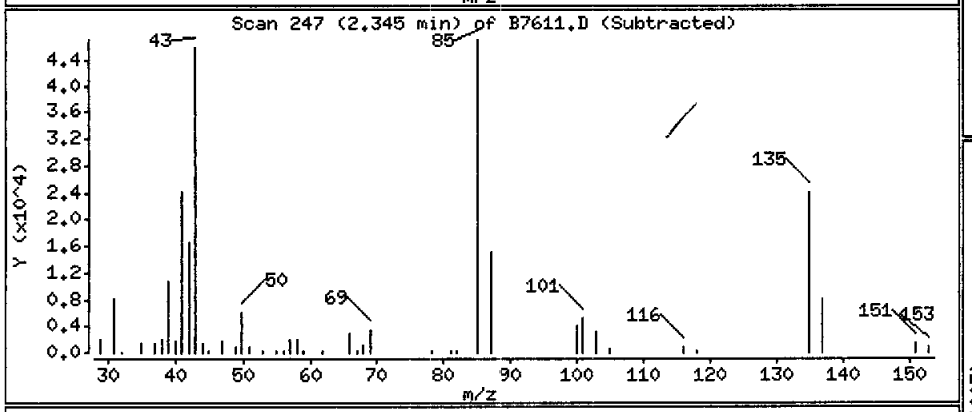
Column phase: J&W DB-624

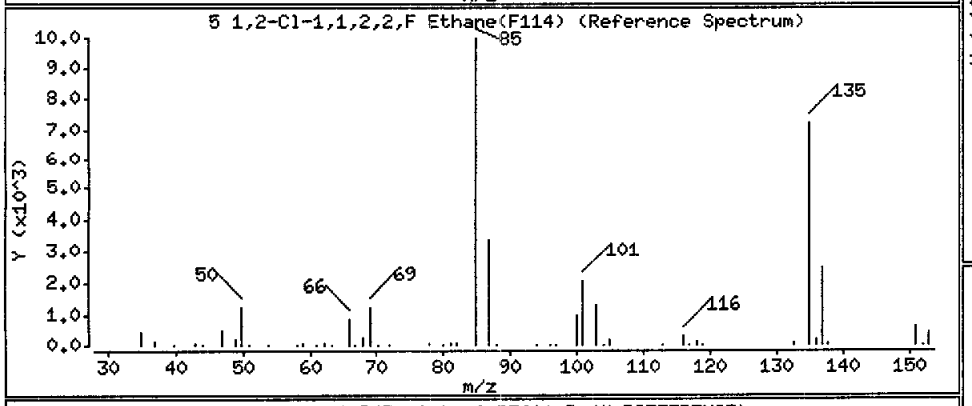
Column diameter: 0.53

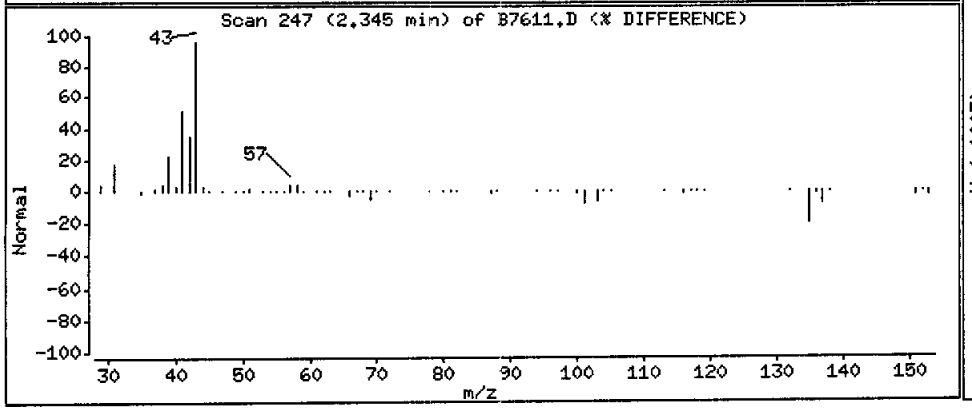
5 1,2-Cl-1,1,2,2,F Ethane(F114)

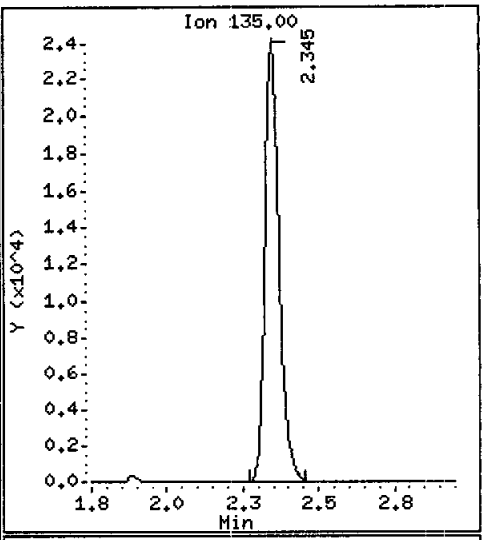
Concentration: 3.867 ppbv

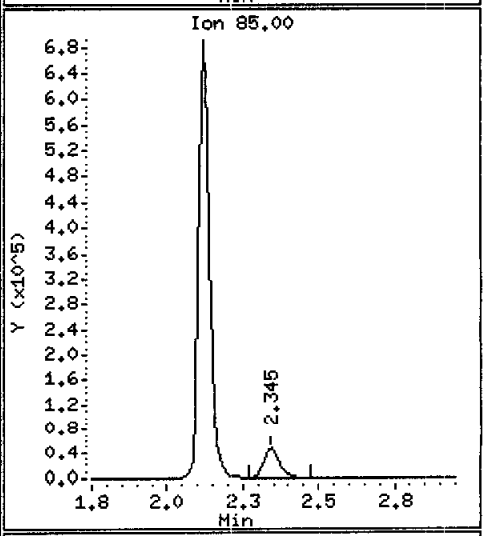


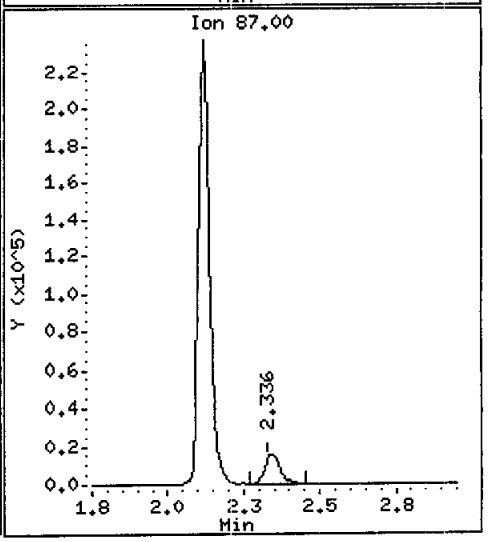












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

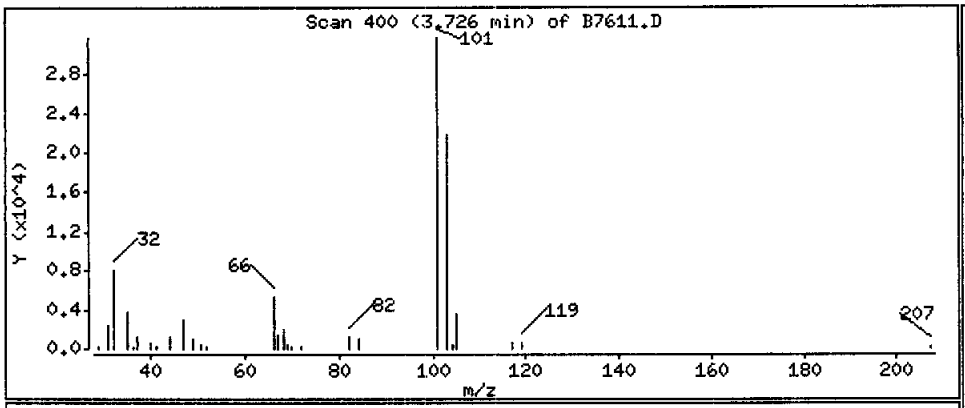
Operator: DLK

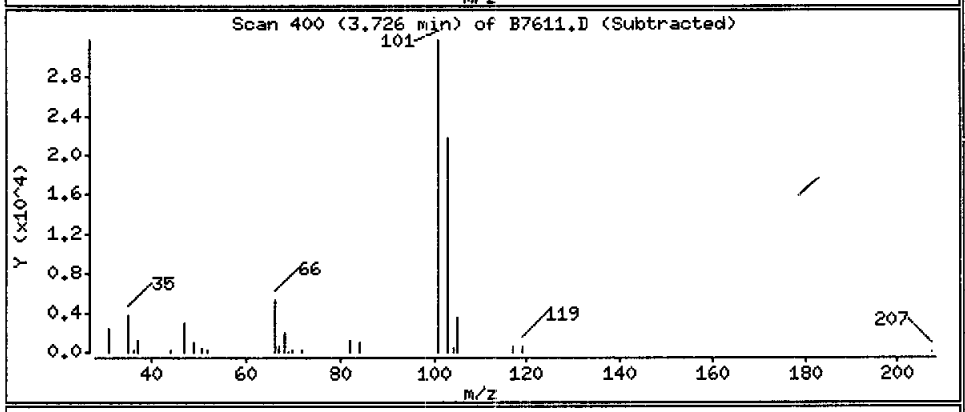
Column phase: J&W DB-624

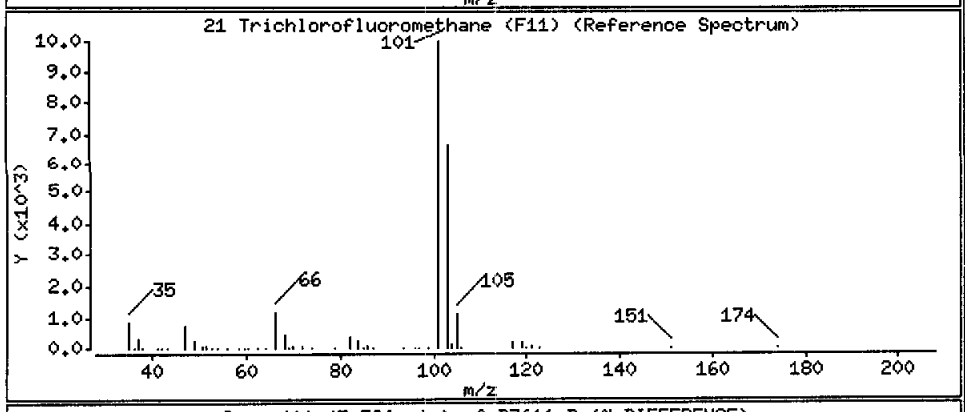
Column diameter: 0.53

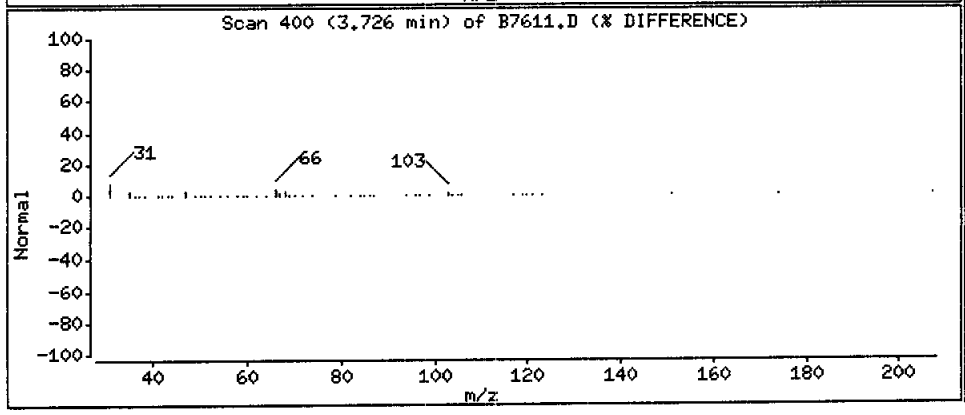
21 Trichlorofluoromethane (F11)

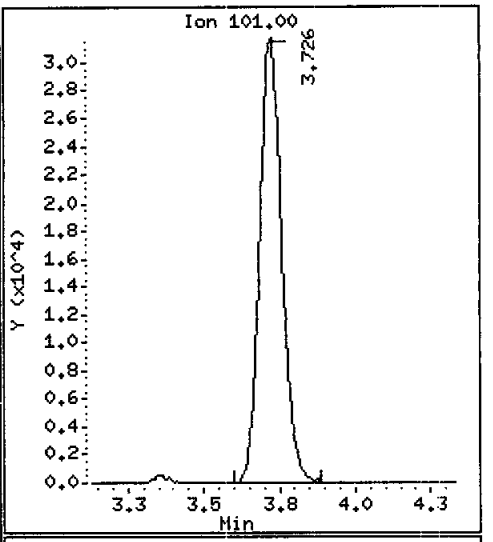
Concentration: 6.374 ppbv

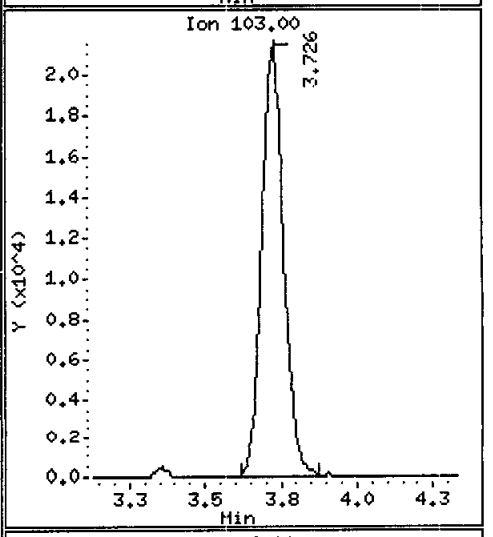


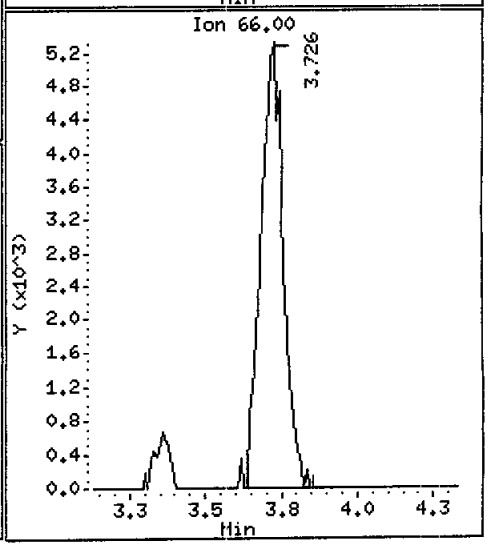












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

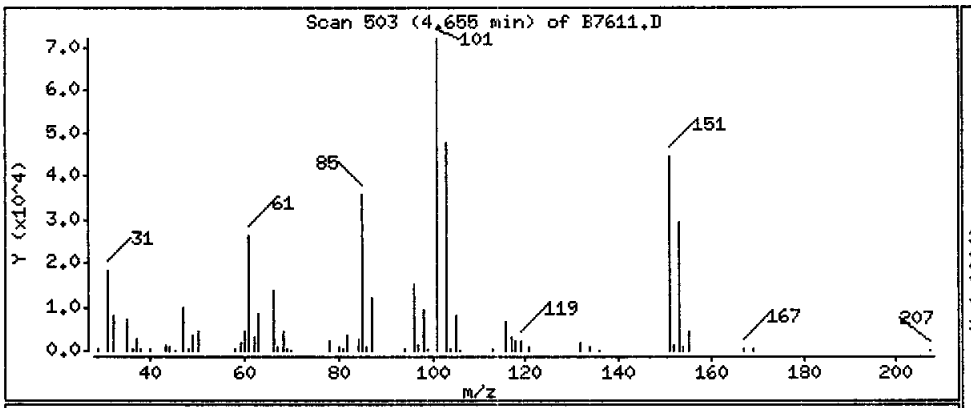
Operator: DLK

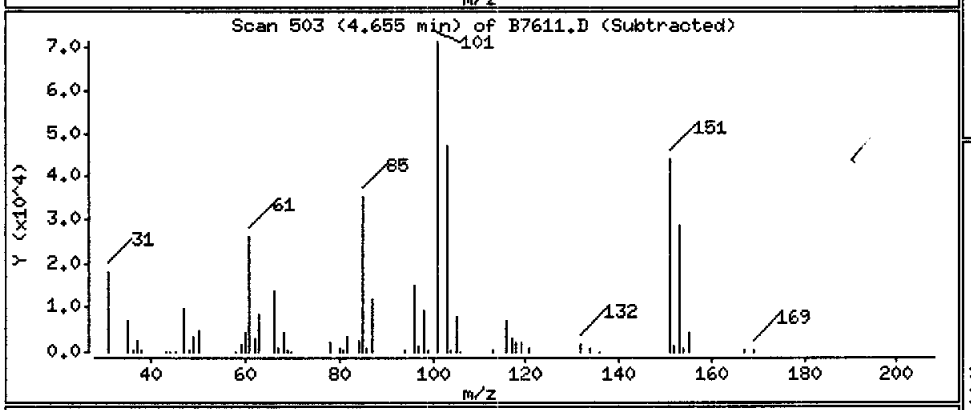
Column phase: J&W DB-624

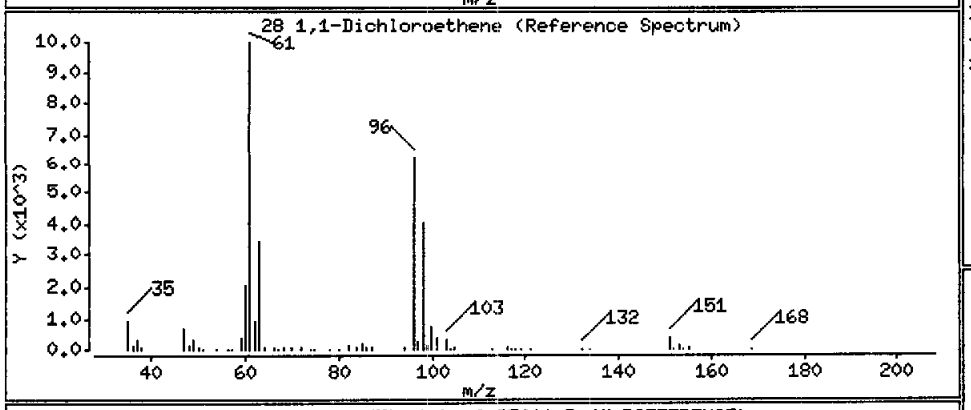
Column diameter: 0.53

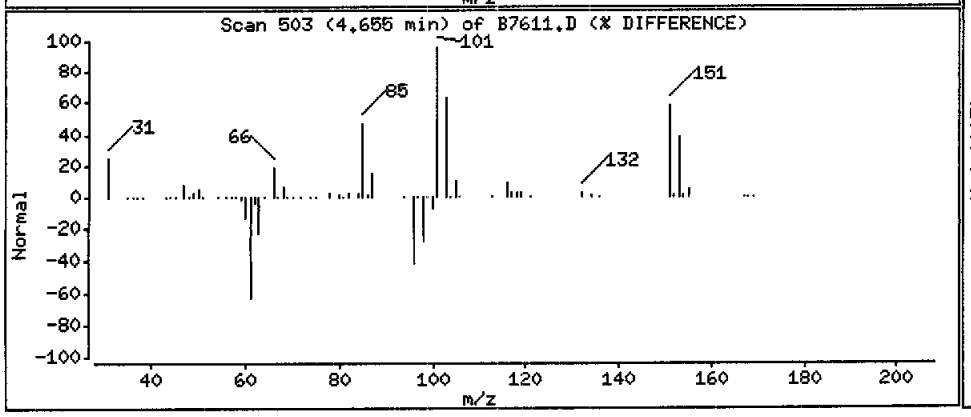
28 1,1-Dichloroethene

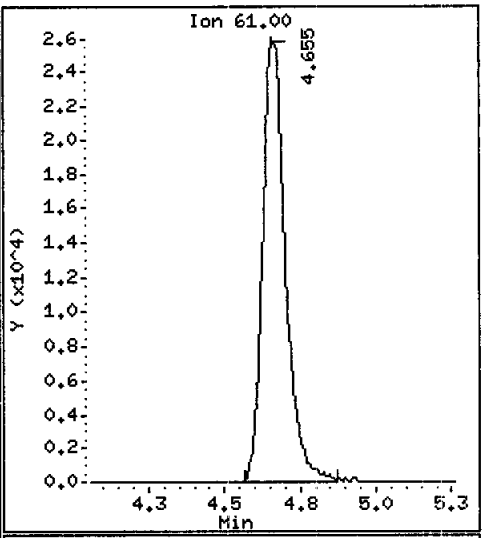
Concentration: 10.16 ppbv

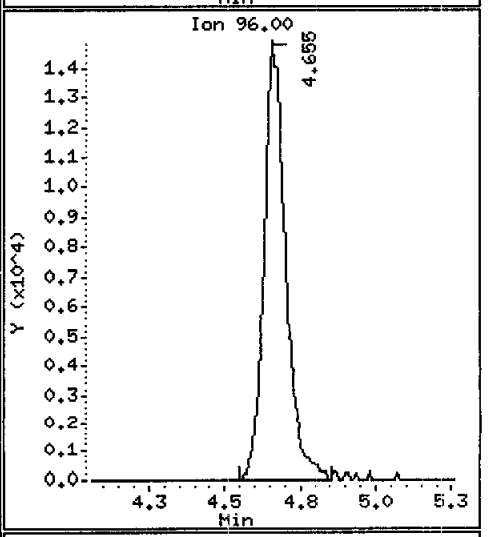


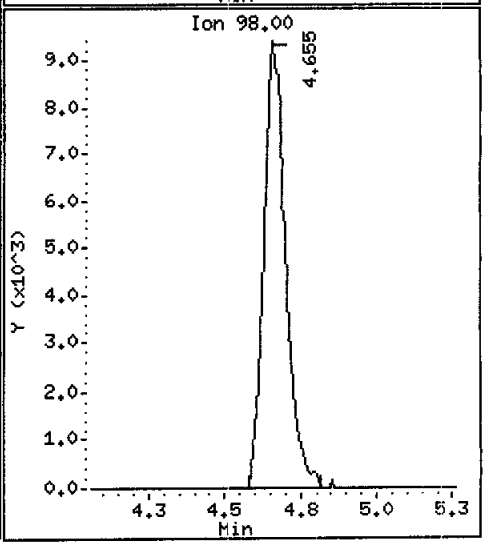












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

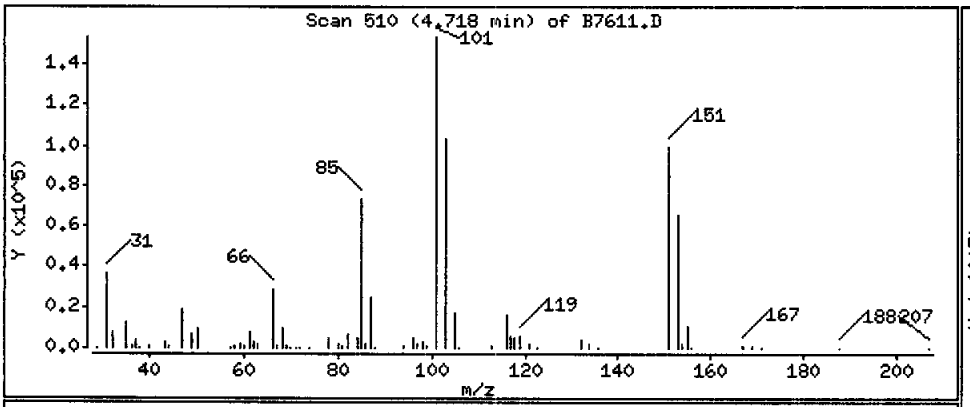
Operator: DLK

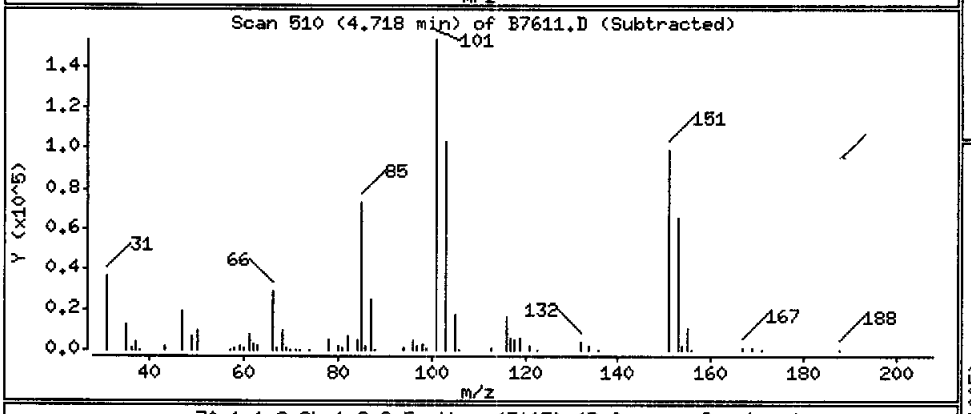
Column phase: J&W DB-624

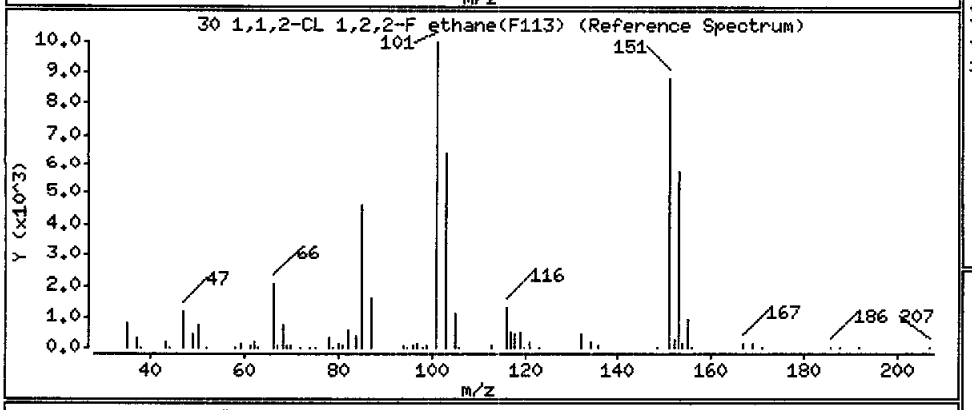
Column diameter: 0.53

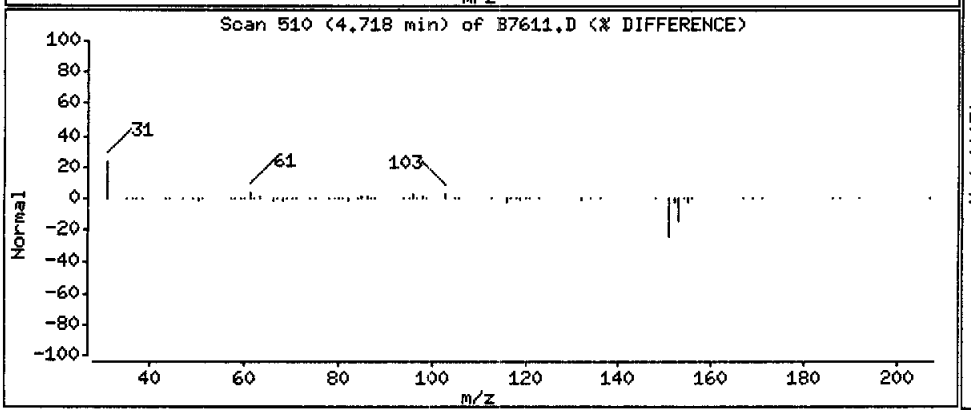
30 1,1,2-CL 1,2,2-F ethane(F113)

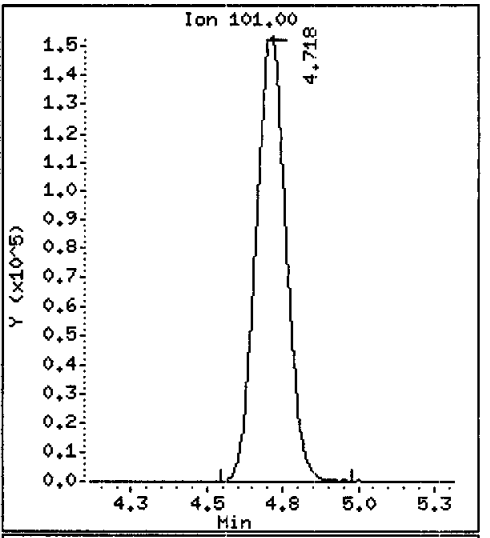
Concentration: 36.30 ppbv

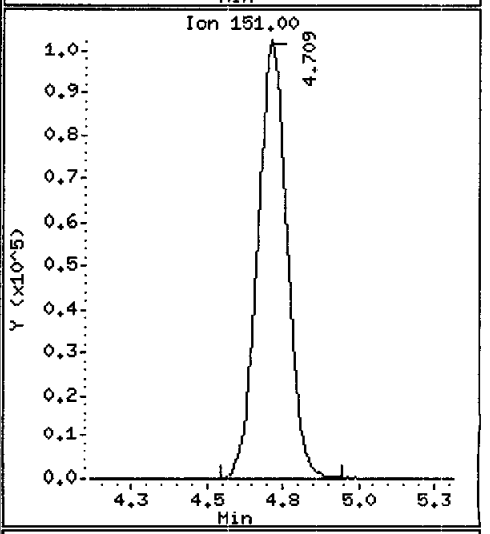


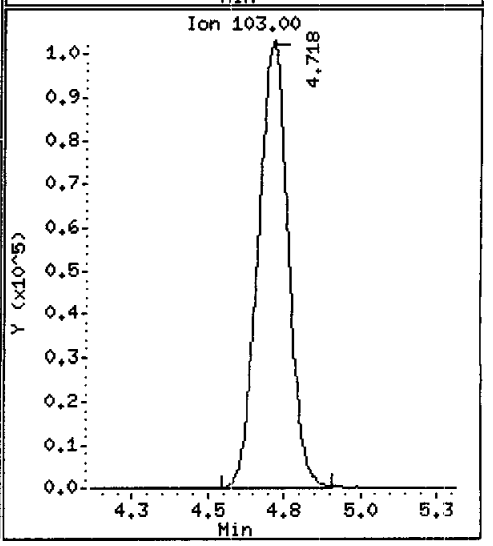












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

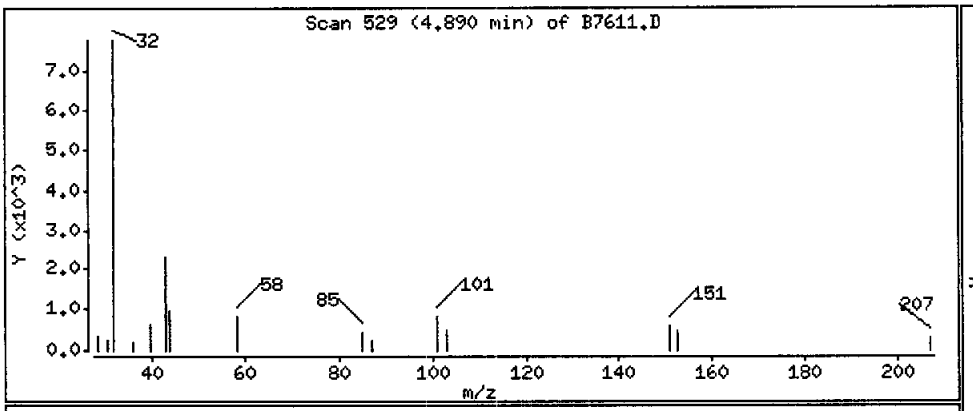
Operator: DLK

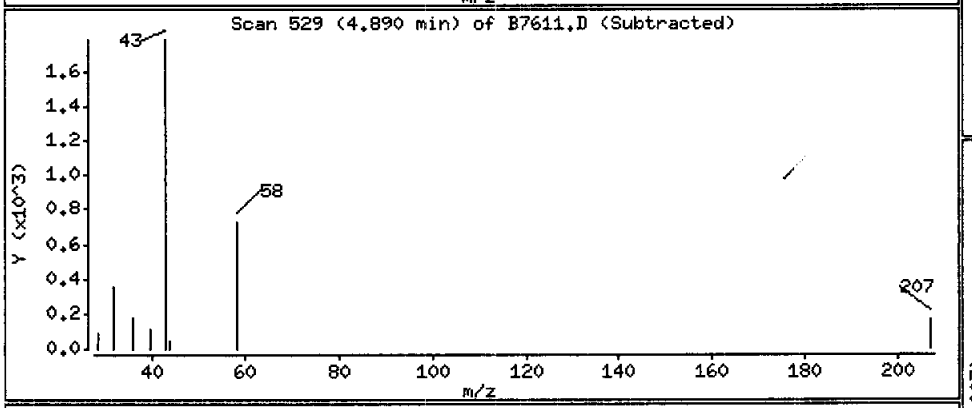
Column phase: J&W DB-624

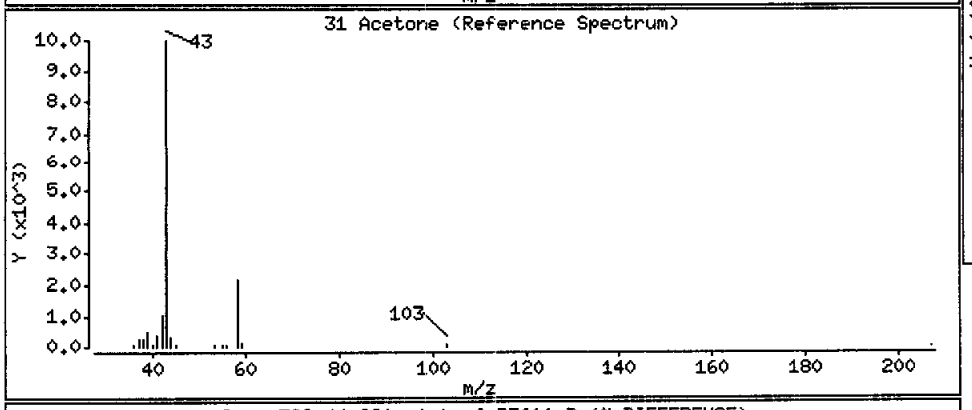
Column diameter: 0.53

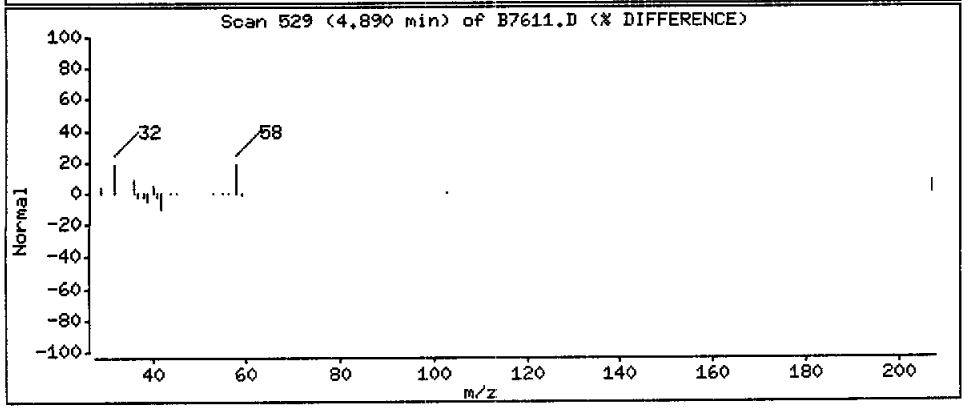
31 Acetone

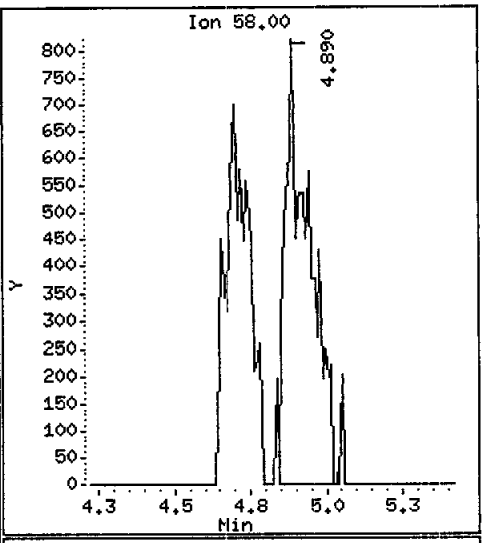
Concentration: 2.288 ppbv

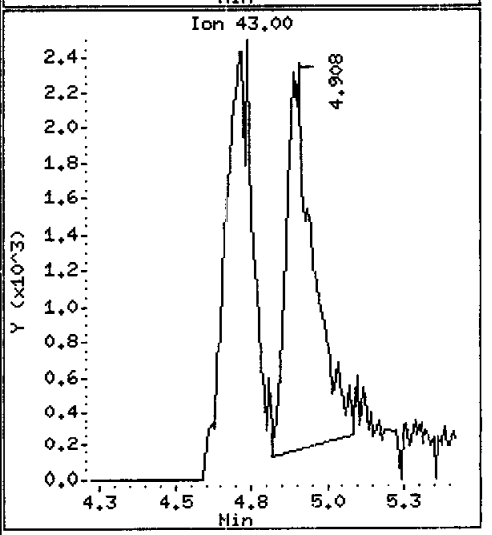












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

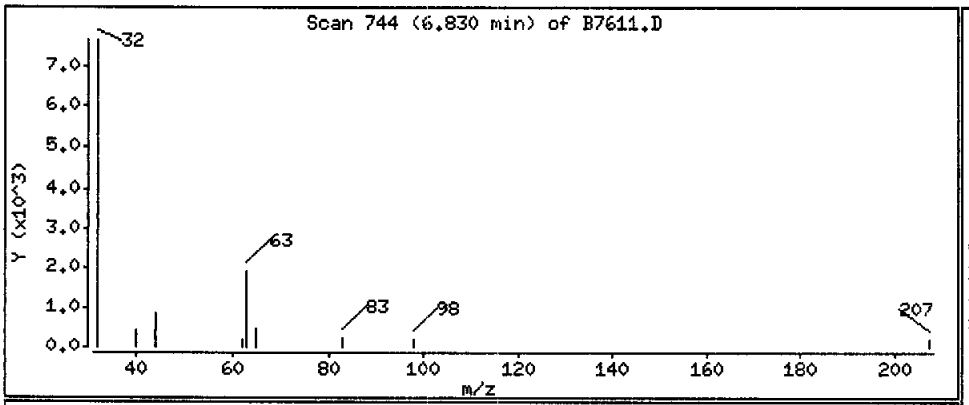
Operator: DLK

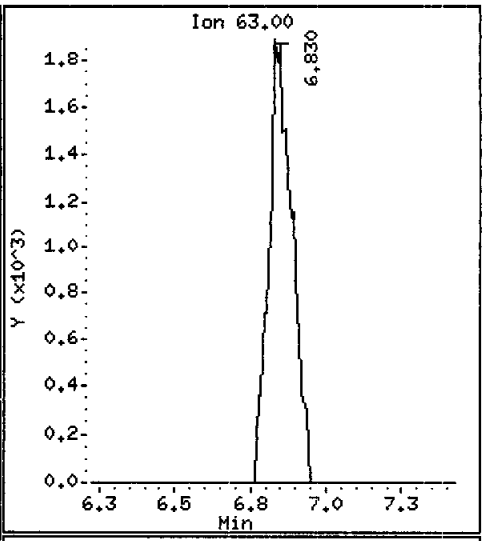
Column phase: J&W DB-624

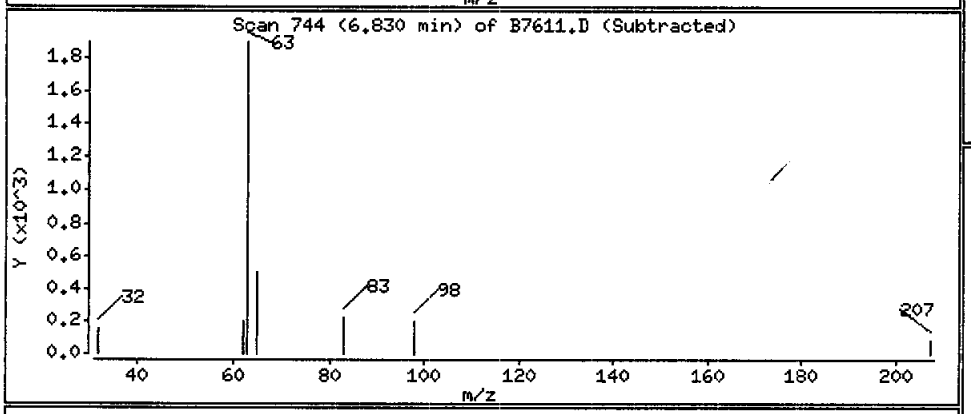
Column diameter: 0.53

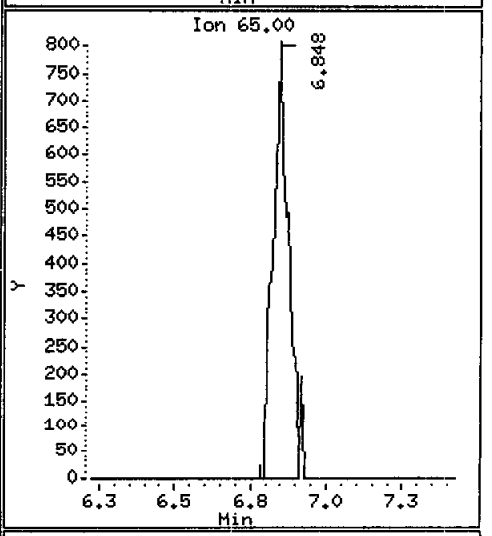
44 1,1-Dichloroethane

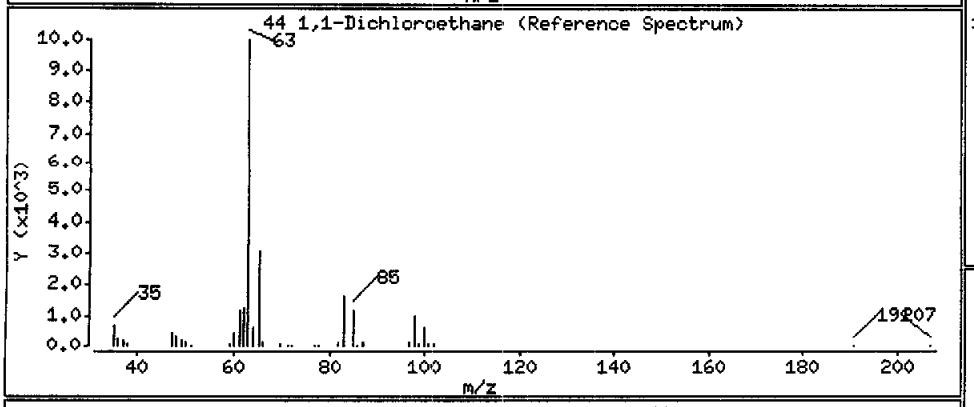
Concentration: 0.6836 ppbv

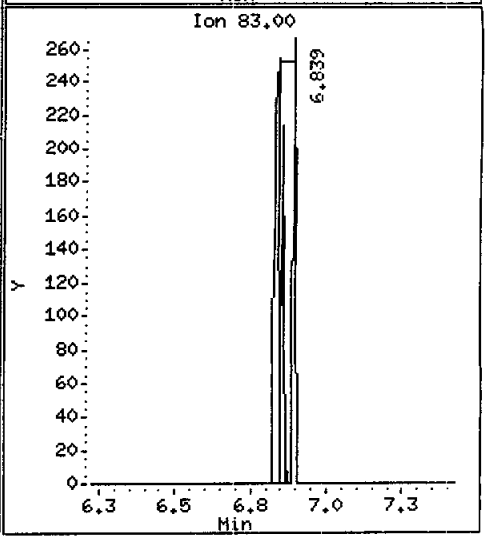


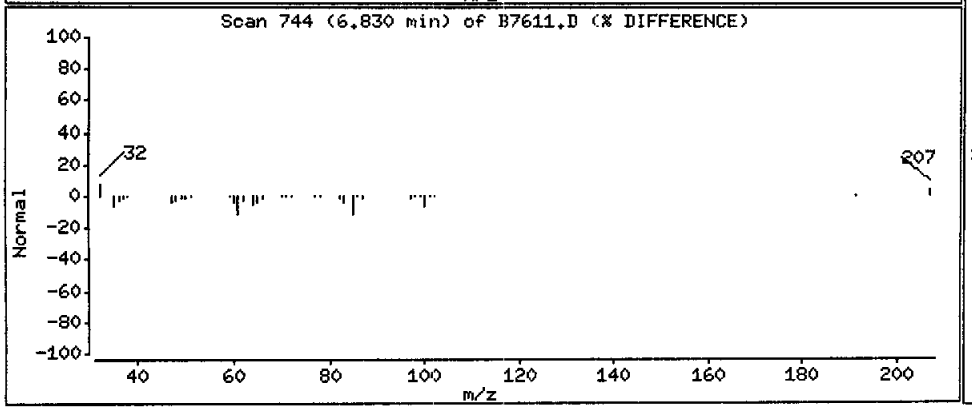












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

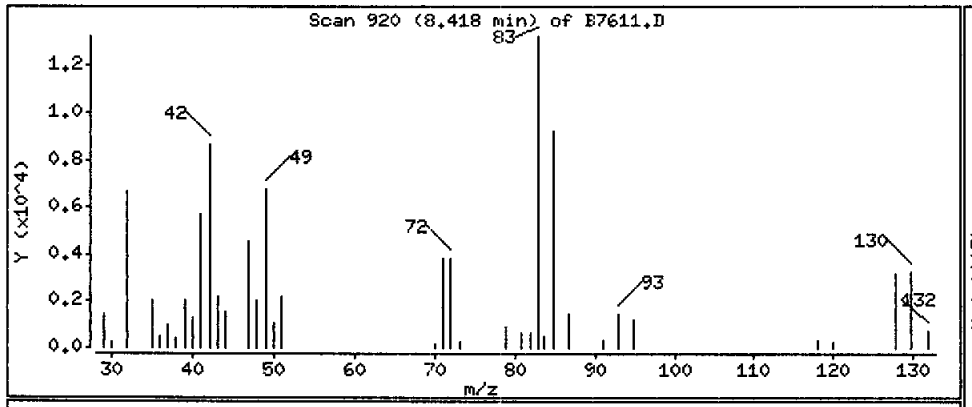
Operator: DLK

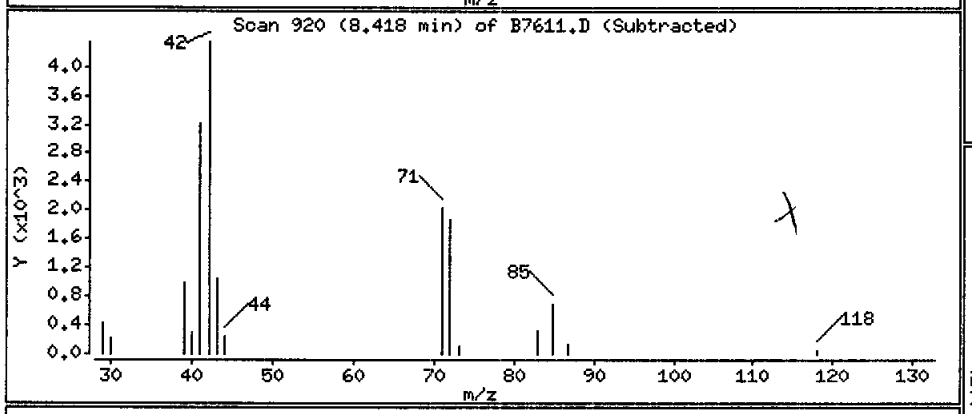
Column phase: J&W DB-624

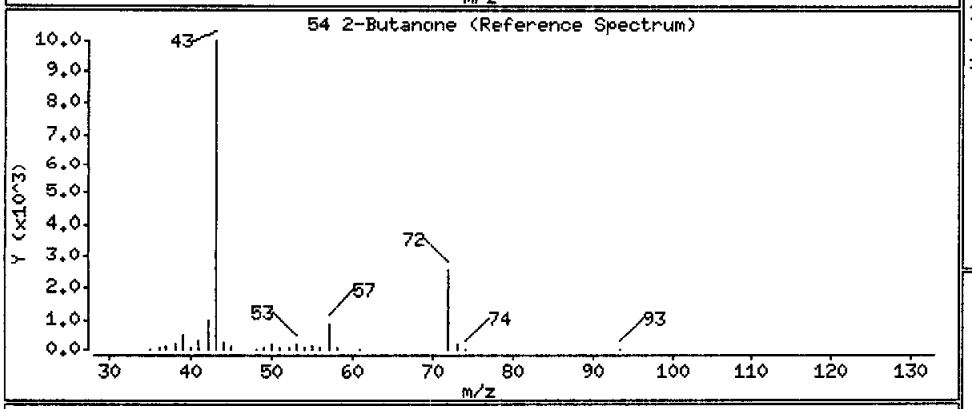
Column diameter: 0.53

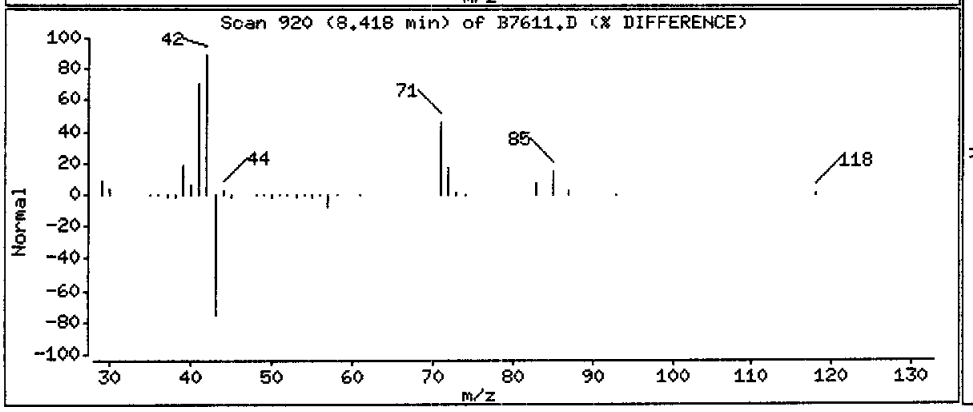
54 2-Butanone

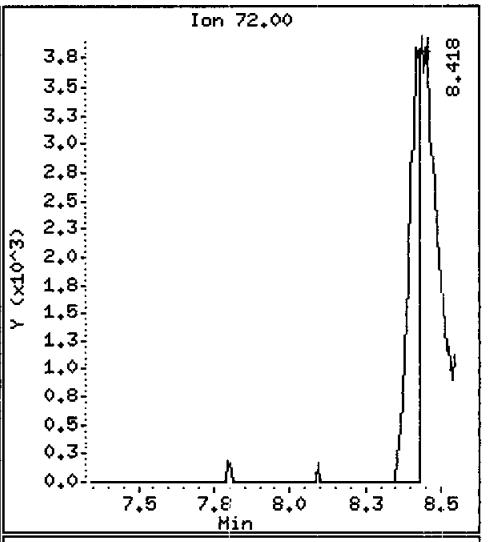
Concentration: 3.757 ppbv

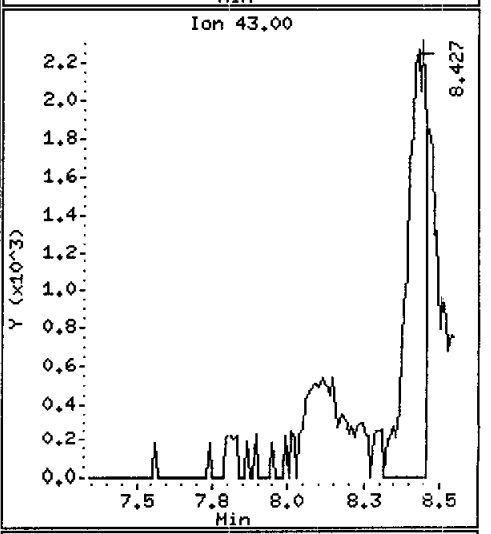


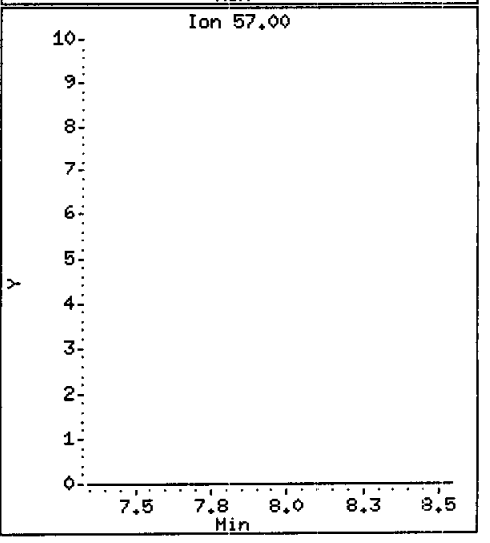












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

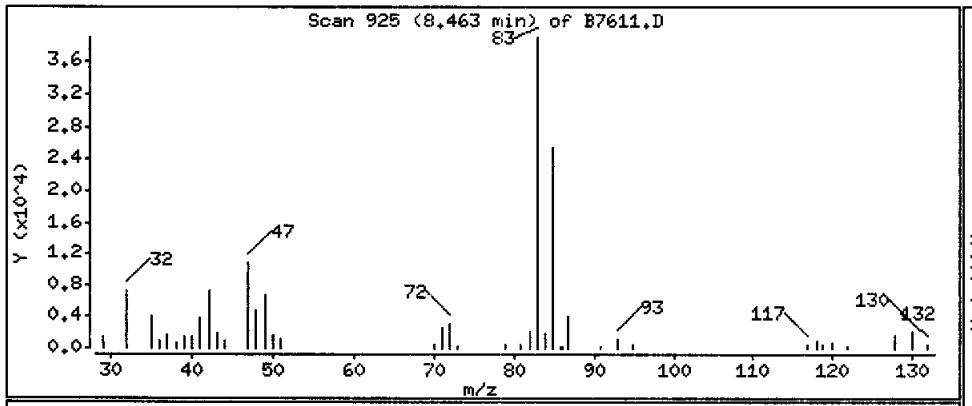
Operator: DLK

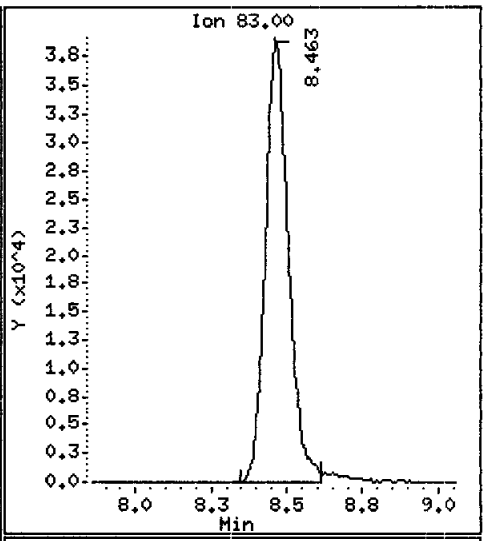
Column phase: J&W DB-624

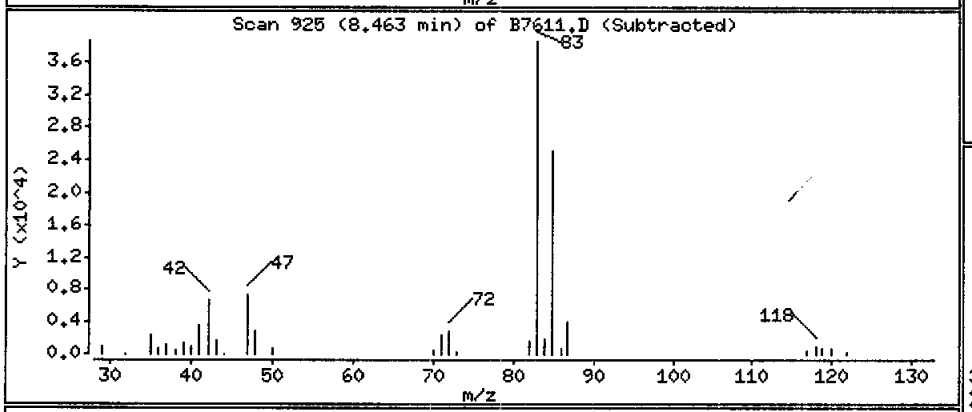
Column diameter: 0.53

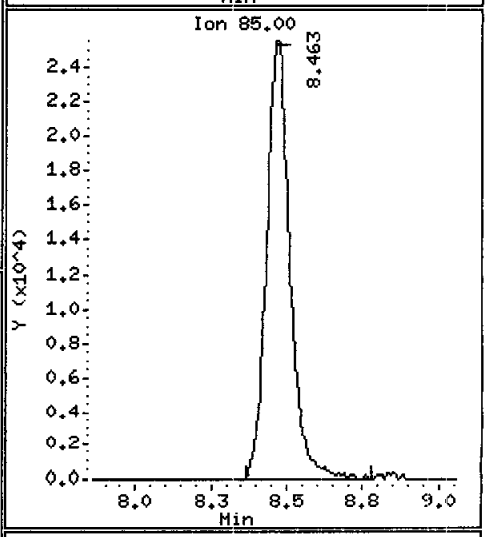
60 Chloroform

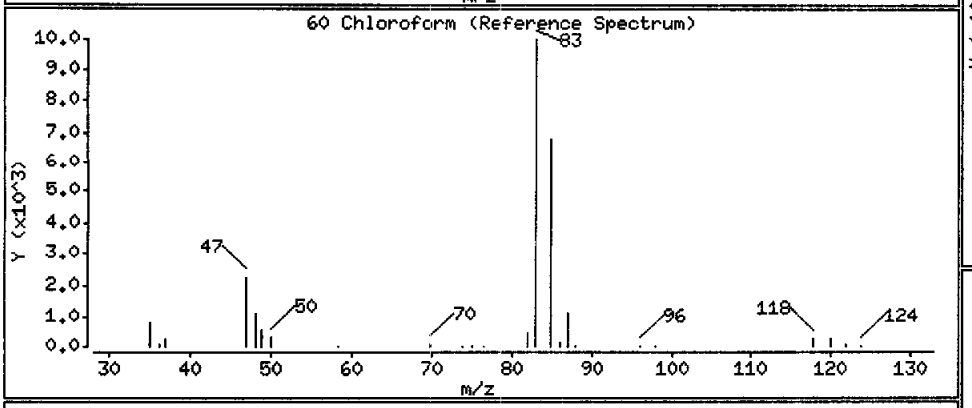
Concentration: 10.89 ppbv

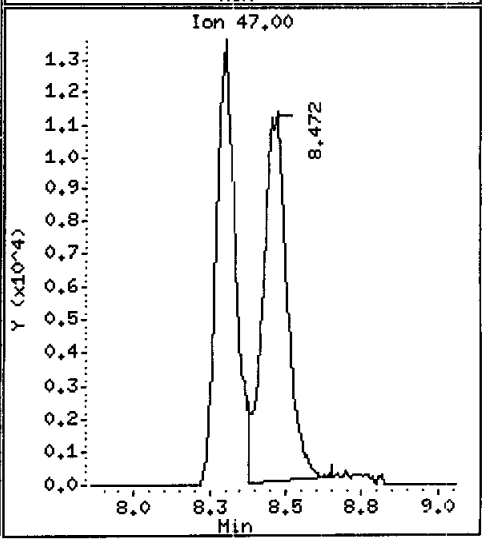


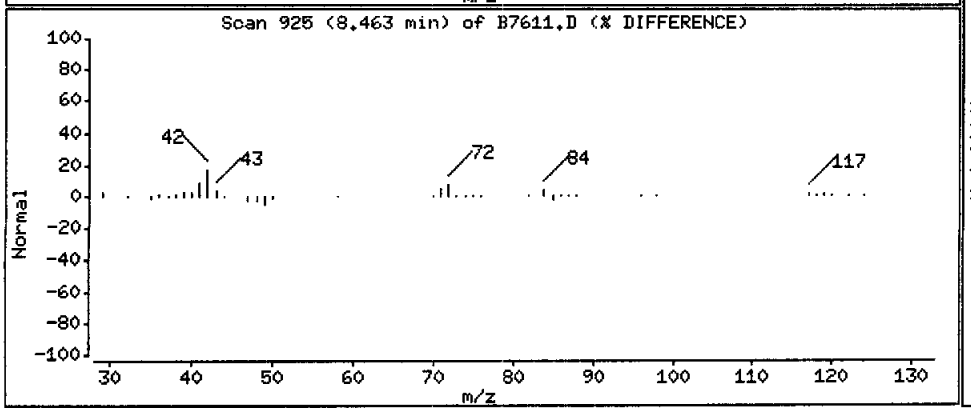












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

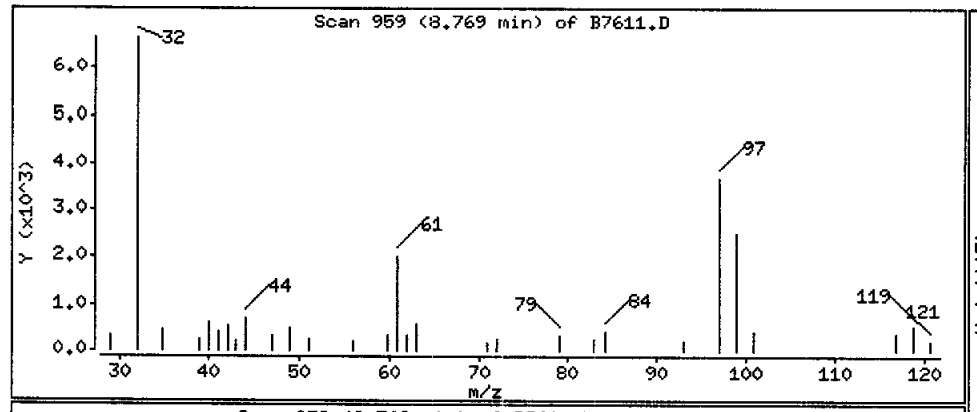
Operator: DLK

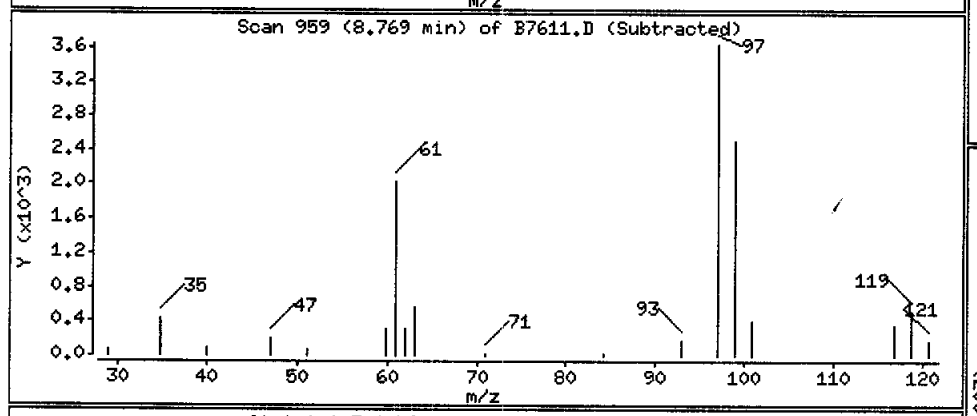
Column phase: J&W DB-624

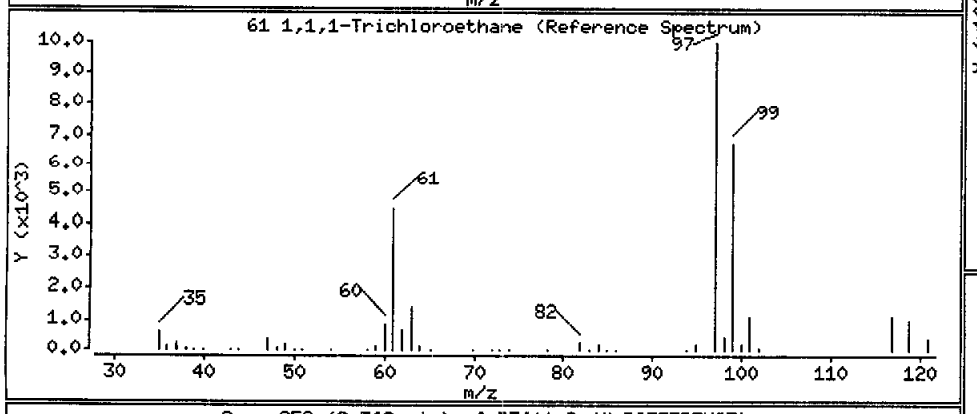
Column diameter: 0.53

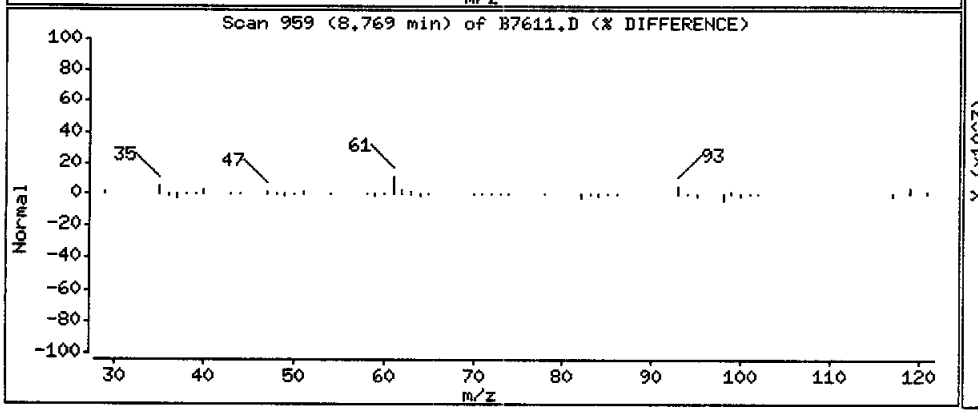
61 1,1,1-Trichloroethane

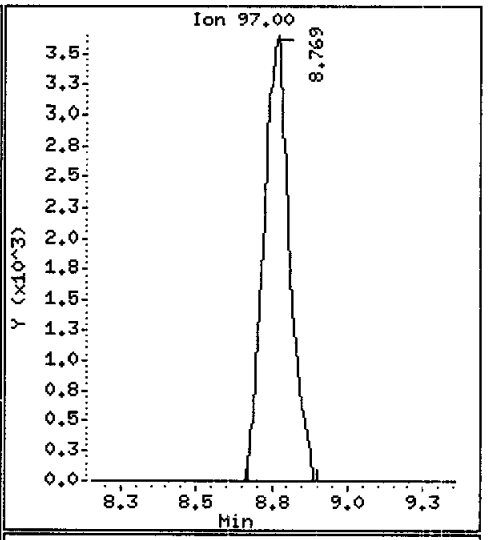
Concentration: 1.157 ppbv

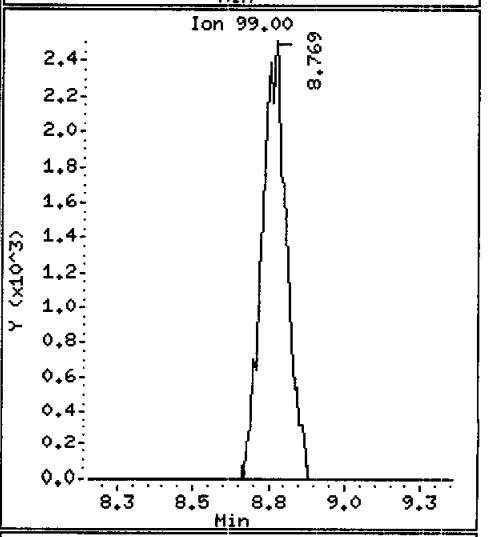


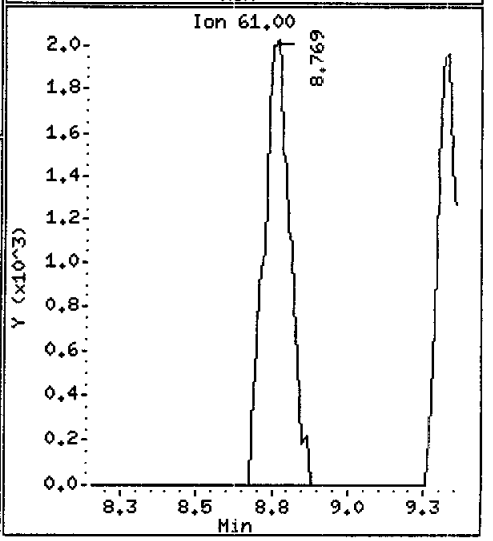












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Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

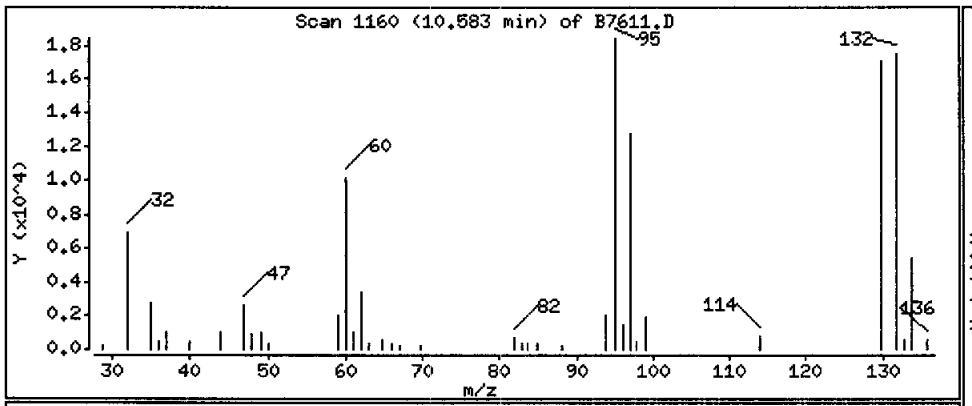
Operator: DLK

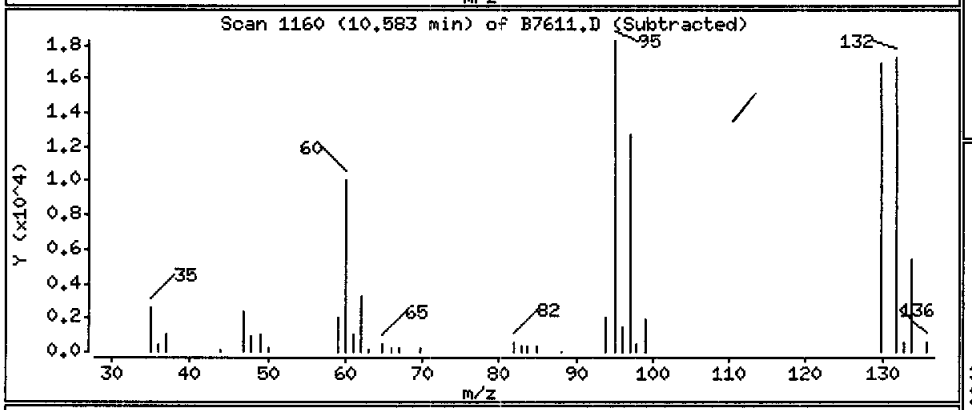
Column phase: J&W DB-624

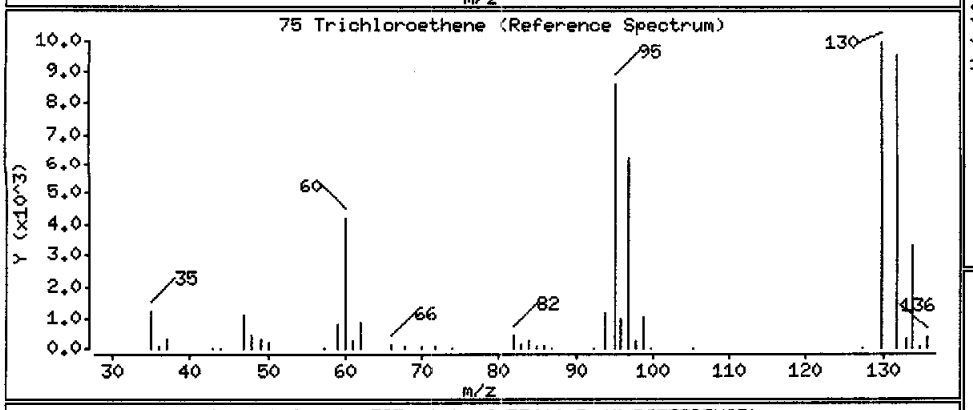
Column diameter: 0.53

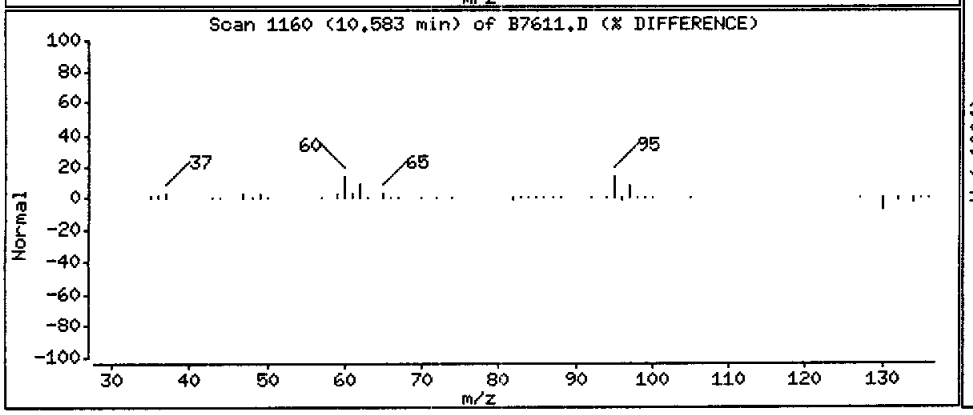
75 Trichloroethene

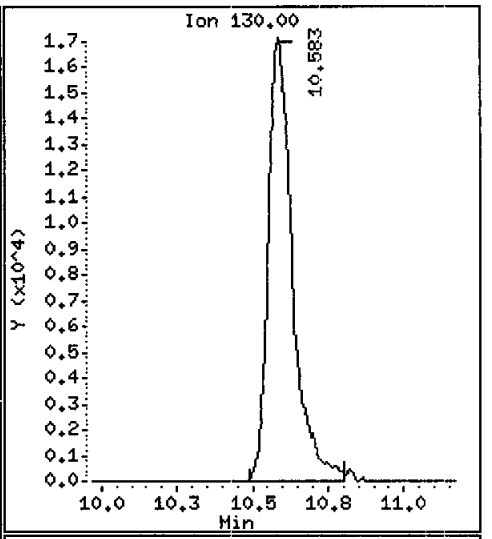
Concentration: 8.406 ppbv

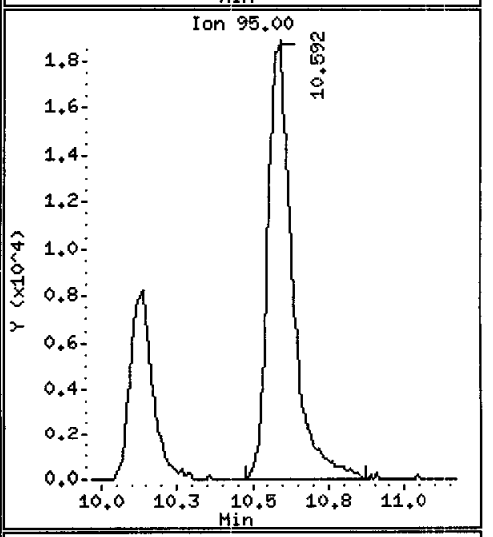


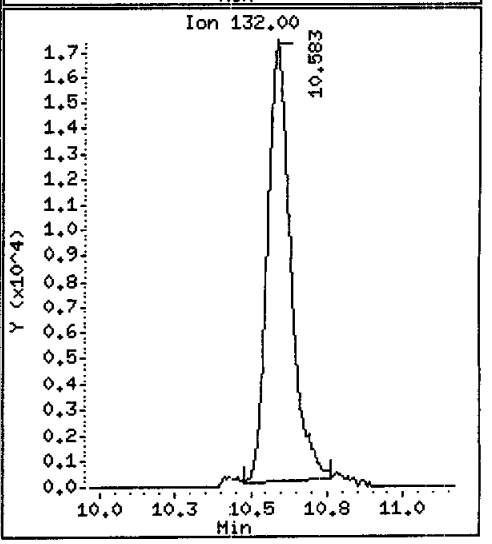












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7611.D

Date : 14-JAN-2005 04:59

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJK1AD,066386-001,SANDIA,E5A100227-5

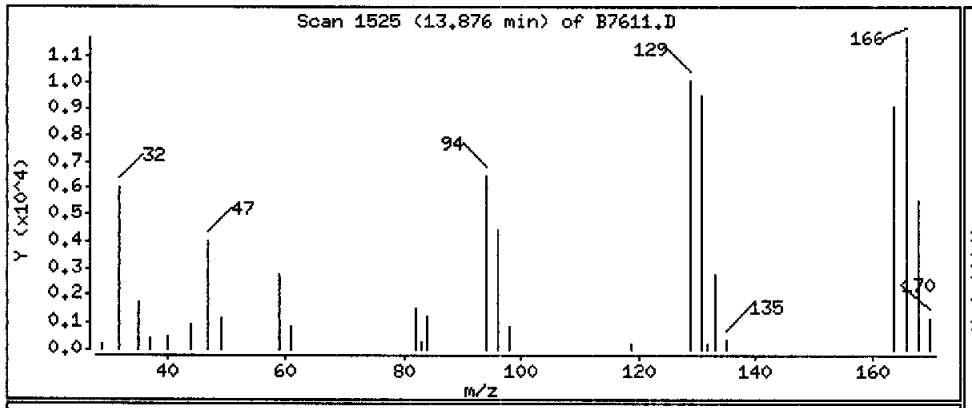
Operator: DLK

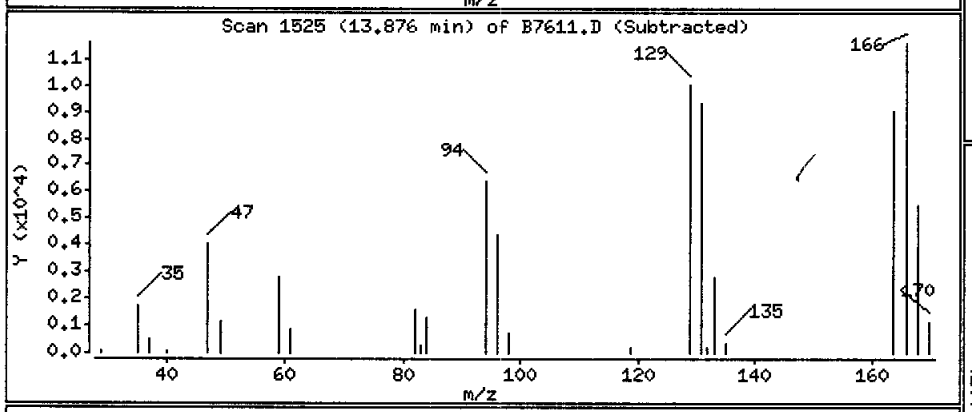
Column phase: J&W DB-624

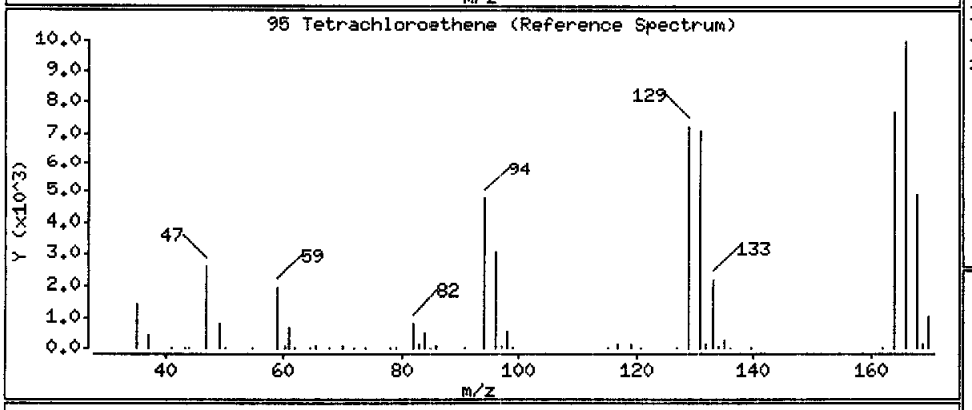
Column diameter: 0.53

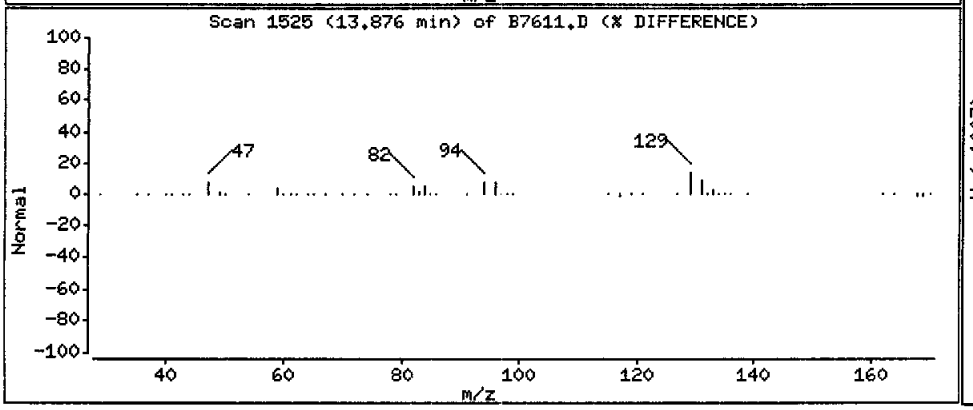
95 Tetrachloroethene

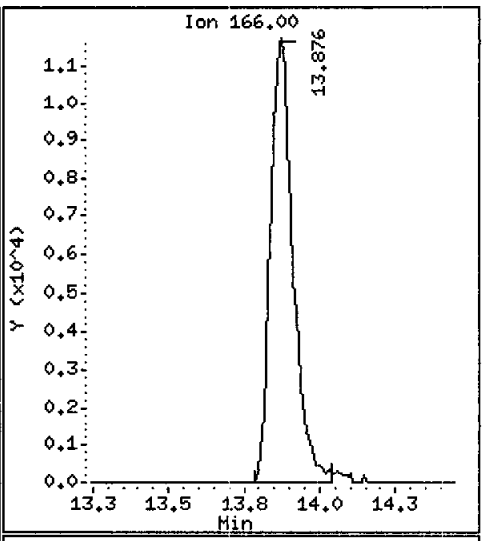
Concentration: 4.232 ppbv

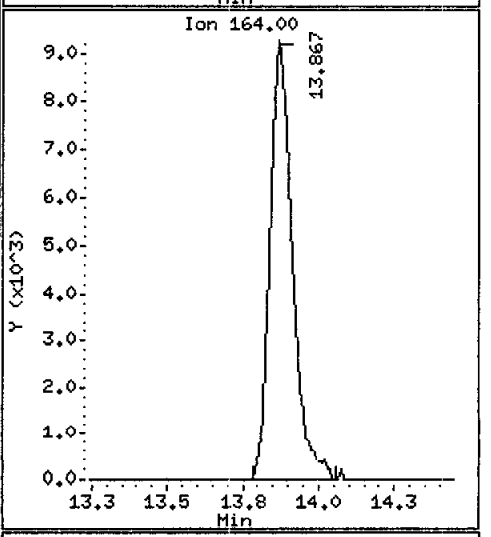


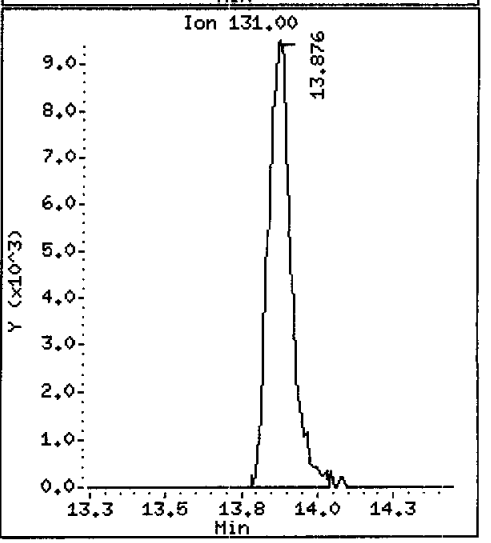












STL Los Angeles

AIR TOXICS - TO-14A/TO-15 MEDIUM LEVEL

Data file : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D
Lab Smp Id: G2DJM1AD Client Smp ID: 066386-001
Inj Date : 14-JAN-2005 05:35
Operator : DLK Inst ID: gcmsb.i
Smp Info : G2DJM1AD,066386-001,SANDIA,E5A100227-6
Misc Info : 24.5,12.4,500,988,0,,,TO14A.sub,0,
Comment :
Method : \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\TO14A.m
Meth Date : 13-Jan-2005 17:52 target Quant Type: ISTD
Cal Date : 01-NOV-2004 11:31 Cal File: IC11016.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14A.sub
Target Version: 4.04
Processing Host: LAPC065

Concentration Formula: Amt * DF * (FinalPres / InitPres)*(CalVol / SmpVol)

Name	Value	Description
DF	1.000	Dilution Factor
FinalPres	24.500	FinalPres
InitPres	12.400	InitPres
CalVol	500.000	CalVol
SmpVol	988.000	SmpVol

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
3 Dichlorodifluoromethane (F12)	85	2.137	2.115	(0.258)	1807037	76.5022	76.49
5 1,2-Cl-1,1,2,2,F Ethane(F114)	135	2.354	2.350	(0.284)	84724	4.41114	4.411
21 Trichlorofluoromethane (F11)	101	3.734	3.730	(0.450)	167672	7.04109	7.040
28 1,1-Dichloroethene	61	4.673	4.659	(0.563)	146086	11.5656	11.56
30 1,1,2-CL 1,2,2-F ethane(F113)	101	4.718	4.713	(0.568)	1122910	41.0412	41.04
31 Acetone	58	4.727	4.822	(0.570)	4001	2.23469	2.234(a)
44 1,1-Dichloroethane	63	6.847	6.825	(0.825)	11704	0.84565	0.8456(a)
54 2-Butanone	72	8.426	7.944	(1.015)	18957	7.95711	7.956(aQ)
* 58 Bromochloromethane	49	8.300	8.295	(1.000)	559596	50.0000	
60 Chloroform	83	8.462	8.458	(1.020)	230434	12.9432	12.94
61 1,1,1-Trichloroethane	97	8.769	8.756	(1.057)	19266	1.08246	1.082(a)
$ 66 1,2-Dichloroethane-d4	65	9.328	9.315	(0.921)	515701	48.4982	48.49
* 73 1,4-Difluorobenzene	114	10.131	10.118	(1.000)	1295716	50.0000	
75 Trichloroethene	130	10.583	10.569	(1.045)	127616	11.2800	11.28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppbv)	FINAL (ppbv)
$ 88 Toluene-d8	100	12.748	12.726	(1.258)	683182	50.3535	50.35
89 Toluene	91	12.874	12.843	(1.271)	59472	2.60679	2.606
95 Tetrachloroethene	166	13.867	13.844	(0.901)	194874	13.4077	13.41
M 99 Xylenes (total)	106				5537	0.74996	0.7499(a)
* 101 Chlorobenzene-d5	117	15.392	15.369	(1.000)	928347	50.0000	
107 o-Xylene	106	16.709	16.614	(1.086)	5537	0.74996	0.7499(a)
$ 114 4-Bromofluorobenzene	95	17.647	17.625	(1.147)	716778	43.2219	43.22

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

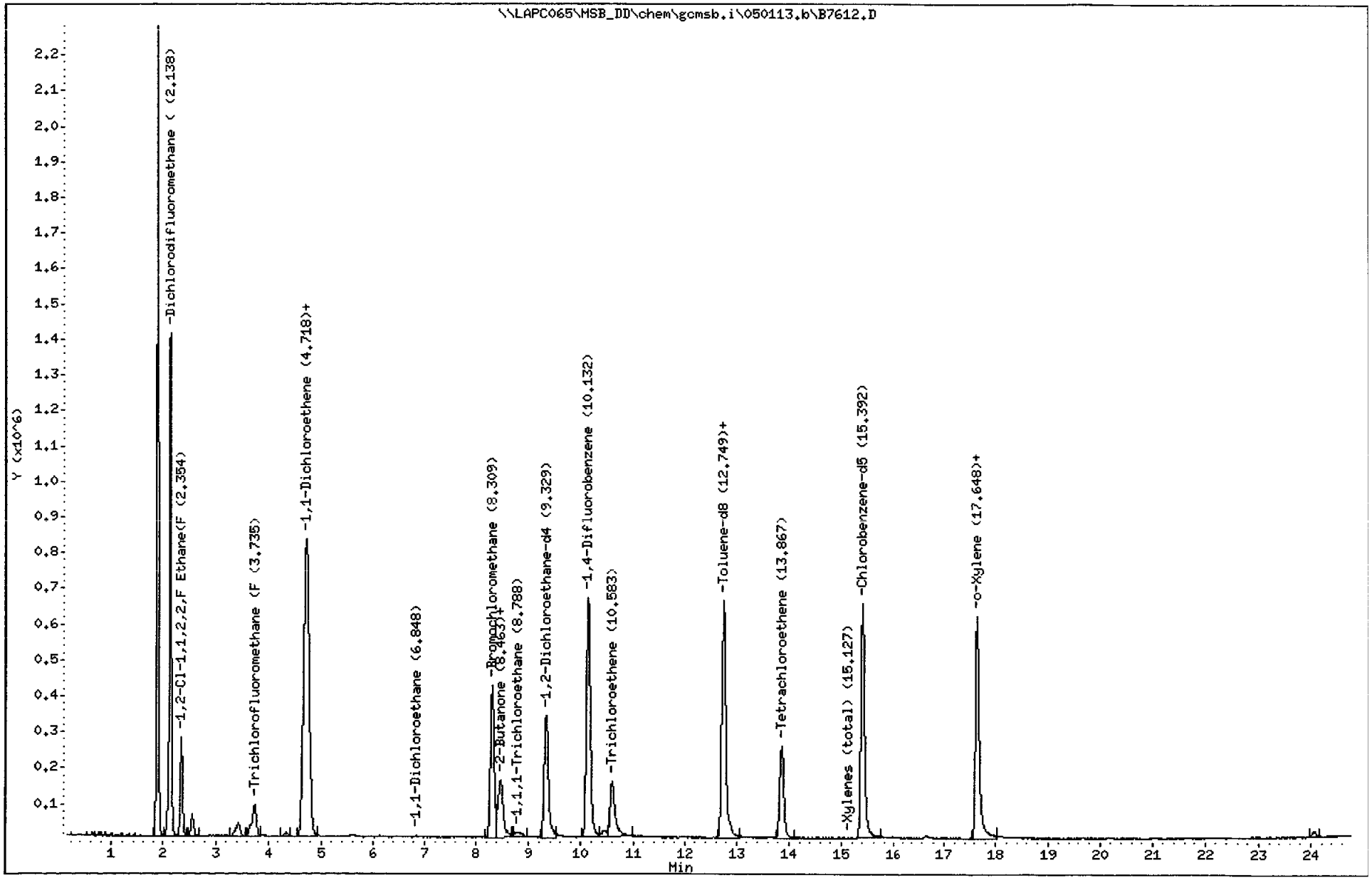
Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D
Date : 14-JAN-2005 05:35
Client ID: 066386-001
Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

Instrument: gcmsb.i

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53



Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

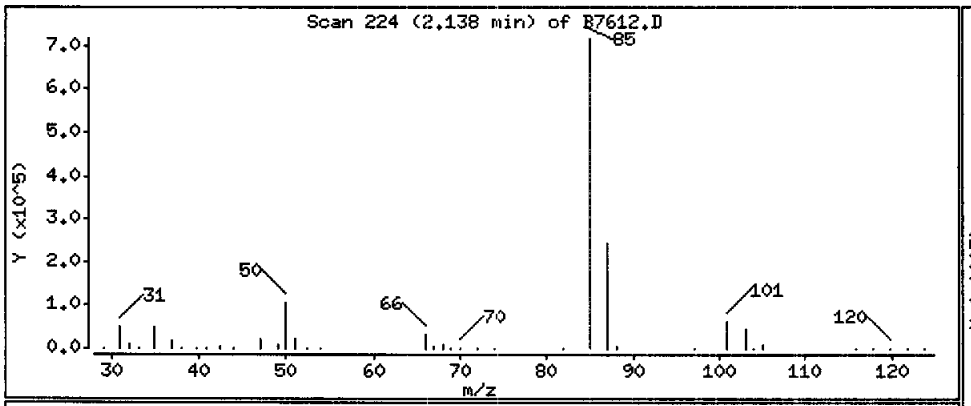
Operator: DLK

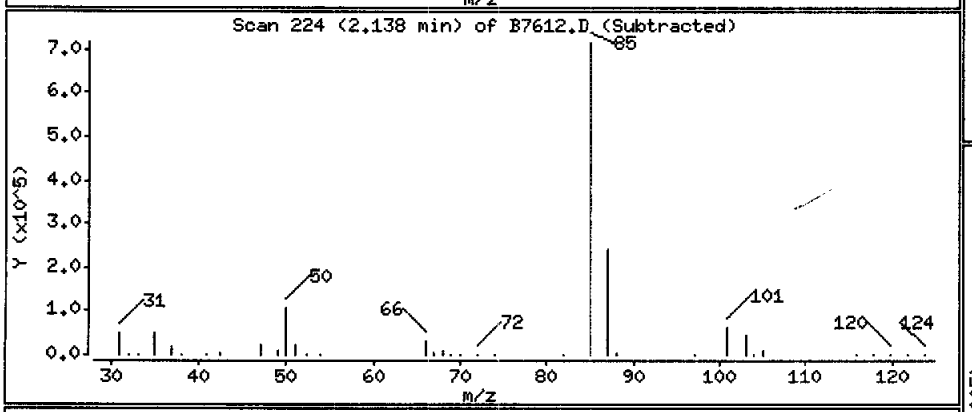
Column phase: J&W DB-624

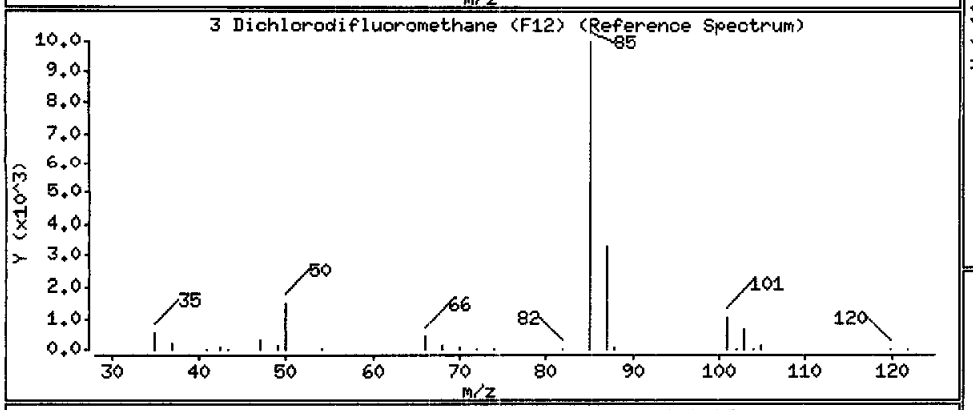
Column diameter: 0.53

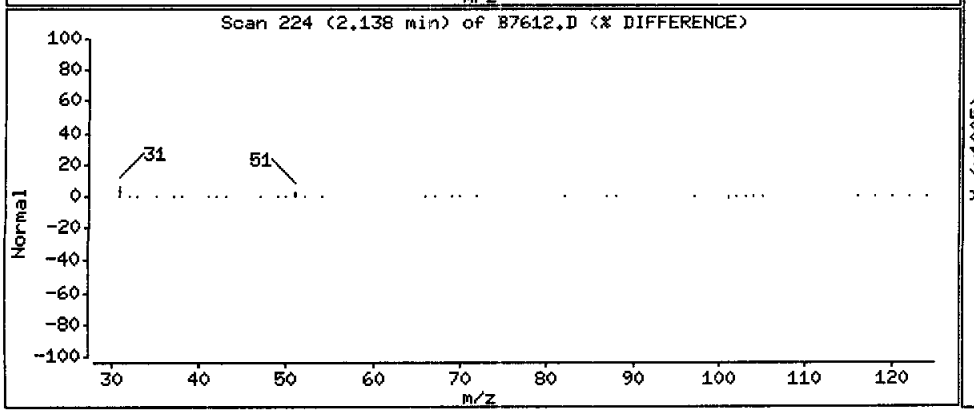
3 Dichlorodifluoromethane (F12)

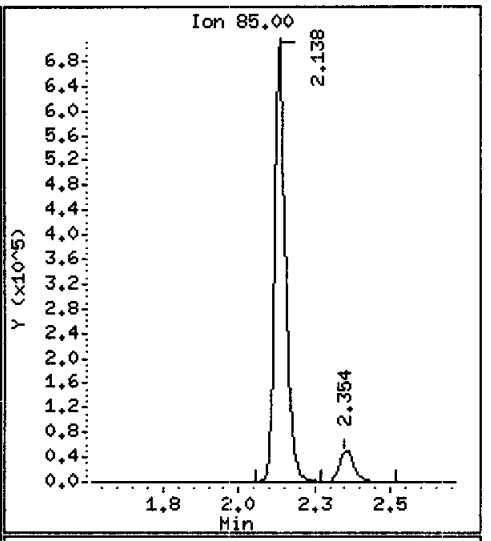
Concentration: 76.49 ppbv

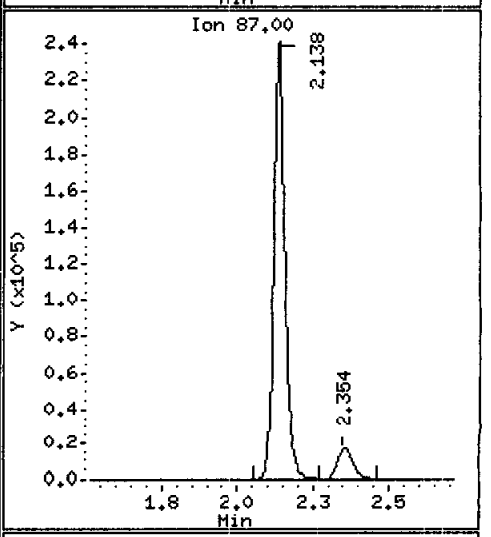


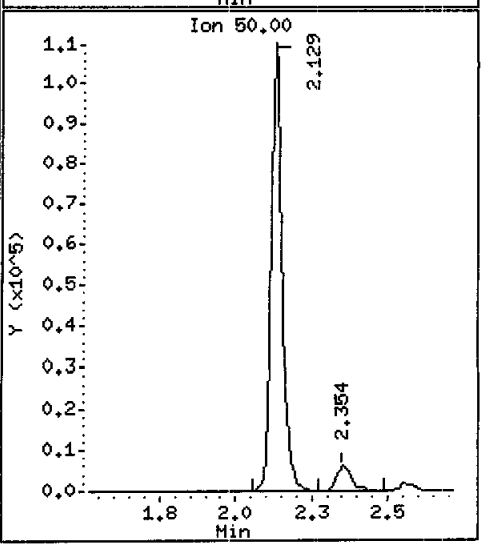












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

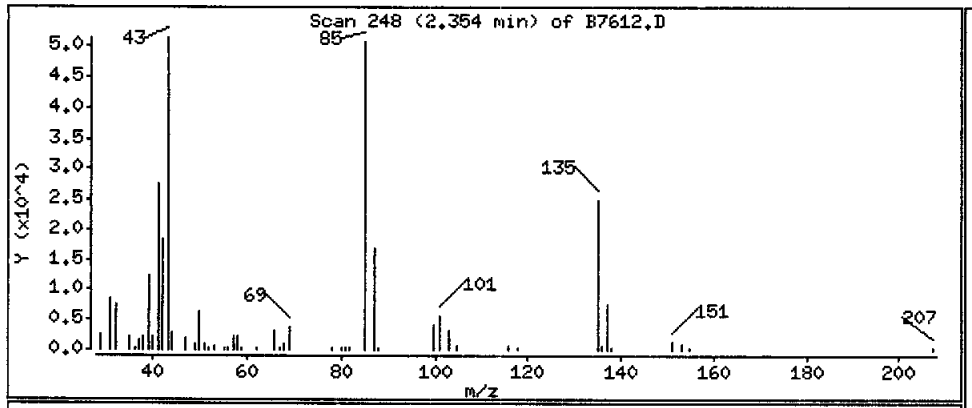
Operator: DLK

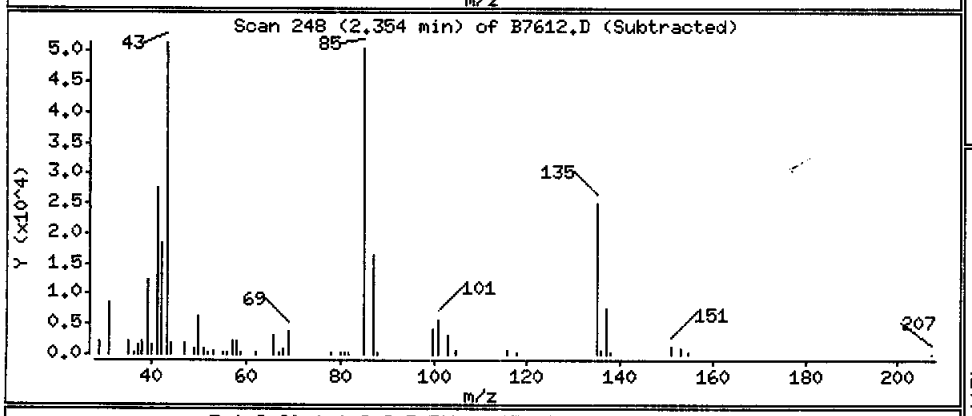
Column phase: J&W DB-624

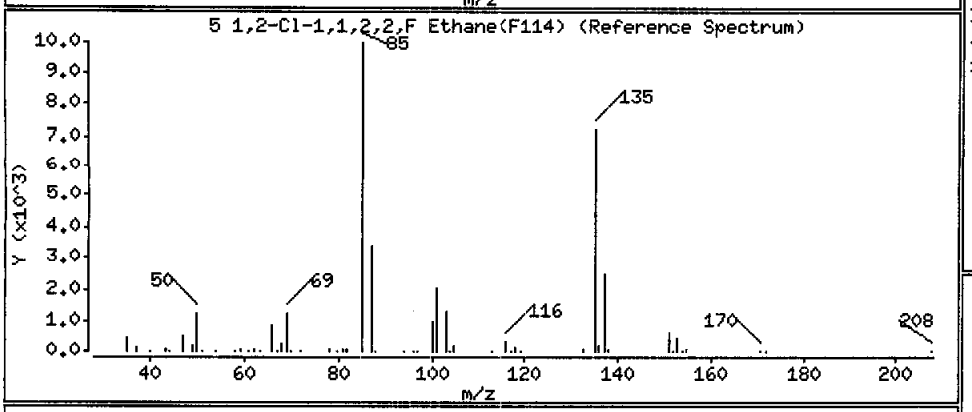
Column diameter: 0.53

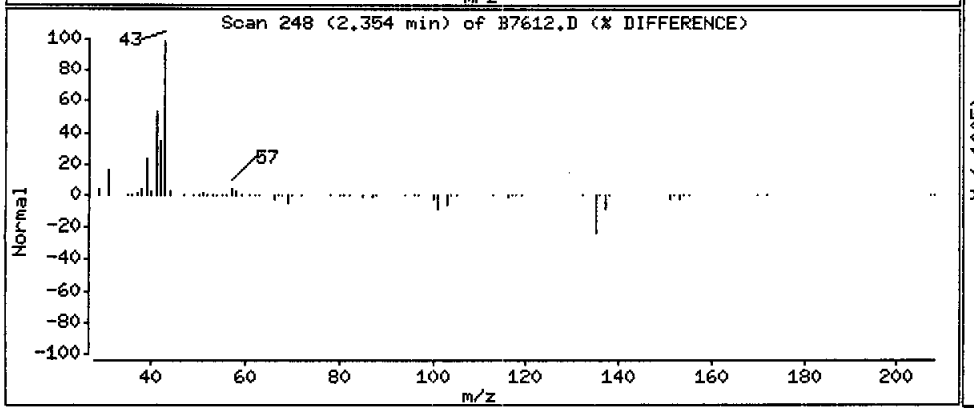
5 1,2-Cl-1,1,2,2,F Ethane(F114)

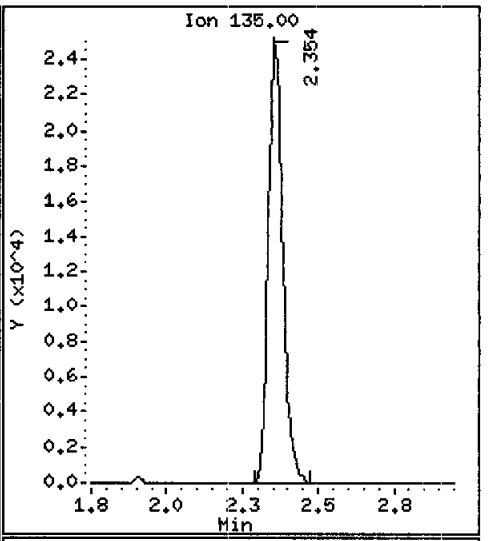
Concentration: 4.411 ppbv

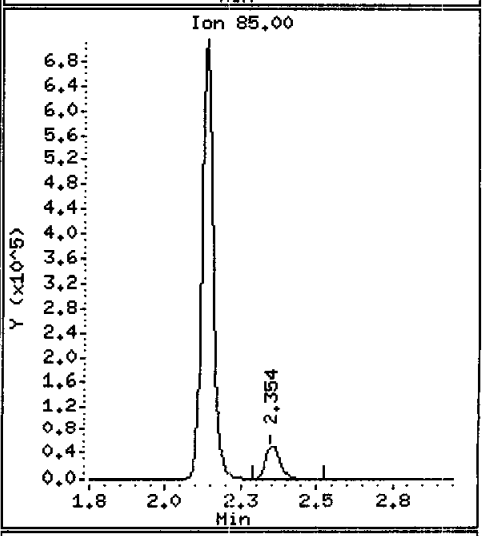


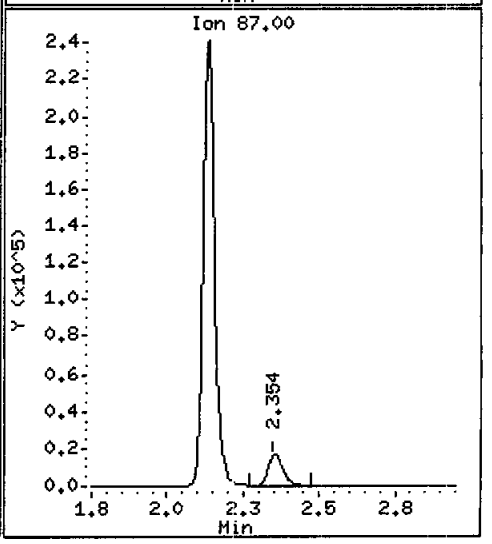












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

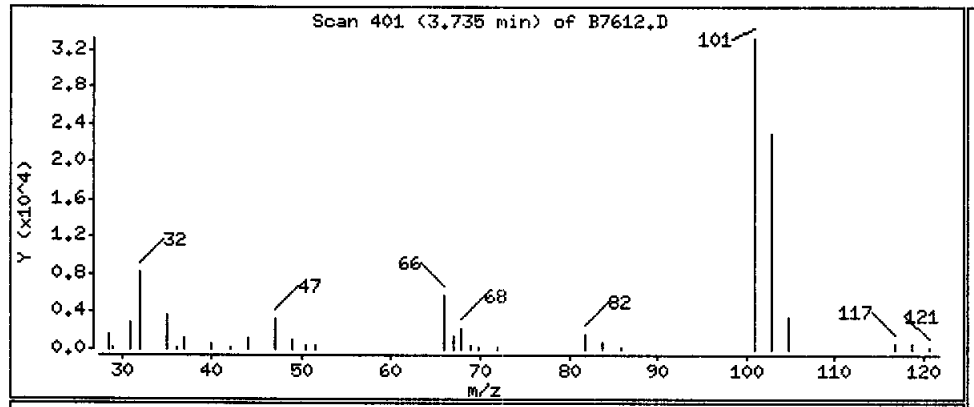
Operator: DLK

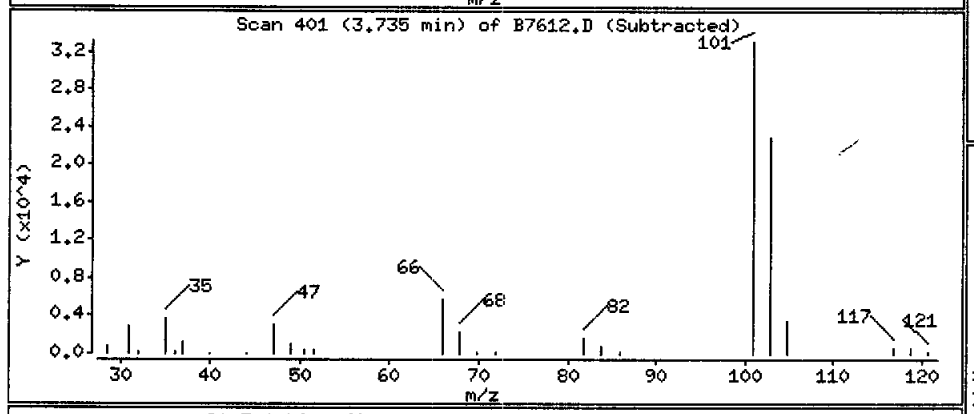
Column phase: J&W DB-624

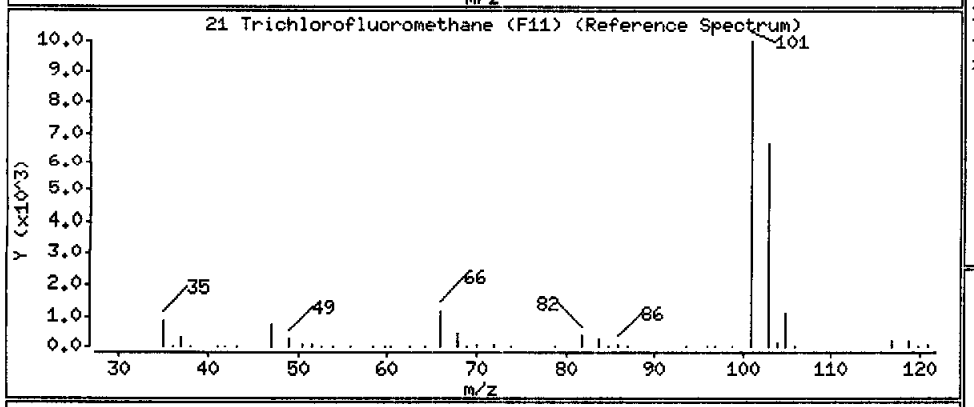
Column diameter: 0.53

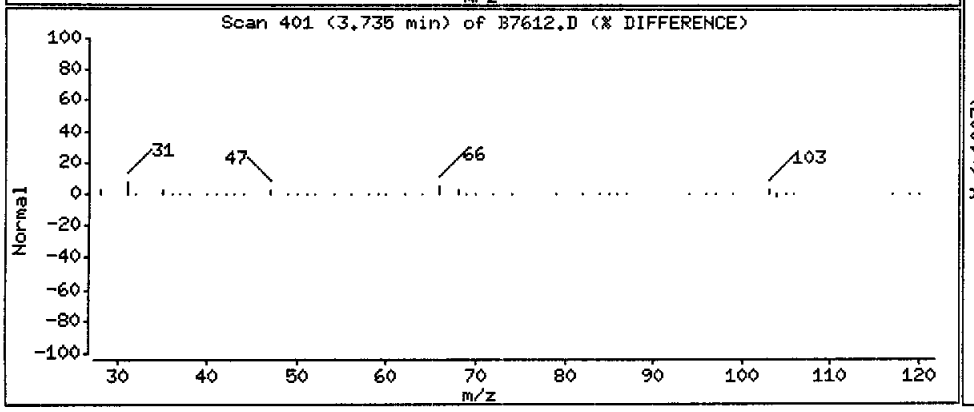
21 Trichlorofluoromethane (F11)

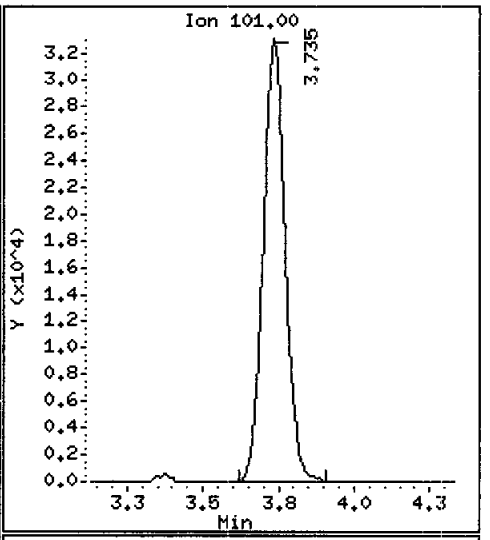
Concentration: 7.040 ppbv

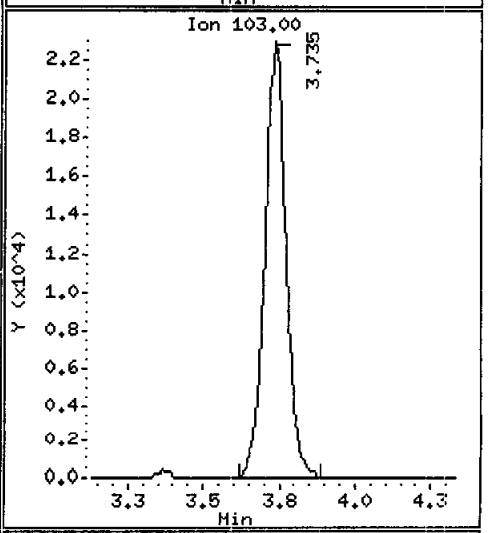


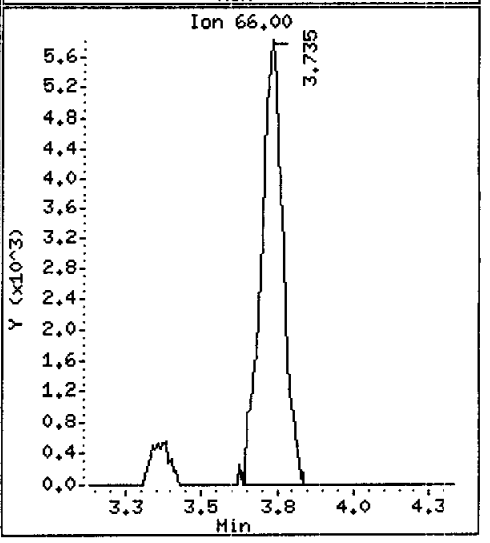












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

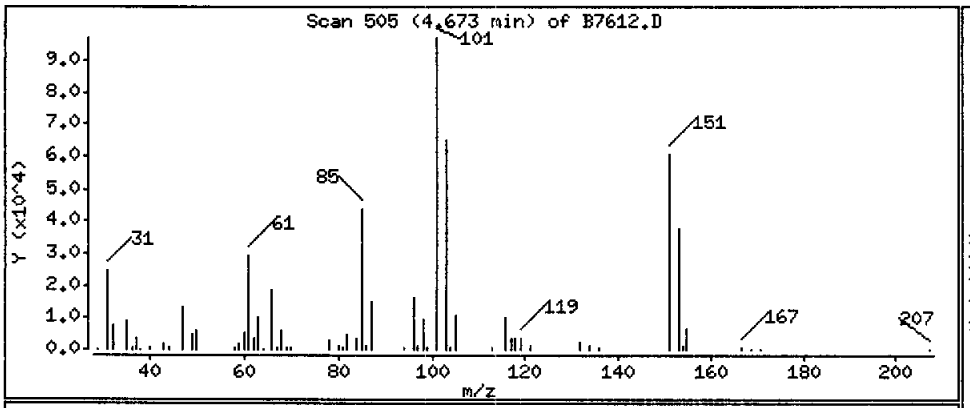
Client ID: 066386-001 Instrument: gcmsb.i

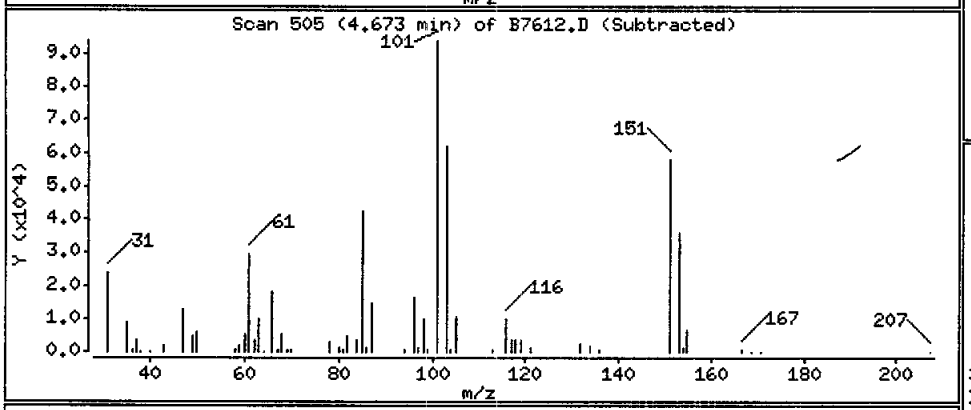
Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

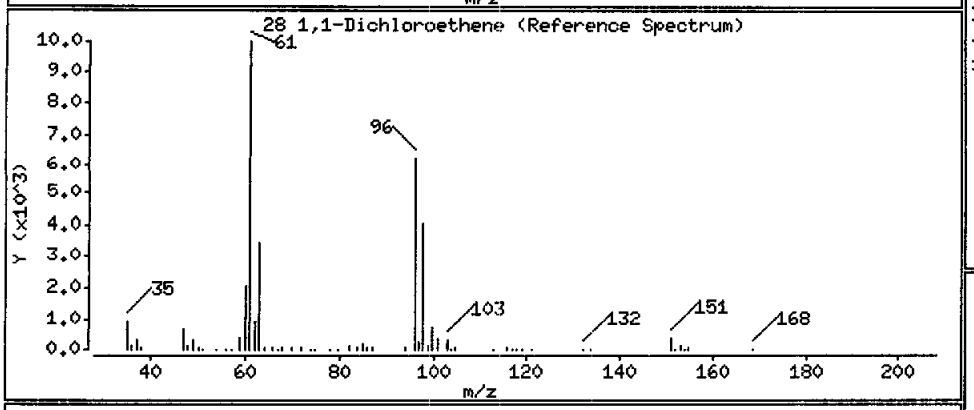
Operator: DLK

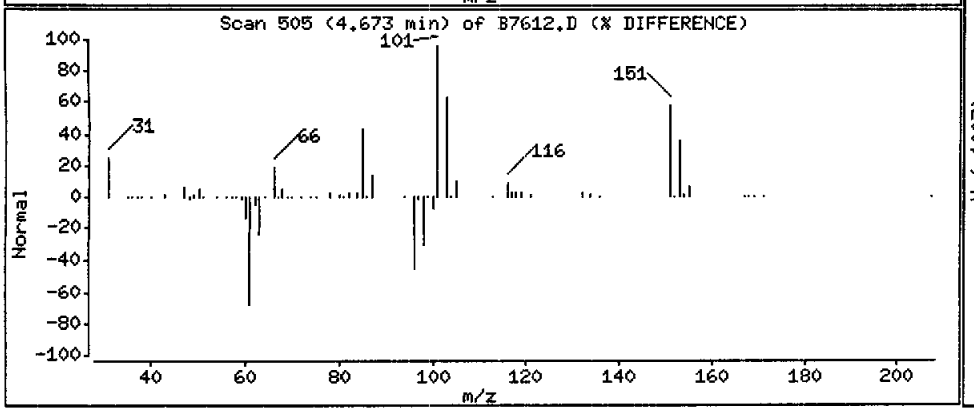
Column phase: J&W DB-624 Column diameter: 0.53

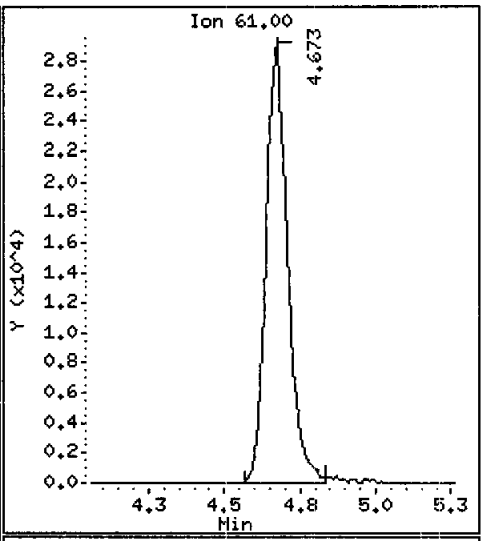
28 1,1-Dichloroethene Concentration: 11.56 ppbv

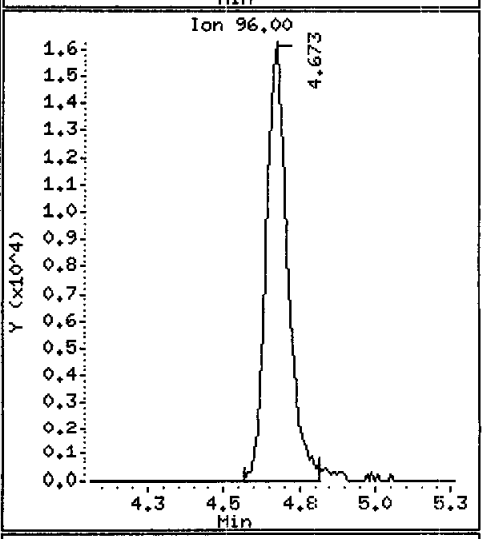


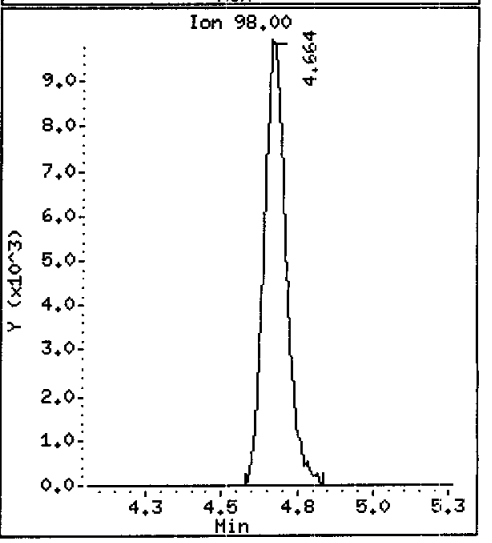












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

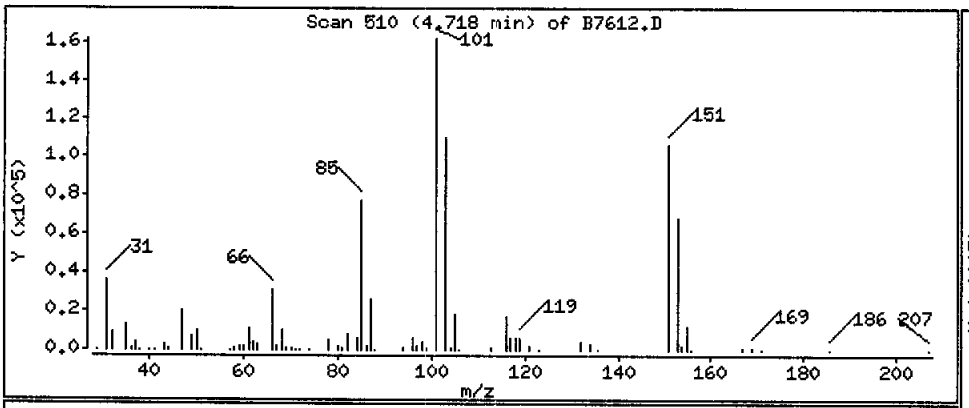
Operator: DLK

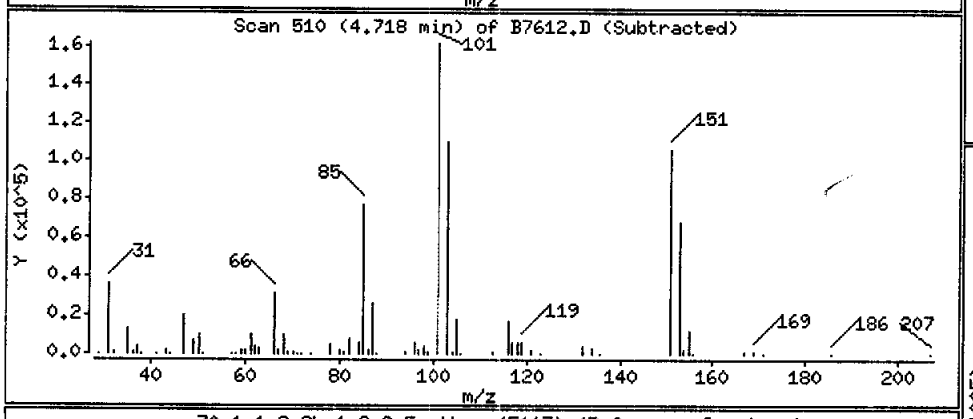
Column phase: J&W DB-624

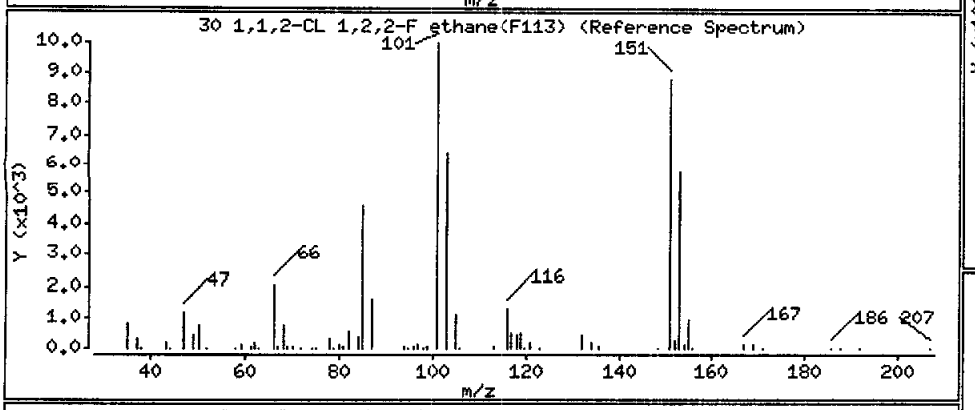
Column diameter: 0.53

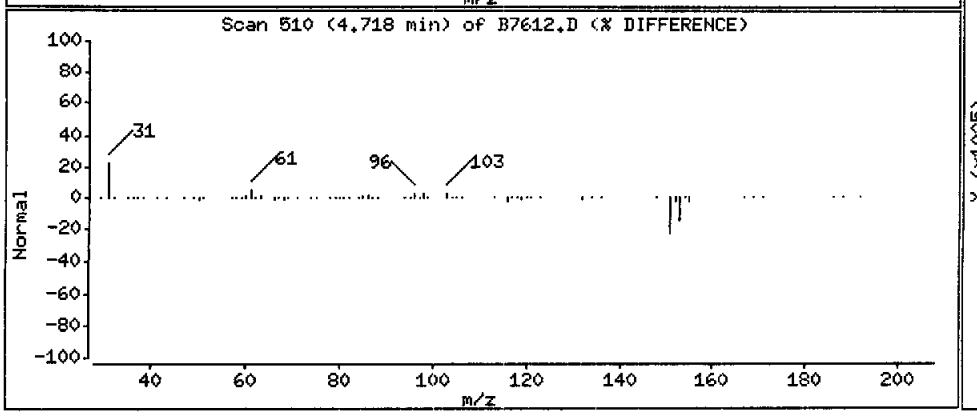
30 1,1,2-CL 1,2,2-F ethane(F113)

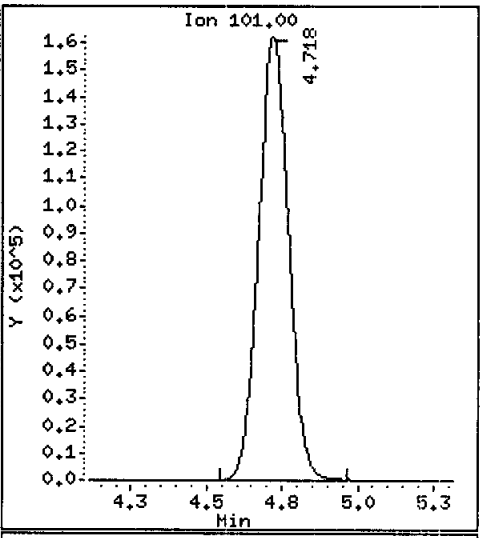
Concentration: 41.04 ppbv

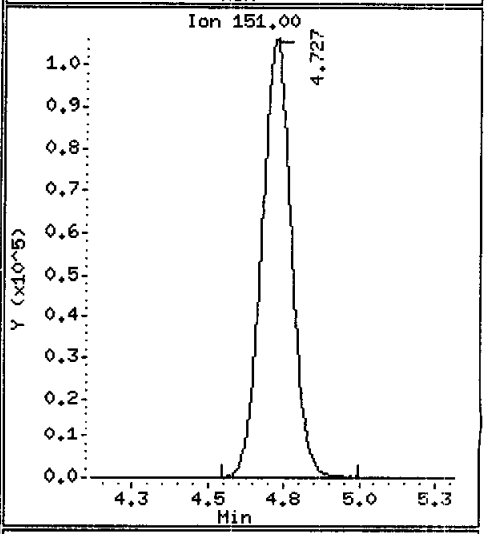


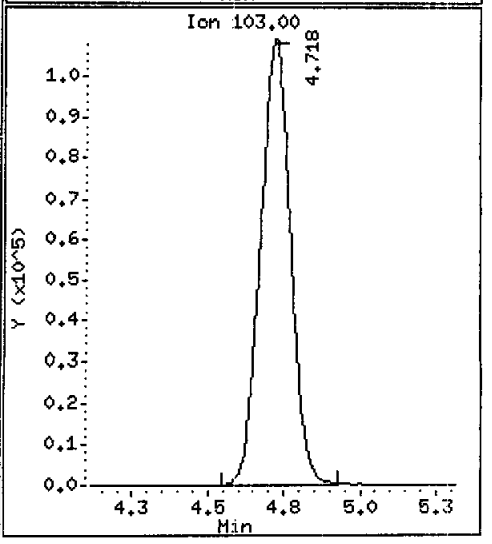












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

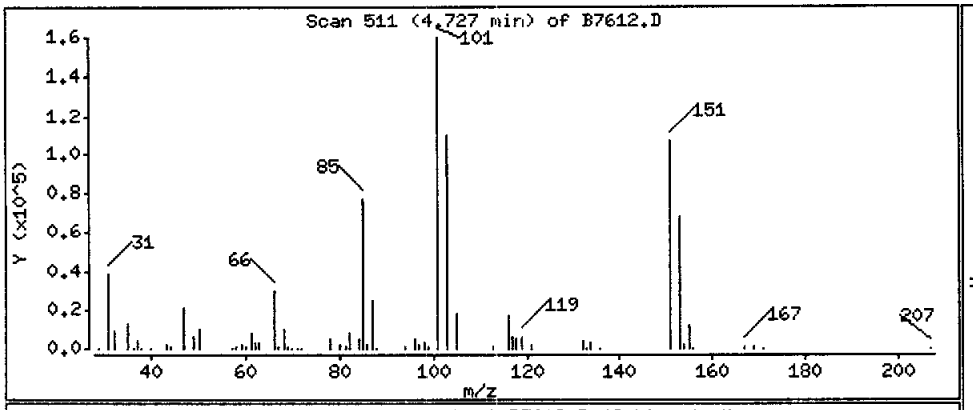
Operator: DLK

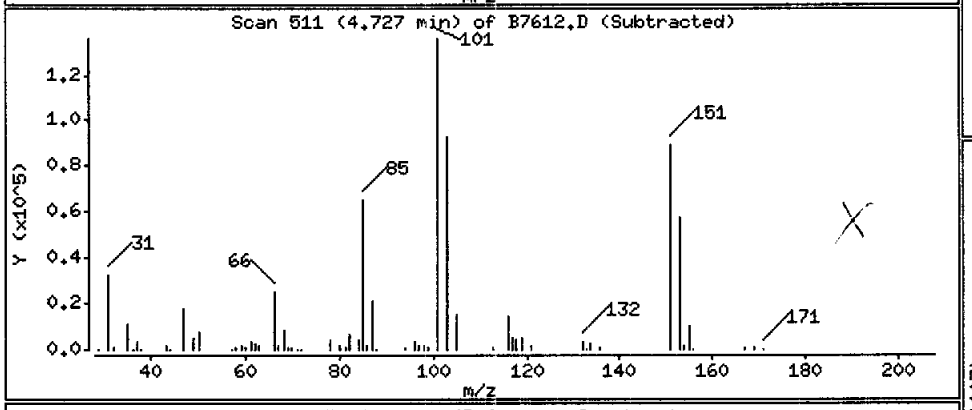
Column phase: J&W DB-624

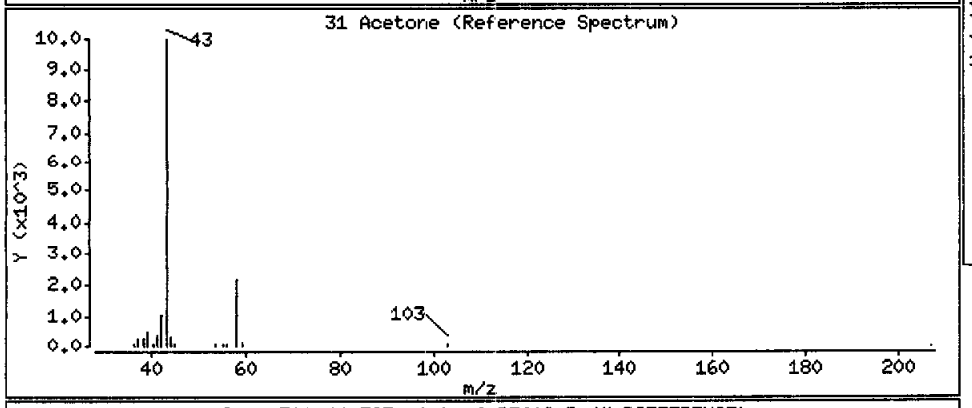
Column diameter: 0.53

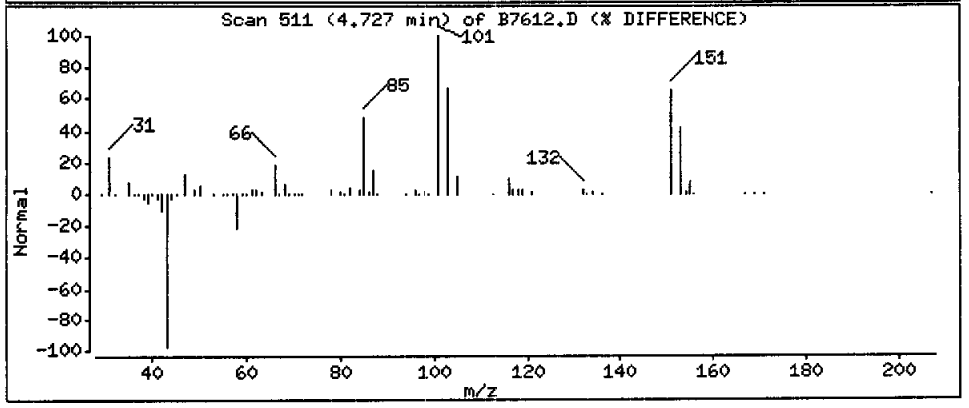
31 Acetone

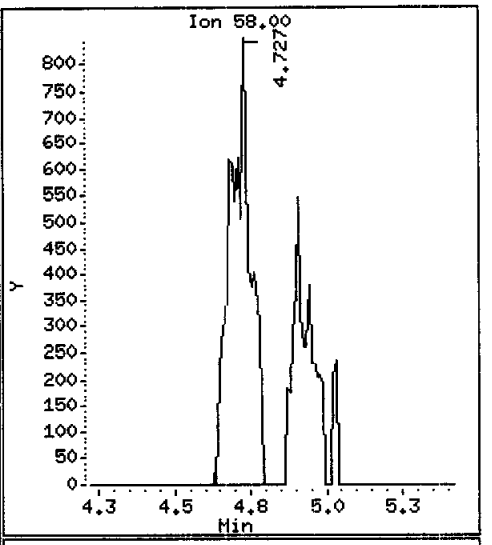
Concentration: 2.234 ppbv

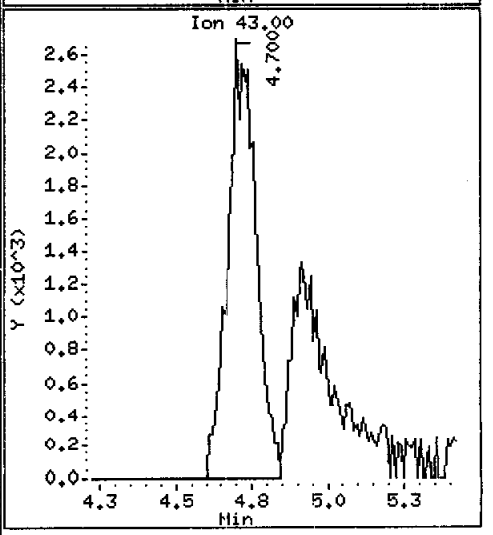












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

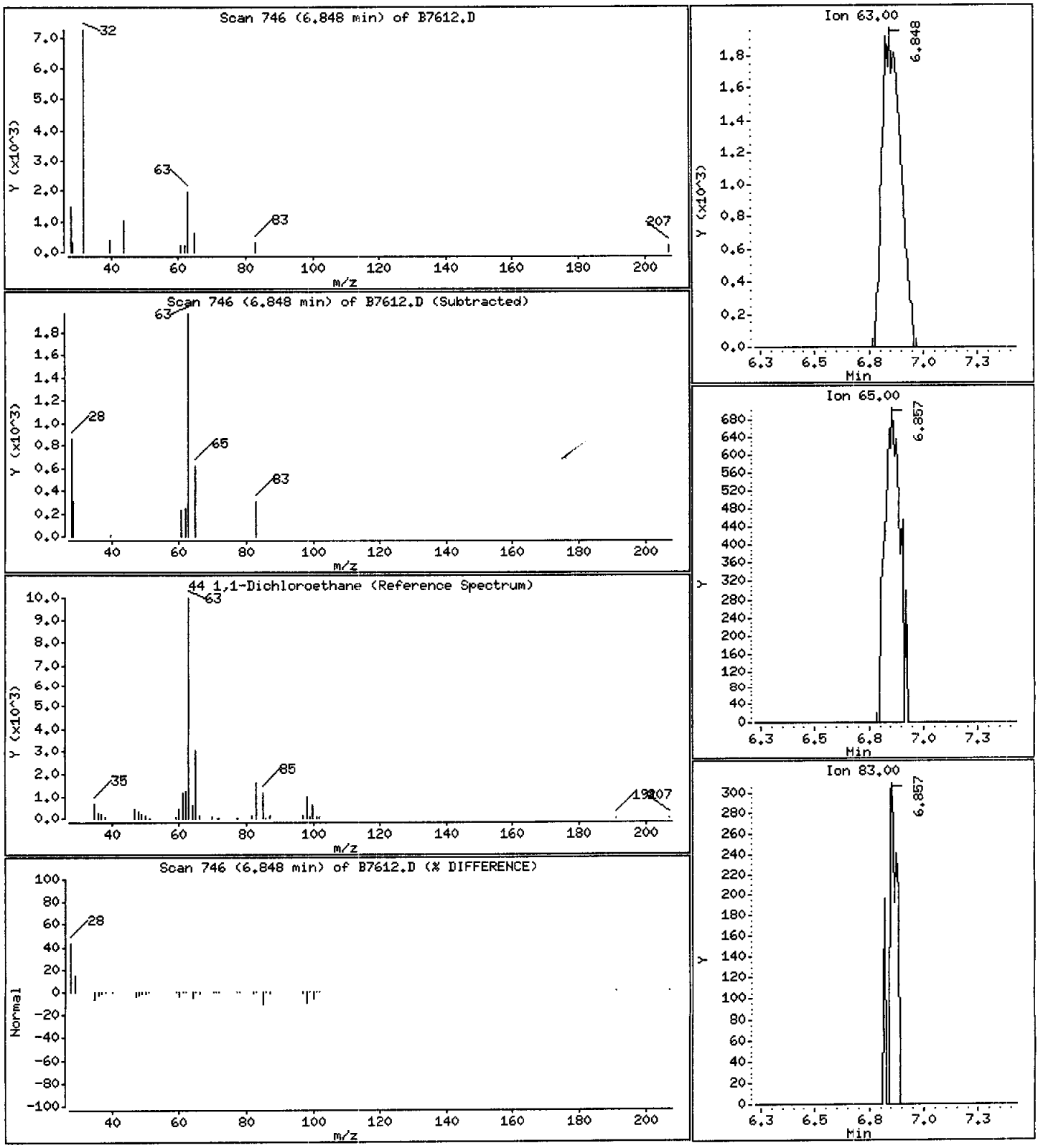
Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

44 1,1-Dichloroethane

Concentration: 0.8456 ppbv



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Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

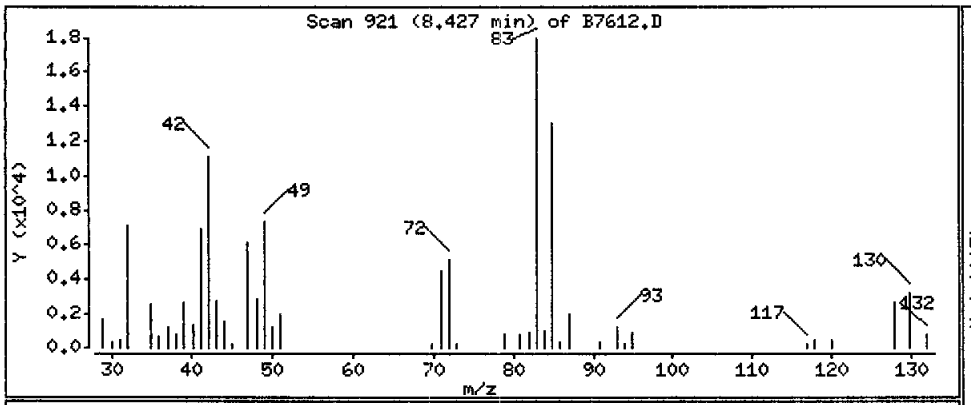
Operator: DLK

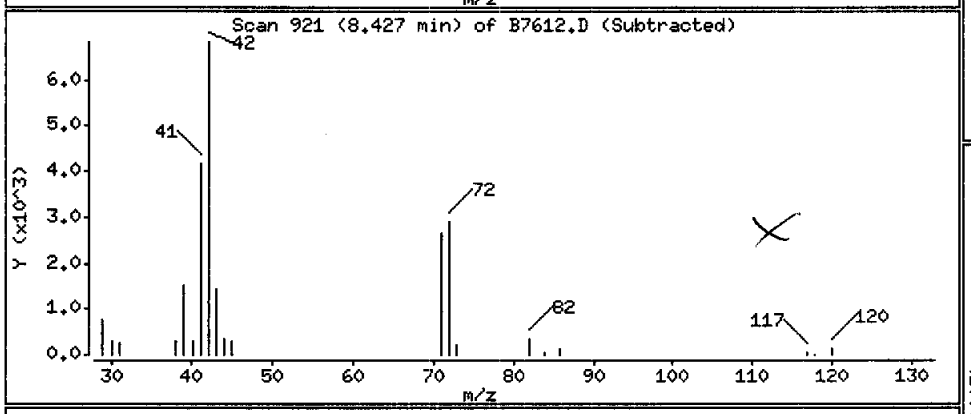
Column phase: J&W DB-624

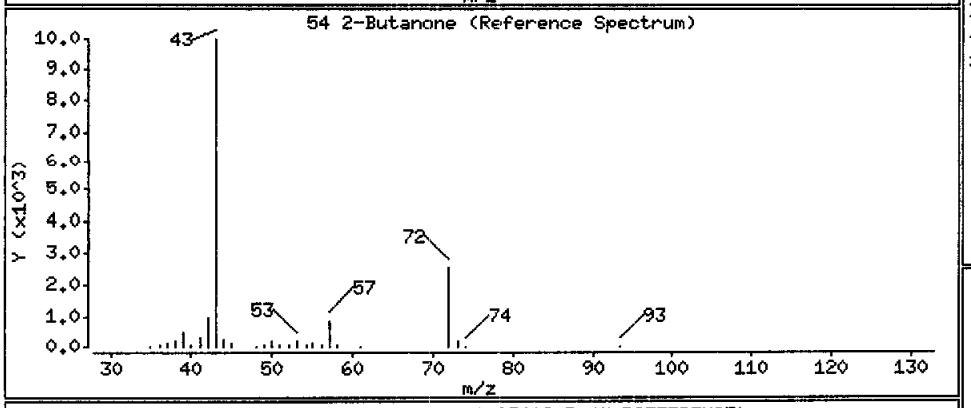
Column diameter: 0.53

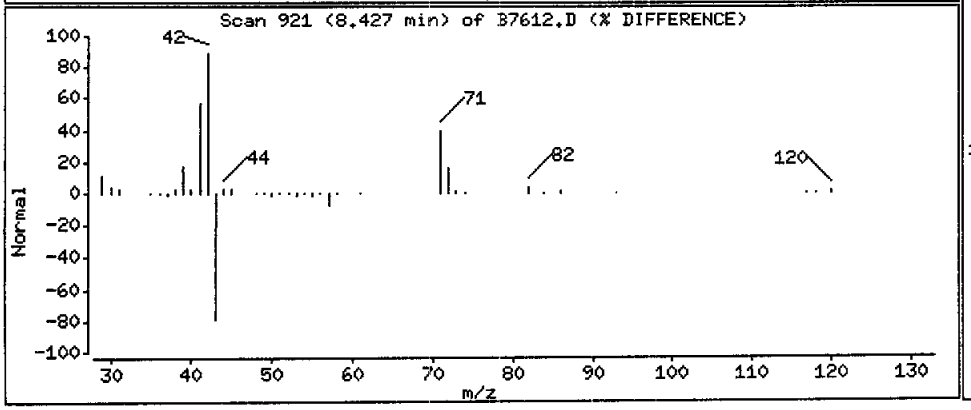
54 2-Butanone

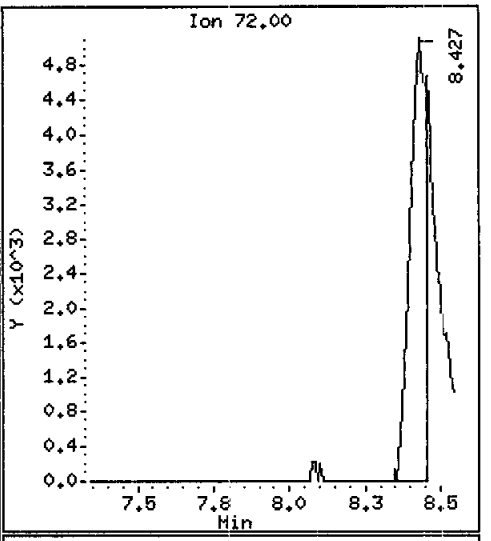
Concentration: 7.956 ppbv

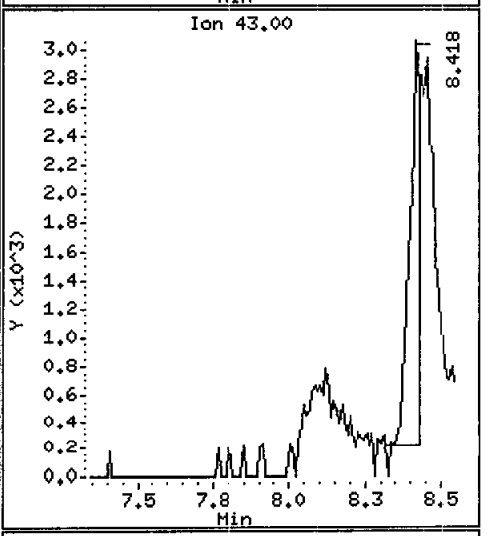


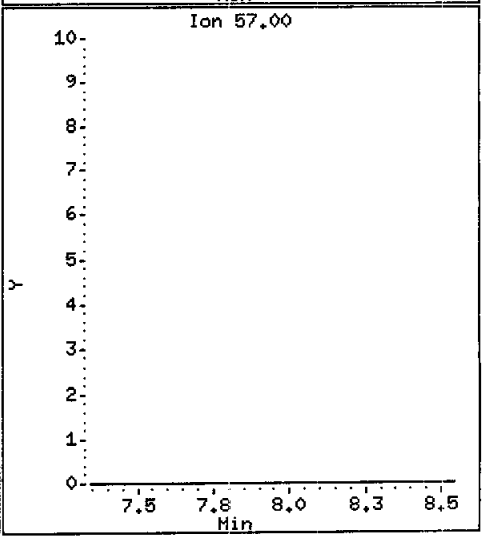












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Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

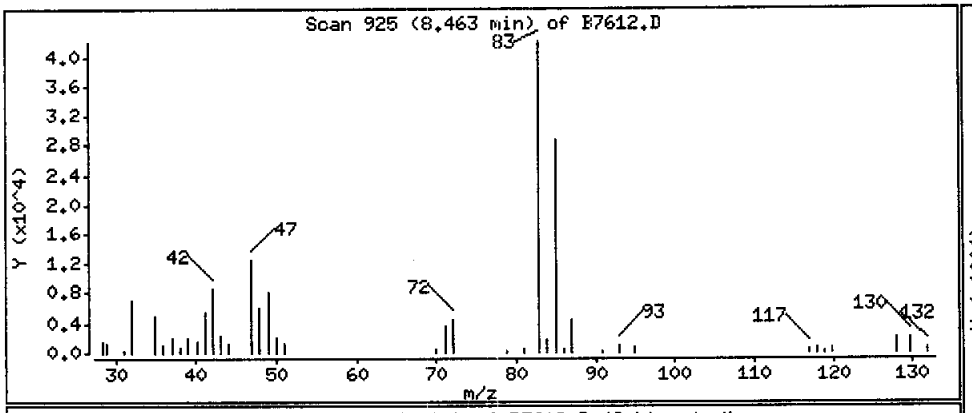
Operator: DLK

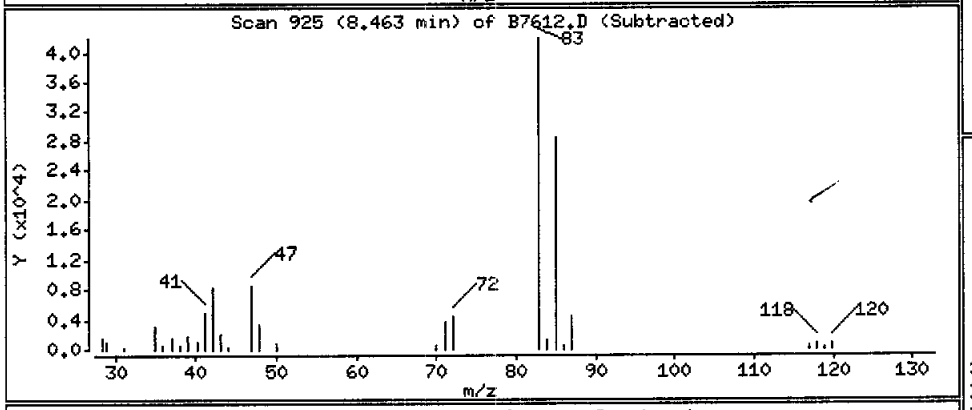
Column phase: J&W DB-624

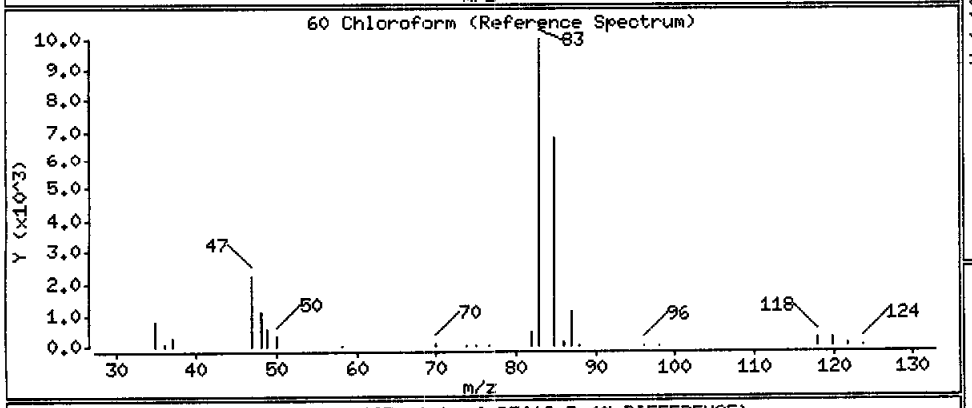
Column diameter: 0.53

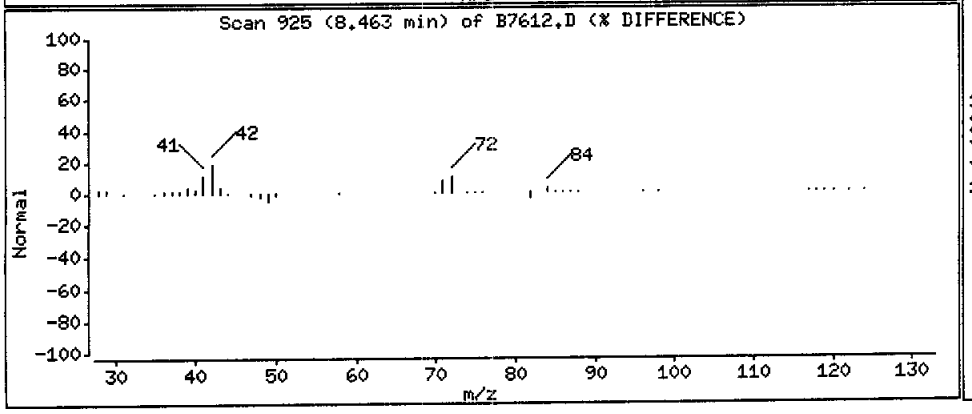
60 Chloroform

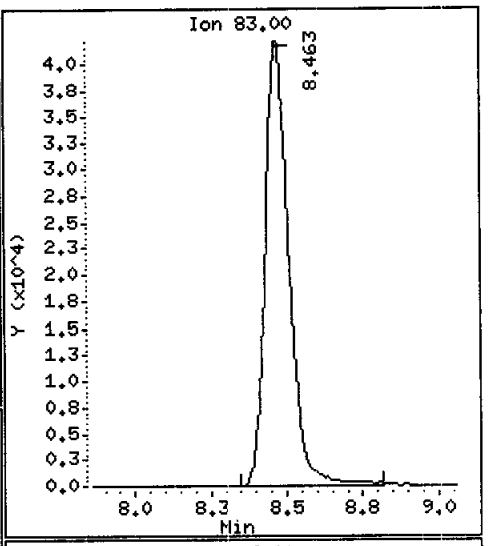
Concentration: 12.94 ppbv

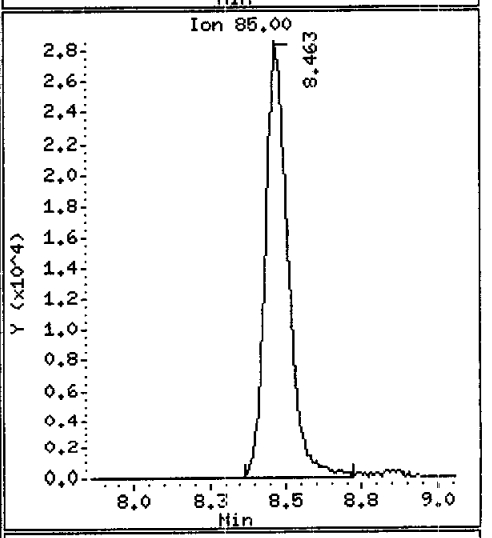


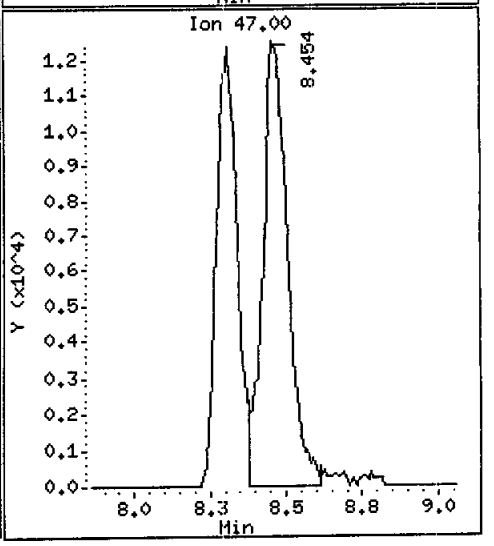












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

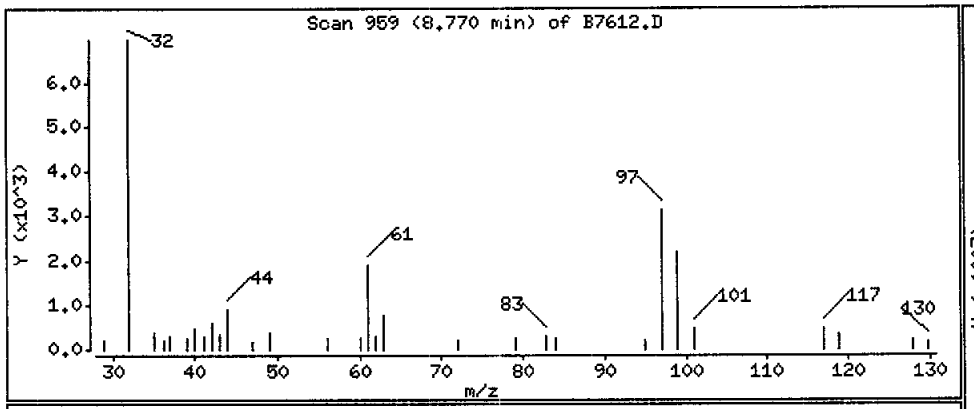
Operator: DLK

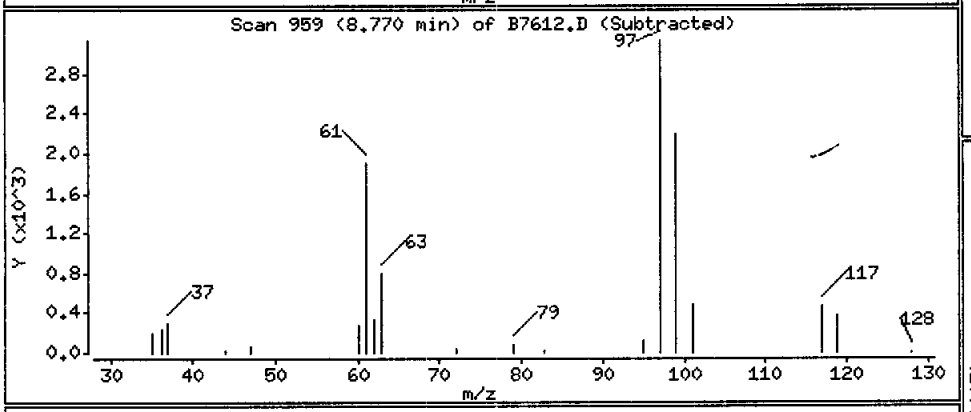
Column phase: J&W DB-624

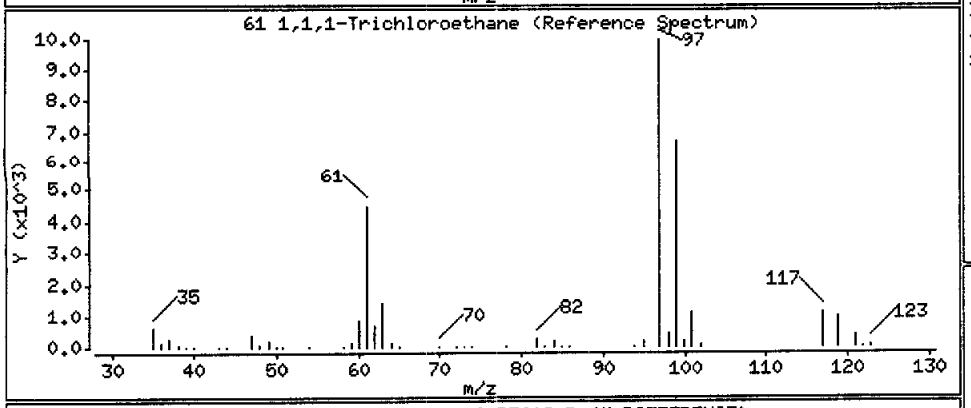
Column diameter: 0.53

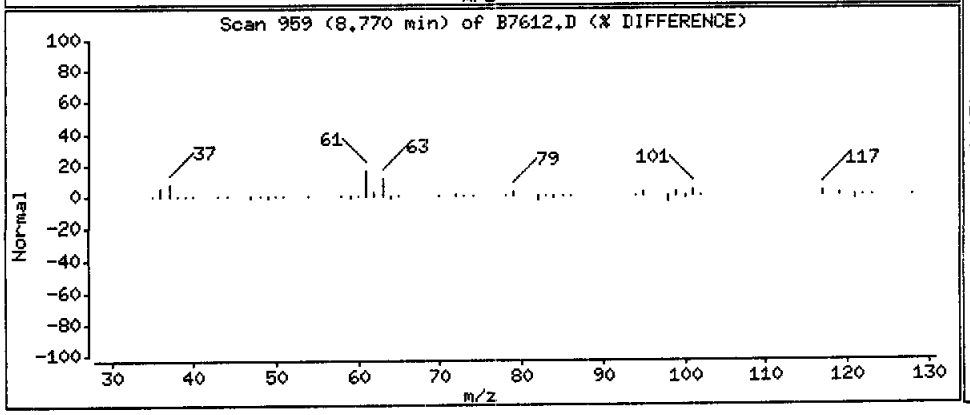
61 1,1,1-Trichloroethane

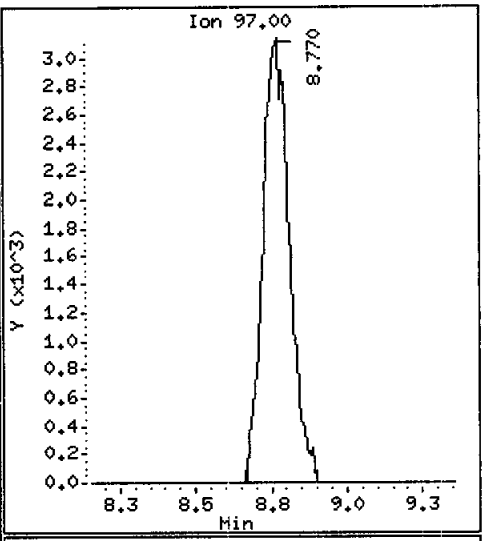
Concentration: 1.082 ppbv

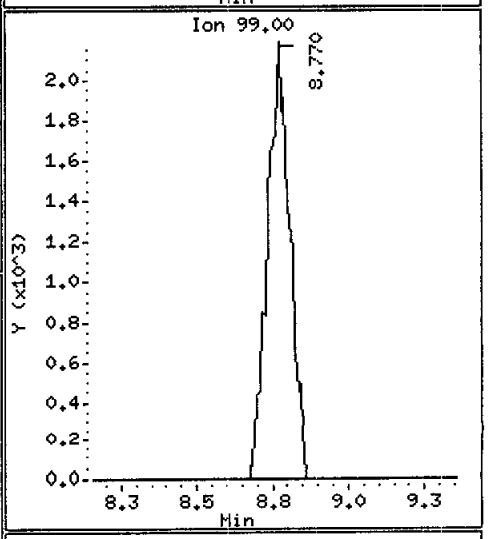


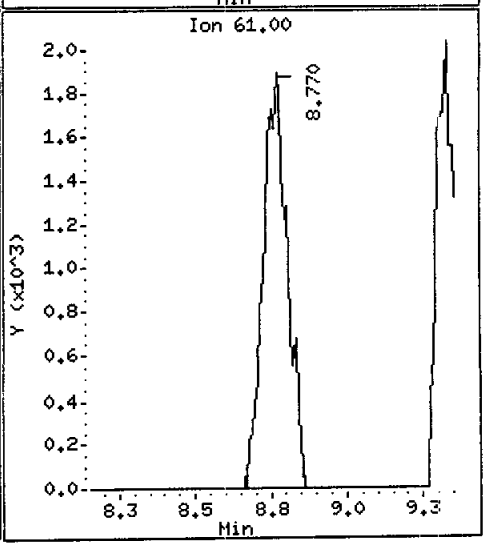












Data File: \\LAPC065\MSB_DD\chem\gcmsb.i\050113.b\B7612.D

Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

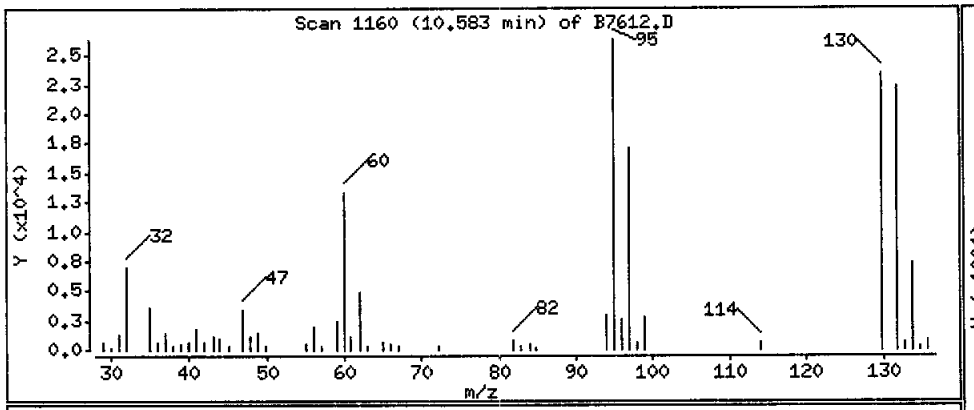
Operator: DLK

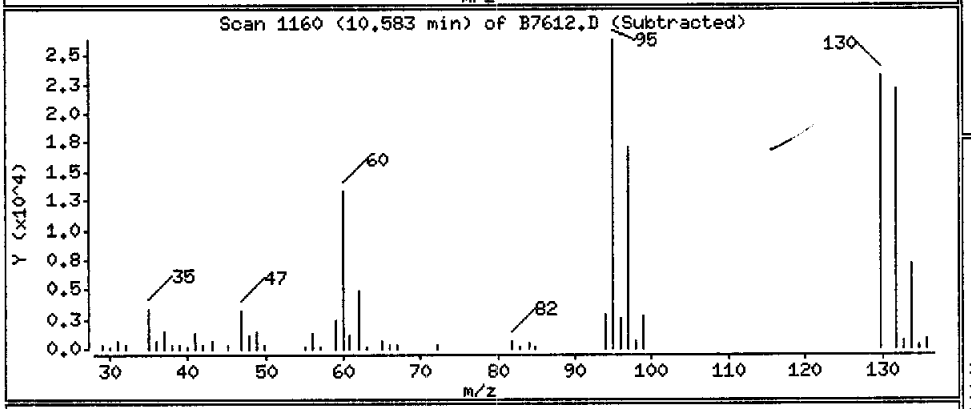
Column phase: J&W DB-624

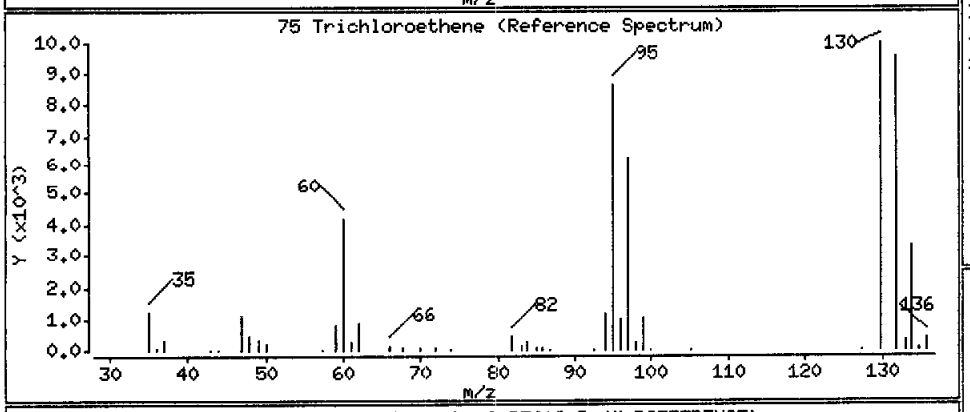
Column diameter: 0.53

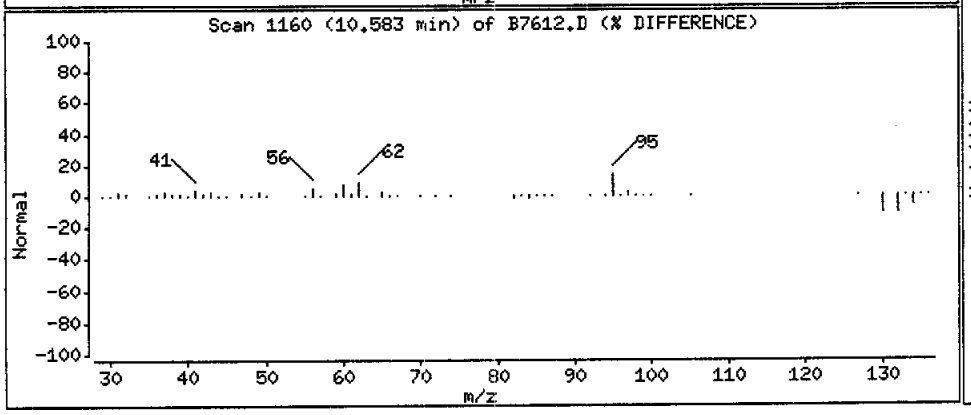
75 Trichloroethene

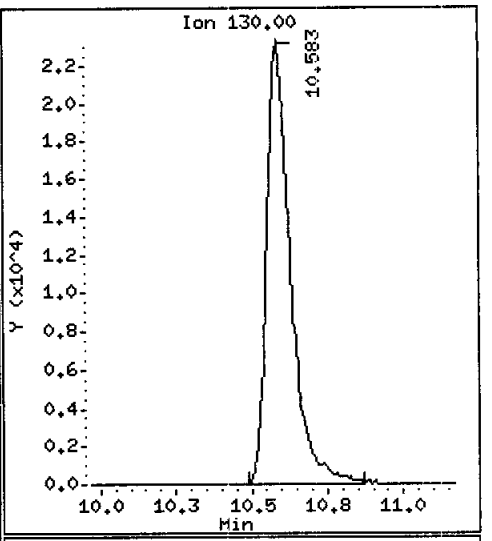
Concentration: 11.28 ppbv

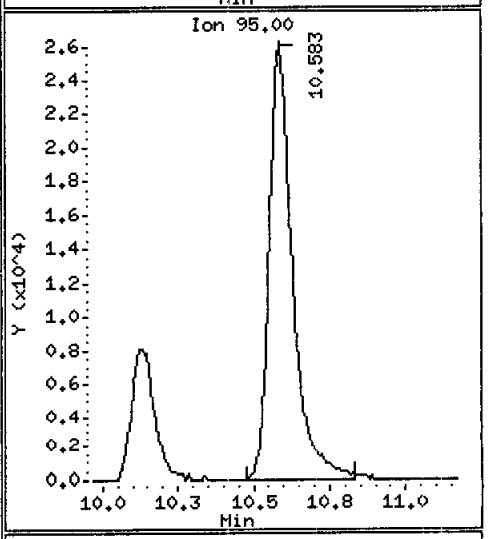


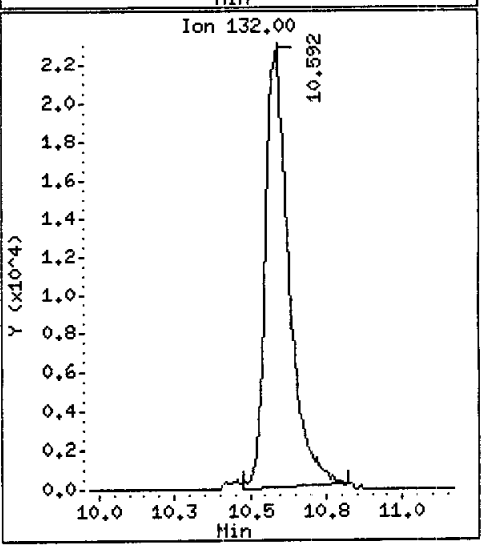












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Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

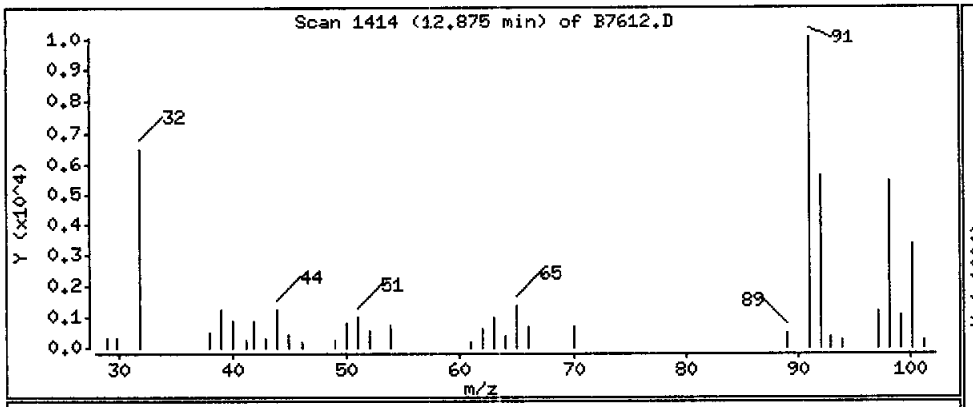
Operator: DLK

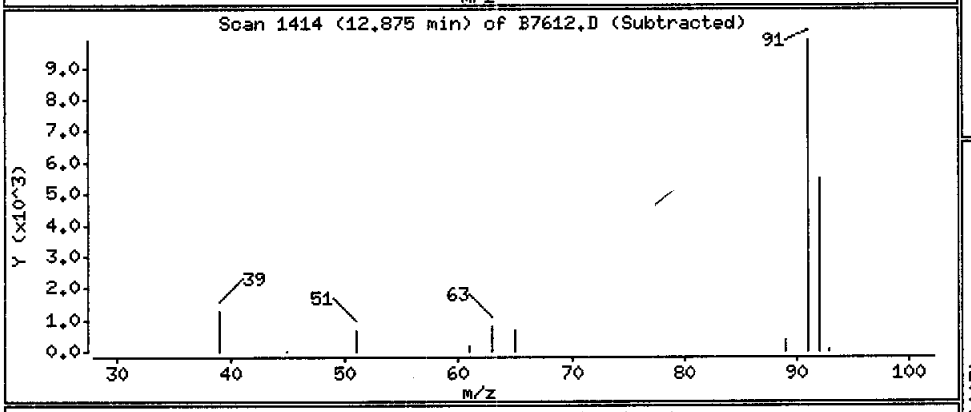
Column phase: J&W DB-624

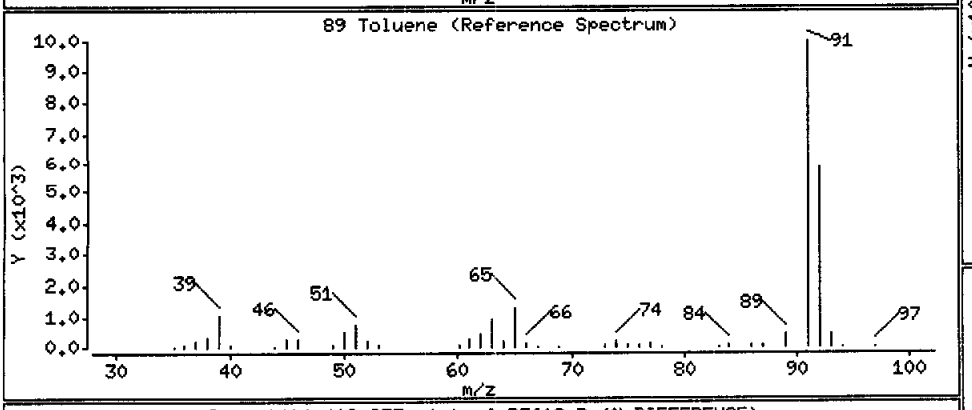
Column diameter: 0.53

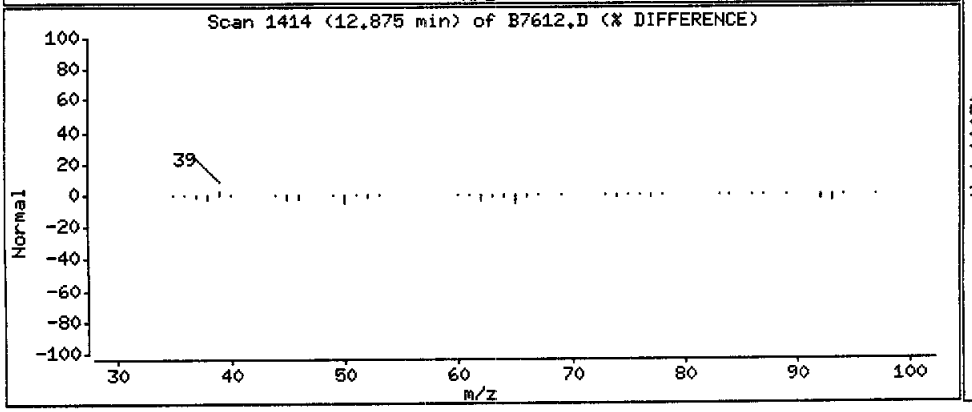
89 Toluene

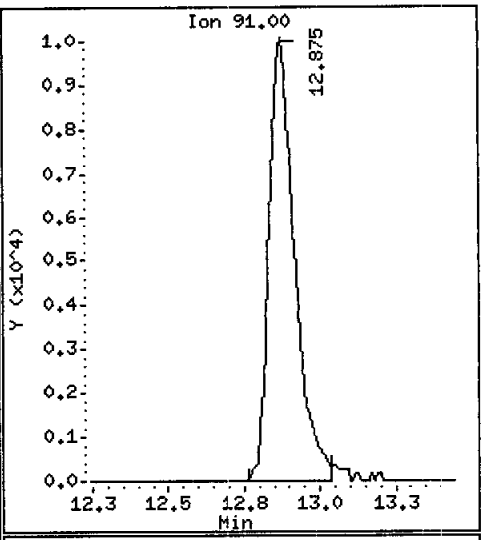
Concentration: 2.606 ppbv

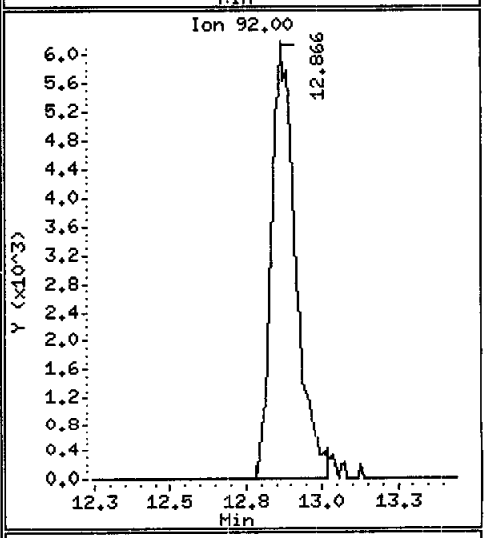


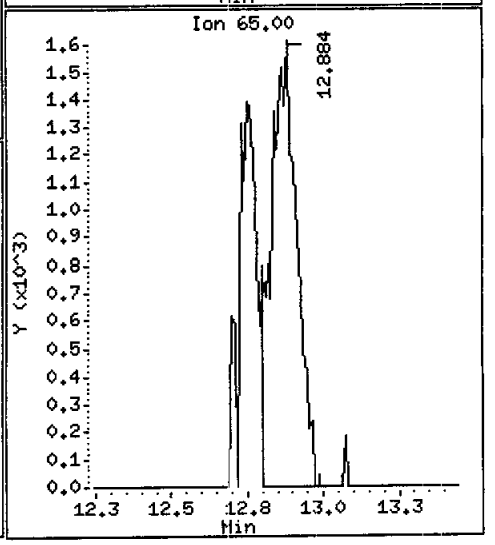












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Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

Operator: DLK

Column phase: J&W DB-624

Column diameter: 0.53

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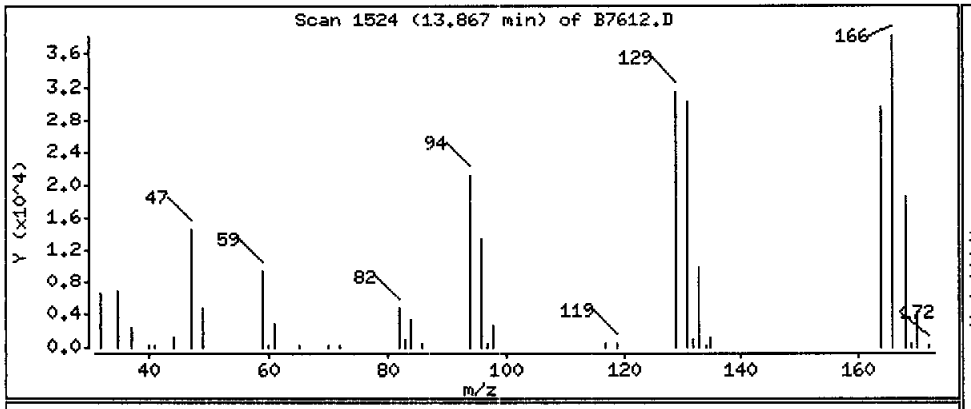
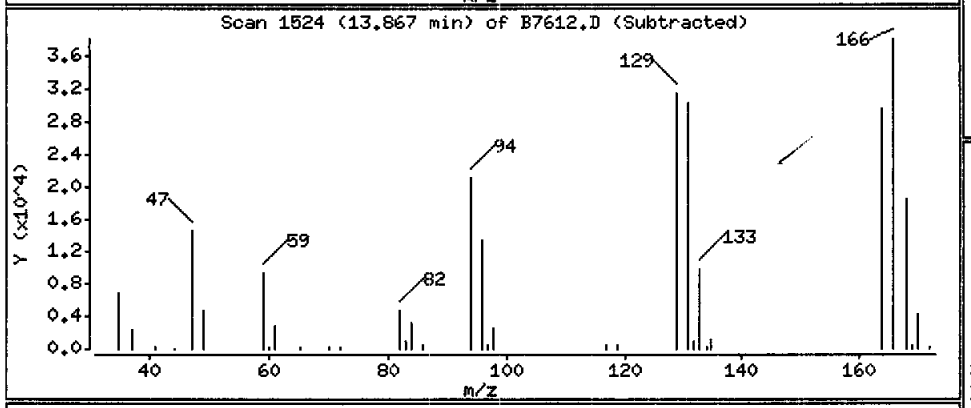
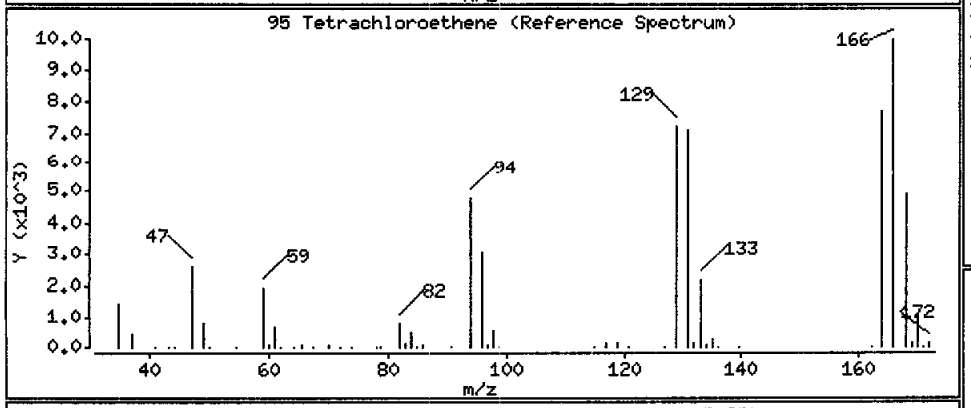
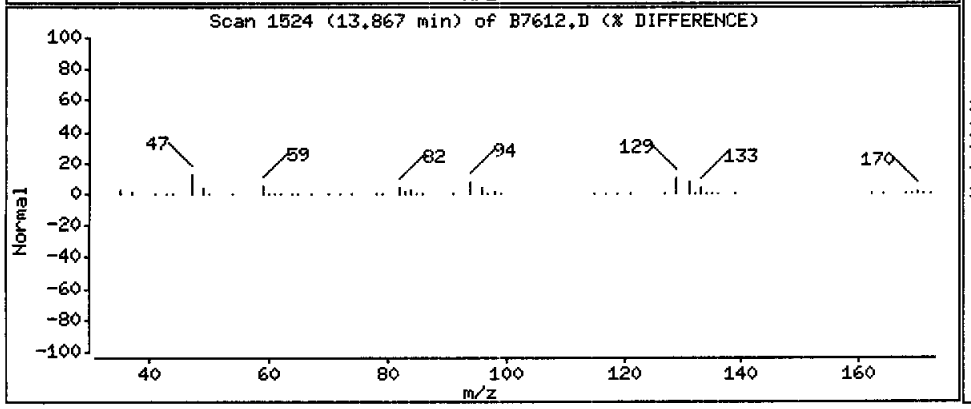
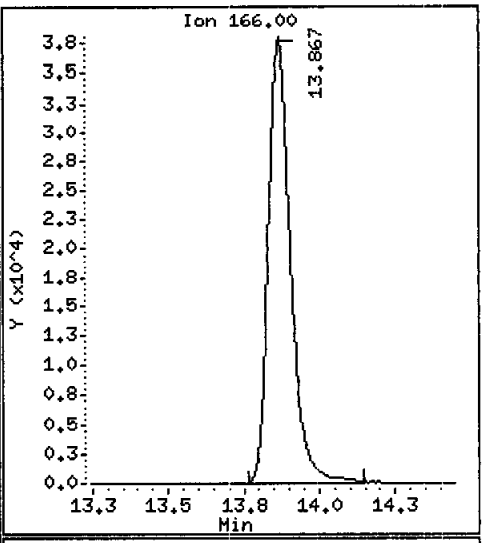
Concentration: 13.41 ppbv

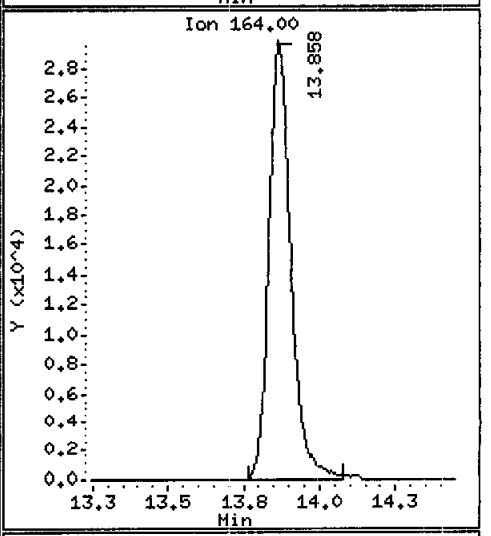


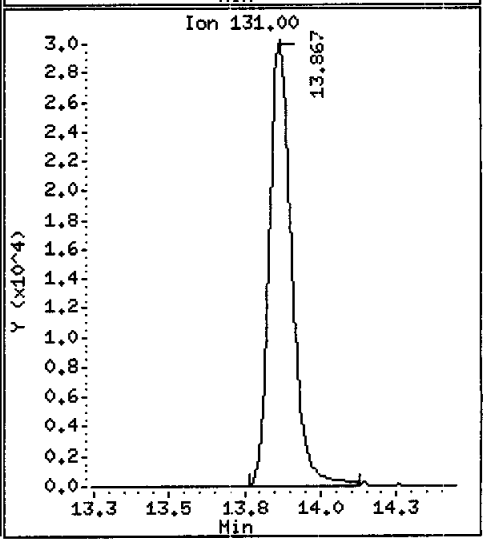












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Date : 14-JAN-2005 05:35

Client ID: 066386-001

Instrument: gcmsb.i

Sample Info: G2DJM1AD,066386-001,SANDIA,E5A100227-6

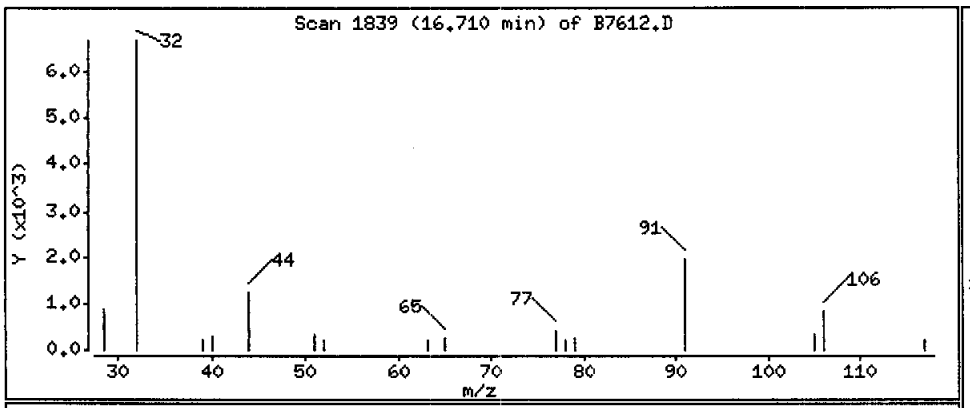
Operator: DLK

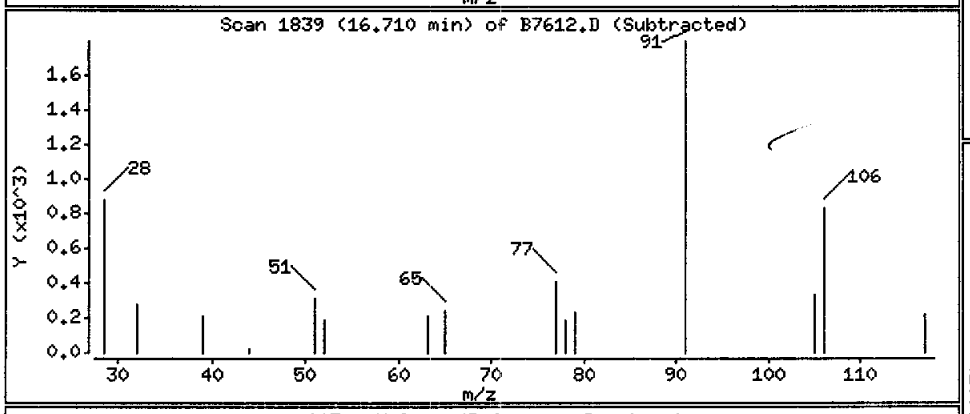
Column phase: J&W DB-624

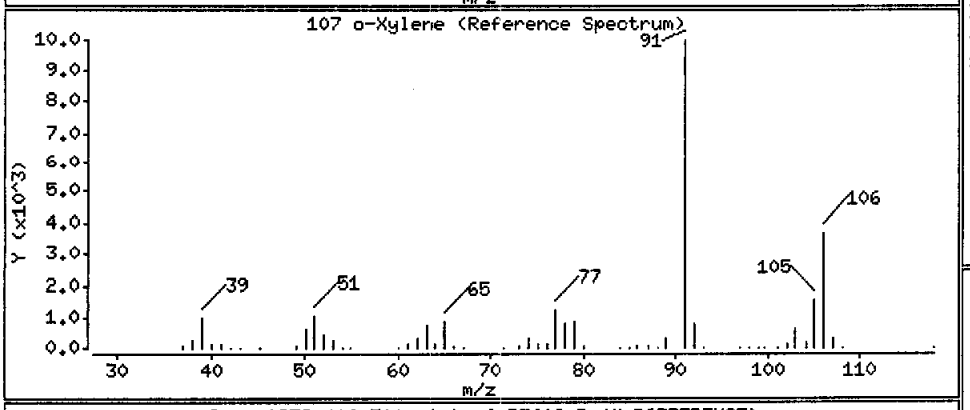
Column diameter: 0.53

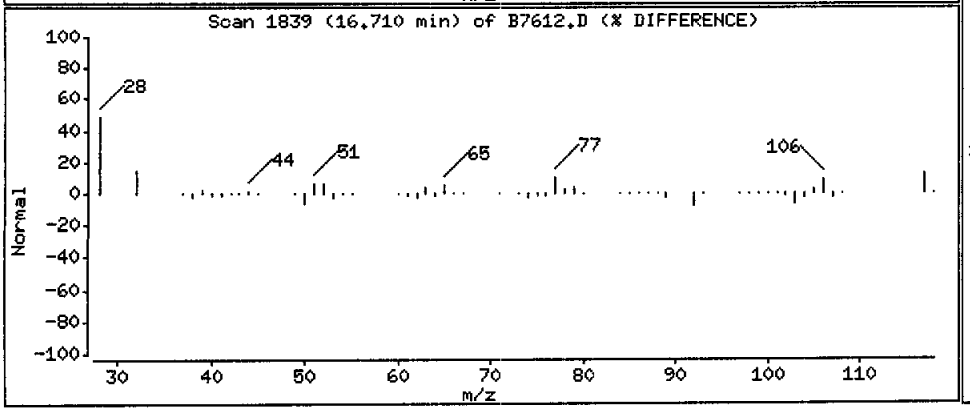
107 o-Xylene

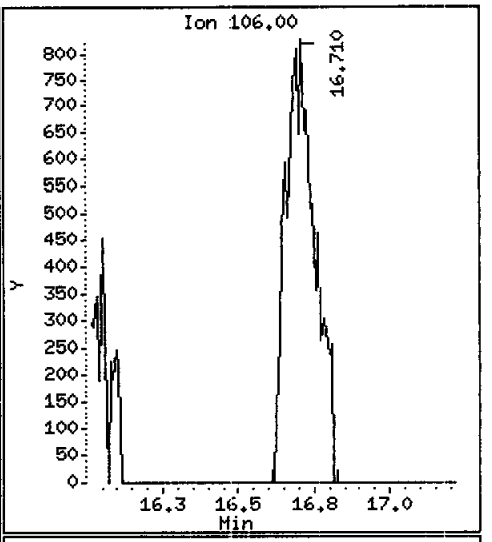
Concentration: 0.7499 ppbv

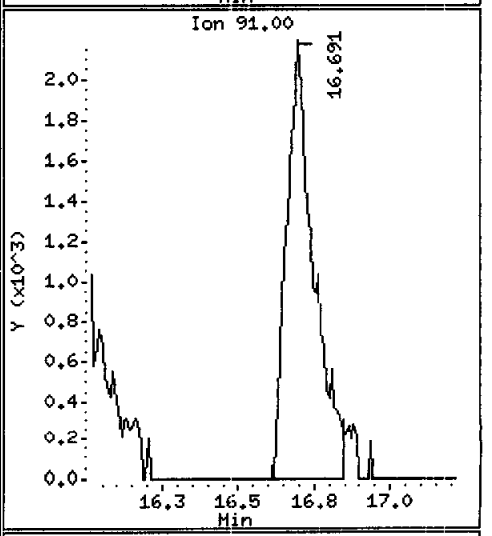


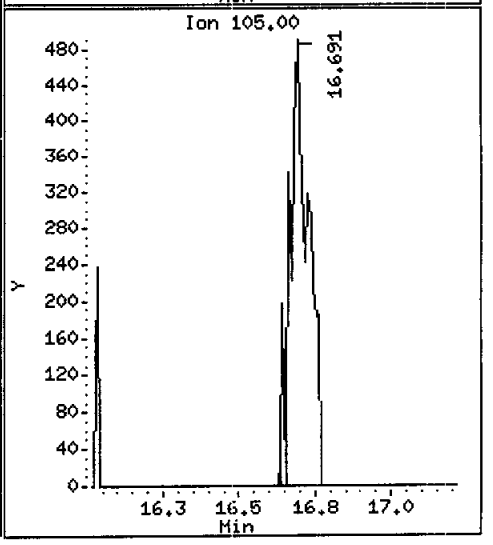












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Sandia National Laboratories/New Mexico

TIJERAS ARROYO GROUNDWATER INVESTIGATION REPORT

November 2005

Environmental
Restoration
Project

United States Department of Energy
Office of Kirtland Site Operations

EXECUTIVE SUMMARY

The Tijeras Arroyo Groundwater (TAG) Investigation Report summarizes the findings of the TAG investigation that is being conducted by Sandia National Laboratories/New Mexico (SNL/NM), Kirtland Air Force Base (KAFB), and the City of Albuquerque (COA). Groundwater investigations conducted during the last 10 years by the SNL/NM Environmental Restoration Project and the KAFB Installation Restoration Program (IRP) have identified trichloroethene (TCE) and nitrate as the primary constituents of concern (COCs) in TAG.

Environmental studies in the TAG study area have ascertained Solid Waste Management Unit (SWMU) locations, the hydrogeologic setting, the distribution of TCE and nitrate in groundwater, the occurrence of these and other COCs in the soil, and the principal release sites. No ongoing contamination is occurring at the SWMUs. For example, the Technical Area (TA)-II septic systems have been taken out of service. No dumping or disposal of toxic materials is currently allowed at SNL/NM sites.

Forty-three SNL/NM SWMUs and six drain and septic system sites are located in the TAG study area, which includes TA-I, TA-II, TA-IV, and the Tijeras Arroyo Operable Unit. KAFB IRP and the COA Environmental Health Department manage approximately 41 sites in the vicinity of the TAG study area.

The SNL/NM characterization work has been completed. At the majority of the SWMUs, only minor amounts of hazardous and/or radioactive materials were released. Therefore, most SWMUs have not required remediation.

A wide variety of environmental studies, consisting of the following, have been conducted by SNL/NM to address specific TAG-related data gaps and to investigate the numerous SWMUs in the study area:

- Research activities for the SWMUs compiled process knowledge by interviewing current and former SNL/NM employees, as well as reviewing historical documents, such as memoranda, aerial photographs, and engineering drawings. The process knowledge revealed that 40 of the 43 SWMUs required site characterization.

- Soil sampling has been conducted at all 40 SWMUs. Soil-vapor sampling has been conducted at 20 of the SWMUs.

- Analytical results are available for all of the SWMUs that required sampling. Based upon these analytical results, the New Mexico Environment Department has accepted No Further Action proposals for the 40 characterized SWMUs. Risk assessments are being, or will be, prepared for the remaining SWMUs.

- Currently, SNL/NM has installed a network of 45 monitoring wells that consists of 35 groundwater and 10 soil-vapor wells. KAFB and the COA have installed approximately 25 groundwater monitoring wells in the vicinity.

- Hydrogeologic investigations have been conducted, such as groundwater elevation measurements, transducer studies, aquifer tests, colloidal borescope measurements, water analyses, and computer modeling.

- Geologic field mapping and other investigations, such as borehole-geophysical, seismic, and aeromagnetic surveys, have been conducted.

Data pertaining to the hydrogeologic setting have been synthesized into the TAG conceptual model. The hydrogeologic setting for the TAG study area is well understood based upon a significant number of monitoring wells. Groundwater occurs in both the perched system and the regional aquifer. However, the perched system has a limited lateral extent that encompasses approximately 3.8 square miles of north-central KAFB. The perched system may extend northward across the KAFB boundary. In the TAG study area, the depth to groundwater for the perched system ranges from 220 to 330 feet (ft) below ground surface (bgs). The uppermost saturated zone in the perched system varies from approximately 10 to 30 ft in thickness, depending upon the well location. Borehole geophysical surveys indicate that a few relatively damp intervals are present below the uppermost saturated zone, but borehole-yield testing has revealed that most of these deeper intervals are too thin to yield volumes of water sufficient for the construction of monitoring wells. The perched system is not used as a water supply.

The direction of groundwater flow in the perched system is to the southeast. Groundwater flows through low-yield, alluvial fan sediments with an average hydraulic gradient of approximately 0.008 feet/foot (ft/ft). Groundwater elevations in the perched system are decreasing in the northwestern portion of the study area, but are increasing in the southeastern area. The perched system is recharged by both artificial (leaking water-supply/sewer lines and the former sewage lagoons) and natural sources (Tijeras Arroyo and possibly ancestral Tijeras Creek). Principal hydrogeologic controls on the perched system include: 1) eastward bedding-plane dip attributed to the western limb of an inferred syncline, 2) stratigraphic variations (such as braided paleochannels), and 3) multiple recharge locations in the northwestern portion of the TAG study area.

Multiple overlapping lenses of low conductivity, mostly unsaturated sediments, serve as a perching horizon beneath the perched system. Beneath the central TAG study area, a layer of approximately 180 to 280 ft of these unsaturated sediments separates the perched system from the regional aquifer. Groundwater in the perched system merges with the regional aquifer southeast of Tijeras Arroyo where the alluvial fan sediments are slightly more permeable.

The regional aquifer is more laterally extensive than the perched system, underlying the entire TAG study area as well as the Albuquerque Basin. Across the TAG study area, the depth to the regional aquifer ranges from approximately 440 to 570 ft bgs. The regional aquifer is composed of both the Ancestral Rio Grande fluvial facies and alluvial fan facies. Locally, groundwater in the regional aquifer flows to the northwest, in a nearly opposite direction to that of the perched system. The gradient in the regional aquifer averages approximately 0.009 ft/ft across the TAG study area, but is steeper near the KAFB, COA, and Veterans Administration (VA) water-supply wells. The regional aquifer is recharged on the eastern side of the study area by natural sources including mountain front flow, Tijeras Arroyo, and the perched system. Groundwater elevations are generally decreasing in the northwestern portion of the study area, but are increasing in the southeastern area. Seasonal pumping variations cause sporadic water-level fluctuations near the water-supply wells. The principal hydrogeologic control upon groundwater flow direction in the regional aquifer is the combined draw-down effect of the KAFB, COA, and VA water-supply wells.

The aqueous geochemical signatures of the perched system and the regional aquifer are distinctive. The geochemical signatures of the perched system vary between well locations, but tend to exhibit higher concentrations of calcium, sulfate, and chloride than the regional aquifer. Groundwater in the regional aquifer exhibits higher bicarbonate/alkalinity concentrations.

The first TAG investigation groundwater samples were collected in November 1992. As of the January 2001 sampling event, SNL/NM had installed 23 monitoring wells. Eleven monitoring wells are completed in the perched system, while twelve monitoring wells are completed in the regional aquifer.

The occurrence of TCE in groundwater is predominantly in the perched system. To date, the maximum concentration of TCE detected in a sample from a perched system well was 9.6 micrograms per liter (μg/L). Only 6 of the 12 perched system monitoring wells have yielded detectable concentrations of TCE. TCE concentrations in the perched system are higher than concentrations in the regional aquifer. The historical trend of TCE concentrations in the perched system is stable.

The sporadic distribution of low concentrations of TCE in the perched system is indicative of discrete TCE releases, compounded by the heterogeneity of the alluvial fan deposits that comprise the unsaturated and saturated intervals. The TCE distribution also probably reflects both the lateral and vertical spreading of TCE vapor through a 220- to 330-ft-thick vadose zone, possibly aided by large volumes of water discharged at or near the surface. TCE releases have been correlated to historical activities associated with TA-I, TA-II, KAFB, and COA properties. Two SNL/NM SWMUs are potential sources of groundwater contamination involving TCE. Another two sites managed by KAFB, and two sites managed by the COA, may have contaminated groundwater with TCE.

The occurrence of TCE in the regional aquifer has no discernible pattern and is more intermittent than the distribution in the perched system. Four regional aquifer monitoring wells have yielded detectable concentrations of TCE. To date, the maximum TCE concentration for the regional aquifer has been 2 μg/L, which is below the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) of 5 μg/L.

Based upon our current understanding, the two SNL/NM SWMUs assigned a “high” concern level (TCE-release sites that may have impacted groundwater) are SWMU 46 (the SNL/NM Acid Waste Line Outfall) and SWMU 165 (the Building 901 Septic System). At both of these SWMUs, sufficient volumes of waste or septic water were released over the years to have driven TCE deep into the vadose zone, to be modified later through vapor-phase transport. For the same reason, the KAFB Golf Course Main Pond and the KAFB Sewage Lagoons are assigned a high concern level. In addition, the COA’s Eubank Landfill—Northeast Fill Area and Eubank Landfill—Southwest Fill Area are assigned a high concern level as being TCE release sites that may have impacted groundwater because of past disposal practices. These six sites appear to be the most likely sources of TCE in groundwater. Ongoing investigations by SNL/NM, KAFB, and the COA should improve our understanding of the TCE-release sites.

Elevated levels of nitrate have been detected in perched system groundwater samples. Historically, the maximum nitrate concentration in the perched system to date is 44 milligrams per liter (mg/L) (in well TA2-SW1-320, December 1999), which is above the EPA MCL of 10 mg/L. The maximum nitrate concentration in the regional aquifer is 42.6 mg/L at well KAFB-0514 (October 2003). In the last six quarterly sampling events, eight perched system monitoring wells had nitrate concentrations that exceeded the MCL of 10 mg/L. Ten regional aquifer monitoring wells had nitrate concentrations that equaled or exceeded this MCL.

Nitrate is suspected of reaching perched system groundwater as degradation products associated with the disposal of septic water or landfill debris (landscaping waste). Based upon current understanding, three SNL/NM SWMUs are assigned a high concern level for being nitrate-release sites that may have impacted groundwater. These three SWMUs are SWMU 46 (Old Acid Waste Line Outfall), SWMU 165 (the Building 901 Septic System in TA-II), and SWMU 187 (the TA-I Sanitary Sewer System). The KAFB Sewage Lagoons, KAFB Golf Course Main Pond, KAFB Sanitary Sewer System, COA Eubank Landfill—Northeast Fill Area, COA 1994 Sanitary-Sewer Line Rupture, COA Sanitary Sewer System, and COA Montessa Park/Tree Nursery are also assigned a high concern level. These 10 sites appear to be the most likely sources of groundwater contamination involving nitrate. Ongoing investigations by SNL/NM, KAFB, and the COA should improve our understanding of the nitrate-release sites.

Based upon a comprehensive review of available information, the following conclusions can be made about groundwater contamination in the TAG study area:

- The distribution of TCE in the perched system is sporadic across the study area and reflects multiple release sites and the effect of subsurface heterogeneity.
- Based upon the historical use and disposal of chlorinated solvents, the extent of TCE in groundwater is probably associated with multiple aqueous releases of solvents and subsequent vapor-phase transport through the vadose zone.
- The distribution of nitrate above the background level is laterally widespread in the perched system.
- In the regional aquifer, concentrations of nitrate above the MCL occur in the western and southeastern portions of the TAG study area.
- The potential sources of TCE and/or nitrate in the TAG study area include sewage lagoons, waste-water outfalls, septic systems, landfills, sewer lines, and the golf course.

SNL/NM recommends the following approach as part of the ongoing environmental studies of the TAG study area:

- Continue annual collection of groundwater samples at all TAG groundwater monitoring wells. At a minimum, the analytes for groundwater sampling will consist of volatile organic compounds and nitrate.
- Continue periodic measurements of groundwater elevations in all TAG monitoring wells.
- Maintain contact with the KAFB IRP personnel with respect to the results of TCE and nitrate abatement studies.
- As available, obtain groundwater results from both KAFB and the COA.
- Continue to integrate SNL/NM, KAFB, and COA data into the Corrective Measures Evaluation process currently underway for the SNL/NM Area of Responsibility.
- Report future TAG investigation results in the SNL/NM Groundwater Protection Program Annual Groundwater Monitoring Report.

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
AOC	Area of Concern
AOR	Area of Responsibility
ARG	Ancestral Rio Grande
bgs	below ground surface
CAU	Corrective Action Unit
CME	Corrective Measures Evaluation
cm/s	centimeter(s) per second
COA	City of Albuquerque
COC	constituent of concern
COOC	Compliance Order on Consent
DCA	dichloroethane
DCE	dichloroethene
D/H	deuterium/hydrogen
DOE	U.S. Department of Energy
DPT	direct-push technology
DQO	Data Quality Objective
DSS	drain and septic system
E_h	oxidation/reduction potential
EHD	Environmental Health Department
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ERDMS	ER Data Management System
FIP	Field Implementation Plan
FLUTe™	Flexible Liner Underground Technology, Ltd.
FOP	Field Operating Procedure
ft	foot (feet)
ft/ft	foot (feet) per foot
ft/yr	foot (feet) per year
GIP	Groundwater Investigation Plan
GMS	Department of Defense Groundwater Modeling System
HE	high explosive(s)
HPT	High Performing Team
HWB	Hazardous Waste Bureau
IRP	Installation Restoration Program
KAFB	Kirtland Air Force Base
LF	Landfill
MAC	maximum allowable concentration
MCL	maximum contaminant level
MEK	methyl ethyl ketone
μg/L	microgram(s) per liter (equivalent to parts per billion)
mg/L	milligram(s) per liter (equivalent to parts per million)
NFA	no further action
NMED	New Mexico Environment Department
PCE	tetrachloroethene
PID	photoionization detector
ppb (v/v)	part(s) per billion on a volume to volume basis
RCRA	Resource Conservation and Recovery Act
SMO	Sample Management Office

ACRONYMS AND ABBREVIATIONS (Concluded)

SNL/NM	Sandia National Laboratories/New Mexico
SWHC	Site-Wide Hydrogeologic Characterization Project
SWMU	solid waste management unit
TA	Technical Area
TAG	Tijeras Arroyo Groundwater
TCA	trichloroethane
TCE	trichloroethene
TJAOU	Tijeras Arroyo Operable Unit
VA	Veterans Administration
VOC	volatile organic compound

1.0 INTRODUCTION

The Sandia National Laboratories/New Mexico (SNL/NM) Environmental Restoration (ER) Project has previously reported concentrations of trichloroethene (TCE) exceeding the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) in groundwater samples from several Tijeras Arroyo Groundwater (TAG) investigation monitoring wells. The other primary groundwater contaminant at the TAG study area is nitrate, which also has exceeded the EPA MCL in several monitoring wells. Groundwater contamination is primarily restricted to a perched groundwater system (perched system) that overlies the regional aquifer.

1.1 Purpose and Background

This document presents an updated conceptual model of the TAG investigation based upon activities that have been conducted since the submittal in 1996 of the "Sandia North [now referred to as Tijeras Arroyo (Collins December 2000)] Groundwater Investigation Plan [GIP]" (SNL/NM March 1996). Prior to June 2003, no reporting requirements were specified by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) for the TAG-related information contained in this report. Two previous annual reports submitted by the SNL/NM ER Project have contained mostly data summaries with modest amounts of synthesis and interpretation. In November 2002, the TAG Continuing Investigation Report (SNL/NM November 2002) compiled existing data collected voluntarily by SNL/NM and was submitted to the U.S. Department of Energy (DOE) and NMED/HWB to keep them informed of the work that had been completed. The Continuing Investigation Report described the status of the site investigation work proposed in the GIP.

Starting in October 2000, meetings of the TAG High Performing Team (HPT) served as a forum for discussing groundwater issues that span institutional boundaries, specifically property controlled by the City of Albuquerque (COA), Kirtland Air Force Base (KAFB), and SNL/NM. The HPT meetings were regularly attended by representatives of the DOE, the SNL/NM ER Project, the KAFB Installation Restoration Program (IRP), the EPA Region 6, the NMED/HWB, the NMED Oversight Bureau, the NMED Ground Water Quality Bureau, the Bernalillo County Environmental Health Department, and the COA Environmental Health Department (EHD).

An integral part of the HPT meetings was the discussion of Data Quality Objectives (DQOs) using EPA guidance (EPA September 1994) in order to more comprehensively conduct an investigation of groundwater contamination in the TAG study area. The data gaps identified as a result of the DQO process were then applied to the development of the TAG Work Plan (SNL/NM June 2003). The Work Plan presented a comprehensive approach for characterizing the nature and extent of TCE and nitrate contamination (the constituents of concern [COCs] as determined by consensus of the HPT) to be used by SNL/NM, KAFB, and the COA. The work was completed from July 2003 through January 2005 and involved drilling deep soil-vapor boreholes, collecting soil-vapor and groundwater samples, and preparing this TAG Investigation Report.

In addition to the characterization and reporting required by the TAG HPT-directed process (for example, this TAG Investigation Report), a Corrective Measures Evaluation (CME) process is concurrently being implemented by SNL/NM. SNL/NM developed a CME Work Plan under the direction of the Compliance Order on Consent (COOC) issued by the NMED (NMED April 2004). The CME Work Plan was prepared in compliance with requirements set forth in the COOC (NMED April 2004) and with the guidance of the Resource Conservation and Recovery Act (RCRA) Corrective Action Plan (EPA May 1994).

As discussed, characterization and potential remediation responsibilities within the historical TAG boundaries have been tentatively assigned to three parties: SNL/NM, KAFB, and the COA. Of these, only SNL/NM has been issued a COOC (agreed upon by all signatories) by the NMED (NMED April 2004). In order to comply with the COOC and generate a CME Work Plan, it was necessary for SNL/NM to clearly define its contribution to overall TAG contamination and describe the activities that SNL/NM will address through its CME. The SNL/NM CME Work Plan identifies the specific area within the overall TAG boundary for which SNL/NM has responsibility and outlines a process for evaluating remedial alternatives within this area. The SNL/NM CME Work Plan was approved (with modifications) by the NMED in October 2004 (NMED October 2004). The boundary of the area addressed in the SNL/NM CME Work Plan is contained within the overall TAG boundaries. In order to clearly distinguish it from the overall TAG study area, the area that the SNL/NM CME Work Plan addresses is referred to as the SNL/NM Area of Responsibility (AOR). The SNL/NM AOR encompasses approximately 2 square miles in the north-central portion of KAFB, or approximately 25 percent of the entire TAG study area, as defined by the TAG Investigation Work Plan (SNL/NM June 2003) and this TAG Investigation Report. Within the SNL/NM AOR, composed of Technical Area (TA)-I, TA-II, and TA-IV, 13 potential release sites are managed by SNL/NM.

Both the TAG HPT-directed investigation and the SNL/NM CME process have unique sets of scheduled deliverables that are somewhat interrelated. The “Tijeras Arroyo Groundwater Investigation Work Plan” (SNL/NM June 2003) and the COOC (NMED April 2004) both contain schedules that define dates for the delivery of plans and reports related to TAG. However, the schedules directed by these two documents do not coincide. The schedule submitted in the TAG Investigation Work Plan showed that this Investigation Report (signifying that characterization is complete) must be presented to the NMED by September 30, 2005. All characterization work completed to support this report (i.e., the specified six quarters of groundwater monitoring) was planned in order to meet this schedule. On September 19, 2005, the DOE requested a 60-day extension of the TAG Investigation Report submittal date.

According to the COOC (NMED April 2004), SNL/NM was also required to complete a CME Report for TAG by September 30, 2005. In order to meet this deadline, SNL/NM needed to submit the TAG CME Work Plan before the characterization requirements of the TAG Investigation Work Plan were fulfilled. In contrast, the COOC (NMED April 2004) states that the CME process cannot proceed until characterization is sufficient. To meet the COOC schedule (NMED April 2004), SNL/NM therefore assumed that the existing groundwater data were sufficient to commence the CME process; indeed, the groundwater analytical data described in this TAG Investigation Report correlate with historical concentrations (SNL/NM November 2002). Groundwater monitoring began in 1992. Therefore, the CME process continued during the ongoing groundwater monitoring characterization, and the CME Report is currently in NMED review.

As noted, the TAG study area is located in the north-central portion of KAFB (Figure 1.1-1, Plate 1). Three of the five SNL/NM TAs are located in the TAG study area. Together, the three TAs (TA-I, TA-II, and TA-IV) encompass approximately 641 acres. About 7,600 employees and contractors work in the 470 structures that are located in the three TAs (DOE October 1999). The structures primarily consist of office buildings, research laboratories, workshops, shipping facilities, and warehouses.

Investigations of groundwater quality in the TAG study area have been conducted by SNL/NM over the past 13 years (Table 1.1-1). In 1992, SNL/NM began to investigate groundwater quality as part of the overall TA-II investigation with the installation of three groundwater monitoring wells. During this initial investigation, the perched system was discovered at a depth of approximately 320 feet (ft) below ground surface (bgs). In October 1994, analytical results of a groundwater sample from the perched system identified TCE at a concentration of 1 microgram per liter (μg/L), which caused SNL/NM to further investigate groundwater contamination in the study area. A complete summary of specific information that had been collected prior to March 1996 was reported in the GIP (SNL/NM March 1996).

Since the preparation of the GIP (SNL/NM March 1996), the SNL/NM ER Project has voluntarily undertaken various activities to determine the nature and extent of groundwater contamination, in an attempt to identify all potential sources for this contamination. Site characterization has included the following activities:

- Sampling soil-vapor monitoring wells located in TA-II
- Installing additional groundwater and soil-vapor monitoring wells
- Collecting groundwater elevation data
- Collecting quarterly groundwater and soil-vapor samples

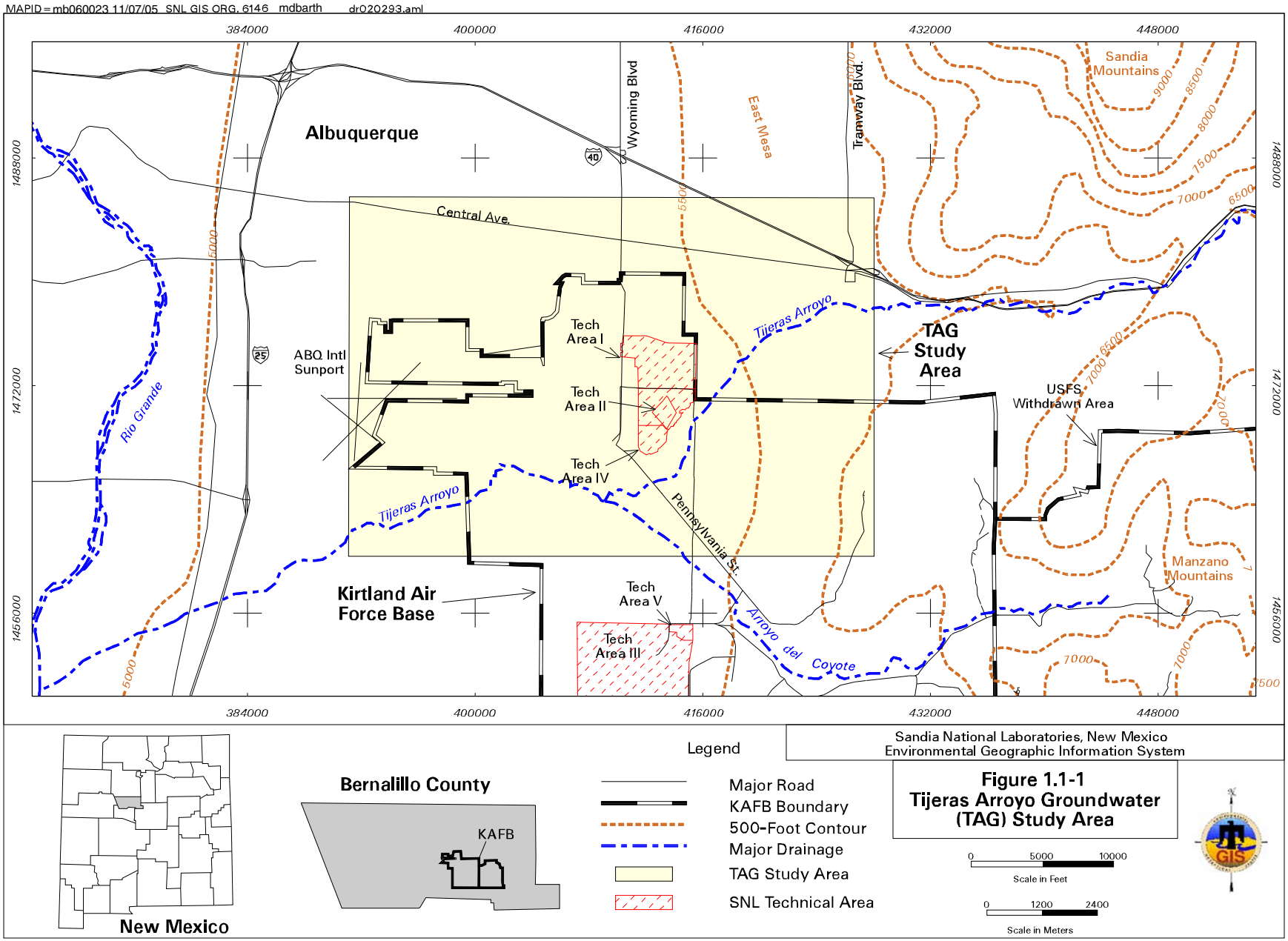
Since the preparation of the TAG Investigation Work Plan (SNL/NM June 2003), the SNL/NM ER Project, KAFB IRP, and the COA have implemented the tasks described in the Work Plan to determine the nature and extent of groundwater contamination. Site characterization included the following activities:

- Installing and sampling soil-vapor monitoring wells
- Collecting groundwater elevation data
- Collecting quarterly groundwater samples for six sampling events

In addition to these activities, site characterization activities independent of the groundwater investigation of the TAG study area were completed at potential source areas including TA-I, TA-II, Tijeras Arroyo sites, septic tanks/drainfields, and non-SNL/NM properties adjacent to the study area. Chapter 2.0 of this report summarizes each of these activities in relation to the groundwater investigation of the TAG study area.

1.2 Updated TAG Conceptual Model—Summary

The purpose of updating the TAG conceptual model is to provide an integrated description of the geologic setting, hydrologic characteristics, and contaminant distributions. This section summarizes the updated conceptual model with more details provided in Chapters 3.0 and 4.0.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840857.04030000 A193
384000
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448000
1488000
1472000
1456000
Albuquerque
Wyoming Blvd
Tramway Blvd.
East Mesa
Sandia Mountains
Central Ave.
Tijeras Arroyo
TAG Study Area
ABQ Intl Sunport
Tech Area I
Tech Area II
Tech Area IV
Tech Area V
Tech Area III
USFS Withdrawn Area
Rio Grande
Pennsylvania St.
Arroyo del Coyote
Kirtland Air Force Base
Manzano Mountains
Legend
Major Road
KAFB Boundary
500-Foot Contour
Major Drainage
TAG Study Area
SNL Technical Area
Bernalillo County
KAFB
New Mexico
Sandia National Laboratories, New Mexico
Environmental Geographic Information System
Figure 1.1-1
Tijeras Arroyo Groundwater (TAG) Study Area
0 5000 10000
Scale in Feet
0 1200 2400
Scale in Meters

Table 1.1-1
Tijeras Arroyo Groundwater Investigation Historical Timeline of SNL/NM Activities

Month	Year	Event	Reference
November–July	1992–1993	SNL/NM began investigation of TA-II groundwater. Perched system discovered as first wells were installed (TA2-SW1-320, TA2-NW1-325, and TA2-NW1-595).	SNL/NM March 1995
March–July	1994	Installed monitoring wells TA2-W-01 and TJA-2.	SNL/NM March 1995
October	1994	Analytical results from groundwater sampling first detected TCE.	SNL/NM March 1996
August–September	1995	Installed monitoring wells WYO-1, WYO-2, and PGS-2.	SNL/NM March 1996
November	1995	Analytical results from groundwater sampling first detected TCE above the EPA MCL of 5 μg/L.	SNL/NM March 1996
November	1995	Installed monitoring well TA2-W-19.	SNL/NM March 1996
March	1996	Sandia North Groundwater Investigation Plan submitted to the NMED/HWB.	SNL/NM March 1996
September	1996	Shallow Water-Bearing Zone Hydrologic Evaluation prepared.	Wolford September 1996
November	1996	Pressure transducer program initiated for select monitoring wells.	SNL/NM March 1998
November–December	1996	Installed TA-II soil-vapor monitoring wells TA2-VW-20 and TA2-VW-21.	IT January 1997
March	1997	Sandia North Geological Investigation Project Report prepared.	Fritts and Van Hart March 1997
March–April	1997	Installed monitoring wells TAI-W-01 and TA2-W-25.	SNL/NM March 1998
August	1997	Borehole geophysical investigation (electromagnetic induction, neutron, and natural gamma) completed on 21 SNL/NM and KAFB monitoring wells.	SNL/NM March 1998
January–February	1998	Installed monitoring wells TAI-W-02, TAI-W-03, TAI-W-06, TA2-W-24, TA2-W-26, and TA2-W-27.	SNL/NM June 2000
March	1998	Fiscal Year 1997 Sandia North Groundwater Investigation Annual Report submitted to the NMED/HWB.	SNL/NM March 1998
August–December	1998	Installed monitoring wells TAI-W-04, TAI-W-05, TAI-W-07, TJA-3, TJA-4, and TJA-5.	SNL/NM June 2000
May–June	1999	Colloidal borescope investigation performed on 18 SNL/NM and KAFB monitoring wells.	AquaVISION July 1999
October	1999	Analysis of the USGS aeromagnetic survey performed to revise the interpretation of the SNL/NM and KAFB area geologic structure.	Van Hart et al. October 1999
June	2000	Fiscal Year 1998 Sandia North Groundwater Investigation Annual Report submitted to the NMED/HWB.	SNL/NM June 2000
October	2000	TAG High Performing Team convened for the first time.	SNL/NM June 2003
December	2000	Project name changed to the Tijeras Arroyo Groundwater Investigation.	Collins December 2000
January–March	2001	Installed groundwater monitoring wells TJA-6 and TJA-7, and soil-vapor monitoring wells 46-VW-01, 46-VW-02, and 227-VW-01.	SNL/NM November 2002
February	2001	Preliminary model of the perched system updated.	BGW February 2001
June	2001	Geologic model of the perched system updated.	Van Hart June 2001
July	2001	Monitoring wells WYO-1 and WYO-2 plugged and abandoned, replaced by WYO-3 and WYO-4.	SNL/NM June 2003
November	2002	TAG Continuing Investigation Report submitted to the NMED/HWB.	SNL/NM November 2002

Refer to footnotes at end of table.

Table 1.1-1 (Concluded)
Tijeras Arroyo Groundwater Investigation Historical Timeline of SNL/NM Activities

Month	Year	Event	Reference
June	2003	TAG Investigation Work Plan submitted to the NMED/HWB.	SNL/NM June 2003
September	2003	TAG Investigation Work Plan approved by the NMED.	Kieling September 2003
April	2004	NMED issued the Compliance Order on Consent.	NMED April 2004
July	2004	TAG Corrective Measures Evaluation Work Plan prepared for the SNL/NM Area of Concern.	SNL/NM November 2004
December	2004	TAG Corrective Measures Evaluation Work Plan for the SNL/NM Area of Responsibility approved by the NMED	NMED October 2004

BGW = Balleau Groundwater, Inc.
EPA = U.S. Environmental Protection Agency.
HWB = Hazardous Waste Bureau.
IT = IT Corporation.
KAFB = Kirtland Air Force Base.
MCL = Maximum Contaminant Level.
μg/L = Microgram(s) per liter.
NMED = New Mexico Environment Department.
SNL/NM = Sandia National Laboratories/New Mexico.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.
USGS = U.S. Geological Survey.

Groundwater in the vicinity of the TAG study area occurs in the regional aquifer and the perched system, both within the upper unit of the Tertiary-age Upper Santa Fe Group. Aquifer tests and drilling data indicate that the regional aquifer is semi-confined to unconfined in the study area, with hydraulic conductivities ranging from approximately 0.77 to 14.8 ft/day. Depth to water in the regional aquifer ranges from 450 to 550 ft bgs (4,854 to 4,924 ft above mean sea level [amsl]) in the study area. The direction of groundwater flow in the regional aquifer is principally north-northwest at a gradient of 0.01 feet/foot (ft/ft), toward the KAFB, COA, and Veterans Administration (VA) water-supply wells in the northwestern portion of the study area. In this portion of the study area, groundwater levels have been declining in the regional aquifer due to pumping from these production wells.

In the eastern section of the TAG study area, the upper portion of the regional aquifer is located within the alluvial fan facies of the Santa Fe Group. In the western section of the study area, the upper portion of the regional aquifer is within the Ancestral Rio Grande (ARG) fluvial facies. These two lithofacies exhibit complex interfingering in a north-south line approximated by Wyoming Boulevard. The ARG fluvial facies are typically coarse-grained and well-sorted, exhibit relatively continuous and well-connected bedding, and have moderate to high hydraulic conductivity. In contrast, the alluvial fan facies are typically finer-grained and poorly sorted, exhibit lenticular bedding that is moderately to well-connected, and have low to moderate hydraulic conductivities.

The perched system consists of multiple perched saturated intervals, located up to several hundred feet above the regional water table (5,019 to 5,320 ft amsl) within the alluvial fan facies of the Upper Santa Fe Group. The perched system is presently understood to cover approximately 3.8 square miles. The flow in the perched system is in a general southeasterly direction at a gradient of 0.01 (ft/ft), with hydraulic conductivity values ranging from 0.043 to 3.99 ft/day.

Potential recharge sources for the perched system include the following:

- Localized, irrigated (grassy) areas such as the Parade Ground north of TA-I
- A buried ancestral Tijeras Arroyo channel (supplying water from portions of Tijeras Arroyo upstream of KAFB)
- Leaking water mains or sewer lines
- The high-volume acid-waste line (now inactive)
- High-volume septic systems (now inactive)
- The KAFB Sewage Lagoons (now inactive)
- Tijeras Arroyo Golf Course (KAFB)

The data available from previous and ongoing site investigations have identified TCE and nitrate as the two major COCs. The presence of volatile organic compounds (VOCs) such as TCE, 1,1-dichloroethane [DCA], and cis-1,2-dichloroethene [DCE] has been confirmed in perched system monitoring wells. Historically, the concentrations of these VOCs are low, ranging from less than 1.0 (estimated values) to 9.6 μg/L, with only three monitoring wells (TA2-W-19, TA2-W-26, and WYO-4) historically exhibiting concentrations above the EPA MCL

for TCE of 5.0 μg/L. The VOC contamination in the uppermost saturated interval of the perched system is laterally widespread, yet discontinuous. The distribution of VOC contamination does not point to a single source. Based upon the historical use of solvents throughout the KAFB and SNL/NM area, it is believed that numerous, small releases have occurred.

Nitrate contamination above the EPA MCL of 10 milligrams per liter (mg/L) has been found consistently in several perched system monitoring wells and in a monitoring well located near where the perched system and regional aquifer merge (TJA-4). Historically, the levels of nitrate contamination in the perched system wells range up to 44 mg/L. The nitrate in the perched system wells is associated with former high-volume waste-water streams throughout the study area. The source of nitrate at TJA-4 is possibly the KAFB golf course or LF [Landfill]-08.

Contaminant transport in the perched system is assumed to be in the direction of the hydraulic gradient toward the southeast. No water-supply wells extract water from the perched system. The pathways for recharge to the regional aquifer are currently unknown, but are likely to be complex.

1.3 Primary COCs in Groundwater

The COCs in groundwater for the TAG study area are TCE and nitrate. Unlike TCE, which is a synthetic compound, nitrate can be naturally derived from geologic deposits. However, most nitrate occurrences result from the disposal of sewage and surface application of fertilizers. Section 1.3.1 discusses general use of petroleum products and chlorinated solvents, and Section 1.3.2 presents the use and characteristics for TCE. Nitrate is discussed in Section 1.3.3.

1.3.1 SNL/NM Use of Petroleum Products and Chlorinated Solvents

During the more than 50 years that SNL/NM has been in operation, a diverse suite of chemicals and radionuclides has been used. Acids, bases, solvents, petroleum products, high explosive (HE) compounds, reactives, metals, and radionuclides were used. Because SNL/NM was involved with nuclear weapons research in an era of rapidly expanding technologies, a wide variety of experiments and tests were conducted. Unfortunately, much of the early work was not well documented. Process knowledge also has been difficult to acquire because waste-management policies were not developed until the 1980s, after SNL/NM had already been in operation for more than 30 years. Therefore, a complete understanding of chemical usage and disposal at SNL/NM is not possible. The available information relevant to the TAG investigation is based upon the surviving archived records, memoranda, and employee interviews.

Table 1.3.1-1 lists the VOC-related solvents, petroleum fuels, and miscellaneous liquids that have been used by SNL/NM in the TAG study area. The list is as accurate as the available process knowledge allows. It is assumed that a similar list of commonly used chemicals may have been used at KAFB facilities.

Table 1.3.1-1
VOC-Related Solvents, Petroleum Fuels, and Miscellaneous Liquids Used by SNL/NM in the TAG Study Area

Solvents	Petroleum fuels	Miscellaneous liquids
Acetone	Diesel	Butyl acetate
Carbon tetrachloride	Gasoline	Ethylene glycol
Dioxane	Kerosene	Freon™ compounds
Hexane		Hydraulic fluids
MEK		Isopropanol
Methylene chloride		Machining oils
Nitromethane		Methanol
1,1,1-TCA		Motor oils
TCE		Naphthalene
Toluene		Paint strippers
Xylene		Paints
		Polychlorinated biphenyls

MEK = Methyl ethyl ketone.
SNL/NM = Sandia National Laboratories/New Mexico.
TAG = Tijeras Arroyo Groundwater.
TCA = Trichloroethane.
TCE = Trichloroethene.
VOC = Volatile organic compound.

1.3.2 Use and Characteristics of TCE

TCE is a colorless, synthetic, moderately volatile liquid that is widely used as a metal degreaser. TCE is especially useful because of its excellent cleansing properties, noncorrosiveness, and low flammability (HSIA November 1986; HSIA February 2001). Chlorinated solvents such as TCE have been used in a wide variety of industrial applications for decades. Besides being widely used as a degreaser, TCE also is used to a much lesser extent in adhesives, paints, and coatings.

First synthesized in 1864, TCE has been used worldwide for about 70 years. Demand for TCE was generated mainly by the development of vapor degreasing after the 1920s and by the growth of the dry-cleaning industry in the 1930s. TCE was replaced for dry-cleaning use by tetrachloroethene (PCE) in the mid-1950s. Production of TCE in the United States peaked in 1977. TCE still is used widely today, especially in metal degreasing and chemical processing.

The qualities that make TCE so useful in numerous industrial applications also cause TCE to be a persistent environmental contaminant. Chemically stable with a low vapor pressure, TCE is more dense than water at 1.46 grams per gram and is slightly soluble. The maximum solubility of TCE in water is 1,100 μg/L. Above that concentration, TCE will precipitate and sink through a water column as a dense nonaqueous phase liquid. Transport of TCE in the environment can occur as either vapor phase or liquid phase in the form of either free product or dissolved in water.

Typically referred to as a chlorinated solvent, TCE is more formally classified as an unsaturated aliphatic halogenated hydrocarbon (HSIA November 1986; HSIA February 2001). TCE has numerous synonyms including trichloroethene, ethylene trichloride, and 1,2-trichloroethylene as

well as several trade names, such as Algylen, Chlorylen, and Trichloran (IARC 1994). The typical grades of TCE contain greater than 99 percent TCE. Two primary grades are manufactured. Degreaser grades are used for cleaning; technical grades are used for formulating other compounds such as hydrofluorocarbon refrigerants and polyvinyl chloride. The two grades primarily differ in the amount and type of added stabilizers and inhibitors. More than 50 stabilizers and inhibitors are known to have been used worldwide. These additives include isobutanol, acetone, and methyl ethyl ketone (MEK). Various impurities also have been documented in commercially produced TCE. These impurities are carbon tetrachloride, benzene, 1,2-DCA, trans-1,2-DCE, and cis-1,2-DCE.

The EPA drinking water standard (MCL) for TCE is 5 μg/L. The State of New Mexico maximum allowable concentration (MAC) for TCE is 100 μg/L.

1.3.3 Nitrate

Nitrate in groundwater can be the result of both anthropogenic and natural sources. Potential anthropogenic-nitrate sources include human sewage, nitrate fertilizers, certain HE materials, and industrial waste streams such as nitric-acid solutions. Nitrate also can leach from geologic deposits, especially sedimentary strata (Holloway et al. October 1998; Walvoord et al. November 2003). Animal waste and decomposing plant debris also are nitrate sources. Groundwater contamination resulting from human sewage is typically indicated by the presence of high nitrate levels coupled with high chloride levels (Driscoll 1986). Isotope studies involving N^{15}/O^{18} are extremely useful for determining whether or not anthropogenic nitrate sources are involved (Carlsen et al. December 2001).

Nitrate is highly mobile in soil due to its high solubility in water and weak retention by soil particles (EPA October 2001). The primary mechanism for nitrate transport in the environment is movement of water containing dissolved nitrate through soil. Nitrate does not volatilize and is likely to remain dissolved in water until consumed by plants or other organisms. Nitrate degradation (denitrification) occurs most rapidly where anaerobic conditions are coupled with the presence of denitrifying bacteria and a suitable carbon source (EPA October 2001).

The presence of nitrogen in water may be reported by analytical laboratories in various formats such as nitrate, nitrite, nitrate plus nitrite, total nitrogen, or Total Kjeldahl Nitrogen. Care must be taken in evaluating nitrogen values and the respective water-quality standards. Dinwiddie (September 1997) set a nitrate plus nitrite background concentration of 4 mg/L for SNL/NM based upon Moats and Winn (January 1995). However, this value was not “reliably established” (Moats and Winn January 1995). The KAFB Nitrate Abatement Program uses the background nitrate plus nitrite concentration of 4 mg/L (Montgomery Watson August 2000). The EPA has established various water-quality standards for nitrogen compounds. The standard most commonly cited is the federal MCL for nitrate of 10 mg/L. The State of New Mexico MAC for nitrate is also 10 mg/L. The federal MCL for nitrite is 1 mg/L, and the nitrate plus nitrite MCL is 10 mg/L.

1.4 Scope of Report

This report provides a brief overview of the operational history and a summary of the environmental investigations completed to date at TA-I, TA-II, and the Tijeras Arroyo Operable

Unit (TJAOU) (Chapter 2.0), presents the current understanding of the hydrogeology of the area and an updated conceptual model (Chapter 3.0), and discusses the groundwater quality analytical results for the six quarterly sampling events through December 2004 (Chapter 4.0). Chapter 5.0 summarizes the most likely contamination sources, describes the nature and extent of the contamination, and proposes recommendations for future study.

2.0 DESCRIPTION OF FACILITIES, SITE INVESTIGATIONS, CONSTITUENTS OF CONCERN, AND POTENTIAL RELEASE SITES

This section describes SNL/NM facilities, as well as SNL/NM, KAFB, and COA site investigations, COCs, and potential release sites located in the TAG study area. The TAG study area contains three SNL/NM facilities (TA-I, TA-II, and TA-IV), as well as areas adjacent to Tijeras Arroyo (Figure 2-1). Forty-six SNL/NM solid waste management units (SWMUs) are located in the study area, and each has been fully investigated. Research consisted of compiling process knowledge by interviewing employees and reviewing historical documents, aerial photographs, and engineering drawings. Invasive field investigations, such as soil sampling, conducted at 43 of the 46 SWMUs, revealed that minor amounts of hazardous and/or radioactive materials were released at most of the sites. The remaining three sites (SWMUs 25, 73, and 104) did not require field investigations.

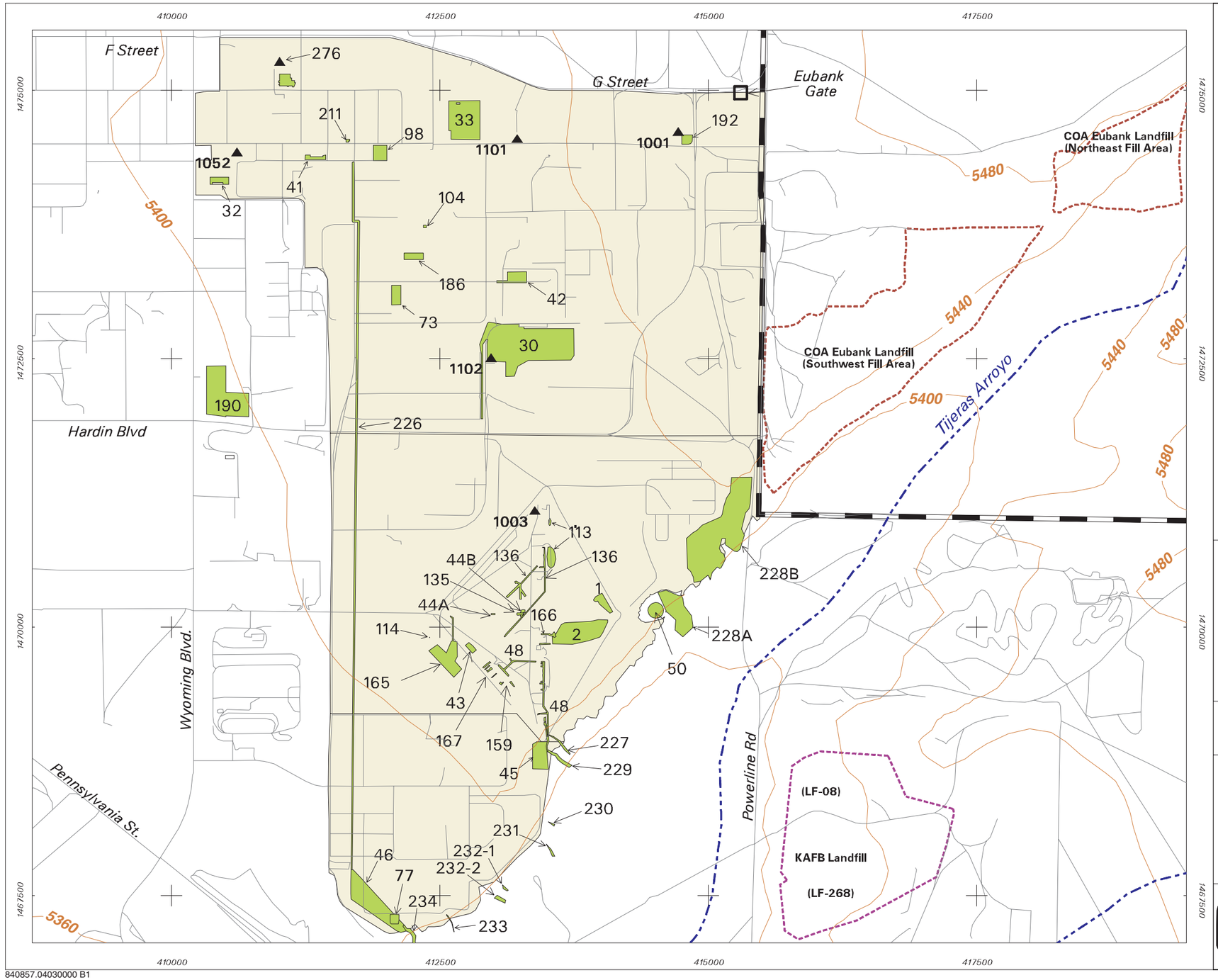
The water-type terminology used in this report is as follows. Waste water refers to water derived from research/testing operations, machine workshops, photographic development, and foundries. Septic water refers to sewage (sanitary waste) from rest rooms and bathing showers. Storm water consists of precipitation and ephemeral overland flow.

Sections 2.1 through 2.5 present the current investigatory and regulatory status for each SWMU and other SNL/NM potential release sites with environmental concerns, such as drain and septic system (DSS) sites. Section 2.6 discusses the potential for the SNL/NM SWMUs to have impacted groundwater. In addition to the SWMUs that SNL/NM suspects may be potential sources of groundwater contamination, KAFB and the COA continue to study other potential release sites that may have impacted groundwater (Figure 2-2). KAFB and off-base sites are discussed in Sections 2.7 and 2.8, respectively. Section 2.9 discusses the soil-vapor investigations completed in the TAG study area, including the installation and sampling of the five vapor wells required by the TAG Work Plan (SNL/NM June 2003). Section 2.10 summarizes the potential release sites that are suspected of causing TCE and nitrate groundwater contamination in the TAG study area.

Detailed discussions of climate and geographic setting are presented in the Site-Wide Environmental Impact Statement (DOE October 1999) and are not discussed in this report.

2.1 TA-I

TA-I is the northernmost of the SNL/NM TAs in the TAG study area. Since 1928, the vicinity of TA-I has served as a municipal airport, U.S. Army airfield, post-World War II aircraft dismantlement site, and nuclear weapons research site. Currently, it is part of SNL/NM, a DOE facility that began research operations at TA-I in 1949.



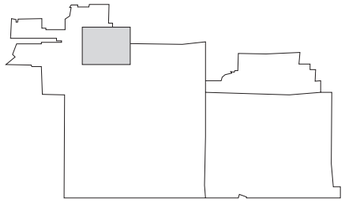
Legend

- DSS Site
- Surface Drainage
- KAFB Boundary
- Road
- 40 Ft Contour
- SWMU
- Technical Area
- City of Albuquerque Landfill
- KAFB Landfill

Note:
SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) are not shown because both are laterally extensive. SWMU 25 is not shown because no location actually existed. SWMU 235 is located 700 ft south of SWMU 234.

0 1000 2000
Scale in Feet

0 240 480
Scale in Meters



Sandia National Laboratories, New Mexico
Environmental Geographic Information System

Figure 2-1
SWMUs and DSS Sites in the Immediate Vicinity of TA-I, TA-II, and TA-IV

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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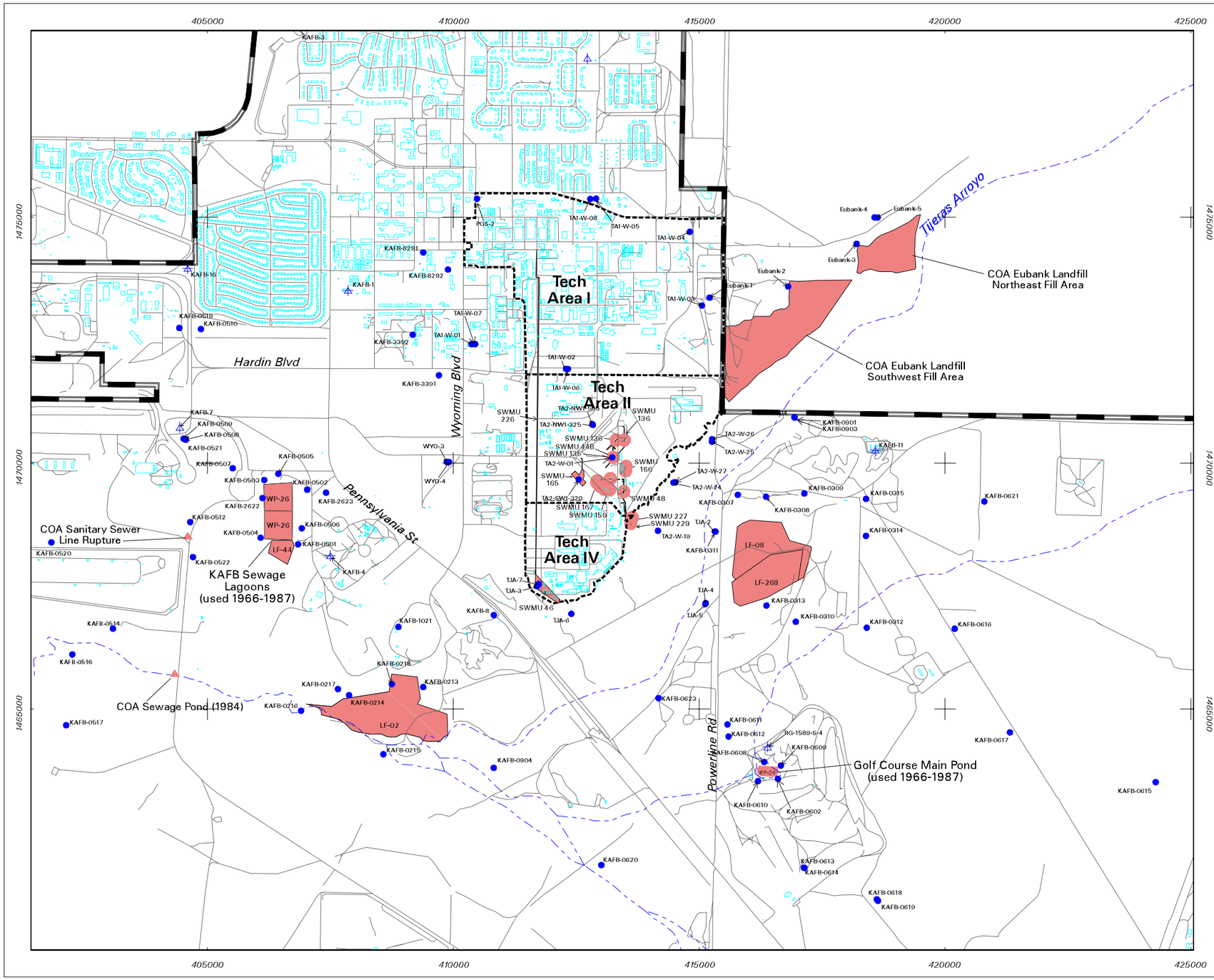

Legend

- Monitoring Well (groundwater, active)
- Water-Supply Well
- Potential Release Site
- Roadway
- Building
- Surface Drainage
- Tech Area Boundary
- KAFB Boundary

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 2200 4400
Scale in Feet

0 528 1056
Scale in Meters

Sandia National Laboratories, New Mexico
Environmental Geographic Information System

Figure 2-2
Monitoring and Water-Supply Wells and Potential Release Sites in the Central Portion of the TAG Study Area

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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2.1.1 Facility Description

TA-I presently comprises approximately 355 acres and is the most densely developed and populated of the SNL/NM TAs, with more than 6,600 employees and 370 structures (DOE October 1999). The TA-I structures primarily consist of office buildings, research laboratories, workshops, and warehouses.

2.1.2 Previous Investigations

Sixteen SWMUs are located in TA-I. Table 2.1.2-1 summarizes the COCs, investigations, and regulatory status for each TA-I site. The NMED has accepted no further action (NFA) proposals for all 16 sites.

The soil sampling results, which indicate the presence of COCs in the soil at background and/or acceptable risk-based levels (Table 2.1.2-1), demonstrate that the TA-I sites pose little or no additional risk to groundwater. However, the following three TA-I sites are associated with significant volumes of either storm water or waste water that may have reached groundwater:

- SWMU 96, Storm Drain System (extending across much of TA-I)
- SWMU 187, TA-I Sanitary Sewer System (extending across much of TA-I)
- SWMU 226, Old Acid Waste Line (TA-I waste water)

Groundwater sampling has been conducted on a quarterly basis at eight monitoring wells in TA-I associated with these three SWMUs; the analytical results suggest that these three sites are not significant sources of groundwater contamination (Chapter 4.0).

2.2 TA-II

TA-II is located between TA-I to the north and TA-IV to the south. For several decades, the name TA-II referred to a diamond-shaped area (45 acres) that was surrounded by a high-security fence and guard towers. Assembly of nuclear weapons began at TA-II in 1948, but was discontinued in either 1958 or 1959 (SNL/NM March 1996). From 1959 until 2002, TA-II activities involved the research of HE components for military and commercial applications. Most of the TA-II buildings have been demolished. ER Project activities are expected to be completed in 2006.

2.2.1 Facility Description

Presently, TA-II spans from just east of Wyoming Boulevard on the west and Powerline Road on the east. TA-II is bounded by Hardin Boulevard on the north and by TA-IV on the south. TA-II encompasses 205 acres, including the historic 45-acre, diamond-shaped area. As recently as 1999, approximately 440 people worked in TA-II, and approximately 25 structures existed that

Table 2.1.2-1
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
25	Burial Site (South of TA-I)	HE	• Aerial photography investigation and field inspections (1994)	• No burials found at the 12 candidate sites	NFA accepted (1995)
			• Review of historical records (1994)	• No reliable evidence found	
30	Reclamation Yard	Metals, PCBs, TPH	• VCM excavated PCB-contaminated soil above 1 mg/L; confirmatory sampling conducted (2000)	• Site successfully remediated	NFA accepted (January 2004)
			• Soil sampling to 5 ft bgs (1995)	• PCB cleanup of areas identified; no other COCs required cleanup	
			• Soil sampling (1986, 1991/1992)	• PCBs detected up to 6,200 μg/L	
32	Steam Plant Oil Spill	TPH (diesel fuel)	• Soil sampling to maximum depth of 107 ft bgs for surface spill (1992)	• Low levels of TPH present above 80 ft bgs; no remediation necessary	NFA accepted (July 1995)
33	Motor Pool	TPH, SVOCs, VOCs, Metals	• Soil sampling to 25 ft bgs (2001)	• No significant COCs detected	NFA accepted (January 2004)
			• Soil sampling to 30 ft bgs (1995)	• Low levels of VOCs, SVOCs, and metals detected; all below action levels	
			• Soil sampling around UST to 30 ft bgs (1991)	• TPH detected up to 1,120 mg/L	
41	Building 838 Mercury Release	Mercury	• Soil sampling to 3 ft bgs (1993 and 1994)	• No mercury detected	NFA accepted (July 1995)
42	Building 870 Water Treatment Facility	Acids/bases, Metals, VOCs, SVOCs	• Soil sampling to 30 ft bgs (1995)	• No VOCs, SVOCs, or metals exceeded risk-based cleanup levels	NFA accepted (December 1999)
			• Soil sampling to 22 ft bgs (1993)	• No anomalous pH values; minor amounts of metals, VOCs, and SVOCs	
73	Building 895 Hazardous Waste Repackaging/Storage	None	• Research of documents; personnel interviews (1994)	• No releases of chemicals or hazardous material were identified	NFA accepted (July 1995)
96	Storm Drain System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Acids/bases, TPH	• Soil sampling to 17 ft bgs (2002)	• No significant COCs detected	NFA accepted (December 2004)
			• Soil sampling to 12 ft bgs (1995)	• No VOCs, SVOCs, TPH, metals, radionuclides, or PCBs exceeded risk-based cleanup levels	

Refer to footnotes at end of table.

Table 2.1.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
96 (cont.)	Storm Drain System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Acids/bases, TPH	• Pipeline camera survey and trenching • Soil samples to 8 ft bgs (1993)	• Pipe breaks identified • No metals, PCBs, radionuclides, SVOCs, and VOCs detected	NFA accepted (December 2004)
			• Soil sampling at Building 870 (1993)	• Several metals detected	
			• Discharge area and channel surface soil sampling (1992)	• Some radionuclides detected	
			• Storm water sampling (1992)	• Concentrations below COA NPDES limits	
98	Building 863 TCA and Photochemical Releases	TCA, TCE, Acids/bases, Silver	• Soil and soil-vapor sampling to 140 ft bgs (1999)	• No VOCs detected in soil samples; low levels of VOCs detected in soil-vapor samples	NFA accepted (December 2000)
			• Soil and soil-vapor sampling to 30 ft bgs (1995)	• No VOCs, SVOCs, or elevated metals detected in soil samples; low levels of VOCs detected in soil-vapor samples	
104	PCB Spill, Computer Facility	PCBs	• Review of historical documents; personnel interviews (1994)	• Spills of PCB oils were confined to building interior	NFA accepted (July 1995)
186	Building 859 TCE Disposal	TCE	• Soil-vapor sampling (1999)	• Low levels of Freon-113 were identified in soil vapor along pipe chases, but not at original surface spill location	NFA accepted (March 2000)
			• Soil-vapor sampling to 20 ft bgs; soil sampling to 30 ft bgs (1995)	• No significant levels of VOCs detected in soil or soil vapor	
187	TA-I Sanitary Sewer System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Nitrate	• Soil sampling to 17 ft bgs (2002)	• No significant COCs (including nitrate) detected	NFA accepted (December 2004)
			• Soil sampling to 12 ft bgs (1995)	• VOCs, SVOCs, PCBs, metals, and radionuclides below risk-based cleanup levels	
			• Building 824 soil sampling (1994)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	
			• Building 838 and 839 soil sampling (1994)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	
			• Building 870 soil sampling (1994)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	

Refer to footnotes at end of table.

Table 2.1.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
187 (cont.)	TA-I Sanitary Sewer System	Metals, PCBs, Radionuclides, SVOCs, VOCs, Nitrate	• Building 814 soil sampling (1993) • Building 870 soil sampling to 11 ft bgs (1993) • Pipeline camera survey and trenching (1993)	• No VOCs, SVOCs, or elevated metals or radionuclides detected	NFA accepted (December 2004)
				• No VOCs, SVOCs, or elevated metals or radionuclides detected • Pipe breaks identified	
190	Steam Plant Tank Farm	TPH (diesel fuel), VOCs, SVOCs	• Biovent remediation wells installed (1998)	• Reduction of TPH in soil-vapor samples	NFA accepted (December 2004)
			• Hollow-stem-auger soil sampling to 120 ft bgs (1997)	• TPH concentrations greater than 100 mg/L confined to depths of 80 ft bgs or less	
			• Geoprobe soil sampling to 50 ft bgs (1995)	• TPH detected up to 52,100 mg/L	
			• Soil sampling to 5 ft bgs (1991)	• TPH detected up to 17,200 mg/L	
192	TA-I Waste Oil Tank	TPH, VOCs, SVOCs, PCBs, Metals	• Soil sampling to 30 ft bgs (1995)	• No COCs detected in soil samples	NFA accepted (December 1999)
211	Building 840 Former UST 840-1	TPH, Metals, PCBs, SVOCs, VOCs	• Soil sampling to 30 ft bgs for metals, PCBs, SVOCs, and VOCs (1995)	• No COCs detected in soil samples	NFA accepted (March 2000)
			• Soil sampling in tank excavation for SVOCs and VOCs (1989)	• No COCs detected in soil samples	
226	Old Acid Waste Line	Metals, PCBs, SVOCs, VOCs, Cyanide, Tritium, Gamma-Emitting Radionuclides	• Soil sampling to 17 ft bgs (2002) • Geoprobe soil sampling to 14 ft bgs along entire 1.3 miles of line; sediment sampling from line (1995) • Soil sampling at Building 839 to 14 ft bgs (1994)	• No significant COCs detected • No significant levels of VOCs, SVOCs, PCBs, metals; tritium, gamma-emitting radionuclides detected • Low levels of radionuclides and metals detected	NFA accepted (December 2004)
			• Pipeline camera survey and trenching (1993)	• Pipe breaks identified	
			• Soil sampling at K and 9th Streets to 8 ft bgs (1992)	• No COCs detected	

bgs = Below ground surface.
COA = City of Albuquerque.
COC = Constituent of concern.
ft = Foot (feet).

Table 2.1.2-1 (Concluded)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-I

HE	= High explosive(s).
µg/L	= Microgram(s) per liter.
mg/L	= Milligram(s) per liter.
NFA	= No Further Action.
NPDES	= National Pollutant Discharge Elimination System.
PCB	= Polychlorinated biphenyl.
SNL/NM	= Sandia National Laboratories/New Mexico.
SVOC	= Semivolatile organic compound.
SWMU	= Solid Waste Management Unit.
TA	= Technical Area.
TCA	= Trichloroethane.
TCE	= Trichloroethene.
TPH	= Total petroleum hydrocarbons.
UST	= Underground storage tank.
VCM	= Voluntary Corrective Measure.
VOC	= Volatile organic compound.

consisted of research facilities, storage yards, warehouses, office trailers, and shipping facilities. Since 1999, most of the structures in TA-II have been removed and operations moved elsewhere, including the Explosive Components Facility, which began operations in 1995.

2.2.2 Previous Investigations

Fourteen SWMUs are located in TA-II. Table 2.2.2-1 summarizes the COCs, investigations, and regulatory status for each TA-II site. The NMED has accepted NFA proposals for all 14 sites.

Several phases of excavation work have been conducted at TA-II as part of voluntary corrective measures. The Radioactive Waste Landfill (SWMU 1, which now includes SWMU 3, the Chemical Disposal Pit [TA-II]) and the Classified Waste Landfill (SWMU 2) have been fully excavated and the landfill contents removed; the excavation work confirmed that neither landfill had been used for the disposal of liquids. Excavation work also has been conducted at all of the ER septic systems to confirm the locations of distribution boxes and leachfields (Galloway 2001a, 2001b).

No SNL/NM testing or disposal activities involving HE material are suspected of releasing nitrate to the environment in the TAG study area. Because of the lack of HE compounds in soil samples from TA-II SWMUs (for example, SWMUs 113 and 114), the potential for HE to degrade to nitrate in this area is low. All TA-II sites that were sampled for HE compounds have been approved for NFA status (Table 2.2.2-1).

Soil sampling results indicate that the TA-II sites pose little or no additional risk to groundwater. This is demonstrated by the fact that COCs in the soil in this area are at or below background and/or acceptable risk-based levels (Table 2.2.2-1).

The following seven TA-II sites are associated with significant volumes of waste water and/or septic water that may have reached groundwater:

- SWMU 48, Building 904 Septic System
- SWMU 135, Building 906 Septic System
- SWMU 136, Building 907 Septic System
- SWMU 159, Building 935 Septic System
- SWMU 165, Building 901 Septic System
- SWMU 166, Building 919 Septic System
- SWMU 167, Building 940 Septic System

The analytical results for groundwater and soil-vapor samples are summarized in Table 2.2.2-1, and groundwater results are discussed in more detail in Chapter 4.0. Groundwater sampling has been conducted on a quarterly basis at seven monitoring wells in the vicinity of TA-II. Soil-vapor samples also have been collected quarterly at SWMU 136 (the Building 907 Septic System) and SWMU 48 (the Building 904 Septic System) from vapor wells TA2-VW-20 and TA2-VW-21, respectively. SWMUs 48 and 136 were uniquely designed to handle more waste water than the other TA-II septic systems. Instead of just being connected to buried disposal components (leachfields, seepage pits, and/or dry wells), these two SWMUs also discharged into open ditches. The disposal ditches were used only for the disposal of waste water, not septic water, because of the obvious odor and health problems inherent in exposure to septic waste.

Table 2.2.2-1
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
1	Radioactive Waste Landfill (and Chemical Disposal Pit)	VOCs, SVOCs, Metals, Radionuclides	• Excavation backfilled and verification soil samples collected (2003 and 2004)	• Remediation is complete	NFA accepted (2005)
			• Soil-staging area clearance (2001) • Additional verification soil sampling (1999)	• COCs below risk-based levels • COCs below risk-based levels	
			• Confirmatory soil sampling (1997)	• COCs below risk-based levels	
			• VCM excavation (1996)	• Entire landfill contents removed; SWMU 1 boundary enlarged to encompass SWMU 3	
			• Historical records research (1995)	• Process knowledge acquired	
			• Historical aerial photography interpretation (1994)	• Chemical disposal pit identified within RWL; disturbances noted in RWL from 1951 to 1959	
			• Surface geophysical surveys (1993, 1994)	• Magnetic anomalies detected in trench and pit areas	
			• Surface and near-surface soil sampling – NESHAP (1993, 1994)	• No activities detected above background	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs identified in Petrex tubes	
			• Organic vapor walk-over survey (1991)	• No organic vapor identified	
			• Radiation survey (1991)	• No activities detected above background	
2	Classified Waste Landfill	VOCs, SVOCs, PCBs, HE, Metals, Radionuclides	• Excavation backfilled and verification soil samples collected (2003 and 2004)	• Remediation is complete	NFA accepted (2005)
			• Additional soil-pile sampling (2001) • Confirmatory soil sampling (2000)	• Low levels of PCBs require additional sampling • COCs below risk-based levels	
			• VCM excavation (1998–2000)	• Entire landfill contents removed	
			• Surface geophysical survey (1997)	• 84 anomalies identified	
			• Historical records research (1996)	• Process knowledge acquired	
			• Soil samples to 100 ft bgs (1994)	• Acetone, methylene chloride, and bis (2-ethylhexyl) phthalate detected. Low levels of COC metals detected. Tritium and low levels of uranium identified	
			• Surface geophysical surveys (1993, 1994)	• Surveys identified burial trenches and pits	
			• Soil-vapor survey (1993)	• Two, small, separate vapor plumes of TCE and PCE identified; minor BTEX and other VOCs also identified in Petrex tubes	

Refer to footnotes at end of table.

Table 2.2.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
2 (cont.)	Classified Waste Landfill	VOCs, SVOCs, PCBs, HE, Metals, Radionuclides	• Organic vapor walk-over survey (1991)	• No organic vapors detected	NFA accepted (2005)
			• Radiation survey (1991)	• No activities detected above background	
			• Organic vapor survey (1988)	• Low levels of VOCs detected	
			• Radiation survey (1988)	• Gamma radiation at or below background levels	
43	Radioactive Material Storage Yard	Metals and Radionuclides	• Surface soil samples (1999)	• Tritium not detected; COCs below risk-based levels	NFA accepted (December 1999)
			• Surface and near-surface (to 2 ft bgs) soil samples (1994)	• Low levels of radionuclides above background	
			• Surface and near-surface (to 3 ft bgs) soil samples (1993)	• Low levels of radionuclides and metals above background	
			• Surface soil samples (1991) • Surface radiation survey (1991)	• Tritium and uranium above background • Radioactive soil detected	
44A	Uranium Calibration Pits	Metals and Radionuclides	• Confirmatory soil sampling (1994)	• COCs below risk-based levels	NFA accepted (December 1999)
			• VCM excavation (1994)	• UCP culverts and contaminated soil removed	
			• Downhole radiation survey (in UCPs) (1994)	• UCPs 1 and 2 had elevated radiation. No elevated radiation detected above background in UCP 3 or 4	
			• Organic vapor survey (1991)	• No VOCs detected	
			• Radiation survey (1991)	• No elevated radiation	
44B	Decontamination Areas	Metals and Radionuclides	• Surface soil sampling (1994)	• COCs below risk-based levels	NFA accepted (December 1999)
			• Surface radiation survey (1994)	• Activities above background were measured at three locations	
			• Surface geophysical surveys (1993, 1994)	• Magnetic anomalies identified as the Building 906 Septic System, utilities, fence lines, and surface debris	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs detected in Petrex tubes	
			• Organic vapor survey (1991)	• Low levels of VOCs and SVOCs	
			• Radiation survey (1991)	• No elevated radiation	

Refer to footnotes at end of table.

Table 2.2.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
48	Building 904 Septic System	VOCs, SVOCs, HE, Metals, Cyanide, Radionuclides	• Quarterly soil-vapor sampling (April 2001) • Review of engineering drawings and historical aerial photography (2001) • Trenching and soil sampling (2000) • Soil-vapor monitoring well TA2-VW-021 installed with sampling ports set at 50 and 92 ft bgs (1997)	• TCE maximum of 1,000 ppb (v/v), total VOCs at 1,064 ppb (v/v) • Historical discharge from SWMU 48 documented at SWMUs 227 and 229 • May 1998 sampling: TCE = 230 ppb (v/v), total VOCs = 253 ppb (v/v)	NFA accepted (October 2004)
			• Soil sampling to 50 ft bgs (1994)	• Barium detected above background; VOCs, SVOCs, HE, metals, cyanide, tritium, and gamma-emitting radionuclides not evaluated with respect to current risk-based levels	
			• Historical aerial photography interpretation (1994)	• Vegetation apparent along both sanitary and HE lines between 1964 and 1992	
			• Soil-vapor surveys (1993, 1995)	• Low levels of BTEX and PCE identified in Petrex tubes, but not indicative of contamination	
			• Soil sampling along septic line trench (1993)	• No VOCs, SVOCs, HE, metals, tritium, and radioisotopes were detected above RCRA Subpart S action levels	
			• Organic vapor survey (1991)	• No VOCs detected	
			• Radiation survey (1991)	• No elevated radiation detected	
113	Area II Firing Sites	Metals, HE, VOCs, SVOCs	• Surface and shallow soil sampling (1994)	• COCs below risk-based levels	NFA accepted (April 2001)
			• Surface radiation survey (1994)	• No elevated radiation	
			• Geophysical survey (1993)	• No magnetic anomalies identified	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs identified in Petrex tubes	
114	Explosive Burn Pit	Metals, HE, VOCs	• RSI excavation of surrounding area (2001) • Confirmatory sampling (2000)	• No debris or additional burn pits found • No soil contamination detected	NFA accepted (October 2004)
			• VCM excavation; confirmatory soil sampling (1995 and 1996)	• All burn pit material removed, metals below risk-based levels	
			• Historical aerial photography interpretation (1995)	• Additional EBP areas identified	
			• Soil sampling to a maximum of 12 ft bgs (1994)	• Barium concentrations exceeded background	
			• Soil-vapor survey (1993)	• Low BTEX levels identified in Petrex tubes	
			• Soil sampling to 6 ft bgs (1992)	• Barium concentrations exceeded background	

Refer to footnotes at end of table.

Table 2.2.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
135	Building 906 Septic System	Metals, Radionuclides, HE, VOCs, SVOCs, PCBs, Herbicides	• Soil-vapor monitoring well installed to 150 ft bgs (2003)	• No significant VOCs detected	NFA accepted (November 2004)
			• Trenching and soil sampling (2000)	• Risk assessment showed no significant risk	
			• Soil samples collected to 52 ft bgs (1994)	• Low levels of VOCs and SVOCs detected. All other COCs within background or acceptable risk	
			• Surface radiation survey (1994)	• Three anomalies identified	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs identified in Petrex tubes	
			• Surface geophysical survey (1993)	• No buried magnetic anomalies identified	
136	Building 907 Septic System	VOCs, SVOCs, HE, Metals, Cyanide, Radionuclides	• Quarterly soil-vapor sampling (April 2001) • Trenching and soil sampling (2000) • Soil-vapor monitoring well T2-VW-020 installed with sampling port at 72 ft bgs (1997)	• TCE maximum of 21 ppb (v/v); total VOCs at 189 ppb (v/v) • May 1998 sampling: TCE = 9 ppb (v/v), total VOCs = 65 ppb (v/v)	NFA accepted (October 2004)
			• Soil sampling to 50 ft bgs (1994)	• No significant VOCs, SVOCs, HE, or radionuclides detected	
			• Soil-vapor survey (1993)	• No VOCs detected in Petrex tubes	
			• Septic-line trench soil samples to 3 ft bgs (1993)	• Low levels of COCs detected	
			• Organic vapor survey (1991)	• No VOCs detected	
			• Radiation survey (1991)	• No elevated radiation	
159	Building 935 Septic System	HE, Metals, Radionuclides, VOCs, SVOCs, PCBs, Nitrate	• Trenching and soil sampling (2000)	• Risk assessment showed no significant risk	NFA accepted (October 2004)
			• Soil sampling to 100 ft bgs (1994)	• No COCs detected and/or above background	
			• Soil-vapor survey (1994)	• No VOCs or SVOCs detected in Petrex tubes	
			• Soil sampling to 50 ft bgs (1994)	• Some metals above background; no VOCs, PCBs, SVOCs, or HE detected; radionuclides within background	
			• Soil-vapor survey (1993)	• No VOCs detected in Petrex tubes	
			• Soil sampling to 50 ft bgs (1992)	• Barium above background; other COCs either nondetect or below background	
			• Soil sampling to 150 ft bgs (1992)	• No COCs identified above background levels	
			• Surface soil sampling (1992)	• Tritium detected above background; other radionuclides within background	

Refer to footnotes at end of table.

Table 2.2.2-1 (Concluded)
Summary of Investigations Conducted at SNL/NM SWMUs Located in TA-II

SWMU Number	SWMU Name	Potential Contaminants	Investigations	Investigation Results	Regulatory Status
165	Building 901 Septic System	VOCs, SVOCs, HE, Metals, Radionuclides, Nitrate, Inorganics	• Trenching and soil sampling (2000)	• COCs below risk-based levels	NFA accepted (October 2004)
			• Soil-vapor survey (1993)	• No VOCs detected in Petrex tubes	
			• Soil sampling to 50 ft bgs (1992)	• Lead and mercury above background; other COCs either nondetect or below background	
			• Soil sampling to 300 ft bgs (1992)	• No COCs detected	
166	Building 919 Septic System	VOCs, SVOCs, HE, Metals, Radionuclides, Nitrate	• Trenching and soil sampling (2000)	• COCs below risk-based levels	NFA accepted (October 2004)
			• Historical aerial photography interpretation (1994)	• Identified septic lines	
			• Soil sampling to 50 ft bgs (1994)	• Barium, lead, and zinc above background; other COCs either nondetect or below background	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs detected in Petrex tubes	
			• Septic-line trench soil sampling to 3 ft bgs (1993)	• COCs either nondetect or below background	
167	Building 940 Septic System	Metals, HE, VOCs, SVOCs	• Trenching and soil sampling (2000)	• COCs below risk-based levels	NFA accepted (October 2004)
			• Historical aerial photography interpretation (1994)	• Septic lines identified through vegetation changes	
			• Soil sampling to 50 ft bgs (1994)	• Nickel and zinc above background; other COCs either nondetect or below background	
			• Soil-vapor survey (1993)	• No VOCs or SVOCs detected in Petrex tubes	

bgs = Below ground surface.
BTEX = Benzene, toluene, ethylbenzene, and xylene.
COC = Constituent of concern.
EBP = Explosive Burn Pit.
ft = Foot (feet).
HE = High explosive(s).
NESHAP = National Emissions Standards for Hazardous Air Pollutants.
NFA = No Further Action.
PCB = Polychlorinated biphenyl(s).
PCE = Tetrachloroethene.
ppb (v/v) = Parts per billion by volume.
RCRA = Resource Conservation and Recovery Act.
RWL = Radioactive Waste Landfill.
RSI = Request for Supplemental Information.
SNL/NM = Sandia National Laboratories/New Mexico.
SVOC = Semivolatile organic compound.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TCE = Trichloroethene.
UCP = Uranium Calibration Pit.
VCM = Voluntary Corrective Measure.
VOC = Volatile organic compound.

2.3 TA-IV

TA-IV comprises 81 acres and is the southernmost SNL/NM TA in the TAG study area. Construction of TA-IV began in 1977. As the newest TA at SNL/NM, TA-IV has always operated with modern environmental considerations. Pulsed-power and particle-beam fusion research operations are conducted at TA-IV.

2.3.1 Facility Description

Approximately 546 people presently work in TA-IV (DOE October 1999). The 70 structures at TA-IV primarily consist of accelerator facilities, office buildings, above-ground transformer-oil tanks, and storage trailers.

2.3.2 Previous Investigations

Two SWMUs are located in TA-IV. However, neither SWMU 45 nor SWMU 46 are the result of TA-IV research operations. For logistical reasons, these two sites are managed by the TJAOU and are discussed in Section 2.4. No TA-IV operations are suspected of impacting groundwater.

2.4 Tijeras Arroyo

Tijeras Arroyo trends across the southern boundary of the TAG study area within a 100-year floodplain that varies in width from approximately 2,500 to 3,000 ft. The northern rim of the arroyo is quite steep, with slopes averaging approximately 40 degrees. As shown in Plate 1, the topographic relief averages about 50 ft between the arroyo floodplain and the East Mesa on which TA-I, TA-II, and TA-IV are located.

In response to storms, surface water flows sporadically in Tijeras Arroyo approximately 12 days per year along a narrow channel that varies in width from approximately 50 to 100 ft. The nearest spring (Echo Canyon Spring) is located upstream of the TAG study area in Tijeras Canyon, approximately 4 miles east of the KAFB Eubank Gate. No springs are located within or downstream of the TAG study area.

2.4.1 Facility Description

Most of Tijeras Arroyo in the study area is undeveloped except for utilities and roads. SNL/NM and KAFB do not manage any occupied buildings on the floodplain.

2.4.2 Previous Investigations

Thirteen SWMUs are located along the northern rim of Tijeras Arroyo. Table 2.4.2-1 summarizes the COCs, investigations, and regulatory status for each site. The NMED has accepted NFA proposals for 10 of the sites.

Table 2.4.2-1
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Regulatory Status
45	Liquid Discharge	VOCs, SVOCs, Metals	• Geoprobe soil sampling to 14 ft bgs (2004)	• No significant COCs detected	NFA accepted (2005)
			• Historical aerial photography review (2001)	• No suspicious environmental problems evident	
			• Excavation of metallic anomalies; soil sampling at 3 ft bgs (1995)	• Metallic items were excavated, no drums or stained soil evident; no VOCs detected, metals below background	
			• Geophysical survey (1995)	• Buried metallic items identified	
			• Geoprobe soil sampling to 14 ft bgs (1995)	• Barium slightly above background, other metals and radionuclides below background; no VOCs detected	
			• Soil-vapor sampling (1995)	• No VOCs or SVOCs detected in Petrex tubes	
			• Surface-soil sampling (1995)	• No VOCs detected, metals and radionuclides within background	
			• Historical aerial photography review (1994)	• No stained soil evident; typical cut-and-fill soil piles present	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Soil sampling in sewer line trench (1993)	• No VOCs, SVOCs, or HE detected; metals and radionuclides below background	
			• Surface UXO survey (1994)	• No UXO visible	
46	Old Acid Waste Line Outfall	VOCs, SVOCs, Metals, Chromium-VI, Cyanide, PCBs, Tritium, Gamma-Emitting Radionuclides	• VCM conducted to remove PCB-contaminated soil (2003)	• Remediation is completed	NFA accepted (2005)
			• Geoprobe sampling to 18 ft bgs near waste line (August 2001)	• Analytical results defined extent of contamination	
			• Quarterly groundwater sampling (April 2001)	• TCE at 0.51 (estimated) μg/L, MEK at 42 μg/L, ethylbenzene at 0.63 (estimated) μg/L, methylene chloride at 1.2 (estimated) μg/L, perchlorate at 1.27 μg/L	
			• Quarterly soil-vapor sampling (April 2001)	• Soil vapor at north end of site, maximum TCE concentration of 46,000 ppb (v/v) at 115 ft bgs, low levels of other VOCs detected from 15 to 265 ft bgs. Soil vapor at south end of site, maximum TCE concentration of 250 ppb (v/v) at 96 ft bgs; low levels of other VOCs detected in soil vapor from 46 to 296 ft bgs	
			• Soil sampling to 3 ft bgs near acid waste line (April 2001)	• Most RCRA metals significantly above background; total PCBs at 50 mg/L, TCE at 2 μg/L, low levels of other VOCs and SVOCs detected; radionuclides within background	
			• Backhoe trenching	• Outfall ends of acid waste line identified	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Regulatory Status
46 (cont.)	Old Acid Waste Line Outfall	VOCs, SVOCs, TAL Metals, Chromium-VI, Cyanide, PCBs, Tritium, Gamma-Emitting Radionuclides	• Groundwater monitoring wells installed; soil samples collected to 295 ft bgs (2001)	• Shallow groundwater present near the north end of site at 300 ft bgs; metal concentrations in soil at background levels, no significant VOCs	NFA accepted (2005)
			• Soil-vapor (FLUTe) monitoring wells installed (2001)	• TCE detected in soil vapor	
			• Historical aerial photography review (2000)	• Three outfall ditches identified at end of acid waste line	
			• Soil-vapor survey (1999)	• Low levels of 17 COCs, including TCE, detected in VaporTec tubes	
			• Monitoring well installed; soil samples collected to 237 ft bgs; soil-vapor samples collected to 312 ft bgs (1998)	• Regional aquifer present at 500 ft bgs; metal concentrations in soil at background levels; 16 VOCs detected in soil vapor with TCE maximum of 10,000 ppb (v/v) at 137 ft bgs	
			• Soil sampling (1994)	• Samples incorrectly collected from surface-water ditch (error determined in 2000)	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
50	Old Centrifuge Site	HE, DU, Metals	• Surface-soil sampling (1999)	• Radionuclides within background	NFA accepted (October 2000)
			• Soil sampling (1994)	• No HE detected; all radionuclides and metals within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface-soil sampling (1989)	• No SVOCs, HE, PCBs, pesticides, herbicides; metals and radionuclides within background	
			• Surface UXO survey (1994)	• No UXO visible	
77	Oil Surface Impoundment	PCBs and VOCs	• Obtain NPDES compliance documents for the storm-water impoundment (1998)	• Impoundment already regulated; no releases known	NFA accepted (October 1999)
			• Soil sampling (1994)	• No PCBs or VOCs detected	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Regulatory Status
227	Building 904 Outfall (one of the two discharge points for TA-II SWMU 48)	VOCs, SVOCs, Metals, HE, Cyanide, Radionuclides	• Quarterly soil-vapor sampling (April 2001)	• TCE maximum of 4,900 ppb (v/v)	NFA accepted (June 2004)
			• Excavate trench at outfall point; soil sampling to 19 ft bgs at trench and to 3 ft bgs on floodplain (2001)	• Background levels of metals and radionuclides in soil; few "J" values for VOCs and SVOCs; no detected HE or cyanide	
			• Historical aerial photography review (2001)	• Waste-water discharge point identified	
			• Installation of FLUTe soil-vapor monitoring well with soil-vapor ports to 225 ft bgs; soil samples collected to 200 ft bgs (2001)	• April 2001 concentrations of TCE in soil vapor ranged from 40 ppb (v/v) at 25 ft bgs, to 4,900 ppb (v/v) at 225 ft bgs, toluene concentrations ranged from 2.1 ppb (v/v) at 25 ft bgs to 13 ppb (v/v) at 125 ft bgs; metal concentrations in soil at background levels, no significant VOCs	
			• Soil-vapor survey (1995)	• No VOCs or SVOCs detected in Petrex tubes	
			• Soil sampling to 3 ft bgs (1994)	• No VOCs, SVOCs, HE, or cyanide detected; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994) • Soil-vapor survey (1993)	• No UXO visible • No VOCs or SVOCs detected in Petrex tubes	
228	Centrifuge Dump Site	228A: DU, Metals, HE, VOCs, SVOCs	• Confirmatory soil sampling (1998–1999)	• No HE detected; low levels of VOCs and SVOCs detected; metals and radionuclides within background	228A: NFA accepted (March 2000)
			• Confirmatory geophysical surveys (1998–1999)	• No anomalies identified	
			• VCM remediation (1998–1999)	• 1,800 cubic yards of soil excavated; DU fragments and debris segregated from soil	
			• Geophysical and radiation survey (1997)	• Identified buried debris and DU fragments	
			• Historical document research and aerial photography review (1997)	• Process knowledge acquired	
			• Soil-vapor survey (1997)	• No VOCs detected	
			• Surface-water survey (1997)	• Discovered gully erosion and scattered DU fragments on floodplain	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Regulatory Status
228 (cont.)	Centrifuge Dump Site	228A: DU, Metals, HE, VOCs, SVOCs	• Surface radiation survey (1995)	• DU fragments identified in gully; gully partially excavated and 13 drums filled with DU fragments and DU-contaminated soil	228A: NFA accepted (March 2000)
			• Soil-vapor survey (1995)	• No VOCs detected in Petrex tubes	
			• Surface UXO survey (1994)	• No UXO visible	
		228B: Friable Asbestos	• Confirmatory soil sampling (2000)	• No friable asbestos detected	228B: NFA accepted (March 2001)
			• Confirmatory geophysical surveys (1999–2000)	• No buried anomalies identified	
			• Housekeeping remediation (1999–2000)	• Entire site excavated; approximately 20,000 cubic yards of construction/demolition debris and soil hauled to KAFB landfill	
			• Geophysical and radiation surveys (1998)	• Buried debris identified; no radioactive anomalies found	
			• Sampling of construction/demolition debris (1998)	• Friable asbestos identified at one small area	
			• Trenching for utilities installation (1997 and 1998)	• No buried debris identified along perimeter of site	
			• Surface radiation surveys (1994 and 1995)	• One radioactive anomaly (a household electrical part) identified and removed from site	
			• Historical aerial photography review	• Dumping identified across 5 acres of site	
			• Surface UXO survey (1994)	• No UXO visible	
229	Storm Drain System Outfall (one of the two discharge points for TA-II SWMU 48)	VOCs, SVOCs, Metals, HE, Cyanide, Radionuclides	• Excavate trench at outfall point; soil sampling to 7 ft bgs at trench and to 5 ft bgs on floodplain (2001)	• Background levels of metals and radionuclides in soil; few "J" values for VOCs and SVOCs	NFA accepted (June 2004)
			• Historical aerial photography review (2001) • Soil-vapor survey (1995)	• Waste-water discharge point identified • No VOCs or SVOCs detected in Petrex tubes	
			• Soil sampling to 3 ft bgs (1994)	• No VOCs, SVOCs, cyanide, HE, or TPH detected; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994) • Soil-vapor survey (1993)	• No UXO visible • No VOCs or SVOCs detected in Petrex tubes	

Refer to footnotes at end of table.

Table 2.4.2-1 (Continued)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Regulatory Status
230	Storm Drain System Outfall (from TA-IV)	VOCs, SVOCs, Metals	• Backhoe soil sampling to 5 ft bgs (2001)	• Risk assessment showed no significant risk	NFA accepted (January 2004)
			• Soil sampling to 3 ft bgs (1994)	• No VOCs or SVOCs detected, TPH maximum of 120 mg/kg; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
231	Storm Drain System Outfall (from TA-IV)	VOCs, SVOCs, Metals	• Backhoe soil sampling to 5 ft bgs (2001)	• Risk assessment showed no significant risk	NFA accepted (January 2004)
			• Soil sampling to 3 ft bgs (1994)	• No VOCs or SVOCs detected, TPH maximum of 130 mg/kg; all radionuclides, metals, and nitrate within background	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
232	Storm Drain System Outfall (from TA-IV)	232-1: VOCs, SVOCs, TPH, Metals	• Backhoe soil sampling to 10 ft bgs (2001)	• Risk assessment showed no significant risk	NFA accepted (January 2004)
			• GeoProbe soil sampling to 10 ft bgs (1995)	• TPH concentrations up to 32 mg/L	
			• Soil sampling to 3 ft bgs (1994)	• No VOCs or SVOCs detected; metals and radionuclides within background; TPH concentrations up to 860 mg/L	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	
		232-2: VOCs, SVOCs, TPH, Metals	• Backhoe soil sampling to 5 ft bgs (2001)	• Risk assessment showed no significant risk	
			• Confirmatory soil sampling to 10 ft bgs (1994)	• Maximum remaining TPH in soil was 32 mg/L; no stained soil present	
			• VCM excavation (1994)	• About 429 cubic yards of soil excavated and shipped off site; action level was 100 mg/L TPH	
			• Inspection of July 1994 mineral oil spill (1994)	• Oil-stained soil extended about 50 ft from outfall	
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	

Refer to footnotes at end of table.

Table 2.4.2-1 (Concluded)
Summary of Investigations Conducted at SNL/NM SWMUs Located Along Tijeras Arroyo

SWMU Number	SWMU Name	Potential Contaminants	Previous Investigations	Results	Regulatory Status
233	Storm Drain System Outfall (from TA-IV)	VOC, SVOC, Metals	• Backhoe soil sampling to 5 ft bgs	• Risk assessment showed no significant risk	NFA accepted (2005)
			• Soil sampling to 3 ft bgs	• No VOCs or SVOCs detected; TPH maximum of 140 mg/kg; all radionuclides, metals, and nitrate within background and/or below risk criteria	
			• Surface radiation survey	• No elevated radiation	
			• Surface UXO survey	• No UXO visible	
234	Storm Drain System Outfall (from TA-IV)	VOCs, SVOCs, Metals	• Excavate trench at suspected outfall; soil sampling with backhoe to 5 ft bgs	• Risk assessment showed no significant risk	NFA accepted (2005)
			• Soil sampling to 3 ft bgs	• No VOCs, SVOCs, or TPH detected; all radionuclides, metals, and nitrate within background and/or below risk criteria	
			• Surface radiation survey	• No elevated radiation	
			• Surface UXO survey	• No UXO visible	
235	Storm Drain System Outfall (from TA-I and KAFB)	VOCs, SVOCs, Metals	• Soil sampling to 3 ft bgs (1994)	• No VOCs, SVOCs, or TPH detected; all radionuclides, metals, and nitrate within background	NFA accepted (March 2000)
			• Surface radiation survey (1994)	• No elevated radiation	
			• Surface UXO survey (1994)	• No UXO visible	

bgs = Below ground surface.
COC = Constituent of concern.
DU = Depleted uranium.
FLUTe = Flexible Liner Underground Technology, Ltd.
ft = Foot (feet).
HE = High explosive(s).
J = Estimated quantity.
KAFB = Kirtland Air Force Base.
MEK = Methyl ethyl ketone.
µg/L = Microgram(s) per liter.
mg/kg = Milligram(s) per kilogram.
mg/L = Milligrams per liter.
NFA = No Further Action.
NPDES = National Pollution Discharge Elimination System.
PCB = Polychlorinated biphenyl.
ppb (v/v) = Parts per billion by volume.
RCRA = Resource Conservation and Recovery Act.
SNL/NM = Sandia National Laboratories/New Mexico.
SVOC = Semivolatile organic compound.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TCE = Trichloroethene.
TPH = Total petroleum hydrocarbon(s).
UXO = Unexploded ordnance.
VCM = Voluntary Corrective Measure.
VOC = Volatile organic compound.

The soil sampling results indicate that the TJAOU sites pose little or no additional risk to groundwater. This is demonstrated by the fact that COCs in the soil in this area are at or below background and/or acceptable risk-based levels (Table 2.4.2-1). However, three sites (SWMUs 46, 227, and 229) are associated with significant volumes of waste water that may have reached groundwater. The historical name for SWMU 229 ("Storm Drain System Outfall") is misleading; SWMUs 229 and 227 were actually the two waste-water outfalls for the TA-II SWMU 48 septic system.

Even though the waste water discharged at SWMUs 46, 227, and 229 was generated at other SWMUs in either TA-I or TA-II, the environmental activities for the three sites are managed by the TJAOU. To summarize, the following three TJAOU sites are associated with significant volumes of waste water that may have reached groundwater:

- SWMU 46, Old Acid Waste Line Outfall (waste water from TA-I via SWMU 226)
- SWMU 227, Building 904 Outfall (waste water from TA-II via SWMU 48)
- SWMU 229, Storm Drain System Outfall (waste water from TA-II via SWMU 48)

SWMU 46 was the outfall for the Old Acid Waste Line (ER SWMU 226) that was connected to six research buildings in TA-I. From about 1948 through late 1974, the waste line discharged into a series of three ditches at the southwestern corner of what was to become TA-IV. The waste water contained a variety of COCs, including TCE (Table 2.4.2-1). The amount of discharge was not well documented or metered, but may have been about 130,000 gallons of acid waste water per day (DOE September 1987). Over a period of 27 years, this flow rate would equate to approximately 1.3 billion gallons of waste water.

SWMUs 227 and 229 were the two waste-water outfalls connected to SWMU 48 (Building 904 Septic System). SWMUs 227 and 229 were open ditches that received waste water from about 1948 until 1992. The ditches received an unspecified amount of TA-II floor washdown water that may have contained COCs such as HE compounds and VOCs (Table 2.4.2-1). The volume of waste water is unknown, but is estimated from historical aerial photography to have been just a small percentage of what was discharged at SWMU 46 (Acid Waste Line Outfall).

Characterization of these three sites has involved the collection of groundwater and soil-vapor samples. Groundwater sampling has been conducted on a quarterly basis at 10 monitoring wells along Tijeras Arroyo. As shown in Table 2.4.2-1, soil-vapor samples also have been collected quarterly at SWMUs 46, 227, and 229 using three soil-vapor monitoring wells (46-VW-01, 46-VW-02, 227-VW-01). The analytical results for both types of sampling are summarized in Table 2.4.2-1, and groundwater analytical results are discussed in more detail in Chapter 4.0.

2.5 Drain and Septic Systems

Forty-five DSS sites are located in the TAG study area (SNL/NM November 2001). Because the TAs were constructed with sanitary sewer lines, sanitary and industrial wastes were typically not plumbed to the DSS. Instead, the majority of the DSS sites in the study area were used for the disposal of small volumes of water from evaporative coolers, air conditioning units, or precipitation. The DSS sites typically consisted of seepage pits and dry wells, rather than leachfields.

2.5.1 Facility Description

The majority (38 of 45) of the DSS sites in the TAG study area are in TA-I. TA-II and TA-IV contain five and two DSS sites, respectively. The NMED has determined that 39 of the 45 DSS sites in the TAG study area would not require environmental characterization work and therefore would not be classified as SWMUs or Areas of Concern (AOCs). Of the remaining six DSS sites, five are designated as AOC sites and one as SWMU 276. These sites required the collection of near-surface samples consisting of either soil and/or soil vapor (SNL/NM November 2001).

The small septic system for TA-II Building 915/922 is connected to DSS Site 1003. As shown in Figure 2-1, five of the six DSS sites are located in TA-I and consist of the following:

- Building 803 Seepage Pit (DSS Site 1052)
- Building 885 Septic System (DSS Site 1101)
- Building 889 Septic System (DSS Site 1102)
- Building 898 Septic System (DSS Site 1001)
- Silver Recovery Sump/Seepage Pit for Building 829X (SWMU 276)

2.5.2 Previous Investigations

The environmental work for the DSS sites has included the review of engineering drawings and the collection of soil samples, passive soil-vapor samples, and active soil-vapor samples. The non-ER DSS Field Implementation Plan (FIP) (SNL/NM November 2001) presents the decision logic. The six DSS sites in the TAG study area were sampled in accordance with both the FIP (SNL/NM November 2001) and NMED/HWB guidance (Moats February 2002). The soil and soil-vapor results indicated no significant concentrations of COCs that could threaten groundwater.

2.6 SWMUs with Potential for Creating Groundwater Contamination

Table 2.6-1 is a synopsis of all the SNL/NM SWMUs and AOCs in the TAG study area and summarizes the COCs and field investigations that were discussed earlier in Tables 2.1.2-1, 2.2.2-1, and 2.4.2-1. Also listed in Table 2.6-1 are the three criteria used to determine whether a particular site was to be considered a “potential source” of TCE and/or nitrate that could potentially threaten groundwater.

The first criterion is based upon whether or not the NMED had approved an NFA proposal for a site. Inherent in an NFA proposal is the evaluation of historical operations, identification of COCs, presentation of sampling results and survey findings, and the preparation of a risk assessment analysis if needed. If the NMED has approved the respective NFA proposal, the site need not be considered as an ongoing potential source of groundwater contamination (Moats November 2001).

In order to make this report as current as possible, the second criterion addresses sampling results that may have not yet been fully reviewed by the NMED. Sites with soil samples that contained levels of COCs below background and/or risk-based levels were not considered to be potential sources. Risk assessment reports support the second criterion and have been

Table 2.6-1
Summary of Field Investigations Conducted at SNL/NM SWMUs and AOCs in the TAG Study Area[a]

SWMU/AOC Number	SWMU/AOC Name	Potential Contaminants												Field Investigation															Potential Source Criteria			Potential Source of TCE or Nitrate	Type of Potential source relevant to groundwater
														Survey						Sampling					Remediation		Monitoring Well						
		Volatile organic compounds	Semivolatile organic compounds	Total petroleum hydrocarbons	Polychlorinated biphenyls	High explosives	Metals	Radionuclides	Cyanide	Acids/Bases	Herbicides/Pesticides	Asbestos	Nitrate	Geophysical—ground surface	Organic-vapor—breathing zone	Pipeline camera—buried piping	Radiation survey—ground surface	Trench—below grade	Unexploded ordnance—ground surface	Groundwater	Sediment (from buried piping)	Soil (maximum depth in feet)	Soil vapor	Storm water	Bio-venting wells	Excavation and removal of debris and/or contaminated soil	Soil vapor	Shallow groundwater	Regional aquifer	NFA proposal approved	Soil above background[b]	Significant water volume		
1	Radioactive Waste Landfill (includes SWMU 3, Chemical Disposal Pit)	•	•				•	•						•	•		•					11	•			•				Yes	Yes	No	No	
2	Classified Waste Landfill	•	•		•	•	•	•						•	•		•					100	•			•				Yes	Yes	No	No	
30	Reclamation Yard			•	•		•															5				•				Yes	No	No	No	
32	Steam Plant Oil Spill			•																		107								Yes	No	No	No	
33	Motor Pool	•	•	•			•															30								Yes	No	No	No	
41	Building 838 Mercury Release						•															3								Yes	No	No	No	
42	Building 870 Water Treatment Facility	•	•				•			•												30								Yes	No	No	No	
43	Radioactive Material Storage Yard						•	•									•					3								Yes	No	No	No	
44A	Uranium Calibration Pits						•	•							•		•					8				•				Yes	No	No	No	
44B	Decontamination Areas						•	•						•	•		•			•		3	•							Yes	Yes	No	No	
45	Liquid Discharge	•	•				•							•			•	•	•			14	•							Yes	No	No	No	
46	Old Acid Waste Line Outfall	•	•		•		•	•	•								•	•	•	•		295	•				•	•	•	No	Yes	Yes	Yes	TCE, Nitrate
48	Building 904 Septic System	•	•			•	•	•	•				•		•		•	•		•		50	•				•	•	•	Yes	No	Yes	Yes	TCE, Nitrate
50	Old Centrifuge Site					•	•	•									•		•			3								Yes	No	No	No	
77	Oil Surface Impoundment	•			•																	3		•						Yes	No	No	No	
96	Storm Drain System	•	•	•	•		•	•		•						•		•		•		12		•						Yes	No	Yes	Yes	TCE
98	Building 863 Trichloroethane and Photochemical Releases	•					•			•												140	•							Yes	No	No	No	
113	Area II Firing Sites	•	•			•	•							•			•					2	•							Yes	No	No	No	
114	Explosive Burn Pit	•				•	•											•				12	•			•				Yes	No	No	No	
135	Building 906 Septic System	•	•		•	•	•	•			•			•			•	•		•		52	•							Yes	No	Yes	No	TCE
136	Building 907 Septic System	•	•			•	•	•	•				•		•		•	•		•		50	•				•	•	•	Yes	No	Yes	Yes	TCE, Nitrate
159	Building 935 Septic System	•	•		•	•	•	•					•					•		•		150	•							Yes	No	Yes	No	TCE, Nitrate
165	Building 901 Septic System	•	•			•	•	•	•				•					•		•		300	•					•	•	Yes	No	Yes	Yes	TCE, Nitrate
166	Building 919 Septic System	•	•			•	•	•					•					•		•		50	•					•	•	Yes	No	Yes	Yes	TCE, Nitrate
167	Building 940 Septic System	•	•			•	•						•					•		•		50	•							Yes	No	Yes	No	TCE, Nitrate
186	Building 859 TCE Disposal	•																				30	•							Yes	No	No	No	
187	TA-I Sanitary Sewer System	•	•		•		•	•					•			•				•		12						•	•	Yes	No	Yes	Yes	TCE, Nitrate
190	Steam Plant Tank Farm	•	•	•																•		120	•		•			•	•	Yes	Yes	No	No	
192	TA-I Waste Oil Tank	•	•	•	•		•															30								Yes	No	No	No	
211	Building 840 Former Underground Storage Tank 840-1	•	•	•	•		•											•				30								Yes	No	No	No	
226	Old Acid Waste Line	•	•		•		•	•	•							•				•	•	14						•	•	Yes	No	Yes	Yes	TCE
227	Building 904 Outfall (discharge point for TA-II SWMU 48)	•	•			•	•	•	•								•	•	•	•		19	•				•	•	•	Yes	No	Yes	Yes	TCE
228	Centrifuge Dump Site (consists of SWMUs 228A and 228B)	•	•			•	•	•				•		•			•	•	•	•		3	•			•				Yes	No	No	No	
229	Storm Drain System Outfall (discharge point for TA-II SWMU 48)	•	•			•	•	•	•								•	•	•	•		7	•					•	•	Yes	No	Yes	Yes	TCE
230	Storm Drain System Outfall (from TA-IV)	•	•				•										•		•			5		•						Yes	No	No	No	
231	Storm Drain System Outfall (from TA-IV)	•	•				•										•		•			5		•						Yes	No	No	No	
232	Storm Drain System Outfall (consists of SWMUs 232-1 and 232-2)	•	•	•			•										•		•			10		•		•				Yes	No	No	No	
233	Storm Drain System Outfall (from TA-IV)	•	•				•										•		•			5		•						No	I	No	No	
234	Storm Drain System Outfall (from TA-IV)	•	•				•										•	•	•			5		•						No	I	No	No	
235	Storm Drain System Outfall (from TA-I and Kirtland Air Force Base)	•	•				•										•		•			3		•						Yes	No	No	No	
276	Former Building 829X Silver Recovery Sump	•	•		•	•	•	•	•													13	•			•				Yes	Yes	No	No	
1001	Building 898 Septic System (TA-I) (DSS Site 1001)	•	•		•	•	•	•	•									•			•	10	•							Yes	No	No	No	

Refer to footnotes at end of table.

Table 2.6-1 (Concluded)
Summary of Field Investigations Conducted at SNL/NM SWMUs and AOCs in the TAG Study Area[a]

SWMU/AOC Number	SWMU/AOC Name	Potential Contaminants												Field Investigation															Potential Source Criteria			Potential Source of TCE or Nitrate	Type of Potential source relevant to groundwater
														Survey						Sampling					Remediation		Monitoring Well						
		Volatile organic compounds	Semivolatile organic compounds	Total petroleum hydrocarbons	Polychlorinated biphenyls	High explosives	Metals	Radionuclides	Cyanide	Acids/Bases	Herbicides/Pesticides	Asbestos	Nitrate	Geophysical—ground surface	Organic-vapor—breathing zone	Pipeline camera—buried piping	Radiation survey—ground surface	Trench—below grade	Unexploded ordnance—ground surface	Groundwater	Sediment (from buried piping)	Soil (maximum depth in feet)	Soil vapor	Storm water	Bio-venting wells	Excavation and removal of debris and/or contaminated soil	Soil vapor	Shallow groundwater	Regional aquifer	NFA proposal approved	Soil above background[b]	Significant water volume		
1003	Former Building 915/922 Septic System (TA-II) (DSS Site 1003)	•	•		•	•	•	•	•												•	32	•							Yes	No	No	No	
1052	Building 803 Seepage Pit (TA-II) (DSS Site 1052)	•	•		•	•	•	•	•													27	•				•			Yes	No	No	No	
1101	Building 885 Septic System (TA-I) (DSS Site 1101)	•	•		•	•	•	•	•					•				•				30								Yes	No	No	No	
1102	Former Building 889 Septic System (TA-I) (DSS Site 1102)	•	•		•	•	•	•	•									•			•	30								Yes	No	No	No	

[a]Field investigations were not required at SWMUs 25, 73, and 104; NFA proposals have been accepted for all three SWMUs.
[b]The potential source criteria of "soil above background" refers to COC concentrations in soil samples with respect to both background levels (Dinwiddie September 1997) and risk-based levels (site-specific NFA proposals).

AOC = Area of Concern.
COC = Constituent of concern.
DSS = Drain and Septic System.
I = Improbable; recent (not yet reviewed by NMED) soil results indicate no significant contamination.
NFA = No Further Action.
NMED = New Mexico Environment Department.
SNL/NM = Sandia National Laboratories/New Mexico.
SWMU = Solid Waste Management Unit.
TA = Technical area.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

submitted to the NMED with the appropriate Notice of Deficiency/Request for Supplemental Information responses. NFA proposals for three sites are currently awaiting NMED approval.

The third criterion addresses the volume of water (waste, septic, or storm) associated with each site. The water volume was assumed to be useful because the vadose zone beneath the TAG study area varies in thickness from approximately 250 to 300 ft. Waste-water outfalls and sewer-line systems are considered to be significant because of multi-year operations that potentially involved millions of gallons of water. In contrast, a small volume of water, such as the one-time discharge of a dust-suppression water tanker at SWMU 45, is not considered to be significant. Storm water from parking lots is considered insignificant because of the desert climate at SNL/NM.

As a conservative measure, each of the TA-II septic systems is assumed to have discharged a significant volume of water. As shown in Table 2.6-2, the TA-II septic systems were used from the late 1940s until the early 1990s. The systems were connected to Buildings 901/902, 904, 906, 907, 919, 935, and 940. Each TA-II septic system is unique with respect to its construction details. The systems were constructed of one or more buried, effluent-disposal components consisting of leachfields, seepage pits, and/or dry wells (Table 2.6-2).

The TAG study area contains the following types of potential sources of groundwater contamination from SNL/NM SWMUs:

- Leachfields/seepage pits/dry wells at seven SNL/NM SWMUs (48, 135, 136, 159, 165, 166, 167)
- Waste-water disposal ditches at four SNL/NM SWMUs (46, 136, 227, 229)
- A storm-water channel/culvert system (SWMU 96)
- A sanitary sewer-line system (SWMU 187)
- An acid waste line (SWMU 226)

Table 2.6-2 lists each potential source of TCE and/or nitrate as well as the type of water, years of operation, and relevant comments.

Thirteen of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential sources of groundwater contamination involving TCE. TA-I contains three sites (SWMUs 96, 187, and 226). TA-II contains seven sites (SWMUs 48, 135, 136, 159, 165, 166, and 167). Three sites (SWMUs 46, 227, and 229) managed by the TJAOU also are categorized as potential TCE sources.

Eight of the SNL/NM SWMUs listed in Table 2.6-2 are considered to be potential nitrate sources resulting from septic water. TA-I contains one site (SWMU 187) that is a potential nitrate source. TA-II contains six potential nitrate sources (SWMUs 48, 136, 159, 165, 166, and 167). The disposal of TA-I waste water containing nitrate at the Acid Waste Line Outfall (SWMU 46) is possible, but not highly probable. The disposal of septic waste into open ditches was unlikely to have occurred because of obvious odor and health issues. However, during utility construction at TA-I, inadvertent cross-connects at various sewer lines were discovered. Such cross-connects to the Acid Waste Line (SWMU 226) have not been documented, but may have

Table 2.6-2
Concern Level for Potential Sources of TCE and Nitrate in the TAG Study Area

Potential Source	TCE Concern	Nitrate Concern	Years of Use	Type of Water	Summary of Process Knowledge
SNL/NM SWMU 46, Old Acid Waste Line Outfall	**High**	**High**	1948–1974	TA-I waste water and possibly septic water	Estimated 1.3 billion gallons of waste water from six TA-I research/office buildings (839, 840, 841, 860, 863, 892) discharged into the three outfall ditches at south end of SWMU 226. Possible TCE in waste water. Septic water from possible cross-connects between the SWMU 226 waste line and sewer lines may have discharged at SWMU 46. In 2000, two soil-vapor monitoring wells installed at SWMU 46; soil-vapor sampling conducted quarterly. Well 46-VW-01 located near waste-line outfall; sampling ports set at 50-ft intervals from 15 to 265 ft bgs; maximum TCE concentration to date of 46,000 ppb (v/v) from 115 ft bgs. Well 46-VW-02 located 900 ft farther southeast with sampling ports set at 50-ft intervals from 46 to 296 ft bgs; maximum TCE concentration to date of 650 ppb (v/v) from 96 ft bgs.
SNL/NM SWMU 48, Building 904 Septic System	Medium	Medium	1947–1992	TA-II septic and waste water	Two systems connected to large research/office Building 904. First system (leachfield/seepage pit) discharged septic water near center of TA-II. Second system (pair of outfall ditches at SWMUs 227 and 229) discharged waste water outside the southern apex of TA-II. Possible TCE and HE in waste water. Soil samples collected along the SWMU 48 piping contain no significant contamination. In 1997, soil-vapor monitoring well TA2-VW-21 installed near SWMU 48 piping with sampling ports set at 50 and 92 ft bgs. Soil-vapor sampling conducted quarterly with maximum TCE concentration to date of 1,500 ppb (v/v) at 92 ft bgs.
SNL/NM SWMU 96, Storm Drain System	Low	None	1948–Present	TA-I storm water	Storm-water channels and culverts extend across TA-I. No significant contamination detected in soil samples.
SNL/NM SWMU 135, Building 906 Septic System	Low	Low	1950–1992	TA-II waste water	Leachfield (dry well previously) connected to small research Building 906. No significant contamination detected in soil samples.
SNL/NM SWMU 136, Building 907 Septic System	Medium	Medium	1948–1992	TA-II septic and waste water	Two systems connected to large research/office Building 907. First system (leachfield/seepage pit) discharged septic water west of Building 907. Second system (ditch in center of TA-II) discharged waste water which possibly contained TCE and HE. In 1997, soil-vapor monitoring well TA2-VW-20 installed near ditch with sampling port set at 72 ft bgs. Soil-vapor sampling conducted quarterly with maximum TCE concentration to date of 47 ppb (v/v).
SNL/NM SWMU 159, Building 935 Septic System	Low	Low	1963–1991	TA-II waste and septic water	Dry wells and seepage pit connected to small research/office Building 935. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
SNL/NM SWMU 165, Building 901 Septic System	**High**	**High**	1948–1992	TA-II septic and waste water	Leachfield connected to personnel shower/laundry facility (Building 901) and small research/machine shop Building 902. Possible TCE and HE in waste water. No significant contamination detected in soil samples. Groundwater samples from perched system monitoring well TA2-SW1-320 have contained maximum TCE and nitrate concentrations of 3.9 µg/L and 44 mg/L, respectively.
SNL/NM SWMU 166, Building 919 Septic System	Low	Medium	1969–1990	TA-II waste and septic water	Leachfield, seepage pit, and dry well connected to large office/research Building 919. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
SNL/NM SWMU 167, Building 940 Septic System	Low	Low	1965–1990	TA-II waste and septic water	Seepage pits connected to small research/office Building 940. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
SNL/NM SWMU 187, TA-I Sanitary Sewer System	Low	**High**	1948–Present	TA-I septic and waste water	Possibly leaking sewer lines and several cross-connects with waste-water lines. System connected to numerous research/office buildings in TA-I. No significant contamination detected in soil samples.
SNL/NM SWMU 226, Old Acid Waste Line Outfall	Low	None	1948–1974	TA-I waste water	Waste-water line from six TA-I research/office buildings discharged at the three SWMU 46 outfall ditches. No significant contamination detected in soil samples collected along the SWMU 226 piping.
SNL/NM SWMU 227, Bunker 904 Outfall	Medium	None	1947–1992	TA-II waste water	Waste water from SWMU 48 discharged into outfall ditch at SWMU 227. Possible TCE and HE in waste water. No significant contamination detected in soil samples. In 2000, soil-vapor monitoring well 227-VW-01 installed with sampling ports set at 50-ft intervals from 25 to 225 ft bgs. Soil-vapor sampling conducted quarterly with maximum TCE concentration to date of 14,000 ppb (v/v) at 225 ft bgs.
SNL/NM SWMU 229, Storm Drain System Outfall (Building 904 Outfall)	Medium	None	1947–1992	TA-II waste water	Waste water from SWMU 48 discharged into outfall ditch at SWMU 229. Possible TCE and HE in waste water. No significant contamination detected in soil samples.
KAFB Landfill LF-02	Low	Medium	1945–1967	Storm water	Industrial and residential waste, landscape debris; unlined landfill covers 50 acres (KAFB 2000a). Estimated debris volume is 1,000,000 cubic yards. No drums found in test pits dug in 2000.
KAFB Landfill LF-08	Low	Medium	1960–1989	Storm water	Industrial and residential waste, landscape debris, possible buried drums; unlined landfill covers 30 acres; Estimated debris volume is 600,000 cubic yards (KAFB 2000a). No drums found in test pits dug in 2000. TCE detected in soil vapor up to 1,100 ppb (v/v), but modeling indicates that TCE will not reach groundwater.
KAFB Landfill LF-44	None	Medium	1979–1988	Storm water	Landscape debris; unlined landfill covers 2 acres; debris volume is not known. Most debris removed in 1992 and 1993 (KAFB 2000a).
KAFB Landfill LF-268	None	Medium	1989–Present	Storm water	Construction/demolition debris, landscape debris; landfill covers 45 acres; debris volume is not known (KAFB 2000a).
KAFB Sewage Lagoons	**High**	**High**	1966–1987	KAFB and TA-I septic and waste water	Most of the estimated 7.3 billion gallons of water discharged at the two lagoons, the remainder piped to the golf-course pond (Montgomery Watson August 2000). TCE detected in 1987 sewage lagoon water samples.
KAFB Golf Course Main Pond	**High**	**High**	1966–1987	KAFB and TA-I septic and waste water	Lagoon (septic) water piped to pond, and used for turf irrigation (Montgomery Watson August 2000). Unknown amount of water may have leaked through pond liner. TCE detected in 1987 pond-water samples. Pond refurbished in 1998 and currently used for storing turf-irrigation water pumped from extraction well.
KAFB Sanitary Sewer Lines	Low	**High**	1940s–Present	KAFB septic water	Leaking sewers lines may be ongoing problem across KAFB.
KAFB Septic Tank Systems	Low	Medium	1940s–Present	Septic water	Approximately 30 septic-tank systems located in study area.
KAFB Manzano Training Area (Base) Blasting	None	Medium	1950s	Storm water	Dynamite blasting associated with construction of storage bunkers may have left residual explosive material that has degraded to nitrate.
COA Eubank Landfill – Northeast Fill Area	**High**	**High**	1974?–1984	Storm and septic water	Residential and industrial waste dumped in unlined landfill (Nelson June 1997). Landfill covers 27 acres, waste depth of 30 to 40 ft. Estimated debris volume is 1,000,000 cubic yards. Residential sewage lagoons installed nearby and used for disposal of septic water from mobile home park, some sewer lines cross the landfill (CH2M Hill April 1996). September 2001 soil-vapor samples contained PCE at 1,100 ppb (v/v) and TCE at 620 ppb (v/v) (DBS&A, April 2002). Maximum soil-vapor sampling depth of 10 ft bgs.
COA Eubank Landfill – Southwest Fill Area	**High**	Medium	Early 1960s–1973?	Storm water	Residential and industrial waste dumped in unlined landfill (Nelson June 1997). Landfill covers 60 acres; maximum waste depth of 36 to 40 ft. Volume of debris is unknown. September 2001 soil-vapor samples contained PCE at 7,100 ppb (v/v) and TCE at 2,000 ppb (v/v) (DBS&A April 2002). Ongoing uncontrolled dumping of household waste, landscape debris, and vehicles.
COA Sanitary-Sewer Line Rupture / Temporary Sewage Pond	Low	**High**	1994	COA septic water	100 million gallons spilled. Unknown volume of septic water recovered from temporary pond on floodplain (Montgomery Watson August 2000).
COA Sanitary Sewer Lines	Low	**High**	1940s–Present	COA septic water	Leaking sewer lines may be ongoing problem on KAFB.
COA Montessa Park/Tree Nursery	None	**High**	1950s-Present	Septic water/ Irrigation water	Sewage lagoon used at Montessa Park Correctional Facility. Irrigation ponds and fertilizer used at tree nursery operated by U.S. Department of Agriculture from approximately 1959 until mid-1990s.

bgs = Below ground surface
COA = City of Albuquerque.
ft = Foot (feet).
HE = High explosive(s).
KAFB = Kirtland Air Force Base.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
PCE = Tetrachloroethene).
ppb (v/v) = Parts per billion by volume.
SNL/NM = Sandia National Laboratories/New Mexico.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

occurred. If present, the cross-connects could have inadvertently allowed septic water to discharge along with waste water at the Acid Waste Line Outfall (SWMU 46).

A qualitative level of concern is listed in Table 2.6-2 for each site considered to be a potential source of TCE and/or nitrate. The concern level is subjectively assigned as “none,” “low,” “medium,” or “high” and is based upon the type of historical activities conducted at each SWMU; associated building operations, if applicable; chemicals/radionuclides used; waste-disposal activities; engineering drawings; and water volume, if known.

For TCE, the concern level is primarily based upon the type and scale of historical operations conducted at the buildings associated with the respective SWMU. The site histories, field inspections, engineering drawings, etc. discussed in this chapter were useful in determining the concern levels. For example, the more locations in a building where TCE might have been used and/or disposed of, such as test cells, machine workshops, floor drains, and/or laboratory sinks, the greater the concern level. A SWMU connected to a building that was used primarily for office space and secondarily for research/testing/machining operations was assigned a “low” concern level for TCE. A SWMU connected to a building that was used primarily for testing/research/machining operations was assigned a “medium” level for TCE. A SWMU that was connected to multiple buildings with research/testing/machining operations was assigned a “high” concern level for TCE.

For nitrate, the concern level is based primarily upon building occupancy. Buildings constructed with no bathrooms were assigned an obvious concern level of “none” for nitrate. A “low” concern level for nitrate was assigned to those septic systems that served small buildings where a staff of only about ten or so worked. Large buildings where dozens of personnel worked were considered to be a medium level of concern. SWMUs that were connected to multiple buildings containing bathrooms were assigned a high concern level for nitrate.

Because some HE compounds can degrade to nitrate, the TA-II buildings in which HE materials were handled that were also connected to waste-water disposal systems were evaluated for anthropogenic nitrate. Using the rationale discussed for TCE, the concern level for HE-derived nitrate is based upon the type and scale of historical operations that were conducted at each building.

The concern levels listed in Table 2.6-2 for the KAFB and COA sites are based upon the discussions presented in Sections 2.7 and 2.8. The KAFB Sewage Lagoons and the KAFB Golf Course Main Pond are considered to be a high level of concern for both TCE and nitrate because 7.3 billion gallons of waste and septic water are estimated to have been disposed of at the two sites. In the 1980s, nitrate and TCE were detected in water that was discharging at both the KAFB Sewage Lagoons and the Golf Course Main Pond. The COA Sanitary-Sewer Line Rupture is considered to be a high level of concern for nitrate because approximately 100 million gallons of septic water were spilled in 1994; an unknown amount of the septic water was recovered and pumped back into the COA system. KAFB groundwater results suggest that septic leakage from COA sewer lines and/or Montessa Park/Tree Farm (Plate 1) may be an ongoing nitrate problem.

2.7 KAFB

KAFB-controlled facilities extend along the north, west, south, and southeast boundaries of the three TAs (TA-I, TA-II, and TA-IV).

2.7.1 Properties Description

KAFB controls properties with varied land uses and facilities. The land located along the northern and western sides of the TAG study area is developed, comprising KAFB housing, office buildings, emergency-response facilities, training schools, machine workshops, storage yards, a brig, a diesel-fuel tank farm, an electromagnetic research facility, and the inactive sewage lagoons. Bordering the southern and southeastern edges of the study area are undeveloped open spaces, active landfills, and closed landfills.

2.7.2 Previous Investigations

The U.S. Air Force IRP manages the environmental characterization and remediation projects at KAFB. Groundwater investigations at KAFB are conducted as part of both RCRA corrective action investigations and an NMED-mandated Nitrate Abatement Program. NMED oversees the IRP projects.

KAFB submits groundwater reports to the NMED on a quarterly basis (KAFB February 2005 and June 2005). Forty KAFB SWMUs (formerly referred to as Corrective Action Units [CAUs]) are located within a mile of TA-I, TA-II, and TA-IV. The SWMUs include oil/water separators, surface spills, oil-storage tanks, septic systems, drum-storage yards, ordnance-training sites, landfills, sewage lagoons, and a contractor yard (KAFB 2000b). KAFB has installed monitoring wells in the vicinity of the landfills as well as in the sewage lagoons (Figure 2-2). Most of the 40 sites do not pose a threat to groundwater. However, the potential impacts of the KAFB landfills and the sewage lagoons are not completely understood.

As shown in Table 2.7.2-1, the KAFB landfills contain a variety of waste, including general refuse (household trash), concrete rubble, industrial refuse, landscape debris, asphalt rubble, and possibly 55-gallon drums of various chemicals and solvents. Soil-vapor studies have been conducted at most of the landfills, but these studies have focused primarily on methane production (KAFB 2000a). At LF-08, soil-vapor samples have contained TCE and PCE concentrations in excess of NMED soil-screening levels; however, SESOIL modeling indicates that these VOCs have a low probability of reaching groundwater (Foster Wheeler Environmental Corporation May 2001). Test pits dug at LF-02 and LF-08 in 2000 did not uncover any buried drums.

The KAFB Sewage Lagoons and the Golf Course Main Pond together comprise SWMU (CAU) WP-26 (Montgomery Watson August 2000). Combined, the two lagoons, which are adjacent to each other, cover approximately 14 acres. The lagoons are located approximately 0.9 miles west of TA-IV (Figure 2-2). Findings based upon recent interpretation of aerial photographs reveal that the lagoons were used from 1966 to 1987 (BGW September 2002). KAFB operated the lagoons, which received untreated sewage from both KAFB and SNL/NM through an interconnected sanitary sewer system. The lagoons were used seasonally from April through October as settling basins for approximately 330 million gallons of untreated (raw) sewage being disposed of annually (Montgomery Watson August 2000). Over a period of 22 years, such a rate would equate to 7.26 billion gallons. The majority of the water percolated into the soil. However, the ratio of percolation to evaporation is not known. While the lagoons were in

Table 2.7.2-1
KAFB and Off-Base Landfills Located in the Vicinity of the TAG Study Area
(KAFB 2000a, CH2M Hill April 1996, Copland July 2001)

Name (Alternate Name)	Owner	Size (acres)	Waste Volume (yd^3)	Dates of Use	Contents
LF-02 (CAU 6-2)	KAFB	50	1,000,000	1945–1967	General refuse, concrete/asphalt rubble, landscape debris (trees, shrubs, grass), industrial refuse, possibly hazardous materials including 55-gallon drums containing liquid solvents and plastic wastes.
LF-07 (CAU 6-3)	KAFB	7	6,000	1972–1977	Burned aircraft parts.
LF-08 (CAU 6-4)	KAFB	30	600,000	1960–1989	General refuse, concrete/asphalt rubble, landscape debris (trees, shrubs, grass), industrial refuse, possibly hazardous materials including chemical drums.
LF-09 (CAU 6-10)	KAFB	31	NA	NA	None, area was a practice-bombing site.
LF-44 (CAU 6-11)	KAFB	2	Unknown	1970s–1988	Construction/demolition debris including concrete, asphalt, landscape debris (trees, shrubs, grass), roofing shingles, metal sheets, motor-oil pans, and bottles. (Most material removed in 1992 and 1993.)
LF-268 (C&D)	KAFB	45	Unknown	1989–present	General refuse, landscape debris (trees, shrubs, grass), construction/demolition debris, asbestos.
Eubank Landfill-Northeast Fill Area	COA	27	Unknown	1974?–1984	Household waste, possibly industrial waste.
Eubank Landfill-Southwest Fill Area	COA	60	Unknown	1960s–1973? by COA. Ongoing dumping by trespassers.	Household waste, possibly industrial waste. Visible waste consists of landscape debris (trees, shrubs, grass), furniture, appliances, lumber, automobiles, general refuse, scrap metal, concrete/asphalt rubble.

C&D = Construction and demolition.
CAU = Corrective Action Unit.
COA = City of Albuquerque.
KAFB = Kirtland Air Force Base.
LF = Landfill.
NA = Not applicable.
TAG = Tijeras Arroyo Groundwater.
yd^3 = Cubic yard(s).

service, an unknown volume of untreated sewage from the lagoons was piped into the 2.6-acre Golf Course Main Pond that is located approximately 1 mile southeast of TA-IV (Figure 2-2). The sewage was mixed with storm water and groundwater and used to irrigate the golf course.

Effluent (water) samples, collected from the sewage lagoons on April 25, 1987, contained up to 47 μg/L of 1,1,1-trichloroethane (TCA) and 4 μg/L of TCE (New Mexico Health and Environment Department April 1987). Effluent samples from the golf course pond contained similar concentrations of TCA and TCE. As a result, disposal of sanitary waste at both the lagoons and the pond was discontinued in October 1987. Sediment samples from the lagoons and pond also have contained nitrate and TCE.

The lagoons have not been used since 1987. However, in 1998, the Golf Course Main Pond was refurbished and used for the storage of water for turf irrigation (Montgomery Watson August 2000). The water was a blend of nitrate-impacted water pumped from a golf-course extraction well (RG-1589-S-4), storm water, and potable water from a KAFB production well.

KAFB and the COA have been jointly investigating another nitrate-release site, the COA Sanitary-Sewer Line Rupture (Montgomery Watson August 2000). In 1994, an 8-ft-diameter COA line ruptured about 1,500 ft west of the KAFB sewage lagoon (Figure 2-2). Approximately 100 million gallons of untreated sewage flowed from the rupture along Munitions Haul Road and ponded on the Tijeras Arroyo floodplain. Some of the sewage was pumped back into the COA sewer system, but an unknown volume was allowed to evaporate or infiltrate. Silt deposits consisting of sewage sludge were 2 to 3 ft thick in some places. Inspection of the sewer line revealed that the line may have leaked for some time before rupturing. This suggests that septic leakage from COA sanitary-sewer lines may be an ongoing problem.

2.8 Off-Base Properties

Properties located outside of the KAFB Eubank Gate, east of TA-I, are managed by a variety of land owners including the COA, the New Mexico State Land Office, Saint John's Church, Albuquerque Public Schools, and the Public Service Company of New Mexico. Property located west of KAFB along Tijeras Arroyo is owned by the COA which manages a correctional facility and a tree nursery.

2.8.1 Properties Descriptions

As shown in Figure 2-2, the Eubank Landfill is located approximately 0.5 miles southeast of the KAFB Eubank Gate. The Eubank Landfill is managed by the COA and consists of two inactive disposal areas, the Northeast Fill Area and the Southwest Fill Area (COA July 2001, Earp January 2002). Both fill areas are located on the northern rim of Tijeras Arroyo and are prone to erosion. The years of operation for the two fill areas are not well documented.

The Northeast Fill Area covers approximately 27 acres and contains household waste and possibly industrial waste (Nelson June 1997). The area was used by the COA from approximately 1974 to 1984 (Tables 2.6-2 and 2.7.2-1). Native soil was used to cover the waste; an engineered cap was not installed (CH2M Hill April 1996). After the fill area was closed and until about 1984, sanitary waste from the adjacent Four Hills Mobile Home Park discharged to the ground surface at the Northeast Fill Area via un-permitted septic tanks and

sewage lagoons (CH2M Hill April 1996). Storm water from the mobile home park and vicinity also has flowed onto the fill area.

The Southwest Fill Area covers approximately 60 acres and contains household waste and possibly industrial waste (Nelson June 1997). The eastern part of the fill area overlies an old gravel quarry. The Southwest Fill Area was used by the COA from the early 1960s until approximately 1973 (Tables 2.6-2 and 2.7.2-1). Native soil was used to cover the waste; no engineered cap was installed. Much household trash and debris were removed from the ground surface in 2002. The Southwest Fill Area continues to be used by trespassers for off-road vehicle recreation.

Montessa Park is land controlled by the COA that straddles Tijeras Arroyo immediately west of KAFB. This area has been used from the 1950s to the present. The Montessa Park Correctional Facility operated a sewage lagoon. The U.S. Department of Agriculture operated a tree nursery on this property from 1959 until the mid-1990s. Nursery operations included the use of irrigation ponds and fertilizers.

2.8.2 Previous Investigations

The COA EHD has conducted various environmental investigations at the Eubank Landfill. For example, soil-vapor investigations were conducted in 1996 and 2001. During the 1996 investigation, soil-vapor sampling probes were set at a grid spacing of 100 ft across the Northeast Fill Area with sampling depths ranging from 1.5 to 4.5 ft bgs (CH2M Hill April 1996). The maximum TCE and PCE concentrations were 71 and 96 parts per billion by volume (ppb [v/v]), respectively. Methane from the decomposition of garbage had a maximum concentration of 230,000 ppb (v/v). No investigations were conducted at the Southwest Fill Area in 1996. Also in 1996, the COA installed a soil-cement retaining wall along the southeastern corner of the landfill where occasional surface-water flow in Tijeras Arroyo was undercutting the landfill.

In September 2001, soil-vapor sampling was conducted at scattered locations across both fill areas to a maximum depth of 10 ft bgs (DBS&A April 2002). Twenty-seven VOCs were detected in the soil-vapor samples. For the Northeast Fill Area, the maximum TCE and PCE concentrations in soil vapor were 620 and 1,100 ppb (v/v), respectively. For the Southwest Fill Area, the maximum concentrations of TCE and PCE in soil vapor were 2,000 and 7,100 ppb (v/v), respectively.

The COA has installed five regional aquifer monitoring wells in the vicinity of the Eubank Landfill. Groundwater quality is discussed in Chapter 4.0.

2.9 TAG Soil-Vapor Investigations

For more than 10 years, numerous soil-vapor investigations have been performed in the TAG study area. As proposed in the 2002 conceptual model of the TAG study area (SNL/NM November 2002), deep soil vapor may be responsible for VOCs detected in the groundwater. Since 1996, the SNL/NM ER Project has completed installation and periodic sampling of several permanent soil-vapor monitoring wells in the TAG study area. KAFB performed and reported soil-vapor investigations for the TAG study area in 2004, and the COA performed and reported soil-vapor investigations in 1996 and 2001 (discussed in Section 2.8.2).

This section primarily describes the soil-vapor investigations completed in response to data gaps identified in the TAG Work Plan (SNL/NM June 2003). In July and August 2004, SNL/NM installed five new soil-vapor monitoring wells for a total of 10 SNL/NM soil-vapor wells in the TAG study area. During December 2004 and January 2005, SNL/NM sampled all 10 soil-vapor wells and analyzed the samples for VOCs. The installation and sampling of the new SNL/NM vapor-wells are presented in this section as well as a brief discussion of other (KAFB and COA) soil-vapor investigations.

2.9.1 Previous Investigations

The historical development of soil-vapor investigations is summarized in Table 2.9.1-1 and has included widespread shallow soil-vapor surveys in general areas as well as at specific potential release sites. In addition to the shallow soil-vapor studies (and sometimes based upon the results of the shallow soil-vapor studies), deep soil–vapor sampling has been performed. More detailed descriptions of these previous investigations are presented in the following documents:

- *Data Evaluation Report – Tijeras Arroyo Groundwater (TAG) Investigation, Summary of Soil Vapor Studies* (Skelly August 2002)
- *Preliminary Site Assessment and Soil Gas Investigation Report—South Eubank Landfill Site* (CH2M Hill April 1996)
- *Landfill Gas Investigation and Characterization Study* (DBS&A April 2002)
- *Summary of Activities at Solid Waste Management Unit WP-26, Sewage Lagoons and Golf Course Main Pond, Kirtland Air Force Base, New Mexico* (MWH Americas, Inc. June 2005)

2.9.2 July–August 2004 Soil-Vapor Well Installations

The TAG Work Plan (SNL/NM June 2003) proposed investigations that would further understanding and eliminate data gaps concerning the distribution of TCE in groundwater. Two of the primary data gaps involved deep soil-vapor investigations. Table 5.1-1 of the Work Plan listed Data Gap D: “determine if the COA Eubank Landfill is a potential source of TCE.” This was to be accomplished by conducting deep (to 250 ft bgs) soil-vapor sampling with a SimulProbe™ (or similar) sampler at two boreholes near Powerline Road. Table 5.1-1 of the Work Plan also listed Data Gap G: “determine the extent of TCE in soil vapor in the vicinity of monitoring well WYO-4.” This was also to be accomplished by conducting deep (to 250 ft bgs) soil-vapor sampling with a SimulProbe™ (or similar) sampler at three drilling locations around WYO-4.

The TAG Work Plan proposed that the deep soil-vapor samples would be collected at five drilling locations using a SimulProbe™ (or similar) sampler. The soil-vapor samples were to be collected at 50-ft intervals to a maximum depth of approximately 250 to 300 ft, the projected depth to the top of the perched system. During preparations for field implementation of the

Table 2.9.1-1
Historical Timeline for TAG Study Area Soil-Vapor Investigations

Month	Year	Event	Reference
November–December	1993	PETREX passive soil-vapor survey completed at 365 surface locations in TA-II.	NERI January 1994 SNL/NM August 1994
January–February	1994	PETREX passive soil-vapor survey completed at 99 surface locations in TA-II.	NERI January 1994 SNL/NM August 1994
August	1994	TA-II RFI Work Plan completed – passive soil-vapor results presented and future, deep soil-vapor investigations described.	SNL/NM August 1994
May	1995	PETREX passive soil-vapor survey completed at 108 surface locations in TA-II.	NERI January 1995
March	1996	Sandia North (now referred to as "Tijeras Arroyo") Groundwater Investigation Plan (GIP) completed – passive soil-vapor results presented and future, deep soil-vapor investigations described.	SNL/NM March 1996
November–December	1996	Soil vapor sampled in three deep boreholes; two deep soil-vapor monitor wells (TA2-VW-20 and TA2-VW-21) installed in TA-II.	IT Corporation January 1997
--	1996	Soil vapor sampled across the COA Eubank Landfill Northeast Fill Area.	CH2M Hill April 1996
January	1997	Analytical results from soil-vapor samples collected during well installation discussed.	IT Corporation January 1997 SNL/NM March 1998
July	1997	Periodic soil-vapor sampling commences. Samples sent to ERCL or Core, Inc. Laboratories.	--
August–September	1998	Deep soil-vapor samples collected during the installation of groundwater monitoring wells.	SNL/NM June 2000
September	1998	Begin sending quarterly soil-vapor samples to Quanterra Laboratory for analyses.	--
September	1999	Deep soil-vapor data reviewed.	Skelly September 1999
January	2000	VaporTec passive soil-vapor survey completed at 43 locations in ER SWMUs 46 and 227.	teg January 2000
March–April	2001	Soil-vapor monitor wells 46-VW-01, 46-VW-02, and 227-VW-01 installed with FLUTe™ completion system.	--
September	2001	Soil-vapor sampling conducted at scattered locations across both fill areas of the COA Eubank Landfill.	DBS&A April 2002
January	2002	Relationship of deep soil-vapor concentrations and groundwater concentrations evaluated.	Skelly January 2002
August	2002	History of soil-vapor investigations summarized and historical concentrations evaluated.	Skelly August 2002
June	2003	TAG Work Plan calls for further soil-vapor investigations.	SNL/NM June 2003
July–August	2004	Five FLUTe™ soil-vapor wells installed.	Fritts October 2004
October–December	2004	KAFB completed soil-vapor investigation near the former sewage lagoons. Direct-push sampling conducted, and FLUTe systems installed/sampled.	MWH Americas, Inc. June 2005

Refer to footnotes at end of table.

Table 2.9.1-1 (Concluded)
Historical Timeline for TAG Study Area Soil-Vapor Investigations

Month	Year	Event	Reference
December	2004	CME Work Plan discusses relationship of surface discharges of water, soil vapor, and concentrations of VOCs in the perched aquifer.	Wymore et al. December 2004
December–January	2004–2005	All 10 TAG soil-vapor wells sampled.	Skelly April 2005

CME = Corrective Measures Evaluation.
COA = City of Albuquerque.
ER = Environmental Restoration.
ERCL = Environmental Restoration Chemistry Laboratory.
FLUTe™ = Flexible Liner Underground Technologies, Ltd.
GIP = Groundwater Investigation Plan.
KAFB = Kirtland Air Force Base.
NERI = Northeast Research Institute, LLC.
RCRA = Resource Conservation and Recovery Act.
RFI = RCRA Facility Investigation.
SNL/NM = Sandia National Laboratories/New Mexico.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
VOC = Volatile organic compound.
VW = Vapor well.
-- = Information either not available or no reference is associated with the event.

soil-vapor investigation, it was decided that instead of employing the SimulProbe™ technique that permanent vapor wells would be installed using FLUTe™ [Flexible Liner Underground Technology, Ltd.] liners. It had been determined that the vast majority of the implementation cost was the cost of drilling the boreholes. If anything failed during SimulProbe™ sampling, there would be no opportunity to cost-effectively resample the same location and depth. With the installation of the FLUTe™ system, all sample locations and depths could be cost-effectively resampled, if required.

The drilling and installation of the FLUTe™ system was performed from July 13 to August 25, 2004 and was planned and overseen by ER Project personnel. Stewart Brothers Drilling personnel drilled and installed the FLUTe™ liners. The well names, port depths, and other specifications are provided in Table 2.9.2-1; locations are shown in Figure 2.9.2-1. Four of the liners were installed to approximately 250 ft bgs with five ports, and one liner was installed to approximately 300 ft bgs with six ports (Fritts October 2004). The boreholes for the installation of the FLUTe™ liners were drilled using an air rotary casing hammer. The FLUTe™ liners were installed as directed by the manufacturer, with a representative from FLUTe™ on site for the first installation (TAG-SV05).

2.9.3 December 2004–January 2005 Soil-Vapor Sampling

Field Activities

SNL/NM performed TAG soil-vapor sampling in December 2004 and January 2005. This soil-vapor sampling event was conducted in conformance with procedures outlined in the TAG Work Plan (SNL/NM June 2003) and the sampling and analysis plan. Soil-vapor samples were collected at each of the 47 vapor-monitoring ports from the 10 TAG soil-vapor wells (Table 2.9.2-1). All samples were collected in SUMMA® canisters and analyzed for VOCs by EPA Method TO-14 (EPA January 1999) by Severn Trent Laboratories in Los Angeles, California. Quality control samples included five duplicate samples, one from each of the five newly installed soil-vapor wells (Skelly April 2005).

Soil-vapor sampling was performed in accordance with Field Operating Procedure (FOP) 94-22 (Deep Soil Gas Sampling) as modified to accommodate the FLUTe™ soil-vapor well completions. Soil vapors were collected from the downhole sample ports using a vacuum pump temporarily attached to the sample tubing. For investigation purposes, the soil vapor drawn from downhole sample ports was monitored with a photoionization detector (PID). Organic vapor measurements from each sampling port were obtained prior to attaching the SUMMA® canister and collecting the vapor sample. Evacuated 6-liter SUMMA® canisters were attached to the sampling tubing upstream of the vacuum pump. After PID readings stabilized, the vacuum pump was isolated from the system and the SUMMA® canisters were opened to the sampling tubing, allowing soil vapor to be drawn under vacuum into the canisters (Skelly April 2005).

In past attempts to sample soil-vapor wells 46-VW-02 and 227-VW-01, the deepest sampling port in each well could not be sampled. It is believed that these deep sampling ports are located within or near the capillary fringe, with the hydrostatic pressure being too great to allow vapor sampling. A more powerful vacuum pump was used during the December 2004 and January 2005 sampling event and these previously unsampled vapor ports produced soil vapor.

Table 2.9.2-1
TAG Soil-Vapor Well Summary and Maximum TCE Concentrations

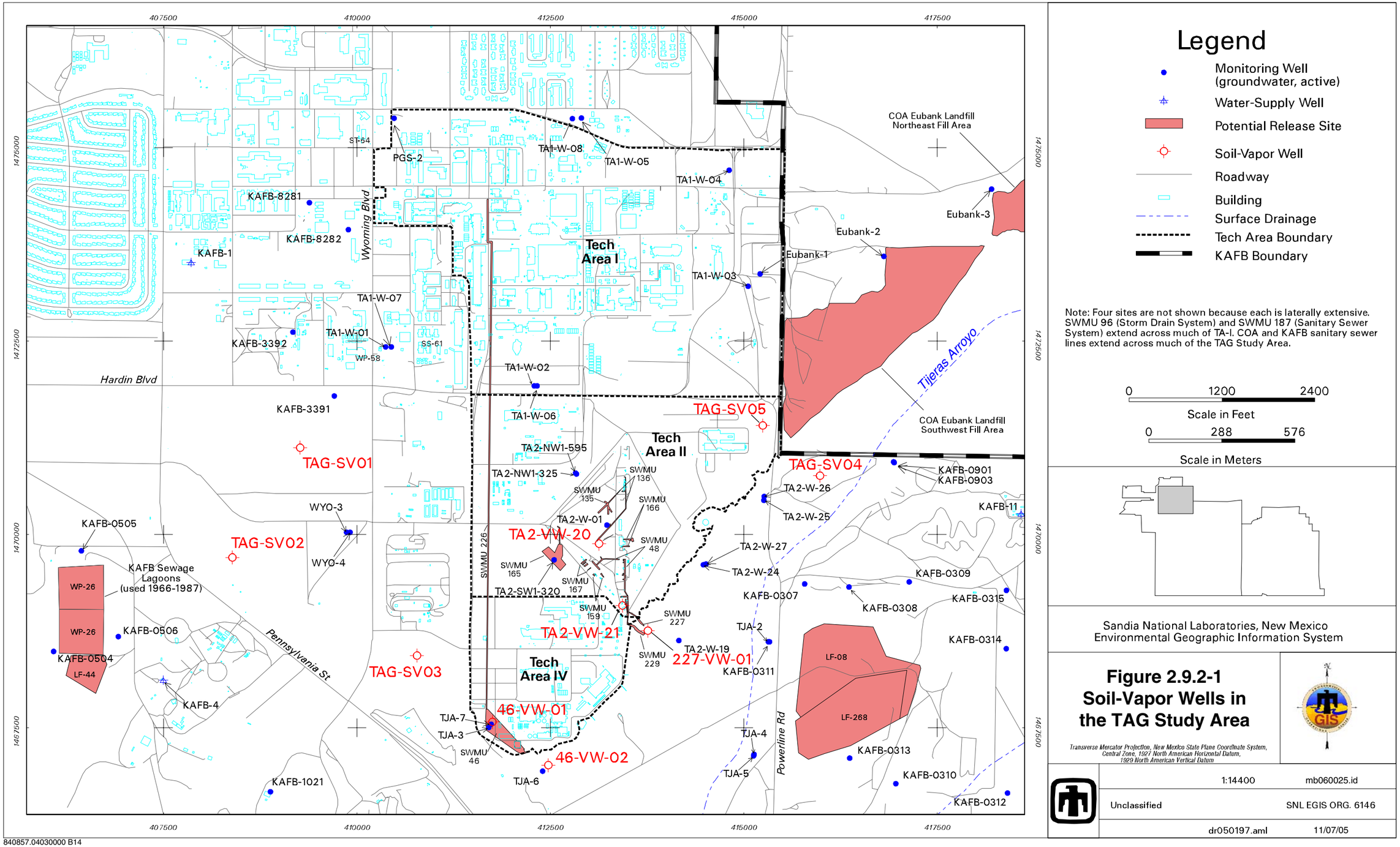
Vapor Well ID	Associated Site/ SWMU	Location	New Mexico State Plane Coordinates		Depth of Sample Port/Intake (ft bgs)	Installation Date	Number of Sampling Events	Maximum TCE Concentration (ppb v/v)	Maximum TCE Sample Date
			Northing	Easting					
Technical Area II Vapor Wells (Conventional Completion):									
TA2-VW-20 (aka: T2-BH-020)	SNL/NM SWMU 136	Central TA-II	1,469,878.38	413,131.31	72	Dec-96	18	47	Mar-02
TA2-VW-21 (aka: T2-BH-021)	SNL/NM SWMU 48	Southern tip of TA-II	1,469,078.38	413,432.13	50	Dec-96	18	520	Mar-99
					92			1,500	Dec-02
Tijeras Arroyo Vapor Wells (FLUTe™ Completion):									
46-VW-01	SNL/NM SWMU 46	Southwest of TA-IV	1,467,573.09	411,752.03	15	Mar-01	6	2,200	Dec-02
					65			12,000	Dec-02
					115			46,000	Mar-02
					165			21,000	Mar-02
					215			1,200	Dec-04
					265			350	Dec-02
46-VW-02	SNL/NM SWMU 46	South of TA-IV	1,467,014.55	412,474.76	46	Mar-01	6	370	Sep-01
					96			650	Dec-02
					146			520	Dec-02
					196			440	Jun-01
					246			490	Jan-05
					296			5	Jan-05
227-VW-01	SNL/NM SWMU 227	Southeast of TA-II	1,468,752.97	413,761.01	25	Mar-01	6	600	Dec-02
					75			2,500	Apr-01
					125			4,500	Mar-02
					175			7,300	Mar-02
					225			14,000	Mar-02
					275			19	Jan-05
TAG-SV01	KAFB Contractor Yard	Southwest of Wyoming Blvd. and Hardin Blvd.	1,470,589.59	409,417.32	48	Aug-04	1	5	Dec-04
					98			15	Dec-04
					148			12	Dec-04
					198			22	Dec-04
					248			110	Dec-04
TAG-SV02	KAFB Former Sewage Lagoons	Northwest of Wyoming Blvd. and Pennsylvania Blvd.	1,469,596.26	408,508.20	47	Aug-04	1	ND (<2)	Dec-04
					97			1.1 J	Dec-04
					147			ND (<2)	Dec-04
					197			8	Dec-04
					247			2	Dec-04

Refer to footnotes at end of table.

Table 2.9.2-1 (Concluded)
TAG Soil-Vapor Well Summary and Maximum TCE Concentrations

Vapor Well ID	Associated Site/ SWMU	Location	New Mexico State Plane Coordinates		Depth of Sample Port/Intake (ft bgs)	Installation Date	Number of Sampling Events	Maximum TCE Concentration (ppb v/v)	Maximum TCE Sample Date
			Northing	Easting					
TAG-SV03	SNL/NM SWMU 46	Northeast of Wyoming Blvd. and Pennsylvania Blvd.	1,468,453.92	410,830.32	47	Aug-04	1	0.99 J	Dec-04
					97			1.0 J	Dec-04
					147			1.2 J	Dec-04
					197			3	Dec-04
					247			12	Dec-04
TAG-SV04	COA South Eubank Landfill	Tijeras Arroyo, South of Eubank Landfill	1,470,935.01	416,085.95	46	Aug-04	1	32	Dec-04
					96			55	Dec-04
					146			14	Dec-04
					196			4	Dec-04
					246			11	Dec-04
TAG-SV05	COA South Eubank Landfill	North of Tijeras Arroyo, West of Eubank Landfill	1,471,543.47	415,267.13	50	Jul-04	1	11,000	Dec-04
					100			9,400	Dec-04
					150			2,800	Dec-04
					200			1,000	Dec-04
					250			10	Dec-04
					300			140	Dec-04

aka = Also known as.
bgs = Below ground surface.
BH = Borehole.
COA = City of Albuquerque.
FLUTe™ = Flexible Liner Underground Technology, Ltd.
ft = Foot (feet).
ID = Identification.
J = Estimated value.
KAFB = Kirtland Air Force Base.
MDL = Method detection limit.
ND ( ) = Not detected above the MDL, shown in parentheses.
ppb v/v = Part per billion(s) on a volume to volume basis.
SNL/NM = Sandia National Laboratories/New Mexico.
SV = Soil vapor.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.
VW = Vapor well.



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Analytical Results

All samples were analyzed by EPA Method TO-14 (EPA January 1999) at analyte-specific method detection limits ranging from 0.5 to 2.0 ppb (v/v). The following 29 VOCs were detected during the December 2004 and January 2005 sampling event:

- Acetone
- Benzene
- Bromodichloromethane
- MEK
- Carbon disulfide
- Carbon tetrachloride
- Chloroethane
- Chloroform
- 1,2-Dichloro-1,1,2,2-tetrafluoroethane
- 1,2-Dichlorobenzene
- Dichlorodifluoromethane
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- cis-1,2-Dichloroethene
- 1,2-Dichloropropane
- Ethyl benzene
- 4-Ethyltoluene
- Methylene chloride
- 4-Methyl-2-pentanone
- PCE
- Toluene
- 1,1,2-Trichloro-1,2,2-trifluoroethane
- TCA
- TCE
- Trichlorofluoromethane
- 1,2,4-Trimethylbenzene
- Vinyl chloride
- m-, p-Xylene
- o-Xylene

TCE and total VOC data are summarized in Table 2.9.3-1. TCE was the most commonly detected analyte and accounted for 0 to 100 percent of the total VOCs. On average, TCE accounted for 51 percent of the total VOCs. The maximum TCE concentration detected was 30,000 ppb (v/v) in 46-VW-01-SV-115 and the maximum total VOCs concentration detected was 45,534 ppb (v/v) in TAG-SV05-100. The areal distribution of TCE is shown in Figure 2.9.3-1 and the areal distribution of total VOCs is shown in Figure 2.9.3-2. As seen in both these figures, the five new soil-vapor wells were relatively free of vapor-phase VOCs with the exception of TAG-SV05 near the COA Eubank Landfill.

Table 2.9.3-1
TAG TCE and Total VOC Analytical Results for Soil-Vapor Samples,
December 2004–January 2005

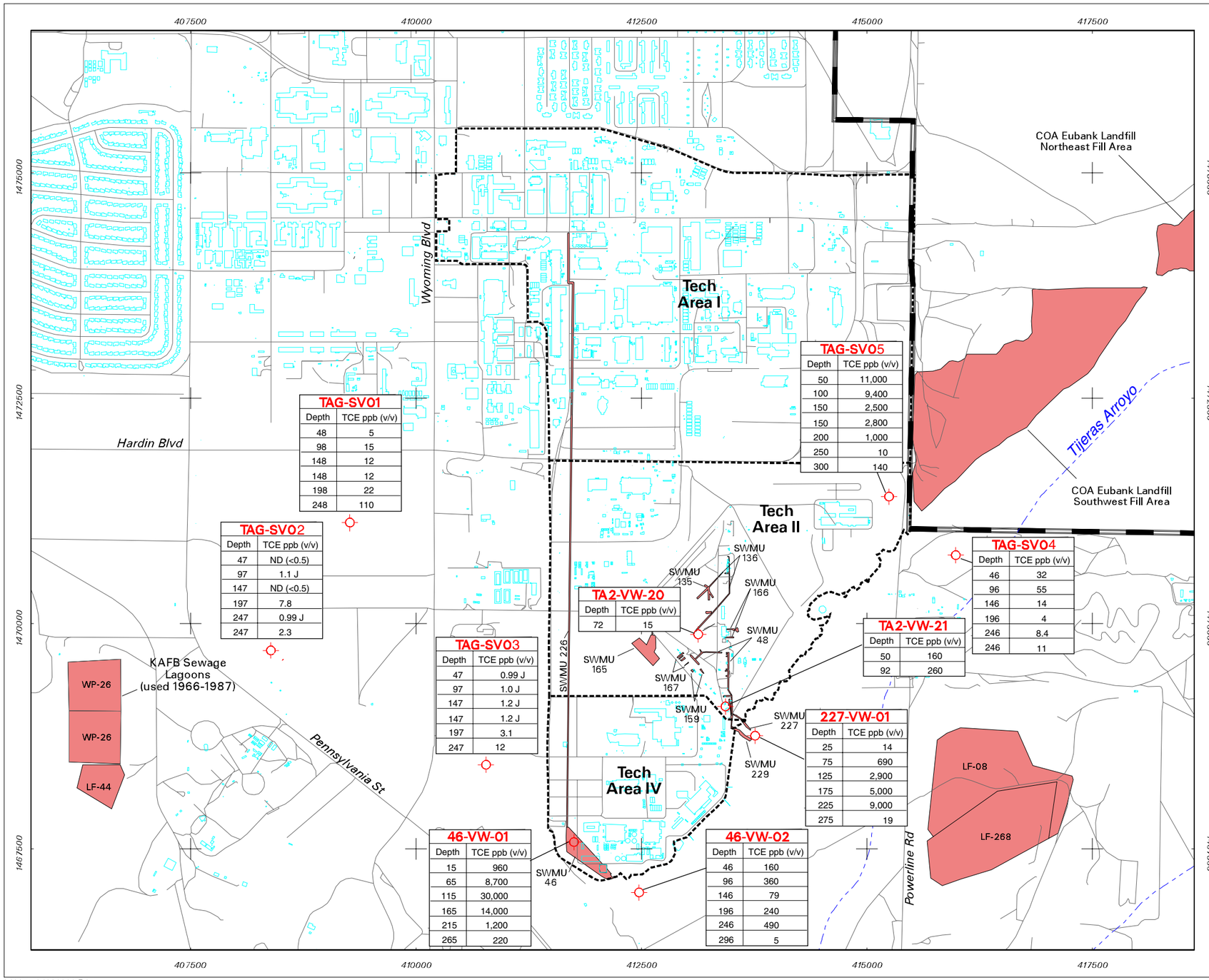
Sample Attributes				Results (EPA Method TO-14[a]) in ppb (v/v)	
Sample ID	Sample Date	Laboratory and Chain of Custody Number	Sample Depth (ft)	Trichloroethene	Total VOCs
TA2-VW-20-SV-72	1/3/2005	Severn Trent AR/COC 608032	72	15	93.9
TA2-VW-021-SV-50	1/3/2005		50	160	204.5
TA2-VW-021-SV-92	1/3/2005		92	260	279.8
46-VW-01-SV-015	12/30/2004	Severn Trent AR/COC 608033	15	960	985.6
46-VW-01-SV-065	12/30/2004		65	8,700	8,997
46-VW-01-SV-115	12/30/2004		115	30,000	31,160
46-VW-01-SV-165	12/30/2004		165	14,000	14,627
46-VW-01-SV-215	12/30/2004		215	1,200	1,241.7
46-VW-01-SV-265	12/30/2004		265	220	226.3
46-VW-02-SV-046	1/3/2005	Severn Trent AR/COC 608034	46	160	193.9
46-VW-02-SV-096	1/3/2005		96	360	376.8
46-VW-02-SV-146	1/3/2005		146	79	82.5
46-VW-02-SV-196	1/3/2005		196	240	243.4
46-VW-02-SV-246	1/3/2005		246	490	507.3
46-VW-02-SV-296	1/3/2005		296	5.2	12.9
227-VW-01-SV-025	1/3/2005	Severn Trent AR/COC 608035	25	14	15.3
227-VW-01-SV-075	1/3/2005		75	690	696.1
227-VW-01-SV-125	1/3/2005		125	2,900	2,908
227-VW-01-SV-175	1/3/2005		175	5,000	5,000
227-VW-01-SV-225	1/3/2005		225	9,000	9,000
227-VW-01-SV-275	1/3/2005		275	19	19.6
TAG-SV01-48	12/30/2004	Severn Trent AR/COC 608036	48	5	6.7
TAG-SV01-98	12/30/2004		98	15	21.1
TAG-SV01-148	12/30/2004		148	12	16.5
TAG-SV01-148-SD	12/30/2004		148	12	20.2
TAG-SV01-198	12/30/2004		198	22	27.1
TAG-SV01-248	12/30/2004		248	110	146.7
TAG-SV02-47	12/29/2004	Severn Trent AR/COC 608037	47	ND (<0.5)	3.6
TAG-SV02-97	12/29/2004		97	1.1 J	5
TAG-SV02-147	12/29/2004		147	ND (<0.5)	0.6
TAG-SV02-197	12/29/2004		197	7.8	29.1
TAG-SV02-247	12/29/2004		247	0.99 J	10.2
TAG-SV02-247-SD	12/29/2004		247	2.3	95.9

Refer to footnotes at end of table.

Table 2.9.3-1 (Concluded)
TAG TCE and Total VOC Analytical Results for Soil-Vapor Samples,
December 2004–January 2005

Sample Attributes				Results (EPA Method TO-14[a]) in ppb (v/v)	
Sample ID	Sample Date	Laboratory and Chain of Custody Number	Sample Depth (ft)	Trichloroethene	Total VOCs
TAG-SV03-47	12/29/2004	Severn Trent AR/COC 608038	47	0.99 J	9.7
TAG-SV03-97	12/29/2004		97	1.0 J	6.5
TAG-SV03-147	12/29/2004		147	1.2 J	53.4
TAG-SV03-147-SD	12/29/2004		147	1.2 J	7.7
TAG-SV03-197	12/29/2004		197	3.1	62.6
TAG-SV03-247	12/29/2004		247	12	24
TAG-SV04-46	12/28/2004	Severn Trent AR/COC 608039	46	32	705.8
TAG-SV04-96	12/28/2004		96	55	774.1
TAG-SV04-146	12/28/2004		146	14	259
TAG-SV04-196	12/28/2004		196	4.2	37
TAG-SV04-246	12/28/2004		246	8.4	151.1
TAG-SV04-246-SD	12/28/2004		246	11	182.7
TAG-SV05-50	12/28/2004	Severn Trent AR/COC 608040	50	11,000	44,225
TAG-SV05-100	12/28/2004		100	9,400	45,534
TAG-SV05-150	12/28/2004		150	2,500	15,410
TAG-SV05-150[b]	12/28/2004		150	2,800	16,962
TAG-SV05-200	12/28/2004		200	1,000	4,898
TAG-SV05-250	12/28/2004		250	10	24.4
TAG-SV05-300	12/28/2004		300	140	576.4

[a]EPA January 1999.
[b]Duplicate sample.
AR/COC = Analysis request/chain-of-custody.
EPA = U.S. Environmental Protection Agency.
ft = Foot (feet).
ID = Identification.
J = Estimated concentration.
MDL = Method detection limit.
ND ( ) = Not detected above the MDL, shown in parentheses.
ppb (v/v) = Part(s) per billion on a volume by volume basis.
SD = Sample duplicate.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.
VOC = Volatile organic compound.



TAG-SV01

Depth	TCE ppb (v/v)
48	5
98	15
148	12
148	12
198	22
248	110

TAG-SV02

Depth	TCE ppb (v/v)
47	ND (<0.5)
97	1.1 J
147	ND (<0.5)
197	7.8
247	0.99 J
247	2.3

TAG-SV03

Depth	TCE ppb (v/v)
47	0.99 J
97	1.0 J
147	1.2 J
147	1.2 J
197	3.1
247	12

TAG-SV05

Depth	TCE ppb (v/v)
50	11,000
100	9,400
150	2,500
150	2,800
200	1,000
250	10
300	140

TA2-VW-20

Depth	TCE ppb (v/v)
72	15

TAG-SV04

Depth	TCE ppb (v/v)
46	32
96	55
146	14
196	4
246	8.4
246	11

TA2-VW-21

Depth	TCE ppb (v/v)
50	160
92	260

227-VW-01

Depth	TCE ppb (v/v)
25	14
75	690
125	2,900
175	5,000
225	9,000
275	19

46-VW-01

Depth	TCE ppb (v/v)
15	960
65	8,700
115	30,000
165	14,000
215	1,200
265	220

46-VW-02

Depth	TCE ppb (v/v)
46	160
96	360
146	79
196	240
246	490
296	5

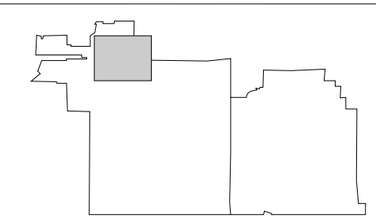
Legend

- Potential Release Site
- Soil-Vapor Well
- Roadway
- Building
- Surface Drainage
- Tech Area Boundary
- KAFB Boundary

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1200 2400
Scale in Feet

0 288 576
Scale in Meters



Sandia National Laboratories, New Mexico
Environmental Geographic Information System

Figure 2.9.3-1
TCE Soil-Vapor Concentrations in the TAG Study Area, December 2004–January 2005

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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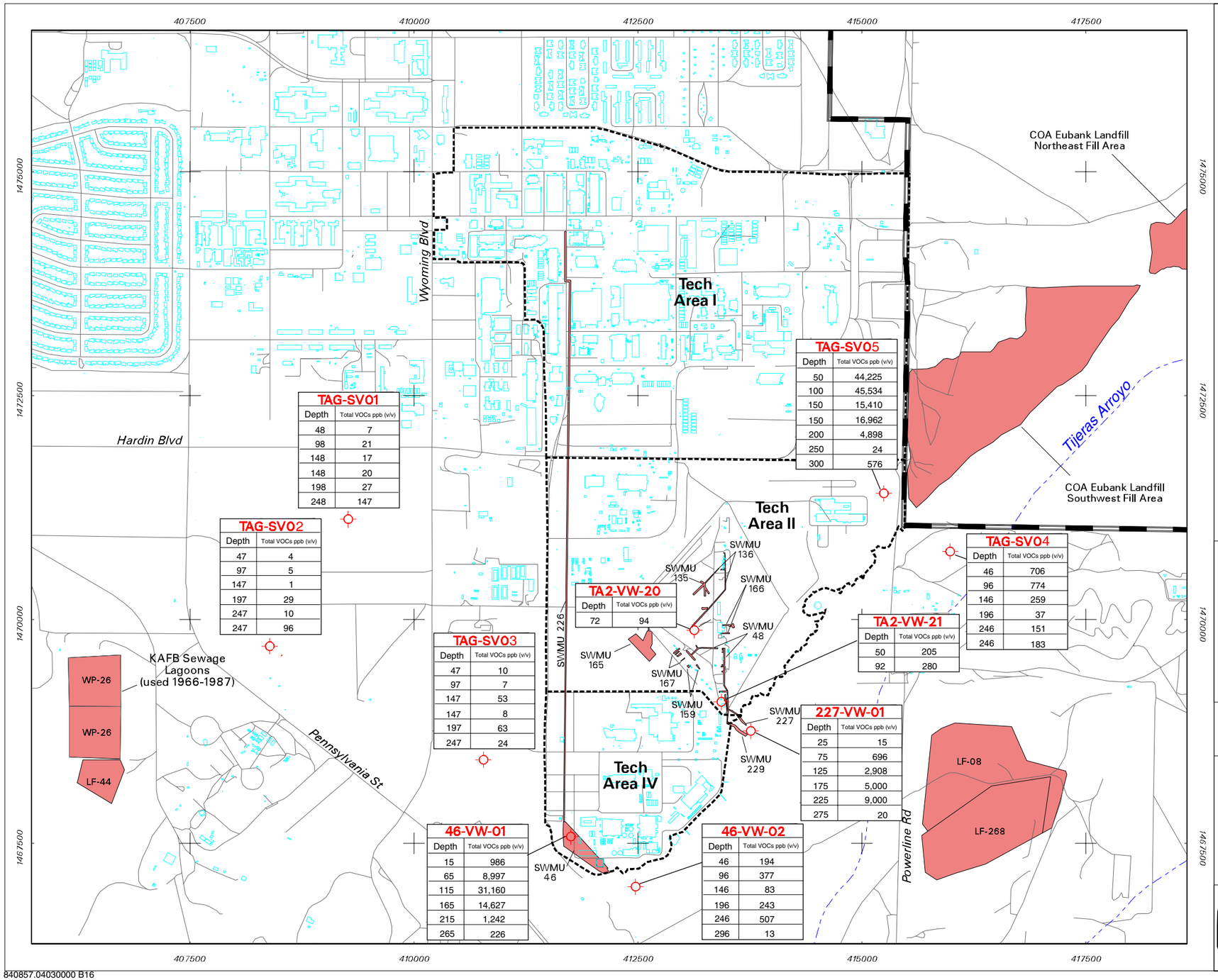

Legend

- Potential Release Site
- Soil-Vapor Well
- Roadway
- Building
- Surface Drainage
- Tech Area Boundary
- KAFB Boundary

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1200 2400
Scale in Feet

0 288 576
Scale in Meters

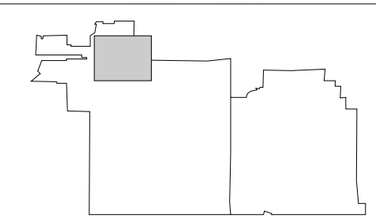

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Figure 2.9.3-2
Total VOC Soil-Vapor Concentrations in the TAG Study Area, December 2004–January 2005

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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2.9.4 Contaminant Soil-Vapor Distribution

Based upon the SNL/NM soil-vapor investigation, the vertical and horizontal distribution of TCE and total VOCs most likely do not represent continuous vapor plumes in the vadose zone. Very low concentrations of VOCs are found at all locations with a varied suite of VOCs at levels mostly below 100 ppb (v/v). Only two of the vapor wells currently have concentrations exceeding 10,000 ppb (v/v) (Table 2.9.3-1). The 46-VW-01 vapor plume was first identified in 2001. The vertical distribution of soil vapor at this location shows VOCs increasing with depth to a maximum at 115 ft then dropping off drastically before reaching the perched system. The TAG-SV05 vapor plume was first identified in 2004; concentrations of VOCs in soil vapor are greater nearest the surface and decrease below 200 ft bgs.

2.9.5 Historical Trends at SNL/NM Soil-Vapor Wells

Soil-vapor samples have been collected since 1997 for the TA-II wells and since April 2002 for the Tijeras Arroyo wells. The recently installed TAG soil-vapor wells have been sampled only once and, therefore, are not discussed in this section. Different laboratories using different analytical methods analyzed the first few rounds of soil-vapor samples from the TA-II wells. The results from these early sampling events (July 1997 through May 1998) do not appear to be comparable with the more recent data. Therefore, the early data are not discussed.

Since September 1998, all soil-vapor samples have been analyzed by Quanterra/Severn Trent Laboratories using EPA Method TO-14 (EPA January 1999). The TCE and total VOC results from these sampling events have been plotted as concentration-versus-time graphs for Figures A-1 through A-12 (Annex A). These graphs show that the TCE and total VOC concentrations in soil vapor exhibit a large amount of scatter. Trend lines are constructed on the graph using linear regression analysis (Table 2.9.5-1). Only a few of the trend lines exhibit good correlation with the linear models, as demonstrated by R^2 coefficient values near one (for example, TA2-VW-21). The other graphs had R^2 coefficient values near zero, indicating a poor correlation to a linear model. These data sets were then tested for nonlinear correlation with second order polynomial regression analysis. R^2 coefficient values did not improve significantly as no oscillations are prominent on these trend diagrams that would correlate with seasonal changes (or other periodicity) in soil-vapor mobility in the monitoring wells. With these extremely low R^2 coefficient values, it is not reasonable to use the trend lines to project future data values. However, TCE and total VOC concentrations qualitatively appear to be decreasing over time as illustrated in Annex A and Table 2.9.5-1.

2.9.6 KAFB Soil-Vapor Investigations around the Former Sewage Lagoons

As part of the KAFB IRP, a multi-phase, soil-vapor investigation was completed in the vicinity of the former sewage lagoons (WP-26) from October through December 2004. The soil-vapor investigation is summarized in “Summary of Activities at Solid Waste Management Unit WP-26, Sewage Lagoons and Golf Course Main Pond, Kirtland Air Force Base, New Mexico” (MWH Americas, Inc. June 2005). The purpose of the project was to investigate the presence of TCE in the vadose zone and perched system beneath the former sewage lagoons. The results of the investigation further define the vertical and horizontal extent of TCE in soil vapor.

Table 2.9.5-1
Summary of Concentration Trends in Soil Vapor Over Time at Select SNL/NM Vapor Wells (Annex A)

Vapor Well	Depth (ft)	Analyte	Annex A Figure	Trend	R^2
TA2-VW-20	72	TCE	A-1	Level	0.0008
TA2-VW-20	72	Total VOCs	A-2	Decreasing	0.2139
TA2-VW-21	50	TCE	A-3	Decreasing	0.8755
TA2-VW-21	50	Total VOCs	A-4	Decreasing	0.8599
TA2-VW-21	92	TCE	A-5	Decreasing	0.2104
TA2-VW-21	92	Total VOCs	A-6	Decreasing	0.2483
46-VW-01	115	TCE	A-7	Decreasing	0.3063
46-VW-01	115	Total VOCs	A-8	Decreasing	0.3265
46-VW-02	46	TCE	A-9	Decreasing	0.0438
46-VW-02	46	Total VOCs	A-10	Decreasing	0.0254
227-VW-01	225	TCE	A-11	Increasing	0.0454
227-VW-01	225	Total VOCs	A-12	Increasing	0.0449

ft = Foot (feet).
SNL/NM = Sandia National Laboratories/New Mexico.
TCE = Trichloroethene.
VOC = Volatile organic compound.

The first phase of the investigation consisted of 17 direct-push technology (DPT) locations sampled at 25-ft depth intervals to a maximum depth of 125 ft. The second phase of the investigation consisted of installation and sampling of two FLUTe™ soil-vapor monitoring wells. The depths of the FLUTe™ sampling ports were based upon the results of field instrument readings and range from approximately 30- to 60-ft intervals relative to one another. Subsurface soil and perched groundwater were also investigated (MWH Americas, Inc. June 2005); however, these results are not discussed in this report.

Soil-vapor samples from DPT and FLUTe™ locations were collected in SUMMA® canisters and analyzed for VOCs by EPA Method TO-15 (EPA January 1999). Twenty VOCs, including the primary COC TCE, were positively identified in DPT soil-gas samples from the vicinity of the former sewage lagoons at concentrations greater than the reporting limit. TCE was detected at all but one DPT location at concentration levels up to 110 ppb (v/v). The overall pattern at any given DPT location indicated increasing concentration with depth. TCE was detected at both FLUTe™ locations at concentration levels up to 150 ppb (v/v). The areal distribution of TCE from the DPT and FLUTe™ sample locations shows that the higher concentrations are on the western side of the former sewage lagoons.

2.9.7 COA Soil-Vapor Investigation of the Eubank Landfill

The COA EHD conducted soil-vapor investigations in 1996 and 2001. During the 1996 investigation, soil-vapor sampling probes were set at a grid spacing of 100 ft across the Northeast Fill Area with sampling depths ranging from 1.5 to 4.5 ft bgs (CH2M Hill April 1996). The maximum TCE concentration was 71 ppb (v/v). No soil-vapor investigations were conducted at the Southwest Fill Area in 1996. In September 2001, soil-vapor sampling was conducted at scattered locations across both fill areas to a maximum depth of 10 ft bgs (DBS&A

April 2002). Twenty-seven VOCs were detected in the soil-vapor samples. For the Northeast Fill Area, the maximum TCE concentration in soil vapor was 620 ppb (v/v). For the Southwest Fill Area, the maximum concentration of TCE in soil vapor was 2,000 ppb (v/v). No deeper soil-vapor investigations have been completed by the COA at the Eubank Landfill.

2.9.8 Soil-Vapor Conceptual Model

Soil-vapor samples collected from the vadose zone from the SNL/NM 10-well vapor-monitoring network as well as from KAFB and COA locations show evidence of vapor-phase contamination. However, no free-phase (liquid) TCE products have been encountered in any of the soil samples collected from the boreholes in any of the TAG investigations. The original source of the TCE is postulated to be the aqueous phase (i.e., waste water); the current vapor-phase contaminants result from being partitioned from the aqueous phase. With the exception of active sanitary sewer and storm drain systems, all anthropogenic sources of recharge (i.e., waste water) have been removed from service and no longer contribute water to the vadose zone.

The highest concentrations of vapor-phase TCE are currently understood to be present near three locations: SWMU 46, SWMU 227, and the COA Eubank Landfill. For SWMU 46, two multi-port, soil-vapor monitoring wells indicate that low to moderate TCE vapor concentrations exist near groundwater monitoring wells TJA-3 and TJA-7, with the highest concentration of 46,000 ppb (v/v) measured more than 100 ft above the groundwater elevation of the perched system. Concentrations immediately above the groundwater elevation of the perched system have ranged from nondetect to less than 500 ppb (v/v).

For SWMU 227, a multi-port, soil-vapor monitoring well indicates that the highest TCE vapor concentration of 14,000 ppb (v/v) is present in the second deepest sampling port, which is located approximately 60 ft above the groundwater elevation of the perched system. The only time the deepest sampling port has been sampled was in January 2005 due to improved sampling equipment (i.e., a more powerful vacuum pump). The concentration of TCE at the deepest sampling port in this sampling event was less than 20 ppb (v/v).

For the Eubank Landfill, the highest TCE concentration (11,000 ppb [v/v]) was collected from the shallowest sampling port in TAG-SV05 (50 ft bgs). The two sampling ports closest to the perched system at this location had TCE concentrations of less than 200 ppb (v/v). Previous COA shallow soil-vapor sampling at the landfill indicated substantial (2,000 ppb [v/v]) TCE concentrations within 10 ft of the land surface.

Based upon these soil-vapor and groundwater data, a residual TCE vapor plume does exist at scattered locations across the TAG study area. The primary mechanism for transporting this contaminant to the aquifer would be through partitioning back into the aqueous phase if additional recharge migrated through the system. During former operations in the study area, a recharge mechanism did exist (i.e., waste-water disposal) to transport TCE from the vapor phase to the groundwater. However, since waste-water disposal has ceased, no recharge mechanism currently exists (the estimates of evapotranspiration in the study area range from 90 to 95 percent of precipitation), and it is unlikely that additional TCE mass will be transported to the perched system The possible exception to this aqueous phase transport model is the TCE vapor found at the COA Eubank Landfill where no mechanism ever existed for aqueous phase transport.

2.9.9 Soil-Vapor Investigation Summary

Based upon the data discussed in Sections 2.9.1 through 2.9.5, the following points summarize the SNL/NM TAG study area soil-vapor investigations:

- Low to moderate levels of VOCs in soil vapor are common in the TAG study area.
- TCE has been found at 45 of the 47 sampling ports in the SNL/NM 10-well soil-vapor network.
- TCE accounts for up to 100 percent of the total VOCs found in the soil-vapor samples. Other VOCs compose a minor percentage of total VOCs in the majority of the samples.
- Moderate levels of soil vapor (10,000 ppb [v/v] to 46,000 ppb [v/v]) were found associated with three potential release sites—SWMU 46, SWMU 227, and the Eubank Landfill.
- Plots of soil-vapor concentration over time exhibit much scatter. However, the overall trend of VOC concentrations suggests a decrease over time.
- No recharge mechanism currently exists at any of the potential release sites to enhance the migration of VOCs to the perched system.

Based upon the data discussed in Sections 2.9.6 through 2.9.8 and presented in other reports (CH2M Hill April 1996; DBS&A April 2002; MWH Americas, Inc. June 2005), the following points summarize the KAFB and COA TAG study area soil-vapor investigations:

- Low levels of TCE in soil vapor (up to 150 ppb [v/v]) were associated with the former sewage lagoons, primarily at locations on the western side of the lagoons and at depths approaching the depth of the perched system.
- Moderate levels of TCE in soil vapor (up to 2,000 ppb [v/v]) were found in near-surface samples in the Southwest Fill Area of the Eubank Landfill.

2.10 Summary of High Potential Sources in the TAG Study Area for TCE and/or Nitrate

The potential sources that were assigned a high concern level for causing groundwater contamination in the TAG study area are listed in Table 2.10-1. Six potential TCE sources are assigned a high level of concern. Ten potential nitrate sources are assigned a high level of concern.

Table 2.10-1
Potential Sources with High Concern Level for
Causing Groundwater Contamination in the TAG Study Area

Potential Source	TCE	Nitrate	Site Owner
Old Acid Waste Line Outfall (SWMU 46)	X	X	SNL/NM
Building 901 Septic System (SWMU 165)	X	X	SNL/NM
TA-I Sanitary Sewer System (SWMU 187)		X	SNL/NM
Sewage Lagoons	X	X	KAFB
Golf Course Main Pond	X	X	KAFB
KAFB Sanitary Sewer System		X	KAFB
Eubank Landfill – Northeast Fill Area	X	X	COA
Eubank Landfill – Southwest Fill Area	X		COA
1994 Sanitary-Sewer Line Rupture		X	COA
COA Sanitary Sewer System		X	COA
Montessa Park / Tree Nursery		X	COA

COA = City of Albuquerque.
KAFB = Kirtland Air Force Base.
SNL/NM = Sandia National Laboratories/New Mexico.
SWMU = Solid Waste Management Unit.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

SNL/NM is responsible for three potential sources of high concern for causing groundwater contamination (SWMUs 46, 165, and 187). The Old Acid Waste Line Outfall (SWMU 46) involves both TCE and nitrate. The Building 901 Septic System (SWMU 165) also involves both TCE and nitrate. The TA-I Sanitary Sewer System (SWMU 187) involves only nitrate.

KAFB is responsible for three potential sources of high concern for causing groundwater contamination. The KAFB Sewage Lagoons and Golf Course Main Pond involve both TCE and nitrate. The KAFB Sanitary Sewer System is considered to have a high concern level for nitrate.

The COA is responsible for five potential sources of high concern for causing groundwater contamination. The Eubank Landfill—Southwest Fill Area involves only TCE. The Eubank Landfill—Northeast Fill Area involves both TCE and nitrate. The COA's 1994 Sanitary-Sewer Line Rupture, Sanitary Sewer System, and Montessa Park/Tree Nursery involve only nitrate.

3.0 HYDROGEOLOGIC DATA SUMMARY

The geologic setting, monitoring well network, and the hydrogeologic setting of the TAG study area are discussed in Sections 3.1, 3.2, and 3.3, respectively.

3.1 Geology

The ER Project's Site-Wide Hydrogeologic Characterization Project (SWHC) provided the framework for the geologic interpretation of the TAG study area (SNL/NM March 1994, March 1995, February 1998, February 2001). A site-wide conceptual model for the KAFB area, including SNL/NM, was presented in three documents: the most recent SWHC report (SNL/NM February 1998), the Long-Term Monitoring Strategy report (SNL/NM February 2001), and the TAG Continuing Investigation Report (SNL/NM November 2002). This section provides further description of the stratigraphy and structures specific to the TAG study area.

3.1.1 Geologic Data Set

The geologic information used to better define the site geology included geologic mapping of surface deposits, surface geophysical surveys, borehole geologic descriptions, and borehole geophysical logs, as well as various types of geophysical surveys, such as aeromagnetic, seismic-reflection, gravity, and magnetotelluric surveys.

3.1.2 Stratigraphy

3.1.2.1 Regional Stratigraphic Setting

The TAG study area overlies the eastern margin of the Albuquerque Basin. Geologic studies have focused primarily on the Upper Santa Fe Group, which is composed mostly of two interfingering facies: an alluvial fan facies and a fluvial facies. Both facies are less than 5 million years old and are composed of unconsolidated to poorly cemented gravel, sand, silt, and clay (Stone et al. February 2000). The alluvial fan facies consist of poorly sorted piedmont-slope deposits derived from the Sandia, Manzanita, and Manzano Mountains east of the study area. The fluvial facies are derived from the ARG to the north and are typically well sorted with correspondingly high hydraulic conductivity. Much of the Upper Santa Fe Group in the TAG study area is covered by poorly developed soil. Conversely, the depth to bedrock underlying the Upper Santa Fe Group is estimated to be approximately 3,500 ft near the center of the study area.

3.1.2.2 Local Stratigraphic Setting

The TAG study area, located on a partially dissected piedmont surface, was formed by coalescing Holocene and Pleistocene alluvial fans originating from the Sandia and Manzanita Mountains. The alluvial fan deposits are primarily derived from Tijeras Canyon, which bisects

the Sandia and Manzanita Mountains. Tijeras Arroyo extends westward from Tijeras Canyon and across the southern portion of the study area. The alluvial fan deposits consist of poorly sorted, weakly stratified sand and gravel in a silt/clay matrix. The sources of these clastic materials are the granitic and sedimentary lithologies of the Sandia Mountains, and the metamorphic and sedimentary lithologies from the Manzanita Mountains. Fine-grained facies in the alluvial fan deposits produce low-permeability zones that significantly influence water movement in both the unsaturated (vadose) and saturated zones.

The strata penetrated in boreholes during the installation of monitoring wells in the TAG study area were highly variable, consisting of alternating layers of gravels, sands, silts, and clays. Gravelly sand lenses, up to 20 ft in thickness, were present at various depths. The lithology of these coarse fractions mainly consisted of limestone, granite, and various metamorphic rock types. Layers of clayey-silty sand, ranging from 2 to 10 ft in thickness, were present throughout the drilled sequence, but were more prevalent and thicker at depths below 300 ft bgs. The low vertical permeability of these fine-grained units is suspected of being able to perch groundwater.

3.1.3 Site-Wide Structural Context

3.1.3.1 Regional Structural Setting

The TAG study area is situated within the Albuquerque Basin, which is bounded on both the eastern and western margins by north-south–trending faults related to the Rio Grande rift system. The Albuquerque Basin is a segment of the tectonic, hydrologic, and topographic basins extending from central Colorado to the border of Mexico at El Paso, Texas. North-south–trending fault systems control these basins (Hawley and Haase 1992). The faults on the eastern margin of the Albuquerque Basin nearest to the TAG study area primarily trend parallel to the Sandia-Manzanita mountain front. These faults are down-to-the-west, normal faults that offset Precambrian through Recent strata. The overall hydrologic effect of faults near the study area is not completely understood. At other locations in the Albuquerque Basin, normal faults affect the basin hydrogeology by: 1) influencing the distribution of the higher conductivity sediments; 2) partitioning the aquifer by juxtaposition of sediments with contrasting hydraulic properties; and 3) possibly providing planes of preferential cementation (Smith and Kuhle February 1998). Investigations conducted immediately south of the TAG study area show that the effects of normal faults range from sealing off groundwater flow to acting as preferential pathways. Groundwater flow across the faults may be localized, both horizontally and vertically (Reiter March 1998).

3.1.3.2 Local Structural Setting

The most recent structural interpretation (Van Hart June 2001; SNL/NM November 2002) of the TAG study area was based upon the findings presented earlier in documents by Fritts and Van Hart (March 1997) and Van Hart et al. (October 1999). In the recent interpretation, Van Hart (June 2001) integrated additional borehole and geophysical data from monitoring wells recently installed in the TAG study area. This interpretation also utilized aeromagnetic, seismic-reflection, gravity, magnetotelluric, and outcrop data. The principal faults in the KAFB area are shown in Figure 3.1.3-1 and are discussed in this section. The roles that these structures

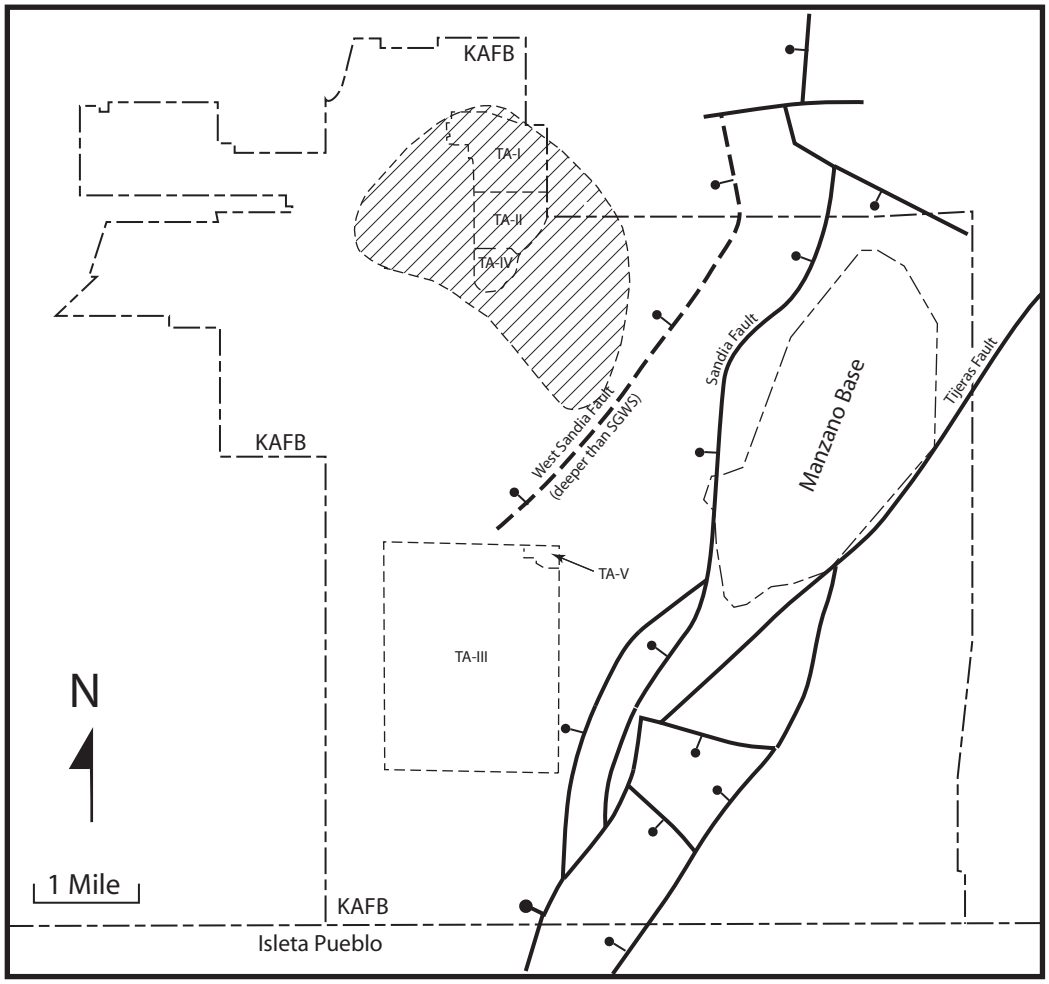


Figure 3.1.3-1
Principal Faults in the KAFB Area
(Known extent of Perched System shaded)

play in controlling groundwater flow are discussed in Section 3.3.2. Section 3.3.3 addresses the TAG conceptual model.

Sandia Fault

The major basin-bounding fault on the western side of the Manzanita Mountains is the Sandia fault. The fault was previously exposed in La Cañada Park near the intersection of Central Avenue and Tramway Boulevard. Precambrian granite on the east of the fault scarp is juxtaposed against rift-fill alluvium on the west (SNL/NM February 1998). The fault is not exposed farther south on KAFB. However, about 4.7 miles to the south-southwest of the previously exposed fault scarp, Pleistocene fan deposits appear to be offset on a series of vintage 1957 aerial photographs (SNL/NM February 1998). The offset has unfortunately been obliterated by the construction of Lovelace Road. As shown in Figure 3.1.3-1, the Sandia fault is interpreted to connect these two areas along a traverse passing to the west of a number of granite exposures in arroyo floors located along the western flank of Manzano Base (SNL/NM February 1998). Strong aeromagnetic features on the western flank of Manzano Base also support this interpreted location of the Sandia Fault.

West Sandia Fault

The existence and position of the West Sandia fault, at least on KAFB, is not as well constrained as the Sandia fault. In previous reports, the West Sandia fault has been inferred. Kelley (1954) was the first to interpret the basin-boundary fault system on the western side of both the Sandia and Manzanita Mountains as a doublet of north-south–trending faults, consisting of the Sandia fault and the Rincón fault, which is exposed on Sandia Pueblo land. Other proponents of this doublet style include Woodward et al. (1978), Lozinsky (1988 and 1994), and Hawley and Haase (1992). SNL/NM (February 1998) proposed that the West Sandia fault was shallowly buried in the TAG study area. Van Hart (June 2001) further resolved the hypothesized location of the West Sandia fault in the subsurface. As shown in Figure 3.1.3-1, the fault extends north-south across the TAG study area. However, Van Hart (June 2001) noted that the location of the West Sandia fault is not conclusively defined.

Syncline

The existence of a south-plunging syncline in the TAG study area was first proposed by Fritts and Van Hart (March 1997) using a structure map of the Santa Fe Group sediments. The datum for the structure map was a stratigraphic marker on the borehole geophysical logs that approximately defined the contact between predominantly coarse-grained, overlying alluvial fan sediments from predominantly fine-grained, underlying alluvial fan sediments. An updated structure map from Van Hart (June 2001) is presented as Figure 3.1.3-2. Structural contours on the coarse-grained/fine-grained marker show that the axis of the south-plunging syncline trends north-south and parallel to the Sandia fault and the mountain front. Such parallelism is typical of rift-related structures. The syncline is significant because the bedding of the Upper Santa Fe Group dips eastward under most of the TAG study area. The bedding dips average approximately 1 degree eastward along the western limb of the syncline.

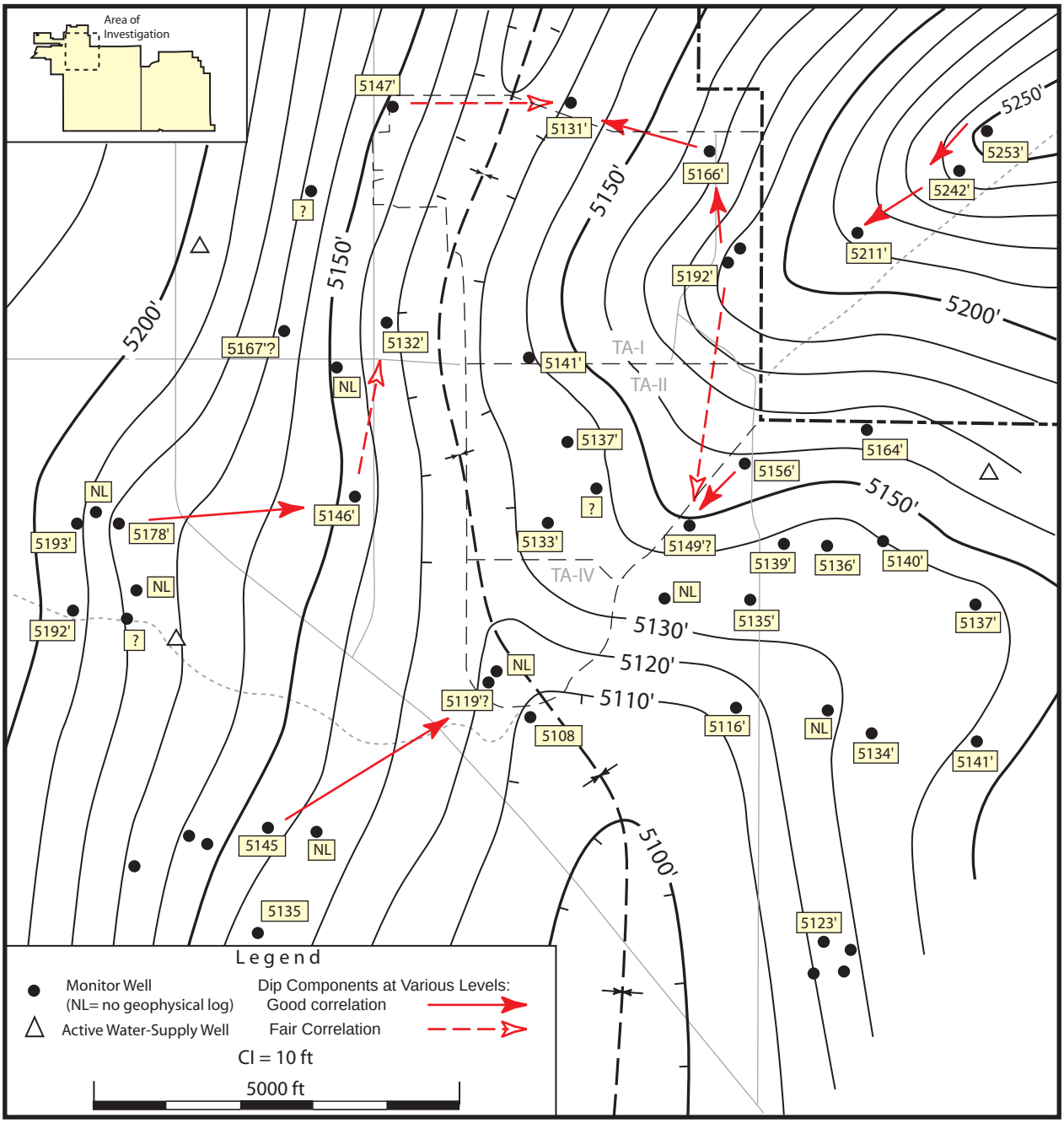


Figure 3.1.3-2

Structure Map on Datum near the Top of the Fine-Grained Alluvial Fan Lithofacies, Tijeras Arroyo Area (modified from Van Hart, June 2001)

3.1.3.3 Structural and Stratigraphic Controls on Groundwater Flow

This section provides an overview of the relationship of geology to groundwater occurrence in the TAG study area; however, the specific details of the hydrogeology are provided in Section 3.3. As part of the Van Hart (June 2001) work, a geophysical-log correlation net (similar to a fence diagram) was constructed using borehole geophysical logs from each well or well pair (a regional aquifer well located adjacent to a perched system well) in the TAG study area. Thirty-nine control points were used. Six cross-sections with broad stratigraphic correlations were constructed using the correlation net (SNL/NM November 2002). Depicted on the cross-sections is the coarse-grained/fine-grained datum that was used to construct the structure map (Figure 3.1.3-2). The vertical transition from predominantly coarse-grained to fine-grained sediments has wide regional significance, and probably was formed by both tectonic and climatic events (Pazzaglia et al. September 1999; Van Hart June 2001).

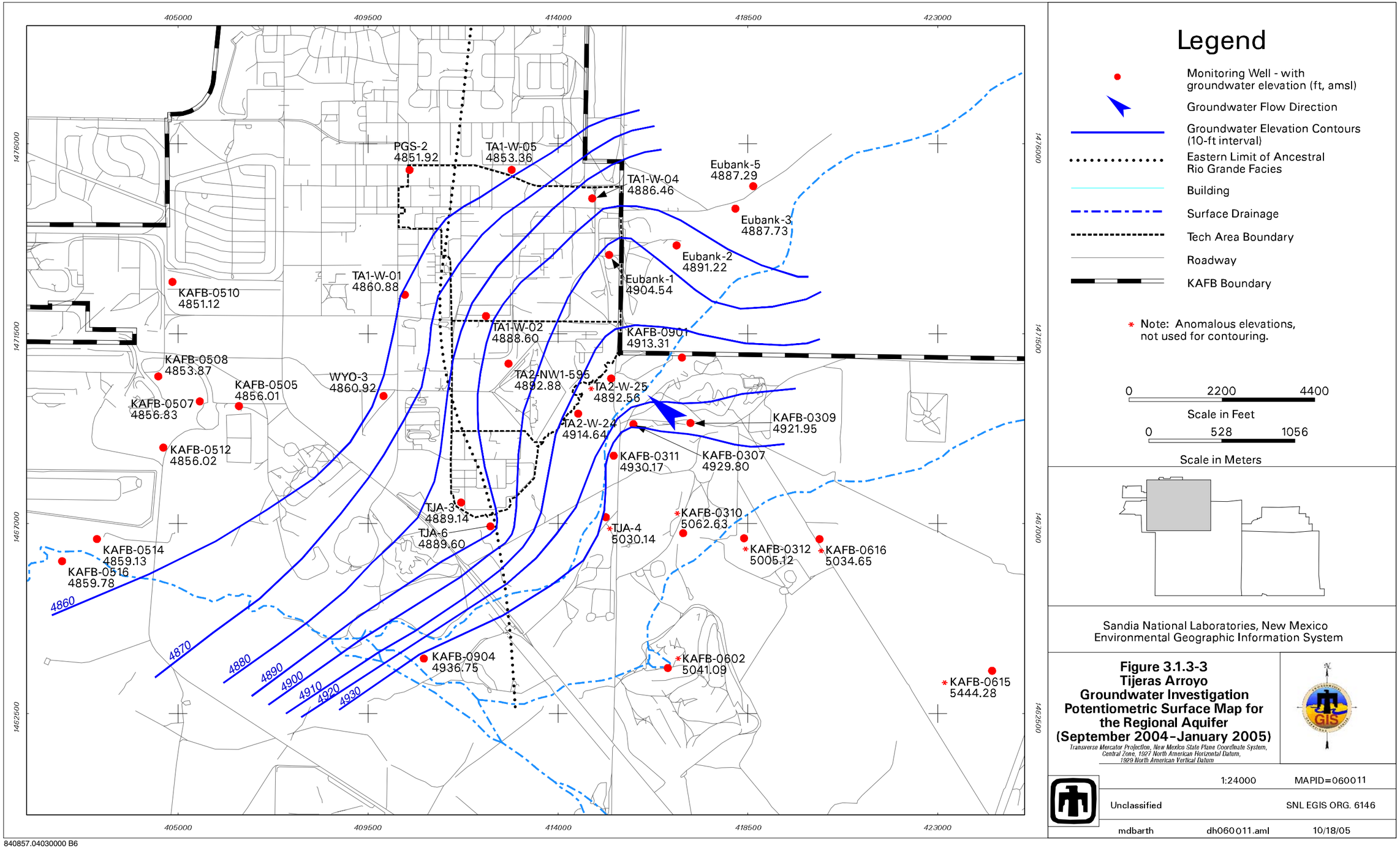
Over most of the TAG study area, the regional aquifer is contained within the fine-grained alluvial fan facies. However, along the western side of the study area paralleling Wyoming Boulevard, the regional aquifer is contained within the interfingering, highly conductive ARG fluvial facies. The potentiometric surface of the regional aquifer in the study area shows that groundwater flows uniformly to the northwest (Figure 3.1.3-3) toward the KAFB, COA, and VA water-supply wells.

Groundwater in the perched system is solely contained in the fine-grained alluvial fan facies, but flow in the perched system is to the southeast, opposite to that of the regional aquifer. This difference in the direction of groundwater flow may be governed by a combination of the interfingering facies, bedding dip associated with the syncline, and unique recharge sources. Bedding dip does not appear to be the sole control of groundwater flow direction because the potentiometric-surface contours (Figure 3.1.3-4) are not directly parallel to the structure contours (Figure 3.1.3-2).

As shown in Figures 3.1.3-5 and 3.1.3-6, groundwater in the perched system appears to merge with that of the regional aquifer. The rate of convergence between the perched system and the regional aquifer is shown by an isopach of the distance between the upper surfaces of the two systems (Figure 3.1.3-6). The distance decreases from greater than 260 ft in the northwestern portion of the study area to less than 160 ft in the southeastern portion, as the two groundwater systems converge near the southeastern corner of the TAG study area in the vicinity of the KAFB Golf Course and KAFB LF-08. The intermediate water-bearing zone screened by monitoring well TJA-4 provides additional evidence that groundwater in the perched system serves to recharge the regional aquifer in the area of convergence.

<u>AquaTrack Geophysical Surveys</u>

Two AquaTrack geophysical surveys were conducted in 2003 for the purpose of quickly mapping the lateral extent of groundwater saturation associated with the perched system (Sunrise Engineering, Inc. April 2003; Sunrise Engineering, Inc. August 2003). The AquaTrack surveys were used to provide additional information about the extent of perched water in areas with limited well data.



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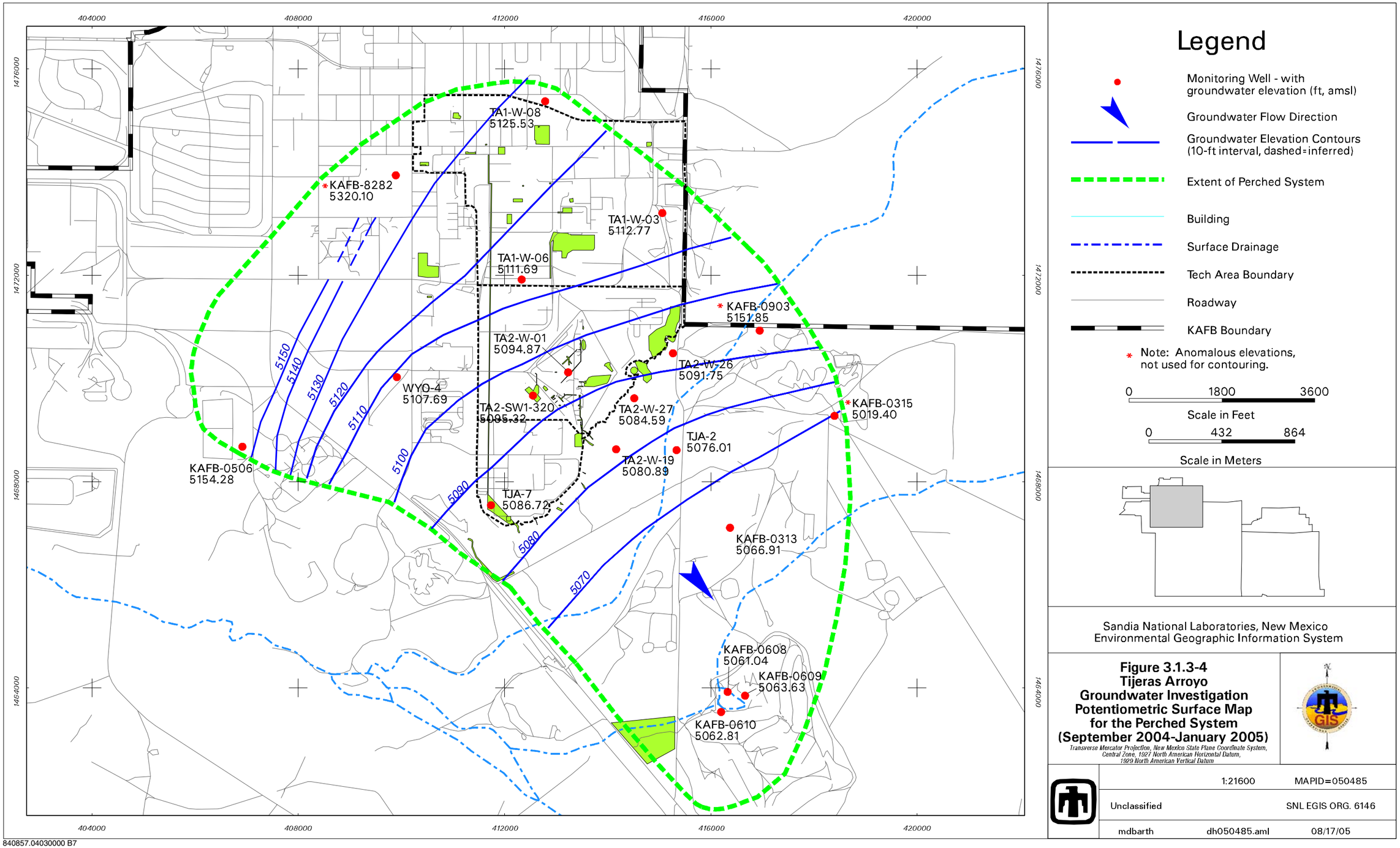

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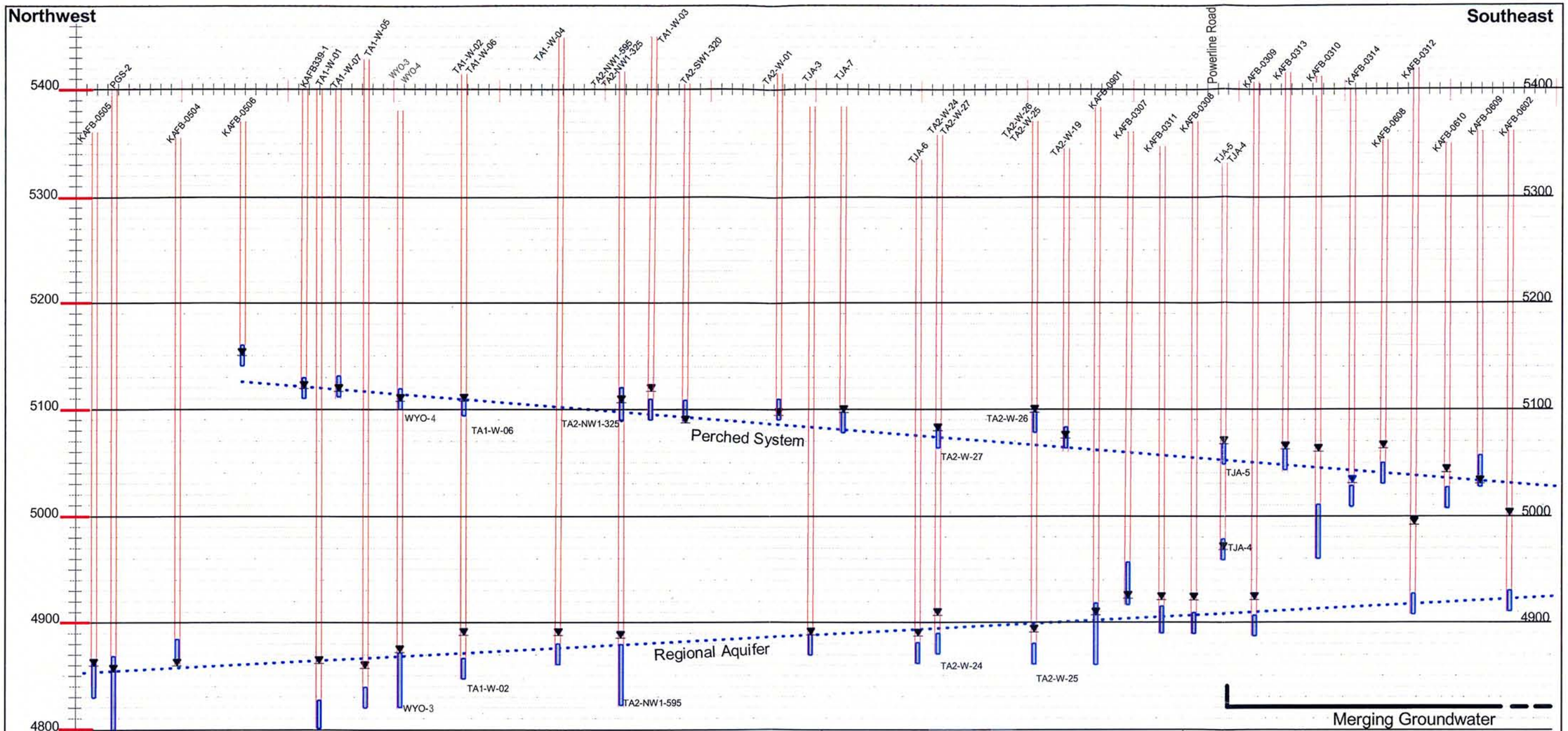

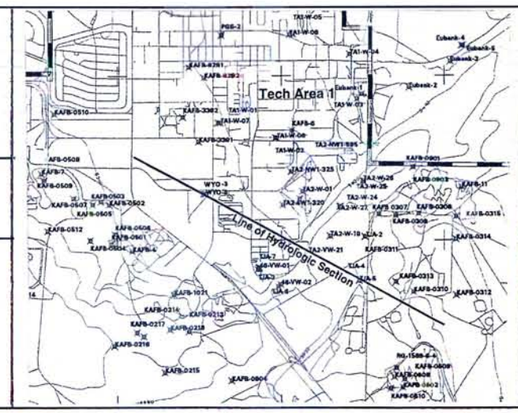

Figure 3.1.3-5
TAG Hydrologic Section

Approximate Scale:

Horizontal 0 — 50

Vertical 0 — 100

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Legend

- Monitoring Well
- Well Screen
- Water Level Elevation (ft amsl September 2004 - January 2005)
- Projected Potentiometric Surface

Notes:

1. Monitoring wells are projected perpendicular onto a N 60 degree W trending line that passes directly through TJA-4 and WYO-3 / WYO-4
2. ft amsl = feet above mean sea level.
3. Well locations are depicted on Figure 3.2-1.

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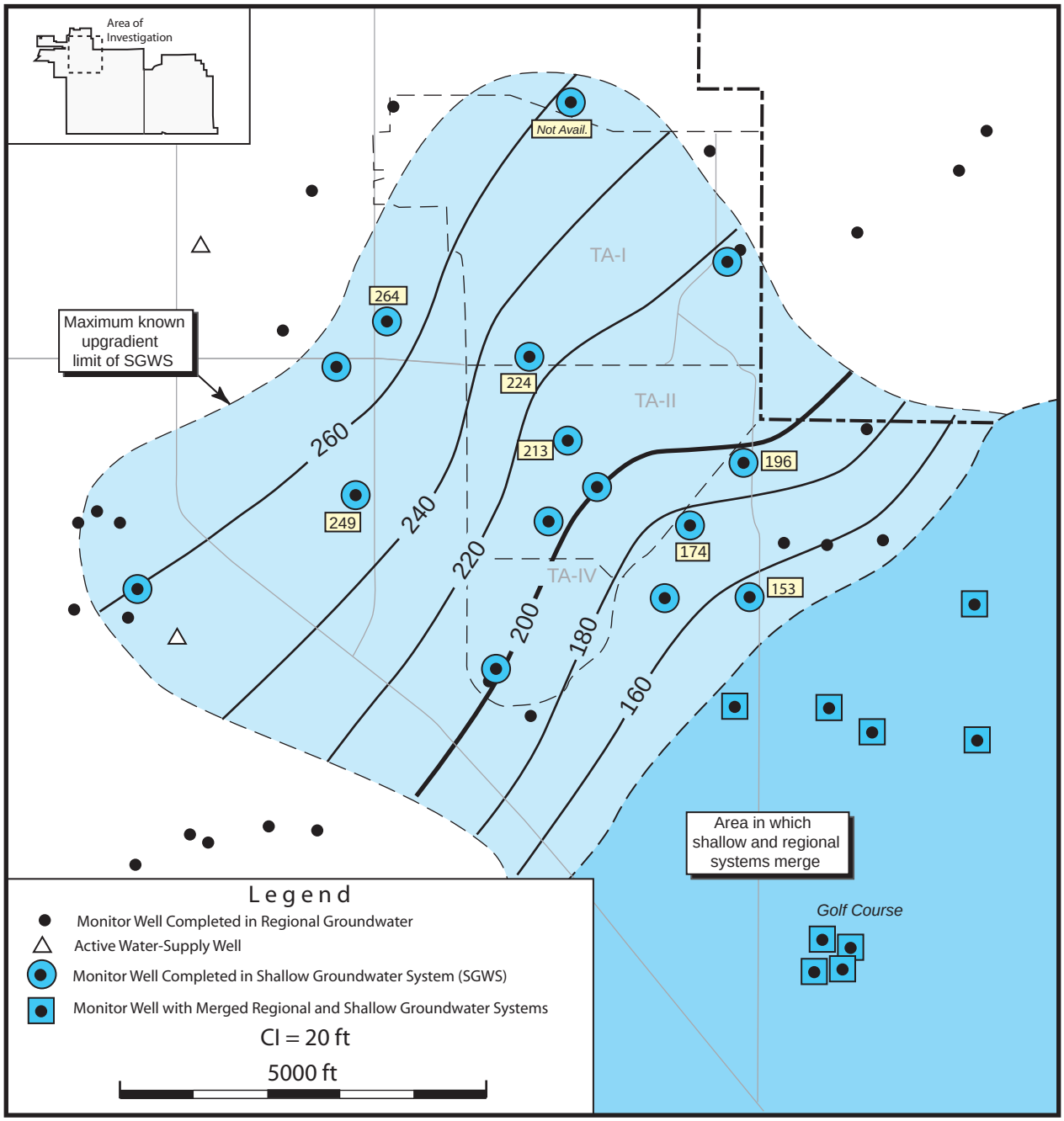


Figure 3.1.3-6

Isopach Map of Vertical Distance between the Perched System and Regional Aquifer, Tijeras Arroyo Area (modified from Van Hart, June 2001)

AquaTrack is a patented geophysical technology developed by Sunrise Engineering, Inc. in which groundwater bodies are mapped using controlled source, frequency domain magnetics. Electrodes were placed in direct contact with the water in several monitoring wells and energized with low-amperage, 400-hertz, alternating current. A vertical dipole configuration was used with electrodes placed in adjacent wells that were completed in the perched system and the regional aquifer. The electrical current flowed preferentially through saturated subsurface materials due to the inherently lower electrical resistance. This preferential flow of current created an induced magnetic field that was measured at multiple points on the ground surface in a grid pattern. The magnetic field measurements were recorded using a data logger that contained multiple electrical coils and a global positioning system receiver. The magnetic data were subsequently processed and contoured at the Sunrise Engineering office in Draper, Utah. After being compared to pre-existing hydrogeologic data, the edges of groundwater saturation were inferred to be represented by anomalously high gradients in the induced magnetic field.

The first survey (Annex B) was conducted in the vicinity of SWMU 46 and covered approximately 64 acres (Sunrise Engineering, Inc. April 2003). This was a demonstration survey because Sunrise Engineering had not yet conducted such a deep survey in New Mexico. To enhance signal strength, a pair of electrodes was used. One electrode was placed in the standing water in monitoring well TJA-7 (perched system) and another electrode was placed in monitoring well TJA-3 (regional aquifer). Measurements were collected across the ground surface from 300 stations over a period of three days in February 2003. The inferred edge of the perched system trended approximately northwest to southeast along the western boundary of TA-IV (Sunrise Engineering, Inc. April 2003; Annex B, Figure 2). The undulating shape of the saturation edge was suggestive of anastomosing channels/alluvial-fan deposits. Discontinuities in saturation appeared to mimic the stratigraphic complexity of the perched system.

The second survey (Annex C) was conducted along Powerline Road near the southwestern corner of the COA South Eubank landfill (Sunrise Engineering, Inc. August 2003). Approximately 200 acres were mapped. Measurements were collected from 875 stations over a period of nine days in June 2003. Electrodes were placed in two well pairs. The first pair consisted of monitoring wells TA1-W-03 (perched system) and Eubank-1 (regional aquifer). The second pair consisted of monitoring wells TA2-W-25 (regional aquifer) and TA2-W-26 (perched system). The eastern inferred edge of the perched system had an undulating shape that trended approximately north to south along Powerline Road (Sunrise Engineering, Inc. August 2003, Annex C, Figure 2). A narrow zone of negligible saturation extended northwestward to within approximately 150 ft of monitoring well TA1-W-03. The overall pattern of saturation was suggestive of anastomosing alluvial-fan deposits.

In 2004, KAFB conducted two AquaTrack surveys, one near the inactive sewage lagoons and another where a sewer line had failed in Tijeras Arroyo. The findings are not yet available.

3.2 Groundwater Monitoring Well Network

This section summarizes the current status of the TAG monitoring well network. Table 3.2-1 summarizes monitoring well data for select monitoring wells. Water level data at SNL/NM and KAFB are collected by several organizations. Quarterly and monthly water level data are summarized in annual groundwater surveillance reports consolidated by the SNL/NM

Table 3.2-1
TAG Investigation Hydrograph Summary (Water Level Trends) for Select Monitoring Wells

Well ID	Screened Interval	Installation Date	Depth to Water (ft btoc) January 2005	Water Level Elevation (ft amsl) January 2005	Maximum Elevation		Minimum Elevation		Overall Groundwater Elevation Trend (Increasing/ Decreasing)	Approximate Rate of Trend (ft/year)	KAFB/COA Pumping Cycles Apparent (Yes/No)
					Date	ft amsl	Date	ft amsl			
KAFB-0310	Regional (?)	27-Aug-91	351.56	5064.66	Apr-04	5062.91	Jul-97	5055.20	Increasing	+ 1.5	No
KAFB-0311	Regional	24-Jul-92	423.31	4930.17	Apr-04	4927.13	Jan-97	4920.49	Increasing	+ 0.7	No
PGS-2	Regional	22-Sep-95	553.70	4851.92	Feb-97	4856.47	Aug-98	4849.51	Decreasing[a]	- 0.5	Yes
TA1-W-01	Regional	22-Mar-97	542.36	4858.79	Apr-97	4863.99	Nov-04	4858.46	Decreasing	- 0.9	Yes
TA1-W-02	Regional	27-Feb-98	525.35	4888.60	Apr-02	4891.00	Aug-98	4884.08	Increasing	+ 0.6	Yes
TA1-W-03	Perched	27-Jan-98	341.59	5112.77	Mar-98	5116.83[b]	Jan-05	5113.22	Decreasing	- 0.6	No
TA1-W-04	Regional	6-Oct-98	571.85	4886.46	Apr-02	4889.65	Dec-98	4883.84	Increasing	+ 1.8	No
TA1-W-05	Regional	16-Nov-98	574.75	4853.36	Mar-01	4861.91	Sep-04	4854.90	Decreasing[a]	- 0.5	Yes
TA1-W-06	Perched	27-Feb-98	302.74	5111.69	Mar-98	5115.08	Sep-04	5112.07	Decreasing	- 0.4	No
TA2-NW1-595	Regional	27-Jul-93	525.71	4892.88	Apr-02	4894.57	Aug-93	4884.99	Increasing	+ 0.8	Yes
TA2-SW1-320	Perched	30-Nov-92	313.86	5095.32	Mar-97	5098.93	Sep-04	5095.76	Decreasing	- 0.2	No
TA2-W-01	Perched	27-Jun-94	322.45	5094.87	Sep-94	5097.83	Oct-01	5094.21	Decreasing	- 0.2	No
TA2-W-19	Perched	9-Nov-95	267.65	5080.89	Oct-02	5081.98	Jan-97	5080.58	Increasing	+ 0.1	No
TA2-W-26	Perched	19-Jan-98	281.35	5091.75	Oct-00	5093.52	Jan-05	5091.82	Decreasing	- 0.2	No
TA2-W-27	Perched	9-Feb-98	275.59	5084.59	Oct-00	5085.66	Sep-04	5084.64	Stable[c]	--	No
TJA-2	Perched	12-Jul-94	273.80	5076.01	Oct-02	5077.72	Jan-96	5075.09	Increasing	+ 0.3	No
TJA-3	Regional	31-Aug-98	498.75	4889.14	Aug-99	4890.02	Feb-02	4888.78	Stable[c]	--	No
TJA-4	Regional (?)	4-Aug-98	308.35	5030.14	Jan-05	5030.29	Dec-98	5020.62	Increasing	+ 1.4	No
WYO-3	Regional	1-Sep-01	528.50	4860.92	May-02	4863.20	Dec-04	4861.20	Decreasing	- 0.6	No
WYO-4	Perched	1-Sep-01	282.21	5107.69	Oct-01	5113.20	Sep-04	5108.41	Decreasing	- 1.6	No

[a]KAFB/COA pumping cycles partially obscure a trend.
[b]Two anomalous data points removed from the data set.
[c]Trend line too flat to determine trend.
amsl = Above mean sea level.
btoc = Below top of casing.
COA = City of Albuquerque.
ft = Foot (feet).
ID = Identification.
KAFB = Kirtland Air Force Base.
TAG = Tijeras Arroyo Groundwater.
(?) = Uncertainty exists as to the unit of completion, may represent an intermediate water-bearing unit associated with the merger of the perched system and the regional aquifer.
-- = Indeterminate trend.

Groundwater Protection Program (Department 10331) that are submitted to the NMED and the EPA. For the TAG investigation, water levels from monitoring wells are currently measured by SNL/NM and KAFB. The SNL/NM wells in this network were installed from 1992 through 2000; the wells installed from 1992 to 1995 were part of investigations of TA-II or the SWHC. Since 1997, SNL/NM wells in the TAG study area were installed according to monitoring well installation procedures and the sampling methods discussed in Section 5.5 of the GIP (SNL/NM March 1996) as well as in SNL/NM ER Project FOPs. Section 5.5 of the GIP also addresses the rationale that determined the well locations (Figures 3.2-1 and 3.2-2). The overall intent of drilling these wells was to establish a groundwater monitoring network for detecting possible contaminants in the perched system and the regional aquifer. In this report, monitoring wells and associated data through January 2005 are evaluated.

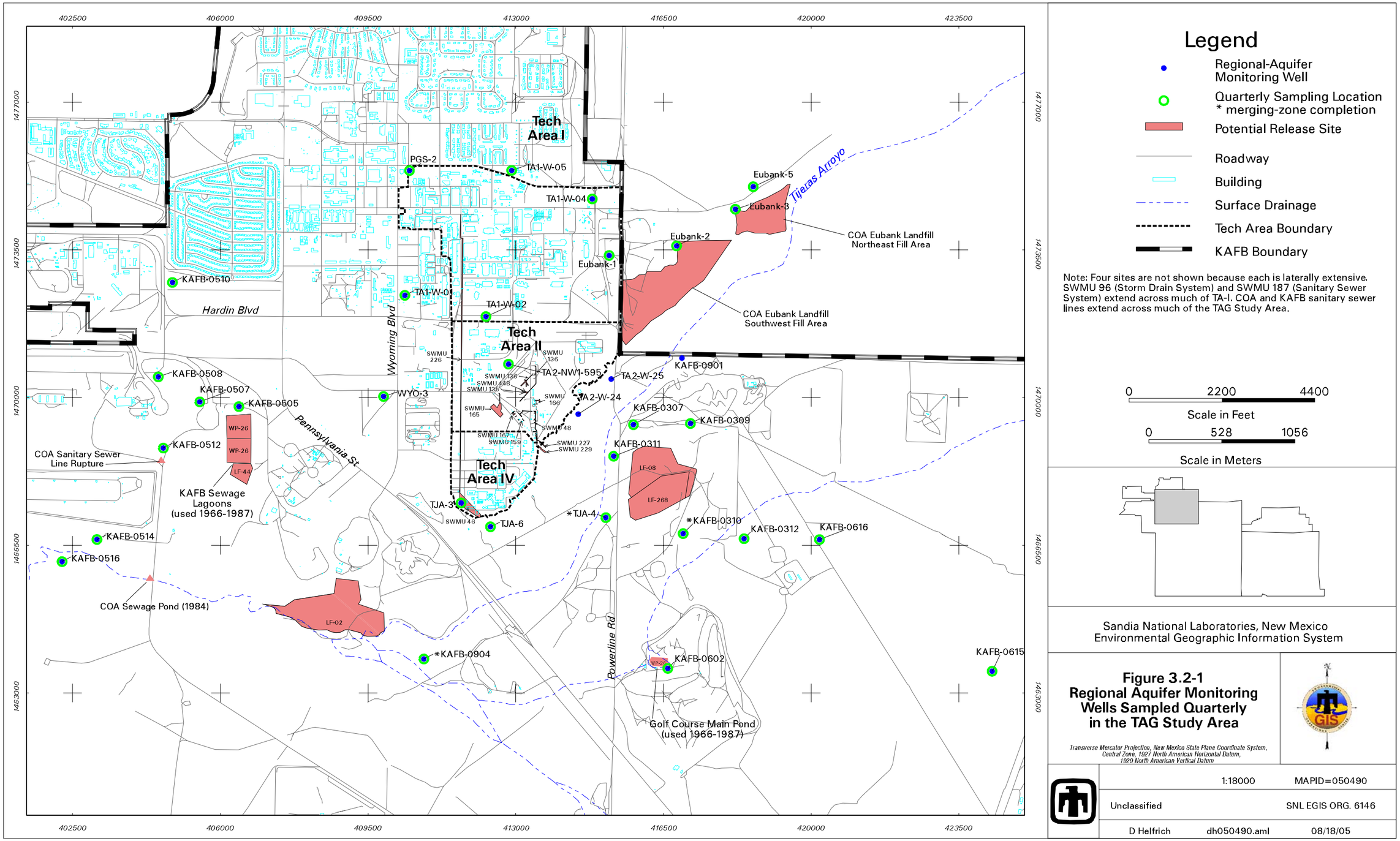
KAFB and COA Monitoring Well Network

Groundwater investigations at KAFB are conducted as part of both RCRA corrective action investigations and an NMED-mandated Nitrate Abatement Program (Montgomery Watson August 2000). The KAFB groundwater monitoring wells associated with these sampling programs have been installed as long ago as 1990, with many of the Nitrate Abatement Program wells installed in the last two to three years. The Nitrate Abatement Program wells are generally located in the vicinity of the former sewage lagoons (KAFB-0500 series wells) and the KAFB Golf Course (KAFB-0600 series wells).

In 1988, the COA EHD installed monitoring well Eubank-1 at the COA Eubank Landfill. Three additional wells (Eubank-2, Eubank-3, and Eubank-5) were installed in 1997. All four wells were drilled with mud-rotary drilling methods and are installed in the regional aquifer with 60-ft screen intervals. The COA EHD collects groundwater samples on an annual schedule with portable Bennett piston pumps. The samples are routinely analyzed for TCE and nitrate using EPA Methods 8260 and 300.1 (EPA November 1986), respectively.

In January 2005, the depth to water in the regional aquifer wells ranged from 423 to 574 ft bgs and in the perched system wells from 267 to 342 ft bgs (Table 3.2-1). Two wells (TJA-4 and KAFB-0310) with depths to water of 308 and 352 ft bgs, respectively, are interpreted to be completed in intermediate water-bearing zones below the perched system. These depths to water are anomalous given their locations, and these wells are considered to be intermediate groundwater wells in the area where the regional aquifer and the perched system merge. For purposes of discussion, wells TJA-4 and KAFB-0310 have been grouped together with the regional aquifer wells. The monthly water-level data (well number, date collected, depth to water, and groundwater elevation) are discussed in Section 3.3; well hydrographs are presented in Annex D.

The TAG hydrologic section is presented as Figure 3.1.3-5 and approximates a northwest-to-southeast–trending line of section across the study area. The section depicts the ground surface, location of the wells, depth of the screened intervals and the elevations of groundwater as of January 2005. Most of the monitoring wells have been projected into the line of section. The section clearly demonstrates that the perched system potentiometric surface dips to the southeast and the regional aquifer potentiometric surface dips to the northwest. Also, as briefly discussed and further evaluated in Section 3.3, the two groundwater systems are apparently merging in the southeastern portion of the TAG study area.



Legend

- Regional-Aquifer Monitoring Well
- Quarterly Sampling Location * merging-zone completion
- Potential Release Site
- Roadway
- Building
- Surface Drainage
- Tech Area Boundary
- KAFB Boundary

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 2200 4400
Scale in Feet

0 528 1056
Scale in Meters

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Figure 3.2-1
Regional Aquifer Monitoring Wells Sampled Quarterly in the TAG Study Area

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

	1:18000	MAPID=050490
Unclassified		SNL EGIS ORG. 6146
D Helfrich	dh050490.aml	08/18/05

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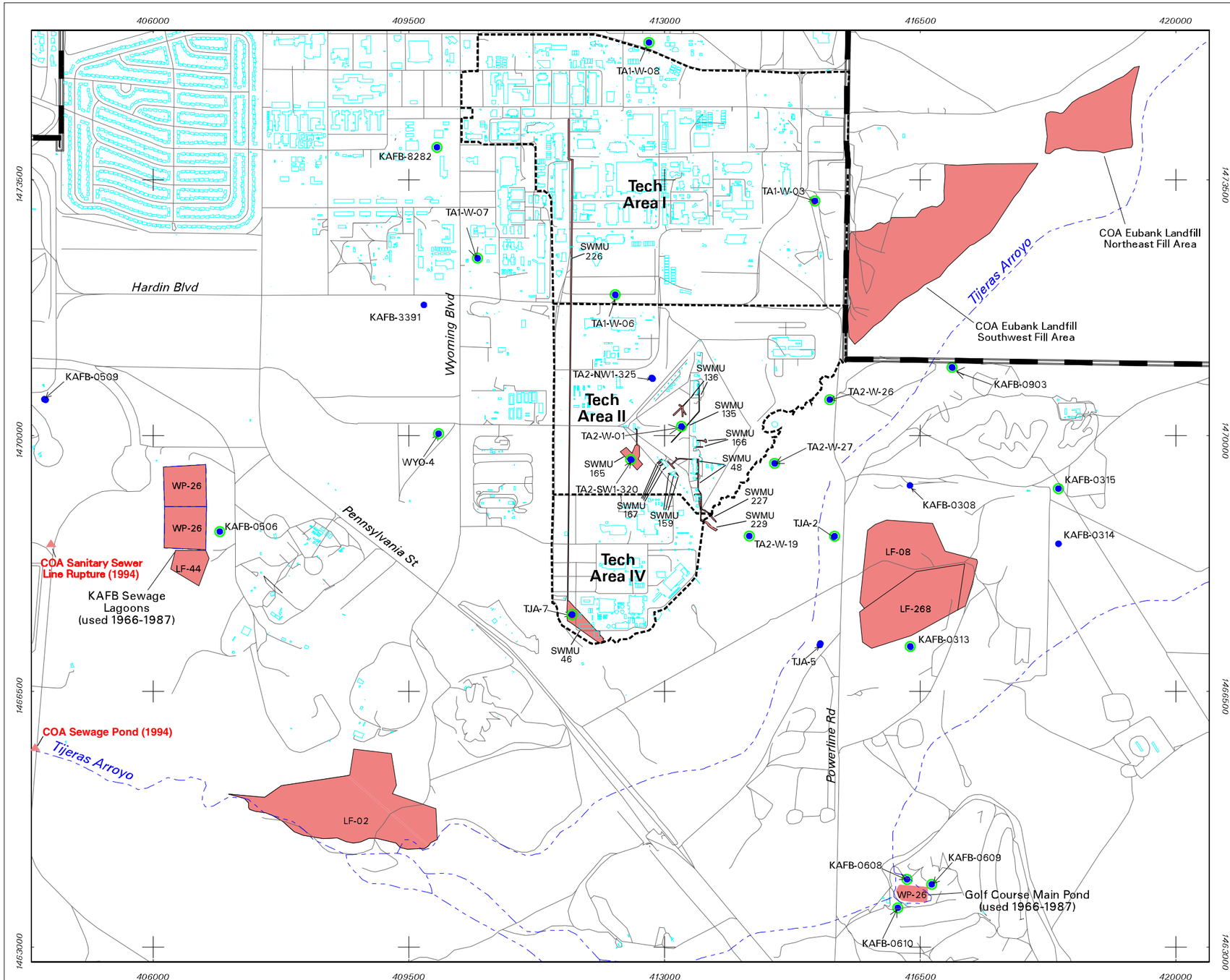

Legend

- Perched - System Monitoring Well
- Quarterly Sampling Location
- Potential Release Site
- Roadway
- Building
- Surface Drainage
- Tech Area Boundary
- KAFB Boundary

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1500 3000
Scale in Feet

0 360 720
Scale in Meters

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Figure 3.2-2
Perched System Monitoring Wells Sampled Quarterly in the TAG Study Area

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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3.3 Hydrology

This section discusses the regional and local hydrologic setting, aquifer parameters, flow gradients, and estimated flow velocities. Sections 3.3.1 and 3.3.2 summarize the regional and local hydrologic settings pertaining to the TAG Investigation. Section 3.3.3 presents the TAG conceptual model. Sections 3.3.4 and 3.3.5 summarize the regional aquifer and perched system characteristics (flow direction, gradients, elevation changes, aquifer parameters, flow velocities, and modeling results).

3.3.1 Regional Hydrology

The regional hydrology in the vicinity of SNL/NM has been thoroughly described in SWHC reports (SNL/NM February 1998 and February 2001). SNL/NM is located in the eastern portion of the Albuquerque Basin, a tectonic and hydrologic feature. The COA and KAFB rely heavily on groundwater in this basin as the principal water supply. The Albuquerque Basin (also known as the Middle Rio Grande basin in some literature) covers approximately 2,100 square miles of central New Mexico. The basin is 70 miles long and up to 40 miles wide near the center of the basin.

The major fresh water aquifers in the basin are located within the Upper Santa Fe Group sediments, specifically within the fluvial and alluvial fan facies. Local cones of depression, associated with the large groundwater withdrawal at the COA wellfields, have altered the direction of groundwater flow around these fields. Seasonal fluctuations in the water table elevation are common, and groundwater mining has led to significant long-term declines of the regional water table superimposed over seasonal fluctuations. The long-term water table decline is not horizontally uniform and is most pronounced along the eastern boundary of the basin due to population centers, facies distribution, and effects attributable to basin-bounding faults. The area of largest water-level decline is immediately north of KAFB, where water levels have decreased approximately 140 ft in the past 40 years (Thorn et al. 1993).

3.3.2 Local Groundwater Setting

On KAFB, the basin-bounding fault system described in Section 3.1.3 divides the groundwater system into three distinct hydrogeologic regions (SNL/NM February 1998). Hydrogeologic Region 1 underlies the TAG study area, is located west of the fault system, and is characterized by Upper Santa Fe Group sediments. Hydrogeologic Region 2 is associated with the fault system and is characterized by both unconsolidated and bedrock water-bearing units. Hydrogeologic Region 3 is located east of the fault system and is characterized by predominantly deep-fractured bedrock aquifers in the Manzanita Mountains. Regions 2 and 3 have little bearing on the TAG study area and are therefore not discussed any further in this report.

The water-bearing units in Region 1 are present within unconsolidated to partially indurated, porous media. Sediments include a mix of coarse- to fine-grained sands, silts, and clays that create a complex framework with highly variable bedding thickness and continuity. The sedimentary packages and the associated structural controls on groundwater flow are discussed in Section 3.1.3. Groundwater flow direction, gradients, and elevations are discussed in Sections 3.3.4 and 3.3.5 for the regional aquifer and perched system, respectively.

3.3.3 TAG Conceptual Model

The TAG conceptual model is shown in Figure 3.3.3-1 and represents a vertical section that trends from northwest to southeast, which approximates the direction of groundwater flow in the perched system. The conceptual model illustrates the various components of the hydrogeologic setting of the TAG study area. These components are discussed throughout this chapter.

The TAG conceptual model shows that the vadose zone is thinner in the central TAG study area where the perched system is present. The perched system is present only across the north-central portion of KAFB within thin lenses of alluvial fan sediments. Discontinuous, yet overlapping multiple lenses of unsaturated alluvial fan sediments serve as a perching horizon beneath the perched system. Deeper still, the regional aquifer is more extensive both laterally and vertically. Groundwater in the perched system merges with the regional aquifer in the southeastern portion of the study area in the vicinity of well TJA-4.

The TAG conceptual model depicts two principal sedimentary facies. The ARG fluvial facies exhibit complex interfingering with the alluvial fan facies along a north-south line approximated by Wyoming Boulevard. The ARG fluvial facies typically exhibit the following characteristics:

- Are coarse-grained with high (sand plus gravel) to (silt plus clay) ratios
- Are well sorted
- Exhibit relatively continuous and well-connected bedding
- Have moderate to high hydraulic conductivities (10 to 150 ft/day)
- Were deposited in north-south–trending, laterally continuous paleochannels that are analogous to the modern Rio Grande

In contrast, the alluvial fan facies typically exhibit the following characteristics:

- Are fine-grained with moderate (sand plus gravel) to (silt plus clay) ratios
- Are poorly sorted with greater heterogeneity
- Exhibit lenticular, moderately connected bedding
- Have low to moderate hydraulic conductivities (0.01 to 50 ft/day)
- Were deposited in east-west–trending, highly braided paleochannels that were developed on the mountain front piedmont

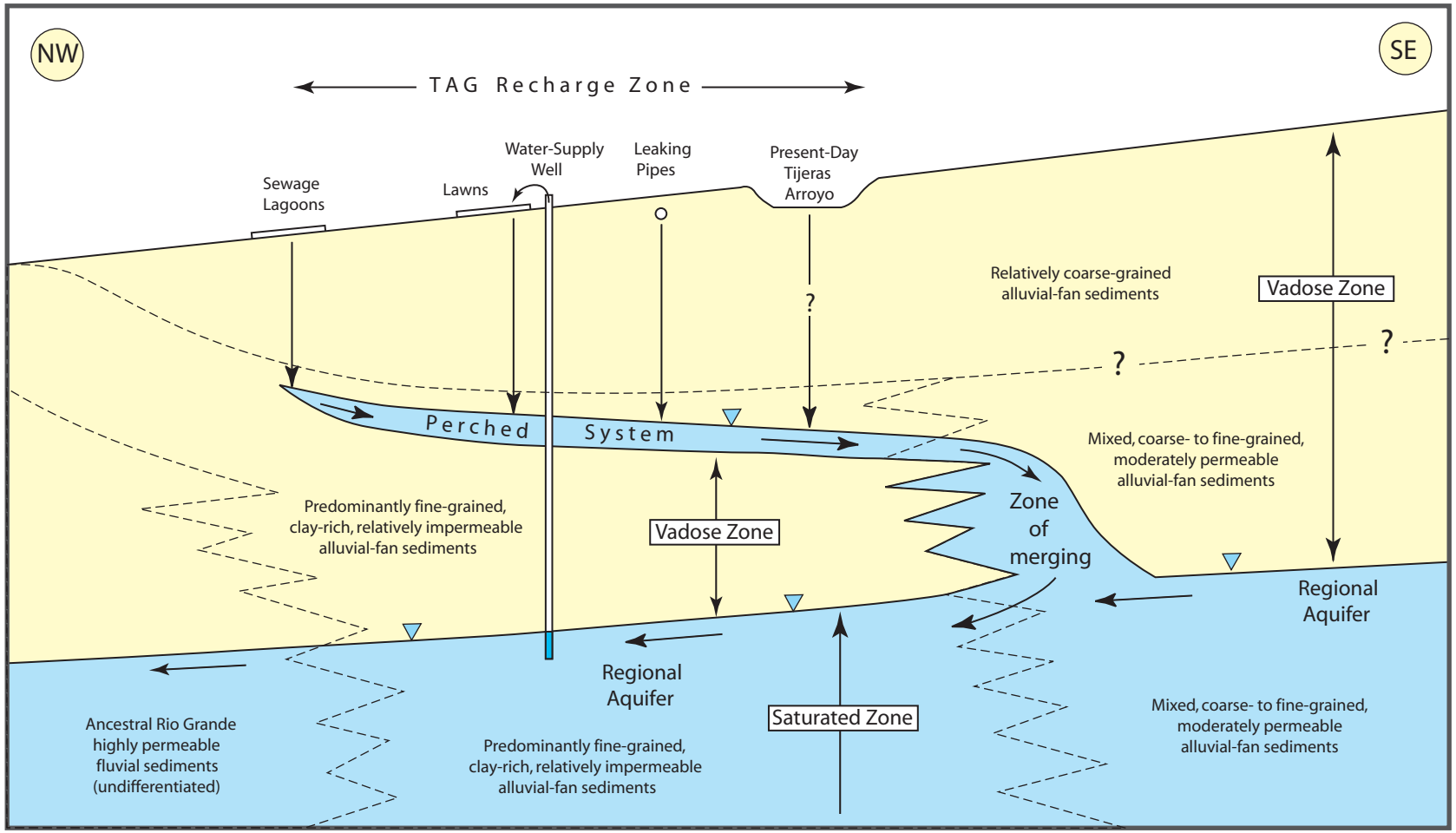

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Figure 3.3.3-1
Schematic TAG Conceptual Model

The perched system is restricted to the alluvial fan facies and exhibits the following characteristics:

- Unconfined (water table) conditions
- Uppermost saturated interval of about 10 to 30 ft in thickness
- Groundwater flow direction primarily to the southeast
- Average lateral gradient of approximately 0.008 ft/ft
- Not used for water supply
- Limited lateral extent across north-central KAFB
- Geochemical signatures variable between well locations with high chloride, nitrate, and sulfate concentrations
- Recharged by both artificial (leaking water-supply/sewer lines, the golf course, and the former sewage lagoons) and natural sources (Tijeras Arroyo and possibly ancestral Tijeras Creek)
- Perching mechanism appears to be the low vertical permeability associated with bedded, fine-grained sediments
- Principal hydrologic controls: (1) the stratigraphic dip of the alluvial fan sediments; (2) stratigraphic variations (such as braided paleochannels); and (3) multiple recharge locations in the northwestern part of the TAG study area

The regional aquifer is present in both the ARG fluvial facies and alluvial fan facies, and exhibits the following characteristics:

- Unconfined to semiconfined conditions
- Greater than 1,000 ft thick across much of the study area
- Groundwater flow direction primarily to the northwest toward water supply wells
- Average lateral gradient of approximately 0.009 ft/ft, but steeper near water-supply wells
- Utilized for water supply by KAFB, COA, and VA
- Fluctuating water levels because of seasonal pumping demand
- Laterally extensive across the Albuquerque Basin
- Geochemical signatures consistent between well locations with low calcium concentrations but high bicarbonate/alkalinity concentrations

- Recharged by natural sources, including mountain front flow, present-day Tijeras Arroyo, and the perched system

- Principal control upon groundwater flow direction: combined effect of the KAFB, COA, and VA water-supply wells

3.3.4 Regional Aquifer

As described in Section 3.2, the water levels in the regional aquifer have been measured regularly as part of the TAG Investigation. The results of these measurements are presented in the following sections.

3.3.4.1 Groundwater Flow

Groundwater in the regional aquifer is encountered from depths of 423 ft bgs in the southeastern portion of the study area (at KAFB-0311) to 578 ft bgs in the northern portion (at TA1-W-05). The January 2005 potentiometric surface map of the regional aquifer for the TAG study area is shown in Figure 3.1.3-3. Several wells in the southeastern portion of the study area have anomalous groundwater elevations and were excluded from contouring the potentiometric surface of the regional aquifer shown in Figure 3.1.3-3. These wells with anomalous groundwater elevations most likely represent intermediate water-bearing intervals in the zone of merging.

As shown in Figure 3.1.3-3, groundwater flow is to the northwest toward the northern boundary of KAFB (toward the COA and KAFB production wells). This general flow direction is locally perturbed in the vicinity of TA2-W-25, with the elevation anomalously low, on the order of 10 to 20 ft with respect to adjacent wells.

Toward the western portion of the study area in the vicinity of KAFB-0504 near the inactive KAFB Sewage Lagoons, the flow becomes more northerly. This is consistent with the interpretation made in the SWHC reports (SNL/NM February 1998 and February 2001) as regional groundwater in the ARG facies moves readily toward COA and KAFB production wells along a zone of higher conductivity.

3.3.4.2 Groundwater Gradients

Based upon the potentiometric surface contours (Figure 3.1.3-3), the horizontal gradient in the regional aquifer is northwest at approximately 0.0084 ft/ft. This is calculated using well KAFB-0311 and well PGS-2, with 69.42 ft of groundwater elevation change over a distance of 8,260 ft. Slightly steeper gradients are locally present, such as in the southeastern portion of the site. For example, between well KAFB-0311 and well TJA-6, the groundwater elevation changes 33.83 ft over a distance of 3,360 ft, a gradient of 0.01 ft/ft.

Because all regional aquifer wells are completed only within the upper part of the aquifer, vertical flow gradients within the aquifer cannot be estimated, but are assumed to be downward, as vertical flow gradients are present at several well pairs in the TA-III/V area 2 miles south of the TAG study area. Downward gradients are dependent upon the lithofacies of the aquifer

materials and range from 0.001 to 0.88 ft/ft. Well pairs completed in the ARG facies exhibit lower vertical gradients, and well pairs completed in the alluvial fan deposits show higher gradients (SNL/NM March 1999).

3.3.4.3 Groundwater Elevation Changes

In January 2005, groundwater elevations for the regional aquifer ranged from 4,859 to 5,446 ft amsl. Hydrographs of all TAG Investigation wells, presented in Annex D, have been created to evaluate the long-term trends of water levels in these wells.

Throughout the duration of the TAG Investigation, groundwater elevations in each regional aquifer well have shown variable trends ranging from a decline of 0.9 ft per year (well TA1-W-01) to an increase of 1.8 ft per year (well TA1-W-04), while the water levels in some wells were relatively stable (Table 3.2-1). Groundwater elevations in the regional aquifer represent transient conditions as shown by the areal distribution of elevation changes (Figure 3.3.4-1).

The overall trend is one of decreasing water levels in the northwestern portion of the study area with increasing water levels in the southeastern area. The line of demarcation between increasing water levels and decreasing water levels approximates the eastern extent of the ARG facies in the subsurface.

3.3.4.4 Aquifer Parameters

The Upper Santa Fe Group regional aquifer is a porous media aquifer that is generally unconfined. However, field data suggest that the uppermost portion of the aquifer is semiconfined in wells completed in the alluvial fan lithofacies (SNL/NM February 1998). This was observed in wells where the water level rose above the depth at which the saturated zone was first encountered during drilling (e.g., TA1-W-01).

In 2001, hydrologic investigations of the regional aquifer were completed in association with rehabilitation and overpumping of production well KAFB-11 near the northeastern corner of the study area (Chace June 2001). Although the water level data were not of sufficient quality to perform quantitative analyses, the following inferences can be made:

- The groundwater system in the alluvial fan facies in the vicinity of KAFB-11 is complex and cannot be described by a radial flow conceptual model.
- No determination could be made whether the West Sandia Fault produced an aquifer boundary condition.
- During pumping of KAFB-11, only 2 of the 16 instrumented wells (TA2-NW1-595 and TA2-W-25) unequivocally showed a response to pumping.
- Wells much closer than TA2-NW1-595 did not respond to pumping of KAFB-11, which leads to the assumption that TA2-NW1-595 and KAFB-11 are preferentially connected hydraulically, possibly due to an east-west–trending paleochannel that subparallels Tijeras Arroyo (Chace June 2001).

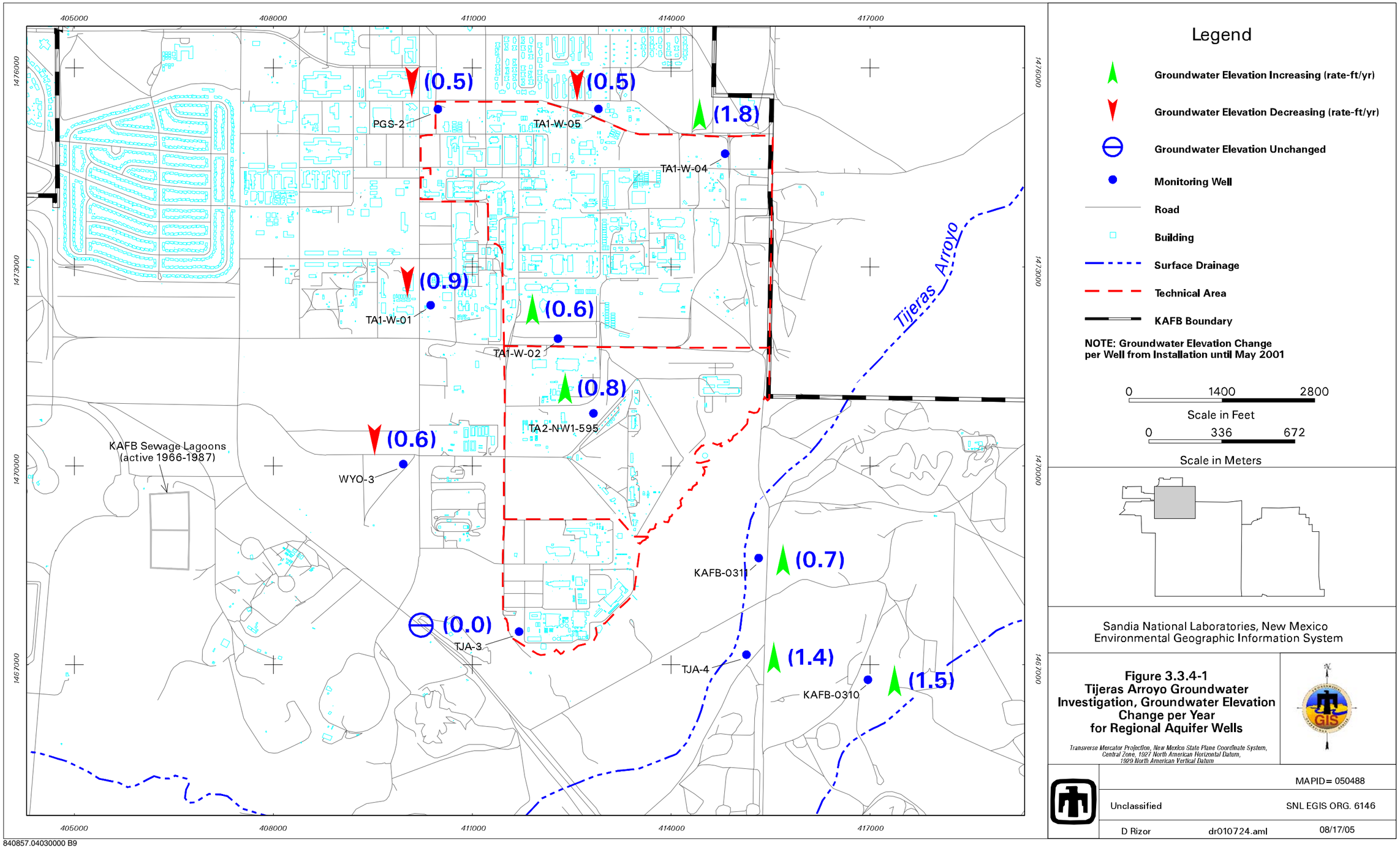

Figure 3.3.4-1
Tijeras Arroyo Groundwater Investigation, Groundwater Elevation Change per Year for Regional Aquifer Wells

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Slug Tests at TAG Regional Aquifer Wells

A series of slug tests were performed in late 2003 and early 2004 to determine the hydraulic conductivity of the aquifer materials in the TAG study area (Skelly et al. May 2004). The need for determining hydraulic parameters was identified as a data gap by North Wind, Inc. during their review of the "Tijeras Arroyo Groundwater Investigation Work Plan" (SNL/NM June 2003). Five regional aquifer wells were tested during December 2003 through January 2004, including TA1-W-01, TA1-W-05, TA2-W-25, TJA-3, and WYO-3.

The slug tests were performed in accordance with SNL/NM FOP 94-59, "Conducting Slug Tests." (SNL/NM 1994). The data gathered during the slug tests were analyzed using AquaTest™ Software developed by Waterloo Hydrogeologic, Inc. This software employs analytical methods developed by Hvorslev (1951) and Bouwer and Rice (1976) to produce graphical solutions of hydraulic conductivity. The result of the analysis was the determination of the hydraulic conductivity for each of the slug tests. The hydraulic conductivity values for each slug test at each well are presented in Annex E. The calculated hydraulic conductivities for the regional aquifer ranged from 0.77 to 14.8 ft/day, with an average of 3.77 ft/day (Skelly et al. May 2004).

Hydraulic conductivity data for the regional aquifer are available from aquifer pumping tests and slug tests performed on wells in other parts of KAFB. The hydraulic conductivities determined for the ARG facies and alluvial fan facies range from 0.2 to 121.5 ft/day, and .001 to 44.7 ft/day respectively (SNL/NM February 1998). The hydraulic conductivities determined for the five TAG wells are within the range calculated for other regional aquifer wells in the vicinity.

3.3.4.5 Regional Groundwater Flow Velocities

Groundwater horizontal flow velocity for the TAG study area was calculated using the following Darcy flow velocity equation:

$$v = K\,(dh/dx)/n_e,$$

where

v	= linear, or pore, velocity, in ft/min
K	= hydraulic conductivity, in ft/min
dh/dx	= horizontal gradient, in ft/ft
n_e	= effective porosity (unitless).

Groundwater flow velocities were estimated using the K values provided by recent slug tests (Section 3.3.4.4; Annex E), dh/dx calculated from the potentiometric surface map (Figure 3.1.3-3), and effective porosity (n_e) values from literature (Domenico and Schwartz 1990). Effective porosity values used in the calculations were 0.25 and 0.35. Table 3.3.4-1 lists the parameters and velocity calculations given a wide range of conditions, such as using the overall horizontal gradient versus locally steep gradients; using minimum, average, and maximum K values; and using the low and high porosity values.

Table 3.3.4-1
Groundwater Flow Velocity Calculations for the Regional Aquifer

Regional Aquifer			K (ft/min)	dh/dx	n_e	v (ft/min)	v (ft/yr)
Overall horizontal gradient[a]	Minimum K values[b]	Low range porosity	5.34E-04	0.0084	0.25	1.79E-05	9
	Average K values[c]		2.62E-03	0.0084	0.25	8.80E-05	46
	Maximum K values[b]		1.03E-02	0.0084	0.25	3.46E-04	182
	Minimum K values[b]	High range porosity	5.34E-04	0.0084	0.35	1.28E-05	7
	Average K values[c]		2.62E-03	0.0084	0.35	6.29E-05	33
	Maximum K values[b]		1.03E-02	0.0084	0.35	2.47E-04	130
Locally steep gradient[a]	Minimum K values[b]	Low range porosity	5.34E-04	0.01	0.25	2.14E-05	11
	Average K values[c]		2.62E-03	0.01	0.25	1.05E-04	55
	Maximum K values[b]		1.03E-02	0.01	0.25	4.12E-04	217
	Minimum K values[b]	High range porosity	5.34E-04	0.01	0.35	1.53E-05	8
	Average K values[c]		2.62E-03	0.01	0.35	7.49E-05	39
	Maximum K values[b]		1.03E-02	0.01	0.35	2.94E-04	155

[a]From Section 3.3.5.2, *Groundwater Gradients*.
[b]From Table 3 of Skelly et al. May 2004 (Annex E).
[c]From Table 2 of Skelly et al. May 2004 (Annex E).
dh/dx = Horizontal gradient.
ft/min = Feet per minute.
ft/yr = Feet per year.
K = Hydraulic conductivity.
n_e = Effective porosity values from literature (Domenico and Schwartz 1990).
v = Linear velocity.

The calculated regional aquifer horizontal flow velocities range from 7 to 217 feet/year (ft/yr). These values are approximately 50 percent of the velocities calculated for the regional aquifer in other portions of SNL/NM, which range from 20 to 500 ft/yr (SNL/NM March 1999). It is presumed that this difference is because the TAG regional aquifer wells are typically completed in the finer-grained alluvial fan facies, rather than in the more coarse-grained ARG facies.

3.3.4.6 Groundwater Modeling

Modeling of groundwater flow through the regional aquifer was performed in 2001 (SNL/NM February 2001) and in 2005 (SNL/NM August 2005). The 2001 modeling results are discussed in this section. The 2005 results are discussed in Section 3.3.5.7 along with the perched system modeling results.

In 2001, SNL/NM used a saturated flow model of the Albuquerque Basin developed by the U.S. Geological Survey (Tiedeman et al. 1998) to investigate the groundwater capture zones of supply wells on, and near, KAFB and to estimate groundwater flow directions and travel times for the regional aquifer. Groundwater flow was simulated with the MODFLOW code (McDonald and Harbaugh 1988). The MODPATH code (Pollock 1994) Version 3 was used to perform particle tracking for estimating groundwater travel times and the capture zones of groundwater supply wells.

SNL/NM modified the Albuquerque Basin model to reflect the hydrogeologic characterization results of KAFB (SNL/NM February 1998 and February 2001). The modifications included increasing the hydraulic conductivity of the ARG deposits, moving the eastern ARG boundary farther east, and decreasing the hydraulic conductivity of the alluvial fan deposits. (SNL/NM February 2001)

<u>Water-Supply Well Capture Zone Analysis</u>

To perform the capture zone analyses for the regional aquifer, imaginary parcels of water were released around a water-supply well and the computer model was run backwards in time for a maximum of 100 years. The water-supply wells selected for these capture zone analyses included several wells currently operating on, and near, KAFB. The results, shown in Figure 3.3.4-2, indicate the capture zones extend across the TAG study area for several of the water-supply wells.

<u>Groundwater Travel Time Analysis</u>

To estimate groundwater flow directions and travel time, a particle tracking analysis was performed for the regional aquifer. The particles were assumed to be released into the regional aquifer directly below the perched system boundary. This analysis does not imply that flow tubes connect the perched system and the regional aquifer; there are no known flow tubes in this area. Furthermore, this analysis did not include the travel time of a parcel of water through the perched system since the model domain included only the regional aquifer.

Particles were assumed to be released in 1975 and tracked forward until the year 2100. In the simulation, the fastest particles had travel times that reached production well KAFB-3 between 34 and 59 years. The variation exists because the particles followed different paths. The

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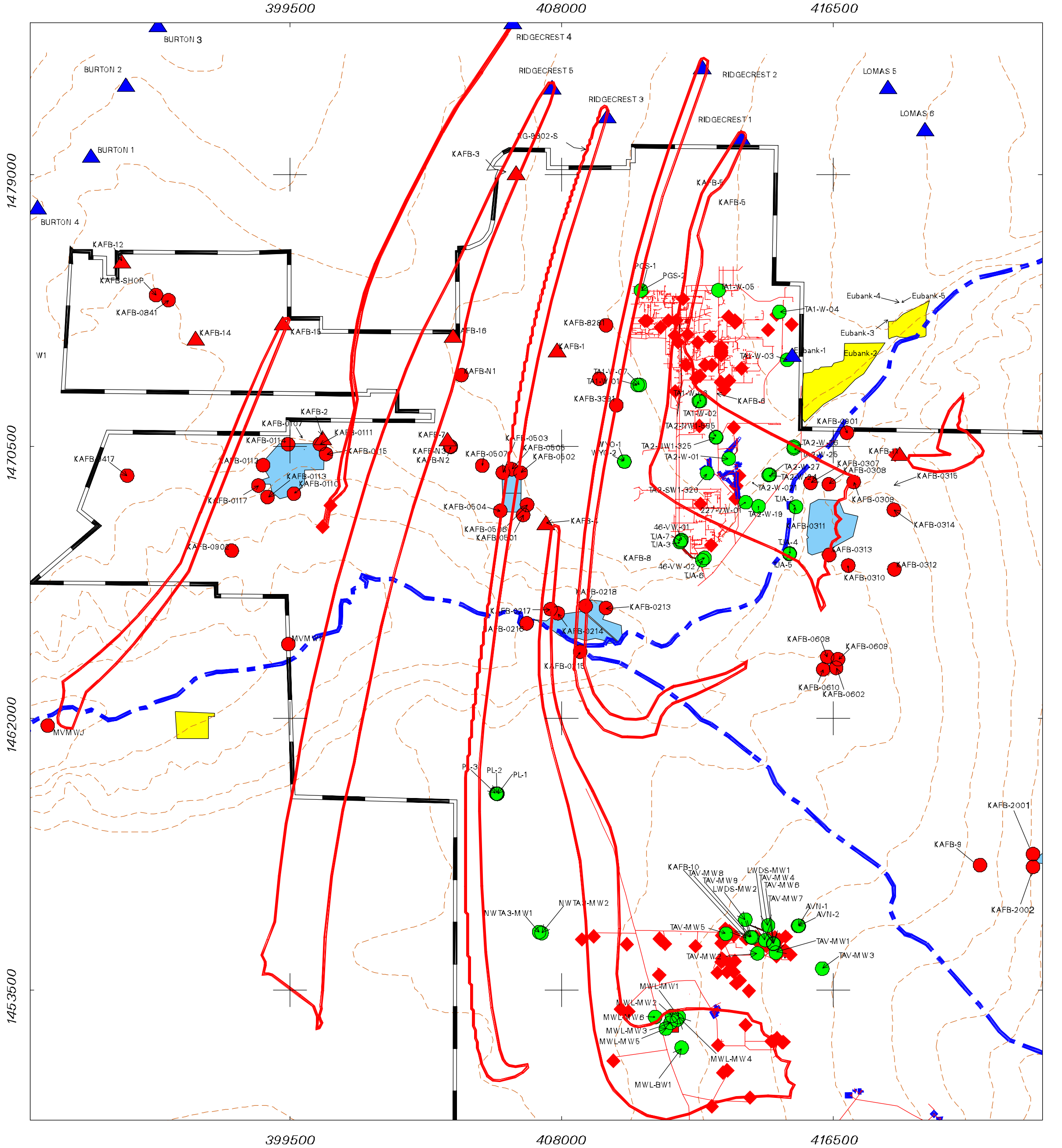

Legend

- SNL/NM monitoring well
- KAFB monitoring well
- KAFB water supply well
- COA monitoring well
- COA water supply well
- Sanitary/Storm Drain
- KAFB boundary
- Arroyo
- 40-foot contour
- Potential SNL/NM source site
- Potential KAFB source site
- Potential COA source site
- Capture Zone

Figure 3.3.4-2
Modeled Capture Zones at SNL/NM for Selected KAFB and COA Water–Supply Wells (SNL/NM February 2001)

0 2640 5280
Scale in Feet

0 633.6 1267.2
Scale in Meters

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production wells impacted next were the Ridgecrest wells north of KAFB. Particles reached the Ridgecrest wells between 41 and 68 years. Because of the lower hydraulic conductivity of the alluvial fan facies, particles released on the southeastern side of Tijeras Arroyo had not yet arrived at the production wells by the end of the model run (year 2100).

3.3.5 Perched Groundwater System

This section discusses groundwater flow characteristics and water-level fluctuations for the perched system as determined through water-level measurements and continuous pressure transducer studies. The results of the various measurements are presented in the following sections.

3.3.5.1 Groundwater Flow

Efforts to describe the groundwater flow in the perched system are based upon two main data sources: the development of potentiometric surface maps and a colloidal borescope study.

Potentiometric Surface Map

As shown in the potentiometric surface map (Figure 3.1.3-4), the general groundwater flow direction in the perched system is toward the southeast. In the western portion of the study area, in the vicinity of the former sewage lagoons, the flow is in a more easterly direction. The potentiometric contours follow the perched system elevation at KAFB-0506 (approximately 5,157 ft amsl). In addition to modifying the direction, the gradient becomes steeper towards the former sewage lagoons, supporting the hypothesis of groundwater mounding under the former sewage lagoons. Other recent interpretations of the potentiometric surface of the perched system incorporate elevation data from the golf course area and show a predominantly easterly flow direction for the southern portion of the study area (BGW September 2002).

Colloidal Borescope Study

In May and June 1999, a colloidal borescope was used to measure groundwater directions and flow velocities in 18 TAG Investigation and KAFB perched system wells. The results were reported in “Colloidal Borescope Investigation of the Sandia North Site, Albuquerque, New Mexico” prepared by AquaVISION of Palisade, Colorado (AquaVISION July 1999; SNL/NM November 2002). The colloidal borescope directly measured colloids (particles generally 1 to 10 microns in diameter) with a computer-controlled video system to infer real-time local groundwater flow direction and velocity in a monitoring well.

The data presented in the borescope study was summarized in the TAG Continuing Investigation Report (SNL/NM November 2002). Across the TAG study area, the groundwater vector mean in the perched system wells was southward at 0.043 centimeters per second (cm/s). Using the AquaVISION “order-of-magnitude” rule, groundwater velocity in the perched system is inferred to be approximately 0.004 cm/s (equivalent to 12 ft/day).

3.3.5.2 Groundwater Gradients

Based upon the potentiometric surface contours, the horizontal gradient in the perched system is southeast at approximately 0.008 ft/ft. This is calculated using upgradient well TA1-W-07 and downgradient well TJA-5, between which there is 55.22 ft of vertical elevation change over a distance of 7,080 ft. Considering the elevation beneath the former sewage lagoons, steeper gradients are possible locally with gradients of 0.013 ft/ft.

Typically, the vertical groundwater flow within and between water-bearing units is indicated when there is a vertical hydraulic gradient at a single location. The existence of the perched system indicates that the vertical flow gradient is downward. Gradients were calculated for two wells in the study area by dividing the difference in water levels between paired wells by the vertical distance between the mid-points of the respective well screens. The vertical gradients for TJA-2 and TA2-NW1-325 are 0.95 and 0.96 ft/ft, respectively (SNL/NM February 1998).

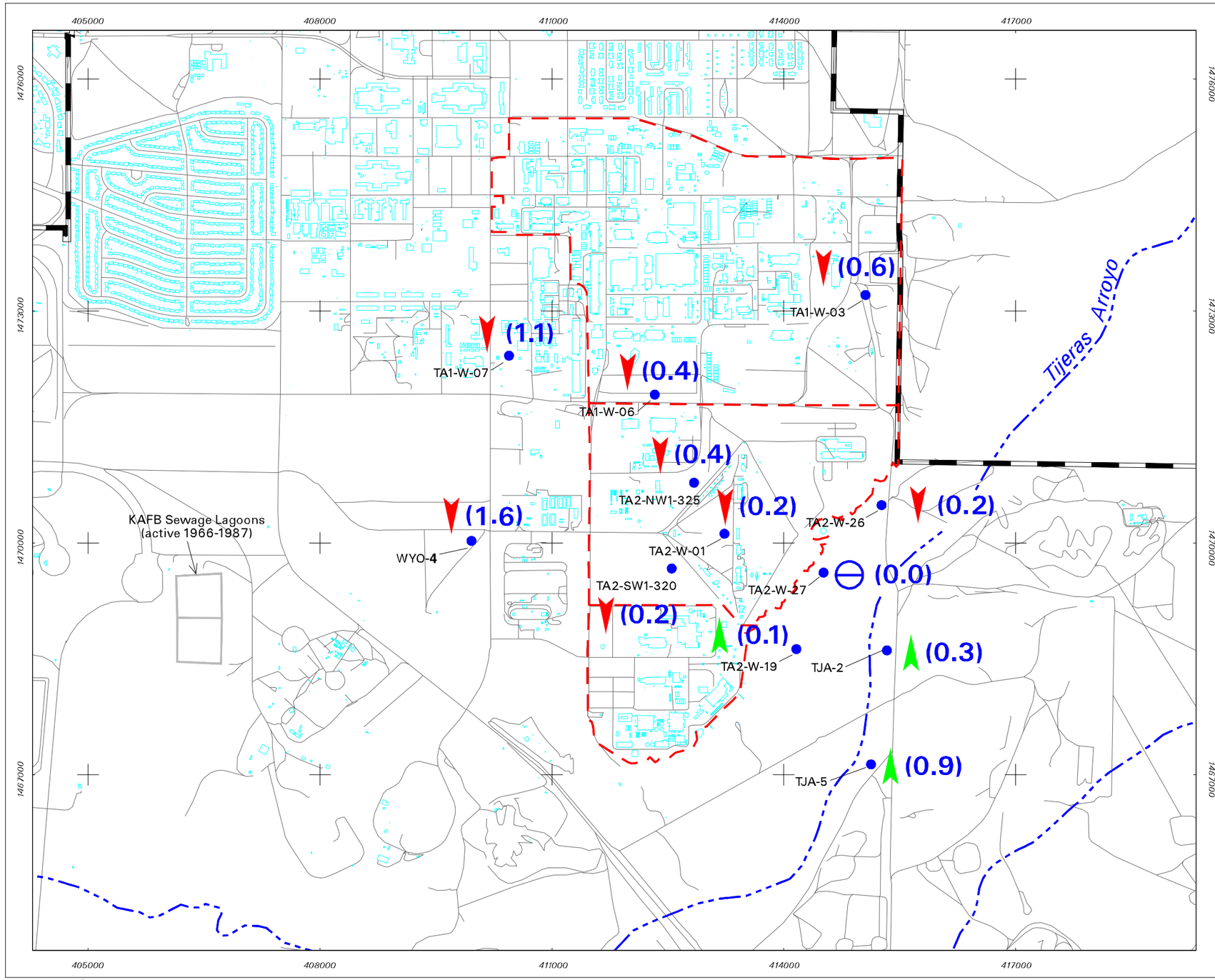
3.3.5.3 Groundwater Elevation Changes

In January 2005, groundwater elevations for the perched system ranged from 5,320 to 5,019 ft amsl. Hydrographs of TAG Investigation wells (Annex D) help to evaluate the long-term trends of water levels in these wells. Throughout the duration of the TAG Investigation, groundwater elevations in each perched system well show variable trends ranging from a decline of 1.6 ft/yr at WYO-4 to an increase of 0.3 ft/yr at TJA-2 (Table 3.2-1). Groundwater elevations in the perched system reflect transient conditions, as shown by the areal distribution of elevation changes (Figure 3.3.5-1). Similar to the regional aquifer, the overall pattern is one of decreasing water levels in the northwestern portion of the study area with increasing water levels in the southeastern area. However, the line of demarcation between increasing water levels and decreasing water levels is shifted further southeast and approximates the northern rim of Tijeras Arroyo.

3.3.5.4 Aquifer Parameters

Groundwater in the perched system is present within a series of porous water-bearing units perched on finer-grained units of the alluvial fan facies. Recharge may be the result from both natural and manmade sources.

Hydrologic investigations were completed in association with rehabilitation and overpumping of the production well KAFB-11 (Chace June 2001). The water level data for wells completed in the perched system showed no response to the KAFB-11 pumping. Further evaluation of transducer data showed no apparent correlation in water level trends between wells paired in the perched system and in the regional aquifer (Chace August 2001).



Legend

- Groundwater Elevation Increasing (rate-ft/yr)
- Groundwater Elevation Decreasing (rate-ft/yr)
- Groundwater Elevation Unchanged
- Monitoring Well
- Road
- Building
- Surface Drainage
- Technical Area
- KAFB Boundary

NOTE: Groundwater Elevation Change per Well from installation until May 2001.

0 1400 2800
Scale in Feet

0 336 672
Scale in Meters

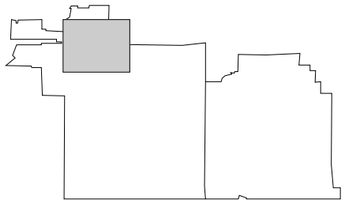


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Figure 3.3.5-1
Tijeras Arroyo Groundwater Investigation, Groundwater Elevation Change per Year Perched System Wells

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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Slug Tests at TAG Perched System Wells

A series of slug tests were performed in late 2003 and early 2004 to determine the hydraulic conductivity of the aquifer materials in the TAG study area (Skelly et al. May 2004). The need for determining hydraulic parameters was identified as a data gap by North Wind, Inc. during their review of the "Tijeras Arroyo Groundwater Investigation Work Plan" (SNL/NM June 2003). Five perched system wells were tested from December 2003 through January 2004: TA1-W-07, TA1-W-08, TA2-W-26, TJA-7, and WYO-4.

The slug tests were performed in accordance with SNL/NM FOP 94-59, "Conducting Slug Tests." (SNL/NM 1994). The data gathered during the slug tests were analyzed using AquaTest™ Software developed by Waterloo Hydrogeologic, Inc. This software employs analytical methods developed by Hvorslev (1951) and Bouwer and Rice (1976) to produce graphical solutions of hydraulic conductivity. The result of the analysis was the determination of the hydraulic conductivity for each of the slug tests. The hydraulic conductivity values for each slug test at each well are presented in Annex E. The calculated hydraulic conductivities for the perched system ranged from 0.043 ft/day to 3.99 ft/day, with an average of 1.63 ft/day (Skelly et al. May 2004).

The ranges of hydraulic conductivities for the perched system and the regional aquifer (described in Section 3.3.4.4) overlap, but the regional aquifer conductivity values are typically an order of magnitude higher. All the conductivity values are within the range of conductivities determined for the regional aquifer within the Santa Fe Group sediments at other locations at SNL/NM (SNL/NM March 1999).

3.3.5.5 Perched System Groundwater Flow Velocities

Groundwater horizontal flow velocity for the TAG study area was calculated using the following Darcy flow velocity equation:

$$v = K\,(dh/dx)/n_e,$$

where

v	= linear, or pore, velocity, in ft/min
K	= hydraulic conductivity in ft/min (horizontal or vertical)
dh/dx	= horizontal gradient (ft/ft), or dh/dy = vertical gradient (ft/ft)
n_e	= effective porosity (unitless).

Groundwater flow velocities were estimated using the K values provided by recent slug tests (Section 3.3.5.4, Annex E), dh/dx calculated from potentiometric surface map (Figure 3.1.3-4) and effective porosity (n_e) values from the literature (Domenico and Schwartz 1990). Effective porosity values provided used in calculations were 0.25 and 0.35. Table 3.3.5-1 lists the parameters and velocity calculations given a wide range of conditions, such as using the overall horizontal gradient versus locally steep gradients; using minimum, average, and maximum K values; and using the low and high values of porosity.

The calculated perched system horizontal flow velocities range from 0.36 up to 76 ft/yr. These values are approximately 5 to 35 percent of the velocities calculated for the regional aquifer in the TAG study area (Section 3.3.4.5).

Table 3.3.5-1
Groundwater Flow Velocity Calculations for the Perched System

Perched System			K (ft/min)	dh/dx	n_e	v (ft/min)	v (ft/yr)
Overall horizontal gradient[a]	Minimum K values[b]	Low range porosity	2.96E-05	0.008	0.25	9.47E-07	0.50
	Average K values[c]		1.13E-03	0.008	0.25	3.62E-05	19
	Maximum K values[b]		2.77E-03	0.008	0.25	8.86E-05	47
	Minimum K values[b]	High range porosity	2.96E-05	0.008	0.35	6.77E-07	0.36
	Average K values[c]		1.13E-03	0.008	0.35	2.58E-05	14
	Maximum K values[b]		2.77E-03	0.008	0.35	6.33E-05	33
Locally steep gradient[a]	Minimum K values[b]	Low range porosity	2.96E-05	0.013	0.25	1.54E-06	0.81
	Average K values[c]		1.13E-03	0.013	0.25	5.88E-05	31
	Maximum K values[b]		2.77E-03	0.013	0.25	1.44E-04	76
	Minimum K values[b]	High range porosity	2.96E-05	0.013	0.35	1.10E-06	0.58
	Average K values[c]		1.13E-03	0.013	0.35	4.20E-05	22
	Maximum K values[b]		2.77E-03	0.013	0.35	1.03E-04	54

[a]From Section 3.3.5.2, *Groundwater Gradients*.
[b]From Table 3 of Skelly et al. May 2004 (Annex E).
[c]From Table 2 of Skelly et al. May 2004 (Annex E).
dh/dx = Horizontal gradient.
ft/min = Feet per minute.
ft/year = Feet per year.
K = Hydraulic conductivity.
n_e = Effective porosity values from literature (Domenico and Schwartz 1990).
v = Linear velocity.

3.3.5.6 1996 and 2002 Modeling Results

Limited numerical modeling of the perched system has been performed. An initial hydrologic evaluation of the perched system was completed in 1996 to estimate aquifer parameters and identify possible sources of recharge (Wolford September 1996; SNL/NM March 1998). The data set used in 1996 for the development of the conceptual model and the numerical models was not nearly as complete as it is today. Several different simulation models were applied to determine the sources of recharge to the perched system, but these were not ideally suited to this problem, and the results of the 1996 modeling were presented only as a first approximation.

The primary usefulness of the 1996 report has been in the compilation of parameters used to develop the conceptual model for the perched system, including estimates of the hydrologic parameters and possible sources of potential recharge. As modeled, the potential sources of recharge included the following (Wolford September 1996):

- The inactive KAFB Sewage Lagoons
- Subsurface flow within a hypothetical buried ancestral channel of Tijeras Arroyo
- Surface water recharge from Tijeras Arroyo within KAFB boundaries
- Infiltration from the irrigation of parks and lawns in the northern portion of KAFB
- Leaks from breaks in water-supply and/or sewer lines

Modeling results from the 1996 study suggest that the sewage lagoons may have been the largest historical source of water in the perched system (Wolford September 1996).

In 2002, Balleau Groundwater, Inc. was asked to refine the conceptual model and employ a more applicable numerical model (BGW September 2002). The refined conceptual model was incorporated into a variably saturated, finite-element flow and transport model using the code FEMWATER (Hsin-Chi et al. 1997). The shape of the modeling grid for the model was based upon stratigraphy of the alluvial fan lithofacies of the Upper Santa Fe Group as described in Section 3.1.3 of this report and in earlier reports (Fritts and Van Hart March 1997).

For recharge inputs, the model included anthropogenic water sources from the KAFB Sewage Lagoons and three SNL/NM SWMUs (46, 165, and 227) and water loss from water lines, a golf-course pond, and turf irrigation at base housing, the parade grounds, and the golf course. In addition, natural recharge was included from the Tijeras Arroyo and Arroyo del Coyote.

Both horizontal and vertical flow was included in the model. Horizontal flow is recognized by rising water levels in southeasterly portions of the perched system. Vertical flow is indicated by water already reaching the perched system, the multiple perched zones encountered during well drilling, and by the lack of any laterally extensive barrier to vertical flow. The model reproduced the areal extent of the perched system and supported the initial interpretation of data (Wolford September 1996) to indicate that a large fraction of water in the perched system is derived from past and ongoing anthropogenic sources.

3.3.5.7 2005 Evaluation of Contaminant Transport Modeling Results

The CME for the SNL/NM AOR within the TAG study area was performed concurrently with the TAG Investigation (SNL/NM June 2003 and November 2004). As part of the CME, the potential for contaminant migration from the SNL/NM AOR within the perched system to production wells in the regional aquifer was evaluated. This section summarizes the *Evaluation of Contaminant*

Transport that is presented in detail as Attachment C to the "Corrective Measures Evaluation Report for Tijeras Arroyo Groundwater" (SNL/NM August 2005).

Introduction

Transport of contaminants from their current location in the perched system beneath the SNL/NM AOR to production wells completed in the ARG lithofacies of the regional aquifer was simulated to estimate contaminant concentrations at the production wells and contaminant arrival time. The production wells considered in this analysis include those completed in the ARG lithofacies of the regional aquifer located west and northwest of the SNL/NM AOR. These include the COA production wells at the Ridgecrest wellfield, KAFB production wells, VA production wells, and production wells that could be completed in the future in the ARG lithofacies of the regional aquifer.

The transport analysis included an estimate of concentration changes as contaminants are transported with groundwater through three hydrogeologic regions and an estimate of travel time from the current location of contaminants in the perched groundwater system to production wells in the regional aquifer. The simulation included calculations and numerical models of the following three hydrogeologic regions, which are also shown in Figure 3.3.5-2:

1. Perched Groundwater System. This region includes the perched groundwater system between the current location of contaminants and the zone of merging of the perched system and regional aquifer. This section was simulated as flow into the alluvial fan model section, which was manually calculated using observed aquifer parameter values.

2. Alluvial Fan Model Section. This region included northwestern groundwater flow in alluvial fan lithofacies. A 1.4-mile-long, cross-sectional, numerical model was devised for this section, in which the estimate of discharge from the perched system comprises a portion (2.2 percent) of the total flow through the alluvial fan model section.

3. ARG Model Section. Groundwater flows northward through this region toward COA pumping centers. This region was simulated using a 10-mile-long, cross-sectional, numerical model in which discharge from the alluvial fan section formed a portion (11.5 percent) of the total flow through the ARG model section.

Numerical models were developed using the Department of Defense Groundwater Modeling System (GMS), employing the MODFLOW groundwater flow simulator (Harbaugh et al. 2000) and the MT3DMS transport simulator (Zheng and Wang 1999) with GMS pre- and post-processors (BYU 2003).

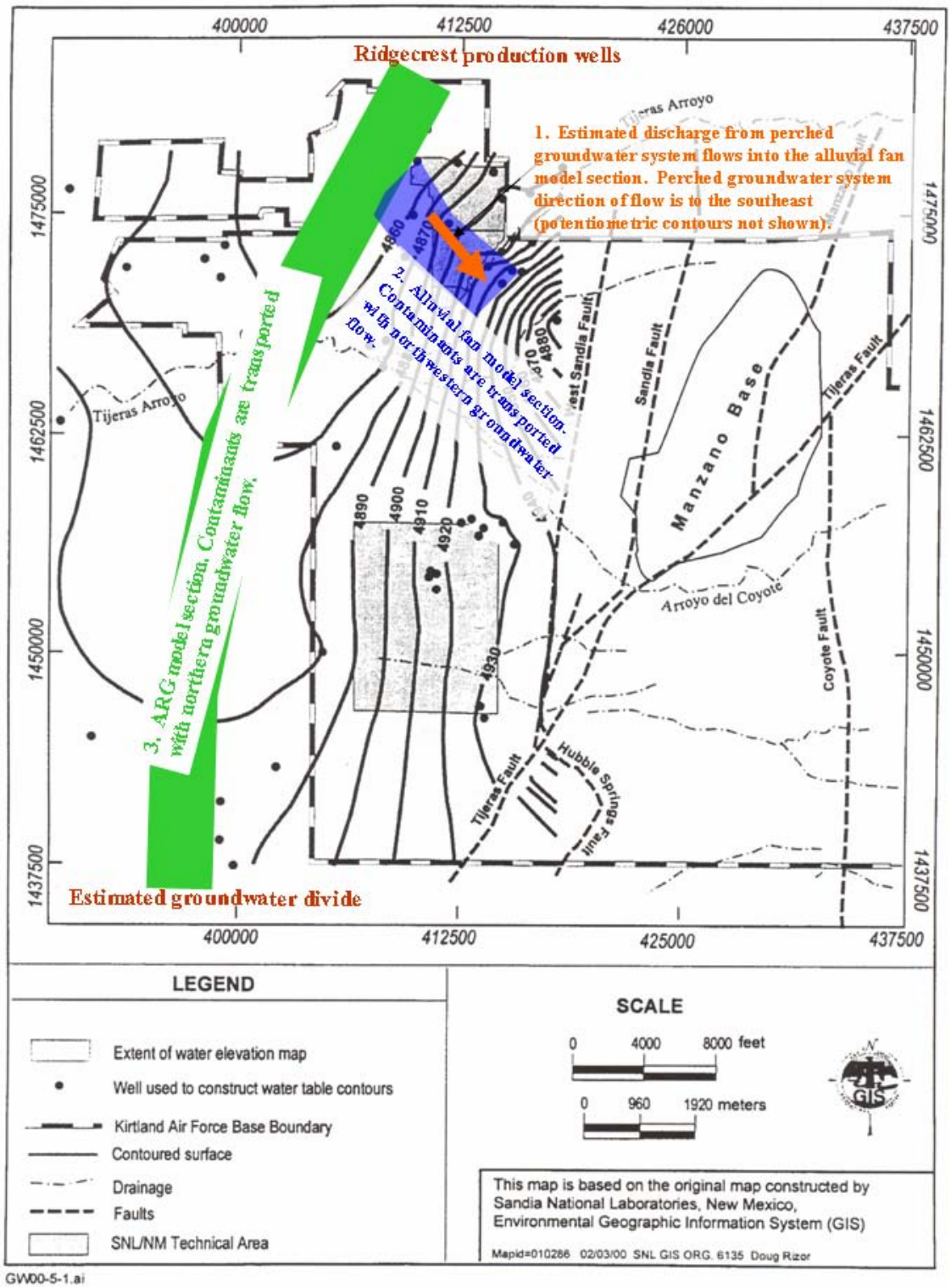

Figure 3.3.5-2
Regional Potentiometric Surface Map and Location of Simulated Regions

The modeling approach incorporated parameter values and assumptions that were based upon observed site conditions. The parameter values used to estimate flow from the perched system and build numerical models for the alluvial fan and ARG model sections are summarized in Table 3.5.5-1. These data were drawn from the CME Work Plan (SNL/NM November 2004) and other literature (see the TAG CME Report for details [SNL/NM August 2005]). Other assumptions were made to intentionally overestimate contaminant concentrations at production wells and intentionally underestimate the travel times to these production wells. In this way, the results of the transport analyses are conservative with respect to estimating potential for natural attenuation. For example, TCE was simulated as a conservative solute by neglecting the effects of dispersion, degradation, and sorption that would actually decrease concentrations and increase transport time. The *Evaluation of Contaminant Transport* that is presented in detail in the "Corrective Measures Evaluation Report for Tijeras Arroyo Groundwater" (SNL/NM August 2005) provides a complete discussion of the assumptions of the modeling approach.

Table 3.5.5-1
Summary Information and Input Parameters, ARG Model Sections,
TAG Study Area

	Perched System Estimate of Flow	Alluvial Fan Model Section	ARG Model Section
Flow model length	NA[a]	1.4 miles	10.0 miles
Cell width	6,000 ft	6,000 ft	6,000 ft
Vertical saturated thickness	20 ft	100 ft	600 ft
Upgradient boundary type	NA[a]	Constant head	No flow, simulating groundwater flow divide
Downgradient boundary type	NA[a]	Constant head	Constant head
Hydraulic conductivity	1.6 ft/day	14.1 ft/day	150 ft/day
Effective porosity	NA[a]	25%	25%
Potential receptor locations	None	None	Ridgecrest municipal pumping wells, KAFB supply wells, VA supply wells, and hypothetical production wells in the ARG lithofacies

[a]The perched system flow was calculated without using a MODFLOW numerical model.
ARG = Ancestral Rio Grande.
ft = Foot (feet).
KAFB = Kirtland Air Force Base.
NA = Not applicable.
TAG = Tijeras Arroyo Groundwater.
VA = Veterans Administration.

Results

The numerical models predict a solute reduction to 0.9 percent of the original concentration during transport from the perched groundwater system to production wells. This estimated reduction is based upon the assumption that the flow of water exiting the perched groundwater

system is contaminated at a uniform concentration of 100 percent. However, TCE and nitrate occur in separate locations, and this estimate does not account for the nonuniform distribution of TCE and nitrate. Only a portion of the flow from the SNL/NM AOR will be contaminated with either TCE or nitrate. The portion of the total estimated flow from the perched system that will contain TCE and nitrate was estimated based upon the observed distribution of these two contaminants. It was estimated that of the total flow from the perched system that was simulated as flow into the alluvial fan model section, approximately 60 percent could be assumed to be contaminated with nitrate and 40 percent with TCE.

Maximum historical concentrations of both nitrate and TCE were used when interpreting the solute transport results, even though more recent observations suggest that concentrations have declined. Maximum historical concentrations of TCE and nitrate in SNL/NM monitoring wells are 9.6 μg/L and 44 mg/L (as nitrogen), respectively. These maximum concentrations were multiplied by the simulated solute reduction factor (0.009) and then by the fraction of flow from the perched system that was assumed to contain nitrate (0.6) or TCE (0.4). As shown in Table 3.5.5-2, the resulting concentrations of nitrate and TCE at the production wells are 0.24 mg/L (as nitrogen) and 0.03 μg/L, respectively. For comparison, the MCLs are 10 mg/L (as nitrogen) and 5 μg/L for nitrate and TCE, respectively.

Table 3.5.5-2
Interpretations of Solute Transport Simulation Relative to
Nitrate and TCE Contamination, TAG Study Area

	Relative Simulated Solute Concentration	Maximum Historical Contaminant Concentration	Fraction of Total Perched Flow	Maximum Concentration in Production Well	Time of Maximum Concentration Arrival into ARG Model Section, Years
Nitrate	0.009	44 mg/L (as nitrogen)	0.6	0.24 mg/L (as nitrogen)	130
TCE	0.009	9.6 μg/L	0.4	0.03 μg/L	140

ARG = Ancestral Rio Grande.
μg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

Travel time estimates for each contaminant are also shown in Table 3.5.5-2. These are the estimated travel times of the maximum concentration from the perched groundwater system to the simulated interface between the alluvial fan and ARG lithofacies. As a conservative assumption, this interface is the closest location downgradient of the perched system where a future production well could be installed. COA, KAFB, and VA production wells are further downgradient than this location, which is on federal property. TCE and nitrate are predicted to arrive at production wells in at least 140 (TCE) and 130 (nitrate) years at the maximum concentrations. The estimated travel times are slightly different because the contaminants are in two different locations within the SNL/NM AOR and thus travel different distances through the perched groundwater system. This modeling predicts that contaminants will never reach the production wells at concentrations above the MCLs.

Conclusions

Manual calculations and numerical modeling were used to simulate transport and dilution of a conservative (nonreactive, nondegraded) solute between the SNL/NM AOR in the perched groundwater system to production wells completed in the ARG lithofacies. The simulated concentration of a conservative solute at these production wells is 0.9 percent of the original concentration in the perched system. When coupled with maximum observed concentrations in the perched system, these results lead to the following conclusions:

- Nitrate originating from the SNL/NM AOR will be reduced to 0.24 mg/L (as nitrogen) before reaching production wells in the ARG lithofacies. For comparison, the MCL for nitrate is 10 mg/L (as nitrogen).

- TCE originating from the SNL/NM AOR will be reduced to 0.03 μg/L before reaching production wells in the ARG. For comparison, the MCL for TCE is 5 μg/L.

These conservative estimates intentionally overpredict contaminant concentrations by neglecting dispersion, degradation, and sorption, which would further attenuate contaminant concentrations. In addition, the estimated travel times for nitrate and TCE are at least 130 and 140 years, respectively, to reach production wells.

4.0 GROUNDWATER QUALITY

Groundwater quality in the TAG study area has been monitored since November 1992. The groundwater monitoring well network discussed in this chapter consists of 49 wells in the TAG study area (Figure 3.2-1). This network of wells is owned and sampled by three parties: SNL/NM, KAFB, and COA.

The analytical data set discussed in this chapter covers six quarters of groundwater sampling during the period from July 2003 through December 2004. Analytical data from previous sampling events are based upon sampling methods different from the methods proposed in the TAG Work Plan (SNL/NM June 2003). Data collected prior to July 2003 are discussed in previous reports (SNL/NM November 2002 and June 2000) and are not included in this report.

Section 4.1 discusses the current groundwater monitoring program at the TAG study area and includes a brief discussion of field sampling procedures. Due to the different ownership of monitoring wells within the TAG network, different contractors performed sampling activities during these six quarters of sampling. Groundwater analytical data from the different entities were provided to SNL/NM for this report.

Guidelines for all parties conducting sampling activities during this timeframe are defined in the TAG Investigation Work Plan (SNL/NM June 2003). Section 4.2 presents the groundwater analytical data generated over the six quarters of sampling. Section 4.3 discusses the distribution of nitrate and TCE, which are the COCs that have been detected at levels exceeding the EPA MCLs in TAG groundwater.

4.1 The TAG Investigation Monitoring Program

4.1.1 Sampling Overview

The current (June 2003) TAG monitoring program, managed by the SNL/NM ER Project, KAFB IRP, and COA, consists of the analytical suite detailed in Table 4.1.1-1. This combined monitoring program was applied to six quarterly sampling events from July 2003 through October 2004.

Various laboratories analyzed the groundwater samples. Table 4.1.1-2 shows each of the 49 TAG monitoring wells and the associated well owner, sampling contractor, and analytical laboratory.

Table 4.1.1-1
Sampling Program for Groundwater Monitoring in the TAG Study Area

Sampling Location	Frequency	Analytes
49 monitoring wells (Table 4.1.1-2 lists each monitoring well)	6 events	Universal TAG Analytes: • field parameters[a] • VOCs • NPN • nitrate • alkalinity ($CaCO_3$, HCO_3, CO_3) • major anions (Cl, SO_4) • miscellaneous anions (bromide, fluoride) • major cations (Ca, Mg, Na, K) • ferrous iron and manganese II
3 monitoring wells: KAFB-0506, KAFB-0512, and TJA-7	6 events	Supplemental Nitrate Suite: • ammonia • TKN
5 monitoring wells: KAFB-0512, KAFB-0610, TA1-W-03, TA1-W-08, and TJA-7	3 events	MNA Suite: • stable isotopes (D/H, $^{15}N/^{14}N$, $^{18}O/^{16}O$) • total phosphorus • total organic carbon

[a]Field parameters = groundwater elevation, E_h, pH, specific conductance, temperature, and turbidity.
E_h = Oxidation/reduction potential.
KAFB = Kirtland Air Force Base.
MNA = Monitored natural attenuation.
NPN = Nitrate plus nitrite.
pH = Hydrogen potential.
TA = Technical Area.
TAG = Tijeras Arroyo Groundwater.
TJA = Tijeras Arroyo.
TKN = Total Kjeldahl nitrogen.
VOC = Volatile organic compound.

Table 4.1.1-2
TAG Monitoring Well Network Associated Ownership,
Sampling Organization, and Analytical Laboratory

Well Identification	Analytical Laboratories	Well Owner	Organization Responsible for Sampling
KAFB-0903	Hall, APCL, & MPI	KAFB	CH2M Hill
KAFB-0904	Hall, APCL, & MPI	KAFB	CH2M Hill
KAFB-8282	Hall, APCL, & MPI	KAFB	CH2M Hill
Eubank-2	ST & GEL	COA	COA & ER
Eubank-3	ST & GEL	COA	COA & ER
Eubank-5	ST & GEL	COA	COA & ER
Eubank-1	ST & GEL	COA	ER
PGS-2	ST & GEL	SNL/NM	ER
TA1-W-01	ST & GEL	SNL/NM	ER
TA1-W-02	ST & GEL	SNL/NM	ER
TA1-W-03	ST & GEL	SNL/NM	ER
TA1-W-04	ST & GEL	SNL/NM	ER
TA1-W-05	ST & GEL	SNL/NM	ER
TA1-W-06	ST & GEL	SNL/NM	ER
TA1-W-08	ST & GEL	SNL/NM	ER
TA2-NW1-595	ST & GEL	SNL/NM	ER
TA2-SW1-320	ST & GEL	SNL/NM	ER
TA2-W-01	ST & GEL	SNL/NM	ER
TA2-W-19	ST & GEL	SNL/NM	ER
TA2-W-26	ST & GEL	SNL/NM	ER
TA2-W-27	ST & GEL	SNL/NM	ER
TJA-2	ST & GEL	SNL/NM	ER
TJA-3	ST & GEL	SNL/NM	ER
TJA-4	ST & GEL	SNL/NM	ER
TJA-6	ST & GEL	SNL/NM	ER
TJA-7	ST & GEL	SNL/NM	ER
WYO-3	ST & GEL	SNL/NM	ER
WYO-4	ST & GEL	SNL/NM	ER
KAFB-0507	Hall, APCL, & MPI	KAFB	MWH
KAFB-0508	Hall, APCL, & MPI	KAFB	MWH
KAFB-0510	Hall, APCL, & MPI	KAFB	MWH
KAFB-0512	Hall, APCL, & MPI	KAFB	MWH
KAFB-0514	Hall, APCL, & MPI	KAFB	MWH
KAFB-0516	Hall, APCL, & MPI	KAFB	MWH
KAFB-0615	Hall, APCL, & MPI	KAFB	MWH
KAFB-0616	Hall, APCL, & MPI	KAFB	MWH
KAFB-0307	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0309	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0310	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0311	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0312	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0313	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0315	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0505	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0506	Laucks, SRI, & Zymax	KAFB	TTFWI

Refer to footnotes at end of table.

Table 4.1.1-2 (Concluded)
TAG Monitoring Well Network Associated Ownership,
Sampling Organization, and Analytical Laboratory

Well Identification	Analytical Laboratories	Well Owner	Organization Responsible for Sampling
KAFB-0602	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0608	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0609	Laucks, SRI, & Zymax	KAFB	TTFWI
KAFB-0610	Laucks, SRI, & Zymax	KAFB	TTFWI

APCL = Applied Physics and Chemistry Laboratory, Chino, California.
COA = City of Albuquerque.
ER = Environmental Restoration Project (SNL/NM).
GEL = General Engineering Laboratories, Inc.
Hall = Hall Analytical Laboratories, Albuquerque, New Mexico.
KAFB = Kirtland Air Force Base.
Laucks = Laucks Testing Laboratories, Seattle, Washington.
MPI = Metrohm-Peak, Inc., Houston, Texas.
MWH = Montgomery, Watson, Harza Americas, Inc.
SNL/NM = Sandia National Laboratories/New Mexico.
SRI = Southwest Research Institute, San Antonio, Texas.
ST = Severn Trent Laboratories, St. Louis, Missouri.
TAG = Tijeras Arroyo Groundwater.
TTFWI = Tetra Tech FW, Inc.
Zymax = Zymax Forensics, San Louis Obispo, California.

4.1.2 SNL/NM Sampling Procedures

This section provides a summary of the SNL/NM field activities and methods associated with groundwater monitoring in the TAG study area. Quarterly groundwater investigation reports were provided to SNL/NM that contained limited information on the sampling procedures used by other organizations. Whereas all sampling organizations followed guidelines set forth in the TAG Work Plan (SNL/NM June 2003), sampling equipment and sampling protocols may have varied from organization to organization (e.g., CH2M Hill [August 2003], MWH Americas, Inc. [December 2003], and TTFWI [March 2004]).

Depth-to-groundwater measurements were obtained prior to purging activities in all monitoring wells. Measurement of field parameters taken by SNL/NM was performed in accordance with FOP 94-46 (SNL/NM September 1999) and the GIP (SNL/NM March 1996). Groundwater temperature, specific conductance, pH, and oxidation/reduction potential (E_h) were measured using a YSI™ Model 3500 Water Quality Meter. Turbidity was measured with a Hach Model 2100P portable turbidity meter. Water quality measurements were recorded on Field Measurement Log forms. Groundwater pH, temperature, specific conductance, turbidity, and E_h were measured during purging and after completion of sampling. The field parameters for KAFB and COA monitoring wells were collected using various brands of meters to measure the parameters listed in Table 4.1.1-1.

Samples were collected for laboratory analyses after water quality parameters had stabilized. Groundwater samples were collected directly from the pump discharge tube into laboratory-prepared sample containers. Chemical preservatives for samples intended for chemical analyses were added to the sample containers at the off-site laboratory prior to shipment to the SNL/NM Sample Management Office (SMO).

Immediately after collection, all sample containers were custody-taped, sealed in plastic bags, and placed on ice in shipping containers. Analytical Request/Chain-of-Custody forms were completed at the time of collection and accompanied sample containers to the analytical laboratory. The samples for chemical and radiochemical analyses were shipped via the SMO to the contracted analytical laboratory. Sample management activities followed FOP 94-34 (SNL/NM June 1995).

All purge and decontamination water generated for each SNL/NM sampling event was containerized in one drum and removed to a 90-day accumulation area pending results of the analyses. Waste labels were placed on all drums, and the corresponding sample numbers were marked on the outside of the drum. The wastes were recorded on a Daily Log of Wastes Generated form and submitted to the SNL/NM ER waste disposal coordinator. For waste characterization purposes, the purge water from each 55-gallon drum was sampled and analyzed for VOCs and nitrate/nitrite.

4.2 Groundwater Analytical Data

TAG groundwater analytical data from the ER Data Management System (ERDMS) for the COA and SNL/NM wells are included in Annex F. COA data was transmitted by spreadsheet and loaded into the ERDMS. Quarterly groundwater data for sampling events involving KAFB monitoring wells were provided to SNL/NM (Table 4.2-1) and entered into the ERDMS. The KAFB well groundwater data are included as Annex G.

Table 4.2-1
Data Sources for Groundwater Sampling at KAFB Wells, TAG Study Area

Well	Contractor	Sampling Event	Report Title	Reference
KAFB-0903 KAFB-0904 KAFB-8282	CH2M Hill	July 2003	Groundwater Sampling at Monitoring Wells KAFB 0903, KAFB 0904, and KAFB 8282: 14-15 July 2003 (3rd Quarter 2003)	CH2M Hill August 2003
		October 2003	Tijeras Arroyo Groundwater (TAG) Investigation Sampling at Monitoring Wells KAFB 0903, KAFB 0904, and KAFB 8282: 23-24 October 2003 (4th Quarter 2003)	CH2M Hill August 2004a
		January 2004	Tijeras Arroyo Groundwater (TAG) Investigation Sampling at Monitoring Wells KAFB 0903, KAFB 0904, and KAFB 8282: 26-28 January 2004 (1st Quarter 2004)	CH2M Hill August 2004b
		April 2004	Tijeras Arroyo Groundwater (TAG) Investigation Sampling at Monitoring Wells KAFB 0903, KAFB 0904, and KAFB 8282: 20-21 April 2004 (2nd Quarter 2004)	CH2M Hill August 2004c
		July 2004	Tijeras Arroyo Groundwater (TAG) Investigation Sampling at Monitoring Wells KAFB 109-3, KAFB 109-4, and KAFB 8-28-2: 19-20 July 2004 (3rd Quarter 2004)	CH2M Hill October 2004
		October 2004	Tijeras Arroyo Groundwater (TAG) Investigation Sampling at Monitoring Wells KAFB 09-03, KAFB 09-04, and KAFB 8-28-2: 13-14 October 2004 (4th Quarter 2004)	CH2M Hill February 2005
KAFB-0507 KAFB-0508 KAFB-0510 KAFB-0512 KAFB-0514 KAFB-0516 KAFB-0615 KAFB-0616	MWH	July 2003	Quarterly Sampling Report for Tijeras Arroyo Groundwater Investigation, July 2003 Sampling Event	MWH December 2003
		October 2003	Quarterly Sampling Report for Tijeras Arroyo Groundwater Investigation, October 2003 Sampling Event	MWH January 2004
		January 2004	Quarterly Sampling Report for Tijeras Arroyo Groundwater Investigation, January 2004 Sampling Event	MWH April 2004
		April 2004	Quarterly Sampling Report for Tijeras Arroyo Groundwater Investigation, April 2004 Sampling Event	MWH June 2004
		July 2004	Quarterly Sampling Report for Tijeras Arroyo Groundwater Investigation, July 2004 Sampling Event	MWH September 2004
		October 2004	Quarterly Sampling Report for Tijeras Arroyo Groundwater Investigation, October 2004 Sampling Event	MWH February 2005
KAFB-0307 KAFB-0309 KAFB-0310 KAFB-0311 KAFB-0312 KAFB-0313 KAFB-0315 KAFB-0505 KAFB-0506 KAFB-0602 KAFB-0608 KAFB-0609 KAFB-0610	TTFWI	July 2003	Tijeras Arroyo Groundwater Investigation, July 2003, Event #1 Data Summary Report	TTFWI March 2004
		October 2003	Tijeras Arroyo Groundwater Investigation, October 2003, Event #2 Data Summary Report	TTFWI May 2004
		January 2004	Tijeras Arroyo Groundwater Investigation, January 2004, Event #3 Data Summary Report	TTFWI September 2004
		April 2004	Tijeras Arroyo Groundwater Investigation, April 2004, Event #4 Data Summary Report	TTFWI March 2005
		July 2004	Tijeras Arroyo Groundwater Investigation, July 2004, Event #5 Data Summary Report	TTFWI May 2005
		October 2004	Tijeras Arroyo Groundwater Investigation, October 2004, Event #6 Data Summary Report	TTFWI June 2005

KAFB = Kirtland Air Force Base.
MWH = Montgomery, Watson, Harza Americas, Inc.
TAG = Tijeras Arroyo Groundwater.
TTFWI = Tetra Tech FW, Inc.

4.2.1 Major Ion Chemistry

Major ion chemistry data from groundwater quality analyses can often reveal distinct characteristics useful for interpreting aquifer flow characteristics. To evaluate possible changes in groundwater chemistry over time, Piper Trilinear and Stiff Diagrams were produced.

The average, median, maximum, and minimum anion and cation concentrations for both the regional aquifer and perched system are presented in Table 4.2.1-1. Average values of some anions and cations maybe biased either slightly high or low because of one-time anomalies. Most concentrations within the six quarters of sampling results for each well were within 20 percent of all concentrations recorded for that well over the six quarters. A few concentrations were between 20 and 35 percent of other values recorded for a specific well and some inexplicable anomalies ranged from 50 to greater than 100 percent higher than other values recorded for a specific well. Examples of the extreme anomalies are found in analytical results for Eubank-3, KAFB-0508, KAFB-0904, PGS-2 in the regional aquifer and KAFB-0903 in the perched system. Both the Piper and Stiff diagrams show the inexplicable one-time concentration anomalies. Calcium, chloride, and sulfate varied more in the perched system than in the regional aquifer, whereas sodium, potassium, magnesium, and alkalinity as HCO_3 had more consistent values.

Table 4.2.1-1
Regional Aquifer and Perched System Anion/Cation
Average, Median, Maximum, and Minimum Concentrations

Regional Aquifer							
Anion/Cation	Na	K	Ca	Mg	Cl	HCO_3	SO_4
Average	26.45	2.56	73.15	12.75	28.55	147.40	72.55
Median	25.60	2.22	68.65	11.88	15.20	140.00	66.45
Maximum	48.30	10.50	150.00	43.20	120.00	237.00	292.00
Minimum	18.20	1.60	46.30	2.30	2.56	84.70	8.07
Perched System							
Average	28.60	2.18	127.42	18.15	92.57	106.33	167.14
Median	23.30	2.02	85.30	15.60	73.00	104.00	76.00
Maximum	83.00	9.00	400.00	44.70	263.00	228.00	672.00
Minimum	16.40	1.30	59.50	8.50	7.70	44.80	13.60

The following generalizations can be made about the major ion chemistry data:

- No discernable temporal trends are apparent.
- The regional aquifer and the perched system have distinct geochemistries.
- The regional aquifer geochemical signatures are more consistent between well locations and have lower calcium and higher bicarbonate/alkalinity.
- The perched system geochemical signatures are less consistent between well locations and have higher chloride, nitrate, and sulfate.

4.2.1.1 Piper Trilinear Diagrams

Piper Trilinear Diagrams were generated for the six quarterly groundwater sampling events conducted from July 2003 through October 2004. A Piper Trilinear Diagram was generated for each monitoring well in the regional aquifer and perched system (Annex H).

For the 30 regional aquifer wells over the sampling period, each had fairly similar geochemistry, with the exception of four wells, KAFB-0310 and TA2-NW1-595, which had higher chloride anions, KAFB-0615, which had higher sulfate anions, and KAFB-0506, which had higher chloride and sulfate ions. The other 26 regional wells showed generally consistent groundwater chemistry classified as a calcium bicarbonate type.

For the perched system wells, the geochemistry was variable with the cations remaining consistent but the anions exhibiting an apparent mixing line. Uniquely, the chemistry at TA2-SW1-320 is very similar to the chemistry found in regional aquifer wells and may be the latent result of the previous high-volume discharge of shower water from the Building 901 Septic System (SWMU 165). Potable water at SNL/NM and KAFB is produced from the regional aquifer.

4.2.1.2 Stiff Diagrams

Stiff Diagrams were generated for the six quarterly groundwater sampling events conducted from July 2003 through October 2004. A Stiff Diagram was generated for each monitoring well in the regional aquifer and perched system (Annex H).

As shown in both the Piper Trilinear and Stiff Diagrams, the regional aquifer wells had consistent water geochemistry except for TA2-NW1-595 (higher chloride), KAFB-0506, KAFB-0514 and KAFB-0310 (higher calcium and slightly lower carbonate) and KAFB-0615 (high sulfate). For the perched system wells, the chemistry was variable in both chloride and sulfate concentrations.

4.2.1.3 Well Pairs

The Piper Trilinear and Stiff Diagrams were reviewed for three of the well pairs. The following evaluation is based upon the comparisons of these two data representations for each well pair. Separate plots were generated for each monitoring well pair and are presented in Annex H.

The well pair TA1-W-02/TA1-W-06 exhibits distinct water types and does not appear to have a local natural structural or stratigraphic connection. The perched system has greater concentrations of calcium, chloride, and sulfate, whereas the regional aquifer has higher bicarbonate plus carbonate. Concentrations of both sodium plus potassium and magnesium are approximately equivalent.

The well pair TA1-W-05/TA1-W-08 exhibits distinct water types and does not appear to have a hydraulic connection. The perched system has greater calcium, chloride, and sulfate, whereas the regional aquifer has higher bicarbonate plus carbonate. Concentrations of both sodium plus potassium and magnesium are approximately equivalent.

In July 2001, well pair WYO-1/WYO-2 was plugged and abandoned and replaced with monitoring wells WYO-3 and WYO-4. Monitoring wells WYO-1 and WYO-2 were plugged and abandoned because the perched system was mixing with the regional aquifer through a defective well completion. The TAG Continuing Investigation Report (SNL/NM November 2002) showed that WYO-1 and WYO-2 had nearly indistinguishable water types. The replacement well pair WYO-3/WYO-4 exhibits distinct water types and indicates a hydraulic connection no longer exists. The perched system has greater chloride and calcium, whereas the regional aquifer has higher bicarbonate plus carbonate and sulfate. Concentrations of sodium plus potassium and magnesium are approximately equivalent.

4.2.2 Metals and Nitrate

The TAG monitoring wells were sampled quarterly for ferrous iron, manganese, and nitrate. The metals and nitrate data are presented in Annexes F and G and include all the inorganic data for TAG samples.

4.2.2.1 Metals

The TAG CME Work Plan (SNL/NM November 2004) outlined a process for evaluating remedial alternatives to identify a corrective measure for the COCs (TCE and nitrate) at the SNL/NM TAG AOR. Evaluation of contaminant degradation mechanisms was performed as part of the CME. One of the mechanisms investigated was aerobic co-metabolic oxidation, a process by which a microbial cell metabolizes a substrate (in this case, TCE) in the presence of a second organic compound that is used as the primary source of carbon and energy.

Ferrous iron and manganese II are used as indicators of anaerobic conditions. Ferrous iron is required to access active anaerobic reaction pathways and manganese II is required to access active anaerobic oxidation pathways. Ferrous iron concentrations ranged from less than 0.028 to 0.57 mg/L in groundwater from TA2-SW1-320. Manganese II concentrations ranged from less than 0.05 to 0.098 mg/L in groundwater from WYO-4. Almost all analytical results for both ferrous iron and manganese II were below detection limits. Summary tables for ferrous iron and manganese II are provided in Annexes F and G; the evaluation of contaminant degradation pathways is fully discussed in the TAG CME Report (SNL/NM August 2005).

4.2.2.2 Nitrate

Nitrate analysis has been conducted on TAG samples since 1992 for selected wells. Only six quarters of data, July 2003 through December 2004, are presented in this report. Annexes F and G list all the nitrate concentrations detected in TAG samples. Nitrate exceeded the MCL (10 mg/L) in 19 wells (Table 4.2.2-1). SNL/NM wells TA2-SW1-320, TJA-4, and TJA-7 have consistently exceeded the MCL. KAFB wells KAFB-0307, -0311, -0312, -0315, -0508, -0512, -0514, -0516, -0602, -0608, -0609, -0610, -0616, and -0904 also exceeded the MCL (10 mg/L). KAFB-0307 and KAFB-0311 nitrate concentrations met the MCL only once during the six quarters of sampling. Concentration trends were plotted for wells that showed consistent concentrations above the MCL; other wells with only sporadic detections were not graphed. The concentration trend lines exhibit decreasing or fairly stable nitrate concentrations for both the perched system and the regional aquifer (Figures 4.2.2-1 and 4.2.2-2).

Table 4.2.2-1
Summary of Nitrate Concentrations in TAG Monitoring Wells

Well[d]	Nitrate Analytical Results (mg/L)[a,b,c]					
	Q1	Q2	Q3	Q4	Q5	Q6
KAFB-0307	9.7	10.0	9.2	9.8	8.8	8.7
KAFB-0311	9.3	10.0	9.3	9.1	8.8	9.2
KAFB-0312	**22.0/20.0**	**19.0**	**19.0/19.0**	**21.0/21.0**	**19.0/19.0**	**18.0/18.0**
KAFB-0315	**15.0**	**13.0**	**13.0**	**14.0**	**12.0**	**11.6**
KAFB-0508	**25.5/25.7**	**28.4**	**29.3/28.9**	**27.6**	**23.0**	**22.8**
KAFB-0512	**16.9/14.7**	**15.1**	**13.0**	**11.8/12.1**	**13.7/14.7**	**11.9/11.8**
KAFB-0514	**41.0**	**42.6**	**37.9**	**33.6**	**31.3**	**30.4**
KAFB-0516	**28.5**	**21.9**	**21.1**	**26.1**	**22.7**	**22.4**
KAFB-0602	**17.0**	**18.0**	**17.0**	**21.0**	**16.0**	**16.0**
KAFB-0608	**24.0**	**25.0**	**21.0**	**28.0**	**25.0**	**24.0**
KAFB-0609	**14.0**	**14.0**	**14.0**	**22.0**	**20.0**	**13.0**
KAFB-0610	**19.0/19.0**	**19.0/19.0**	**19.0/19.0**	**19.0/18.0**	**18.0/18.0**	**18.0/18.0**
KAFB-0616	**20.8**	**20.1**	**20.1**	**20.3**	**18.9**	**18.9**
KAFB-0904	**19.0**	**19.0**	**19.0**	**19.0**	**20.0**	**20.0**
TA2-SW1-320	**25.0**	**24.0**	**25.0**	**24.2**	**34.2**	**25.1**
TA2-W-19	**10.4**	**10.3**	10.0	9.3/9.39	9.53	10.3/10.0
TJA-2	**10.1**	9.70	10.0	9.1	9.96	9.6
TJA-4	**25.0**	**25.8**	**27.0**	**26.4**	**26.0**	**25**
TJA-7	**26.0**	**25.0/26.0**	**29.8**	**24.0**	**27.0/27.0**	**27.1/25.0**

Note: Values in **bold** indicate that the concentration exceeds the MCL of 10 mg/L.
[a]No laboratory qualifiers or data validation qualifiers are provided; see analytical data qualifiers in Annexes F and G.
[b]For multiple laboratory analytical methods (e.g., SW-846 9056 or EPA 353.1), the highest concentration is provided.
[c]Two values indicate that a duplicate sample was analyzed; if the duplicate was analyzed by multiple laboratory analytical methods, the highest concentration is provided.
[d]Includes only wells that met or exceeded the EPA MCL of 10 mg/L for at least one quarter.
EPA = U.S. Environmental Protection Agency.
MCL = Maximum contaminant level.
mg/L = Milligram(s) per liter.
TAG = Tijeras Arroyo Groundwater.

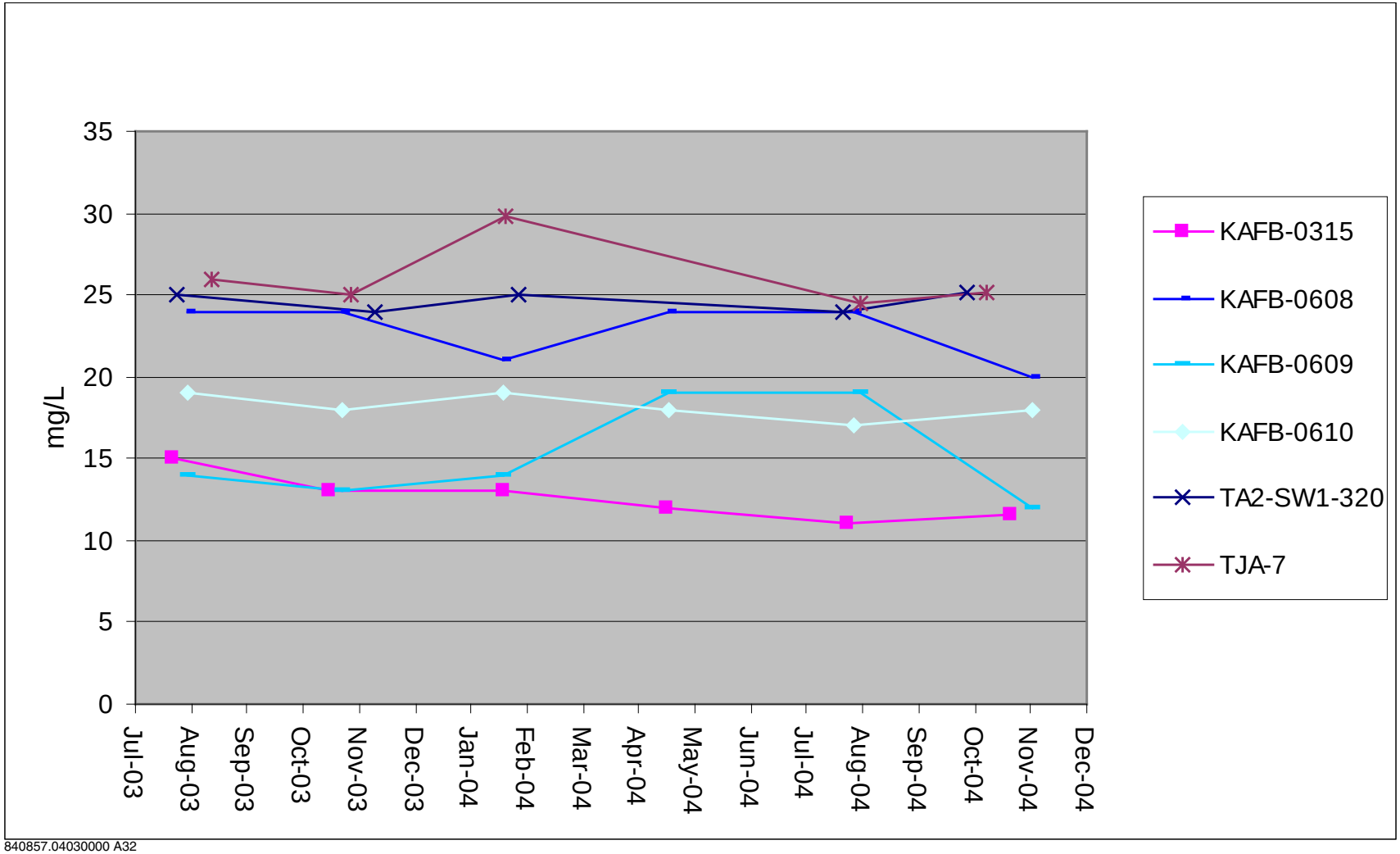

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Figure 4.2.2-1
Perched System Nitrate Concentrations, July 2003–December 2004

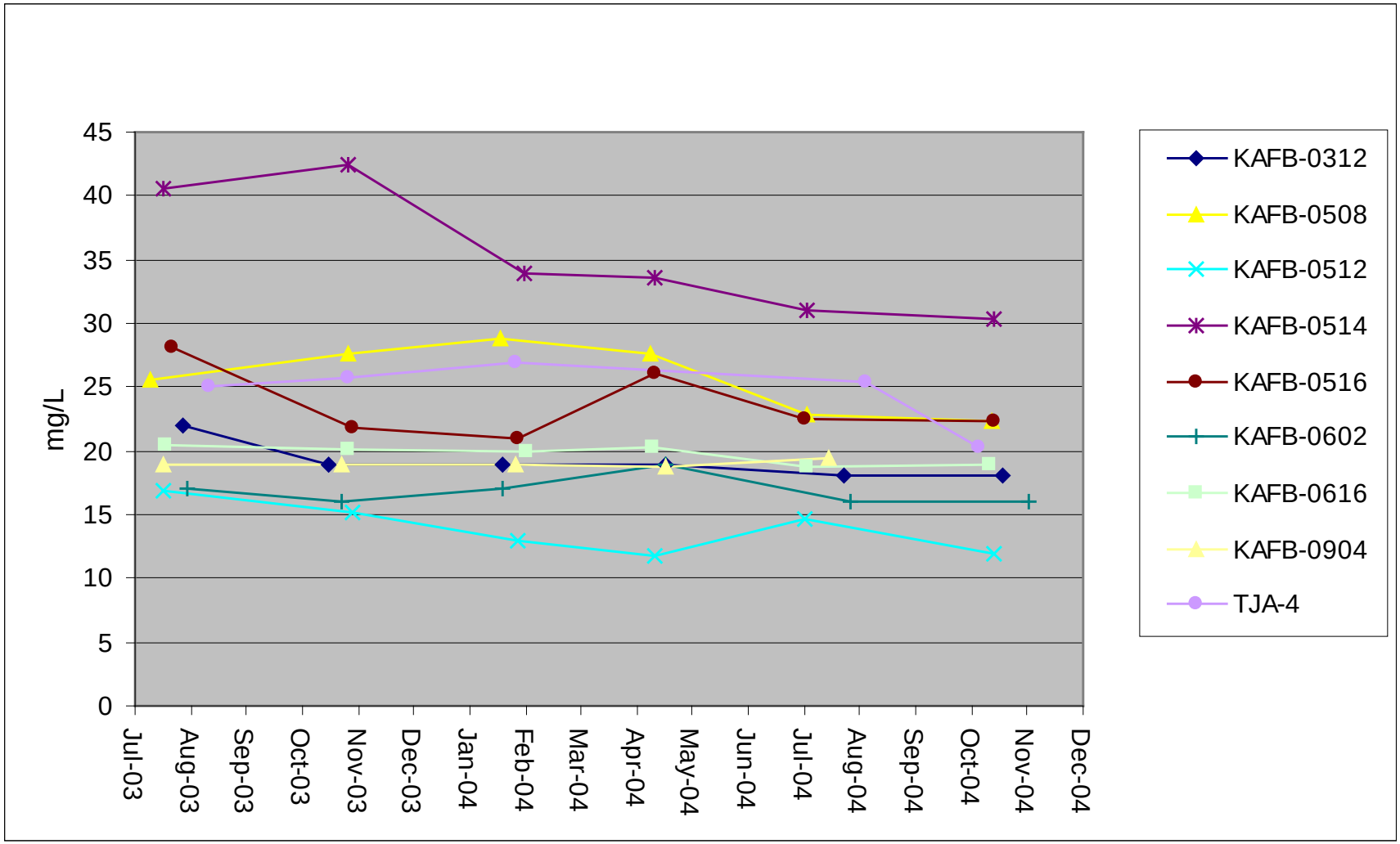

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Figure 4.2.2-2
Regional Aquifer Nitrate Concentrations, July 2003–December 2004

4.2.3 Volatile Organic Compounds

Twenty VOC species have been detected in TAG samples over the past 12 years. Most of the VOCs occurred at very low concentrations, and the number of detections is inconsistent from quarter to quarter. The VOCs most often encountered are TCE, PCE, cis-1,2-PCE, 1,1-DCA, and 1,1-DCE.

Of these five compounds, TCE is the only compound to exceed the MCL and has been detected below, at, and just above detection limits in several wells during the July 2003 through December 2004 reporting period. TCE is the only VOC considered to be a COC with a maximum detected concentration of 7.7 μg/L. TCE was detected in 15 of the 49 TAG monitoring wells (Table 4.2.3-1). Of the 15 wells, only 6 had sporadic detections and the other 9 had more consistent detections. TCE exceeded the MCL (5 μg/L) in only two perched system monitoring wells (TA2-W-19 and WYO-4). TCE was plotted for nine wells, eight perched system wells (KAFB-0506, TA1-W-06, TA2-W-01, TA2-W-19, TA2-W-26, TJA-2, TJA-7, and WYO-4) and one regional aquifer well (KAFB-0615) where TCE was more consistently detected (Figures 4.2.3-1 and 4.2.3-2). These nine wells are in the perched system with the exception of KAFB-0615. TCE concentrations over time are fairly consistent at any given location. The concentration trend line is level to slightly decreasing for five of the wells (KAFB-0506, TA1-W-06, TA2-W-01, TA2-W-26, and TJA-7). The trend lines for four wells (KAFB-0615, TA2-W-19, TJA-2, and WYO-4) exhibit generally increasing concentrations, although the more recent data indicate stable TCE concentrations.

Tables for the other detected VOCs (PCE, cis-1,2-DCE, 1,1-DCA, and 1,1-DCE) are presented in Annexes F and G.

4.2.4 Isotopes

Currently, KAFB contractors are performing a comprehensive groundwater sampling program in compliance with a Nitrate-Abatement Plan (Montgomery Watson August 2000). The KAFB program requires stable isotopic analysis of groundwater, including the two stable isotopes of nitrogen, ^{14}N and ^{15}N. For the TAG investigation, groundwater samples were collected from five monitoring wells and analyzed for isotopes of nitrogen ($^{15}N/^{14}N$ [$\delta^{15}N$]), oxygen ($^{18}O/^{16}O$ [$\delta^{18}O$]), and hydrogen (deuterium/hydrogen [D/H]). These isotopic ratios can be used to identify sources in groundwater.

Nitrogen isotope studies (e.g., Kreitler [1975], Keeney [1986], and Kendall [1998]) are based upon the fact that when nitrogen compounds are altered chemically within a system, the stable, nonradioactive isotopes ^{14}N and ^{15}N can undergo isotopic fractionation. Some of the fractionations can be unique; therefore, the nitrogen isotopes can be used to determine original sources of nitrogen-bearing compounds in groundwater systems (Kreitler 1975) and are usually expressed as the ratio of ^{15}N and ^{14}N. The average abundance of ^{15}N in the atmosphere (air) is constant, with the $^{15}N/^{14}N$ ratio equal to 1/272. The convention is to report nitrogen isotope ratios in parts per thousand (or per mil) relative to N_2 in atmospheric air using the standard definition of δ:

$$^{15}N_{AIR} = \{[(^{15}N/^{14}N)_X/(^{15}N/^{14}N)_{AIR}]-1\} * 1000$$

Table 4.2.3-1
Summary of TCE Concentrations in TAG Monitoring Wells

Well[c]	TCE Analytical Results (μg/L)[a,b]					
	Q1	Q2	Q3	Q4	Q5	Q6
KAFB-0307	ND	ND	ND	ND	ND	0.7
KAFB-0310	ND	ND	ND	ND	ND	0.6
KAFB-0313	ND	ND	ND	ND	ND	0.7
KAFB-0506	3.9/4.3	4.2/4.2	4.8	3.6	4.0	4.3
KAFB-0615	0.6	0.9	0.5	1.1	ND	1.2
TA1-W-04	ND	ND	ND	0.30	ND	ND
TA1-W-06	ND	0.438	0.362	ND	0.32	ND
TA1-W-08	ND	ND	ND	0.44	ND	ND
TA2-W-01	1.29	1.96	1.63	1.8	1.3	1.38
TA2-W-19	3.77	4.54	4.19	**5.2/5.1**	4.2	4.56/4.65
TA2-W-26	1.9	1.98/2.13	1.81/1.56	ND	1.4/1.3	ND
TA2-W-27	ND	ND	0.519	ND	0.51	0.412
TJA-2	2.59	2.36	3.08	3.3	3.1	3.1
TJA-7	1.46	ND	0.430	ND	0.53/0.55	ND
WYO-4	**6.57/6.39**	**6.06/7.05**	**6.99/6.60**	**7.7/7.6**	**6.7/6.0**	**7.35/7.43**

Note: Values in **bold** indicate that the concentration exceeds the EPA MCL of 5 μg/L.
[a]No laboratory qualifiers or data validation qualifiers are provided; see analytical data qualifiers in Annexes F and G.
[b]Two values indicate that a duplicate sample was analyzed.
[c]Includes only wells that have detectable concentrations of TCE during at least one quarterly sampling event.
EPA = U.S. Environmental Protection Agency.
MCL = Maximum contaminant level.
μg/L = Microgram(s) per liter.
ND = TCE not detected during this quarterly sampling event; see Annexes F and G for method detection limits.
TAG = Tijeras Arroyo Groundwater.
TCE = Trichloroethene.

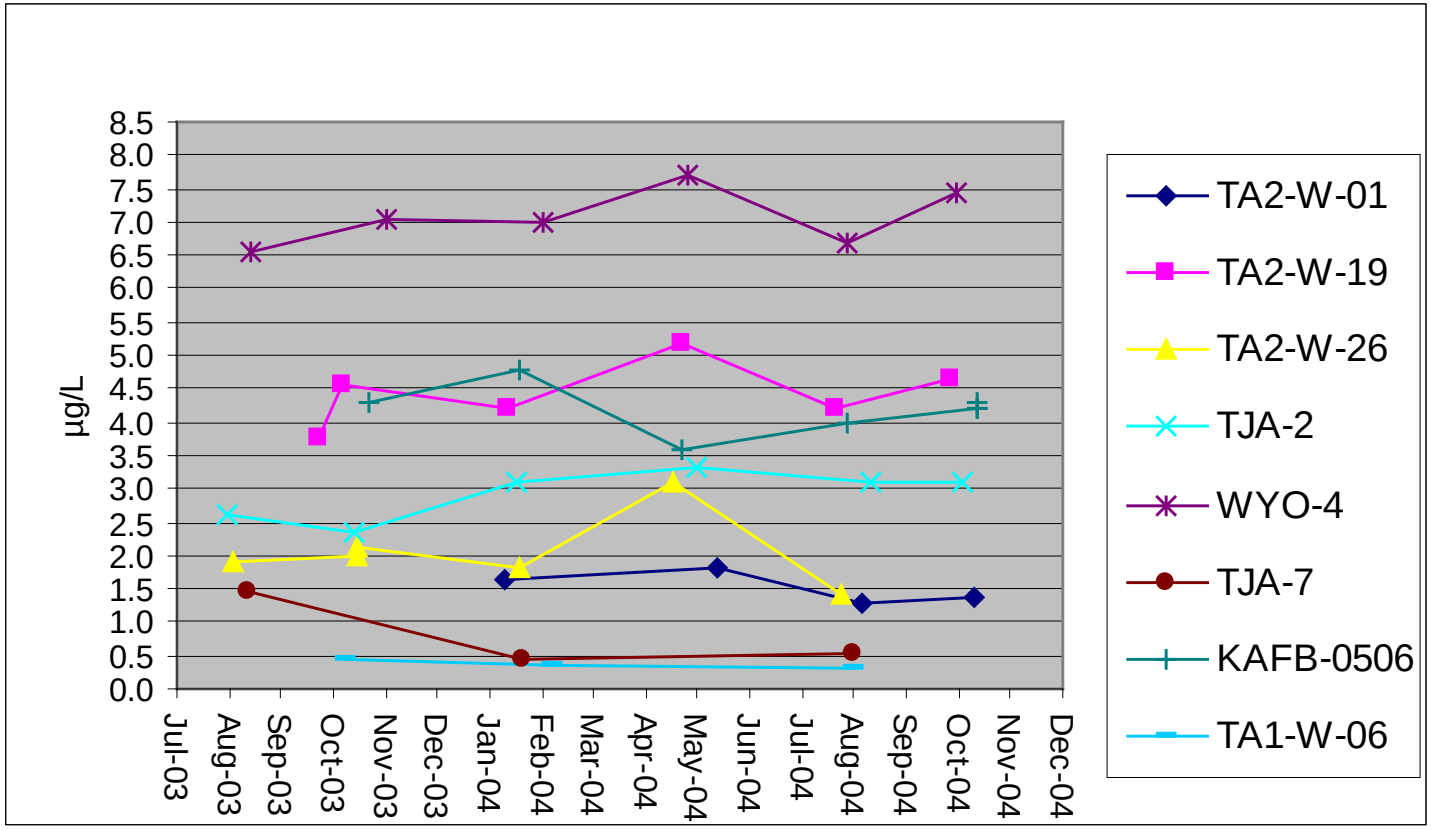

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Figure 4.2.3-1
Perched System TCE Concentrations, July 2003–December 2004

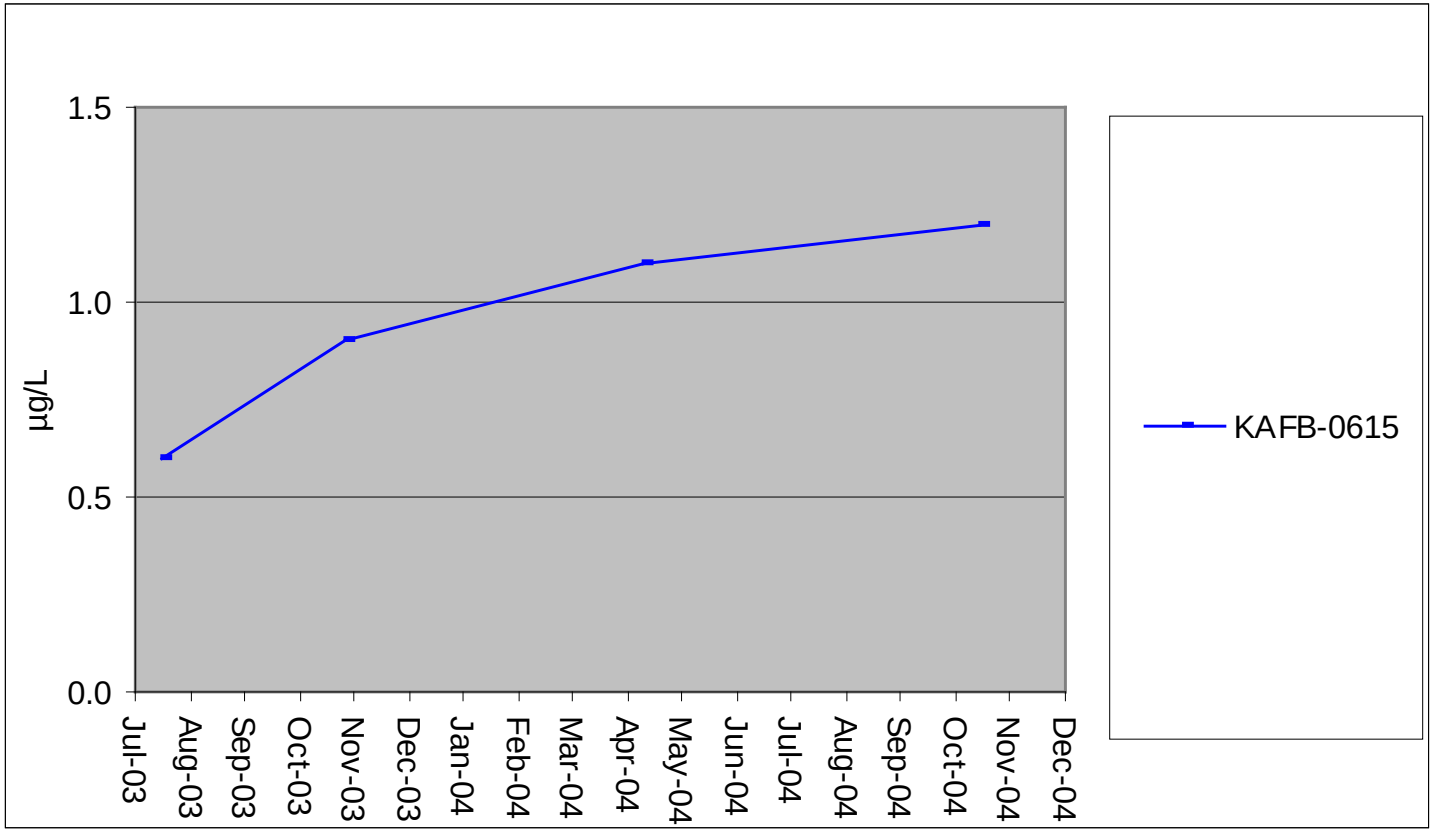

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Figure 4.2.3-2
Regional Aquifer TCE Concentrations, July 2003–December 2004

where, “X” is the isotope ratio of the sample and “AIR” is the isotope ratio in the reference standard gas (Kendall 1998). Most earth materials have $\delta^{15}N$ compositions between -20 and +30 per mil, where “-”corresponds to the sample being light or depleted with respect to ^{15}N, and “+” corresponds to the sample being heavy or enriched with respect to ^{15}N. As described by Kendall (1998) and McQuillan et al. (June 2000), the typical range of $\delta^{15}N$ in nitrogen sources is shown in Table 4.2.4-1.

Table 4.2.4-1
$\delta^{15}N$ Values for Common Sources of Nitrogen

Nitrogen Source	$\delta^{15}N$ (McQuillan et al. June 2000) ($^0/_{00}$)	$\delta^{15}N$—Range (Kendall 1998) ($^0/_{00}$)
Atmosphere	Not stated	0
Inorganic Fertilizers (from atmospheric sources)	+8.8	-3 to +3
Soils, unfertilized	Not stated	+2 to +5
Evapotranspiration	+5.0	Not stated
Animal Manure/ Septic Waste	+14.2 (animal) and +10.8 (septic)	+10 to +25

$^0/_{00}$ = Per mil (part per thousand).

The results of the $\delta^{15}N$ isotope analyses of the groundwater samples are presented in Annexes F and G and are summarized as follows:

- $\delta^{15}N$ isotopic signatures were enriched and ranged from 3.2 to 57.3 per mil (Annexes F and G). However, the 57.3 per mil result for TJA-7 from August 2003 appears to be a statistical outlier. When this value is removed from the data set the $\delta^{15}N$ isotopic signatures ranged from 3.2 to 13.9 per mil. Signatures in this range typical correspond to the range of unfertilized soils, animal manure, and septic waste.

- $\delta^{18}O$ isotopic signatures were slightly depleted and ranged from -11.9 to -9.2 per mil (Annexes F and G). These isotopic values are well within the range of values seen in other KAFB wells (MWH Americas, Inc. July 2003).

- D/H isotopic signatures were depleted and ranged from -82 to -62 per mil (Annexes F and G). These isotopic values are well within the range of values seen in other KAFB wells (MWH Americas, Inc. July 2003).

4.3 Nature and Extent of Contamination

4.3.1 Nitrate

The distribution of maximum nitrate concentrations for all the sampling events is shown in Figures 4.3.1-1 and 4.3.1-2. The nitrate concentrations ranged from 0.3 to 29.8 mg/L in the perched system and from 0.6 to 42.6 mg/L in the regional aquifer.

Nitrate exceeded the MCL (10 mg/L) in eight perched system wells (KAFB-0315, -0608, -0609, -0610, TA2-SW1-320, TW2-W-19, TJA-1, and TJA-7) and nine regional aquifer wells (KAFB-0312, -0508, -0512, -0514, -0516, -0602, -0616, 0904, and TJA-4).

The KAFB Stage 1 Abatement Report (MWH Americas, Inc. July 2003) defines four nitrate plumes. Plume 1 is within the regional aquifer near the former sewage lagoons southeast of the airport runway. Nitrate results for four regional wells (KAFB-0508, -0512, -0514, and -0516) located near the former sewage lagoons exceeded the MCL.

Plume 2 is within the perched system and is associated with the golf course. Nitrate results for five regional aquifer wells (KAFB-0312, -0602, -0616, -0904, and TJA-4) exceeded the MCL, and in two regional aquifer wells (KAFB-0307 and KAFB-0311) nitrate was detected at a concentration equaling the MCL (10 mg/L).

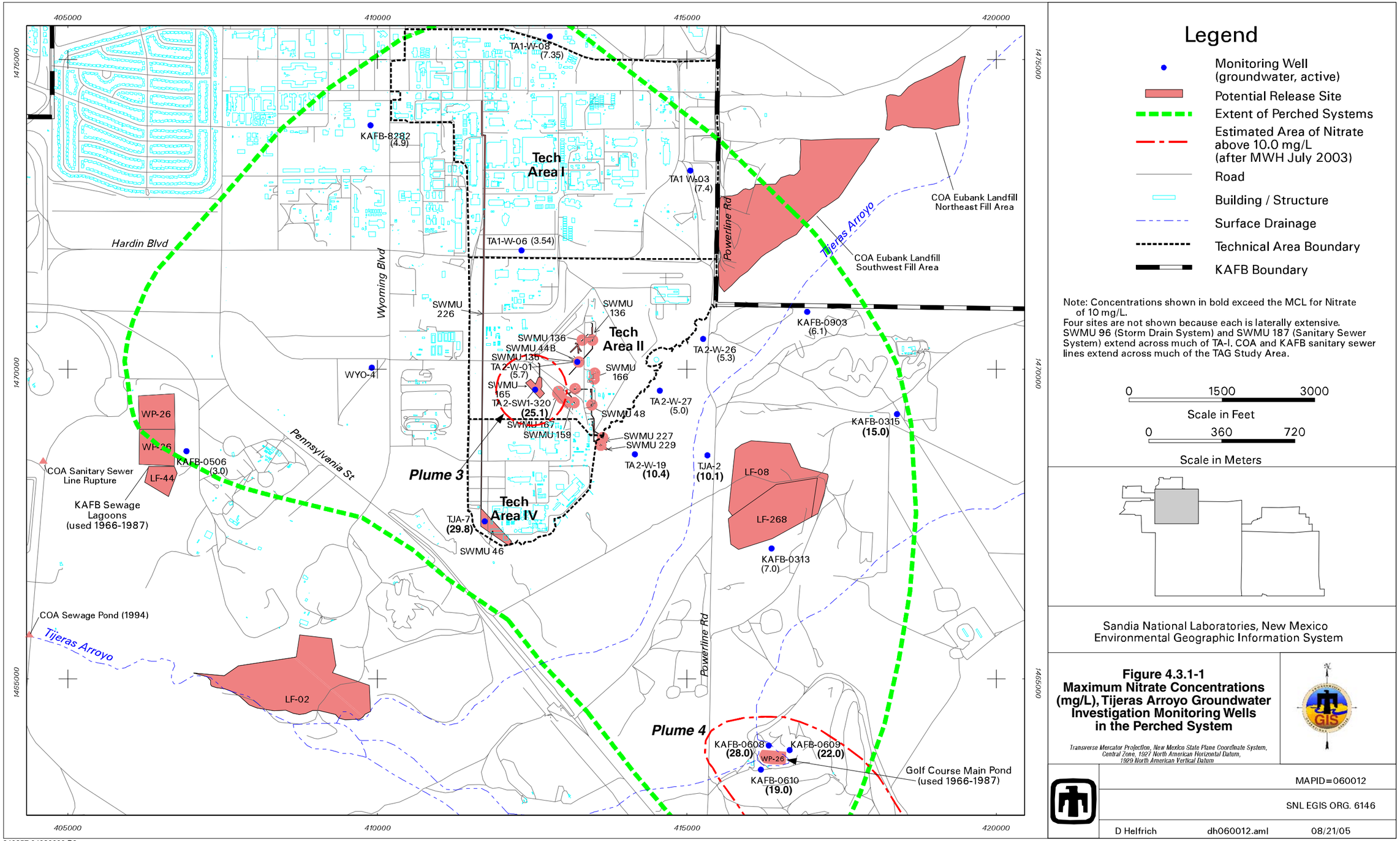
Plume 3 is within the perched system in the southwestern portion of TA-II. Possible sources for Plume 3 include:

- SWMU 48, Building 904 Septic System (TA-II waste water)
- SWMU 136, Building 907 Septic System (TA-II septic water)
- SWMU 159, Building 935 Septic System (TA-II septic water)
- SWMU 165, Building 901 Septic System (TA-II personnel shower and septic water)
- SWMU 166, Building 919 Septic System (TA-II waste water)
- SWMU 167, Building 940 Septic System (TA-II septic water)

The nitrate concentration in the perched system monitoring well TA2-SW1-320, located within Plume 3, exceeded the MCL.

The nitrate concentration in perched system monitoring wells KAFB-0608, -0609, and -0610, located within Plume 4 and associated with the golf course, exceeded the MCL.

Two additional areas within the perched system exhibit nitrate concentrations exceeding the MCL. A possible fifth nitrate plume includes wells TA2-W-19 and TJA-2, in which nitrate concentrations slightly exceeded the MCL at 10.4 and 10.1 mg/L, respectively. This plume is located southeast of TA-II and has no known source. A possible sixth plume includes well TJA-7, which exhibited concentrations almost three times the MCL for nitrate. This plume is located near the southwestern corner of TA-IV and is most likely associated with SWMU 46.



Legend

- Monitoring Well (groundwater, active)
- Potential Release Site
- Extent of Perched Systems
- Estimated Area of Nitrate above 10.0 mg/L (after MWH July 2003)
- Road
- Building / Structure
- Surface Drainage
- Technical Area Boundary
- KAFB Boundary

Note: Concentrations shown in bold exceed the MCL for Nitrate of 10 mg/L.
Four sites are not shown because each is laterally extensive.
SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I, COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1500 3000
Scale in Feet

0 360 720
Scale in Meters

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Figure 4.3.1-1
Maximum Nitrate Concentrations (mg/L), Tijeras Arroyo Groundwater Investigation Monitoring Wells in the Perched System

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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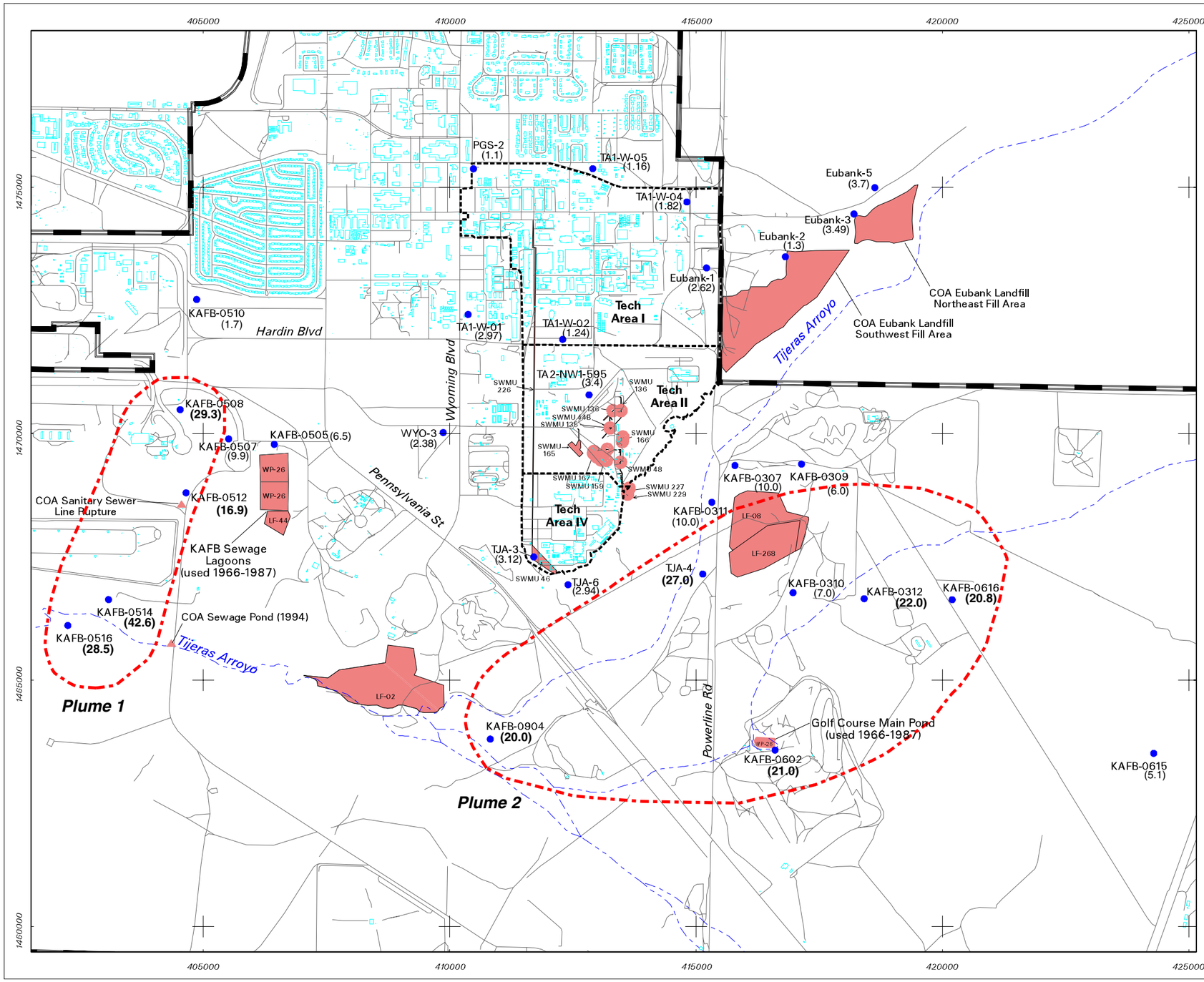

Legend

- Monitoring Well (groundwater, active)
- Estimated Area of Nitrate above 10.0 mg/L (after MWH July 2003)
- Potential Release Site
- Road
- Building / Structure
- Surface Drainage
- Technical Area Boundary
- KAFB Boundary

Note: Concentrations shown in bold exceed the MCL for Nitrate of 10 mg/L.
Four sites are not shown because each is laterally extensive.
SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I, COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 2200 4400
Scale in Feet

0 528 1056
Scale in Meters

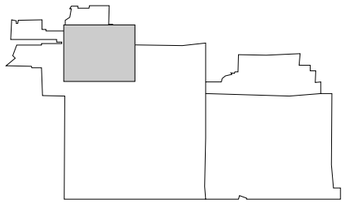

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Figure 4.3.1-2
Maximum Nitrate Concentrations (mg/L), Tijeras Arroyo Groundwater Investigation Monitoring Wells in the Regional Aquifer

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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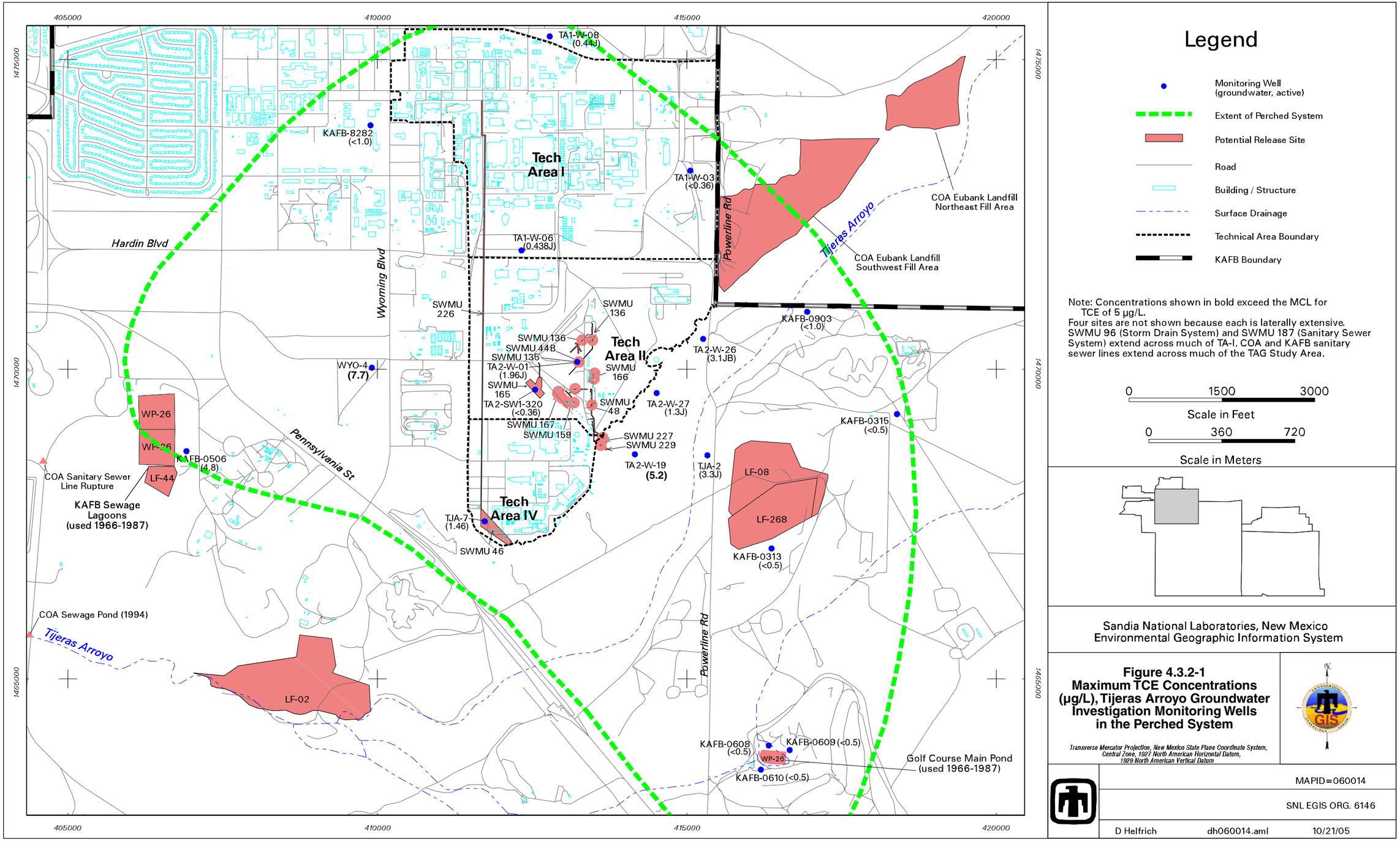
4.3.2 Chlorinated Solvents

The horizontal distribution of TCE in groundwater is sporadic, which may reflect multiple small sources of TCE. Eight wells located within the perched system had consistent TCE detections with maximum values ranging from 0.438 (estimated concentration) to 7.7 μg/L (Figure 4.3.2-1). Graphical representations of TCE concentrations for the perched system wells over six quarters of sampling (July 2003 through December 2004) are presented in Figure 4.2.3-1. The highest concentrations within the perched system were found at well WYO-4 ranging from 6.57 to 7.43 μg/L. Monitoring well WYO-4 is located near the central portion of the study area and is not in proximity to any potential release site.

Six wells within the regional aquifer exhibited concentrations above detection limits (Figure 4.3.2-2). One well, KAFB-0615, located near the eastern edge of the TAG study area, exhibited a consistent increase in TCE with a maximum concentration of 1.2 μg/L (Figure 4.2.3-2). The other six wells within the regional aquifer exhibited generally low and sporadic TCE detections. No wells with the regional aquifer exhibited TCE concentrations exceeding the MCL of 5 μg/L.



Legend

- Monitoring Well (groundwater, active)
- Extent of Perched System
- Potential Release Site
- Road
- Building / Structure
- Surface Drainage
- Technical Area Boundary
- KAFB Boundary

Note: Concentrations shown in bold exceed the MCL for TCE of 5 µg/L.
Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 1500 3000
Scale in Feet

0 360 720
Scale in Meters

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Figure 4.3.2-1
Maximum TCE Concentrations (µg/L), Tijeras Arroyo Groundwater Investigation Monitoring Wells in the Perched System

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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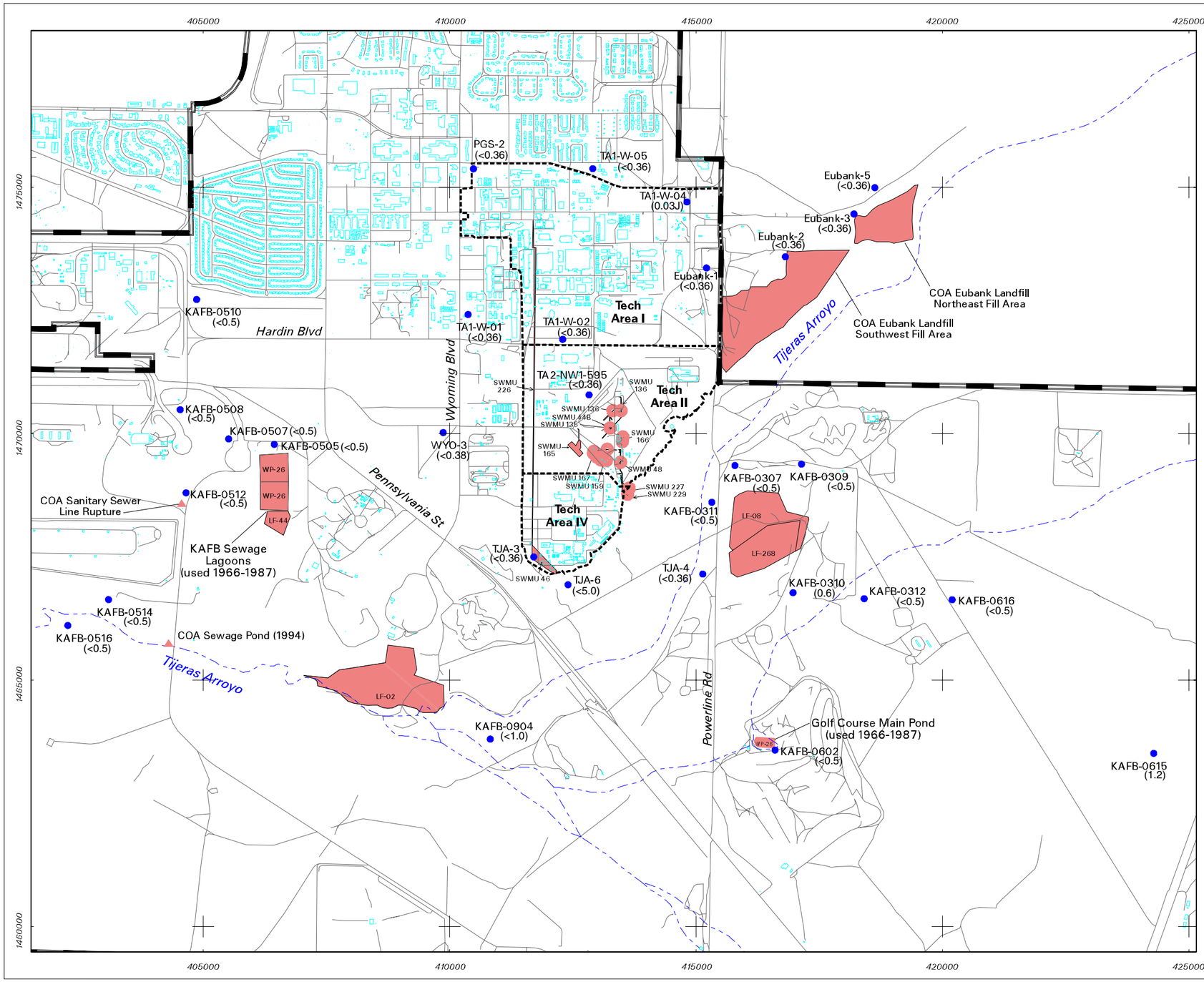


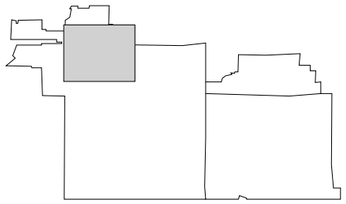
Legend

- Monitoring Well (groundwater, active)
- Potential Release Site
- Road
- Building / Structure
- Surface Drainage
- Technical Area Boundary
- KAFB Boundary

Note: Four sites are not shown because each is laterally extensive. SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) extend across much of TA-I. COA and KAFB sanitary sewer lines extend across much of the TAG Study Area.

0 2200 4400
Scale in Feet

0 528 1056
Scale in Meters



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Environmental Geographic Information System

Figure 4.3.2-2
Maximum TCE Concentrations (µg/L), Tijeras Arroyo Groundwater Investigation Monitoring Wells in the Regional Aquifer

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone, 1927 North American Horizontal Datum, 1929 North American Vertical Datum

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5.0 SUMMARY AND RECOMMENDATIONS

This section summarizes the environmental work conducted to date, and presents recommendations for further study at the TAG study area.

5.1 Summary of Work Accomplished

A wide variety of environmental studies, consisting of the following, have been conducted by SNL/NM, COA, and KAFB for the TAG study area:

- Research activities that compiled process knowledge by interviewing current and former SNL/NM employees, as well as reviewing historical documents, such as memoranda, aerial photographs, and engineering drawings.

- Process knowledge acquired has been substantial. For example, the COCs are well known for each SWMU and DSS site. Process knowledge revealed that 40 SWMUs and 6 DSS sites required site characterization.

- Soil sampling has been conducted at 40 SWMUs and 6 DSS sites in the TAG study area. At a few sites, contaminated soil exceeding risk-based cleanup levels has been excavated and shipped off site. None of the contaminated soil contained significant concentrations of VOCs or nitrate.

- Soil-vapor sampling has been conducted at 20 SWMUs and 4 DSS sites.

- No sites require additional remediation, such as the excavation of contaminated soil. The NMED has accepted NFA proposals and issued Certificates of Completion for nearly all of the sites.

- Across the TAG study area, SNL/NM has installed a network of 35 monitoring wells consisting of 25 groundwater and 10 soil-vapor wells. KAFB and the COA have installed another 36 groundwater monitoring wells in the vicinity.

- Hydrogeologic investigations, such as transducer studies, aquifer tests, colloidal borescope, water analyses, and computer modeling have been conducted.

- Groundwater analyses have been performed for general chemistry, VOCs, and nitrate. Trend analysis and geochemical interpretation have been documented.

- Geologic field mapping and other investigations, such as borehole-geophysical, seismic, and aeromagnetic surveys, have been conducted.

- A conceptual model has been prepared that depicts the hydrogeologic setting of the TAG study area.

5.2 Summary of Data Findings

Environmental studies in the TAG study area have identified SWMUs, characterized the hydrogeologic setting, defined the distribution of TCE and nitrate in groundwater, evaluated the occurrence of other COCs in the soil, and determined the principal release sites. TCE and nitrate are the COCs affecting groundwater in the TAG study area. No ongoing pollution is occurring at the SWMUs. For example, the TA-II septic systems have been taken out of service. No dumping or disposal of toxic materials is allowed at SNL/NM.

SNL/NM manages 43 SWMUs and 6 DSS sites located in the TAG study area, which includes TA-I, TA-II, TA-IV, and the TJAOU. The KAFB IRP and the COA EHD manage 41 sites in the vicinity. Most of the characterization work has been completed at SNL/NM. At the majority of the sites, only minor amounts of hazardous and/or radioactive materials were released. Therefore, most sites have not required remediation. At a few sites, contaminated soil exceeding risk-based cleanup levels has been excavated and shipped off site. None of the contaminated soil contained significant concentrations of VOCs or nitrate.

The hydrogeologic setting for the TAG study area is well understood because a significant amount of site characterization work has been performed. Groundwater occurs in both the perched system and the regional aquifer. However, the perched system has a limited lateral extent that covers approximately 3.8 square miles of north-central KAFB. The perched system may extend northward across the KAFB boundary. In the TAG study area, the depth to groundwater for the perched system ranges from 270 to 340 ft bgs. The uppermost saturated zone in the perched system varies from approximately 10 to 30 ft in thickness, depending upon well location. Borehole geophysical surveys indicate that a few relatively damp intervals are present below the uppermost saturated zone, but borehole-yield testing has revealed that most of these deeper intervals are too thin to yield sufficient volumes of water suitable for the construction of monitoring wells. The perched system is not used as a water supply.

The direction of groundwater flow in the perched system is to the southeast. Groundwater flows through low-yield alluvial fan sediments with an average hydraulic gradient of approximately 0.008 ft/ft. Groundwater elevations in the perched system are decreasing in the northwestern portion of the study area, but are increasing in the southeastern area. The aqueous geochemistry of the perched system and the regional aquifer are different in that the geochemical signatures of the perched system vary between well locations and tend to exhibit higher concentrations of calcium, sulfate, and chloride than the regional aquifer. The perched system is recharged by both artificial (leaking water-supply/sewer lines and the former sewage lagoons) and natural sources (Tijeras Arroyo and possibly ancestral Tijeras Creek). Principal hydrogeologic controls upon the perched system are: 1) the stratigraphic dip of the alluvial fan sediments; 2) stratigraphic variations (such as braided paleochannels); and 3) multiple recharge locations in the northwestern portion of the TAG study area.

Multiple overlapping lenses of low conductivity sediments serve as a perching horizon beneath the perched system. Beneath the central TAG study area, approximately 180 to 280 ft of unsaturated sediments separate the perched system from the regional aquifer. The regional aquifer is more laterally extensive than the perched system, extending across the TAG study area as well as the Albuquerque Basin. Across the TAG study area, the depth to the regional aquifer ranges from approximately 423 to 578 ft bgs. The regional aquifer is composed of both the ARG fluvial facies and alluvial fan facies. Groundwater in the regional aquifer flows to the northwest in a nearly opposite direction to that of the perched system. The hydraulic gradient in the regional aquifer averages approximately 0.009 ft/ft across the study area, but is steeper

near the KAFB and COA water-supply wells. The regional aquifer is recharged by natural sources including mountain front flow, Tijeras Arroyo, and the perched system. Groundwater elevations are generally decreasing in the northwestern portion of the study area, but are increasing in the southeastern area. Seasonal pumping variations cause sporadic water-level fluctuations near the water-supply wells. The principal hydrogeologic control upon groundwater flow direction in the regional aquifer is the combined draw-down effect of the KAFB, COA, and VA water-supply wells.

The occurrence of TCE in groundwater is principally restricted to the perched system. For the six quarterly sampling events discussed in this report, the maximum concentration of TCE in the perched system is 7.7 μg/L. Eight of the eighteen perched system monitoring wells have yielded detectable concentrations of TCE. TCE concentrations in the perched system are higher than concentrations in the regional aquifer. The historical trend of TCE concentrations in the perched system is essentially stable.

In the TAG study area, TCE is suspected of reaching groundwater by being disposed of in dilute concentrations along with significant quantities of waste water at SNL/NM. Thirteen SWMUs are potential sources of TCE groundwater contamination. Four other sites managed by KAFB and an uncontrolled landfill managed by the COA also may have impacted groundwater with TCE.

The sporadic distribution of low TCE concentrations (less than 10 μg/L) in the perched system is indicative of discrete TCE releases compounded by the heterogeneity of the alluvial fan deposits that comprise the unsaturated and saturated intervals. The TCE distribution also probably reflects both the lateral and vertical spreading of TCE soil-vapor through a 250- to 300-ft-thick vadose zone. TCE releases have been correlated to historical activities at TA-I, TA-II, and KAFB. Two SWMUs are assigned a high concern level for being TCE-release sites that may have impacted groundwater: SWMU 46 (the SNL/NM Acid Waste Line Outfall) and SWMU 165 (the Building 901 Septic System). The KAFB Sewage Lagoons also are assigned a high concern level. These three sites appear to be the most likely sources of groundwater contamination involving TCE. Ongoing investigations by SNL/NM, KAFB, and the COA should improve our understanding of the TCE-release sites.

The occurrence of TCE in the regional aquifer has no discernible pattern and is more intermittent than the distribution in the perched system. Six of the thirty regional aquifer monitoring wells have yielded detectable concentrations of TCE. For the six quarterly sampling events discussed in this report, the maximum TCE concentration for the regional aquifer has been 1.2 μg/L, below the EPA MCL of 5 μg/L.

At SNL/NM, nitrate may have reached groundwater due to the disposal of septic water at six TA-II septic-system leachfields (SWMUs 48, 136, 159, 165, 166, and 167), leakage from the TA-I Sanitary Sewer System (SWMU 187), and possibly the inadvertent discharge of septic water along with waste water at SWMU 46. As part of the IRP Nitrate Abatement Program, three primary potential sources of nitrate contamination have been identified at KAFB (Montgomery Watson August 2000). These sites are the KAFB Sewage Lagoons, the KAFB Golf Course Main Pond, and the COA Sanitary-Sewer Line Rupture. Four KAFB landfills and various COA sites (Eubank Landfill, 1994 Sanitary-Sewer Line Rupture, leaking sanitary-sewer lines, and Montessa Park/Tree Nursery) may also be sources of nitrate.

Elevated levels of nitrate have been detected in perched system and regional aquifer groundwater samples. The maximum nitrate concentration detected in the perched system groundwater for the six quarterly sampling events discussed in this report is 29.8 mg/L, above the EPA MCL of 10 mg/L. The maximum nitrate concentration detected in samples from the regional aquifer groundwater samples is 42.6 mg/L. The area with the highest concentration of nitrate in the regional aquifer is in the vicinity of the COA Sanitary-Sewer Line Rupture and the KAFB Sewage Lagoons, beyond the western extent of the perched system. Nitrate is suspected of reaching groundwater as degradation products associated with the disposal of septic water or landfill debris. Two SWMUs are assigned a high concern level for being nitrate-release sites that may have impacted groundwater: SWMU 165 (the Building 901 Septic System in TA-II) and SWMU 187 (the TA-I Sanitary Sewer System). The KAFB Sewage Lagoons, the KAFB Golf Course Main Pond, and the COA Sanitary-Sewer Line Rupture are also assigned a high concern level. These five sites appear to be the most likely sources of nitrate groundwater contamination. Ongoing investigations by SNL/NM, KAFB, and the COA should improve our understanding of the nitrate-release sites.

5.3 Recommendations for Further Study

SNL/NM recommends the following activities as part of its ongoing environmental studies:

- Continue annual collection of groundwater samples at all TAG groundwater monitoring wells. At a minimum, the analytes for groundwater sampling will consist of VOCs and nitrate.
- Continue periodic (quarterly, semiannually, or annually) measurements of groundwater elevations in all TAG monitoring wells.
- Maintain contact with the KAFB IRP personnel with respect to the results of TCE and nitrate abatement studies.
- As available, obtain groundwater results from both KAFB and the COA.
- Continue to integrate SNL/NM, KAFB, and COA data into the CME process currently underway for the SNL/NM AOR.
- Report future TAG investigation results in the SNL/NM Groundwater Protection Program Annual Groundwater Monitoring Report.

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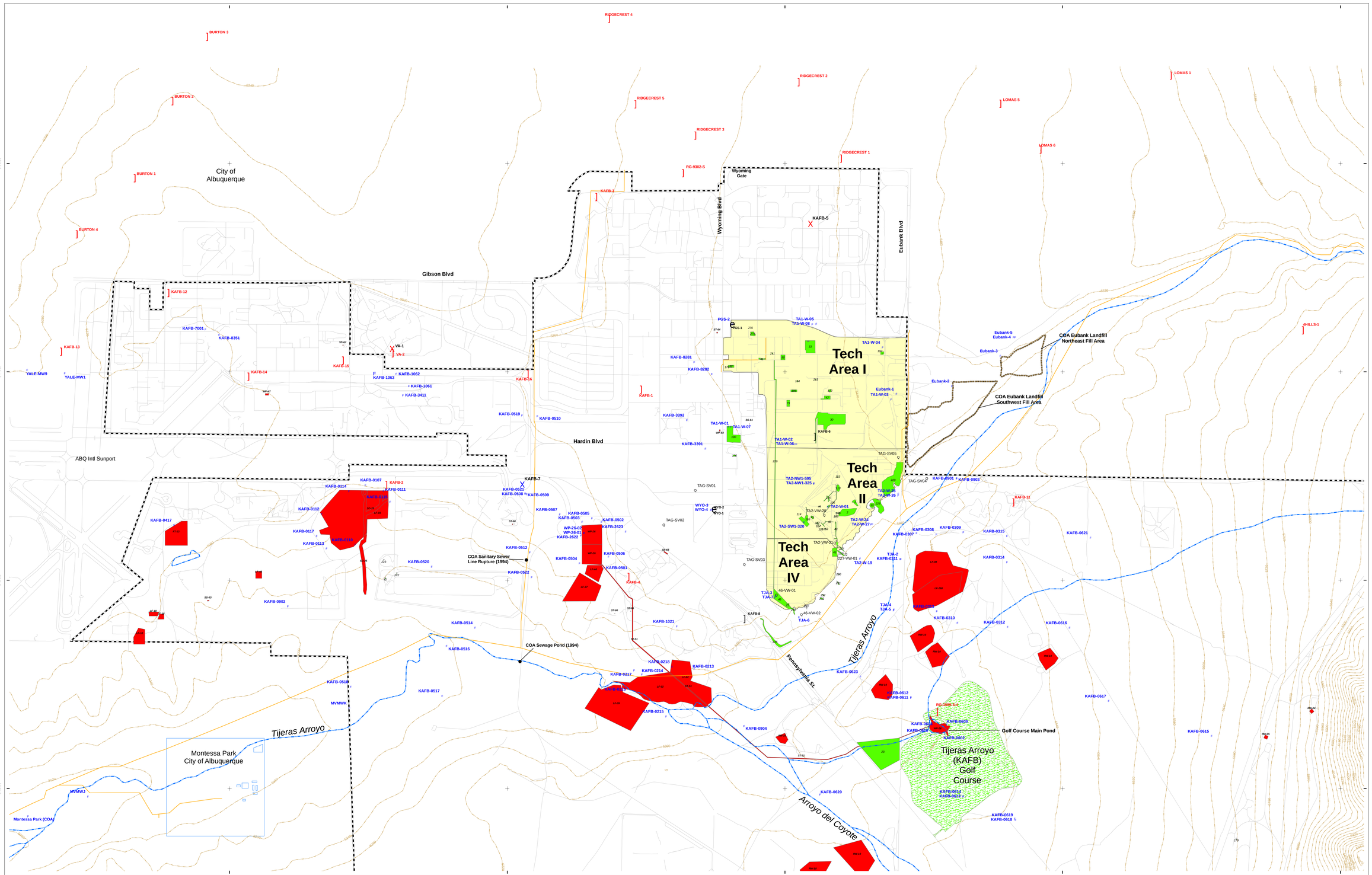

Legend

- KAFB Boundary
- 40-Foot Contour
- Major Road
- Main Sewer Line
- Drainage Feature
- SNL/NM Technical Area
- SNL/NM Solid Waste Management Unit (SWMU)
- USAF Installation Restoration Program (IRP)
- Monitoring Well
- Production Well (Potable)
- Production Well (Out of Commission)
- Production Well (Abandoned)
- Production Well (Non-Potable)
- Monitoring Well Plugged and Abandoned
- Vapor Monitoring Well

Note:
SWMU 96 (Storm Drain System) and SWMU 187 (Sanitary Sewer System) are not shown because both are laterally extensive. SWMU 25 is not shown because no location actually existed. SWMU 235 is located 700 ft south of SWMU 234.

Scale

2,000 1,000 0 2,000 Feet
600 300 0 600 Meters
0.4 0.2 0 0.4 Miles
0.5 0.25 0 0.5 Kilometers

Sandia National Laboratories, New Mexico
Environmental Geographic Information System

Plate 1
SNL SWMU Sites, Select USAF IRP Sites and Well Locations in the Northwest Portion of Kirtland Air Force Base

Transverse Mercator Projection, New Mexico State Plane Coordinate System, Central Zone
1927 North American Horizontal Datum, 1929 North American Vertical Datum

Unclassified | SNL EGIS ORG. 6146

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ANNEX A
Soil Vapor Concentrations Over Time

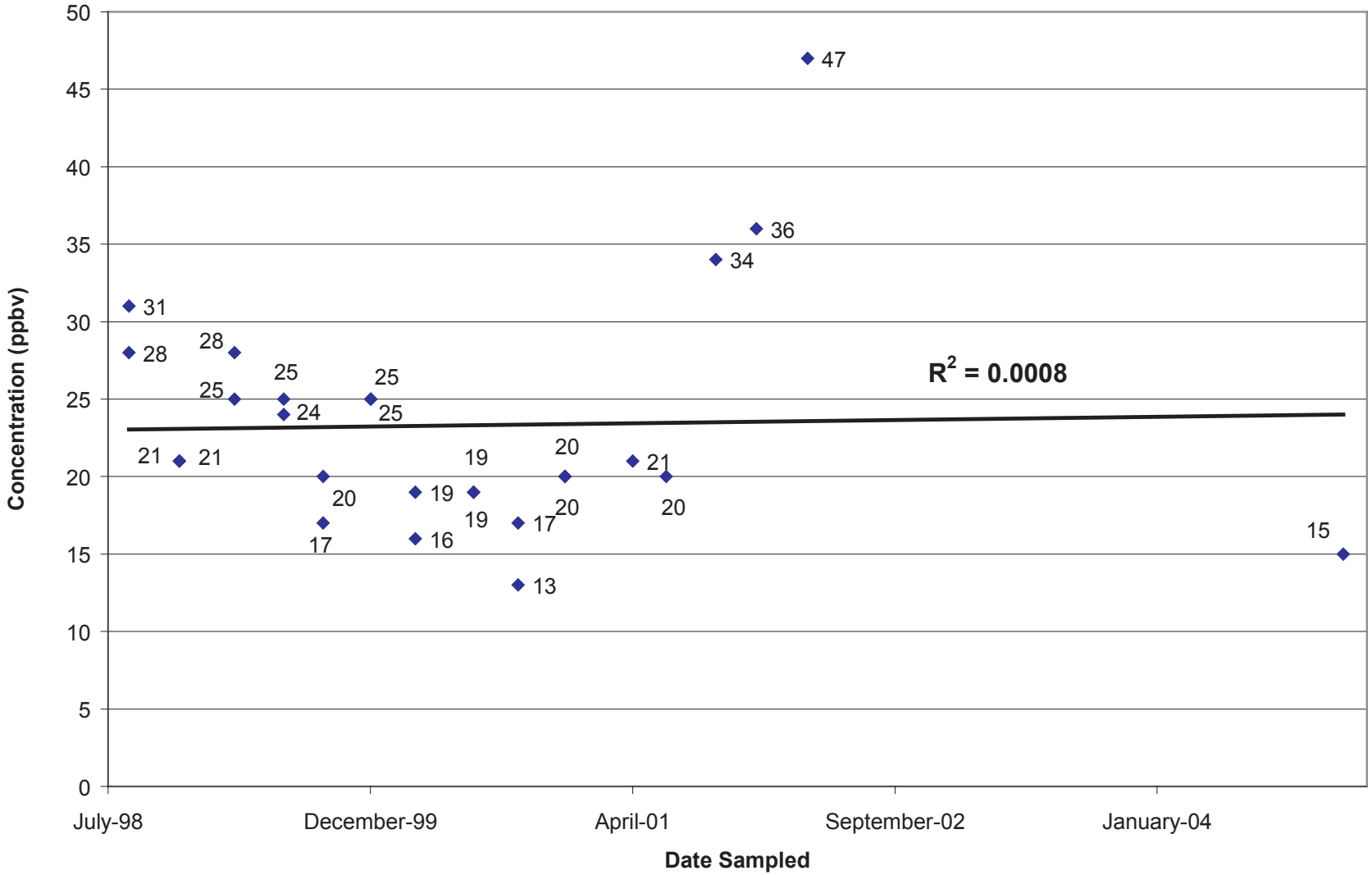

Figure A-1. TA2-VW-20 @ 72 ft: TCE versus Time--Quanterra/Severn Trent Data Only

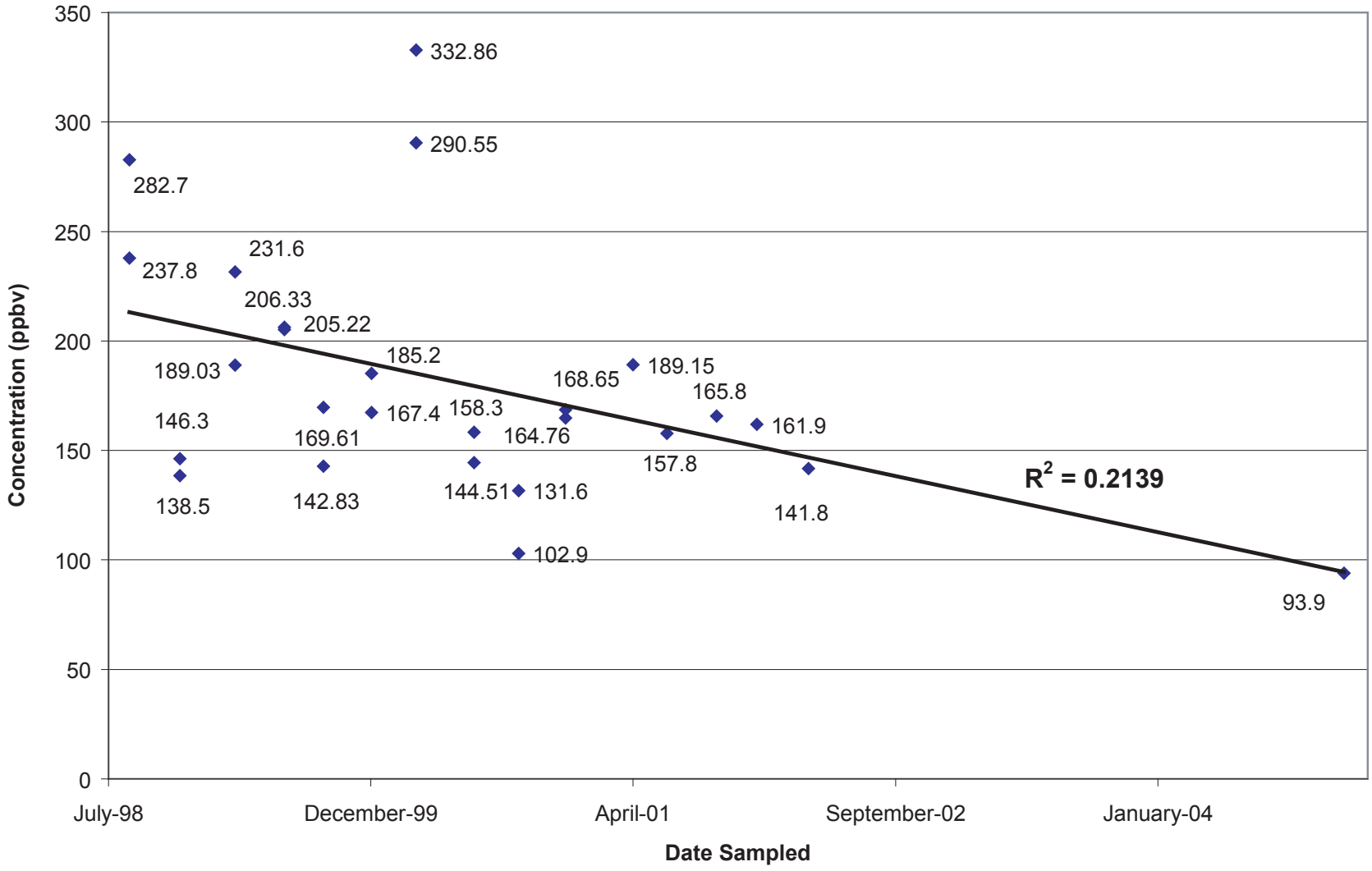

Figure A-2. TA2-VW-20 @ 72 ft: Total VOCs versus Time--Quanterra/Severn Trent Data Only

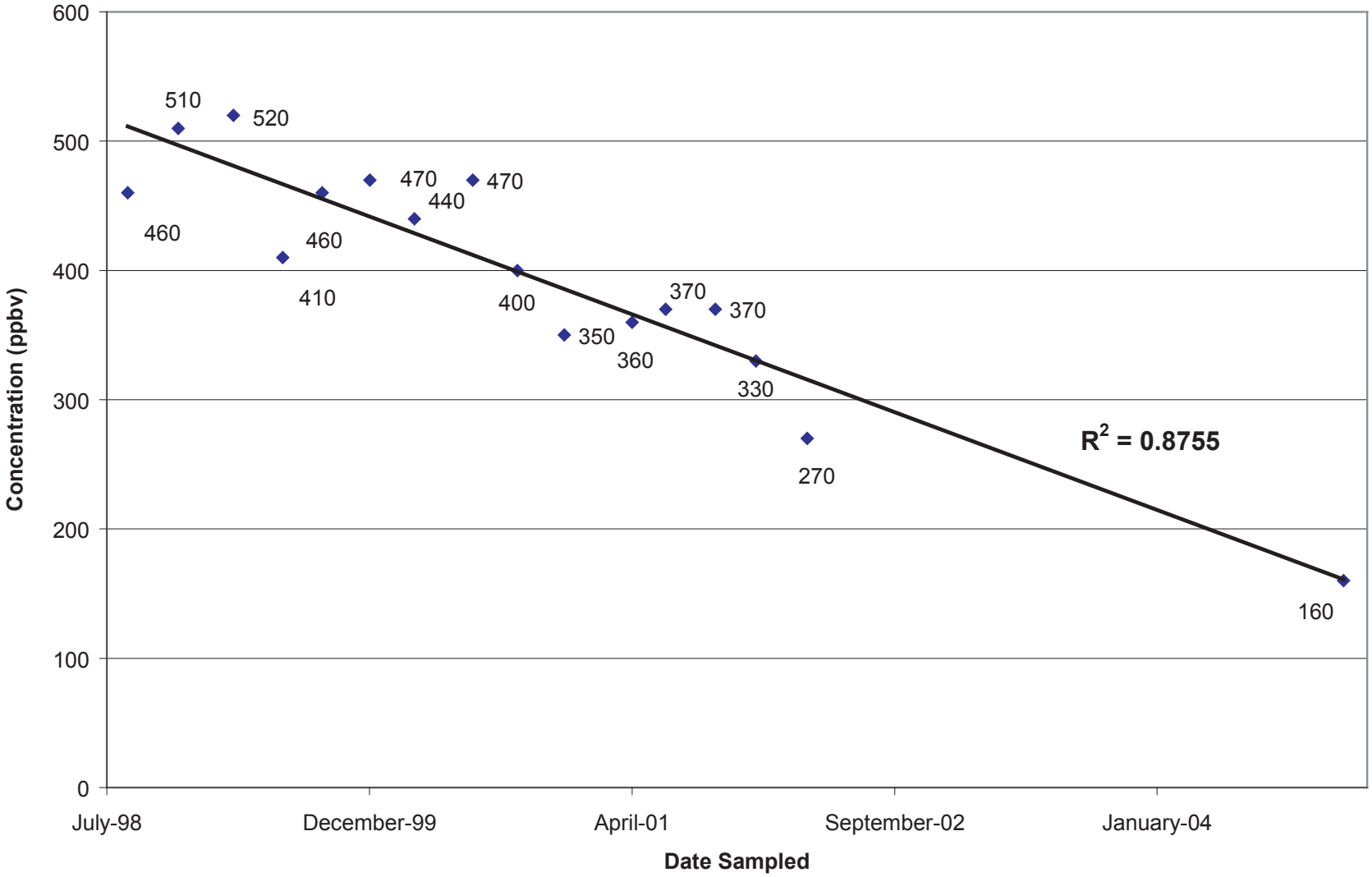

Figure A-3. TA2-VW-21 @ 50 ft: TCE versus Time--Quanterra/Severn Trent Data Only

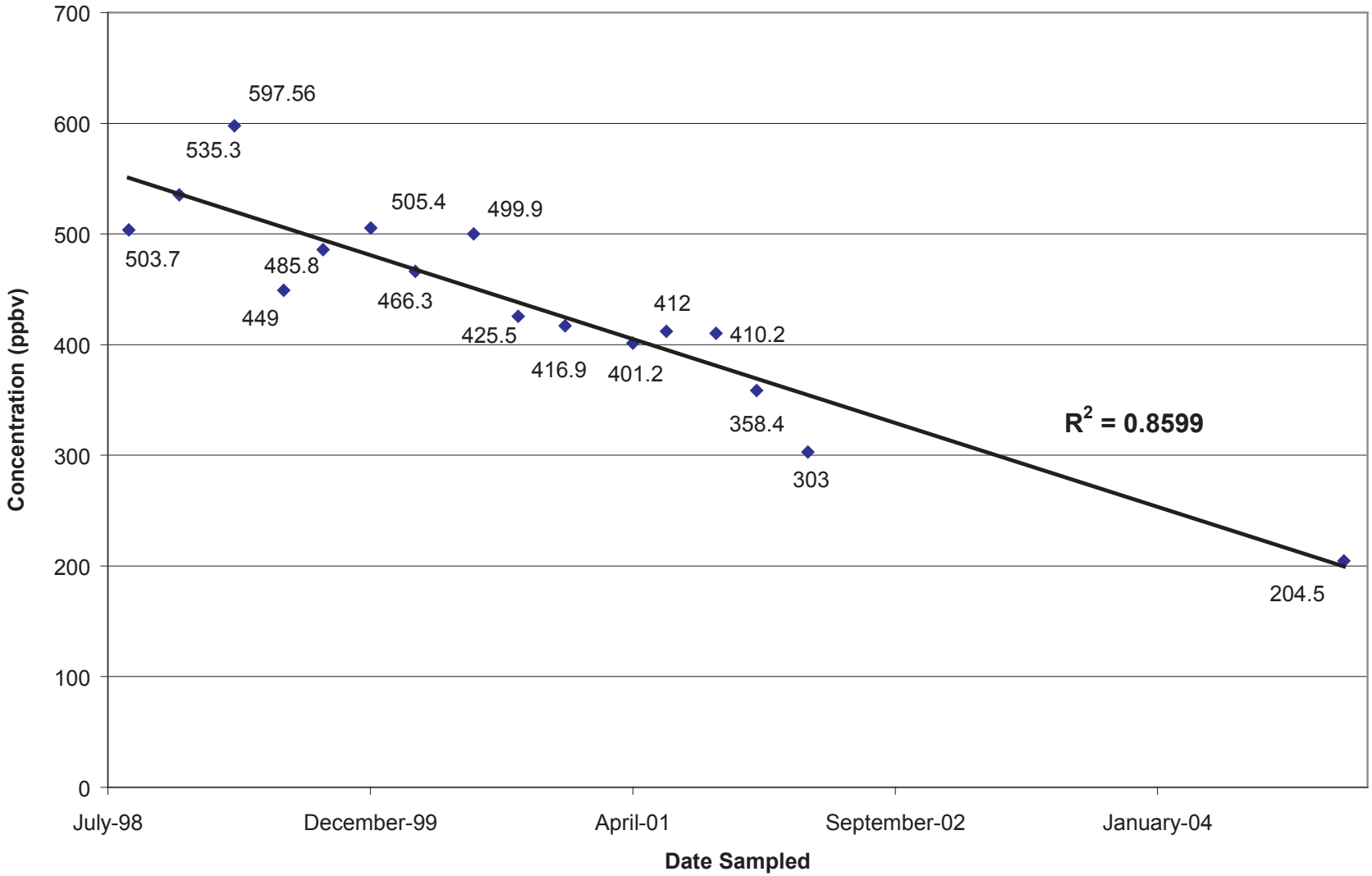

Figure A-4. TA2-VW-21 @ 50 ft : Total VOCs versus Time--Quanterra/Severn Trent Data Only

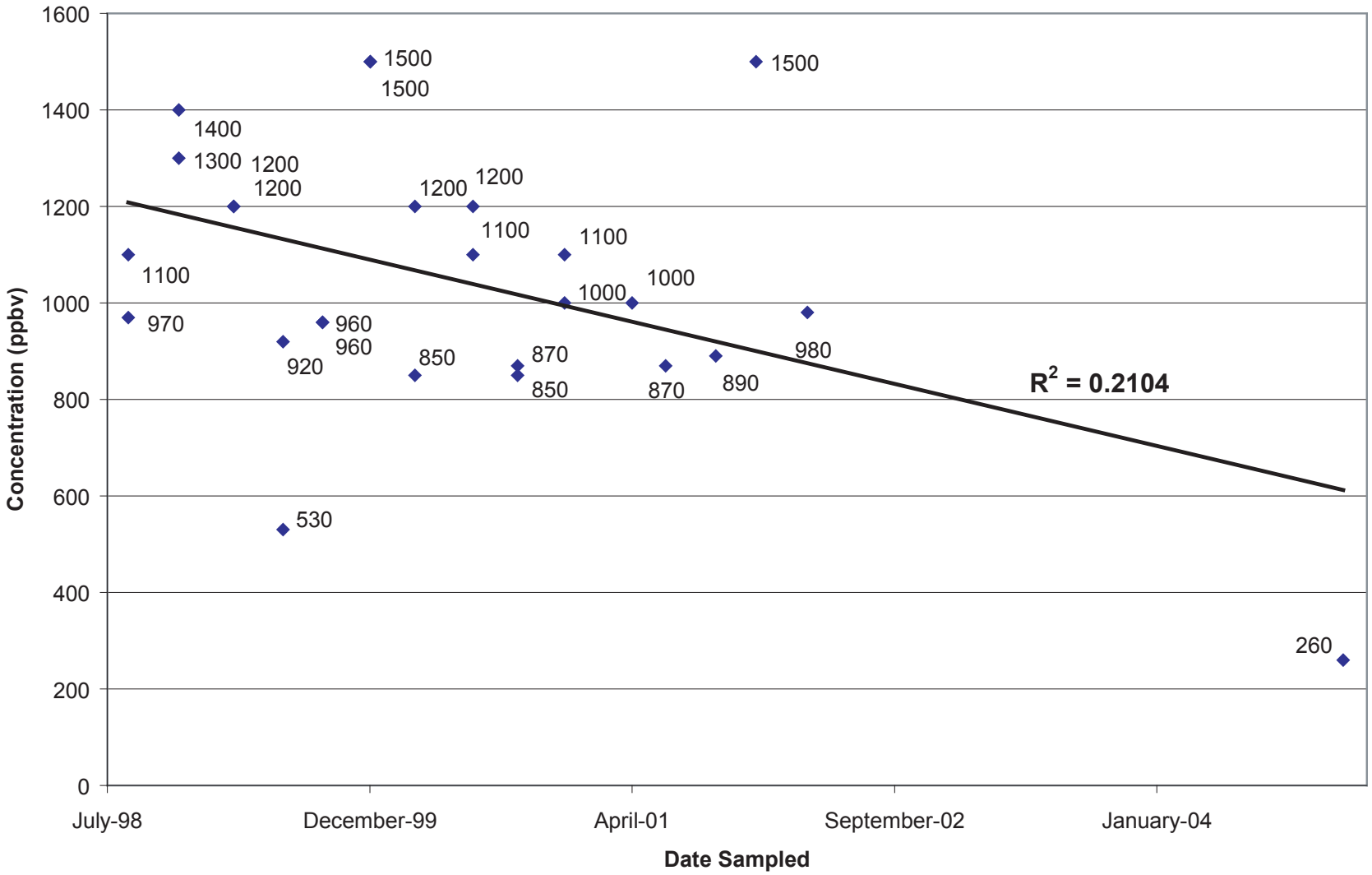

Figure A-5. TA2-VW-21 @ 92 ft: TCE versus Time--Quanterra/Severn Trent Data Only

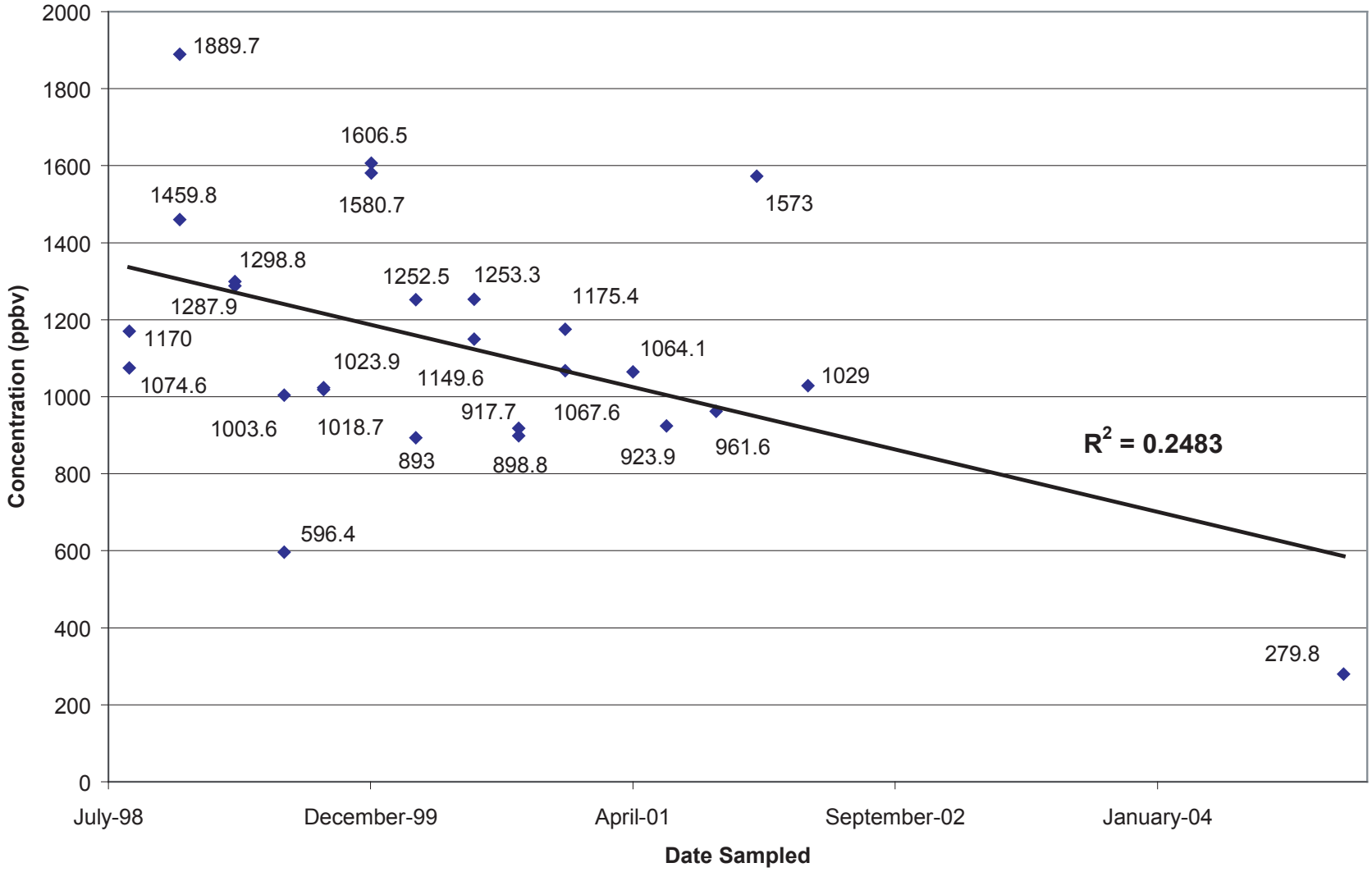

Figure A-6. TA2-VW-21 @ 92 ft: Total VOCs versus Time--Quanterra/ Severn Trent Data Only

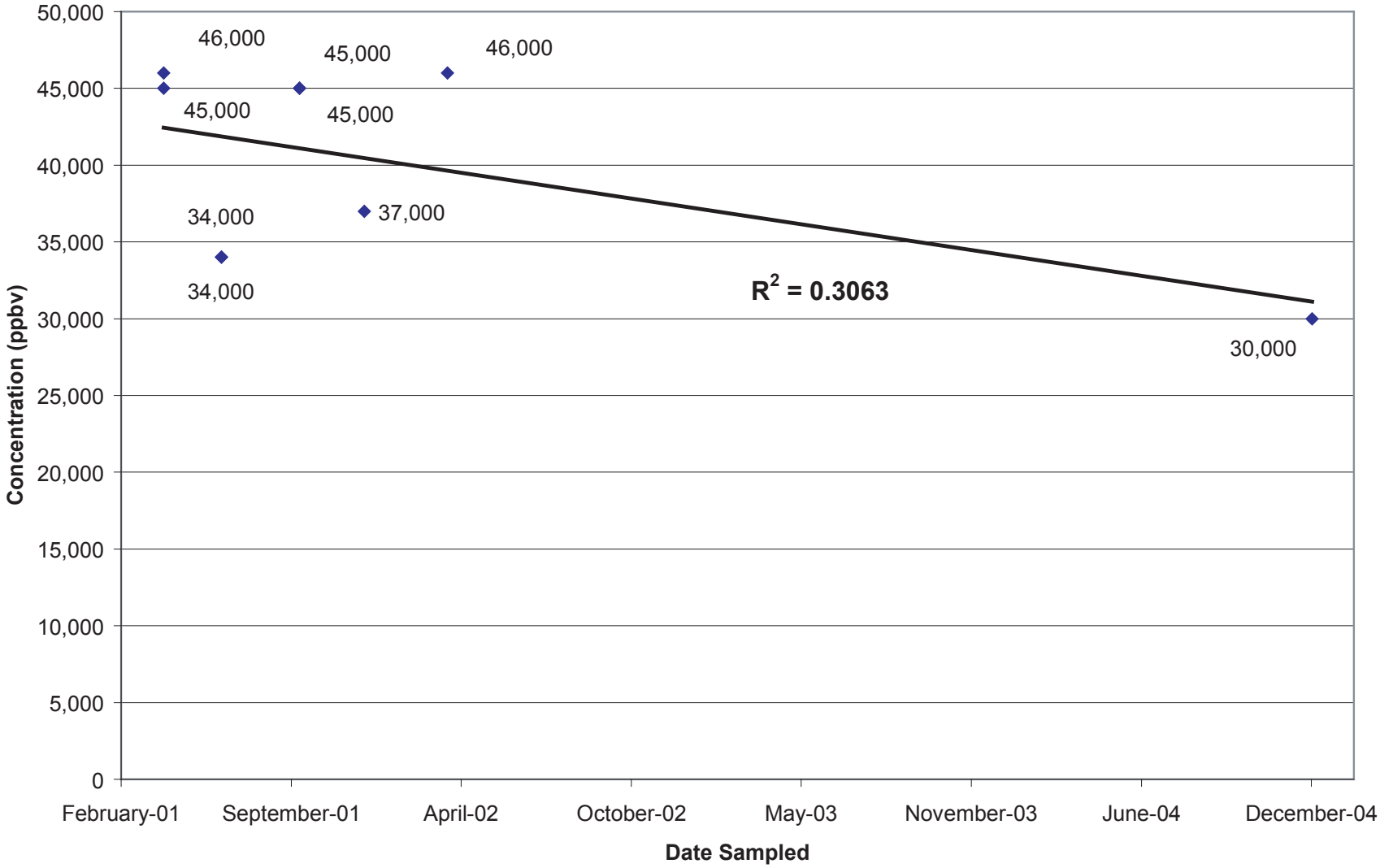

Figure A-7. 46-VW-01 @ 115 ft: TCE versus TIme

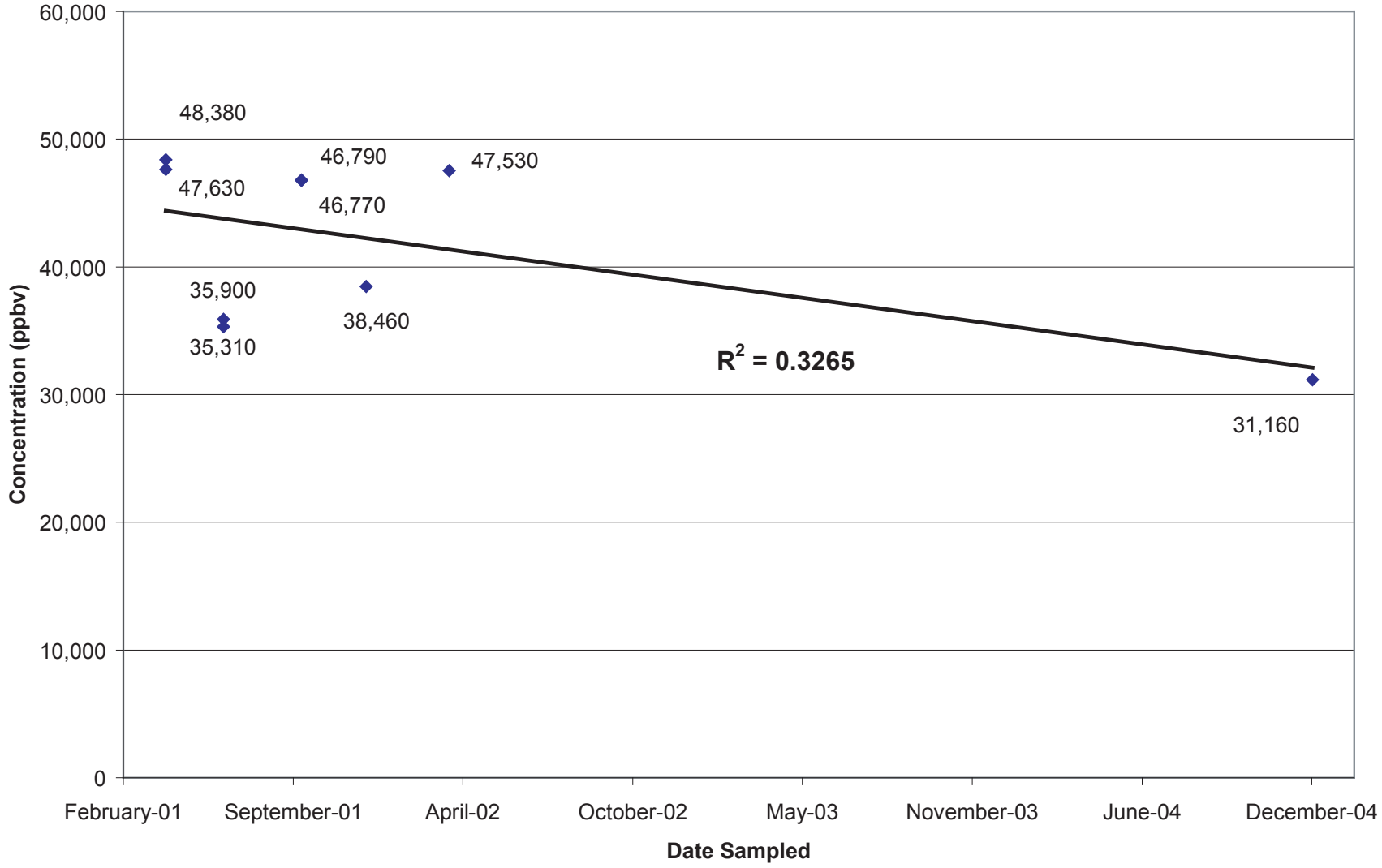

Figure A-8. 46-VW-01 @ 115 ft: Total VOCs versus Time

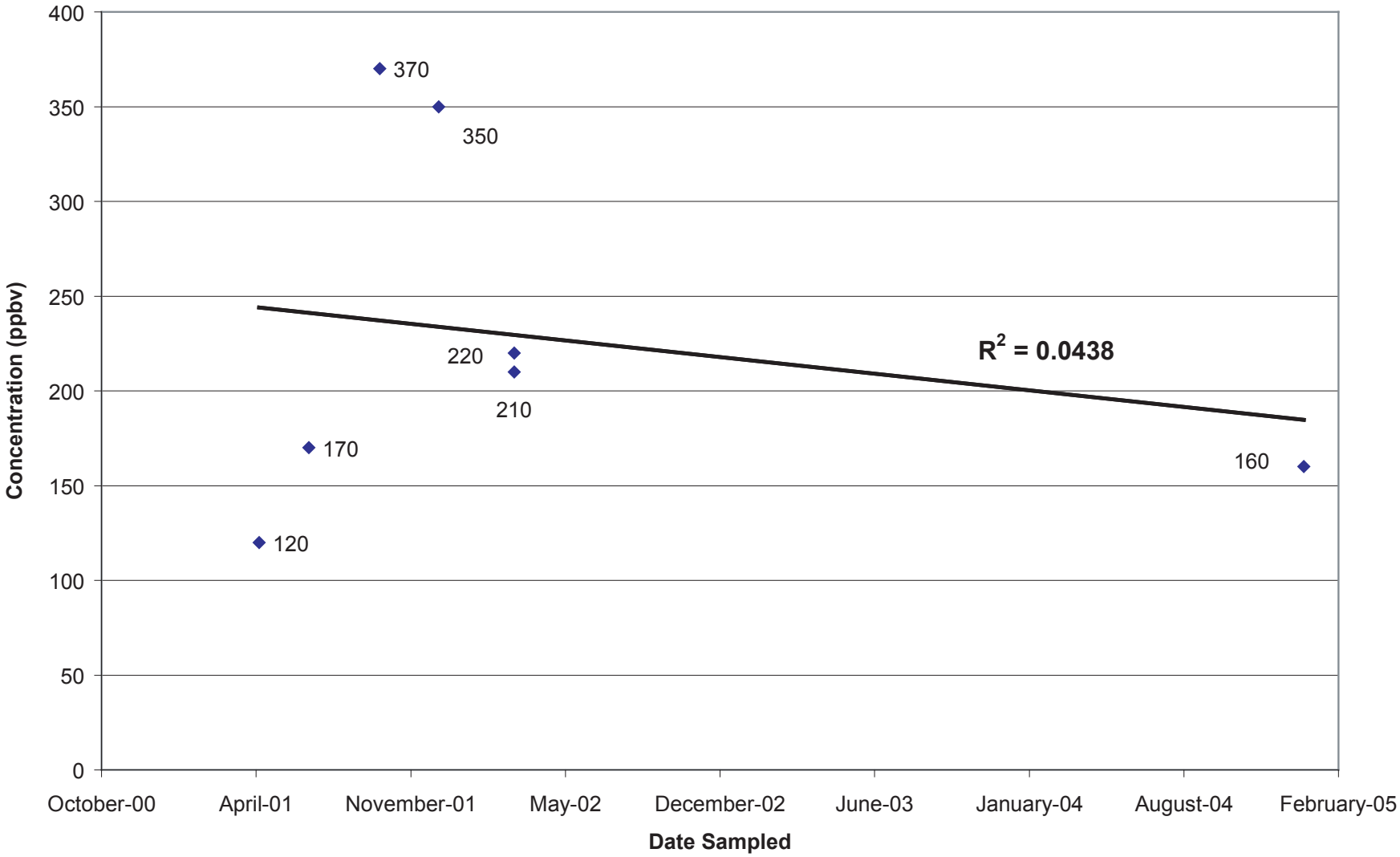

Figure A-9. 46-VW-02 @ 46 ft: TCE versus Time

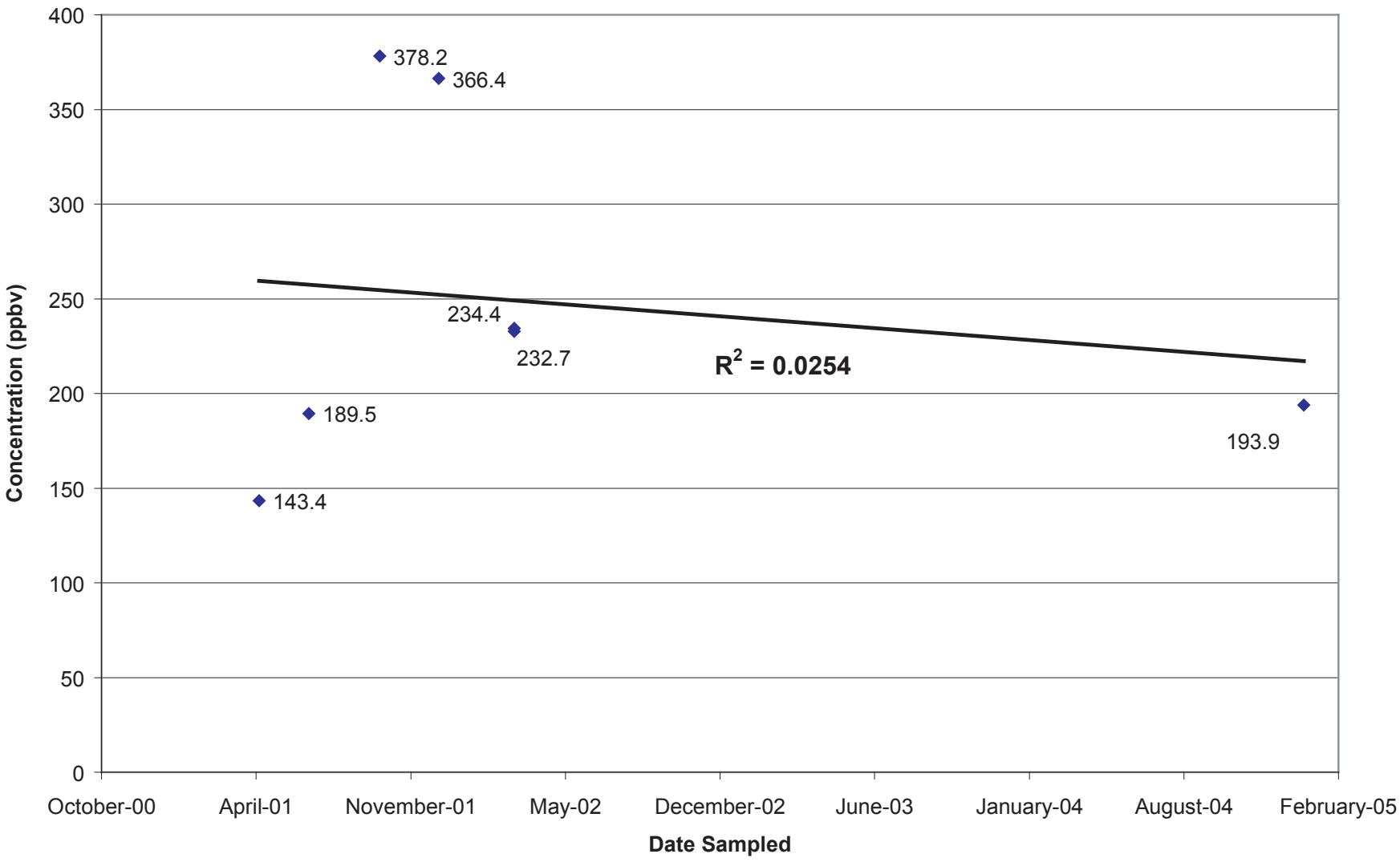

Figure A-10. 46-VW-02 @ 46 ft: Total VOCs versus Time

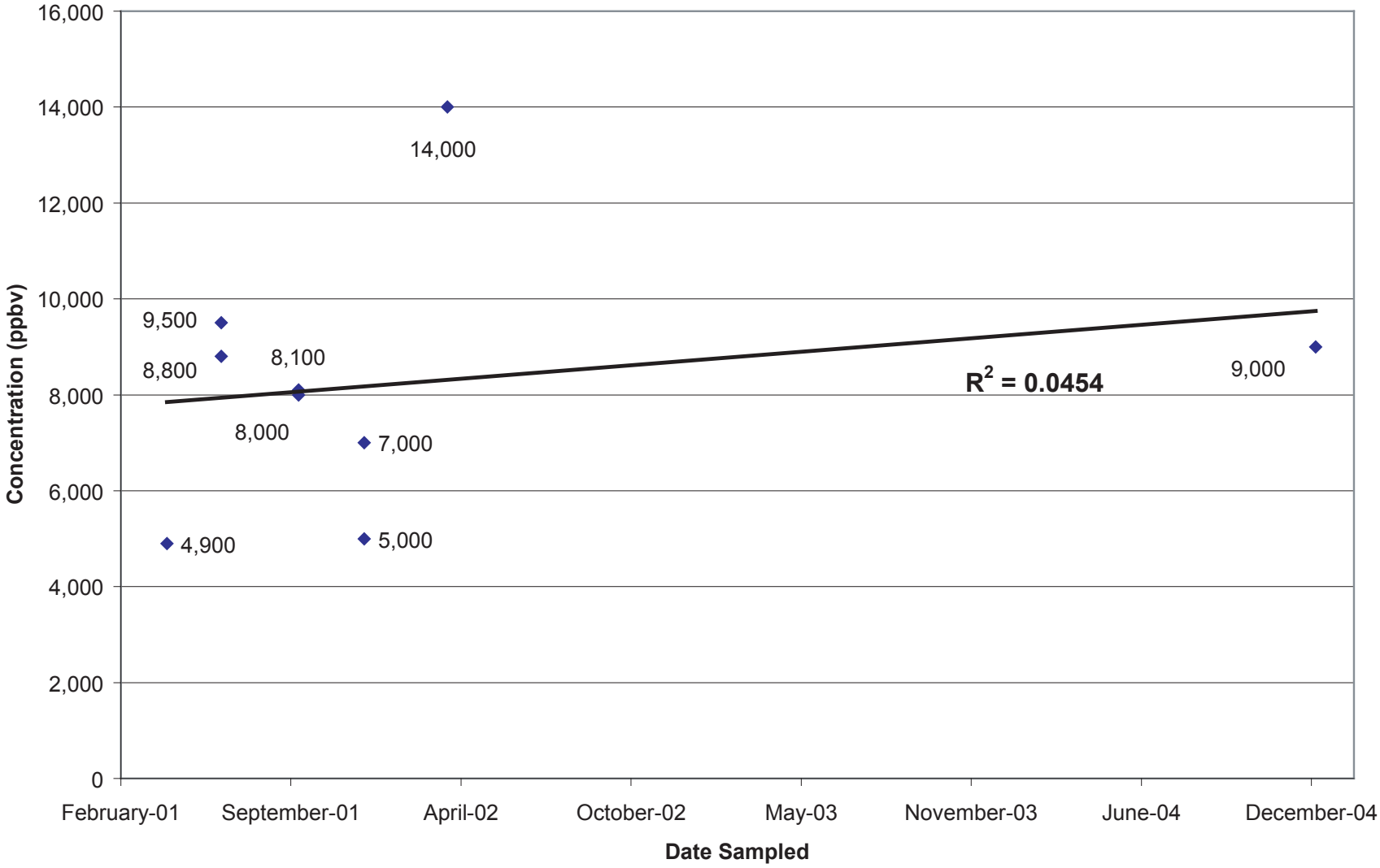

Figure A-11. 227-VW-01 @ 225 ft: TCE versus Time

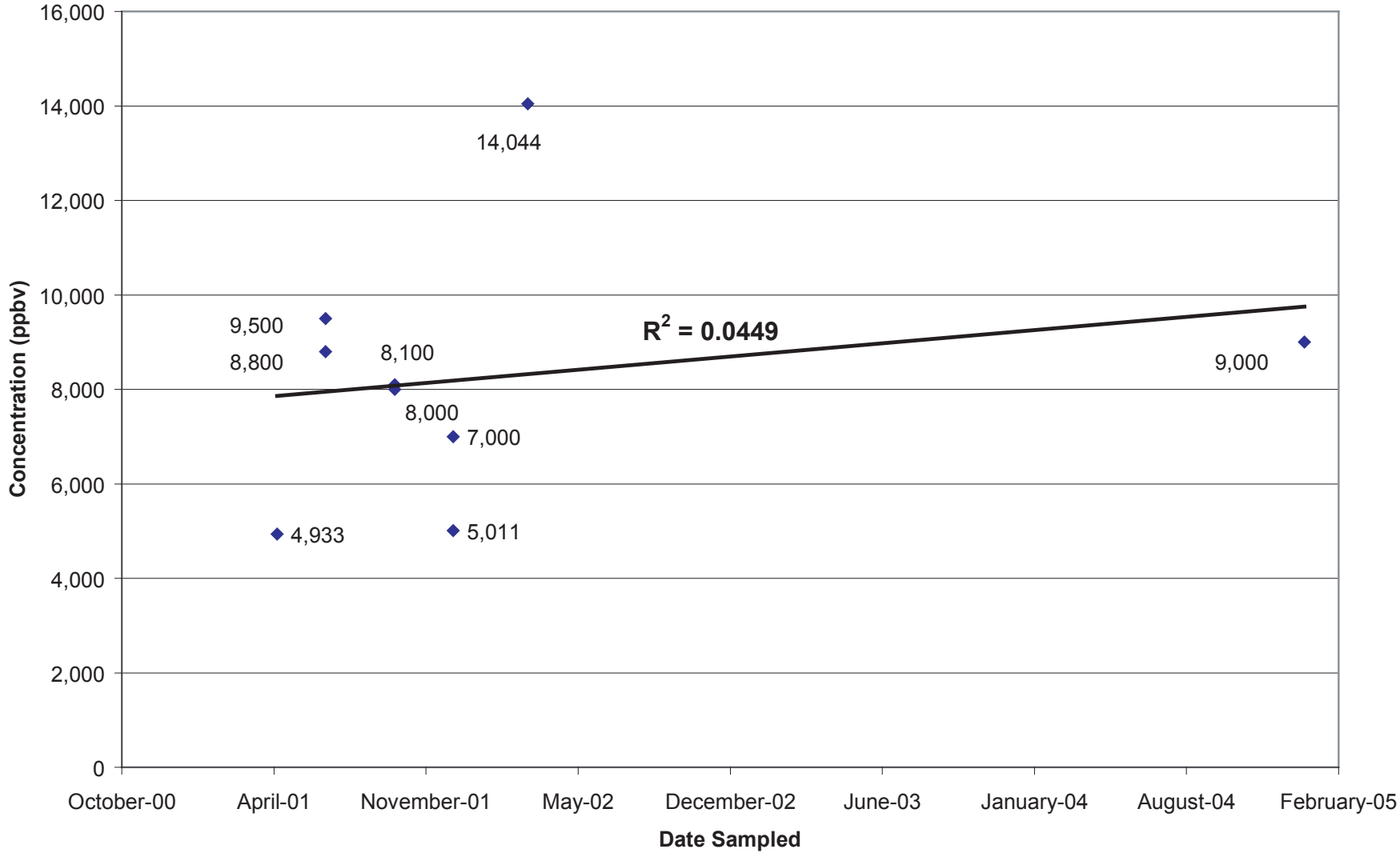

Figure A-12. 227-VW-01 @ 225 ft: Total VOCs versus Time

ANNEX B
Demonstration AquaTrack Groundwater Survey at Sandia National Laboratories
April 2003

Demonstration AquaTrack Ground Water Survey at Sandia National Laboratories

April 2003
(Revision 1)

Prepared for:
Sandia National Laboratories
Environmental Restoration Project
Albuquerque, New Mexico

Prepared by:
Sunrise Engineering, Inc.
12225 S. Business Park Dr.
Draper, Utah
(888) 523-2221
SEI project 1044/001/0001

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Figure 2. Contour map of the magnetic field strength.

Appendix

Appendix A. Magnetic profiles.

Acronyms and Abbreviations

bgs	below ground surface
CS-FDM	Controlled Source – Frequency Domain Magnetics
GPS	Global Positioning System
Hz	Hertz (cycles per second)
SEI	Sunrise Engineering, Inc.
SNL/NM	Sandia National Laboratories/New Mexico

1. Introduction

This report documents the results of a demonstration-scale AquaTrack ground water survey conducted for the Environmental Restoration project at Sandia National Laboratories in Albuquerque, New Mexico (SNL/NM) by Sunrise Engineering, Inc. (SEI). SEI conducted the field portion of the survey on February 10-12, 2003.

The objective of the demonstration was to determine the site-specific applicability of the AquaTrack technology to delineate the extent of a perched aquifer in the southern portion of Technical Area IV. The perched aquifer at SNL/NM occurs in coalescing alluvial fan deposits and the nature of saturation is laterally variable, although the relatively large distance between monitor wells precludes detailed definition of the saturated extent of the aquifer. Due to the high cost of installing additional monitor wells at SNL/NM, improved delineation of the perched aquifer using AquaTrack may optimize future drilling locations and result in significant cost savings to SNL/NM.

2. Methodology

2.1. Overview of the Technology

AquaTrack is a patented geophysical technology used to map ground water bodies using Controlled Source – Frequency Domain Magnetics (CS-FDM). Electrodes are placed in contact with the water body to be mapped and a small alternating current is introduced through electrodes placed in wells or in contact with surface water. The current flows preferentially through saturated subsurface materials due to the lower electrical resistance. This preferential flow of current creates an induced magnetic field that is measured at multiple points on the ground surface, typically in a grid pattern. The magnetic field measurements are recorded using a data logger. The locations of the field measurement stations are determined using a Global Positioning System (GPS). The measured magnetic field data are processed, contoured, and correlated to other hydrogeologic data, resulting in enhanced definition of the extent of saturation associated with the ground water body.

2.2. Electrode Configuration

A vertical dipole electrode configuration was employed in the SNL/NM demonstration. In this configuration, one electrode was placed in a well completed in the aquifer to be mapped; the other electrode was placed in a nearby well completed in a deeper aquifer. At SNL/NM, electrodes were placed in:

1. Well TJA-7, completed in the perched aquifer to a depth of approximately 330 feet below ground surface [bgs], and
2. Well TJA-3, located approximately 54 feet from well TJA-7 but completed in the deeper regional aquifer to a depth of approximately 538 feet bgs.

A 400 Hertz (Hz), 100 volt potential was applied to the electrodes. The resulting current flow was approximately 1.5 amps.

2.3. Survey Area

The magnetic field was measured over an area of roughly 2,000 x 1,400 feet, covering approximately 64 acres. The normal lateral spacing between measurement stations was approximately 100 feet, although the spacing was reduced to 50 feet in some areas to provide greater resolution. Magnetic field readings were collected at a total of approximately 300 stations over a period of three days. The normal time required to obtain magnetic field measurements was approximately 6 minutes per station.

2.4. Magnetic Field Strength Measurements

The magnetic field resulting from by the flow of current introduced into the perched aquifer was measured using the AquaTrack equipment shown in Figure 1. This equipment contains three coils oriented at 90-degree angles (two in the horizontal direction, one in the vertical direction). The coils generate individual electrical voltages corresponding to the strength of magnetic field at each measurement station.

The signals from the coils are sent to an integrated Campbell Scientific Model CR1000 data logger used to preprocess the data. At each station, magnetic field measurements are collected over a sampling period of 2 seconds. The magnetic field and statistical data are stored on an integrated Allegro CE handheld computer. The location and elevation of each measurement station are determined using a Trimble Pathfinder GPS unit and are also stored in the handheld computer.

For quality control, a base station is established within the survey area. At a minimum, magnetic field measurements are collected at the base station at the beginning, midpoint, and end of each field day. These data are used to identify any changes in background magnetic field and/or diurnal drift. If necessary, the magnetic field strength measurements collected during the actual survey can then be can be normalized to compensate for these factors.

To ensure data quality at the measurement stations, the data logger calculates the average field strength for each coil and the ratio of the strength of the field generated by the 400 Hz signal applied to the electrodes relative to the background magnetic field strength. These data are compared to pre-determined signal quality criteria, and in addition the operator can view additional field strength and signal/noise ratio data in real time to estimate data quality.

The magnetic field strength and GPS data are periodically downloaded from the handheld computer for further processing.

2.4. Data Processing and Interpretation

The magnetic field strength measurements obtained in the field are processed to account for distance from the electrodes, near-electrode effects, and the elevation of the measurement point. The processed data are interpreted by constructing contour maps using SURFER and vertical profiles of the magnetic field. Changes in the gradient, rather than the absolute magnitude, of the

induced magnetic field are used to infer the presence or absence of ground water at a given area. If the aquifer is present uniformly throughout the study area, the magnetic field will attenuate uniformly in all directions with increasing distance from the source electrodes (i.e., no changes in the gradient of the magnetic will be present). At the edge of saturation, the electrical conductivity of the subsurface will anomalously decrease, and the gradient of the magnetic field will increase.

It is important to note that the magnitude and gradient of the induced magnetic field does not, of itself, indicate aquifer boundaries or the presence of ground water. Correlation to independent hydrogeologic data (such as ground water encountered in boreholes and wells within the study area) is crucial to interpreting the results of the AquaTrack survey. An appropriate use of AquaTrack is to gain additional detailed information between control points (wells or boreholes) and to obtain information beyond these control points. Hence, a significant benefit of an AquaTrack survey is to optimize the location of additional wells, particularly when drilling and/or wells installation costs are high.

3. Results

A contour map showing the magnitude of the processed magnetic field data from the perched aquifer is shown on Figure 2. The edge of saturation in the perched aquifer is inferred by anomalously high gradient in the induced magnetic field. Magnetic field gradients can also be identified on profiles, included as Appendix A.

The aquifer boundary indicated by the AquaTrack survey agrees fairly well with that interpreted on the basis of the presence or absence of perched water encountered during the installation of monitor wells in the area. The data are consistent with the lack of perched ground water in the well TJA-6 area. However, the AquaTrack survey resulted in increased resolution of the extent of saturation in the perched aquifer. The irregular pattern of saturation is consistent with the hydrogeologic setting of the aquifer within coalescing alluvial fan deposits, wherein coarser-grained deposits serve as preferential pathways for ground water flow.

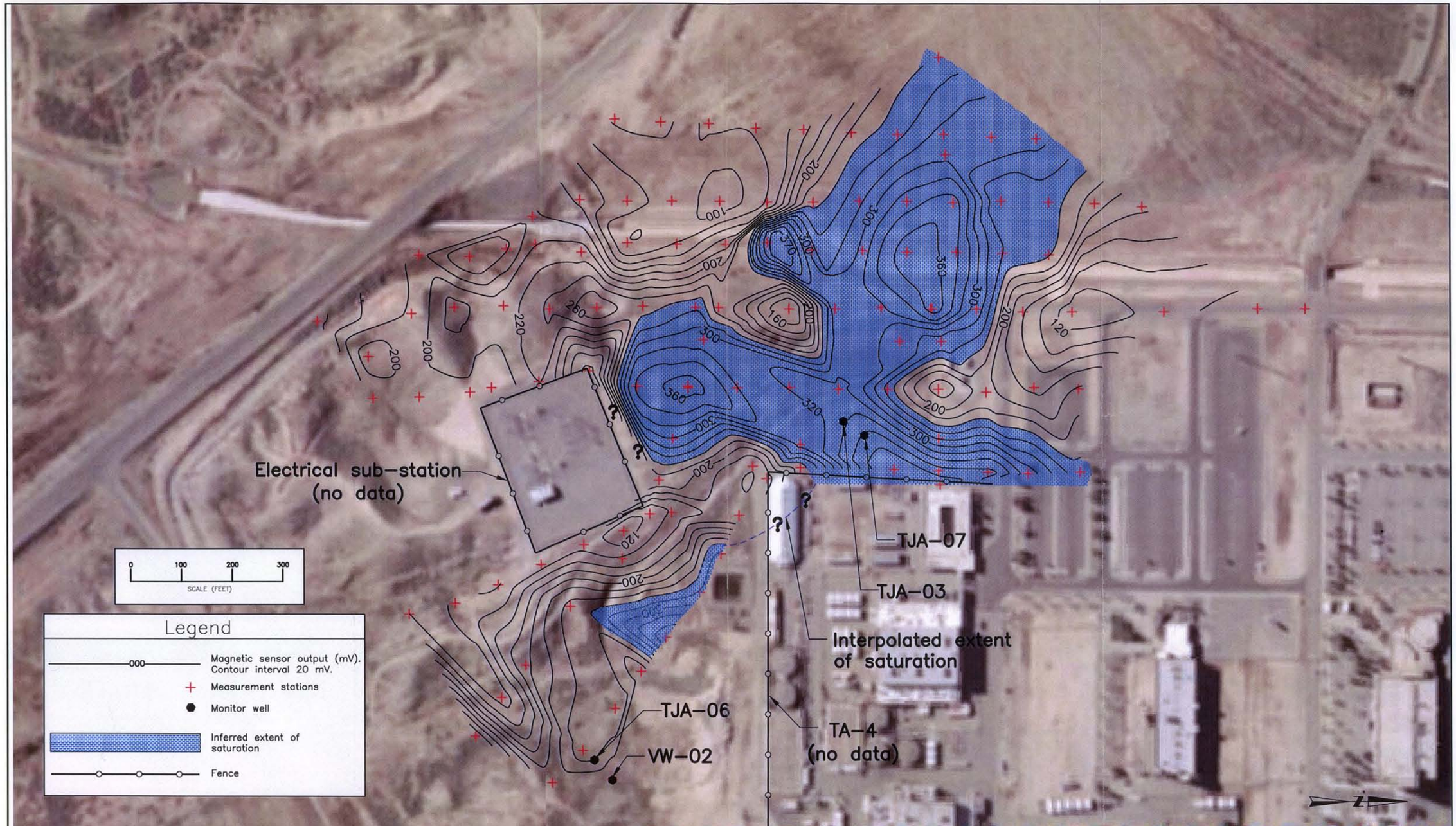
In general, the quality of the magnetic field strength data is high. No significant drift from diurnal, equipment, or intermittent sources was present. Repeatability of magnetic field measurements was excellent. Little, if any, effects from buried or aboveground utilities was seen. There is a high level of confidence for measurement stations located within approximately 600 feet from the electrodes, and a moderate level of confidence for stations 600 to 800 feet from the electrodes. Due to the expected attenuation of the induced magnetic with increasing radial distance from the electrodes, beyond 800 feet the signal to noise ratio is fairly high and the delineation of the edge of the perched aquifer is not reliable.

4. Recommendations

Based on the results of the AquaTrack demonstration survey at SNL/NM, the following recommendations for potential additional investigations are presented:

- Where appropriate existing wells are present, perform additional surveys using a vertical dipole electrode configuration. For the vertical dipole configuration, a well completed in the perched aquifer should be in relatively close proximity to a well completed in the underlying regional aquifer. At SNL/NM, candidates include the areas near well pairs: (1) WYO-3/WYO-4, (2) T11-W-02/TA1-W-06, (3) TA1-W-01/TA-W-07, and TA2-NW1-595/TA2-NW1-325. In areas where no suitable well pair currently exists, inexpensive temporary boreholes or wells could be drilled to allow electrode contact with ground water.
- Where no well pair suitable for a vertical dipole electrode configuration is available, a horizontal dipole electrode configuration could be employed whereby electrodes are placed in wells completed only in the perched aquifer, and the induced magnetic field between the wells is surveyed. This configuration is less optimal than the vertical dipole, due to a smaller available survey area and potential interferences from shallow electrical conductors, such as buried utilities. A modified version of the horizontal dipole configuration uses surface electrodes, such as a chain-link fence or metal rods driven into the soil.
- AquaTrack is also useful in the identification of water-filled faults and fractures, and may be considered to help define the nature of hydraulic communication between the perched and regional aquifers in the merging zone to the southeast.

Figure 1. Photographs of the AquaTrack magnetic field strength measurement equipment.



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SUNRISE ENGINEERING, INC.

12227 South Business Park Drive, Suite 220
Draper, Utah 84020

TEL (801) 523-0100
FAX (801) 523-0990

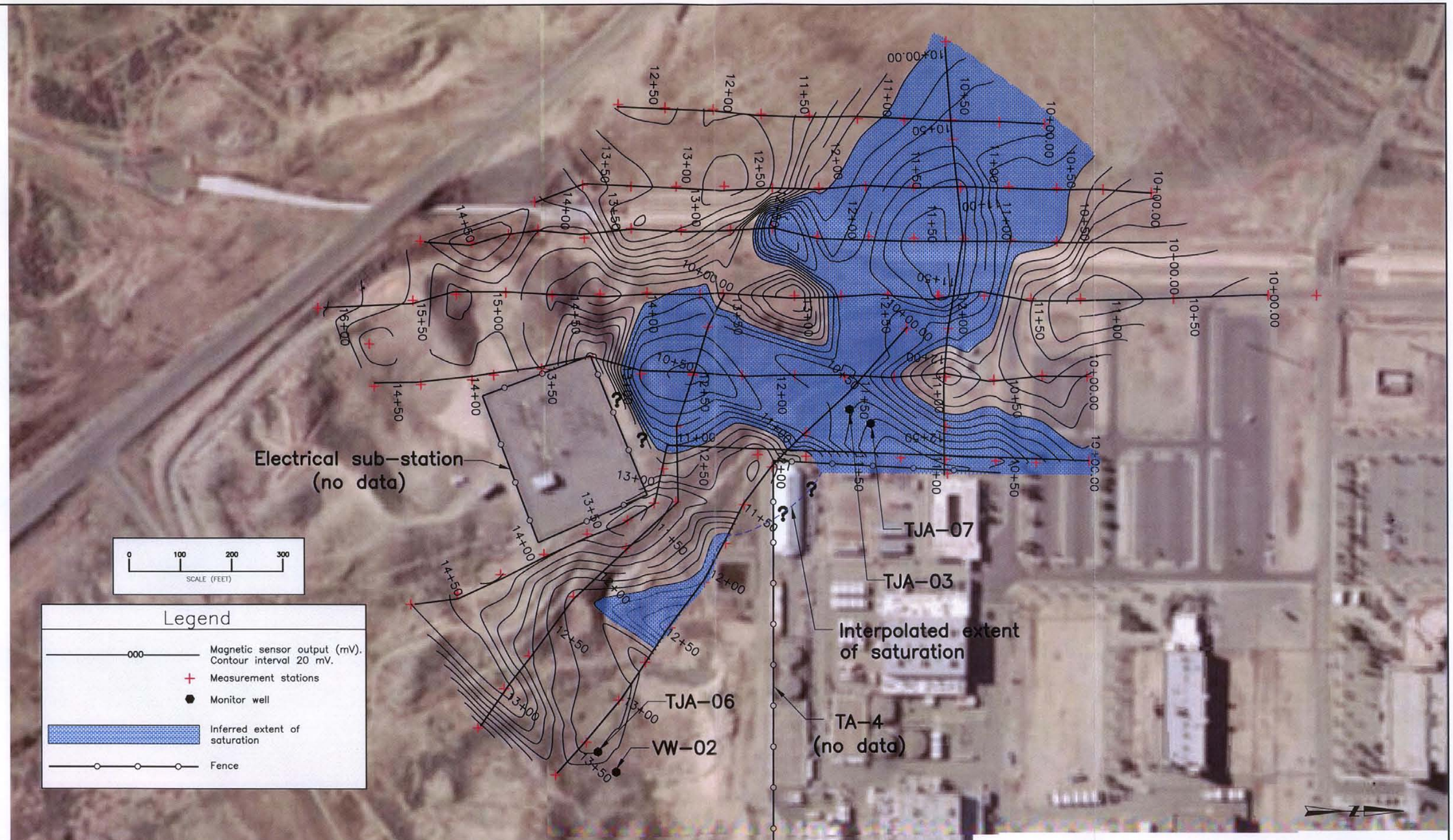
SUNRISE ENGINEERING INC.
AquaTrack

Demonstration AquaTrack Survey - Sandia National Laboratories

Figure 2. Contour Map of Magnetic Field Strength

PROJECT NO.		
.....		
DESIGNED	CHECKED	DRAWN
JRM	NRM	RDD
DATE	DRAWING NO.	
3-26-03	M1	
SCALE	SHEET NO.	
....	1 OF 1	

Appendix A.
Magnetic profiles



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AquaTrack

Demonstration AquaTrack Survey - Sandia National Laboratories

Figure A-1. Magnetic Profile Locations

PROJECT NO.		
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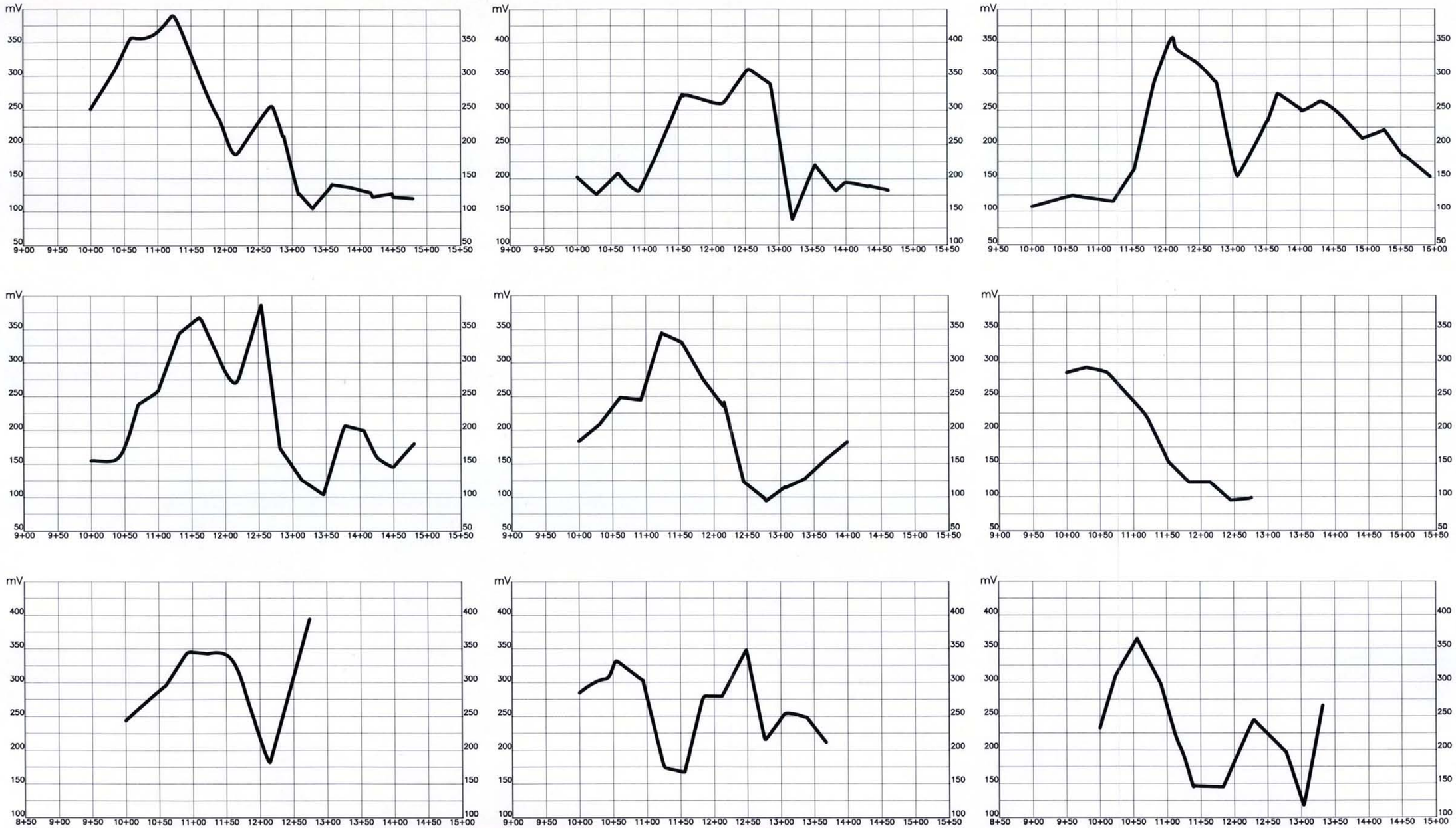

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SUNRISE ENGINEERING INC. AquaTrack

Demonstration AquaTrack Survey - Sandia National Laboratories

Figure A-2. Magnetic Profiles.

PROJECT NO.		
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JRM	NRM	RDD
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SCALE	SHEET NO.	
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ANNEX C
AquaTrack Groundwater Survey at Sandia National Laboratories
August 2003

AquaTrack Ground Water Survey at Sandia National Laboratories

August 2003

Prepared for:
Sandia National Laboratories
Environmental Restoration Project
Albuquerque, New Mexico

Prepared by:
Sunrise Engineering, Inc.
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SEI project 01176

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Acronyms and Abbreviations

bgs	below ground surface
CS-FDM	Controlled Source – Frequency Domain Magnetics
GPS	Global Positioning System
Hz	Hertz (cycles per second)
SEI	Sunrise Engineering, Inc.
SNL/NM	Sandia National Laboratories/New Mexico

1. Introduction

This report documents the results of an AquaTrack ground water survey conducted for the Environmental Restoration project at Sandia National Laboratories in Albuquerque, New Mexico (SNL/NM) by Sunrise Engineering, Inc. (SEI). SEI conducted the field portion of the survey on June 16-26, 2003.

The objective of the survey was to delineate the extent of a perched aquifer to the west and southwest of the city-owned Eubank Landfill. The perched aquifer at SNL/NM occurs in coalescing alluvial fan deposits and the nature of saturation is laterally variable (SNL/NM, 2002), although the relatively large distance between monitor wells precludes detailed definition of the saturated extent of the aquifer. Due to the high cost of installing additional monitor wells at SNL/NM, improved delineation of the perched aquifer using AquaTrack may optimize future drilling locations and result in significant cost savings to SNL/NM.

2. Methodology

2.1. Overview of the Technology

AquaTrack is a patented geophysical technology used to map ground water bodies using Controlled Source – Frequency Domain Magnetics (CS-FDM). Electrodes are placed in contact with the water body to be mapped and a low-amperage alternating current is introduced through electrodes placed in wells or in contact with surface water. The current flows preferentially through saturated subsurface materials due to the lower electrical resistance. This preferential flow of current creates an induced magnetic field that is measured at multiple points on the ground surface, typically in a grid pattern. The magnetic field measurements are recorded using a data logger. The locations of the field measurement stations are determined using a Global Positioning System (GPS). The measured magnetic field data are processed, contoured, and correlated to other hydrogeologic data, resulting in enhanced definition of the extent of saturation associated with the ground water body.

2.2. Electrode Configuration

Vertical dipole electrode configurations were placed in two well pairs at SNL/NM. These configurations consisted of one electrode placed in a well completed in the perched aquifer, and a second electrode placed in a nearby well completed in a deeper aquifer. The two well pairs were:

Well Pair 1: TA1-W-03/Eubank-1

- Well TA1-W-03, completed in the perched aquifer to a depth of approximately 350 feet below ground surface [bgs], and
- Well Eubank-1, located approximately 188 feet from well TA1-W-03 but completed in the deeper regional aquifer to a depth of approximately 570 feet bgs.

Well Pair 2: TA2-W-26/TA2-W-25

- TA2-W-26, completed in the perched aquifer to a depth of approximately 300 feet below ground surface [bgs], and
- TA2-W-25, located approximately 53 feet from well TA1-W-03 but completed the deeper regional aquifer to a depth of approximately 500 feet bgs.

A 400 Hertz (Hz), 110 volt potential was applied to the electrodes. The resulting alternating current for both well sets was approximately 0.5 amps.

2.3. Survey Area

The magnetic field was measured over an area of approximately 200 acres. The area covered while energizing the TA1-W-03/Eubank-1 well pair was approximately 80 acres; the coverage while energizing the TA2-W-26/TA2-W-25 well pair was approximately 120 acres. The typical lateral spacing between measurement stations was approximately 30 meters, although the spacing was reduced to 15 meters in some areas to provide greater resolution. Magnetic field readings were collected at a total of approximately 875 stations (300 stations for the TA1-W-03/Eubank-1 well pair; 575 stations for the TA2-W-26/TA2-W-25 well pair). The field work was completed over a period of nine days. The typical time required to obtain magnetic field measurements was approximately 6 minutes per station.

2.4. Magnetic Field Strength Measurements

The magnetic field resulting from the flow of current introduced into the perched aquifer was measured using the AquaTrack equipment shown in Figure 1. This equipment contains three coils oriented at 90-degree angles (two in the horizontal direction, one in the vertical direction). The coils generate individual electrical voltages corresponding to the strength of magnetic field at each measurement station.

The signals from the coils are sent to an integrated Campbell Scientific Model CR1000 data logger used to preprocess the data. At each station, magnetic field measurements are collected over a sampling period of 2 seconds. The magnetic field and statistical data are stored on an integrated Allegro CE handheld computer. The location and elevation of each measurement station are determined using a Trimble Pathfinder GPS unit and are also stored in the handheld computer.

For quality control, a base station is established within each survey area. At a minimum, magnetic field measurements are collected at the base station at the beginning, midpoint, and end of each field day. These data are used to identify any changes in background magnetic field and/or diurnal drift. If necessary, the magnetic field strength measurements collected during the actual survey can then be can be normalized to compensate for these factors.

To ensure data quality at the measurement stations, the data logger calculates the average field strength for each coil and the ratio of the strength of the field generated by the 400 Hz signal applied to the electrodes relative to the background magnetic field strength. These data

are compared to pre-determined signal quality criteria, and in addition the operator can view additional field strength and signal/noise ratio data in real time to estimate data quality.

The magnetic field strength and GPS data are periodically downloaded from the handheld computer for further processing.

2.5. Data Processing and Interpretation

The magnetic field strength measurements obtained in the field are processed to account for distance from the electrodes, near-electrode effects, the elevation of the measurement point, and interference from aboveground or buried utilities. The processed data are interpreted by constructing contour maps using SURFER and vertical profiles of the magnetic field. Changes in the gradient, rather than the absolute magnitude, of the induced magnetic field are used to infer the presence or absence of ground water at a given area. If the aquifer is present uniformly throughout the study area, the magnetic field will attenuate uniformly in all directions with increasing distance from the source electrodes (i.e., no changes in the gradient of the magnetic will be present). At the edge of saturation, the electrical conductivity of the subsurface will anomalously decrease, and the gradient of the magnetic field will increase.

It is important to note that the magnitude and gradient of the induced magnetic field does not, of itself, indicate aquifer boundaries or the presence of ground water. Correlation to independent hydrogeologic data (such as ground water encountered in boreholes and wells within the study area) is crucial to interpreting the results of the AquaTrack survey. An appropriate use of AquaTrack is to gain additional detailed information between control points (wells or boreholes) and to obtain information beyond these control points. Hence, a significant benefit of an AquaTrack survey is to optimize the location of additional wells, particularly when drilling and/or wells installation costs are high.

3. Results

A contour map showing the magnitude of the processed magnetic field data is shown on Figure 2. The edge of saturation in the perched aquifer is inferred by anomalously high gradient in the induced magnetic field and magnetic field strength. Magnetic field gradients can also be identified on profiles, included as Appendix A.

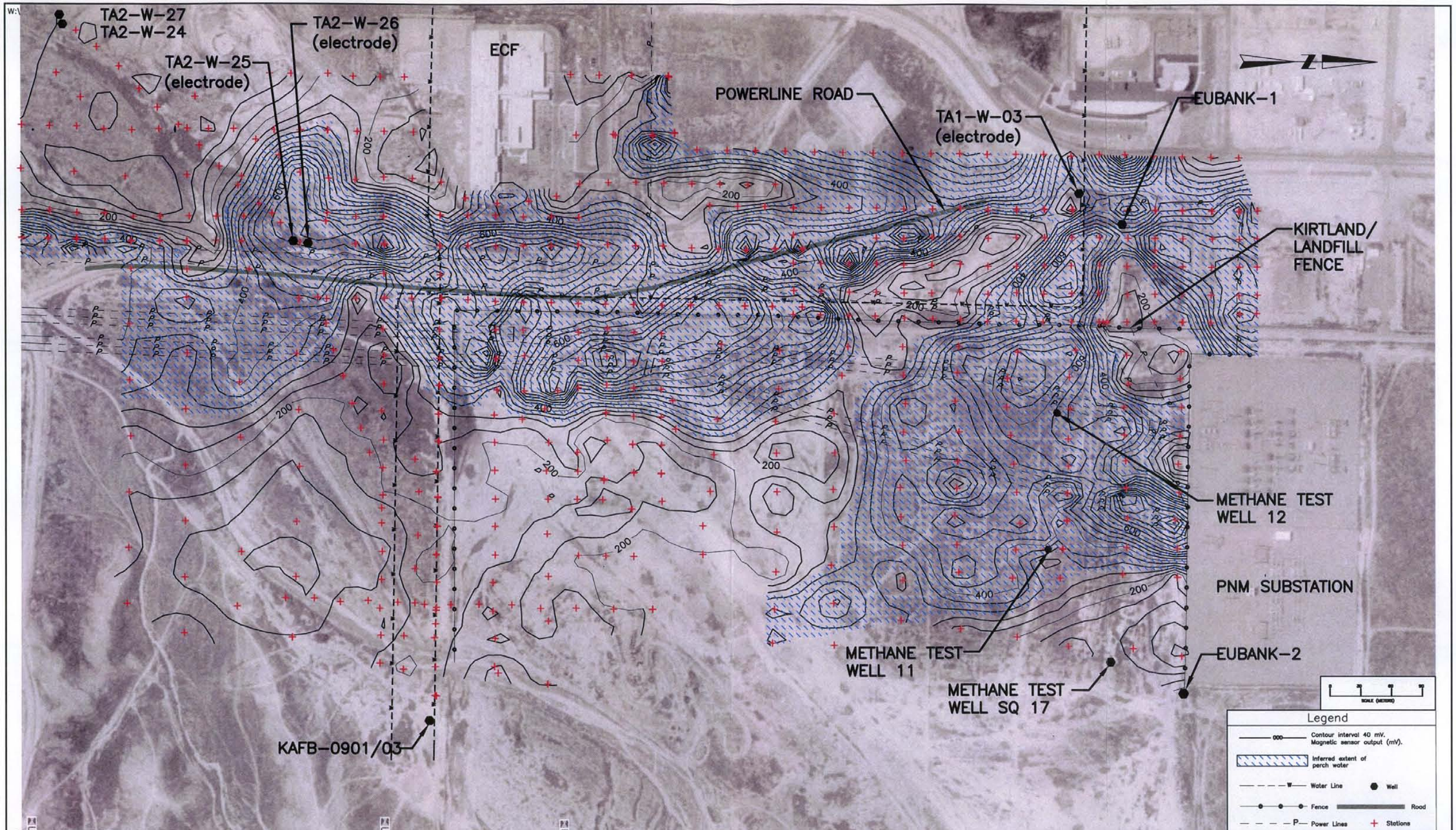
The irregular pattern of saturation is consistent with the hydrogeologic setting of the aquifer within coalescing alluvial fan deposits, wherein coarser-grained deposits serve as preferential pathways for ground water flow. The inferred extent of saturation in the perched aquifer trends approximately north-south along Powerline Road.

In general, the quality of the magnetic field strength data is high. No significant drift from diurnal, equipment, or intermittent sources was present, but all readings were normalized to remove all drift. Repeatability of magnetic field measurements was excellent. Drift correction and noise data are summarized in Appendix B.

4. References

Sandia National Laboratories, 2002. Tijeras Arroyo Groundwater Work Plan. Sandia National Laboratories Environmental Restoration Project, August 28, 2002.

Figure 1. Photographs of the AquaTrack magnetic field strength measurement equipment.



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SUNRISE ENGINEERING, INC.

CONSULTING ENGINEERS & LAND SURVEYORS

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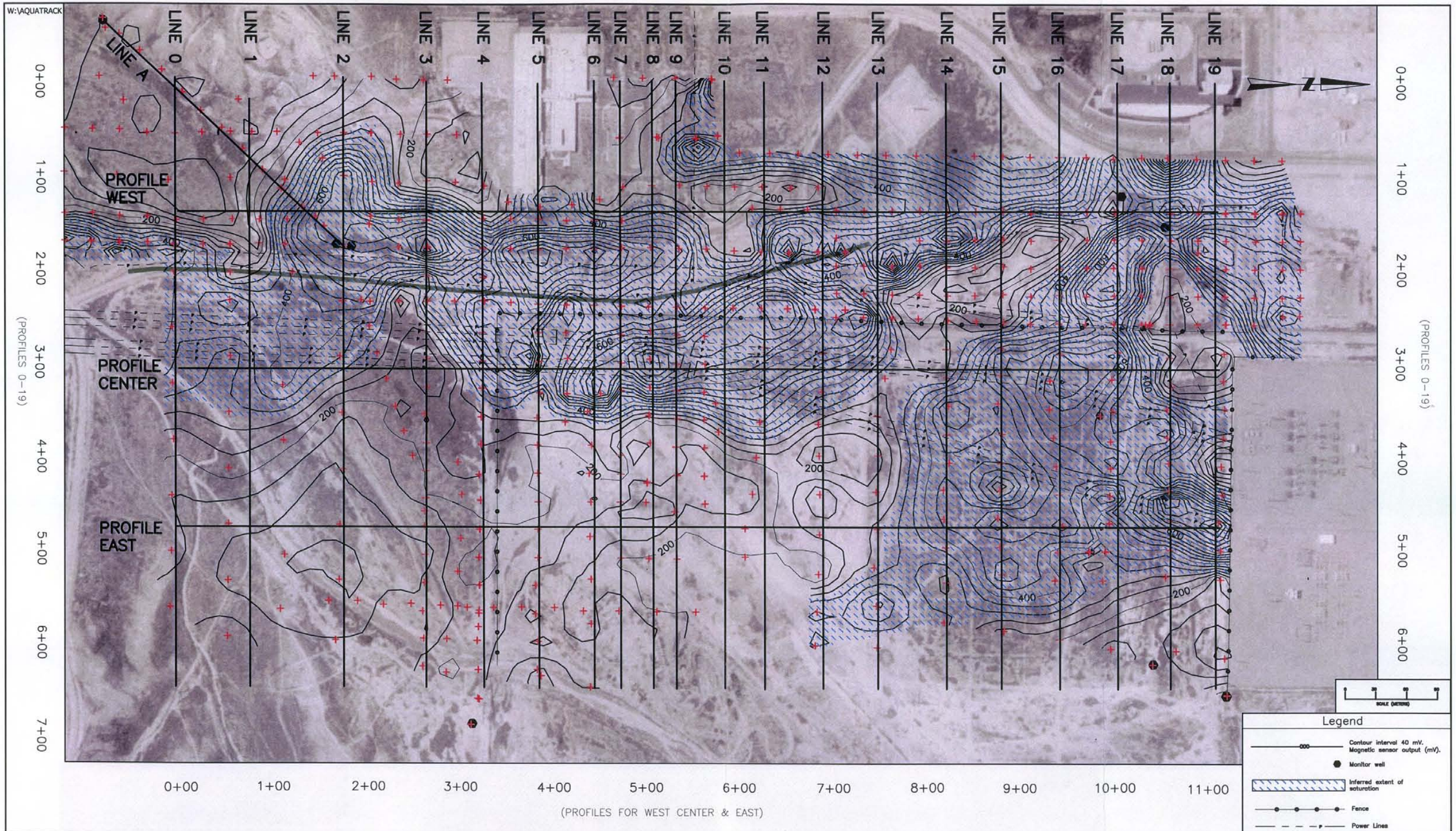
SUNRISE ENGINEERING INC.
AquaTrack

AquaTrack Survey – Sandia National Laboratories
Figure 2. Contour Map of Magnetic Field Strength

PROJECT NO.		
01176		
DESIGNED	CHECKED	DRAWN
NRM	JRM	RDD
DATE		DRAWING NO.
3-25-03		M1
SCALE		SHEET NO.
1" = 90 m		1 OF 1

Appendix A.
Magnetic profiles



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SUNRISE ENGINEERING INC. AquaTrack

AquaTrack Survey – Sandia National Laboratories
Figure A-1. Magnetic Profile Locations

PROJECT NO.		
01176		
DESIGNED	CHECKED	DRAWN
NRM	JRM	RDD
DATE		DRAWING NO.
3-25-03		M1
SCALE		SHEET NO.
1" = 90 m		1 OF 1

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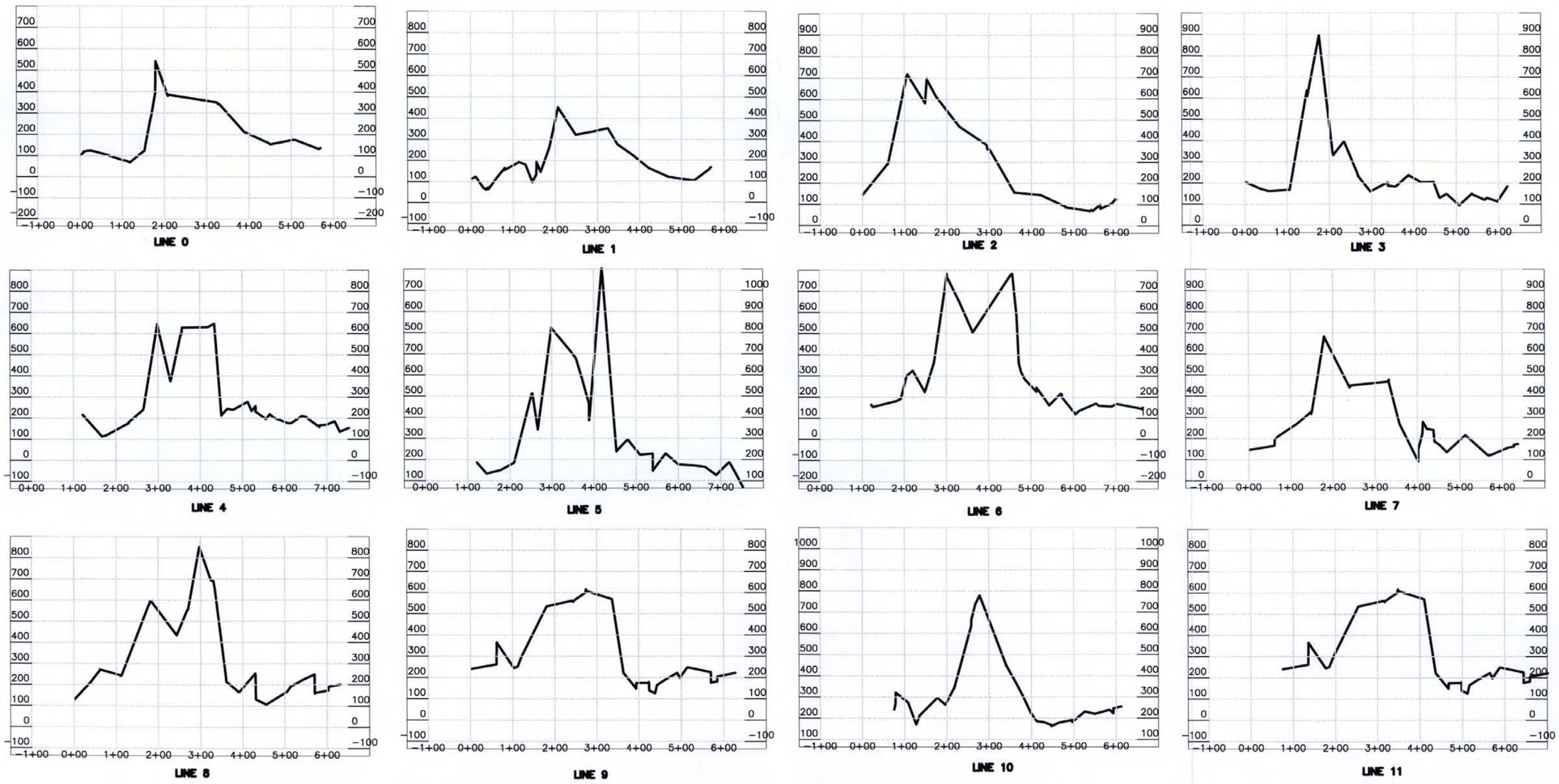

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AquaTrack Survey – Sandia National Laboratories
Figure A-2. Magnetic Profiles.

PROJECT NO.		
01176		
DESIGNED	CHECKED	DRAWN
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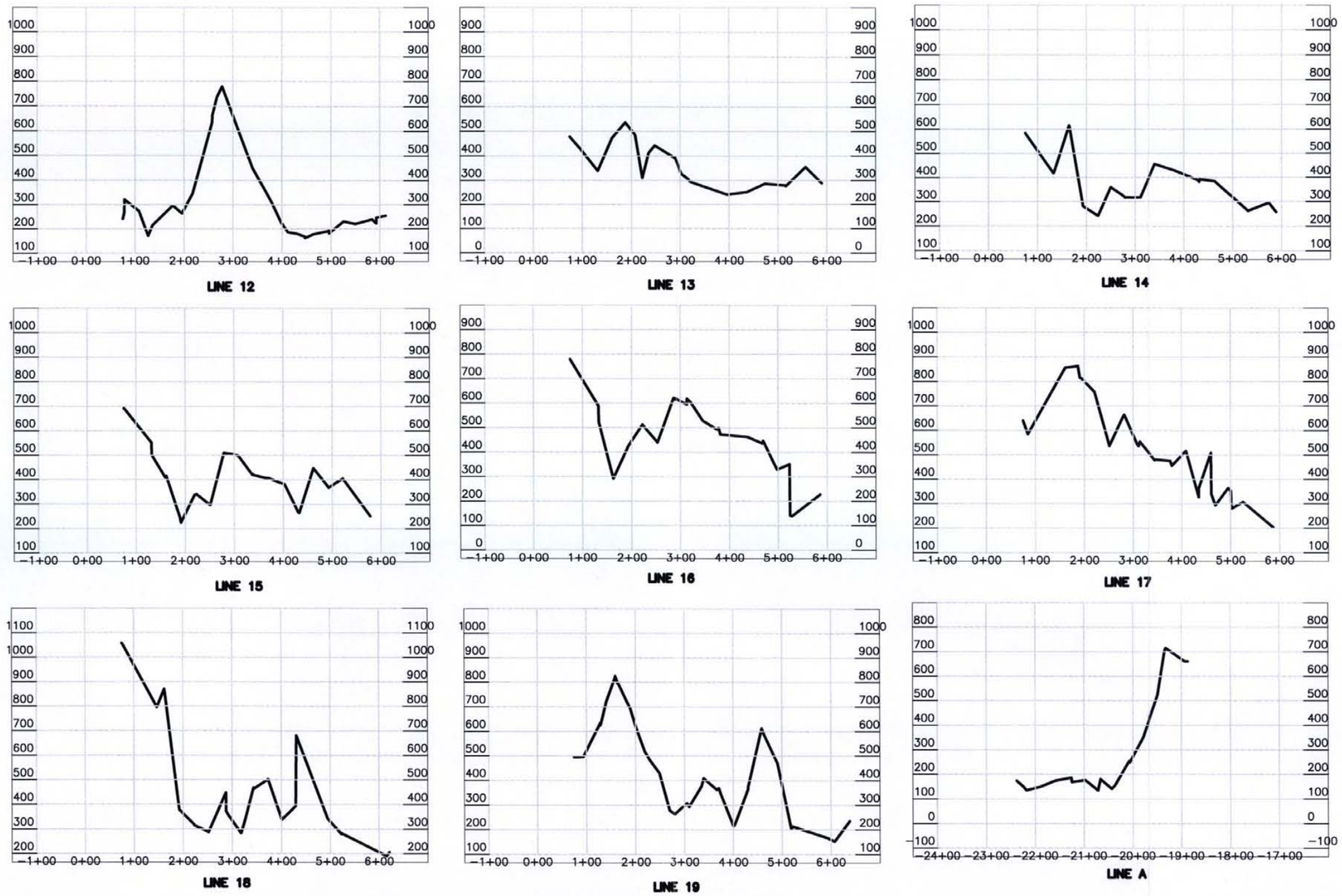
DATE		DRAWING NO.
3-25-03		M1
SCALE		SHEET NO.
NTS		1 OF 1



W:\AQUATRACK-PROJECTS\1-AquaTrack Active Projects\Sandia 2\DraftsMan\base profile 1a.dwg, 9/16/2003 9:43:49 AM

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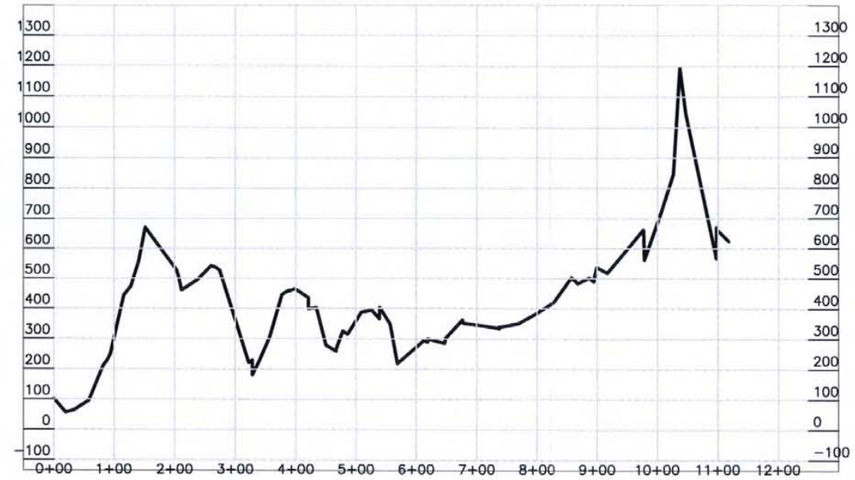
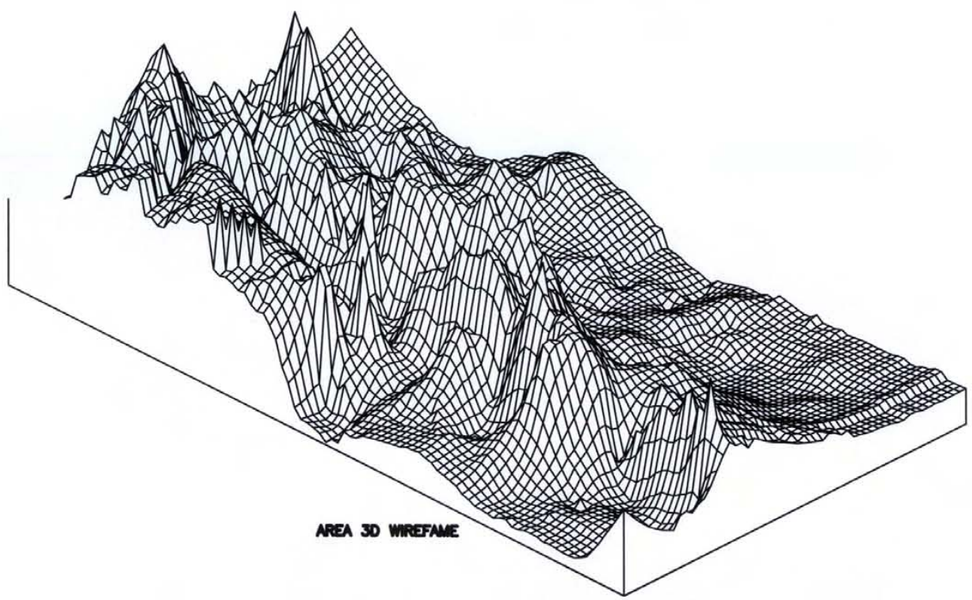
AquaTrack Survey – Sandia National Laboratories
Figure A-2 (cont.). Magnetic Profiles.

PROJECT NO. 01176		
DESIGNED NRM	CHECKED JRM	DRAWN RDD
DATE 3-25-03	DRAWING NO. M1	
SCALE NTS	SHEET NO. 1 OF 1	

CROSS PROFILES CENTER



CROSS PROFILES WEST



AREA 3D WIREFAME

CROSS PROFILES EAST

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AquaTrack Survey – Sandia National Laboratories
Figure A-2 (cont.). Magnetic Profiles.

PROJECT NO. 01176		
DESIGNED NRM	CHECKED JRM	DRAWN RDD
DATE 3-25-03		DRAWING NO. M1
SCALE NTS		SHEET NO. 1 OF 1

Appendix B.
Base station drift and noise

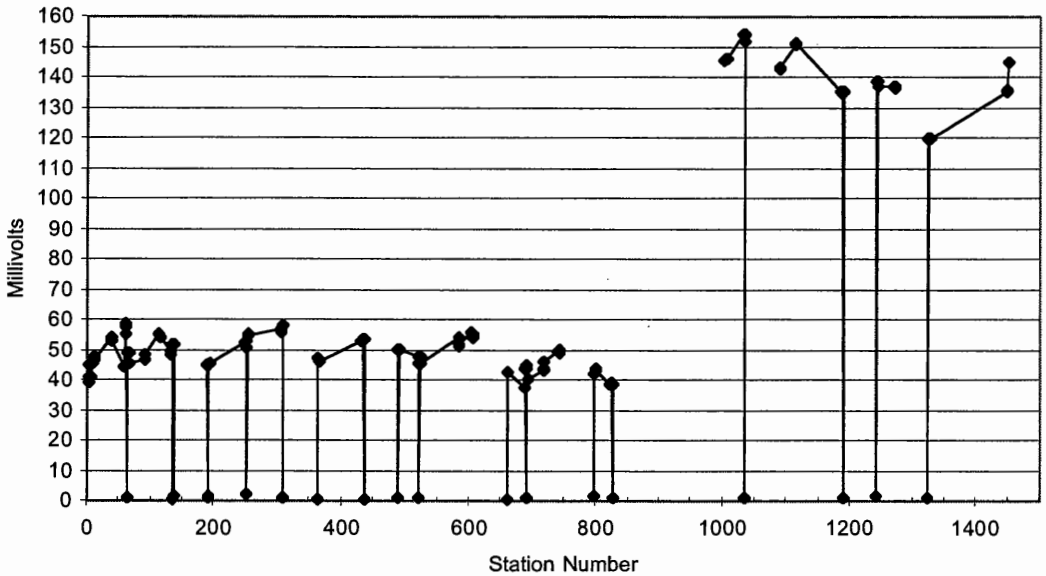


Figure B-1. Base station drift corrections.

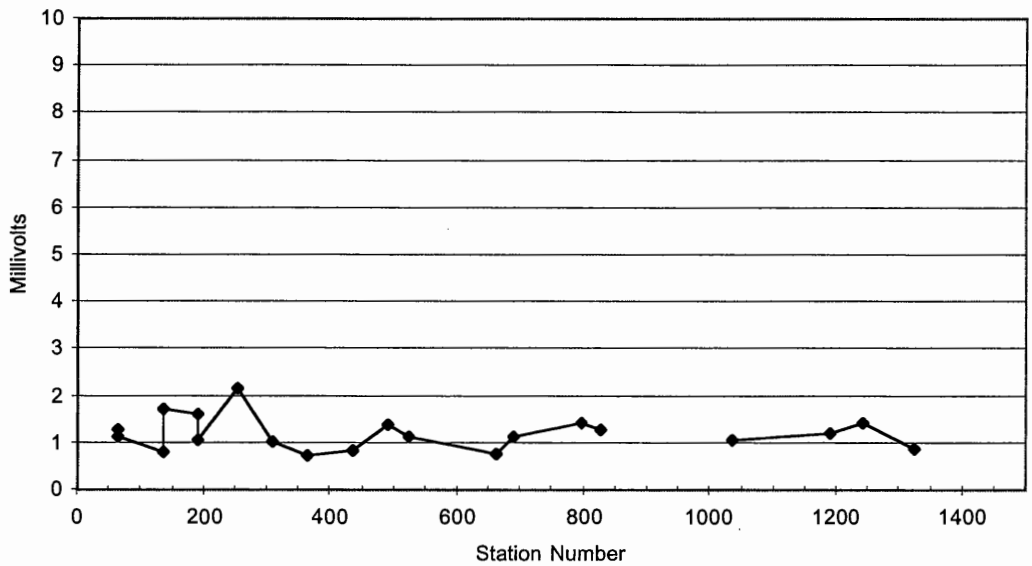


Figure B-2. Base station noise.

ANNEX D
Hydrographs for TAG Monitoring Wells

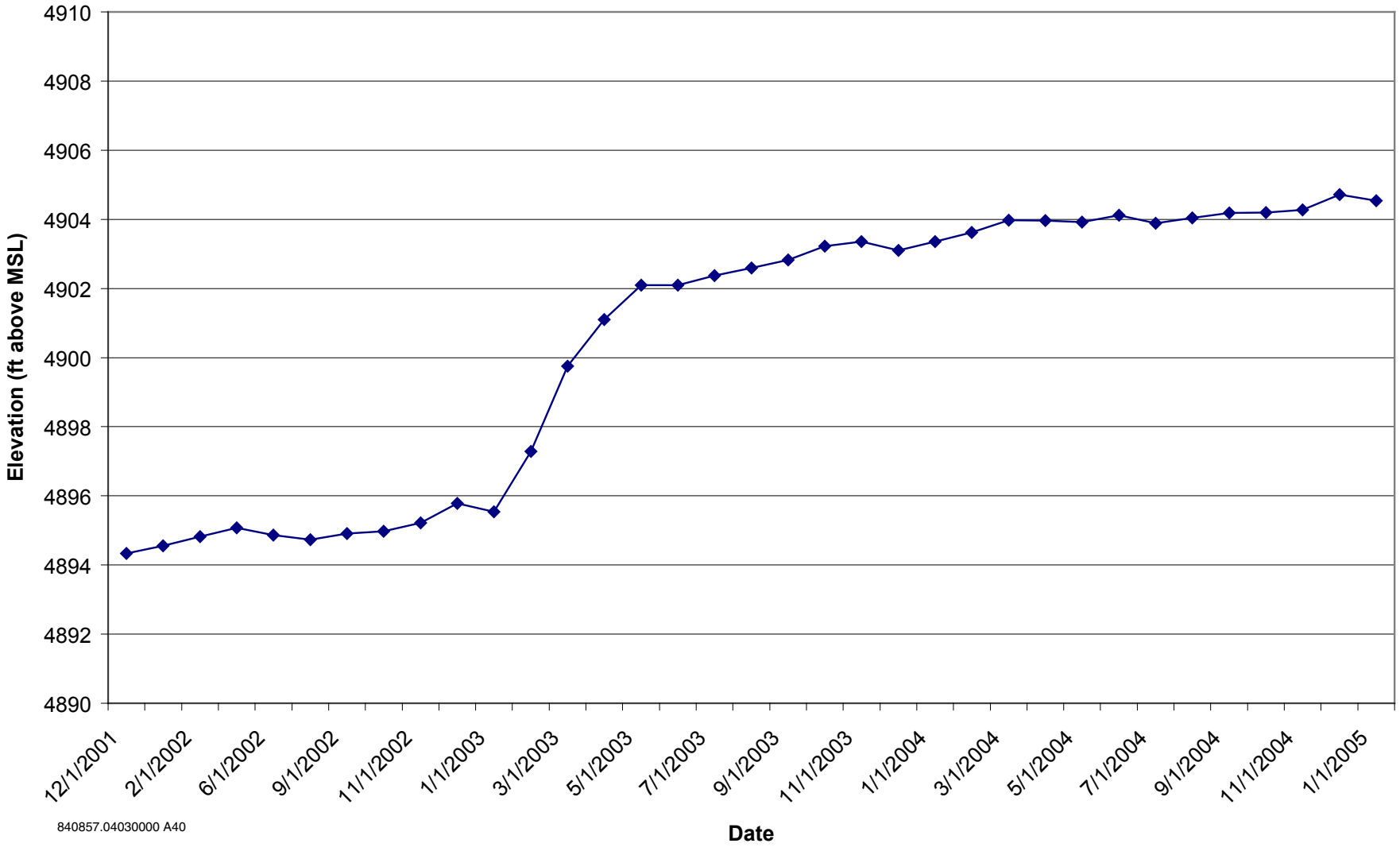


Figure D-1
Eubank-1 Hydrograph

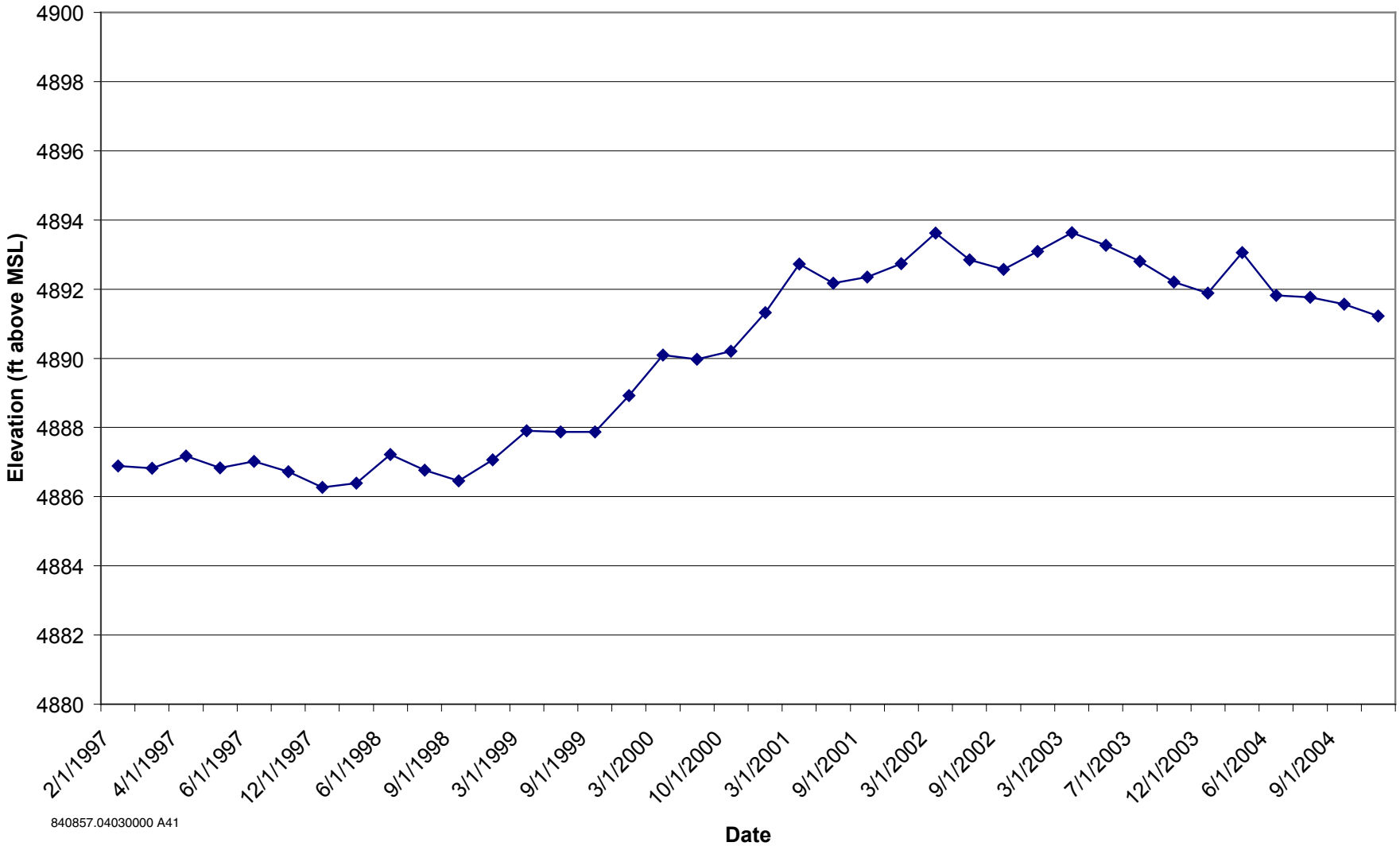


Figure D-2
Eubank-2 Hydrograph

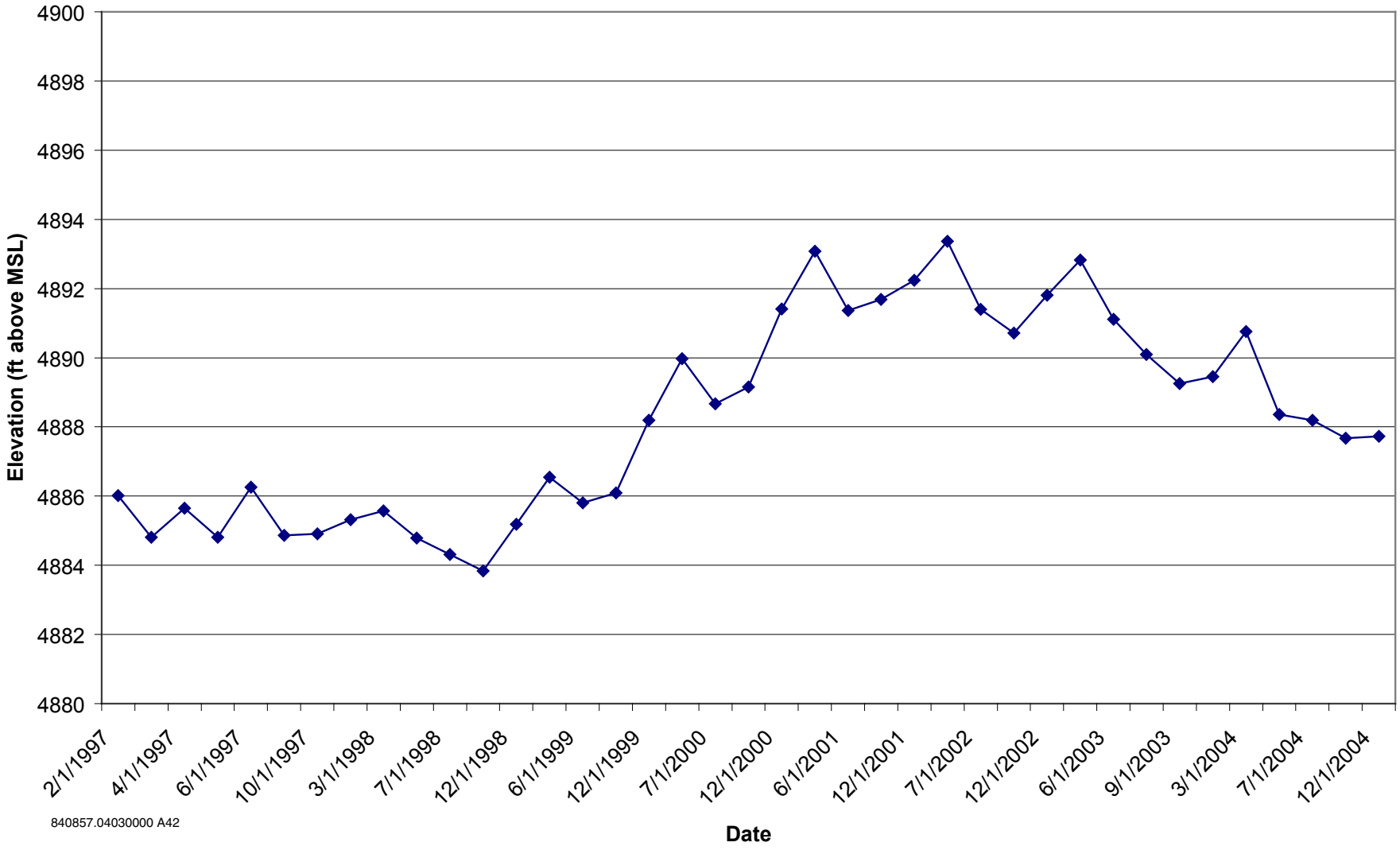


Figure D-3
Eubank-3 Hydrograph

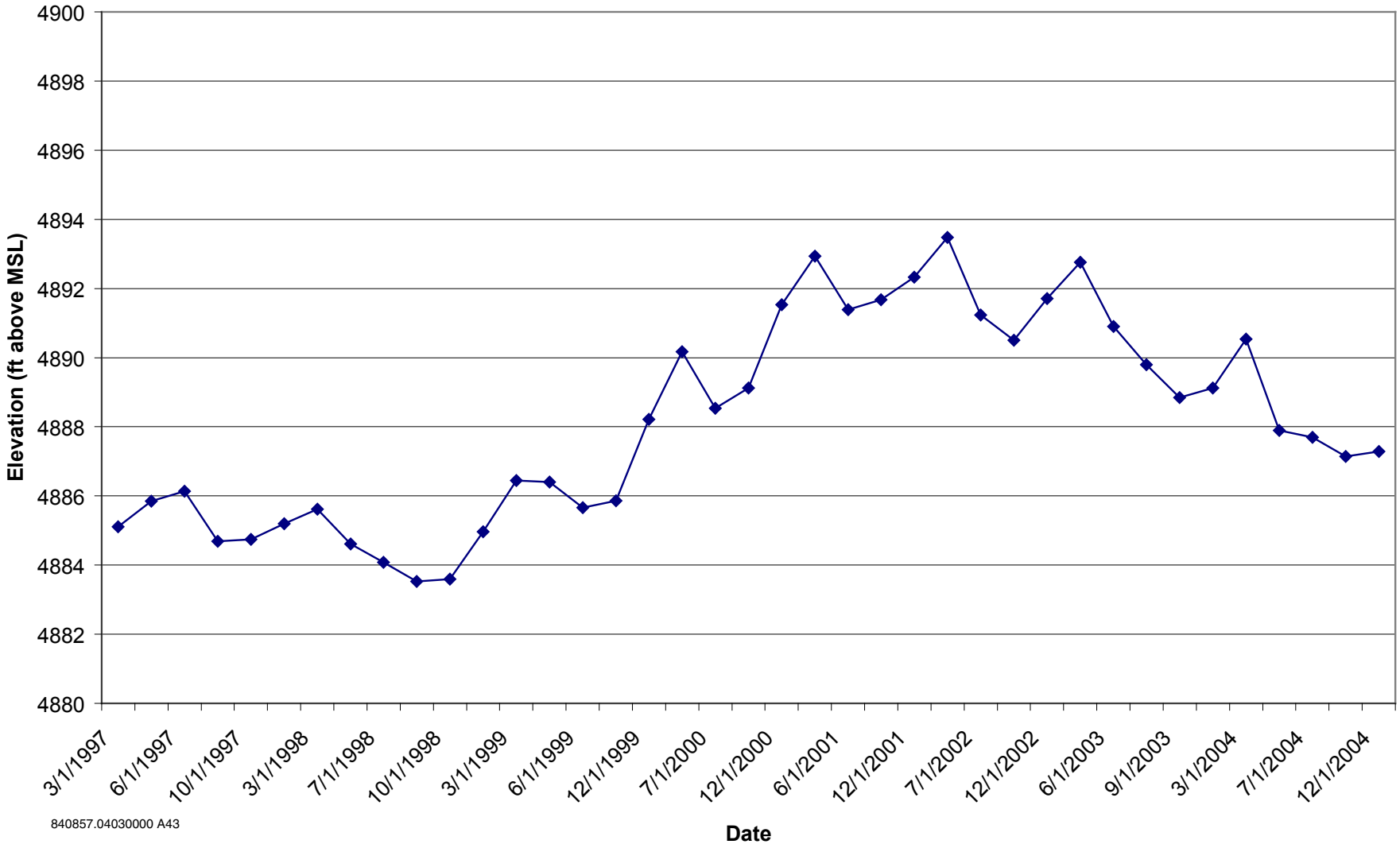


Figure D-4
Eubank-5 Hydrograph

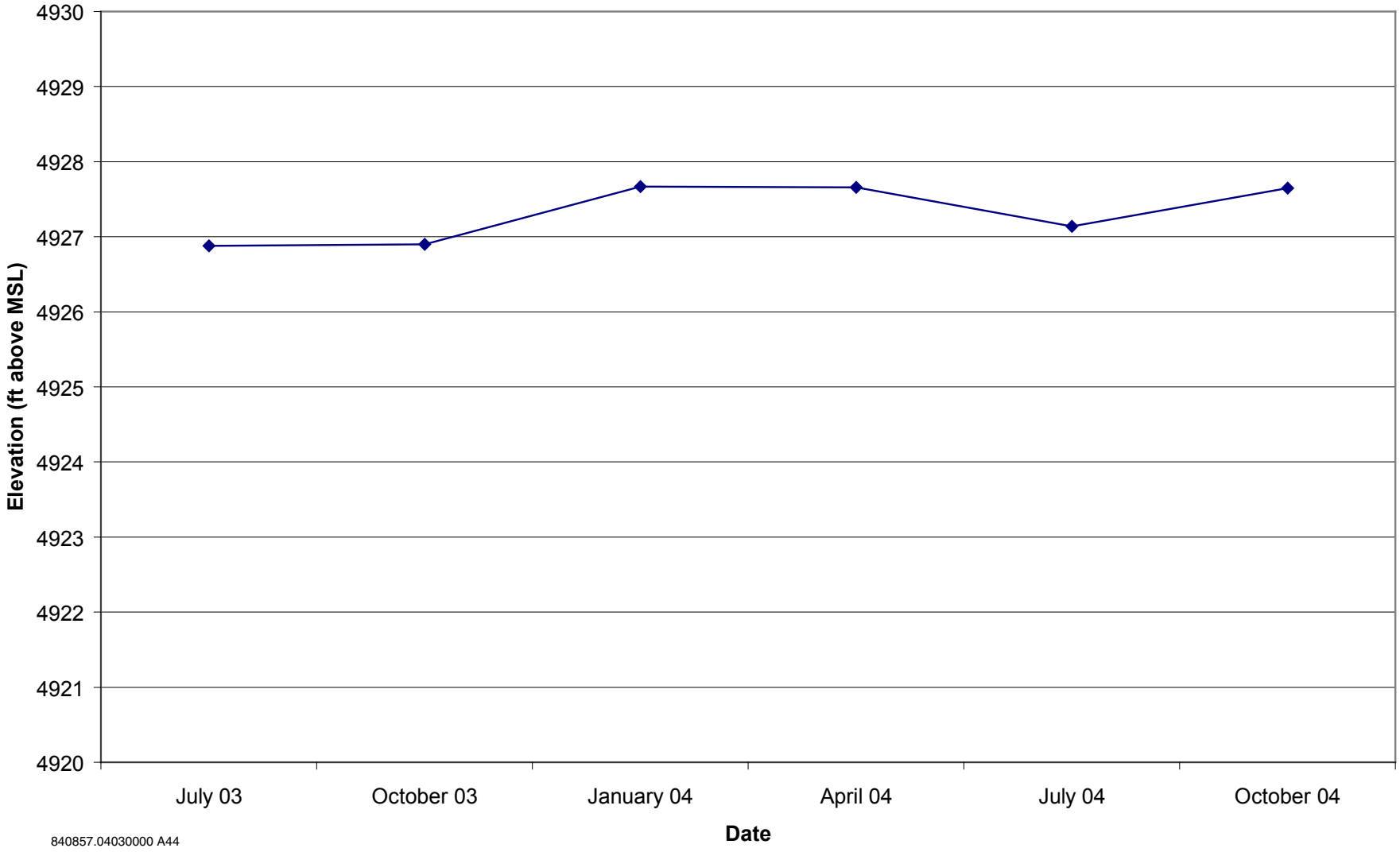


Figure D-5
KAFB-0307 Hydrograph

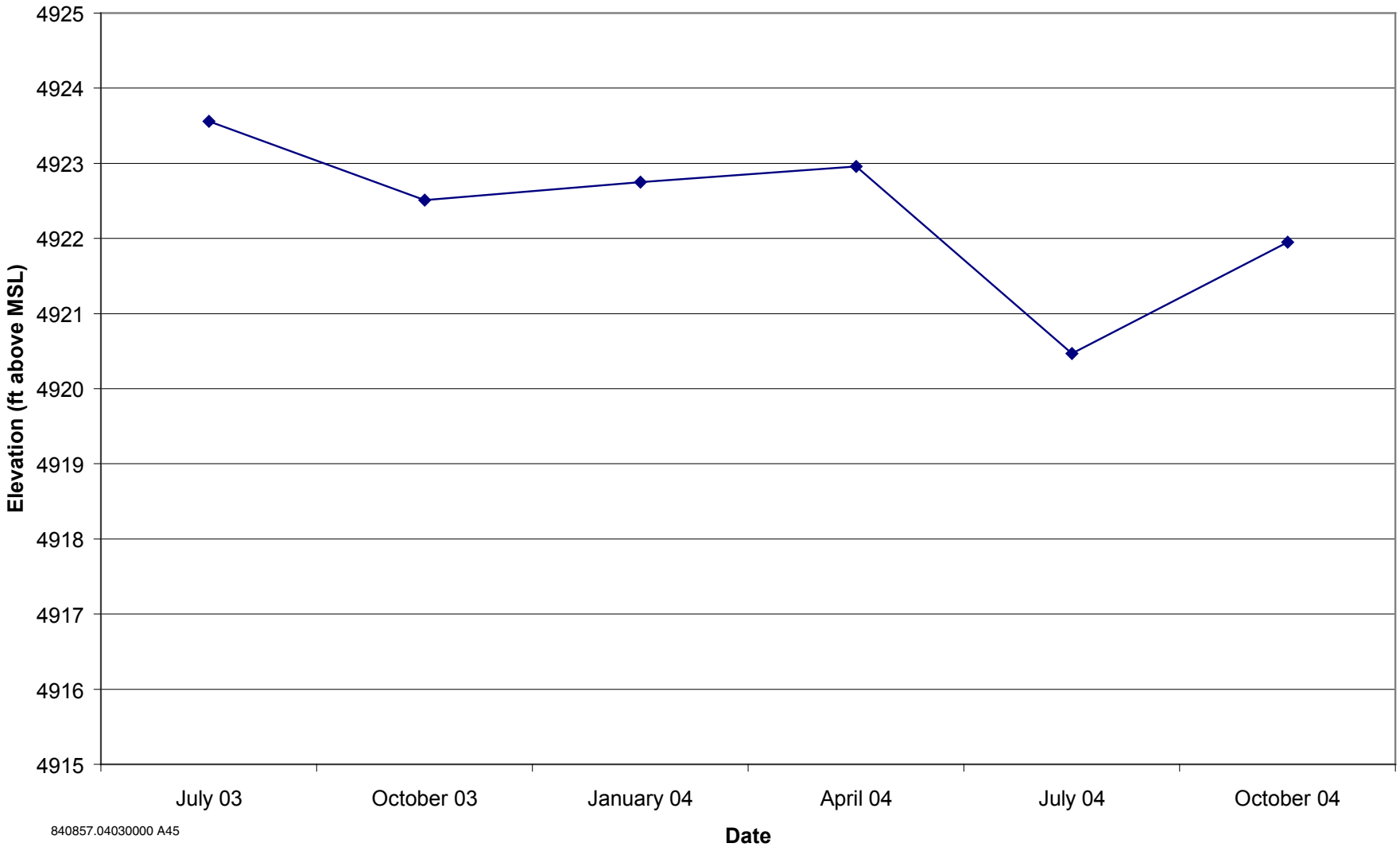


Figure D-6
KAFB-0309 Hydrograph

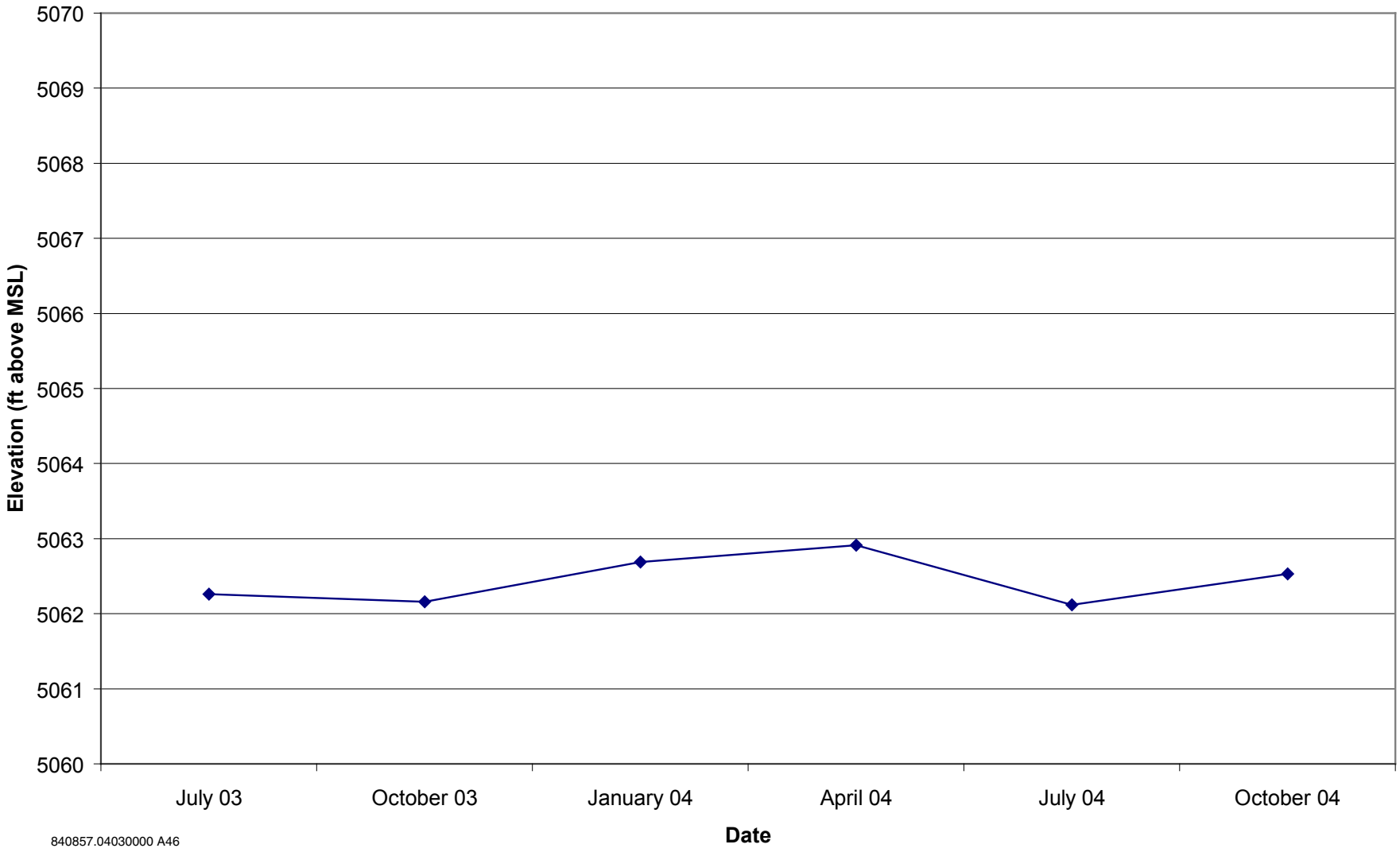


Figure D-7
KAFB-0310 Hydrograph

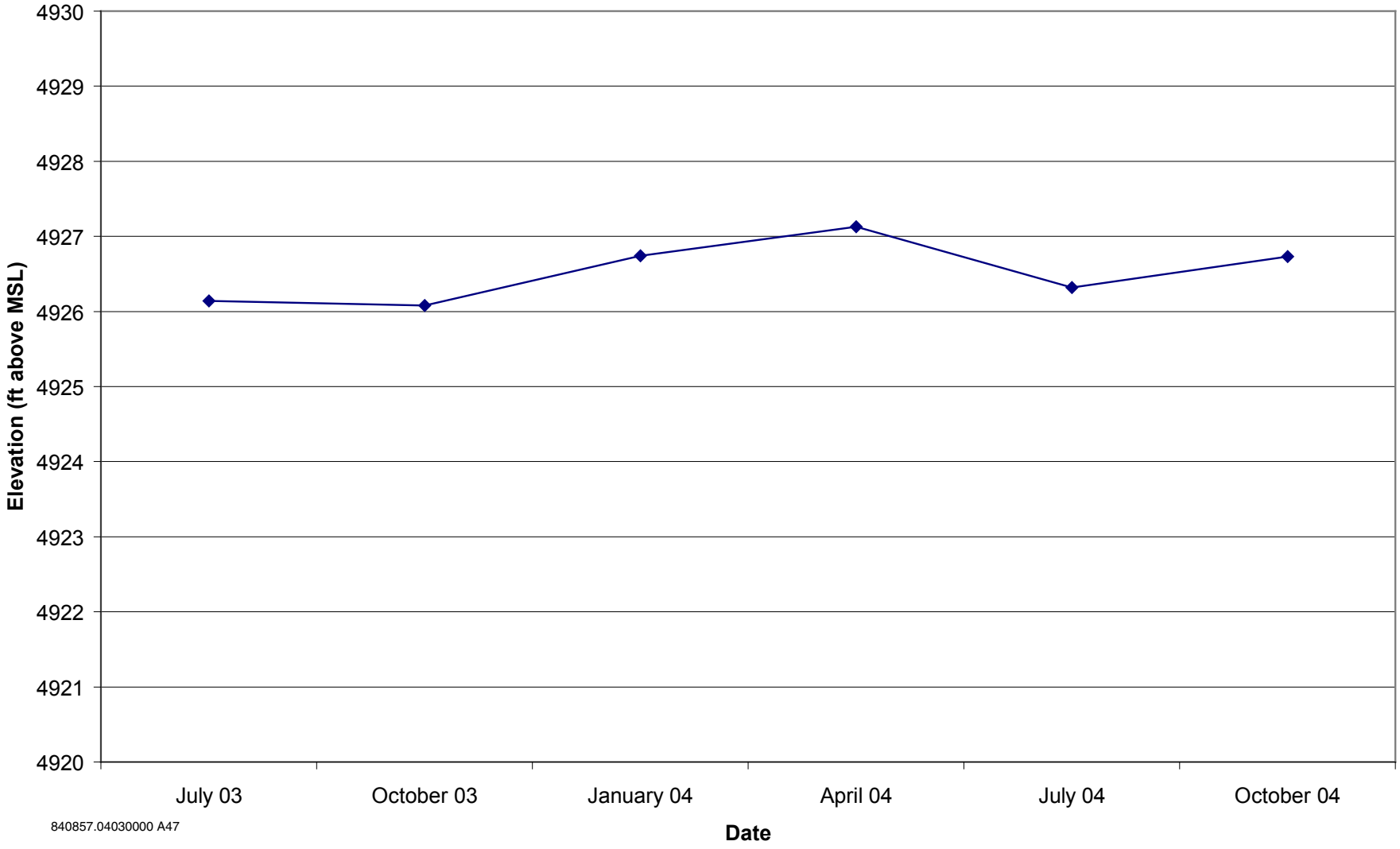


Figure D-8
KAFB-0311 Hydrograph

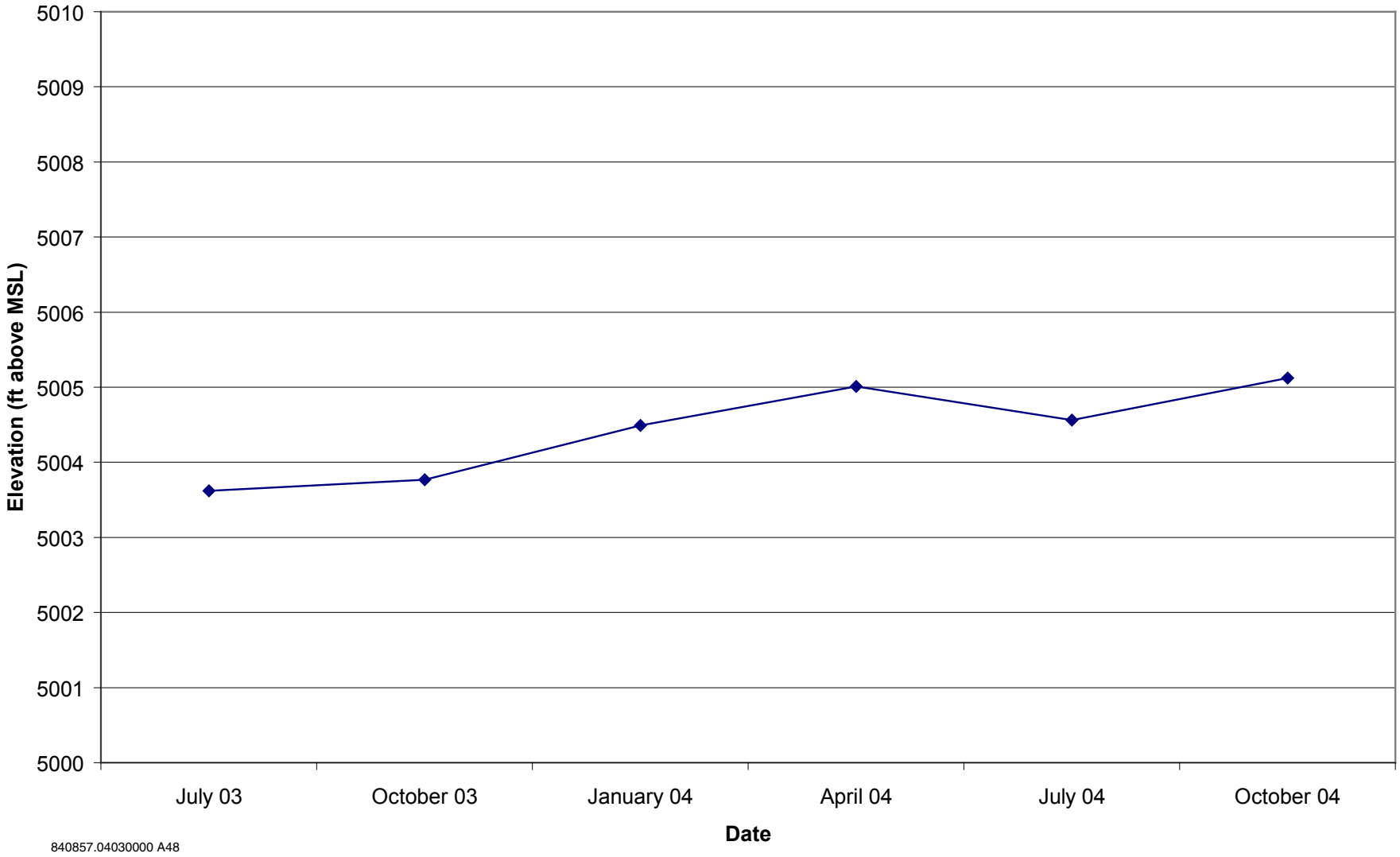


Figure D-9
KAFB-0312 Hydrograph

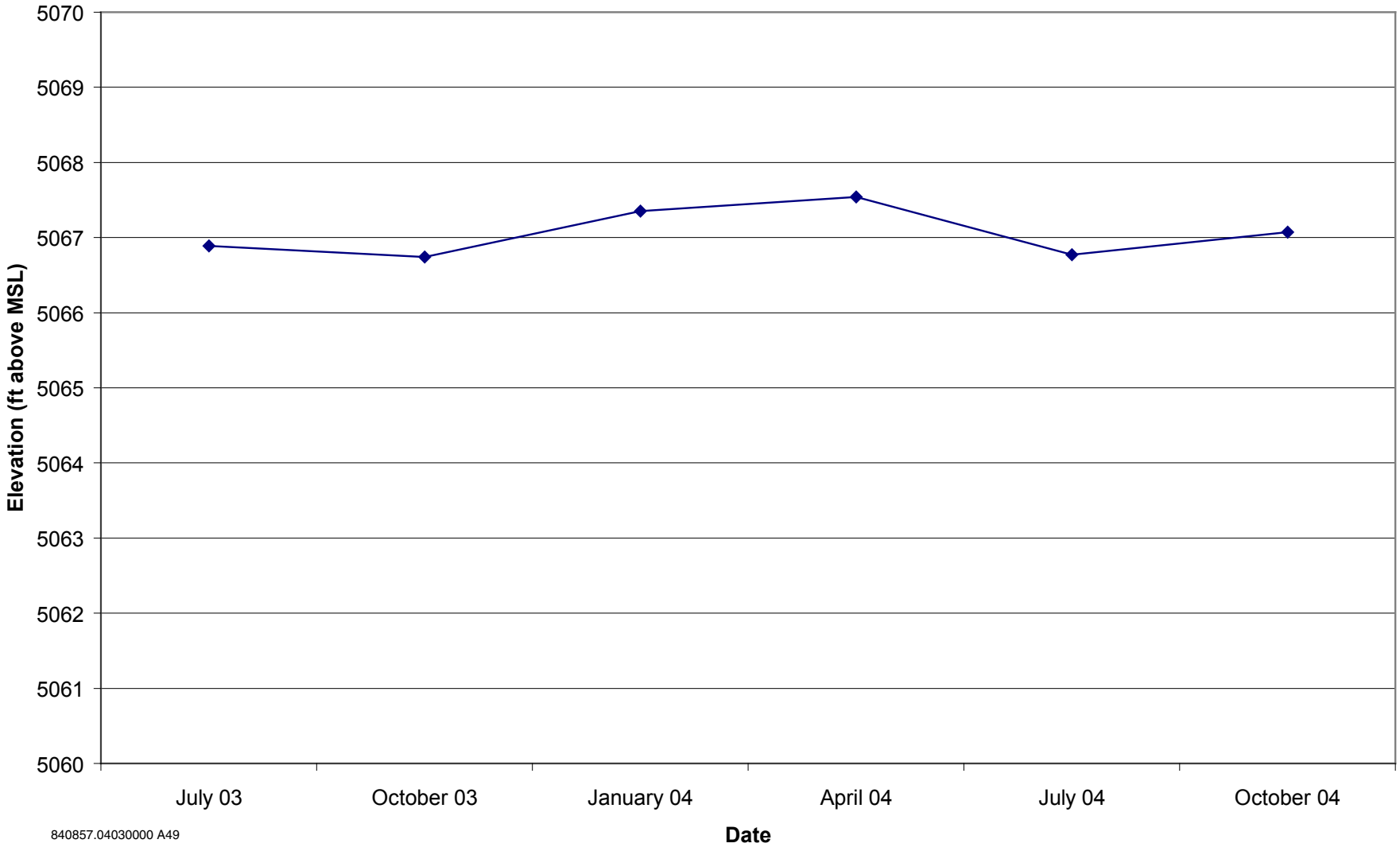


Figure D-10
KAFB-0313 Hydrograph

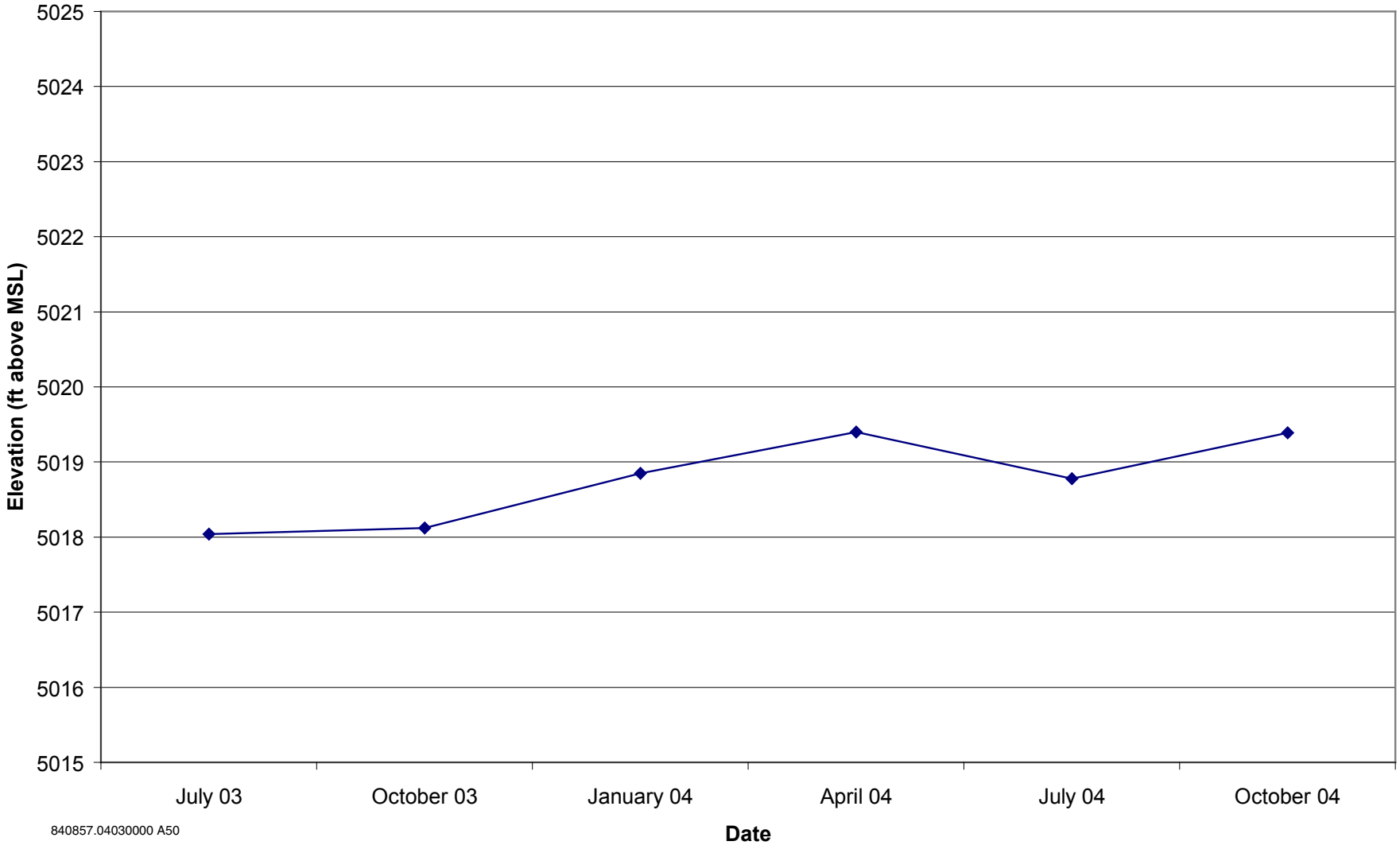


Figure D-11
KAFB-0315 Hydrograph

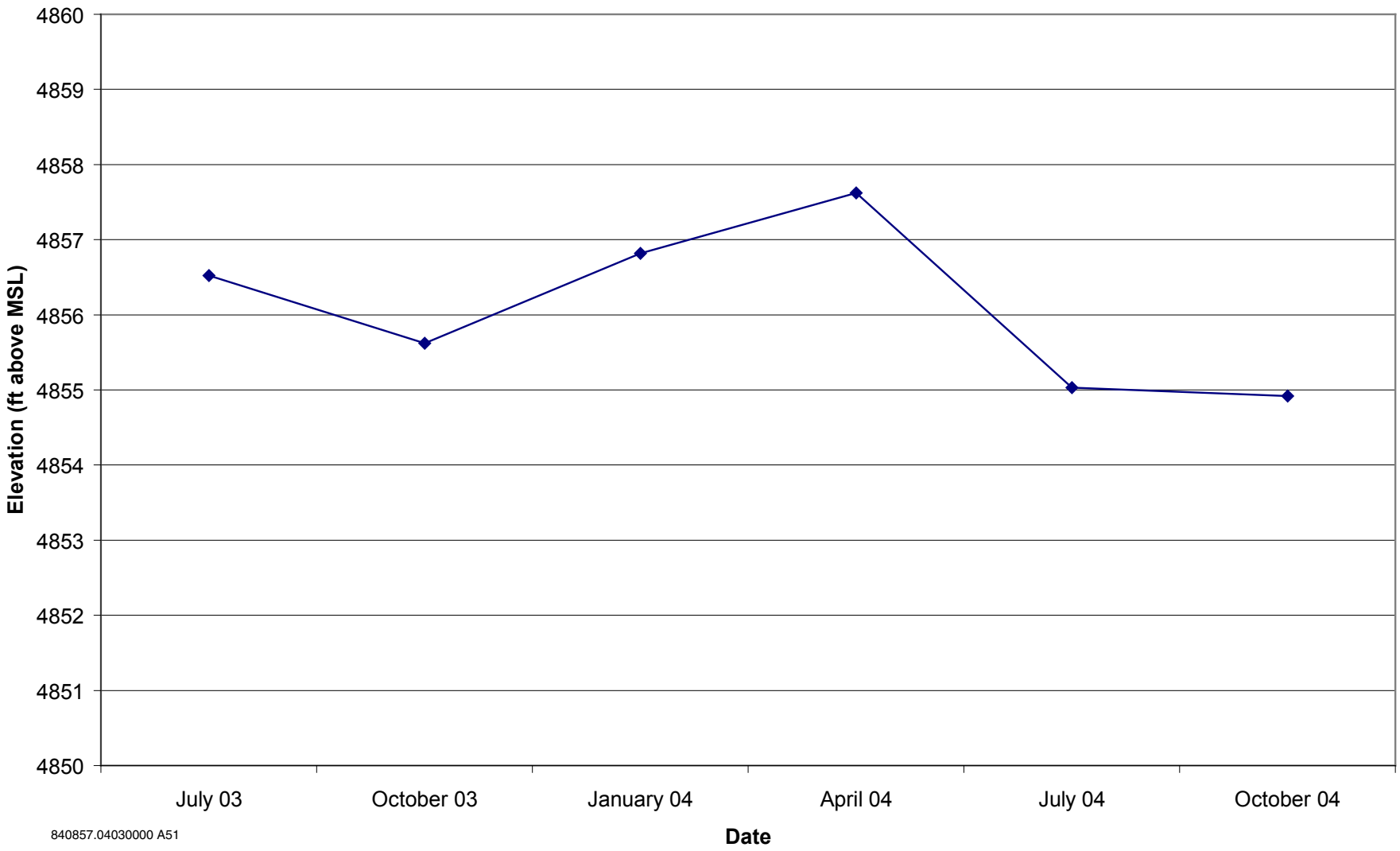
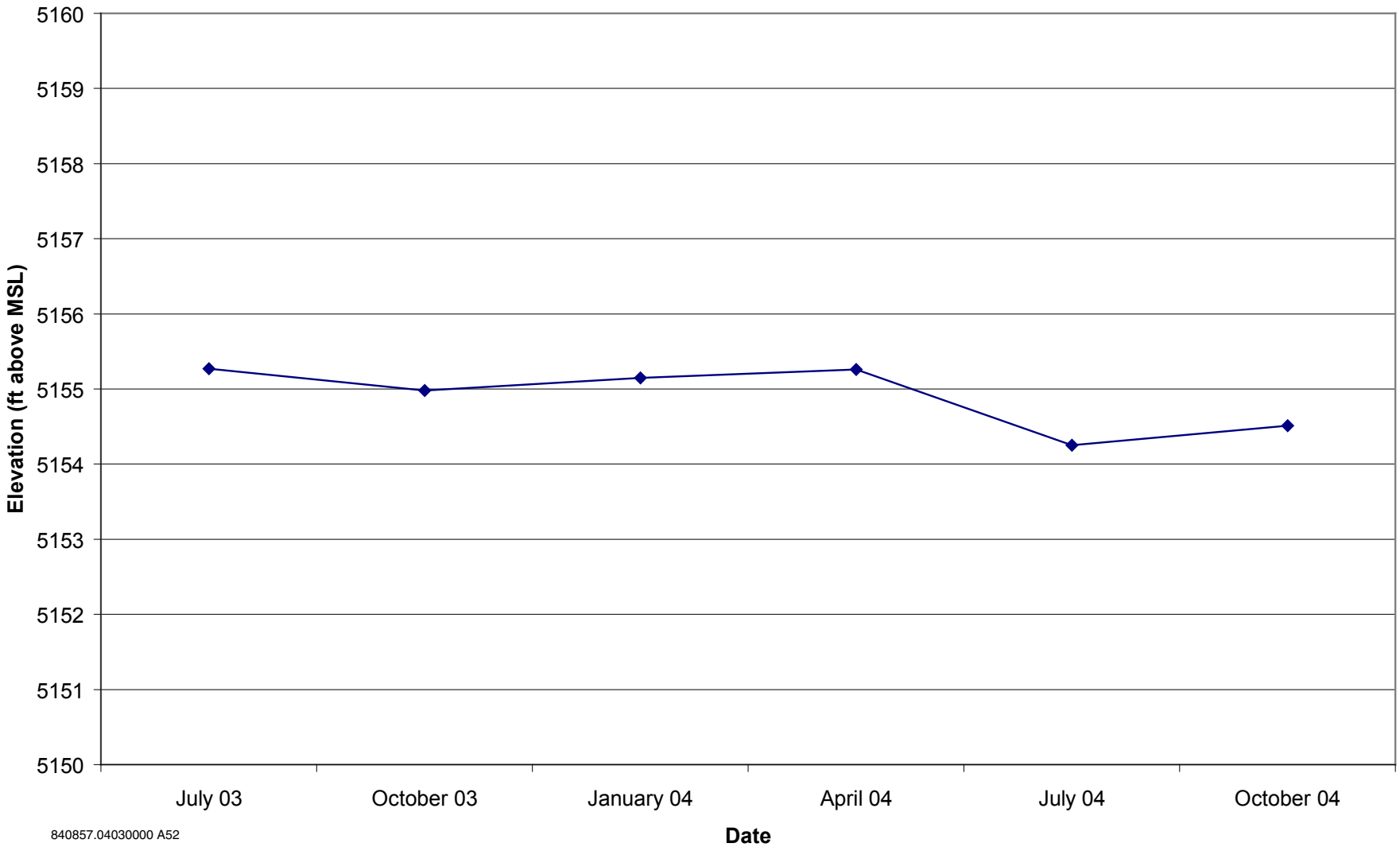


Figure D-12
KAFB-0505 Hydrograph



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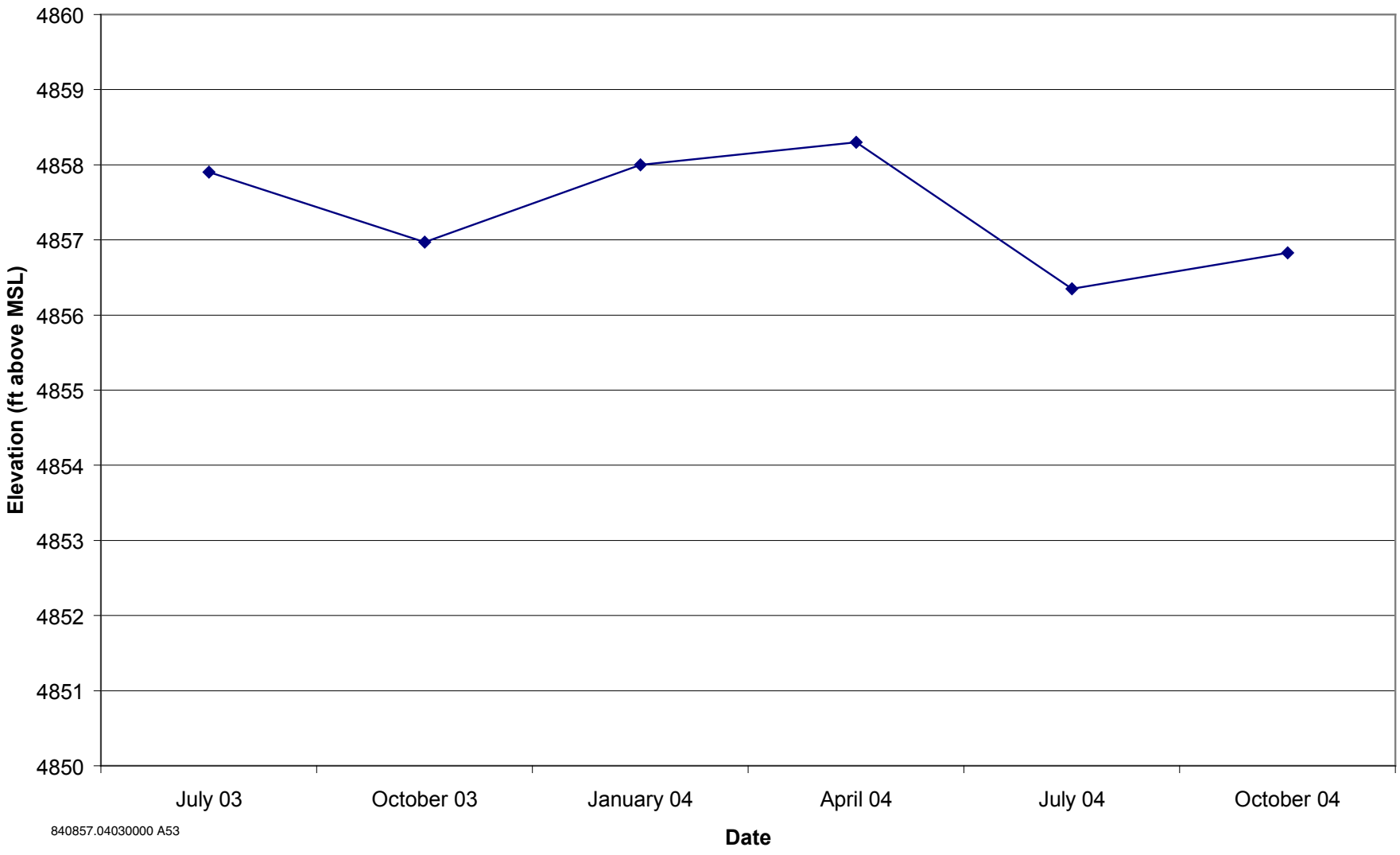
KAFB-0506 Hydrograph



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KAFB-0507 Hydrograph

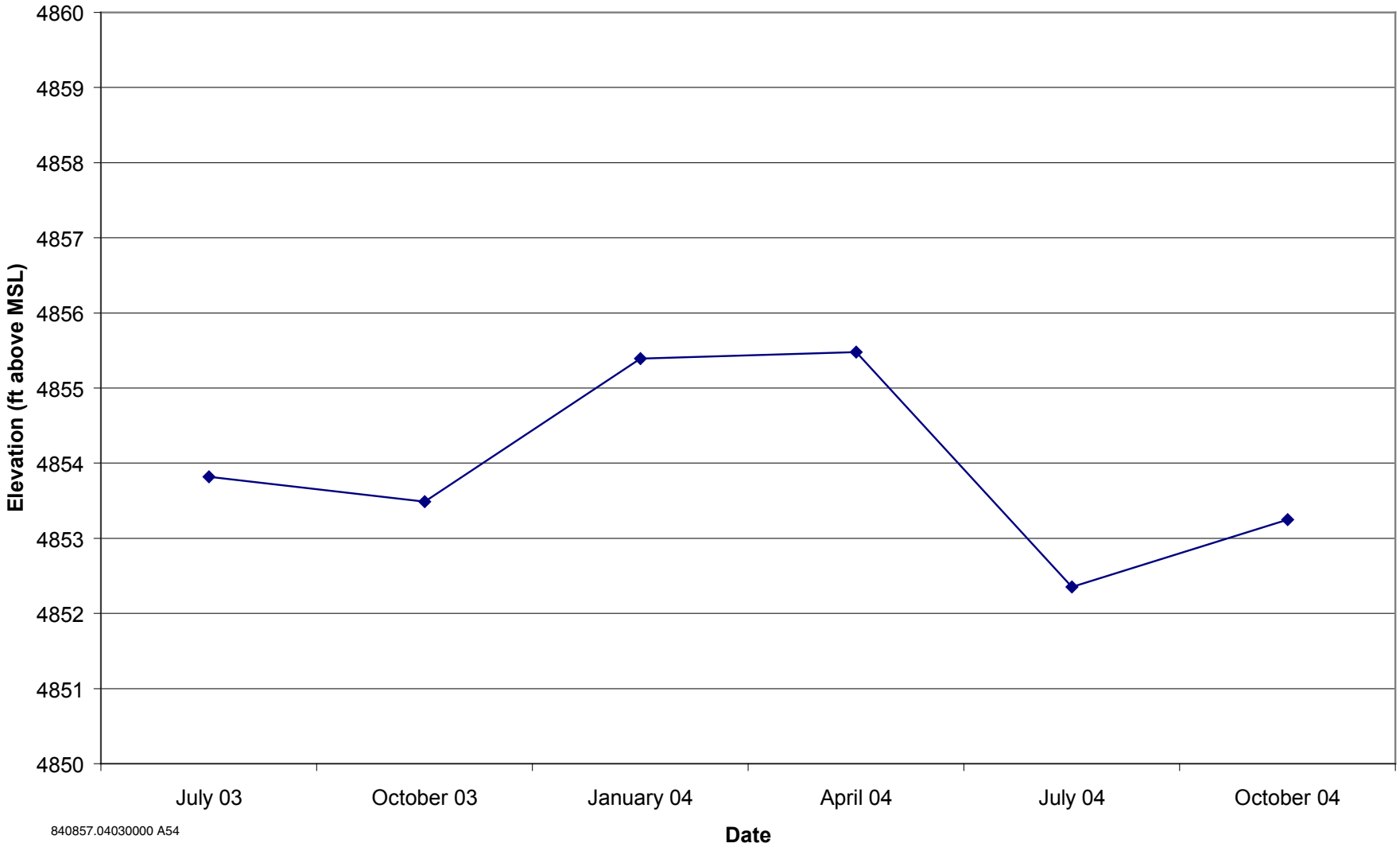


Figure D-15
KAFB-0508 Hydrograph

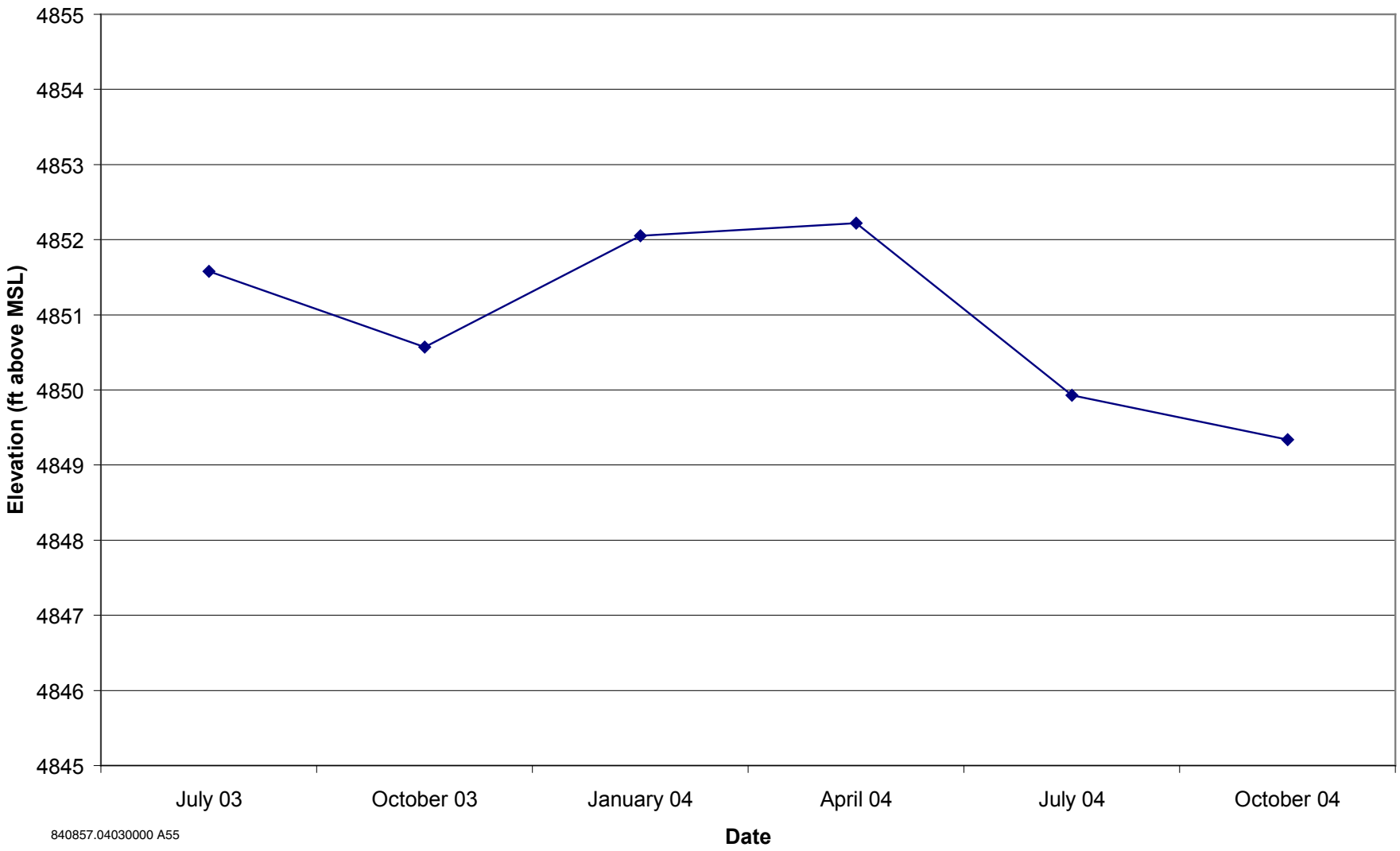


Figure D-16
KAFB-0510 Hydrograph

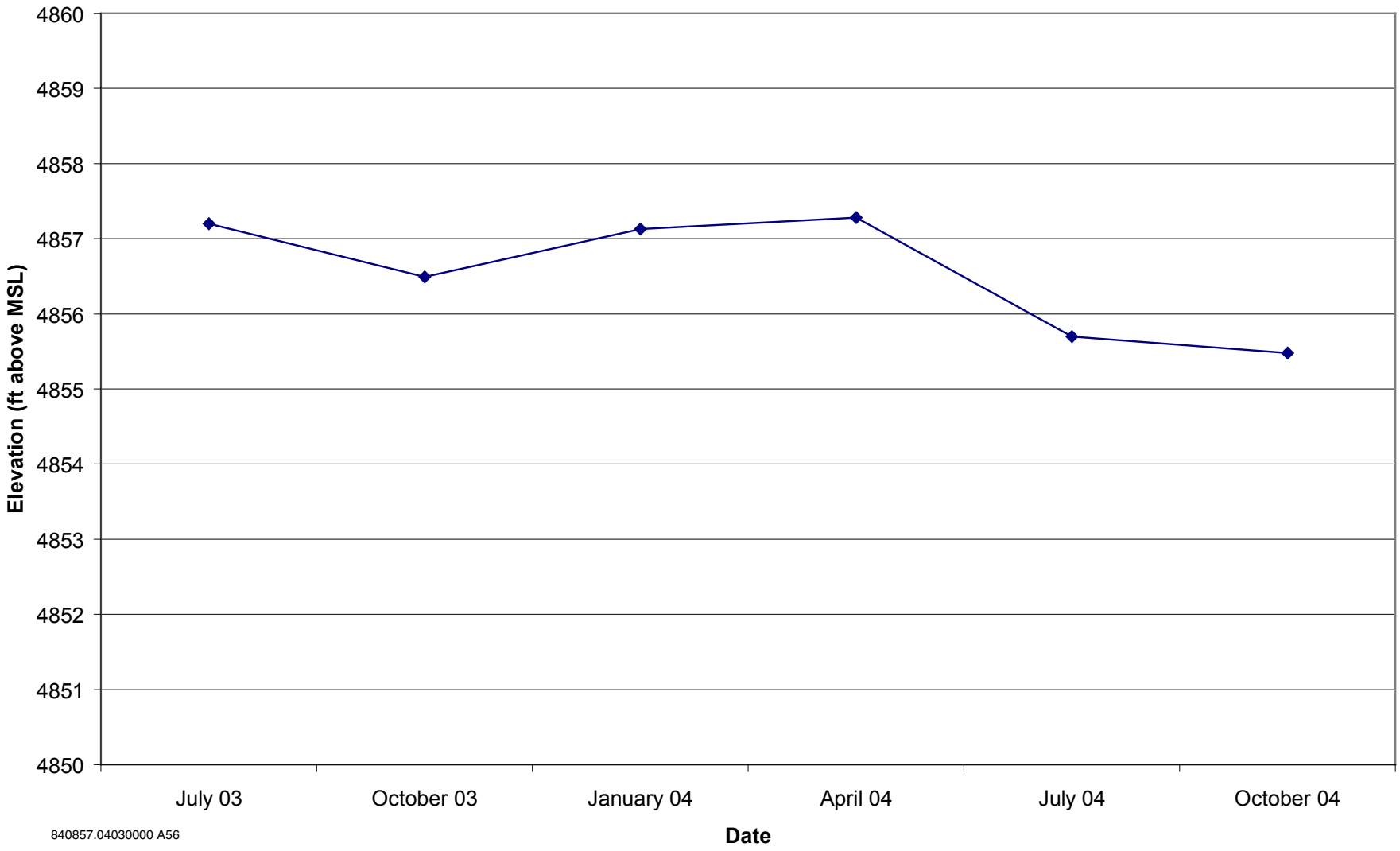


Figure D-17
KAFB-0512 Hydrograph

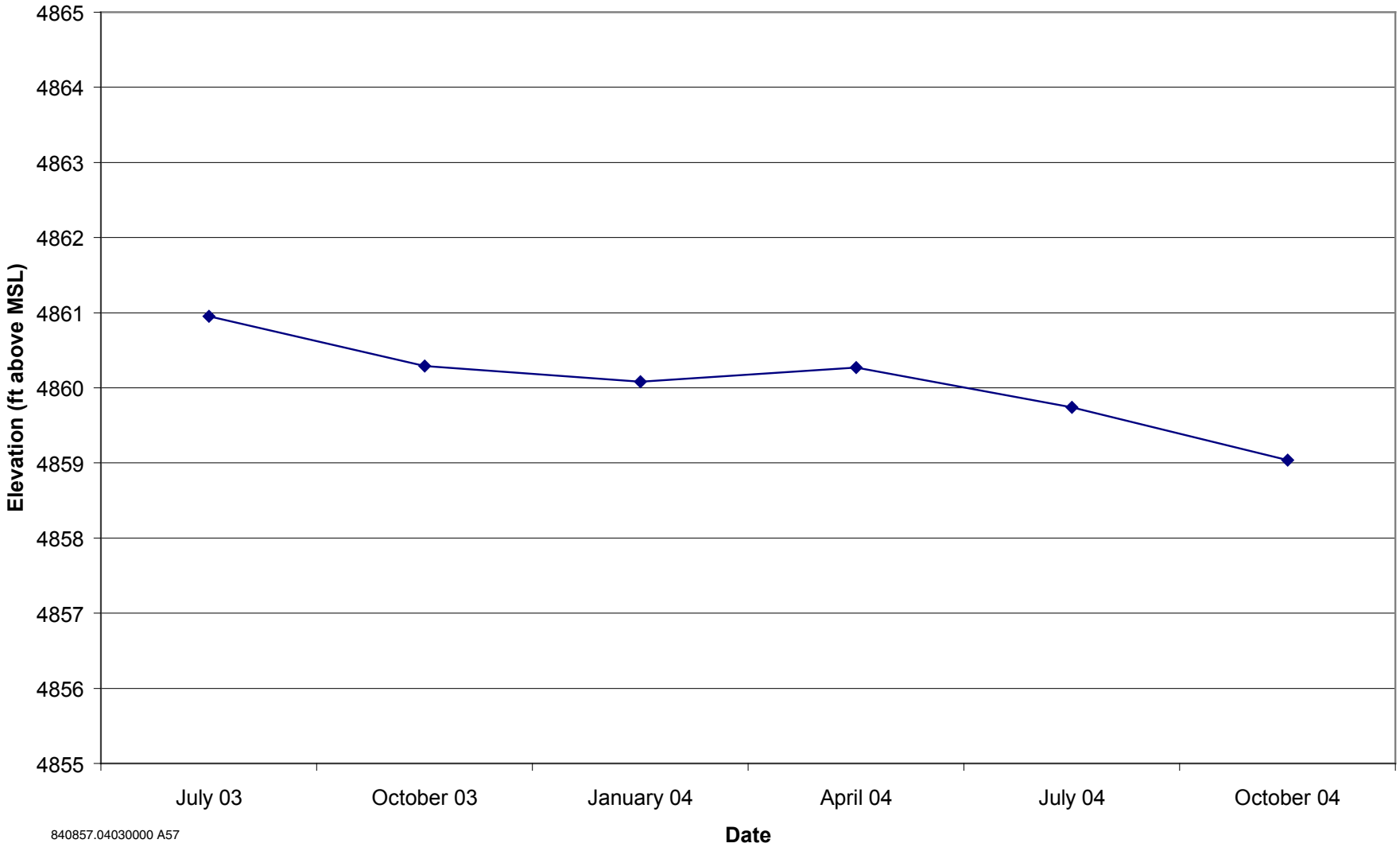


Figure D-18
KAFB-0514 Hydrograph

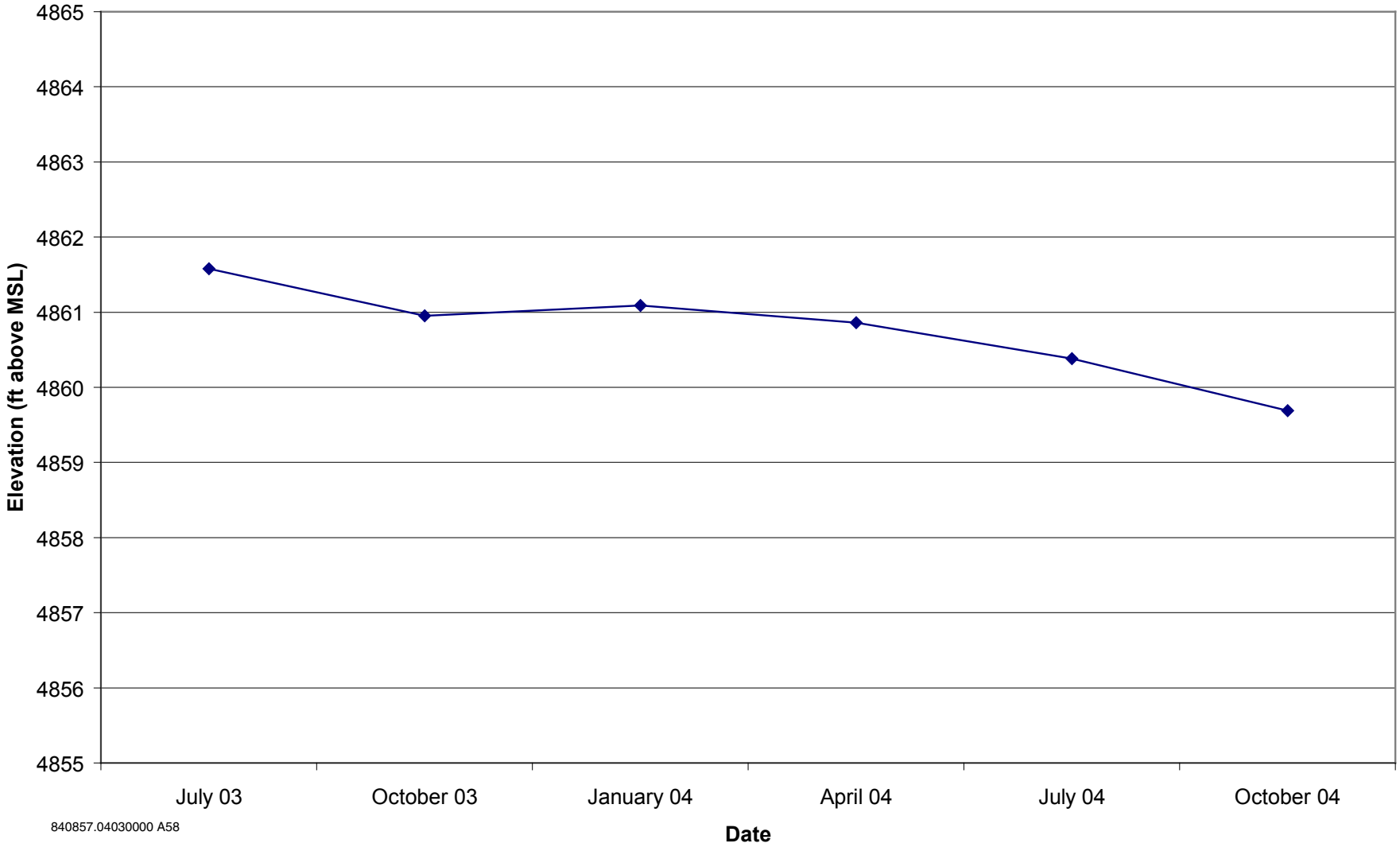


Figure D-19
KAFB-0516 Hydrograph

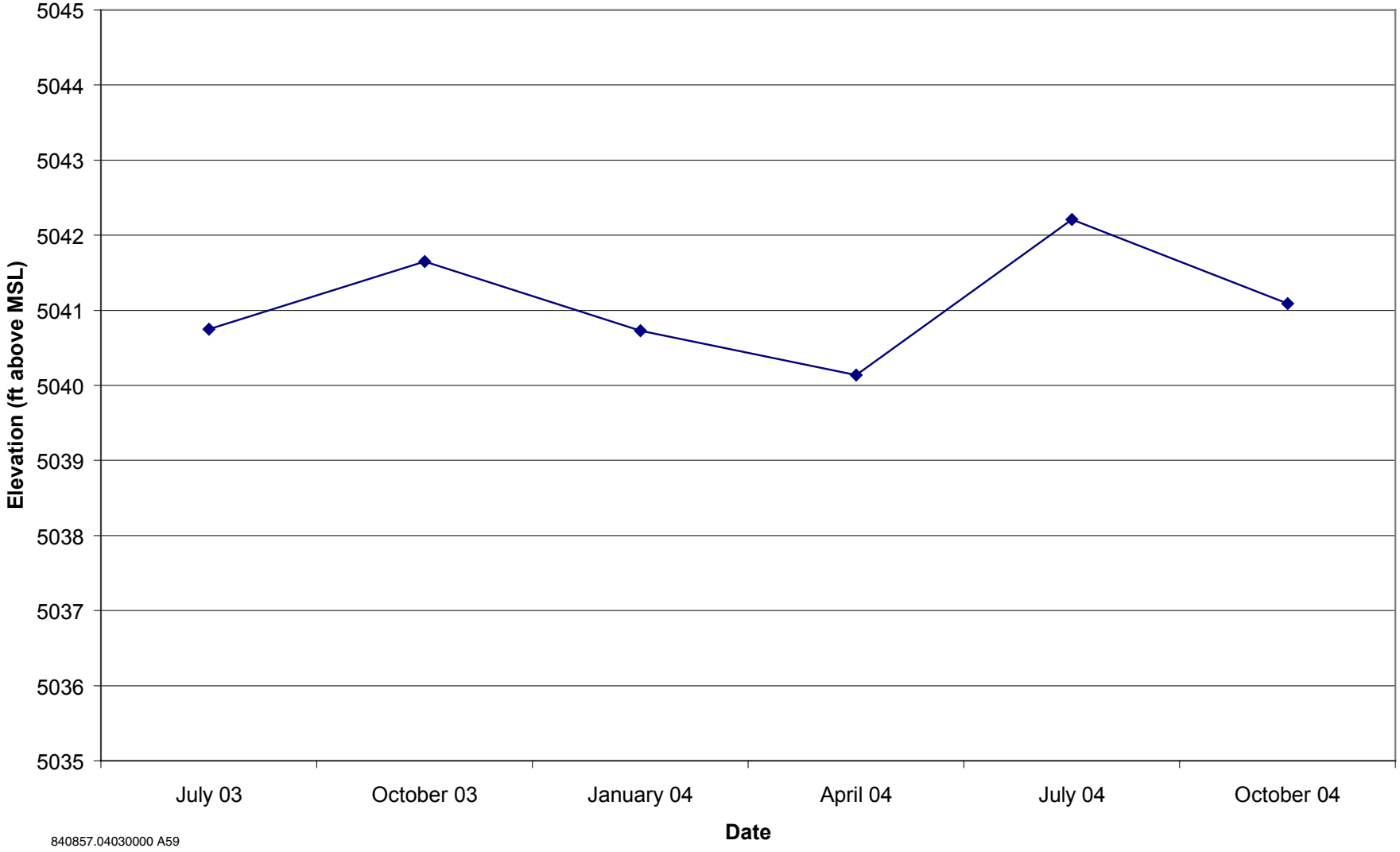
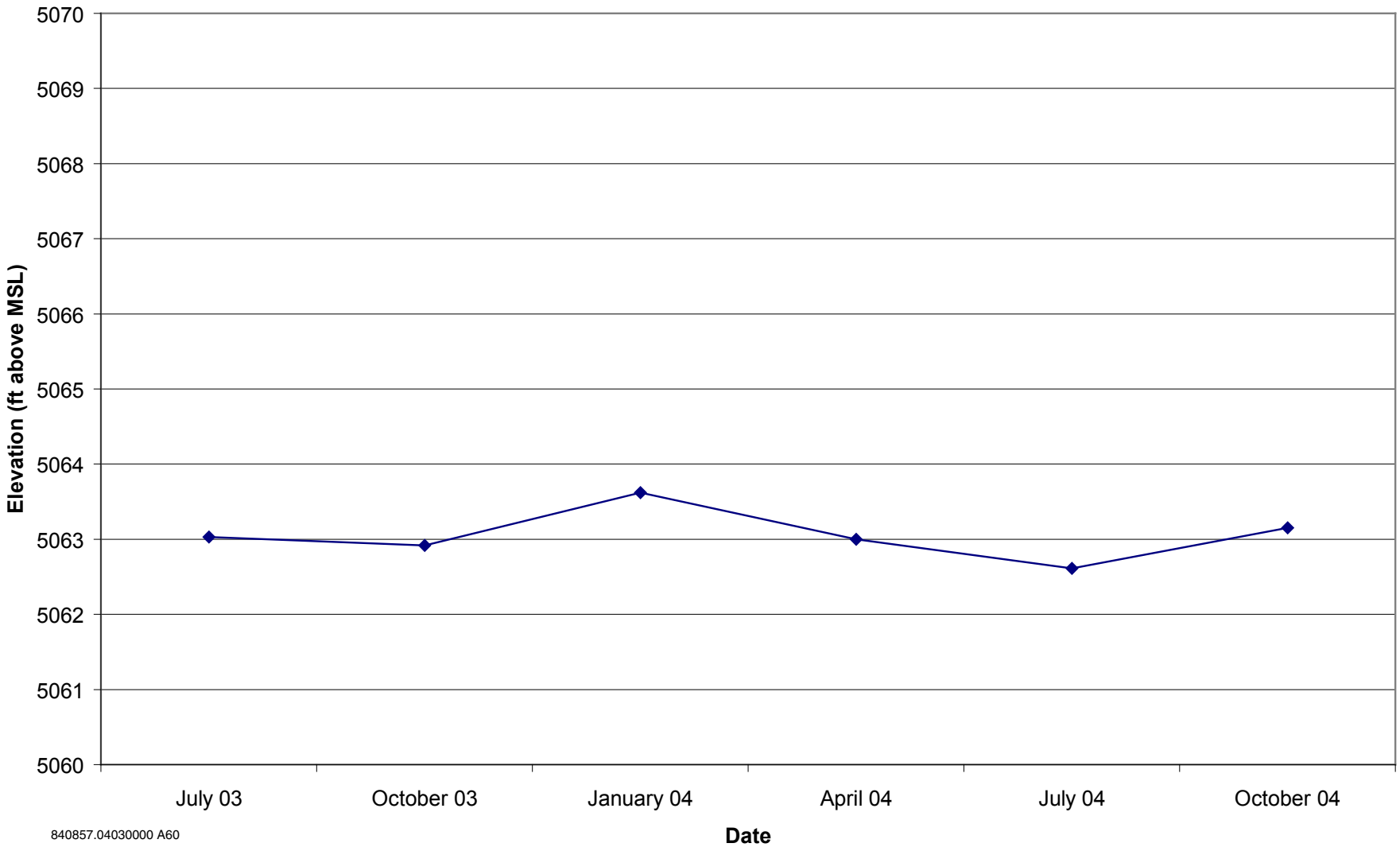


Figure D-20
KAFB-0602 Hydrograph



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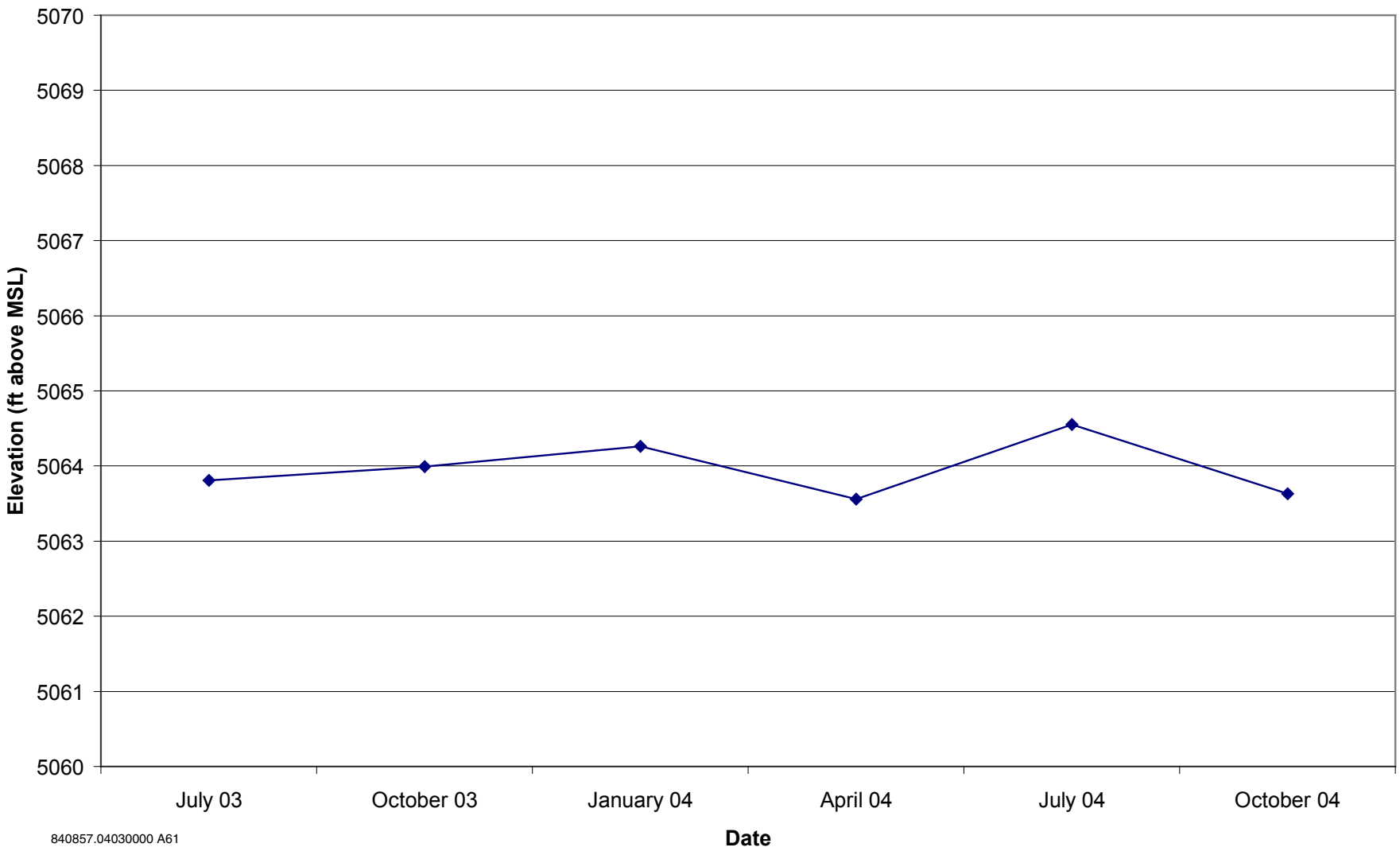
KAFB-0608 Hydrograph



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KAFB-0609 Hydrograph

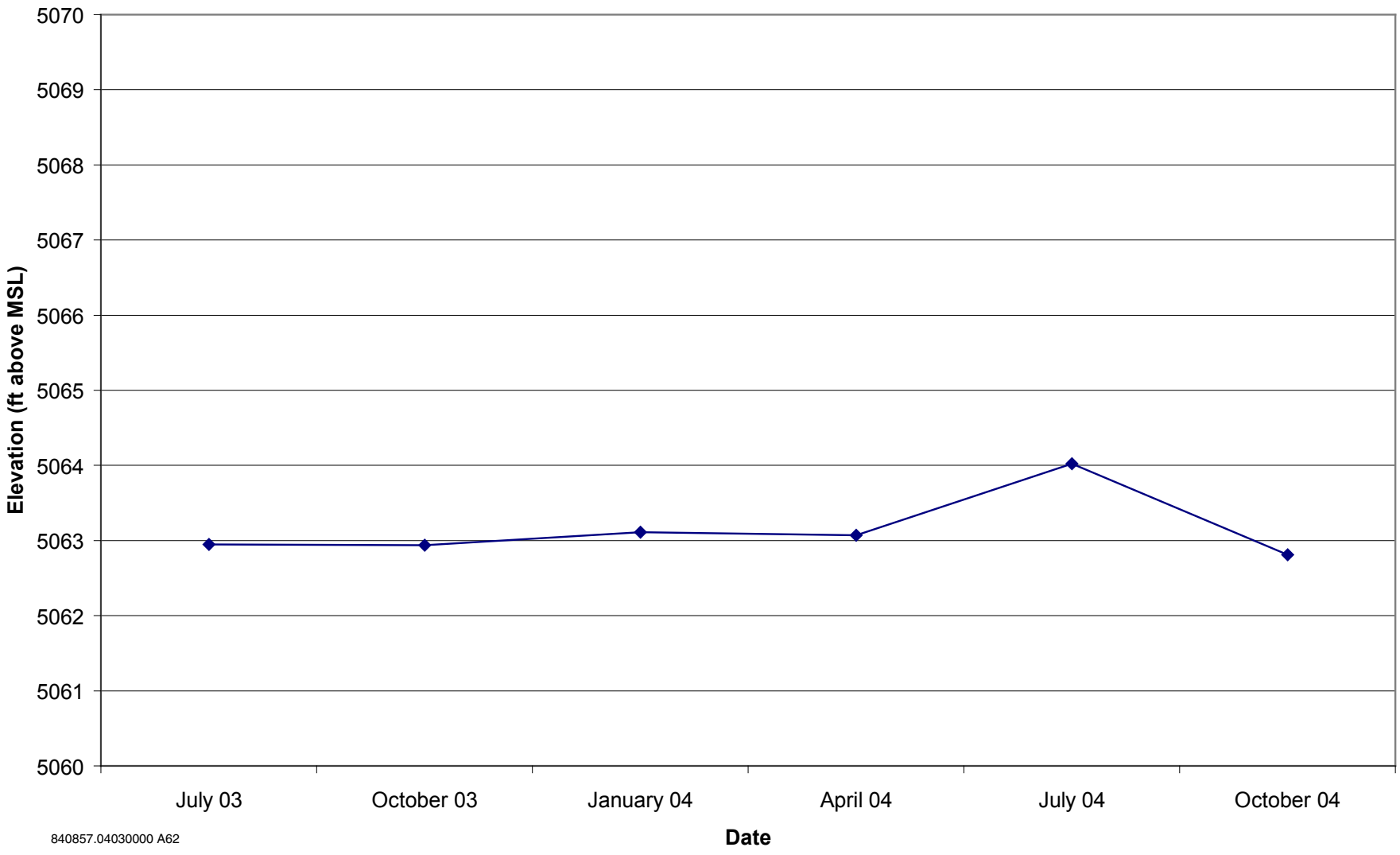
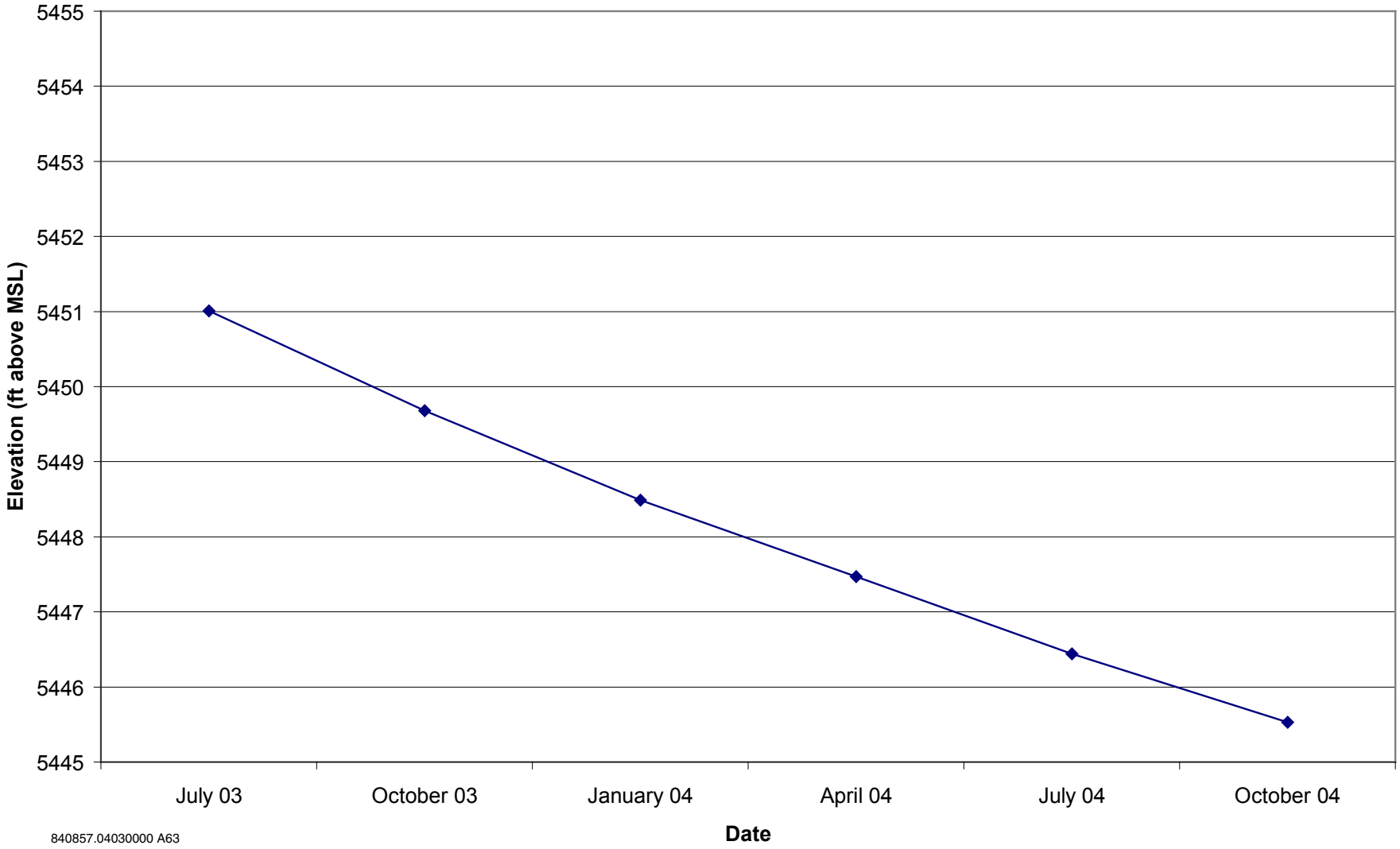


Figure D-23
KAFB-0610 Hydrograph



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KAFB-0615 Hydrograph

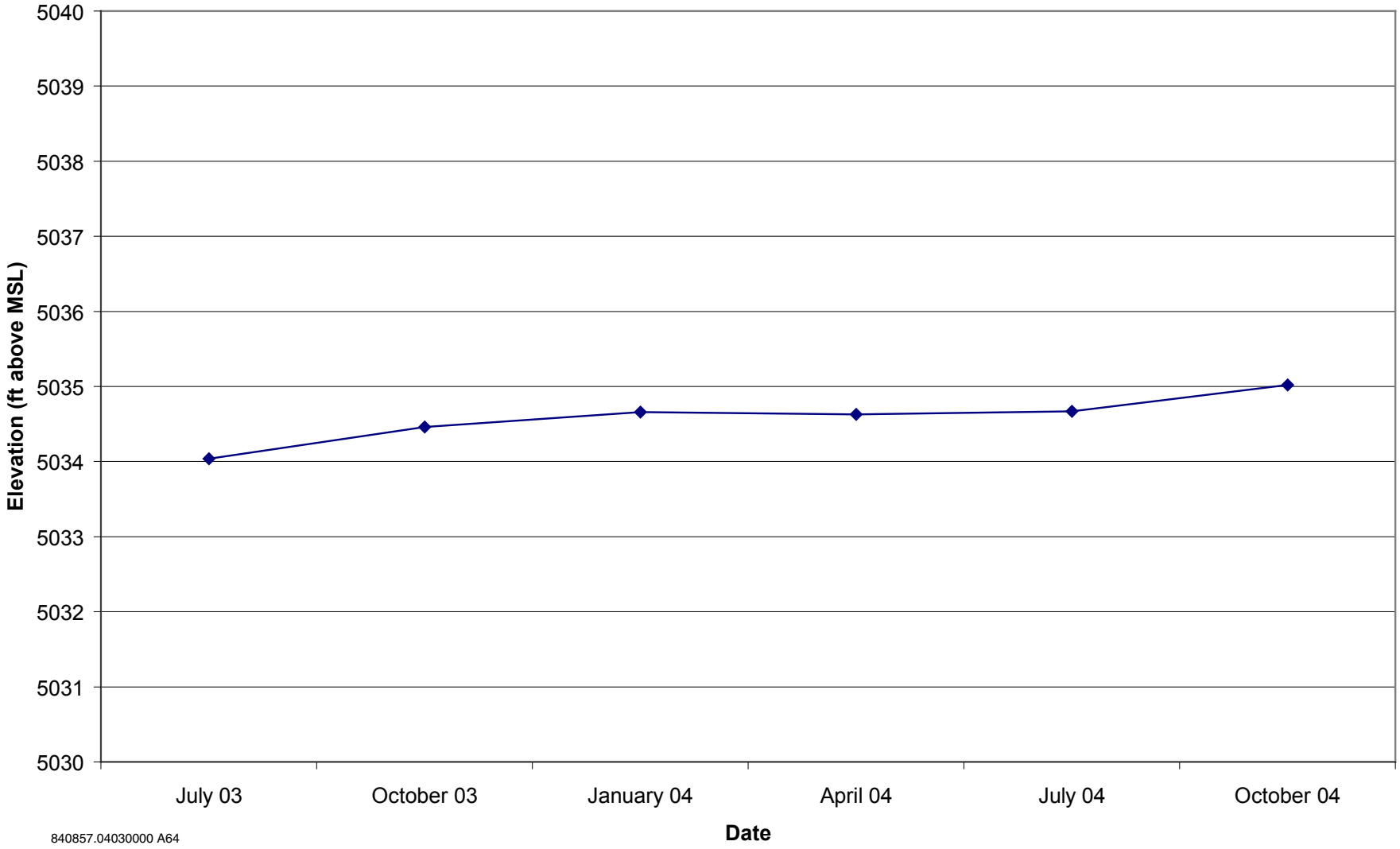

Figure D-25
KAFB-0616 Hydrograph

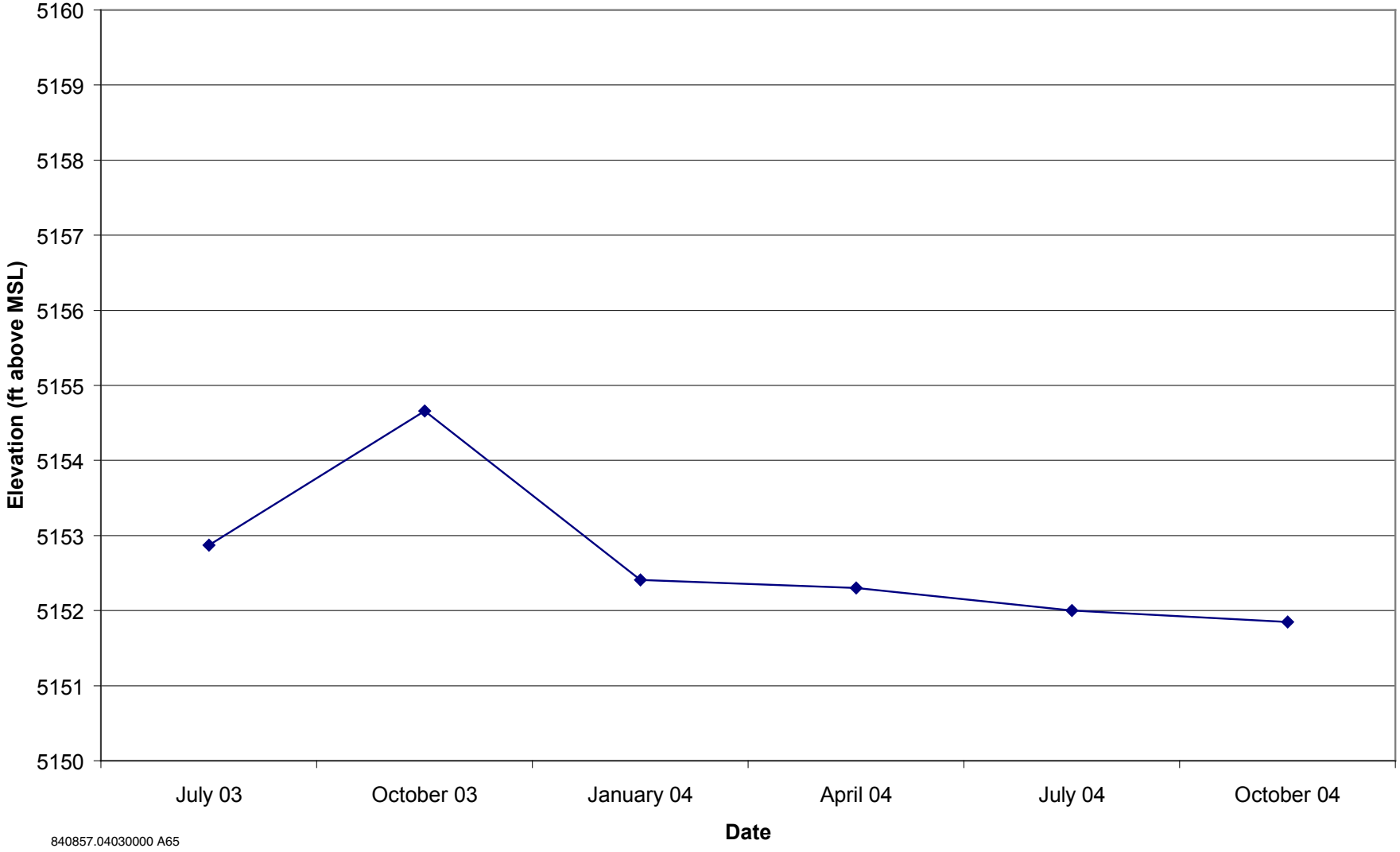

Figure D-26
KAFB-0903 Hydrograph

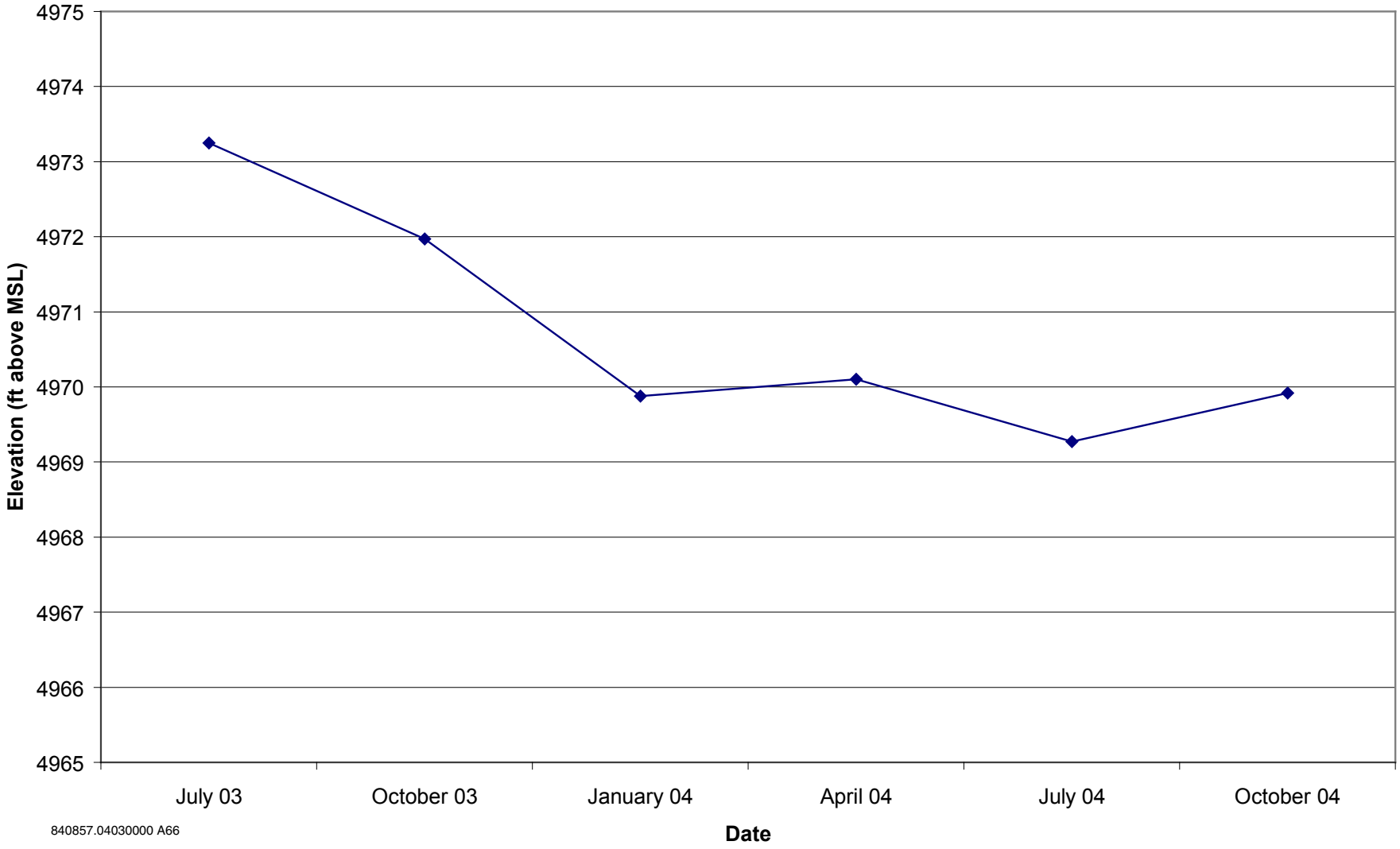

Figure D-27
KAFB-0904 Hydrograph

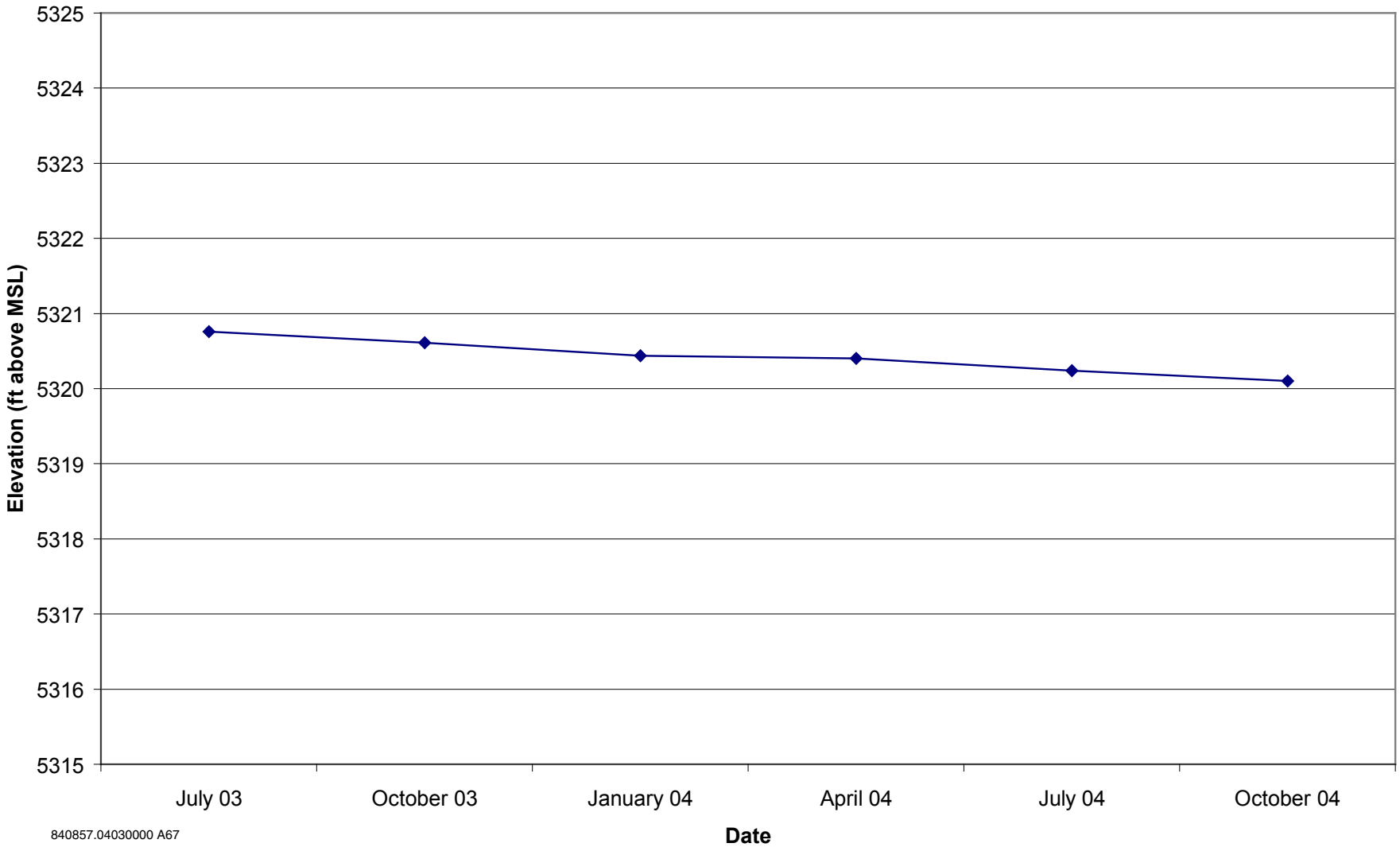

Figure D-28
KAFB-8282 Hydrograph

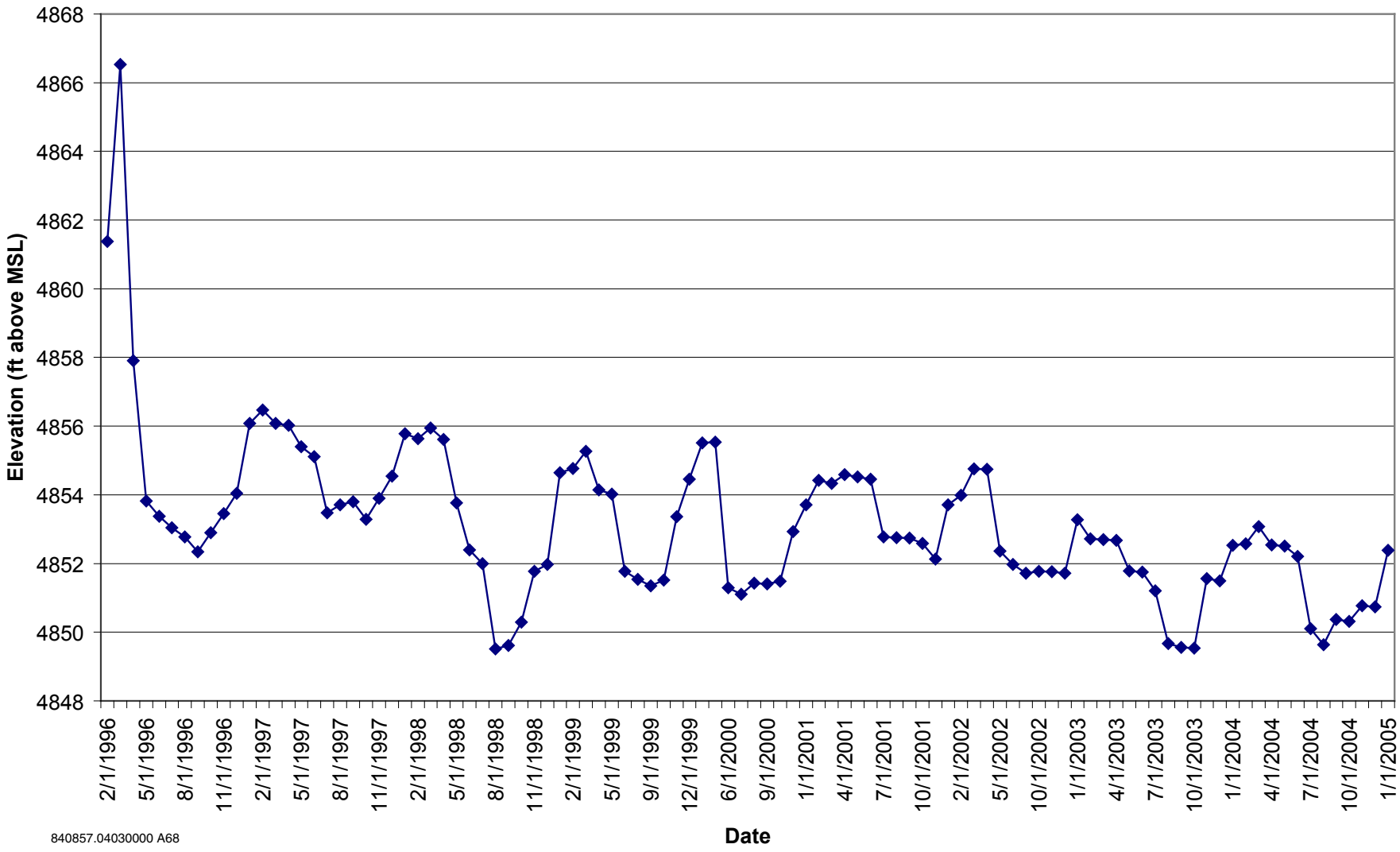

Figure D-29
PGS-2 Hydrograph (20-ft scale)

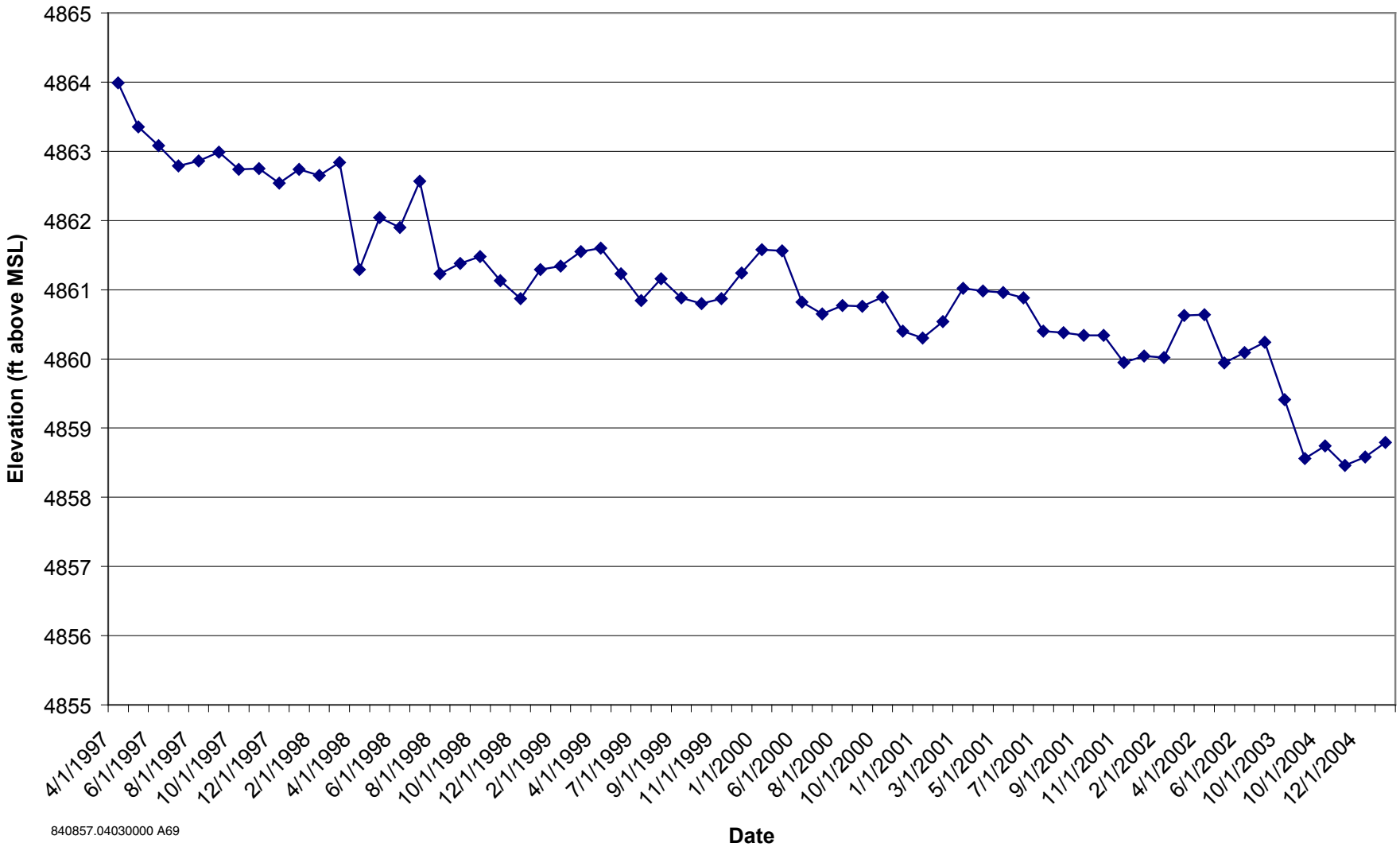

Figure D-30
TA1-W-01 Hydrograph

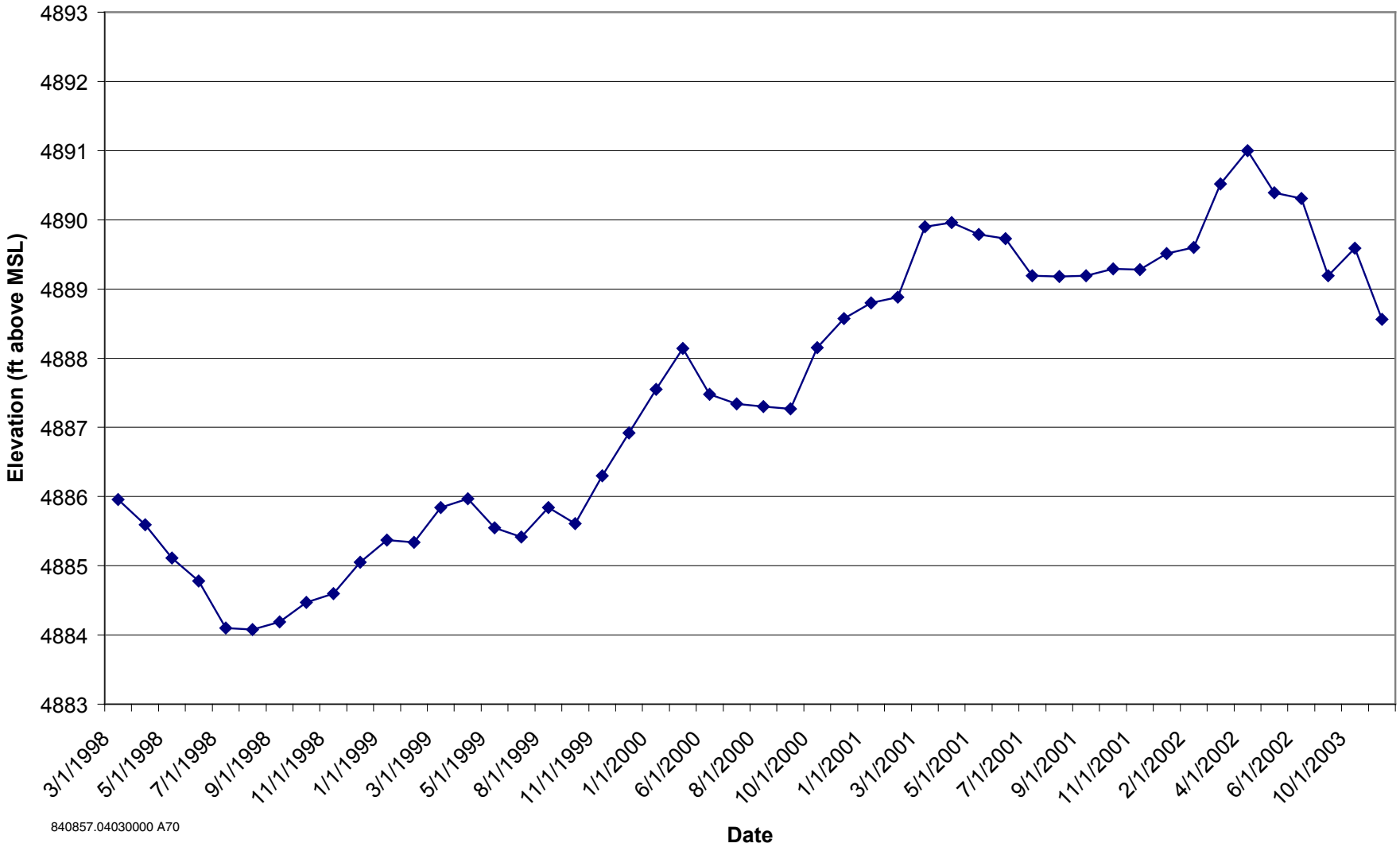

Figure D-31
TA1-W-02 Hydrograph

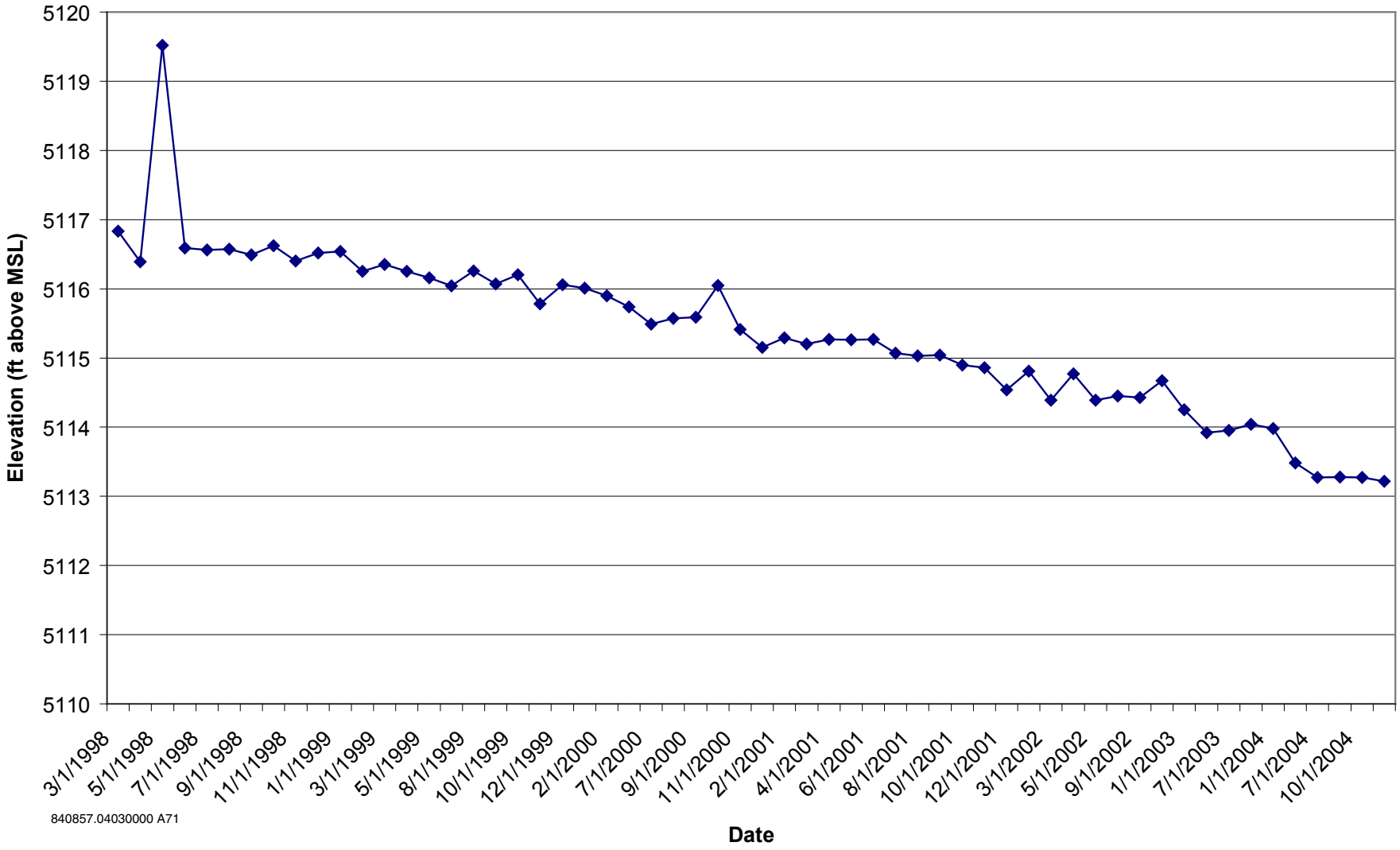

Figure D-32
TA1-W-03 Hydrograph

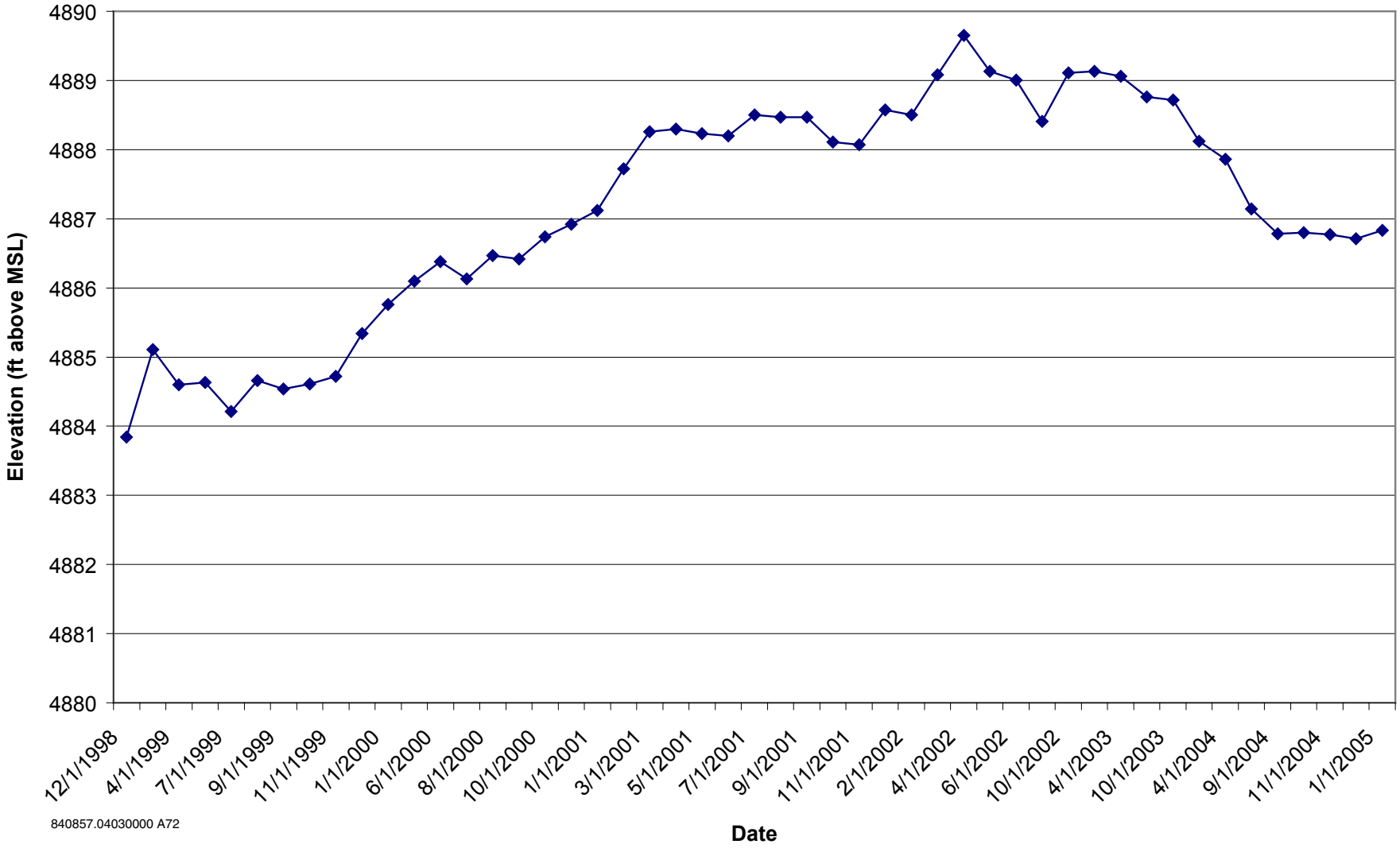

Figure D-33
TA1-W-04 Hydrograph

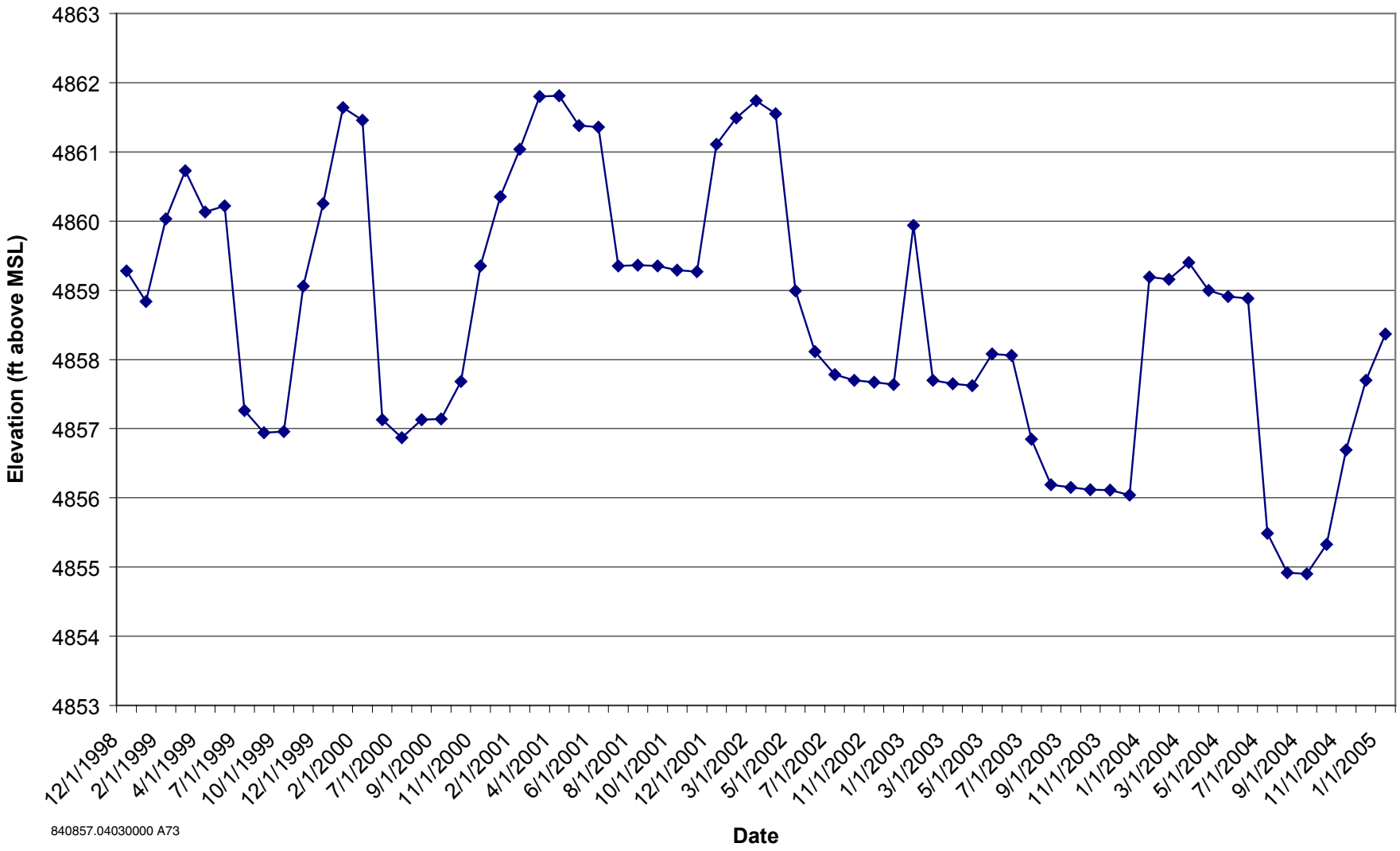

Figure D-34
TA1-W-05 Hydrograph

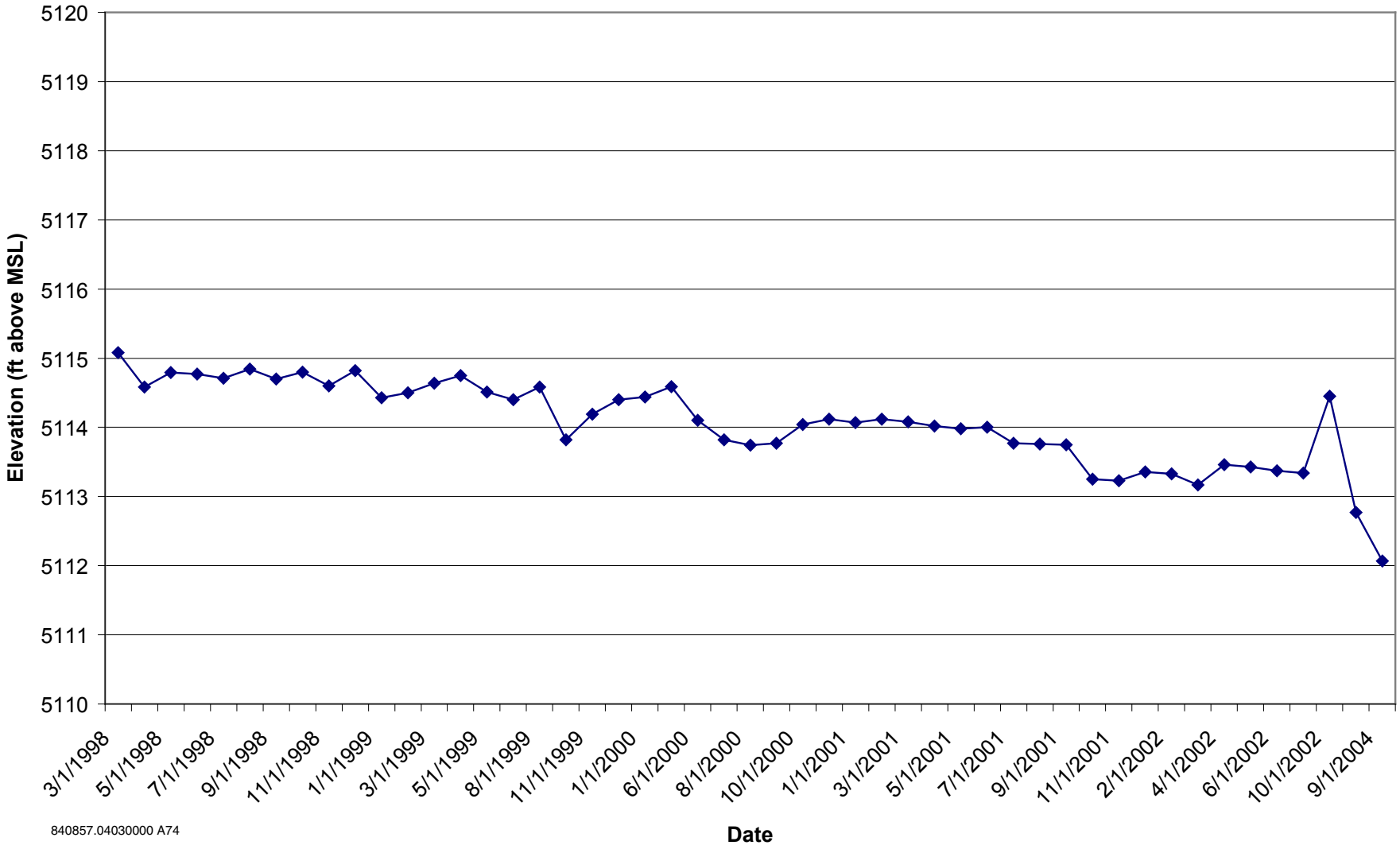

Figure D-35
TA1-W-06 Hydrograph

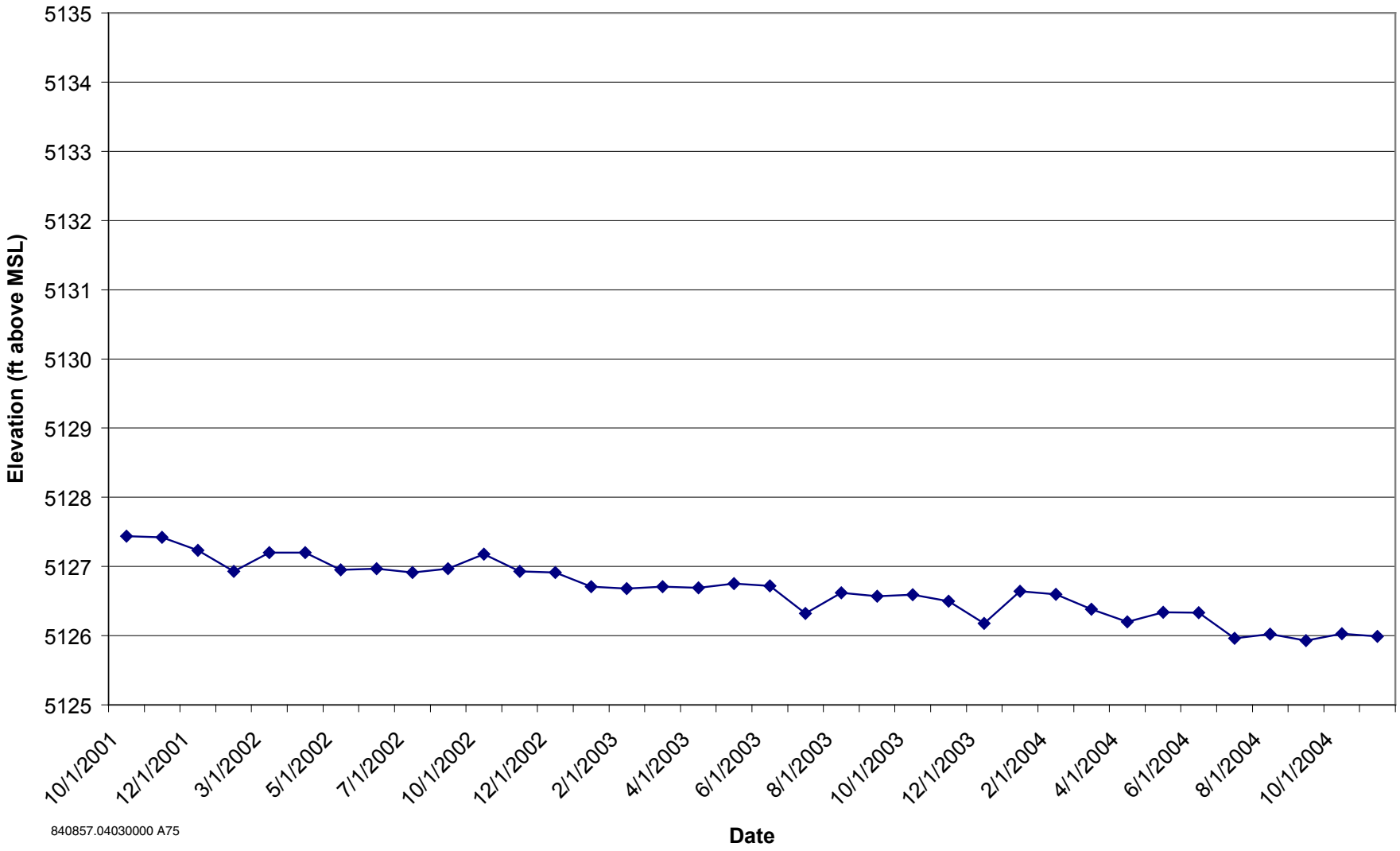

Figure D-36
TA1-W-08 Hydrograph

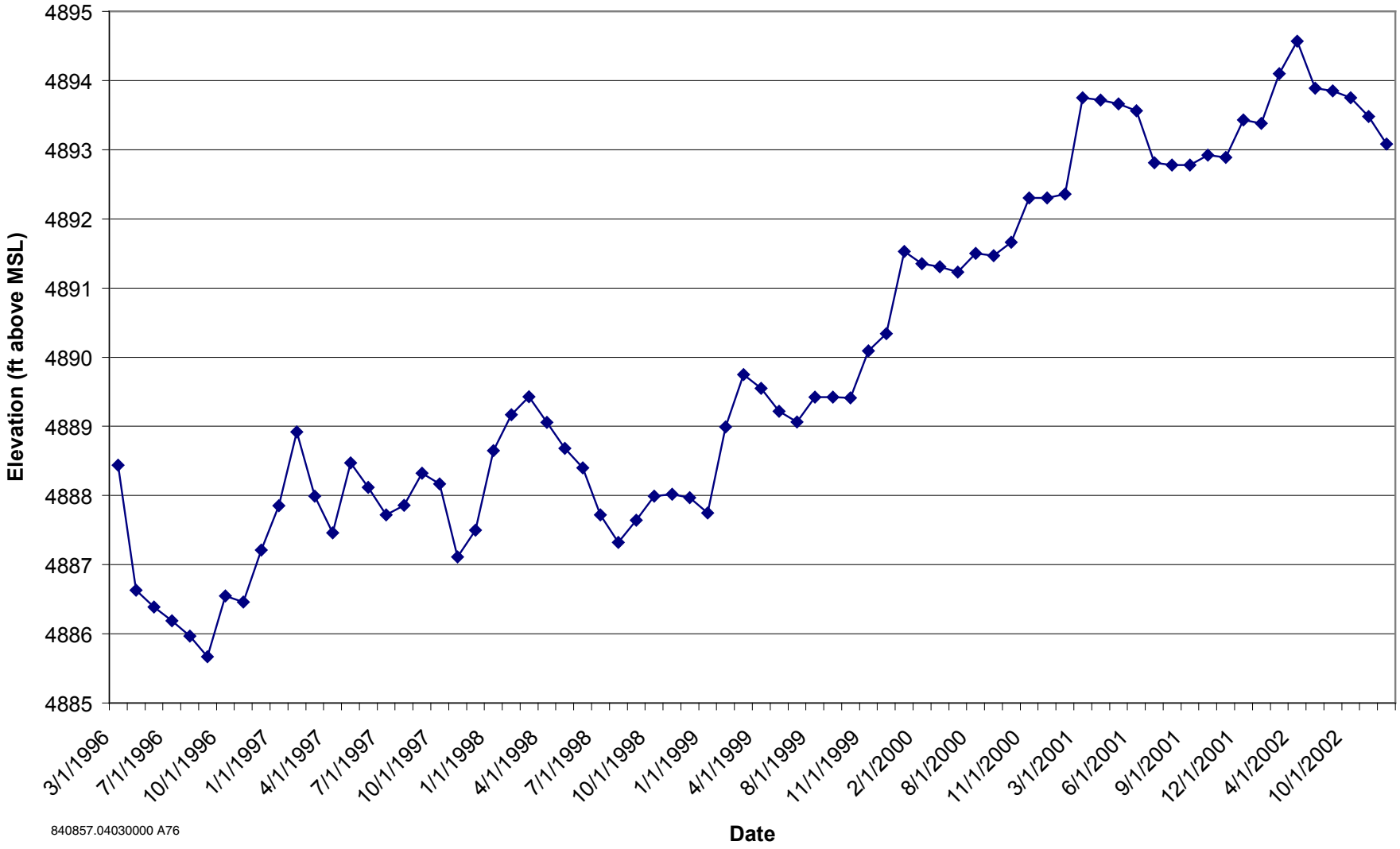

Figure D-37
TA2-NW1-595 Hydrograph

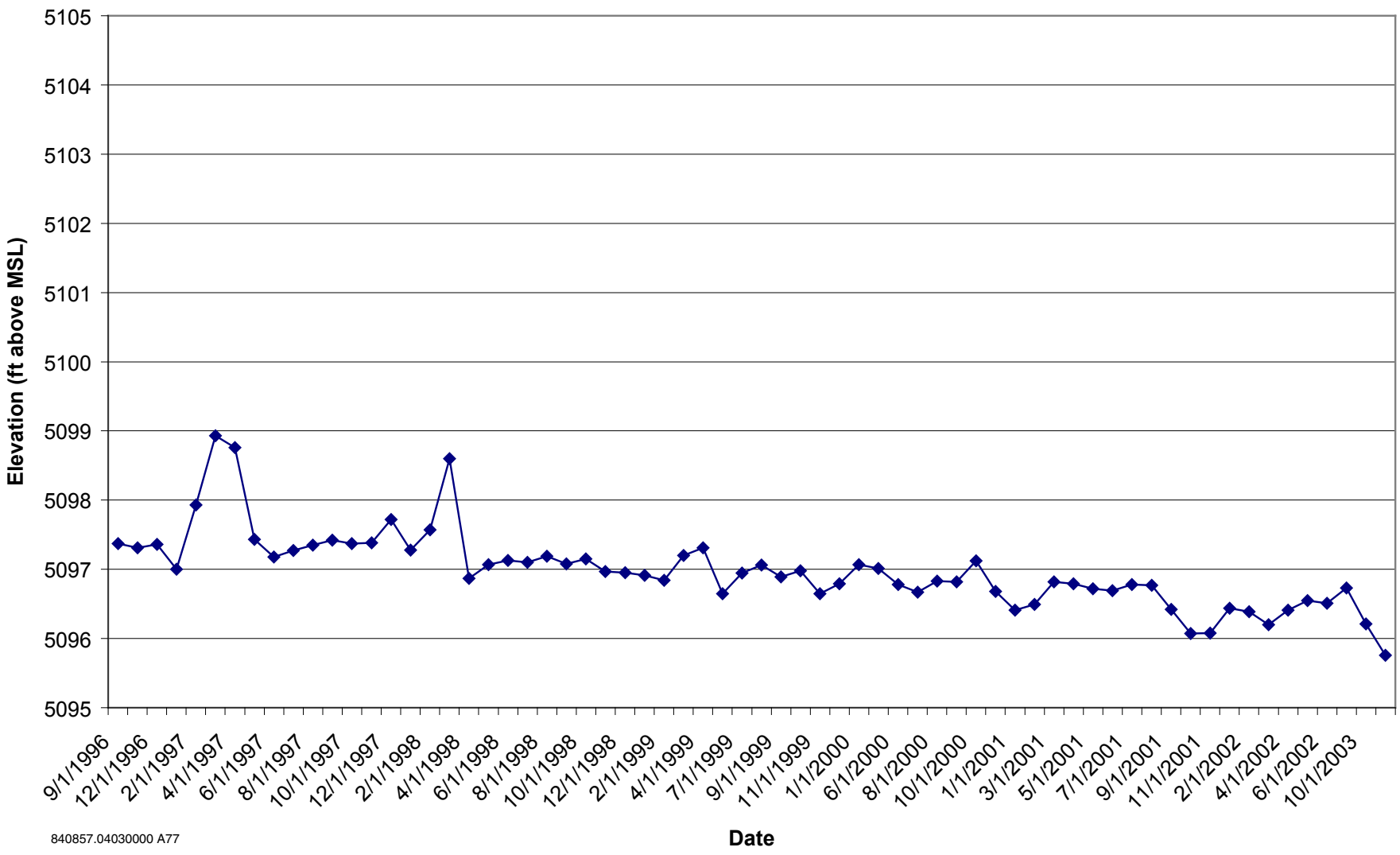

Figure D-38
TA2-SW1-320 Hydrograph

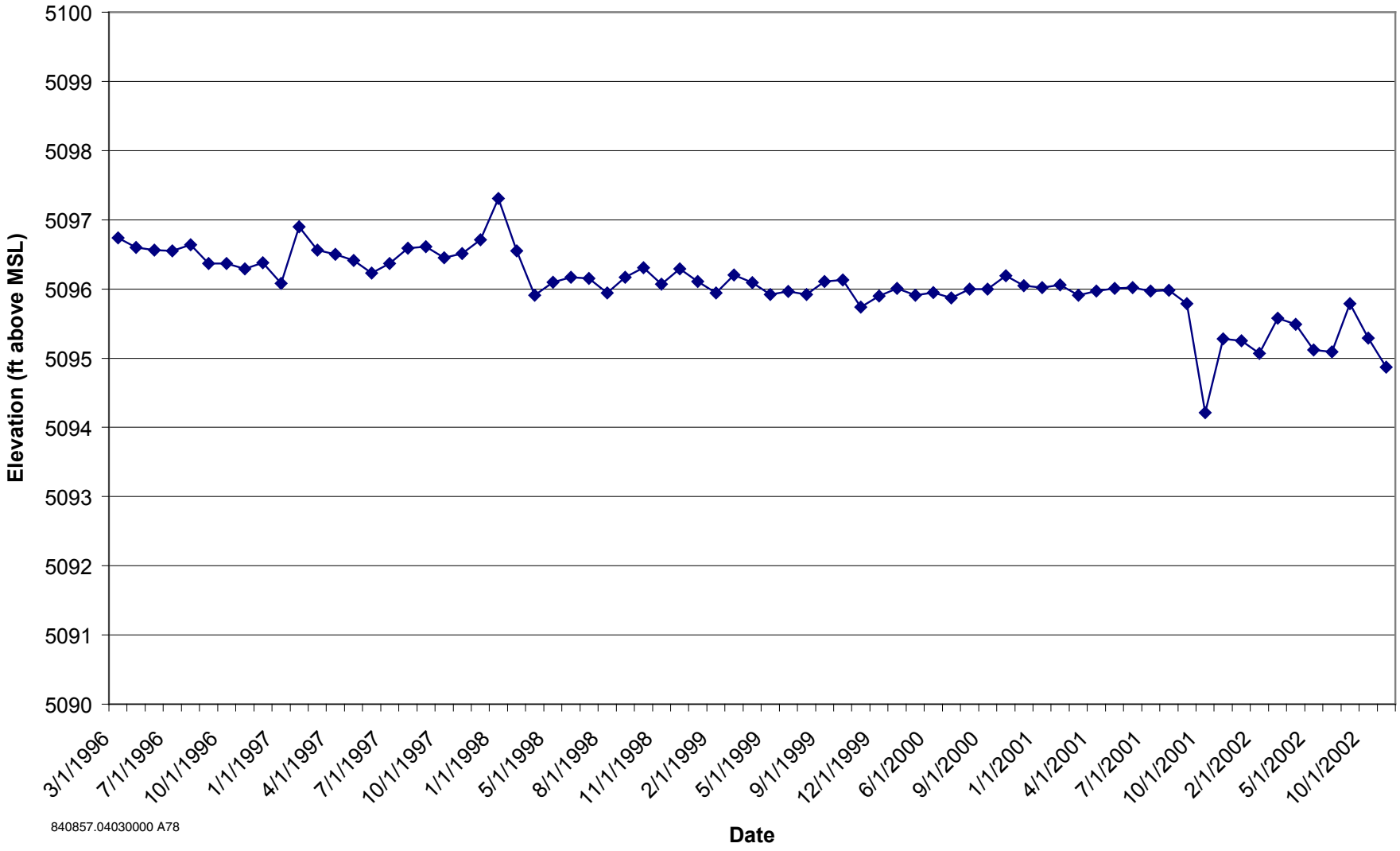

Figure D-39
TA2-W-01 Hydrograph

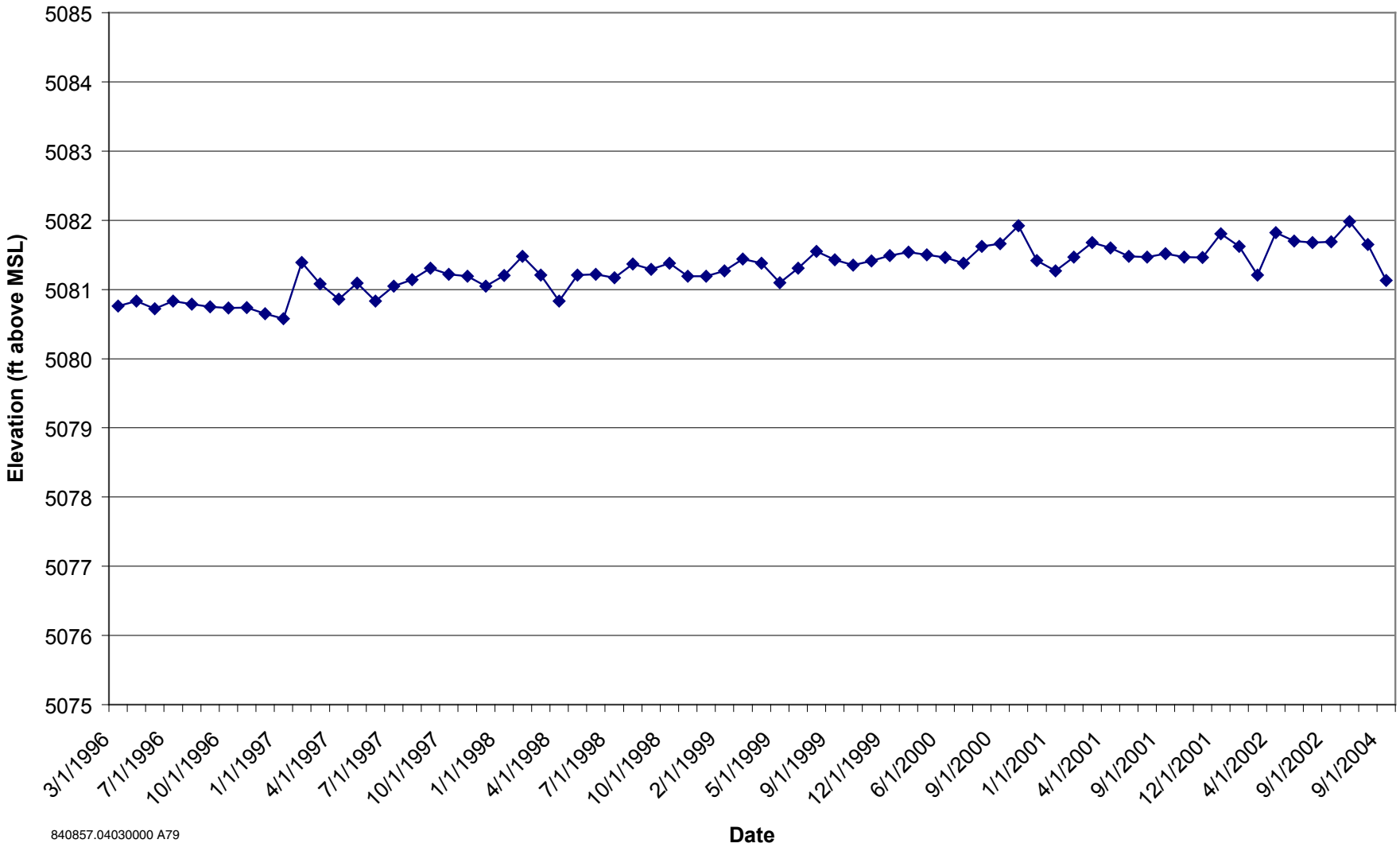

Figure D-40
TA2-W-19 Hydrograph

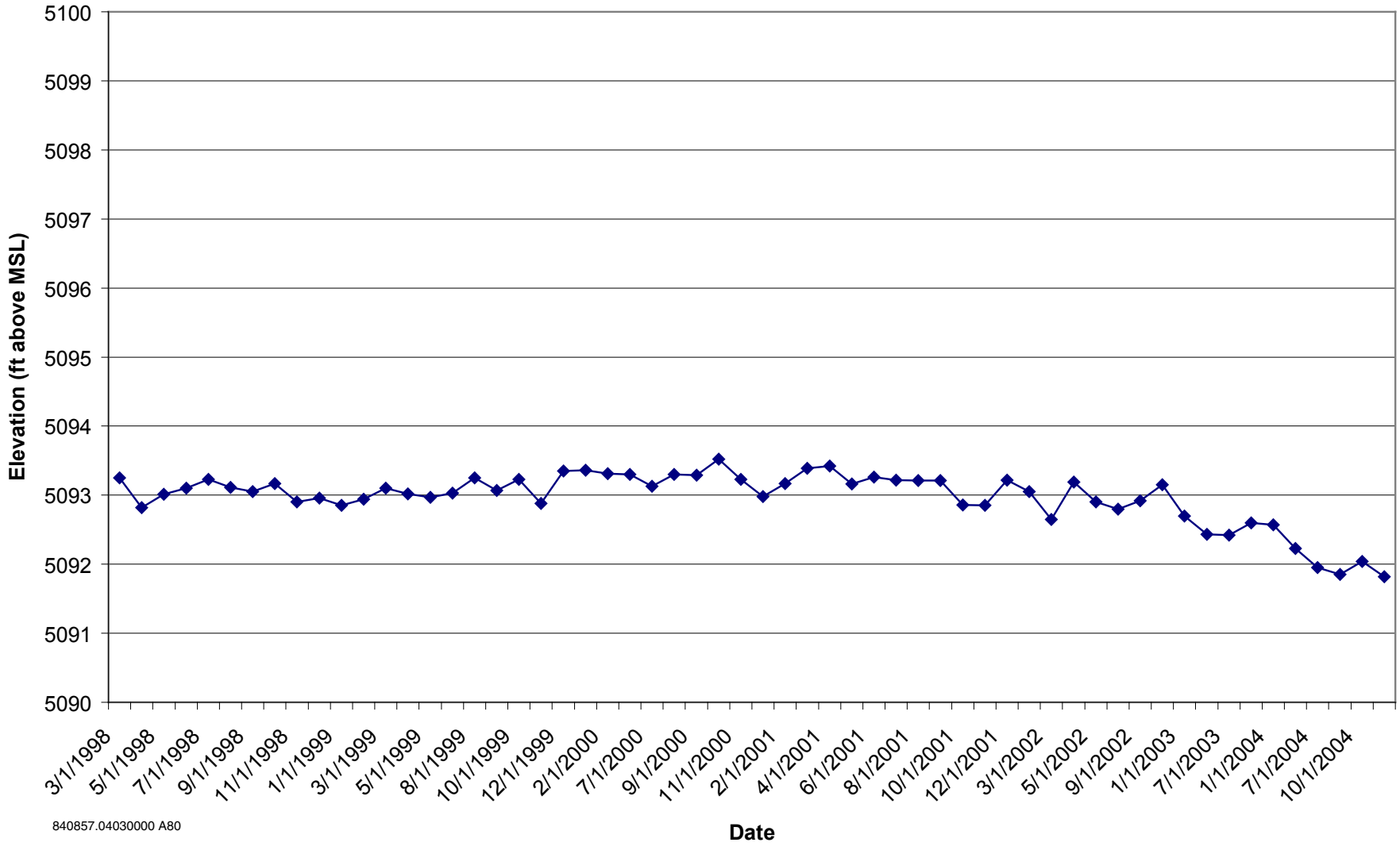

Figure D-41
TA2-W-26 Hydrograph

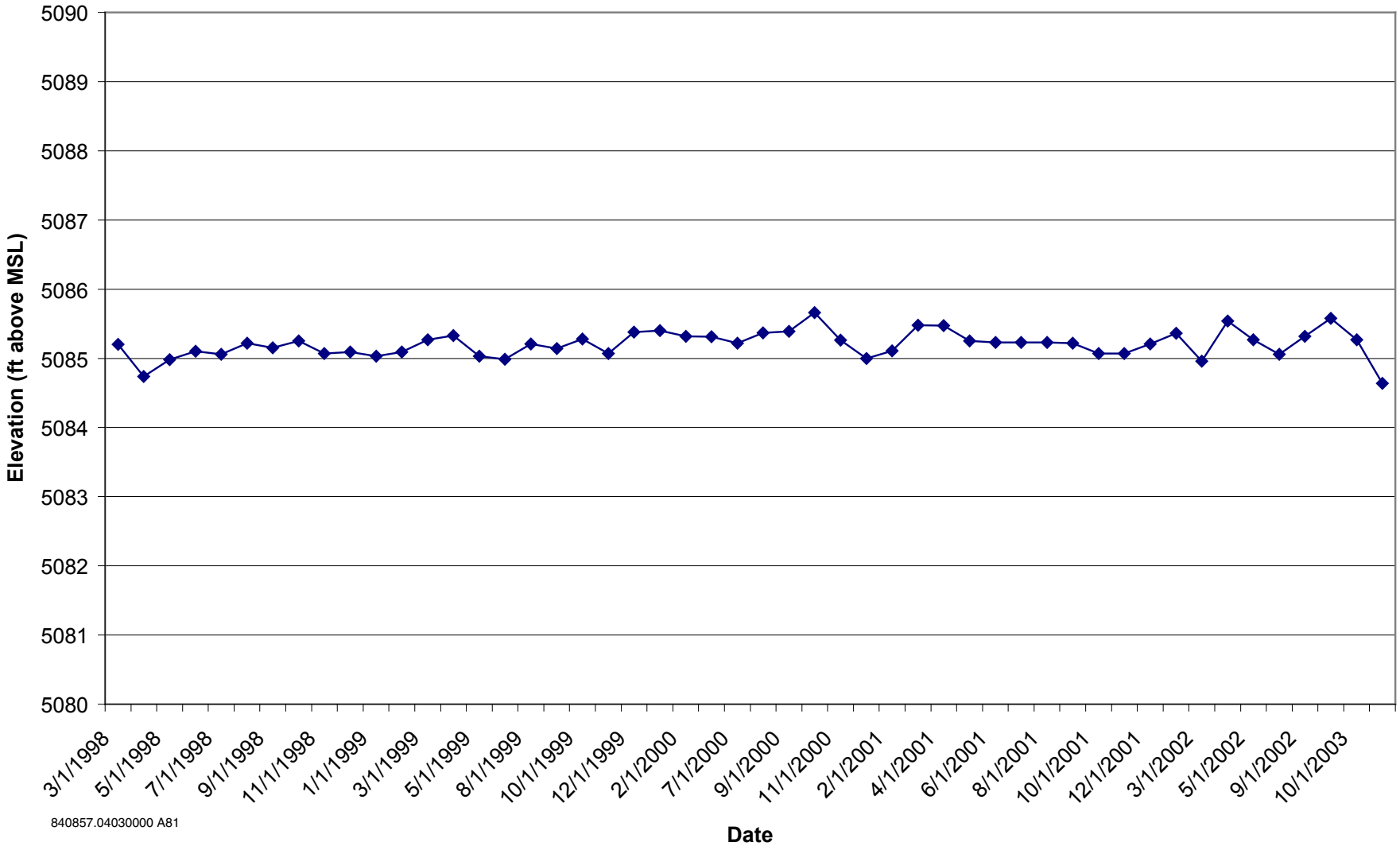

Figure D-42
TA2-W-27 Hydrograph

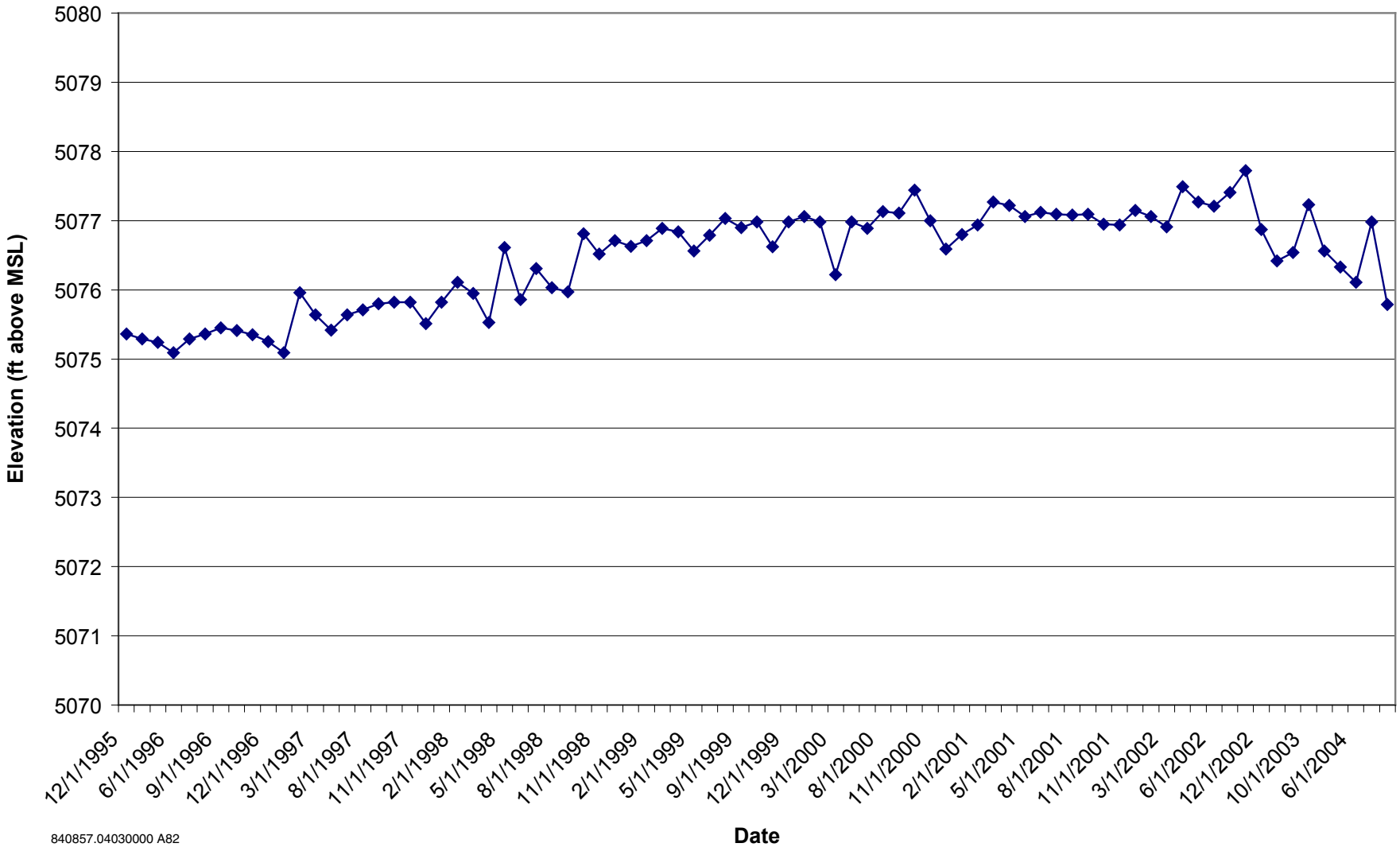

Figure D-43
TJA-2 Hydrograph

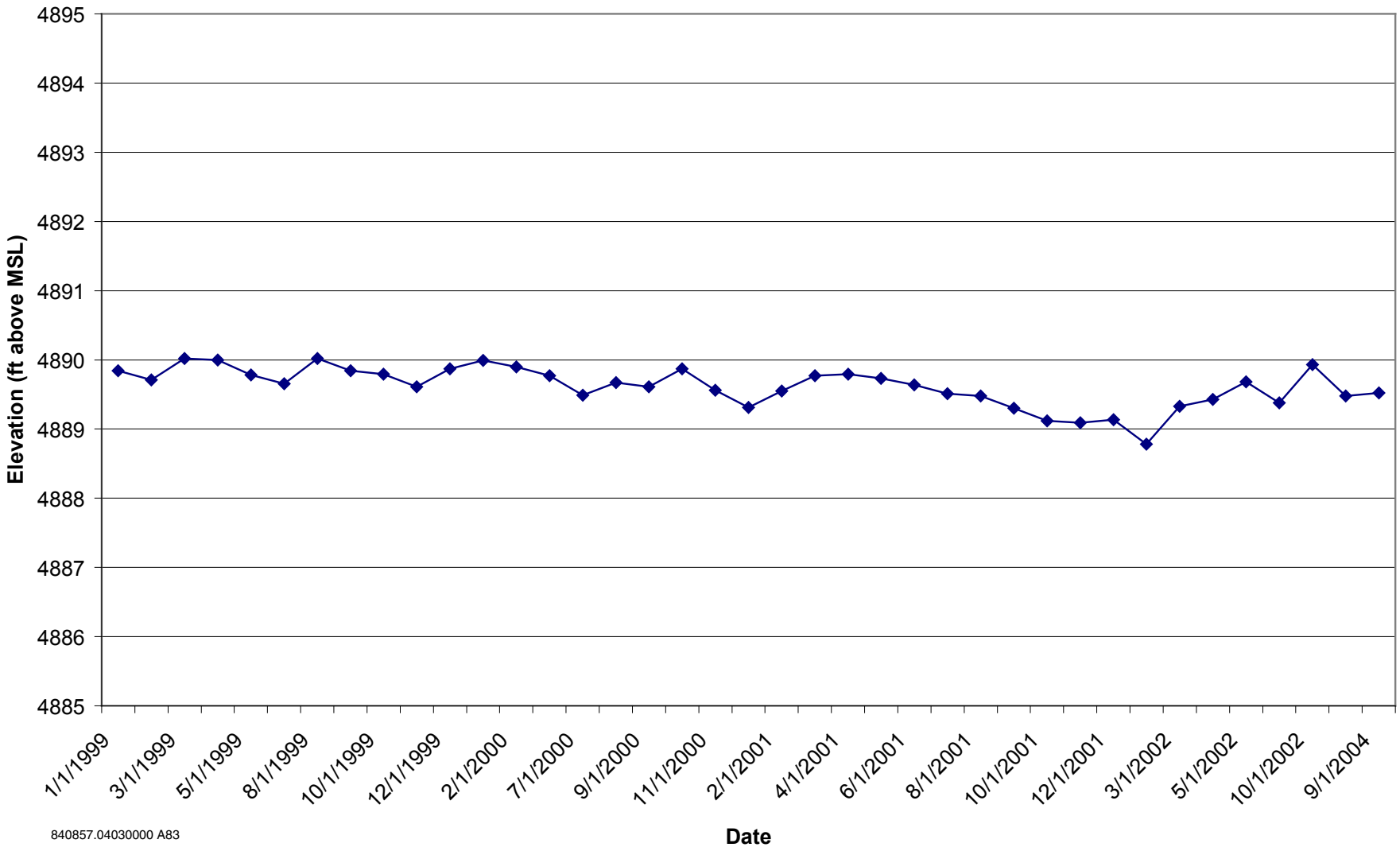

Figure D-44
TJA-3 Hydrograph

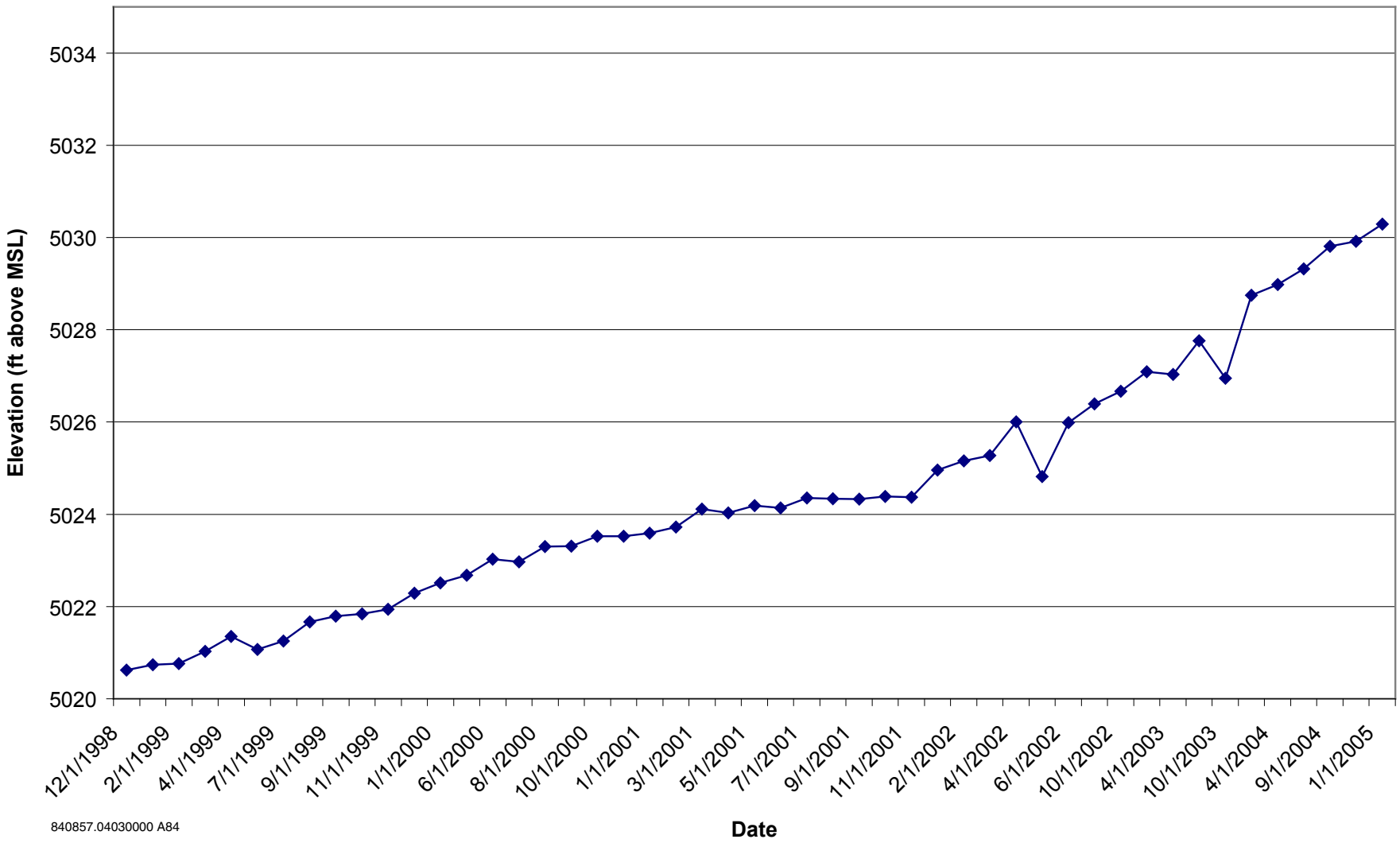

Figure D-45
TJA-4 Hydrograph (15 ft scale)

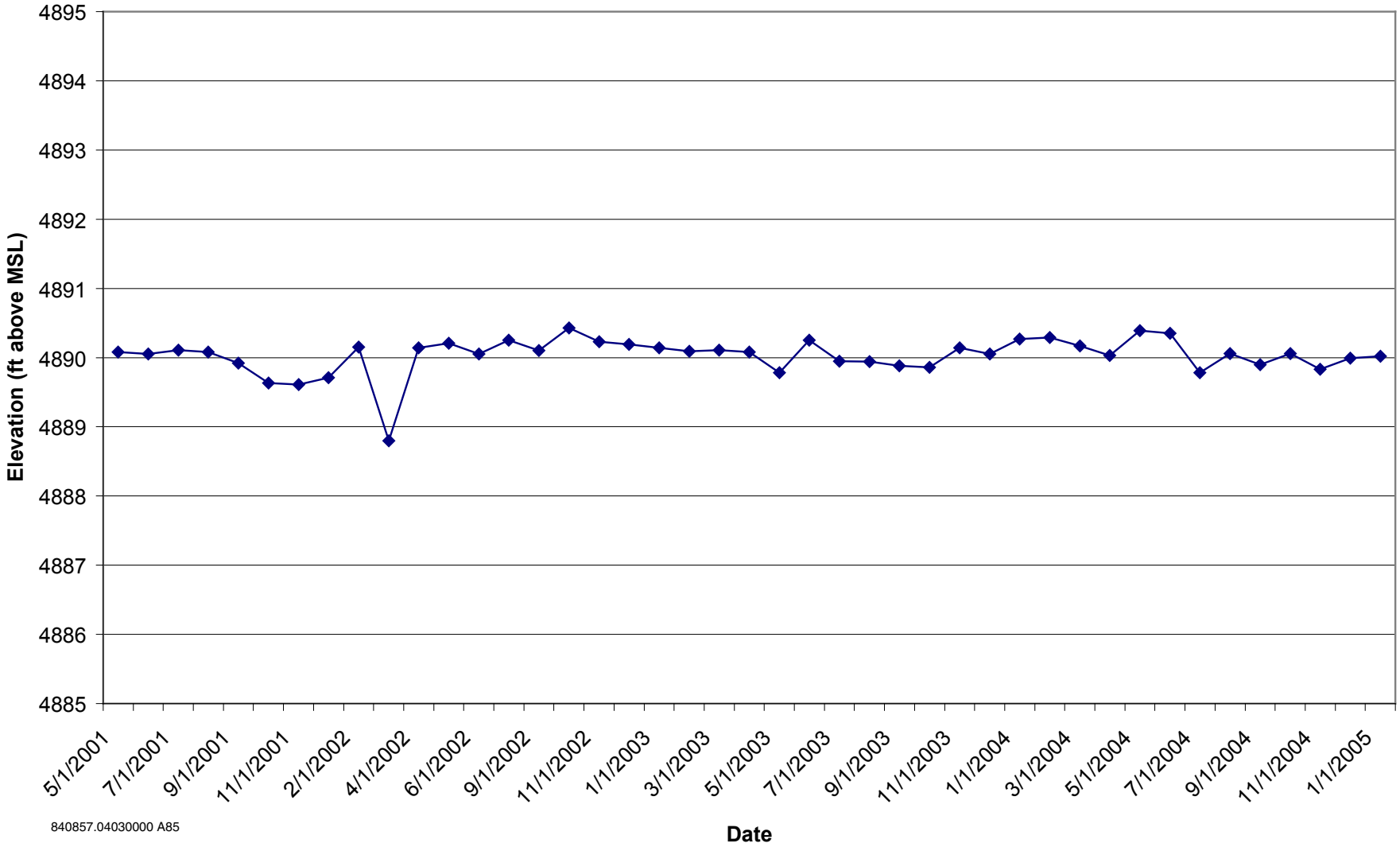

Figure D-46
TJA-6 Hydrograph

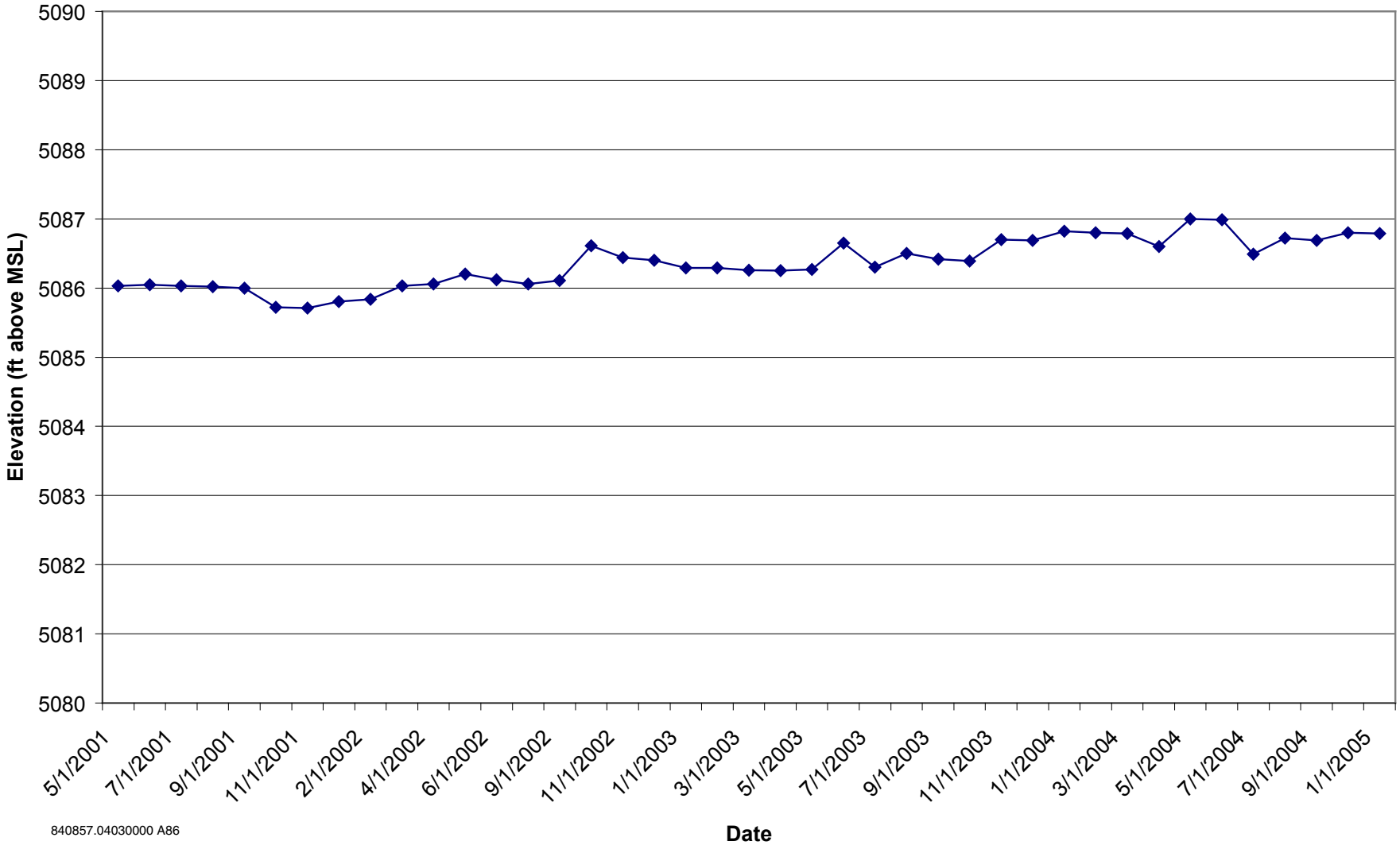

Figure D-47
TJA-7 Hydrograph

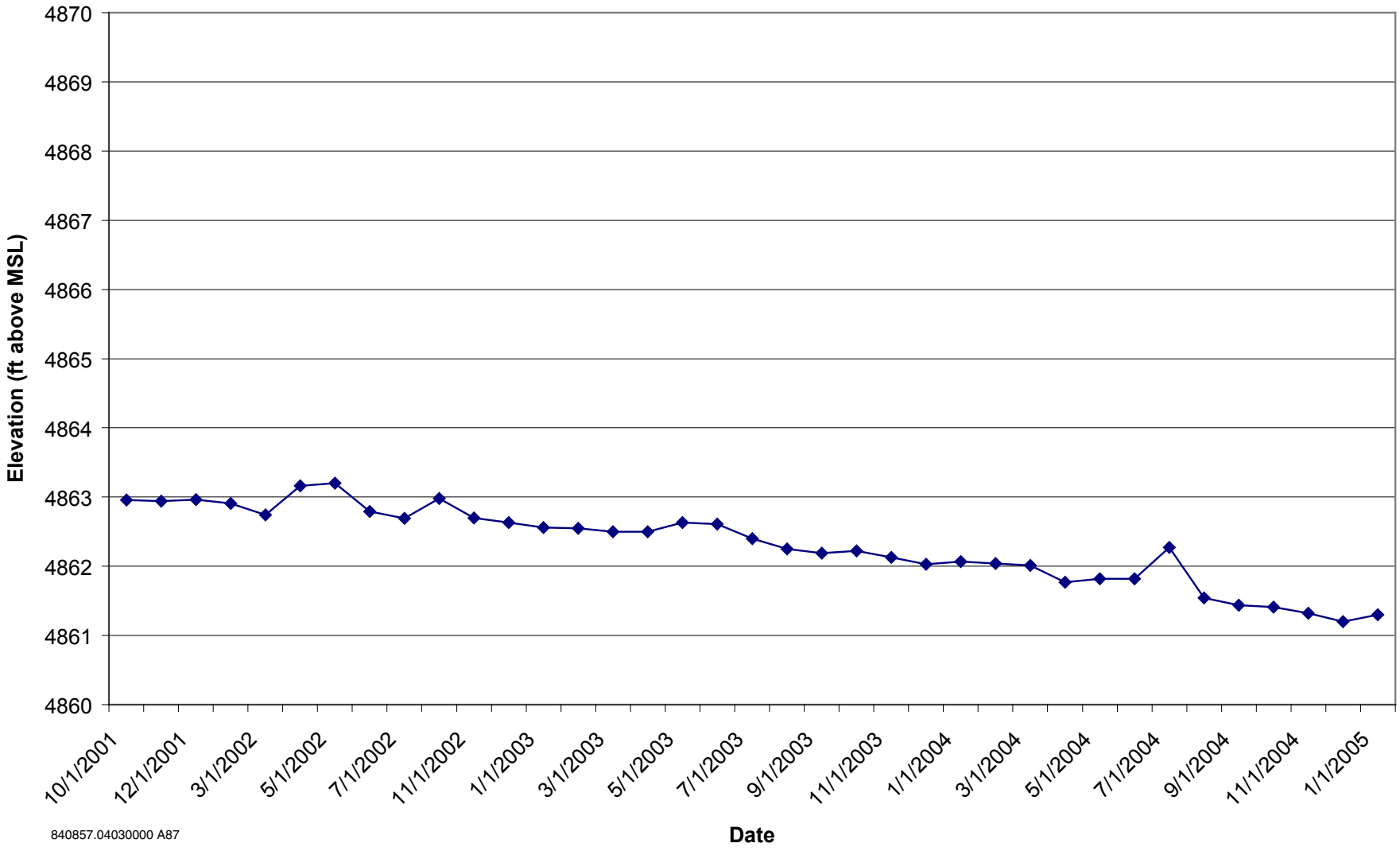

Figure D-48
WYO-3 Hydrograph

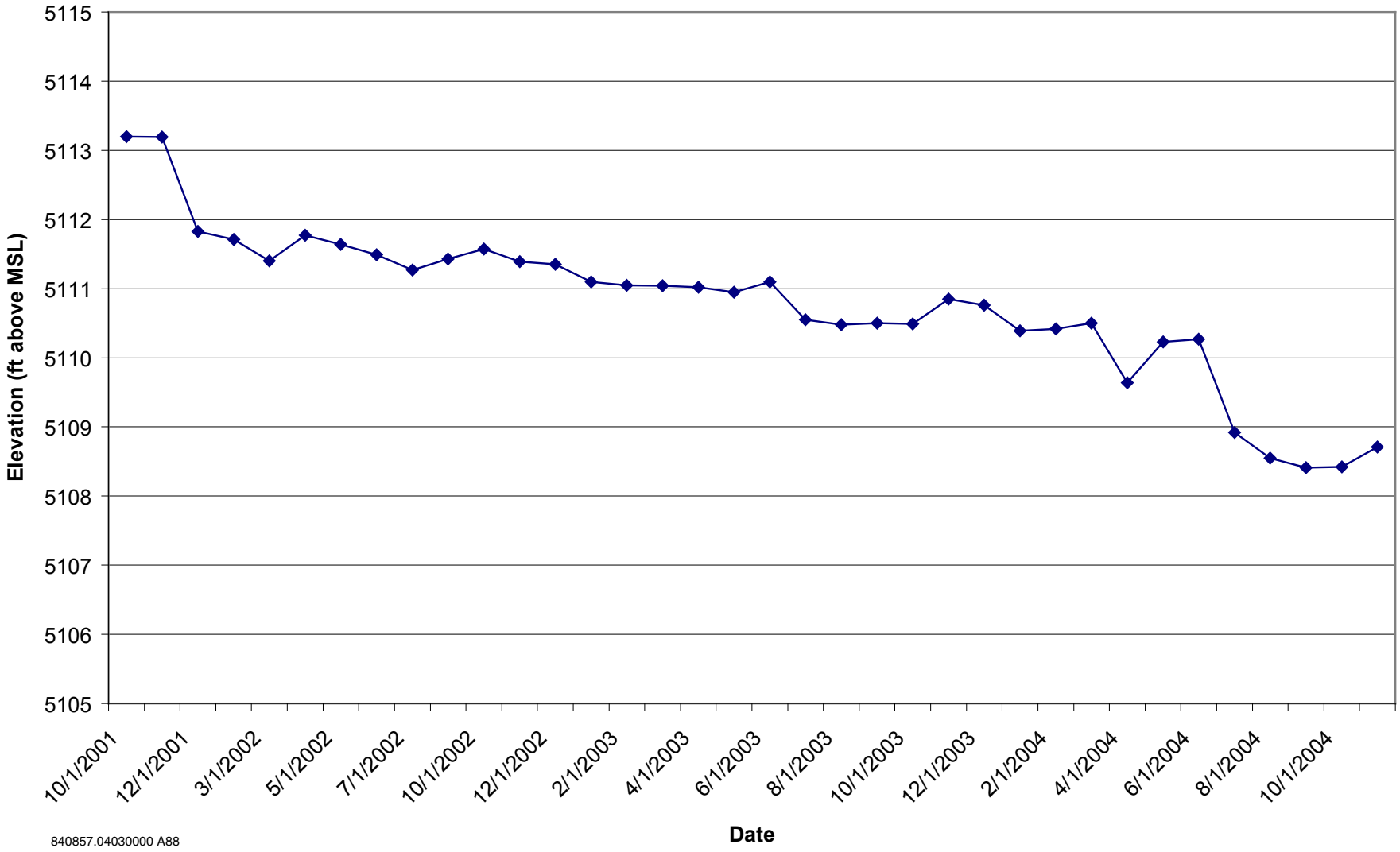

Figure D-49
WYO-4 Hydrograph

ANNEX E
Technical Memorandum—Field Report on the Slug Tests at Tijeras Arroyo Groundwater Investigation Wells (Skelly et al. 2004)

Sandia National Laboratories
Operated for the U.S. Department of Energy by
Sandia Corporation
Albuquerque, New Mexico 87185

date: 18 May 2004

to: Sue Collins, 6134 (MS1087)

from: Michael Skelly, 6133 (MS1088)
Stacy Griffith, 6133 (MS1087)
Robert Lynch, 6134 (MS1126)
Gilbert Quintana, 6134 (MS1126)

subject: Technical Memorandum--Field Report on the Slug Tests at Tijeras Arroyo Groundwater Investigation Wells

Attached is a Technical Memorandum describing the slug tests completed for groundwater wells in the TAG investigation study area. This technical memo is based on the need for determining hydraulic parameters of the two aquifers that was identified by North Wind, Inc. as a data gap during their review of the "*Tijeras Arroyo Groundwater Investigation Work Plan*" (SNL/NM 2003). The hydraulic conductivity data presented in this report will be used to refine the TAG hydrogeologic conceptual model. The refined conceptual model will be presented in the TAG Final Report estimated to be completed by September of 2005 (SNL/NM 2003).

The version of this memo submitted to the records center also includes supporting documentation as required by FOP 94-59, such as field forms, field data generated by the transducer, and data used for the curve-matching analysis.

Cc (w/expanded attachments):

ES&H and Security Records Center, 96122 (MS0651)

Technical Memorandum—Field Report
Slug Tests at Tijeras Arroyo Groundwater Investigation Wells
SNL/NM Environmental Restoration Project

Introduction/Background

This Field Report describes the activities associated with conducting slug tests at groundwater monitoring wells in the Tijeras Arroyo Groundwater (TAG) Investigation study area. The slug tests were performed to determine the hydraulic conductivity of the aquifer materials in the study area. Hydraulic conductivity (K) is the capacity of a porous medium to transmit water and is dependent on the intrinsic permeability of the native materials surrounding the well screen (SNL/NM 1994). Hydraulic conductivity is expressed as a velocity, and is often presented in units of centimeters per second (cm/sec) or feet per minute (ft/min). The equivalent hydraulic conductivities presented in the tables of this report are also presented as ft/day and ft/year, units that may be more intuitive for some readers.

The need for determining hydraulic parameters of the two aquifers was identified by North Wind, Inc. as a data gap during their review of the "*Tijeras Arroyo Groundwater Investigation Work Plan"* (SNL/NM 2003). The hydraulic conductivity data presented in this report will be used to refine the TAG hydrogeologic conceptual model. The refined conceptual model will be presented in the TAG Final Report estimated to be completed by September of 2005 (SNL/NM 2003).

The objective of this field investigation was to determine the hydraulic properties of the regional aquifer and perched groundwater system in the TAG study area. In general, the hydraulic properties of an aquifer can be determined either by conducting pumping tests or slug tests. Pumping tests were not considered for the TAG study area because of logistical considerations, such as the need to contain and dispose of high volumes of potentially contaminated groundwater. Slug tests induce stress on an aquifer by instantaneously injecting or removing a discrete volume of material into the well and measuring changes in the water level over time as the aquifer returns to equilibrium.

For this study, the groundwater monitoring wells tested are located in the vicinity of Technical Area (TA)-I, II, and IV; very few wells are actually within the secured portion of the technical

area boundaries. Some of the wells are located within Solid Waste Management Unit (SWMU) boundaries. Ten, geographically diverse wells (five regional aquifer and five perched aquifer wells) were investigated during this field effort (Figure 1; Table 1).

Table 1

Monitoring Wells Selected for Slug Testing in the TAG Study Area.

Well ID	Completion Interval	Year Installed	Depth to Water[a] (ft btoc)	Date(s) Tested
TA1-W-01	Regional Aquifer	1997	541.88	14 Jan 04
TA1-W-05	Regional Aquifer	1998	574.16	12 Jan 04
TA1-W-07	Perched System	1998	281.21	15 Jan 04 – 16 Jan04
TA1-W-08	Perched System	2001	308.23	23 Dec 03
TA2-W-25	Regional Aquifer	1997	473.62	13 Jan 04
TA2-W-26	Perched System	1998	280.69	22 Dec 03
TJA-3	Regional Aquifer	1998	498.53	19 Dec 04
TJA-7	Perched System	2001	302.37	18 Dec 03 – 19 Dec 03
WYO-3	Regional Aquifer	2001	527.61	17 Dec 03
WYO-4	Perched System	2001	279.17	15 Dec 03 – 17 Dec 03

[a] = Groundwater depths/elevations measured on the date shown in the right hand column prior initiating the slug test.
btoc = below top of casing.
ft = feet.
ID = identification.

Field Methods

The slug tests were completed sporadically between December 15, 2003 and January 16, 2004. This intermittent schedule was due to prioritization of other ER related field activities for the crew conducting the slug tests. The ER field team consisted of:

Michael Skelly	Assistant Task Leader/Site Safety Officer
Stacy Griffith	Assistant Task Leader
Robert Lynch	Field Technician/Site Safety Officer Designee
Gilbert Quintana	Field Technician

Equipment used to conduct the slug tests included support vehicles and a flat-bed truck for hauling the required equipment, and also used as the platform for injecting and withdrawing the slug. The slug was raised and lowered by means of a large (~4 ft diameter) motorized spool with a graduated ¼ inch cable. The slug is a solid aluminum rod that measured 3 inches wide by 72 inches long with a total displacement of approximately 509 in^3. A portable generator mounted on the flat-bed truck was used to operate the spool, lap-top computer, and other accessories. The slug and any submerged cable were decontaminated at the ER Field Office or at the well head before injecting the slug into the well.

The Field Operating Procedure (FOP) 94-59 (SNL/NM 1994) was used for all investigation activities at this site. The following steps were used at each well:

- The static water level was measured and recorded.
- The transducer was lowered into the well to a depth of approximately 10 ft below the static water level and allowed to stabilize. The transducer was a Solinst™ electronic pressure transducer (Model RL 002051) with an M70 probe and ReelPC™ data logger software.
- The data logger was started and recorded approximately 5 minutes of static pressure readings with the data logger.
- The sampling rate was set up to collect data logarithmically, with frequent measurements at the start of the test and less frequent measurements later in the test. The logarithmic mode was used for slug tests because the water level changes rapidly in the first few seconds of the test and then slower as the test continues.
- The slug was lowered into the water-column in the well as quickly and smoothly as possible to raise the water level ("injection") and the water level was allowed to stabilize. Water-level changes induced in the wells were measured to $\pm$ 0.01 ft by the transducer.
- The water level and time measurements were continuously recorded until the water level was within 0.1 foot of the static water level, or until recovery was 95 %. The data logger was stopped and the water level allowed to re-stabilize, if it was not already.
- The slug was removed to lower the water level ("withdrawal") and the water level was allowed to stabilize. Again, the transducer measured water-level changes induced in the wells.
- The slug was lowered and raised at a consistent rate of 0.72 seconds per foot, which

equates to completely submerging or exposing the entire slug in 4.3 seconds. [It should be noted that this injection rate might be a limitation in this procedure. The analysis assumes that an instantaneous change in volume is created in the well. It could be argued that four seconds to inject/withdraw is not instantaneous enough, especially in higher conductivity formations.]

- In order to document the reproducibility of the test, the process was repeated such that slug was injected twice and withdrawn twice for a total of four data sets per well.

For all slug test activities Level D personal protective equipment was required. Daily tailgate safety meetings were held by the site health and safety officer (or designee) and documented on the Tailgate Safety Meeting Form. All equipment and personnel followed appropriate decontamination procedures per FOP 94-26. Less than 1 gallon of decontamination water per day was generated by slug test activities and discharged to the land surface.

Data Analysis

After completion of the field portion of the slug test, the following steps were used to prepare each data set for analysis:

- Electronic information in the transducer was directly transferred to a laptop computer.
- Data logger recordings were imported from a text file into a spreadsheet.
- In the spreadsheet, the time-of-day readings were converted to elapsed time, and changes in water level relative to the transducer were converted to depth to water measurements.
- Time-versus-water level curves were generated and inspected.
- Data was culled for extraneous data points (such as too many data points after water levels have stabilized).
- Selected data was imported into the AquaTest™ Software and analytical solutions were generated using the Hvorslev and Bouwer-Rice methods (described below).
- The analytical solutions were compiled (Table 2).
- Records generated from this procedure were submitted to the ES&H and Security Record Center.

The data gathered during the slug tests was analyzed using AquaTest™ Software developed by Waterloo Hydrogeologic, Inc. This software employs analytical methods developed by M.J. Hvorslev (1951) and Bouwer-Rice (1976) to produce graphical solutions of hydraulic

conductivity. The use of the software followed the manufacturer's operating manuals. The result of the analysis was the determination of the hydraulic conductivity for each of the tests. The hydraulic conductivity values were then compiled into Table 2.

Table 2
Summary of Hydraulic Conductivity Values
for TAG Monitoring Wells Tested December 2003 – January 2004

Well ID	Aquifer	Test ID	Analysis Method	Hydraulic Conductivity (K)			
				(ft/min)	(ft/day)	(ft/year)	(cm/sec)
TA1-W-01	Regional	Withdrawal 1	Hvorslev	2.15E-03	3.09E+00	1128	1.09E-03
			Bouwer-Rice	1.99E-03	2.86E+00	1044	1.01E-03
		Withdrawal 2	Hvorslev	2.38E-03	3.42E+00	1248	1.21E-03
			Bouwer-Rice	2.20E-03	3.17E+00	1157	1.12E-03
		Average		**2.18E-03**	**3.14E+00**	**1144**	**1.11E-03**
TA1-W-05	Regional	Withdrawal 1	Hvorslev	5.97E-04	8.59E-01	314	3.03E-04
			Bouwer-Rice	5.34E-04	7.69E-01	281	2.71E-04
		Withdrawal 2	Hvorslev	2.06E-03	2.97E+00	1084	1.05E-03
			Bouwer-Rice	1.85E-03	2.66E+00	971	9.38E-04
		Injection 1	Hvorslev	1.03E-02	1.48E+01	5402	5.22E-03
			Bouwer-Rice	9.24E-03	1.33E+01	4855	4.69E-03
		Injection 2	Hvorslev	1.06E-03	1.52E+00	555	5.36E-04
			Bouwer-Rice	9.44E-04	1.36E+00	496	4.80E-04
		Average		**5.38E-03**	**7.75E+00**	**2827**	**2.73E-03**
TA1-W-07	Perched	Withdrawal 1	Hvorslev	1.53E-04	2.21E-01	81	7.80E-05
			Bouwer-Rice	9.79E-05	1.41E-01	51	4.97E-05
		Withdrawal 2	Hvorslev	4.90E-04	7.05E-01	257	2.49E-04
			Bouwer-Rice	3.14E-04	4.52E-01	165	1.59E-04
		Average		**2.64E-04**	**3.80E-01**	**139**	**1.34E-04**
TA1-W-08	Perched	Withdrawal 1	Hvorslev	2.39E-03	3.44E+00	1256	1.21E-03
			Bouwer-Rice*	8.54E-02	1.23E+02	44895	4.34E-02
		Withdrawal 2	Hvorslev	2.13E-03	3.07E+00	1121	1.08E-03
			Bouwer-Rice	1.57E-03	2.26E+00	825	7.97E-04
		Average		**2.03E-03**	**2.92E+00**	**1067**	**1.03E-03**
TA2-W-25	Regional	Withdrawal 1	Hvorslev	9.51E-04	1.37E+00	500	4.83E-04
			Bouwer-Rice	8.33E-04	1.20E+00	438	4.23E-04
		Withdrawal 2	Hvorslev	1.51E-03	2.17E+00	792	7.66E-04
			Bouwer-Rice	1.33E-03	1.91E+00	697	6.74E-04
		Average		**1.15E-03**	**1.66E+00**	**607**	**5.86E-04**
TA2-W-26	Perched	Withdrawal 1	Hvorslev	2.27E-03	3.27E+00	1194	1.15E-03
			Bouwer-Rice	1.67E-03	2.41E+00	880	8.50E-04
		Withdrawal 2	Hvorslev	2.62E-03	3.77E+00	1376	1.33E-03
			Bouwer-Rice	1.93E-03	2.78E+00	1015	9.81E-04
		Average		**2.12E-03**	**3.06E+00**	**1116**	**1.08E-03**

Table 2 (Concluded)
Summary of Hydraulic Conductivity Values
for TAG Monitoring Wells Tested December 2003 – January 2004

Well ID	Aquifer	Test ID	Analysis Method	Hydraulic Conductivity (K)			
				(ft/min)	(ft/day)	(ft/year)	(cm/sec)
TJA-3	Regional	Withdrawal 1	Hvorslev	4.34E-03	6.25E+00	2281	2.20E-03
			Bouwer-Rice	3.33E-03	4.80E+00	1752	1.69E-03
		Withdrawal 2	Hvorslev	2.78E-03	4.00E+00	1460	1.41E-03
			Bouwer-Rice	2.14E-03	3.08E+00	1124	1.09E-03
		Average		**3.15E-03**	**4.53E+00**	**1654**	**1.60E-03**
TJA-7	Perched	Withdrawal 1	Hvorslev	1.17E-04	1.69E-01	62	5.96E-05
			Bouwer-Rice	7.85E-05	1.13E-01	41	3.99E-05
		Withdrawal 2	Hvorslev	2.77E-03	3.99E+00	1456	1.41E-03
			Bouwer-Rice	1.84E-03	2.65E+00	967	9.35E-04
		Average		**1.20E-03**	**1.73E+00**	**632**	**6.10E-04**
WYO-3	Regional	Withdrawal 1	Hvorslev	1.38E-03	1.98E+00	723	6.98E-04
			Bouwer-Rice	9.79E-04	1.41E+00	515	4.97E-04
		Withdrawal 2	Hvorslev	1.50E-03	2.16E+00	788	7.62E-04
			Bouwer-Rice	1.06E-03	1.53E+00	558	5.40E-04
		Average		**1.23E-03**	**1.77E+00**	**646**	**6.24E-04**
WYO-4	Perched	Withdrawal 1	Hvorslev	4.01E-05	5.77E-02	21	2.04E-05
			Bouwer-Rice	2.96E-05	4.26E-02	16	1.50E-05
		Withdrawal 2	Hvorslev	4.49E-05	6.47E-02	24	2.28E-05
			Bouwer-Rice	3.32E-05	4.78E-02	17	1.69E-05
		Average		**3.69E-05**	**5.32E-02**	**19**	**1.88E-05**
Average	**Regional**			**2.62E-03**	**3.77E+00**	**1376**	**1.33E-03**
Average	**Perched**			**1.13E-03**	**1.63E+00**	**595**	**5.75E-04**

Notes:
* Suspicious analytical solution, value not included in the calculation of averages.
Hydraulic conductivity calculated with the Hvorslev analysis method using a solid slug.
Cm/sec = Centimeters per second.
ft/min = Foot (feet) per minute.
K = Hydraulic conductivity.
TA = Technical Area.
TJA = Tijeras Arroyo.
W = Well.
WYO = Wyoming (Boulevard).

Results:

Table 3 presents the range of hydraulic conductivity values determined from these slug tests. It should be noted that the Bouwer-Rice for the first withdrawal test at TA1-W-08 was anomalously high (by an order of magnitude) and was not used in the calculation of average conductivity for the specific well or the aquifer types. As seen in Table 3, the ranges of hydraulic conductivities for the perched aquifer (10^{-5} to 10^{-3} ft/min) and the regional aquifer (10^{-4} to 10^{-2} ft/min) somewhat overlap, with the regional aquifer conductivity approximately an order of magnitude higher. All the conductivity values are within the range of conductivities (10^{-5} to 10^{-2} ft/min) determined for the regional aquifer within the Santa Fe Group sediments at other locations at SNL/NM (SNL/NM 1999).

Table 3
Ranges of Hydraulic Conductivity Values for
TAG Monitoring Wells Tested December 2003 – January 2004

Range of Hydraulic Conductivities (K) for the Perched Aquifer				
	(ft/min)	**(ft/day)**	**(ft/year)**	**(cm/sec)**
Minimum	2.96E-05	4.26E-02	16	1.50E-05
Maximum*	2.77E-03	3.99E+00	1456	1.41E-03
Range of Hydraulic Conductivities (K) for the Regional Aquifer				
	(ft/min)	**(ft/day)**	**(ft/year)**	**(cm/sec)**
Minimum	5.34E-04	7.69E-01	281	2.71E-04
Maximum	1.03E-02	1.48E+01	5402	5.22E-03

Note:
* Suspicious result for one of the Bouwer-Rice solutions not included in the determination of maximum hydraulic conductivity.

References:

Bouwer, H. and R.C. Rice, 1976. *A Slug Test Method for Determining Hydraulic Conductivity of Unconfined Aquifers with completely or partially penetrating wells.* Water Resources Research, vol. 12, No. 3 pp. 423-428.

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ANNEX F
Groundwater Monitoring Results for COA and SNL/NM Wells

Table F-1
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA1-W-03 24-Jul-03	Acetone	13.1	4.5	5	NE	NE		J	062684-001
TA1-W-06 29-Jul-03	1,1-Dichloroethene	0.48	0.41	1	7	5	J		062690-001
TA2-W-01 07-Aug-03	Trichloroethene	1.29	0.36	1	5	100			062700-001
TA2-W-19	Trichloroethene	3.77	0.36	1	5	100			063272-001
23-Sep-03	cis-1,2-Dichloroethene	0.661	0.3	1	70	NE	J		063272-001
TA2-W-26	Tetrachloroethene	2.67	0.33	1	5	20			062704-001
04-Aug-03	Trichloroethene	1.9	0.36	1	5	100			062704-001
	cis-1,2-Dichloroethene	0.925	0.3	1	70	NE	J		062704-001
TA2-W-27 06-Aug-03	Tetrachloroethene	0.421	0.33	1	5	20	J		062707-001
TJA-2 31-Jul-03	Trichloroethene	2.59	0.36	1	5	100			062709-001
TJA-7 12-Aug-03	Trichloroethene	1.46	0.36	1	5	100			062717-001
WYO-4	1,1-Dichloroethane	0.709	0.41	1	NE	25	J		062721-001
14-Aug-03	Trichloroethene	**6.57**	0.36	1	5	100			062721-001
	cis-1,2-Dichloroethene	1.63	0.3	1	70	NE			062721-001
WYO-4 (Duplicate)	1,1-Dichloroethane	0.757	0.41	1	NE	25	J		062722-001
14-Aug-03	Trichloroethene	**6.39**	0.36	1	5	100			062722-001
	cis-1,2-Dichloroethene	1.66	0.3	1	70	NE			062722-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA1-W-03 13-Oct-03	Chloroform	0.364	0.36	1	NE	100	J		063281-001
TA1-W-06 09-Oct-03	Trichloroethene	0.438	0.36	1	5	100	J		063284-001
TA2-W-01 01-Dec-03	Trichloroethene	1.96	0.36	1	5	100		J	063290-001
TA2-W-19 07-Oct-03	1,1-Dichloroethane	0.725	0.41	1	NE	25	J		063291-001
	Trichloroethene	4.54	0.36	1	5	100			063291-001
	cis-1,2-Dichloroethene	0.845	0.3	1	70	NE	J		063291-001
TA2-W-26 16-Oct-03	Tetrachloroethene	2.50	0.33	1	5	20			063292-001
	Trichloroethene	1.98	0.36	1	5	100		J	063292-001
	cis-1,2-Dichloroethene	0.820	0.3	1	70	NE	J		063292-001
TA2-W-26 (Duplicate) 16-Oct-03	Tetrachloroethene	2.59	0.33	1	5	20			063293-001
	Trichloroethene	2.13	0.36	1	5	100		J	063293-001
	cis-1,2-Dichloroethene	0.770	0.3	1	70	NE	J		063293-001
TA2-W-27 23-Oct-03	Tetrachloroethene	0.436	0.33	1	5	20	J		063294-001
TJA-2 15-Oct-03	Trichloroethene	2.36	0.36	1	5	100		J	063295-001
WYO-4 03-Nov-03	Trichloroethene	**6.06**	0.36	1	5	100		J	063301-001
	cis-1,2-Dichloroethene	1.43	0.3	1	70	NE			063301-001
WYO-4 (Duplicate) 03-Nov-03	Trichloroethene	**7.05**	0.36	1	5	100		J	063302-001
	cis-1,2-Dichloroethene	1.55	0.3	1	70	NE			063302-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 2nd Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
Eubank-5 19-Feb-04	Acetone	5.52	4.5	5	NE	NE		5.52 U, B1	063911-001
TA1-W-06	1,1-Dichloroethene	0.784	0.41	1	7	5	J		063864-001
09-Feb-04	Trichloroethene	0.362	0.36	1	5	100	J	J	063864-001
TA2-W-01 12-Jan-04	Trichloroethene	1.63	0.36	1	5	100			063876-001
TA2-W-19	Trichloroethene	4.19	0.36	1	5	100			063878-001
13-Jan-04	cis-1,2-Dichloroethene	0.886	0.3	1	70	NE	J		063878-001
TA2-W-26	Tetrachloroethene	2.31	0.33	1	5	20			063880-001
20-Jan-04	Trichloroethene	1.81	0.36	1	5	100		J	063880-001
	cis-1,2-Dichloroethene	0.726	0.3	1	70	NE	J		063880-001
TA2-W-26 (Duplicate)	Tetrachloroethene	2.04	0.33	1	5	20			063881-001
20-Jan-04	Trichloroethene	1.56	0.36	1	5	100		J	063881-001
	cis-1,2-Dichloroethene	0.724	0.3	1	70	NE	J		063881-001
TA2-W-27	Tetrachloroethene	0.577	0.33	1	5	20	J		063885-001
15-Jan-04	Trichloroethene	0.519	0.36	1	5	100	J	J	063885-001
TJA-2	Trichloroethene	3.08	0.36	1	5	100		J	063887-001
19-Jan-04	cis-1,2-Dichloroethene	0.626	0.626	1	70	NE	J		063887-001
TJA-7 22-Jan-04	Trichloroethene	0.430	0.36	1	5	100	J	J	063895-001
WYO-4	1,1-Dichloroethane	0.773	0.41	1	NE	25	J		063899-001
03-Feb-04	Trichloroethene	**6.99**	0.36	1	5	100		J	063899-001
	cis-1,2-Dichloroethene	1.58	0.3	1	70	NE			063899-001
WYO-4 (Duplicate)	1,1-Dichloroethane	0.729	0.41	1	NE	25	J		063900-001
03-Feb-04	Trichloroethene	**6.60**	0.36	1	5	100		J	063900-001
	cis-1,2-Dichloroethene	1.62	0.3	1	70	NE			063900-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
Eubank-1 20-May-04	Acetone	4.2	1.3	20	NE	NE	B, J	20UJ, B, B1, P2	064600-001
Eubank-2 06-May-04	Acetone	4.6	1.3	20	NE	NE	J	J	064602-001
	Toluene	0.72	0.59	5	1,000	750	J		064602-001
Eubank-3 04-May-04	Acetone	4.3	1.3	20	NE	NE	J	20UJ, B1	064604-001
	Chloromethane	0.32	0.23	10	NE	NE	J	10U, B1	064604-001
Eubank-5 03-May-04	Methylene chloride	**14**	2.6	5	5	100		14UJ, A2, B1	064607-001
PGS-2 12-May-04	Acetone	6.5	1.3	20	NE	NE	B, J	20UJ, B, B1	064551-001
	Methylene chloride	4.0	2.6	5	5	100	B, J	5.0UJ, B, B1	064551-001
TA1-W-01 10-May-04	Acetone	3.9	1.3	20	NE	NE	J	20UJ, B1	064553-001
TA1-W-02 11-May-04	Acetone	4.5	1.3	20	NE	NE	B, J	20UJ, B, B1, P1	064556-001
TA1-W-03 28-Apr-04	Acetone	3.8	1.3	20	NE	NE	B, J	20UJ, B	064558-001
	Chloroform	0.60	0.12	5	NE	100	J	5.0U, B3	064558-001
	Toluene	1.0	0.59	5	1,000	750	B, J	5.0U, B	064558-001
TA1-W-04 26-Apr-04	Acetone	6.5	1.3	20	NE	NE	B, J	20UJ, B	064560-001
	Trichloroethene	0.30	0.06	5	5	100	J		064560-001
	1,2-Dichloroethene (total)	0.73	0.61	10	70	NE	J	10UJ, A2, B3	064560-001
	trans-1,2-Dichloroethene	0.73	0.31	5	100	NE	J	5.0U, B3	064560-001
TA1-W-05 07-May-04	Acetone	4.7	1.3	20	NE	NE	J	20UJ, B1	064562-001
TA1-W-06 21-May-04	Acetone	4.9	1.3	20	NE	NE	B, J	20UJ, A1, B, B1	064564-001
	Chloroform	0.30	0.12	5	NE	100	J	J, A1	064564-001
	1,1-Dichloroethene	1.0	0.68	5	7	5	J	J, A1	064564-001
TA1-W-08 23-Apr-04	Acetone	5.3	1.3	20	NE	NE	B, J	20UJ, B, B1	064566-001
	Chloroform	0.22	0.12	5	NE	100	J	5.0UJ, A2, B1, P1	064566-001
	Trichloroethene	0.44	0.06	5	5	100	J		064566-001
	1,2-Dichloroethene (total)	0.64	0.61	10	70	NE	J		064566-001
	trans-1,2-Dichloroethene	0.64	0.31	5	100	NE	J		064566-001
TA2-NW1-595 (QED) 13-May-04	Acetone	7.9	1.3	20	NE	NE	B, J	20U, B	064568-001
	Chloroform	0.42	0.12	5	NE	100	J	5.0U, B1	064568-001
	Methylene chloride	**6.4**	2.6	5	5	100		6.4UJ, B1	064568-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA2-NW1-595 (Bennett)	Acetone	4.4	1.3	20	NE	NE	B, J	20U, B, P2	064571-001
19-May-04	Chloroform	0.28	0.12	5	NE	100	J	P2	064571-001
TA2-SW1-320	Acetone	11	1.3	20	NE	NE	B, J	20UJ, B, B1	064573-001
14-May-04	Chloromethane	0.38	0.23	10	NE	NE	J		064573-001
	Methylene chloride	**5.7**	2.6	5	5	100		5.7UJ, B1	064573-001
TA2-W-01	Acetone	9.6	1.3	20	NE	NE	B, J	20UJ, B, B1	064575-001
17-May-04	Chloroform	0.30	0.12	5	NE	100	J		064575-001
	Methylene chloride	**6.7**	2.6	5	5	100		6.7UJ, B1	064575-001
	Trichloroethene	1.8	0.06	5	5	100	J		064575-001
TA2-W-19	Acetone	5.1	1.3	20	NE	NE	B, J	20UJ, B	064577-001
27-Apr-04	Trichloroethene	**5.2**	0.06	5	5	100			064577-001
	1,1-Dichloroethane	0.92	0.21	5	NE	25	J		064577-001
	1,2-Dichloroethene (total)	1.7	0.61	10	70	NE	J	10U, B3	064577-001
	cis-1,2-Dichloroethene	0.99	0.20	5	70	NE	J		064577-001
	trans-1,2-Dichloroethene	0.70	0.31	5	100	NE	J		064577-001
TA2-W-19 (Duplicate)	Acetone	4.5	1.3	20	NE	NE	B, J	20UJ, B	064578-001
27-Apr-04	Trichloroethene	**5.1**	0.06	5	5	100			064578-001
	1,1-Dichloroethane	0.96	0.21	5	NE	25	J		064578-001
	1,2-Dichloroethene (total)	1.7	0.61	10	70	NE	J	10U, B3	064578-001
	cis-1,2-Dichloroethene	1.0	0.20	5	70	NE	J		064578-001
	trans-1,2-Dichloroethene	0.62	0.31	5	100	NE	J		064578-001
TA2-W-26	Acetone	4.1	1.3	20	NE	NE	B, J	20UJ, B	064580-001
21-Apr-04	Carbon tetrachloride	0.87	0.14	5	5	10	B, J	5.0U, B	064580-001
	Chloroform	0.32	0.12	5	NE	100	J		064580-001
	Tetrachloroethene	1.9	0.20	5	5	20	J		064580-001
	Trichloroethene	3.1	0.06	5	5	100	B, J	5.0U, B	064580-001
	1,2-Dichloroethene (total)	0.69	0.61	10	70	NE	J		064580-001
	cis-1,2-Dichloroethene	0.69	0.20	5	70	NE	J		064580-001
TA2-W-26 (Duplicate)	Acetone	4.1	1.3	20	NE	NE	B, J	20UJ, B	064581-001
21-Apr-04	Carbon tetrachloride	0.88	0.14	5	5	10	B, J	5.0U, B	064581-001
	Chloroform	0.37	0.12	5	NE	100	J		064581-001
	Tetrachloroethene	2.0	0.20	5	5	20	J		064581-001
	Trichloroethene	3.0	0.06	5	5	100	B, J	5.0U, B	064581-001
	1,2-Dichloroethene (total)	0.70	0.61	10	70	NE	J		064581-001
	cis-1,2-Dichloroethene	0.70	0.20	5	70	NE	J		064581-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA2-W-27	Acetone	4.6	1.3	20	NE	NE	J	20UJ, B1	064583-001
19-Apr-04	Chloromethane	0.46	0.23	10	NE	NE	J	J	064583-001
	Methylene chloride	**6.1**	2.6	5	5	100	B	5.0U, B	064583-001
	Tetrachloroethene	0.62	0.20	5	5	20	J		064583-001
	Trichloroethene	1.3	0.06	5	5	100	J	5.0U, B1	064583-001
	4-Methyl-2-pentanone	3.6	0.90	20	NE	NE	J	20UJ, B1	064583-001
TJA-2	Acetone	3.3	1.3	20	NE	NE	J	20UJ, B1	064585-001
05-May-04	Chloromethane	0.38	0.23	10	NE	NE	J	10U, B1	064585-001
	Trichloroethene	3.3	0.06	5	5	100	J		064585-001
	1,1-Dichloroethane	0.50	0.21	5	NE	25	J		064585-001
	1,2-Dichloroethene (total)	0.67	0.61	10	70	NE	J		064585-001
	cis-1,2-Dichloroethene	0.67	0.20	5	70	NE	J		064585-001
TJA-3 27-Apr-04	Acetone	4.3	1.3	20	NE	NE	B, J	20UJ, B	064587-001
TJA-4	Acetone	5.7	1.3	20	NE	NE	J	20UJ, A1, B1	064589-001
20-Apr-04	Methylene chloride	2.9	2.6	5	5	100	B, J	5.0UJ, A1, B	064589-001
	4-Methyl-2-pentanone	3.0	0.90	20	NE	NE	J	20UJ, B1, A1	064589-001
TJA-6	Acetone	5.0	1.3	20	NE	NE	B, J	20UJ, B	064591-001
22-Apr-04	Carbon tetrachloride	0.88	0.14	5	5	10	B, J	5.0U, B	064591-001
	Trichloroethene	1.2	0.06	5	5	100	B, J	5.0U, B	064591-001
TJA-7	Acetone	4.4	1.3	20	NE	NE	B, J	20UJ, B, B1	064593-001
30-Apr-04	Methylene chloride	**23**	2.6	5	5	100		23UJ, A2, B1	064593-001
WYO-3	Acetone	4.0	1.3	20	NE	NE	B, J	20UJ, B	064595-001
28-Apr-04	Chloromethane	0.35	0.23	10	NE	NE	J	10U, B3	064595-001
	Toluene	1.0	0.59	5	1,000	750	B, J	5.0U, B	064595-001
WYO-4	Acetone	3.8	1.3	20	NE	NE	B, J	20UJ, B, B1	064597-001
30-Apr-04	Methylene chloride	3.2	2.6	5	5	100	J	5.0UJ, A2, B1	064597-001
	Trichloroethene	**7.7**	0.06	5	5	100			064597-001
	1,1-Dichloroethane	0.99	0.21	5	NE	25	J		064597-001
	1,2-Dichloroethene (total)	2.1	0.61	10	70	NE	J		064597-001
	cis-1,2-Dichloroethene	2.1	0.20	5	70	NE	J		064597-001
WYO-4 (Duplicate)	Acetone	3.7	1.3	20	NE	NE	B, J	20UJ, B, B1	064598-001
30-Apr-04	Methylene chloride	3.2	2.6	5	5	100	J	5.0UJ, A2, B1	064598-001
	Trichloroethene	**7.6**	0.06	5	5	100			064598-001
	1,1-Dichloroethane	0.95	0.21	5	NE	25	J		064598-001
	1,2-Dichloroethene (total)	1.9	0.61	10	70	NE	J		064598-001
	cis-1,2-Dichloroethene	1.9	0.20	5	70	NE	J		064598-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
Eubank-1 19-Aug-04	Methylene chloride	4.5	2.6	5	5	100	B, J	5.0UJ, A, B, B1	065416-001
PGS-2 28-Jul-04	Acetone	3.7	1.3	20	NE	NE	B, J	20UJ, B	065360-001
TA1-W-01 17-Aug-04	Methylene chloride	4.8	2.6	5	5	100	B, J	5.0UJ, A, B, B1	065362-001
TA1-W-02 13-Aug-04	Acetone	4.9	1.3	20	NE	NE	J	20UJ, B1	065364-001
	Chloromethane	0.49	0.23	10	NE	NE	J	10U, B1	065364-001
	Methylene chloride	4.8	2.6	5	5	100	J	5.0U, B1	065364-001
TA1-W-03 18-Aug-04	Chloroform	0.47	0.12	5	NE	100	J		065366-001
	Methylene chloride	4.5	2.6	5	5	100	B, J	5.0UJ, A, B, B1	065366-001
TA1-W-04 26-Jul-04	Acetone	3.9	1.3	20	NE	NE	B, J	20UJ, B, B1	065368-001
	Chloromethane	0.48	0.23	10	NE	NE	J	J, P1	065368-001
	Methylene chloride	2.7	2.6	5	5	100	B, J	5.0UJ, B	065368-001
TA1-W-06 06-Aug-04	1,1-Dichloroethene	0.92	0.68	5	7	5	J		065372-001
	Bromomethane	4.1	0.89	10	NE	NE	B, J	10UJ, B	065372-001
	Chloroform	0.35	0.12	5	NE	100	J		065372-001
	Methylene chloride	4.2	2.6	5	5	100	B, J	5.0UJ, B	065372-001
	Trichloroethene	0.32	0.06	5	5	100	J		065372-001
TA1-W-08 13-Aug-04	Methylene chloride	**8.3**	2.6	5	5	100	B	8.3UJ, B, B1	065374-001
TA2-NW1-595 (QED) 26-Jul-04	Acetone	4.1	1.3	20	NE	NE	J	J	065377-001
	Methylene chloride	3.8	2.6	5	5	100	J	5.0UJ, B1	065377-001
TA2-SW1-320 27-Jul-04	Acetone	4.3	1.3	20	NE	NE	B, J	20UJ, B	065381-001
TA2-W-01 12-Aug-04	Trichloroethene	1.3	0.06	5	5	100	J		065383-001
TA2-W-19 27-Jul-04	1,1-Dichloroethane	0.73	0.21	5	NE	25	J	J, P1	065385-001
	Chloromethane	0.49	0.23	10	NE	NE	J	10UJ, B1, P1	065385-001
	Trichloroethene	4.2	0.06	5	5	100	J		065385-001
TA2-W-26 30-Jul-04	1,2-Dichloroethene	0.61	0.18	10	70	NE	J	P2	065387-001
	Acetone	4.1	0.21	20	NE	NE	J	20UJ, B1, P2	065387-001
	Bromomethane	1.2	0.1	10	NE	NE	J	J, P2	065387-001
	Methylene chloride	1.8	0.17	5	5	100	J	5.0UJ, B1, P2	065387-001
	Tetrachloroethene	2.0	0.08	5	5	20	J	P2	065387-001
	Trichloroethene	1.4	0.09	5	5	100	J	P2	065387-001
	cis-1,2-Dichloroethene	0.61	0.1	5	70	NE	J	P2	065387-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA2-W-26	1,2-Dichloroethene	0.6	0.18	10	70	NE	J	P2	065388-001
30-Jul-04	Bromomethane	1.2	0.1	10	NE	NE	J	J, P2	065388-001
(Duplicate)	Methylene chloride	2.1	0.17	5	5	100	J	5.0UJ, B1, P2	065388-001
	Tetrachloroethene	2.0	0.08	5	5	20	J	P2	065388-001
	Trichloroethene	1.3	0.09	5	5	100	J	P2	065388-001
	cis-1,2-Dichloroethene	0.6	0.1	5	70	NE	J	P2	065388-001
TAG-W-27	Acetone	3.8	1.3	20	NE	NE	B, J	20UJ, B	065392-001
28-Jul-04	Chloroform	0.24	0.12	5	NE	100	J	5.0U, B1	065392-001
	Methylene chloride	2.8	2.6	5	5	100	B, J	5.0UJ, B	065392-001
	Tetrachloroethene	0.65	0.2	5	5	20	J	P1, UJ	065392-001
	Trichloroethene	0.51	0.06	5	5	100	J		065392-001
TJA-2	1,1-Dichloroethane	0.53	0.21	5	NE	25	J	A, J	065394-001
16-Aug-04	1,2-Dichloroethene	0.63	0.61	10	70	NE	J		065394-001
	Methylene chloride	3.6	2.6	5	5	100	B, J	5.0UJ, A, B, B1	065394-001
	Trichloroethene	3.1	0.06	5	5	100	J		065394-001
	cis-1,2-Dichloroethene	0.63	0.2	5	70	NE	J		065394-001
TJA-3	Methylene chloride	**8.9**	2.6	5	5	100		8.9UJ, A, B1	065397-001
09-Aug-04									
TJA-6	Bromomethane	1.7	0.1	10	NE	NE	B, J	10UJ, B	065401-001
04-Aug-04	Methylene chloride	2.6	0.17	5	5	100	B, J	5.0UJ, B, B1	065401-001
TJA-7	Acetone	2.7	1.3	20	NE	NE	B, J, H	20UJ, B, HT	065403-R01
06-Aug-04	Acetone	4.7	1.3	20	NE	NE	J	20UJ, B1	065403-001
(Duplicate)	Bromomethane	4.1	0.89	10	NE	NE	B, J	10UJ, B	065403-001
	Methylene chloride	3.5	2.6	5	5	100	B, J	5.0UJ, B	065403-001
	Trichloroethene	0.53	0.06	5	5	100	J		065403-001
TJA-7	Methylene chloride	3.7	2.6	5	5	100	B, J	5.0UJ, B	065404-001
06-Aug-04	Trichloroethene	0.55	0.06	5	5	100	J		065404-001
WYO-4	1,2-Dichloroethene	1.7	0.18	10	70	NE	J		065411-001
03-Aug-04	Bromomethane	1.6	0.1	10	NE	NE	B, J	10UJ, B, B1	065411-001
	Methylene chloride	2.6	0.17	5	5	100	B, J	5.0UJ, B, B1, B2	065411-001
	Trichloroethene	**6.7**	0.09	5	5	100			065411-001
	cis-1,2-Dichloroethene	1.7	0.1	5	70	NE	J		065411-001
WYO-4	1,2-Dichloroethene	1.5	0.18	10	70	NE	J		065412-001
03-Aug-04	Methylene chloride	2.7	0.17	5	5	100	B, J	5.0UJ, B, B1, B2	065412-001
(Duplicate)	Trichloroethene	**6.0**	0.09	5	5	100			065412-001
	cis-1,2-Dichloroethene	1.5	0.1	5	70	NE	J		065412-001

Refer to footnotes at end of table.

Table F-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL/MAC[d] (µg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
Eubank-1 20-Oct-04	Acetone	6.5	4.5	5.0	NE			6.50 UJ	066077-001
TA1-W-03 19-Oct-04	Chloroform	0.372	0.36	1.0	NE		J		066031-001
TA2-W-01 18-Oct-04	Trichloroethene	1.38	0.36	1.0	5.0				066048-001
TA2-W-19	Trichloroethene	4.56	0.36	1.0	5.0			J	066050-001
04-Oct-04	cis-1,2-Dichloroethene	0.866	0.30	1.0	70		J		066050-001
TA2-W-19 (Duplicate)	1,1-Dichloroethane	0.722	0.41	1.0	NE		J		066051-001
04-Oct-04	Trichloroethene	4.65	0.36	1.0	5.0			J	066051-001
	cis-1,2-Dichloroethene	0.873	0.30	1.0	70		J		066051-001
TA2-W-27	Tetrachloroethene	0.631	0.33	1.0	5.0		J		066056-001
14-Oct-04	Trichloroethene	0.412	0.36	1.0	5.0		J		066056-001
TJA-2	Trichloroethene	3.1	0.36	1.0	5.0			J	066059-001
11-Oct-04	cis-1,2-Dichloroethene	0.504					J		066059-001
TJA-6	Bromodichloromethane	0.445	0.38	1.0	NE		J		066065-001
13-Oct-04	Bromoform	0.83	0.50	1.0	NE		J		066065-001
	Dibromochloromethane	0.832	0.29	1.0	NE		J		066065-001
WYO-4	Trichloroethene	**7.35**	0.36	1.0	5.0				066073-001
06-Oct-04	cis-1,2-Dichloroethene	1.61	0.30	1.0	70				066073-001
WYO-4 (Duplicate)	Trichloroethene	**7.43**	0.36	1.0	5.0				066074-001
06-Oct-04	cis-1,2-Dichloroethene	1.69	0.30	1.0	70				066074-001

Note: Values in **bold** exceed the established MCL or MAC.

[a]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., Update 3, SW846, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.

[b]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[c]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[d]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

CFR = Code of Federal Regulations.
COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MAC = Maximum allowable concentration.
MCL = Maximum contaminant level.
MDL = Method detection limit.
µg/L = Microgram(s) per liter.
NE = Not established.
NMAC = New Mexico Administrative Code.
PQL = Practical quantitation limit.
SNL/NM = Sandia National Laboratories/New Mexico.

Table F-1 (Concluded)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells

Laboratory Qualifiers:

B = Analyte detected in associated laboratory method blank.
H = Holding time was exceeded.
J = Amount detected is below the PQL.

Validation Qualifiers:

(If blank, quality control samples met acceptance criteria with respect to submitted sample.)

A = Laboratory accuracy and/or bias measurements for the associated laboratory control sample and/or duplicate do not meet acceptance criteria.
A1 = Laboratory accuracy and/or bias measurements for the associated surrogate spike do not meet acceptance criteria.
A2 = Laboratory accuracy and/or bias measurements for the associated matrix spike and/or matrix spike duplicate do not meet acceptance criteria.
B = Analyte present in associated laboratory method blank sample.
B1 = Analyte present in associated trip blank sample.
B2 = Analyte present in associated equipment blank sample.
B3 = Analyte present in associated continuing calibration blank.
HT = The holding time was exceeded for the associated sample analysis.
J = The associate value is an estimated quantity.
P1 = Laboratory precision measurements for the matrix spike and/or matrix spike duplicate do not meet acceptance criteria.
P2 = Insufficient quality control data to determine laboratory precision.
# U = Analyte was qualified as not detected at the listed value.
# UJ = Analyte was qualified as not detected at listed value. The value is an estimate.

Table F-2
Method Detection Limits for Volatile Organic Compounds
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Analyte	MDL[a] (μg/L)	Analytical Method[b]
1,1,1-Trichloroethane	0.07–0.34	SW846 8260
1,1,2,2-Tetrachloroethane	0.3–0.73	SW846 8260
1,1,2-Trichloroethane	0.21–0.77	SW846 8260
1,1-Dichloroethane	0.12–0.41	SW846 8260
1,1-Dichloroethene	0.07–0.68	SW846 8260
1,2-Dichloroethane	0.14–0.29	SW846 8260
1,2-Dichloropropane	0.18–0.61	SW846 8260
1,2-Dichloropropane	0.1–0.25	SW846 8260
2-Butanone	0.1–2.31	SW846 8260
2-Hexanone	0.11–1.45	SW846 8260
4-methyl-, 2-Pentanone	0.19–1.78	SW846 8260
Acetone	0.21–4.5	SW846 8260
Benzene	0.11–0.33	SW846 8260
Bromodichloromethane	0.07–0.38	SW846 8260
Bromoform	0.3–0.62	SW846 8260
Bromomethane	0.1–0.89	SW846 8260
Carbon disulfide	0.06–1.91	SW846 8260
Carbon tetrachloride	0.1–0.29	SW846 8260
Chlorobenzene	0.12–0.32	SW846 8260
Chloroethane	0.1–0.56	SW846 8260
Chloroform	0.11–0.36	SW846 8260
Chloromethane	0.09–0.5	SW846 8260
Dibromochloromethane	0.16–0.59	SW846 8260
Ethyl benzene	0.1–0.38	SW846 8260
Methylene chloride	0.17–3.3	SW846 8260
Styrene	0.13–0.25	SW846 8260
Tetrachloroethene	0.08–0.33	SW846 8260
Toluene	0.07–0.59	SW846 8260
Trichloroethene	0.06–0.36	SW846 8260
Vinyl acetate	0.18–1.32	SW846 8260
Vinyl chloride	0.08–0.64	SW846 8260
Xylene	0.25–0.82	SW846 8260
cis-1,2-Dichloroethene	0.1–0.3	SW846 8260
cis-1,3-Dichloropropene	0.13–0.3	SW846 8260
trans-1,2-Dichloroethene	0.09–0.37	SW846 8260
trans-1,3-Dichloropropene	0.12–0.53	SW846 8260

[a]The minimum concentration or activity that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., Update 3, SW846, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.

COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
MDL = Method detection limit.
μg/L = Microgram(s) per liter.
SNL/NM = Sandia National Laboratories/New Mexico.

Table F-3
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
EUBANK-1	Nitrate	2.07	0.0341	0.1	10	10			062724-045	SW846 9056
18-Aug-03	Nitrate	3.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.55	0.03	0.15	10	10			062724-016	EPA 353.1
PGS-2	Nitrate	0.828	0.0341	0.1	10	10	H	HT, J	062678-045	SW846 9056
22-Jul-03	Nitrate	ND	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.89	0.01	0.05	10	10	B		062678-016	EPA 353.1
TA1-W-01	Nitrate	2.23	0.0341	0.1	10	10	H	HT, J	062680-045	SW846 9056
22-Jul-03	Nitrate	3.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.46	0.02	0.1	10	10	B		062680-016	EPA 353.1
TA1-W-02	Nitrate	0.993	0.0341	0.1	10	10	H	HT, J	062682-045	SW846 9056
23-Jul-03	Nitrate	0.2	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1	0.01	0.05	10	10			062682-016	EPA 353.1
TA1-W-03	Nitrate	6.83	0.0341	0.1	10	10			062684-045	SW846 9056
24-Jul-03	Nitrate	0.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	7.3	0.05	0.25	10	10			062684-016	EPA 353.1
TA1-W-04	Nitrate	1.7	0.0341	0.1	10	10			062686-045	SW846 9056
29-Jul-03	Nitrate	2.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.68	0.01	0.05	10	10			062686-016	EPA 353.1
TA1-W-05	Nitrate	0.997	0.0341	0.1	10	10			062688-045	SW846 9056
28-Jul-03	Nitrate	ND	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.06	0.01	0.05	10	10		B2, J	062688-016	EPA 353.1
TA1-W-06	Nitrate	3.05	0.0341	0.1	10	10			062690-045	SW846 9056
29-Jul-03	Nitrate	2.9	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.59	0.01	0.05	10	10			062690-016	EPA 353.1
TA1-W-08	Nitrate	6.92	0.0341	0.1	10	10			062692-045	SW846 9056
30-Jul-03	Nitrate	5.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	7.35	0.05	0.25	10	10			062692-016	EPA 353.1
TA1-W-08 (Duplicate) 30-Jul-03	Nitrate plus nitrite as N	7.3	0.05	0.25	10	10			062693-016	EPA 353.1
TA2-NW1-595	Nitrate	3.09	0.0341	0.1	10	10			062695-A45	SW846 9056
30-Jul-03	Nitrate	3.9	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.7	0.01	0.05	10	10			062695-A16	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595	Nitrate	3.02	0.0341	0.1	10	10			062695-045	SW846 9056
05-Aug-03	Nitrate	3.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.76	0.01	0.05	10	10			062695-016	EPA 353.1
TA2-SW1-320	Nitrate	**22.9**	0.171	0.5	10	10	H	HT, J	062698-045	SW846 9056
24-Jul-03	Nitrate	**17.2**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**25**	0.25	1.25	10	10			062698-016	EPA 353.1
TA2-W-01	Nitrate	5.14	0.0341	0.1	10	10			062700-045	SW846 9056
07-Aug-03	Nitrate	4.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	5.58	0.03	0.15	10	10			062700-016	EPA 353.1
TA2-W-19	Nitrate	9.58	0.0341	0.1	10	10	H		062702-045	SW846 9056
04-Aug-03	Nitrate	7.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**10.4**	0.1	0.5	10	10			062702-016	EPA 353.1
TA2-W-26	Nitrate	4.67	0.0341	0.1	10	10			062704-045	SW846 9056
04-Aug-03	Nitrate	5.2	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	5.22	0.03	0.15	10	10			062704-016	EPA 353.1
TA2-W-26 (Duplicate) 04-Aug-03	Nitrate plus nitrite as N	5.1	0.03	0.15	10	10			062705-016	EPA 353.1
TA2-W-27	Nitrate	4.14	0.0341	0.1	10	10			062707-045	SW846 9056
06-Aug-03	Nitrate	3.2	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.53	0.03	0.15	10	10			062707-016	EPA 353.1
TJA-2	Nitrate	9.34	0.0341	0.1	10	10			062709-045	SW846 9056
31-Jul-03	Nitrate	9.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**10.1**	0.1	0.5	10	10			062709-016	EPA 353.1
TJA-3	Nitrate	2.52	0.0341	0.1	10	10			062711-045	SW846 9056
06-Aug-03	Nitrate	3.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.55	0.01	0.05	10	10		B2, J	062711-016	EPA 353.1
TJA-4	Nitrate	**23.2**	0.171	0.5	10	10			062713-045	SW846 9056
11-Aug-03	Nitrate	**20.5**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**25**	0.25	1.25	10	10			062713-016	EPA 353.1
TJA-6	Nitrate	2.17	0.0341	0.1	10	10			062715-045	SW846 9056
11-Aug-03	Nitrate	0.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.49	0.03	0.15	10	10			062715-016	EPA 353.1
TJA-7	Nitrate	**22.9**	0.0341	0.1	10	10	H	HT, J	062717-045	SW846 9056
12-Aug-03	Nitrate	**21.7**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**26**	0.5	2.5	10	10			062717-016	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3 13-Aug-03	Nitrate	1.71	0.0341	0.1	10	10	H	HT, J	062719-045	SW846 9056
	Nitrate	2.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.92	0.01	0.05	10	10			062719-016	EPA 353.1
WYO-4 14-Aug-03	Nitrate	2.54	0.0341	0.1	10	10			062721-045	SW846 9056
	Nitrate	1.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.72	0.01	0.05	10	10			062721-016	EPA 353.1
WYO-4 (Duplicate) 14-Aug-03	Nitrate plus nitrite as N	2.7	0.01	0.05	10	10			062722-016	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1	Nitrate	1.99	0.0341	0.1	10	10	H	HT, J	063303-045	SW846 9056
10-Nov-03	Nitrate	2.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.50	0.05	0.25	10	10			063303-016	EPA 353.1
Eubank-1 (Sample Split) 10-Oct-03	Nitrate	2.40	0.1	0.1	10	10			063302-A45	EPA 300.0
Eubank-2	Nitrate	1.23	0.0341	0.1	10	10			063304-045	SW846 9056
12-Nov-03	Nitrate	1.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.950	0.01	0.050	10	10			063304-016	EPA 353.1
Eubank-3	Nitrate	3.03	0.0341	0.1	10	10	H	HT, J	063305-045	SW846 9056
18-Nov-03	Nitrate	4.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.40	0.05	0.25	10	10			063305-016	EPA 353.1
Eubank-5	Nitrate	3.02	0.0341	0.1	10	10	H	HT, J	063306-045	SW846 9056
19-Nov-03	Nitrate	3.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.70	0.05	0.25	10	10			063306-016	EPA 353.1
PGS-2	Nitrate	0.628	0.0341	0.1	10	10	H	HT, J	063278-045	SW846 9056
10-Nov-03	Nitrate	0.2	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.710	0.01	0.05	10	10			063278-016	EPA 353.1
TA1-W-01	Nitrate	2.27	0.0341	0.1	10	10			063279-045	SW846 9056
06-Nov-03	Nitrate	2.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.50	0.05	0.25	10	10			063279-016	EPA 353.1
TA1-W-02	Nitrate	0.921	0.0341	0.1	10	10	H	HT, J	063280-045	SW846 9056
08-Oct-03	Nitrate	1.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.00	0.05	0.25	10	10			063280-016	EPA 353.1
TA1-W-03	Nitrate	6.79	0.0341	0.1	10	10			063281-045	SW846 9056
13-Oct-03	Nitrate	5.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	6.40	0.05	0.25	10	10			063281-016	EPA 353.1
TA1-W-04	Nitrate	1.54	0.0341	0.1	10	10			063282-045	SW846 9056
14-Oct-03	Nitrate	2.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.39	0.01	0.05	10	10			063282-016	EPA 353.1
TA1-W-05	Nitrate	0.967	0.0341	0.1	10	10			063283-045	SW846 9056
20-Oct-03	Nitrate	0.9	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.05	0.05	0.25	10	10			063283-016	EPA 353.1
TA1-W-06	Nitrate	2.96	0.0341	0.1	10	10			063284-045	SW846 9056
09-Oct-03	Nitrate	3.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.30	0.05	0.25	10	10			063284-016	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-08	Nitrate	7.00	0.0341	0.1	10	10			063285-045	SW846 9056
21-Oct-03	Nitrate	5.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	6.25	0.05	0.25	10	10			063285-016	EPA 353.1
TA1-W-08 (Duplicate) 21-Oct-03	Nitrate plus nitrite as N	6.25	0.05	0.25	10	10			063286-016	EPA 353.1
TA2-NW1-595	Nitrate	3.34	0.0341	0.1	10	10			063287-045	SW846 9056
12-Nov-03	Nitrate	3.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.40	0.05	0.25	10	10			063287-016	EPA 353.1
TA2-NW1-595	Nitrate	2.96	0.0341	0.1	10	10			063288-045	SW846 9056
11-Nov-03	Nitrate	3.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.20	0.05	0.25	10	10			063288-016	EPA 353.1
TA2-SW1-320	Nitrate	**22.4**	0.171	0.5	10	10	H	HT, J	063289-045	SW846 9056
11-Nov-03	Nitrate	**19.8**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**24.0**	0.5	2.5	10	10			063289-016	EPA 353.1
TA2-W-01	Nitrate	5.16	0.0341	0.1	10	10			063290-045	SW846 9056
01-Dec-03	Nitrate	6.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	5.70	0.05	0.25	10	10			063290-016	EPA 353.1
TA2-W-19	Nitrate	9.35	0.0682	0.2	10	10	H	HT, J	063291-045	SW846 9056
07-Oct-03	Nitrate	**10.3**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	9.50	0.1	0.5	10	10			063291-016	EPA 353.1
TA2-W-26	Nitrate	4.84	0.0341	0.1	10	10			063292-045	SW846 9056
16-Oct-03	Nitrate	3.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	5.00	0.05	0.25	10	10			063292-016	EPA 353.1
TA2-W-26 (Duplicate) 16-Oct-03	Nitrate plus nitrite as N	4.75	0.05	0.25	10	10			063293-016	EPA 353.1
TA2-W-27	Nitrate	4.19	0.0341	0.1	10	10			063294-045	SW846 9056
23-Oct-03	Nitrate	4.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.50	0.05	0.25	10	10			063294-016	EPA 353.1
TJA-2	Nitrate	9.32	0.0341	0.1	10	10			063295-045	SW846 9056
15-Oct-03	Nitrate	9.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	9.70	0.1	0.5	10	10			063295-016	EPA 353.1
TJA-3	Nitrate	2.51	0.0341	0.1	10	10			063296-045	SW846 9056
22-Oct-03	Nitrate	3.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.75	0.05	0.25	10	10			063296-016	EPA 353.1
TJA-4	Nitrate	**22.8**	0.341	1.0	10	10	H		063297-045	SW846 9056
27-Oct-03	Nitrate	**17.7**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**25.8**	0.25	1.25	10	10			063297-016	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-6 05-Nov-03	Nitrate	2.26	0.0341	0.1	10	10			063298-045	SW846 9056
	Nitrate	2.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.50	0.05	0.25	10	10		B2, J	063298-016	EPA 353.1
TJA-7 28-Oct-03	Nitrate	**24.5**	0.341	1.00	10	10	H	HT, J	063299-045	SW846 9056
	Nitrate	**20.4**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**25.0**	0.250	1.25	10	10			063299-016	EPA 353.1
TJA-7 (Sample Split) 28-Oct-03	Nitrate	**26.0**	0.5	0.5	10	10		P2	063299-A45	EPA 300.0
WYO-3 29-Oct-03	Nitrate	1.80	0.0341	0.1	10	10			063300-045	SW846 9056
	Nitrate	2.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.61	0.01	0.05	10	10			063300-016	EPA 353.1
WYO-3 (Sample Split) 29-Oct-03	Nitrate	2.0	0.1	0.1	10	10		P2	063300-A45	EPA 300.0
WYO-4 03-Nov-03	Nitrate	2.86	0.0341	0.1	10	10			063301-045	SW846 9056
	Nitrate	2.2	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.20	0.01	0.05	10	10			063301-016	EPA 353.1
WYO-4 (Duplicate) 03-Nov-03	Nitrate plus nitrite as N	2.21	0.01	0.05	10	10			063302-016	EPA 353.1
WYO-4 (Sample Split) 03-Nov-03	Nitrate	3.0	0.1	0.1	10	10			063301-A45	EPA 300.0
Eubank-1 16-Feb-04	Nitrate	2.3	0.054	0.1	10	10			063904-016	EPA 300.0
	Nitrate	4.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.20	0.05	0.25	10	10			063904-015	EPA 353.1
Eubank-2 18-Feb-04	Nitrate	1.3	0.054	0.1	10	10			063906-016	EPA 300.0
	Nitrate	1.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.03	0.01	0.05	10	10			063906-015	EPA 353.1
Eubank-3 17-Feb-04	Nitrate	3.2	0.054	0.1	10	10			063909-016	EPA 300.0
	Nitrate	2.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.34	0.01	0.05	10	10			063909-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-5	Nitrate	3.3	0.054	0.1	10	10			063911-016	EPA 300.0
19-Feb-04	Nitrate	3.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.40	0.05	0.25	10	10			063911-015	EPA 353.1
PGS-2	Nitrate	0.85	0.054	0.1	10	10			063851-016	EPA 300.0
03-Feb-04	Nitrate	1.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.80	0.01	0.05	10	10		A2, J	063851-015	EPA 353.1
	Nitrate plus nitrite as N (lab re-analysis)	0.73	0.01	0.05	10	10			063851-R15	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 2nd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-01	Nitrate	2.5	0.054	0.1	10	10			063853-016	EPA 300.0
05-Feb-04	Nitrate	2.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.85	0.01	0.05	10	10		A2, J	063853-015	EPA 353.1
	Nitrate plus nitrite as N (lab re-analysis)	2.40	0.05	0.25	10	10			063853-R15	EPA 353.1
TA1-W-02	Nitrate	1.0	0.054	0.1	10	10			063855-016	EPA 300.0
28-Jan-04	Nitrate	1.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.00	0.05	0.25	10	10			063855-015	EPA 353.1
TA1-W-03	Nitrate	6.8	0.054	0.1	10	10			063857-016	EPA 300.0
07-Jan-04	Nitrate	5.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.09	0.01	0.05	10	10		A2, J	063857-015	EPA 353.1
TA1-W-04	Nitrate	1.6	0.054	0.1	10	10			063860-016	EPA 300.0
06-Jan-04	Nitrate	2.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.30	0.01	0.05	10	10		A2, J	063860-015	EPA 353.1
TA1-W-05	Nitrate	1.0	0.054	0.1	10	10			063862-016	EPA 300.0
12-Feb-04	Nitrate	0.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.0	0.05	0.25	10	10			063862-015	EPA 353.1
TA1-W-06	Nitrate	3.2	0.054	0.1	10	10			063864-016	EPA 300.0
09-Feb-04	Nitrate	2.29	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.96	0.01	0.05	10	10		A2, J	063864-015	EPA 353.1
	Nitrate plus nitrite as N (lab re-analysis)	3.25	0.05	0.25	10	10			063864-R15	EPA 353.1
TA1-W-08	Nitrate	7.1	0.054	0.1	10	10			063866-016	EPA 300.0
10-Feb-04	Nitrate	5.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	7.00	0.05	0.25	10	10			063866-015	EPA 353.1
TA1-W-08 (Duplicate)	Nitrate	7.0	0.054	0.1	10	10			063867-016	EPA 300.0
10-Feb-04	Nitrate plus nitrite as N	7.10	0.05	0.25	10	10			063867-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.1	10	10			063869-016	EPA 300.0
26-Jan-04	Nitrate	3.4	0.5	NA	10	10		None	Field	HACH 8039
(Bennett)	Nitrate plus nitrite as N	1.85	0.05	0.25	10	10			063869-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.1	10	10			063871-016	EPA 300.0
04-Feb-04	Nitrate	2.9	0.5	NA	10	10		None	Field	HACH 8039
(QED)	Nitrate plus nitrite as N	3.25	0.05	0.25	10	10			063871-015	EPA 353.1
TA2-SW1-320	Nitrate	**23.0**	0.27	0.50	10	10			063873-016	EPA 300.0
29-Jan-04	Nitrate	**17.5**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**25.0**	0.5	2.5	10	10			063873-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 2nd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Nitrate	5.1	0.054	0.1	10	10			063876-016	EPA 300.0
12-Jan-04	Nitrate	4.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.50	0.05	0.25	10	10		A2, J	063876-015	EPA 353.1
TA2-W-19	Nitrate	9.2	0.054	0.1	10	10			063878-016	EPA 300.0
13-Jan-04	Nitrate	7.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	10	0.1	0.5	10	10		A2, J	063878-015	EPA 353.1
TA2-W-26	Nitrate	4.8	0.054	0.1	10	10			063880-016	EPA 300.0
20-Jan-04	Nitrate	4.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	5.15	0.05	0.25	10	10			063880-015	EPA 353.1
TA2-W-26 (Duplicate)	Nitrate	4.9	0.054	0.1	10	10			063881-016	EPA 300.0
20-Jan-04	Nitrate plus nitrite as N	5.30	0.05	0.25	10	10			063881-015	EPA 353.1
TA2-W-27	Nitrate	4.4	0.054	0.1	10	10			063885-016	EPA 300.0
15-Jan-04	Nitrate	3.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.16	0.01	0.05	10	10		A2, B2, J	063885-015	EPA 353.1
TJA-2	Nitrate	9.3	0.054	0.1	10	10		A2, J	063887-016	EPA 300.0
19-Jan-04	Nitrate	6.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	10	0.05	0.25	10	10			063887-015	EPA 353.1
TJA-3	Nitrate	2.9	0.054	0.1	10	10			063889-016	EPA 300.0
22-Oct-03	Nitrate	2.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.89	0.01	0.25	10	10			063889-015	EPA 353.1
TJA-4	Nitrate	**26.0**	0.27	0.50	10	10			063891-016	EPA 300.0
29-Jan-04	Nitrate	**17.4**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**27.0**	0.25	1.25	10	10			063891-015	EPA 353.1
TJA-6	Nitrate	2.5	0.054	0.1	10	10			063893-016	EPA 300.0
04-Feb-04	Nitrate	2.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.35	0.05	0.25	10	10			063893-015	EPA 353.1
TJA-7	Nitrate	**27.0**	0.27	0.50	10	10			063895-016	EPA 300.0
22-Jan-04	Nitrate	**15**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**29.8**	0.250	1.25	10	10			063895-015	EPA 353.1
WYO-3	Nitrate	2.0	0.054	0.1	10	10			063897-016	EPA 300.0
21-Jan-04	Nitrate	1.9	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.38	0.01	0.05	10	10		B2, J	063897-015	EPA 353.1
WYO-4	Nitrate	2.9	0.054	0.1	10	10			063899-016	EPA 300.0
03-Feb-04	Nitrate	3.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.06	0.01	0.05	10	10		A2, J	063899-015	EPA 353.1
	Nitrate plus nitrite as N (lab re-analysis)	2.11	0.01	0.05	10	10			063899-R15	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 2nd and 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-4 (Duplicate) 03-Feb-04	Nitrate	2.9	0.054	0.1	10	10			063900-016	EPA 300.0
	Nitrate plus nitrite as N	2.09	0.01	0.05	10	10		A2, J	063900-015	EPA 353.1
	Nitrate plus nitrite as N (lab re-analysis)	2.12	0.01	0.05	10	10			063900-R15	EPA 353.1
Eubank-1 20-May-04	Nitrate	2.3	0.054	0.10	10	10			064600-016	EPA 300.0
	Nitrate	3.2	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.34	0.0144	0.20	10	10			064600-015	EPA 353.1
Eubank-2 06-May-04	Nitrate	1.2	0.054	0.10	10	10			064602-016	EPA 300.0
	Nitrate	1.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.29	0.0144	0.20	10	10			064602-015	EPA 353.1
Eubank-3 04-May-04	Nitrate	3.1	0.054	0.10	10	10			064604-016	EPA 300.0
	Nitrate	3.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.18	0.0359	0.05	10	10			064604-015	EPA 353.1
Eubank-5 03-May-04	Nitrate	3.3	0.054	0.10	10	10			064607-016	EPA 300.0
	Nitrate	3.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.51	0.0359	0.05	10	10			064607-015	EPA 353.1
PGS-2 12-May-04	Nitrate	0.90	0.054	0.10	10	10			064551-016	EPA 300.0
	Nitrate	1.7	0.50	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.837	0.0144	0.20	10	10			064551-015	EPA 353.1
TA1-W-01 10-May-04	Nitrate	2.4	0.054	0.10	10	10			064553-016	EPA 300.0
	Nitrate	2.7	0.50	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.34	0.0144	0.20	10	10			064553-015	EPA 353.1
TA1-W-02 11-May-04	Nitrate	1.0	0.054	0.10	10	10			064556-016	EPA 300.0
	Nitrate	0.8	0.50	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.04	0.0144	0.20	10	10			064556-015	EPA 353.1
TA1-W-03 28-Apr-04	Nitrate	6.5	0.054	0.10	10	10			064558-016	EPA 300.0
	Nitrate	5.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	7.4	0.0359	0.50	10	10			064558-015	EPA 353.1
TA1-W-04 26-Apr-04	Nitrate	1.6	0.054	0.10	10	10			064560-016	EPA 300.0
	Nitrate	2.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.61	0.0359	0.05	10	10	N		064560-015	EPA 353.1
TA1-W-05 07-May-04	Nitrate	1.1	0.054	0.10	10	10			064562-016	EPA 300.0
	Nitrate	3.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.923	0.0144	0.20	10	10			064562-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-06	Nitrate	3.2	0.054	0.10	10	10			064564-016	EPA 300.0
21-May-04	Nitrate	3.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.14	0.0144	0.20	10	10			064564-015	EPA 353.1
TA1-W-08	Nitrate	6.9	0.054	0.10	10	10			064566-016	EPA 300.0
23-Apr-04	Nitrate	6.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	6.59	0.0359	0.50	10	10			064566-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.10	10	10			064568-016	EPA 300.0
13-May-04	Nitrate	3.3	0.5	NA	10	10		None	Field	HACH 8039
(QED)	Nitrate plus nitrite as N	3.12	0.0144	0.20	10	10			064568-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.10	10	10			064571-016	EPA 300.0
19-May-04	Nitrate	4.0	0.5	NA	10	10		None	Field	HACH 8039
(Bennett)	Nitrate plus nitrite as N	3.24	0.0144	0.20	10	10			064571-015	EPA 353.1
TA2-SW1-320	Nitrate	**22**	0.27	0.50	10	10			064573-016	EPA 300.0
14-May-04	Nitrate	**16.5**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**24.2**	0.144	2	10	10	H	HT, J	064573-015	EPA 353.1
TA2-W-01	Nitrate	4.9	0.054	0.10	10	10			064575-016	EPA 300.0
17-May-04	Nitrate	2.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.46	0.0359	0.50	10	10			064575-015	EPA 353.1
TA2-W-19	Nitrate	9.3	0.054	0.10	10	10			064577-016	EPA 300.0
27-Apr-04	Nitrate	7.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	9.23	0.0359	0.50	10	10			064577-015	EPA 353.1
TA2-W-19 (Duplicate)	Nitrate	9.3	0.054	0.10	10	10			064578-016	EPA 300.0
27-Apr-04	Nitrate plus nitrite as N	9.39	0.0359	0.50	10	10			064578-015	EPA 353.1
TA2-W-26	Nitrate	4.8	0.054	0.10	10	10			064580-016	EPA 300.0
21-Apr-04	Nitrate	3.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.70	0.0359	0.50	10	10		J, B2	064580-015	EPA 353.1
TA2-W-26 (Duplicate)	Nitrate	4.7	0.054	0.10	10	10			064581-016	EPA 300.0
21-Apr-04	Nitrate plus nitrite as N	4.80	0.0359	0.50	10	10		J, B2	064581-015	EPA 353.1
TA2-W-27	Nitrate	5.0	0.054	0.10	10	10			064583-016	EPA 300.0
19-Apr-04	Nitrate	4.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.17	0.0359	0.50	10	10			064583-015	EPA 353.1
TJA-2	Nitrate	9.1	0.054	0.10	10	10			064585-016	EPA 300.0
05-May-04	Nitrate	8.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	8.65	0.144	0.05	10	10			064585-015	EPA 353.1
TJA-3	Nitrate	2.5	0.054	0.10	10	10			064587-016	EPA 300.0
27-Apr-04	Nitrate	4.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.8	0.0359	0.50	10	10			064587-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd and 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4	Nitrate	**24**	0.27	0.50	10	10			064589-016	EPA 300.0
20-Apr-04	Nitrate	**17.3**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**26.4**	0.144	2	10	10			064589-015	EPA 353.1
TJA-6	Nitrate	2.4	0.054	0.10	10	10			064591-016	EPA 300.0
22-Apr-04	Nitrate	2.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.42	0.0359	0.05	10	10		J, B2	064591-015	EPA 353.1
TJA-7	Nitrate	**24**	0.27	0.50	10	10			064593-016	EPA 300.0
30-Apr-04	Nitrate	**16.3**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**17.9**	0.287	4	10	10			064593-015	EPA 353.1
WYO-3	Nitrate	1.9	0.054	0.10	10	10			064595-016	EPA 300.0
28-Apr-04	Nitrate	2.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.12	0.0359	0.50	10	10			064595-015	EPA 353.1
WYO-4	Nitrate	2.7	0.054	0.10	10	10			064597-016	EPA 300.0
30-Apr-04	Nitrate	2.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.81	0.0359	0.50	10	10			064597-015	EPA 353.1
WYO-4 (Duplicate)	Nitrate	2.7	0.054	0.10	10	10			064598-016	EPA 300.0
30-Apr-04	Nitrate plus nitrite as N	2.86	0.0359	0.05	10	10			064598-015	EPA 353.1
Eubank-1	Nitrate	2.3	2.8	0.054	10	10			065416-016	EPA 300.0
19-Aug-04	Nitrate	1.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.17	0.0144	0.20	10	10			065416-015	EPA 353.1
PGS-2	Nitrate	0.82	0.054	0.10	10	10			065360-016	EPA 300.0
28-Jul-04	Nitrate	1.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.62	0.0036	0.05	10	10			065360-015	EPA 353.1
TA1-W-01	Nitrate	2.6	0.054	0.10	10	10			065362-016	EPA 300.0
17-Aug-04	Nitrate	2.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.32	0.0144	0.20	10	10			065362-015	EPA 353.1
TA1-W-02	Nitrate	1.0	0.054	0.10	10	10		A2, J	065364-016	EPA 300.0
13-Aug-04	Nitrate	1.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.921	0.0144	0.20	10	10			065364-015	EPA 353.1
TA1-W-03	Nitrate	6.8	0.054	0.10	10	10			065366-016	EPA 300.0
18-Aug-04	Nitrate	5.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	6.53	0.0144	0.20	10	10			065366-015	EPA 353.1
TA1-W-04	Nitrate	1.6	0.054	0.10	10	10			065368-016	EPA 300.0
26-Jul-04	Nitrate	1.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.53	0.0036	0.05	10	10			065368-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05	Nitrate	1.1	0.054	0.10	10	10			065370-016	EPA 300.0
20-Aug-04	Nitrate	2.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.596	0.0036	0.05	10	10			065370-015	EPA 353.1
TA1-W-06	Nitrate	3.2	0.054	0.10	10	10			065372-016	EPA 300.0
06-Aug-04	Nitrate	4.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.72	0.0144	0.20	10	10			065372-015	EPA 353.1
TA1-W-08	Nitrate	6.8	0.054	0.10	10	10		A2, J	065374-016	EPA 300.0
13-Aug-04	Nitrate	3.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	7.31	0.144	2.0	10	10			065374-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.10	10	10			065377-016	EPA 300.0
26-Jul-04	Nitrate	4.7	0.5	NA	10	10		None	Field	HACH 8039
(QED)	Nitrate plus nitrite as N	3.21	0.0036	0.05	10	10			065377-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.10	10	10			065379-016	EPA 300.0
23-Aug-04	Nitrate	2.7	0.5	NA	10	10		None	Field	HACH 8039
(Bennett)	Nitrate plus nitrite as N	3.01	0.0144	0.20	10	10			065379-015	EPA 353.1
TA2-SW1-320	Nitrate	**24.0**	0.27	0.50	10	10		A2, J	065381-016	EPA 300.0
27-Jul-04	Nitrate	**34.2**	0.5	NA	10	10			Field	HACH 8039
	Nitrate plus nitrite as N	**24.0**	0.0036	0.05	10	10			065381-015	EPA 353.1
TA2-W-01	Nitrate	5.0	0.054	0.10	10	10			065383-016	EPA 300.0
12-Aug-04	Nitrate	3.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.71	0.144	2.0	10	10			065383-015	EPA 353.1
TA2-W-19	Nitrate	9.4	0.054	0.10	10	10		A2, J	065385-016	EPA 300.0
27-Jul-04	Nitrate	8.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	9.53	0.0036	0.05	10	10			065385-015	EPA 353.1
TA2-W-26	Nitrate	4.7	0.054	0.10	10	10		P2	065387-016	EPA 300.0
30-Jul-04	Nitrate	5.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.55	0.144	2.0	10	10			065387-015	EPA 353.1
TA2-W-26 (Duplicate)	Nitrate	4.6	0.054	0.10	10	10		P2	065388-016	EPA 300.0
30-Jul-04	Nitrate plus nitrite as N	3.31	0.144	2.0	10	10			065388-015	EPA 353.1
TA2-W-27	Nitrate	4.3	0.054	0.10	10	10			065392-016	EPA 300.0
28-Jul-04	Nitrate	3.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.32	0.0359	0.50	10	10			065392-015	EPA 353.1
TJA-2	Nitrate	9.3	0.054	0.10	10	10		A2, J	065394-016	EPA 300.0
16-Aug-04	Nitrate	8.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	9.96	0.144	2.0	10	10			065394-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-3	Nitrate	2.7	0.054	0.10	10	10			065397-016	EPA 300.0
09-Aug-03	Nitrate	2.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.52	0.0144	0.20	10	10			065397-015	EPA 353.1
TJA-4	Nitrate	**26.0**	0.27	0.50	10	10		A2, J	065399-016	EPA 300.0
10-Aug-04	Nitrate	**21.3**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**25.4**	0.144	2.0	10	10			065399-015	EPA 353.1
TJA-6	Nitrate	2.5	0.054	0.10	10	10			065401-016	EPA 300.0
09-Aug-04	Nitrate	2.9	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.20	0.0144	0.20	10	10			065397-015	EPA 353.1
TJA-7	Nitrate	**27.0**	0.054	0.10	10	10	E	J	065403-016	EPA 300.0
06-Aug-04	Nitrate (re-analysis)	**24.0**	0.27	0.50	10	10	H	HT, J	065403-R16	EPA 300.0
	Nitrate	**20.9**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**24.3**	0.144	2.0	10	10			065403-015	EPA 353.1
TJA-7 (Duplicate)	Nitrate	**27.0**	0.054	0.10	10	10	E	J	065404-016	EPA 300.0
06-Aug-04	Nitrate (re-analysis)	**25.0**	0.27	0.50	10	10	H	HT, J	065404-R16	EPA 300.0
	Nitrate plus nitrite as N	**24.6**	0.144	2.0	10	10			065404-015	EPA 353.1
WYO-3	Nitrate	2.0	0.054	0.10	10	10			065408-016	EPA 300.0
11-Aug-04	Nitrate	2.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.89	0.0144	0.20	10	10			065408-015	EPA 353.1
WYO-4	Nitrate	2.8	0.054	0.10	10	10			065411-016	EPA 300.0
03-Aug-04	Nitrate	1.9	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.04	0.0144	0.20	10	10		B2, J	065411-015	EPA 353.1
WYO-4 (Duplicate)	Nitrate	2.8	0.054	0.10	10	10			065412-016	EPA 300.0
03-Aug-04	Nitrate plus nitrite as N	2.71	0.0144	0.20	10	10		B2, J	065412-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1	Nitrate	2.3	0.054	0.10	10	10			066077-016	EPA 300.0
20-Oct-04	Nitrate	1.8	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.62	0.003	0.02	10	10			066077-015	EPA 353.1
Eubank-2	Nitrate	1.3	0.054	0.10	10	10			066080-016	EPA 300.0
21-Oct-04	Nitrate	1.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.689	0.03	0.20	10	10			066080-015	EPA 353.1
Eubank-3	Nitrate	3.2	0.054	0.10	10	10			066082-016	EPA 300.0
20-Oct-04	Nitrate	3.5	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.49	0.003	0.02	10	10			066082-015	EPA 353.1
Eubank-5	Nitrate	3.2	0.054	0.10	10	10			066084-016	EPA 300.0
25-Oct-04	Nitrate	3.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.61	0.003	0.02	10	10			066084-015	EPA 353.1
PGS-2	Nitrate	1.1	0.054	0.10	10	10			066025-016	EPA 300.0
05-Oct-04	Nitrate	1.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.02	0.003	0.02	10	10		A2, J	066025-015	EPA 353.1
TA1-W-01	Nitrate	2.5	0.054	0.10	10	10		P2	066027-016	EPA 300.0
06-Oct-04	Nitrate	3.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.97	0.003	0.02	10	10			066027-015	EPA 353.1
TA1-W-02	Nitrate	1.1	0.054	0.10	10	10			066029-016	EPA 300.0
11-Oct-04	Nitrate	1.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.24	0.003	0.02	10	10			066029-015	EPA 353.1
TA1-W-03	Nitrate	7.0	0.054	0.10	10	10			066031-016	EPA 300.0
19-Oct-04	Nitrate	5.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.545	0.003	0.02	10	10			066031-015	EPA 353.1
TA1-W-04	Nitrate	1.6	0.054	0.10	10	10		P2	066033-016	EPA 300.0
07-Oct-04	Nitrate	2.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.82	0.003	0.02	10	10			066033-015	EPA 353.1
TA1-W-05	Nitrate	1.1	0.054	0.10	10	10			066035-016	EPA 300.0
26-Oct-04	Nitrate	1.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	1.16	0.003	0.02	10	10			066035-015	EPA 353.1
TA1-W-06	Nitrate	3.2	0.054	0.10	10	10			066037-016	EPA 300.0
26-Oct-04	Nitrate	3.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.54	0.003	0.02	10	10			066037-015	EPA 353.1
TA1-W-08	Nitrate	7.0	0.054	0.10	10	10		P2	066039-016	EPA 300.0
08-Oct-04	Nitrate	5.3	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	0.337	0.003	0.020	10	10			066039-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Continued)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595	Nitrate	3.3	0.054	0.10	10	10			066042-016	EPA 300.0
25-Oct-04	Nitrate	2.5	0.5	NA	10	10		None	Field	HACH 8039
(QED)	Nitrate plus nitrite as N	2.57	0.03	0.20	10	10			066042-015	EPA 353.1
TA2-NW1-595	Nitrate	3.3	0.054	0.10	10	10		P2	066044-016	EPA 300.0
07-Oct-04	Nitrate	3.3	0.5	NA	10	10		None	Field	HACH 8039
(Bennett)	Nitrate plus nitrite as N	3.38	0.003	0.02	10	10		B2, J	066044-015	EPA 353.1
TA2-SW1-320	Nitrate	**25**	0.27	0.50	10	10			066046-016	EPA 300.0
04-Oct-04	Nitrate	**17.4**	0.5	NA	10	10			Field	HACH 8039
	Nitrate plus nitrite as N	**25.1**	0.03	0.20	10	10		A2, J	066046-015	EPA 353.1
TA2-W-01	Nitrate	4.8	0.054	0.10	10	10			066048-016	EPA 300.0
18-Oct-04	Nitrate	3.7	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	4.75	0.003	0.02	10	10			066048-015	EPA 353.1
TA2-W-19	Nitrate	10	0.054	0.10	10	10			066050-016	EPA 300.0
04-Oct-04	Nitrate	7.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**10.3**	0.03	0.20	10	10		A2, J	066050-015	EPA 353.1
TA2-W-19 (Duplicate)	Nitrate	10	0.054	0.10	10	10			066051-016	EPA 300.0
04-Oct-04	Nitrate plus nitrite as N	9.93	0.03	0.20	10	10		A2, J	066051-015	EPA 353.1
TA2-W-26	Nitrate	4.6	0.054	0.10	10	10			066053-016	EPA 300.0
13-Oct-04	Nitrate	4.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.32	0.003	0.02	10	10			066053-015	EPA 353.1
TA2-W-27	Nitrate	4.2	0.054	0.10	10	10			066056-016	EPA 300.0
14-Oct-04	Nitrate	3.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.91	0.03	0.20	10	10			066056-015	EPA 353.1
TJA-2	Nitrate	9.6	0.054	0.10	10	10			066059-016	EPA 300.0
11-Oct-04	Nitrate	**14.9**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	7.51	0.03	0.20	10	10			066059-015	EPA 353.1
TJA-3	Nitrate	2.6	0.054	0.10	10	10			066061-016	EPA 300.0
12-Oct-04	Nitrate	3.0	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.12	0.003	0.02	10	10			066061-015	EPA 353.1
TJA-4	Nitrate	**25**	0.27	0.50	10	10			066063-016	EPA 300.0
12-Oct-04	Nitrate	**15.9**	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**20.2**	0.03	0.20	10	10			066063-015	EPA 353.1
TJA-6	Nitrate	2.5	0.054	0.10	10	10			066065-016	EPA 300.0
13-Oct-04	Nitrate	2.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.94	0.003	0.02	10	10			066065-015	EPA 353.1

Refer to footnotes at end of table.

Table F-3 (Concluded)
Summary of Nitrate and Nitrate plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-7	Nitrate	**25**	0.27	0.50	10	10			066067-016	EPA 300.0
15-Oct-04	Nitrate	5.6	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	**27.1**	0.03	0.20	10	10			066067-015	EPA 353.1
TJA-7 (Duplicate)	Nitrate	**25**	0.27	0.50	10	10			066068-016	EPA 300.0
15-Oct-04	Nitrate plus nitrite as N	**23.2**	0.03	0.20	10	10			066068-015	EPA 353.1
WYO-3	Nitrate	2.0	0.054	0.10	10	10			066071-016	EPA 300.0
08-Oct-04	Nitrate	2.4	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	2.38	0.003	0.02	10	10			066071-015	EPA 353.1
WYO-4	Nitrate	2.8	0.054	0.10	10	10		P2	066073-016	EPA 300.0
06-Oct-04	Nitrate	2.1	0.5	NA	10	10		None	Field	HACH 8039
	Nitrate plus nitrite as N	3.30	0.003	0.02	10	10			066073-015	EPA 353.1
WYO-4 (Duplicate)	Nitrate	2.8	0.054	0.10	10	10		P2	066074-016	EPA 300.0
06-Oct-04	Nitrate plus nitrite as N	3.29	0.003	0.02	10	10			066074-015	EPA 353.1

Note: Values in **bold** exceed the established MCL or MAC.

[a]The minimum concentration or activity that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Method SW846 9056).
U.S. Environmental Protection Agency (EPA), December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to all 300 series methods).
HACH 8039, "Nitrate, High Range, Cadmium Reduction Method," procedures for portable colorimeters.

CFR = Code of Federal Regulations.
COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MAC = Maximum allowable concentration.
MCL = Maximum contaminant level.
MDL = Method detection limit.
µg/L = Microgram(s) per liter.
mg/L = Milligram(s) per liter.
NA = Not applicable.
ND = Not detected above the MDL.
NE = Not established.
NMAC = New Mexico Administrative Code.
PQL = Practical quantitation limit.
SNL/NM = Sandia National Laboratories/New Mexico.

Laboratory Qualifiers:

B = Analyte detected in associated laboratory method blank.
E = Matrix interference during analysis.
H = Holding time was exceeded.
J = Amount detected is below the PQL.

Validation Qualifiers:

(If blank, quality control samples met acceptance criteria with respect to submitted sample.)

A2 = Laboratory accuracy and/or bias measurements for the associated matrix spike and/or matrix spike duplicate do not meet acceptance criteria.
B2 = Analyte present in associated equipment blank sample.
HT = The holding time was exceeded for the associated sample analysis.
J = The associate value is an estimated quantity.
None = No validation performed on field analysis.
P2 = Insufficient quality control data to determine laboratory precision.

Table F-4
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
EUBANK-1	Bromide	0.141	0.0978	0.2	NE	NE	J		062724-013	SW846 9056
18-Aug-03	Chloride	12.3	0.0322	0.2	NE	NE			062724-013	SW846 9056
	Fluoride	0.318	0.0553	0.1	4	1.6			062724-013	SW846 9056
	Sulfate	85.4	0.965	2	NE	NE			062724-013	SW846 9056
	Calcium	70.9	0.04	0.1	NE	NE			062724-009	SW846 3005
	Magnesium	9.76	0.00633	0.01	NE	NE		J	062724-009	SW846 3005
	Potassium	1.65	0.0151	0.3	NE	NE	B		062724-009	SW846 3005
	Sodium	22.8	0.00968	0.25	NE	NE		J	062724-009	SW846 3005
	Alkalinity as CACO3	133	1.45	2	NE	NE			062724-014	EPA 310.1
	bicarb as CACO3 Alkalinity	133	1.45	2	NE	NE			062724-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062724-014	EPA 310.1
PGS-2	Bromide	0.243	0.0978	0.2	NE	NE			062678-013	SW846 9056
22-Jul-03	Chloride	14.2	0.0322	0.2	NE	NE			062678-013	SW846 9056
	Fluoride	0.212	0.0553	0.1	4	1.6			062678-013	SW846 9056
	Sulfate	59	0.965	2	NE	NE			062678-013	SW846 9056
	Calcium	56.7	0.04	0.1	NE	NE			062678-009	SW846 3005
	Magnesium	12.1	0.00633	0.01	NE	NE			062678-009	SW846 3005
	Potassium	2.59	0.0151	0.3	NE	NE			062678-009	SW846 3005
	Sodium	34.4	0.00968	0.25	NE	NE			062678-009	SW846 3005
	Alkalinity as CACO3	168	1.45	2	NE	NE			062678-014	EPA 310.1
	bicarb as CACO3 Alkalinity	165	1.45	2	NE	NE			062678-014	EPA 310.1
	carb as CACO3 Alkalinity	2.58	1.45	2	NE	NE			062678-014	EPA 310.1
TA1-W-01	Bromide	0.275	0.0978	0.2	NE	NE			062680-013	SW846 9056
22-Jul-03	Chloride	14.7	0.0322	0.2	NE	NE			062680-013	SW846 9056
	Fluoride	0.444	0.0553	0.1	4	1.6			062680-013	SW846 9056
	Sulfate	78.3	0.965	2	NE	NE			062680-013	SW846 9056
	Calcium	72.7	0.04	0.1	NE	NE			062680-009	SW846 3005
	Magnesium	14.5	0.00633	0.01	NE	NE			062680-009	SW846 3005
	Potassium	2.15	0.0151	0.3	NE	NE			062680-009	SW846 3005
	Sodium	28	0.00968	0.25	NE	NE			062680-009	SW846 3005
	Alkalinity as CACO3	170	1.45	2	NE	NE			062680-014	EPA 310.1
	bicarb as CACO3 Alkalinity	170	1.45	2	NE	NE			062680-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062680-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-02	Bromide	0.226	0.0978	0.2	NE	NE			062682-013	SW846 9056
23-Jul-03	Chloride	14.1	0.0322	0.2	NE	NE			062682-013	SW846 9056
	Fluoride	0.407	0.0553	0.1	4	1.6			062682-013	SW846 9056
	Sulfate	79.7	0.965	2	NE	NE			062682-013	SW846 9056
	Calcium	76.8	0.2	0.5	NE	NE	B		062682-009	SW846 3005
	Magnesium	14.3	0.0317	0.05	NE	NE			062682-009	SW846 3005
	Potassium	2.33	0.0753	1.5	NE	NE			062682-009	SW846 3005
	Sodium	26.5	0.0484	1.25	NE	NE			062682-009	SW846 3005
	Alkalinity as CACO3	178	1.45	2	NE	NE			062682-014	EPA 310.1
	bicarb as CACO3 Alkalinity	177	1.45	2	NE	NE			062682-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062682-014	EPA 310.1
TA1-W-03	Bromide	3	0.0978	0.2	NE	NE			062684-013	SW846 9056
24-Jul-03	Chloride	234	1.61	10	NE	NE			062684-013	SW846 9056
	Fluoride	0.247	0.0553	0.1	4	1.6			062684-013	SW846 9056
	Sulfate	469	9.65	20	NE	NE			062684-013	SW846 9056
	Calcium	299	0.2	0.5	NE	NE	B		062684-009	SW846 3005
	Magnesium	32.7	0.0317	0.05	NE	NE			062684-009	SW846 3005
	Potassium	2.8	0.0753	1.5	NE	NE			062684-009	SW846 3005
	Sodium	51	0.0484	1.25	NE	NE			062684-009	SW846 3005
	Alkalinity as CACO3	74	1.45	2	NE	NE			062684-014	EPA 310.1
	bicarb as CACO3 Alkalinity	73.8	1.45	2	NE	NE			062684-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062684-014	EPA 310.1
TA1-W-04	Bromide	0.256	0.0978	0.2	NE	NE			062686-013	SW846 9056
29-Jul-03	Chloride	16.8	0.0322	0.2	NE	NE			062686-013	SW846 9056
	Fluoride	0.372	0.0553	0.1	4	1.6			062686-013	SW846 9056
	Sulfate	65.4	0.965	2	NE	NE			062686-013	SW846 9056
	Calcium	70.7	0.04	0.1	NE	NE	B		062686-009	SW846 3005
	Magnesium	13.1	0.00633	0.01	NE	NE			062686-009	SW846 3005
	Potassium	2.62	0.0151	0.3	NE	NE			062686-009	SW846 3005
	Sodium	27	0.00968	0.25	NE	NE	B		062686-009	SW846 3005
	Alkalinity as CACO3	173	1.45	2	NE	NE			062686-014	EPA 310.1
	bicarb as CACO3 Alkalinity	172	1.45	2	NE	NE			062686-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062686-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05	Bromide	0.204	0.0978	0.2	NE	NE			062688-013	SW846 9056
28-Jul-03	Chloride	11.5	0.0322	0.2	NE	NE			062688-013	SW846 9056
	Fluoride	0.301	0.0553	0.1	4	1.6			062688-013	SW846 9056
	Sulfate	101	0.965	2	NE	NE			062688-013	SW846 9056
	Calcium	87.6	0.04	0.1	NE	NE			062688-009	SW846 3005
	Magnesium	13.2	0.00633	0.01	NE	NE			062688-009	SW846 3005
	Potassium	2.08	0.0151	0.3	NE	NE			062688-009	SW846 3005
	Sodium	31.8	0.00968	0.25	NE	NE			062688-009	SW846 3005
	Alkalinity as CACO3	207	1.45	2	NE	NE			062688-014	EPA 310.1
	bicarb as CACO3 Alkalinity	207	1.45	2	NE	NE			062688-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062688-014	EPA 310.1
TA1-W-06	Bromide	1.23	0.0978	0.2	NE	NE			062690-013	SW846 9056
29-Jul-03	Chloride	98.1	0.322	2	NE	NE			062690-013	SW846 9056
	Fluoride	0.309	0.0553	0.1	4	1.6			062690-013	SW846 9056
	Sulfate	206	1.93	4	NE	NE			062690-013	SW846 9056
	Calcium	130	0.04	0.1	NE	NE	B		062690-009	SW846 3005
	Magnesium	16.9	0.00633	0.01	NE	NE			062690-009	SW846 3005
	Potassium	1.96	0.0151	0.3	NE	NE			062690-009	SW846 3005
	Sodium	33.8	0.00968	0.25	NE	NE	B		062690-009	SW846 3005
	Alkalinity as CACO3	98.7	1.45	2	NE	NE			062690-014	EPA 310.1
	bicarb as CACO3 Alkalinity	98.3	1.45	2	NE	NE			062690-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062690-014	EPA 310.1
TA1-W-08	Bromide	2.55	0.0978	0.2	NE	NE			062692-013	SW846 9056
30-Jul-03	Chloride	215	1.61	10	NE	NE			062692-013	SW846 9056
	Fluoride	0.27	0.0553	0.1	4	1.6			062692-013	SW846 9056
	Sulfate	672	9.65	20	NE	NE			062692-013	SW846 9056
	Calcium	330	0.2	0.5	NE	NE			062692-009	SW846 3005
	Magnesium	38	0.00633	0.01	NE	NE			062692-009	SW846 3005
	Potassium	2.95	0.0151	0.3	NE	NE	B		062692-009	SW846 3005
	Sodium	70.7	0.00968	0.25	NE	NE		J	062692-009	SW846 3005
	Alkalinity as CACO3	94.5	1.45	2	NE	NE			062692-014	EPA 310.1
	bicarb as CACO3 Alkalinity	94.2	1.45	2	NE	NE			062692-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062692-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595	Bromide	1.19	0.0978	0.2	NE	NE			062695-A13	SW846 9056
30-Jul-03	Chloride	85.1	0.322	2	NE	NE			062695-A13	SW846 9056
	Fluoride	0.344	0.0553	0.1	4	1.6			062695-A13	SW846 9056
	Sulfate	120	1.93	4	NE	NE			062695-A13	SW846 9056
	Calcium	106	0.04	0.1	NE	NE			062695-A09	SW846 3005
	Magnesium	17	0.00633	0.01	NE	NE			062695-A09	SW846 3005
	Potassium	2.36	0.0151	0.3	NE	NE	B		062695-A09	SW846 3005
	Sodium	32	0.00968	0.25	NE	NE		J	062695-A09	SW846 3005
	Alkalinity as CACO3	188	1.45	2	NE	NE			062695-A14	EPA 310.1
	bicarb as CACO3 Alkalinity	187	1.45	2	NE	NE			062695-A14	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062695-A14	EPA 310.1
TA2-NW1-595	Bromide	0.985	0.0978	0.2	NE	NE			062695-013	SW846 9056
05-Aug-03	Chloride	65.9	0.322	2	NE	NE			062695-013	SW846 9056
	Fluoride	0.216	0.0553	0.1	4	1.6			062695-013	SW846 9056
	Sulfate	92.2	1.93	4	NE	NE			062695-013	SW846 9056
	Calcium	106	0.04	0.1	NE	NE			062695-009	SW846 3005
	Magnesium	15.9	0.00633	0.01	NE	NE			062695-009	SW846 3005
	Potassium	2.34	0.0151	0.3	NE	NE	B		062695-009	SW846 3005
	Sodium	29.2	0.00968	0.25	NE	NE		J	062695-009	SW846 3005
	Alkalinity as CACO3	154	1.45	2	NE	NE			062695-014	EPA 310.1
	bicarb as CACO3 Alkalinity	154	1.45	2	NE	NE			062695-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062695-014	EPA 310.1
TA2-SW1-320	Bromide	0.421	0.0978	0.2	NE	NE			062698-013	SW846 9056
24-Jul-03	Chloride	26.3	0.0644	0.4	NE	NE			062698-013	SW846 9056
	Fluoride	0.454	0.0553	0.1	4	1.6			062698-013	SW846 9056
	Sulfate	14.1	0.193	0.4	NE	NE			062698-013	SW846 9056
	Calcium	66.3	0.2	0.5	NE	NE	B		062698-009	SW846 3005
	Magnesium	11.6	0.0317	0.05	NE	NE			062698-009	SW846 3005
	Potassium	2.05	0.0753	1.5	NE	NE			062698-009	SW846 3005
	Sodium	19.8	0.0484	1.25	NE	NE			062698-009	SW846 3005
	Alkalinity as CACO3	109	1.45	2	NE	NE			062698-014	EPA 310.1
	bicarb as CACO3 Alkalinity	108	1.45	2	NE	NE			062698-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062698-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Bromide	1.43	0.0978	0.2	NE	NE			062700-013	SW846 9056
07-Aug-03	Chloride	108	0.322	2	NE	NE			062700-013	SW846 9056
	Fluoride	0.318	0.0553	0.1	4	1.6			062700-013	SW846 9056
	Sulfate	40.3	1.93	4	NE	NE			062700-013	SW846 9056
	Calcium	85.6	0.04	0.1	NE	NE			062700-009	SW846 3005
	Magnesium	11	0.00633	0.01	NE	NE			062700-009	SW846 3005
	Potassium	1.78	0.0151	0.3	NE	NE	B		062700-009	SW846 3005
	Sodium	21.4	0.00968	0.25	NE	NE			062700-009	SW846 3005
	Alkalinity as CACO3	114	1.45	2	NE	NE			062700-014	EPA 310.1
	bicarb as CACO3 Alkalinity	113	1.45	2	NE	NE			062700-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062700-014	EPA 310.1
TA2-W-19	Bromide	0.835	0.0978	0.2	NE	NE			062702-013	SW846 9056
04-Aug-03	Chloride	72.9	0.322	2	NE	NE			062702-013	SW846 9056
	Fluoride	0.262	0.0553	0.1	4	1.6			062702-013	SW846 9056
	Sulfate	55.6	1.93	4	NE	NE			062702-013	SW846 9056
	Calcium	83.9	0.04	0.1	NE	NE			062702-009	SW846 3005
	Magnesium	11.6	0.00633	0.01	NE	NE			062702-009	SW846 3005
	Potassium	1.83	0.0151	0.3	NE	NE	B		062702-009	SW846 3005
	Sodium	23.9	0.00968	0.25	NE	NE		J	062702-009	SW846 3005
	Alkalinity as CACO3	101	1.45	2	NE	NE			062702-014	EPA 310.1
	bicarb as CACO3 Alkalinity	101	1.45	2	NE	NE			062702-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062702-014	EPA 310.1
TA2-W-26	Bromide	1.49	0.0978	0.2	NE	NE			062704-013	SW846 9056
04-Aug-03	Chloride	106	0.322	2	NE	NE			062704-013	SW846 9056
	Fluoride	0.207	0.0553	0.1	4	1.6			062704-013	SW846 9056
	Sulfate	197	1.93	4	NE	NE			062704-013	SW846 9056
	Calcium	156	0.04	0.1	NE	NE			062704-009	SW846 3005
	Magnesium	19.1	0.00633	0.01	NE	NE			062704-009	SW846 3005
	Potassium	2.21	0.0151	0.3	NE	NE	B		062704-009	SW846 3005
	Sodium	31	0.00968	0.25	NE	NE		J	062704-009	SW846 3005
	Alkalinity as CACO3	95.5	1.45	2	NE	NE			062704-014	EPA 310.1
	bicarb as CACO3 Alkalinity	95.2	1.45	2	NE	NE			062704-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062704-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27	Bromide	1.63	0.0978	0.2	NE	NE			062707-013	SW846 9056
06-Aug-03	Chloride	126	0.322	2	NE	NE			062707-013	SW846 9056
	Fluoride	0.292	0.0553	0.1	4	1.6			062707-013	SW846 9056
	Sulfate	168	1.93	4	NE	NE			062707-013	SW846 9056
	Calcium	134	0.04	0.1	NE	NE	B		062707-009	SW846 3005
	Magnesium	18.7	0.00633	0.01	NE	NE		J	062707-009	SW846 3005
	Potassium	2.46	0.0151	0.3	NE	NE	B		062707-009	SW846 3005
	Sodium	32.7	0.00968	0.25	NE	NE		J	062707-009	SW846 3005
	Alkalinity as CACO3	100	1.45	2	NE	NE			062707-014	EPA 310.1
	bicarb as CACO3 Alkalinity	99.9	1.45	2	NE	NE			062707-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062707-014	EPA 310.1
TJA-2	Bromide	0.912	0.0978	0.2	NE	NE			062709-013	SW846 9056
31-Jul-03	Chloride	70.9	0.161	1	NE	NE			062709-013	SW846 9056
	Fluoride	0.365	0.0553	0.1	4	1.6			062709-013	SW846 9056
	Sulfate	58.2	0.965	2	NE	NE			062709-013	SW846 9056
	Calcium	80.4	0.04	0.1	NE	NE			062709-009	SW846 3005
	Magnesium	13.1	0.00633	0.01	NE	NE			062709-009	SW846 3005
	Potassium	1.81	0.0151	0.3	NE	NE	B		062709-009	SW846 3005
	Sodium	24.4	0.00968	0.25	NE	NE		J	062709-009	SW846 3005
	Alkalinity as CACO3	134	1.45	2	NE	NE			062709-014	EPA 310.1
	bicarb as CACO3 Alkalinity	134	1.45	2	NE	NE			062709-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062709-014	EPA 310.1
TJA-3	Bromide	0.204	0.0978	0.2	NE	NE			062711-013	SW846 9056
06-Aug-03	Chloride	13.6	0.0322	0.2	NE	NE			062711-013	SW846 9056
	Fluoride	0.352	0.0553	0.1	4	1.6			062711-013	SW846 9056
	Sulfate	74.3	0.965	2	NE	NE			062711-013	SW846 9056
	Calcium	69	0.04	0.1	NE	NE	B		062711-009	SW846 3005
	Magnesium	11	0.00633	0.01	NE	NE		J	062711-009	SW846 3005
	Potassium	2.07	0.0151	0.3	NE	NE	B		062711-009	SW846 3005
	Sodium	26.5	0.00968	0.25	NE	NE		J	062711-009	SW846 3005
	Alkalinity as CACO3	184	1.45	2	NE	NE			062711-014	EPA 310.1
	bicarb as CACO3 Alkalinity	184	1.45	2	NE	NE			062711-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062711-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4	Bromide	0.355	0.0978	0.2	NE	NE			062713-013	SW846 9056
11-Aug-03	Chloride	21.6	0.0644	0.4	NE	NE			062713-013	SW846 9056
	Fluoride	0.403	0.0553	0.1	4	1.6			062713-013	SW846 9056
	Sulfate	19	0.193	0.4	NE	NE			062713-013	SW846 9056
	Calcium	64.5	0.04	0.1	NE	NE			062713-009	SW846 3005
	Magnesium	12.5	0.00633	0.01	NE	NE			062713-009	SW846 3005
	Potassium	3.11	0.0151	0.3	NE	NE	B		062713-009	SW846 3005
	Sodium	22.9	0.00968	0.25	NE	NE			062713-009	SW846 3005
	Alkalinity as CACO3	110	1.45	2	NE	NE			062713-014	EPA 310.1
	bicarb as CACO3 Alkalinity	110	1.45	2	NE	NE			062713-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062713-014	EPA 310.1
TJA-6	Bromide	0.227	0.0978	0.2	NE	NE			062715-013	SW846 9056
11-Aug-03	Chloride	14.8	0.0322	0.2	NE	NE			062715-013	SW846 9056
	Fluoride	0.409	0.0553	0.1	4	1.6			062715-013	SW846 9056
	Sulfate	62.1	0.965	2	NE	NE			062715-013	SW846 9056
	Calcium	61.3	0.04	0.1	NE	NE			062715-009	SW846 3005
	Magnesium	11.5	0.00633	0.01	NE	NE			062715-009	SW846 3005
	Potassium	2.21	0.0151	0.3	NE	NE	B		062715-009	SW846 3005
	Sodium	22.3	0.00968	0.25	NE	NE			062715-009	SW846 3005
	Alkalinity as CACO3	115	1.45	2	NE	NE			062715-014	EPA 310.1
	bicarb as CACO3 Alkalinity	115	1.45	2	NE	NE			062715-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062715-014	EPA 310.1
TJA-7	Bromide	0.373	0.978	2	NE	NE			062717-013	SW846 9056
12-Aug-03	Chloride	30.3	0.322	2	NE	NE			062717-013	SW846 9056
	Fluoride	0.273	0.0553	0.1	4	1.6			062717-013	SW846 9056
	Sulfate	15.7	0.193	0.4	NE	NE			062717-013	SW846 9056
	Calcium	71.4	0.04	0.1	NE	NE	B		062717-009	SW846 3005
	Magnesium	11.3	0.00633	0.01	NE	NE		J	062717-009	SW846 3005
	Potassium	2.14	0.0151	0.3	NE	NE			062717-009	SW846 3005
	Sodium	19.7	0.00968	0.25	NE	NE			062717-009	SW846 3005
	Alkalinity as CACO3	44.8	1.45	2	NE	NE			062717-014	EPA 310.1
	bicarb as CACO3 Alkalinity	44.8	1.45	2	NE	NE			062717-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062717-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2003, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3	Bromide	0.147	0.0978	0.2	NE	NE	J		062719-013	SW846 9056
13-Aug-03	Chloride	15.2	0.0322	0.2	NE	NE			062719-013	SW846 9056
	Fluoride	0.309	0.0553	0.1	4	1.6			062719-013	SW846 9056
	Sulfate	82	0.965	2	NE	NE			062719-013	SW846 9056
	Calcium	66.5	0.04	0.1	NE	NE	B		062719-009	SW846 3005
	Magnesium	11.6	0.00633	0.01	NE	NE		J	062719-009	SW846 3005
	Potassium	2.22	0.0151	0.3	NE	NE			062719-009	SW846 3005
	Sodium	25.9	0.00968	0.25	NE	NE			062719-009	SW846 3005
	Alkalinity as CACO3	189	1.45	2	NE	NE			062719-014	EPA 310.1
	bicarb as CACO3 Alkalinity	188	1.45	2	NE	NE			062719-014	EPA 310.1
	carb as CACO3 Alkalinity	1.69	1.45	2	NE	NE	J		062719-014	EPA 310.1
WYO-4	Bromide	1.04	0.0978	0.2	NE	NE			062721-013	SW846 9056
14-Aug-03	Chloride	101	0.322	2	NE	NE			062721-013	SW846 9056
	Fluoride	0.264	0.0553	0.1	4	1.6			062721-013	SW846 9056
	Sulfate	57	1.93	4	NE	NE			062721-013	SW846 9056
	Calcium	81.8	0.04	0.1	NE	NE	B		062721-009	SW846 3005
	Magnesium	11.8	0.00633	0.01	NE	NE		J	062721-009	SW846 3005
	Potassium	1.93	0.0151	0.3	NE	NE			062721-009	SW846 3005
	Sodium	20.2	0.00968	0.25	NE	NE			062721-009	SW846 3005
	Alkalinity as CACO3	97.8	1.45	2	NE	NE			062721-014	EPA 310.1
	bicarb as CACO3 Alkalinity	97.5	1.45	2	NE	NE			062721-014	EPA 310.1
	carb as CACO3 Alkalinity	ND	1.45	2	NE	NE	U		062721-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1	Bromide	0.104	0.0978	0.2	NE	NE	J		063303-013	SW846 9056
10-Nov-03	Chloride	12.1	0.0322	0.2	NE	NE			063303-013	SW846 9056
	Fluoride	0.334	0.0553	0.1	4	1.6			063303-013	SW846 9056
	Sulfate	76.2	0.965	2	NE	NE			063303-013	SW846 9056
	Calcium	71.1	0.04	0.1	NE	NE			063303-009	SW846 3005
	Magnesium	10.5	0.00633	0.01	NE	NE		J	063303-009	SW846 3005
	Potassium	1.63	0.0151	0.3	NE	NE			063303-009	SW846 3005
	Sodium	24.2	0.00968	0.25	NE	NE			063303-009	SW846 3005
	Total Alkalinity as CACO3	171	1.45	2	NE	NE			063303-014	EPA 310.1
	Alkalinity as HCO3	169	1.45	2	NE	NE			063303-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063303-014	EPA 310.1
Eubank-2	Bromide	0.110	0.0978	0.2	NE	NE	J		063304-013	SW846 9056
12-Nov-03	Chloride	12.4	0.0322	0.2	NE	NE			063304-013	SW846 9056
	Fluoride	0.264	0.0553	0.1	4	1.6			063304-013	SW846 9056
	Sulfate	91.6	1.93	4	NE	NE			063304-013	SW846 9056
	Calcium	80.8	0.04	0.1	NE	NE			063304-009	SW846 3005
	Magnesium	12.4	0.00633	0.01	NE	NE		J	063304-009	SW846 3005
	Potassium	2.04	0.0151	0.3	NE	NE			063304-009	SW846 3005
	Sodium	32.8	0.00968	0.25	NE	NE			063304-009	SW846 3005
	Total Alkalinity as CACO3	237	1.45	2	NE	NE			063304-014	EPA 310.1
	Alkalinity as HCO3	237	1.45	2	NE	NE			063304-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063304-014	EPA 310.1
Eubank-3	Bromide	0.143	0.0978	0.2	NE	NE	J		063305-013	SW846 9056
18-Nov-03	Chloride	21.2	0.0644	0.4	NE	NE			063305-013	SW846 9056
	Fluoride	0.322	0.0553	0.1	4	1.6			063305-013	SW846 9056
	Sulfate	93.0	0.965	2	NE	NE			063305-013	SW846 9056
	Calcium	82.6	0.04	0.1	NE	NE			063305-009	SW846 3005
	Magnesium	12.9	0.00633	0.01	NE	NE			063305-009	SW846 3005
	Potassium	2.03	0.0151	0.3	NE	NE	B		063305-009	SW846 3005
	Sodium	32.1	0.00968	0.25	NE	NE	B		063305-009	SW846 3005
	Total Alkalinity as CACO3	200	1.45	2	NE	NE			063305-014	EPA 310.1
	Alkalinity as HCO3	200	1.45	2	NE	NE			063305-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063305-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-5	Bromide	0.250	0.0978	0.2	NE	NE			063306-013	SW846 9056
19-Nov-03	Chloride	24.3	0.161	1	NE	NE			063306-013	SW846 9056
	Fluoride	0.310	0.0553	0.1	4	1.6			063306-013	SW846 9056
	Sulfate	90.9	0.965	2	NE	NE			063306-013	SW846 9056
	Calcium	86.4	0.04	0.1	NE	NE	B		063306-009	SW846 3005
	Magnesium	11.1	0.00633	0.01	NE	NE			063306-009	SW846 3005
	Potassium	1.79	0.0151	0.3	NE	NE			063306-009	SW846 3005
	Sodium	28.8	0.00968	0.25	NE	NE	B		063306-009	SW846 3005
	Total Alkalinity as CACO3	199	1.45	2	NE	NE			063306-014	EPA 310.1
	Alkalinity as HCO3	198	1.45	2	NE	NE			063306-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063306-014	EPA 310.1
PGS-2	Bromide	0.107	0.0978	0.2	NE	NE	J		063278-013	SW846 9056
10-Nov-03	Chloride	13.1	0.0322	0.2	NE	NE			063278-013	SW846 9056
	Fluoride	0.107	0.0553	0.1	4	1.6			063278-013	SW846 9056
	Sulfate	58.6	0.965	2	NE	NE			063278-013	SW846 9056
	Calcium	50.9	0.04	0.1	NE	NE			063278-009	SW846 3005
	Magnesium	10.8	0.00633	0.01	NE	NE		J	063278-009	SW846 3005
	Potassium	2.41	0.0151	0.3	NE	NE			063278-009	SW846 3005
	Sodium	33.4	0.00968	0.25	NE	NE			063278-009	SW846 3005
	Total Alkalinity as CACO3	159	1.45	2	NE	NE			063278-014	EPA 310.1
	Alkalinity as HCO3	155	1.45	2	NE	NE			063278-014	EPA 310.1
	Alkalinity as CO3	3.34	1.45	2	NE	NE			063278-014	EPA 310.1
TA1-W-01	Bromide	0.190	0.0978	0.2	NE	NE	J	B3, J	063279-013	SW846 9056
06-Nov-03	Chloride	14.9	0.0322	0.2	NE	NE			063279-013	SW846 9056
	Fluoride	0.419	0.0553	0.1	4	1.6			063279-013	SW846 9056
	Sulfate	77.7	0.965	2	NE	NE			063279-013	SW846 9056
	Calcium	71.7	0.04	0.1	NE	NE			063279-009	SW846 3005
	Magnesium	12.6	0.00633	0.01	NE	NE			063279-009	SW846 3005
	Potassium	2.44	0.0151	0.3	NE	NE			063279-009	SW846 3005
	Sodium	28.6	0.00968	0.25	NE	NE	B	J	063279-009	SW846 3005
	Total Alkalinity as CACO3	176	1.45	2	NE	NE			063279-014	EPA 310.1
	Alkalinity as HCO3	175	1.45	2	NE	NE			063279-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063279-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-02	Bromide	0.137	0.0978	0.2	NE	NE	J		063280-013	SW846 9056
08-Oct-03	Chloride	13.8	0.0322	0.2	NE	NE			063280-013	SW846 9056
	Fluoride	0.323	0.0553	0.1	4	1.6			063280-013	SW846 9056
	Sulfate	78.8	1.93	4	NE	NE			063280-013	SW846 9056
	Calcium	72.0	0.04	0.1	NE	NE		J	063280-009	SW846 3005
	Magnesium	13.2	0.00633	0.01	NE	NE			063280-009	SW846 3005
	Potassium	2.08	0.0151	0.3	NE	NE			063280-009	SW846 3005
	Sodium	23.4	0.00968	0.25	NE	NE			063280-009	SW846 3005
	Total Alkalinity as CACO3	165	1.45	2	NE	NE			063280-014	EPA 310.1
	Alkalinity as HCO3	165	1.45	2	NE	NE			063280-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063280-014	EPA 310.1
TA1-W-03	Bromide	3.03	0.0978	0.2	NE	NE			063281-013	SW846 9056
13-Oct-03	Chloride	234	1.61	10	NE	NE			063281-013	SW846 9056
	Fluoride	0.261	0.0553	0.1	4	1.6			063281-013	SW846 9056
	Sulfate	461	9.65	20	NE	NE			063281-013	SW846 9056
	Calcium	298	0.2	0.5	NE	NE			063281-009	SW846 3005
	Magnesium	31.8	0.00633	0.01	NE	NE			063281-009	SW846 3005
	Potassium	2.61	0.0151	0.3	NE	NE			063281-009	SW846 3005
	Sodium	45.0	0.00968	0.25	NE	NE	B		063281-009	SW846 3005
	Total Alkalinity as CACO3	67.1	1.45	2	NE	NE			063281-014	EPA 310.1
	Alkalinity as HCO3	66.8	1.45	2	NE	NE			063281-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063281-014	EPA 310.1
TA1-W-04	Bromide	0.213	0.0978	0.2	NE	NE			063282-013	SW846 9056
14-Oct-03	Chloride	16.7	0.0322	0.2	NE	NE			063282-013	SW846 9056
	Fluoride	0.360	0.0553	0.1	4	1.6			063282-013	SW846 9056
	Sulfate	65.0	0.965	2	NE	NE			063282-013	SW846 9056
	Calcium	68.2	0.04	0.1	NE	NE			063282-009	SW846 3005
	Magnesium	11.9	0.00633	0.01	NE	NE			063282-009	SW846 3005
	Potassium	2.39	0.0151	0.3	NE	NE			063282-009	SW846 3005
	Sodium	24.5	0.00968	0.25	NE	NE	B		063282-009	SW846 3005
	Total Alkalinity as CACO3	186	1.45	2	NE	NE			063282-014	EPA 310.1
	Alkalinity as HCO3	185	1.45	2	NE	NE			063282-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063282-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05	Bromide	0.121	0.0978	0.2	NE	NE	J		063283-013	SW846 9056
20-Oct-03	Chloride	12.3	0.0322	0.2	NE	NE			063283-013	SW846 9056
	Fluoride	0.224	0.0553	0.1	4	1.6			063283-013	SW846 9056
	Sulfate	99.5	0.965	2	NE	NE			063283-013	SW846 9056
	Calcium	81.6	0.04	0.1	NE	NE			063283-009	SW846 3005
	Magnesium	11.0	0.00633	0.01	NE	NE		J	063283-009	SW846 3005
	Potassium	2.0	0.0151	0.3	NE	NE			063283-009	SW846 3005
	Sodium	26.1	0.00968	0.25	NE	NE			063283-009	SW846 3005
	Total Alkalinity as CACO3	236	1.45	2	NE	NE			063283-014	EPA 310.1
	Alkalinity as HCO3	236	1.45	2	NE	NE			063283-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063283-014	EPA 310.1
TA1-W-06	Bromide	1.19	0.0978	0.2	NE	NE			063284-013	SW846 9056
09-Oct-03	Chloride	100	0.322	2	NE	NE			063284-013	SW846 9056
	Fluoride	0.291	0.0553	0.1	4	1.6			063284-013	SW846 9056
	Sulfate	192	1.93	4	NE	NE			063284-013	SW846 9056
	Calcium	126	0.04	0.1	NE	NE		J	063284-009	SW846 3005
	Magnesium	15.6	0.00633	0.01	NE	NE			063284-009	SW846 3005
	Potassium	2.02	0.0151	0.3	NE	NE			063284-009	SW846 3005
	Sodium	31.7	0.00968	0.25	NE	NE			063284-009	SW846 3005
	Total Alkalinity as CACO3	85.1	1.45	2	NE	NE			063284-014	EPA 310.1
	Alkalinity as HCO3	84.7	1.45	2	NE	NE			063284-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063284-014	EPA 310.1
TA1-W-08	Bromide	2.51	0.0978	0.2	NE	NE			063285-013	SW846 9056
21-Oct-03	Chloride	198	3.22	20	NE	NE			063285-013	SW846 9056
	Fluoride	0.167	0.0553	0.1	4	1.6			063285-013	SW846 9056
	Sulfate	600	19.3	40	NE	NE			063285-013	SW846 9056
	Calcium	321	0.2	0.5	NE	NE			063285-009	SW846 3005
	Magnesium	40.6	0.00633	0.01	NE	NE		J	063285-009	SW846 3005
	Potassium	2.93	0.0151	0.3	NE	NE			063285-009	SW846 3005
	Sodium	75.3	0.00968	0.25	NE	NE			063285-009	SW846 3005
	Total Alkalinity as CACO3	97.8	1.45	2	NE	NE			063285-014	EPA 310.1
	Alkalinity as HCO3	97.3	1.45	2	NE	NE			063285-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063285-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595 (QED) 12-Nov-03	Bromide	0.914	0.0978	0.2	NE	NE			063287-013	SW846 9056
	Chloride	88.0	0.322	2	NE	NE			063287-013	SW846 9056
	Fluoride	0.247	0.0553	0.1	4	1.6			063287-013	SW846 9056
	Sulfate	121	1.93	4	NE	NE			063287-013	SW846 9056
	Calcium	110	0.04	0.1	NE	NE			063287-009	SW846 3005
	Magnesium	18.5	0.00633	0.01	NE	NE		J	063287-009	SW846 3005
	Potassium	2.24	0.0151	0.3	NE	NE			063287-009	SW846 3005
	Sodium	35.4	0.00968	0.25	NE	NE			063287-009	SW846 3005
	Total Alkalinity as CACO3	147	1.45	2	NE	NE			063287-014	EPA 310.1
	Alkalinity as HCO3	146	1.45	2	NE	NE			063287-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063287-014	EPA 310.1
TA2-NW1-595 (Bennett) 11-Nov-03	Bromide	0.929	0.0978	0.2	NE	NE			063288-013	SW846 9056
	Chloride	85.8	0.322	2	NE	NE			063288-013	SW846 9056
	Fluoride	0.235	0.0553	0.1	4	1.6			063288-013	SW846 9056
	Sulfate	120	1.93	4	NE	NE			063288-013	SW846 9056
	Calcium	107	0.04	0.1	NE	NE			063288-009	SW846 3005
	Magnesium	17.8	0.00633	0.01	NE	NE		J	063288-009	SW846 3005
	Potassium	2.11	0.0151	0.3	NE	NE			063288-009	SW846 3005
	Sodium	32.0	0.00968	0.25	NE	NE			063288-009	SW846 3005
	Total Alkalinity as CACO3	289	2.90	4	NE	NE			063288-014	EPA 310.1
	Alkalinity as HCO3	288	2.90	4	NE	NE			063288-014	EPA 310.1
	Alkalinity as CO3	ND	2.90	4	NE	NE	U		063288-014	EPA 310.1
TA2-SW1-320 11-Nov-03	Bromide	0.267	0.0978	0.2	NE	NE			063289-013	SW846 9056
	Chloride	24.4	0.161	1	NE	NE			063289-013	SW846 9056
	Fluoride	0.379	0.0553	0.1	4	1.6			063289-013	SW846 9056
	Sulfate	15.9	0.193	0.4	NE	NE			063289-013	SW846 9056
	Calcium	64.9	0.04	0.1	NE	NE			063289-009	SW846 3005
	Magnesium	11.5	0.00633	0.01	NE	NE		J	063289-009	SW846 3005
	Potassium	1.78	0.0151	0.3	NE	NE			063289-009	SW846 3005
	Sodium	19.6	0.00968	0.25	NE	NE			063289-009	SW846 3005
	Total Alkalinity as CACO3	229	2.90	4	NE	NE			063289-014	EPA 310.1
	Alkalinity as HCO3	228	2.90	4	NE	NE			063289-014	EPA 310.1
	Alkalinity as CO3	ND	2.90	4	NE	NE	U		063289-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Bromide	1.34	0.0978	0.2	NE	NE			063290-013	SW846 9056
01-Dec-03	Chloride	110	0.322	2	NE	NE			063290-013	SW846 9056
	Fluoride	ND	0.0553	0.1	4	1.6	U		063290-013	SW846 9056
	Sulfate	47.1	1.93	4	NE	NE			063290-013	SW846 9056
	Calcium	82.1	0.04	0.1	NE	NE			063290-009	SW846 3005
	Magnesium	9.77	0.00633	0.01	NE	NE			063290-009	SW846 3005
	Potassium	1.80	0.0151	0.3	NE	NE	B		063290-009	SW846 3005
	Sodium	19.5	0.00968	0.25	NE	NE	B	J	063290-009	SW846 3005
	Total Alkalinity as CACO3	88.8	1.45	2	NE	NE			063290-014	EPA 310.1
	Alkalinity as HCO3	88.2	1.45	2	NE	NE			063290-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063290-014	EPA 310.1
TA2-W-19	Bromide	0.904	0.0978	0.2	NE	NE		B3, J	063291-013	SW846 9056
07-Oct-03	Chloride	78.8	0.322	2	NE	NE			063291-013	SW846 9056
	Fluoride	0.287	0.0553	0.1	4	1.6			063291-013	SW846 9056
	Sulfate	48.3	1.93	4	NE	NE			063291-013	SW846 9056
	Calcium	83.9	0.04	0.1	NE	NE		J	063291-009	SW846 3005
	Magnesium	12.2	0.00633	0.01	NE	NE			063291-009	SW846 3005
	Potassium	1.82	0.0151	0.3	NE	NE			063291-009	SW846 3005
	Sodium	22.8	0.00968	0.25	NE	NE			063291-009	SW846 3005
	Total Alkalinity as CACO3	98.1	1.45	2	NE	NE			063291-014	EPA 310.1
	Alkalinity as HCO3	97.7	1.45	2	NE	NE			063291-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063291-014	EPA 310.1
TA2-W-26	Bromide	1.62	0.0978	0.2	NE	NE			063292-013	SW846 9056
16-Oct-03	Chloride	134	0.322	2	NE	NE			063292-013	SW846 9056
	Fluoride	0.218	0.0553	0.1	4	1.6			063292-013	SW846 9056
	Sulfate	248	1.93	4	NE	NE			063292-013	SW846 9056
	Calcium	164	0.04	0.1	NE	NE	B		063292-009	SW846 3005
	Magnesium	19.8	0.00633	0.01	NE	NE		J	063292-009	SW846 3005
	Potassium	2.08	0.0151	0.3	NE	NE			063292-009	SW846 3005
	Sodium	29.8	0.00968	0.25	NE	NE	B		063292-009	SW846 3005
	Total Alkalinity as CACO3	89.8	1.45	2	NE	NE			063292-014	EPA 310.1
	Alkalinity as HCO3	89.3	1.45	2	NE	NE			063292-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063292-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27	Bromide	1.62	0.0978	0.2	NE	NE			063294-013	SW846 9056
23-Oct-03	Chloride	129	0.322	2	NE	NE			063294-013	SW846 9056
	Fluoride	0.311	0.0553	0.1	4	1.6			063294-013	SW846 9056
	Sulfate	164	1.93	4	NE	NE			063294-013	SW846 9056
	Calcium	135	0.04	0.1	NE	NE			063294-009	SW846 3005
	Magnesium	17.5	0.00633	0.01	NE	NE		J	063294-009	SW846 3005
	Potassium	2.12	0.0151	0.3	NE	NE			063294-009	SW846 3005
	Sodium	32.0	0.00968	0.25	NE	NE			063294-009	SW846 3005
	Total Alkalinity as CACO3	98.8	1.45	2	NE	NE			063294-014	EPA 310.1
	Alkalinity as HCO3	98.2	1.45	2	NE	NE			063294-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063294-014	EPA 310.1
TJA-2	Bromide	0.915	0.0978	0.2	NE	NE			063295-013	SW846 9056
15-Oct-03	Chloride	72.2	0.161	1	NE	NE			063295-013	SW846 9056
	Fluoride	0.352	0.0553	0.1	4	1.6			063295-013	SW846 9056
	Sulfate	56.1	0.965	2	NE	NE			063295-013	SW846 9056
	Calcium	85.0	0.04	0.1	NE	NE	B		063295-009	SW846 3005
	Magnesium	12.8	0.00633	0.01	NE	NE		J	063295-009	SW846 3005
	Potassium	1.74	0.0151	0.3	NE	NE			063295-009	SW846 3005
	Sodium	22.9	0.00968	0.25	NE	NE	B		063295-009	SW846 3005
	Total Alkalinity as CACO3	114	1.45	2	NE	NE			063295-014	EPA 310.1
	Alkalinity as HCO3	113	1.45	2	NE	NE			063295-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063295-014	EPA 310.1
TJA-3	Bromide	0.126	0.0978	0.2	NE	NE	J		063296-013	SW846 9056
22-Oct-03	Chloride	13.4	0.0322	0.2	NE	NE			063296-013	SW846 9056
	Fluoride	0.278	0.0553	0.1	4	1.6			063296-013	SW846 9056
	Sulfate	73.4	0.965	2	NE	NE			063296-013	SW846 9056
	Calcium	68.4	0.04	0.1	NE	NE			063296-009	SW846 3005
	Magnesium	11.7	0.00633	0.01	NE	NE		J	063296-009	SW846 3005
	Potassium	1.82	0.0151	0.3	NE	NE			063296-009	SW846 3005
	Sodium	24.4	0.00968	0.25	NE	NE			063296-009	SW846 3005
	Total Alkalinity as CACO3	169	1.45	2	NE	NE			063296-014	EPA 310.1
	Alkalinity as HCO3	168	1.45	2	NE	NE			063296-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063296-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4 27-Oct-03	Bromide	0.243	0.0978	0.2	NE	NE			063297-013	SW846 9056
	Chloride	21.1	0.0644	0.4	NE	NE			063297-013	SW846 9056
	Fluoride	0.322	0.0553	0.1	4	1.6			063297-013	SW846 9056
	Sulfate	19.4	0.193	0.4	NE	NE			063297-013	SW846 9056
	Calcium	65.3	0.04	0.1	NE	NE			063297-009	SW846 3005
	Magnesium	12.0	0.00633	0.01	NE	NE			063297-009	SW846 3005
	Potassium	3.0	0.0151	0.3	NE	NE	B		063297-009	SW846 3005
	Sodium	24.1	0.00968	0.25	NE	NE	B		063297-009	SW846 3005
	Total Alkalinity as CACO3	140	1.45	2	NE	NE			063297-014	EPA 310.1
	Alkalinity as HCO3	139	1.45	2	NE	NE			063297-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063297-014	EPA 310.1
TJA-6 05-Nov-03	Bromide	ND	0.0978	0.2	NE	NE	U		063298-013	SW846 9056
	Chloride	14.6	0.0322	0.2	NE	NE			063298-013	SW846 9056
	Fluoride	0.322	0.0553	0.1	4	1.6			063298-013	SW846 9056
	Sulfate	61.1	0.965	2	NE	NE			063298-013	SW846 9056
	Calcium	63.2	0.04	0.1	NE	NE			063298-009	SW846 3005
	Magnesium	11.2	0.00633	0.01	NE	NE			063298-009	SW846 3005
	Potassium	2.43	0.0151	0.3	NE	NE			063298-009	SW846 3005
	Sodium	24.7	0.00968	0.25	NE	NE	B	J	063298-009	SW846 3005
	Total Alkalinity as CACO3	174	1.45	2	NE	NE			063298-014	EPA 310.1
	Alkalinity as HCO3	173	1.45	2	NE	NE			063298-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063298-014	EPA 310.1
TJA-7 28-Oct-03	Bromide	0.344	0.0978	0.2	NE	NE			063299-013	SW846 9056
	Chloride	30.8	0.161	1	NE	NE			063299-013	SW846 9056
	Fluoride	0.294	0.0553	0.1	4	1.6			063299-013	SW846 9056
	Sulfate	15.9	0.193	0.4	NE	NE			063299-013	SW846 9056
	Calcium	71.0	0.04	0.1	NE	NE			063299-009	SW846 3005
	Magnesium	12.3	0.00633	0.01	NE	NE			063299-009	SW846 3005
	Potassium	2.06	0.0151	0.3	NE	NE	B		063299-009	SW846 3005
	Sodium	19.1	0.00968	0.25	NE	NE	B		063299-009	SW846 3005
	Total Alkalinity as CACO3	135	1.45	2	NE	NE			063299-014	EPA 310.1
	Alkalinity as HCO3	134	1.45	2	NE	NE			063299-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063299-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3	Bromide	ND	0.0978	0.2	NE	NE	U		063300-013	SW846 9056
29-Oct-03	Chloride	16.8	0.0322	0.2	NE	NE			063300-013	SW846 9056
	Fluoride	0.376	0.0553	0.1	4	1.6			063300-013	SW846 9056
	Sulfate	93.8	0.965	2	NE	NE			063300-013	SW846 9056
	Calcium	68.3	0.04	0.1	NE	NE			063300-009	SW846 3005
	Magnesium	13.3	0.00633	0.01	NE	NE			063300-009	SW846 3005
	Potassium	2.19	0.0151	0.3	NE	NE	B		063300-009	SW846 3005
	Sodium	25.6	0.00968	0.25	NE	NE	B		063300-009	SW846 3005
	Total Alkalinity as CACO3	172	1.45	2	NE	NE			063300-014	EPA 310.1
	Alkalinity as HCO3	171	1.45	2	NE	NE			063300-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063300-014	EPA 310.1
WYO-4	Bromide	1.05	0.0978	0.2	NE	NE			063301-013	SW846 9056
03-Nov-03	Chloride	104	0.322	2	NE	NE			063301-013	SW846 9056
	Fluoride	0.319	0.0553	0.1	4	1.6			063301-013	SW846 9056
	Sulfate	54.3	1.93	4	NE	NE			063301-013	SW846 9056
	Calcium	81.3	0.04	0.1	NE	NE	B		063301-009	SW846 3005
	Magnesium	11.7	0.00633	0.01	NE	NE		J	063301-009	SW846 3005
	Potassium	1.69	0.0151	0.3	NE	NE			063301-009	SW846 3005
	Sodium	21.3	0.00968	0.25	NE	NE			063301-009	SW846 3005
	Total Alkalinity as CACO3	95.8	1.45	2	NE	NE			063301-014	EPA 310.1
	Alkalinity as HCO3	95.2	1.45	2	NE	NE			063301-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063301-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1 16-Feb-04	Bromide	0.243	0.0978	0.2	NE	NE			063904-013	SW846 9056
	Chloride	13.0	0.0322	0.2	NE	NE			063904-013	SW846 9056
	Fluoride	0.430	0.0553	0.1	4	1.6			063904-013	SW846 9056
	Sulfate	74.2	1.93	4	NE	NE			063904-013	SW846 9056
	Calcium	70.0	0.04	0.1	NE	NE			063904-014	SW846 3005
	Magnesium	8.77	0.00633	0.01	NE	NE		J	063904-014	SW846 3005
	Potassium	1.67	0.0151	0.3	NE	NE			063904-014	SW846 3005
	Sodium	22.2	0.00968	0.25	NE	NE	B	J	063904-014	SW846 3005
	Total Alkalinity as CACO3	161	1.45	2	NE	NE			063904-018	EPA 310.1
	Alkalinity as HCO3	160	1.45	2	NE	NE			063904-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063904-018	EPA 310.1
Eubank-2 18-Feb-04	Bromide	0.217	0.0978	0.2	NE	NE			063906-013	SW846 9056
	Chloride	11.7	0.0322	0.2	NE	NE			063906-013	SW846 9056
	Fluoride	0.271	0.0553	0.1	4	1.6			063906-013	SW846 9056
	Sulfate	83.2	1.93	4	NE	NE			063906-013	SW846 9056
	Calcium	82.0	0.04	0.1	NE	NE			063906-014	SW846 3005
	Magnesium	11.3	0.00633	0.01	NE	NE			063906-014	SW846 3005
	Potassium	2.22	0.0151	0.3	NE	NE	B		063906-014	SW846 3005
	Sodium	28.3	0.00968	0.25	NE	NE			063906-014	SW846 3005
	Total Alkalinity as CACO3	202	1.45	2	NE	NE			063906-018	EPA 310.1
	Alkalinity as HCO3	201	1.45	2	NE	NE			063906-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063906-018	EPA 310.1
Eubank-3 17-Feb-04	Bromide	ND	0.0978	0.2	NE	NE	U		063909-013	SW846 9056
	Chloride	2.56	0.0322	0.2	NE	NE			063909-013	SW846 9056
	Fluoride	0.795	0.0553	0.1	4	1.6			063909-013	SW846 9056
	Sulfate	8.07	0.193	0.4	NE	NE			063909-013	SW846 9056
	Calcium	86.4	0.04	0.1	NE	NE			063909-014	SW846 3005
	Magnesium	11.4	0.00633	0.01	NE	NE		J	063909-014	SW846 3005
	Potassium	1.89	0.0151	0.3	NE	NE			063909-014	SW846 3005
	Sodium	31.8	0.00968	0.25	NE	NE	B		063909-014	SW846 3005
	Total Alkalinity as CACO3	189	1.45	2	NE	NE			063909-018	EPA 310.1
	Alkalinity as HCO3	188	1.45	2	NE	NE			063909-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063909-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-5	Bromide	0.277	0.0978	0.2	NE	NE			063911-013	SW846 9056
19-Feb-04	Chloride	22.6	0.161	1	NE	NE			063911-013	SW846 9056
	Fluoride	0.348	0.0553	0.1	4	1.6			063911-013	SW846 9056
	Sulfate	85.6	0.965	2	NE	NE			063911-013	SW846 9056
	Calcium	86.1	0.04	0.1	NE	NE	B		063911-014	SW846 3005
	Magnesium	11.5	0.00633	0.01	NE	NE		J	063911-014	SW846 3005
	Potassium	2.11	0.0151	0.3	NE	NE	B		063911-014	SW846 3005
	Sodium	30.2	0.00968	0.25	NE	NE			063911-014	SW846 3005
	Total Alkalinity as CACO3	190	1.45	2	NE	NE			063911-018	EPA 310.1
	Alkalinity as HCO3	189	1.45	2	NE	NE			063911-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063911-018	EPA 310.1
PGS-2	Bromide	0.204	0.0978	0.2	NE	NE			063851-013	SW846 9056
03-Feb-04	Chloride	14.0	0.0322	0.2	NE	NE			063851-013	SW846 9056
	Fluoride	0.089	0.0553	0.1	4	1.6	J		063851-013	SW846 9056
	Sulfate	63.1	0.965	2	NE	NE			063851-013	SW846 9056
	Calcium	52.7	0.04	0.1	NE	NE			063851-014	SW846 3005
	Magnesium	12.8	0.00633	0.01	NE	NE			063851-014	SW846 3005
	Potassium	2.96	0.0151	0.3	NE	NE			063851-014	SW846 3005
	Sodium	41.3	0.00968	0.25	NE	NE			063851-014	SW846 3005
	Total Alkalinity as CACO3	129	1.45	2	NE	NE			063851-018	EPA 310.1
	Alkalinity as HCO3	129	1.45	2	NE	NE			063851-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063851-018	EPA 310.1
TA1-W-01	Bromide	0.240	0.0978	0.2	NE	NE			063853-013	SW846 9056
05-Feb-04	Chloride	15.1	0.0322	0.2	NE	NE			063853-013	SW846 9056
	Fluoride	0.429	0.0553	0.1	4	1.6			063853-013	SW846 9056
	Sulfate	79.9	0.965	2	NE	NE			063853-013	SW846 9056
	Calcium	64.0	0.04	0.1	NE	NE	B	J	063853-014	SW846 3005
	Magnesium	10.9	0.00633	0.01	NE	NE		J	063853-014	SW846 3005
	Potassium	2.01	0.0151	0.3	NE	NE			063853-014	SW846 3005
	Sodium	21.7	0.00968	0.25	NE	NE		J	063853-014	SW846 3005
	Total Alkalinity as CACO3	167	1.45	2	NE	NE			063853-018	EPA 310.1
	Alkalinity as HCO3	167	1.45	2	NE	NE			063853-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063853-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-02	Bromide	0.906	0.0978	0.2	NE	NE	B		063855-013	SW846 9056
28-Jan-04	Chloride	14.3	0.0322	0.2	NE	NE			063855-013	SW846 9056
	Fluoride	0.320	0.0553	0.1	4	1.6			063855-013	SW846 9056
	Sulfate	82.1	0.965	2	NE	NE			063855-013	SW846 9056
	Calcium	68.2	0.04	0.1	NE	NE	B		063855-014	SW846 3005
	Magnesium	11.1	0.00633	0.01	NE	NE		J	063855-014	SW846 3005
	Potassium	2.20	0.0151	0.3	NE	NE			063855-014	SW846 3005
	Sodium	20.4	0.00968	0.25	NE	NE		J	063855-014	SW846 3005
	Total Alkalinity as CACO3	165	1.45	2	NE	NE			063855-018	EPA 310.1
	Alkalinity as HCO3	165	1.45	2	NE	NE			063855-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063855-018	EPA 310.1
TA1-W-03	Bromide	2.50	0.0978	0.2	NE	NE			063857-013	SW846 9056
07-Jan-04	Chloride	226	1.61	10	NE	NE			063857-013	SW846 9056
	Fluoride	0.152	0.0553	0.1	4	1.6			063857-013	SW846 9056
	Sulfate	473	9.65	20	NE	NE			063857-013	SW846 9056
	Calcium	286	0.2	0.5	NE	NE			063857-014	SW846 3005
	Magnesium	28.9	0.00633	0.01	NE	NE		J	063857-014	SW846 3005
	Potassium	2.74	0.0151	0.3	NE	NE	B		063857-014	SW846 3005
	Sodium	42.3	0.00968	0.25	NE	NE	B		063857-014	SW846 3005
	Total Alkalinity as CACO3	109	1.45	2	NE	NE			063857-018	EPA 310.1
	Alkalinity as HCO3	108	1.45	2	NE	NE			063857-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063857-018	EPA 310.1
TA1-W-04	Bromide	0.242	0.0978	0.2	NE	NE		B3, J	063860-013	SW846 9056
06-Jan-04	Chloride	16.6	0.0322	0.2	NE	NE			063860-013	SW846 9056
	Fluoride	0.322	0.0553	0.1	4	1.6			063860-013	SW846 9056
	Sulfate	63.6	0.965	2	NE	NE			063860-013	SW846 9056
	Calcium	63.5	0.04	0.1	NE	NE	B		063860-014	SW846 3005
	Magnesium	10.6	0.00633	0.01	NE	NE		J	063860-014	SW846 3005
	Potassium	2.37	0.0151	0.3	NE	NE			063860-014	SW846 3005
	Sodium	22.3	0.00968	0.25	NE	NE			063860-014	SW846 3005
	Total Alkalinity as CACO3	193	1.45	2	NE	NE			063860-018	EPA 310.1
	Alkalinity as HCO3	193	1.45	2	NE	NE			063860-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063860-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05	Bromide	0.988	0.0978	0.2	NE	NE	B		063862-013	SW846 9056
12-Feb-04	Chloride	11.5	0.0322	0.2	NE	NE			063862-013	SW846 9056
	Fluoride	0.253	0.0553	0.1	4	1.6			063862-013	SW846 9056
	Sulfate	98.7	0.965	2	NE	NE			063862-013	SW846 9056
	Calcium	82.1	0.04	0.1	NE	NE			063862-014	SW846 3005
	Magnesium	11.0	0.00633	0.01	NE	NE			063862-014	SW846 3005
	Potassium	2.20	0.0151	0.3	NE	NE			063862-014	SW846 3005
	Sodium	28.5	0.00968	0.25	NE	NE	B		063862-014	SW846 3005
	Total Alkalinity as CACO3	199	1.45	2	NE	NE			063862-018	EPA 310.1
	Alkalinity as HCO3	198	1.45	2	NE	NE			063862-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063862-018	EPA 310.1
TA1-W-06	Bromide	1.23	0.0978	0.2	NE	NE			063864-013	SW846 9056
09-Feb-04	Chloride	94.4	0.322	2	NE	NE			063864-013	SW846 9056
	Fluoride	0.298	0.0553	0.1	4	1.6			063864-013	SW846 9056
	Sulfate	194	1.93	4	NE	NE			063864-013	SW846 9056
	Calcium	133	0.04	0.1	NE	NE	B		063864-014	SW846 3005
	Magnesium	15.9	0.00633	0.01	NE	NE		J	063864-014	SW846 3005
	Potassium	2.12	0.0151	0.3	NE	NE			063864-014	SW846 3005
	Sodium	31.7	0.00968	0.25	NE	NE		J	063864-014	SW846 3005
	Total Alkalinity as CACO3	87.1	1.45	2	NE	NE			063864-018	EPA 310.1
	Alkalinity as HCO3	86.5	1.45	2	NE	NE			063864-018	EPA 310.1
TA1-W-08	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063864-018	EPA 310.1
10-Feb-04	Bromide	2.52	0.0978	0.2	NE	NE			063866-013	SW846 9056
	Chloride	202	1.61	10	NE	NE			063866-013	SW846 9056
	Fluoride	0.230	0.0553	0.1	4	1.6			063866-013	SW846 9056
	Sulfate	641	9.65	20	NE	NE			063866-013	SW846 9056
	Calcium	348	0.4	1	NE	NE	B		063866-014	SW846 3005
	Magnesium	40.8	0.00633	0.01	NE	NE		J	063866-014	SW846 3005
	Potassium	3.18	0.0151	0.3	NE	NE			063866-014	SW846 3005
	Sodium	74.2	0.00968	0.25	NE	NE		J	063866-014	SW846 3005
	Total Alkalinity as CACO3	82.0	1.45	2	NE	NE			063866-018	EPA 310.1
	Alkalinity as HCO3	81.2	1.45	2	NE	NE			063866-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063866-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595	Bromide	1.76	0.0978	0.2	NE	NE	B		063869-013	SW846 9056
26-Jan-04	Chloride	88.0	0.322	2	NE	NE			063869-013	SW846 9056
(Bennett)	Fluoride	0.223	0.0553	0.1	4	1.6			063869-013	SW846 9056
	Sulfate	119	1.93	4	NE	NE			063869-013	SW846 9056
	Calcium	107	0.04	0.1	NE	NE	B		063869-014	SW846 3005
	Magnesium	16.9	0.00633	0.01	NE	NE			063869-014	SW846 3005
	Potassium	2.43	0.0151	0.3	NE	NE			063869-014	SW846 3005
	Sodium	28.2	0.00968	0.25	NE	NE	B		063869-014	SW846 3005
	Total Alkalinity as CACO3	143	1.45	2	NE	NE			063869-018	EPA 310.1
	Alkalinity as HCO3	142	1.45	2	NE	NE			063869-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063869-018	EPA 310.1
TA2-NW1-595	Bromide	1.12	0.0978	0.2	NE	NE			063871-013	SW846 9056
04-Feb-04	Chloride	85.2	0.322	2	NE	NE			063871-013	SW846 9056
(QED)	Fluoride	0.307	0.0553	0.1	4	1.6			063871-013	SW846 9056
	Sulfate	114	1.93	4	NE	NE			063871-013	SW846 9056
	Calcium	98.0	0.04	0.1	NE	NE		J	063871-014	SW846 3005
	Magnesium	15.2	0.00633	0.01	NE	NE			063871-014	SW846 3005
	Potassium	2.19	0.0151	0.3	NE	NE			063871-014	SW846 3005
	Sodium	24.8	0.00968	0.25	NE	NE	B	J	063871-014	SW846 3005
	Total Alkalinity as CACO3	140	1.45	2	NE	NE			063871-018	EPA 310.1
	Alkalinity as HCO3	139	1.45	2	NE	NE			063871-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063871-018	EPA 310.1
TA2-SW1-320	Bromide	0.397	0.0978	0.2	NE	NE			063873-013	SW846 9056
29-Jan-04	Chloride	26.2	0.0644	0.4	NE	NE			063873-013	SW846 9056
	Fluoride	0.444	0.0553	0.1	4	1.6			063873-013	SW846 9056
	Sulfate	13.6	0.193	0.4	NE	NE			063873-013	SW846 9056
	Calcium	67.3	0.04	0.1	NE	NE			063873-014	SW846 3005
	Magnesium	11.3	0.00633	0.01	NE	NE			063873-014	SW846 3005
	Potassium	2.02	0.0151	0.3	NE	NE			063873-014	SW846 3005
	Sodium	19.6	0.00968	0.25	NE	NE	B	J	063873-014	SW846 3005
	Total Alkalinity as CACO3	109	1.45	2	NE	NE			063873-018	EPA 310.1
	Alkalinity as HCO3	108	1.45	2	NE	NE			063873-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063873-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Bromide	1.57	0.0978	0.2	NE	NE			063876-013	SW846 9056
12-Jan-04	Chloride	103	0.322	2	NE	NE			063876-013	SW846 9056
	Fluoride	0.300	0.0553	0.1	4	1.6			063876-013	SW846 9056
	Sulfate	45.5	1.93	4	NE	NE			063876-013	SW846 9056
	Calcium	89.9	0.04	0.1	NE	NE	B		063876-014	SW846 3005
	Magnesium	11.5	0.00633	0.01	NE	NE			063876-014	SW846 3005
	Potassium	2.11	0.0151	0.3	NE	NE	B		063876-014	SW846 3005
	Sodium	24.2	0.00968	0.25	NE	NE		J	063876-014	SW846 3005
	Total Alkalinity as CACO3	94.1	1.45	2	NE	NE			063876-018	EPA 310.1
	Alkalinity as HCO3	93.2	1.45	2	NE	NE			063876-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063876-018	EPA 310.1
TA2-W-19	Bromide	0.966	0.0978	0.2	NE	NE			063878-013	SW846 9056
13-Jan-04	Chloride	71.9	0.322	2	NE	NE			063878-013	SW846 9056
	Fluoride	0.333	0.0553	0.1	4	1.6			063878-013	SW846 9056
	Sulfate	56.8	1.93	4	NE	NE			063878-013	SW846 9056
	Calcium	81.4	0.04	0.1	NE	NE			063878-014	SW846 3005
	Magnesium	11.0	0.00633	0.01	NE	NE			063878-014	SW846 3005
	Potassium	1.75	0.0151	0.3	NE	NE			063878-014	SW846 3005
	Sodium	20.1	0.00968	0.25	NE	NE			063878-014	SW846 3005
	Total Alkalinity as CACO3	100	1.45	2	NE	NE			063878-018	EPA 310.1
	Alkalinity as HCO3	99.1	1.45	2	NE	NE			063878-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063878-018	EPA 310.1
TA2-W-26	Bromide	1.83	0.0978	0.2	NE	NE	B		063880-013	SW846 9056
20-Jan-04	Chloride	146	0.322	2	NE	NE			063880-013	SW846 9056
	Fluoride	0.216	0.0553	0.1	4	1.6			063880-013	SW846 9056
	Sulfate	268	1.93	4	NE	NE			063880-013	SW846 9056
	Calcium	175	0.2	0.5	NE	NE			063880-014	SW846 3005
	Magnesium	23.2	0.00633	0.01	NE	NE		J	063880-014	SW846 3005
	Potassium	2.51	0.0151	0.3	NE	NE			063880-014	SW846 3005
	Sodium	32.0	0.00968	0.25	NE	NE		J	063880-014	SW846 3005
	Total Alkalinity as CACO3	93.1	1.45	2	NE	NE			063880-018	EPA 310.1
	Alkalinity as HCO3	92.7	1.45	2	NE	NE			063880-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063880-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 2nd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27	Bromide	2.19	0.0978	0.2	NE	NE	B		063885-013	SW846 9056
15-Jan-04	Chloride	118	0.644	4	NE	NE			063885-013	SW846 9056
	Fluoride	0.220	0.0553	0.1	4	1.6			063885-013	SW846 9056
	Sulfate	160	3.86	8	NE	NE			063885-013	SW846 9056
	Calcium	128	0.04	0.1	NE	NE	B		063885-014	SW846 3005
	Magnesium	15.9	0.00633	0.01	NE	NE			063885-014	SW846 3005
	Potassium	2.11	0.0151	0.3	NE	NE			063885-014	SW846 3005
	Sodium	28.3	0.00968	0.25	NE	NE	B		063885-014	SW846 3005
	Total Alkalinity as CACO3	92	1.45	2	NE	NE			063885-018	EPA 310.1
	Alkalinity as HCO3	91.7	1.45	2	NE	NE			063885-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063885-018	EPA 310.1
TJA-2	Bromide	1.41	0.0978	0.2	NE	NE	B		063887-013	SW846 9056
19-Jan-04	Chloride	70.2	0.322	2	NE	NE			063887-013	SW846 9056
	Fluoride	0.278	0.0553	0.1	4	1.6			063887-013	SW846 9056
	Sulfate	54.6	1.93	4	NE	NE			063887-013	SW846 9056
	Calcium	81.1	0.04	0.1	NE	NE			063887-014	SW846 3005
	Magnesium	12.8	0.00633	0.01	NE	NE			063887-014	SW846 3005
	Potassium	1.85	0.0151	0.3	NE	NE	B		063887-014	SW846 3005
	Sodium	25	0.00968	0.25	NE	NE			063887-014	SW846 3005
	Total Alkalinity as CACO3	107	1.45	2	NE	NE			063887-018	EPA 310.1
	Alkalinity as HCO3	106	1.45	2	NE	NE			063887-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063887-018	EPA 310.1
TJA-3	Bromide	0.824	0.0978	0.2	NE	NE	B		063889-013	SW846 9056
27-Jan-04	Chloride	13.6	0.0322	0.2	NE	NE			063889-013	SW846 9056
	Fluoride	0.280	0.0553	0.1	4	1.6			063889-013	SW846 9056
	Sulfate	74.1	0.965	2	NE	NE			063889-013	SW846 9056
	Calcium	67.6	0.04	0.1	NE	NE	B		063889-014	SW846 3005
	Magnesium	10.3	0.00633	0.01	NE	NE		J	063889-014	SW846 3005
	Potassium	1.86	0.0151	0.3	NE	NE	B		063889-014	SW846 3005
	Sodium	21.6	0.00968	0.25	NE	NE			063889-014	SW846 3005
	Total Alkalinity as CACO3	160	1.45	2	NE	NE			063889-018	EPA 310.1
	Alkalinity as HCO3	160	1.45	2	NE	NE			063889-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063889-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4 29-Jan-04	Bromide	0.354	0.0978	0.2	NE	NE			063891-013	SW846 9056
	Chloride	21.7	0.0644	0.4	NE	NE			063891-013	SW846 9056
	Fluoride	0.404	0.0553	0.1	4	1.6			063891-013	SW846 9056
	Sulfate	18.5	0.193	0.4	NE	NE			063891-013	SW846 9056
	Calcium	73.6	0.04	0.1	NE	NE			063891-014	SW846 3005
	Magnesium	15.4	0.00633	0.01	NE	NE			063891-014	SW846 3005
	Potassium	3.46	0.0151	0.3	NE	NE			063891-014	SW846 3005
	Sodium	27.8	0.00968	0.25	NE	NE	B	J	063891-014	SW846 3005
	Total Alkalinity as CACO3	133	1.45	2	NE	NE			063891-018	EPA 310.1
	Alkalinity as HCO3	133	1.45	2	NE	NE			063891-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063891-018	EPA 310.1
TJA-6 04-Feb-04	Bromide	0.255	0.0978	0.2	NE	NE			063893-013	SW846 9056
	Chloride	15.1	0.0322	0.2	NE	NE			063893-013	SW846 9056
	Fluoride	0.418	0.0553	0.1	4	1.6			063893-013	SW846 9056
	Sulfate	61.5	0.965	2	NE	NE			063893-013	SW846 9056
	Calcium	60.7	0.04	0.1	NE	NE		J	063893-014	SW846 3005
	Magnesium	10.9	0.00633	0.01	NE	NE			063893-014	SW846 3005
	Potassium	2.24	0.0151	0.3	NE	NE			063893-014	SW846 3005
	Sodium	20.4	0.00968	0.25	NE	NE	B	J	063893-014	SW846 3005
	Total Alkalinity as CACO3	160	1.45	2	NE	NE			063893-018	EPA 310.1
	Alkalinity as HCO3	160	1.45	2	NE	NE			063893-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063893-018	EPA 310.1
TJA-7 22-Jan-04	Bromide	0.565	0.0978	0.2	NE	NE	B	B, B3, J	063895-013	SW846 9056
	Chloride	30.9	0.322	2	NE	NE			063895-013	SW846 9056
	Fluoride	0.310	0.0553	0.1	4	1.6			063895-013	SW846 9056
	Sulfate	18.2	0.193	0.4	NE	NE			063895-013	SW846 9056
	Calcium	72.1	0.04	0.1	NE	NE	B	J	063895-014	SW846 3005
	Magnesium	12.5	0.00633	0.01	NE	NE		J	063895-014	SW846 3005
	Potassium	2.14	0.0151	0.3	NE	NE	B		063895-014	SW846 3005
	Sodium	17.6	0.00968	0.25	NE	NE	B	J	063895-014	SW846 3005
	Total Alkalinity as CACO3	130	1.45	2	NE	NE			063895-014	EPA 310.1
	Alkalinity as HCO3	130	1.45	2	NE	NE			063895-014	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063895-014	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
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Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3 21-Jan-04	Bromide	0.900	0.0978	0.2	NE	NE	B	B, J	063897-013	SW846 9056
	Chloride	16.3	0.0322	0.2	NE	NE			063897-013	SW846 9056
	Fluoride	0.398	0.0553	0.1	4	1.6			063897-013	SW846 9056
	Sulfate	88.6	1.93	4	NE	NE			063897-013	SW846 9056
	Calcium	67.4	0.04	0.1	NE	NE			063897-014	SW846 3005
	Magnesium	13.3	0.00633	0.01	NE	NE			063897-014	SW846 3005
	Potassium	2.25	0.0151	0.3	NE	NE			063897-014	SW846 3005
	Sodium	24.3	0.00968	0.25	NE	NE			063897-014	SW846 3005
	Total Alkalinity as CACO3	172	1.45	2	NE	NE			063897-018	EPA 310.1
	Alkalinity as HCO3	171	1.45	2	NE	NE			063897-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063897-018	EPA 310.1
WYO-4 03-Feb-04	Bromide	1.15	0.0978	0.2	NE	NE			063899-013	SW846 9056
	Chloride	97.2	0.322	2	NE	NE			063899-013	SW846 9056
	Fluoride	0.365	0.0553	0.1	4	1.6			063899-013	SW846 9056
	Sulfate	49.2	1.93	4	NE	NE			063899-013	SW846 9056
	Calcium	89.3	0.04	0.1	NE	NE			063899-014	SW846 3005
	Magnesium	15.5	0.00633	0.01	NE	NE			063899-014	SW846 3005
	Potassium	2.01	0.0151	0.3	NE	NE			063899-014	SW846 3005
	Sodium	21.6	0.00968	0.25	NE	NE			063899-014	SW846 3005
	Total Alkalinity as CACO3	95.1	1.45	2	NE	NE			063899-018	EPA 310.1
	Alkalinity as HCO3	94.3	1.45	2	NE	NE			063899-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2	NE	NE	U		063899-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1 20-May-04	Bromide	0.14	0.02	0.25	NE	NE	J		064600-013	SW846 9056
	Chloride	12.7	0.43	2	NE	NE			064600-013	SW846 9056
	Fluoride	0.35	0.0032	0.10	4	1.6			064600-013	SW846 9056
	Sulfate	78.9	0.37	5	NE	NE			064600-013	SW846 9056
	Calcium	65.8	0.035	0.50	NE	NE			064600-014	SW846 6020
	Magnesium	9.8	0.0022	0.10	NE	NE	B		064600-014	SW846 6020
	Potassium	1.6	0.013	0.50	NE	NE	B		064600-014	SW846 6020
	Sodium	24.6	0.0064	0.50	NE	NE	B		064600-014	SW846 6020
	Total Alkalinity as CACO3	164	1.2	5	NE	NE			064600-018	EPA 310.1
	Alkalinity as HCO3	164	1.2	5	NE	NE			064600-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064600-018	EPA 310.1
Eubank-2 06-May-04	Bromide	0.15	0.02	0.25	NE	NE	J		064602-013	SW846 9056
	Chloride	11.9	0.43	2	NE	NE			064602-013	SW846 9056
	Fluoride	0.23	0.0032	0.10	4	1.6			064602-013	SW846 9056
	Sulfate	93.1	0.37	5	NE	NE			064602-013	SW846 9056
	Calcium	73	0.035	0.50	NE	NE		J	064602-014	SW846 6020
	Magnesium	11.3	0.0022	0.10	NE	NE			064602-014	SW846 6020
	Potassium	2.1	0.013	0.50	NE	NE			064602-014	SW846 6020
	Sodium	29.9	0.0064	0.50	NE	NE			064602-014	SW846 6020
	Total Alkalinity as CACO3	199	1.2	5	NE	NE			064602-018	EPA 310.1
	Alkalinity as HCO3	199	1.2	5	NE	NE			064602-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064602-018	EPA 310.1
Eubank-3 04-May-04	Bromide	0.19	0.02	0.25	NE	NE	J		064604-013	SW846 9056
	Chloride	18.1	0.43	2	NE	NE			064604-013	SW846 9056
	Fluoride	0.31	0.0032	0.10	4	1.6			064604-013	SW846 9056
	Sulfate	82.6	0.37	5	NE	NE			064604-013	SW846 9056
	Calcium	72.9	0.035	0.50	NE	NE		J	064604-014	SW846 6020
	Magnesium	11.8	0.0022	0.10	NE	NE			064604-014	SW846 6020
	Potassium	1.8	0.013	0.50	NE	NE			064604-014	SW846 6020
	Sodium	29.8	0.0064	0.50	NE	NE			064604-014	SW846 6020
	Total Alkalinity as CACO3	188	1.2	5	NE	NE			064604-018	EPA 310.1
	Alkalinity as HCO3	188	1.2	5	NE	NE			064604-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064604-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-5	Bromide	0.22	0.02	0.25	NE	NE	J		064607-013	SW846 9056
03-May-04	Chloride	23.4	0.43	2	NE	NE			064607-013	SW846 9056
	Fluoride	0.28	0.0032	0.10	4	1.6			064607-013	SW846 9056
	Sulfate	84.7	0.37	5	NE	NE			064607-013	SW846 9056
	Calcium	77.0	0.035	0.50	NE	NE			064607-014	SW846 6020
	Magnesium	11.8	0.0022	0.10	NE	NE			064607-014	SW846 6020
	Potassium	1.9	0.013	0.50	NE	NE			064607-014	SW846 6020
	Sodium	30.9	0.0064	0.50	NE	NE			064607-014	SW846 6020
	Total Alkalinity as CACO3	195	1.2	5	NE	NE			064607-018	EPA 310.1
	Alkalinity as HCO3	195	1.2	5	NE	NE			064607-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064607-018	EPA 310.1
PGS-2	Bromide	0.18	0.02	0.25	NE	NE	J		064551-013	SW846 9056
12-May-04	Chloride	14.1	0.43	2	NE	NE	B		064551-013	SW846 9056
	Fluoride	ND	0.0032	0.10	4	1.6	U		064551-013	SW846 9056
	Sulfate	64.1	0.37	5	NE	NE			064551-013	SW846 9056
	Calcium	50.9	0.035	0.50	NE	NE	B		064551-014	SW846 6020
	Magnesium	11.5	0.0022	0.10	NE	NE		J	064551-014	SW846 6020
	Potassium	2.7	0.013	0.50	NE	NE			064551-014	SW846 6020
	Sodium	39.9	0.0064	0.50	NE	NE			064551-014	SW846 6020
	Total Alkalinity as CACO3	179	1.2	5.0	NE	NE			064551-018	EPA 310.1
	Alkalinity as HCO3	179	1.2	5.0	NE	NE			064551-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064551-018	EPA 310.1
TA1-W-01	Bromide	0.18	0.02	0.25	NE	NE	J		064553-013	SW846 9056
10-May-04	Chloride	14.7	0.43	2	NE	NE			064553-013	SW846 9056
	Fluoride	0.40	0.0032	0.10	4	1.6			064553-013	SW846 9056
	Sulfate	78.0	0.37	5	NE	NE			064553-013	SW846 9056
	Calcium	61.0	0.035	0.50	NE	NE		J	064553-014	SW846 6020
	Magnesium	12.4	0.0022	0.10	NE	NE			064553-014	SW846 6020
	Potassium	2.2	0.013	0.50	NE	NE			064553-014	SW846 6020
	Sodium	24.7	0.0064	0.50	NE	NE			064553-014	SW846 6020
	Total Alkalinity as CACO3	165	1.2	5.0	NE	NE			064553-018	EPA 310.1
	Alkalinity as HCO3	165	1.2	5.0	NE	NE			064553-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064553-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-02	Bromide	0.16	0.02	0.25	NE	NE	J		064556-013	SW846 9056
11-May-04	Chloride	13.7	0.43	2	NE	NE			064556-013	SW846 9056
	Fluoride	0.34	0.0032	0.10	4	1.6			064556-013	SW846 9056
	Sulfate	81.0	0.37	5	NE	NE			064556-013	SW846 9056
	Calcium	67.3	0.035	0.50	NE	NE	B		064556-014	SW846 6020
	Magnesium	12.8	0.0022	0.10	NE	NE		J	064556-014	SW846 6020
	Potassium	2.1	0.013	0.50	NE	NE			064556-014	SW846 6020
	Sodium	23.2	0.0064	0.50	NE	NE			064556-014	SW846 6020
	Total Alkalinity as CACO3	173	1.2	5.0	NE	NE			064556-018	EPA 310.1
	Alkalinity as HCO3	173	1.2	5.0	NE	NE			064556-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064556-018	EPA 310.1
TA1-W-03	Bromide	3.0	0.02	0.25	NE	NE			064558-013	SW846 9056
28-Apr-04	Chloride	230	4.3	20	NE	NE			064558-013	SW846 9056
	Fluoride	0.21	0.0032	0.10	4	1.6			064558-013	SW846 9056
	Sulfate	449	3.7	50	NE	NE			064558-013	SW846 9056
	Calcium	227	0.01745	0.50	NE	NE	N		064558-014	SW846 6020
	Magnesium	29.9	0.001099	0.10	NE	NE			064558-014	SW846 6020
	Potassium	2.6	0.006374	0.50	NE	NE	E		064558-014	SW846 6020
	Sodium	44.4	0.003203	0.50	NE	NE			064558-014	SW846 6020
	Total Alkalinity as CACO3	70	1.2	5.0	NE	NE			064558-018	EPA 310.1
	Alkalinity as HCO3	70	1.2	5.0	NE	NE			064558-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064558-018	EPA 310.1
TA1-W-04	Bromide	0.15	0.02	0.25	NE	NE	B		064560-013	SW846 9056
26-Apr-04	Chloride	14.3	0.43	2	NE	NE			064560-013	SW846 9056
	Fluoride	0.31	0.0032	0.10	4	1.6			064560-013	SW846 9056
	Sulfate	60.3	0.37	5	NE	NE			064560-013	SW846 9056
	Calcium	61.2	0.01745	0.50	NE	NE	N		064560-014	SW846 6020
	Magnesium	10.9	0.001099	0.10	NE	NE			064560-014	SW846 6020
	Potassium	2.4	0.006374	0.50	NE	NE	E		064560-014	SW846 6020
	Sodium	23.2	0.003203	0.50	NE	NE			064560-014	SW846 6020
	Total Alkalinity as CACO3	170	1.2	5.0	NE	NE			064560-018	EPA 310.1
	Alkalinity as HCO3	170	1.2	5.0	NE	NE			064560-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064560-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05 07-May-04	Bromide	0.13	0.02	0.25	NE	NE	J		064562-013	SW846 9056
	Chloride	11.5	0.43	2	NE	NE			064562-013	SW846 9056
	Fluoride	0.27	0.0032	0.10	4	1.6			064562-013	SW846 9056
	Sulfate	99.2	0.37	5	NE	NE			064562-013	SW846 9056
	Calcium	75.9	0.035	0.50	NE	NE		J	064562-014	SW846 6020
	Magnesium	11.7	0.0022	0.10	NE	NE			064562-014	SW846 6020
	Potassium	2.1	0.013	0.50	NE	NE			064562-014	SW846 6020
	Sodium	29.9	0.0064	0.50	NE	NE			064562-014	SW846 6020
	Total Alkalinity as CACO3	201	1.2	5.0	NE	NE			064562-018	EPA 310.1
	Alkalinity as HCO3	201	1.2	5.0	NE	NE			064562-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064562-018	EPA 310.1
TA1-W-06 21-May-04	Bromide	1.2	0.02	0.25	NE	NE			064564-013	SW846 9056
	Chloride	101	4.3	20	NE	NE			064564-013	SW846 9056
	Fluoride	0.32	0.0032	0.10	4	1.6			064564-013	SW846 9056
	Sulfate	195	3.7	50	NE	NE			064564-013	SW846 9056
	Calcium	98.7	0.035	0.50	NE	NE			064564-014	SW846 6020
	Magnesium	12.2	0.0022	0.10	NE	NE	B		064564-014	SW846 6020
	Potassium	1.7	0.013	0.50	NE	NE	B		064564-014	SW846 6020
	Sodium	27.3	0.0064	0.50	NE	NE	B		064564-014	SW846 6020
	Total Alkalinity as CACO3	85	1.2	5.0	NE	NE			064564-018	EPA 310.1
	Alkalinity as HCO3	85	1.2	5.0	NE	NE			064564-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064564-018	EPA 310.1
TA1-W-08 23-Apr-04	Bromide	2.4	0.02	0.25	NE	NE			064566-013	SW846 9056
	Chloride	190	4.3	20	NE	NE			064566-013	SW846 9056
	Fluoride	0.19	0.0032	0.10	4	1.6			064566-013	SW846 9056
	Sulfate	570	3.7	50	NE	NE			064566-013	SW846 9056
	Calcium	285	0.01745	0.50	NE	NE	N		064566-014	SW846 6020
	Magnesium	37.3	0.001099	0.10	NE	NE			064566-014	SW846 6020
	Potassium	3.0	0.006374	0.50	NE	NE	E		064566-014	SW846 6020
	Sodium	69.9	0.003203	0.50	NE	NE			064566-014	SW846 6020
	Total Alkalinity as CACO3	86	1.2	5.0	NE	NE			064566-018	EPA 310.1
	Alkalinity as HCO3	86	1.2	5.0	NE	NE			064566-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064566-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595	Bromide	1.2	0.02	0.25	NE	NE			064568-013	SW846 9056
13-May-04	Chloride	92.8	4.3	20	NE	NE			064568-013	SW846 9056
(QED)	Fluoride	0.26	0.0032	0.10	4	1.6			064568-013	SW846 9056
	Sulfate	117	3.7	50	NE	NE			064568-013	SW846 9056
	Calcium	99.3	0.035	0.50	NE	NE	B		064568-014	SW846 6020
	Magnesium	16.4	0.0022	0.10	NE	NE			064568-014	SW846 6020
	Potassium	2.3	0.013	0.50	NE	NE			064568-014	SW846 6020
	Sodium	30	0.0064	0.50	NE	NE			064568-014	SW846 6020
	Total Alkalinity as CACO3	144	1.2	5.0	NE	NE			064568-018	EPA 310.1
	Alkalinity as HCO3	144	1.2	5.0	NE	NE			064568-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064568-018	EPA 310.1
TA2-NW1-595	Bromide	1.2	0.02	0.25	NE	NE			064571-013	SW846 9056
19-May-04	Chloride	86.2	4.3	20	NE	NE			064571-013	SW846 9056
(Bennett)	Fluoride	0.25	0.0032	0.10	4	1.6			064571-013	SW846 9056
	Sulfate	111	3.7	50	NE	NE			064571-013	SW846 9056
	Calcium	98.1	0.035	0.50	NE	NE			064571-014	SW846 6020
	Magnesium	15.9	0.0022	0.10	NE	NE	B		064571-014	SW846 6020
	Potassium	2.2	0.013	0.50	NE	NE	B		064571-014	SW846 6020
	Sodium	28.9	0.0064	0.50	NE	NE	B		064571-014	SW846 6020
	Total Alkalinity as CACO3	137	1.2	5.0	NE	NE			064571-018	EPA 310.1
	Alkalinity as HCO3	137	1.2	5.0	NE	NE			064571-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064571-018	EPA 310.1
TA2-SW1-320	Bromide	0.38	0.02	0.25	NE	NE			064573-013	SW846 9056
14-May-04	Chloride	27.1	0.87	4	NE	NE			064573-013	SW846 9056
	Fluoride	0.39	0.0032	0.10	4	1.6			064573-013	SW846 9056
	Sulfate	14.8	0.75	10	NE	NE			064573-013	SW846 9056
	Calcium	56.9	0.035	0.50	NE	NE			064573-014	SW846 6020
	Magnesium	10	0.0022	0.10	NE	NE	B		064573-014	SW846 6020
	Potassium	1.7	0.013	0.50	NE	NE	B		064573-014	SW846 6020
	Sodium	17	0.0064	0.50	NE	NE	B		064573-014	SW846 6020
	Total Alkalinity as CACO3	109	1.2	5.0	NE	NE			064573-018	EPA 310.1
	Alkalinity as HCO3	109	1.2	5.0	NE	NE			064573-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064573-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Bromide	1.8	0.02	0.25	NE	NE			064575-013	SW846 9056
17-May-04	Chloride	108	4.3	20	NE	NE			064575-013	SW846 9056
	Fluoride	0.42	0.0032	0.10	4	1.6			064575-013	SW846 9056
	Sulfate	52.3	0.37	5.0	NE	NE			064575-013	SW846 9056
	Calcium	82.7	0.035	0.50	NE	NE			064575-014	SW846 6020
	Magnesium	11.1	0.0022	0.10	NE	NE	B		064575-014	SW846 6020
	Potassium	1.8	0.013	0.50	NE	NE	B		064575-014	SW846 6020
	Sodium	20.9	0.0064	0.50	NE	NE	B		064575-014	SW846 6020
	Total Alkalinity as CACO3	95	1.2	5.0	NE	NE			064575-018	EPA 310.1
	Alkalinity as HCO3	95	1.2	5.0	NE	NE			064575-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064575-018	EPA 310.1
TA2-W-19	Bromide	0.90	0.02	0.25	NE	NE			064577-013	SW846 9056
27-Apr-04	Chloride	74.6	0.87	4	NE	NE			064577-013	SW846 9056
	Fluoride	0.28	0.0032	0.10	4	1.6			064577-013	SW846 9056
	Sulfate	57.5	0.75	10	NE	NE			064577-013	SW846 9056
	Calcium	71.5	0.01745	0.50	NE	NE	N		064577-014	SW846 6020
	Magnesium	11.3	0.001099	0.10	NE	NE			064577-014	SW846 6020
	Potassium	1.8	0.006374	0.50	NE	NE	E		064577-014	SW846 6020
	Sodium	22	0.003203	0.50	NE	NE			064577-014	SW846 6020
	Total Alkalinity as CACO3	104	1.2	5.0	NE	NE			064577-018	EPA 310.1
	Alkalinity as HCO3	104	1.2	5.0	NE	NE			064577-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064577-018	EPA 310.1
TA2-W-26	Bromide	1.7	0.02	0.25	NE	NE			064580-013	SW846 9056
21-Apr-04	Chloride	130	4.3	20	NE	NE			064580-013	SW846 9056
	Fluoride	0.23	0.0032	0.10	4	1.6			064580-013	SW846 9056
	Sulfate	246	3.7	50	NE	NE			064580-013	SW846 9056
	Calcium	175	0.01745	0.50	NE	NE			064580-014	SW846 6020
	Magnesium	21.6	0.001099	0.10	NE	NE			064580-014	SW846 6020
	Potassium	2.3	0.006374	0.50	NE	NE			064580-014	SW846 6020
	Sodium	33.8	0.003203	0.50	NE	NE	B		064580-014	SW846 6020
	Total Alkalinity as CACO3	104	1.2	5.0	NE	NE			064580-018	EPA 310.1
	Alkalinity as HCO3	104	1.2	5.0	NE	NE			064580-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064580-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27	Bromide	1.6	0.02	0.25	NE	NE			064583-013	SW846 9056
19-Apr-04	Chloride	200	4.3	20	NE	NE			064583-013	SW846 9056
	Fluoride	0.24	0.0032	0.10	4	1.6			064583-013	SW846 9056
	Sulfate	164	3.7	50	NE	NE			064583-013	SW846 9056
	Calcium	131	0.01745	0.50	NE	NE			064583-014	SW846 6020
	Magnesium	17.2	0.001099	0.10	NE	NE			064583-014	SW846 6020
	Potassium	2.1	0.006374	0.50	NE	NE			064583-014	SW846 6020
	Sodium	29.1	0.003203	0.50	NE	NE	B		064583-014	SW846 6020
	Total Alkalinity as CACO3	93	1.2	5	NE	NE			064583-018	EPA 310.1
	Alkalinity as HCO3	93	1.2	5	NE	NE			064583-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064583-018	EPA 310.1
TJA-2	Bromide	1.1	0.02	0.25	NE	NE			064585-013	SW846 9056
05-May-04	Chloride	69.8	0.87	4	NE	NE			064585-013	SW846 9056
	Fluoride	0.28	0.0032	0.10	4	1.6			064585-013	SW846 9056
	Sulfate	52.9	0.75	10	NE	NE			064585-013	SW846 9056
	Calcium	70.8	0.035	0.50	NE	NE		J	064585-014	SW846 6020
	Magnesium	11.7	0.0022	0.10	NE	NE			064585-014	SW846 6020
	Potassium	1.7	0.013	0.50	NE	NE			064585-014	SW846 6020
	Sodium	22	0.0064	0.50	NE	NE			064585-014	SW846 6020
	Total Alkalinity as CACO3	104	1.2	5.0	NE	NE			064585-018	EPA 310.1
	Alkalinity as HCO3	104	1.2	5.0	NE	NE			064585-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064585-018	EPA 310.1
TJA-3	Bromide	0.17	0.02	0.25	NE	NE	B		064587-013	SW846 9056
27-Apr-04	Chloride	12.5	0.43	2	NE	NE			064587-013	SW846 9056
	Fluoride	0.30	0.0032	0.10	4	1.6			064587-013	SW846 9056
	Sulfate	71.1	0.37	5	NE	NE			064587-013	SW846 9056
	Calcium	60.9	0.01745	0.50	NE	NE	N		064587-014	SW846 6020
	Magnesium	11.1	0.001099	0.10	NE	NE			064587-014	SW846 6020
	Potassium	1.9	0.006374	0.50	NE	NE	E		064587-014	SW846 6020
	Sodium	23.4	0.003203	0.50	NE	NE			064587-014	SW846 6020
	Total Alkalinity as CACO3	98	1.2	5.0	NE	NE			064587-018	EPA 310.1
	Alkalinity as HCO3	98	1.2	5.0	NE	NE			064587-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064587-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4 20-Apr-04	Bromide	0.30	0.02	0.25	NE	NE			064589-013	SW846 9056
	Chloride	20	0.43	2	NE	NE			064589-013	SW846 9056
	Fluoride	0.34	0.0032	0.10	4	1.6			064589-013	SW846 9056
	Sulfate	19.1	0.037	0.50	NE	NE			064589-013	SW846 9056
	Calcium	93.4	0.01745	0.50	NE	NE			064589-014	SW846 6020
	Magnesium	39.1	0.001099	0.10	NE	NE			064589-014	SW846 6020
	Potassium	28.3	0.006374	0.50	NE	NE			064589-014	SW846 6020
	Sodium	50.6	0.003203	0.50	NE	NE	B		064589-014	SW846 6020
	Total Alkalinity as CACO3	134	1.2	5	NE	NE			064589-018	EPA 310.1
	Alkalinity as HCO3	134	1.2	5	NE	NE			064589-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064589-018	EPA 310.1
TJA-6 22-Apr-04	Bromide	0.18	0.02	0.25	NE	NE	J		064591-013	SW846 9056
	Chloride	14.6	0.43	2	NE	NE			064591-013	SW846 9056
	Fluoride	0.33	0.0032	0.10	4	1.6			064591-013	SW846 9056
	Sulfate	61.8	0.37	5	NE	NE			064591-013	SW846 9056
	Calcium	65.2	0.01745	0.50	NE	NE			064591-014	SW846 6020
	Magnesium	11.7	0.001099	0.10	NE	NE			064591-014	SW846 6020
	Potassium	2.3	0.006374	0.50	NE	NE			064591-014	SW846 6020
	Sodium	23.5	0.003203	0.50	NE	NE	B		064591-014	SW846 6020
	Total Alkalinity as CACO3	158	1.2	5	NE	NE			064591-018	EPA 310.1
	Alkalinity as HCO3	158	1.2	5	NE	NE			064591-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064591-018	EPA 310.1
TJA-7 30-Apr-04	Bromide	0.42	0.02	0.25	NE	NE			064593-013	SW846 9056
	Chloride	29.0	0.43	2	NE	NE			064593-013	SW846 9056
	Fluoride	0.30	0.0032	0.10	4	1.6			064593-013	SW846 9056
	Sulfate	16.2	0.037	0.50	NE	NE			064593-013	SW846 9056
	Calcium	63.6	0.035	0.50	NE	NE			064593-014	SW846 6020
	Magnesium	12.1	0.0022	0.10	NE	NE			064593-014	SW846 6020
	Potassium	1.9	0.013	0.50	NE	NE			064593-014	SW846 6020
	Sodium	18.4	0.0064	0.50	NE	NE			064593-014	SW846 6020
	Total Alkalinity as CACO3	128	1.2	5	NE	NE			064593-018	EPA 310.1
	Alkalinity as HCO3	128	1.2	5	NE	NE			064593-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		064593-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 3rd Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3	Bromide	0.18	0.02	0.25	NE	NE	B		064595-013	SW846 9056
28-Apr-04	Chloride	14.1	0.43	2	NE	NE			064595-013	SW846 9056
	Fluoride	0.37	0.0032	0.10	4	1.6			064595-013	SW846 9056
	Sulfate	82.8	0.37	5	NE	NE			064595-013	SW846 9056
	Calcium	63.8	0.01745	0.50	NE	NE	N		064595-014	SW846 6020
	Magnesium	11.8	0.001099	0.10	NE	NE			064595-014	SW846 6020
	Potassium	2.2	0.006374	0.50	NE	NE	E		064595-014	SW846 6020
	Sodium	24.4	0.003203	0.50	NE	NE			064595-014	SW846 6020
	Total Alkalinity as CACO3	156	1.2	5.0	NE	NE			064595-018	EPA 310.1
	Alkalinity as HCO3	156	1.2	5.0	NE	NE			064595-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064595-018	EPA 310.1
WYO-4	Bromide	0.49	0.02	0.25	NE	NE			064597-013	SW846 9056
30-Apr-04	Chloride	84.4	0.87	4	NE	NE			064597-013	SW846 9056
	Fluoride	0.14	0.0032	0.10	4	1.6			064597-013	SW846 9056
	Sulfate	38	0.75	10	NE	NE			064597-013	SW846 9056
	Calcium	75.2	0.035	0.50	NE	NE			064597-014	SW846 6020
	Magnesium	12.6	0.0022	0.10	NE	NE			064597-014	SW846 6020
	Potassium	1.8	0.013	0.50	NE	NE			064597-014	SW846 6020
	Sodium	19.2	0.0064	0.50	NE	NE			064597-014	SW846 6020
	Total Alkalinity as CACO3	96	1.2	5.0	NE	NE			064597-018	EPA 310.1
	Alkalinity as HCO3	96	1.2	5.0	NE	NE			064597-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5.0	NE	NE	U		064597-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1	Bromide	0.17	0.02	0.25	NE	NE	J		065416-013	SW846 9056
18-Aug-04	Chloride	12.3	0.43	2	NE	NE			065416-013	SW846 9056
	Fluoride	0.34	0.01	0.10	4	1.6			065416-013	SW846 9056
	Sulfate	75.5	0.37	5	NE	NE			065416-013	SW846 9056
	Calcium	66.6	0.035	0.50	NE	NE	B		065416-014	SW846 6020
	Magnesium	9.7	0.0022	0.10	NE	NE	B		065416-014	SW846 6020
	Potassium	1.6	0.013	0.50	NE	NE	B		065416-014	SW846 6020
	Sodium	24.6	0.0064	0.50	NE	NE	B		065416-014	SW846 6020
	Total Alkalinity as CACO3	166	1.2	5	NE	NE			065416-018	EPA 310.1
	Alkalinity as HCO3	166	1.2	5	NE	NE			065416-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065416-018	EPA 310.1
PGS-2	Bromide	0.18	0.02	0.25	NE	NE	J		065360-013	SW846 9056
28-Jul-04	Chloride	14.6	0.43	2	NE	NE			065360-013	SW846 9056
	Fluoride	0.089	0.01	0.10	4	1.6	J		065360-013	SW846 9056
	Sulfate	61.4	0.37	5	NE	NE			065360-013	SW846 9056
	Calcium	50	0.035	0.50	NE	NE	B	J	065360-014	SW846 6020
	Magnesium	2.3	0.0022	0.10	NE	NE	B	J	065360-014	SW846 6020
	Potassium	10.5	0.013	0.50	NE	NE	B		065360-014	SW846 6020
	Sodium	30.6	0.0064	0.50	NE	NE	B	J	065360-014	SW846 6020
	Total Alkalinity as CACO3	98	1.2	5	NE	NE			065360-018	EPA 310.1
	Alkalinity as HCO3	98	1.2	5	NE	NE			065360-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065360-018	EPA 310.1
TA1-W-01	Bromide	0.16	0.02	0.25	NE	NE	J		065362-013	SW846 9056
17-Aug-04	Chloride	14.1	0.43	2	NE	NE	B		065362-013	SW846 9056
	Fluoride	0.35	0.01	0.10	4	1.6			065362-013	SW846 9056
	Sulfate	76.1	0.37	5	NE	NE			065362-013	SW846 9056
	Calcium	64.7	0.035	0.50	NE	NE	B		065362-014	SW846 6020
	Magnesium	12.6	0.0022	0.10	NE	NE	B		065362-014	SW846 6020
	Potassium	2.2	0.013	0.50	NE	NE	B		065362-014	SW846 6020
	Sodium	25.3	0.0064	0.50	NE	NE	B		065362-014	SW846 6020
	Total Alkalinity as CACO3	170	1.2	5	NE	NE			065362-018	EPA 310.1
	Alkalinity as HCO3	170	1.2	5	NE	NE			065362-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065362-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method
TA1-W-02 13-Aug-04	Bromide	0.16	0.02	0.25	NE	NE	J		065364-013	SW846 9056
	Chloride	13.9	0.43	2	NE	NE	B		065364-013	SW846 9056
	Fluoride	0.32	0.01	0.10	4	1.6			065364-013	SW846 9056
	Sulfate	82.4	0.37	5	NE	NE			065364-013	SW846 9056
	Calcium	67.5	0.035	1	NE	NE	B	A2, J, P1	065364-014	SW846 6020
	Magnesium	13.1	0.0022	0.2	NE	NE	B	A, J, P1	065364-014	SW846 6020
	Potassium	2.0	0.013	1	NE	NE	B		065364-014	SW846 6020
	Sodium	23.2	0.0064	1	NE	NE	B		065364-014	SW846 6020
	Total Alkalinity as CACO3	171	1.2	5	NE	NE			065364-018	EPA 310.1
	Alkalinity as HCO3	171	1.2	5	NE	NE			065364-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065364-018	EPA 310.1
TA1-W-03 18-Aug-04	Bromide	3.5	0.02	0.25	NE	NE			065366-013	SW846 9056
	Chloride	245	4.3	20	NE	NE			065366-013	SW846 9056
	Fluoride	0.25	0.01	0.10	4	1.6			065366-013	SW846 9056
	Sulfate	470	3.7	50	NE	NE			065366-013	SW846 9056
	Calcium	280	0.035	0.50	NE	NE	B		065366-014	SW846 6020
	Magnesium	33.1	0.0022	0.10	NE	NE	B		065366-014	SW846 6020
	Potassium	2.7	0.013	0.50	NE	NE	B		065366-014	SW846 6020
	Sodium	49.9	0.0064	0.50	NE	NE	B		065366-014	SW846 6020
	Total Alkalinity as CACO3	65	1.2	5	NE	NE			065366-018	EPA 310.1
	Alkalinity as HCO3	65	1.2	5	NE	NE			065366-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065366-018	EPA 310.1
TA1-W-04 26-Jul-04	Bromide	0.16	0.02	0.25	NE	NE	J		065368-013	SW846 9056
	Chloride	16.2	0.43	2	NE	NE			065368-013	SW846 9056
	Fluoride	0.27	0.01	0.10	4	1.6			065368-013	SW846 9056
	Sulfate	61.7	0.37	5	NE	NE			065368-013	SW846 9056
	Calcium	61.9	0.035	0.50	NE	NE	B		065368-014	SW846 6020
	Magnesium	9.6	0.0022	0.10	NE	NE	B	J	065368-014	SW846 6020
	Potassium	2.1	0.013	0.50	NE	NE	B		065368-014	SW846 6020
	Sodium	22.5	0.0064	0.50	NE	NE	B		065368-014	SW846 6020
	Total Alkalinity as CACO3	168	1.2	5	NE	NE			065368-018	EPA 310.1
	Alkalinity as HCO3	168	1.2	5	NE	NE			065368-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065368-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05	Bromide	0.13	0.02	0.25	NE	NE	J		065370-013	SW846 9056
20-Aug-04	Chloride	11.5	0.43	2	NE	NE			065370-013	SW846 9056
	Fluoride	0.24	0.01	0.10	4	1.6			065370-013	SW846 9056
	Sulfate	97.2	0.37	5	NE	NE			065370-013	SW846 9056
	Calcium	78.6	0.035	0.50	NE	NE	B		065370-014	SW846 6020
	Magnesium	12.2	0.0022	0.10	NE	NE	B		065370-014	SW846 6020
	Potassium	2.2	0.013	0.50	NE	NE	B		065370-014	SW846 6020
	Sodium	31.2	0.0064	0.50	NE	NE	B		065370-014	SW846 6020
	Total Alkalinity as CACO3	202	1.2	5	NE	NE			065370-018	EPA 310.1
	Alkalinity as HCO3	202	1.2	5	NE	NE			065370-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065370-018	EPA 310.1
TA1-W-06	Bromide	1.4	0.02	0.25	NE	NE			065372-013	SW846 9056
06-Aug-04	Chloride	98.1	4.3	20	NE	NE			065372-013	SW846 9056
	Fluoride	0.28	0.01	0.10	4	1.6			065372-013	SW846 9056
	Sulfate	188	0.037	50	NE	NE			065372-013	SW846 9056
	Calcium	150	0.035	1	NE	NE	B	A2, J	065372-014	SW846 6020
	Magnesium	19.2	0.0022	0.2	NE	NE	B	J	065372-014	SW846 6020
	Potassium	2.3	0.013	1	NE	NE	B		065372-014	SW846 6020
	Sodium	39.5	0.0064	1	NE	NE	B		065372-014	SW846 6020
	Total Alkalinity as CACO3	87	1.2	5	NE	NE			065372-018	EPA 310.1
	Alkalinity as HCO3	87	1.2	5	NE	NE			065372-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065372-018	EPA 310.1
TA1-W-08	Bromide	2.8	0.02	0.25	NE	NE			065374-013	SW846 9056
13-Aug-04	Chloride	213	4.3	20	NE	NE	B		065374-013	SW846 9056
	Fluoride	0.38	0.01	0.10	4	1.6			065374-013	SW846 9056
	Sulfate	666	3.7	50	NE	NE			065374-013	SW846 9056
	Calcium	336	0.035	1	NE	NE	B	A2, J, P1	065374-014	SW846 6020
	Magnesium	44.7	0.0022	0.2	NE	NE	B	A, J, P1	065374-014	SW846 6020
	Potassium	3.2	0.013	1	NE	NE	B		065374-014	SW846 6020
	Sodium	83	0.0064	1	NE	NE	B	J	065374-014	SW846 6020
	Total Alkalinity as CACO3	82	1.2	5	NE	NE			065374-018	EPA 310.1
	Alkalinity as HCO3	82	1.2	5	NE	NE			065374-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065374-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595	Bromide	1.1	0.02	0.25	NE	NE			065377-013	SW846 9056
26-Jul-04	Chloride	0.88	0.43	2	NE	NE			065377-013	SW846 9056
(QED)	Fluoride	0.23	0.01	0.10	4	1.6			065377-013	SW846 9056
	Sulfate	122	0.37	5	NE	NE			065377-013	SW846 9056
	Calcium	96.7	0.035	0.50	NE	NE	B		065377-014	SW846 6020
	Magnesium	14.6	0.0022	0.10	NE	NE	B	J	065377-014	SW846 6020
	Potassium	2.0	0.013	0.50	NE	NE	B		065377-014	SW846 6020
	Sodium	26.9	0.0064	0.50	NE	NE	B	J	065377-014	SW846 6020
	Total Alkalinity as CACO3	149	1.2	5	NE	NE			065377-018	EPA 310.1
	Alkalinity as HCO3	149	1.2	5	NE	NE			065377-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065377-018	EPA 310.1
TA2-NW1-595	Bromide	1.2	0.02	0.25	NE	NE			065379-013	SW846 9056
23-Aug-04	Chloride	90.7	4.3	20	NE	NE			065379-013	SW846 9056
(Bennett)	Fluoride	0.24	0.01	0.10	4	1.6			065379-013	SW846 9056
	Sulfate	113	3.7	50	NE	NE			065379-013	SW846 9056
	Calcium	99.2	0.035	0.50	NE	NE	B		065379-014	SW846 6020
	Magnesium	18.4	0.0022	0.10	NE	NE	B		065379-014	SW846 6020
	Potassium	2.4	0.013	0.50	NE	NE	B		065379-014	SW846 6020
	Sodium	32.9	0.0064	0.50	NE	NE	B		065379-014	SW846 6020
	Total Alkalinity as CACO3	140	1.2	5	NE	NE			065379-018	EPA 310.1
	Alkalinity as HCO3	140	1.2	5	NE	NE			065379-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065379-018	EPA 310.1
TA2-SW1-320	Bromide	0.38	0.02	0.25	NE	NE			065381-013	SW846 9056
27-Jul-04	Chloride	27.2	0.43	2	NE	NE			065381-013	SW846 9056
	Fluoride	0.36	0.01	0.10	4	1.6			065381-013	SW846 9056
	Sulfate	14.9	0.037	0.50	NE	NE			065381-013	SW846 9056
	Calcium	59.5	0.035	0.50	NE	NE	B	J	065381-014	SW846 6020
	Magnesium	9.5	0.0022	0.10	NE	NE	B	J	065381-014	SW846 6020
	Potassium	1.6	0.013	0.50	NE	NE	B		065381-014	SW846 6020
	Sodium	16.4	0.0064	0.50	NE	NE	B	J	065381-014	SW846 6020
	Total Alkalinity as CACO3	114	1.2	5	NE	NE			065381-018	EPA 310.1
	Alkalinity as HCO3	114	1.2	5	NE	NE			065381-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065381-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Bromide	1.5	0.02	0.25	NE	NE			065383-013	SW846 9056
12-Aug-04	Chloride	105	4.3	20	NE	NE			065383-013	SW846 9056
	Fluoride	0.23	0.01	0.10	4	1.6			065383-013	SW846 9056
	Sulfate	48.1	0.37	5	NE	NE			065383-013	SW846 9056
	Calcium	93.2	0.035	1	NE	NE	B	A2, J	065383-014	SW846 6020
	Magnesium	13	0.0022	0.2	NE	NE	B	J	065383-014	SW846 6020
	Potassium	2.0	0.013	1	NE	NE	B		065383-014	SW846 6020
	Sodium	23.9	0.0064	1	NE	NE	B		065383-014	SW846 6020
	Total Alkalinity as CACO3	106	1.2	5	NE	NE			065383-018	EPA 310.1
	Alkalinity as HCO3	106	1.2	5	NE	NE			065383-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065383-018	EPA 310.1
TA2-W-19	Bromide	1.0	0.02	0.25	NE	NE			065385-013	SW846 9056
27-Jul-04	Chloride	75.6	4.3	20	NE	NE			065385-013	SW846 9056
	Fluoride	0.26	0.01	0.10	4	1.6			065385-013	SW846 9056
	Sulfate	58.5	0.37	5	NE	NE			065385-013	SW846 9056
	Calcium	75.8	0.035	0.50	NE	NE	B	J	065385-014	SW846 6020
	Magnesium	10.3	0.0022	0.10	NE	NE	B	J	065385-014	SW846 6020
	Potassium	1.6	0.013	0.50	NE	NE	B		065385-014	SW846 6020
	Sodium	19.8	0.0064	0.50	NE	NE	B	J	065385-014	SW846 6020
	Total Alkalinity as CACO3	106	1.2	5	NE	NE			065385-018	EPA 310.1
	Alkalinity as HCO3	106	1.2	5	NE	NE			065385-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065385-018	EPA 310.1
TA2-W-26	Bromide	1.9	0.02	0.25	NE	NE			065387-013	SW846 9056
30-Jul-04	Chloride	140	4.3	20	NE	NE			065387-013	SW846 9056
	Fluoride	0.22	0.01	0.10	4	1.6			065387-013	SW846 9056
	Sulfate	245	3.7	50	NE	NE			065387-013	SW846 9056
	Calcium	161	0.035	0.50	NE	NE	B		065387-014	SW846 6020
	Magnesium	18.9	0.0022	0.10	NE	NE	B	J	065387-014	SW846 6020
	Potassium	2.0	0.013	0.50	NE	NE	B		065387-014	SW846 6020
	Sodium	30.1	0.0064	0.50	NE	NE	B	J	065387-014	SW846 6020
	Total Alkalinity as CACO3	90	1.2	5	NE	NE			065387-018	EPA 310.1
	Alkalinity as HCO3	90	1.2	5	NE	NE			065387-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065387-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27	Bromide	1.7	0.02	0.25	NE	NE			065392-013	SW846 9056
28-Jul-04	Chloride	119	4.3	20	NE	NE			065392-013	SW846 9056
	Fluoride	0.26	0.01	0.10	4	1.6			065392-013	SW846 9056
	Sulfate	172	0.37	5	NE	NE			065392-013	SW846 9056
	Calcium	120	0.035	0.50	NE	NE	B	J	065392-014	SW846 6020
	Magnesium	15.1	0.0022	0.10	NE	NE	B	J	065392-014	SW846 6020
	Potassium	1.8	0.013	0.50	NE	NE	B		065392-014	SW846 6020
	Sodium	26.2	0.0064	0.50	NE	NE	B	J	065392-014	SW846 6020
	Total Alkalinity as CACO3	159	1.2	5	NE	NE			065392-018	EPA 310.1
	Alkalinity as HCO3	159	1.2	5	NE	NE			065392-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065392-018	EPA 310.1
TJA-2	Bromide	0.93	0.02	0.25	NE	NE			065394-013	SW846 9056
16-Aug-04	Chloride	66.3	4.3	20	NE	NE	B		065394-013	SW846 9056
	Fluoride	0.25	0.01	0.10	4	1.6			065394-013	SW846 9056
	Sulfate	55.2	0.37	5	NE	NE			065394-013	SW846 9056
	Calcium	76.1	0.035	1	NE	NE	B	A2, J, P1	065394-014	SW846 6020
	Magnesium	12.5	0.0022	0.2	NE	NE	B	A, J, P1	065394-014	SW846 6020
	Potassium	1.7	0.013	1	NE	NE	B		065394-014	SW846 6020
	Sodium	24.4	0.0064	1	NE	NE	B		065394-014	SW846 6020
	Total Alkalinity as CACO3	104	1.2	5	NE	NE			065394-018	EPA 310.1
	Alkalinity as HCO3	104	1.2	5	NE	NE			065394-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065394-018	EPA 310.1
TJA-3	Bromide	0.15	0.02	0.25	NE	NE	J		065397-013	SW846 9056
09-Aug-04	Chloride	13.1	0.43	2	NE	NE			065397-013	SW846 9056
	Fluoride	0.26	0.01	0.10	4	1.6			065397-013	SW846 9056
	Sulfate	71.6	0.37	5	NE	NE			065397-013	SW846 9056
	Calcium	68.7	0.035	1	NE	NE	B	A2, J, P1	065397-014	SW846 6020
	Magnesium	11.8	0.0022	0.2	NE	NE	B	A, J, P1	065397-014	SW846 6020
	Potassium	1.8	0.013	1	NE	NE	B		065397-014	SW846 6020
	Sodium	25.6	0.0064	1	NE	NE	B		065397-014	SW846 6020
	Total Alkalinity as CACO3	165	1.2	5	NE	NE			065397-018	EPA 310.1
	Alkalinity as HCO3	165	1.2	5	NE	NE			065399-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065399-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4 10-Aug-04	Bromide	0.28	0.02	0.25	NE	NE			065399-013	SW846 9056
	Chloride	20.9	0.43	2	NE	NE			065399-013	SW846 9056
	Fluoride	0.26	0.01	0.10	4	1.6			065399-013	SW846 9056
	Sulfate	17.9	0.37	5	NE	NE			065399-013	SW846 9056
	Calcium	65.8	0.035	1	NE	NE	B	A2, J, P1	065399-014	SW846 6020
	Magnesium	14.1	0.0022	0.2	NE	NE	B	A, J, P1	065399-014	SW846 6020
	Potassium	3.0	0.013	1	NE	NE	B	J	065399-014	SW846 6020
	Sodium	25.4	0.0064	1	NE	NE	B	J	065399-014	SW846 6020
	Total Alkalinity as CACO3	135	1.2	5	NE	NE			065399-018	EPA 310.1
	Alkalinity as HCO3	135	1.2	5	NE	NE		J, P1	065399-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065399-018	EPA 310.1
TJA-6 04-Aug-04	Bromide	0.15	0.02	0.25	NE	NE	J		065401-013	SW846 9056
	Chloride	14.5	0.43	2	NE	NE			065401-013	SW846 9056
	Fluoride	0.30	0.01	0.10	4	1.6			065401-013	SW846 9056
	Sulfate	61.8	0.37	5	NE	NE			065401-013	SW846 9056
	Calcium	58.2	0.035	0.50	NE	NE	B		065401-014	SW846 6020
	Magnesium	10.1	0.0022	0.10	NE	NE	B	J	065401-014	SW846 6020
	Potassium	2.0	0.013	0.50	NE	NE	B		065401-014	SW846 6020
	Sodium	20.4	0.0064	0.50	NE	NE	B		065401-014	SW846 6020
	Total Alkalinity as CACO3	161	1.2	5	NE	NE			065401-018	EPA 310.1
	Alkalinity as HCO3	161	1.2	5	NE	NE			065401-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065401-018	EPA 310.1
TJA-7 06-Aug-04	Bromide	0.43	0.02	0.25	NE	NE			065403-013	SW846 9056
	Chloride	31.8	0.43	2	NE	NE			065403-013	SW846 9056
	Fluoride	0.30	0.01	0.10	4	1.6			065403-013	SW846 9056
	Sulfate	20.4	0.37	5	NE	NE			065403-013	SW846 9056
	Calcium	72.5	0.035	1	NE	NE	B	A2, J	065403-014	SW846 6020
	Magnesium	13.9	0.0022	0.2	NE	NE	B	J	065403-014	SW846 6020
	Potassium	1.9	0.013	1	NE	NE	B		065403-014	SW846 6020
	Sodium	20.3	0.0064	1	NE	NE	B		065403-014	SW846 6020
	Total Alkalinity as CACO3	124	1.2	5	NE	NE			065403-018	EPA 310.1
	Alkalinity as HCO3	124	1.2	5	NE	NE			065403-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065403-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2004, 4th Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3	Bromide	ND	0.02	0.25	NE	NE	U		065408-013	SW846 9056
11-Aug-04	Chloride	15	0.43	2	NE	NE			065408-013	SW846 9056
	Fluoride	0.31	0.01	0.10	4	1.6			065408-013	SW846 9056
	Sulfate	86.5	0.37	5	NE	NE			065408-013	SW846 9056
	Calcium	70.4	0.035	1	NE	NE	B	A2, J, P1	065408-014	SW846 6020
	Magnesium	13.9	0.0022	0.2	NE	NE	B	A, J, P1	065408-014	SW846 6020
	Potassium	2.2	0.013	1	NE	NE	B		065408-014	SW846 6020
	Sodium	27.1	0.0064	1	NE	NE	B		065408-014	SW846 6020
	Total Alkalinity as CACO3	173	1.2	5	NE	NE			065408-018	EPA 310.1
	Alkalinity as HCO3	173	1.2	5	NE	NE			065408-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065408-018	EPA 310.1
WYO-4	Bromide	1.2	0.02	0.25	NE	NE			065411-013	SW846 9056
03-Aug-04	Chloride	105	4.3	20	NE	NE			065411-013	SW846 9056
	Fluoride	0.28	0.01	0.10	4	1.6			065411-013	SW846 9056
	Sulfate	45.7	0.37	5	NE	NE			065411-013	SW846 9056
	Calcium	79.1	0.035	0.50	NE	NE	B		065411-014	SW846 6020
	Magnesium	12.4	0.0022	0.10	NE	NE	B	J	065411-014	SW846 6020
	Potassium	1.6	0.013	0.50	NE	NE	B		065411-014	SW846 6020
	Sodium	18.9	0.0064	0.50	NE	NE	B		065411-014	SW846 6020
	Total Alkalinity as CACO3	93	1.2	5	NE	NE			065411-018	EPA 310.1
	Alkalinity as HCO3	93	1.2	5	NE	NE			065411-018	EPA 310.1
	Alkalinity as CO3	ND	1.2	5	NE	NE	U		065411-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1 20-Oct-04	Bromide	ND	0.0978	0.20	NE	NE	U		066077-013	SW846 9056
	Chloride	13.0	0.0322	0.20	NE	NE			066077-013	SW846 9056
	Fluoride	0.294	0.0553	0.10	4	1.6			066077-013	SW846 9056
	Sulfate	78.4	0.965	2.0	NE	NE			066077-013	SW846 9056
	Calcium	70.9	0.010	0.10	NE	NE			066077-014	SW846 6020
	Magnesium	10.1	0.00633	0.01	NE	NE		J	066077-014	SW846 6020
	Potassium	1.72	0.0151	0.30	NE	NE			066077-014	SW846 6020
	Sodium	27.2	0.00968	0.25	NE	NE	B		066077-014	SW846 6020
	Total Alkalinity as CACO3	160	1.45	2.0	NE	NE			066077-018	EPA 310.1
	Alkalinity as HCO3	159	1.45	2.0	NE	NE			066077-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066077-018	EPA 310.1
Eubank-2 21-Oct-04	Bromide	ND	0.0978	0.20	NE	NE	U		066080-013	SW846 9056
	Chloride	11.6	0.0322	0.20	NE	NE			066080-013	SW846 9056
	Fluoride	0.158	0.0553	0.10	4	1.6			066080-013	SW846 9056
	Sulfate	90.9	0.965	2.0	NE	NE			066080-013	SW846 9056
	Calcium	80.1	0.040	0.10	NE	NE			066080-014	SW846 6020
	Magnesium	12.0	0.00633	0.01	NE	NE			066080-014	SW846 6020
	Potassium	2.21	0.0151	0.30	NE	NE			066080-014	SW846 6020
	Sodium	31.7	0.00968	0.25	NE	NE	B		066080-014	SW846 6020
	Total Alkalinity as CACO3	205	1.45	2.0	NE	NE			066080-018	EPA 310.1
	Alkalinity as HCO3	205	1.45	2.0	NE	NE			066080-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066080-018	EPA 310.1
Eubank-3 20-Oct-04	Bromide	ND	0.0978	0.20	NE	NE	U		066082-013	SW846 9056
	Chloride	18.6	0.161	1.0	NE	NE			066082-013	SW846 9056
	Fluoride	0.240	0.0553	0.10	4	1.6			066082-013	SW846 9056
	Sulfate	88.4	0.965	2.0	NE	NE			066082-013	SW846 9056
	Calcium	81.8	0.010	0.10	NE	NE			066082-014	SW846 6020
	Magnesium	12.1	0.00633	0.01	NE	NE		J	066082-014	SW846 6020
	Potassium	1.93	0.0151	0.30	NE	NE			066082-014	SW846 6020
	Sodium	34.7	0.00968	0.25	NE	NE	B		066082-014	SW846 6020
	Total Alkalinity as CACO3	190	1.45	2.0	NE	NE			066082-018	EPA 310.1
	Alkalinity as HCO3	189	1.45	2.0	NE	NE			066082-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066082-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method
Eubank-5 25-Oct-04	Bromide	ND	0.0978	0.20	NE	NE	U		066084-013	SW846 9056
	Chloride	24.6	0.161	1.0	NE	NE			066084-013	SW846 9056
	Fluoride	0.216	0.0553	0.10	4	1.6			066084-013	SW846 9056
	Sulfate	91.2	0.965	2.0	NE	NE			066084-013	SW846 9056
	Calcium	83.9	0.040	0.10	NE	NE			066084-014	SW846 6020
	Magnesium	12.7	0.00633	0.01	NE	NE		J	066084-014	SW846 6020
	Potassium	2.01	0.0151	0.30	NE	NE			066084-014	SW846 6020
	Sodium	32.6	0.00968	0.25	NE	NE	B		066084-014	SW846 6020
	Total Alkalinity as CACO3	186	1.45	2.0	NE	NE			066084-018	EPA 310.1
	Alkalinity as HCO3	186	1.45	2.0	NE	NE			066084-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066084-018	EPA 310.1
PGS-2 05-Oct-04	Bromide	0.253	0.0978	0.20	NE	NE			066025-013	SW846 9056
	Chloride	13.1	0.0322	0.20	NE	NE			066025-013	SW846 9056
	Fluoride	0.213	0.0553	0.10	4	1.6			066025-013	SW846 9056
	Sulfate	57.5	0.965	2.0	NE	NE			066025-013	SW846 9056
	Calcium	46.5	0.040	0.10	NE	NE			066025-014	SW846 6020
	Magnesium	10.5	0.00633	0.01	NE	NE			066025-014	SW846 6020
	Potassium	2.34	0.0151	0.30	NE	NE			066025-014	SW846 6020
	Sodium	28.3	0.00968	0.25	NE	NE			066025-014	SW846 6020
	Total Alkalinity as CACO3	147	1.45	2.0	NE	NE			066025-018	EPA 310.1
	Alkalinity as HCO3	145	1.45	2.0	NE	NE			066025-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066025-018	EPA 310.1
TA1-W-01 06-Oct-04	Bromide	0.247	0.0978	0.20	NE	NE			066027-013	SW846 9056
	Chloride	14.6	0.0322	0.20	NE	NE			066027-013	SW846 9056
	Fluoride	0.432	0.0553	0.10	4	1.6			066027-013	SW846 9056
	Sulfate	75.0	0.965	2.0	NE	NE			066027-013	SW846 9056
	Calcium	69.0	0.040	0.10	NE	NE			066027-014	SW846 6020
	Magnesium	13.6	0.00633	0.01	NE	NE			066027-014	SW846 6020
	Potassium	2.16	0.0151	0.30	NE	NE			066027-014	SW846 6020
	Sodium	25.9	0.00968	0.25	NE	NE			066027-014	SW846 6020
	Total Alkalinity as CACO3	166	1.45	2.0	NE	NE			066027-018	EPA 310.1
	Alkalinity as HCO3	165	1.45	2.0	NE	NE			066027-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066027-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-02	Bromide	0.254	0.0978	0.20	NE	NE			066029-013	SW846 9056
11-Oct-04	Chloride	13.8	0.0322	0.20	NE	NE			066029-013	SW846 9056
	Fluoride	0.423	0.0553	0.10	4	1.6			066029-013	SW846 9056
	Sulfate	78.2	0.965	2.0	NE	NE			066029-013	SW846 9056
	Calcium	68.8	0.040	0.10	NE	NE			066029-014	SW846 6020
	Magnesium	13.5	0.00633	0.01	NE	NE			066029-014	SW846 6020
	Potassium	2.29	0.0151	0.30	NE	NE			066029-014	SW846 6020
	Sodium	23.3	0.00968	0.25	NE	NE			066029-014	SW846 6020
	Total Alkalinity as CACO3	177	104	1.45	NE	NE			066029-018	EPA 310.1
	Alkalinity as HCO3	177	104	1.45	NE	NE			066029-018	EPA 310.1
	Alkalinity as CO3	ND	104	1.45	NE	NE	U		066029-018	EPA 310.1
TA1-W-03	Bromide	2.63	0.0978	0.20	NE	NE			066031-013	SW846 9056
19-Oct-04	Chloride	263	0.644	4.0	NE	NE			066031-013	SW846 9056
	Fluoride	0.076	0.0553	0.10	4	1.6	J		066031-013	SW846 9056
	Sulfate	505	3.86	8.0	NE	NE			066031-013	SW846 9056
	Calcium	294	0.20	0.50	NE	NE			066031-014	SW846 6020
	Magnesium	30.7	0.00633	0.01	NE	NE		J	066031-014	SW846 6020
	Potassium	2.61	0.0151	0.30	NE	NE			066031-014	SW846 6020
	Sodium	48.2	0.00968	0.25	NE	NE	B		066031-014	SW846 6020
	Total Alkalinity as CACO3	68.0	1.45	2.0	NE	NE			066031-018	EPA 310.1
	Alkalinity as HCO3	67.7	1.45	2.0	NE	NE			066031-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066031-018	EPA 310.1
TA1-W-04	Bromide	0.276	0.0978	0.20	NE	NE			066033-013	SW846 9056
07-Oct-04	Chloride	15.5	0.0322	0.20	NE	NE			066033-013	SW846 9056
	Fluoride	0.382	0.0553	0.10	4	1.6			066033-013	SW846 9056
	Sulfate	59.3	0.965	2.0	NE	NE			066033-013	SW846 9056
	Calcium	65.9	0.040	0.10	NE	NE			066033-014	SW846 6020
	Magnesium	11.5	0.00633	0.01	NE	NE			066033-014	SW846 6020
	Potassium	2.39	0.0151	0.30	NE	NE			066033-014	SW846 6020
	Sodium	23.5	0.00968	0.25	NE	NE			066033-014	SW846 6020
	Total Alkalinity as CACO3	168	1.45	2.0	NE	NE			066033-018	EPA 310.1
	Alkalinity as HCO3	167	1.45	2.0	NE	NE			066033-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066033-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-05	Bromide	ND	0.0978	0.20	NE	NE	U		066035-013	SW846 9056
26-Oct-04	Chloride	11.7	0.0322	0.20	NE	NE			066035-013	SW846 9056
	Fluoride	0.198	0.0553	0.10	4	1.6			066035-013	SW846 9056
	Sulfate	102	0.965	2.0	NE	NE			066035-013	SW846 9056
	Calcium	79.8	0.040	0.10	NE	NE	B		066035-014	SW846 6020
	Magnesium	10.9	0.00633	0.01	NE	NE		J	066035-014	SW846 6020
	Potassium	2.02	0.0151	0.30	NE	NE			066035-014	SW846 6020
	Sodium	33.6	0.00968	0.25	NE	NE	B		066035-014	SW846 6020
	Total Alkalinity as CACO3	199	1.45	2.0	NE	NE			066035-018	EPA 310.1
	Alkalinity as HCO3	198	1.45	2.0	NE	NE			066035-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066035-018	EPA 310.1
TA1-W-06	Bromide	0.880	0.0978	0.20	NE	NE			066037-013	SW846 9056
26-Oct-04	Chloride	103	0.322	2.0	NE	NE			066037-013	SW846 9056
	Fluoride	0.206	0.0553	0.10	4	1.6			066037-013	SW846 9056
	Sulfate	211	1.93	4.0	NE	NE			066037-013	SW846 9056
	Calcium	119	0.040	0.10	NE	NE	B		066037-014	SW846 6020
	Magnesium	14.8	0.00633	0.01	NE	NE		J	066037-014	SW846 6020
	Potassium	1.91	0.0151	0.30	NE	NE			066037-014	SW846 6020
	Sodium	34.6	0.00968	0.25	NE	NE	B		066037-014	SW846 6020
	Total Alkalinity as CACO3	88.9	1.45	2.0	NE	NE			066037-018	EPA 310.1
	Alkalinity as HCO3	88.4	1.45	2.0	NE	NE			066037-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066037-018	EPA 310.1
TA1-W-08	Bromide	ND	0.0978	0.20	NE	NE	U		066039-013	SW846 9056
08-Oct-04	Chloride	202	1.61	10.0	NE	NE			066039-013	SW846 9056
	Fluoride	0.260	0.0553	0.10	4	1.6			066039-013	SW846 9056
	Sulfate	650	9.65	20.0	NE	NE			066039-013	SW846 9056
	Calcium	334	0.20	0.50	NE	NE			066039-014	SW846 6020
	Magnesium	41.1	0.00633	0.01	NE	NE			066039-014	SW846 6020
	Potassium	3.25	0.0151	0.30	NE	NE			066039-014	SW846 6020
	Sodium	76.7	0.00968	0.25	NE	NE			066039-014	SW846 6020
	Total Alkalinity as CACO3	53.6	1.45	2.0	NE	NE			066039-018	EPA 310.1
	Alkalinity as HCO3	53.5	1.45	2.0	NE	NE			066039-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066039-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method
TA2-NW1-595	Bromide	0.761	0.0978	0.20	NE	NE			066042-013	SW846 9056
25-Oct-04	Chloride	89.4	0.322	2.0	NE	NE			066042-013	SW846 9056
(QED)	Fluoride	0.183	0.0553	0.10	4	1.6			066042-013	SW846 9056
	Sulfate	119	1.93	4.0	NE	NE			066042-013	SW846 9056
	Calcium	103	0.040	0.10	NE	NE			066042-014	SW846 6020
	Magnesium	17.0	0.00633	0.01	NE	NE		J	066042-014	SW846 6020
	Potassium	2.40	0.0151	0.30	NE	NE			066042-014	SW846 6020
	Sodium	31.3	0.00968	0.25	NE	NE	B		066042-014	SW846 6020
	Total Alkalinity as CACO3	137	1.45	2.0	NE	NE			066042-018	EPA 310.1
	Alkalinity as HCO3	137	1.45	2.0	NE	NE			066042-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066042-018	EPA 310.1
TA2-NW1-595	Bromide	ND	0.0978	0.20	NE	NE	U		066044-013	SW846 9056
07-Oct-04	Chloride	83.3	0.322	2.0	NE	NE			066044-013	SW846 9056
(Bennett)	Fluoride	0.299	0.0553	0.10	4	1.6			066044-013	SW846 9056
	Sulfate	118	1.93	4.0	NE	NE			066044-013	SW846 9056
	Calcium	104	0.040	0.10	NE	NE			066044-014	SW846 6020
	Magnesium	17.4	0.00633	0.01	NE	NE			066044-014	SW846 6020
	Potassium	2.32	0.0151	0.30	NE	NE			066044-014	SW846 6020
	Sodium	29.5	0.00968	0.25	NE	NE			066044-014	SW846 6020
	Total Alkalinity as CACO3	138	1.45	2.0	NE	NE			066044-018	EPA 310.1
	Alkalinity as HCO3	137	1.45	2.0	NE	NE			066044-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066044-018	EPA 310.1
TA2-SW1-320	Bromide	0.467	0.0978	0.20	NE	NE			066046-013	SW846 9056
04-Oct-04	Chloride	28.2	0.161	1.0	NE	NE			066046-013	SW846 9056
	Fluoride	0.444	0.0553	0.10	4	1.6			066046-013	SW846 9056
	Sulfate	13.7	0.193	0.40	NE	NE			066046-013	SW846 9056
	Calcium	60.9	0.040	0.10	NE	NE			066046-014	SW846 6020
	Magnesium	11.2	0.00633	0.01	NE	NE			066046-014	SW846 6020
	Potassium	1.70	0.0151	0.30	NE	NE			066046-014	SW846 6020
	Sodium	17.5	0.00968	0.25	NE	NE			066046-014	SW846 6020
	Total Alkalinity as CACO3	104	1.45	2.0	NE	NE	H	HT, J	066046-018	EPA 310.1
	Alkalinity as HCO3	104	1.45	2.0	NE	NE	H	HT, J	066046-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	H, U	HT, UJ	066046-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01	Bromide	1.19	0.0978	0.20	NE	NE			066048-013	SW846 9056
18-Oct-04	Chloride	113	0.322	2.0	NE	NE			066048-013	SW846 9056
	Fluoride	0.145	0.0553	0.10	4	1.6			066048-013	SW846 9056
	Sulfate	81.4	1.93	4.0	NE	NE			066048-013	SW846 9056
	Calcium	84.2	0.040	0.10	NE	NE			066048-014	SW846 6020
	Magnesium	10.8	0.00633	0.01	NE	NE		J	066048-014	SW846 6020
	Potassium	1.72	0.0151	0.30	NE	NE			066048-014	SW846 6020
	Sodium	21.9	0.00968	0.25	NE	NE	B		066048-014	SW846 6020
	Total Alkalinity as CACO3	81.6	1.45	2.0	NE	NE			066048-018	EPA 310.1
	Alkalinity as HCO3	81.4	1.45	2.0	NE	NE			066048-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066048-018	EPA 310.1
TA2-W-19	Bromide	0.966	0.0978	0.20	NE	NE			066050-013	SW846 9056
04-Oct-04	Chloride	70.2	0.322	2.0	NE	NE			066050-013	SW846 9056
	Fluoride	0.343	0.0553	0.10	4	1.6			066050-013	SW846 9056
	Sulfate	58.4	1.93	4.0	NE	NE			066050-013	SW846 9056
	Calcium	76.7	0.040	0.10	NE	NE			066050-014	SW846 6020
	Magnesium	11.3	0.00633	0.01	NE	NE			066050-014	SW846 6020
	Potassium	1.61	0.0151	0.30	NE	NE			066050-014	SW846 6020
	Sodium	21.1	0.00968	0.25	NE	NE			066050-014	SW846 6020
	Total Alkalinity as CACO3	100	1.45	2.0	NE	NE			066050-018	EPA 310.1
	Alkalinity as HCO3	99.9	1.45	2.0	NE	NE			066050-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066050-018	EPA 310.1
TA2-W-26	Bromide	1.38	0.0978	0.20	NE	NE			066053-013	SW846 9056
13-Oct-04	Chloride	143	0.644	4.0	NE	NE			066053-013	SW846 9056
	Fluoride	0.146	0.0553	0.10	4	1.6			066053-013	SW846 9056
	Sulfate	268	3.86	8.0	NE	NE			066053-013	SW846 9056
	Calcium	160	0.040	0.10	NE	NE	B		066053-014	SW846 6020
	Magnesium	21.6	0.00633	0.01	NE	NE			066053-014	SW846 6020
	Potassium	2.26	0.0151	0.30	NE	NE			066053-014	SW846 6020
	Sodium	31.4	0.00968	0.25	NE	NE	B	J	066053-014	SW846 6020
	Total Alkalinity as CACO3	66.8	1.45	2.0	NE	NE			066053-018	EPA 310.1
	Alkalinity as HCO3	66.6	1.45	2.0	NE	NE			066053-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066053-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27	Bromide	1.27	0.0978	0.20	NE	NE			066056-013	SW846 9056
14-Oct-04	Chloride	132	0.322	2.0	NE	NE			066056-013	SW846 9056
	Fluoride	0.109	0.0553	0.10	4	1.6			066056-013	SW846 9056
	Sulfate	174	1.93	4.0	NE	NE			066056-013	SW846 9056
	Calcium	123	0.040	0.10	NE	NE	B		066056-014	SW846 6020
	Magnesium	18.9	0.00633	0.01	NE	NE			066056-014	SW846 6020
	Potassium	1.99	0.0151	0.30	NE	NE	B		066056-014	SW846 6020
	Sodium	29.8	0.00968	0.25	NE	NE	B		066056-014	SW846 6020
	Total Alkalinity as CACO3	74.6	1.45	2.0	NE	NE			066056-018	EPA 310.1
	Alkalinity as HCO3	74.2	1.45	2.0	NE	NE			066056-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066056-018	EPA 310.1
TJA-2	Bromide	ND	0.0978	0.20	NE	NE	U		066059-013	SW846 9056
11-Oct-04	Chloride	70.1	0.161	1.0	NE	NE			066059-013	SW846 9056
	Fluoride	0.343	0.0553	0.10	4	1.6			066059-013	SW846 9056
	Sulfate	53.2	0.965	2.0	NE	NE			066059-013	SW846 9056
	Calcium	79.3	0.040	0.10	NE	NE			066059-014	SW846 6020
	Magnesium	12.5	0.00633	0.01	NE	NE			066059-014	SW846 6020
	Potassium	1.86	0.0151	0.30	NE	NE			066059-014	SW846 6020
	Sodium	24.0	0.00968	0.25	NE	NE			066059-014	SW846 6020
	Total Alkalinity as CACO3	98.2	1.45	2.0	NE	NE			066059-018	EPA 310.1
	Alkalinity as HCO3	97.6	1.45	2.0	NE	NE			066059-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066059-018	EPA 310.1
TJA-3	Bromide	0.267	0.0978	0.20	NE	NE			066061-013	SW846 9056
12-Oct-04	Chloride	13.0	0.0322	0.20	NE	NE			066061-013	SW846 9056
	Fluoride	0.353	0.0553	0.10	4	1.6			066061-013	SW846 9056
	Sulfate	71.7	0.965	2.0	NE	NE			066061-013	SW846 9056
	Calcium	65.3	0.040	0.10	NE	NE			066061-014	SW846 6020
	Magnesium	11.6	0.00633	0.01	NE	NE			066061-014	SW846 6020
	Potassium	1.83	0.0151	0.30	NE	NE			066061-014	SW846 6020
	Sodium	24.4	0.00968	0.25	NE	NE			066061-014	SW846 6020
	Total Alkalinity as CACO3	187	1.45	2.0	NE	NE			066061-018	EPA 310.1
	Alkalinity as HCO3	187	1.45	2.0	NE	NE			066061-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066061-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4 12-Oct-04	Bromide	0.418	0.0978	0.20	NE	NE			066063-013	SW846 9056
	Chloride	20.1	0.0553	0.10	NE	NE			066063-013	SW846 9056
	Fluoride	0.402	0.0553	0.10	4	1.6			066063-013	SW846 9056
	Sulfate	18.0	0.193	0.40	NE	NE			066063-013	SW846 9056
	Calcium	65.5	0.040	0.10	NE	NE			066063-014	SW846 6020
	Magnesium	13.7	0.00633	0.01	NE	NE			066063-014	SW846 6020
	Potassium	3.08	0.0151	0.30	NE	NE			066063-014	SW846 6020
	Sodium	25.2	0.00968	0.25	NE	NE			066063-014	SW846 6020
	Total Alkalinity as CACO3	98.2	1.45	2.0	NE	NE			066063-018	EPA 310.1
	Alkalinity as HCO3	97.9	1.45	2.0	NE	NE			066063-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066063-018	EPA 310.1
TJA-6 13-Oct-04	Bromide	ND	0.0978	0.20	NE	NE	U		066065-013	SW846 9056
	Chloride	15.2	0.0322	0.20	NE	NE			066065-013	SW846 9056
	Fluoride	0.165	0.0553	0.10	4	1.6			066065-013	SW846 9056
	Sulfate	65.9	0.965	2.0	NE	NE			066065-013	SW846 9056
	Calcium	63.8	0.040	0.10	NE	NE	B		066065-014	SW846 6020
	Magnesium	12.6	0.00633	0.01	NE	NE			066065-014	SW846 6020
	Potassium	2.37	0.0151	0.30	NE	NE			066065-014	SW846 6020
	Sodium	24.9	0.00968	0.25	NE	NE	B	J	066065-014	SW846 6020
	Total Alkalinity as CACO3	127	1.45	2.0	NE	NE			066065-018	EPA 310.1
	Alkalinity as HCO3	126	1.45	2.0	NE	NE			066065-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066065-018	EPA 310.1
TJA-7 15-Oct-04	Bromide	ND	0.0978	0.20	NE	NE	U		066067-013	SW846 9056
	Chloride	30.7	0.161	1.0	NE	NE			066067-013	SW846 9056
	Fluoride	0.137	0.0553	0.10	4	1.6			066067-013	SW846 9056
	Sulfate	16.9	0.193	0.40	NE	NE			066067-013	SW846 9056
	Calcium	68.7	0.040	0.10	NE	NE			066067-014	SW846 6020
	Magnesium	12.7	0.00633	0.01	NE	NE		J	066067-014	SW846 6020
	Potassium	1.90	0.0151	0.30	NE	NE			066067-014	SW846 6020
	Sodium	20.9	0.00968	0.25	NE	NE	B		066067-014	SW846 6020
	Total Alkalinity as CACO3	98.4	1.45	2.0	NE	NE			066067-018	EPA 310.1
	Alkalinity as HCO3	97.6	1.45	2.0	NE	NE			066067-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066067-018	EPA 310.1

Refer to footnotes at end of table.

Table F-4 (Continued)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
WYO-3	Bromide	0.263	0.0978	0.20	NE	NE			066071-013	SW846 9056
08-Oct-04	Chloride	14.7	0.0322	0.20	NE	NE			066071-013	SW846 9056
	Fluoride	0.415	0.0553	0.10	4	1.6			066071-013	SW846 9056
	Sulfate	84.9	0.965	2.0	NE	NE			066071-013	SW846 9056
	Calcium	71.3	0.040	0.10	NE	NE			066071-014	SW846 6020
	Magnesium	14.7	0.00633	0.01	NE	NE			066071-014	SW846 6020
	Potassium	2.41	0.0151	0.30	NE	NE			066071-014	SW846 6020
	Sodium	25.7	0.00968	0.25	NE	NE			066071-014	SW846 6020
	Total Alkalinity as CACO3	169	1.45	2.0	NE	NE			066071-018	EPA 310.1
	Alkalinity as HCO3	168	1.45	2.0	NE	NE			066071-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066071-018	EPA 310.1
WYO-4	Bromide	1.24	0.0978	0.20	NE	NE			066073-013	SW846 9056
06-Oct-04	Chloride	99.4	0.322	2.0	NE	NE			066073-013	SW846 9056
	Fluoride	0.368	0.0553	0.10	4	1.6			066073-013	SW846 9056
	Sulfate	51.4	1.93	4.0	NE	NE			066073-013	SW846 9056
	Calcium	80.3	0.040	0.10	NE	NE			066073-014	SW846 6020
	Magnesium	13.6	0.00633	0.01	NE	NE			066073-014	SW846 6020
	Potassium	1.88	0.0151	0.30	NE	NE			066073-014	SW846 6020
	Sodium	21.1	0.00968	0.25	NE	NE			066073-014	SW846 6020
	Total Alkalinity as CACO3	95.1	1.45	2.0	NE	NE			066073-018	EPA 310.1
	Alkalinity as HCO3	94.5	1.45	2.0	NE	NE			066073-018	EPA 310.1
	Alkalinity as CO3	ND	1.45	2.0	NE	NE	U		066073-018	EPA 310.1

Note: Values in **bold** exceed the established MCL or MAC.

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Methods SW846 9056, SW846 3005, and SW846 6020).

U.S. Environmental Protection Agency (EPA), December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to Method 310.1).

CFR = Code of Federal Regulations.
COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MAC = Maximum allowable concentration.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligrams per liter.
ND = Not detected at or above the MDL.
NE = Not established.
NMAC = New Mexico Administrative Code.
PQL = Practical quantitation limit.
SNL/NM = Sandia National Laboratories/New Mexico.

Table F-4 (Concluded)
Summary of Anion, Cation, and Alkalinity Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
Fiscal Year 2005, 1st Quarter

Laboratory Qualifiers:

B = Analyte detected in associated laboratory method blank.
E = Matrix interference during analysis.
H = Holding time was exceeded.
J = Amount detected is below the PQL.
N = Associated spike analyte recovered outside laboratory control limits.
U = Analyte is absent or below the method detection limit.

Validation Qualifiers:

(If blank, quality control samples met acceptance criteria with respect to submitted sample.)
A = Laboratory accuracy and/or bias measurements for the associated laboratory control sample and/or duplicate do not meet acceptance criteria.
A2 = Laboratory accuracy and/or bias measurements for the associated matrix spike and/or matrix spike duplicate do not meet acceptance criteria.
B = Analyte present in associated laboratory method blank sample.
B3 = Analyte present in associated continuing calibration blank.
HT = Holding time was exceeded for the associated sample analysis.
J = Associate value is an estimated quantity.
P1 = Laboratory precision measurements for the matrix spike and/or matrix spike duplicate do not meet acceptance criteria.
UJ = Analyte not detected above laboratory MDL, but associated value is an estimate and may be inaccurate or imprecise.

Table F-5
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-1	18-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062724-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	10-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063303-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	16-Feb-04	ND	0.028	0.10	NE	NE		None	063904-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	20-May-04	ND	0.028	0.10	NE	NE	U	None	064600-012	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	19-Aug-04	ND	0.028	0.10	NE	NE		None	065416-012	3500 Fe2+
	20-Oct-04	ND	0.028	0.10	NE	NE		None	066077-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
Eubank-2	09-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062585-040	SM 3500-Fe
	12-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063304-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	18-Feb-04	ND	0.028	0.10	NE	NE		None	063906-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	06-May-04	ND	0.028	0.10	NE	NE	U	None	064602-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Jul-04	ND	0.028	0.10	NE	NE		None	065418-012	3500 Fe2+
	21-Oct-04	ND	0.028	0.10	NE	NE		None	066080-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
Eubank-3	10-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062586-040	SM 3500-Fe
	18-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063305-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	17-Feb-04	ND	0.028	0.10	NE	NE		None	063909-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	04-May-04	ND	0.028	0.10	NE	NE	U	None	064604-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
Eubank-3 (Continued)	13-Jul-04	ND	0.028	0.10	NE	NE		None	065419-012	3500 Fe2+
	20-Oct-04	ND	0.028	0.10	NE	NE		None	066082-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
Eubank-5	09-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062587-040	SM 3500-Fe
	19-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063306-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	19-Feb-04	ND	0.028	0.10	NE	NE		None	063911-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	03-May-04	ND	0.028	0.10	NE	NE	U	None	064607-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Jul-04	ND	0.028	0.10	NE	NE		None	065420-012	3500 Fe2+
	25-Oct-04	ND	0.028	0.10	NE	NE		None	066084-012	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
PGS-2	22-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062678-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	10-Nov-03	0.040	0.0284	0.05	NE	NE	H, J	None	063278-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	03-Feb-04	ND	0.028	0.10	NE	NE		None	063851-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	12-May-04	ND	0.028	0.10	NE	NE	U	None	064551-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	28-Jul-04	ND	0.028	0.10	NE	NE		None	065360-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	05-Oct-04	ND	0.028	0.10	NE	NE		None	066025-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TA1-W-01	22-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062680-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	06-Nov-03	ND	0.0284	0.05	NE	NE	U	None	063279-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	05-Feb-04	ND	0.028	0.10	NE	NE		None	063853-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-01 (Continued)	10-May-04	ND	0.028	0.10	NE	NE	U	None	064553-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	17-Aug-04	ND	0.028	0.10	NE	NE		None	065362-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	06-Oct-04	ND	0.028	0.10	NE	NE		None	066027-012	3500 Fe2+
		0.04	0.03	NA	NE	NE		None	Field	HACH 8146
TA1-W-02	23-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062682-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	08-Oct-03	0.0536	0.0284	0.05	NE	NE	H	None	063280-040	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	28-Jan-04	ND	0.028	0.10	NE	NE		None	063855-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	11-May-04	ND	0.028	0.10	NE	NE	U	None	064556-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Aug-04	ND	0.028	0.10	NE	NE		None	065364-012	3500 Fe2+
		0.08	0.03	NA	NE	NE		None	Field	HACH 8146
	11-Oct-04	ND	0.028	0.10	NE	NE		None	066029-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TA1-W-03	24-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062684-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063281-040	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	07-Jan-04	ND	0.028	0.10	NE	NE		None	063857-012	3500 Fe2+
		0.26	0.03	NA	NE	NE		None	Field	HACH 8146
	28-Apr-04	ND	0.028	0.10	NE	NE	U	None	064558-012	3500 Fe2+
		0.06	0.03	NA	NE	NE		None	Field	HACH 8146
	18-Aug-04	ND	0.028	0.10	NE	NE		None	065366-012	3500 Fe2+
		0.29	0.03	NA	NE	NE		None	Field	HACH 8146
	19-Oct-04	ND	0.028	0.10	NE	NE		None	066031-012	3500 Fe2+
		0.12	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-04	29-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062686-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	14-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063282-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	06-Jan-04	ND	0.028	0.10	NE	NE		None	063860-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	26-Apr-04	ND	0.028	0.10	NE	NE	U	None	064560-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	26-Jul-04	ND	0.028	0.10	NE	NE		None	065368-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	07-Oct-04	ND	0.028	0.10	NE	NE		None	066033-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TA1-W-05	28-Jul-03	ND	0.0284	0.05	NE	NE	U	None	062688-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	20-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063283-040	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	12-Feb-04	ND	0.028	0.10	NE	NE		None	063862-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	07-May-04	ND	0.028	0.10	NE	NE	U	None	064562-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146
	20-Aug-04	ND	0.028	0.10	NE	NE		None	065370-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	26-Oct-04	ND	0.028	0.10	NE	NE		None	066035-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TA1-W-06	29-Jul-03	ND	0.0284	0.05	NE	NE	U	None	062690-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	09-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063284-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	09-Feb-04	ND	0.028	0.10	NE	NE		None	063864-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146
	21-May-04	ND	0.028	0.10	NE	NE	U	None	064564-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-06 (Continued)	06-Aug-04	ND	0.028	0.10	NE	NE		None	065372-012	3500 Fe2+
		0.04	0.03	NA	NE	NE		None	Field	HACH 8146
	26-Oct-04	ND	0.028	0.10	NE	NE		None	066037-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TA1-W-08	30-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062692-040	SM 3500-Fe
		0.15	0.03	NA	NE	NE		None	Field	HACH 8146
	21-Oct-03	ND	0.0284	0.05	NE	NE	U	None	063285-040	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	10-Feb-04	ND	0.028	0.10	NE	NE		None	063866-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	23-Apr-04	ND	0.028	0.10	NE	NE	U	None	064566-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Aug-04	ND	0.028	0.10	NE	NE		None	065374-012	3500 Fe2+
		0.14	0.03	NA	NE	NE		None	Field	HACH 8146
	08-Oct-04	ND	0.028	0.10	NE	NE		None	066039-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146
TA2-NW1-595 (QED)	30-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062695-A40	SM 3500-Fe
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	12-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063287-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	04-Feb-04	ND	0.028	0.10	NE	NE		None	063871-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-May-04	ND	0.028	0.10	NE	NE	U	None	064568-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	26-Jul-04	ND	0.028	0.10	NE	NE		None	065377-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	25-Oct-04	ND	0.028	0.10	NE	NE		None	066042-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-NW1-595 (Bennett)	05-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062695-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	11-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063288-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	26-Jan-04	ND	0.028	0.10	NE	NE		None	063869-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	19-May-04	ND	0.028	0.10	NE	NE	U	None	064568-012	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	23-Aug-04	ND	0.028	0.10	NE	NE		None	065379-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	07-Oct-04	ND	0.028	0.10	NE	NE		None	066044-012	3500 Fe2+
		0.04	0.03	NA	NE	NE		None	Field	HACH 8146
TA2-SW1-320	24-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062698-040	SM 3500-Fe
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	11-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063289-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	29-Jan-04	ND	0.028	0.10	NE	NE		None	063873-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	14-May-04	ND	0.028	0.10	NE	NE	U	None	064573-012	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	27-Jul-04	ND	0.028	0.10	NE	NE		None	065381-012	3500 Fe2+
		0.57	0.03	NA	NE	NE		None	Field	HACH 8146
	04-Oct-04	ND	0.028	0.10	NE	NE		None	066046-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
TA2-W-01	07-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062700-040	SM 3500-Fe
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	01-Dec-03	ND	0.0284	0.05	NE	NE	U	None	063290-040	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	12-Jan-04	ND	0.028	0.10	NE	NE		None	063876-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146
	17-May-04	ND	0.028	0.10	NE	NE	U	None	064575-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-01 (Continued)	12-Aug-04	ND	0.028	0.10	NE	NE		None	065383-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	18-Oct-04	ND	0.028	0.10	NE	NE		None	066048-012	3500 Fe2+
		0.06	0.03	NA	NE	NE		None	Field	HACH 8146
TA2-W-19	04-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062702-040	SM 3500-Fe
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	07-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063291-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Jan-04	ND	0.028	0.10	NE	NE		None	063878-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	27-Apr-04	ND	0.028	0.10	NE	NE	U	None	064577-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	27-Jul-04	ND	0.028	0.10	NE	NE		None	065385-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	04-Oct-04	ND	0.028	0.10	NE	NE		None	066050-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146
TA2-W-26	04-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062704-040	SM 3500-Fe
		0.19	0.03	NA	NE	NE		None	Field	HACH 8146
	16-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063292-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	20-Jan-04	ND	0.028	0.10	NE	NE		None	063880-012	3500 Fe2+
		0.05	0.03	NA	NE	NE		None	Field	HACH 8146
	21-Apr-04	ND	0.028	0.10	NE	NE	U	None	064580-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	30-Jul-04	ND	0.028	0.10	NE	NE		None	065387-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Oct-04	ND	0.028	0.10	NE	NE		None	066053-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TA2-W-27	06-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062707-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	23-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063294-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA2-W-27 (Continued)	15-Jan-04	ND	0.028	0.10	NE	NE		None	063885-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	19-Apr-04	ND	0.028	0.10	NE	NE	U	None	064583-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	28-Jul-04	ND	0.028	0.10	NE	NE		None	065392-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	14-Oct-04	ND	0.028	0.10	NE	NE		None	066056-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
TJA-2	31-Jul-03	ND	0.0284	0.05	NE	NE	U, H	None	062709-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	15-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063295-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	19-Jan-04	ND	0.028	0.10	NE	NE		None	063887-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	05-May-04	ND	0.028	0.10	NE	NE	U	None	064585-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	16-Aug-04	ND	0.028	0.10	NE	NE		None	065394-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	11-Oct-04	ND	0.028	0.10	NE	NE		None	066059-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TJA-3	06-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062711-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	22-Oct-03	ND	0.0284	0.05	NE	NE	U	None	063296-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	27-Jan-04	ND	0.028	0.10	NE	NE		None	063889-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	27-Apr-04	ND	0.028	0.10	NE	NE	U	None	064587-012	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	09-Aug-04	ND	0.028	0.10	NE	NE		None	065397-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	12-Oct-04	ND	0.028	0.10	NE	NE		None	066061-012	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-4	06-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062713-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	27-Oct-03	ND	0.0284	0.05	NE	NE	U	None	063297-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	29-Jan-04	ND	0.028	0.10	NE	NE		None	063891-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	20-Apr-04	ND	0.028	0.10	NE	NE	U	None	064589-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	10-Aug-04	ND	0.028	0.10	NE	NE		None	065399-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	12-Oct-04	ND	0.028	0.10	NE	NE		None	066063-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
TJA-6	11-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062715-040	SM 3500-Fe
		0.10	0.03	NA	NE	NE		None	Field	HACH 8146
	05-Nov-03	ND	0.0284	0.05	NE	NE	U, H	None	063298-040	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	04-Feb-04	ND	0.028	0.10	NE	NE		None	063893-012	3500 Fe2+
		0.11	0.03	NA	NE	NE		None	Field	HACH 8146
	22-Apr-04	ND	0.028	0.10	NE	NE	U	None	064591-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	04-Aug-04	ND	0.028	0.10	NE	NE		None	065401-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	13-Oct-04	ND	0.028	0.10	NE	NE		None	066065-012	3500 Fe2+
		0.06	0.03	NA	NE	NE		None	Field	HACH 8146
TJA-7	12-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062717-040	SM 3500-Fe
		0.05	0.03	NA	NE	NE		None	Field	HACH 8146
	28-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063299-040	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	22-Jan-04	ND	0.028	0.10	NE	NE		None	063895-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	30-Apr-04	ND	0.028	0.10	NE	NE	U	None	064593-012	3500 Fe2+
		0.03	0.03	NA	NE	NE		None	Field	HACH 8146

Refer to footnotes at end of table.

Table F-5 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-7 (Continued)	06-Aug-04	ND	0.028	0.10	NE	NE		None	065403-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	15-Oct-04	ND	0.028	0.10	NE	NE		None	066067-012	3500 Fe2+
		0.04	0.03	NA	NE	NE		None	Field	HACH 8146
WYO-3	13-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062719-040	SM 3500-Fe
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	29-Oct-03	ND	0.0284	0.05	NE	NE	U, H	None	063300-040	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	21-Jan-04	ND	0.028	0.10	NE	NE		None	063897-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	28-Apr-04	ND	0.028	0.10	NE	NE	U	None	064595-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	11-Aug-04	ND	0.028	0.10	NE	NE		None	065408-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	08-Oct-04	ND	0.028	0.10	NE	NE		None	066071-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
WYO-4	14-Aug-03	ND	0.0284	0.05	NE	NE	U, H	None	062721-040	SM 3500-Fe
		0.06	0.03	NA	NE	NE		None	Field	HACH 8146
	03-Nov-03	0.0288	0.0284	0.05	NE	NE	B, H, J	None	063301-040	3500 Fe2+
		0.01	0.03	NA	NE	NE		None	Field	HACH 8146
	03-Feb-04	ND	0.028	0.10	NE	NE		None	063899-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	30-Apr-04	ND	0.028	0.10	NE	NE	U	None	064597-012	3500 Fe2+
		0.02	0.03	NA	NE	NE		None	Field	HACH 8146
	03-Aug-04	ND	0.028	0.10	NE	NE		None	065411-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146
	06-Oct-04	ND	0.028	0.10	NE	NE		None	066073-012	3500 Fe2+
		ND	0.03	NA	NE	NE		None	Field	HACH 8146

Note: Values in **bold** exceed the established MCL or MAC.

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

Table F-5 (Concluded)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

[d]Lab specific per laboratory operating procedures for Methods SM 3500-Fe and 3500 Fe2+.
HACH 8146, "Iron, Ferrous (0 to 3.00 mg/L), Phenanthroline Method," procedures for portable colorimeters.

CFR = Code of Federal Regulations.
COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MAC = Maximum allowable concentration.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligrams per liter.
NA = Not applicable.
ND = Not detected at or above the MDL.
NE = Not established.
NMAC = New Mexico Administrative Code.
PQL = Practical quantitation limit.
SNL/NM = Sandia National Laboratories/New Mexico.

Laboratory Qualifiers:

B = Analyte detected in associated laboratory method blank.
J = Amount detected is below the PQL.
U = Analyte is absent or below the method detection limit.

Validation Qualifiers:

None = Data was not validated.

Table F-6
Summary of Manganese 2+ Results (Method C2_150.mtw[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[b] (mg/L)	PQL[c] (mg/L)	MCL/MAC[d] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
Eubank-1	18-Aug-03	0.002	0.0007	NR	NE	NE		None	062724-040
	10-Nov-03	ND	0.05	NR	NE	NE	U	None	063303-041
	16-Feb-04	ND	0.05	NR	NE	NE	U	None	063904-011
	20-May-04	ND	0.05	NR	NE	NE	U	None	064600-011
	19-Aug-04	ND	0.05	NR	NE	NE	U	None	065416-011
	20-Oct-04	ND	0.05	NR	NE		U	None	066077-011
Eubank-2	09-Jul-03	ND	0.05	NR	NE	NE	U	None	062585-040
	12-Nov-03	ND	0.05	NR	NE	NE	U	None	063304-041
	18-Feb-04	ND	0.05	NR	NE	NE	U	None	063906-011
	06-May-04	ND	0.05	NR	NE	NE	U	None	064602-011
	07-Jul-04	ND	0.05	NR	NE	NE	U	None	065418-011
	21-Oct-04	ND	0.05	NR	NE		U	None	066080-011
Eubank-3	10-Jul-03	ND	0.05	NR	NE	NE	U	None	062586-040
	18-Nov-03	ND	0.05	NR	NE	NE	U	None	063305-041
	17-Feb-04	ND	0.05	NR	NE	NE	U	None	063909-011
	04-May-04	ND	0.05	NR	NE	NE	U	None	064604-011
	07-Jul-04	ND	0.05	NR	NE	NE	U	None	065419-011
	20-Oct-04	ND	0.05	NR	NE	NE	U	None	066082-011
Eubank-5	09-Jul-03	ND	0.05	NR	NE	NE	U	None	062587-040
	19-Nov-03	ND	0.05	NR	NE	NE	U	None	063306-041
	19-Feb-04	ND	0.05	NR	NE	NE	U	None	063911-011
	03-May-04	ND	0.05	NR	NE	NE	U	None	064607-011
	07-Jul-04	ND	0.05	NR	NE	NE	U	None	065420-011
	25-Oct-04	ND	0.05	NR	NE	NE	U	None	066084-011
PGS-2	22-Jul-03	ND	0.05	NR	NE	NE	U	None	062678-041
	10-Nov-03	ND	0.05	NR	NE	NE	U	None	063278-041
	03-Feb-04	ND	0.05	NR	NE	NE	U	None	063851-011
	12-May-04	ND	0.05	NR	NE	NE	U	None	064551-011
	28-Jul-04	ND	0.05	NR	NE	NE	U	None	065360-011
	05-Oct-04	ND	0.05	NR	NE	NE	U	None	066025-011

Refer to footnotes at end of table.

Table F-6 (Continued)
Summary of Manganese 2+ Results (Method C2_150.mtw[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[b] (mg/L)	PQL[c] (mg/L)	MCL/MAC[d] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA1-W-01	22-Jul-03	ND	0.05	NR	NE	NE	U	None	062680-041
	06-Nov-03	ND	0.05	NR	NE	NE	U	None	063279-041
	05-Feb-04	ND	0.05	NR	NE	NE	U	None	063853-011
	10-May-04	ND	0.05	NR	NE	NE	U	None	064553-011
	17-Aug-04	ND	0.05	NR	NE	NE	U	None	065362-011
	06-Oct-04	ND	0.05	NR	NE	NE	U	None	066027-011
TA1-W-02	23-Jul-03	ND	0.05	NR	NE	NE	U	None	062682-041
	08-Oct-03	ND	0.05	NR	NE	NE	U	None	063280-041
	28-Jan-04	ND	0.05	NR	NE	NE	U	None	063855-011
	11-May-04	ND	0.05	NR	NE	NE	U	None	064556-011
	13-Aug-04	ND	0.05	NR	NE	NE	U	None	065364-011
	11-Oct-04	ND	0.05	NR	NE	NE	U	None	066029-011
TA1-W-03	24-Jul-03	ND	0.05	NR	NE	NE	U	None	062684-041
	13-Oct-03	ND	0.05	NR	NE	NE	U	None	063281-041
	07-Jan-04	ND	0.05	NR	NE	NE	U	None	063857-011
	28-Apr-04	ND	0.05	NR	NE	NE	U	None	064558-011
	18-Aug-04	ND	0.05	NR	NE	NE	U	None	065366-011
	19-Oct-04	ND	0.05	NR	NE	NE	U	None	066031-011
TA1-W-04	29-Jul-03	ND	0.05	NR	NE	NE	U	None	062686-041
	14-Oct-03	ND	0.05	NR	NE	NE	U	None	063282-041
	06-Jan-04	ND	0.05	NR	NE	NE	U	None	063860-011
	26-Apr-04	ND	0.05	NR	NE	NE	U	None	064560-011
	26-Jul-04	ND	0.05	NR	NE	NE	U	None	065368-011
	07-Oct-04	ND	0.05	NR	NE	NE	U	None	066033-011
TA1-W-05	28-Jul-03	ND	0.05	NR	NE	NE	U	None	062688-041
	20-Oct-03	ND	0.05	NR	NE	NE	U	None	063283-041
	12-Feb-04	ND	0.05	NR	NE	NE	U	None	063862-011
	07-May-04	ND	0.05	NR	NE	NE	U	None	064562-011
	20-Aug-04	ND	0.05	NR	NE	NE	U	None	065370-011
	26-Oct-04	ND	0.05	NR	NE	NE	U	None	066035-011

Refer to footnotes at end of table.

Table F-6 (Continued)
Summary of Manganese 2+ Results (Method C2_150.mtw[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[b] (mg/L)	PQL[c] (mg/L)	MCL/MAC[d] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA1-W-06	29-Jul-03	ND	0.05	NR	NE	NE	U	None	062690-041
	09-Oct-03	ND	0.05	NR	NE	NE	U	None	063284-041
	09-Feb-04	ND	0.05	NR	NE	NE	U	None	063864-011
	21-May-04	ND	0.05	NR	NE	NE	U	None	064564-011
	06-Aug-04	ND	0.05	NR	NE	NE	U	None	065372-011
	26-Oct-04	ND	0.05	NR	NE	NE	U	None	066037-011
TA1-W-08	30-Jul-03	ND	0.05	NR	NE	NE	U	None	062692-041
	21-Oct-03	ND	0.05	NR	NE	NE	U	None	063285-041
	10-Feb-04	ND	0.05	NR	NE	NE	U	None	063866-011
	23-Apr-04	ND	0.05	NR	NE	NE	U	None	064566-011
	13-Aug-04	ND	0.05	NR	NE	NE	U	None	065374-011
	08-Oct-04	ND	0.05	NR	NE	NE	U	None	066039-011
TA2-NW1-595 (QED)	12-Nov-03	ND	0.05	NR	NE	NE	U	None	063287-041
	04-Feb-04	ND	0.05	NR	NE	NE	U	None	063871-011
	13-May-04	ND	0.05	NR	NE	NE	U	None	064568-011
	26-Jul-04	ND	0.05	NR	NE	NE	U	None	065377-011
	25-Oct-04	ND	0.05	NR	NE	NE	U	None	066042-011
TA2-NW1-595 (Bennett)	05-Aug-03	ND	0.05	NR	NE	NE	U	None	062695-041
	11-Nov-03	ND	0.05	NR	NE	NE	U	None	063288-041
	26-Jan-04	ND	0.05	NR	NE	NE	U	None	063869-011
	19-May-04	ND	0.05	NR	NE	NE	U	None	064568-011
	23-Aug-04	ND	0.05	NR	NE	NE	U	None	065379-011
	07-Oct-04	ND	0.05	NR	NE	NE	U	None	066044-011
TA2-SW1-320	24-Jul-03	ND	0.05	NR	NE	NE	U	None	062698-041
	11-Nov-03	ND	0.05	NR	NE	NE	U	None	063289-041
	29-Jan-04	ND	0.05	NR	NE	NE	U	None	063873-011
	14-May-04	ND	0.05	NR	NE	NE	U	None	064573-011
	27-Jul-04	ND	0.05	NR	NE	NE	U	None	065381-011
	04-Oct-04	ND	0.05	NR	NE	NE	U	None	066046-011

Refer to footnotes at end of table.

Table F-6 (Continued)
Summary of Manganese 2+ Results (Method C2_150.mtw[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[b] (mg/L)	PQL[c] (mg/L)	MCL/MAC[d] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TA2-W-01	07-Aug-03	ND	0.05	NR	NE	NE	U	None	062700-041
	01-Dec-03	ND	0.05	NR	NE	NE	U	None	063290-041
	12-Jan-04	ND	0.05	NR	NE	NE	U	None	063876-011
	17-May-04	ND	0.05	NR	NE	NE	U	None	064575-011
	12-Aug-04	ND	0.05	NR	NE	NE	U	None	065383-011
	18-Oct-04	ND	0.05	NR	NE	NE	U	None	066048-011
TA2-W-19	04-Aug-03	ND	0.05	NR	NE	NE	U	None	062702-041
	07-Oct-03	ND	0.05	NR	NE	NE	U	None	063291-041
	13-Jan-04	ND	0.05	NR	NE	NE	U	None	063878-011
	27-Apr-04	ND	0.05	NR	NE	NE	U	None	064577-011
	27-Jul-04	ND	0.05	NR	NE	NE	U	None	065385-011
	04-Oct-04	ND	0.05	NR	NE	NE	U	None	066050-011
TA2-W-26	04-Aug-03	ND	0.05	NR	NE	NE	U	None	062704-041
	16-Oct-03	0.031	0.05	NR	NE	NE		None	063292-041
	20-Jan-04	ND	0.05	NR	NE	NE	U	None	063880-011
	21-Apr-04	ND	0.05	NR	NE	NE	U	None	064580-011
	30-Jul-04	ND	0.05	NR	NE	NE	U	None	065387-011
	13-Oct-04	ND	0.05	NR	NE	NE	U	None	066053-011
TA2-W-27	06-Aug-03	ND	0.05	NR	NE	NE	U	None	062707-041
	23-Oct-03	ND	0.05	NR	NE	NE	U	None	063294-041
	15-Jan-04	ND	0.05	NR	NE	NE	U	None	063885-011
	19-Apr-04	ND	0.05	NR	NE	NE	U	None	064583-011
	28-Jul-04	ND	0.05	NR	NE	NE	U	None	065392-011
	14-Oct-04	ND	0.05	NR	NE	NE	U	None	066056-011
TJA-2	31-Jul-03	0.06	0.05	NR	NE	NE		None	062709-041
	15-Oct-03	ND	0.05	NR	NE	NE	U	None	063295-041
	19-Jan-04	ND	0.05	NR	NE	NE	U	None	063887-011
	05-May-04	ND	0.05	NR	NE	NE	U	None	064585-011
	16-Aug-04	ND	0.05	NR	NE	NE	U	None	065394-011
	11-Oct-04	ND	0.05	NR	NE	NE	U	None	066059-011

Refer to footnotes at end of table.

Table F-6 (Continued)
Summary of Manganese 2+ Results (Method C2_150.mtw[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[b] (mg/L)	PQL[c] (mg/L)	MCL/MAC[d] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
TJA-3	06-Aug-03	0.078	0.05	NR	NE	NE		None	062711-041
	22-Oct-03	ND	0.05	NR	NE	NE	U	None	063296-041
	27-Jan-04	ND	0.05	NR	NE	NE	U	None	063889-011
	27-Apr-04	ND	0.05	NR	NE	NE	U	None	064587-011
	09-Aug-04	ND	0.05	NR	NE	NE	U	None	065397-011
	12-Oct-04	ND	0.05	NR	NE	NE	U	None	066061-011
TJA-4	11-Aug-03	ND	0.05	NR	NE	NE	U	None	062713-041
	27-Oct-03	ND	0.05	NR	NE	NE	U	None	063297-041
	29-Jan-04	ND	0.05	NR	NE	NE	U	None	063891-011
	20-Apr-04	ND	0.05	NR	NE	NE	U	None	064589-011
	10-Aug-04	ND	0.05	NR	NE	NE	U	None	065399-011
	12-Oct-04	ND	0.05	NR	NE	NE	U	None	066063-011
TJA-6	11-Aug-03	ND	0.05	NR	NE	NE	U	None	062715-041
	05-Nov-03	ND	0.05	NR	NE	NE	U	None	063298-041
	04-Feb-04	ND	0.05	NR	NE	NE	U	None	063893-011
	22-Apr-04	ND	0.05	NR	NE	NE	U	None	064591-011
	04-Aug-04	ND	0.05	NR	NE	NE	U	None	065401-011
	13-Oct-04	ND	0.05	NR	NE	NE	U	None	066065-011
TJA-7	12-Aug-03	ND	0.05	NR	NE	NE	U	None	062717-041
	28-Oct-03	ND	0.05	NR	NE	NE	U	None	063299-041
	22-Jan-04	ND	0.05	NR	NE	NE	U	None	063895-011
	30-Apr-04	ND	0.05	NR	NE	NE	U	None	064593-011
	06-Aug-04	ND	0.05	NR	NE	NE	U	None	065403-011
	15-Oct-04	ND	0.05	NR	NE	NE	U	None	066067-011
WYO-3	13-Aug-03	ND	0.05	NR	NE	NE	U	None	062719-041
	29-Oct-03	ND	0.05	NR	NE	NE	U	None	063300-041
	21-Jan-04	ND	0.05	NR	NE	NE	U	None	063897-011
	28-Apr-04	ND	0.05	NR	NE	NE	U	None	064595-011
	11-Aug-04	ND	0.05	NR	NE	NE	U	None	065408-011
	08-Oct-04	ND	0.05	NR	NE	NE	U	None	066071-011

Refer to footnotes at end of table.

Table F-6 (Concluded)
Summary of Manganese 2+ Results (Method C2_150.mtw[a])
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[b] (mg/L)	PQL[c] (mg/L)	MCL/MAC[d] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number
WYO-4	14-Aug-03	0.098	0.05	NR	NE	NE		None	062721-041
	03-Nov-03	ND	0.05	NR	NE	NE	U	None	063301-041
	03-Feb-04	ND	0.05	NR	NE	NE	U	None	063899-011
	30-Apr-04	ND	0.05	NR	NE	NE	U	None	064597-011
	03-Aug-04	ND	0.05	NR	NE	NE	U	None	065411-011
	06-Oct-04	ND	0.05	NR	NE	NE	U	None	066073-011

[a]Lab specific per laboratory operating procedures for Method C2_150.mtw.

[b]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[c]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[d]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

CFR = Code of Federal Regulations.
COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MAC = Maximum allowable concentration.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligrams per liter.
ND = Not detected at or above the MDL.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported by laboratory.
PQL = Practical quantitation limit.
SNL/NM = Sandia National Laboratories/New Mexico.

Laboratory Qualifiers:
U = Analyte is absent or below the method detection limit.

Validation Qualifiers:
None = Data was not validated.

Table F-7
Summary of Ammonia, Total Kjeldahl Nitrogen, Total Organic Carbon, and Phosphate Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TA1-W-03	Total Organic carbon	0.764	0.025	0.2	NE	NE	B		062684-048	EPA 415.1
24-Jul-03	Total Phosphate as phosphorus	0.0448	0.0162	0.05	NE	NE	J, B	B, B3, J	062684-042	EPA 365.4
TA1-W-08	Total Organic carbon	0.924	0.025	0.2	NE	NE	B		062692-048	SW846 9060
30-Jul-03	Total Phosphate as phosphorus	ND	0.0162	0.05	NE	NE	U, B		062692-042	EPA 365.4
TJA-7	Ammonia	ND	0.024	0.05	NE	NE	U		062717-019	EPA 350.1
12-Aug-03	Total Kjeldahl Nitrogen	0.338	0.0375	0.125	NE	NE			062717-046	EPA 351.2
	Total Organic carbon	0.431	0.025	0.2	NE	NE	B		062717-048	EPA 415.1
	Total Phosphate as phosphorus	0.0449	0.0162	0.05	NE	NE	J, B	B, B3, J	062717-042	EPA 365.4
TJA-7	Ammonia	ND	0.024	0.05	NE	NE	U		063299-019	EPA 350.1
28-Oct-03	Total Kjeldahl Nitrogen	3.33	0.09	0.3	NE	NE			063299-046	EPA 351.2
TA1-W-03	Total Organic Carbon	0.790	0.025	0.2	NE	NE			063857-004	EPA 415.1
07-Jan-04	Total Phosphorus	0.011	0.011	0.05	NE	NE	B, J	B, B3, J	063857-024	EPA 365.4
TA1-W-08	Total Organic Carbon	0.599	0.025	0.2	NE	NE	B	B3, J	063866-004	EPA 415.1
10-Feb-04	Total Phosphorus	0.016	0.011	0.05	NE	NE	J		063866-024	EPA 365.4
TJA-7	Total Organic Carbon	0.335	0.025	0.2	NE	NE			063895-004	EPA 415.1
22-Jan-04	Ammonia	0.080	0.024	0.05	NE	NE			063895-017	EPA 350.1
	Total Kjeldahl Nitrogen	0.560	0.030	0.1	NE	NE			063895-019	EPA 351.2
	Total Phosphorus	ND	0.011	0.05	NE	NE	U		063895-024	EPA 365.4
TJA-7	Total Kjeldahl Nitrogen	ND	0.061	0.10	NE	NE	U		064593-017	EPA 350.1
30-Apr-04	Ammonia	ND	0.0216	0.05	NE	NE	U	UJ, A2	064593-019	EPA 351.2
TA1-W-03	Total Organic Carbon	0.64	0.39	1.0	NE	NE	J		065366-004	EPA 415.1
18-Aug-04	Total Phosphorus	0.0288	0.010	0.050	NE	NE	J		065366-024	EPA 365.4
TA1-W-08	Total Organic Carbon	1.1	0.39	1.0	NE	NE			065374-004	EPA 415.1
13-Aug-04	Total Phosphorus	0.0237	0.010	0.050	NE	NE	J		065374-024	EPA 365.4

Refer to footnotes at end of table.

Table F-7 (Concluded)
Summary of Ammonia, Total Kjeldahl Nitrogen, Total Organic Carbon, and Phosphate Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL/MAC[c] (mg/L)		Laboratory Qualifier	Validation Qualifier	Sample Number	Analytical Method[d]
TJA-7	Total Organic Carbon	ND	0.39	1.0	NE	NE	U		065403-004	EPA 415.1
06-Aug-04	Ammonia	ND	0.0216	0.050	NE	NE	U		065403-019	EPA 350.1
	Total Kjeldahl Nitrogen	ND	0.061	0.10	NE	NE	U	A2, R	065403-017	EPA 351.2
	Total Phosphorus	0.0361	0.010	0.050	NE	NE	J		065403-024	EPA 365.4
TJA-7	Ammonia	ND	0.0159	0.05	NE	NE	U	B3, UJ	066067-019	EPA 350.1
15-Oct-04	Total Kjeldahl Nitrogen	0.130	0.044	0.10	NE	NE			066067-017	EPA 351.2

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846, (and updates) (applies to Method SW846 9060).
U.S. Environmental Protection Agency (EPA), December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to 300- and 400-series methods).

CFR = Code of Federal Regulations.
COA = City of Albuquerque.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
MAC = Maximum allowable concentration.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligrams per liter.
ND = Not detected at or above the MDL.
NE = Not established.
NMAC = New Mexico Administrative Code.
PQL = Practical quantitation limit.
SNL/NM = Sandia National Laboratories/New Mexico.

Laboratory Qualifiers:

B = Analyte detected in associated laboratory method blank.
J = Amount detected is below the PQL.
U = Analyte is absent or below the method detection limit.

Validation Qualifiers:

(If blank, quality control samples met acceptance criteria with respect to submitted sample.)
A2 = Laboratory accuracy and/or bias measurements for the associated matrix spike and/or matrix spike duplicate do not meet acceptance criteria.
B = Analyte present in associated laboratory method blank sample.
B3 = Analyte present in associated continuing calibration blank.
J = Associate value is an estimated quantity.
R = The date was qualified as unusable for their intended purpose.
UJ = Analyte not detected above laboratory MDL, but associated value is an estimate and may be inaccurate or imprecise.

Table F-8
Summary of Stable Isotope Results
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2004

Well ID	Analyte	Result ($^0/_{00}$)	Validation Qualifier	Sample Number	Analytical Method[a]
TA1-W-03 24-Jul-03	δ Nitrogen-15	12.7	None	062684-043	Lab Specific
	δ Oxygen-18	- 10.8	None	062684-043	Lab Specific
	δ Deuterium	- 78	None	062684-043	Lab Specific
TA1-W-08 30-Jul-03	δ Nitrogen-15	12.5	None	062692-043	Lab Specific
	δ Oxygen-18	-10.8	None	062692-043	Lab Specific
	δ Deuterium	-76	None	062692-043	Lab Specific
TJA-7 12-Aug-03	δ Nitrogen-15	57.3	None	062717-043	Lab Specific
	δ Oxygen-18	- 10.4	None	062717-043	Lab Specific
	δ Deuterium	- 81	None	062717-043	Lab Specific
TA1-W-03 07-Jan-04	δ Nitrogen-15	6.2	None	063857-036	Lab Specific
	δ Oxygen-18	- 11.1	None	063857-036	Lab Specific
	δ Deuterium	- 74	None	063857-036	Lab Specific
TA1-W-08 10-Feb-04	δ Nitrogen-15	7.0	None	063866-036	Lab Specific
	δ Oxygen-18	-10.4	None	063866-036	Lab Specific
	δ Deuterium	-79	None	063866-036	Lab Specific
TJA-7 22-Jan-04	δ Nitrogen-15	6.9	None	063895-036	Lab Specific
	δ Oxygen-18	- 10.7	None	063895-036	Lab Specific
	δ Deuterium	- 74	None	063895-036	Lab Specific
TA1-W-03 18-Aug-04	δ Nitrogen-15	5.4	None	065366-036	Lab Specific
	δ Oxygen-18	- 10.7	None	065366-036	Lab Specific
	δ Deuterium	- 75	None	065366-036	Lab Specific
TA1-W-08 13-Aug-04	δ Nitrogen-15	6.2	None	065374-036	Lab Specific
	δ Oxygen-18	-11.1	None	065374-036	Lab Specific
	δ Deuterium	-77	None	065374-036	Lab Specific
TJA-7 06-Aug-04	δ Nitrogen-15	3.9	None	065403-036	Lab Specific
	δ Oxygen-18	- 10.5	None	065403-036	Lab Specific
	δ Deuterium	- 72	None	065403-036	Lab Specific

[a]Lab specific per laboratory operating procedures.
COA = City of Albuquerque.
ID = Identification.
SNL/NM = Sandia National Laboratories/New Mexico.
$^0/_{00}$ = Per mil (part per thousand).

Validation Qualifiers:
None = Data was not validated.

Table F-9
Summary of Field Water Quality Measurements[a]
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2005

Well ID	Sample Date	Temperature (^{0}C)	Specific Conductivity (μmho/cm)	Oxidation Reduction Potential (mV)	pH	Turbidity (NTU)	Dissolved Oxygen (%Sat)	Dissolved Oxygen (mg/L)
EUBANK-1	18-Aug-03	20.55	497	230.5	7.48	0.31	---	7.40
PGS-2	22-Jul-03	22	437	128.8	8.31	1.5	69.3	---
TA1-W-01	22-Jul-03	21.40	500	187.2	7.11	0.98	84.6	---
TA1-W-02	23-Jul-03	21.80	502	223.4	7.17	1.07	---	5.89
TA1-W-03	24-Jul-03	19.96	576	168.3	7.26	0.86	---	7.60
TA1-W-04	29-Jul-03	21.01	502	192.8	7.32	1.62	---	6.09
TA1-W-05	28-Jul-03	21.91	564	194.1	7.26	1.59	---	5.38
TA1-W-06	29-Jul-03	21.41	865	205.4	7.45	0.74	---	7.35
TA1-W-08	30-Jul-03	19.57	900	206.2	7.30	0.35	---	7.22
TA2-NW1-595	30-Jul-03	20.30	724	187.2	7.07	0.81	---	7.61
TA2-NW1-595	05-Aug-03	20.86	765	189.1	7.31	0.79	---	6.98
TA2-SW1-320	24-Jul-03	21.60	475	147.3	7.70	2.10	---	8.52
TA2-W-01	07-Aug-03	19.92	638	203.6	7.54	7.41	---	7.83
TA2-W-19	04-Aug-03	19.64	619	211.5	7.52	3.86	---	7.99
TA2-W-19	23-Sep-03	19.71	616	205.9	7.61	0.69	---	8.29
TA2-W-26	04-Aug-03	20.51	1,000	197.4	7.41	3.17	---	7.88
TA2-W-27	06-Aug-03	20.14	895	204.2	7.43	0.71	---	8.22
TJA-2	31-Jul-03	19.52	596	204.9	7.49	1.03	---	7.37
TJA-3	06-Aug-03	20.97	496	194.5	7.41	0.51	---	6.68
TJA-4	11-Aug-03	19.32	537	206.4	7.52	0.28	---	5.19
TJA-6	11-Aug-03	22.32	474	217.0	7.47	23.8	---	4.48
TJA-7	12-Aug-03	22.40	557	233.9	7.54	8.36	---	7.60
WYO-3	13-Aug-03	20.05	520	227.5	7.48	0.83	---	0.28
WYO-4	14-Aug-03	19.12	623	173.4	7.65	1.33	---	7.45

Refer to footnotes at end of table.

Table F-9 (Continued)
Summary of Field Water Quality Measurements[a]
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2005

Well ID	Sample Date	Temperature (^{0}C)	Specific Conductivity (μmho/cm)	Oxidation Reduction Potential (mV)	pH	Turbidity (NTU)	Dissolved Oxygen (%Sat)	Dissolved Oxygen (mg/L)
Eubank-1	10-Nov-03	19.00	456	328.1	7.44	0.28	---	6.34
	16-Feb-04	18.60	419	193.5	7.73	0.90	---	7.73
	20-May-04	20.76	475	133.8	7.43	0.45	---	7.07
	19-Aug-04	19.93	462	169.7	7.81	0.46	---	4.67
Eubank-2	12-Nov-03	17.93	485	309.5	7.30	8.37	---	7.03
	18-Feb-04	16.96	478	187.3	7.56	0.71	---	7.53
	06-May-04	20.74	556	152.1	7.16	2.78	---	6.95
Eubank-3	18-Nov-03	15.50	505	262.9	7.29	0.80	---	8.75
	17-Feb-04	17.31	505	178.7	7.54	0.43	---	7.99
	04-May-04	18.67	560	117.0	7.14	0.51	---	7.60
Eubank-5	19-Nov-03	16.70	503	305.7	7.26	0.77	---	8.19
	19-Feb-04	16.44	533	191.4	7.56	0.64	---	8.14
	03-May-04	18.70	583	130.9	7.14	0.49	---	7.88
PGS-2	10-Nov-03	17.25	458	170.1	8.48	0.30	---	1.15
	03-Feb-04	14.01	422	120.7	8.27	0.70	---	1.60
	12-May-04	19.04	481	129.5	7.85	0.95	---	0.99
	28-Jul-04	20.95	425	133.4	8.16	1.95	---	1.28
TA1-W-01	06-Nov-03	19.89	435	346.1	7.33	0.43	---	6.23
	05-Feb-04	17.90	484	249.3	7.32	0.43	---	NM
	10-May-04	22.07	496	169.2	7.27	0.43	---	6.21
	17-Aug-04	21.46	481	189.6	7.70	0.42	---	6.42
TA1-W-02	08-Oct-03	18.68	489	224.1	7.28	4.88	---	6.24
	28-Jan-04	17.51	475	268.2	7.27	2.91	---	4.01
	11-May-04	21.19	489	148.5	7.23	0.38	---	5.00
	13-Aug-04	21.38	477	130.9	7.32	0.89	---	5.83
TA1-W-03	13-Oct-03	17.60	625	229.2	7.34	0.88	---	7.39
	07-Jan-04	15.22	1,568	190.7	7.39	2.28	---	5.39
	28-Apr-04	17.84	1,588	102.1	7.23	0.71	---	7.17
	18-Aug-04	18.41	1,563	158.7	7.65	3.69	---	7.89
TA1-W-04	14-Oct-03	18.50	479	229.0	7.33	0.93	---	5.60
	06-Jan-04	17.46	447	247.8	7.08	1.23	---	5.02
	26-Apr-04	19.37	464	97.9	7.26	0.32	---	5.53
	26-Jul-04	19.86	473	180.0	7.49	1.58	---	2.78

Refer to footnotes at end of table.

Table F-9 (Continued)
Summary of Field Water Quality Measurements[a]
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2005

Well ID	Sample Date	Temperature (^{0}C)	Specific Conductivity (μmho/cm)	Oxidation Reduction Potential (mV)	pH	Turbidity (NTU)	Dissolved Oxygen (%Sat)	Dissolved Oxygen (mg/L)
TA1-W-05	20-Oct-03	19.80	549	257.9	7.20	0.39	---	7.46
	12-Feb-04	17.01	499	202.3	7.47	0.16	---	7.29
	07-May-04	20.04	559	174.8	7.11	0.29	---	6.69
	20-Aug-04	20.94	544	173.7	7.47	0.93	---	6.51
TA1-W-06	09-Oct-03	18.89	830	184.1	7.45	0.58	---	7.31
	09-Feb-04	16.05	771	175.3	7.79	1.90	---	7.27
	21-May-04	20.44	823	146.9	7.46	0.34	---	6.54
	06-Aug-04	20.09	795	143.6	7.44	0.28	---	6.98
TA1-W-08	21-Oct-03	17.48	1,840	242.0	7.32	1.03	---	7.49
	10-Feb-04	14.97	1,723	172.3	7.57	1.40	---	6.29
	23-Apr-04	16.84	1,800	109.9	7.16	0.21	---	7.80
	13-Aug-04	18.60	1,756	173.1	7.53	0.46	---	7.35
TA2-NW1-595 (QED)	12-Nov-03	16.20	7.48	245.3	7.48	0.76	---	8.53
	04-Feb-04	13.29	691	142.7	7.59	0.46	---	8.45
	13-May-04	16.78	749	208.6	7.19	0.37	---	7.47
	26-Jul-04	17.87	714	180.3	7.14	0.37	---	6.56
TA2-NW1-595 (Bennett)	11-Nov-03	19.45	663	269.9	7.30	0.59	---	6.92
	26-Jan-04	16.55	715	218.7	7.29	0.43	---	4.30
	19-May-04	19.98	736	139.9	7.28	0.43	---	7.19
	23-Aug-04	20.02	711	170.7	7.64	0.39	---	7.49
TA2-SW1-320	11-Nov-03	16.80	528	233.9	7.77	2.69	---	8.53
	29-Jan-04	14.08	450	158.4	7.91	3.06	---	11.92
	14-May-04	15.99	481	163.6	7.50	0.71	---	8.20
	27-Jul-04	19.28	464	168.0	7.49	2.04	---	7.36
TA2-W-01	01-Dec-03	16.63	529	290.3	7.53	6.74	---	8.74
	12-Jan-04	17.13	570	224.8	7.52	6.36	---	4.17
	17-May-04	22.03	623	182.2	7.40	3.50	---	7.32
	12-Aug-04	20.40	595	177.6	7.82	10.8	---	7.81
TA2-W-19	07-Oct-03	18.12	606	216.6	7.41	0.96	---	8.08
	13-Jan-04	17.16	539	234.7	7.54	2.24	---	4.91
	27-Apr-04	18.43	563	152.4	7.77	0.37	---	8.61
	27-Jul-04	19.76	558	181.5	7.26	0.59	---	7.65
TA2-W-26	16-Oct-03	17.79	956	232.1	7.39	1.93	---	7.65
	20-Jan-04	15.98	924	226.6	7.43	3.12	---	4.54
	21-Apr-04	17.36	1,011	103.6	7.28	0.45	---	8.76
	30-Jul-04	19.24	958	147.5	7.18	1.18	---	7.58

Refer to footnotes at end of table.

Table F-9 (Continued)
Summary of Field Water Quality Measurements[a]
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2005

Well ID	Sample Date	Temperature (^{0}C)	Specific Conductivity (μmho/cm)	Oxidation Reduction Potential (mV)	pH	Turbidity (NTU)	Dissolved Oxygen (%Sat)	Dissolved Oxygen (mg/L)
TA2-W-27	23-Oct-03	18.77	751	234.7	7.44	0.37	---	8.32
	15-Jan-04	16.19	799	233.9	7.44	1.02	---	4.91
	19-Apr-04	18.01	820	117.9	7.29	0.73	---	8.51
	28-Jul-04	18.82	810	166.5	7.19	1.16	---	8.50
TJA-2	15-Oct-03	17.74	561	238.7	7.49	0.37	---	7.42
	19-Jan-04	15.98	530	217.1	7.54	0.63	---	6.48
	05-May-04	19.30	576	144.6	7.40	0.36	---	7.47
	16-Aug-04	18.99	552	181.1	7.92	1.29	---	7.67
TJA-3	22-Oct-03	18.73	446	249.0	7.41	0.43	---	6.35
	27-Jan-04	16.89	465	250.1	7.36	0.34	---	4.28
	27-Apr-04	18.93	472	126.8	7.29	0.20	---	6.38
	09-Aug-04	20.78	462	209.7	7.65	0.22	---	6.93
TJA-4	27-Oct-03	17.58	495	225.7	7.49	0.41	---	5.41
	29-Jan-04	16.76	511	235.1	7.49	0.55	---	1.68
	20-Apr-04	16.83	500	154.0	7.33	0.68	---	5.51
	10-Aug-04	19.20	500	170.5	7.75	0.94	---	5.06
TJA-6	05-Nov-03	19.55	413	329.5	7.42	5.68	---	4.47
	04-Feb-04	17.90	440	232.0	7.39	7.23	---	2.31
	22-Apr-04	20.64	444	112.5	7.25	3.86	---	4.66
	04-Aug-04	21.60	431	171.4	7.18	9.42	---	4.91
TJA-7	28-Oct-03	17.11	502	234.6	7.53	8.03	---	8.08
	22-Jan-04	13.68	517	229.5	7.51	13.7	---	5.13
	30-Apr-04	17.39	523	136.6	7.40	1.75	---	7.64
	06-Aug-04	18.80	498	158.4	7.28	2.61	---	8.07
WYO-3	29-Oct-03	18.89	453	323.7	7.42	0.88	---	7.20
	21-Jan-04	16.51	487	233.1	7.42	2.50	---	4.24
	28-Apr-04	19.43	473	119.7	7.68	0.33	---	7.14
	11-Aug-04	20.00	486	171.3	7.74	0.49	---	7.04
WYO-4	03-Nov-03	16.85	557	263.7	7.63	0.32	---	8.15
	03-Feb-04	14.90	581	194.3	7.72	1.51	---	3.81
	30-Apr-04	17.20	567	157.7	7.88	0.41	---	8.21
	03-Aug-04	19.50	564	158.7	7.42	0.98	---	7.61

Refer to footnotes at end of table.

Table F-9 (Concluded)
Summary of Field Water Quality Measurements[a]
Tijeras Arroyo Groundwater Investigation
SNL/NM and COA Wells
July 2003 through December 2005

Well ID	Sample Date	Temperature (^{0}C)	Specific Conductivity (μmho/cm)	Oxidation Reduction Potential (mV)	pH	Turbidity (NTU)	Dissolved Oxygen (%Sat)	Dissolved Oxygen (mg/L)
Eubank-1	20-Oct-04	19.59	468	187.8	7.06	0.32	---	7.93
Eubank-2	21-Oct-04	18.74	534	193.3	6.87	1.60	---	5.20
Eubank-3	20-Oct-04	18.27	533	134.8	7.19	0.61	---	6.39
Eubank-5	25-Oct-04	18.33	564	182.9	6.91	0.50	---	1.72
PGS-2	05-Oct-04	17.44	387	125.4	8.47	0.27	---	2.60
TA1-W-01	06-Oct-04	18.98	447	216.2	7.51	0.35	---	7.32
TA1-W-02	11-Oct-04	18.48	471	190.6	7.25	0.70	---	6.41
TA1-W-03	19-Oct-04	16.96	1,575	174.3	6.94	2.95	---	8.05
TA1-W-04	07-Oct-04	18.55	437	224.3	7.51	0.40	---	6.89
TA1-W-05	26-Oct-04	18.72	544	196.0	6.89	0.40	---	1.66
TA1-W-06	26-Oct-04	17.40	777	128.4	7.43	0.23	---	6.87
TA1-W-08	08-Oct-04	17.31	1762	180.4	7.24	0.27	---	9.04
TA2-NW1-595 (QED)	25-Oct-04	15.79	686	109.9	7.40	0.27	---	5.74
TA2-NW1-595 (Bennett)	07-Oct-04	18.78	717	220.7	6.81	0.42	---	6.51
TA2-SW1-320	04-Oct-04	18.39	448	191.5	7.76	1.18	---	10.61
TA2-W-01	18-Oct-04	17.91	599	159.7	7.12	3.10	---	7.21
TA2-W-19	04-Oct-04	18.75	572	183.4	7.00	2.73	---	2.07
TA2-W-26	13-Oct-04	18.17	1,002	176.2	6.95	1.89	---	5.23
TA2-W-27	14-Oct-04	17.49	818	200.9	7.32	0.73	---	8.25
TJA-2	11-Oct-04	16.51	558	168.3	7.10	0.92	---	5.71
TJA-3	12-Oct-04	17.77	460	208.1	7.27	0.24	---	6.72
TJA-4	12-Oct-04	17.88	507	196.0	6.98	1.34	---	4.16
TJA-6	13-Oct-04	19.21	434	224.5	7.29	8.81	---	4.95
TJA-7	15-Oct-04	16.86	508	154.9	7.20	2.07	---	4.10
WYO-3	08-Oct-04	19.27	499	177.2	7.00	0.79	---	1.06
WYO-4	06-Oct-04	16.11	576	145.8	7.39	7.31	0.71	7.09

[a]Field measurements collected prior to sampling.

°C = Degrees Celsius.
COA = City of Albuquerque.
ID = Identification.
μmho/cm = Micromhos per centimeter.
mg/L = Milligrams per liter.
mV = Millivolt(s).
NM = Not measured.
NTU = nephelometric turbity units.
pH = Potential of hydrogen (negative logarithm of the hydrogen ion concentration).
SNL/NM = Sandia National Laboratories/New Mexico.
%Sat = Percent saturation.
--- = Not applicable.

ANNEX G
Groundwater Monitoring Results for KAFB Wells

Table G-1
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2004

Well ID	Sample Date	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL[d] (µg/L)	Laboratory Qualifier
KAFB-0307	02-Nov-04	Trichloroethene	0.7	NR	0.5	5.0	
KAFB-0309	26-Oct-04	Chloromethane	0.7	NR	0.5	NE	
KAFB-0310	27-Oct-04	Trichloroethene	0.6	NR	0.5	5.0	
KAFB-0312	25-Oct-04	Chloromethane	0.8	NR	0.5	NE	
KAFB-0313	02-Nov-04	Trichloroethene	0.7	NR	0.5	5.0	
KAFB-0505	20-Oct-04	Chloromethane	0.8	NR	0.5	NE	
KAFB-0506	25-Jul-03	1,1-Dichloroethane	4.8	NR	0.5	NE	
		1,4-Dichlorobenzene	0.6	NR	NR	75	
		Trichloroethene	3.9	NR	NR	5.0	
	23-Oct-03	1,1-Dichloroethane	4.8	NR	0.5	NE	
		1,4-Dichlorobenzene	0.6	NR	0.5	75	
		Trichloroethene	4.2	NR	0.5	5.0	
	21-Jan-04	1,1-Dichloroethane	5.8	NR	0.5	NE	
		1,4-Dichlorobenzene	0.6	NR	0.5	75	
		Trichloroethene	4.8	NR	0.5	5.0	
	26-Apr-04	1,1-Dichloroethane	4.7	NR	0.5	NE	
		Trichloroethene	3.6	NR	0.5	5.0	
	03-Aug-04	1,1-Dichloroethane	4.9	NR	NR	NE	
		Trichloroethene	4.0	NR	NR	5.0	
	19-Oct-04	1,1-Dichloroethane	5.2	NR	0.5	NE	
		Trichloroethene	4.3	NR	0.5	5.0	
KAFB-0506 Duplicate	23-Oct-03	1,1-Dichloroethane	4.9	NR	0.5	NE	
		1,4-Dichlorobenzene	0.6	NR	0.5	75	
		Trichloroethene	4.3	NR	0.5	5.0	
	19-Oct-04	1,1-Dichloroethane	5.4	NR	0.5	NE	
		Trichloroethene	4.2	NR	0.5	5.0	
KAFB-0508	27-Oct-03	Toluene	0.8	0.050	0.5	1,000	
	12-Apr-04	Toluene	0.4	NR	0.5	1,000	F
KAFB-0510	18-Jul-03	Toluene	0.4	0.050	0.5	1,000	F
	29-Oct-03	Toluene	0.4	0.090	0.5	1,000	F
KAFB-0512	30-Oct-03	Toluene	0.6	0.050	0.5	1,000	
KAFB-0512 Duplicate	30-Oct-03	Toluene	0.6	0.050	0.5	1,000	
KAFB-0514	17-Jul-03	Toluene	0.7	0.090	0.5	1,000	
	27-Oct-03	Toluene	0.8	0.050	0.5	1,000	

Refer to footnotes at end of table.

Table G-1 (Continued)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2004

Well ID	Sample Date	Analyte	Result (µg/L)	MDL[b] (µg/L)	PQL[c] (µg/L)	MCL[d] (µg/L)	Laboratory Qualifier
KAFB-0516	30-Oct-03	Toluene	0.5	0.050	0.5	1,000	
KAFB-0609	21-Jan-04	Toluene	1.9	NR	0.5	1,000	
	09-Nov-04	Chloromethane	1.0	NR	0.5	NE	
KAFB-0610	09-Nov-04	Chloromethane	0.7	NR	0.5	NE	
KAFB-0615	16-Jul-03	Toluene	11.3	0.090	0.5	1,000	
		Trichloroethene	0.6	0.043	0.5	5.0	
	28-Oct-03	Toluene	2.9	0.050	0.5	1,000	
		Trichloroethene	0.9	0.031	0.5	5.0	
	29-Jan-04	Trichloroethene	0.5	NR	0.5	5.0	
	14-Apr-04	Trichloroethene	1.1	NR	0.5	5.0	
	21-Oct-04	Trichloroethene	1.2	NR	0.5	5.0	
KAFB-0616	18-Jul-03	Toluene	0.3	0.050	0.5	1,000	F
	28-Oct-03	Toluene	0.4	0.050	0.5	1,000	F
	03-Feb-04	Carbon disulfide	0.3	NR	NR	NE	F
		Toluene	0.4	NR	NR	1,000	F
KAFB-0903	27-Jan-04	Toluene	1.9	NR	1.0	1,000	
		Ethylbenzene	1.0	NR	1.0	700	J
	19-Jul-04	Toluene	4.2	NR	1.0	1,000	
KAFB-0904	24-Oct-03	Toluene	42.0	NR	1.0	1,000	
	21-Apr-04	Toluene	5.9	NR	1.0	1,000	
	20-Jul-04	Toluene	1.6	NR	1.0	1,000	
	14-Oct-04	Toluene	2.5	NR	1.0	1,000	
KAFB-8282	26-Jan-04	Chloroform	1.0	NR	1.0	NE	J
	19-Jul-04	Chloroform	0.5	NR	1.0	NE	J
	14-Oct-04	Toluene	1.7	NR	NR	1,000	

[a]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates).

[b]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[c]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[d]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.

Table G-1 (Concluded)
Summary of Detected Volatile Organic Compounds (Method SW846 8260[a])
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2004

MDL = Method detection limit.
µg/L = Microgram(s) per liter.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.

Laboratory Qualifiers:
F = Analyte was positively identified but the reported concentration is estimated.
J = Amount detected is below the PQL.

Table G-2
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0307	23-Jul-03	Nitrate	9.5	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.7	NR	0.20	10		EPA 353.2
	20-Oct-03	Nitrate plus Nitrite	10.0	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	10.0	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	8.5	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.2	NR	0.20	10		EPA 353.2
	20-Apr-04	Nitrate	9.8	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.1	NR	0.20	10		EPA 353.2
	30-Jul-04	Nitrate	8.8	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	8.7	NR	NR	10		EPA 353.2
	02-Nov-04	Nitrate	8.0	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	8.7	NR	0.20	10		EPA 353.2
KAFB-0309	22-Jul-03	Nitrate	5.2	NR	2.0	10		SW846 9056
	15-Oct-03	Nitrate	5.7	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	6.0	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	4.7	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	5.7	NR	0.20	10		EPA 353.2
	22-Apr-04	Nitrate	5.0	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	5.5	NR	0.20	10		EPA 353.2
	27-Jul-04	Nitrate	5.4	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	5.2	NR	NR	10		EPA 353.2
	26-Oct-04	Nitrate	5.0	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	5.4	NR	0.20	10		EPA 353.2
KAFB-0310	31-Jul-03	Nitrate	5.4	NR	2.0	10		SW846 9056
	13-Oct-03	Nitrate	5.9	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	6.0	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	5.2	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.2	NR	0.20	10		EPA 353.2
	20-Apr-04	Nitrate	6.2	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.0	NR	0.20	10		EPA 353.2
	28-Jul-04	Nitrate	5.9	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	5.6	NR	NR	10		EPA 353.2
	27-Oct-04	Nitrate	5.5	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.0	NR	0.20	10		EPA 353.2

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQb[c] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0310 Duplicate	13-Oct-03	Nitrate	5.5	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	7.0	NR	0.20	10		EPA 353.2
KAFB-0311	23-Jul-03	Nitrate	9.0	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.3	NR	0.50	10		EPA 353.2
	20-Oct-03	Nitrate plus Nitrite	9.9	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	10.0	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	8.8	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.3	NR	0.20	10		EPA 353.2
	19-Apr-04	Nitrate	8.8	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.1	NR	0.20	10		EPA 353.2
	30-Jul-04	Nitrate	8.8	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	8.7	NR	NR	10		EPA 353.2
	28-Oct-04	Nitrate	8.6	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	9.2	NR	0.20	10		EPA 353.2
KAFB-0312	28-Jul-03	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**22.0**	NR	1.0	10		EPA 353.2
	17-Oct-03	Nitrate	**19.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**19.0**	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	0.20	10		EPA 353.2
	21-Apr-04	Nitrate	**21.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	0.20	10		EPA 353.2
	29-Jul-04	Nitrate	**19.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**18.0**	NR	NR	10		EPA 353.2
	25-Oct-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**18.0**	NR	0.20	10		EPA 353.2
KAFB-0312 Duplicate	28-Jul-03	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**20.0**	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	0.20	10		EPA 353.2
	21-Apr-04	Nitrate	**21.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	0.20	10		EPA 353.2
	29-Jul-04	Nitrate	**19.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**16.0**	NR	NR	10		EPA 353.2
	25-Oct-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**18.0**	NR	0.20	10		EPA 353.2

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0313	23-Jul-03	Nitrate	6.6	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.4	NR	0.50	10		EPA 353.2
	16-Oct-03	Nitrate	6.6	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	7.0	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	6.2	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.8	NR	0.20	10		EPA 353.2
	19-Apr-04	Nitrate	7.0	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.6	NR	0.20	10		EPA 353.2
	28-Jul-04	Nitrate	6.6	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	6.4	NR	NR	10		EPA 353.2
	02-Nov-04	Nitrate	5.9	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	6.5	NR	0.20	10		EPA 353.2
KAFB-0315	22-Jul-03	Nitrate	**14.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**15.0**	NR	0.50	10		EPA 353.2
	16-Oct-03	Nitrate	**13.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**13.0**	NR	0.20	10		EPA 353.2
	21-Jan-04	Nitrate	**12.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**13.0**	NR	0.20	10		EPA 353.2
	20-Apr-04	Nitrate	**14.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**12.0**	NR	0.20	10		EPA 353.2
	29-Jul-04	Nitrate	**12.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**11.0**	NR	NR	10		EPA 353.2
	28-Oct-04	Nitrate	**11.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**11.6**	NR	0.20	10		EPA 353.2
KAFB-0505	24-Jul-03	Nitrate	6.4	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	6.5	NR	0.50	10		EPA 353.2
	24-Oct-03	Nitrate	6.5	NR	0.20	10		EPA 353.2
		Nitrate plus Nitrite	6.0	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	5.0	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	5.0	NR	1.0	10		EPA 353.2
	27-Apr-04	Nitrate	3.0	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	6.1	NR	1.0	10		EPA 353.2
	02-Aug-04	Nitrate	5.6	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	6.1	NR	NR	10		EPA 353.2
	20-Oct-04	Nitrate	5.2	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	5.5	NR	1.0	10		EPA 353.2

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0506	25-Jul-03	Nitrate	2.5	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	3.0	NR	0.20	10		EPA 353.2
	23-Oct-03	Nitrate	3.0	NR	0.20	10		EPA 353.2
		Nitrate plus Nitrite	3.0	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	2.7	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	3.0	NR	1.0	10		EPA 353.2
	26-Apr-04	Nitrate	2.6	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	2.6	NR	1.0	10		EPA 353.2
	03-Aug-04	Nitrate	2.8	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	2.9	NR	NR	10		EPA 353.2
	19-Oct-04	Nitrate	2.7	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	2.9	NR	1.0	10		EPA 353.2
KAFB-0506 Duplicate	23-Oct-03	Nitrate	3.0	NR	0.20	10		EPA 353.2
		Nitrate plus Nitrite	3.0	NR	1.0	10		EPA 353.2
	19-Oct-04	Nitrate	2.7	NR	0.20	10		SW846 9056
		Nitrate plus Nitrite	2.8	NR	1.0	10		EPA 353.2
KAFB-0507	15-Jul-03	Nitrate	9.6	0.12	0.16	10	D	SW846 9056
		Nitrate plus Nitrite	9.9	0.12	0.16	10	D	EPA 300.0
	31-Oct-03	Nitrate	9.5	0.15	0.20	10	D	SW846 9056
		Nitrate plus Nitrite	9.6	0.15	0.20	10	D	EPA 300.0
	14-Jan-04	Nitrate	9.5	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	9.5	NR	NR	10	D	EPA 300.0
	12-Apr-04	Nitrate	8.8	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	9.2	NR	NR	10	D	EPA 300.0
	08-Jul-04	Nitrate	9.4	NR	NR	10	D,B	SW846 9056
		Nitrate plus Nitrite	9.2	NR	NR	10	D,B	EPA 300.0
	21-Oct-04	Nitrate	7.9	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	7.7	NR	NR	10	D	EPA 300.0
KAFB-0508	10-Jul-03	Nitrate	**25.5**	0.24	0.32	10	D	SW846 9056
		Nitrate plus Nitrite	**25.5**	0.24	0.32	10	D	EPA 300.0
	27-Oct-03	Nitrate	**28.4**	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	**27.6**	0.30	0.40	10	D	EPA 300.0
	20-Jan-04	Nitrate	**29.3**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**28.8**	NR	NR	10	D	EPA 300.0
	12-Apr-04	Nitrate	**27.6**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**27.6**	NR	NR	10	D	EPA 300.0

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0508 (Continued)	08-Jul-04	Nitrate	**23.0**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**22.8**	NR	NR	10	D	EPA 300.0
	19-Oct-04	Nitrate	**22.8**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**22.3**	NR	NR	10	D	EPA 300.0
KAFB-0508 Duplicate	10-Jul-03	Nitrate	**25.7**	0.24	0.32	10	D	SW846 9056
		Nitrate plus Nitrite	**25.7**	0.24	0.32	10	D	EPA 300.0
	20-Jan-04	Nitrate	**28.9**	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	**28.6**	0.30	0.40	10	D	EPA 300.0
KAFB-0510	18-Jul-03	Nitrate	1.4	0.15	0.20	10	D	SW846 9056
		Nitrate plus Nitrite	1.4	0.15	0.20	10	D	EPA 300.0
	29-Oct-03	Nitrate	1.4	0.15	0.20	10	D,B	SW846 9056
		Nitrate plus Nitrite	1.4	0.15	0.20	10	D,B	EPA 300.0
	28-Jan-04	Nitrate	1.3	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	1.3	NR	NR	10	D	EPA 300.0
	16-Apr-04	Nitrate	1.3	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	1.3	NR	NR	10	D	EPA 300.0
	09-Jul-04	Nitrate	1.6	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	1.7	NR	NR	10	D	EPA 300.0
	19-Oct-04	Nitrate	1.4	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	1.5	NR	NR	10	D	EPA 300.0
KAFB-0512	17-Jul-03	Nitrate	**16.8**	0.30	0.40	10	D,B	SW846 9056
		Nitrate plus Nitrite	**16.9**	0.30	0.40	10	D,B	EPA 300.0
	30-Oct-03	Nitrate	**15.1**	0.15	0.20	10	D	SW846 9056
		Nitrate plus Nitrite	**15.1**	0.15	0.20	10	D	EPA 300.0
	30-Jan-04	Nitrate	**13.0**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**12.9**	NR	NR	10	D	EPA 300.0
	15-Apr-04	Nitrate	**11.8**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**11.8**	NR	NR	10	D	EPA 300.0
	07-Jul-04	Nitrate	**13.7**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**13.6**	NR	NR	10	D	EPA 300.0
	20-Oct-04	Nitrate	**11.4**	NR	NR	10	D,B	SW846 9056
		Nitrate plus Nitrite	**11.9**	NR	NR	10	D,B	EPA 300.0

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0512 Duplicate	30-Oct-03	Nitrate	**14.7**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**14.5**	NR	NR	10	D	EPA 300.0
	15-Apr-04	Nitrate	**12.1**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**11.7**	NR	NR	10	D	EPA 300.0
	07-Jul-04	Nitrate	**14.7**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**14.6**	NR	NR	10	D	EPA 300.0
	20-Oct-04	Nitrate	**11.6**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**11.8**	NR	NR	10	D	EPA 300.0
KAFB-0514	17-Jul-03	Nitrate	**41.0**	0.60	0.80	10	D	SW846 9056
		Nitrate plus Nitrite	**40.6**	0.60	0.80	10	D	EPA 300.0
	27-Oct-03	Nitrate	**42.6**	0.38	0.50	10	D	SW846 9056
		Nitrate plus Nitrite	**42.5**	0.38	0.50	10	D	EPA 300.0
	02-Feb-04	Nitrate	**33.9**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**37.9**	NR	NR	10	D	EPA 300.0
	15-Apr-04	Nitrate	**33.4**	NR	NR	10	D,B	SW846 9056
		Nitrate plus Nitrite	**33.6**	NR	NR	10	D,B	EPA 300.0
	08-Jul-04	Nitrate	**31.3**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**31.0**	NR	NR	10	D	EPA 300.0
	20-Oct-04	Nitrate	**29.5**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**30.4**	NR	NR	10	D	EPA 300.0
KAFB-0516	21-Jul-03	Nitrate	**28.5**	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	**28.1**	0.30	0.40	10	D	EPA 300.0
	30-Oct-03	Nitrate	**21.9**	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	**21.9**	0.30	0.40	10	D	EPA 300.0
	30-Jan-04	Nitrate	**21.1**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**20.9**	NR	NR	10	D	EPA 300.0
	15-Apr-04	Nitrate	**26.1**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**26.0**	NR	NR	10	D	EPA 300.0
	07-Jul-04	Nitrate	**22.7**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**22.5**	NR	NR	10	D	EPA 300.0
	21-Oct-04	Nitrate	**22.1**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**22.4**	NR	NR	10	D	EPA 300.0

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0602	30-Jul-03	Nitrate	**16.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**17.0**	NR	0.50	10		EPA 353.2
	24-Oct-03	Nitrate	**18.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**16.0**	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	**16.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**17.0**	NR	1.0	10		EPA 353.2
	21-Apr-04	Nitrate	**21.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	1.0	10		EPA 353.2
	02-Aug-04	Nitrate	**16.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**16.0**	NR	NR	10		EPA 353.2
	09-Nov-04	Nitrate	**16.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**16.0**	NR	1.0	10		EPA 353.2
KAFB-0608	30-Jul-03	Nitrate	**23.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**24.0**	NR	1.0	10		EPA 353.2
	24-Oct-03	Nitrate	**25.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**24.0**	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	**20.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**21.0**	NR	1.0	10		EPA 353.2
	21-Apr-04	Nitrate	**28.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**24.0**	NR	1.0	10		EPA 353.2
	02-Aug-04	Nitrate	**25.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**24.0**	NR	NR	10		EPA 353.2
	09-Nov-04	Nitrate	**24.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**20.0**	NR	1.0	10		EPA 353.2
KAFB-0609	30-Jul-03	Nitrate	**13.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**14.0**	NR	0.50	10		EPA 353.2
	24-Oct-03	Nitrate	**14.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**13.0**	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	**13.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**14.0**	NR	1.0	10		EPA 353.2
	21-Apr-04	Nitrate	**22.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	1.0	10		EPA 353.2
	05-Aug-04	Nitrate	**20.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	NR	10		EPA 353.2
	09-Nov-04	Nitrate	**13.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**12.0**	NR	1.0	10		EPA 353.2

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0610	30-Jul-03	Nitrate	**17.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	0.50	10		EPA 353.2
	24-Oct-03	Nitrate	**19.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**18.0**	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	1.0	10		EPA 353.2
	21-Apr-04	Nitrate	**19.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**17.0**	NR	1.0	10		EPA 353.2
	02-Aug-04	Nitrate	**18.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**16.0**	NR	NR	10		EPA 353.2
	09-Nov-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**15.0**	NR	1.0	10		EPA 353.2
KAFB-0610 Duplicate	30-Jul-03	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	0.50	10		EPA 353.2
	24-Oct-03	Nitrate	**19.0**	NR	2.0	10		EPA 353.2
		Nitrate plus Nitrite	**18.0**	NR	1.0	10		EPA 353.2
	21-Jan-04	Nitrate	**19.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**19.0**	NR	1.0	10		EPA 353.2
	21-Apr-04	Nitrate	**18.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**18.0**	NR	1.0	10		EPA 353.2
	02-Aug-04	Nitrate	**18.0**	NR	NR	10		SW846 9056
		Nitrate plus Nitrite	**17.0**	NR	NR	10		EPA 353.2
	09-Nov-04	Nitrate	**17.0**	NR	2.0	10		SW846 9056
		Nitrate plus Nitrite	**18.0**	NR	1.0	10		EPA 353.2
KAFB-0615	16-Jul-03	Nitrate	4.5	0.38	0.50	10	D	SW846 9056
		Nitrate plus Nitrite	4.3	0.12	0.16	10	D	EPA 300.0
	28-Oct-03	Nitrate	4.7	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	4.7	0.30	0.40	10	D	EPA 300.0
	29-Jan-04	Nitrate	3.7	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	3.5	NR	NR	10	D	EPA 300.0
	14-Apr-04	Nitrate	5.1	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	5.1	NR	NR	10	D	EPA 300.0
	21-Oct-04	Nitrate	3.5	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	4.0	NR	NR	10	D	EPA 300.0

Refer to footnotes at end of table.

Table G-2 (Continued)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0616	18-Jul-03	Nitrate	**20.8**	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	**20.4**	0.30	0.40	10	D	EPA 300.0
	28-Oct-03	Nitrate	**20.1**	0.30	0.40	10	D	SW846 9056
		Nitrate plus Nitrite	**20.1**	0.30	0.40	10	D	EPA 300.0
	03-Feb-04	Nitrate	**20.1**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**20.0**	NR	NR	10	D	EPA 300.0
	15-Apr-04	Nitrate plus Nitrite	**20.2**	NR	NR	10	D	EPA 300.0
		Nitrate	**20.3**	NR	NR	10	D	SW846 9056
	09-Jul-04	Nitrate	**18.9**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**18.8**	NR	NR	10	D	EPA 300.0
	18-Oct-04	Nitrate	**18.6**	NR	NR	10	D	SW846 9056
		Nitrate plus Nitrite	**18.9**	NR	NR	10	D	EPA 300.0
KAFB-0903	17-Jul-03	Nitrate	5.9	NR	0.10	10		EPA 300.0
	23-Oct-03	Nitrate	6.1	NR	0.50	10		EPA 300.0
	27-Jan-04	Nitrate plus Nitrite	5.72	NR	0.10	10		EPA 353.2
		Nitrate plus Nitrite	5.7	NR	0.50	10		EPA 300.0
	20-Apr-04	Nitrate	5.9	NR	0.10	10	D	EPA 300.0
		Nitrate plus Nitrite	5.05	NR	0.10	10		EPA 353.2
	19-Jul-04	Nitrate	5.3	NR	0.10	10	D	EPA 300.0
		Nitrate plus Nitrite	4.88	NR	0.10	10		EPA 353.2
	13-Oct-04	Nitrate	5.4	NR	0.10	10	D	EPA 300.0
KAFB-0904	17-Jul-03	Nitrate	**19.0**	NR	1.0	10		EPA 300.0
	24-Oct-03	Nitrate	**19.0**	NR	0.50	10		EPA 300.0
	29-Jan-04	Nitrate plus Nitrite	**18.3**	NR	0.10	10		EPA 353.2
		Nitrate plus Nitrite	**19.0**	NR	0.50	10		EPA 300.0
	21-Apr-04	Nitrate	**19.0**	NR	0.10	10	D	EPA 300.0
		Nitrate plus Nitrite	**18.7**	NR	0.10	10		EPA 353.2
	20-Jul-04	Nitrate	**20.0**	NR	0.10	10	D	EPA 300.0
		Nitrate plus Nitrite	**19.4**	NR	0.10	10		EPA 353.2
	14-Oct-04	Nitrate	**20.0**	NR	0.10	10	D	EPA 300.0
KAFB-8282	17-Jul-03	Nitrate	4.9	NR	0.10	10		EPA 300.0
	24-Oct-03	Nitrate	4.1	NR	0.50	10		EPA 300.0
	26-Jan-04	Nitrate plus Nitrite	4.66	NR	0.10	10		EPA 353.2
		Nitrate plus Nitrite	4.8	NR	0.50	10		EPA 300.0
	20-Apr-04	Nitrate	4.8	NR	0.10	10	D	EPA 300.0
		Nitrate plus Nitrite	4.03	NR	0.10	10		EPA 353.2

Refer to footnotes at end of table.

Table G-2 (Concluded)
Summary of Nitrate and Nitrate Plus Nitrite Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-8282 (Continued)	19-Jul-04	Nitrate	4.5	NR	0.10	10	D	EPA 300.0
		Nitrate plus Nitrite	4.5	NR	0.10	10		EPA 353.2
	14-Oct-04	Nitrate	4.7	NR	0.10	10	D	EPA 300.0
KAFB-8282 Duplicate	24-Oct-03	Nitrate	4.1	NR	0.50	10		EPA 300.0

Note: Values in **bold** exceed the established MCL.

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Method SW846 9056).
U.S. Environmental Protection Agency, December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to all 300-series methods).

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligram(s) per liter.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.

Laboratory Qualifiers:

B = Analyte was detected in blank sample.
D = Sample dilutions required for analysis and reported values reflect the dilution.

Table G-3
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0307	23-Jul-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	20-Oct-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	20-Apr-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	30-Jul-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	140	NR	NR	NE		EPA 310.1
	02-Nov-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
KAFB-0309	22-Jul-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	15-Oct-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	160	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	160	NR	4.0	NE		EPA 310.1
	22-Apr-04	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	27-Jul-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	140	NR	NR	NE		EPA 310.1
	26-Oct-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0310	31-Jul-03	bicarb as CACO3 Alkalinity	110	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	110	NR	4.0	NE		EPA 310.1
	13-Oct-03	bicarb as CACO3 Alkalinity	110	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	110	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
	20-Apr-04	bicarb as CACO3 Alkalinity	110	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	110	NR	4.0	NE		EPA 310.1
	28-Jul-04	bicarb as CACO3 Alkalinity	110	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	110	NR	NR	NE		EPA 310.1
	27-Oct-04	bicarb as CACO3 Alkalinity	110	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	110	NR	4.0	NE		EPA 310.1
KAFB-0310 Duplicate	13-Oct-03	bicarb as CACO3 Alkalinity	110	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	110	NR	4.0	NE		EPA 310.1
KAFB-0311	23-Jul-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	20-Oct-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	160	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	160	NR	4.0	NE		EPA 310.1
	19-Apr-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0311 (Continued)	30-Jul-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	140	NR	NR	NE		EPA 310.1
	28-Oct-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
KAFB-0312	28-Jul-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	17-Oct-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	29-Jul-04	bicarb as CACO3 Alkalinity	130	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	130	NR	NR	NE		EPA 310.1
	25-Oct-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
KAFB-0312 Duplicate	28-Jul-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0312 Duplicate (Continued)	29-Jul-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	140	NR	NR	NE		EPA 310.1
	25-Oct-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
KAFB-0313	23-Jul-03	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
	16-Oct-03	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
KAFB-0313	19-Apr-04	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
	28-Jul-04	bicarb as CACO3 Alkalinity	120	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	120	NR	NR	NE		EPA 310.1
	02-Nov-04	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
KAFB-0315	22-Jul-03	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	16-Oct-03	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	20-Apr-04	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0315 (Continued)	29-Jul-04	bicarb as CACO3 Alkalinity	120	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	120	NR	NR	NE		EPA 310.1
	28-Oct-04	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
KAFB-0505	24-Jul-03	bicarb as CACO3 Alkalinity	190	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	190	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	170	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	170	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	190	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	190	NR	4.0	NE		EPA 310.1
	27-Apr-04	bicarb as CACO3 Alkalinity	170	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	170	NR	4.0	NE		EPA 310.1
	02-Aug-04	bicarb as CACO3 Alkalinity	170	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	170	NR	NR	NE		EPA 310.1
	20-Oct-04	bicarb as CACO3 Alkalinity	170	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	170	NR	4.0	NE		EPA 310.1
KAFB-0506	25-Jul-03	bicarb as CACO3 Alkalinity	71	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	71	NR	4.0	NE		EPA 310.1
	23-Oct-03	bicarb as CACO3 Alkalinity	68	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	68	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	78	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	78	NR	4.0	NE		EPA 310.1
	26-Apr-04	bicarb as CACO3 Alkalinity	74	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0506 (Continued)	03-Aug-04	bicarb as CACO3 Alkalinity	68	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	68	NR	NR	NE		EPA 310.1
	19-Oct-04	bicarb as CACO3 Alkalinity	71	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	71	NR	4.0	NE		EPA 310.1
KAFB-0506 Duplicate	23-Oct-03	bicarb as CACO3 Alkalinity	70	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	70	NR	4.0	NE		EPA 310.1
	19-Oct-04	bicarb as CACO3 Alkalinity	72	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	72	NR	4.0	NE		EPA 310.1
KAFB-0507	15-Jul-03	bicarb as CACO3 Alkalinity	172	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	172	NR	NR	NE		EPA 310.1
	31-Oct-03	bicarb as CACO3 Alkalinity	159	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	159	NR	NR	NE		EPA 310.1
	14-Jan-04	bicarb as CACO3 Alkalinity	164	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	164	NR	NR	NE		EPA 310.1
	12-Apr-04	bicarb as CACO3 Alkalinity	164	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	164	NR	NR	NE		EPA 310.1
	08-Jul-04	bicarb as CACO3 Alkalinity	149	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	149	NR	NR	NE		EPA 310.1
	21-Oct-04	bicarb as CACO3 Alkalinity	174	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	174	NR	NR	NE		EPA 310.1
KAFB-0508	10-Jul-03	bicarb as CACO3 Alkalinity	121	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	121	NR	NR	NE		EPA 310.1
	27-Oct-03	bicarb as CACO3 Alkalinity	122	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	122	NR	NR	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0508 (Continued)	20-Jan-04	bicarb as CACO3 Alkalinity	122	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	122	NR	NR	NE		EPA 310.1
	12-Apr-04	bicarb as CACO3 Alkalinity	119	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	119	NR	NR	NE		EPA 310.1
	08-Jul-04	bicarb as CACO3 Alkalinity	112	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	112	NR	NR	NE		EPA 310.1
	19-Oct-04	bicarb as CACO3 Alkalinity	136	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	136	NR	NR	NE		EPA 310.1
KAFB-0508 Duplicate	10-Jul-03	bicarb as CACO3 Alkalinity	119	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	119	NR	NR	NE		EPA 310.1
	20-Jan-04	bicarb as CACO3 Alkalinity	117	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	117	NR	NR	NE		EPA 310.1
KAFB-0510	18-Jul-03	bicarb as CACO3 Alkalinity	109	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	109	NR	NR	NE		EPA 310.1
	29-Oct-03	bicarb as CACO3 Alkalinity	115	NR	NR	NE	B	SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	115	NR	NR	NE	B	EPA 310.1
	28-Jan-04	bicarb as CACO3 Alkalinity	109	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	109	NR	NR	NE		EPA 310.1
	16-Apr-04	bicarb as CACO3 Alkalinity	124	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	124	NR	NR	NE		EPA 310.1
	09-Jul-04	bicarb as CACO3 Alkalinity	108	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	108	NR	NR	NE		EPA 310.1
	19-Oct-04	bicarb as CACO3 Alkalinity	117	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	117	NR	NR	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0512	17-Jul-03	bicarb as CACO3 Alkalinity	126	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	126	NR	NR	NE		EPA 310.1
	30-Oct-03	bicarb as CACO3 Alkalinity	122	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	122	NR	NR	NE		EPA 310.1
	30-Jan-04	bicarb as CACO3 Alkalinity	119	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	119	NR	NR	NE		EPA 310.1
	15-Apr-04	bicarb as CACO3 Alkalinity	153	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	153	NR	NR	NE		EPA 310.1
	07-Jul-04	bicarb as CACO3 Alkalinity	116	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	116	NR	NR	NE		EPA 310.1
	20-Oct-04	bicarb as CACO3 Alkalinity	127	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	127	NR	NR	NE		EPA 310.1
KAFB-0512 Duplicate	30-Oct-03	bicarb as CACO3 Alkalinity	121	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	121	NR	NR	NE		EPA 310.1
	15-Apr04	bicarb as CACO3 Alkalinity	144	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	144	NR	NR	NE		EPA 310.1
	07-Jul-04	bicarb as CACO3 Alkalinity	107	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	107	NR	NR	NE		EPA 310.1
	20-Oct-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	140	NR	NR	NE		EPA 310.1
KAFB-0514	17-Jul-03	bicarb as CACO3 Alkalinity	117	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	117	NR	NR	NE		EPA 310.1
	27-Oct-03	bicarb as CACO3 Alkalinity	117	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	117	NR	NR	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0514 (Continued)	02-FEB-04	bicarb as CACO3 Alkalinity	114	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	114	NR	NR	NE		EPA 310.1
	15-Apr-04	bicarb as CACO3 Alkalinity	144	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	144	NR	NR	NE		EPA 310.1
	08-Jul-04	bicarb as CACO3 Alkalinity	109	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	109	NR	NR	NE		EPA 310.1
	20-Oct-04	bicarb as CACO3 Alkalinity	118	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	118	NR	NR	NE		EPA 310.1
KAFB-0516	21-Jul-03	bicarb as CACO3 Alkalinity	115	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	115	NR	NR	NE		EPA 310.1
	30-Oct-03	bicarb as CACO3 Alkalinity	113	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	113	NR	NR	NE		EPA 310.1
	30-Jan-04	bicarb as CACO3 Alkalinity	108	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	108	NR	NR	NE		EPA 310.1
	15-Apr-04	bicarb as CACO3 Alkalinity	144	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	144	NR	NR	NE		EPA 310.1
	07-Jul-04	bicarb as CACO3 Alkalinity	110	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	110	NR	NR	NE		EPA 310.1
	21-Oct-04	bicarb as CACO3 Alkalinity	122	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	122	NR	NR	NE		EPA 310.1
KAFB-0602	30-Jul-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0602 (Continued)	21-Jan-04	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	02-Aug-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	140	NR	NR	NE		EPA 310.1
	09-Nov-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
KAFB-0608	30-Jul-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	02-Aug-04	bicarb as CACO3 Alkalinity	120	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	120	NR	NR	NE		EPA 310.1
	09-Nov-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
KAFB-0609	30-Jul-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0609 (Continued)	21-Jan-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	120	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	120	NR	4.0	NE		EPA 310.1
	05-Aug-04	bicarb as CACO3 Alkalinity	120	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	120	NR	NR	NE		EPA 310.1
	09-Nov-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
KAFB-0610	30-Jul-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	21-Jan-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	02-Aug-04	bicarb as CACO3 Alkalinity	130	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	130	NR	NR	NE		EPA 310.1
	09-Nov-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
KAFB-0610 Duplicate	30-Jul-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0610 Duplicate (Continued)	21-Jan-04	bicarb as CACO3 Alkalinity	140	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	4.0	NE		EPA 310.1
	21-Apr-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
	02-Aug-04	bicarb as CACO3 Alkalinity	130	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	NR	NE	U	EPA 310.1
		total Alkalinity	130	NR	NR	NE		EPA 310.1
	09-Nov-04	bicarb as CACO3 Alkalinity	130	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	130	NR	4.0	NE		EPA 310.1
KAFB-0615	16-Jul-03	bicarb as CACO3 Alkalinity	114	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	114	NR	NR	NE		EPA 310.1
	28-Oct-03	bicarb as CACO3 Alkalinity	113	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	113	NR	NR	NE		EPA 310.1
	29-Jan-04	bicarb as CACO3 Alkalinity	116	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	116	NR	NR	NE		EPA 310.1
	14-Apr-04	bicarb as CACO3 Alkalinity	153	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	153	NR	NR	NE		EPA 310.1
	21-Oct-04	bicarb as CACO3 Alkalinity	133	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	133	NR	NR	NE		EPA 310.1
KAFB-0616	18-Jul-03	bicarb as CACO3 Alkalinity	134	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	134	NR	NR	NE		EPA 310.1
	28-Oct-03	bicarb as CACO3 Alkalinity	135	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	135	NR	NR	NE		EPA 310.1
	03-Feb-04	bicarb as CACO3 Alkalinity	131	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	131	NR	NR	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0616 (Continued)	15-Apr-04	bicarb as CACO3 Alkalinity	134	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	134	NR	NR	NE		EPA 310.1
	09-Jul-04	bicarb as CACO3 Alkalinity	139	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	139	NR	NR	NE		EPA 310.1
	18-Oct-04	bicarb as CACO3 Alkalinity	135	NR	NR	NE		SM A2320
		carb as CACO3 Alkalinity	0	NR	NR	NE		SM A2320
		total Alkalinity	135	NR	NR	NE		EPA 310.1
KAFB-0903	17-Jul-03	bicarb as CACO3 Alkalinity	150	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	4.0	NE		EPA 310.1
	23-Oct-03	bicarb as CACO3 Alkalinity	150	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	2.0	NE		EPA 310.1
	27-Jan-04	bicarb as CACO3 Alkalinity	150	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	20	NR	2.0	NE		EPA 310.1
		total Alkalinity	170	NR	2.0	NE		EPA 310.1
	20-Apr-04	bicarb as CACO3 Alkalinity	150	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	2.0	NE		EPA 310.1
	19-Jul-04	bicarb as CACO3 Alkalinity	170	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	170	NR	NR	NE		EPA 310.1
	13-Oct-04	bicarb as CACO3 Alkalinity	160	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	160	NR	NR	NE		EPA 310.1
KAFB-0904	17-Jul-03	bicarb as CACO3 Alkalinity	160	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	160	NR	2.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	230	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	230	NR	2.0	NE		EPA 310.1
	29-Jan-04	bicarb as CACO3 Alkalinity	160	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	2.0	2.0	NE	U	EPA 310.1
		total Alkalinity	160	NR	2.0	NE		EPA 310.1

Refer to footnotes at end of table.

Table G-3 (Continued)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0904 (Continued)	21-Apr-04	bicarb as CACO3 Alkalinity	150	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	NR	NE		EPA 310.1
	20-Jul-04	bicarb as CACO3 Alkalinity	150	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	150	NR	NR	NE		EPA 310.1
	14-Oct-04	bicarb as CACO3 Alkalinity	140	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	140	NR	NR	NE		EPA 310.1
KAFB-8282	17-Jul-03	bicarb as CACO3 Alkalinity	74	NR	4.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	4.0	NE		EPA 310.1
	24-Oct-03	bicarb as CACO3 Alkalinity	74	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	2.0	NE		EPA 310.1
	26-Jan-04	bicarb as CACO3 Alkalinity	70	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	2.0	2.0	NE	U	EPA 310.1
		total Alkalinity	70	NR	2.0	NE		EPA 310.1
	20-Apr-04	bicarb as CACO3 Alkalinity	74	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	NR	NE		EPA 310.1
	19-Jul-04	bicarb as CACO3 Alkalinity	74	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	NR	NE		EPA 310.1
	14-Oct-04	bicarb as CACO3 Alkalinity	74	NR	NR	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	4.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	NR	NE		EPA 310.1
KAFB-8282 Duplicate	24-Oct-03	bicarb as CACO3 Alkalinity	74	NR	2.0	NE		EPA 310.1
		carb as CACO3 Alkalinity	ND	NR	2.0	NE	U	EPA 310.1
		total Alkalinity	74	NR	2.0	NE		EPA 310.1

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

Table G-3 (Concluded)
Summary of Alkalinity Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Method SM A2320).
U.S. Environmental Protection Agency, December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to Method 310.1).

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligram(s) per liter.
ND = Not detected above laboratory reporting limit.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.

Laboratory Qualifiers:

B = Analyte was detected in blank sample.
U = Analyte not detected above reporting limit.

Table G-4
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0307	23-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	28	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	38	NR	10	NE		SW846 9056
	20-Oct-03	Bromide	1.0	NR	1.0	NE		EPA 300.0
		Bromide	1.0	NR	1.0	NE		EPA 300.0
		Chloride	30	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	33	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	26	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	33	NR	10	NE		SW846 9056
	20-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	26	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	36	NR	10	NE		SW846 9056
	30-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	29	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	32	NR	NR	NE		SW846 9056
	02-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	26	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	31	NR	10	NE		SW846 9056
KAFB-0309	22-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	11	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	67	NR	10	NE		SW846 9056
	15-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	11	NR	10	NE		EPA 300.0
		Fluoride	0.50	NR	0.2	4		EPA 300.0
		Sulfate	73	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	9.0	NR	10	NE		SW846 9056
		Fluoride	0.4	NR	0.2	4		SW846 9056
		Sulfate	72	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0309 (Continued)	22-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	12	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	71	NR	10	NE		SW846 9056
	27-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	10	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	73	NR	NR	NE		SW846 9056
	26-Oct-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	10	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	70	NR	10	NE		SW846 9056
KAFB-0310	31-Jul-03	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	120	NR	20	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	120	NR	10	NE		SW846 9056
	13-Oct-03	Bromide	1.0	NR	1.0	NE		EPA 300.0
		Chloride	110	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	110	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	2.0	NR	1.0	NE		SW846 9056
		Chloride	110	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	110	NR	10	NE		SW846 9056
	20-Apr-04	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	110	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	110	NR	10	NE		SW846 9056
	28-Jul-04	Bromide	1.0	NR	NR	NE		SW846 9056
		Chloride	110	NR	NR	NE		SW846 9056
		Fluoride	0.30	NR	NR	4		SW846 9056
		Sulfate	110	NR	NR	NE		SW846 9056
	27-Oct-04	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	98	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	110	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0310 Duplicate	13-Oct-03	Bromide	1.0	NR	1.0	NE		EPA 300.0
		Chloride	110	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	110	NR	10	NE		EPA 300.0
KAFB-0311	23-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	17	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	36	NR	10	NE		SW846 9056
	20-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	19	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	36	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	16	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	36	NR	10	NE		SW846 9056
	19-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	16	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	34	NR	10	NE		SW846 9056
	30-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	15	NR	NR	NE		SW846 9056
		Fluoride	0.5	NR	NR	4		SW846 9056
		Sulfate	35	NR	NR	NE		SW846 9056
	28-Oct-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	21	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	34	NR	10	NE		SW846 9056
KAFB-0312	28-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	18	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	39	NR	10	NE		SW846 9056
	17-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	18	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	40	NR	10	NE		EPA 300.0

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0312 (Continued)	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	17	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	40	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	20	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	44	NR	10	NE		SW846 9056
	29-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	18	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	38	NR	NR	NE		SW846 9056
	25-Oct-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	17	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	38	NR	10	NE		SW846 9056
KAFB-0312 Duplicate	28-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	18	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	42	NR	10	NE		SW846 9056
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	18	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	39	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	22	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	45	NR	10	NE		SW846 9056
	29-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	19	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	38	NR	NR	NE		SW846 9056
	25-Oct-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	17	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	37	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0313	23-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	51	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	96	NR	10	NE		SW846 9056
	16-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	46	NR	10	NE		EPA 300.0
		Fluoride	0.50	NR	0.2	4		EPA 300.0
		Sulfate	98	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	46	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	99	NR	10	NE		SW846 9056
	19-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	48	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	100	NR	10	NE		SW846 9056
	28-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	45	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	96	NR	NR	NE		SW846 9056
	02-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	40	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	89	NR	10	NE		SW846 9056
KAFB-0315	22-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	65	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	68	NR	10	NE		SW846 9056
	16-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	65	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	74	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	67	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	72	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0315 (Continued)	20-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	84	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	72	NR	10	NE		SW846 9056
	29-Jul-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	77	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	76	NR	NR	NE		SW846 9056
	28-Oct-04	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	73	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	76	NR	10	NE		SW846 9056
KAFB-0505	24-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	15	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	85	NR	10	NE		SW846 9056
	24-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	16	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	92	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	14	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	85	NR	10	NE		SW846 9056
	27-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	14	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	78	NR	10	NE		SW846 9056
	02-Aug-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	14	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	88	NR	NR	NE		SW846 9056
	20-Oct-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	13	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	85	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0506	25-Jul-03	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	140	NR	20	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	140	NR	10	NE		SW846 9056
	23-Oct-03	Bromide	1.0	NR	1.0	NE		EPA 300.0
		Chloride	140	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	170	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	2.0	NR	1.0	NE		SW846 9056
		Chloride	140	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	160	NR	10	NE		SW846 9056
	26-Apr-04	Bromide	2.0	NR	1.0	NE		SW846 9056
		Chloride	140	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	150	NR	10	NE		SW846 9056
	03-Aug-04	Bromide	1.0	NR	NR	NE		SW846 9056
		Chloride	140	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	160	NR	NR	NE		SW846 9056
	19-Oct-04	Bromide	1.0	NR	1.0	NE		SW846 9056
		Chloride	130	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	190	NR	10	NE		SW846 9056
KAFB-0506 Duplicate	23-Oct-03	Bromide	1.0	NR	1.0	NE		EPA 300.0
		Chloride	140	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	170	NR	10	NE		EPA 300.0
	19-Oct-04	Bromide	2.0	NR	1.0	NE		SW846 9056
		Chloride	140	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	190	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0507	15-Jul-03	Bromide	ND	0.48	10	NE	U,D	SW846 9056
		Chloride	14.1	0.30	0.8	NE	D	SW846 9056
		Fluoride	0.69	0.12	0.4	4	D	SW846 9056
		Sulfate	86.6	0.36	2.0	NE	D	SW846 9056
	31-Oct-03	Bromide	ND	0.60	2.5	NE	U,D	SW846 9056
		Chloride	13.3	0.37	1.0	NE	D	SW846 9056
		Fluoride	0.53	0.16	0.5	4	D	SW846 9056
		Sulfate	84.4	0.45	2.5	NE	D	SW846 9056
	14-Jan-04	Bromide	ND	NR	2.0	NE	U,D	SW846 9056
		Chloride	14.2	NR	NR	NE	D	SW846 9056
		Fluoride	0.64	NR	NR	4	D	SW846 9056
		Sulfate	88.5	NR	NR	NE	D	SW846 9056
	12-Apr-04	Bromide	0.42	NR	NR	NE	F,D	SW846 9056
		Chloride	13.4	NR	NR	NE	D	SW846 9056
		Fluoride	0.78	NR	NR	4	D	SW846 9056
		Sulfate	85.5	NR	NR	NE	D	SW846 9056
	08-Jul-04	Bromide	ND	NR	2.5	NE	D	SW846 9056
		Chloride	13.1	NR	NR	NE	D,B	SW846 9056
		Fluoride	0.34	NR	NR	4	F,D	SW846 9056
		Sulfate	84.1	NR	NR	NE	D,B	SW846 9056
	21-Oct-04	Bromide	ND	NR	2.5	NE	U,D	SW846 9056
		Chloride	12.7	NR	NR	NE	D	SW846 9056
		Fluoride	0.43	NR	NR	4	F,D	SW846 9056
		Sulfate	77.6	NR	NR	NE	D	SW846 9056
KAFB-0508	10-Jul-03	Bromide	ND	0.96	10	NE	U,D	SW846 9056
		Chloride	14.3	0.59	1.6	NE	D	SW846 9056
		Fluoride	0.66	0.25	0.8	4	F,D	SW846 9056
		Sulfate	30.6	0.71	4.0	NE	D	SW846 9056
	27-Oct-03	Bromide	ND	1.2	4.0	NE	U,D	SW846 9056
		Chloride	14.2	0.74	2.0	NE	D	SW846 9056
		Fluoride	1.5	0.31	1.0	4	D	SW846 9056
		Sulfate	33.2	0.89	5.0	NE	D	SW846 9056
	20-Jan-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	15	NR	NR	NE	D	SW846 9056
		Fluoride	1.3	NR	NR	4	D	SW846 9056
		Sulfate	33.5	NR	NR	NE	D	SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0508 (Continued)	12-Apr-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	13.7	NR	NR	NE	D	SW846 9056
		Fluoride	1.3	NR	NR	4	D	SW846 9056
		Sulfate	33.8	NR	NR	NE	D	SW846 9056
	08-Jul-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	12.7	NR	NR	NE	D	SW846 9056
		Fluoride	0.32	NR	NR	4	F,D	SW846 9056
		Sulfate	28.5	NR	NR	NE	D	SW846 9056
	19-Oct-04	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	11.8	NR	NR	NE	D	SW846 9056
		Fluoride	1.2	NR	NR	4	D	SW846 9056
		Sulfate	22.3	NR	NR	NE	D	SW846 9056
KAFB-0508 Duplicate	10-Jul-03	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	14.5	NR	NR	NE	D	SW846 9056
		Fluoride	0.62	NR	NR	4	D	SW846 9056
		Sulfate	30.4	NR	NR	NE	D	SW846 9056
	20-Jan-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	14.8	NR	NR	NE	D	SW846 9056
		Fluoride	1.2	NR	NR	4	D	SW846 9056
		Sulfate	32.8	NR	NR	NE	D	SW846 9056
KAFB-0510	18-Jul-03	Bromide	0.76	0.60	10	NE	F,D	SW846 9056
		Chloride	47.7	0.37	1.0	NE	D	SW846 9056
		Fluoride	0.63	0.16	0.5	4	D	SW846 9056
		Sulfate	23.8	0.45	2.5	NE	D	SW846 9056
	29-Oct-03	Bromide	ND	0.60	2.5	NE	U,D,B	SW846 9056
		Chloride	42.8	0.37	1.0	NE	D,B	SW846 9056
		Fluoride	0.72	0.16	0.5	4	D,B	SW846 9056
		Sulfate	23.8	0.45	2.5	NE	D,B	SW846 9056
	28-Jan-04	Bromide	0.64	NR	NR	NE	F,D	SW846 9056
		Chloride	35.4	NR	NR	NE	D	SW846 9056
		Fluoride	0.66	NR	NR	4	D	SW846 9056
		Sulfate	25	NR	NR	NE	D	SW846 9056
	16-Apr-04	Bromide	0.52	NR	NR	NE	F,D	SW846 9056
		Chloride	33.6	NR	NR	NE	D	SW846 9056
		Fluoride	0.79	NR	NR	4	D	SW846 9056
		Sulfate	25.1	NR	NR	NE	D	SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0510 (Continued)	09-Jul-04	Bromide	0.52	NR	NR	NE	F,D	SW846 9056
		Chloride	40.8	NR	NR	NE	D	SW846 9056
		Fluoride	0.31	NR	NR	4	F,D	SW846 9056
		Sulfate	22.8	NR	NR	NE	D	SW846 9056
	19-Oct-04	Bromide	0.41	NR	NR	NE	F,D	SW846 9056
		Chloride	41.2	NR	NR	NE	D	SW846 9056
		Fluoride	1.2	NR	NR	4	D	SW846 9056
		Sulfate	18.4	NR	NR	NE	D	SW846 9056
KAFB-0512	17-Jul-03	Bromide	ND	1.2	10	NE	U,D	SW846 9056
		Chloride	14.4	0.74	2.0	NE	D,B	SW846 9056
		Fluoride	0.68	0.31	1.0	4	F,D	SW846 9056
		Sulfate	37.5	0.89	5.0	NE	D,B	SW846 9056
	30-Oct-03	Bromide	ND	0.60	2.5	NE	U,D	SW846 9056
		Chloride	12.9	0.37	1.0	NE	D	SW846 9056
		Fluoride	0.67	0.16	0.5	4	D	SW846 9056
		Sulfate	36.3	0.45	2.5	NE	D	SW846 9056
	30-Jan-04	Bromide	ND	NR	2.5	NE	U,D	SW846 9056
		Chloride	11.4	NR	NR	NE	D	SW846 9056
		Fluoride	0.64	NR	NR	4	D	SW846 9056
		Sulfate	34.8	NR	NR	NE	D	SW846 9056
	15-Apr-04	Bromide	0.30	NR	NR	NE	F,D	SW846 9056
		Chloride	10.6	NR	NR	NE	D	SW846 9056
		Fluoride	0.64	NR	NR	4	D	SW846 9056
		Sulfate	33.5	NR	NR	NE	D	SW846 9056
	07-Jul-04	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	11.1	NR	NR	NE	D	SW846 9056
		Fluoride	0.37	NR	NR	4	F,D	SW846 9056
		Sulfate	31.8	NR	NR	NE	D	SW846 9056
	20-Oct-04	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	11	NR	NR	NE	D,B	SW846 9056
		Fluoride	0.95	NR	NR	4	D,B	SW846 9056
		Sulfate	25.2	NR	NR	NE	D	SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0512 Duplicate	30-Oct-03	Bromide	ND	NR	2.5	NE	U,D	SW846 9056
		Chloride	12.0	NR	NR	NE	D	SW846 9056
		Fluoride	0.47	NR	NR	4	F,D	SW846 9056
		Sulfate	35.5	NR	NR	NE	D	SW846 9056
	15-Apr-04	Bromide	0.31	NR	NR	NE	F,D	SW846 9056
		Chloride	10.7	NR	NR	NE	D	SW846 9056
		Fluoride	0.74	NR	NR	4	D	SW846 9056
		Sulfate	34.0	NR	NR	NE	D	SW846 9056
	07-Jul-04	Bromide	ND	NR	2.5	NE	U,D	SW846 9056
		Chloride	11.4	NR	NR	NE	D	SW846 9056
		Fluoride	0.36	NR	NR	4	F,D	SW846 9056
		Sulfate	32.2	NR	NR	NE	D	SW846 9056
	20-Oct-04	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	10.6	NR	NR	NE	D	SW846 9056
		Fluoride	0.52	NR	NR	4	F,D	SW846 9056
		Sulfate	28.1	NR	NR	NE	D	SW846 9056
KAFB-0514	17-Jul-03	Bromide	ND	2.4	10	NE	U,D	SW846 9056
		Chloride	22.1	1.5	4.0	NE	D	SW846 9056
		Fluoride	0.97	0.62	2.0	4	F,D	SW846 9056
		Sulfate	49.1	1.8	10	NE	D	SW846 9056
	27-Oct-03	Bromide	ND	1.5	6.3	NE	U,D	SW846 9056
		Chloride	20.5	0.93	2.5	NE	D	SW846 9056
		Fluoride	0.99	0.39	1.3	4	F,D	SW846 9056
		Sulfate	47.4	1.1	6.3	NE	D	SW846 9056
	02-Feb-04	Bromide	ND	NR	6.3	NE	U,D	SW846 9056
		Chloride	18.4	NR	NR	NE	D	SW846 9056
		Fluoride	0.66	NR	NR	4	F,D	SW846 9056
		Sulfate	40.2	NR	NR	NE	D	SW846 9056
	15-Apr-04	Bromide	ND	NR	6.3	NE	U,D	SW846 9056
		Chloride	19.3	NR	NR	NE	D,B	SW846 9056
		Fluoride	0.99	NR	NR	4	F,D	SW846 9056
		Sulfate	43.4	NR	NR	NE	D,B	SW846 9056
	08-Jul-04	Bromide	ND	NR	10	NE	U,D	SW846 9056
		Chloride	18.9	NR	NR	NE	D	SW846 9056
		Fluoride	0.74	NR	NR	4	F,D	SW846 9056
		Sulfate	41.3	NR	NR	NE	D	SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0514 (Continued)	20-Oct-04	Bromide	ND	NR	6.3	NE	U,D	SW846 9056
		Chloride	19.4	NR	NR	NE	D	SW846 9056
		Fluoride	1.2	NR	NR	4	F,D	SW846 9056
		Sulfate	30.4	NR	NR	NE	D	SW846 9056
KAFB-0516	21-Jul-03	Bromide	ND	1.2	10	NE	U,D	SW846 9056
		Chloride	13.2	0.74	2.0	NE	D	SW846 9056
		Fluoride	0.97	0.31	1.0	4	F,D	SW846 9056
		Sulfate	38.4	0.89	5.0	NE	D	SW846 9056
	30-Oct-03	Bromide	ND	1.2	5.0	NE	U,D	SW846 9056
		Chloride	12	0.74	2.0	NE	D	SW846 9056
		Fluoride	0.61	0.31	1.0	4	F,D	SW846 9056
		Sulfate	36.3	0.89	5.0	NE	D	SW846 9056
	30-Jan-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	11.9	NR	NR	NE	D	SW846 9056
		Fluoride	0.68	NR	NR	4	F,D	SW846 9056
		Sulfate	35.6	NR	NR	NE	D	SW846 9056
	15-Apr-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	11.6	NR	NR	NE	D	SW846 9056
		Fluoride	0.68	NR	NR	4	F,D	SW846 9056
		Sulfate	36.6	NR	NR	NE	D	SW846 9056
	07-Jul-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	14.4	NR	NR	NE	D	SW846 9056
		Fluoride	0.60	NR	NR	4	F,D	SW846 9056
		Sulfate	33.9	NR	NR	NE	D	SW846 9056
	21-Oct-04	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	11.7	NR	NR	NE	D	SW846 9056
		Fluoride	1.2	NR	NR	4	D	SW846 9056
		Sulfate	29.4	NR	NR	NE	D	SW846 9056
KAFB-0602	30-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	33	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	44	NR	10	NE		SW846 9056
	24-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	34	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	49	NR	10	NE		EPA 300.0

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0602 (Continued)	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	31	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	44	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	56	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	69	NR	10	NE		SW846 9056
	02-Aug-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	32	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	44	NR	NR	NE		SW846 9056
	09-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	30	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	48	NR	10	NE		SW846 9056
KAFB-0608	30-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	25	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	87	NR	10	NE		SW846 9056
	24-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	25	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	93	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	24	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	82	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	28	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	110	NR	10	NE		SW846 9056
	02-Aug-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	24	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	98	NR	NR	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0608 (Continued)	09-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	24	NR	10	NE		SW846 9056
		Fluoride	0.30	NR	0.2	4		SW846 9056
		Sulfate	100	NR	10	NE		SW846 9056
KAFB-0609	30-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	40	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	74	NR	10	NE		SW846 9056
	24-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	42	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	85	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	39	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	71	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	48	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	45	NR	10	NE		SW846 9056
	05-Aug-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	44	NR	NR	NE		SW846 9056
		Fluoride	0.50	NR	NR	4		SW846 9056
		Sulfate	39	NR	NR	NE		SW846 9056
	09-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	37	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	83	NR	10	NE		SW846 9056
KAFB-0610	30-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	53	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	67	NR	10	NE		SW846 9056
	24-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	53	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	66	NR	10	NE		EPA 300.0

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0610 (Continued)	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	52	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	65	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	59	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	72	NR	10	NE		SW846 9056
	02-Aug-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	53	NR	NR	NE		SW846 9056
		Fluoride	0.40	NR	NR	4		SW846 9056
		Sulfate	64	NR	NR	NE		SW846 9056
	09-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	50	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	68	NR	10	NE		SW846 9056
KAFB-0610 Duplicate	30-Jul-03	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	54	NR	10	NE		SW846 9056
		Fluoride	0.50	NR	0.2	4		SW846 9056
		Sulfate	65	NR	10	NE		SW846 9056
	24-Oct-03	Bromide	ND	NR	1.0	NE	U	EPA 300.0
		Chloride	56	NR	10	NE		EPA 300.0
		Fluoride	0.40	NR	0.2	4		EPA 300.0
		Sulfate	68	NR	10	NE		EPA 300.0
	21-Jan-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	54	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	66	NR	10	NE		SW846 9056
	21-Apr-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	57	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	70	NR	10	NE		SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0610 Duplicate (Continued)	02-Aug-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	52	NR	NR	NE		SW846 9056
		Fluoride	0.50	NR	NR	4		SW846 9056
		Sulfate	64	NR	NR	NE		SW846 9056
	09-Nov-04	Bromide	ND	NR	1.0	NE	U	SW846 9056
		Chloride	50	NR	10	NE		SW846 9056
		Fluoride	0.40	NR	0.2	4		SW846 9056
		Sulfate	66	NR	10	NE		SW846 9056
KAFB-0615	16-Jul-03	Bromide	ND	1.5	10	NE	U,D	SW846 9056
		Chloride	57.2	0.93	2.5	NE	D	SW846 9056
		Fluoride	2.9	0.39	1.3	4	D	SW846 9056
		Sulfate	273	1.1	6.3	NE	D	SW846 9056
	28-Oct-03	Bromide	ND	1.2	5.0	NE	U,D	SW846 9056
		Chloride	59.1	0.74	2.0	NE	D	SW846 9056
		Fluoride	3.5	0.31	1.0	4	D	SW846 9056
		Sulfate	273	0.89	5.0	NE	D	SW846 9056
	29-Jan-04	Bromide	ND	NR	5.0	NE	U,D	SW846 9056
		Chloride	59.9	NR	NR	NE	D	SW846 9056
		Fluoride	3.1	NR	NR	4	D	SW846 9056
		Sulfate	292	NR	NR	NE	D	SW846 9056
	14-Apr-04	Bromide	1.1	NR	NR	NE	F,D	SW846 9056
		Chloride	57.9	NR	NR	NE	D	SW846 9056
		Fluoride	3.3	NR	NR	4	D	SW846 9056
		Sulfate	270	NR	NR	NE	D	SW846 9056
	21-Oct-04	Bromide	0.80	NR	NR	NE	F,D	SW846 9056
		Chloride	56.7	NR	NR	NE	D	SW846 9056
		Fluoride	3.0	NR	NR	4	D	SW846 9056
		Sulfate	257	NR	NR	NE	D	SW846 9056
KAFB-0616	18-Jul-03	Bromide	ND	1.2	10	NE	U,D	SW846 9056
		Chloride	29.5	0.74	2.0	NE	D	SW846 9056
		Fluoride	0.86	0.31	1.0	4	F,D	SW846 9056
		Sulfate	43.2	0.89	5.0	NE	D	SW846 9056
	28-Oct-03	Bromide	ND	1.2	5.0	NE	U,D	SW846 9056
		Chloride	29.4	0.74	2.0	NE	D	SW846 9056
		Fluoride	1.4	0.31	1.0	4	D	SW846 9056
		Sulfate	42	0.89	5.0	NE	D	SW846 9056

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0616 (Continued)	03-Feb-04	Bromide	ND	NR	4.0	NE	U,D	SW846 9056
		Chloride	30.5	NR	NR	NE	D	SW846 9056
		Fluoride	0.77	NR	NR	4	F,D	SW846 9056
		Sulfate	37.8	NR	NR	NE	D	SW846 9056
	15-Apr-04	Bromide	0.57	NR	NR	NE	F,D	SW846 9056
		Chloride	31.3	NR	NR	NE	D	SW846 9056
		Fluoride	1.0	NR	NR	4	D	SW846 9056
		Sulfate	42	NR	NR	NE	D	SW846 9056
	09-Jul-04	Bromide	0.46	NR	NR	NE	F,D	SW846 9056
		Chloride	29.5	NR	NR	NE	D	SW846 9056
		Fluoride	0.38	NR	NR	4	F,D	SW846 9056
		Sulfate	40.8	NR	NR	NE	D	SW846 9056
	18-Oct-04	Bromide	0.45	NR	NR	NE	F,D	SW846 9056
		Chloride	31.1	NR	NR	NE	D	SW846 9056
		Fluoride	0.67	NR	NR	4	F,D	SW846 9056
		Sulfate	33	NR	NR	NE	D	SW846 9056
KAFB-0903	17-Jul-03	Bromide	0.17	NR	0.1	NE		EPA 300.0
		Chloride	13	NR	0.1	NE		EPA 300.0
		Fluoride	0.27	NR	0.1	4		EPA 300.0
		Sulfate	62	NR	0.5	NE		EPA 300.0
	23-Oct-03	Bromide	ND	NR	0.1	NE	U	EPA 300.0
		Chloride	14	NR	0.1	NE		EPA 300.0
		Fluoride	0.32	NR	0.1	4		EPA 300.0
		Sulfate	65	NR	0.5	NE		EPA 300.0
	27-Jan-04	Bromide	ND	NR	0.1	NE	U	EPA 300.0
		Chloride	7.7	NR	0.1	NE		EPA 300.0
		Fluoride	ND	NR	0.1	4	U	EPA 300.0
		Sulfate	25	NR	0.5	NE		EPA 300.0
	20-Apr-04	Bromide	0.16	NR	NR	NE		EPA 300.0
		Chloride	14	NR	NR	NE	D	EPA 300.0
		Fluoride	0.31	NR	NR	4	F,D	EPA 300.0
		Sulfate	62	NR	NR	NE	D	EPA 300.0
	19-Jul-04	Bromide	0.10	NR	NR	NE	J	EPA 300.0
		Chloride	14	NR	NR	NE	D	EPA 300.0
		Fluoride	0.28	NR	NR	4	F,D	EPA 300.0
		Sulfate	59	NR	NR	NE	D	EPA 300.0

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0903 (Continued)	13-Oct-04	Bromide	ND	NR	0.1	NE	U	EPA 300.0
		Chloride	14	NR	NR	NE	D	EPA 300.0
		Fluoride	0.30	NR	NR	4	F,D	EPA 300.0
		Sulfate	59	NR	NR	NE	D	EPA 300.0
KAFB-0904	17-Jul-03	Bromide	0.22	NR	1.0	NE		EPA 300.0
		Chloride	14	NR	1.0	NE		EPA 300.0
		Fluoride	0.44	NR	1.0	4		EPA 300.0
		Sulfate	28	NR	1.0	NE		EPA 300.0
	24-Oct-03	Bromide	ND	NR	0.1	NE	U	EPA 300.0
		Chloride	15	NR	0.1	NE		EPA 300.0
		Fluoride	0.45	NR	0.1	4		EPA 300.0
		Sulfate	26	NR	0.5	NE		EPA 300.0
	29-Jan-04	Bromide	0.14	NR	0.1	NE		EPA 300.0
		Chloride	14	NR	1.0	NE		EPA 300.0
		Fluoride	0.36	NR	0.1	4		EPA 300.0
		Sulfate	26	NR	0.5	NE		EPA 300.0
	21-Apr-04	Bromide	0.30	NR	NR	NE		EPA 300.0
		Chloride	14	NR	NR	NE	D	EPA 300.0
		Fluoride	0.41	NR	NR	4	D	EPA 300.0
		Sulfate	27	NR	NR	NE	D	EPA 300.0
	20-Jul-04	Bromide	0.21	NR	0.1	NE		EPA 300.0
		Chloride	14	NR	NR	NE	D	EPA 300.0
		Fluoride	0.41	NR	NR	4	D	EPA 300.0
		Sulfate	26	NR	NR	NE	D	EPA 300.0
	14-Oct-04	Bromide	0.17	NR	NR	NE		EPA 300.0
		Chloride	14	NR	NR	NE	D	EPA 300.0
		Fluoride	0.47	NR	NR	4	D	EPA 300.0
		Sulfate	25	NR	NR	NE	D	EPA 300.0
KAFB-8282	17-Jul-03	Bromide	3.0	NR	0.1	NE		EPA 300.0
		Chloride	210	NR	1.0	NE		EPA 300.0
		Fluoride	0.30	NR	0.1	4		EPA 300.0
		Sulfate	610	NR	5.0	NE		EPA 300.0
	24-Oct-03	Bromide	1.9	NR	0.1	NE		EPA 300.0
		Chloride	80	NR	0.5	NE		EPA 300.0
		Fluoride	0.27	NR	0.1	4		EPA 300.0
		Sulfate	660	NR	10	NE		EPA 300.0

Refer to footnotes at end of table.

Table G-4 (Continued)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-8282 (Continued)	26-Jan-04	Bromide	2.8	NR	0.1	NE		EPA 300.0
		Chloride	200	NR	2.0	NE		EPA 300.0
		Fluoride	0.23	NR	0.1	4		EPA 300.0
		Sulfate	620	NR	10	NE		EPA 300.0
	20-Apr-04	Bromide	3.1	NR	NR	NE		EPA 300.0
		Chloride	250	NR	NR	NE	D	EPA 300.0
		Fluoride	0.25	NR	NR	4	D	EPA 300.0
		Sulfate	670	NR	NR	NE	D	EPA 300.0
	19-Jul-04	Bromide	2.6	NR	0.1	NE		EPA 300.0
		Chloride	220	NR	NR	NE	D	EPA 300.0
		Fluoride	0.26	NR	NR	4	D	EPA 300.0
		Sulfate	670	NR	NR	NE	D	EPA 300.0
	14-Oct-04	Bromide	2.5	NR	NR	NE		EPA 300.0
		Chloride	190	NR	NR	NE	D	EPA 300.0
		Fluoride	0.24	NR	NR	4	D	EPA 300.0
		Sulfate	610	NR	NR	NE	D	EPA 300.0
KAFB-8282 Duplicate	24-Oct-03	Bromide	5.4	NR	NR	NE		EPA 300.0
		Chloride	85	NR	NR	NE		EPA 300.0
		Fluoride	0.29	NR	NR	4		EPA 300.0
		Sulfate	630	NR	NR	NE		EPA 300.0

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Method SW846 9056).
U.S. Environmental Protection Agency, December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to Method 300.0).

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligram(s) per liter.
ND = Not detected above laboratory reporting limit.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.

Table G-4 (Concluded)
Summary of Anion Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Laboratory Qualifiers:

B = Analyte was detected in blank sample.
D = Sample dilutions required for anaysis and reported values reflect the dilution.
F = Analyte was positively identified but the reported concentration is estimated.
J = Data are estimated due to associated quality control data.
U = Analyte not detected above reporting limit.

Table G-5
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0307	23-Jul-03	Calcium	59.9	NR	1.0	NE		SW846 6020
		Magnesium	12.4	NR	0.1	NE		SW846 6020
		Potassium	2.23	NR	1.0	NE		SW846 6020
		Sodium	20.8	NR	1.0	NE		SW846 6020
	20-Oct-03	Calcium	55.0	NR	0.1	NE		SW846 6020
		Magnesium	10.8	NR	0.1	NE		SW846 6020
		Potassium	2.17	NR	0.1	NE		SW846 6020
		Sodium	19.2	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	56.7	NR	0.1	NE		SW846 6020
		Magnesium	11.1	NR	0.1	NE		SW846 6020
		Potassium	2.15	NR	0.1	NE		SW846 6020
		Sodium	21.1	NR	0.1	NE		SW846 6020
	20-Apr-04	Calcium	58.8	NR	0.1	NE		SW846 6020
		Magnesium	11.5	NR	0.1	NE		SW846 6020
		Potassium	2.56	NR	0.1	NE		SW846 6020
		Sodium	21.1	NR	0.1	NE		SW846 6020
	30-Jul-04	Calcium	55.9	NR	NR	NE		SW846 6020
		Magnesium	9.71	NR	NR	NE		SW846 6020
		Potassium	2.15	NR	NR	NE		SW846 6020
		Sodium	18.5	NR	NR	NE		SW846 6020
	02-Nov-04	Calcium	60.4	NR	0.1	NE		SW846 6020
		Magnesium	11.0	NR	0.1	NE		SW846 6020
		Potassium	2.36	NR	0.1	NE		SW846 6020
		Sodium	20.1	NR	0.1	NE		SW846 6020
KAFB-0309	22-Jul-03	Calcium	61.8	NR	1.0	NE		SW846 6020
		Magnesium	11.7	NR	1.0	NE		SW846 6020
		Potassium	1.76	NR	1.0	NE		SW846 6020
		Sodium	21.4	NR	1.0	NE		SW846 6020
	15-Oct-03	Calcium	59.2	NR	0.1	NE		SW846 6020
		Magnesium	11.3	NR	0.1	NE		SW846 6020
		Potassium	2.01	NR	0.1	NE		SW846 6020
		Sodium	20.7	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	60.8	NR	0.1	NE		SW846 6020
		Magnesium	10.9	NR	0.1	NE		SW846 6020
		Potassium	1.83	NR	0.1	NE		SW846 6020
		Sodium	22.2	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0309 (Continued)	22-Apr-04	Calcium	61.7	NR	0.1	NE		SW846 6020
		Magnesium	11.5	NR	0.1	NE		SW846 6020
		Potassium	2.11	NR	0.1	NE		SW846 6020
		Sodium	22.1	NR	0.1	NE		SW846 6020
	27-Jul-04	Calcium	60.3	NR	NR	NE		SW846 6020
		Magnesium	9.43	NR	NR	NE		SW846 6020
		Potassium	1.79	NR	NR	NE		SW846 6020
		Sodium	19.0	NR	NR	NE		SW846 6020
	26-Oct-04	Calcium	62.7	NR	0.1	NE		SW846 6020
		Magnesium	10.9	NR	0.1	NE		SW846 6020
		Potassium	1.99	NR	0.1	NE		SW846 6020
		Sodium	21.2	NR	0.1	NE		SW846 6020
KAFB-0310	31-Jul-03	Calcium	110	NR	1.0	NE		SW846 6020
		Magnesium	20.9	NR	1.0	NE		SW846 6020
		Potassium	2.30	NR	1.0	NE		SW846 6020
		Sodium	29.0	NR	1.0	NE		SW846 6020
	13-Oct-03	Calcium	96.3	NR	0.1	NE		SW846 6020
		Magnesium	16.4	NR	0.1	NE		SW846 6020
		Potassium	2.02	NR	0.1	NE		SW846 6020
		Sodium	25.1	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	102	NR	0.1	NE		SW846 6020
		Magnesium	18.8	NR	0.1	NE		SW846 6020
		Potassium	2.23	NR	0.1	NE		SW846 6020
		Sodium	28.1	NR	0.1	NE		SW846 6020
	20-Apr-04	Calcium	103	NR	0.1	NE		SW846 6020
		Magnesium	18.9	NR	0.1	NE		SW846 6020
		Potassium	2.52	NR	0.1	NE		SW846 6020
		Sodium	27.7	NR	0.1	NE		SW846 6020
	28-Jul-04	Calcium	104	NR	NR	NE		SW846 6020
		Magnesium	15.8	NR	NR	NE		SW846 6020
		Potassium	2.15	NR	NR	NE		SW846 6020
		Sodium	26.0	NR	NR	NE		SW846 6020
	27-Oct-04	Calcium	104	NR	0.1	NE		SW846 6020
		Magnesium	18.4	NR	0.1	NE		SW846 6020
		Potassium	2.38	NR	0.1	NE		SW846 6020
		Sodium	27.6	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0310 Duplicate	13-Oct-03	Calcium	98.5	NR	0.1	NE		SW846 6020
		Magnesium	19.2	NR	0.1	NE		SW846 6020
		Potassium	2.36	NR	0.1	NE		SW846 6020
		Sodium	25.9	NR	0.1	NE		SW846 6020
KAFB-0311	23-Jul-03	Calcium	57.5	NR	1.0	NE		SW846 6020
		Magnesium	11.4	NR	1.0	NE		SW846 6020
		Potassium	2.03	NR	1.0	NE		SW846 6020
		Sodium	20.7	NR	1.0	NE		SW846 6020
	20-Oct-03	Calcium	53.4	NR	0.1	NE		SW846 6020
		Magnesium	10.7	NR	0.1	NE		SW846 6020
		Potassium	2.11	NR	0.1	NE		SW846 6020
		Sodium	19.4	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	54.0	NR	0.1	NE		SW846 6020
		Magnesium	10.4	NR	0.1	NE		SW846 6020
		Potassium	2.08	NR	0.1	NE		SW846 6020
		Sodium	21.0	NR	0.1	NE		SW846 6020
	19-Apr-04	Calcium	55.6	NR	0.1	NE		SW846 6020
		Magnesium	10.4	NR	0.1	NE		SW846 6020
		Potassium	2.19	NR	0.1	NE		SW846 6020
		Sodium	20.4	NR	0.1	NE		SW846 6020
	30-Jul-04	Calcium	53.6	NR	NR	NE		SW846 6020
		Magnesium	9.00	NR	NR	NE		SW846 6020
		Potassium	1.96	NR	NR	NE		SW846 6020
		Sodium	18.2	NR	NR	NE		SW846 6020
	28-Oct-04	Calcium	57.2	NR	0.1	NE		SW846 6020
		Magnesium	10.3	NR	0.1	NE		SW846 6020
		Potassium	2.14	NR	0.1	NE		SW846 6020
		Sodium	20.0	NR	0.1	NE		SW846 6020
KAFB-0312	28-Jul-03	Calcium	73.5	NR	1.0	NE		SW846 6020
		Magnesium	15.2	NR	1.0	NE		SW846 6020
		Potassium	3.03	NR	1.0	NE		SW846 6020
		Sodium	29.5	NR	1.0	NE		SW846 6020
	17-Oct-03	Calcium	76.3	NR	0.1	NE		SW846 6020
		Magnesium	11.7	NR	0.1	NE		SW846 6020
		Potassium	2.63	NR	0.1	NE		SW846 6020
		Sodium	30.1	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0312 (Continued)	21-Jan-04	Calcium	60.8	NR	0.1	NE		SW846 6020
		Magnesium	12.0	NR	0.1	NE		SW846 6020
		Potassium	2.60	NR	0.1	NE		SW846 6020
		Sodium	25.5	NR	0.1	NE		SW846 6020
	21-Apr-04	Calcium	60.7	NR	0.1	NE		SW846 6020
		Magnesium	12.1	NR	0.1	NE		SW846 6020
		Potassium	3.00	NR	0.1	NE		SW846 6020
		Sodium	25.0	NR	0.1	NE		SW846 6020
	29-Jul-04	Calcium	60.9	NR	NR	NE		SW846 6020
		Magnesium	10.5	NR	NR	NE		SW846 6020
		Potassium	2.60	NR	NR	NE		SW846 6020
		Sodium	22.2	NR	NR	NE		SW846 6020
	25-Oct-04	Calcium	64.1	NR	0.1	NE		SW846 6020
		Magnesium	12.1	NR	0.1	NE		SW846 6020
		Potassium	2.84	NR	0.1	NE		SW846 6020
		Sodium	25.3	NR	0.1	NE		SW846 6020
KAFB-0312 Duplicate	28-Jul-03	Calcium	64.4	NR	1.0	NE		SW846 6020
		Magnesium	13.3	NR	1.0	NE		SW846 6020
		Potassium	2.62	NR	1.0	NE		SW846 6020
		Sodium	25.6	NR	1.0	NE		SW846 6020
	21-Jan-04	Calcium	60.0	NR	0.1	NE		SW846 6020
		Magnesium	11.7	NR	0.1	NE		SW846 6020
		Potassium	2.54	NR	0.1	NE		SW846 6020
		Sodium	25.0	NR	0.1	NE		SW846 6020
	21-Apr-04	Calcium	63.5	NR	0.1	NE		SW846 6020
		Magnesium	12.2	NR	0.1	NE		SW846 6020
		Potassium	3.06	NR	0.1	NE		SW846 6020
		Sodium	25.7	NR	0.1	NE		SW846 6020
	29-Jul-04	Calcium	60.1	NR	NR	NE		SW846 6020
		Magnesium	10.3	NR	NR	NE		SW846 6020
		Potassium	2.58	NR	NR	NE		SW846 6020
		Sodium	24.0	NR	NR	NE		SW846 6020
	25-Oct-04	Calcium	63.4	NR	0.1	NE		SW846 6020
		Magnesium	11.9	NR	0.1	NE		SW846 6020
		Potassium	2.84	NR	0.1	NE		SW846 6020
		Sodium	25.5	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0313	23-Jul-03	Calcium	79.2	NR	1.0	NE		SW846 6020
		Magnesium	16.1	NR	1.0	NE		SW846 6020
		Potassium	1.80	NR	1.0	NE		SW846 6020
		Sodium	23.6	NR	1.0	NE		SW846 6020
	16-Oct-03	Calcium	73.3	NR	0.1	NE		SW846 6020
		Magnesium	13.8	NR	0.1	NE		SW846 6020
		Potassium	1.77	NR	0.1	NE		SW846 6020
		Sodium	21.4	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	73.8	NR	0.1	NE		SW846 6020
		Magnesium	14.2	NR	0.1	NE		SW846 6020
		Potassium	1.70	NR	0.1	NE		SW846 6020
		Sodium	22.7	NR	0.1	NE		SW846 6020
	19-Apr-04	Calcium	74.4	NR	0.1	NE		SW846 6020
		Magnesium	14.8	NR	0.1	NE		SW846 6020
		Potassium	2.11	NR	0.1	NE		SW846 6020
		Sodium	23.5	NR	0.1	NE		SW846 6020
	28-Jul-04	Calcium	76.1	NR	NR	NE		SW846 6020
		Magnesium	12.0	NR	NR	NE		SW846 6020
		Potassium	1.70	NR	NR	NE		SW846 6020
		Sodium	19.7	NR	NR	NE		SW846 6020
	02-Nov-04	Calcium	77.4	NR	0.1	NE		SW846 6020
		Magnesium	13.7	NR	0.1	NE		SW846 6020
		Potassium	1.88	NR	0.1	NE		SW846 6020
		Sodium	21.9	NR	0.1	NE		SW846 6020
KAFB-0315	22-Jul-03	Calcium	85.3	NR	1.0	NE		SW846 6020
		Magnesium	16.6	NR	1.0	NE		SW846 6020
		Potassium	2.04	NR	1.0	NE		SW846 6020
		Sodium	24.4	NR	1.0	NE		SW846 6020
	16-Oct-03	Calcium	87.2	NR	0.1	NE		SW846 6020
		Magnesium	14.6	NR	0.1	NE		SW846 6020
		Potassium	2.04	NR	0.1	NE		SW846 6020
		Sodium	24.9	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	84.6	NR	0.1	NE		SW846 6020
		Magnesium	15.7	NR	0.1	NE		SW846 6020
		Potassium	2.08	NR	0.1	NE		SW846 6020
		Sodium	25.1	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0315 (Continued)	20-Apr-04	Calcium	86.2	NR	0.1	NE		SW846 6020
		Magnesium	16.1	NR	0.1	NE		SW846 6020
		Potassium	2.42	NR	0.1	NE		SW846 6020
		Sodium	25.3	NR	0.1	NE		SW846 6020
	29-Jul-04	Calcium	87.6	NR	NR	NE		SW846 6020
		Magnesium	13.9	NR	NR	NE		SW846 6020
		Potassium	2.03	NR	NR	NE		SW846 6020
		Sodium	22.2	NR	NR	NE		SW846 6020
	28-Oct-04	Calcium	90.4	NR	0.1	NE		SW846 6020
		Magnesium	15.9	NR	0.1	NE		SW846 6020
		Potassium	2.29	NR	0.1	NE		SW846 6020
		Sodium	25.2	NR	0.1	NE		SW846 6020
KAFB-0505	24-Jul-03	Calcium	76.7	NR	1.0	NE		SW846 6020
		Magnesium	14.2	NR	1.0	NE		SW846 6020
		Potassium	2.44	NR	1.0	NE		SW846 6020
		Sodium	28.0	NR	1.0	NE		SW846 6020
	24-Oct-03	Calcium	72.1	NR	0.1	NE		SW846 6020
		Magnesium	12.8	NR	0.1	NE		SW846 6020
		Potassium	2.35	NR	0.1	NE		SW846 6020
		Sodium	26.7	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	71.6	NR	0.1	NE		SW846 6020
		Magnesium	12.6	NR	0.1	NE		SW846 6020
		Potassium	2.79	NR	0.1	NE		SW846 6020
		Sodium	27.8	NR	0.1	NE		SW846 6020
	27-Apr-04	Calcium	71.2	NR	0.1	NE		SW846 6020
		Magnesium	12.8	NR	0.1	NE		SW846 6020
		Potassium	2.63	NR	0.1	NE		SW846 6020
		Sodium	27.4	NR	0.1	NE		SW846 6020
	02-Aug-04	Calcium	71.6	NR	NR	NE		SW846 6020
		Magnesium	10.8	NR	NR	NE		SW846 6020
		Potassium	2.21	NR	NR	NE		SW846 6020
		Sodium	25.6	NR	NR	NE		SW846 6020
	20-Oct-04	Calcium	73.7	NR	0.1	NE		SW846 6020
		Magnesium	11.4	NR	0.1	NE		SW846 6020
		Potassium	2.20	NR	0.1	NE		SW846 6020
		Sodium	27.1	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0506	25-Jul-03	Calcium	129	NR	1.0	NE		SW846 6020
		Magnesium	19.5	NR	1.0	NE		SW846 6020
		Potassium	1.83	NR	1.0	NE		SW846 6020
		Sodium	24.7	NR	1.0	NE		SW846 6020
	23-Oct-03	Calcium	123	NR	0.1	NE		SW846 6020
		Magnesium	17.8	NR	0.1	NE		SW846 6020
		Potassium	1.88	NR	0.1	NE		SW846 6020
		Sodium	23.2	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	124	NR	0.1	NE		SW846 6020
		Magnesium	17.7	NR	0.1	NE		SW846 6020
		Potassium	1.82	NR	0.1	NE		SW846 6020
		Sodium	23.9	NR	0.1	NE		SW846 6020
	26-Apr-04	Calcium	125	NR	0.1	NE		SW846 6020
		Magnesium	18.1	NR	0.1	NE		SW846 6020
		Potassium	2.09	NR	0.1	NE		SW846 6020
		Sodium	24.0	NR	0.1	NE		SW846 6020
	03-Aug-04	Calcium	123	NR	NR	NE		SW846 6020
		Magnesium	14.6	NR	NR	NE		SW846 6020
		Potassium	1.76	NR	NR	NE		SW846 6020
		Sodium	20.5	NR	NR	NE		SW846 6020
	19-Oct-04	Calcium	131	NR	0.1	NE		SW846 6020
		Magnesium	18.2	NR	0.1	NE		SW846 6020
		Potassium	2.04	NR	0.1	NE		SW846 6020
		Sodium	25.1	NR	0.1	NE		SW846 6020
KAFB-0506 Duplicate	23-Oct-03	Calcium	118	NR	0.1	NE		SW846 6020
		Magnesium	17.5	NR	0.1	NE		SW846 6020
		Potassium	1.83	NR	0.1	NE		SW846 6020
		Sodium	22.2	NR	0.1	NE		SW846 6020
	19-Oct-04	Calcium	133	NR	0.1	NE		SW846 6020
		Magnesium	17.6	NR	0.1	NE		SW846 6020
		Potassium	1.98	NR	0.1	NE		SW846 6020
		Sodium	25.3	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0507	15-Jul-03	Calcium	72.0	0.060	0.2	NE	B	SW846 6010
		Magnesium	11.2	15	0.1	NE		SW846 6010
		Potassium	2.02	0.023	0.4	NE	B	SW846 6010
		Sodium	26.1	0.21	0.2	NE	B	SW846 6010
	31-Oct-03	Calcium	75.0	0.056	0.2	NE		SW846 6010
		Magnesium	12.5	0.013	0.1	NE		SW846 6010
		Potassium	2.10	0.023	0.4	NE	B	SW846 6010
		Sodium	29.1	0.13	2.0	NE		SW846 6010
	14-Jan-04	Calcium	74.5	NR	NR	NE	B	SW846 6010
		Magnesium	11.4	NR	NR	NE		SW846 6010
		Potassium	2.22	NR	NR	NE	B	SW846 6010
		Sodium	29.1	NR	NR	NE	B	SW846 6010
	12-Apr-04	Calcium	74.0	NR	NR	NE	B	SW846 6010
		Magnesium	10.8	NR	NR	NE		SW846 6010
		Potassium	2.21	NR	NR	NE	B	SW846 6010
		Sodium	26.8	NR	NR	NE		SW846 6010
	08-Jul-04	Calcium	75.3	NR	NR	NE		SW846 6010
		Magnesium	11.8	NR	NR	NE	B	SW846 6010
		Potassium	2.05	NR	NR	NE	B	SW846 6010
		Sodium	28.1	NR	NR	NE	B	SW846 6010
	21-Oct-04	Calcium	78.6	NR	NR	NE		SW846 6010
		Magnesium	12.1	NR	NR	NE		SW846 6010
		Potassium	2.47	NR	NR	NE	B	SW846 6010
		Sodium	30.2	NR	NR	NE	B	SW846 6010
KAFB-0508	10-Jul-03	Calcium	62.9	0.060	0.2	NE	B	SW846 6010
		Magnesium	9.62	15	0.1	NE	B	SW846 6010
		Potassium	2.27	0.023	0.4	NE	B	SW846 6010
		Sodium	24.6	0.210	0.2	NE	B	SW846 6010
	27-Oct-03	Calcium	69.5	0.056	0.2	NE	B	SW846 6010
		Magnesium	10.1	0.013	0.1	NE	B	SW846 6010
		Potassium	2.34	0.023	0.4	NE	B	SW846 6010
		Sodium	48.3	0.130	2.0	NE		SW846 6010
	20-Jan-04	Calcium	74.8	NR	NR	NE		SW846 6010
		Magnesium	10.9	NR	NR	NE	B	SW846 6010
		Potassium	2.72	NR	NR	NE	J,B	SW846 6010
		Sodium	30.2	NR	NR	NE	J	SW846 6010

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0508 (Continued)	12-Apr-04	Calcium	66.5	NR	NR	NE	B	SW846 6010
		Magnesium	9.34	NR	NR	NE		SW846 6010
		Potassium	2.26	NR	NR	NE	B	SW846 6010
		Sodium	25.3	NR	NR	NE		SW846 6010
	08-Jul-04	Calcium	59.8	NR	NR	NE		SW846 6010
		Magnesium	9.21	NR	NR	NE		SW846 6010
		Potassium	2.04	NR	NR	NE	B	SW846 6010
		Sodium	25.5	NR	NR	NE	B	SW846 6010
	19-Oct-04	Calcium	63.2	NR	NR	NE		SW846 6010
		Magnesium	9.46	NR	NR	NE	B	SW846 6010
		Potassium	2.31	NR	NR	NE	B	SW846 6010
		Sodium	26.1	NR	NR	NE	B	SW846 6010
KAFB-0508 Duplicate	10-Jul-03	Calcium	59.6	0.060	0.2	NE	B	SW846 6010
		Magnesium	9.19	15	0.1	NE	B	SW846 6010
		Potassium	2.14	0.023	0.4	NE	B	SW846 6010
		Sodium	23.5	0.210	0.2	NE	B	SW846 6010
	20-Jan-04	Calcium	73.6	NR	NR	NE		SW846 6010
		Magnesium	10.8	NR	NR	NE	B	SW846 6010
		Potassium	2.51	NR	NR	NE	J,B	SW846 6010
		Sodium	29.4	NR	NR	NE	J	SW846 6010
KAFB-0510	18-Jul-03	Calcium	48.8	0.060	0.2	NE	B	SW846 6010
		Magnesium	6.61	15	0.1	NE		SW846 6010
		Potassium	1.83	0.023	0.4	NE	B	SW846 6010
		Sodium	20.6	0.210	0.2	NE	B	SW846 6010
	29-Oct-03	Calcium	47.9	0.056	0.2	NE	B	SW846 6010
		Magnesium	6.07	0.013	0.1	NE	B	SW846 6010
		Potassium	1.76	0.023	0.4	NE	B	SW846 6010
		Sodium	20.6	0.130	2.0	NE		SW846 6010
	28-Jan-04	Calcium	46.6	NR	NR	NE		SW846 6010
		Magnesium	6.25	NR	NR	NE	B	SW846 6010
		Potassium	1.84	NR	NR	NE	B	SW846 6010
		Sodium	20.2	NR	NR	NE	B	SW846 6010
	16-Apr-04	Calcium	46.3	NR	NR	NE		SW846 6010
		Magnesium	6.47	NR	NR	NE		SW846 6010
		Potassium	2.06	NR	NR	NE	B	SW846 6010
		Sodium	22.5	NR	NR	NE	B	SW846 6010

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0510 (Continued)	09-Jul-04	Calcium	46.9	NR	NR	NE		SW846 6010
		Magnesium	6.63	NR	NR	NE		SW846 6010
		Potassium	1.84	NR	NR	NE	B	SW846 6010
		Sodium	21.0	NR	NR	NE	B	SW846 6010
	19-Oct-04	Calcium	49.4	NR	NR	NE		SW846 6010
		Magnesium	6.83	NR	NR	NE	B	SW846 6010
		Potassium	2.08	NR	NR	NE	B	SW846 6010
		Sodium	21.6	NR	NR	NE	B	SW846 6010
KAFB-0512	17-Jul-03	Calcium	54.9	0.060	0.2	NE	B	SW846 6010
		Magnesium	8.68	15	0.1	NE		SW846 6010
		Potassium	1.91	0.023	0.4	NE	B	SW846 6010
		Sodium	23.1	0.210	0.2	NE	B	SW846 6010
	30-Oct-03	Calcium	53.5	0.056	0.2	NE		SW846 6010
		Magnesium	8.99	0.013	0.1	NE		SW846 6010
		Potassium	1.75	0.023	0.4	NE	B	SW846 6010
		Sodium	24.0	0.130	2.0	NE	J	SW846 6010
	30-Jan-04	Calcium	54.1	NR	NR	NE		SW846 6010
		Magnesium	8.54	NR	NR	NE	B	SW846 6010
		Potassium	2.03	NR	NR	NE	J,B	SW846 6010
		Sodium	24.2	NR	NR	NE	J	SW846 6010
	15-Apr-04	Calcium	51.2	NR	NR	NE		SW846 6010
		Magnesium	8.33	NR	NR	NE		SW846 6010
		Potassium	1.94	NR	NR	NE	B	SW846 6010
		Sodium	24.0	NR	NR	NE	B	SW846 6010
	07-Jul-04	Calcium	51.7	NR	NR	NE		SW846 6010
		Magnesium	8.47	NR	NR	NE	B	SW846 6010
		Potassium	1.95	NR	NR	NE	B	SW846 6010
		Sodium	24.1	NR	NR	NE	B	SW846 6010
	20-Oct-04	Calcium	52.9	NR	NR	NE		SW846 6010
		Magnesium	8.44	NR	NR	NE		SW846 6010
		Potassium	2.13	NR	NR	NE	J,B	SW846 6010
		Sodium	24.8	NR	NR	NE		SW846 6010

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0512 Duplicate	30-Oct-03	Calcium	53.2	0.056	0.2	NE		SW846 6010
		Magnesium	9.14	0.013	0.1	NE		SW846 6010
		Potassium	1.82	0.023	0.4	NE	B	SW846 6010
		Sodium	24.3	0.130	2.0	NE	J	SW846 6010
	07-Jul-04	Calcium	53.7	NR	NR	NE	B	SW846 6010
		Magnesium	8.68	NR	NR	NE	B	SW846 6010
		Potassium	2.03	NR	NR	NE	B	SW846 6010
		Sodium	24.8	NR	NR	NE	B	SW846 6010
	20-Oct-04	Calcium	53.3	NR	NR	NE		SW846 6010
		Magnesium	8.47	NR	NR	NE		SW846 6010
		Potassium	2.07	NR	NR	NE	J,B	SW846 6010
		Sodium	24.3	NR	NR	NE		SW846 6010
KAFB-0514	17-Jul-03	Calcium	85.7	0.060	0.2	NE	B	SW846 6010
		Magnesium	12.5	15	0.1	NE		SW846 6010
		Potassium	2.75	0.023	0.4	NE	B	SW846 6010
		Sodium	22.4	0.210	0.2	NE	B	SW846 6010
	27-Oct-03	Calcium	93.3	0.056	0.2	NE	B	SW846 6010
		Magnesium	13.1	0.013	0.1	NE	B	SW846 6010
		Potassium	3.10	0.023	0.4	NE	B	SW846 6010
		Sodium	36.7	0.130	2.0	NE	B	SW846 6010
	02-Feb-04	Calcium	87.0	NR	NR	NE		SW846 6010
		Magnesium	12.4	NR	NR	NE	B	SW846 6010
		Potassium	3.14	NR	NR	NE	B	SW846 6010
		Sodium	24.0	NR	NR	NE		SW846 6010
	15-Apr-04	Calcium	80.3	NR	NR	NE	B	SW846 6010
		Magnesium	11.1	NR	NR	NE		SW846 6010
		Potassium	2.98	NR	NR	NE	B	SW846 6010
		Sodium	24.1	NR	NR	NE	B	SW846 6010
	08-Jul-04	Calcium	79.0	NR	NR	NE		SW846 6010
		Magnesium	11.6	NR	NR	NE		SW846 6010
		Potassium	2.54	NR	NR	NE	B	SW846 6010
		Sodium	22.3	NR	NR	NE	B	SW846 6010
	20-Oct-04	Calcium	84.4	NR	NR	NE		SW846 6010
		Magnesium	12.1	NR	NR	NE		SW846 6010
		Potassium	3.02	NR	NR	NE	B	SW846 6010
		Sodium	25.4	NR	NR	NE	B	SW846 6010

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0516	21-Jul-03	Calcium	66.1	0.060	0.2	NE		SW846 6010
		Magnesium	8.61	13	0.1	NE	B	SW846 6010
		Potassium	2.88	0.023	0.4	NE	B	SW846 6010
		Sodium	27.7	0.130	0.2	NE	B	SW846 6010
	30-Oct-03	Calcium	58.1	0.056	0.2	NE		SW846 6010
		Magnesium	8.17	0.013	0.1	NE		SW846 6010
		Potassium	2.44	0.023	0.4	NE	B	SW846 6010
		Sodium	26.6	0.130	2.0	NE		SW846 6010
	30-Jan-04	Calcium	60.3	NR	NR	NE		SW846 6010
		Magnesium	8.08	NR	NR	NE	B	SW846 6010
		Potassium	2.97	NR	NR	NE	B	SW846 6010
		Sodium	27.5	NR	NR	NE		SW846 6010
	15-Apr-04	Calcium	61.4	NR	NR	NE	B	SW846 6010
		Magnesium	8.05	NR	NR	NE		SW846 6010
		Potassium	3.01	NR	NR	NE	B	SW846 6010
		Sodium	28.6	NR	NR	NE		SW846 6010
	07-Jul-04	Calcium	60.1	NR	NR	NE	B	SW846 6010
		Magnesium	7.96	NR	NR	NE	B	SW846 6010
		Potassium	2.77	NR	NR	NE	B	SW846 6010
		Sodium	27.0	NR	NR	NE	B	SW846 6010
	21-Oct-04	Calcium	61.7	NR	NR	NE		SW846 6010
		Magnesium	8.20	NR	NR	NE		SW846 6010
		Potassium	2.92	NR	NR	NE	B	SW846 6010
		Sodium	29.0	NR	NR	NE	B	SW846 6010
KAFB-0602	30-Jul-03	Calcium	69.3	NR	1.0	NE		SW846 6020
		Magnesium	15.0	NR	1.0	NE		SW846 6020
		Potassium	3.02	NR	1.0	NE		SW846 6020
		Sodium	26.6	NR	1.0	NE		SW846 6020
	24-Oct-03	Calcium	64.8	NR	0.1	NE		SW846 6020
		Magnesium	13.2	NR	0.1	NE		SW846 6020
		Potassium	3.01	NR	0.1	NE		SW846 6020
		Sodium	24.1	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	67.1	NR	0.1	NE		SW846 6020
		Magnesium	13.7	NR	0.1	NE		SW846 6020
		Potassium	3.05	NR	0.1	NE		SW846 6020
		Sodium	26.0	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0602 (Continued)	21-Apr-04	Calcium	81.6	NR	0.1	NE		SW846 6020
		Magnesium	17.2	NR	0.1	NE		SW846 6020
		Potassium	3.14	NR	0.1	NE		SW846 6020
		Sodium	23.1	NR	0.1	NE		SW846 6020
	02-Aug-04	Calcium	65.2	NR	NR	NE		SW846 6020
		Magnesium	11.4	NR	NR	NE		SW846 6020
		Potassium	2.98	NR	NR	NE		SW846 6020
		Sodium	24.3	NR	NR	NE		SW846 6020
	09-Nov-04	Calcium	69.8	NR	0.1	NE		SW846 6020
		Magnesium	13.4	NR	0.1	NE		SW846 6020
		Potassium	3.30	NR	0.1	NE		SW846 6020
		Sodium	27.6	NR	0.1	NE		SW846 6020
KAFB-0608	30-Jul-03	Calcium	82.2	NR	1.0	NE		SW846 6020
		Magnesium	18.4	NR	1.0	NE		SW846 6020
		Potassium	2.00	NR	1.0	NE		SW846 6020
		Sodium	22.7	NR	1.0	NE		SW846 6020
	24-Oct-03	Calcium	93.2	NR	0.1	NE		SW846 6020
		Magnesium	17.0	NR	0.1	NE		SW846 6020
		Potassium	2.04	NR	0.1	NE		SW846 6020
		Sodium	25.7	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	79.0	NR	0.1	NE		SW846 6020
		Magnesium	17.0	NR	0.1	NE		SW846 6020
		Potassium	2.05	NR	0.1	NE		SW846 6020
		Sodium	22.9	NR	0.1	NE		SW846 6020
	21-Apr-04	Calcium	83.2	NR	0.1	NE		SW846 6020
		Magnesium	18.0	NR	0.1	NE		SW846 6020
		Potassium	2.32	NR	0.1	NE		SW846 6020
		Sodium	23.3	NR	0.1	NE		SW846 6020
	02-Aug-04	Calcium	83.9	NR	NR	NE		SW846 6020
		Magnesium	15.3	NR	NR	NE		SW846 6020
		Potassium	1.95	NR	NR	NE		SW846 6020
		Sodium	20.8	NR	NR	NE		SW846 6020
	09-Nov-04	Calcium	91.1	NR	0.1	NE		SW846 6020
		Magnesium	20.1	NR	0.1	NE		SW846 6020
		Potassium	2.20	NR	0.1	NE		SW846 6020
		Sodium	25.9	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0609	30-Jul-03	Calcium	77.7	NR	1.0	NE		SW846 6020
		Magnesium	17.3	NR	1.0	NE		SW846 6020
		Potassium	1.91	NR	1.0	NE		SW846 6020
		Sodium	23.3	NR	1.0	NE		SW846 6020
	24-Oct-03	Calcium	74.6	NR	0.1	NE		SW846 6020
		Magnesium	15.1	NR	0.1	NE		SW846 6020
		Potassium	1.98	NR	0.1	NE		SW846 6020
		Sodium	21.5	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	74.1	NR	0.1	NE		SW846 6020
		Magnesium	15.6	NR	0.1	NE		SW846 6020
		Potassium	1.92	NR	0.1	NE		SW846 6020
		Sodium	23.1	NR	0.1	NE		SW846 6020
	21-Apr-04	Calcium	66.8	NR	0.1	NE		SW846 6020
		Magnesium	16.1	NR	0.1	NE		SW846 6020
		Potassium	2.06	NR	0.1	NE		SW846 6020
		Sodium	23.3	NR	0.1	NE		SW846 6020
	05-Aug-04	Calcium	66.9	NR	NR	NE		SW846 6020
		Magnesium	13.7	NR	NR	NE		SW846 6020
		Potassium	1.66	NR	NR	NE		SW846 6020
		Sodium	21.2	NR	NR	NE		SW846 6020
	09-Nov-04	Calcium	80.3	NR	0.1	NE		SW846 6020
		Magnesium	15.5	NR	0.1	NE		SW846 6020
		Potassium	2.14	NR	0.1	NE		SW846 6020
		Sodium	22.0	NR	0.1	NE		SW846 6020
KAFB-0610	30-Jul-03	Calcium	85.5	NR	1.0	NE		SW846 6020
		Magnesium	18.3	NR	1.0	NE		SW846 6020
		Potassium	2.28	NR	1.0	NE		SW846 6020
		Sodium	21.8	NR	1.0	NE		SW846 6020
	24-Oct-03	Calcium	80.2	NR	0.1	NE		SW846 6020
		Magnesium	16.1	NR	0.1	NE		SW846 6020
		Potassium	2.25	NR	0.1	NE		SW846 6020
		Sodium	20.3	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	83.0	NR	0.1	NE		SW846 6020
		Magnesium	17.0	NR	0.1	NE		SW846 6020
		Potassium	2.29	NR	0.1	NE		SW846 6020
		Sodium	22.1	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0610 (Continued)	21-Apr-04	Calcium	81.7	NR	0.1	NE		SW846 6020
		Magnesium	16.9	NR	0.1	NE		SW846 6020
		Potassium	2.60	NR	0.1	NE		SW846 6020
		Sodium	21.6	NR	0.1	NE		SW846 6020
	02-Aug-04	Calcium	82.1	NR	NR	NE		SW846 6020
		Magnesium	14.1	NR	NR	NE		SW846 6020
		Potassium	2.20	NR	NR	NE		SW846 6020
		Sodium	18.8	NR	NR	NE		SW846 6020
	09-Nov-04	Calcium	88.2	NR	0.1	NE		SW846 6020
		Magnesium	17.0	NR	0.1	NE		SW846 6020
		Potassium	2.51	NR	0.1	NE		SW846 6020
		Sodium	21.4	NR	0.1	NE		SW846 6020
KAFB-0610 Duplicate	30-Jul-03	Calcium	87.5	NR	1.0	NE		SW846 6020
		Magnesium	18.6	NR	1.0	NE		SW846 6020
		Potassium	2.42	NR	1.0	NE		SW846 6020
		Sodium	22.3	NR	1.0	NE		SW846 6020
	24-Oct-03	Calcium	91.4	NR	0.1	NE		SW846 6020
		Magnesium	17.0	NR	0.1	NE		SW846 6020
		Potassium	2.38	NR	0.1	NE		SW846 6020
		Sodium	23.1	NR	0.1	NE		SW846 6020
	21-Jan-04	Calcium	83.2	NR	0.1	NE		SW846 6020
		Magnesium	16.9	NR	0.1	NE		SW846 6020
		Potassium	2.27	NR	0.1	NE		SW846 6020
		Sodium	21.8	NR	0.1	NE		SW846 6020
	21-Apr-04	Calcium	80.6	NR	0.1	NE		SW846 6020
		Magnesium	17.2	NR	0.1	NE		SW846 6020
		Potassium	2.63	NR	0.1	NE		SW846 6020
		Sodium	21.4	NR	0.1	NE		SW846 6020
	02-Aug-04	Calcium	83.5	NR	NR	NE		SW846 6020
		Magnesium	14.4	NR	NR	NE		SW846 6020
		Potassium	2.27	NR	NR	NE		SW846 6020
		Sodium	18.6	NR	NR	NE		SW846 6020
	09-Nov-04	Calcium	88.9	NR	0.1	NE		SW846 6020
		Magnesium	16.6	NR	0.1	NE		SW846 6020
		Potassium	2.49	NR	0.1	NE		SW846 6020
		Sodium	21.0	NR	0.1	NE		SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0615	16-Jul-03	Calcium	115	0.060	0.2	NE	B	SW846 6010
		Magnesium	43.2	15	0.1	NE		SW846 6010
		Potassium	7.77	0.023	0.4	NE	B	SW846 6010
		Sodium	40.4	0.210	0.2	NE	B	SW846 6010
	28-Oct-03	Calcium	102	0.056	0.2	NE	B	SW846 6010
		Magnesium	30.5	0.013	0.1	NE	B	SW846 6010
		Potassium	6.45	0.023	0.4	NE	B	SW846 6010
		Sodium	43.5	0.130	2.0	NE	B	SW846 6010
	29-Jan-04	Calcium	113	NR	NR	NE		SW846 6010
		Magnesium	36.9	NR	NR	NE	B	SW846 6010
		Potassium	8.08	NR	NR	NE	B	SW846 6010
		Sodium	43.7	NR	NR	NE		SW846 6010
	14-Apr-04	Calcium	104	NR	NR	NE		SW846 6010
		Magnesium	32.0	NR	NR	NE		SW846 6010
		Potassium	7.09	NR	NR	NE	J,B	SW846 6010
		Sodium	40.9	NR	NR	NE		SW846 6010
	21-Oct-04	Calcium	117	NR	NR	NE		SW846 6010
		Magnesium	40.5	NR	NR	NE		SW846 6010
		Potassium	8.11	NR	NR	NE	B	SW846 6010
		Sodium	44.8	NR	NR	NE	B	SW846 6010
KAFB-0616	18-Jul-03	Calcium	65.9	0.060	0.2	NE	B	SW846 6010
		Magnesium	14.2	15	0.1	NE		SW846 6010
		Potassium	2.04	0.023	0.4	NE	B	SW846 6010
		Sodium	24.5	0.210	0.2	NE	B	SW846 6010
	28-Oct-03	Calcium	67.6	0.056	0.2	NE	B	SW846 6010
		Magnesium	13.8	0.013	0.1	NE	B	SW846 6010
		Potassium	2.05	0.023	0.4	NE	B	SW846 6010
		Sodium	26.0	0.130	2.0	NE	B	SW846 6010
	03-Feb-04	Calcium	71.0	NR	NR	NE		EPA 300.0
		Magnesium	15.4	NR	NR	NE	B	SW846 6010
		Potassium	2.32	NR	NR	NE	B	SW846 6010
		Sodium	26.6	NR	NR	NE		SW846 6010
	15-Apr-04	Calcium	68.8	NR	NR	NE		EPA 300.0
		Magnesium	15.1	NR	NR	NE		SW846 6010
		Potassium	2.34	NR	NR	NE	B	SW846 6010
		Sodium	27.6	NR	NR	NE		SW846 6010

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0616 (Continued)	09-Jul-04	Calcium	68.9	NR	NR	NE		SW846 6010
		Magnesium	15.2	NR	NR	NE		SW846 6010
		Potassium	2.06	NR	NR	NE	B	SW846 6010
		Sodium	26.5	NR	NR	NE	B	SW846 6010
	18-Oct-04	Calcium	72.3	NR	NR	NE	J	SW846 6010
		Magnesium	15.5	NR	NR	NE	B	SW846 6010
		Potassium	2.36	NR	NR	NE	J,B	SW846 6010
		Sodium	26.4	NR	NR	NE	B	SW846 6010
KAFB-0903	17-Jul-03	Calcium	71.0	NR	0.5	NE		EPA 6010C
		Magnesium	8.90	NR	0.5	NE		EPA 6010C
		Potassium	1.60	NR	0.5	NE		EPA 6010C
		Sodium	20.0	NR	0.5	NE		EPA 6010C
	23-Oct-03	Calcium	69.0	NR	0.5	NE		EPA 6010C
		Magnesium	8.60	NR	0.5	NE		EPA 6010C
		Potassium	1.40	NR	0.5	NE		EPA 6010C
		Sodium	20.0	NR	0.5	NE		EPA 6010C
	27-Jan-04	Calcium	110	NR	0.5	NE		EPA 6010C
		Magnesium	18.0	NR	0.5	NE		EPA 6010C
		Potassium	9.00	NR	1.0	NE		EPA 6010C
		Sodium	19.0	NR	0.5	NE		EPA 6010C
	20-Apr-04	Calcium	220	NR	NR	NE		SW846 6020
		Magnesium	12.0	NR	NR	NE		SW846 6020
		Potassium	2.00	NR	NR	NE	B	SW846 6020
		Sodium	20.0	NR	NR	NE	B	SW846 6020
	19-Jul-04	Calcium	64.0	NR	NR	NE		SW846 6020
		Magnesium	8.50	NR	NR	NE		SW846 6020
		Potassium	1.30	NR	NR	NE	B	SW846 6020
		Sodium	19.0	NR	NR	NE	B	SW846 6020
	13-Oct-04	Calcium	69.0	NR	NR	NE		SW846 6020
		Magnesium	9.00	NR	NR	NE		SW846 6020
		Potassium	1.40	NR	NR	NE	B	SW846 6020
		Sodium	19.0	NR	NR	NE	B	SW846 6020

Refer to footnotes at end of table.

Table G-5 (Continued)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0904	17-Jul-03	Calcium	66.0	NR	1.0	NE		EPA 6010C
		Magnesium	13.0	NR	1.0	NE		EPA 6010C
		Potassium	4.90	NR	1.0	NE		EPA 6010C
		Sodium	20.0	NR	1.0	NE		EPA 6010C
	24-Oct-03	Calcium	62.0	NR	0.5	NE		EPA 6010C
		Magnesium	12.0	NR	0.5	NE		EPA 6010C
		Potassium	4.40	NR	0.5	NE		EPA 6010C
		Sodium	20.0	NR	0.5	NE		EPA 6010C
	29-Jan-04	Calcium	66.0	NR	0.5	NE		EPA 6010C
		Magnesium	13.0	NR	0.5	NE		EPA 6010C
		Potassium	5.20	NR	0.5	NE		EPA 6010C
		Sodium	21.0	NR	0.5	NE		EPA 6010C
	21-Apr-04	Calcium	65.0	NR	NR	NE		SW846 6020
		Magnesium	13.0	NR	NR	NE	B	SW846 6020
		Potassium	5.20	NR	NR	NE	B	SW846 6020
		Sodium	20.0	NR	NR	NE	B	SW846 6020
	20-Jul-04	Calcium	60.0	NR	NR	NE		SW846 6020
		Magnesium	12.0	NR	NR	NE	B	SW846 6020
		Potassium	4.60	NR	NR	NE	B	SW846 6020
		Sodium	20.0	NR	NR	NE	B	SW846 6020
	14-Oct-04	Calcium	61.0	NR	NR	NE		SW846 6020
		Magnesium	12.0	NR	NR	NE	B	SW846 6020
		Potassium	4.50	NR	NR	NE	B	SW846 6020
		Sodium	20.0	NR	NR	NE	B	SW846 6020
KAFB-8282	17-Jul-03	Calcium	400	NR	5.0	NE		EPA 6010C
		Magnesium	40.0	NR	0.5	NE		EPA 6010C
		Potassium	2.90	NR	0.5	NE		EPA 6010C
		Sodium	50.0	NR	0.5	NE		EPA 6010C
	24-Oct-03	Calcium	340	NR	5.0	NE		EPA 6010C
		Magnesium	40.0	NR	0.5	NE		EPA 6010C
		Potassium	2.80	NR	0.5	NE		EPA 6010C
		Sodium	47.0	NR	0.5	NE		EPA 6010C
	26-Jan-04	Calcium	290	NR	5.0	NE		EPA 6010C
		Magnesium	41.0	NR	0.5	NE		EPA 6010C
		Potassium	3.10	NR	0.5	NE		EPA 6010C
		Sodium	50.0	NR	0.5	NE		EPA 6010C

Refer to footnotes at end of table.

Table G-5 (Concluded)
Summary of Cation Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-8282 (Continued)	20-Apr-04	Calcium	310	NR	NR	NE		SW846 6020
		Magnesium	43.0	NR	NR	NE	B	SW846 6020
		Potassium	2.70	NR	NR	NE	B	SW846 6020
		Sodium	50.0	NR	NR	NE	B	SW846 6020
	19-Jul-04	Calcium	280	NR	NR	NE		SW846 6020
		Magnesium	40.0	NR	NR	NE	B	SW846 6020
		Potassium	2.70	NR	NR	NE	B	SW846 6020
		Sodium	48.0	NR	NR	NE	B	SW846 6020
	14-Oct-04	Calcium	270	NR	NR	NE		SW846 6020
		Magnesium	43.0	NR	NR	NE	B	SW846 6020
		Potassium	2.90	NR	NR	NE	B	SW846 6020
		Sodium	50.0	NR	NR	NE	B	SW846 6020
KAFB-8282 Duplicate	24-Oct-03	Calcium	360	NR	5.0	NE		EPA 6010C
		Magnesium	41.0	NR	0.5	NE		EPA 6010C
		Potassium	2.90	NR	0.5	NE		EPA 6010C
		Sodium	50.0	NR	0.5	NE		EPA 6010C

[a]The minimum concentration or activity that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Methods SW846 6020, SW846 6010, and EPA 6010C).
U.S. Environmental Protection Agency, December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to Method 300.0).

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligram(s) per liter.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.

Laboratory Qualifiers:
B = Analyte was detected in blank sample.
U = Analyte not detected above reporting limit.

Table G-6
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0307	23-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	20-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	20-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	30-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	02-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0309	22-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	15-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	22-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	27-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	26-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0310	31-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	13-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	20-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	28-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	27-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0310 Duplicate	13-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0311	23-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	20-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	19-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	30-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	28-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0312	28-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	17-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	29-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	25-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe

Refer to footnotes at end of table.

Table G-6 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0312 Duplicate	28-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	29-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	25-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0313	23-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	16-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	19-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	28-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	02-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0315	22-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	16-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	20-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	29-Jul-04	ND	NR	NR	NE	U	SM 3500-Fe
	28-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0505	24-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	24-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	27-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	02-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	20-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0506	25-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	23-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	26-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	03-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	19-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0506 Duplicate	23-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	19-Oct-04	ND	NR	0.50	NE	U	SM 3500-Fe

Refer to footnotes at end of table.

Table G-6 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0507	15-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	31-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	14-Jan-04	ND	NR	0.05	NE	U	SM 3500-Fe
	12-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	08-Jul-04	ND	NR	0.05	NE	U	A3500D
	21-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0508	10-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	27-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	20-Jan-04	ND	NR	0.05	NE	U	SM 3500-Fe
	12-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	08-Jul-04	ND	NR	0.05	NE	U	A3500D
	19-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0508 Duplicate	10-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	20-Jan-04	ND	NR	0.05	NE	U	SM 3500-Fe
KAFB-0510	18-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	29-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	28-Jan-04	ND	NR	0.05	NE	U	SM 3500-Fe
	16-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	09-Jul-04	ND	NR	0.05	NE	U	A3500D
	19-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0512	17-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	30-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	30-Jan-04	ND	NR	0.05	NE	U	SM 3500-Fe
	15-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	07-Jul-04	ND	NR	0.05	NE	U	A3500D
	20-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0512 Duplicate	30-Oct-03	ND	NR	0.05	NE	U	A3500D
	15-Apr-04	ND	NR	0.05	NE	U	A3500D
	07-Jul-04	ND	NR	0.05	NE	U	A3500D
	20-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0514	17-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	27-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	02-Feb-04	ND	NR	0.05	NE	U	SM 3500-Fe
	15-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	08-Jul-04	ND	NR	0.05	NE	U	A3500D
	20-Oct-04	ND	NR	0.05	NE	U	A3500D

Refer to footnotes at end of table.

Table G-6 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0516	21-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	30-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	30-Jan-04	ND	NR	0.05	NE	U	SM 3500-Fe
	15-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	07-Jul-04	ND	NR	0.05	NE	U	A3500D
	21-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0602	30-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	24-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	02-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	09-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0608	30-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	24-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	02-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	09-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0609	30-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	24-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	05-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	09-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0610	30-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	24-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	02-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	09-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe
KAFB-0610 Duplicate	21-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	21-Apr-04	ND	NR	0.50	NE	U	SM 3500-Fe
	02-Aug-04	ND	NR	NR	NE	U	SM 3500-Fe
	09-Nov-04	ND	NR	0.50	NE	U	SM 3500-Fe

Refer to footnotes at end of table.

Table G-6 (Continued)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Ferrous Iron Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0615	16-Jul-03	ND	NR	0.50	NE	U	SM 3500-Fe
	28-Oct-03	ND	NR	0.50	NE	U	SM 3500-Fe
	29-Jan-04	ND	NR	0.50	NE	U	SM 3500-Fe
	14-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	21-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0616	18-Jul-03	ND	NR	0.05	NE	U	SM 3500-Fe
	28-Oct-03	ND	NR	0.05	NE	U	SM 3500-Fe
	03-Feb-04	ND	NR	0.05	NE	U	SM 3500-Fe
	15-Apr-04	ND	NR	0.05	NE	U	SM 3500-Fe
	09-Jul-04	ND	NR	0.05	NE	U	A3500D
	18-Oct-04	ND	NR	0.05	NE	U	A3500D
KAFB-0903	17-Jul-03	ND	NR	0.10	NE	U	7000-Series
	24-Oct-03	ND	NR	0.10	NE	U	7000-Series
	27-Jan-04	ND	NR	0.10	NE	U	7000-Series
	20-Apr-04	ND	NR	0.10	NE	U	A3500D
	19-Jul-04	ND	NR	0.10	NE	U	A3500D
	13-Oct-04	ND	NR	0.10	NE	U	A3500D
KAFB-0904	17-Jul-03	ND	NR	0.10	NE	U	7000-Series
	24-Oct-03	ND	NR	0.10	NE	U	7000-Series
	29-Jan-04	ND	NR	0.10	NE	U	7000-Series
	21-Apr-04	ND	NR	0.10	NE	U	A3500D
	20-Jul-04	ND	NR	0.10	NE	U	A3500D
	14-Oct-04	ND	NR	0.10	NE	U	A3500D
KAFB-8282	17-Jul-03	ND	NR	0.10	NE	U	7000-Series
	24-Oct-03	ND	NR	0.10	NE	U	7000-Series
	26-Jan-04	ND	NR	0.10	NE	U	7000-Series
	20-Apr-04	ND	NR	0.10	NE	U	A3500D
	19-Jul-04	ND	NR	0.10	NE	U	A3500D
	14-Oct-04	ND	NR	0.10	NE	U	A3500D
KAFB-8282 Duplicate	24-Oct-03	ND	NR	0.10	NE	U	7000-Series

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

Table G-6 (Concluded)
Summary of Ferrous Iron Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

[d]Lab specific per laboratory operating procedures for Methods SM 3500-Fe, A3500D, and 7000 Series.

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligram(s) per liter.
ND = Not detected above laboratory reporting limit.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.

Laboratory Qualifiers:

U = Analyte not detected above reporting limit.

Table G-7
Summary of Manganese 2+ Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0307	23-Jul-03	ND	NR	0.05	NE	U	SWRI
	20-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	20-Apr-04	ND	NR	0.05	NE	U	SWRI
	30-Jul-04	ND	NR	0.10	NE	U	SWRI
	02-Nov-04	ND	NR	0.05	NE	U	SWRI
KAFB-0309	22-Jul-03	ND	NR	0.05	NE	U	SWRI
	15-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	22-Apr-04	ND	NR	0.05	NE	U	SWRI
	27-Jul-04	ND	NR	0.10	NE	U	SWRI
	26-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0310	31-Jul-03	ND	NR	0.05	NE	U	SWRI
	13-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	20-Apr-04	ND	NR	0.05	NE	U	SWRI
	28-Jul-04	ND	NR	0.05	NE	U	SWRI
	27-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0310 Duplicate	13-Oct-03	ND	NR	0.05	NE	U	C2-Cations
KAFB-0311	23-Jul-03	ND	NR	0.05	NE	U	SWRI
	20-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	19-Apr-04	ND	NR	0.05	NE	U	SWRI
	30-Jul-04	ND	NR	0.10	NE	U	SWRI
	28-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0312	28-Jul-03	ND	NR	0.05	NE	U	SWRI
	17-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	21-Apr-04	ND	NR	0.05	NE	U	SWRI
	29-Jul-04	ND	NR	0.10	NE	U	SWRI
	25-Oct-04	ND	NR	0.05	NE	U	SWRI

Refer to footnotes at end of table.

Table G-7 (Continued)
Summary of Manganese 2+ Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0312 Duplicate	28-Jul-03	ND	NR	0.05	NE	U	SWRI
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	21-Apr-04	ND	NR	0.05	NE	U	SWRI
	29-Jul-04	ND	NR	0.10	NE	U	SWRI
	25-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0313	23-Jul-03	ND	NR	0.05	NE	U	SWRI
	16-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	19-Apr-04	ND	NR	0.05	NE	U	SWRI
	28-Jul-04	ND	NR	0.05	NE	U	SWRI
	02-Nov-04	ND	NR	0.05	NE	U	SWRI
KAFB-0315	22-Jul-03	ND	NR	0.05	NE	U	SWRI
	16-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	20-Apr-04	ND	NR	0.05	NE	U	SWRI
	29-Jul-04	ND	NR	0.05	NE	U	SWRI
	28-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0505	24-Jul-03	ND	NR	0.05	NE	U	SWRI
	24-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	27-Apr-04	ND	NR	0.05	NE	U	SWRI
	02-Aug-04	ND	NR	0.05	NE	U	SWRI
	20-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0506	25-Jul-03	ND	NR	0.05	NE	U	SWRI
	23-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	26-Apr-04	ND	NR	0.05	NE	U	SWRI
	03-Aug-04	ND	NR	0.05	NE	U	SWRI
	19-Oct-04	ND	NR	0.05	NE	U	SWRI
KAFB-0506 Duplicate	23-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	19-Oct-04	ND	NR	0.05	NE	U	SWRI

Refer to footnotes at end of table.

Table G-7 (Continued)
Summary of Manganese 2+ Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0507	15-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	31-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	14-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
	12-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	08-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	21-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0508	10-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	27-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	20-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
	12-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	08-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	19-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0508 Duplicate	10-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	20-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0510	18-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	29-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	28-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
	16-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	09-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	19-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0512	17-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	30-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	30-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
	15-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	07-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	20-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0512 Duplicate	30-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	15-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	07-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	20-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0514	17-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	27-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	02-Feb-04	ND	NR	0.05	NE	U	EPA 300.0
	15-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	08-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	20-Oct-04	ND	NR	0.05	NE	U	EPA 300.0

Refer to footnotes at end of table.

Table G-7 (Continued)
Summary of Manganese 2+ Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0516	21-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	30-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	30-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
	15-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	07-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	21-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0602	30-Jul-03	ND	NR	0.05	NE	U	SWRI
	24-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	09-Nov-04	ND	NR	0.05	NE	U	C2-Cations
KAFB-0608	30-Jul-03	ND	NR	0.05	NE	U	SWRI
	24-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	09-Nov-04	ND	NR	0.05	NE	U	C2-Cations
KAFB-0609	30-Jul-03	ND	NR	0.05	NE	U	SWRI
	24-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	09-Nov-04	ND	NR	0.05	NE	U	C2-Cations
KAFB-0610	30-Jul-03	ND	NR	0.05	NE	U	SWRI
	24-Oct-03	ND	NR	0.05	NE	U	C2-Cations
	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	21-Apr-04	ND	NR	0.05	NE	U	SWRI
	02-Aug-04	ND	NR	0.05	NE	U	SWRI
	09-Nov-04	ND	NR	0.05	NE	U	SWRI
KAFB-0610 Duplicate	21-Jan-04	ND	NR	0.05	NE	U	SWRI
	21-Apr-04	ND	NR	0.05	NE	U	SWRI
	02-Aug-04	ND	NR	0.05	NE	U	SWRI
	09-Nov-04	ND	NR	0.05	NE	U	SWRI
KAFB-0615	16-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	28-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	29-Jan-04	ND	NR	0.05	NE	U	EPA 300.0
	15-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	21-Oct-04	ND	NR	0.05	NE	U	EPA 300.0
KAFB-0616	18-Jul-03	ND	NR	0.05	NE	U	EPA 300.0
	28-Oct-03	ND	NR	0.05	NE	U	EPA 300.0
	03-Feb-04	ND	NR	0.05	NE	U	EPA 300.0
	14-Apr-04	ND	NR	0.05	NE	U	EPA 300.0
	09-Jul-04	ND	NR	0.05	NE	U	EPA 300.0
	18-Oct-04	ND	NR	0.05	NE	U	EPA 300.0

Refer to footnotes at end of table.

Table G-7 (Continued)
Summary of Manganese 2+ Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Manganese 2+ Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0903	17-Jul-03	0.0088	NR	0.002	NE		EPA 6020
	23-Oct-03	0.028	NR	NR	NE		EPA 6020
	27-Jan-04	0.470	NR	0.002	NE		EPA 6020
	20-Apr-04	0.28	NR	NR	NE		EPA 6020
	19-Jul-04	0.002	NR	NR	NE		EPA 6020
	13-Oct-04	0.0028	NR	0.002	NE		EPA 6020
KAFB-0904	17-Jul-03	ND	NR	2.0	NE		EPA 6020
	24-Oct-03	0.011	NR	NR	NE		EPA 6020
	27-Jan-04	0.0058	NR	0.002	NE		EPA 6020
	21-Apr-04	0.041	NR	NR	NE		EPA 6020
	20-Jul-04	0.0021	NR	NR	NE		EPA 6020
	14-Oct-04	0.0072	NR	0.002	NE		EPA 6020
KAFB-8282	17-Jul-03	ND	NR	2.0	NE		EPA 6020
	24-Oct-03	ND	NR	NR	NE		EPA 6020
	26-Jan-04	0.0046	NR	0.002	NE		EPA 6020
	20-Apr-04	0.0026	NR	NR	NE		EPA 6020
	19-Jul-04	0.001	NR	NR	NE	J	EPA 6020
	14-Oct-04	0.0005	NR	NR	NE	J	EPA 6020
KAFB-8282 Duplicate	24-Oct-03	0.0042	NR	NR	NE		EPA 6020

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Method 6020).
U.S. Environmental Protection Agency, December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to Method 300.0).
Lab specific per laboratory operating procedures for Methods SWRI and CZ-Cations.

CFR	= Code of Federal Regulations.	MCL	= Maximum contaminant level.	NE	= Not established.
EPA	= U.S. Environmental Protection Agency.	MDL	= Method detection limit.	NMAC	= New Mexico Administrative Code.
ID	= Identification.	mg/L	= Milligram(s) per liter.	NR	= Not reported.
KAFB	= Kirtland Air Force Base.	ND	= Not detected above laboratory reporting limit.	PQL	= Practical quantitation limit.

Laboratory Qualifiers:

J = Data are estimated due to associated quality control data.
U = Analyte not detected above reporting limit.

Table G-8
Summary of Ammonia, TKN, TOC, and Total Phosphorus Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0506	25-Jul-03	Ammonia as N	ND	NR	0.02	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	23-Oct-03	Ammonia as N	ND	NR	0.02	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	21-Jan-04	Ammonia as N	0.04	NR	0.02	NE		EPA 350.1
		Total Kjeldahl Nitrogen	0.40	NR	0.30	NE		EPA 351.2
	26-Apr-04	Ammonia as N	ND	NR	0.02	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	03-Aug-04	Ammonia as N	ND	NR	0.02	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	0.60	NR	0.30	NE		EPA 351.2
	19-Oct-04	Ammonia as N	ND	NR	0.05	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.2
KAFB-0506 Duplicate	23-Oct-03	Ammonia as N	ND	NR	0.02	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	19-Oct-04	Ammonia as N	ND	NR	0.05	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.2
KAFB-0512	17-Jul-03	Ammonia as N	ND	NR	0.17	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	0.30	NR	NR	NE	F	EPA 351.3
	30-Oct-03	Ammonia as N	0.17	NR	NR	NE		EPA 350.2
		Total Kjeldahl Nitrogen	0.18	NR	NR	NE		EPA 351.3
		Total Organic Carbon	1.5	NR	1.0	NE		SW846 9060
		Total Phosphorus	ND	NR	0.1	NE	U	EPA 365.2
	30-Jan-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	ND	NR	0.08	NE	U	EPA 351.3
		Total Organic Carbon	4.1	NR	NR	NE	J	SW846 9060
		Total Phosphorus	ND	NR	0.1	NE	U,J	EPA 365.2
	15-Apr-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.3
		Total Organic Carbon	2.2	NR	NR	NE		SW846 9060
		Total Phosphorus	ND	NR	0.1	NE	U	EPA 365.2
	07-Jul-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.3
	20-Oct-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	0.11	NR	1.0	NE	F	EPA 351.3
		Total Phosphorus	ND	NR	0.10	NE	U	EPA 365.2
		Total Organic Carbon	1.3	NR	NR	NE		SW846 9060

Refer to footnotes at end of table.

Table G-8 (Continued)
Summary of Ammonia, TKN, TOC, and Total Phosphorus Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0512 Duplicate	30-Oct-03	Ammonia as N	0.17	NR	NR	NE		EPA 350.2
		Total Kjeldahl Nitrogen	0.18	NR	NR	NE		EPA 351.3
		Total Organic Carbon	ND	NR	1.0	NE	U	SW846 9060
		Total Phosphorus	ND	NR	0.1	NE	U	EPA 365.2
	15-Apr-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	0.11	NR	1.0	NE	F	EPA 351.3
		Total Organic Carbon	2.2	NR	NR	NE		SW846 9060
		Total Phosphorus	ND	NR	0.1	NE	U	EPA 365.2
	07-Jul-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.3
	20-Oct-04	Ammonia as N	ND	NR	1.0	NE	U	EPA 350.2
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.3
		Phosphorus	ND	NR	0.10	NE	U	EPA 365.2
		Total Organic Carbon	1.4	NR	NR	NE		SW846 9060
KAFB-0610	30-Jul-03	Ammonia as N	ND	NR	0.02	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
		Total Organic Carbon	ND	NR	1.0	NE	U	SW846 9060
		Total Phosphorus	ND	NR	0.02	NE	U	EPA 365.2
	24-Oct-03	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	21-Jan-04	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
		Total Organic Carbon	ND	NR	1.0	NE	U	EPA 9060
		Total Phosphorus	ND	NR	0.02	NE	U	EPA 365.2
	21-Apr-04	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	02-Aug-04	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	09-Nov-04	Ammonia as N	ND	NR	0.05	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.2
		Total Organic Carbon	ND	NR	1.0	NE	U	SW846 9060
		Total Phosphorus	0.02	NR	0.02	NE		EPA 365.2

Refer to footnotes at end of table.

Table G-8 (Concluded)
Summary of Ammonia, TKN, TOC, and Total Phosphorus Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result (mg/L)	MDL[a] (mg/L)	PQL[b] (mg/L)	MCL[c] (mg/L)	Laboratory Qualifier	Analytical Method[d]
KAFB-0610 Duplicate	30-Jul-03	Ammonia as N	0.03	NR	0.02	NE		EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
		Total Organic Carbon	ND	NR	1.0	NE	U	SW846 9060
		Total Phosphorus	ND	NR	0.02	NE	U	EPA 365.2
	24-Oct-03	Ammonia as N	0.05	NR	0.01	NE		EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	21-Jan-04	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
		Total Organic Carbon	ND	NR	1.0	NE	U	SW846 9060
		Total Phosphorus	ND	NR	0.02	NE	U	EPA 365.2
	21-Apr-04	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	02-Aug-04	Ammonia as N	ND	NR	0.01	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	0.30	NE	U	EPA 351.2
	09-Nov-04	Ammonia as N	ND	NR	0.05	NE	U	EPA 350.1
		Total Kjeldahl Nitrogen	ND	NR	1.0	NE	U	EPA 351.2
		Total Organic Carbon	ND	NR	1.0	NE	U	SW846 9060
		Total Phosphorus	0.02	NR	0.02	NE		EPA 365.2

[a]The minimum concentration that can be measured and reported with 99% confidence that the analyte is greater than zero; analyte is matrix-specific.

[b]The lowest concentration of analytes in a sample that can be reliably determined within specified limits of precision and accuracy by the indicated method under routine laboratory operating conditions.

[c]MCL established by the EPA Primary Drinking Water Regulations (40 CFR 141.11[b]) and subsequent amendments or the New Mexico Environmental Improvement Board in 20 NMAC 7.1.

[d]U.S. Environmental Protection Agency (EPA), November 1986. "Test Methods for Evaluating Solid Waste," 3rd ed., SW846 (and updates) (applies to Method SW846 9060).
U.S. Environmental Protection Agency (EPA), December 1984. "Methods for Chemical Analysis of Water and Wastes," EPA 600 4-79-200 (applies to all 300-series methods).

CFR = Code of Federal Regulations.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
KAFB = Kirtland Air Force Base.
MCL = Maximum contaminant level.
MDL = Method detection limit.
mg/L = Milligram(s) per liter.
ND = Not detected above laboratory reporting limit.
NE = Not established.
NMAC = New Mexico Administrative Code.
NR = Not reported.
PQL = Practical quantitation limit.
TKN = Total Kjeldahl Nitrogen.
TOC = Total organic carbon.

Laboratory Qualifiers:

F = Analyte was positively identified but the reported concentration is estimated.
J = Data are estimated due to associated quality control data.
U = Analyte not detected above reporting limit.

Table G-9
Summary of Stable Isotope Results
Tijeras Arroyo Groundwater Investigation
KAFB Wells
July 2003 – December 2005

Well ID	Sample Date	Analyte	Result ($^0/_{00}$)	Laboratory Qualifier	Analytical Method[a]
KAFB-0512	30-Oct-03	Hydrogen	-62		SIRMS
		Nitrogen 15	5.5		SIRMS
		Oxygen 18	-11.9		SIRMS
	30-Jan-04	Hydrogen	-81		SIRMS
		Nitrogen 15	5.7		SIRMS
		Oxygen 18	-11.5		SIRMS
	20-Oct-04	Hydrogen	-81		SIRMS
		Nitrogen 15	3.2		SIRMS
		Oxygen 18	-10.8		SIRMS
KAFB-0512 Duplicate	30-Oct-03	Hydrogen	-63		SIRMS
		Nitrogen 15	5.8		SIRMS
		Oxygen 18	-11.9		SIRMS
	30-Jan-04	Hydrogen	-79		SIRMS
		Nitrogen 15	5.6		SIRMS
		Oxygen 18	-11.7		SIRMS
	20-Oct-04	Hydrogen	-82		SIRMS
		Nitrogen 15	3.4		SIRMS
		Oxygen 18	-11.5		SIRMS
KAFB-0610	30-Jul-03	Deuterium	-77		SIRMS
		Nitrogen 15	11.7 - 12.4		SIRMS
		Oxygen 18	-10.4		SIRMS
	21-Jan-04	Deuterium	-72		SIRMS
		Nitrogen 15	13.9		SIRMS
		Oxygen 18	-10.1		SIRMS
	09-Nov-04	Deuterium	-76		SIRMS
		Nitrogen 15	3.7		SIRMS
		Oxygen 18	-9.2		SIRMS
KAFB-0610 Duplicate	21-Jan-04	Deuterium	-72		SIRMS
		Nitrogen 15	13.7		SIRMS
		Oxygen 18	-10.2		SIRMS
	09-Nov-04	Deuterium	-77		SIRMS
		Nitrogen 15	3.4		SIRMS
		Oxygen 18	-9.2		SIRMS

[a]Lab specific per laboratory operating procedures for Method SIRMS.
ID = Identification.
KAFB = Kirtland Air Force Base.
$^0/_{00}$ = Per mil (part per thousand).

ANNEX H
Major Ion Chemistry Plots

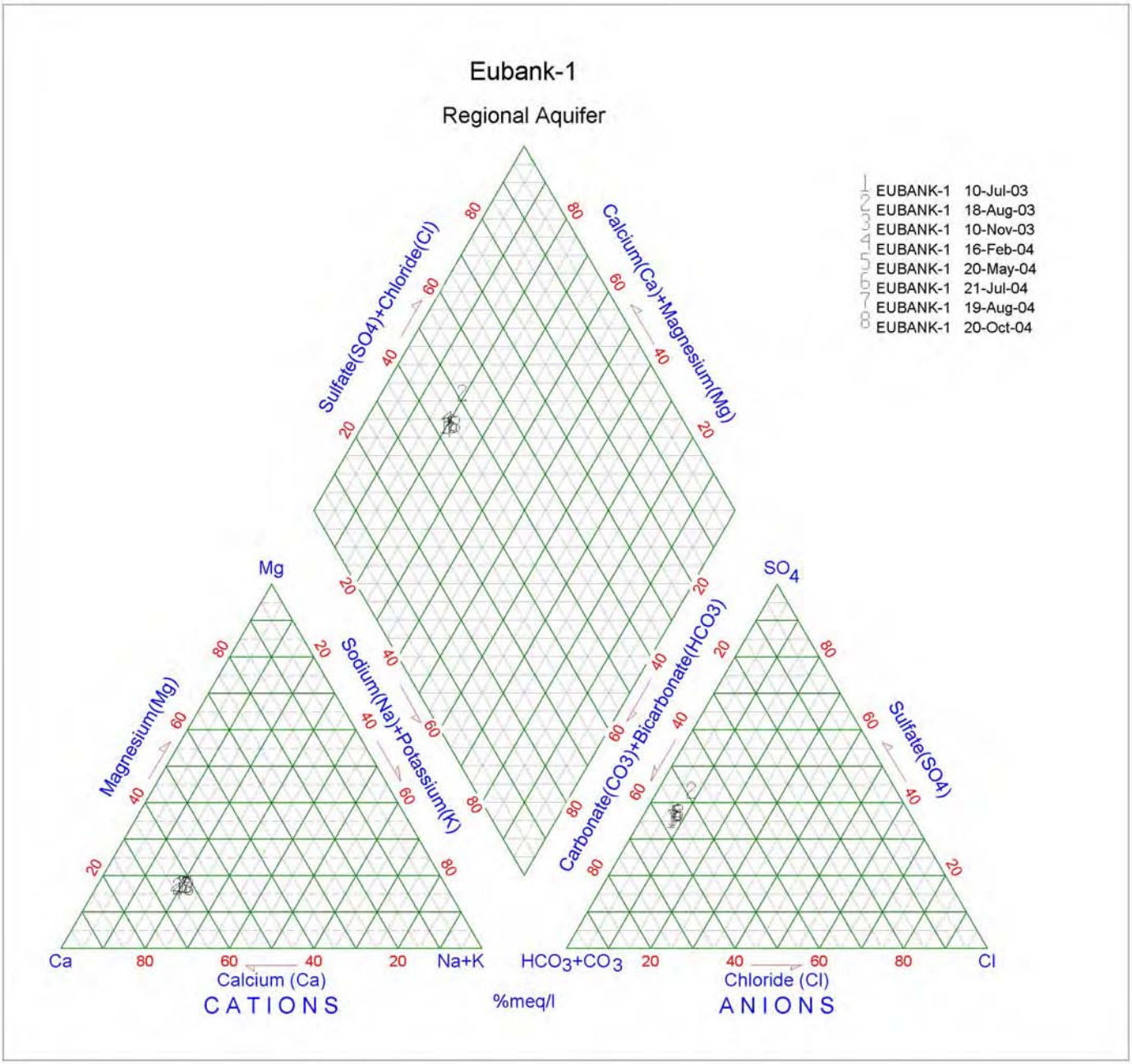
Eubank-1
Regional Aquifer
EUBANK-1 10-Jul-03
EUBANK-1 18-Aug-03
EUBANK-1 10-Nov-03
EUBANK-1 16-Feb-04
EUBANK-1 20-May-04
EUBANK-1 21-Jul-04
EUBANK-1 19-Aug-04
EUBANK-1 20-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-1

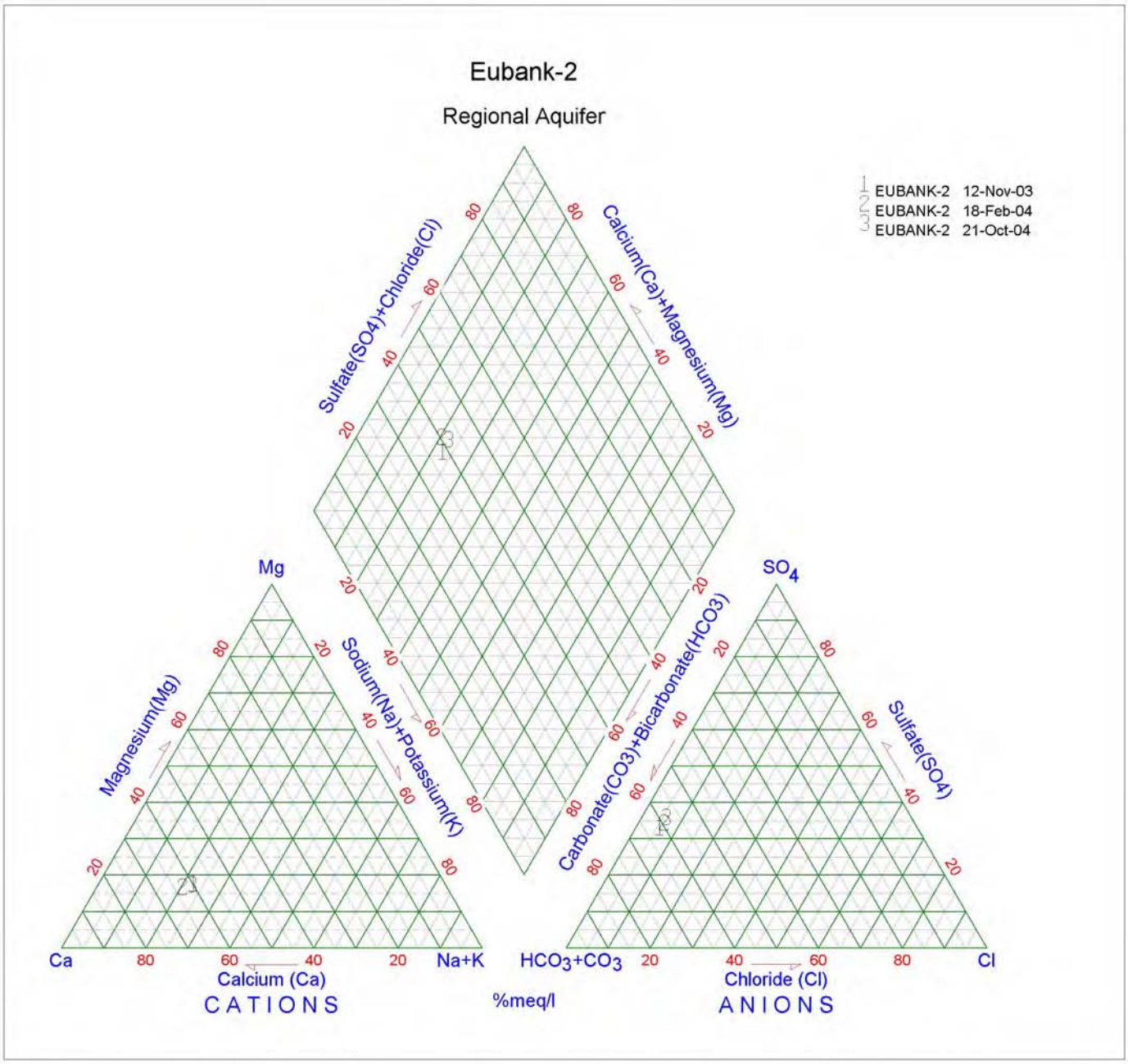
Eubank-2
Regional Aquifer
EUBANK-2 12-Nov-03
EUBANK-2 18-Feb-04
EUBANK-2 21-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-2

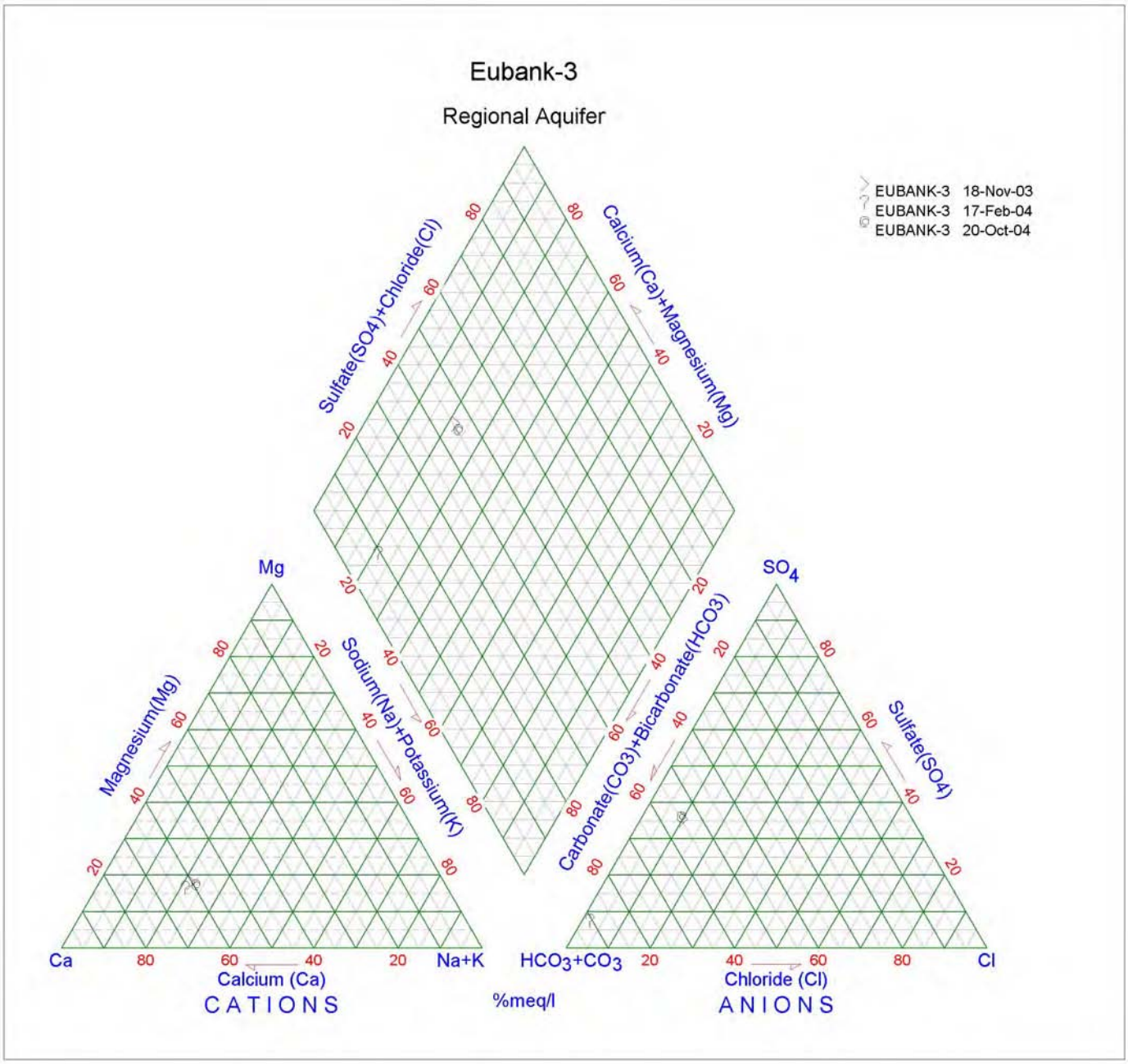
Eubank-3
Regional Aquifer
EUBANK-3 18-Nov-03
EUBANK-3 17-Feb-04
EUBANK-3 20-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-3

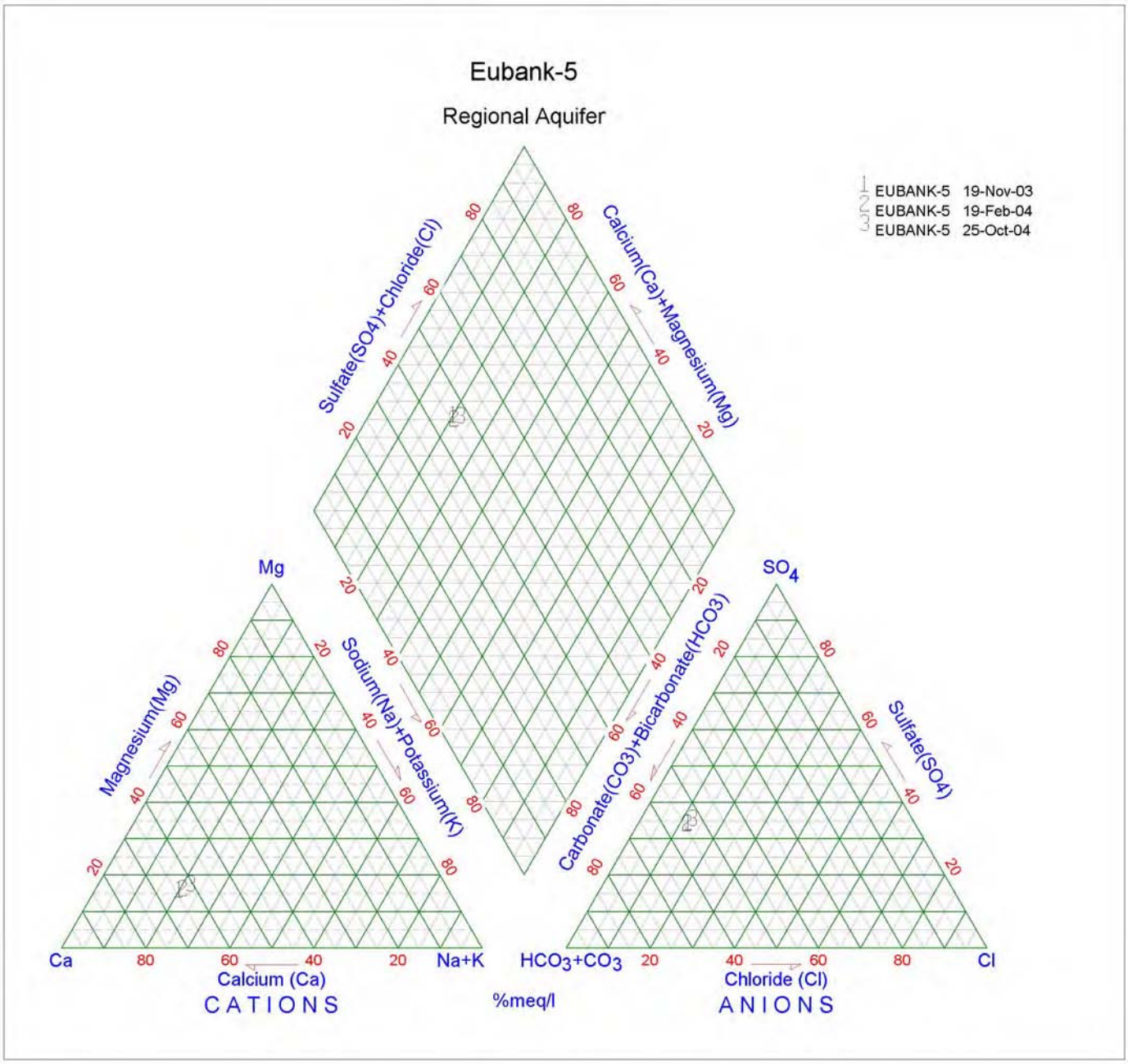
Eubank-5
Regional Aquifer
EUBANK-5 19-Nov-03
EUBANK-5 19-Feb-04
EUBANK-5 25-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-4

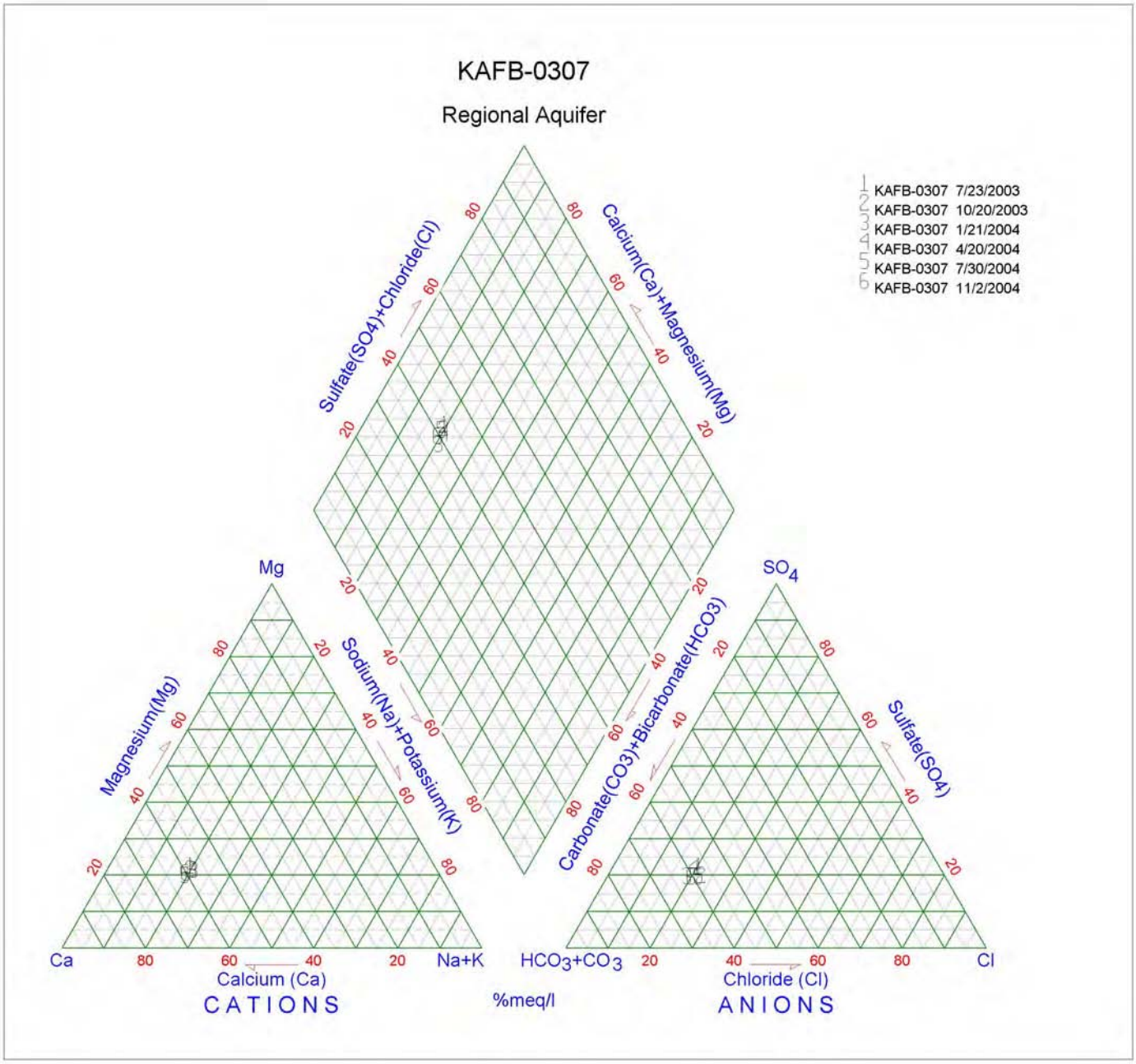
KAFB-0307
Regional Aquifer
KAFB-0307 7/23/2003
KAFB-0307 10/20/2003
KAFB-0307 1/21/2004
KAFB-0307 4/20/2004
KAFB-0307 7/30/2004
KAFB-0307 11/2/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-5

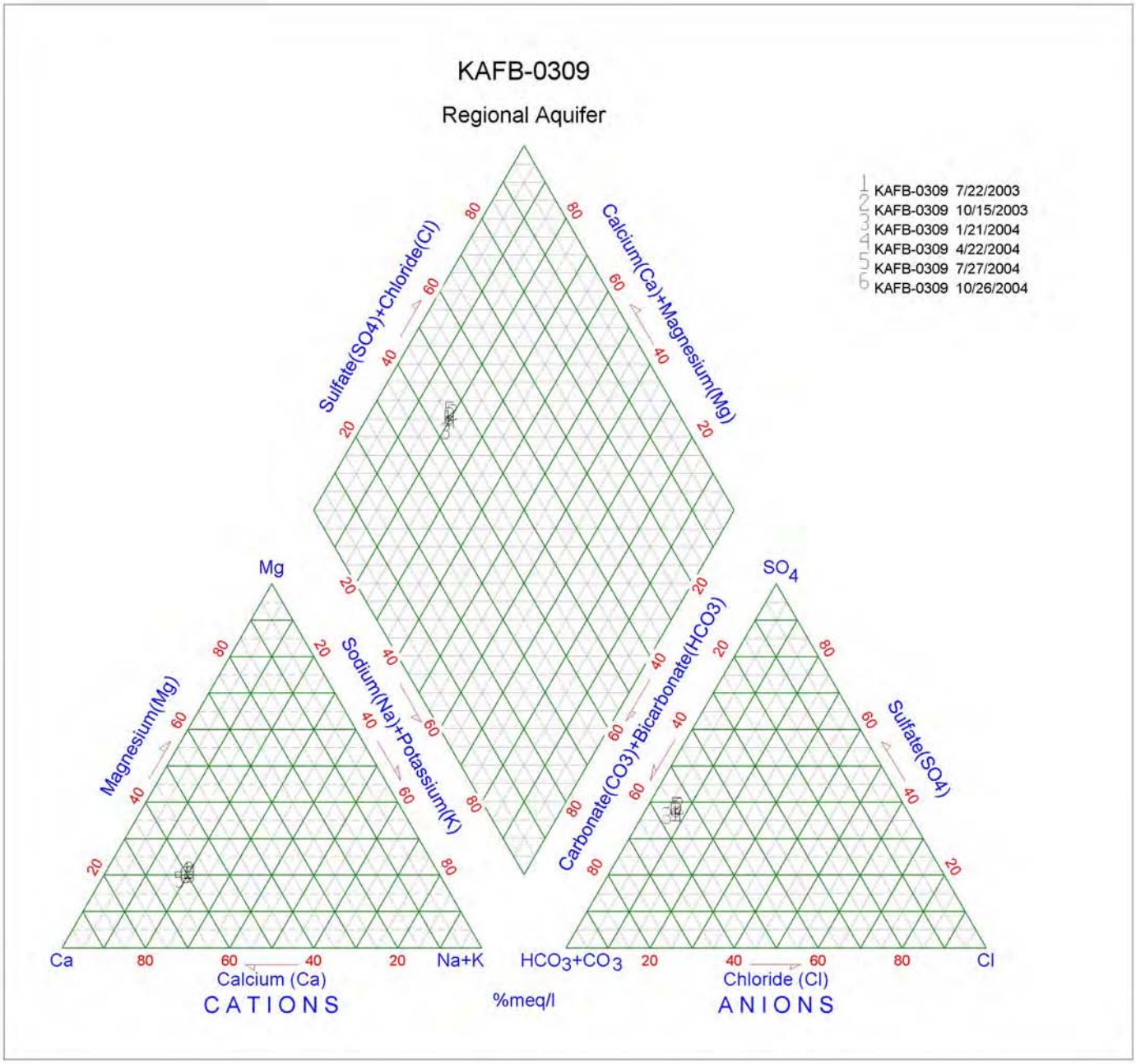
KAFB-0309
Regional Aquifer
KAFB-0309 7/22/2003
KAFB-0309 10/15/2003
KAFB-0309 1/21/2004
KAFB-0309 4/22/2004
KAFB-0309 7/27/2004
KAFB-0309 10/26/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-6

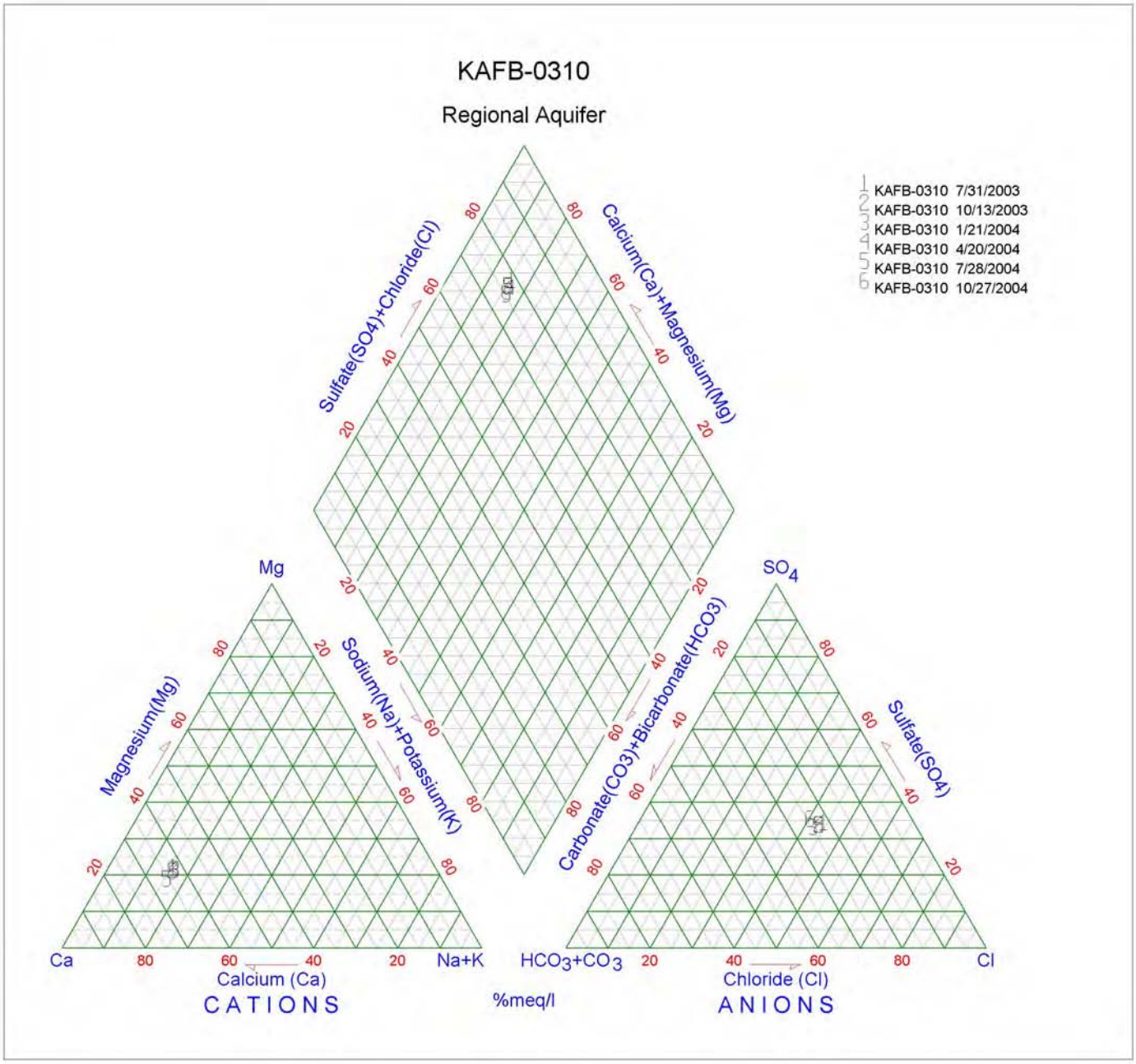
KAFB-0310
Regional Aquifer
KAFB-0310 7/31/2003
KAFB-0310 10/13/2003
KAFB-0310 1/21/2004
KAFB-0310 4/20/2004
KAFB-0310 7/28/2004
KAFB-0310 10/27/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-7

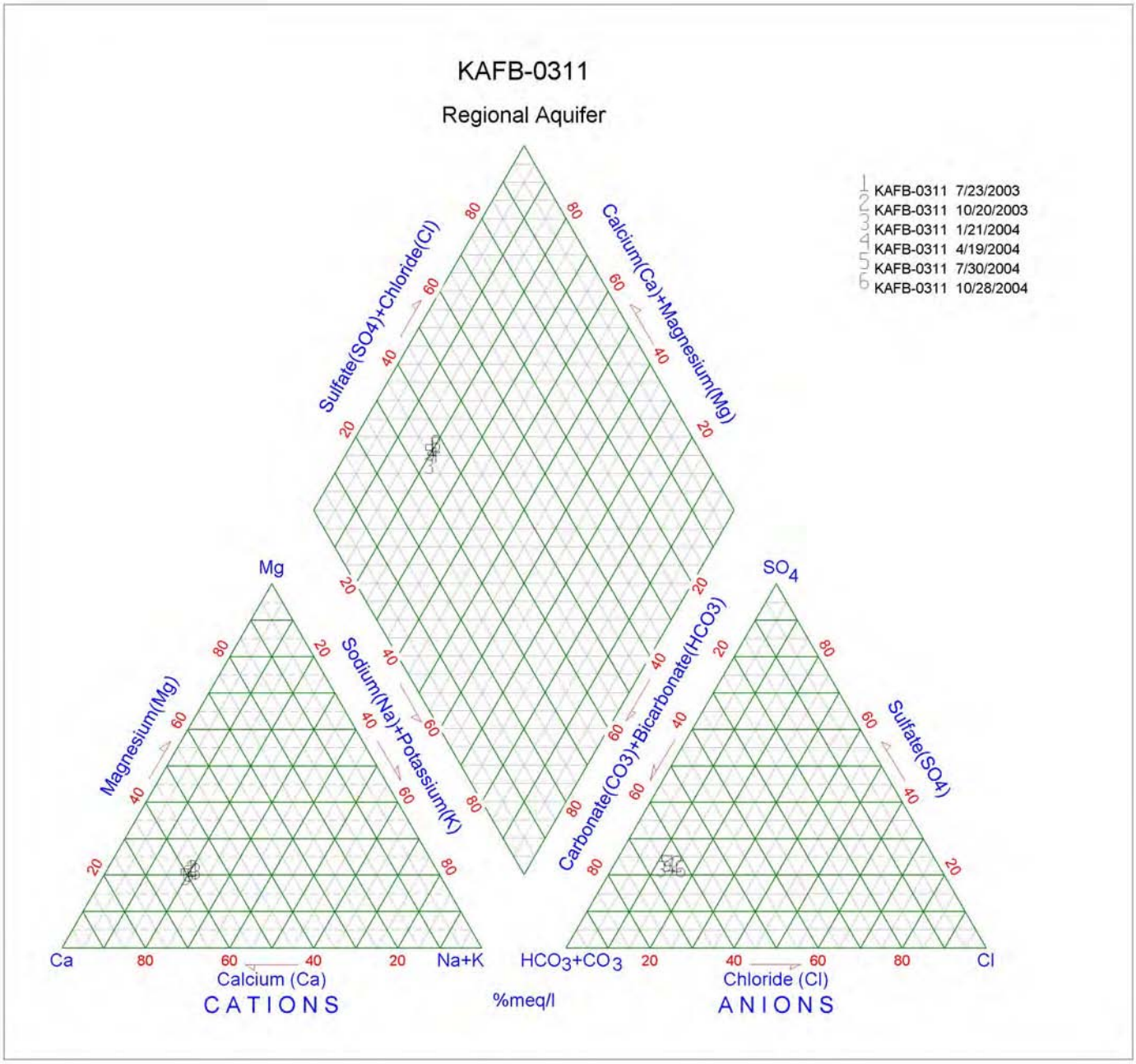
KAFB-0311
Regional Aquifer
KAFB-0311 7/23/2003
KAFB-0311 10/20/2003
KAFB-0311 1/21/2004
KAFB-0311 4/19/2004
KAFB-0311 7/30/2004
KAFB-0311 10/28/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-8

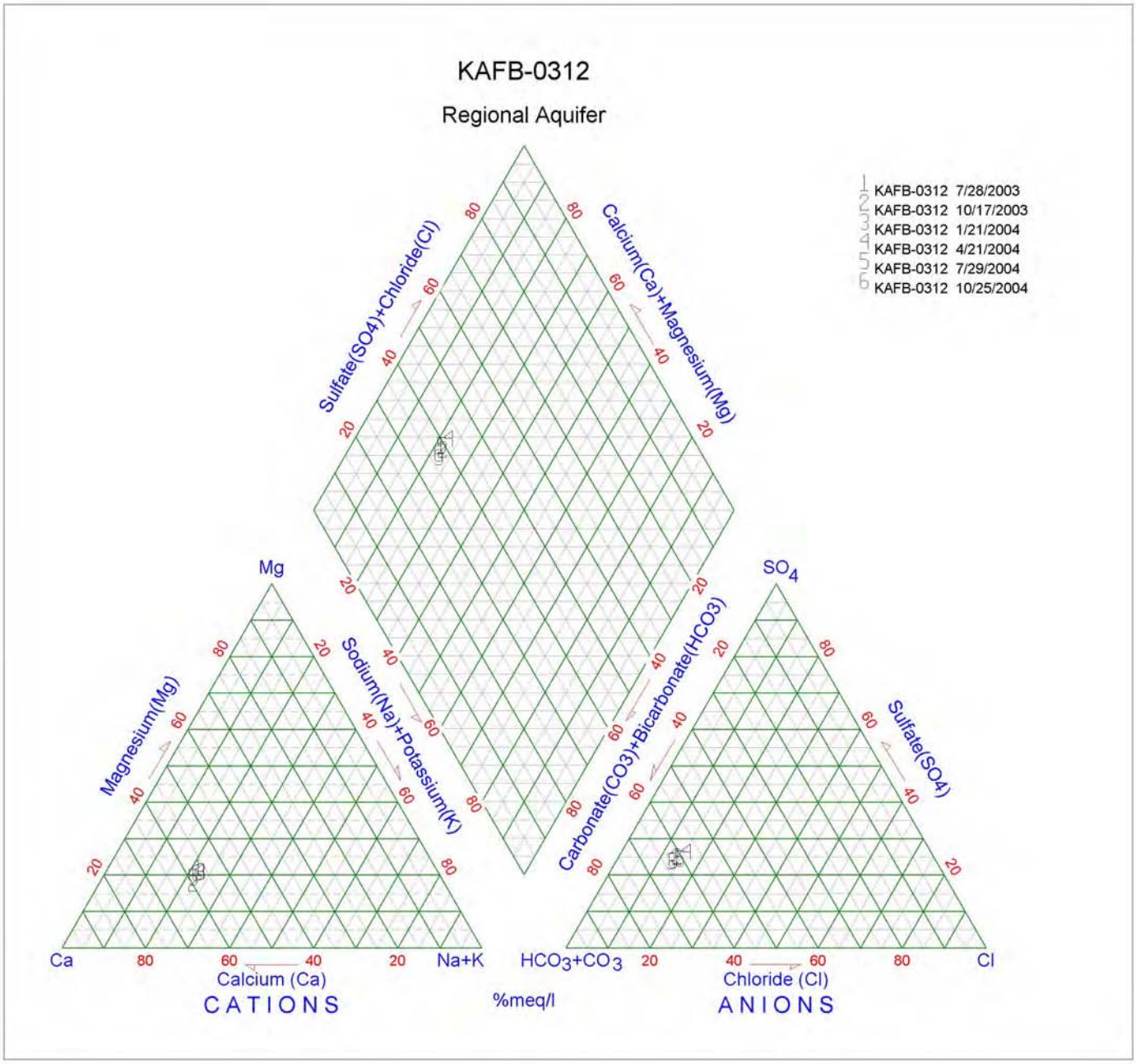
KAFB-0312
Regional Aquifer
KAFB-0312 7/28/2003
KAFB-0312 10/17/2003
KAFB-0312 1/21/2004
KAFB-0312 4/21/2004
KAFB-0312 7/29/2004
KAFB-0312 10/25/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Mg
Magnesium(Mg)
SO4
Sulfate(SO4)
Ca
Na+K
Calcium (Ca)
CATIONS
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-9

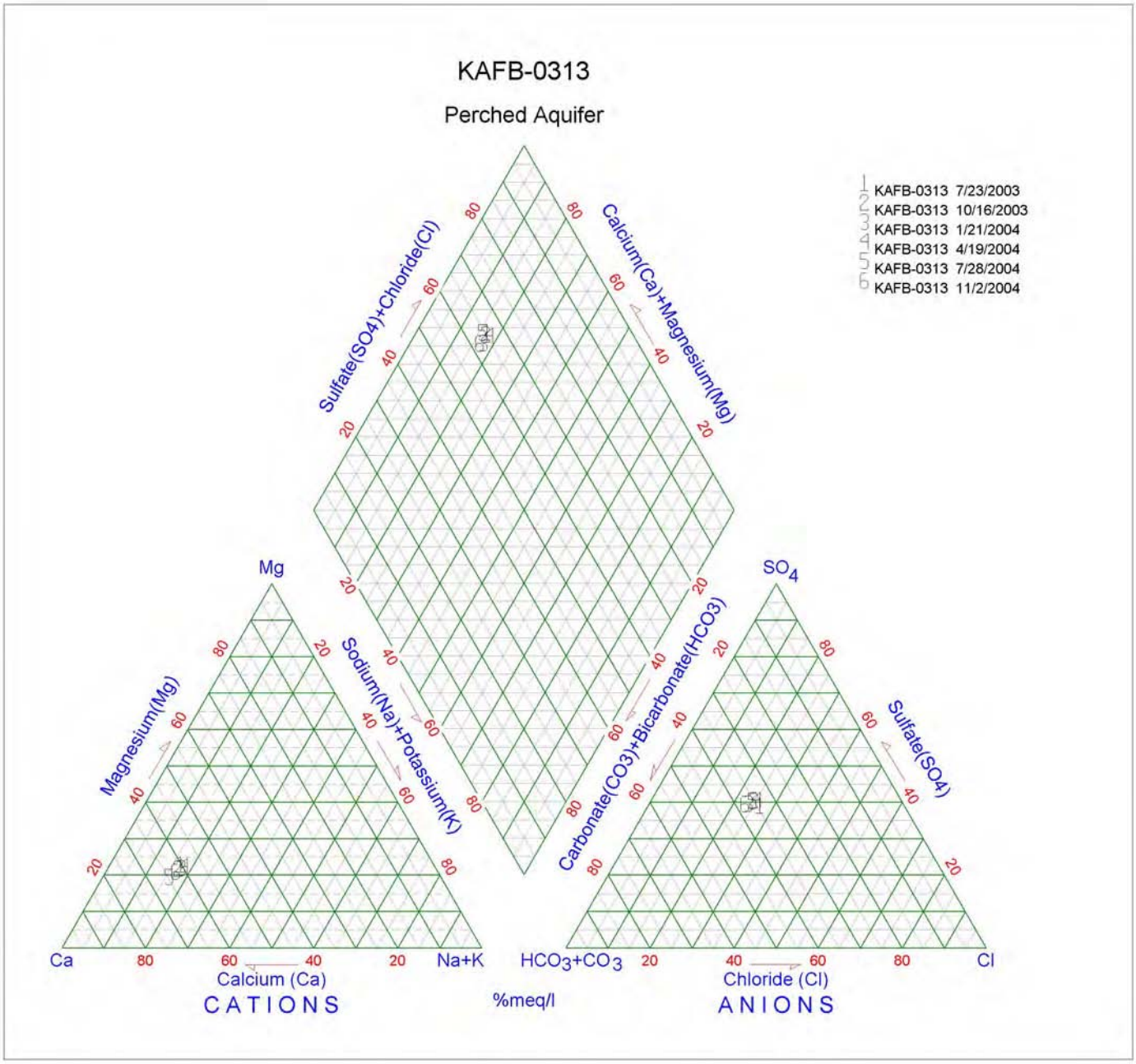
KAFB-0313
Perched Aquifer
KAFB-0313 7/23/2003
KAFB-0313 10/16/2003
KAFB-0313 1/21/2004
KAFB-0313 4/19/2004
KAFB-0313 7/28/2004
KAFB-0313 11/2/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-10

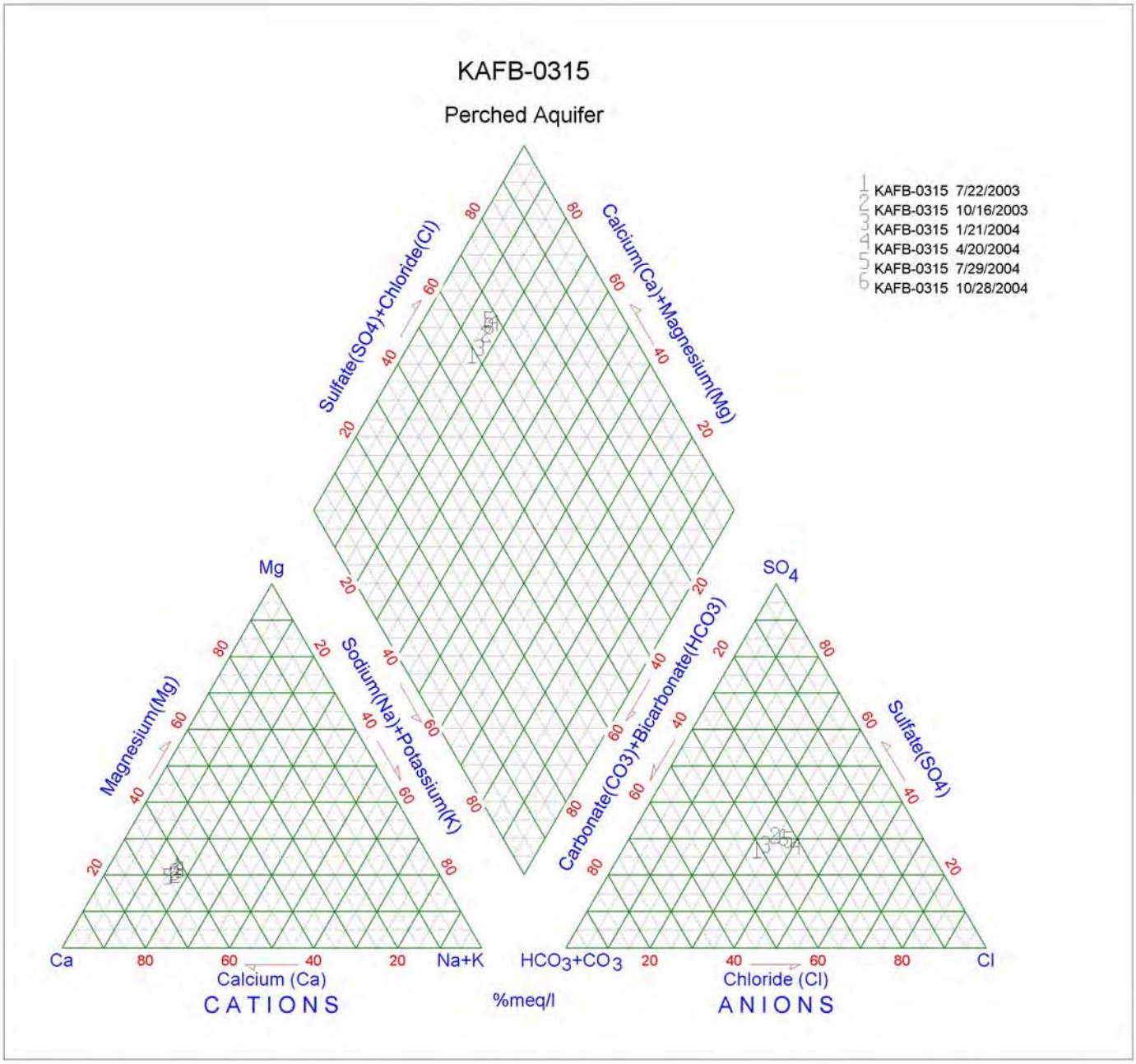
KAFB-0315
Perched Aquifer
KAFB-0315 7/22/2003
KAFB-0315 10/16/2003
KAFB-0315 1/21/2004
KAFB-0315 4/20/2004
KAFB-0315 7/29/2004
KAFB-0315 10/28/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-11

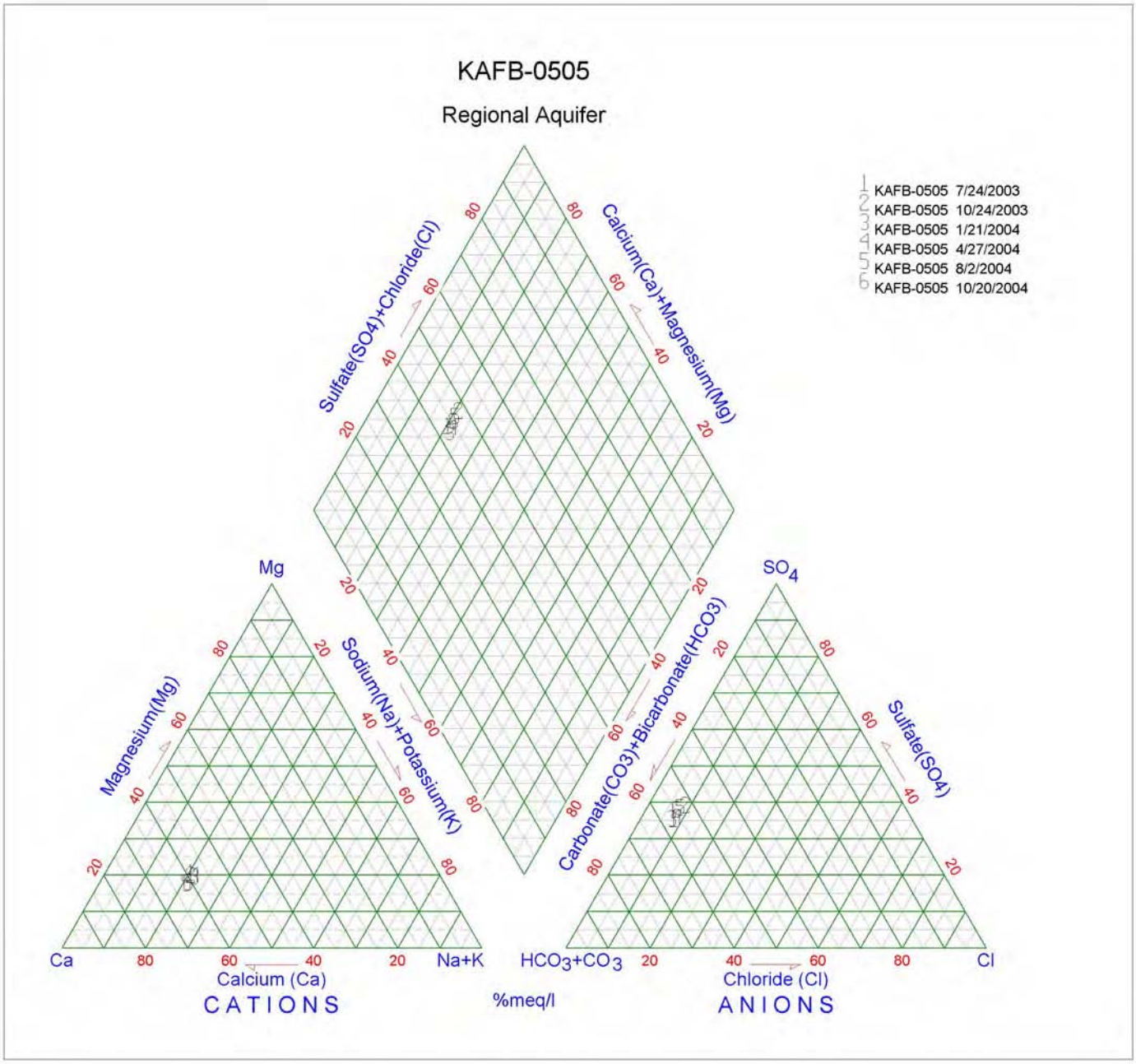
KAFB-0505
Regional Aquifer
KAFB-0505 7/24/2003
KAFB-0505 10/24/2003
KAFB-0505 1/21/2004
KAFB-0505 4/27/2004
KAFB-0505 8/2/2004
KAFB-0505 10/20/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-12

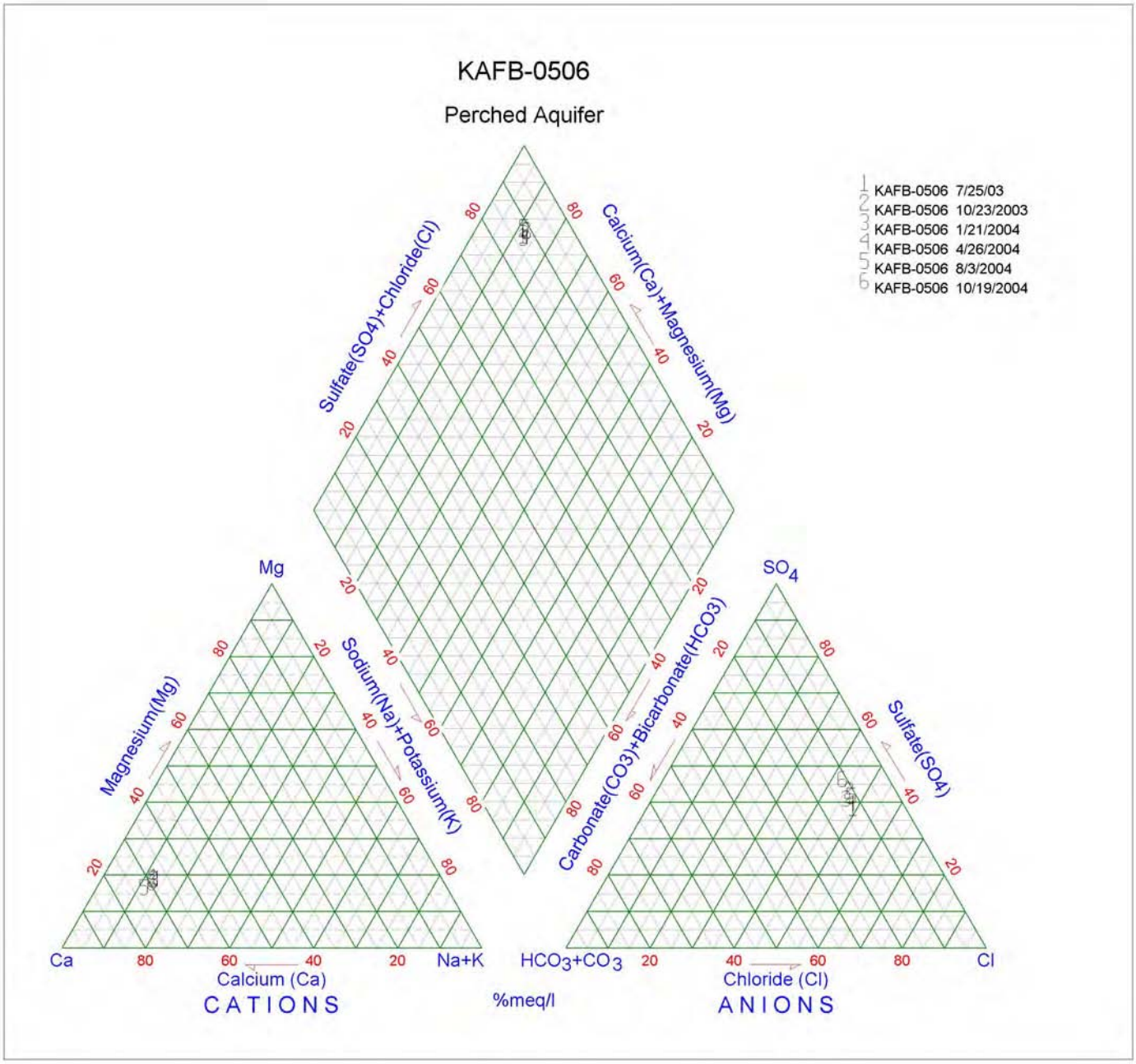
KAFB-0506
Perched Aquifer
KAFB-0506 7/25/03
KAFB-0506 10/23/2003
KAFB-0506 1/21/2004
KAFB-0506 4/26/2004
KAFB-0506 8/3/2004
KAFB-0506 10/19/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-13

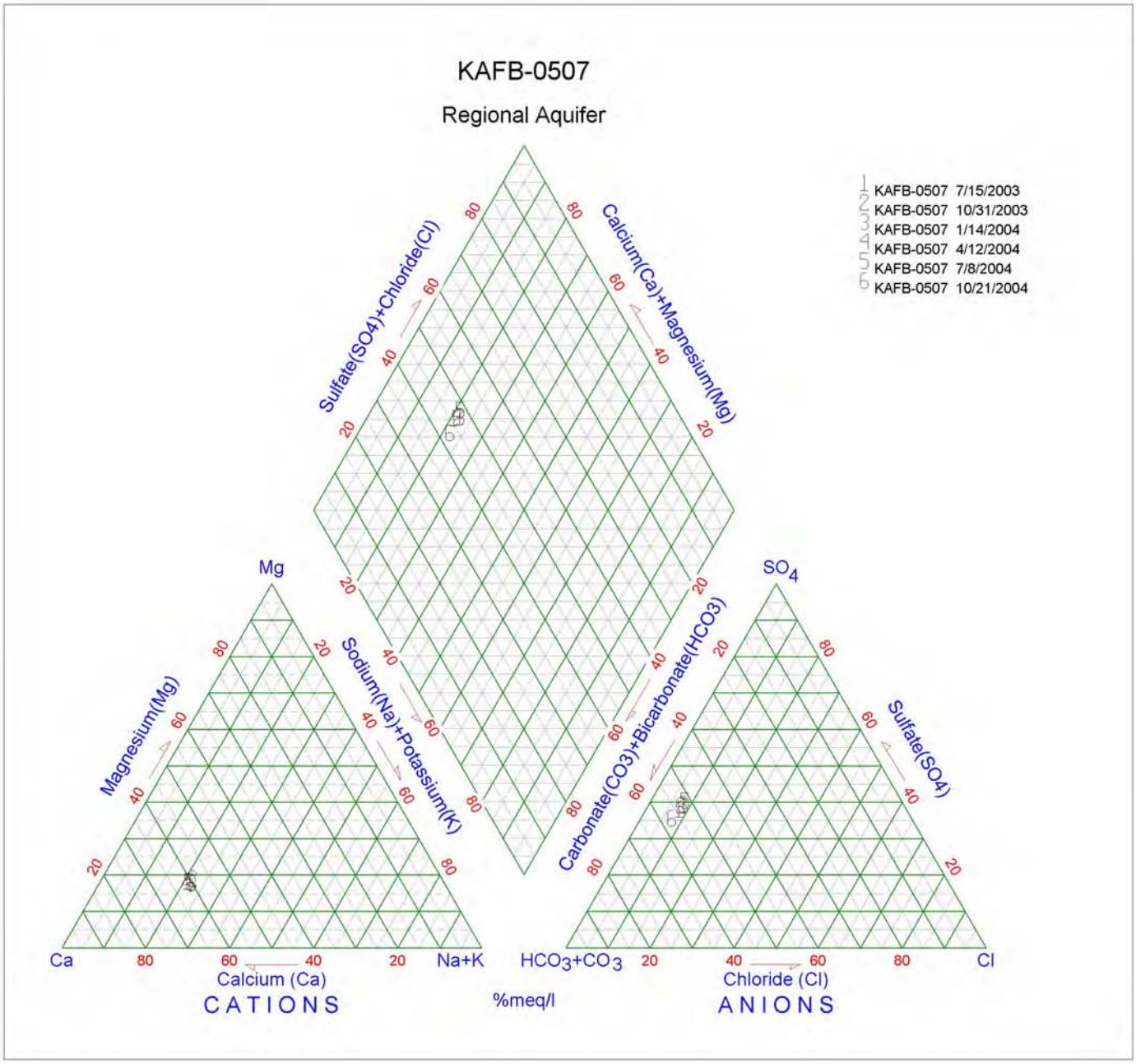
KAFB-0507
Regional Aquifer
KAFB-0507 7/15/2003
KAFB-0507 10/31/2003
KAFB-0507 1/14/2004
KAFB-0507 4/12/2004
KAFB-0507 7/8/2004
KAFB-0507 10/21/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-14

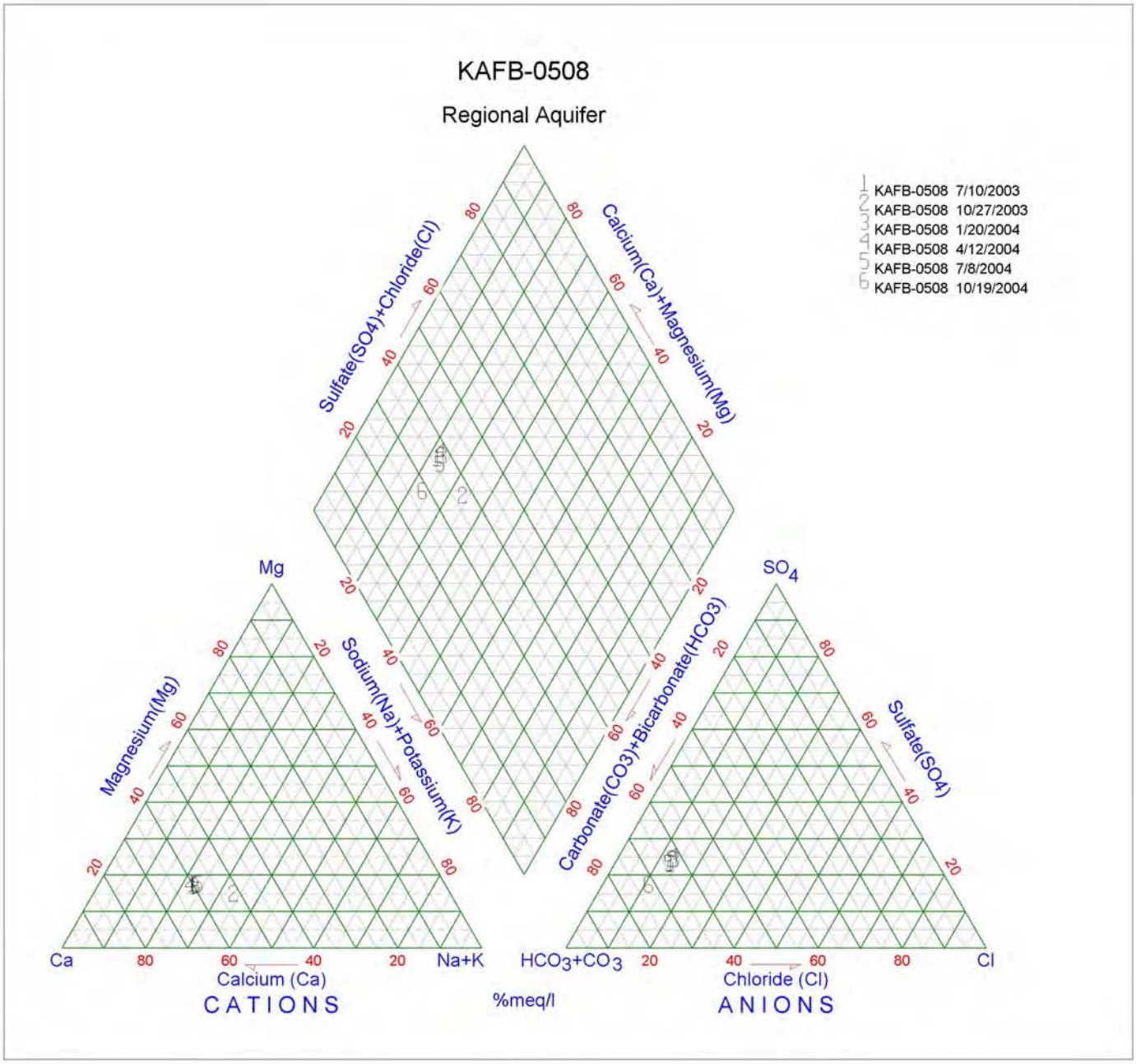
KAFB-0508
Regional Aquifer
KAFB-0508 7/10/2003
KAFB-0508 10/27/2003
KAFB-0508 1/20/2004
KAFB-0508 4/12/2004
KAFB-0508 7/8/2004
KAFB-0508 10/19/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
SO4
Magnesium(Mg)
Sulfate(SO4)
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-15

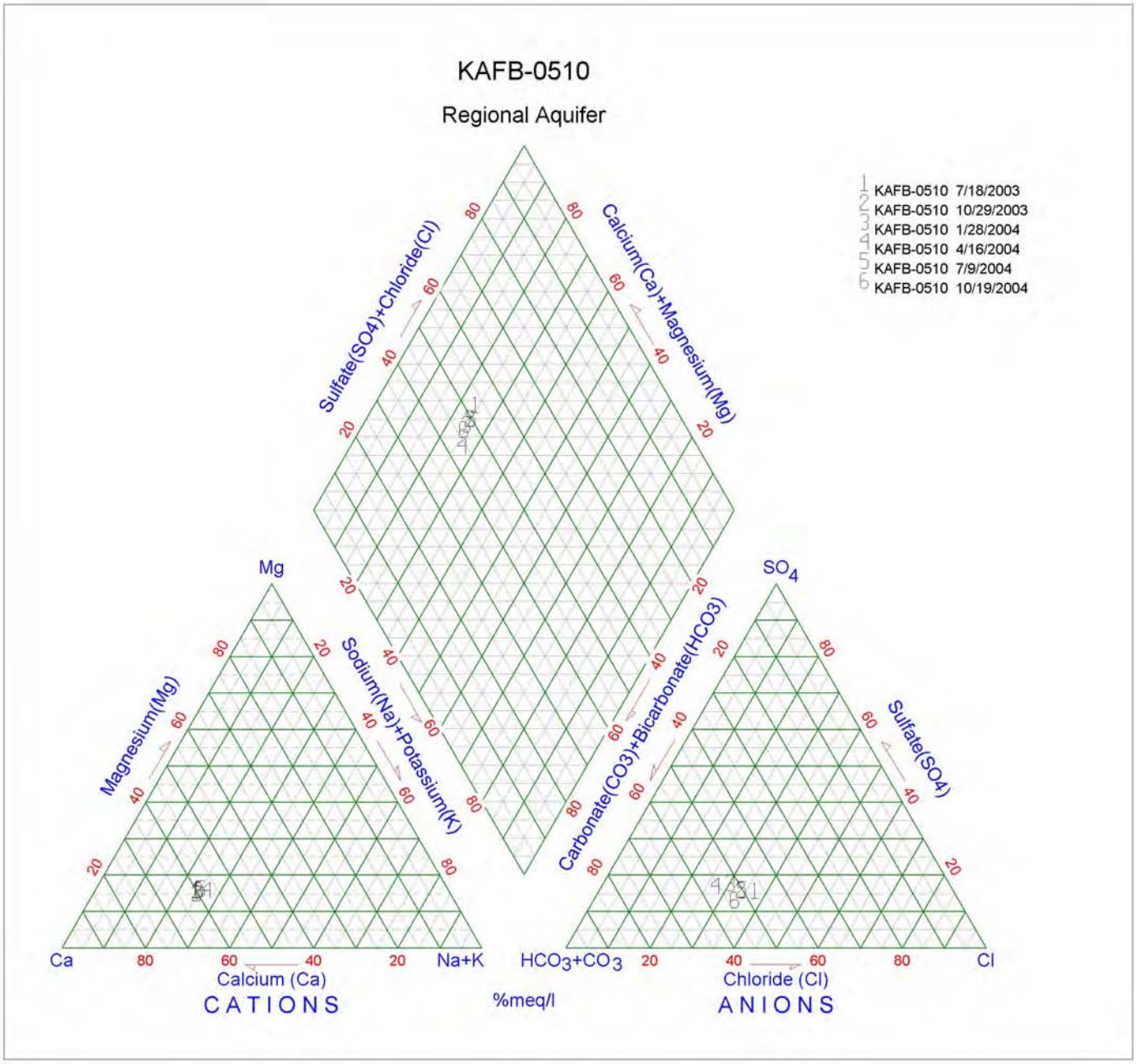
KAFB-0510
Regional Aquifer
KAFB-0510 7/18/2003
KAFB-0510 10/29/2003
KAFB-0510 1/28/2004
KAFB-0510 4/16/2004
KAFB-0510 7/9/2004
KAFB-0510 10/19/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-16

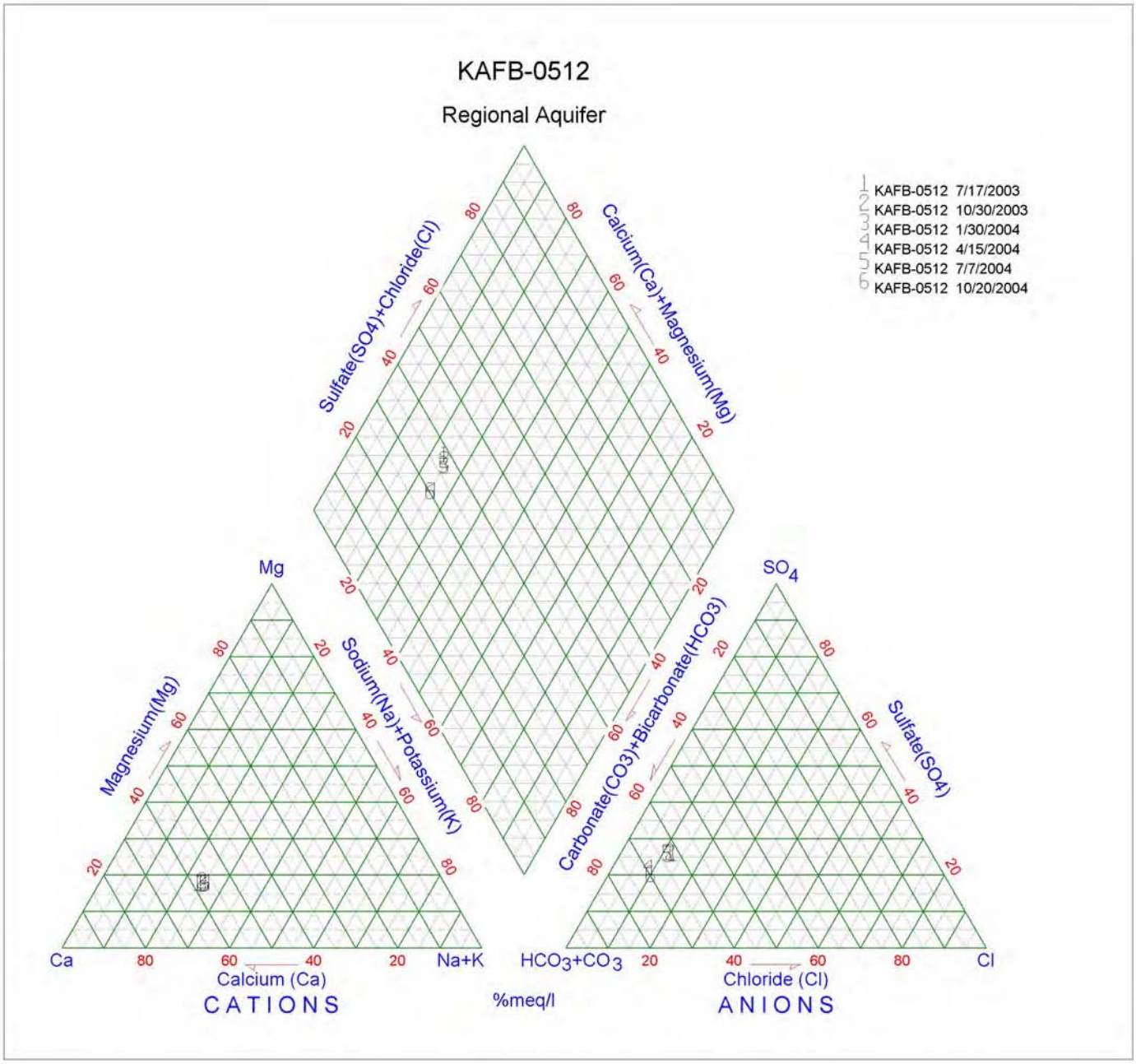
KAFB-0512
Regional Aquifer
KAFB-0512 7/17/2003
KAFB-0512 10/30/2003
KAFB-0512 1/30/2004
KAFB-0512 4/15/2004
KAFB-0512 7/7/2004
KAFB-0512 10/20/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-17

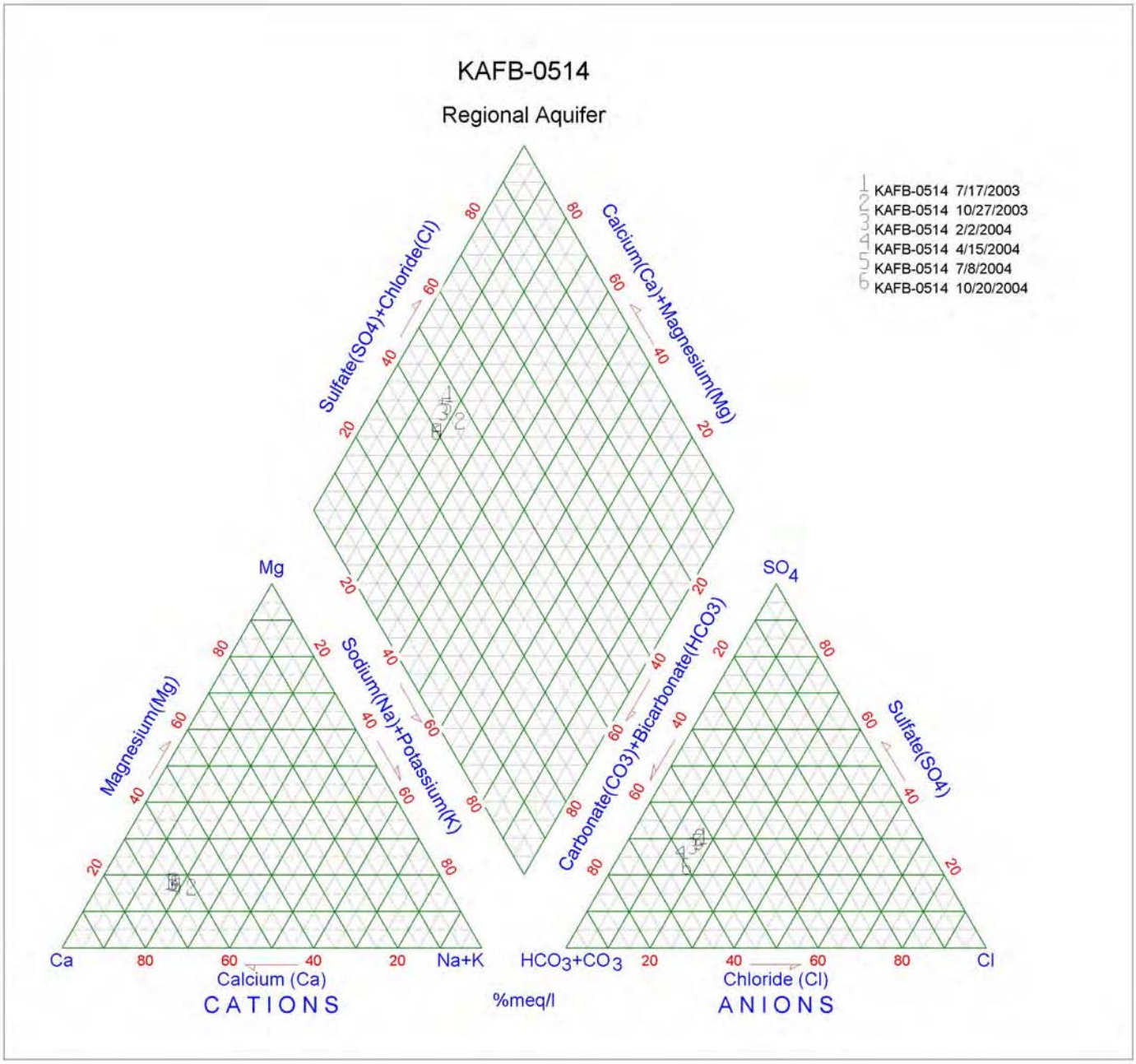
KAFB-0514
Regional Aquifer
KAFB-0514 7/17/2003
KAFB-0514 10/27/2003
KAFB-0514 2/2/2004
KAFB-0514 4/15/2004
KAFB-0514 7/8/2004
KAFB-0514 10/20/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-18

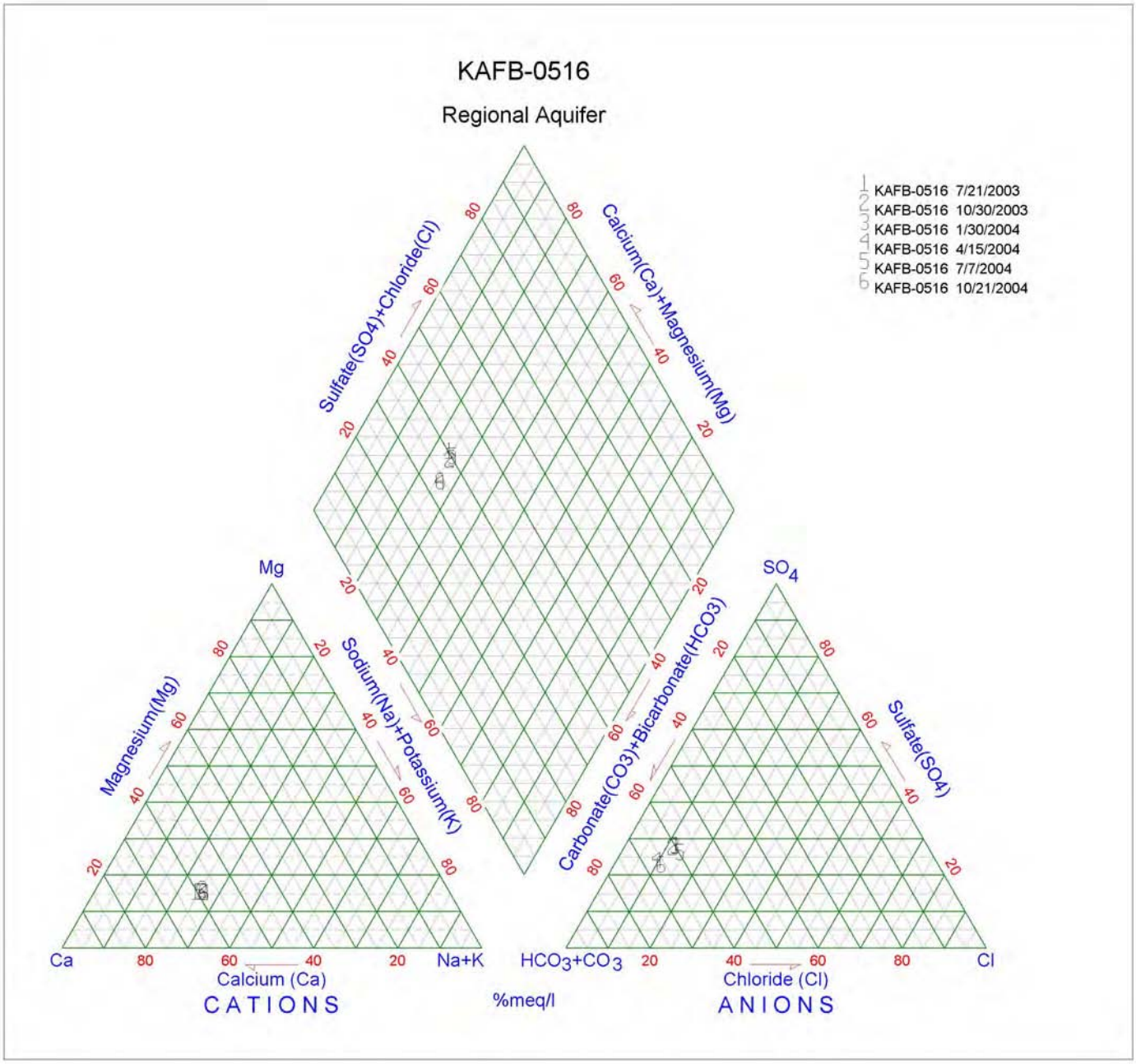
KAFB-0516
Regional Aquifer
KAFB-0516 7/21/2003
KAFB-0516 10/30/2003
KAFB-0516 1/30/2004
KAFB-0516 4/15/2004
KAFB-0516 7/7/2004
KAFB-0516 10/21/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-19

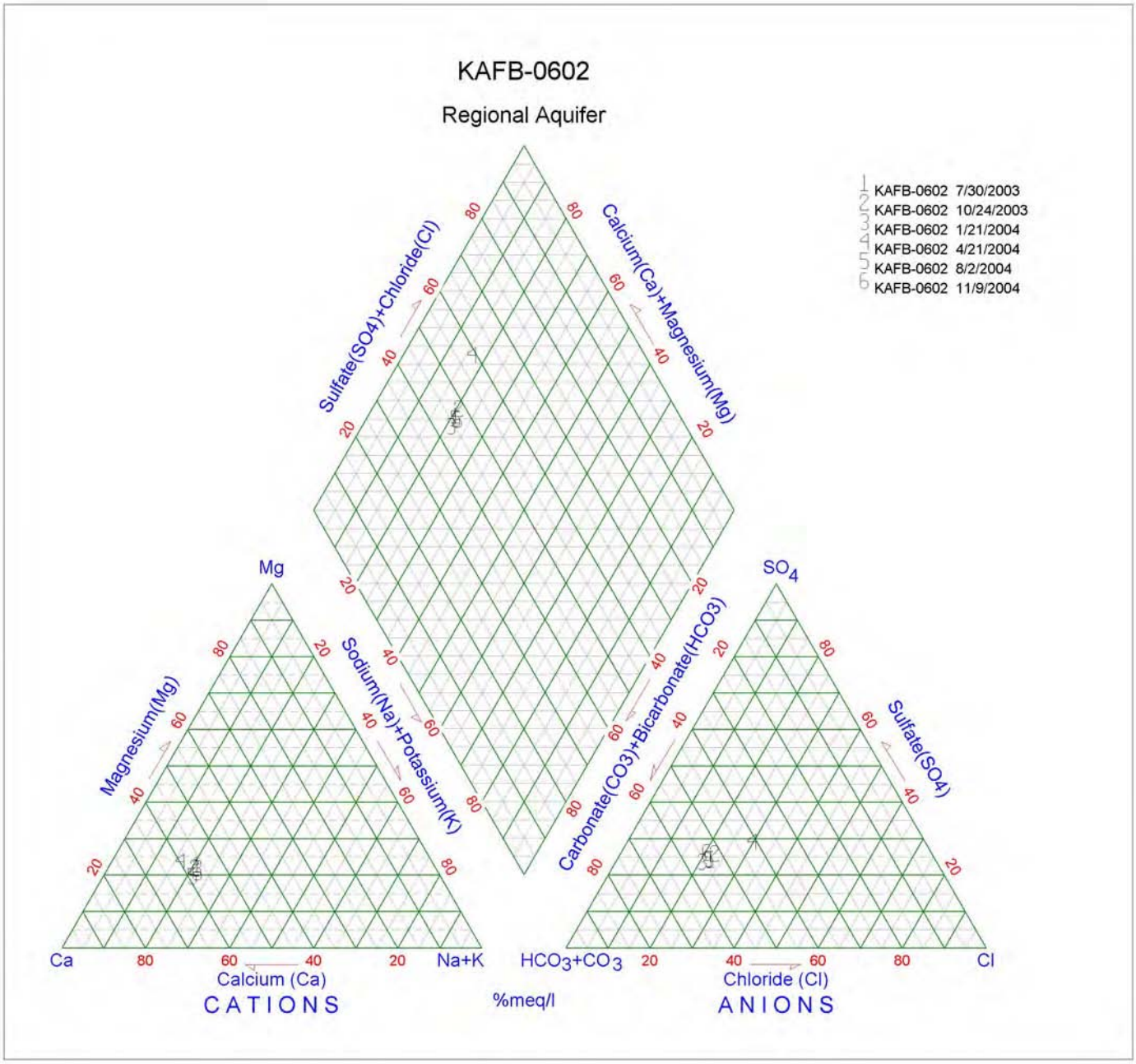
KAFB-0602
Regional Aquifer
KAFB-0602 7/30/2003
KAFB-0602 10/24/2003
KAFB-0602 1/21/2004
KAFB-0602 4/21/2004
KAFB-0602 8/2/2004
KAFB-0602 11/9/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-20

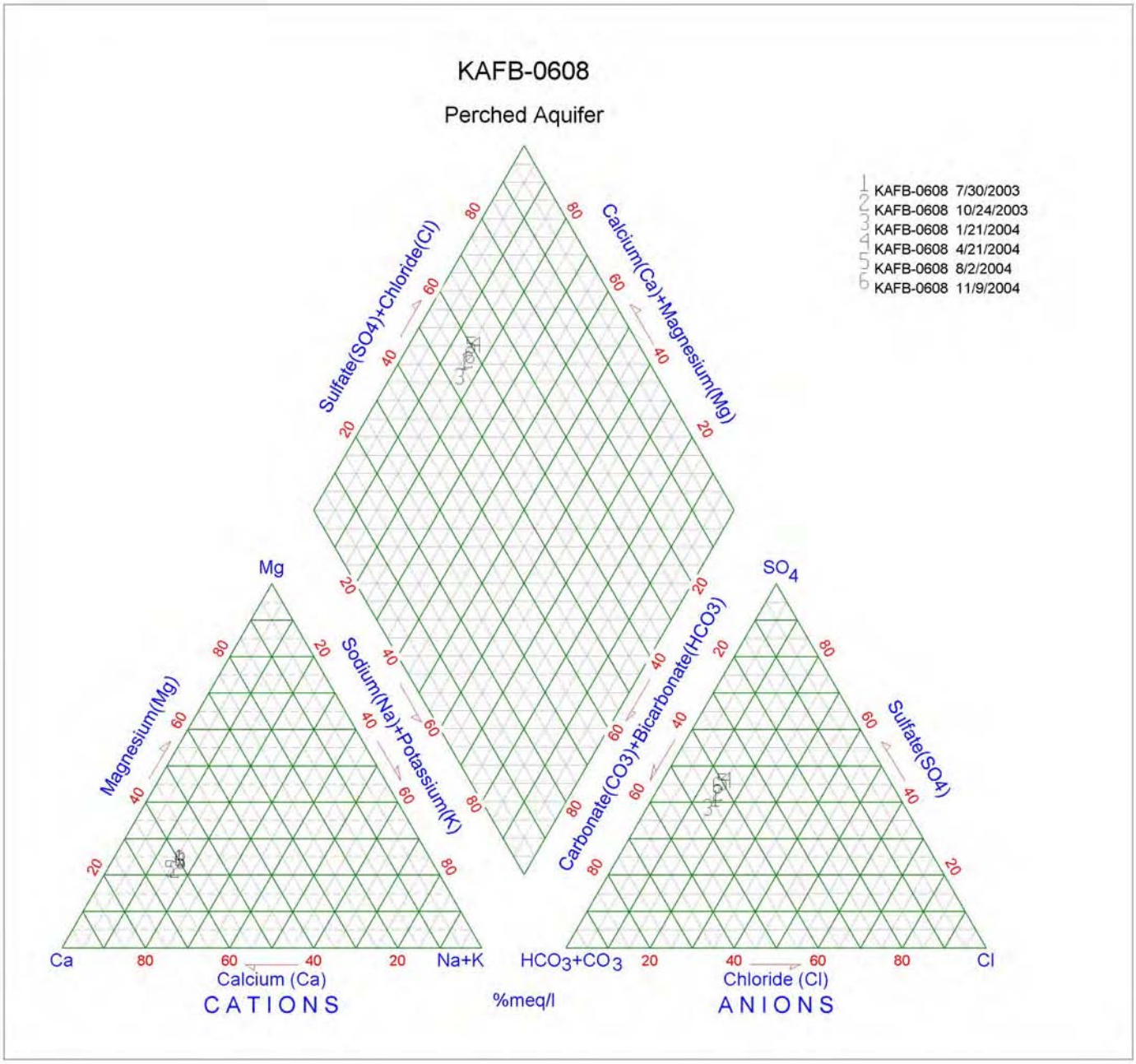
KAFB-0608
Perched Aquifer
KAFB-0608 7/30/2003
KAFB-0608 10/24/2003
KAFB-0608 1/21/2004
KAFB-0608 4/21/2004
KAFB-0608 8/2/2004
KAFB-0608 11/9/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-21

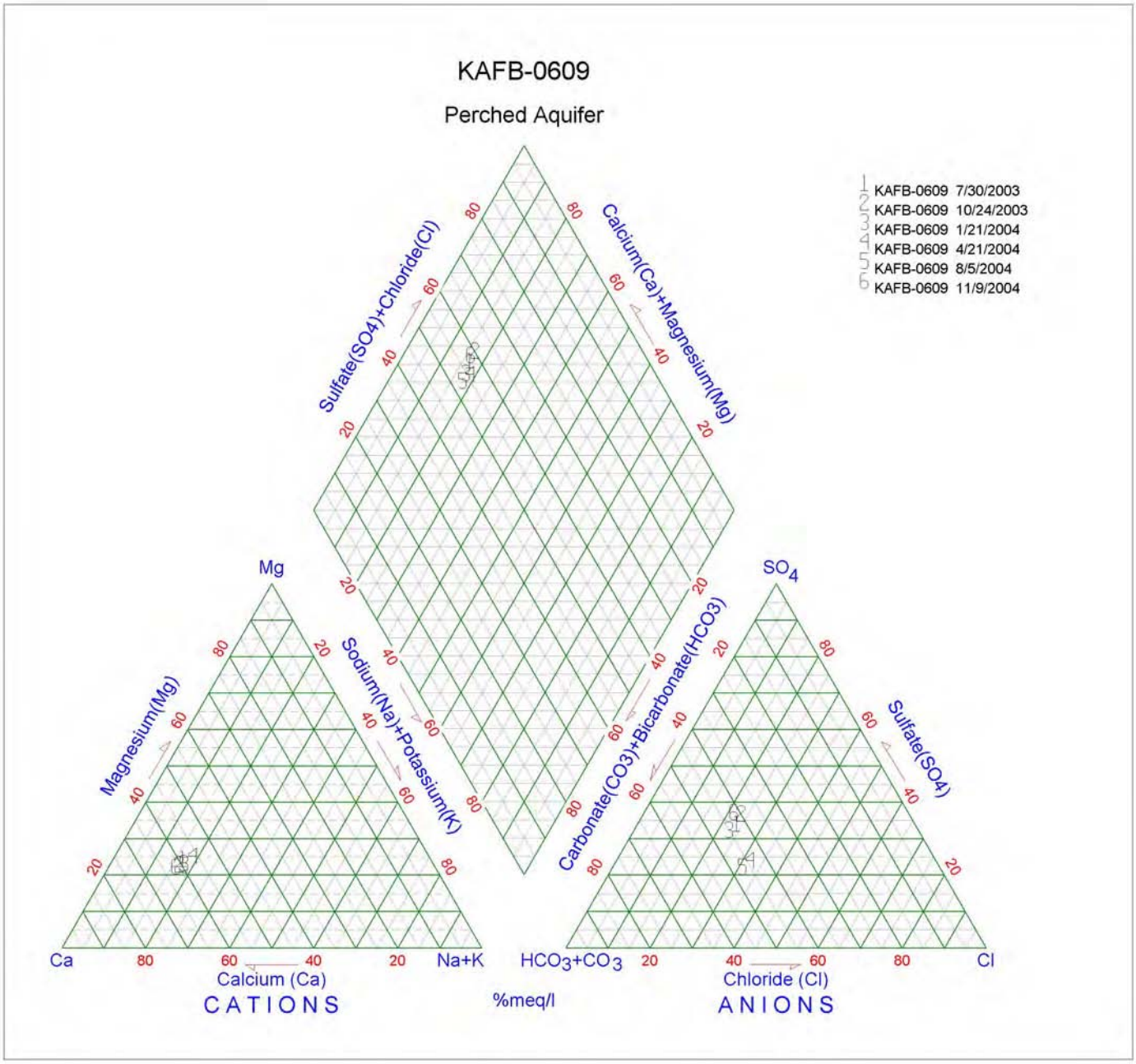
KAFB-0609
Perched Aquifer
KAFB-0609 7/30/2003
KAFB-0609 10/24/2003
KAFB-0609 1/21/2004
KAFB-0609 4/21/2004
KAFB-0609 8/5/2004
KAFB-0609 11/9/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-22

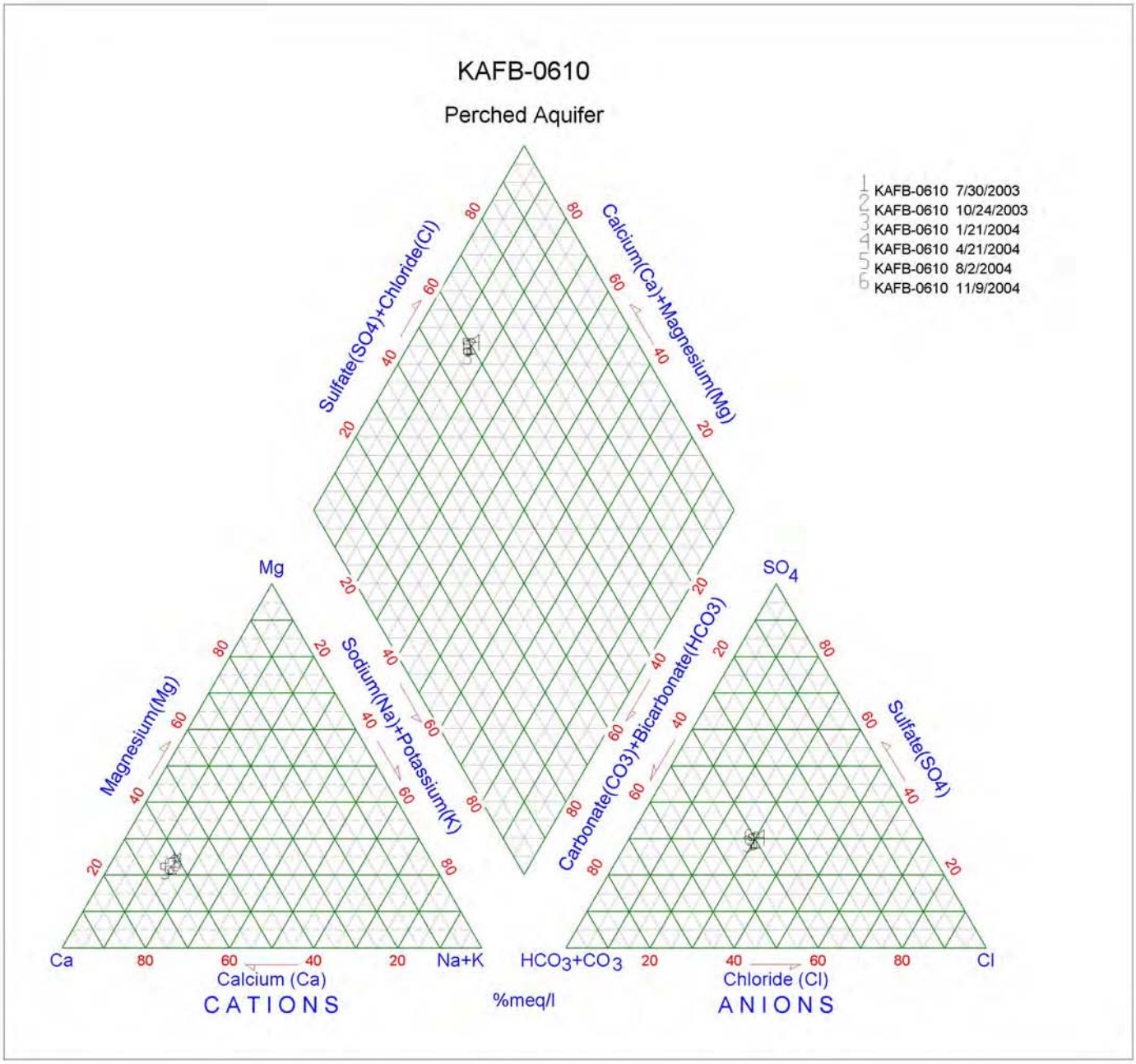
KAFB-0610
Perched Aquifer
KAFB-0610 7/30/2003
KAFB-0610 10/24/2003
KAFB-0610 1/21/2004
KAFB-0610 4/21/2004
KAFB-0610 8/2/2004
KAFB-0610 11/9/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-23

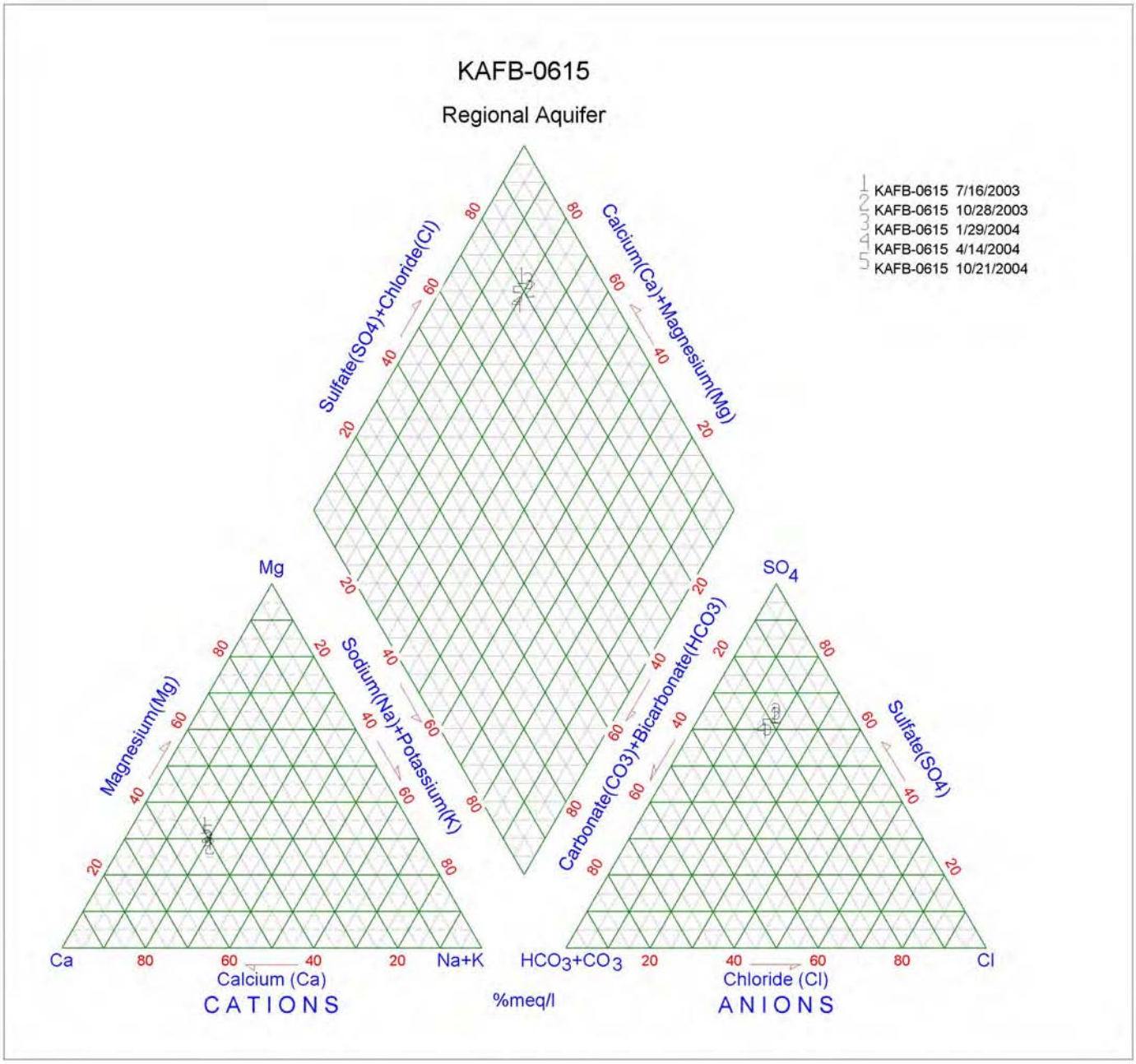
KAFB-0615
Regional Aquifer
KAFB-0615 7/16/2003
KAFB-0615 10/28/2003
KAFB-0615 1/29/2004
KAFB-0615 4/14/2004
KAFB-0615 10/21/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-24

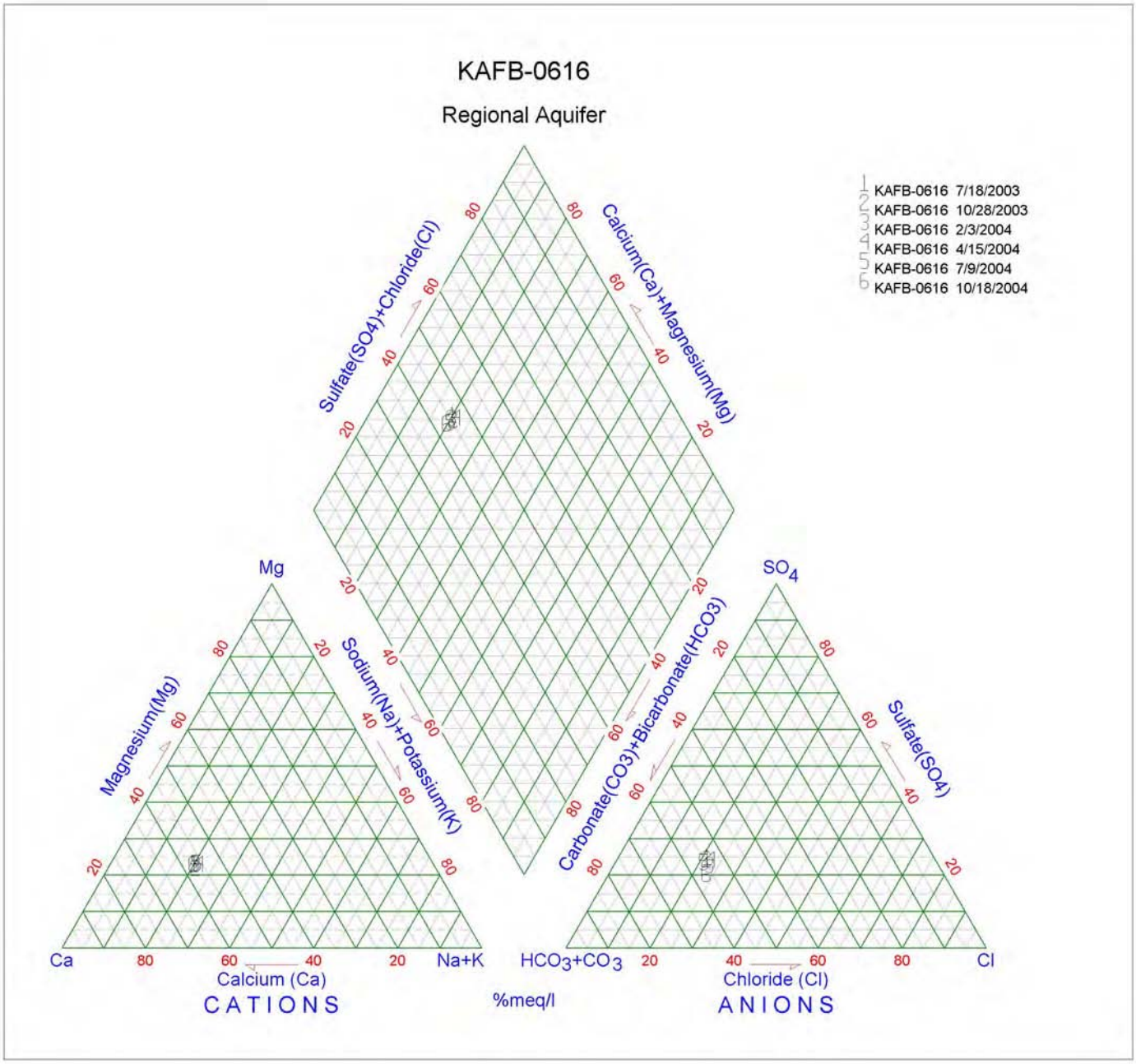
KAFB-0616
Regional Aquifer
KAFB-0616 7/18/2003
KAFB-0616 10/28/2003
KAFB-0616 2/3/2004
KAFB-0616 4/15/2004
KAFB-0616 7/9/2004
KAFB-0616 10/18/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Carbonate(CO3)+Bicarbonate(HCO3)
Sodium(Na)+Potassium(K)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-25

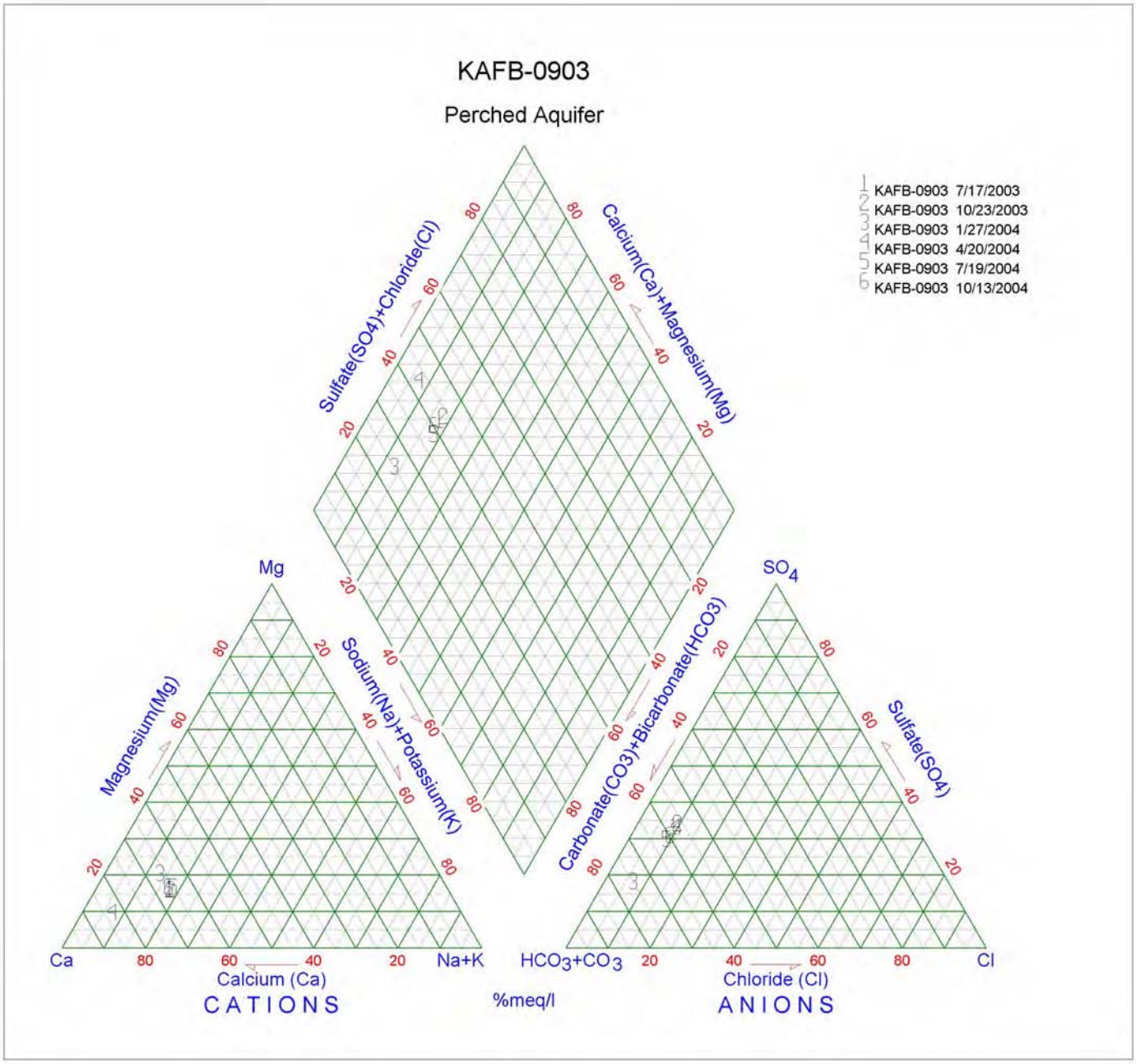
KAFB-0903
Perched Aquifer
KAFB-0903 7/17/2003
KAFB-0903 10/23/2003
KAFB-0903 1/27/2004
KAFB-0903 4/20/2004
KAFB-0903 7/19/2004
KAFB-0903 10/13/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-26

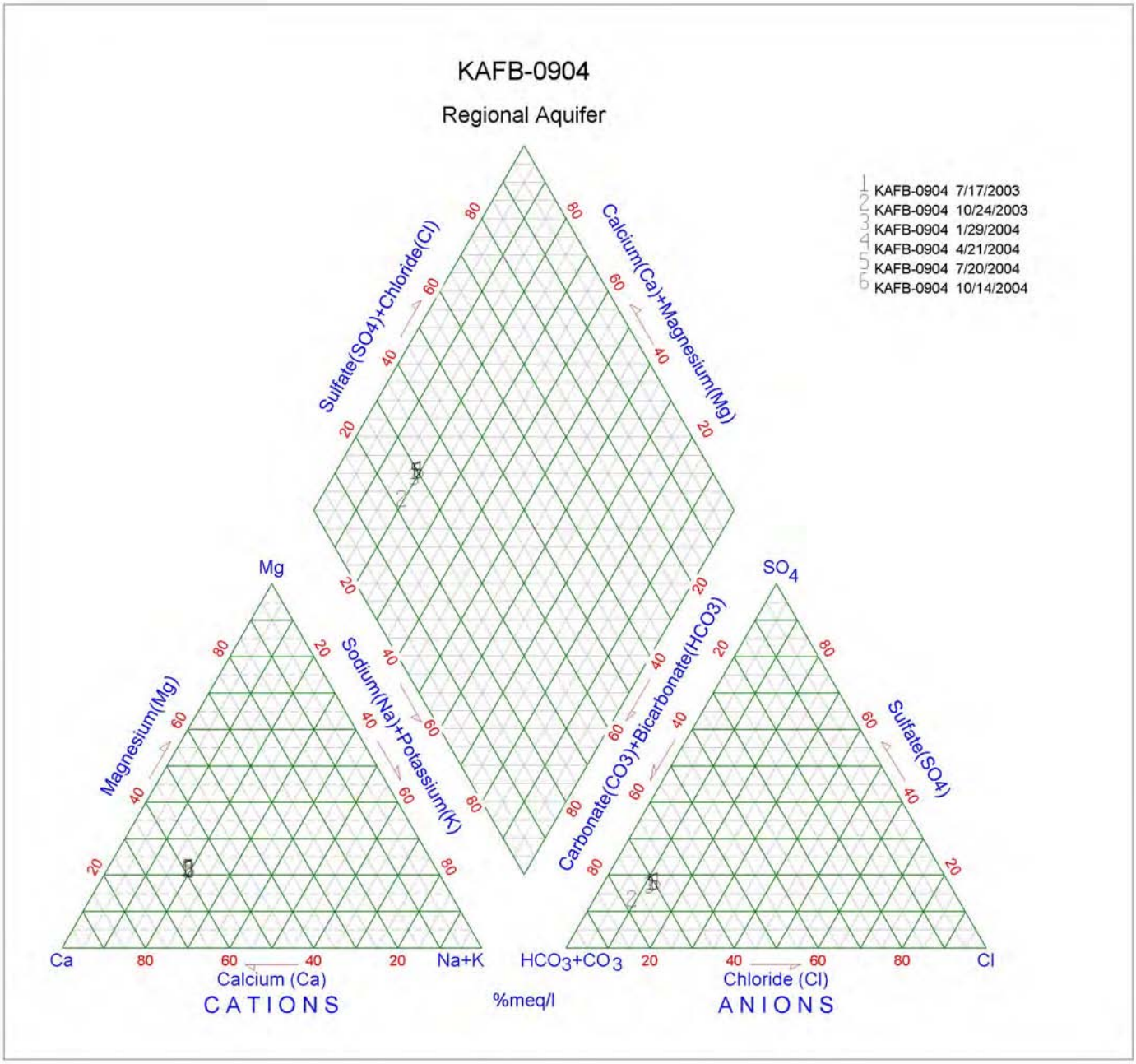
KAFB-0904
Regional Aquifer
KAFB-0904 7/17/2003
KAFB-0904 10/24/2003
KAFB-0904 1/29/2004
KAFB-0904 4/21/2004
KAFB-0904 7/20/2004
KAFB-0904 10/14/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-27

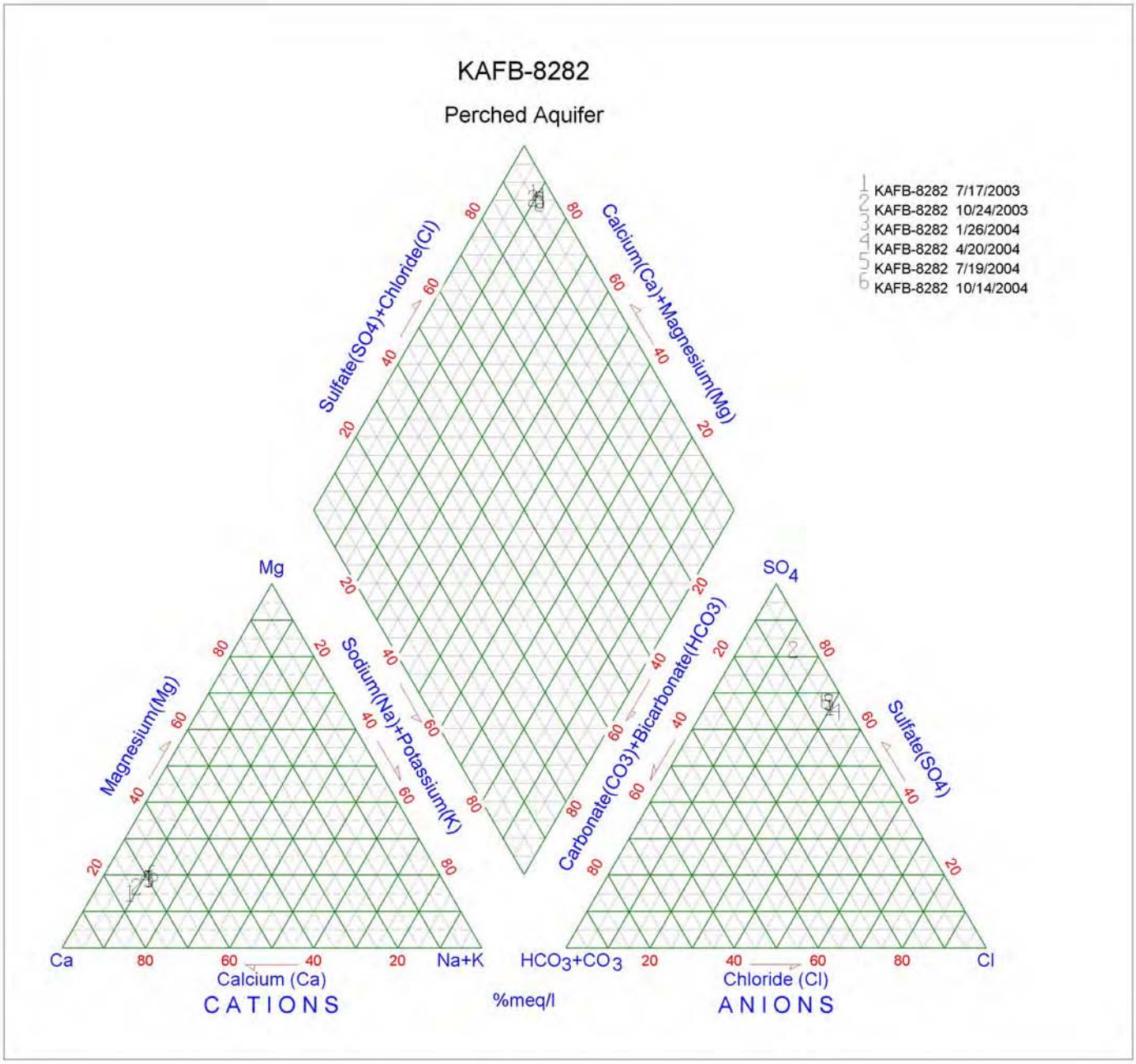
KAFB-8282
Perched Aquifer
KAFB-8282 7/17/2003
KAFB-8282 10/24/2003
KAFB-8282 1/26/2004
KAFB-8282 4/20/2004
KAFB-8282 7/19/2004
KAFB-8282 10/14/2004
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-28

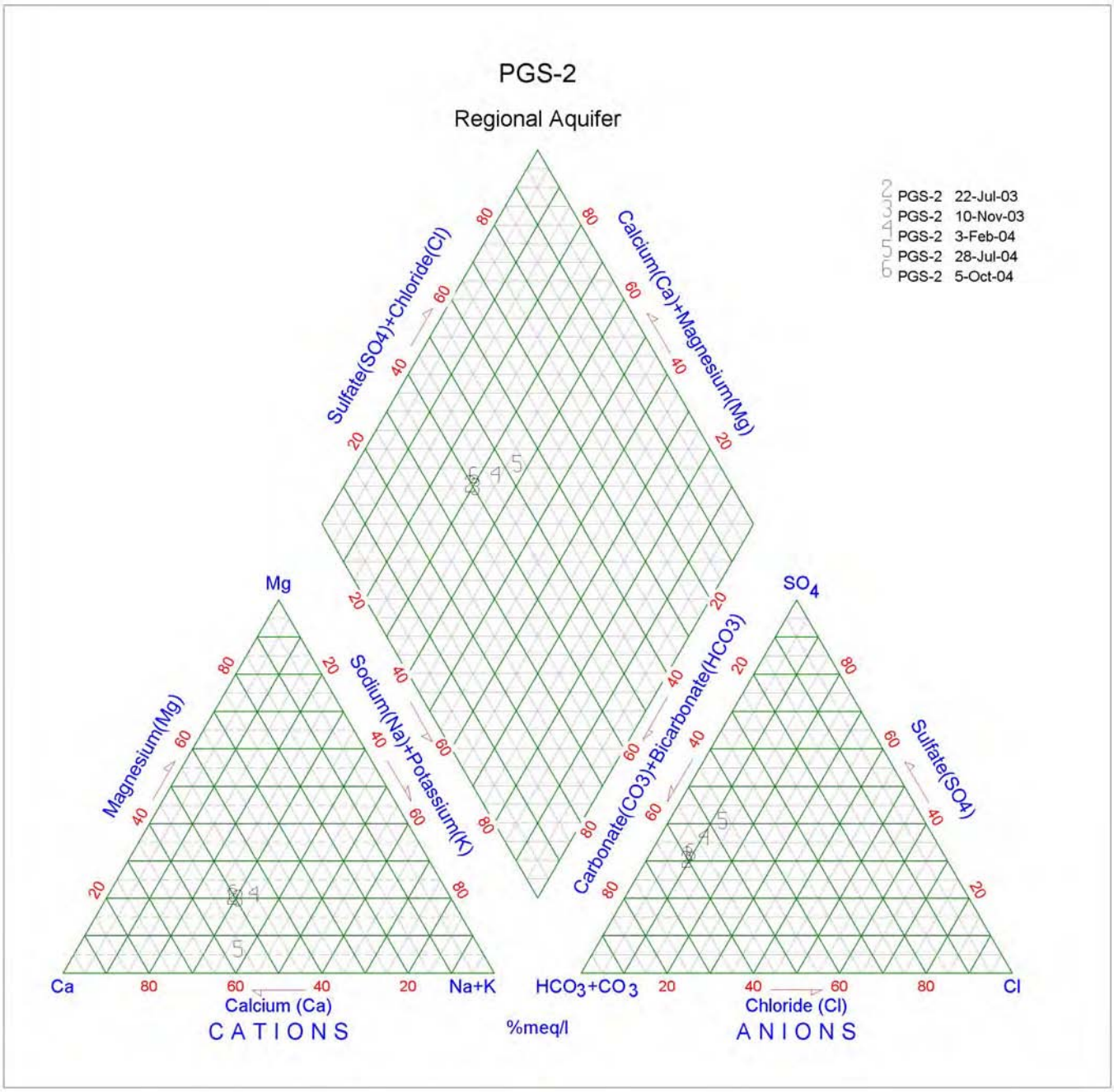
PGS-2
Regional Aquifer
PGS-2 22-Jul-03
PGS-2 10-Nov-03
PGS-2 3-Feb-04
PGS-2 28-Jul-04
PGS-2 5-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-29

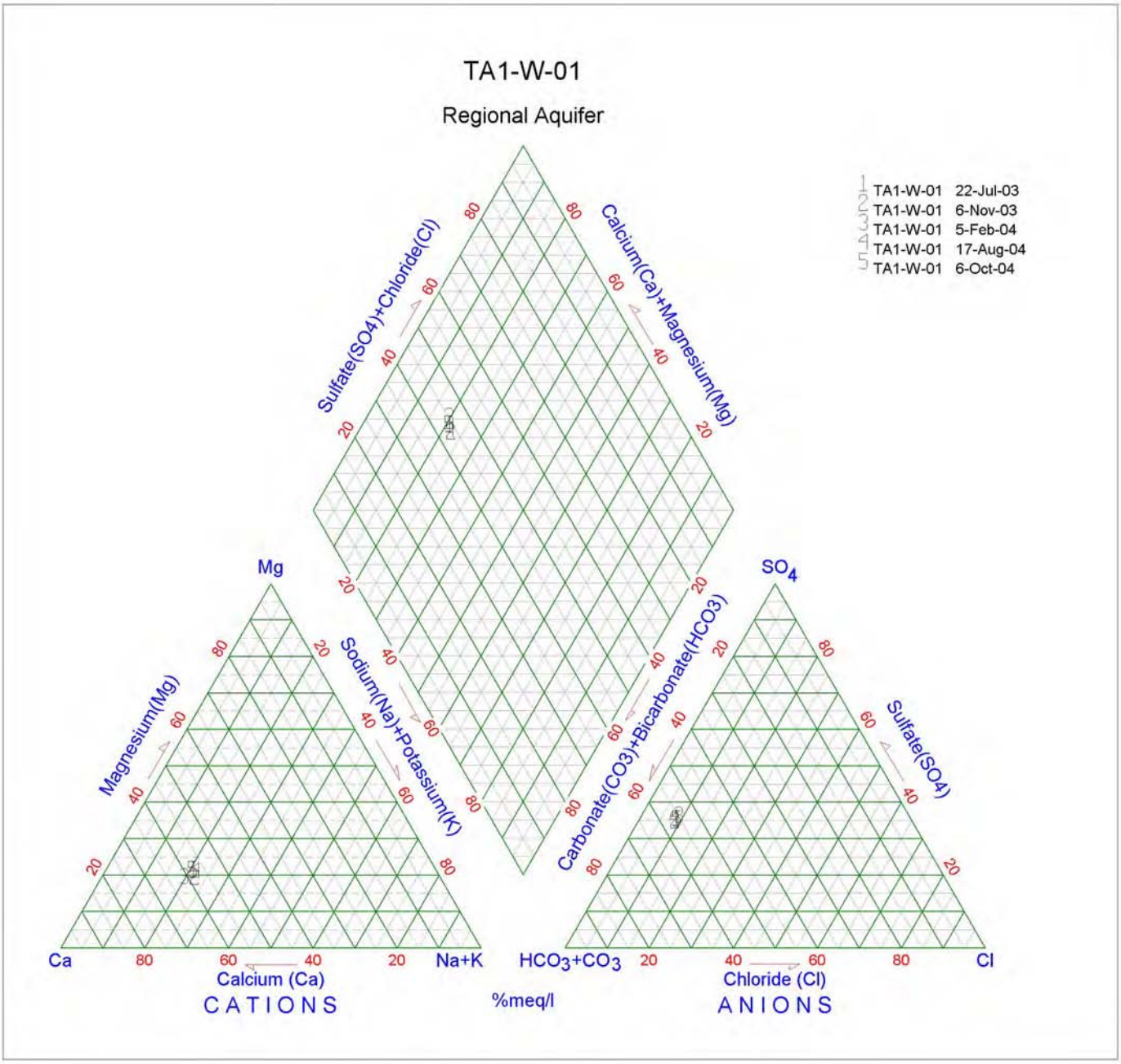
TA1-W-01
Regional Aquifer
TA1-W-01 22-Jul-03
TA1-W-01 6-Nov-03
TA1-W-01 5-Feb-04
TA1-W-01 17-Aug-04
TA1-W-01 6-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-30

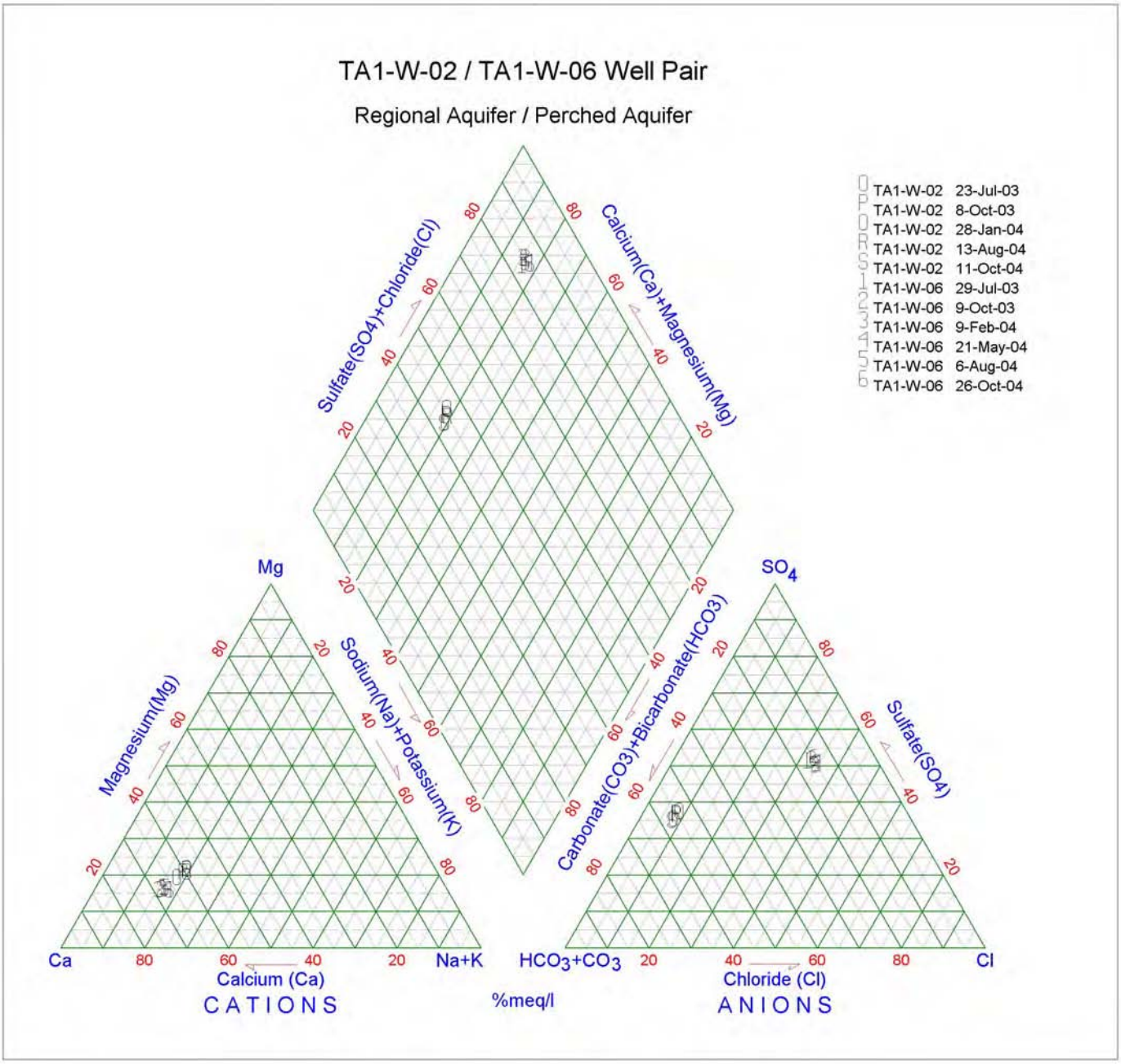
TA1-W-02 / TA1-W-06 Well Pair
Regional Aquifer / Perched Aquifer
TA1-W-02 23-Jul-03
TA1-W-02 8-Oct-03
TA1-W-02 28-Jan-04
TA1-W-02 13-Aug-04
TA1-W-02 11-Oct-04
TA1-W-06 29-Jul-03
TA1-W-06 9-Oct-03
TA1-W-06 9-Feb-04
TA1-W-06 21-May-04
TA1-W-06 6-Aug-04
TA1-W-06 26-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-31

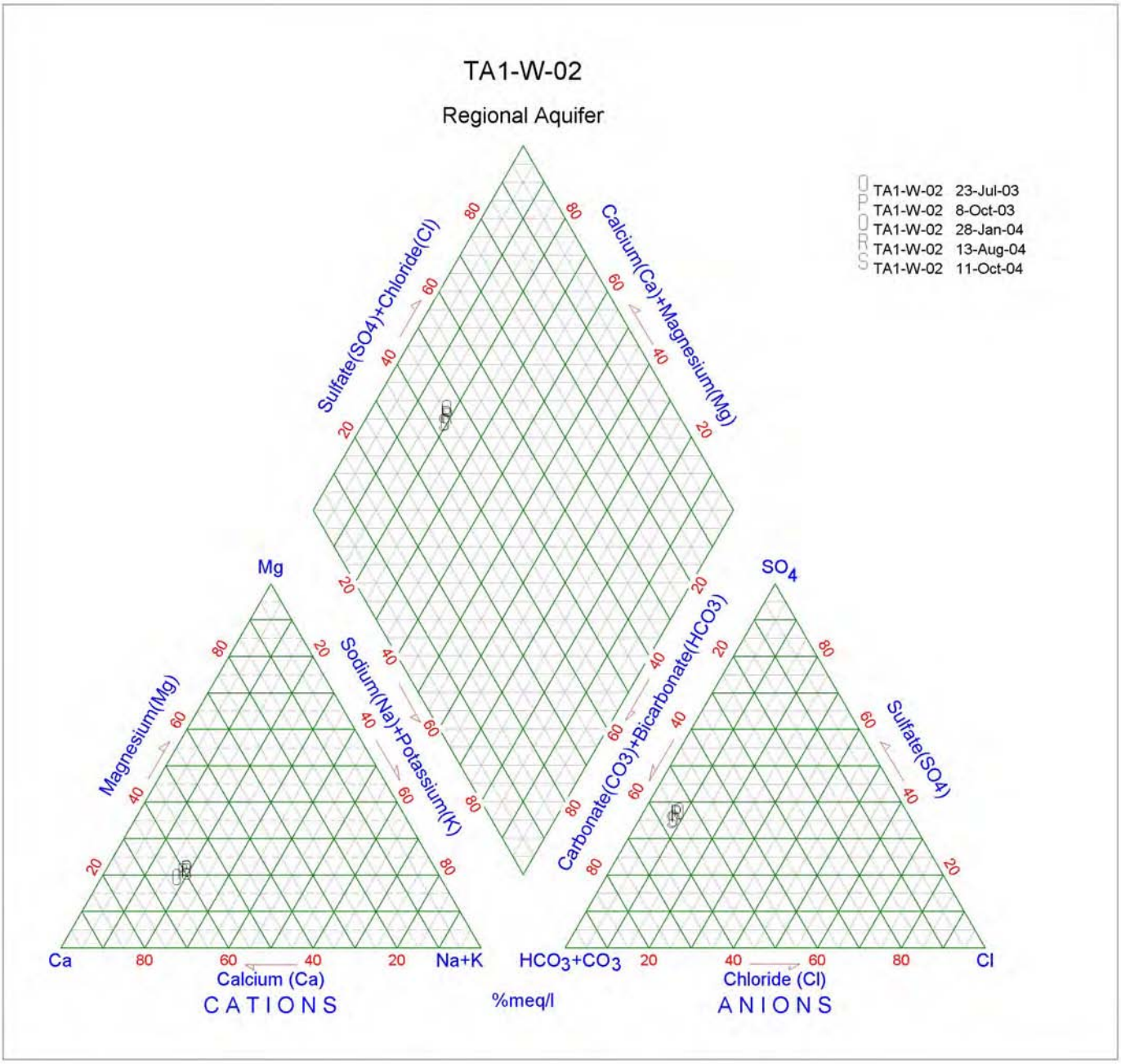
TA1-W-02
Regional Aquifer
TA1-W-02 23-Jul-03
TA1-W-02 8-Oct-03
TA1-W-02 28-Jan-04
TA1-W-02 13-Aug-04
TA1-W-02 11-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
SO4
Sulfate(SO4)
Ca
Na+K
Calcium (Ca)
CATIONS
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-32

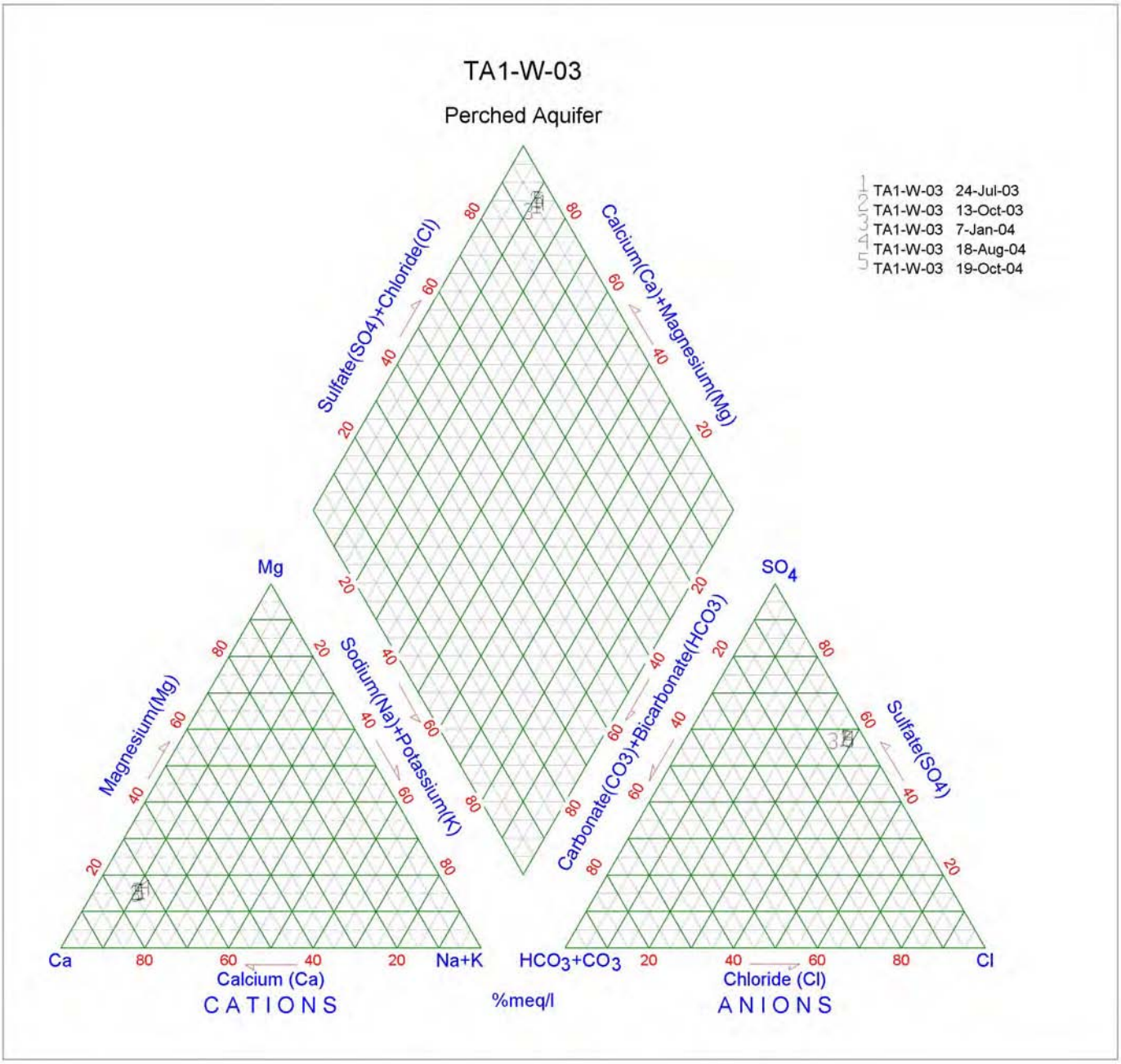
TA1-W-03
Perched Aquifer
TA1-W-03 24-Jul-03
TA1-W-03 13-Oct-03
TA1-W-03 7-Jan-04
TA1-W-03 18-Aug-04
TA1-W-03 19-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-33

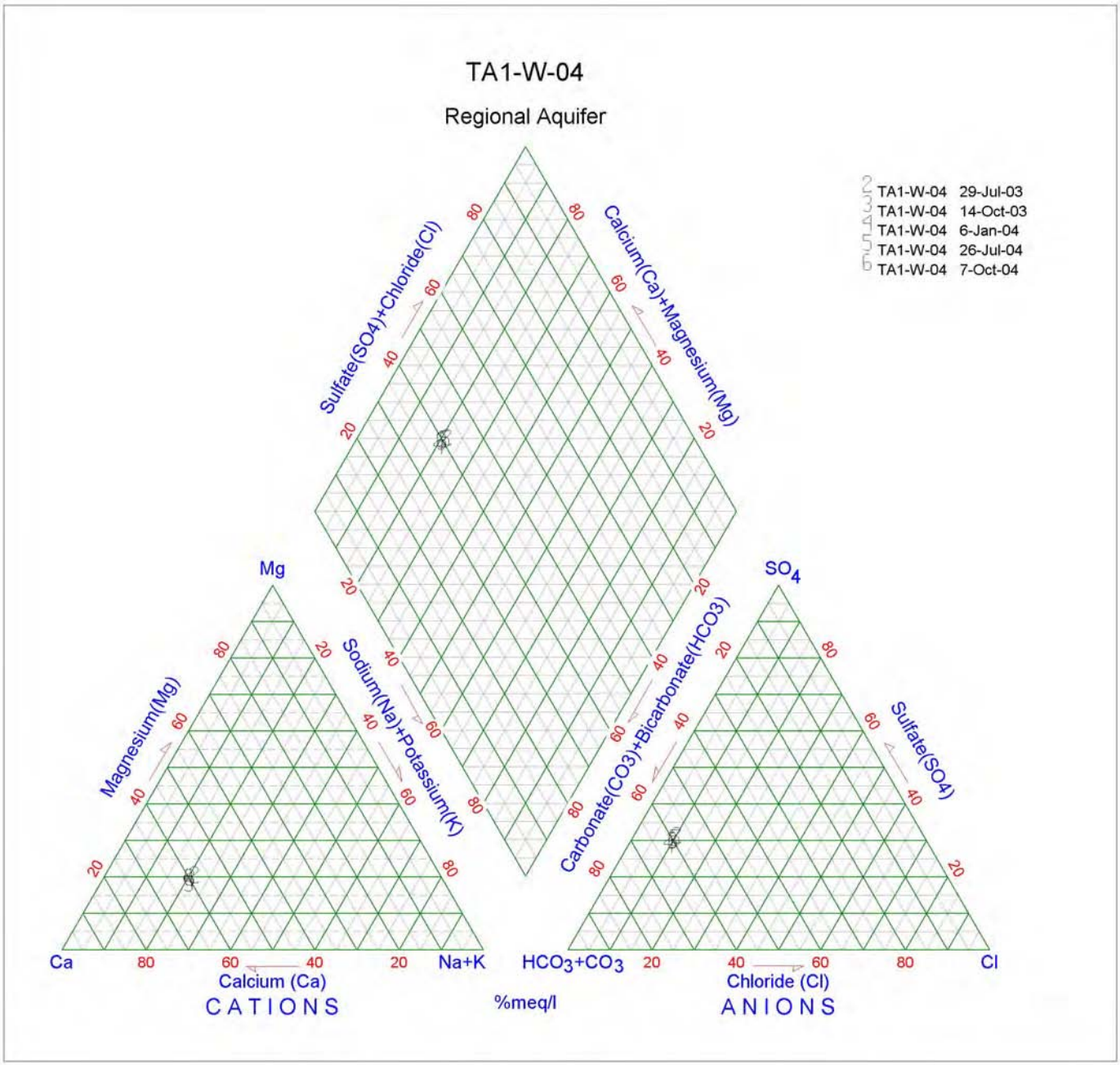
TA1-W-04
Regional Aquifer
TA1-W-04 29-Jul-03
TA1-W-04 14-Oct-03
TA1-W-04 6-Jan-04
TA1-W-04 26-Jul-04
TA1-W-04 7-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-34

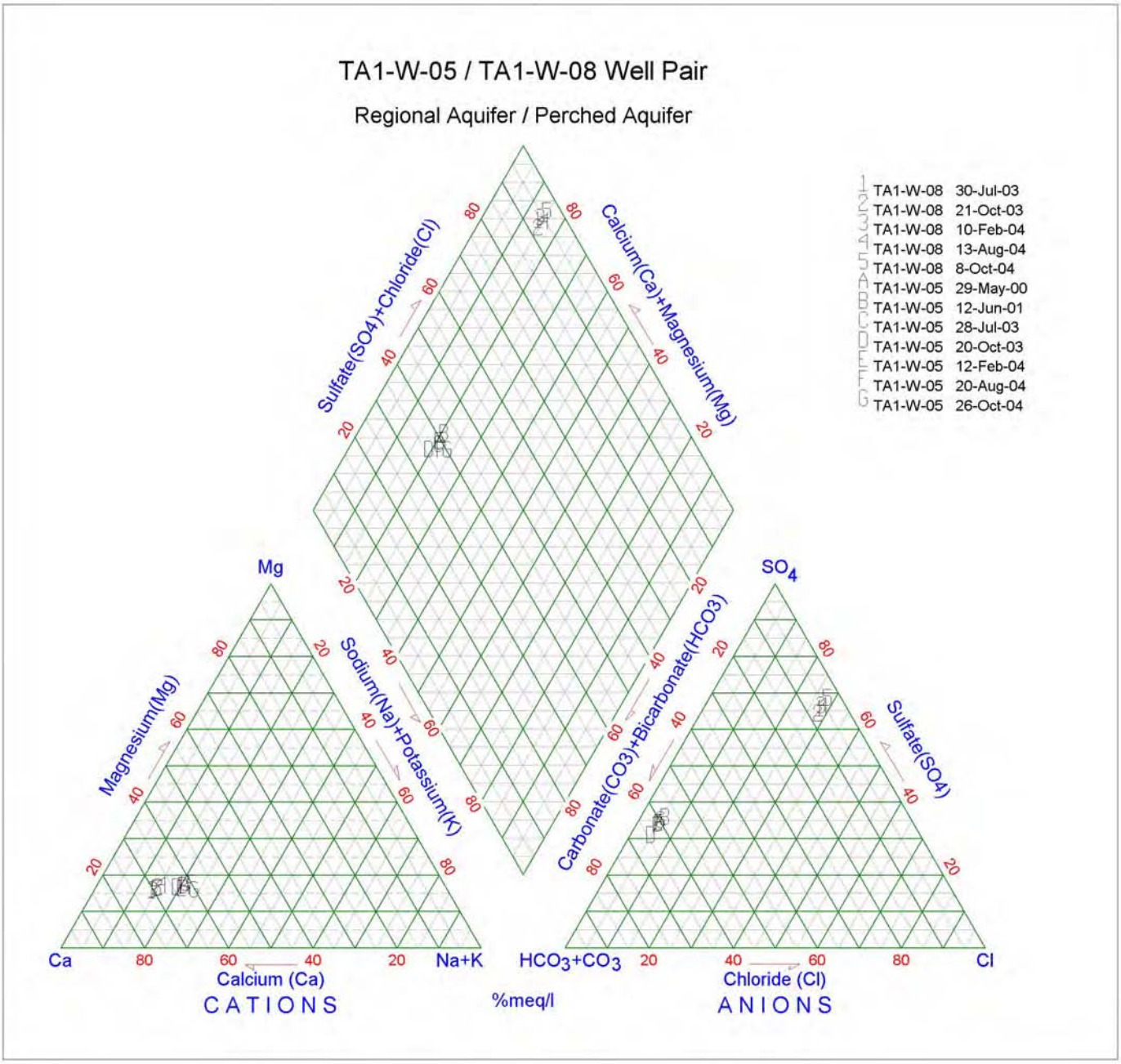
TA1-W-05 / TA1-W-08 Well Pair
Regional Aquifer / Perched Aquifer
TA1-W-08 30-Jul-03
TA1-W-08 21-Oct-03
TA1-W-08 10-Feb-04
TA1-W-08 13-Aug-04
TA1-W-08 8-Oct-04
TA1-W-05 29-May-00
TA1-W-05 12-Jun-01
TA1-W-05 28-Jul-03
TA1-W-05 20-Oct-03
TA1-W-05 12-Feb-04
TA1-W-05 20-Aug-04
TA1-W-05 26-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-35

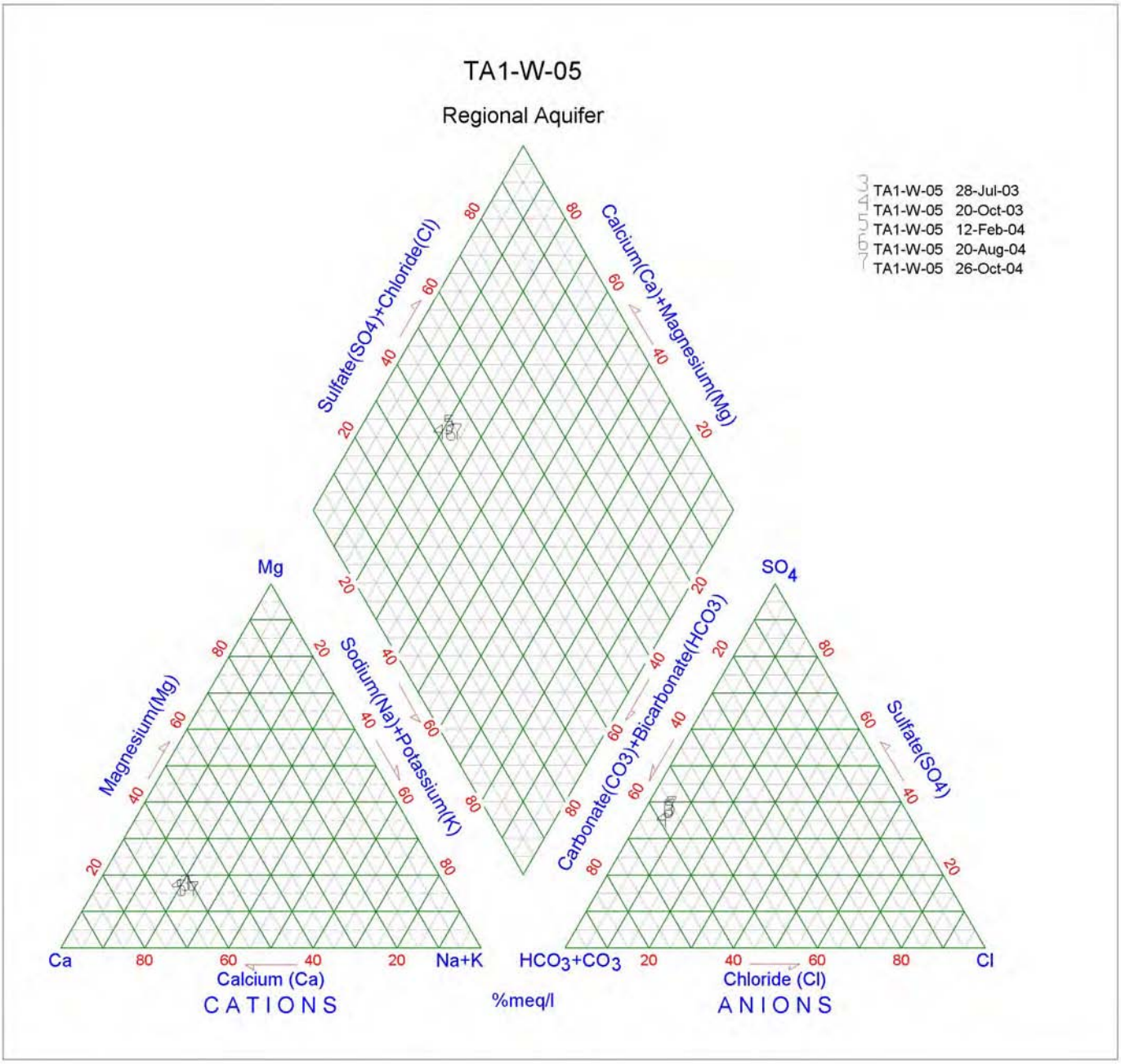
TA1-W-05
Regional Aquifer
TA1-W-05 28-Jul-03
TA1-W-05 20-Oct-03
TA1-W-05 12-Feb-04
TA1-W-05 20-Aug-04
TA1-W-05 26-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-36

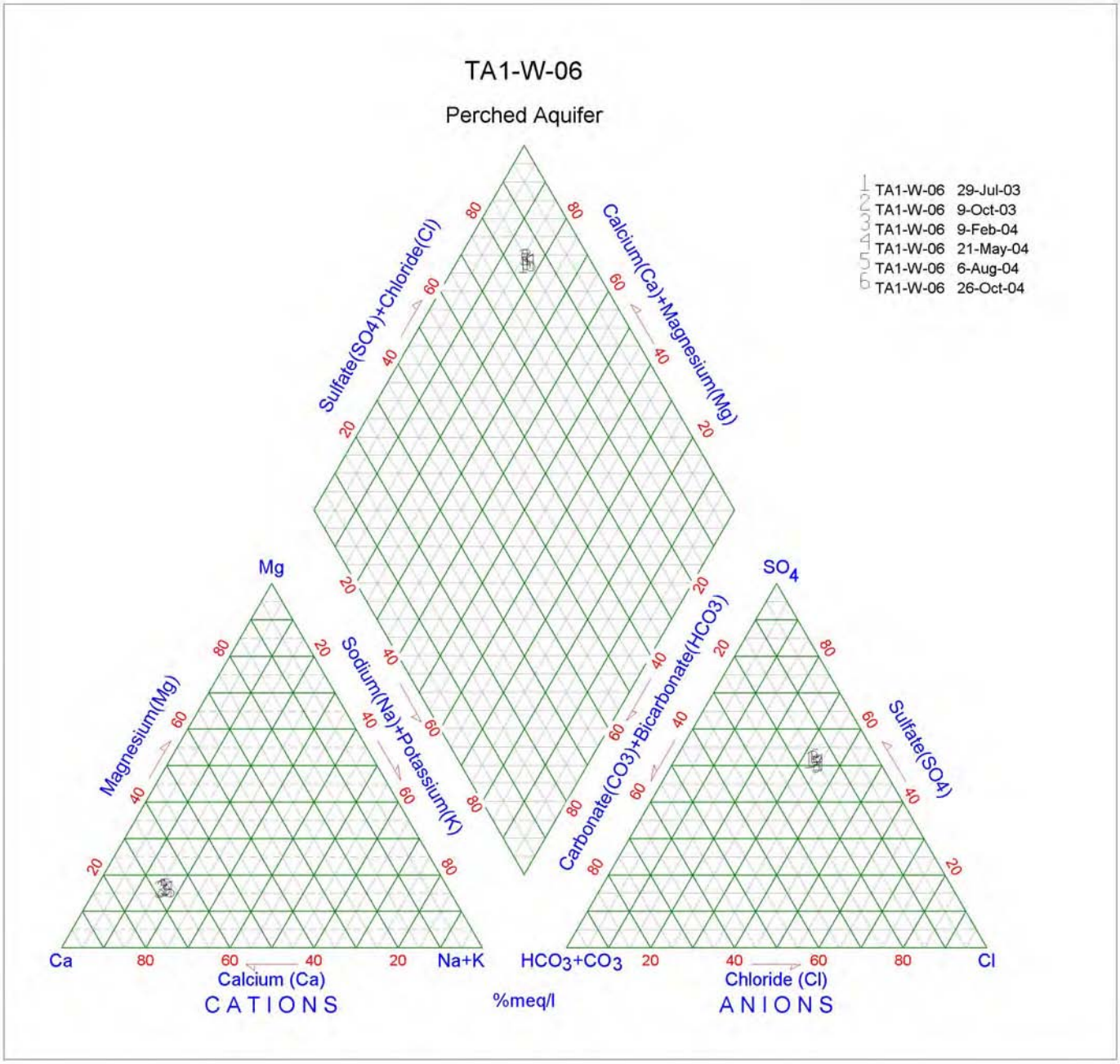
TA1-W-06
Perched Aquifer
TA1-W-06 29-Jul-03
TA1-W-06 9-Oct-03
TA1-W-06 9-Feb-04
TA1-W-06 21-May-04
TA1-W-06 6-Aug-04
TA1-W-06 26-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-37

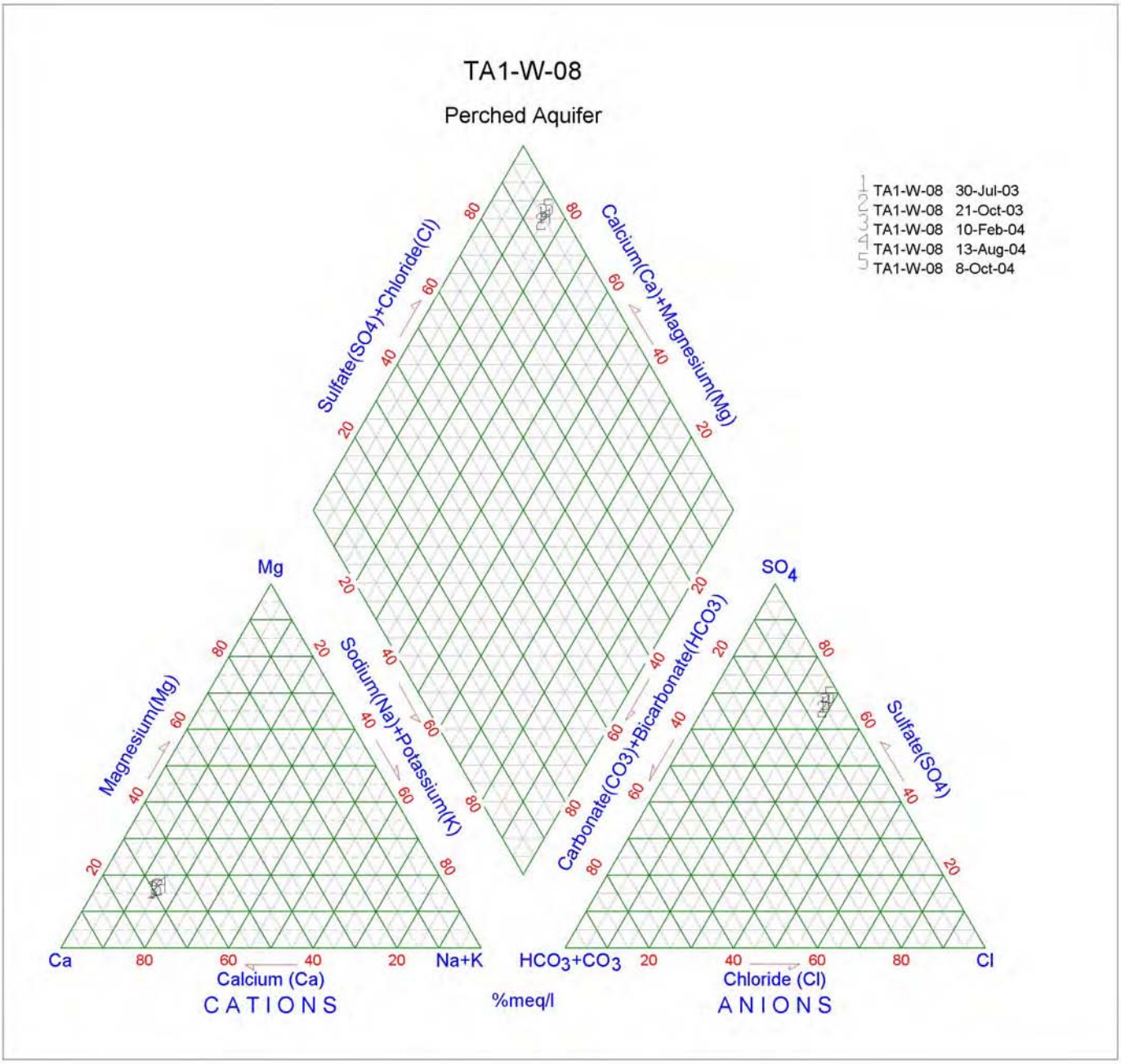
TA1-W-08
Perched Aquifer
TA1-W-08 30-Jul-03
TA1-W-08 21-Oct-03
TA1-W-08 10-Feb-04
TA1-W-08 13-Aug-04
TA1-W-08 8-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-38

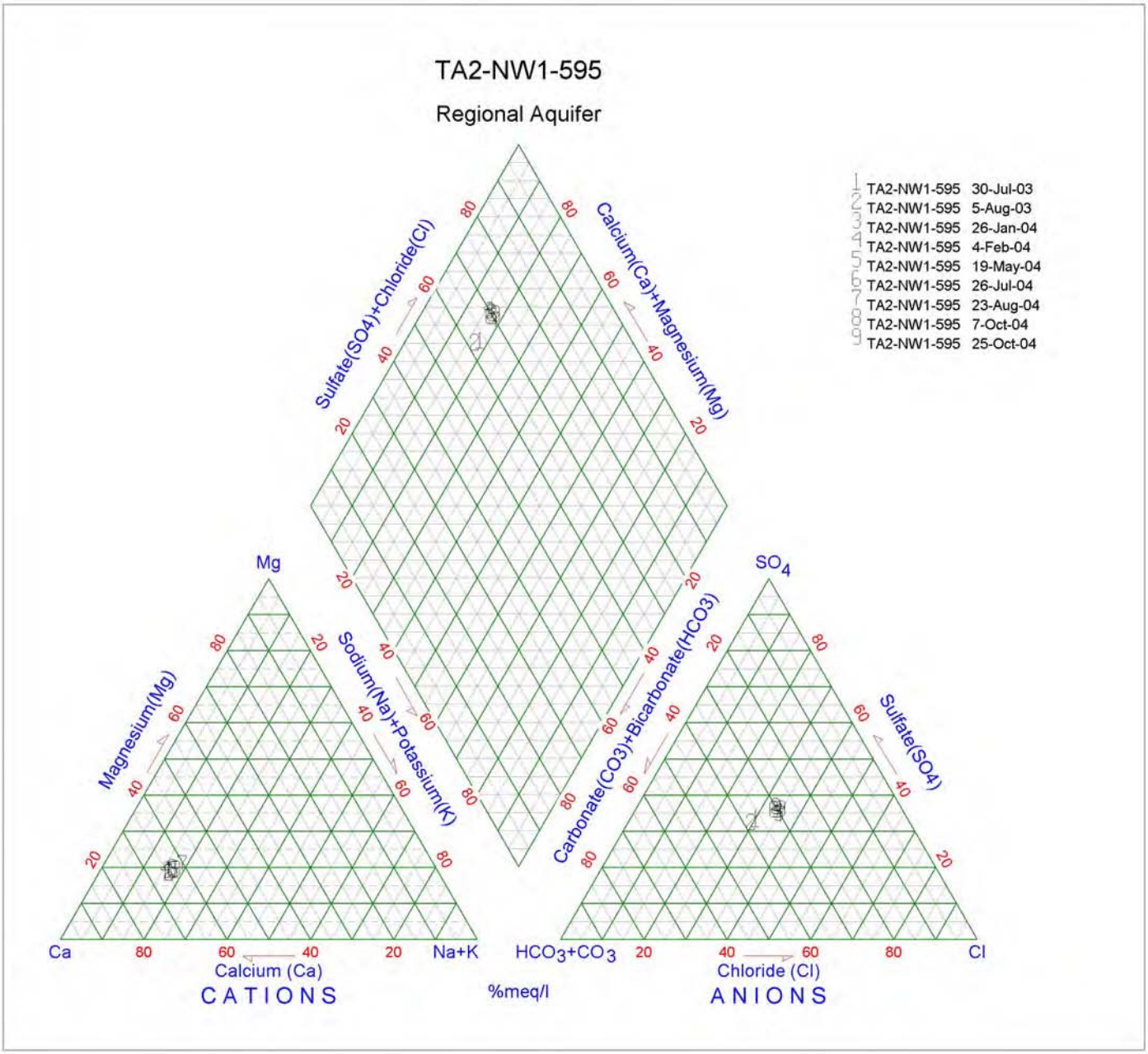
TA2-NW1-595
Regional Aquifer
TA2-NW1-595 30-Jul-03
TA2-NW1-595 5-Aug-03
TA2-NW1-595 26-Jan-04
TA2-NW1-595 4-Feb-04
TA2-NW1-595 19-May-04
TA2-NW1-595 26-Jul-04
TA2-NW1-595 23-Aug-04
TA2-NW1-595 7-Oct-04
TA2-NW1-595 25-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-39

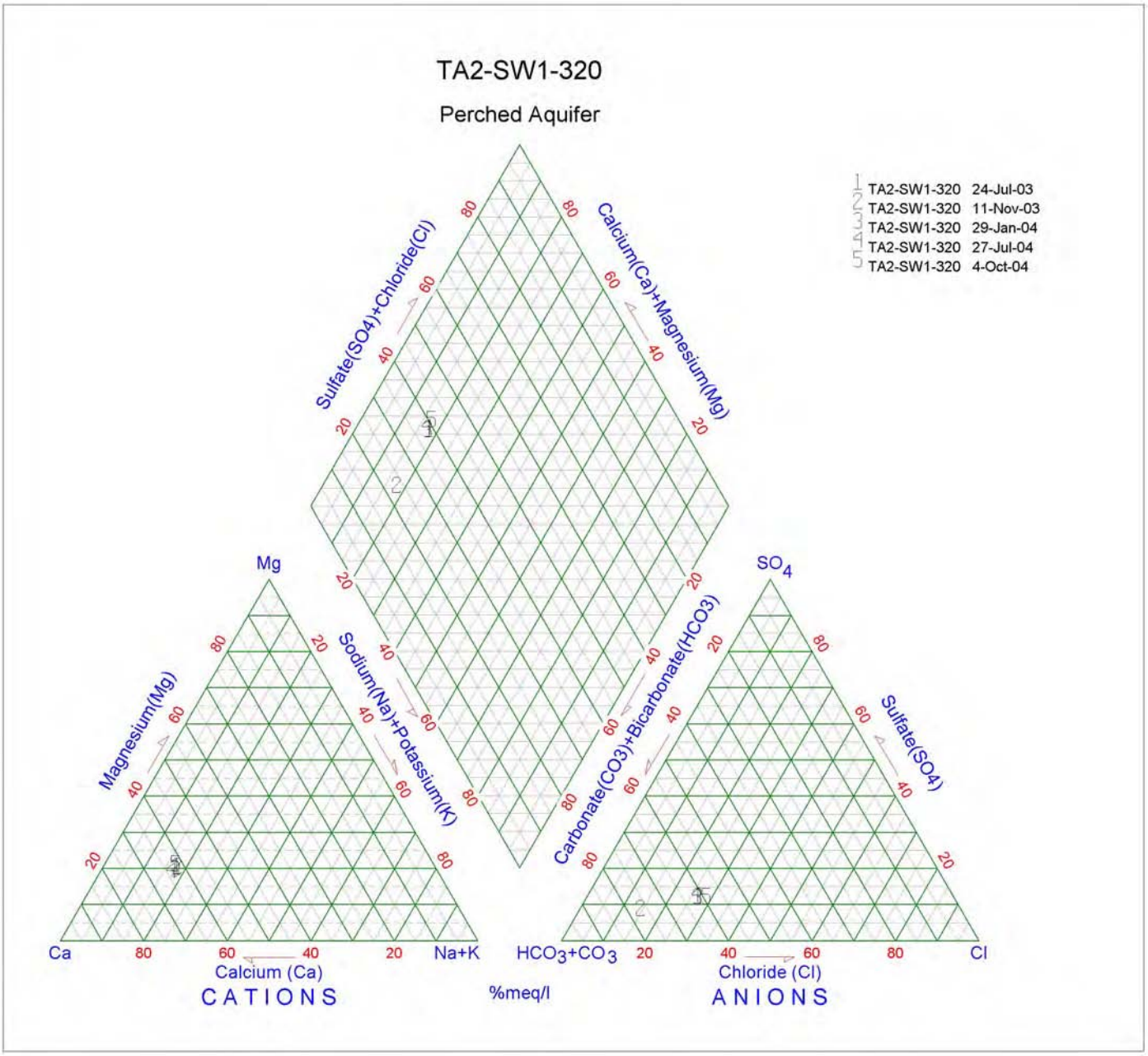
TA2-SW1-320
Perched Aquifer
TA2-SW1-320 24-Jul-03
TA2-SW1-320 11-Nov-03
TA2-SW1-320 29-Jan-04
TA2-SW1-320 27-Jul-04
TA2-SW1-320 4-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS
%meq/l

Figure H-40

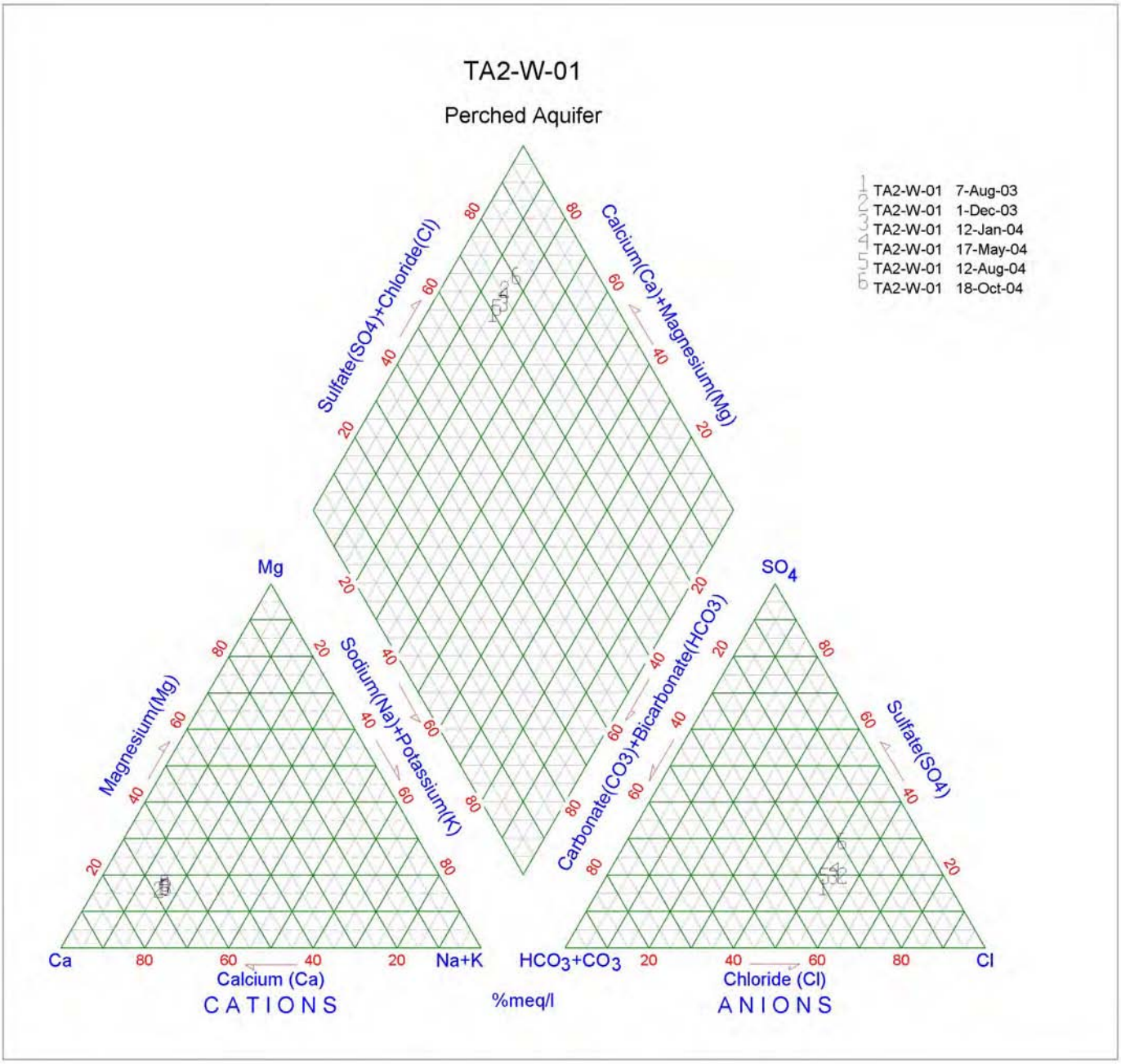
TA2-W-01
Perched Aquifer
TA2-W-01 7-Aug-03
TA2-W-01 1-Dec-03
TA2-W-01 12-Jan-04
TA2-W-01 17-May-04
TA2-W-01 12-Aug-04
TA2-W-01 18-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
CATIONS
%meq/l
Chloride (Cl)
ANIONS

Figure H-41

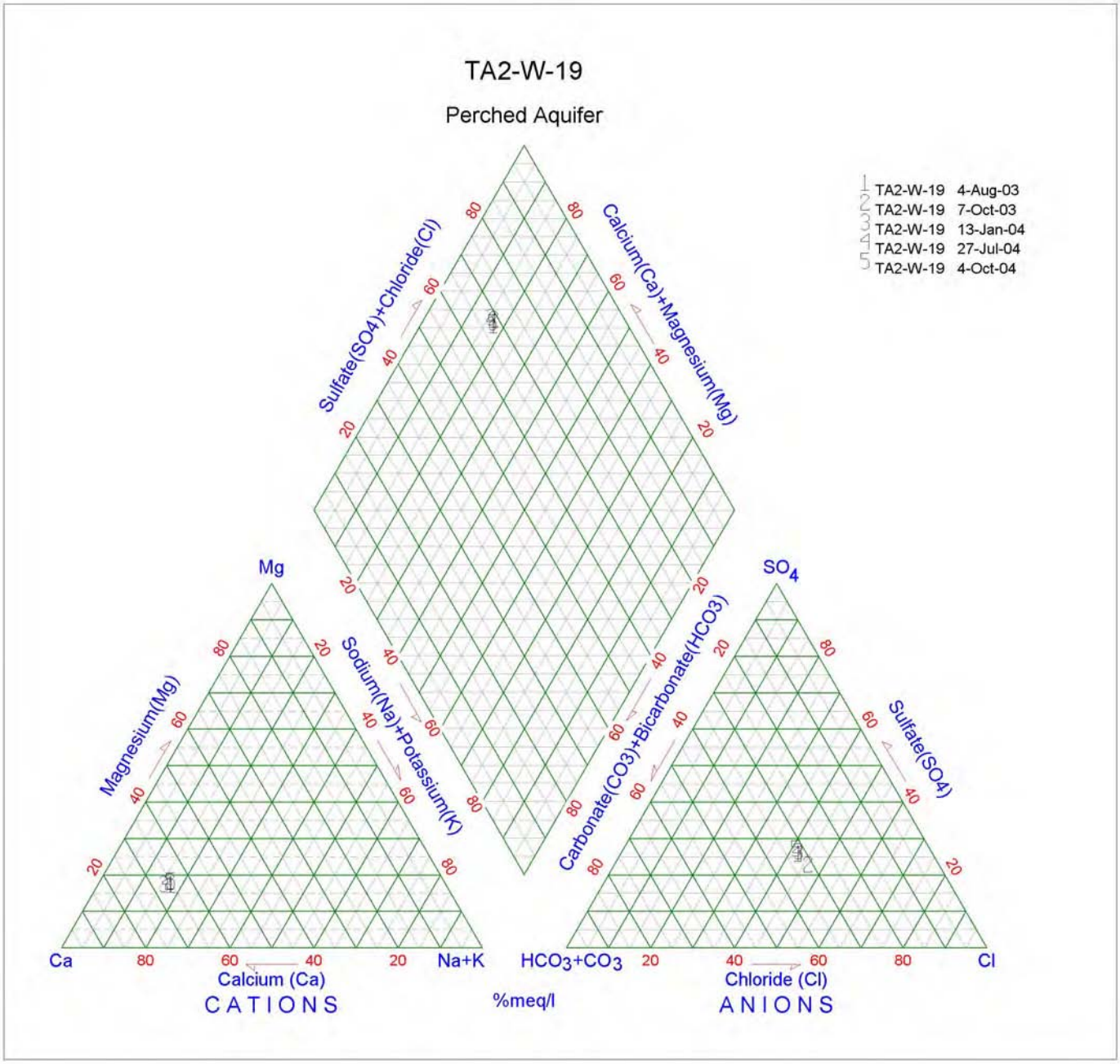
TA2-W-19
Perched Aquifer
TA2-W-19 4-Aug-03
TA2-W-19 7-Oct-03
TA2-W-19 13-Jan-04
TA2-W-19 27-Jul-04
TA2-W-19 4-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
CATIONS
%meq/l
Chloride (Cl)
ANIONS

Figure H-42

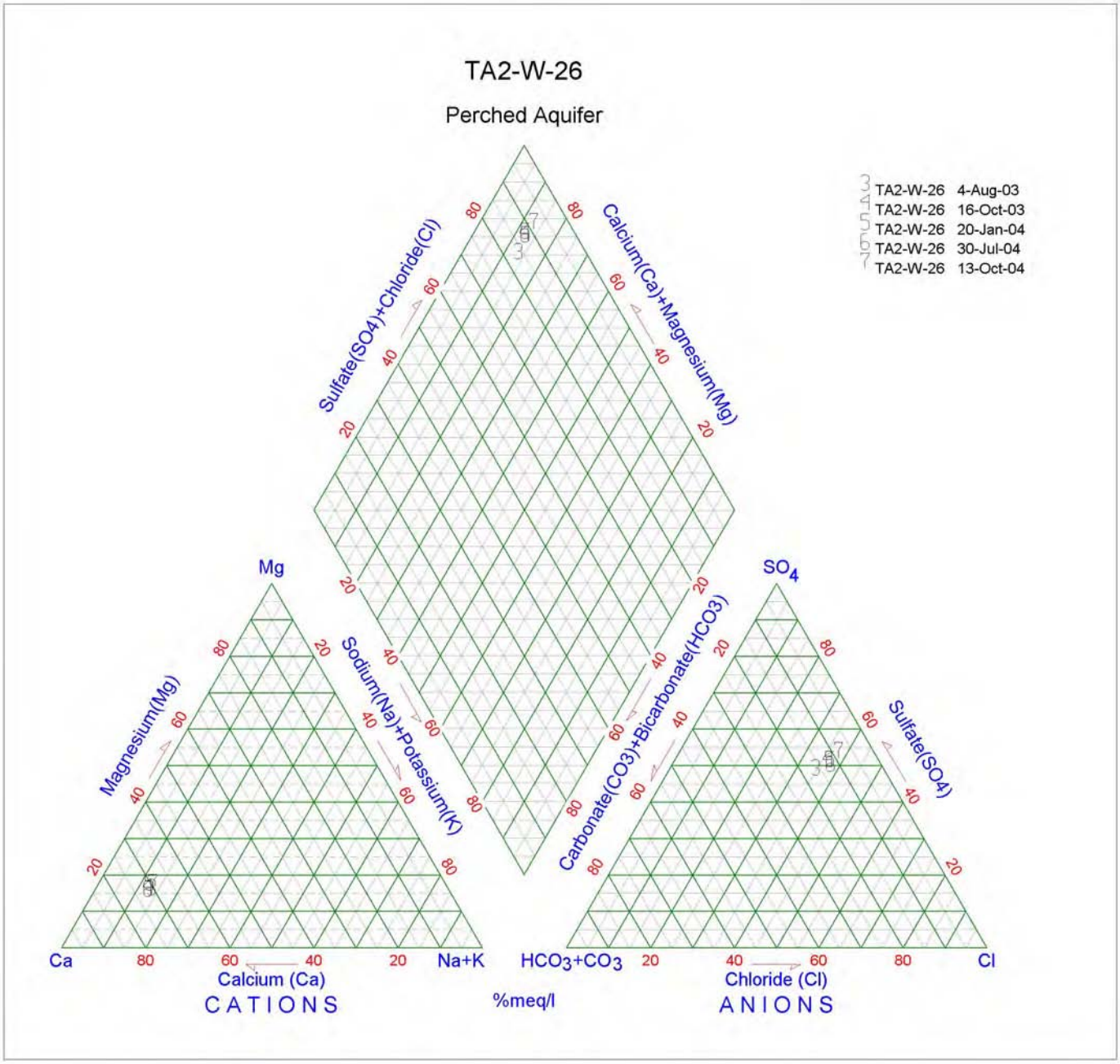
TA2-W-26
Perched Aquifer
TA2-W-26 4-Aug-03
TA2-W-26 16-Oct-03
TA2-W-26 20-Jan-04
TA2-W-26 30-Jul-04
TA2-W-26 13-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
SO4
Magnesium(Mg)
Sulfate(SO4)
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-43

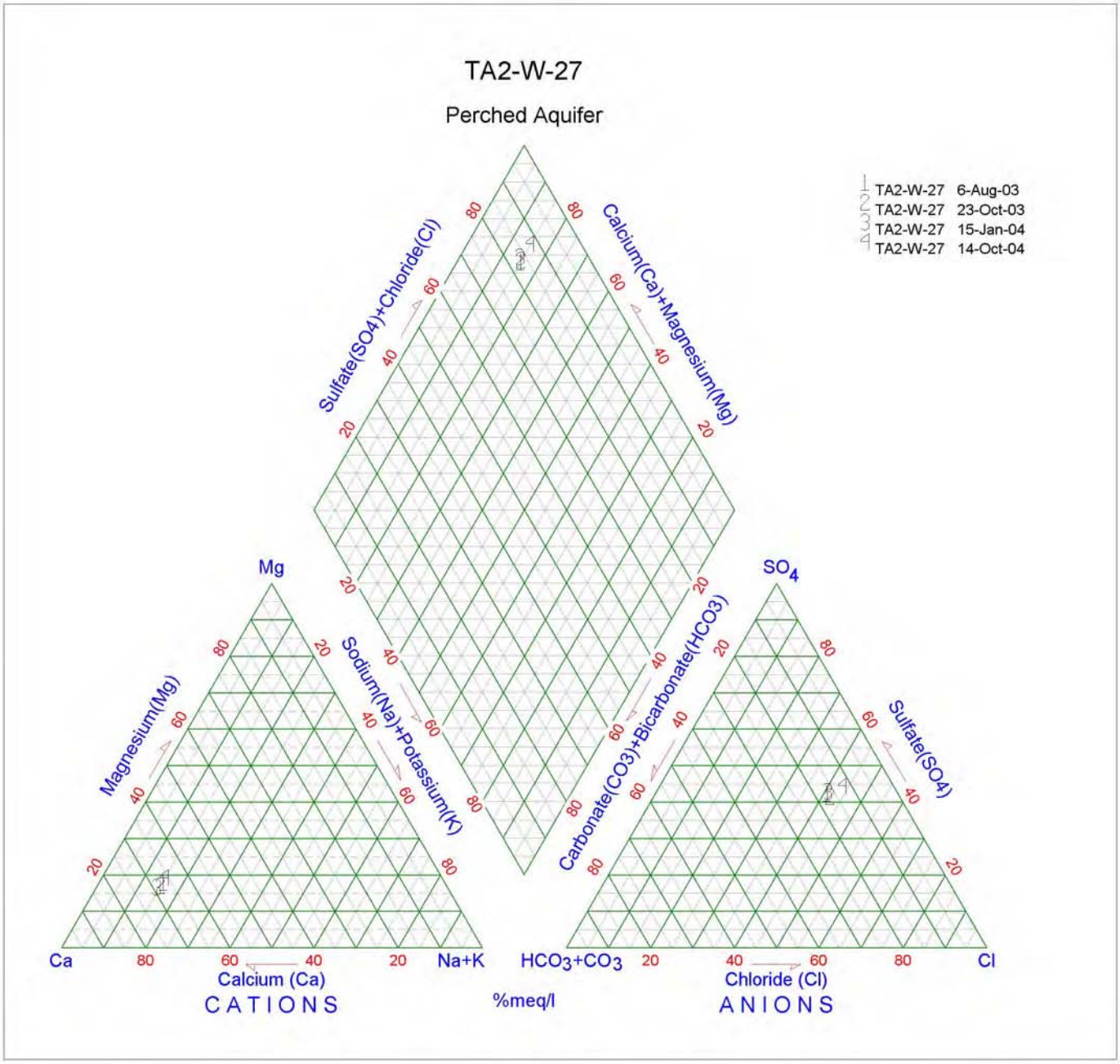
TA2-W-27
Perched Aquifer
TA2-W-27 6-Aug-03
TA2-W-27 23-Oct-03
TA2-W-27 15-Jan-04
TA2-W-27 14-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
CATIONS
%meq/l
Chloride (Cl)
ANIONS

Figure H-44

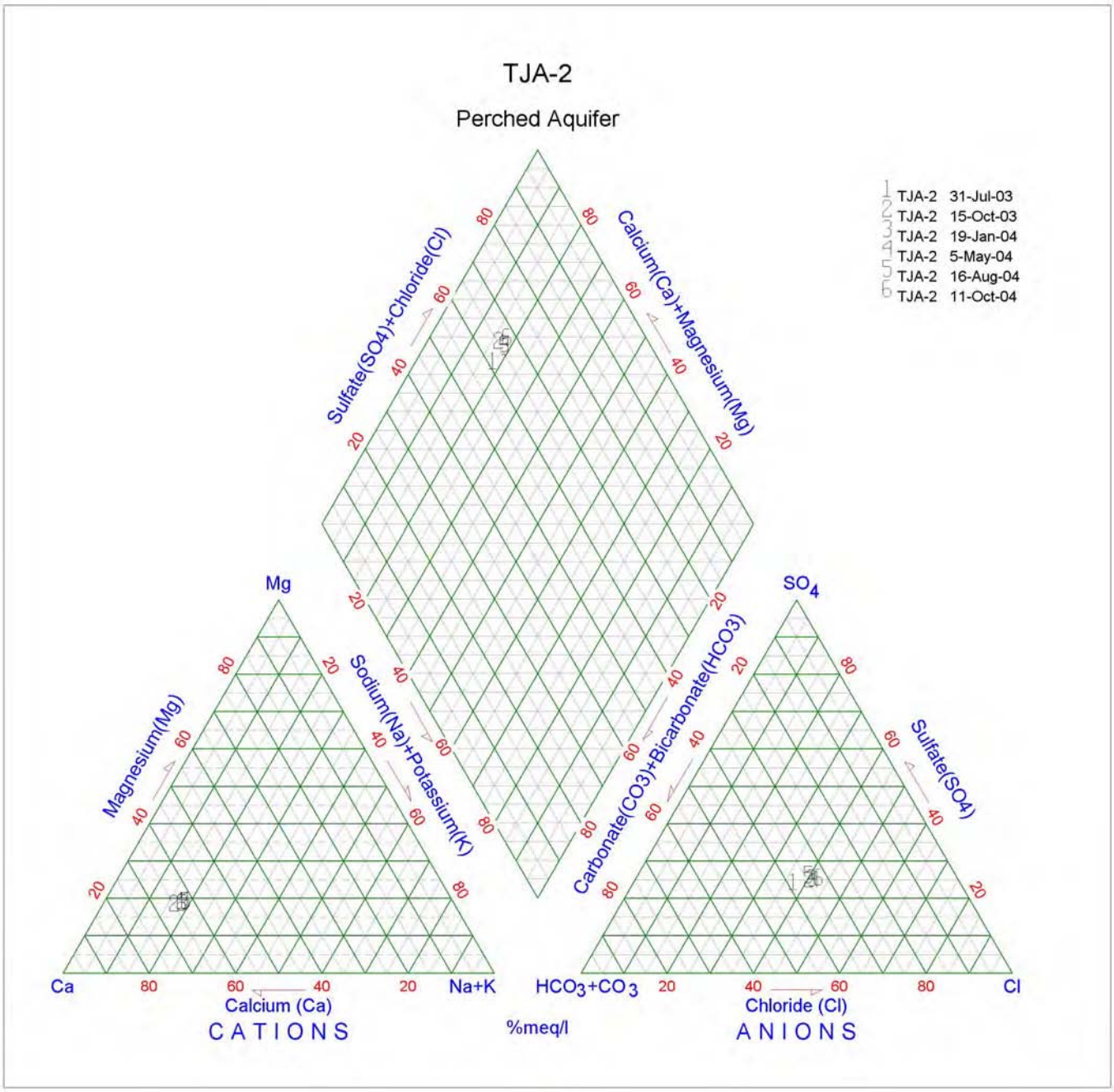
TJA-2
Perched Aquifer
TJA-2 31-Jul-03
TJA-2 15-Oct-03
TJA-2 19-Jan-04
TJA-2 5-May-04
TJA-2 16-Aug-04
TJA-2 11-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-45

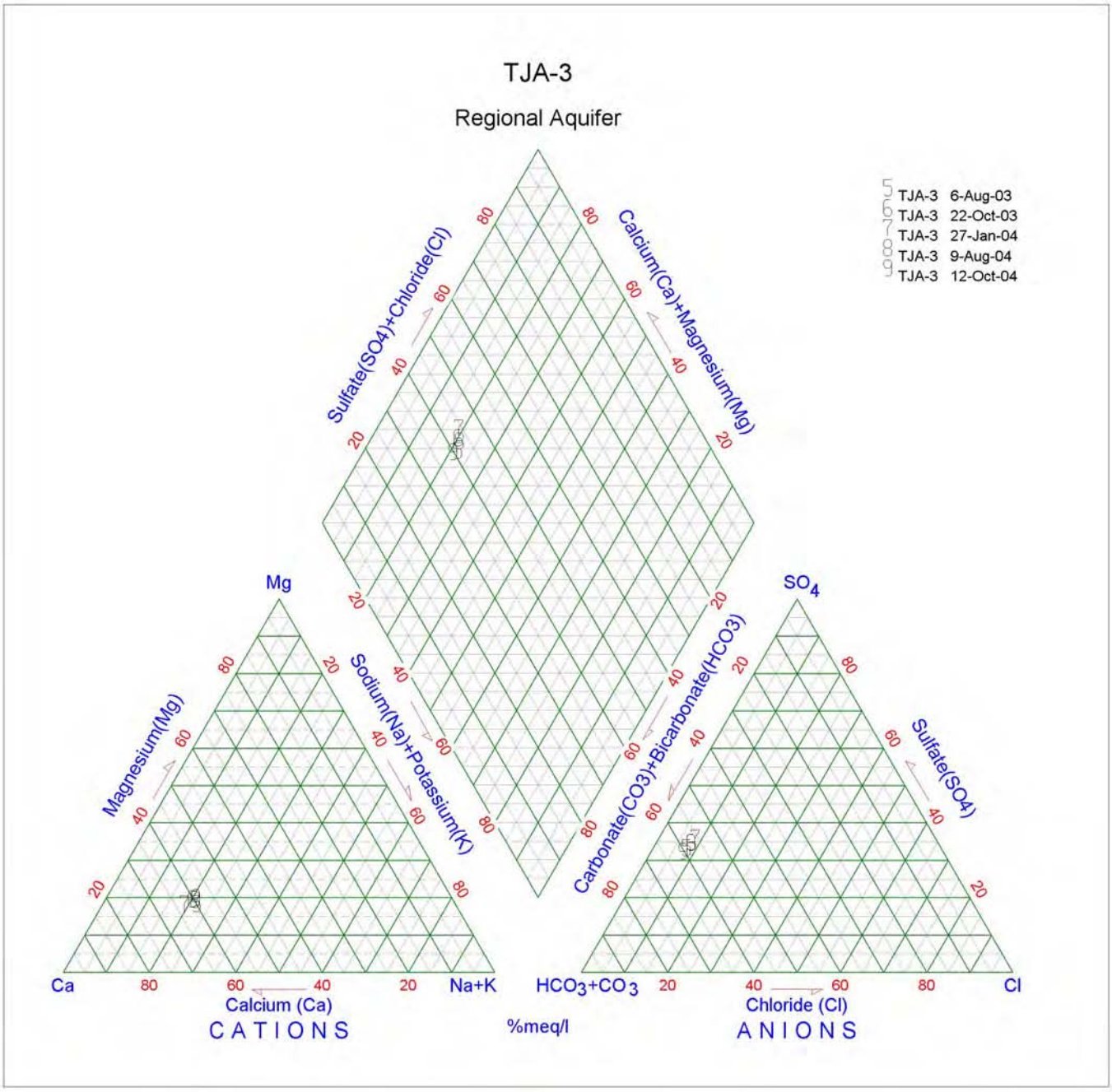
TJA-3
Regional Aquifer
TJA-3 6-Aug-03
TJA-3 22-Oct-03
TJA-3 27-Jan-04
TJA-3 9-Aug-04
TJA-3 12-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-46

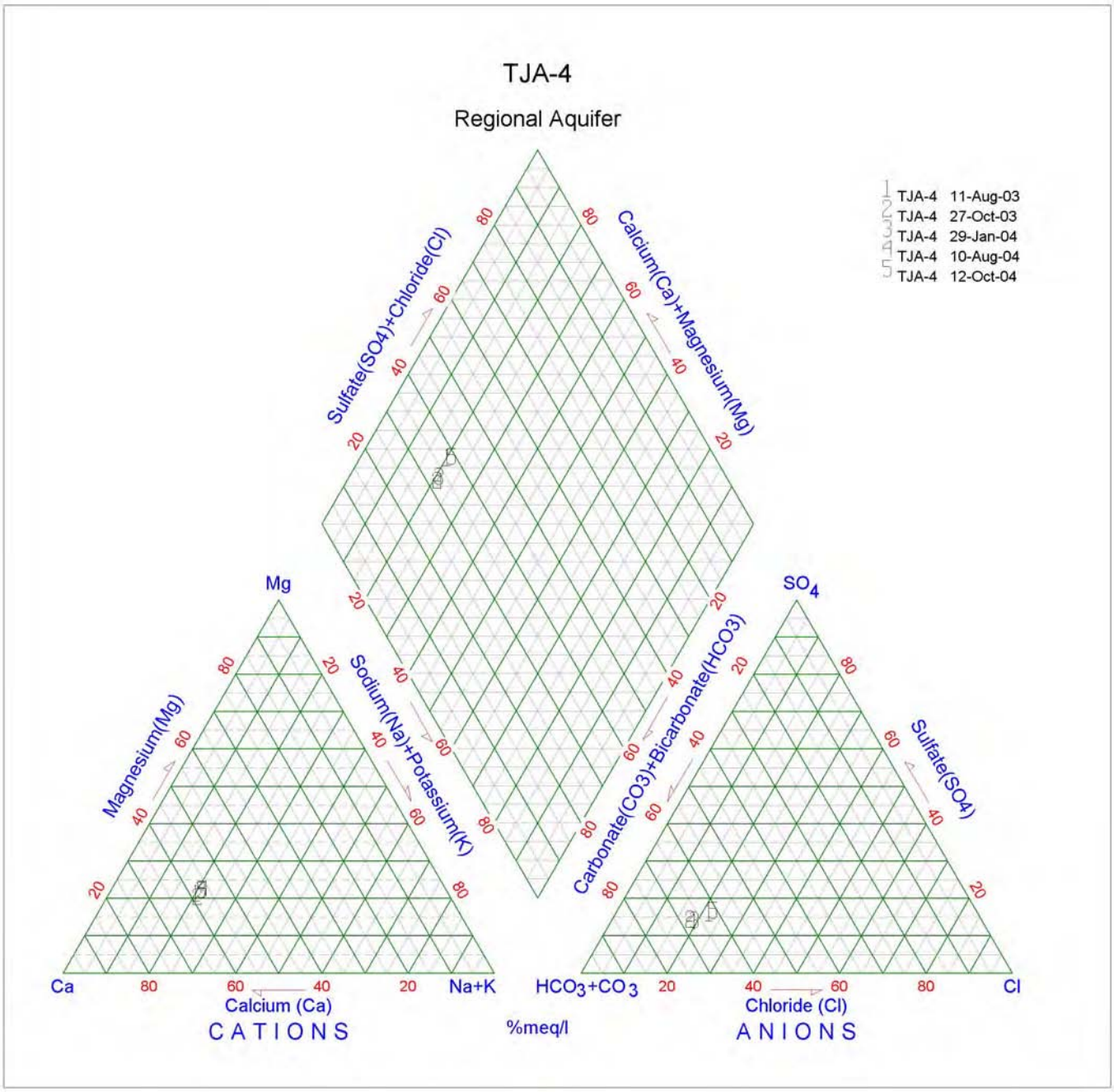
TJA-4
Regional Aquifer
TJA-4 11-Aug-03
TJA-4 27-Oct-03
TJA-4 29-Jan-04
TJA-4 10-Aug-04
TJA-4 12-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Calcium (Ca)
CATIONS
Na+K
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-47

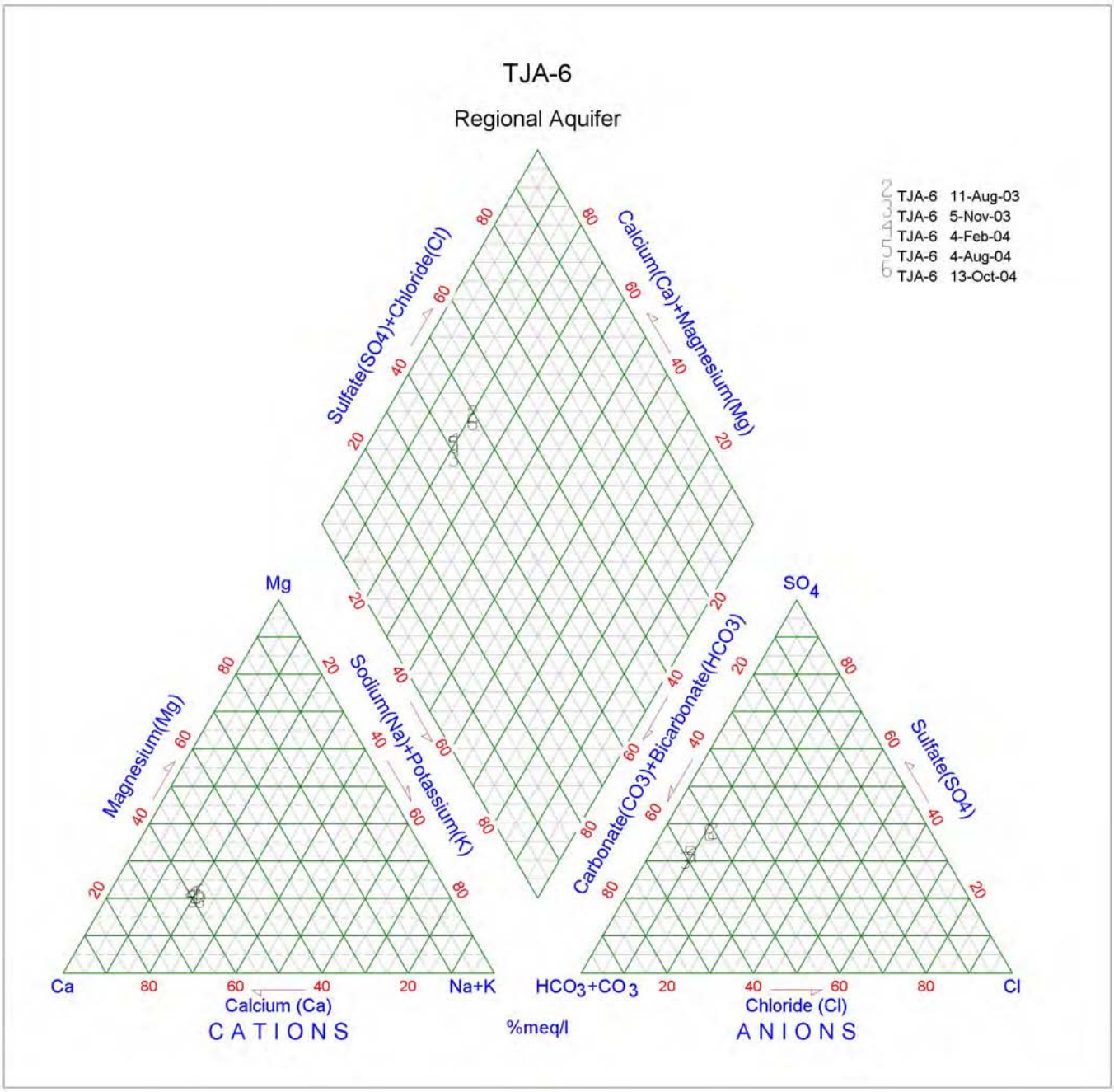
TJA-6
Regional Aquifer
TJA-6 11-Aug-03
TJA-6 5-Nov-03
TJA-6 4-Feb-04
TJA-6 4-Aug-04
TJA-6 13-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Calcium (Ca)
CATIONS
Na+K
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-48

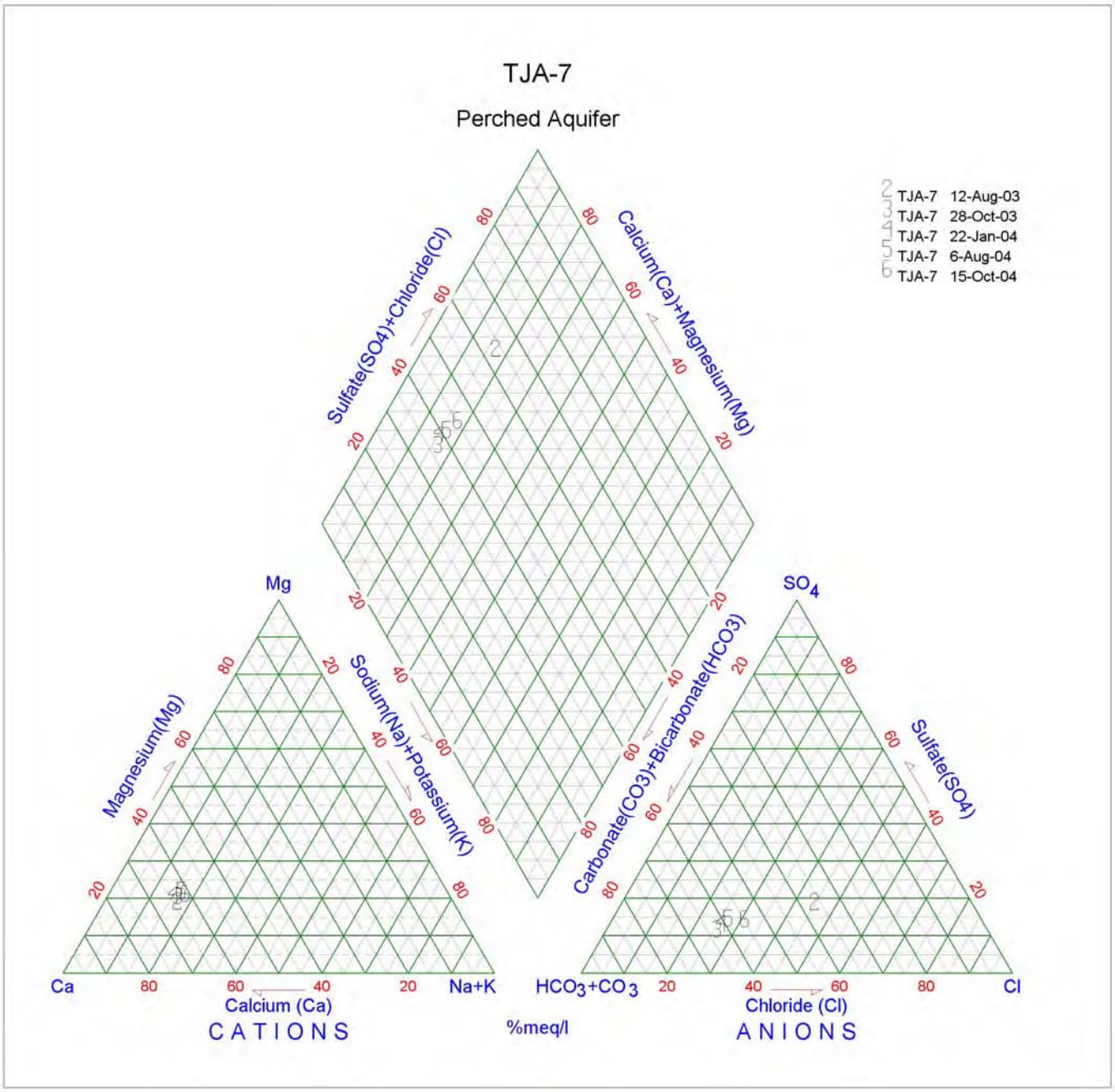
TJA-7
Perched Aquifer
TJA-7 12-Aug-03
TJA-7 28-Oct-03
TJA-7 22-Jan-04
TJA-7 6-Aug-04
TJA-7 15-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

Figure H-49

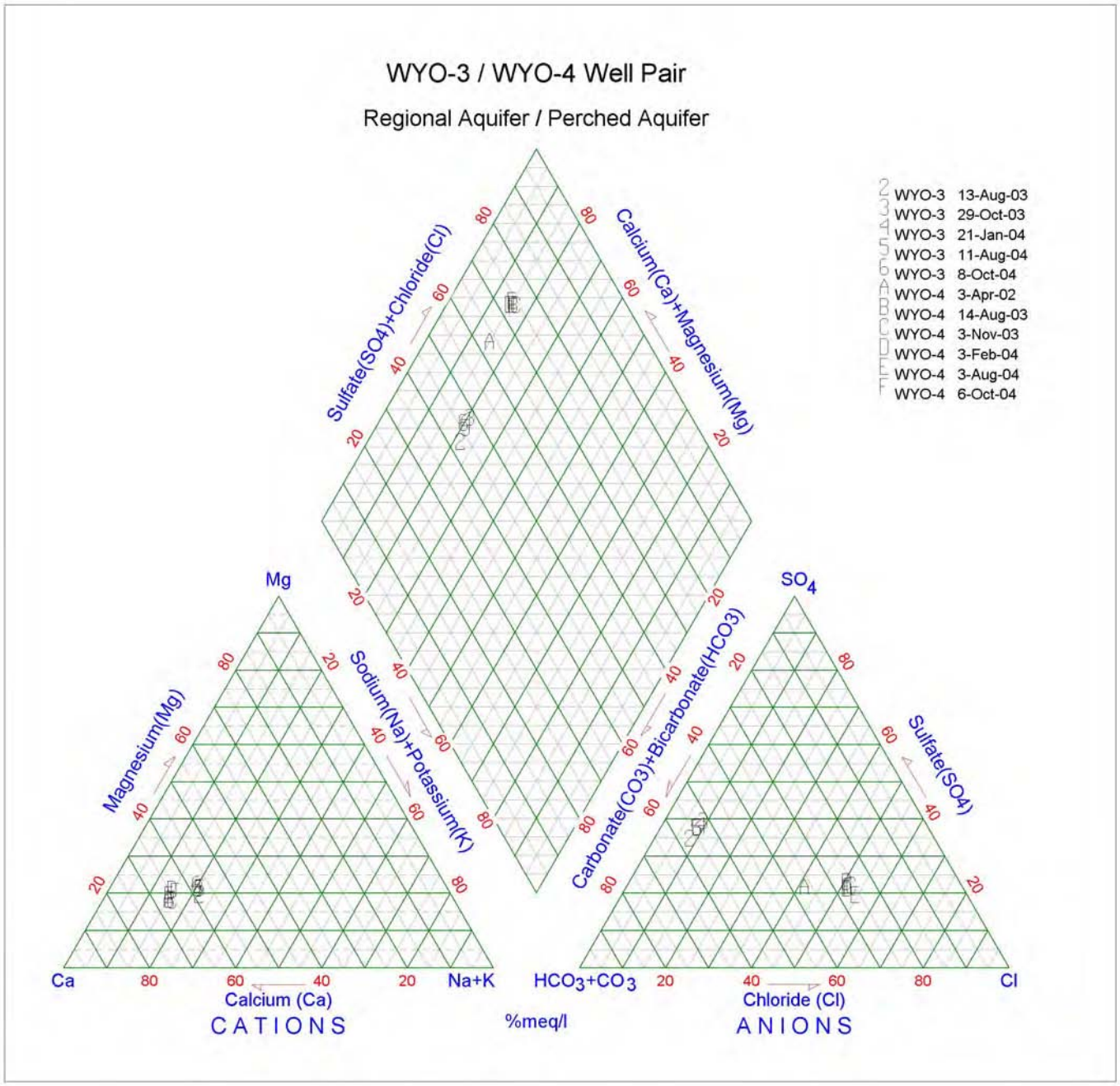
WYO-3 / WYO-4 Well Pair
Regional Aquifer / Perched Aquifer
WYO-3 13-Aug-03
WYO-3 29-Oct-03
WYO-3 21-Jan-04
WYO-3 11-Aug-04
WYO-3 8-Oct-04
WYO-4 3-Apr-02
WYO-4 14-Aug-03
WYO-4 3-Nov-03
WYO-4 3-Feb-04
WYO-4 3-Aug-04
WYO-4 6-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Calcium (Ca)
Na+K
CATIONS
%meq/l
SO4
Sulfate(SO4)
HCO3+CO3
Chloride (Cl)
Cl
ANIONS

Figure H-50

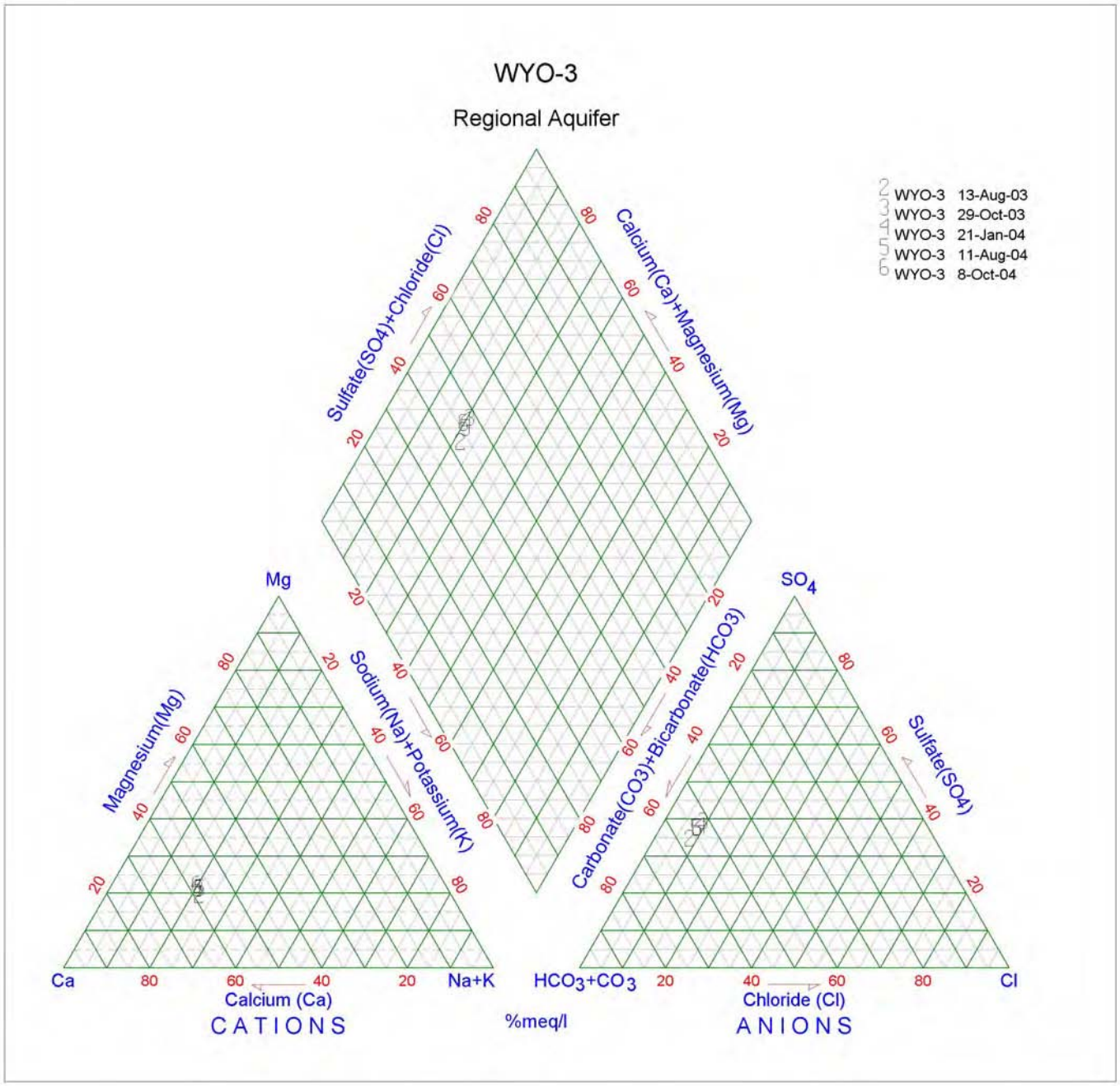
WYO-3
Regional Aquifer
WYO-3 13-Aug-03
WYO-3 29-Oct-03
WYO-3 21-Jan-04
WYO-3 11-Aug-04
WYO-3 8-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Calcium (Ca)
Na+K
CATIONS
%meq/l
SO4
Sulfate(SO4)
HCO3+CO3
Chloride (Cl)
Cl
ANIONS

Figure H-51

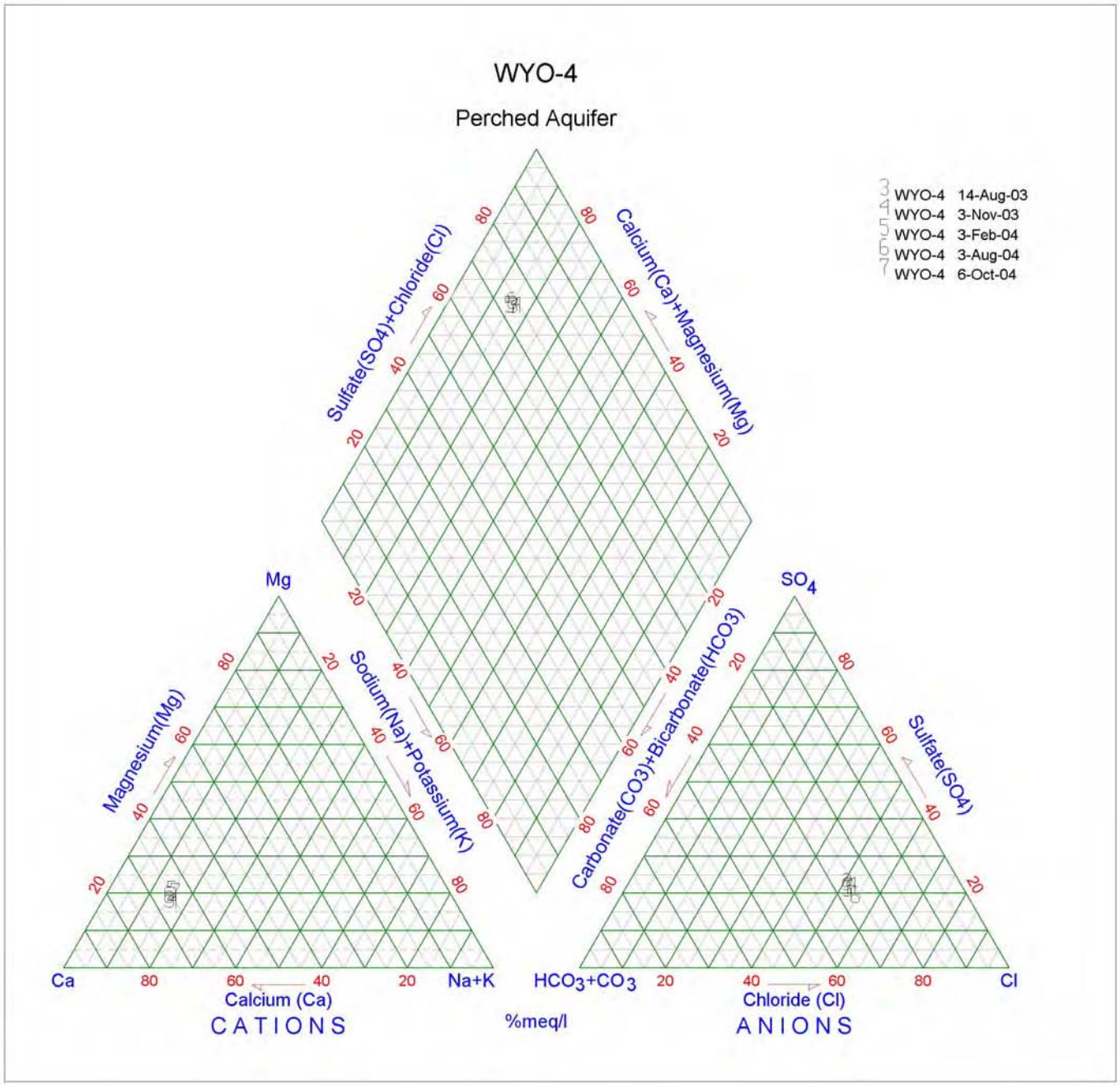
WYO-4
Perched Aquifer
WYO-4 14-Aug-03
WYO-4 3-Nov-03
WYO-4 3-Feb-04
WYO-4 3-Aug-04
WYO-4 6-Oct-04
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Calcium (Ca)
CATIONS
Na+K
SO4
Sulfate(SO4)
Cl
Chloride (Cl)
ANIONS
HCO3+CO3
%meq/l

Figure H-52

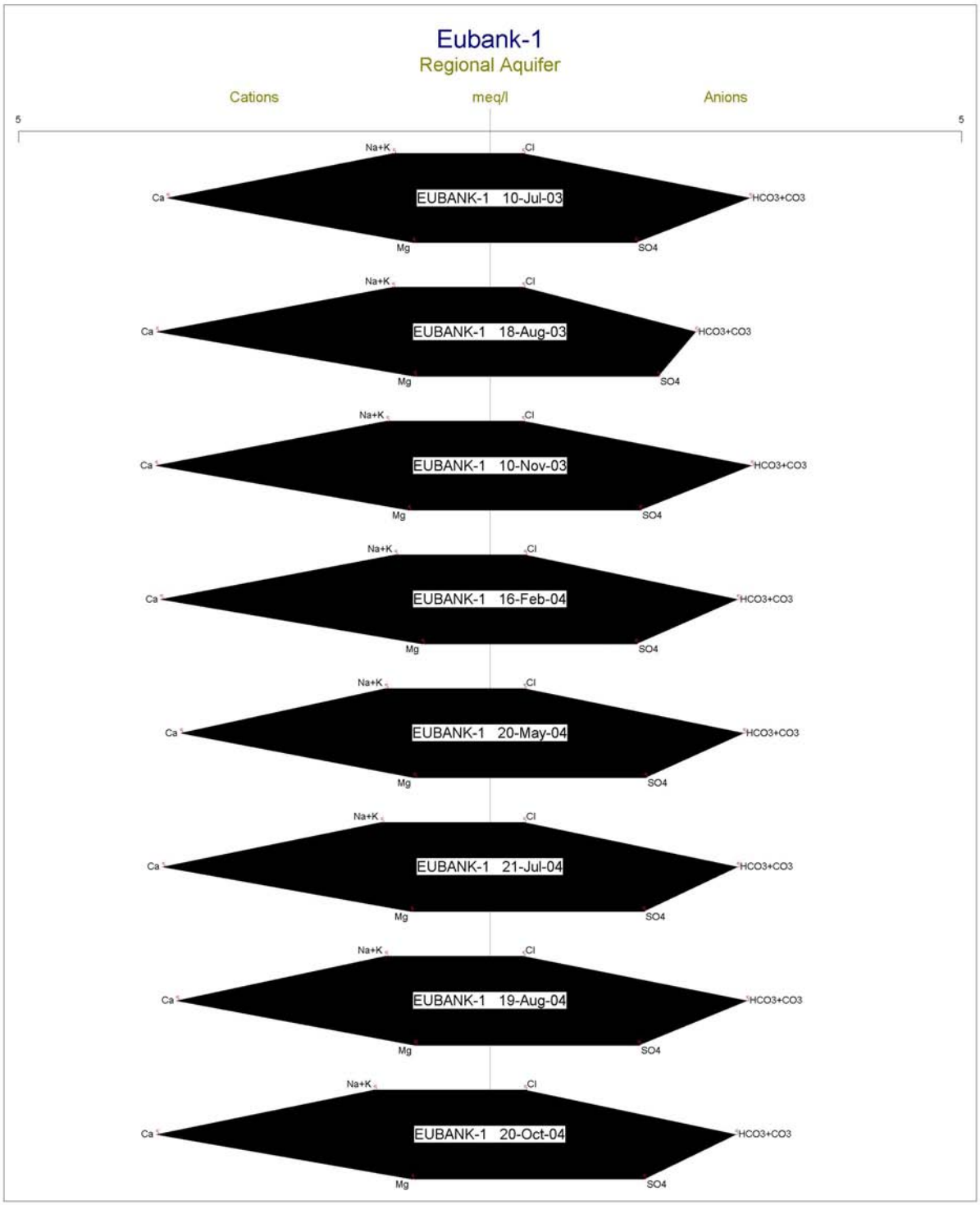
Eubank-1
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
EUBANK-1 10-Jul-03
EUBANK-1 18-Aug-03
EUBANK-1 10-Nov-03
EUBANK-1 16-Feb-04
EUBANK-1 20-May-04
EUBANK-1 21-Jul-04
EUBANK-1 19-Aug-04
EUBANK-1 20-Oct-04

Figure H-53

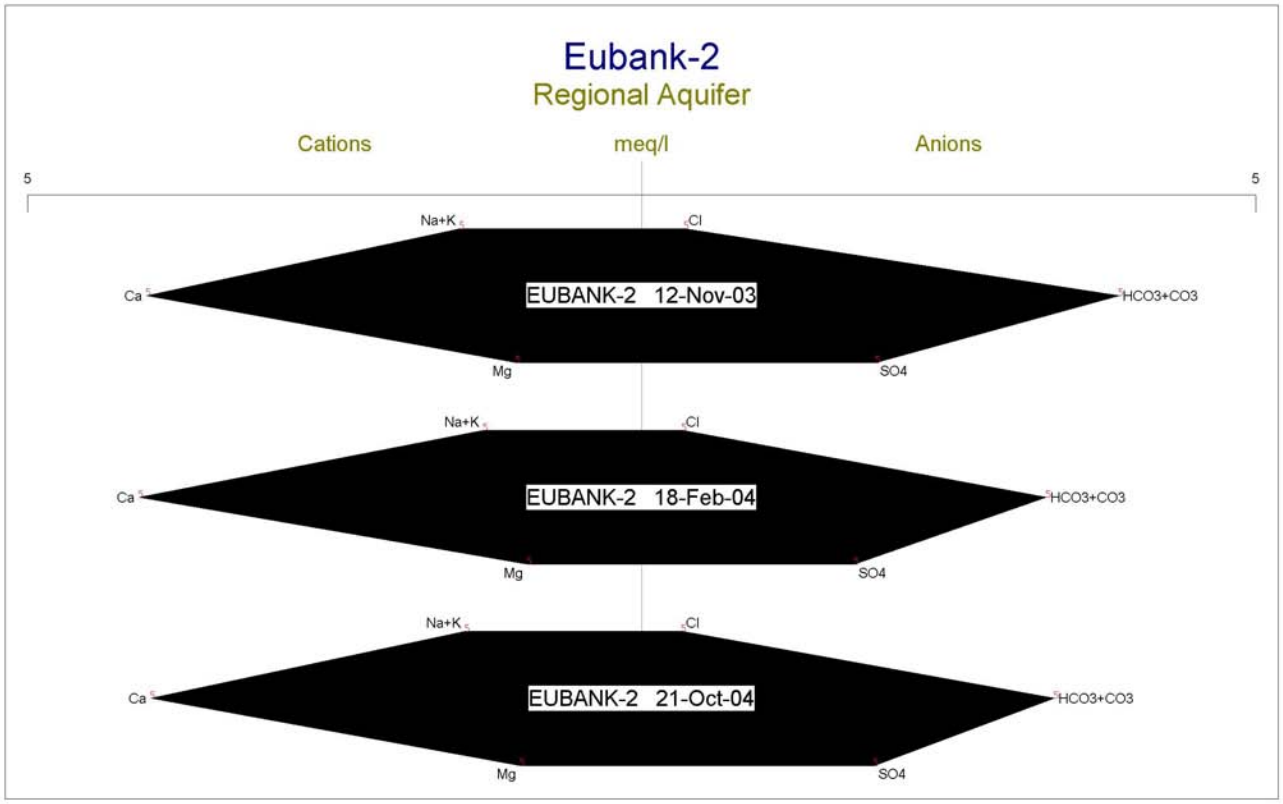
Eubank-2
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
EUBANK-2 12-Nov-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
EUBANK-2 18-Feb-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
EUBANK-2 21-Oct-04
HCO3+CO3
Mg
SO4

Figure H-54

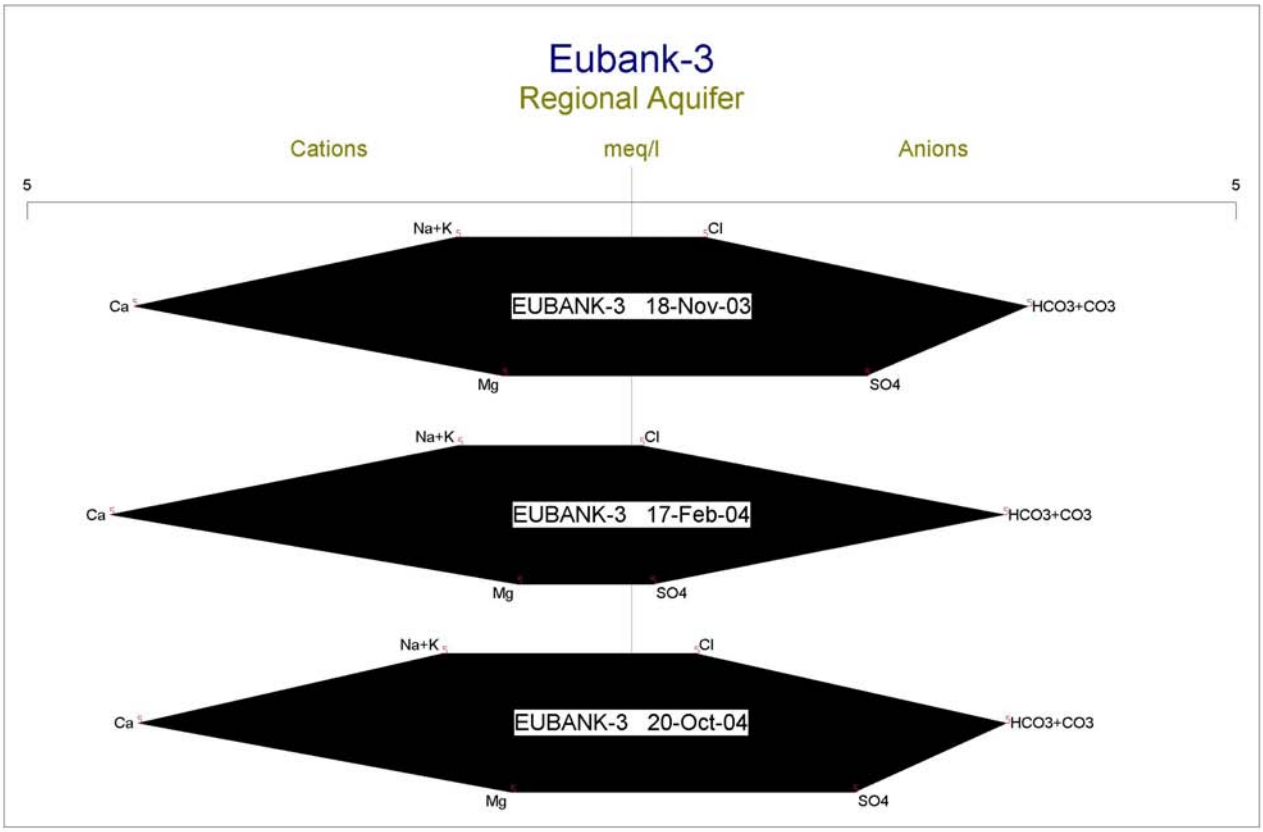
Eubank-3
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
EUBANK-3 18-Nov-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
EUBANK-3 17-Feb-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
EUBANK-3 20-Oct-04
HCO3+CO3
Mg
SO4

Figure H-55

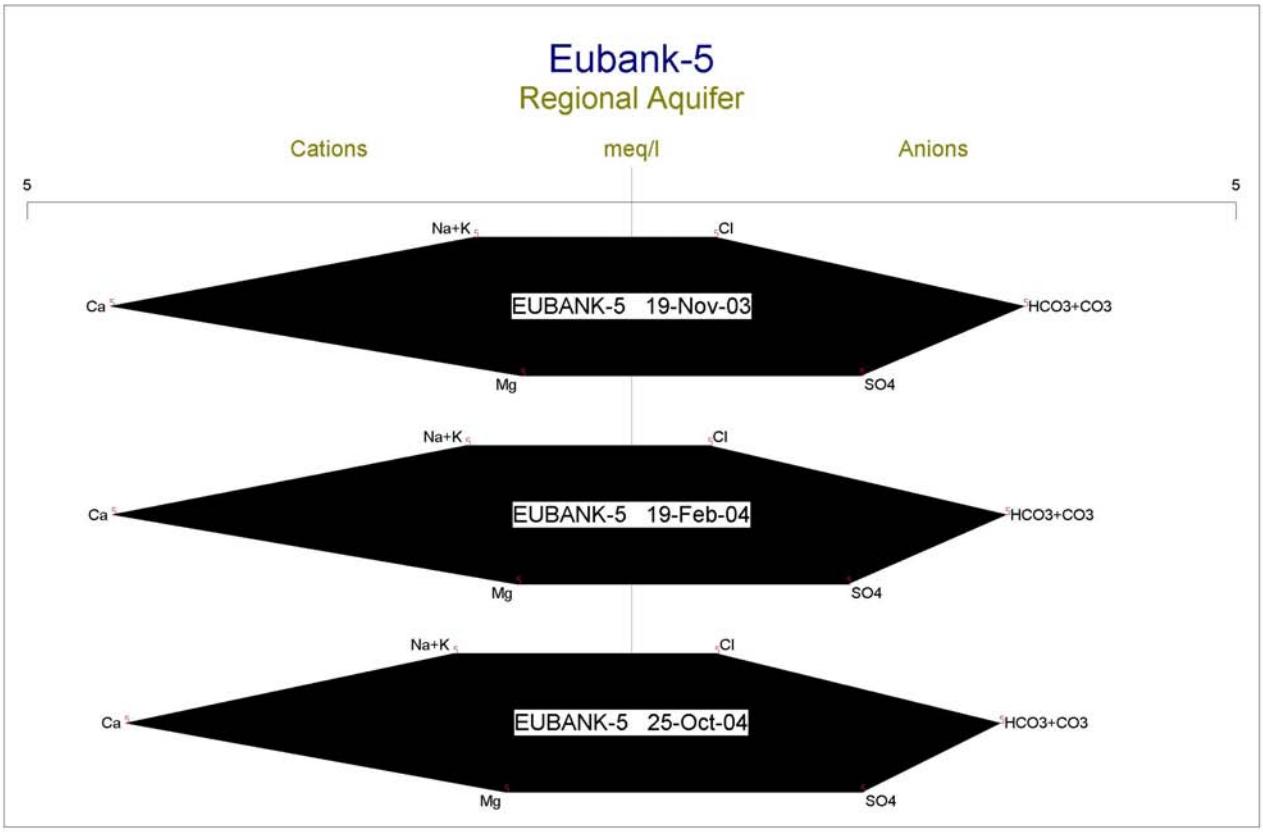
Eubank-5
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
EUBANK-5 19-Nov-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
EUBANK-5 19-Feb-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
EUBANK-5 25-Oct-04
HCO3+CO3
Mg
SO4

Figure H-56

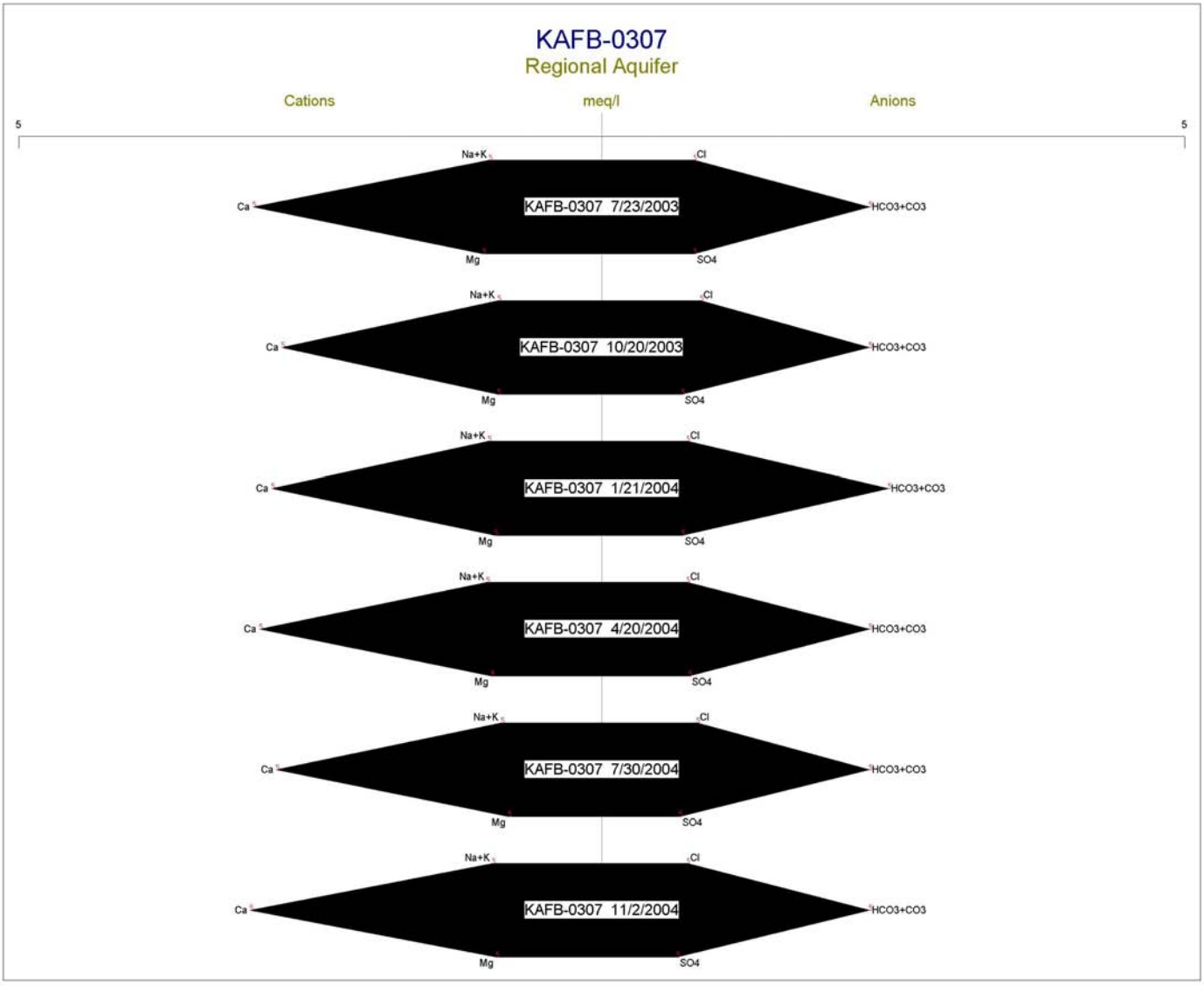
KAFB-0307
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0307 7/23/2003
KAFB-0307 10/20/2003
KAFB-0307 1/21/2004
KAFB-0307 4/20/2004
KAFB-0307 7/30/2004
KAFB-0307 11/2/2004

Figure H-57

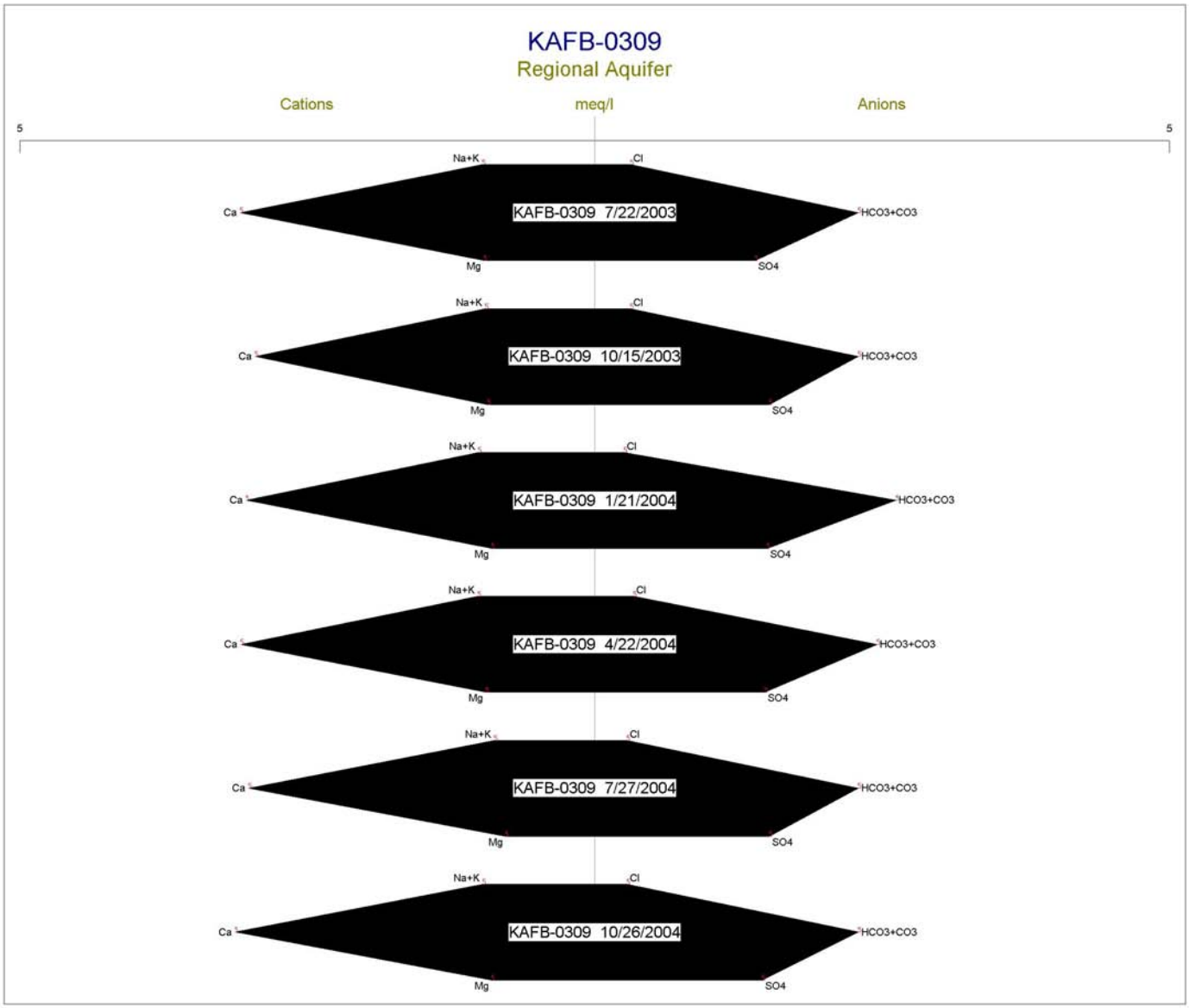
KAFB-0309
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0309 7/22/2003
KAFB-0309 10/15/2003
KAFB-0309 1/21/2004
KAFB-0309 4/22/2004
KAFB-0309 7/27/2004
KAFB-0309 10/26/2004

Figure H-58

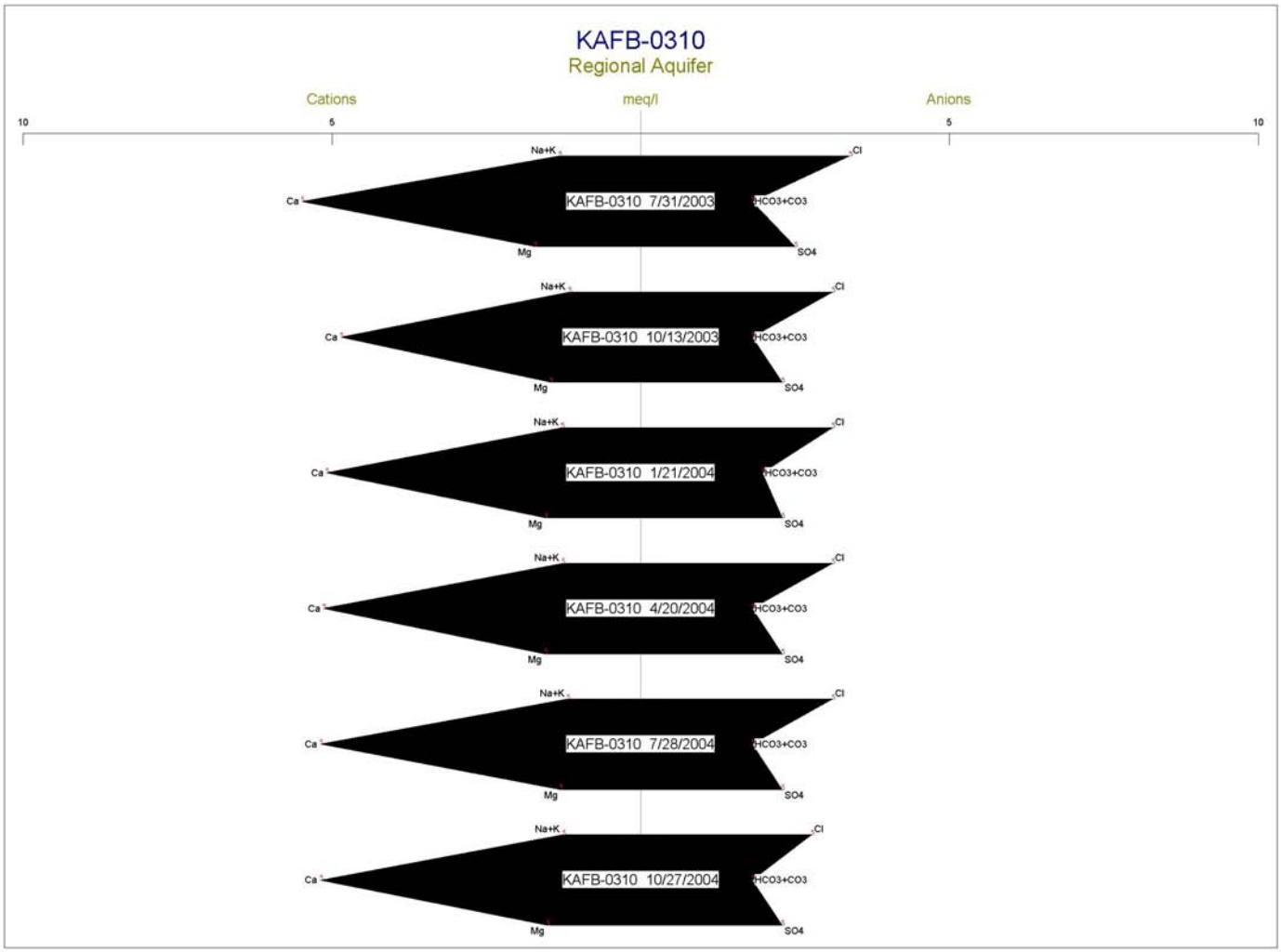
KAFB-0310
Regional Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0310 7/31/2003
KAFB-0310 10/13/2003
KAFB-0310 1/21/2004
KAFB-0310 4/20/2004
KAFB-0310 7/28/2004
KAFB-0310 10/27/2004

Figure H-59

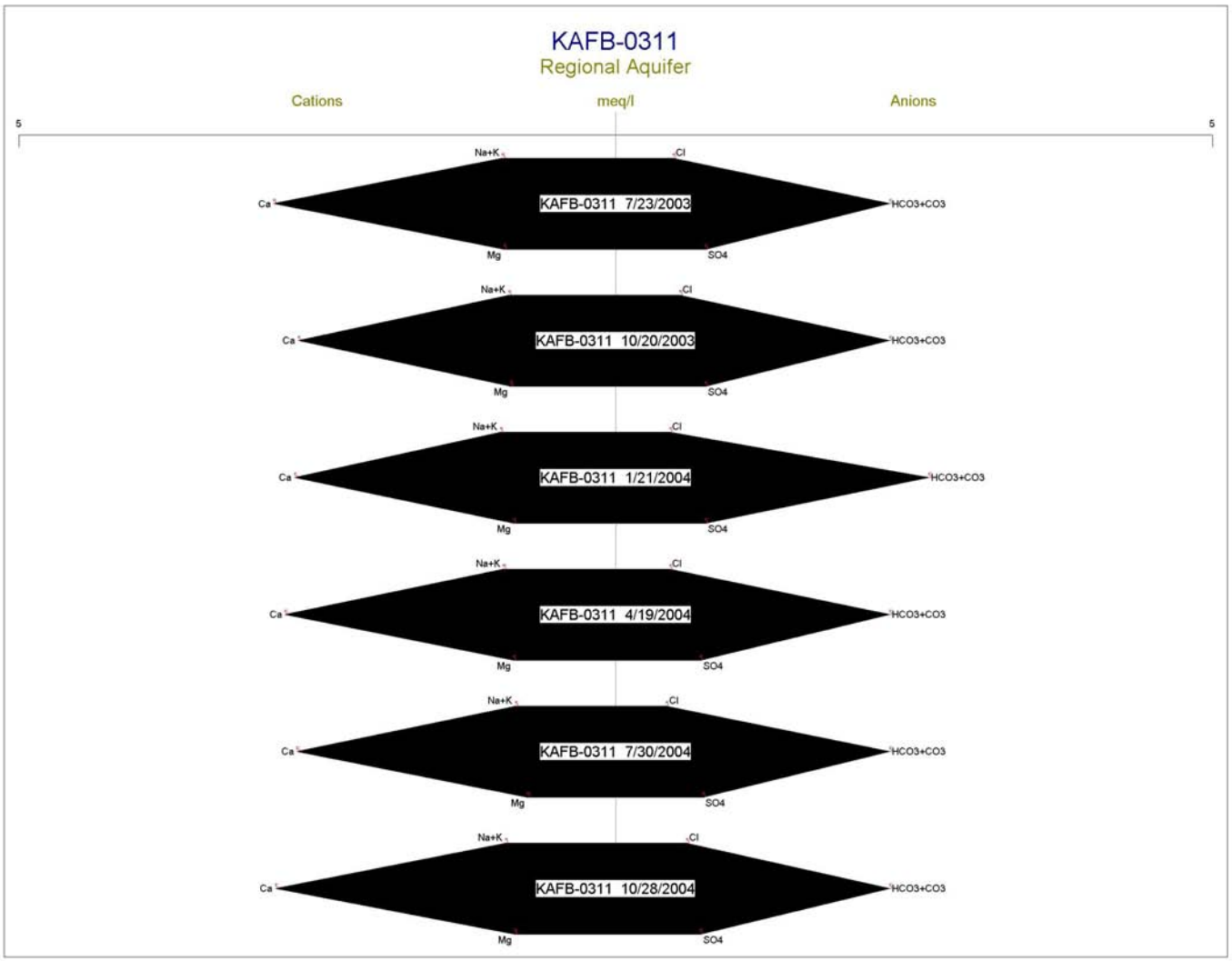
KAFB-0311
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0311 7/23/2003
KAFB-0311 10/20/2003
KAFB-0311 1/21/2004
KAFB-0311 4/19/2004
KAFB-0311 7/30/2004
KAFB-0311 10/28/2004

Figure H-60

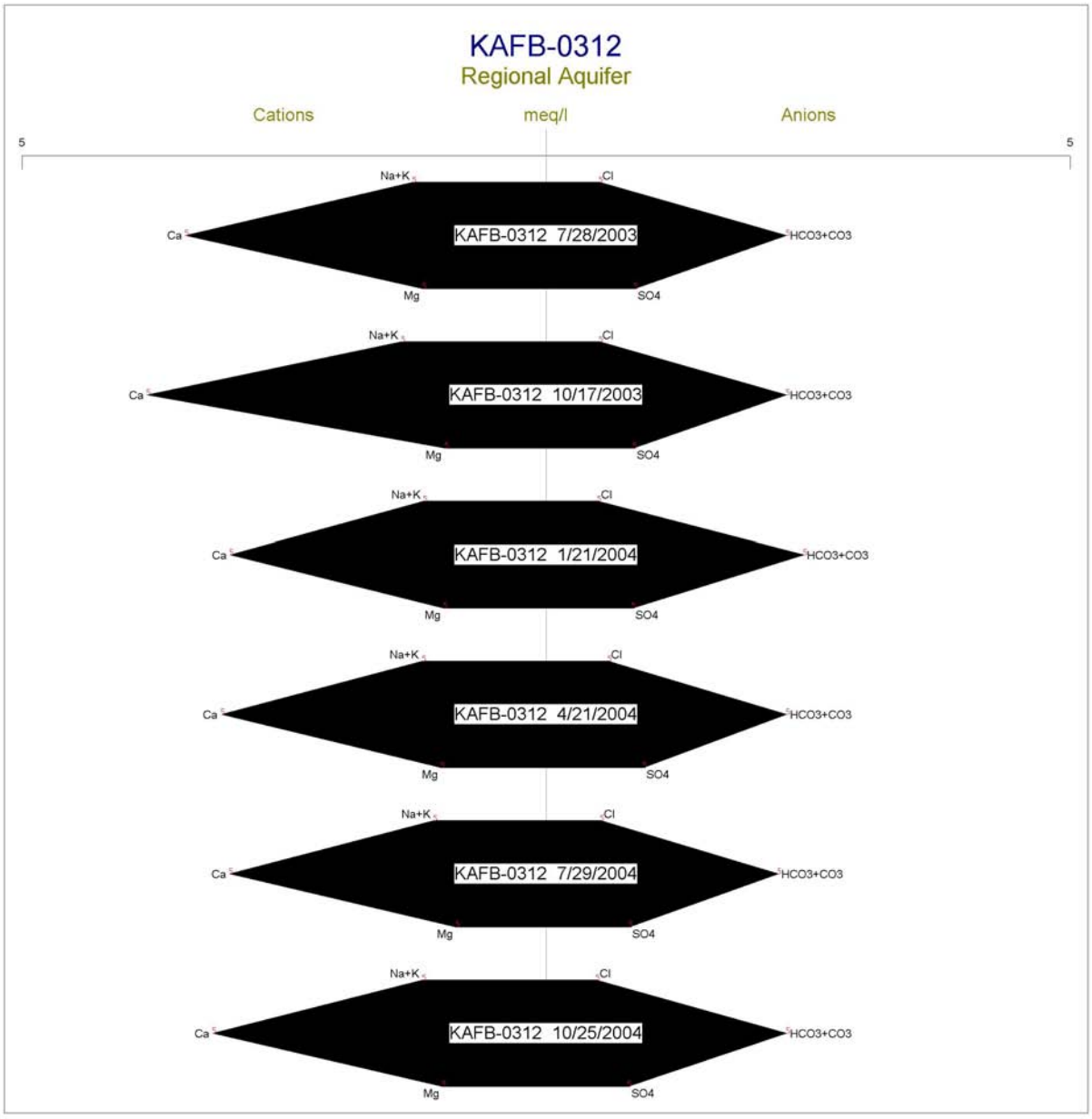
KAFB-0312
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0312 7/28/2003
KAFB-0312 10/17/2003
KAFB-0312 1/21/2004
KAFB-0312 4/21/2004
KAFB-0312 7/29/2004
KAFB-0312 10/25/2004

Figure H-61

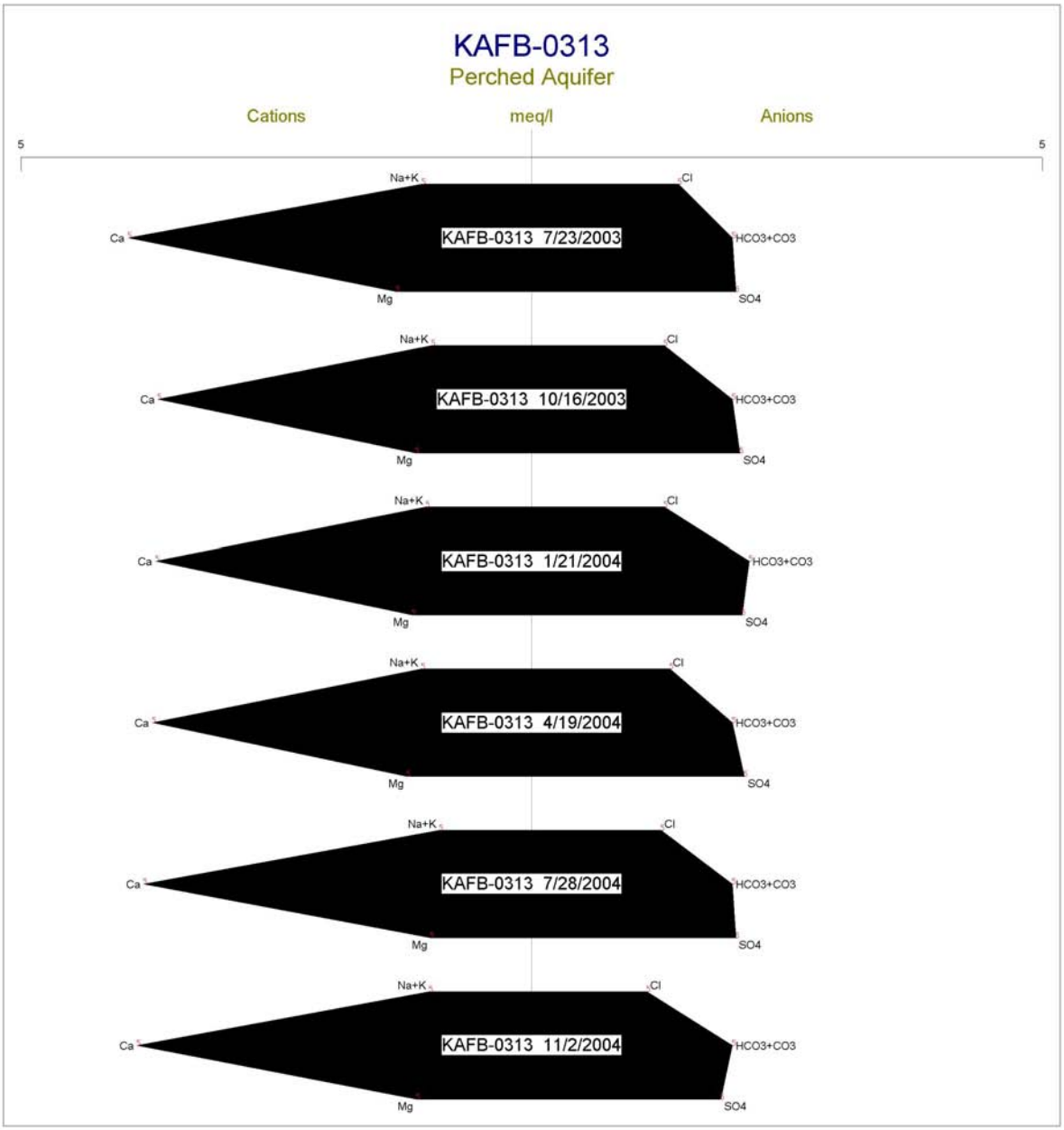
KAFB-0313
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0313 7/23/2003
KAFB-0313 10/16/2003
KAFB-0313 1/21/2004
KAFB-0313 4/19/2004
KAFB-0313 7/28/2004
KAFB-0313 11/2/2004

Figure H-62

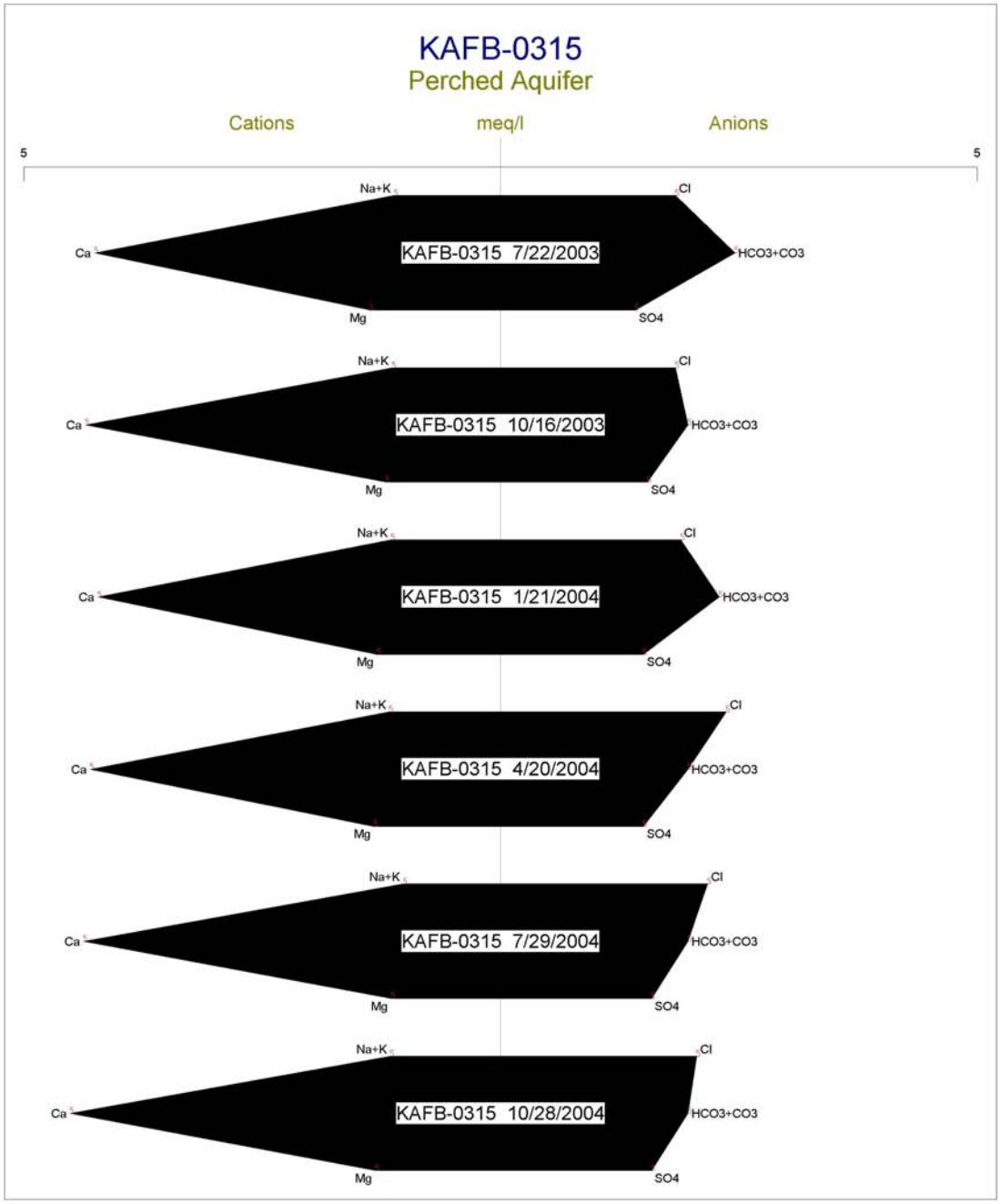
KAFB-0315
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0315 7/22/2003
KAFB-0315 10/16/2003
KAFB-0315 1/21/2004
KAFB-0315 4/20/2004
KAFB-0315 7/29/2004
KAFB-0315 10/28/2004

Figure H-63

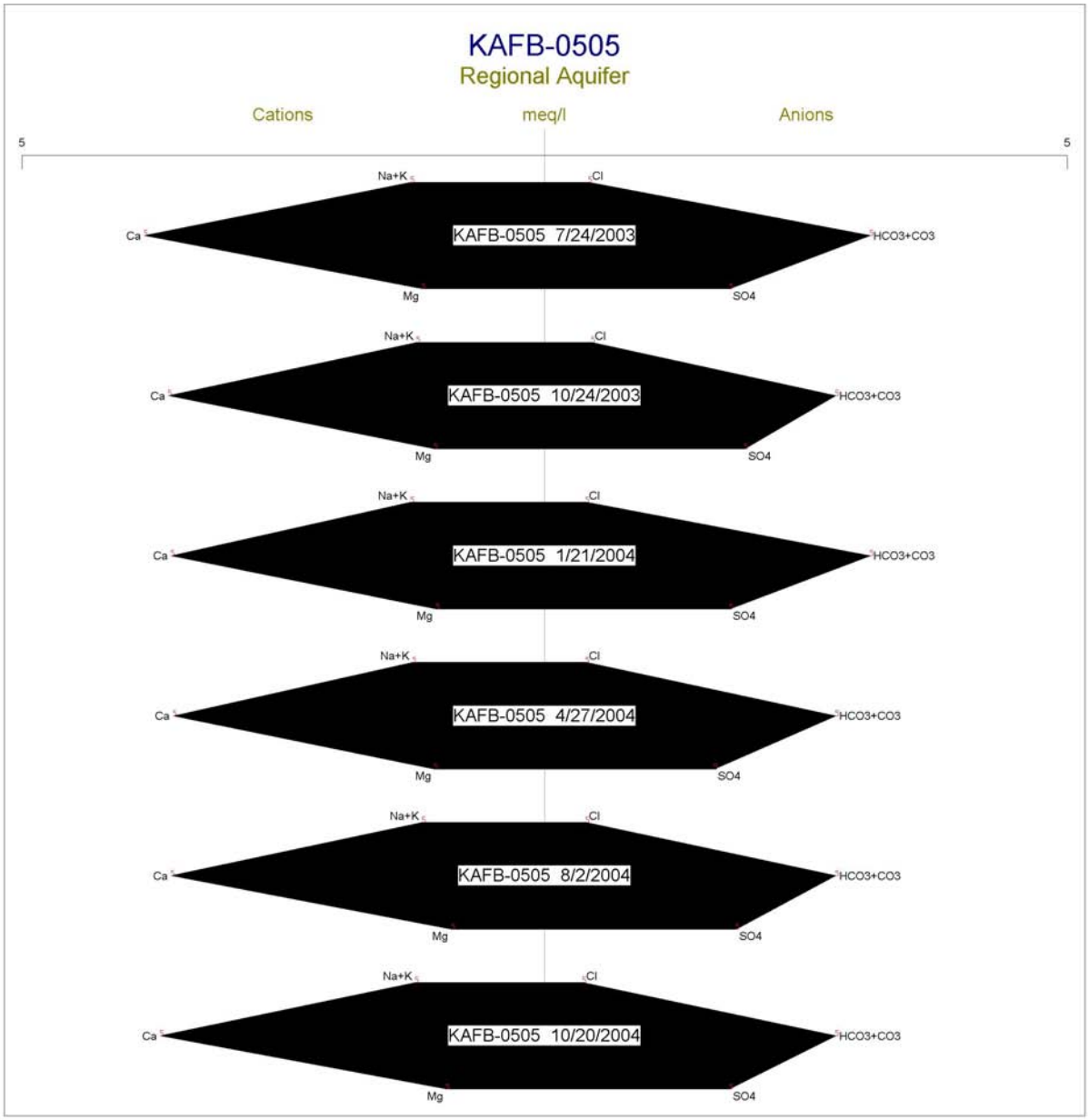
KAFB-0505
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0505 7/24/2003
KAFB-0505 10/24/2003
KAFB-0505 1/21/2004
KAFB-0505 4/27/2004
KAFB-0505 8/2/2004
KAFB-0505 10/20/2004

Figure H-64

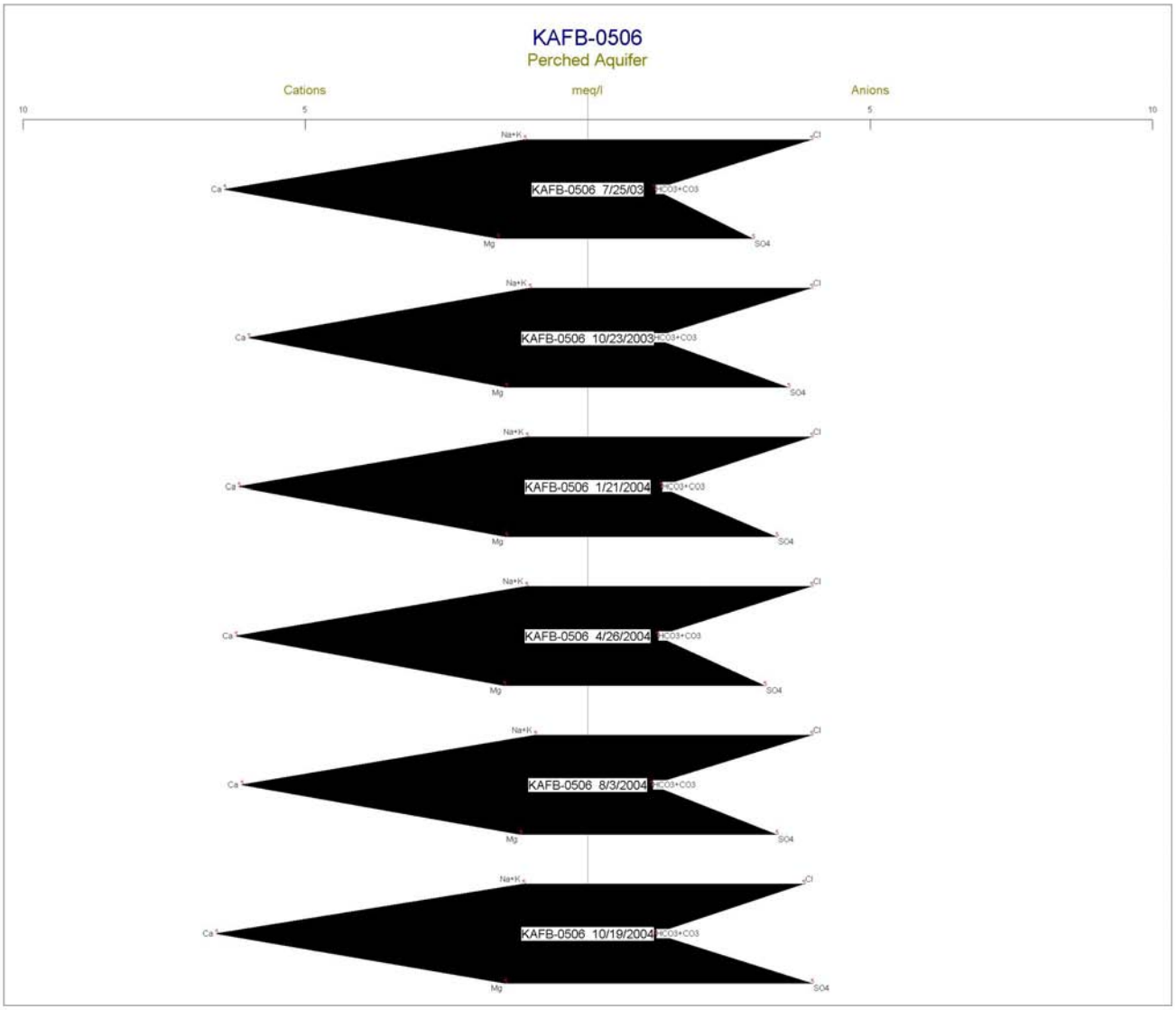
KAFB-0506
Perched Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
Mg
SO4
HCO3+CO3
KAFB-0506 7/25/03
KAFB-0506 10/23/2003
KAFB-0506 1/21/2004
KAFB-0506 4/26/2004
KAFB-0506 8/3/2004
KAFB-0506 10/19/2004

Figure H-65

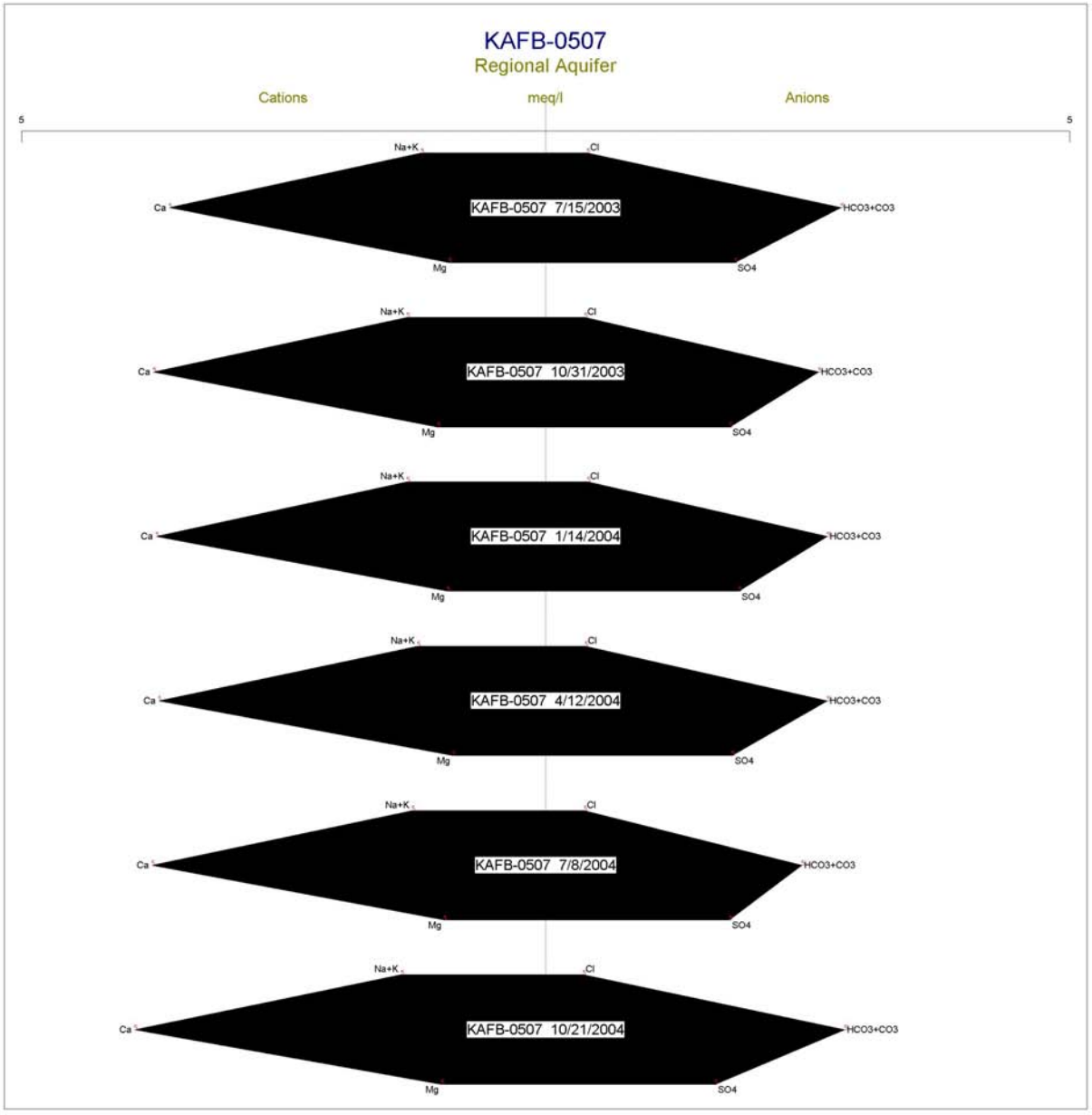
KAFB-0507
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0507 7/15/2003
KAFB-0507 10/31/2003
KAFB-0507 1/14/2004
KAFB-0507 4/12/2004
KAFB-0507 7/8/2004
KAFB-0507 10/21/2004

Figure H-66

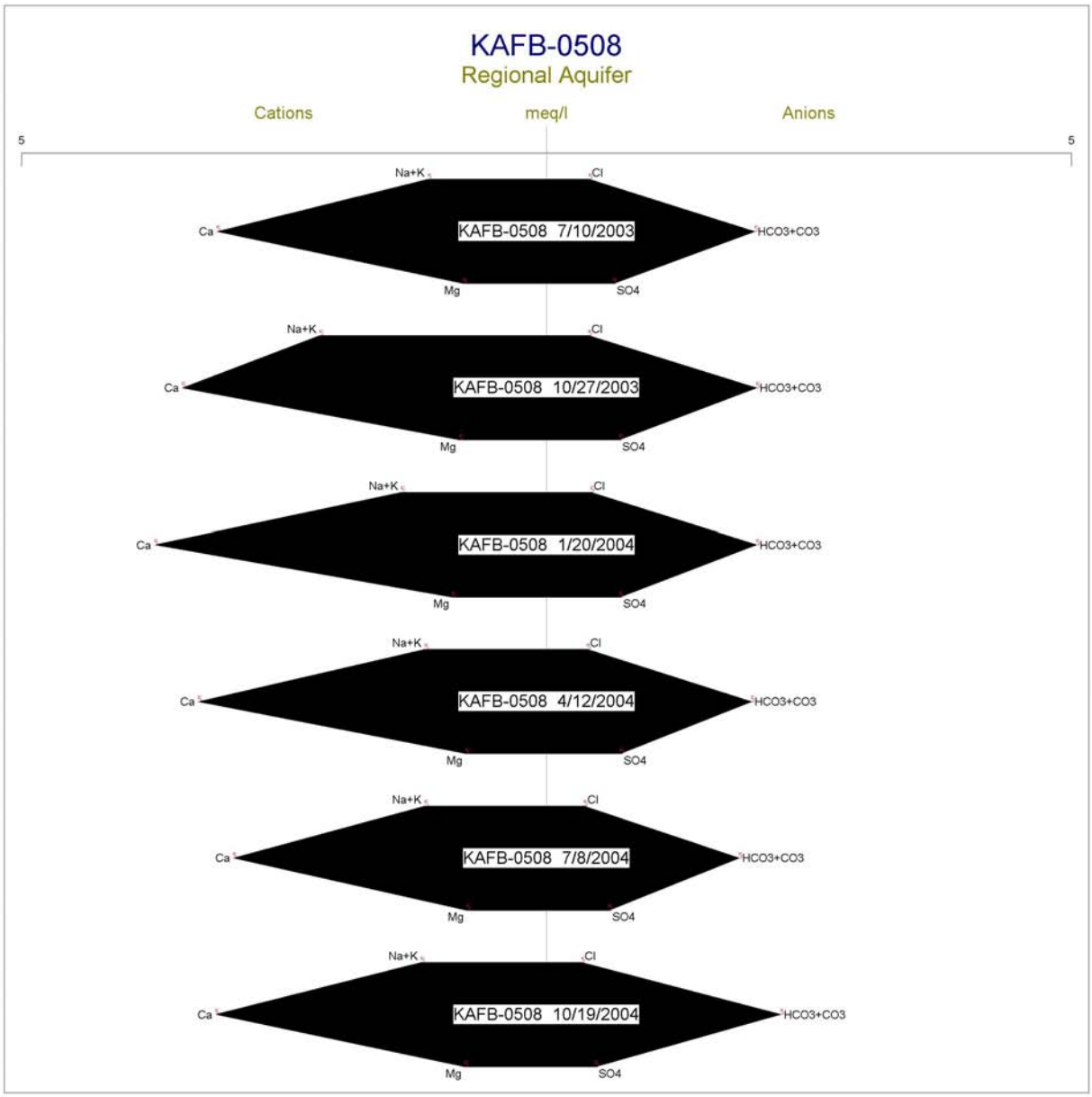
KAFB-0508
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0508 7/10/2003
KAFB-0508 10/27/2003
KAFB-0508 1/20/2004
KAFB-0508 4/12/2004
KAFB-0508 7/8/2004
KAFB-0508 10/19/2004

Figure H-67

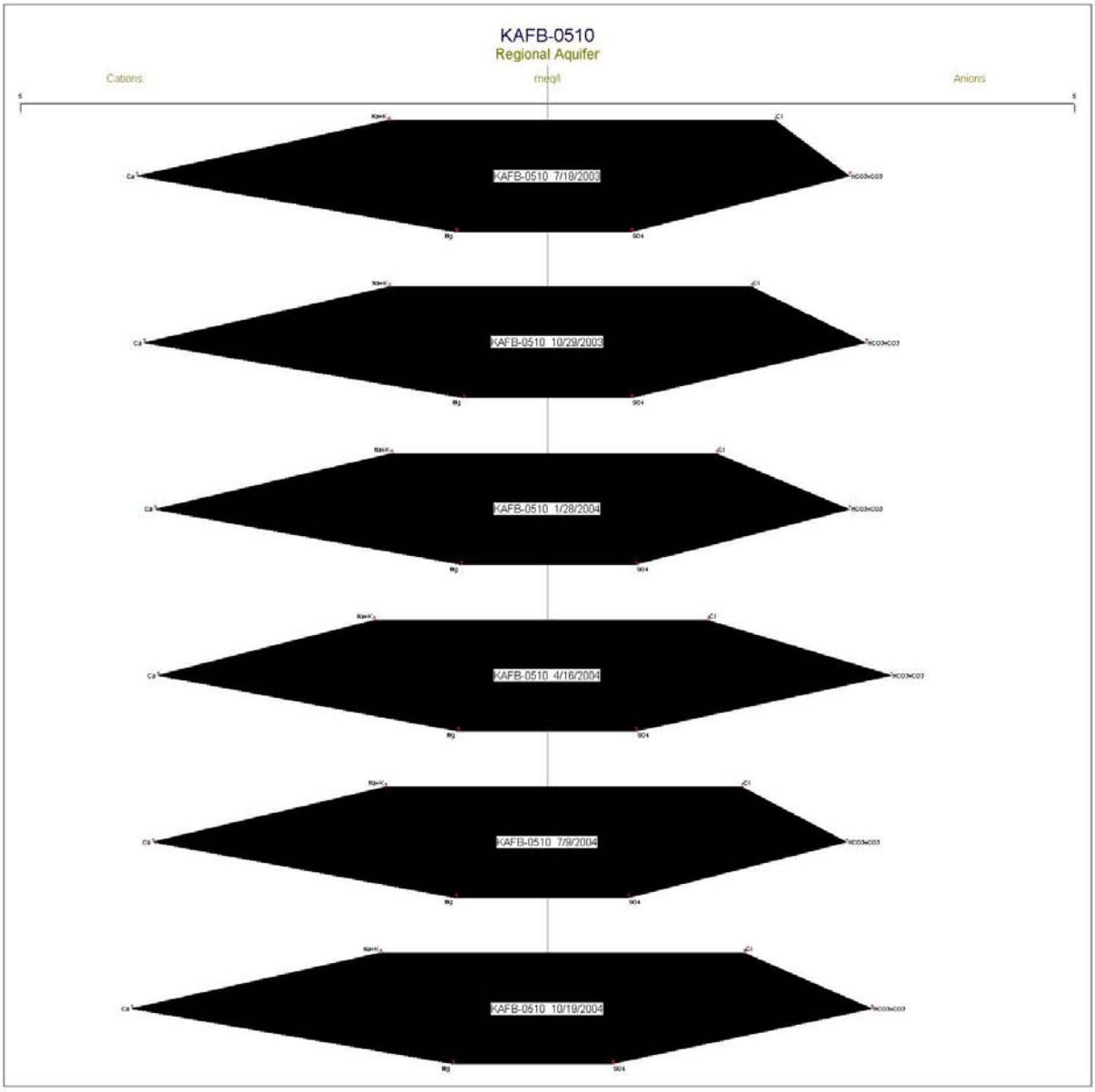
KAFB-0510
Regional Aquifer
Cations
meq/l
Anions
KAFB-0510 7/18/2003
KAFB-0510 10/29/2003
KAFB-0510 1/28/2004
KAFB-0510 4/16/2004
KAFB-0510 7/9/2004
KAFB-0510 10/19/2004

Figure H-68

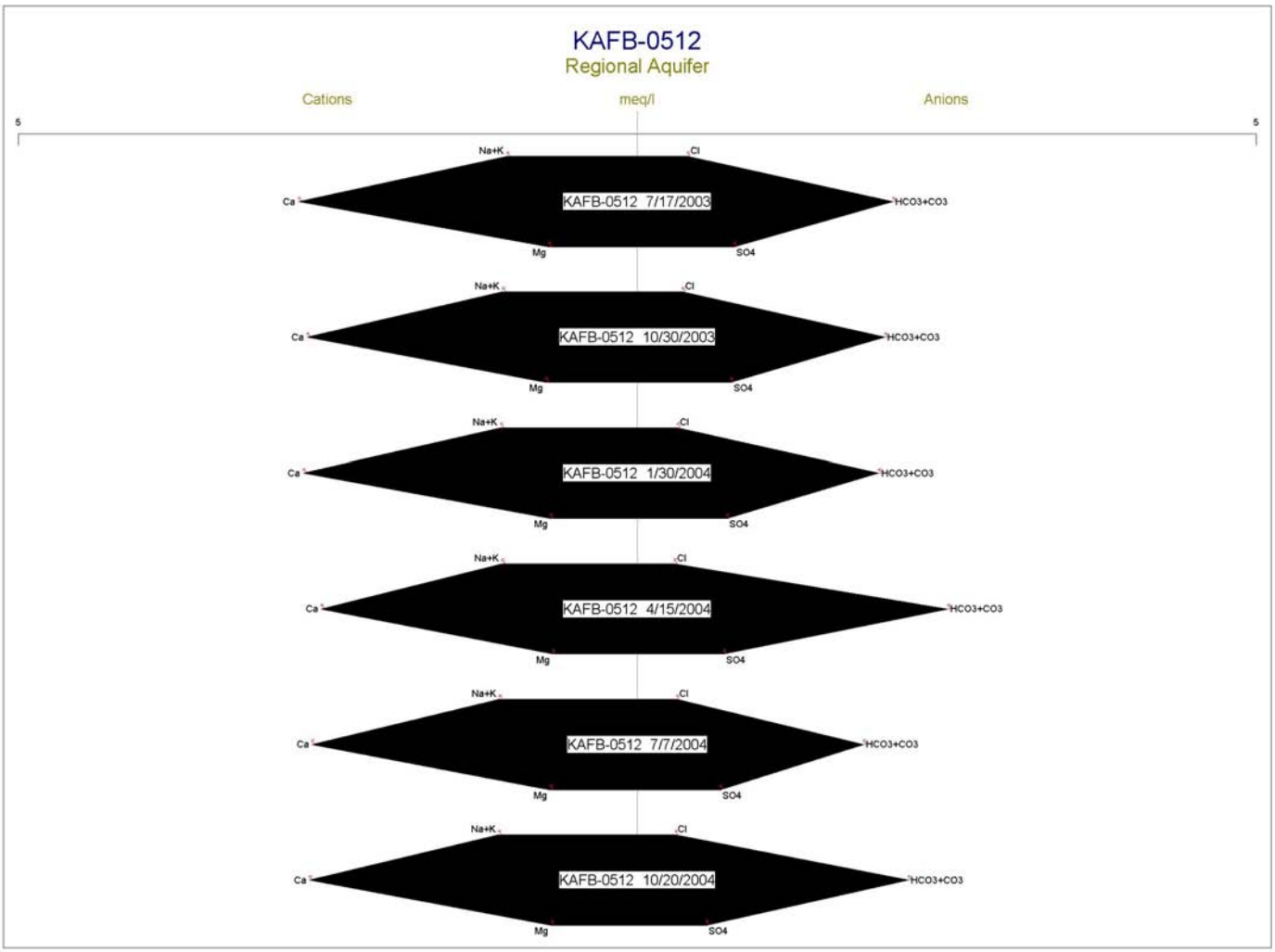
KAFB-0512
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0512 7/17/2003
KAFB-0512 10/30/2003
KAFB-0512 1/30/2004
KAFB-0512 4/15/2004
KAFB-0512 7/7/2004
KAFB-0512 10/20/2004

Figure H-69

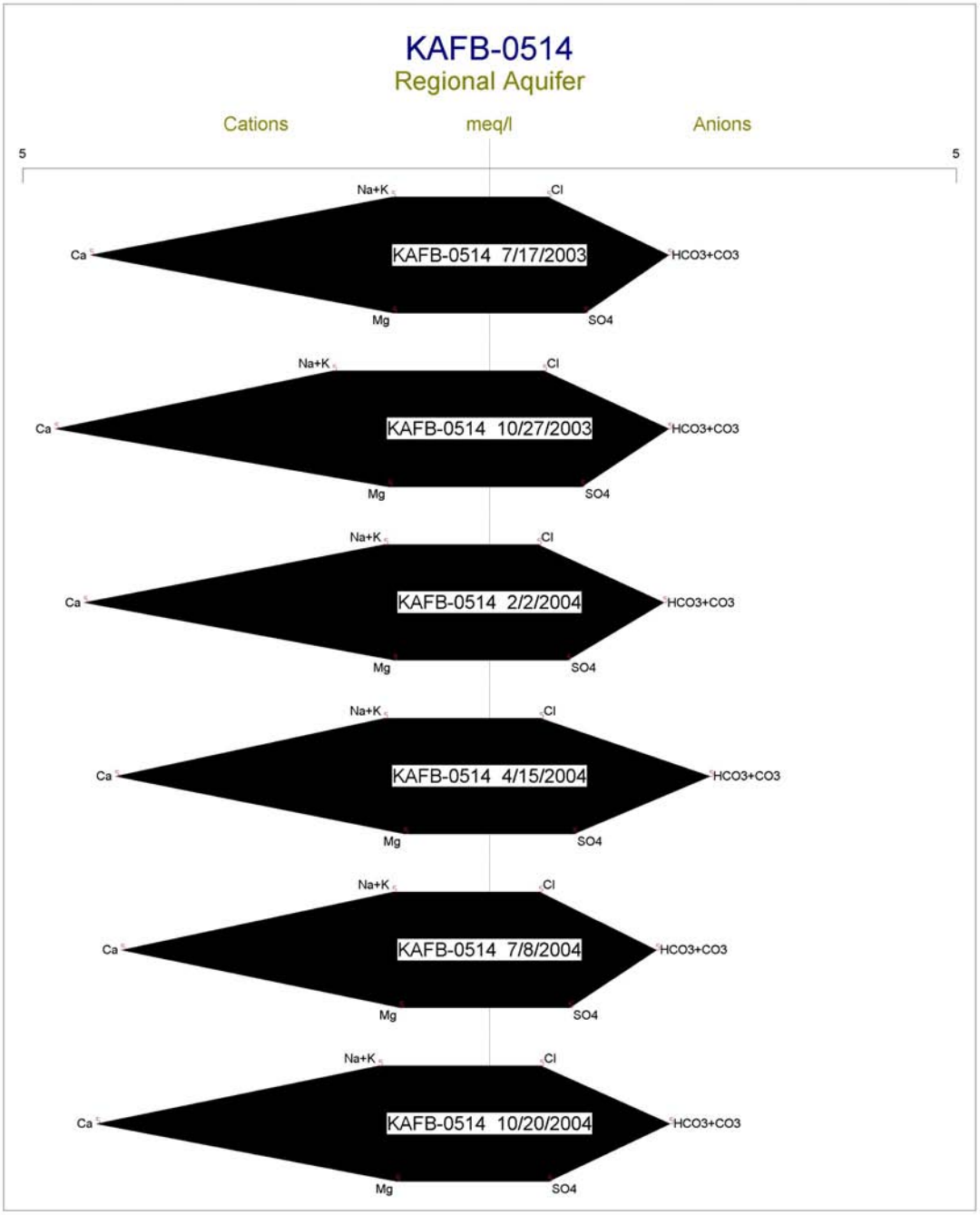
KAFB-0514
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0514 7/17/2003
KAFB-0514 10/27/2003
KAFB-0514 2/2/2004
KAFB-0514 4/15/2004
KAFB-0514 7/8/2004
KAFB-0514 10/20/2004

Figure H-70

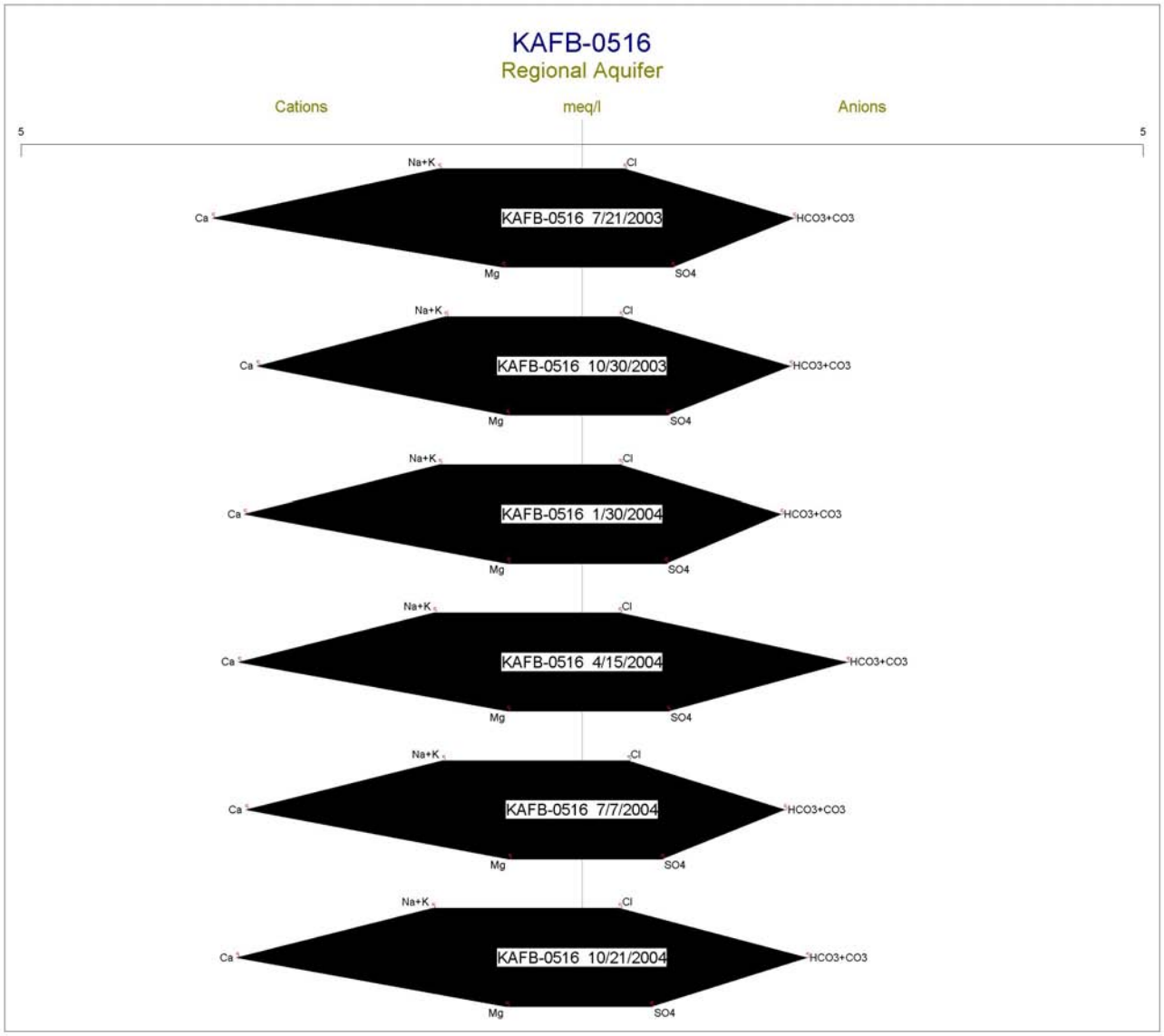
KAFB-0516
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0516 7/21/2003
KAFB-0516 10/30/2003
KAFB-0516 1/30/2004
KAFB-0516 4/15/2004
KAFB-0516 7/7/2004
KAFB-0516 10/21/2004

Figure H-71

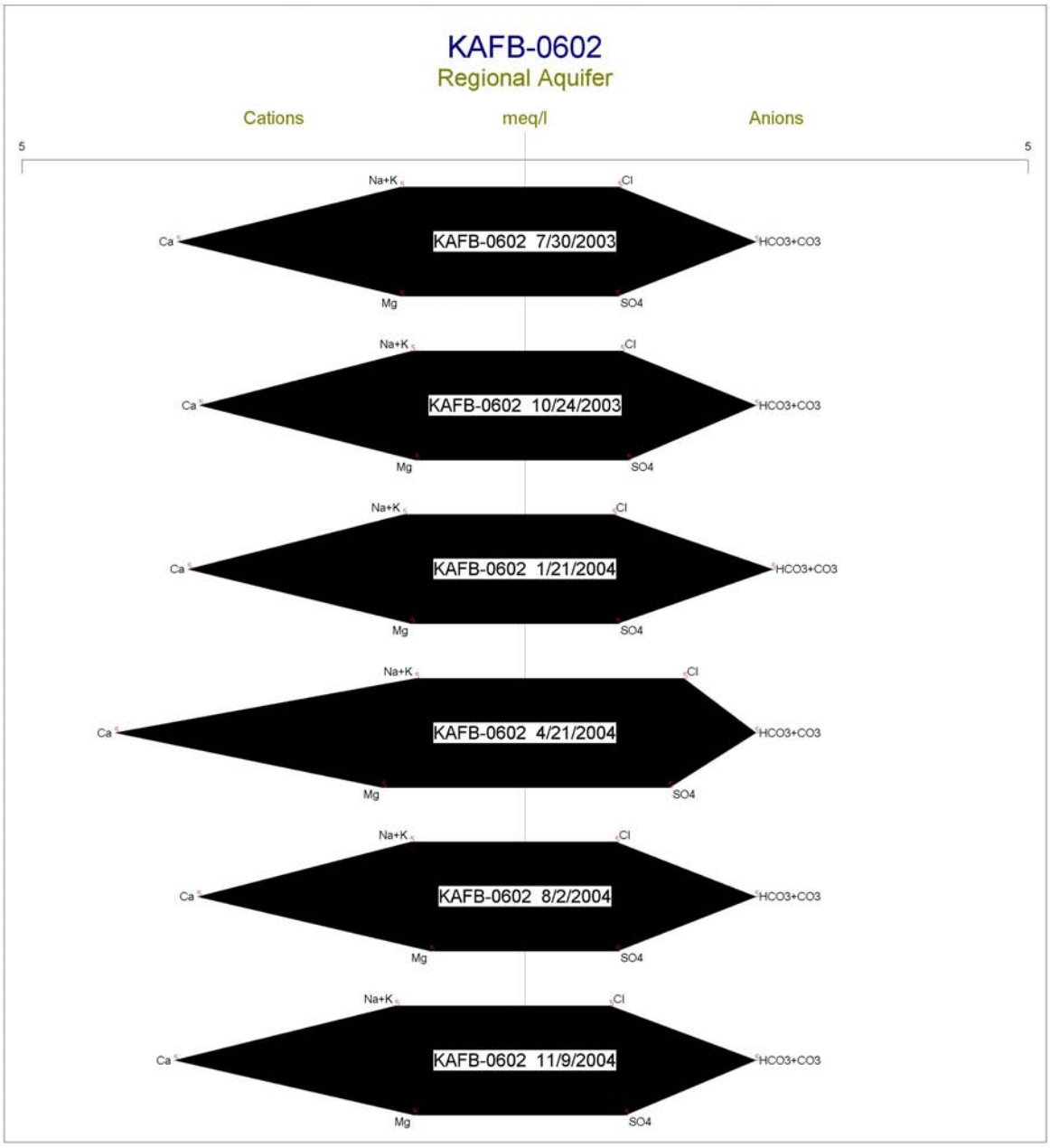
KAFB-0602
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0602 7/30/2003
KAFB-0602 10/24/2003
KAFB-0602 1/21/2004
KAFB-0602 4/21/2004
KAFB-0602 8/2/2004
KAFB-0602 11/9/2004

Figure H-72

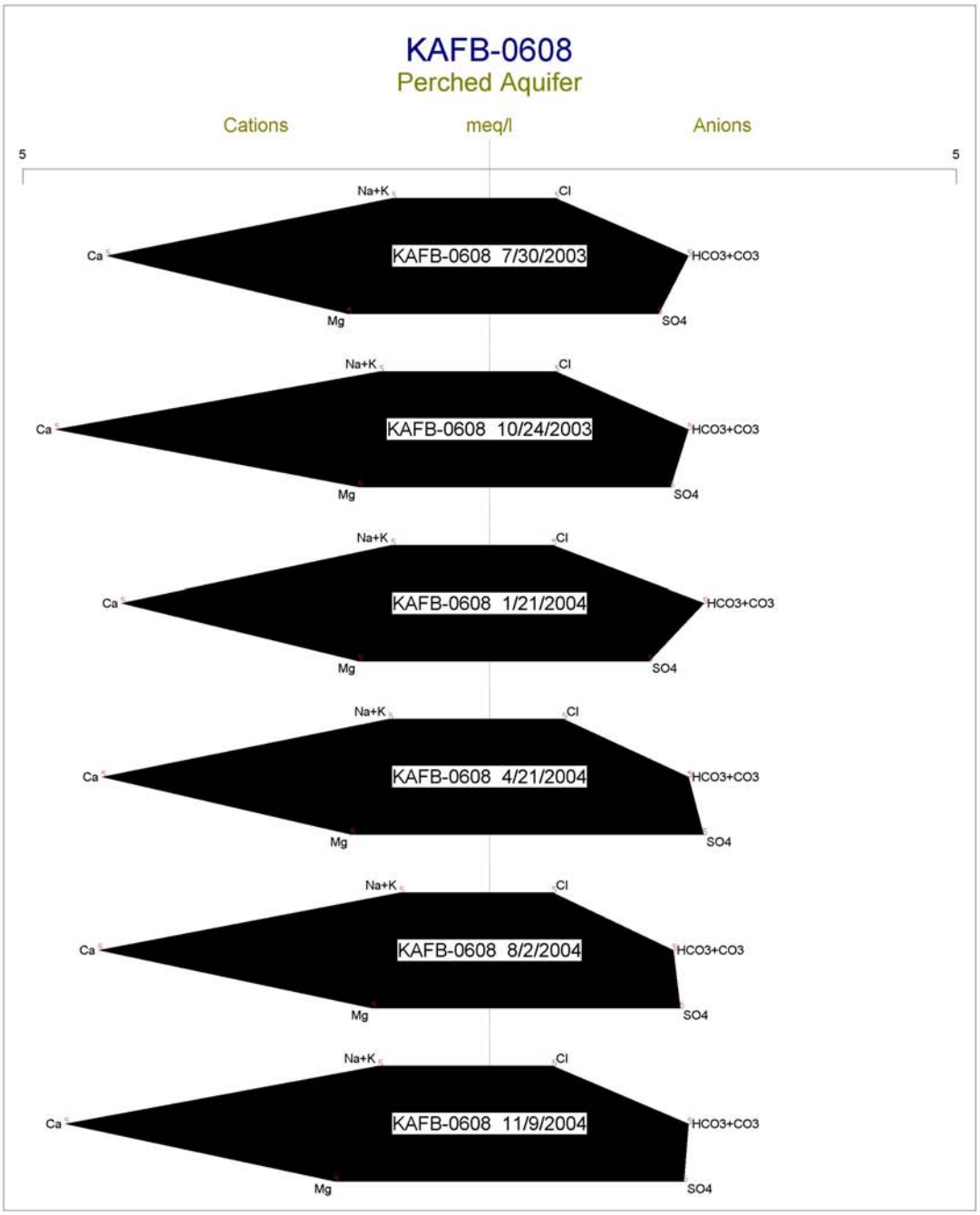
KAFB-0608
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0608 7/30/2003
KAFB-0608 10/24/2003
KAFB-0608 1/21/2004
KAFB-0608 4/21/2004
KAFB-0608 8/2/2004
KAFB-0608 11/9/2004

Figure H-73

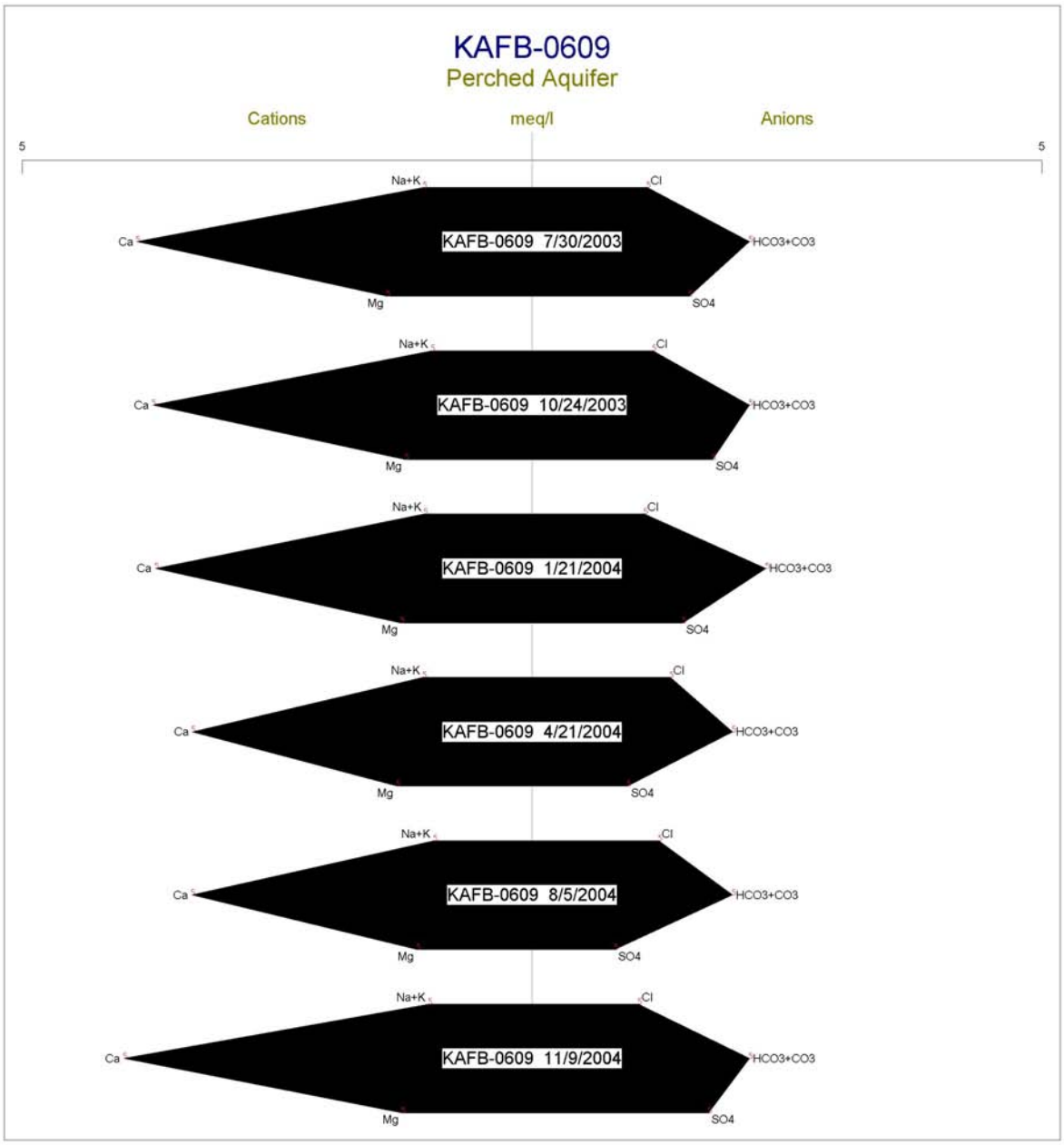
KAFB-0609
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0609 7/30/2003
KAFB-0609 10/24/2003
KAFB-0609 1/21/2004
KAFB-0609 4/21/2004
KAFB-0609 8/5/2004
KAFB-0609 11/9/2004

Figure H-74

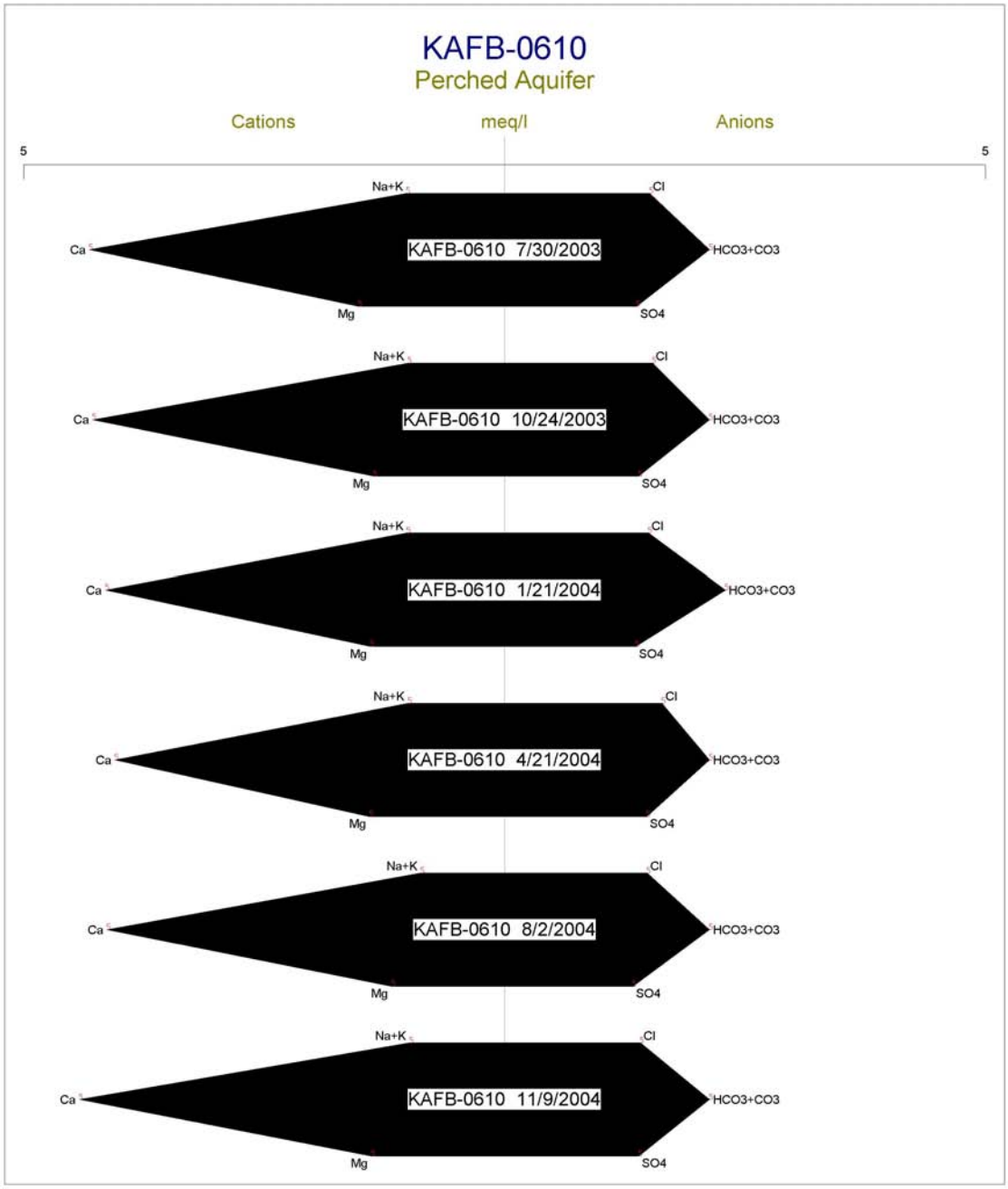
KAFB-0610
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0610 7/30/2003
KAFB-0610 10/24/2003
KAFB-0610 1/21/2004
KAFB-0610 4/21/2004
KAFB-0610 8/2/2004
KAFB-0610 11/9/2004

Figure H-75

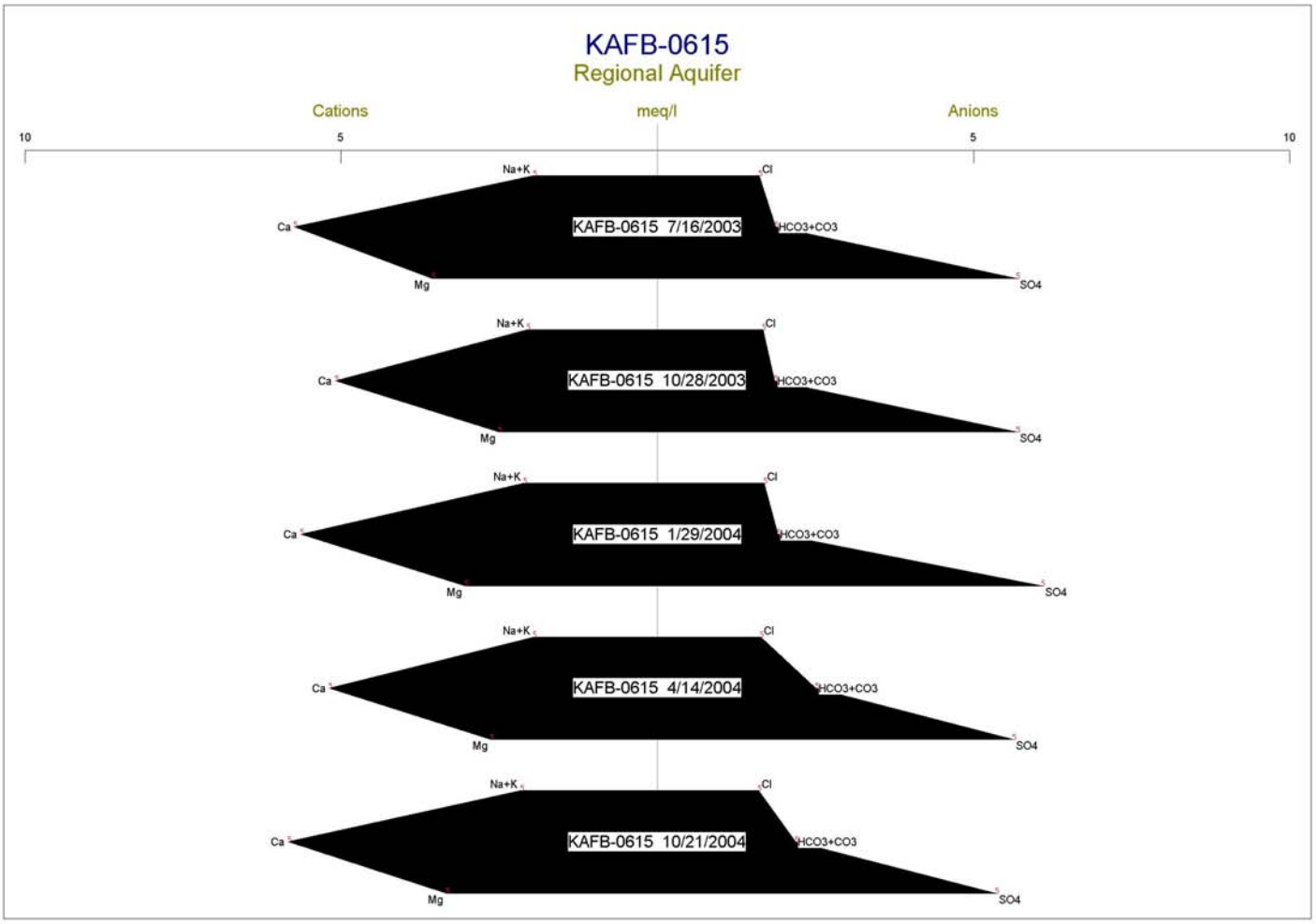
KAFB-0615
Regional Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0615 7/16/2003
KAFB-0615 10/28/2003
KAFB-0615 1/29/2004
KAFB-0615 4/14/2004
KAFB-0615 10/21/2004

Figure H-76

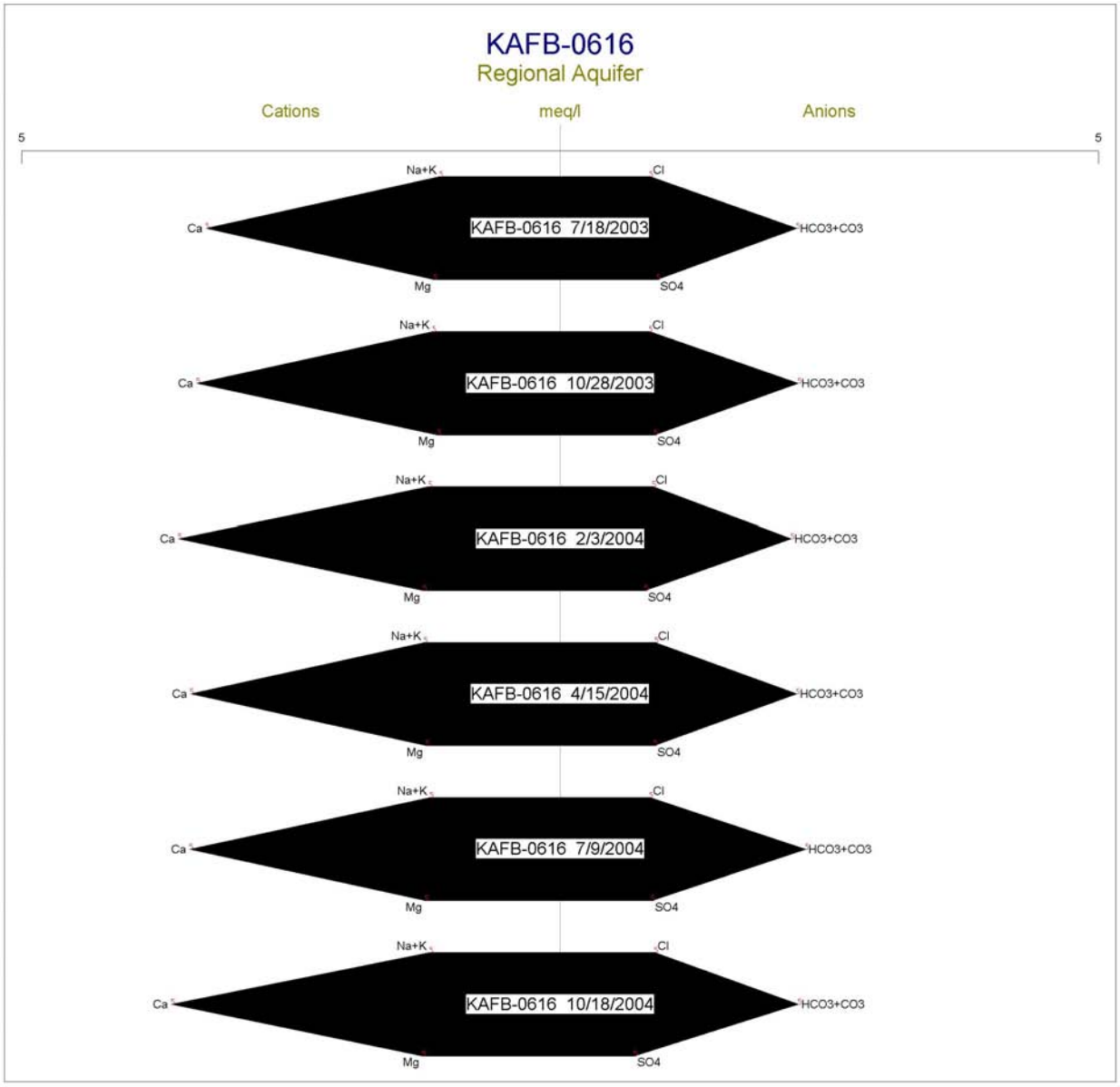
KAFB-0616
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0616 7/18/2003
KAFB-0616 10/28/2003
KAFB-0616 2/3/2004
KAFB-0616 4/15/2004
KAFB-0616 7/9/2004
KAFB-0616 10/18/2004

Figure H-77

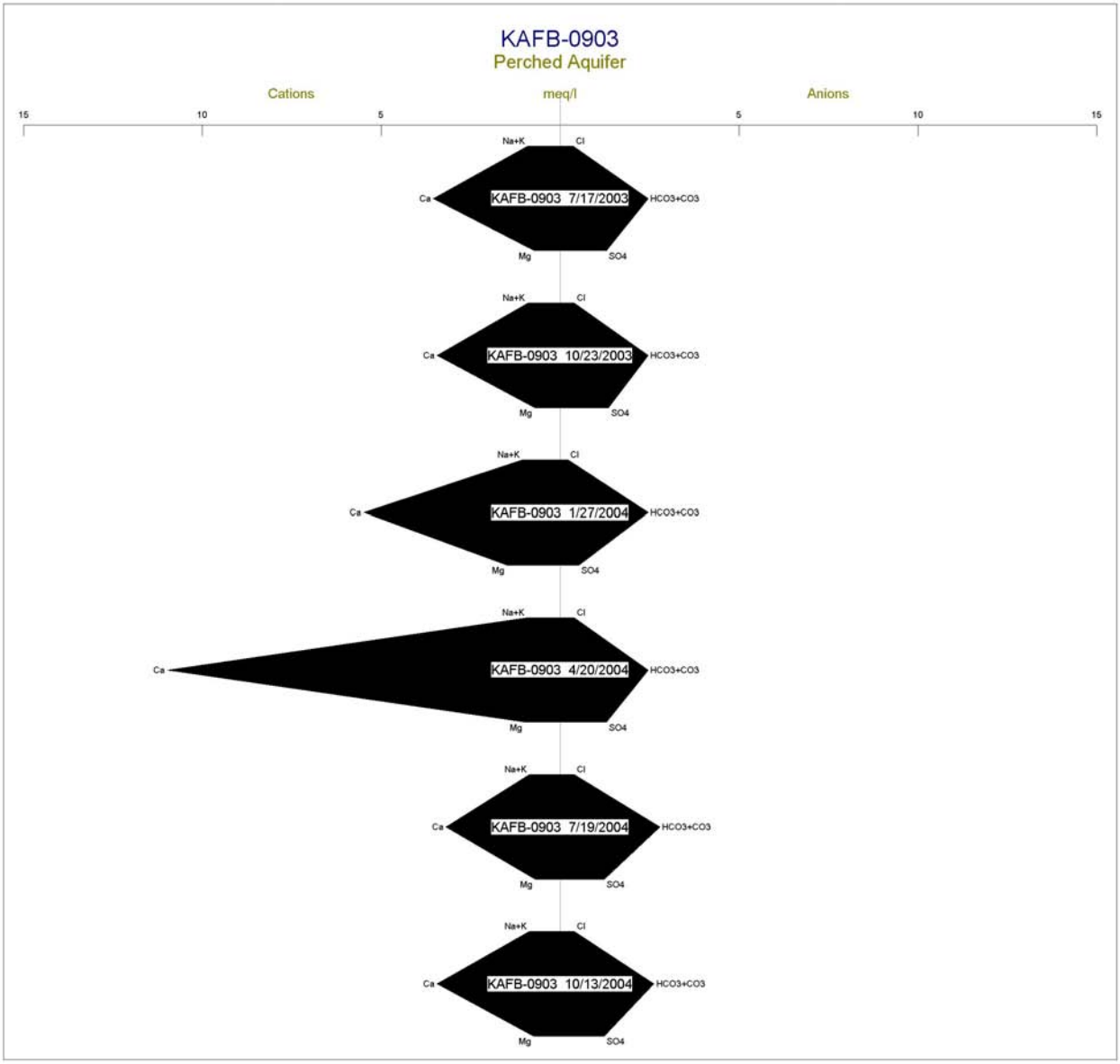
KAFB-0903
Perched Aquifer
Cations
meq/l
Anions
15
10
5
5
10
15
Na+K
Cl
Ca
KAFB-0903 7/17/2003
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
KAFB-0903 10/23/2003
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
KAFB-0903 1/27/2004
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
KAFB-0903 4/20/2004
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
KAFB-0903 7/19/2004
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
KAFB-0903 10/13/2004
HCO3+CO3
Mg
SO4

Figure H-78

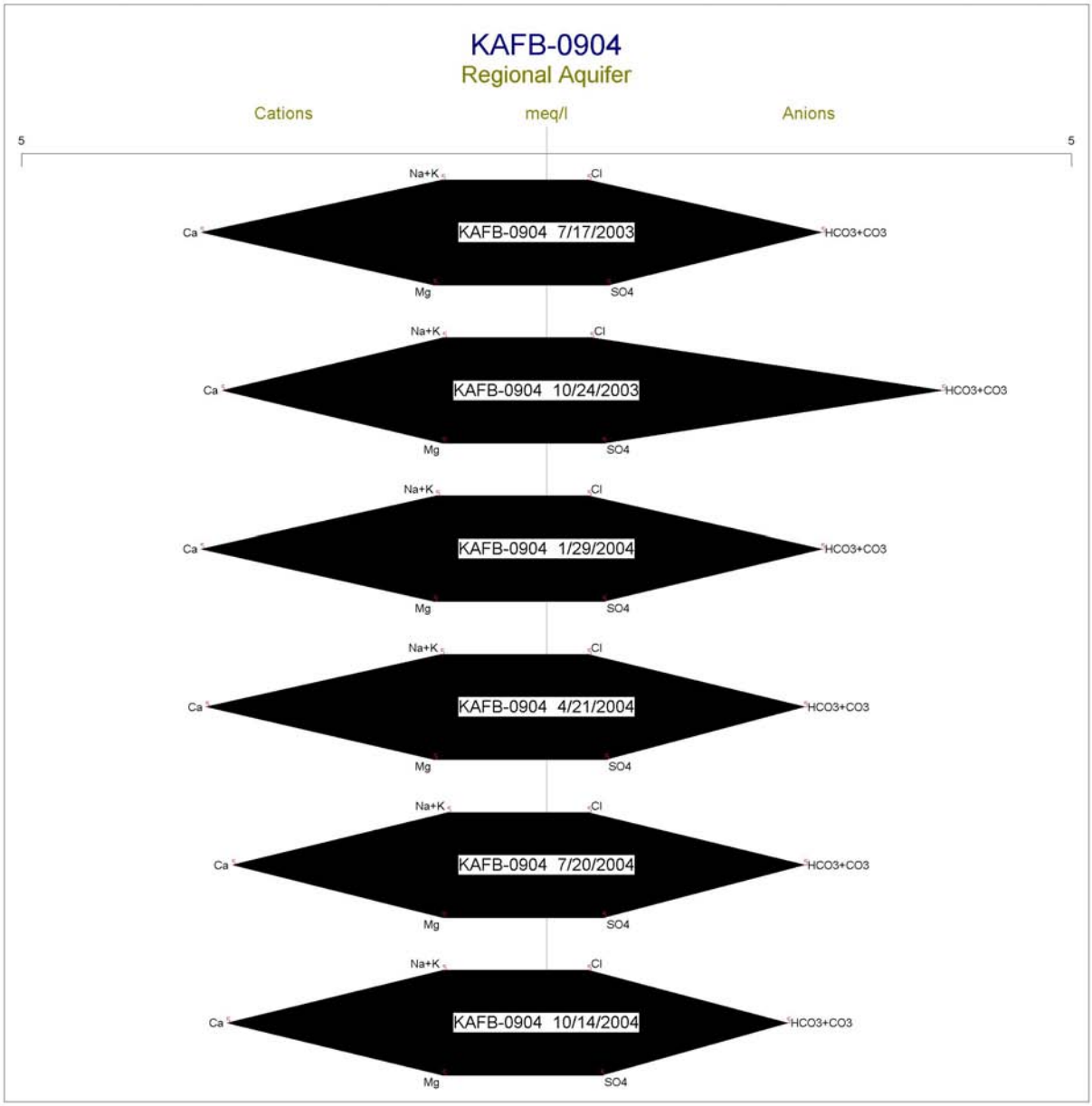
KAFB-0904
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
KAFB-0904 7/17/2003
KAFB-0904 10/24/2003
KAFB-0904 1/29/2004
KAFB-0904 4/21/2004
KAFB-0904 7/20/2004
KAFB-0904 10/14/2004

Figure H-79

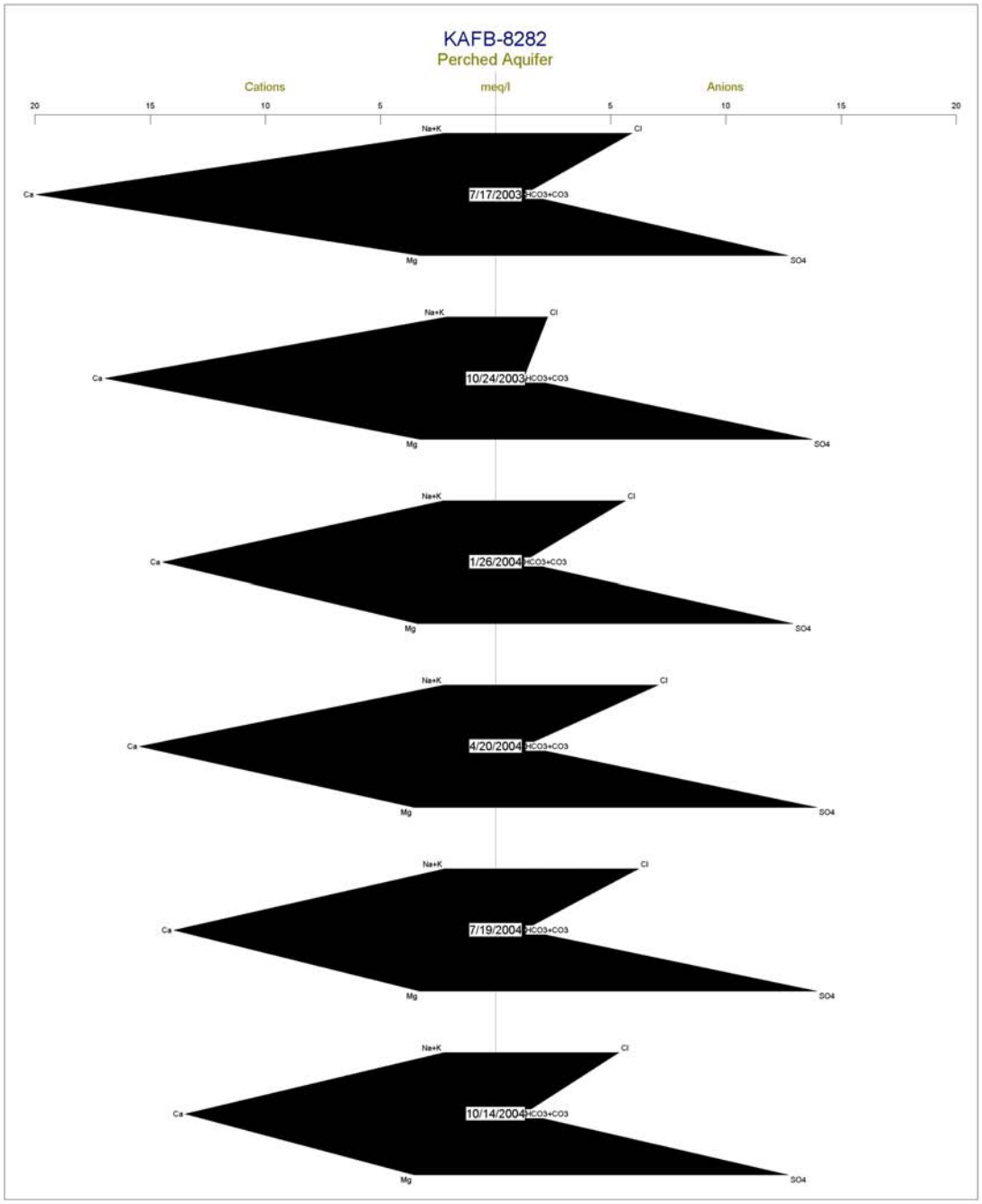
KAFB-8282
Perched Aquifer
Cations
meq/l
Anions
20
15
10
5
5
10
15
20
Na+K
Cl
Ca
7/17/2003
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
10/24/2003
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
1/26/2004
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
4/20/2004
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
7/19/2004
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
10/14/2004
HCO3+CO3
Mg
SO4

Figure H-80

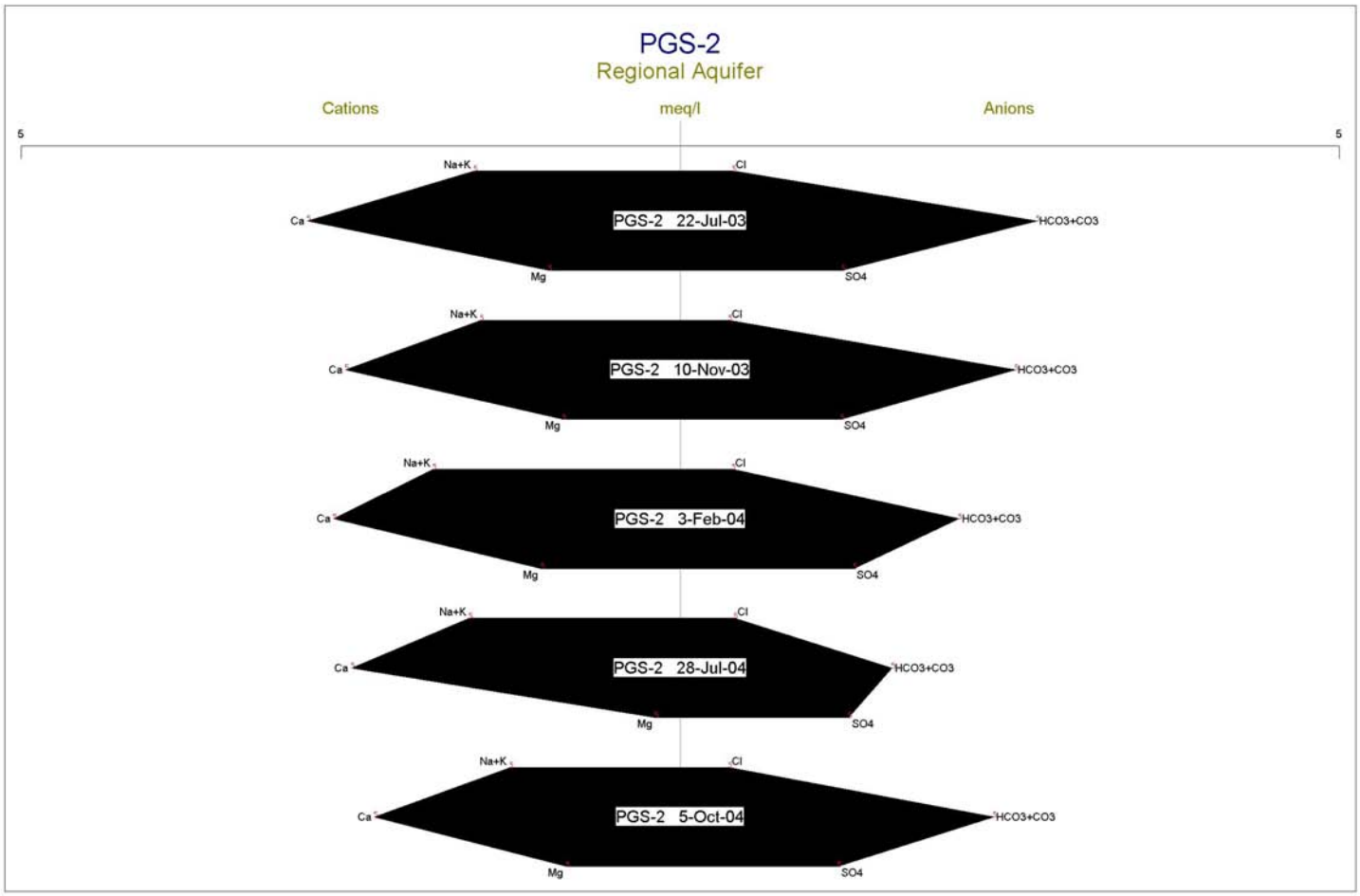
PGS-2
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
PGS-2 22-Jul-03
PGS-2 10-Nov-03
PGS-2 3-Feb-04
PGS-2 28-Jul-04
PGS-2 5-Oct-04

Figure H-81

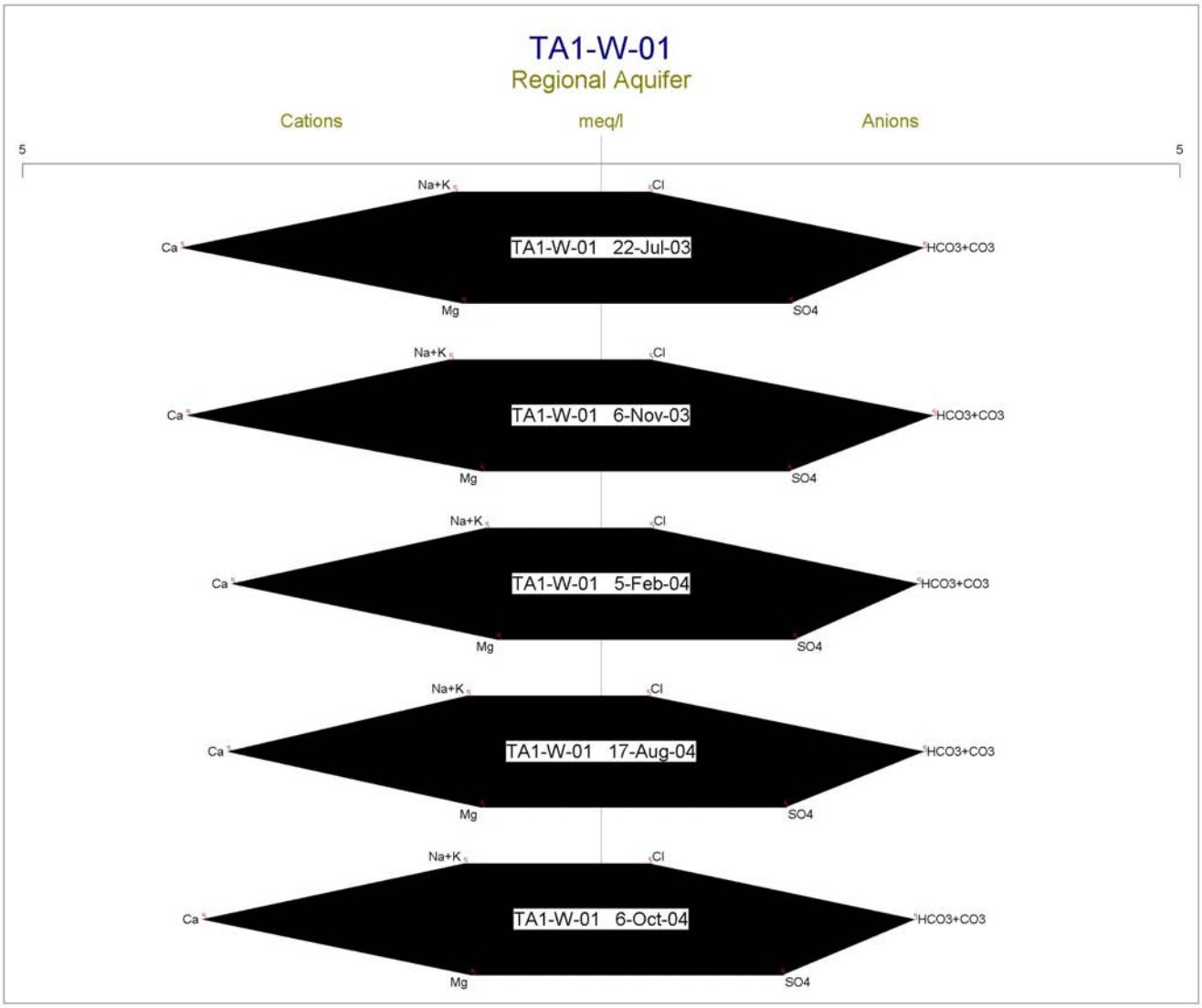
TA1-W-01
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA1-W-01 22-Jul-03
TA1-W-01 6-Nov-03
TA1-W-01 5-Feb-04
TA1-W-01 17-Aug-04
TA1-W-01 6-Oct-04

Figure H-82

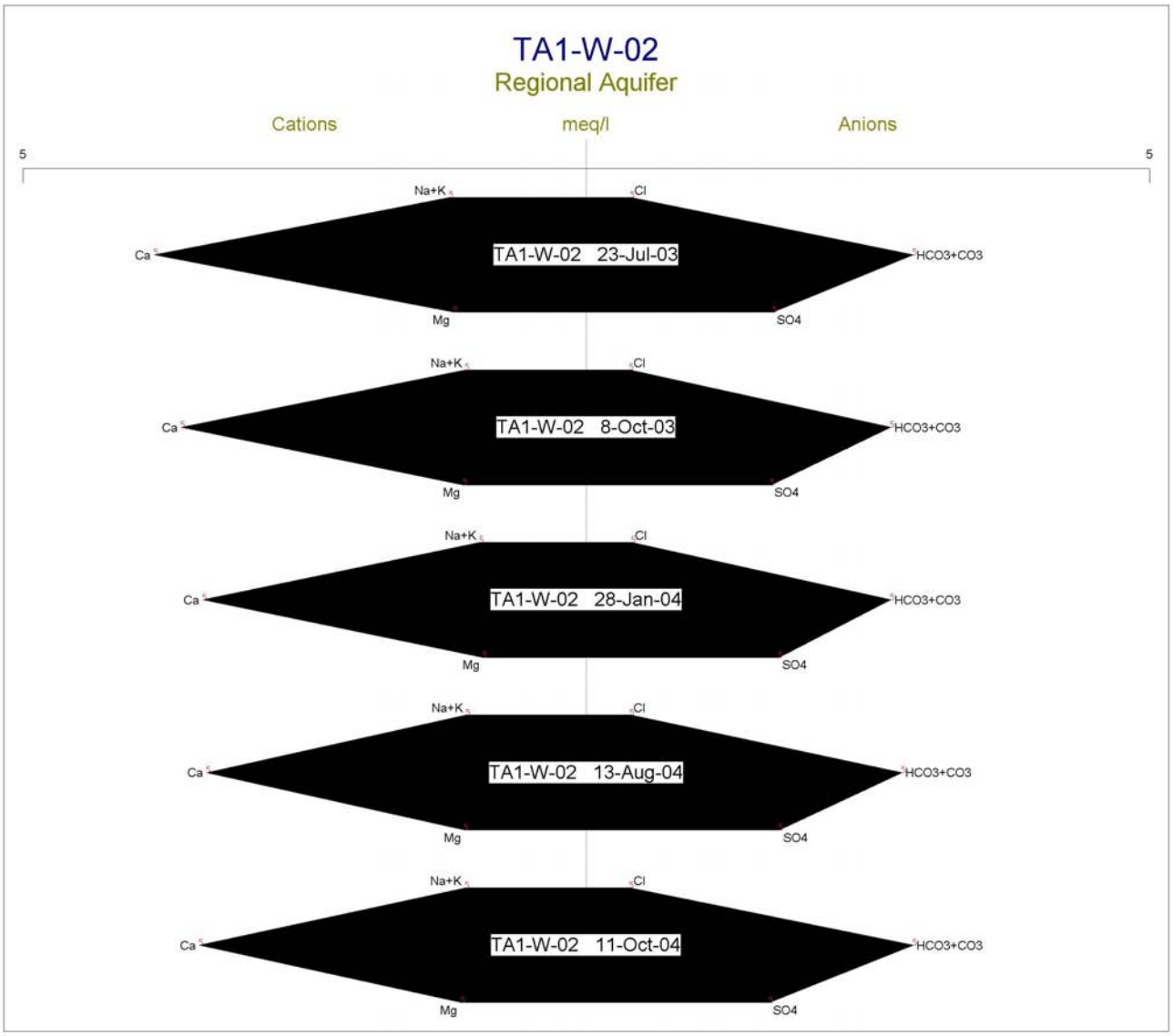
TA1-W-02
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA1-W-02 23-Jul-03
TA1-W-02 8-Oct-03
TA1-W-02 28-Jan-04
TA1-W-02 13-Aug-04
TA1-W-02 11-Oct-04

Figure H-83

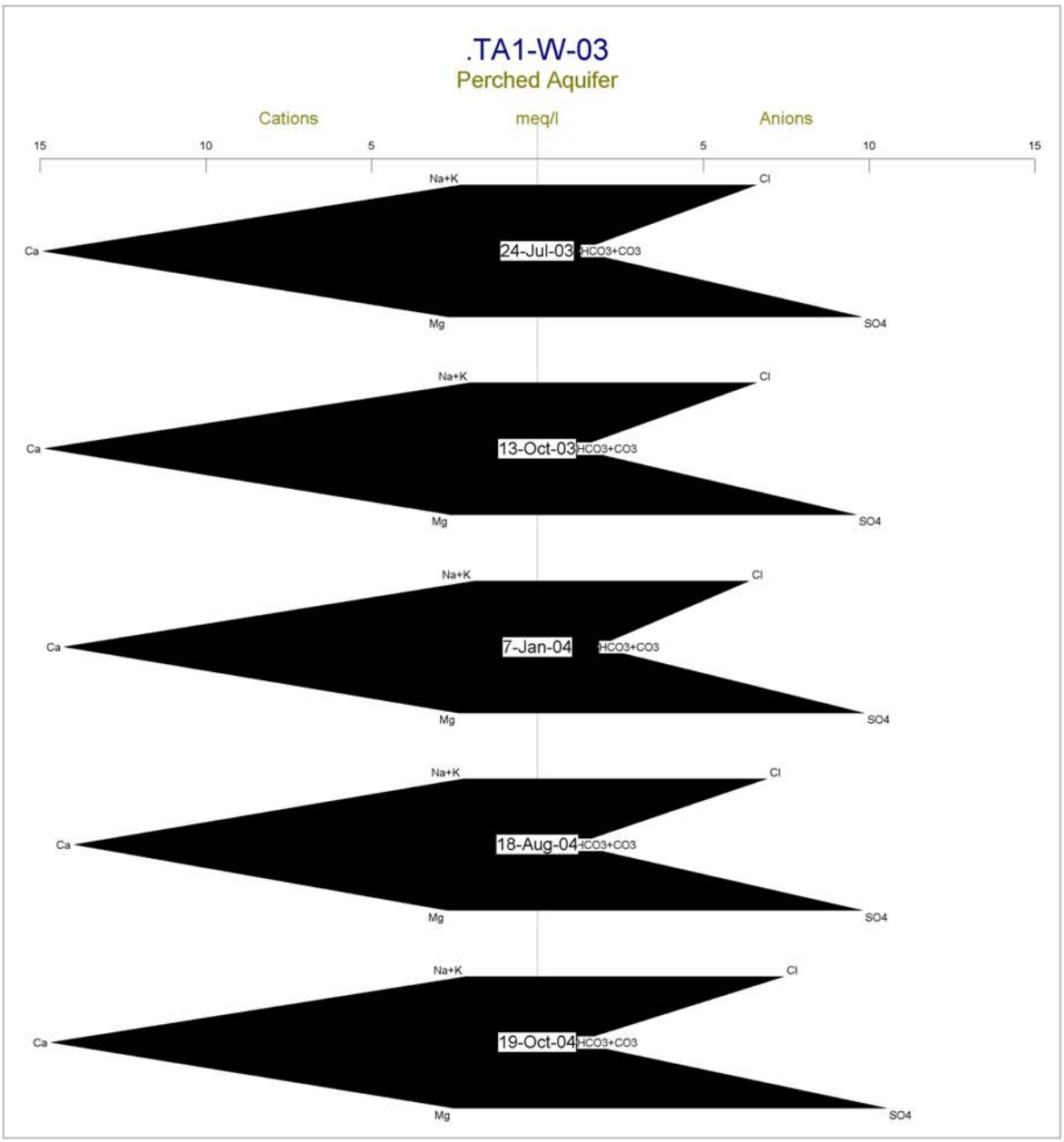
.TA1-W-03
Perched Aquifer
Cations
meq/l
Anions
15
10
5
5
10
15
Na+K
Cl
Ca
24-Jul-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
13-Oct-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
7-Jan-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
18-Aug-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
19-Oct-04
HCO3+CO3
Mg
SO4

Figure H-84

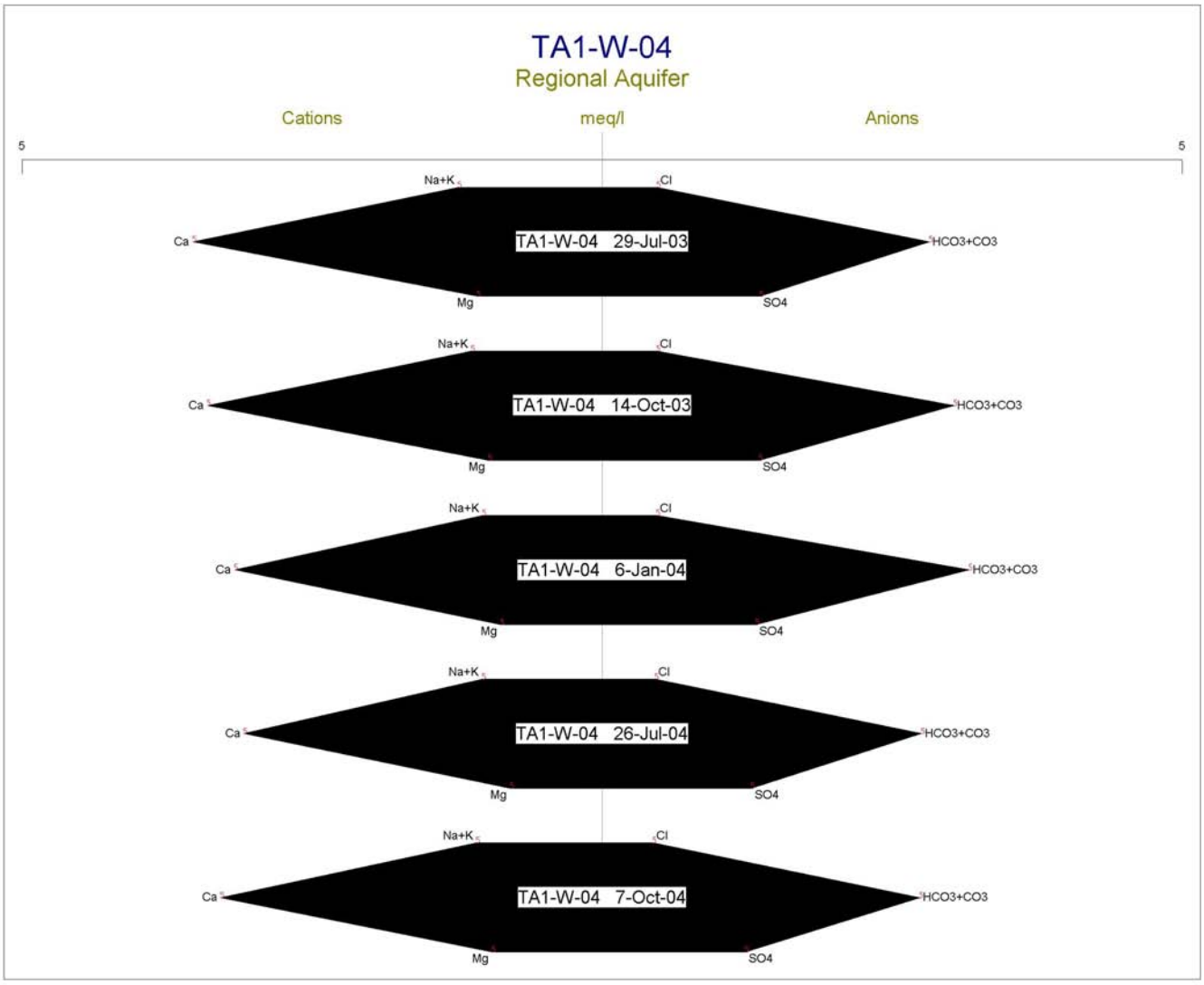
TA1-W-04
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA1-W-04 29-Jul-03
TA1-W-04 14-Oct-03
TA1-W-04 6-Jan-04
TA1-W-04 26-Jul-04
TA1-W-04 7-Oct-04

Figure H-85

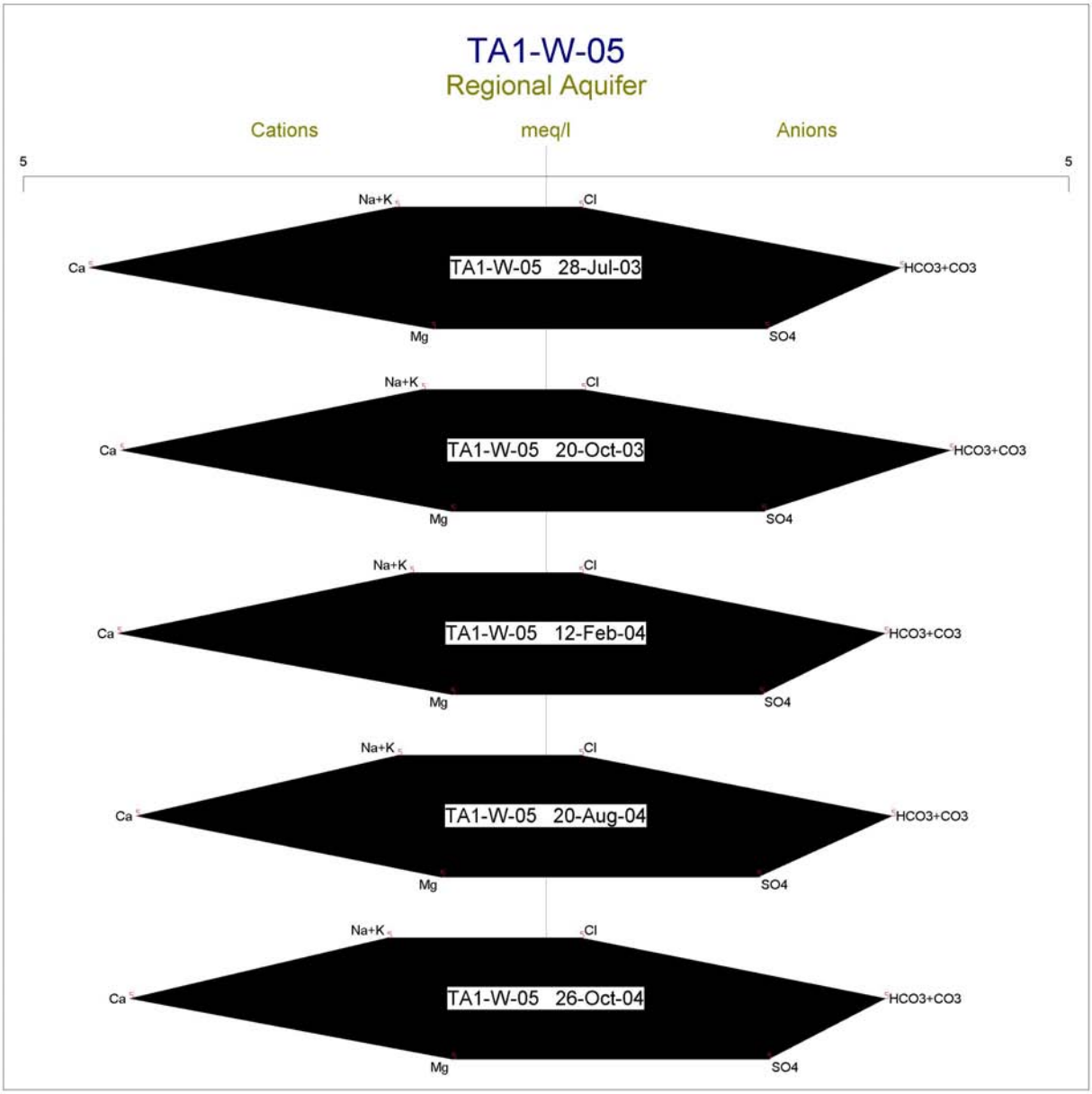
TA1-W-05
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA1-W-05 28-Jul-03
TA1-W-05 20-Oct-03
TA1-W-05 12-Feb-04
TA1-W-05 20-Aug-04
TA1-W-05 26-Oct-04

Figure H-86

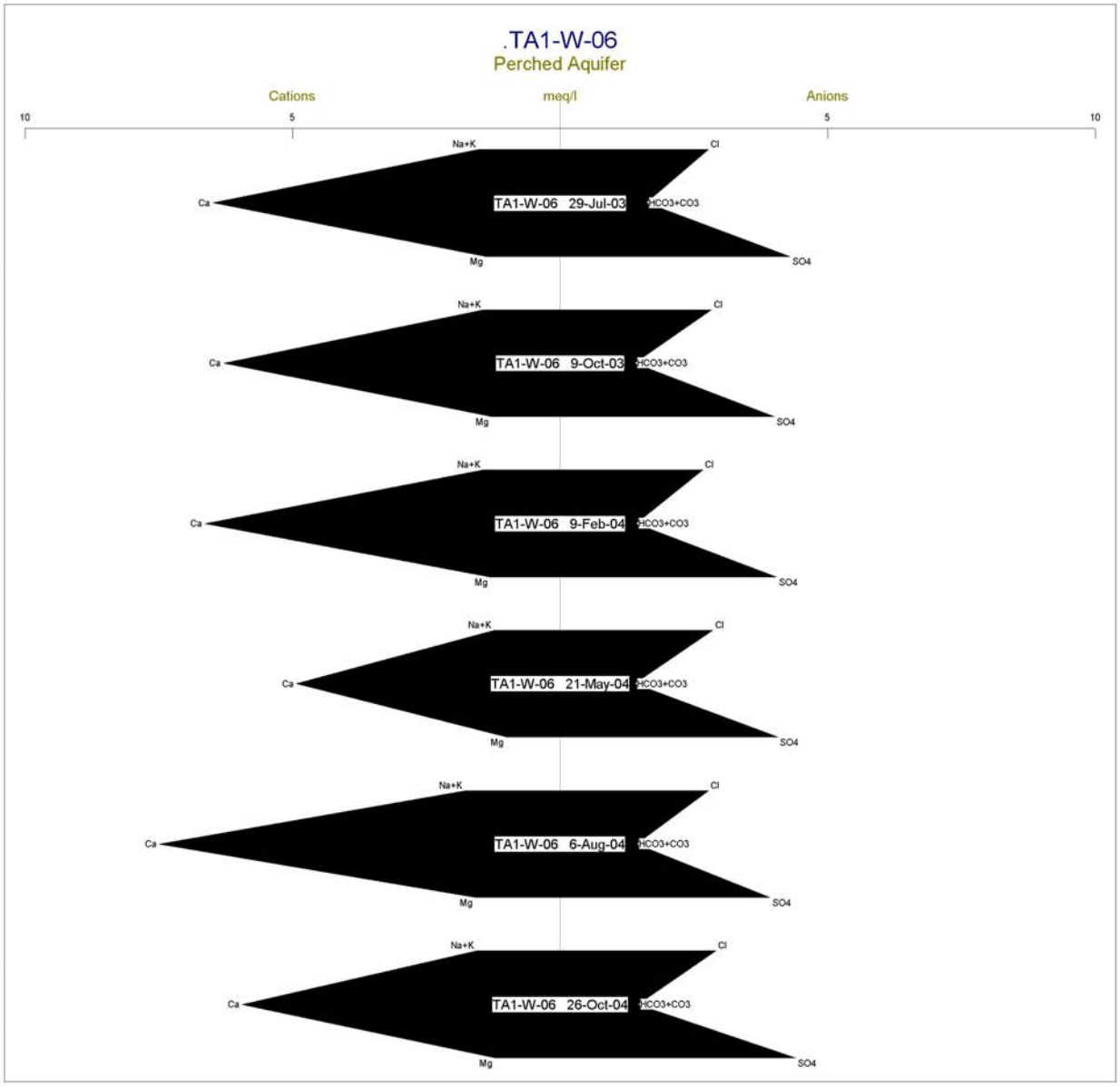
.TA1-W-06
Perched Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
TA1-W-06 29-Jul-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA1-W-06 9-Oct-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA1-W-06 9-Feb-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA1-W-06 21-May-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA1-W-06 6-Aug-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA1-W-06 26-Oct-04
HCO3+CO3
Mg
SO4

Figure H-87

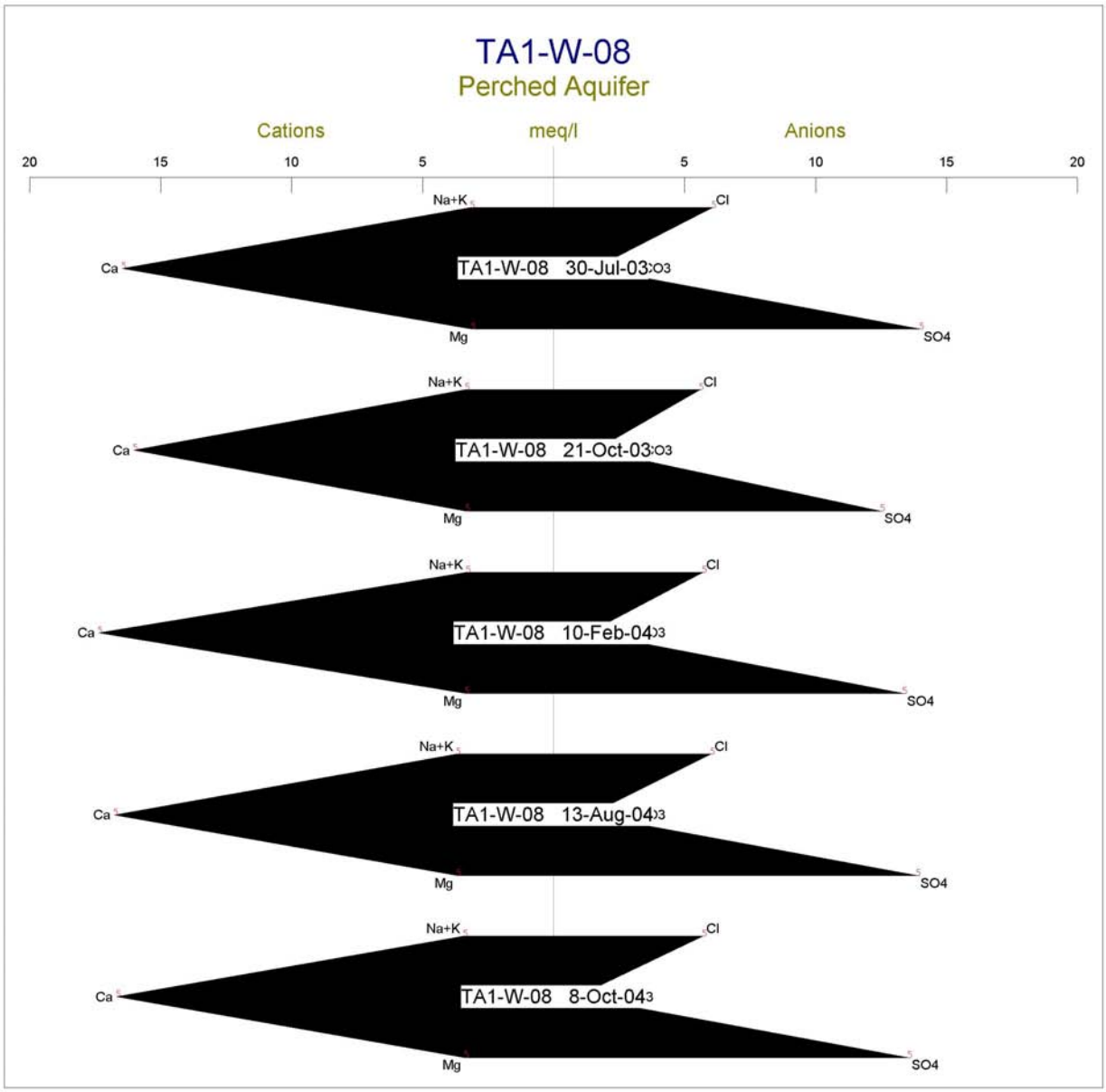
TA1-W-08
Perched Aquifer
Cations
meq/l
Anions
20
15
10
5
5
10
15
20
Na+K
Cl
Ca
TA1-W-08 30-Jul-03
Mg
SO4
Na+K
Cl
Ca
TA1-W-08 21-Oct-03
Mg
SO4
Na+K
Cl
Ca
TA1-W-08 10-Feb-04
Mg
SO4
Na+K
Cl
Ca
TA1-W-08 13-Aug-04
Mg
SO4
Na+K
Cl
Ca
TA1-W-08 8-Oct-04
Mg
SO4

Figure H-88

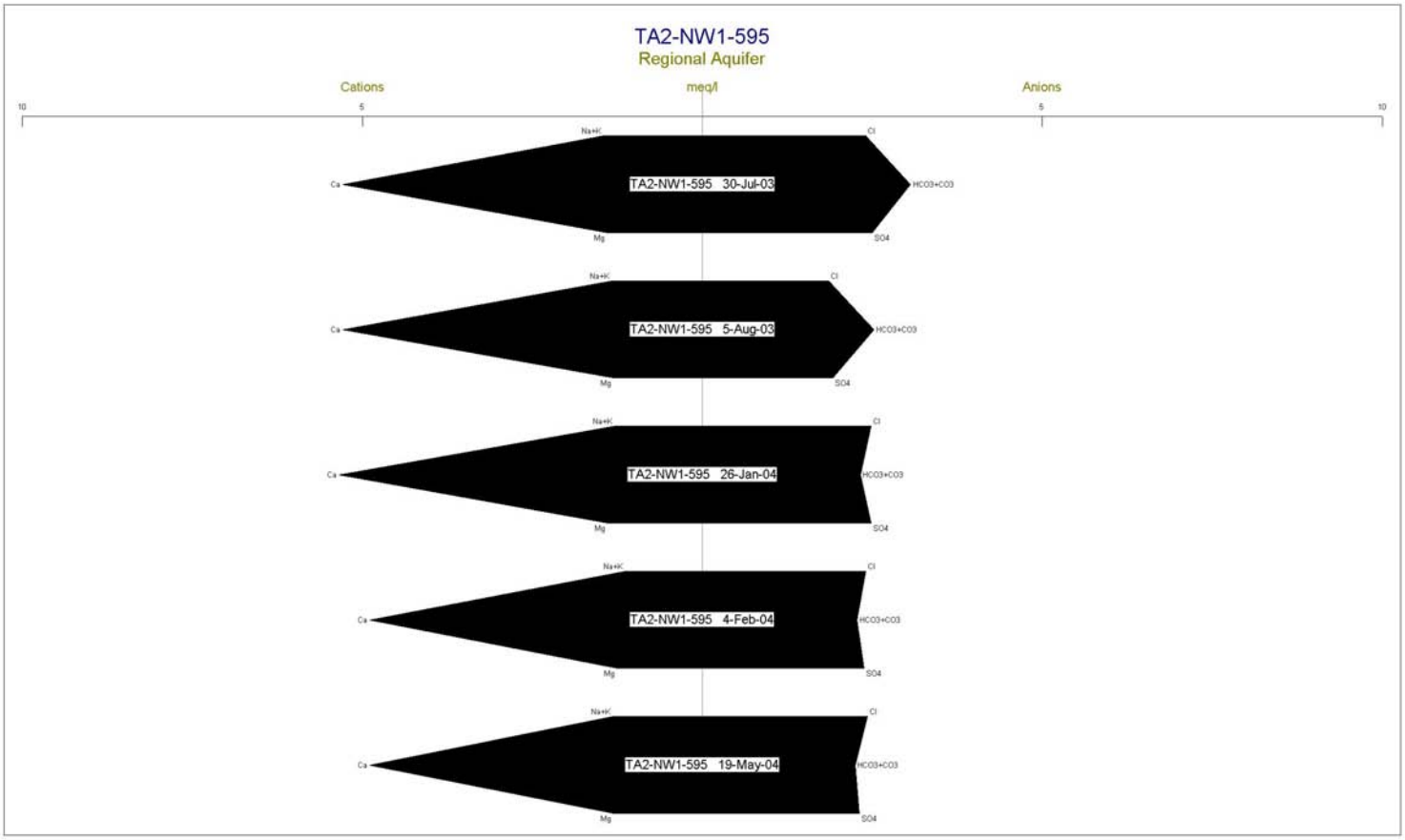
TA2-NW1-595
Regional Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA2-NW1-595 30-Jul-03
TA2-NW1-595 5-Aug-03
TA2-NW1-595 26-Jan-04
TA2-NW1-595 4-Feb-04
TA2-NW1-595 19-May-04

Figure H-89

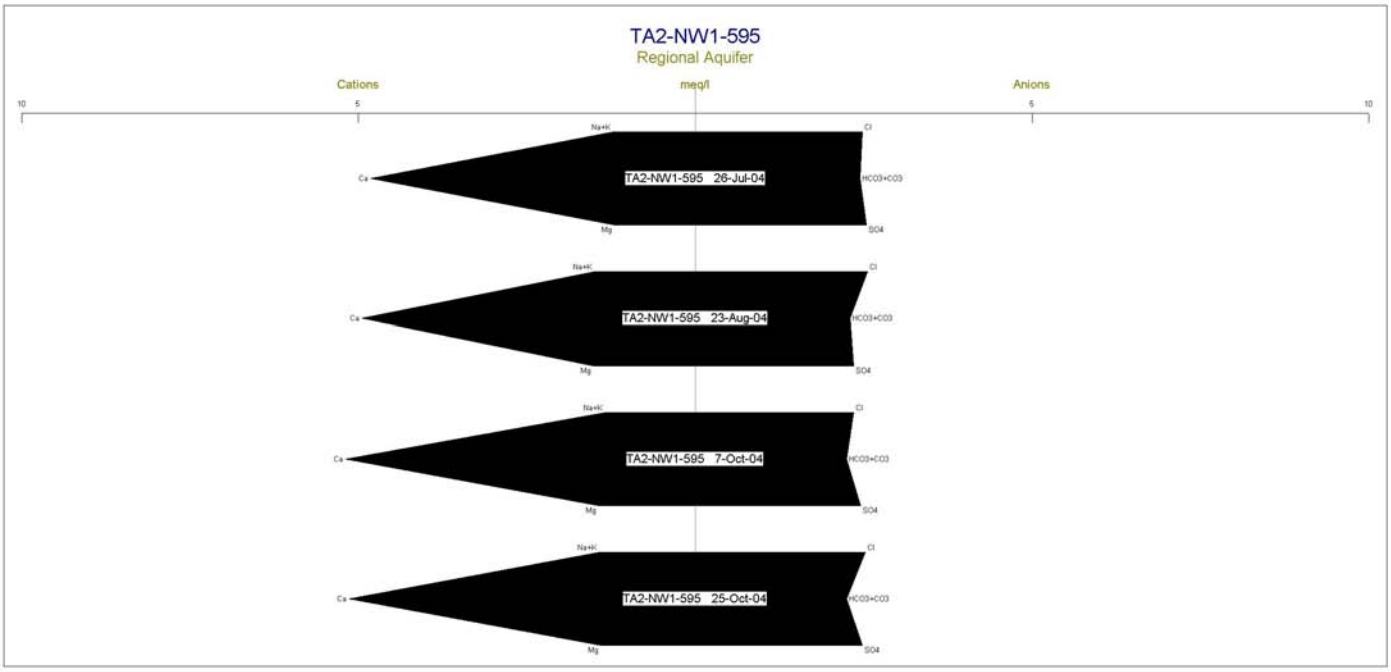
TA2-NW1-595
Regional Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Ca
Mg
Cl
HCO3+CO3
SO4
TA2-NW1-595 26-Jul-04
TA2-NW1-595 23-Aug-04
TA2-NW1-595 7-Oct-04
TA2-NW1-595 25-Oct-04

Figure H-90

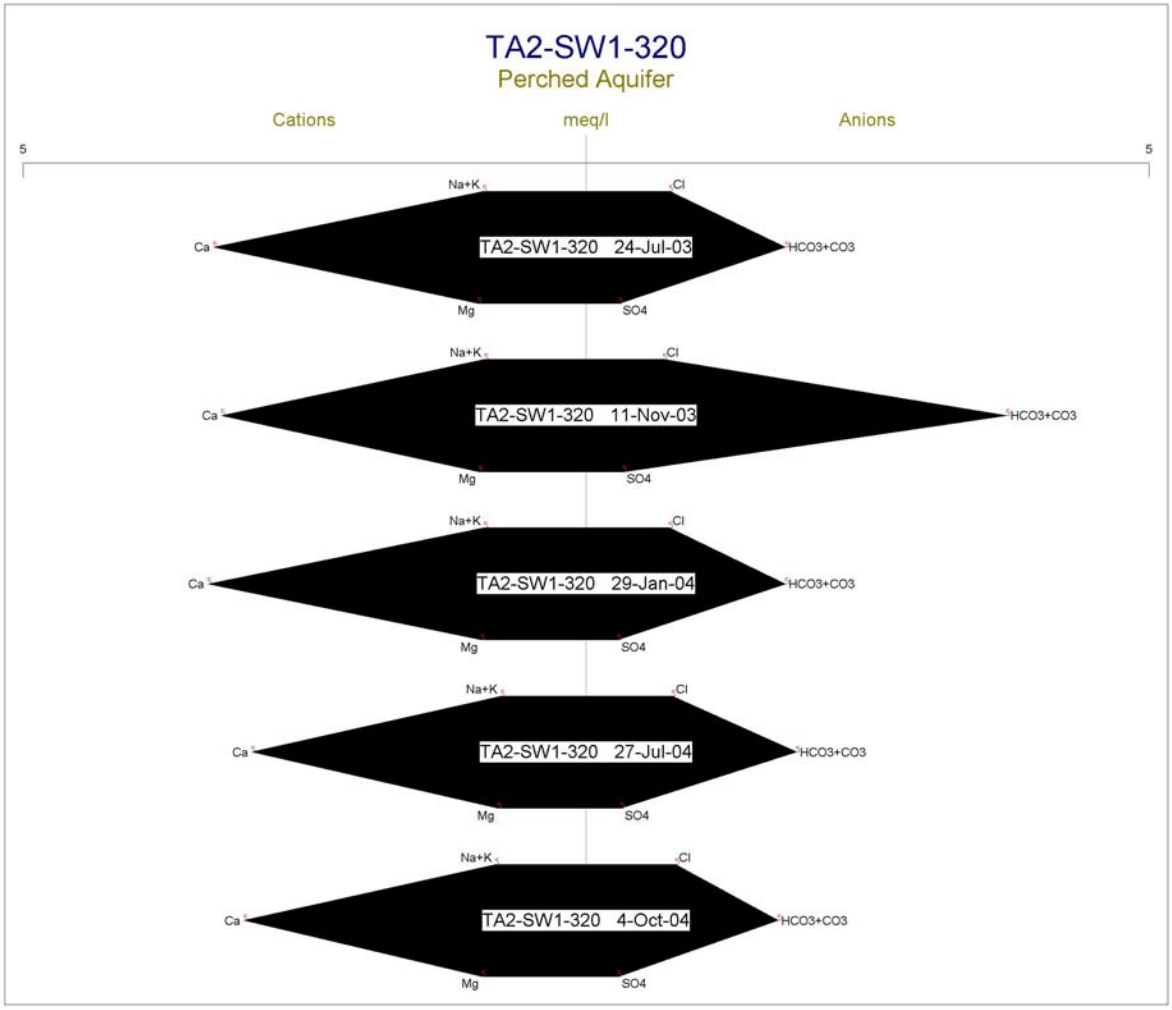
TA2-SW1-320
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA2-SW1-320 24-Jul-03
TA2-SW1-320 11-Nov-03
TA2-SW1-320 29-Jan-04
TA2-SW1-320 27-Jul-04
TA2-SW1-320 4-Oct-04

Figure H-91

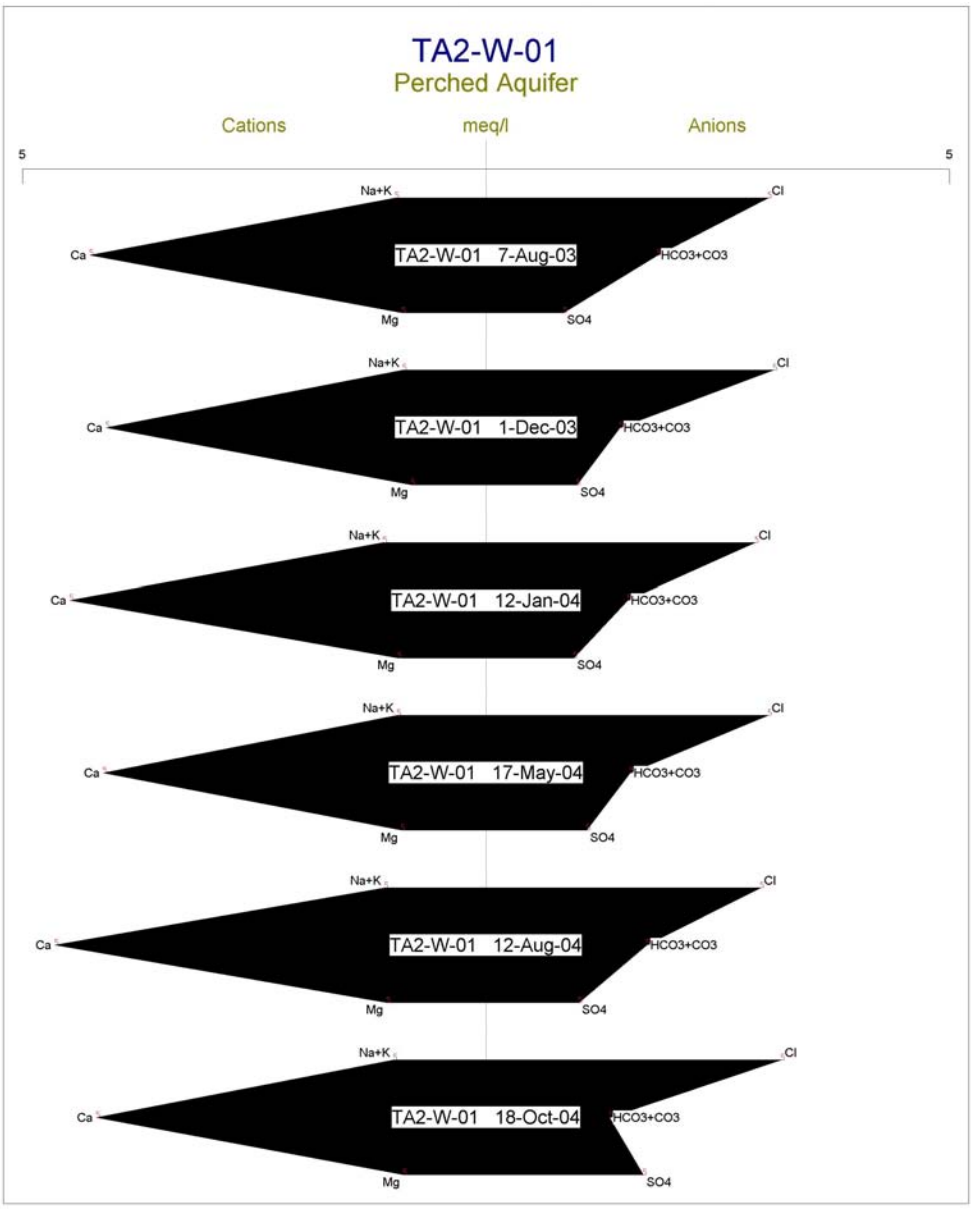
TA2-W-01
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TA2-W-01 7-Aug-03
TA2-W-01 1-Dec-03
TA2-W-01 12-Jan-04
TA2-W-01 17-May-04
TA2-W-01 12-Aug-04
TA2-W-01 18-Oct-04

Figure H-92

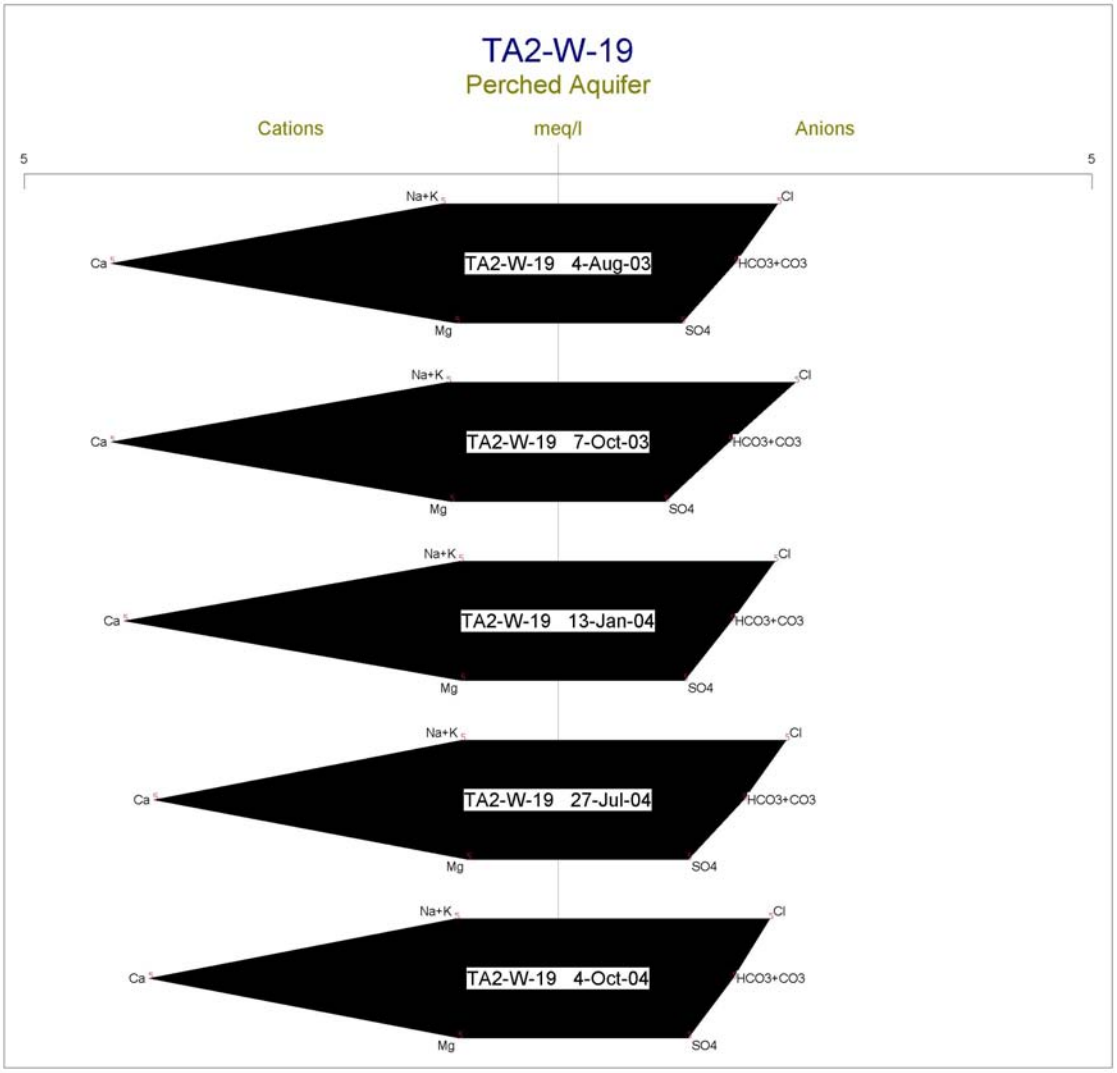
TA2-W-19
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
TA2-W-19 4-Aug-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-19 7-Oct-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-19 13-Jan-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-19 27-Jul-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-19 4-Oct-04
HCO3+CO3
Mg
SO4

Figure H-93

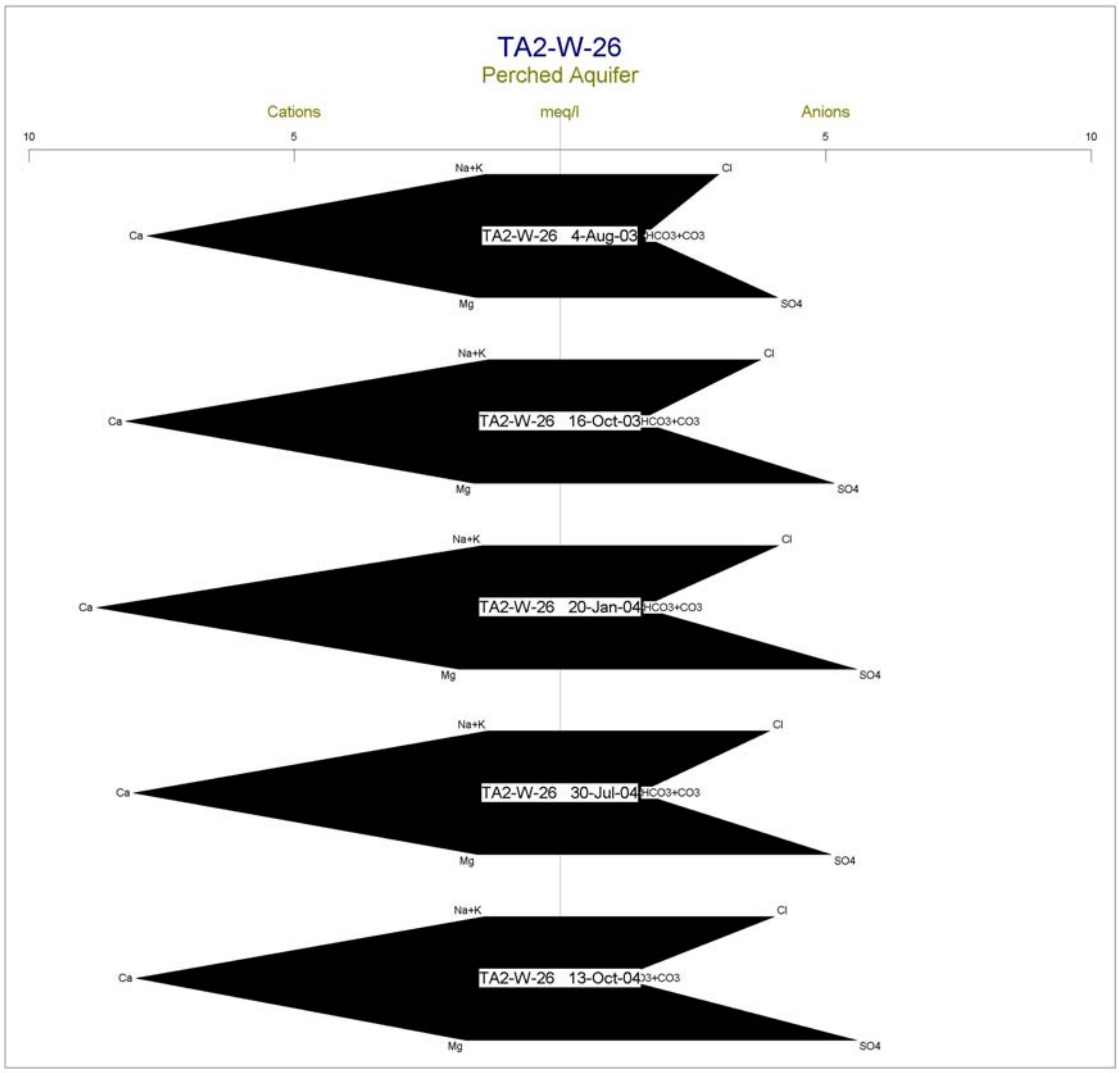
TA2-W-26
Perched Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
TA2-W-26 4-Aug-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-26 16-Oct-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-26 20-Jan-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-26 30-Jul-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-26 13-Oct-04
Mg
SO4

Figure H-94

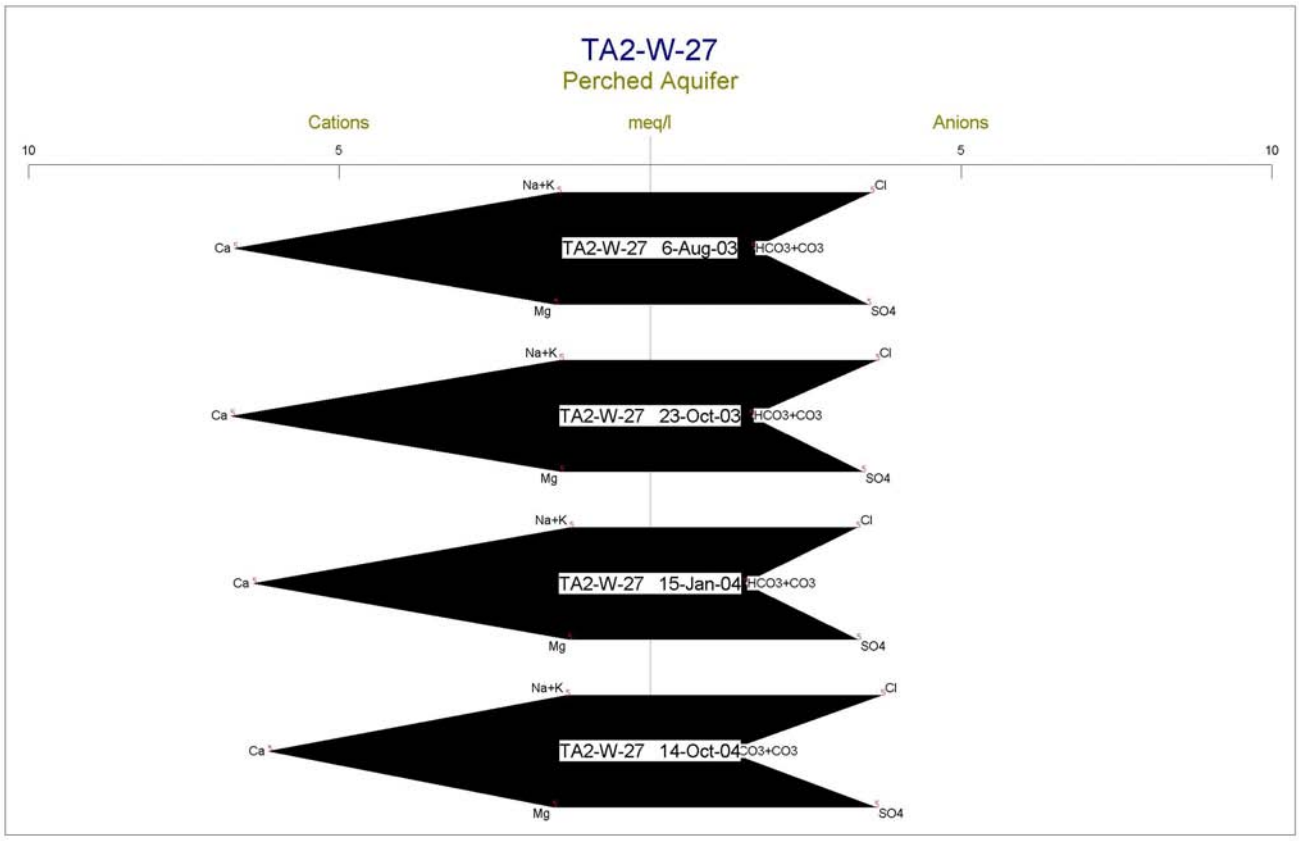
TA2-W-27
Perched Aquifer
Cations
meq/l
Anions
10
5
5
10
Na+K
Cl
Ca
TA2-W-27 6-Aug-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-27 23-Oct-03
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-27 15-Jan-04
HCO3+CO3
Mg
SO4
Na+K
Cl
Ca
TA2-W-27 14-Oct-04
CO3+CO3
Mg
SO4

Figure H-95

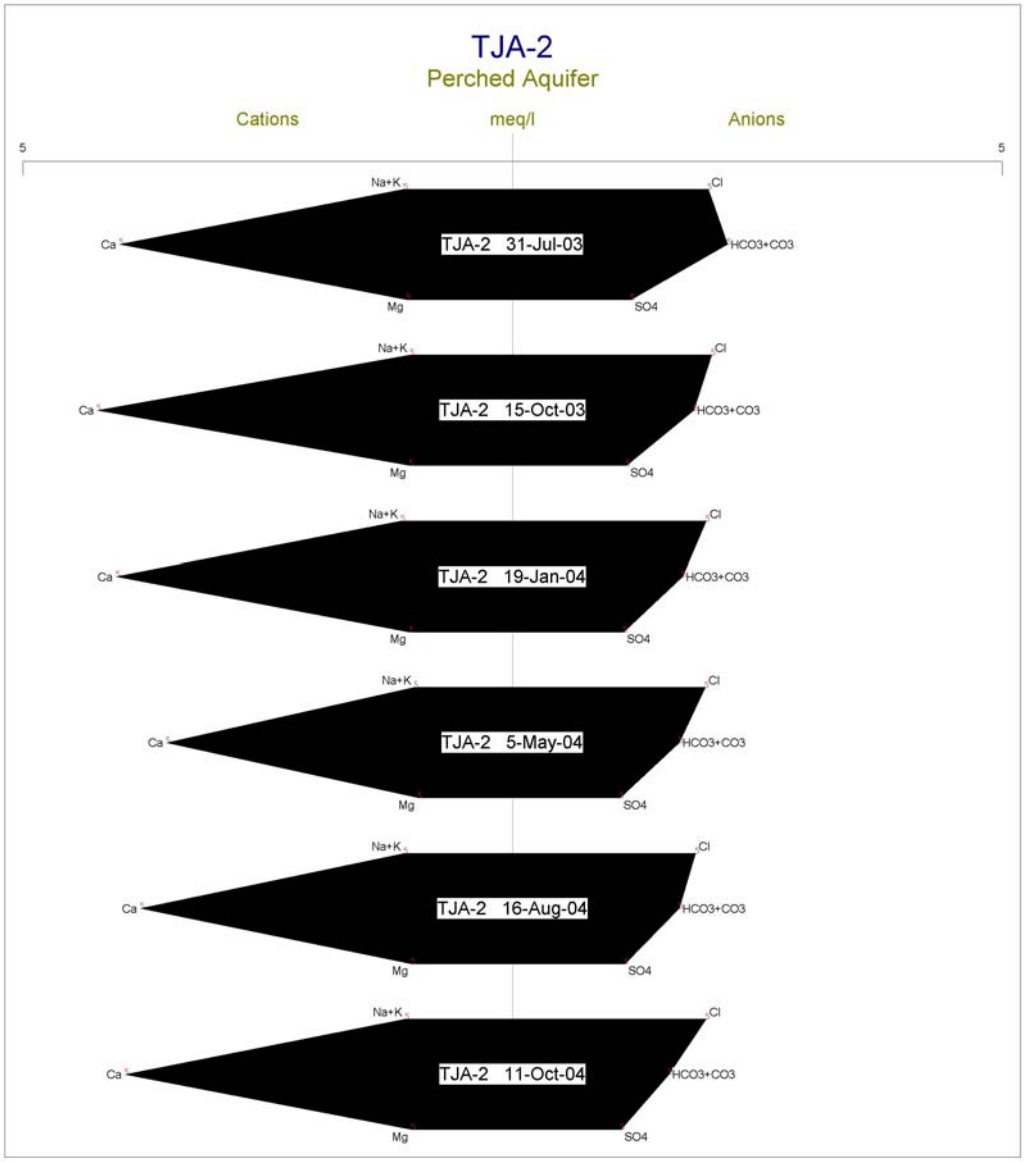
TJA-2
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TJA-2 31-Jul-03
TJA-2 15-Oct-03
TJA-2 19-Jan-04
TJA-2 5-May-04
TJA-2 16-Aug-04
TJA-2 11-Oct-04

Figure H-96

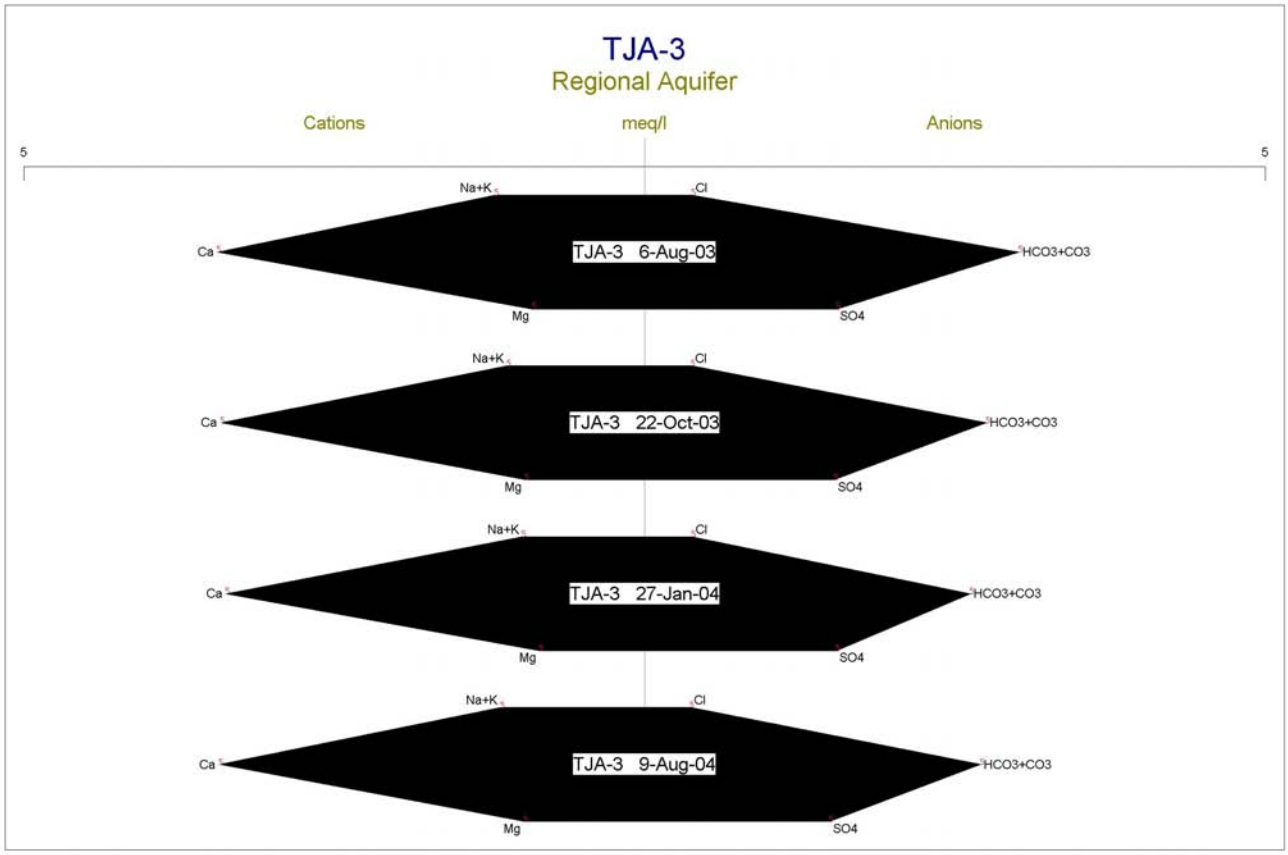
TJA-3
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
TJA-3 6-Aug-03
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-3 22-Oct-03
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-3 27-Jan-04
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-3 9-Aug-04
Mg
SO4

Figure H-97

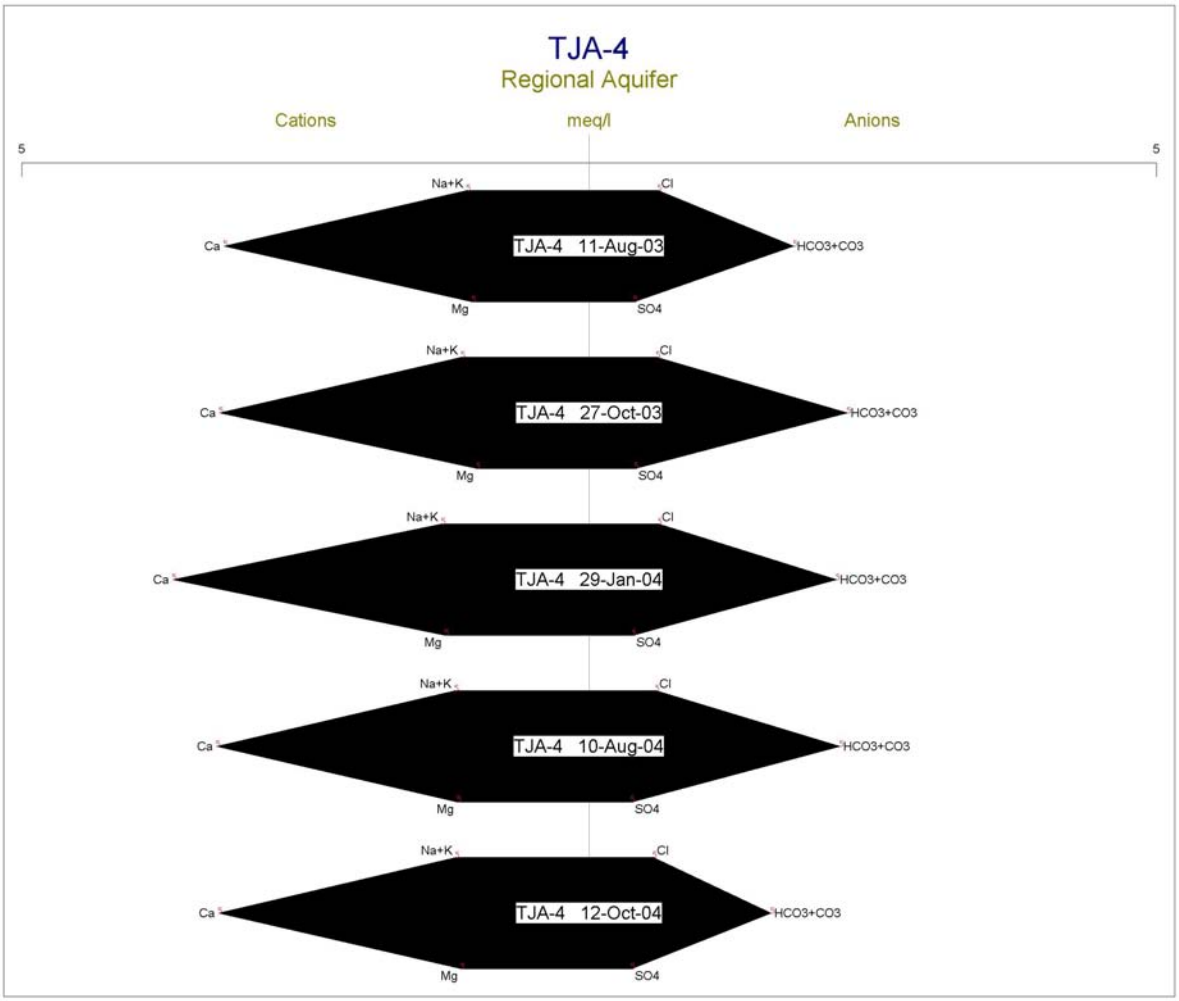
TJA-4
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TJA-4 11-Aug-03
TJA-4 27-Oct-03
TJA-4 29-Jan-04
TJA-4 10-Aug-04
TJA-4 12-Oct-04

Figure H-98

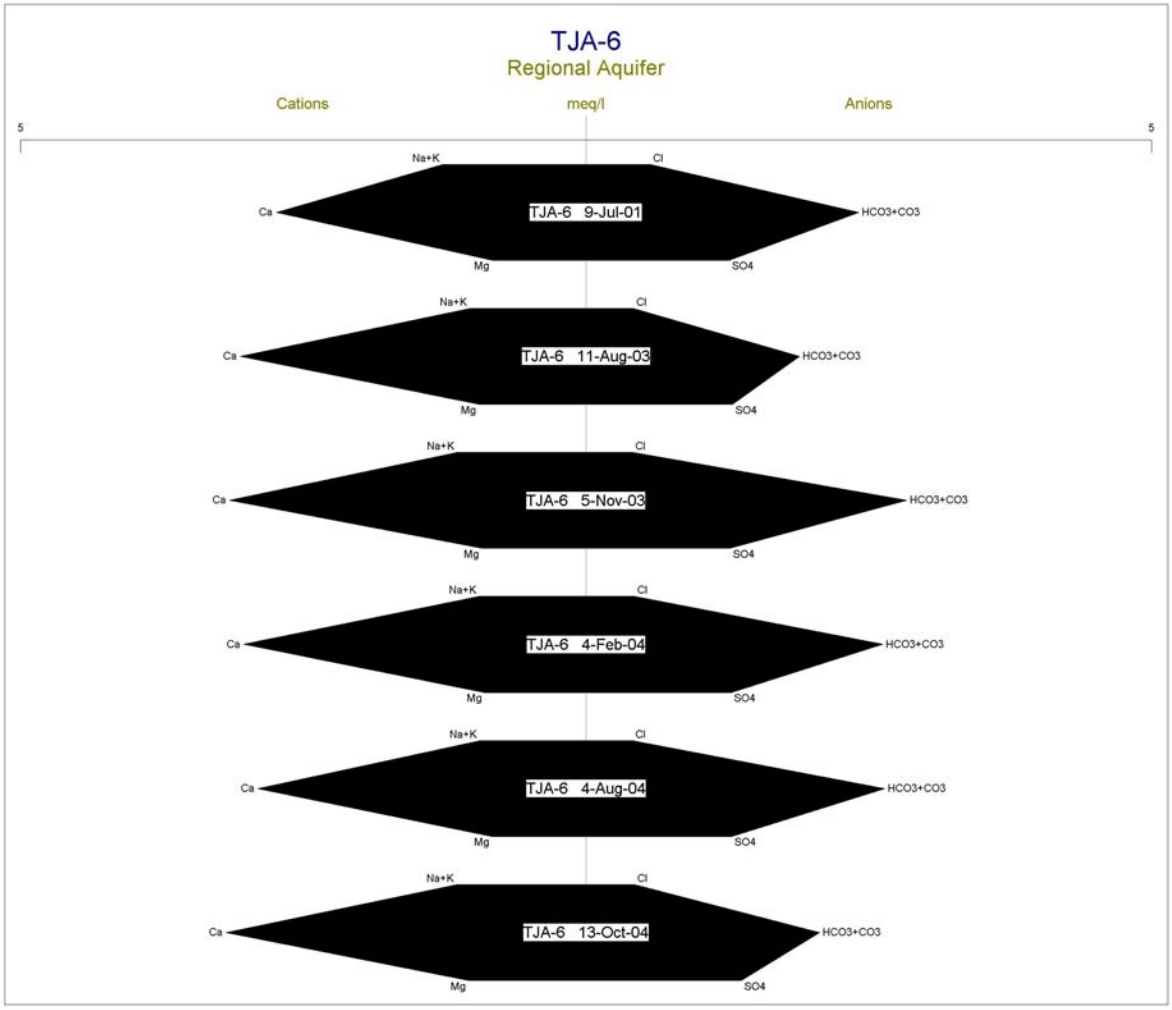
TJA-6
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
TJA-6 9-Jul-01
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-6 11-Aug-03
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-6 5-Nov-03
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-6 4-Feb-04
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-6 4-Aug-04
Mg
SO4
Na+K
Cl
Ca
HCO3+CO3
TJA-6 13-Oct-04
Mg
SO4

Figure H-99

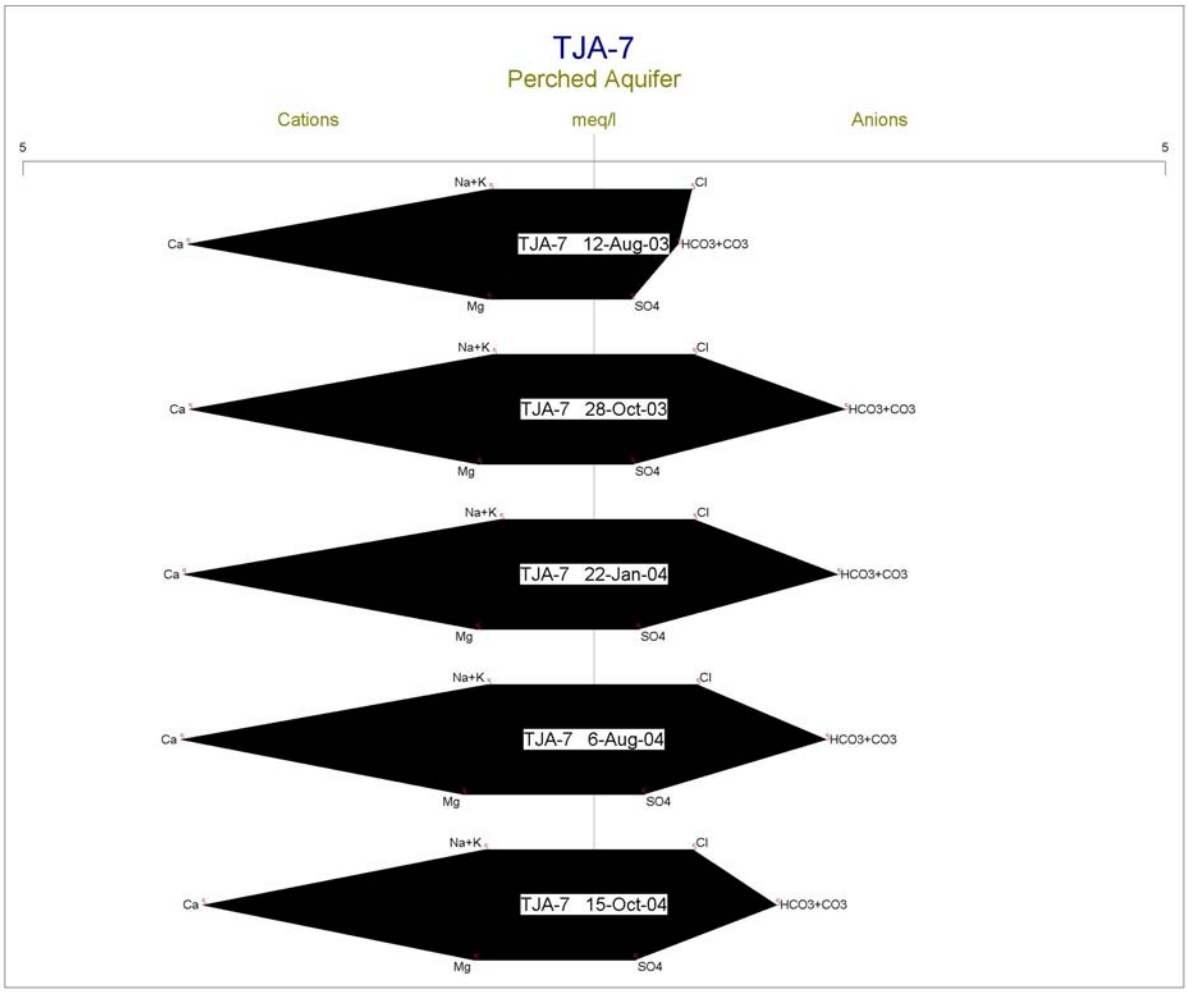
TJA-7
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
TJA-7 12-Aug-03
TJA-7 28-Oct-03
TJA-7 22-Jan-04
TJA-7 6-Aug-04
TJA-7 15-Oct-04

Figure H-100

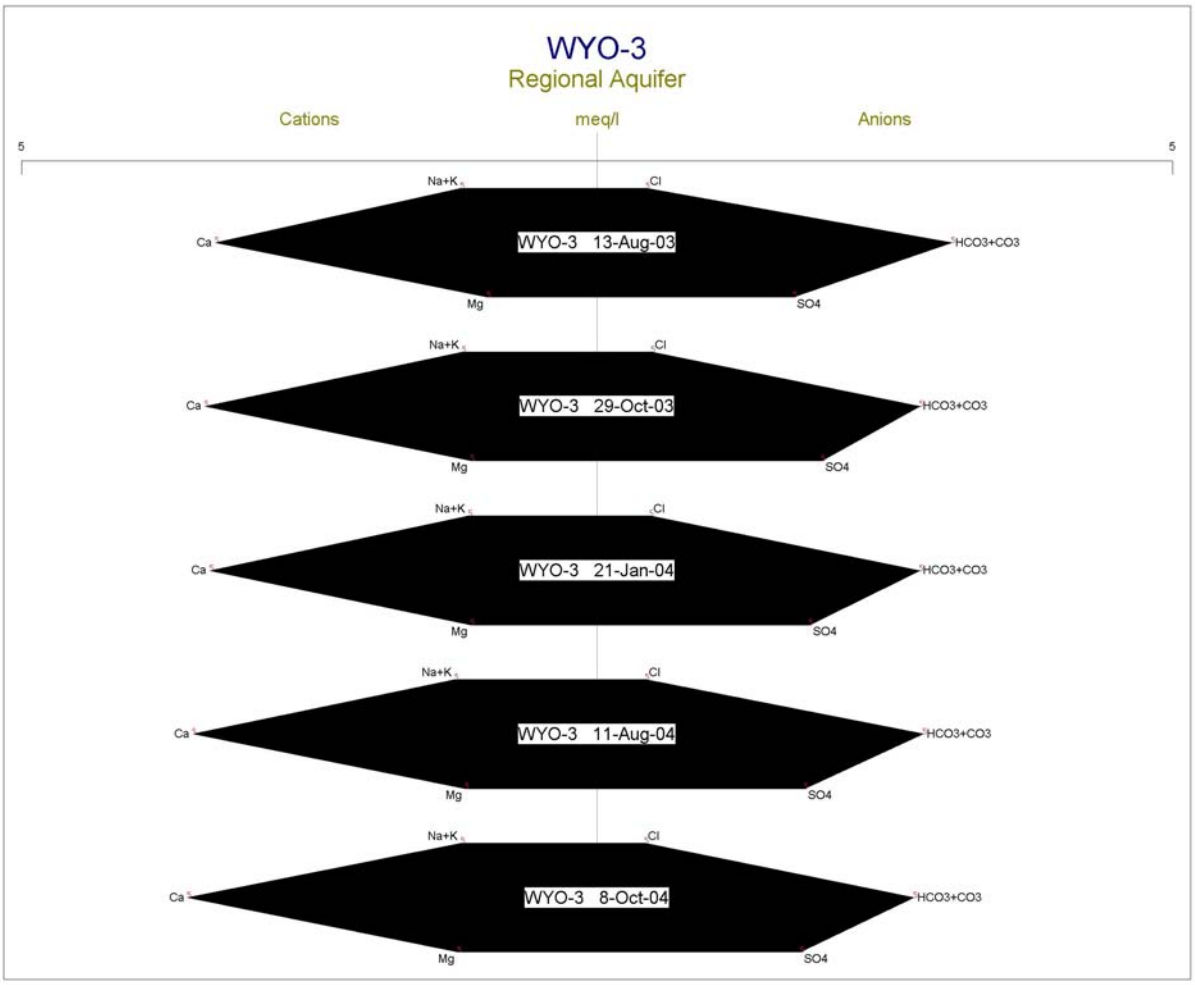
WYO-3
Regional Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
WYO-3 13-Aug-03
WYO-3 29-Oct-03
WYO-3 21-Jan-04
WYO-3 11-Aug-04
WYO-3 8-Oct-04

Figure H-101

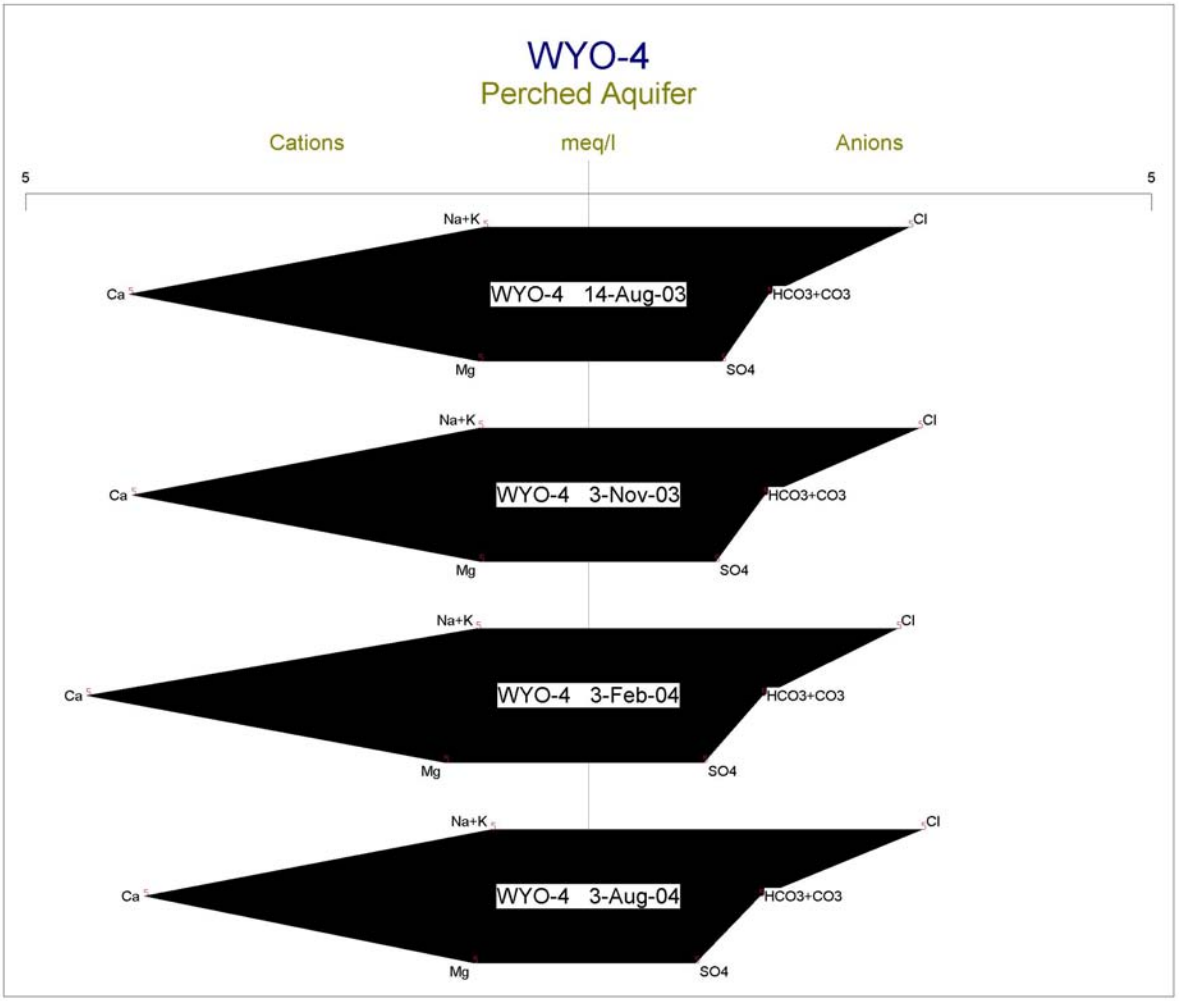
WYO-4
Perched Aquifer
Cations
meq/l
Anions
5
5
Na+K
Cl
Ca
HCO3+CO3
Mg
SO4
WYO-4 14-Aug-03
WYO-4 3-Nov-03
WYO-4 3-Feb-04
WYO-4 3-Aug-04

Figure H-102