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SVE SPLIT AIR
and
INDEPENDNT INDOOR AIR SAMPLING REPORT

SPARTON TECHNOLOGY, INC.
ALBUQUERQUE, NEW MEXICO

EPA I.D. No. NMD083212332

Submitted to:

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U.S. Environmental Protection Agency
Region 6
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1.0 INTRODUCTION

1.1 Purpose

The U. S. Environmental Protection Agency (EPA) requested TechLaw, Inc. (TechLaw), to collect SVE split air samples from ten vapor probes, six monitoring wells, and four vapor recovery wells located at Sparton Technology (Sparton) in Albuquerque, New Mexico. TechLaw was also requested to perform independent indoor air sampling at two locations within the Melloy Dodge Dealership building. These samples included two, 24-hour composite samples and two, eight-hour composite samples. TechLaw developed and submitted a Quality Assurance Project Plan (QAPP) and a site specific Health and Safety Plan (HASP) to EPA prior to the sampling visit.

The purpose of this report is to present the findings and observations noted during the indoor independent air sampling and soil vapor extraction split sampling activities which occurred on October 15- 17, 2001. Included as attachments are copies of the TechLaw Field Logbook (Attachment A), copies of the Chain-of-Custody (COC) forms (Attachment B), photographic log (Attachment C), table summarizing the analytical results of the Soil Vapor Extraction (SVE) split samples collected (Attachment D), table summarizing the analytical results of the indoor air samples collected (Attachment E), table comparing EPA and Sparton Technology (Trichloroethylene) TCE analytical results (Attachment F), Indoor Air Sample Location Map (Attachment G), and analytical data package (Attachment H).

1.2 History and Environmental Setting

Sparton stored hazardous wastes on site through 1980 in two surface impoundments and a concrete sump. The wastes contained metals and organic solvents. Sparton completed a RCRA Facility Investigation (RFI) in July 1992, and a Corrective Measures Study (CMS) in June 1996, under an EPA Administrative Order on Consent, which became effective on October 1, 1988. Current corrective action activities are being conducted under Civil Action No. CIV 97 0206 LH/JHG, which became effective on March 3, 2000. The major contaminants of concern are trichloroethylene (TCE), 1,1,1,-trichloroethane (TCA), methylene chloride, acetone, 1,1-dichloroethylene (DCE) and hexavalent chromium.

1.3 Scope

TechLaw performed split sampling with the facility's consultant, Metric Corporation and New Mexico Environmental Department (NMED). TechLaw collected split samples from ten vapor probe points, six monitoring wells, and four vapor recovery wells. In addition two duplicate samples were collected for quality assurance/quality control (QA/QC) purposes.

In conjunction with the split sampling performed at Sparton, TechLaw also completed

independent indoor air sampling. TechLaw collected air sampling from two locations within the Melloy Dodge Dealership office complex.

2.0 METHODS OF INVESTIGATION

Sampling and oversight activities were conducted by the following personnel:

John Fellinger, TechLaw, Inc.- Indoor Air Sampling Field Team Leader

Tami Engle, TechLaw, Inc. - Field Team Leader and Sampling Quality Control

Baird Swanson -New Mexico Environmental Department

Sparton and contractor staff present included:

Donald Gutierrez - Sparton Technology, Inc.

Don Briggs -Metric Corporation

The methods for the sampling visit are outlined in the EPA approved QAPP, dated October 15, 2001.

2.1 Independent Indoor Air Sampling and Analysis

TechLaw collected 8-hour and 24-hour time weighted average (TWA) air samples at two locations within the automobile dealership building located on the former Sparton property. In accordance with the TechLaw approved QAPP, a duplicate 8-hour and 24-hour TWA air sample was collected to verify laboratory analytical procedures, sampling techniques, and field quality control purposes. The total number of samples including QA/QC samples was six. Ambient air blank samples were not collected by the TechLaw Team at this indoor air sampling event.

All samples were collected in pre-cleaned and certified Summa canisters supplied by the laboratory, Southwest Laboratories of Oklahoma (SWLO), located in Broken Arrow, Oklahoma.

All samples collected were properly labeled by indicating the starting/stopping vacuum pressure, date and time of collection. The Summa canisters were placed directly into the cooler to be shipped. The coolers were packed with additional packing material. The COC form (Attachment B) was placed in the cooler. Temperature blanks were not collected, as indicated in the approved QAPP. The cooler was sealed with strapping tape and a custody seal was placed at the appropriate location on the cooler and covered with clear tape. The samples were shipped overnight, via Federal Express to SWLO. SWLO analyzed the samples for total volatile organic compounds using modified Method TO-14 and TO-15. The constituents detected and quantitation limits are provided in the attached Analytical Data Package (Attachment H).

Table 1 shows the sample date and times, analyses requested, and sample numbers.

TABLE 1

Sample Information for Independent Indoor Air Sampling Event

Sample Number	Sample Date	Sample Start Time	Sample Stop Time (10/16/01)	Analyses
IA-1-24	10/15/01	2119	0915	Total VOCs Modified TO-14 and T0-15
IA-2-24	10/15/01	2124	2134	Total VOCs Modified TO-14 and T0-15
IA-3-24	10/15/01	2125	2135	Total VOCs Modified TO-14 and T0-15
IA-1-8	10/16/01	0734	1534	Total VOCs Modified TO-14 and T0-15
IA-2-8	10/16/01	0736	1343	Total VOCs Modified TO-14 and T0-15
IA-3-8	10/16/01	0737	1537	Total VOCs Modified TO-14 and T0-15

SUMMA Canisters were used to collect these samples. Preservative was not required for Modified TO-14 and TO-15 analyses.
IA= Indoor Air
IA-3-24= Duplicate sample of IA-24-2
IA-3-8= Duplicate sample of IA-2-8

2.2 SVE Split Air Sampling and Analyses

Sparton collected air samples from 20 monitoring wells, vapor probe points and vapor recovery wells. TechLaw collected split samples from these locations as well. In accordance with the TechLaw approved QAPP, two duplicate air samples were collected to verify laboratory analytical procedures, sampling techniques, and field quality control purposes. The total number of samples, including QA/QC samples was twenty-two. Ambient blank air samples and temperature blank samples were not collected by the TechLaw Team at this split sampling event.

All samples were collected in pre-cleaned and certified Tedlar gas sampling bags supplied by SWLO. All samples collected were properly labeled by indicating the date and time of collection. Sample bags were wrapped with bubble wrap and placed directly into the cooler to be shipped. The coolers were packed with additional packing material. The COC form (Attachment B) was placed in the cooler. The cooler was sealed with strapping tape and a custody seal was placed at the appropriate location on the cooler and covered with clear tape. The samples were shipped overnight, via Federal Express to SWLO. SWLO analyzed the samples for total volatile organic compounds using modified Method TO-14. The constituents detected, the applicable method, and quantitation limits are provided in the attached Analytical Data Package (Attachment H).

Table 2 shows the Sparton vapor probe, vapor recovery well, and monitoring well numbers,

sample date and time, analyses requested, and corresponding TechLaw sample numbers.

TABLE 2

Sample Information for SVE Split Sampling Event

Sparton Sample Number	Sample Date	Sample Time	Analyses	TechLaw Sample Designation
VP-11	10/16/01	09:08	Total VOCs Modified TO-14	VP-11
MW-13	10/16/01	09:38	Total VOCs Modified TO-14	MW-13
MW-7	10/16/01	10:14	Total VOCs Modified TO-14	MW-7
VP-9	10/16/01	10:39	Total VOCs Modified TO-14	VP-9
VP-10	10/16/01	11:06	Total VOCs Modified TO-14	VP-10
MW-18	10/16/01	12:33	Total VOCs Modified TO-14	MW-18
VP-8	10/16/01	13:45	Total VOCs Modified TO-14	VP-8
MW-15	10/16/01	14:35	Total VOCs Modified TO-14	MW-15
MW-21	10/16/01	15:04	Total VOCs Modified TO-14	MW-21
MW-21	10/16/01	15:06	Total VOCs Modified TO-14	VP-14 Duplicate of MW-21
MW-17	10/16/01	15:37	Total VOCs Modified TO-14	MW-17
VR-5	10/17/01	09:18	Total VOCs Modified TO-14	VR-5
VR-4	10/17/01	09:50	Total VOCs Modified TO-14	VR-4
VP-14	10/17/01	10:18	Total VOCs Modified TO-14	VP-14I
VR-2	10/17/01	10:45	Total VOCs Modified TO-14	VR-2
VP-1	10/17/01	11:05	Total VOCs Modified TO-14	VP-1
VP-2	10/17/01	11:23	Total VOCs Modified TO-14	VP-2
VP-4	10/17/01	11:38	Total VOCs Modified TO-14	VP-4
VP-5	10/17/01	11:52	Total VOCs Modified TO-14	VP-5
VP-6	10/17/01	12:06	Total VOCs Modified TO-14	VP-6
VR-1	10/17/01	12:25	Total VOCs Modified TO-14	VR-1
VR-1	10/17/01	12:36	Total VOCs Modified TO-14	VR-11 Duplicate of VR-1

Tedlar bags were used to collect these samples. Preservative was not required for Modified TO-14 analyses.
VP = Vapor Probe MW = Monitoring Well VR = Vapor Recovery Well VP-14I = Sparton VP-14

3.0 INDEPENDENT INDOOR AIR SAMPLE COLLECTION

Observations and activities were recorded in a hard bound field logbook. A copy of this logbook is included in Attachment A.

3.1 Indoor Air Sample Collection Procedures

The TechLaw team collected four independent indoor air samples at two locations within the Melloy Dodge Dealership office complex. These locations are designated as IA-1-24, IA-1-8, IA-2-24, and IA-2-8. In addition to the four SUMMA canisters collected, one 8-hour composite duplicate sample and one 24-hour composite duplicate sample was collected (IA-3-24 and IA-3-8). Attachment G provides a sample location map.

IA-1 was located off the main show room entrance and adjacent to the parts warehouse. The second location, IA-2 and duplicate sample location IA-3, was also located off the main show room entrance, in the "Used Car Sales" portion of the building complex. These locations were selected as representative of the interior of the dealership and were not expected to be occupied during the proposed sample time. The SUMMA canisters were concealed within cardboard boxes, allowing only the restrictor sampling orifice to be exposed. To further conceal the SUMMA canisters within the cardboard boxes from casual observation, the boxes were placed behind office furniture.

The SUMMA canisters which were collecting 24-hour composite samples were started on 15 October 2001 and concluded at the same time on 16 October 2001. The SUMMA canisters collecting 8-hour composite samples were started on 16 October 2001 and concluded eight hours on the same day. The canisters were inspected hourly during the 8-hour sampling period on 16 October to protect them from tampering.

3.2 Indoor Air Sampling Analytical Results

The laboratory did not report any significant problems during the analysis of the indoor air samples. While completing field screening with a Flame Ionization Detector (FID) of the Melloy Dodge Dealership, trace levels of volatile organic compounds were detected during the sampling event. A brief summary of the analytical results for each location is presented in Attachment E. The complete analytical package is provided in Attachment H.

3.3 Indoor Air Sampling Observations

Sample IA-1-24 was stopped after an approximate 12-hour run time, as the remaining vacuum on the canister was reaching shipping limits. Sample IA-2-8 was stopped after an approximate 6-hour run time, for the same reason. The photographs in Attachment C provide visual documentation of the sample equipment and locations for the indoor air samples.

On 16 October 2001 at approximately 1340 hours, a rag containing an adhesive remover was found near sampling locations IA-2-8, IA-3-8, IA-2-24, and IA-3-24 by TechLaw personnel during periodic monitoring of the sampling locations. The rag was found approximately 20-feet down the hall from the location of IA2/IA3. Attachment G provides the sampling locations and area where the rag was observed. The rag was removed by the owner of the automobile dealership at approximately 1345 hours. TechLaw and Mr. Melloy of Melloy Dodge Dealership

believed the rag contained contents from an adhesive remover bottle. This adhesive remover bottle was located and the label identified such compounds as: xylene, aliphatic petroleum distillates, and ethyl-benzene.

4.0 SVE SPLIT AIR SAMPLE COLLECTION

Observations made during field oversight were recorded in a hard bound field logbook. A copy of this logbook is included as Attachment A. Noteworthy deviations from Sparton's sampling plan, current EPA guidance, or industry standards are discussed in the following sections.

4.1 Purging Procedures

The Sparton sampling team utilized a well gauge, chamber gauge, and vacuum chamber and 1/8 -inch diameter tygon tubing to purge the sample locations. Dedicated tygon tubing was placed onto the well connectors which was then attached to the well gauge. Non-dedicated tygon tubing is then connected from the well gauge to the chamber gauge and conclusively to the vacuum chamber. Additional non-dedicated tygon tubing is run to the vacuum pump. Electricity was generated from electrical outlets found throughout the current facility (Melloy Dodge Dealership). As air was extracted from the soil, a vacuum was established, thus soil vapor was exhausted and a continuous two minute interval of air sample was field tested for organic vapors by Sparton sampling team using a Photo Ionization Detector (PID) for an entire three well volumes. The PID probe used to monitor the vapor exhaust was equipped with a 10.2 electron volt (eV) lamp. The Metric personnel ensured that the probe of the PID was not inserted into the tube from which the exhaust came, as that would alter the purge flow rate.

The volume of air purged was determined from total time the well was purged in minutes and the selected purge rate in standard cubic feet per hour (scfh). The number derived was the approximate volume of air that had been purged from the well. At intervals of every two minutes, the PID was used to monitor and obtain measurements of the organic vapors being released by the exhaust. Based upon consistent PID readings, stabilization of the media parameters could be established. However, based upon the above mentioned calculation, three well volumes were purged at every well, regardless of the stabilization of the organic vapor content in the exhaust.

A minimum of three well volumes were purged from each air sample location prior to sampling. The total purge volume (three well volumes) was calculated from pre existing data, as there were no well measurements taken in the field. All data, including vapor probe, monitoring well, or vapor recovery well depth, probe diameter, casing volume, minimum purge volume, approximate purge rate, selected purge rate, and two minute interval PID readings were recorded in the field logbook (Attachment A). In addition, apparent moisture content within the tubing, and description of the sample containers were also recorded.

4.2 Split Air Sampling Collection Procedures

The TechLaw Team collected split air samples at 20 of the possible 21 vapor probe, vapor recovery, and monitoring well locations. The locations that the TechLaw team collected at include VP-11, MW-13, MW-7, VP-9, VP-10, MW-18, VP-8, MW-15, MW-21, MW-17, VR-5,

VR-4, VP-14, VR-2, VP-1, VP-2, VP-4, VP-5, VP-6, and VR-1. VP-3 was not sampled due to a potential obstruction or plug within the well. In addition to the spilt air samples collected, TechLaw collected two duplicate samples. Split samples should be collected in a manner such that the sample collection procedures are the same for both the facility and oversight sampling teams. If the sample collection procedures are identical for both sets of samples, then any deviation of the analytical results can normally be attributed to the sample custody, packaging, and shipping procedures, sample volume, or to factors associated with the analytical laboratories such as analytical methods, preservation techniques, and maximum holding time.

In order to ensure that the sampling procedures were identical during the split sampling event, Metric Corporation or Sparton Technology personnel performed all of the sample collection activities at each location. This procedure ensured that the sample collection activities were consistent. The calculation of the volume purged was also completed in this manner to ensure consistent results.

As the Sparton sampling team mobilized at each location, the TechLaw Team member observed the condition of the well, probe, or recovery point as well as the purging equipment setup procedures, and the methods used by Sparton representatives to calculate the volume of air purged. Following the purge activities at each split sample location, the TechLaw Team member donned clean protective gloves and provided Tedlar bags to the Sparton sampling personnel. All the split air sample Tedlar bags were either supplied pre-cleaned and certified by the Sparton, TechLaw, or NMED analytical laboratory. The Tedlar bags were stored in a clean area to prevent pre-sample exposure to fuels, solvents, and other contaminants.

The Tedlar bags were placed in the vacuum chamber and allowed to fill with air. When the Chamber Gauge indicated a reading of approximately 40-50 standard cubic feet per hour (scfh) the sample bag was considered to be full by the Metric personnel. For split sampling purposes, both Tedlar bags were placed in the vacuum chamber and filled simultaneously. At instances in which three split samples (Sparton, TechLaw/EPA, and NMED) occurred, two Tedlar bags would be filled simultaneously and the third would be immediately placed in the vacuum chamber for sample collection.

Following the sampling activities at each location, approximately one-third of the air was released from the Tedlar bag to protect it against bursting during transport to the laboratory. Also, the samples were kept out of direct light while being prepared for shipment to SWLO. The samples are required to be analyzed within 24 hours of collection to minimize the potential loss, reaction, or degradation of VOCs.

The photographs in Attachment C provide visual documentation of vapor probe, vapor recovery, and monitoring wells, and sample collection procedures. The air sample locations appeared to be adequately maintained and the Sparton Team appeared to conduct the purging and sampling procedures in an appropriate manner.

4.3 Split Air Sampling Analytical Results

The split air samples collected during the October 16 and 17, 2001, sampling event were analyzed for volatile organic compounds by EPA method Modified TO-14. A brief summary of the analytical results for each location is presented in Attachment D. The complete laboratory

data package is included as Attachment H. SWLO identified 1,4 Dioxane, Methyl Ethyl Ketone, Tetrahydrofuran, and Acetonitrile as temporarily identified compounds (TICS) during the analysis of the split samples.

4.4 Discussion of Observations

Observations during the October 16-17, 2001 SVE split air sample event included:

- Sample collection was ordinarily completed in the same fashion: dedicated tygon tubing was connected from the well probe to the well gauge which in turn was affixed to the vacuum gauge and chamber via non-dedicated tubing. The tube that the exhaust was discharged from was then angled towards the PID probe to obtain a reading. This was completed in the open air following the PID being zeroed out for ambient organic vapor concentrations, at each location. Due to the activities conducted at the site, (automobile service and maintenance), ambient PID readings were performed prior to purging the vapor probe, monitoring well, or vapor recovery well. At VP-14, the ambient PID reading was recorded in the field logbook as being 0.9 ppm. No other locations were identified as having ambient PID readings above 0 ppm.

- Sample collection at VR-1 (and duplicate sample VR-11) was conducted without calculating a purge volume, instead, the blower was turned on and a vacuum for the vapor recovery well was established. Initially, a vacuum of 23 inches of water column was registered at the wellhead. PID readings were recorded at intervals of every two minutes until the PID reading stabilized. Upon stabilization, the sample was collected. The final vacuum at the well head was not recorded following the sample.

- Personnel Protective Equipment, such as gloves, were not worn by the Sparton sampling team. Sparton representatives were observed not wearing gloves while handling the sampling equipment, or the sample bags during the entire collection process.

- Condensation was observed within the dedicated tygon tubing at VR-5 as well as within the Tedlar bag in which the sample was placed. Condensation was also observed in the dedicated tygon tubing at VR-4 and VR-2. The occurrence of condensation may have been caused by increasing ambient temperature; however, Sparton representatives did not offer an explanation.

In conclusion, Sparton appears to have established standard procedures to ensure collection of representative samples. There were no major deficiencies observed during the oversight and sampling visit. The observations noted above are considered minor and do not represent significant deviations from sampling protocols established by EPA or followed by industry. However, the deviation of not using the gloves during the sampling event may need to be considered if anomalous sample results are identified. A table which summarizes EPA and Sparton Technology analytical results concerning trichlorethylene (TCE) is found in Attachment F.

Observation of the Installation of the Containment System

- Presently, the infiltration ponds that are located north of the Melloy Dodge Dealership are dry and the building was supplied with electricity; however, the use of the infiltration ponds remains stagnant as Sparton is awaiting preliminary results of hexavalent chromium levels. Metric personnel stated that the air stripper that is placed within this building will be capable of operating at a rate of 50 gallons per minute (gpm).

ATTACHMENT A

FIELD LOGBOOK

Field Log Book

For

U.S. EPA, Region 6

Dallas, Texas

by

TechLAW
750 N. St. Paul Ave, Ste 600
Dallas, Tx 75201

Regarding:

SPARTON Technology, Inc

Spartan
Albuquerque, NM

WAHR06707
10/15/01

1500 John Fellinger, Tanbow, Inc. (Indoor AIR Sampling Field Team Leader) And Tam Engle Arrive Hotel to calibrate the ~~FIDE~~ 19/1 Flame Ionization Detector (FID) model is an OVA (Organic Vapor Analyzer) by FoxPro

1511 Depart for Spartan

1534 Arrive At Melloy Dodge Dealership (Spartan site) to meet with Mr. Bill Melloy.

Bill Melloy's concern of indoor sampling is that if the results would indicate a level of concern w/ A analysis chemical, if those results would 'shut down' the dealership.

Mr. Melloy showed J. Fellinger And T. Engle three (3) vacant offices, two which are downstairs, one of which is upstairs. Mr. Melloy stated that he didn't particularly want any samples taken in the maintenance department And the parts department.

Tam Engle
10/15/01

Sparton WA # R069707
Albuquerque 10/15/01

Mr. Malloy was viewed the SUMMA canister and the FID. Mr. Malloy agreed to meet with J. Felling and T. Engle to operate the FID during non operating hours.

Mr. Malloy also stated that the roof of the building was being redone. The material being reused is the tar and gravel.

1620 J. Fellinger and T. Engle depart site to gather sampling material. Will meet with Mr. Malloy at 9pm at the Malloy Dodge Dealership.

2056 Tech Law Field Team arrive at Malloy Dodge Dealership to commence field screening activities with FID

Delivery Office was field screened, no chemical detected

Jamie K. Hugh 10/15/01

10/5/04

Sparton
Albuquerque, NM
Business Link, 0.035 ppm

WAH Rec 707
10/5/04

Delivery office: not in use by people on a regular basis. The office may be in use 2 or 3 times a day. Intervals of use by people are approximately twenty (20) minutes at a time.
Located on south side of building, next to entry way.

2119 Sample IA-1-24 start time 2119.
6 Litre Summa canister
Flow rate 2.5 ~~mg/LITE~~ 10/5/04 mL/min

2124 Sample IA-2-24 start sample time
6 Litre Summa canister
Flow rate 2.5 mL/min

2125 Sample IA-3-24 start time (duplicate of IA-2-24)
6 Litre Summa canister
Flow rate 2.5 mL/min

These Summa canisters will operate and sample ambient indoor air samples for 24 hours. Samples IA-2-24 and sample IA-3-24 are

10/15/01

Sparton
Manchester, NH

WBA R46707
10/15/01

located within the Business Link, department on the North side of the facility, the office is currently not in use. Normally, this area is in use everyday; however, the area is only partially in use present.

8 (Eight) Hour Sample Canisters are located with the 24-hour Summa canisters. The 8 Hour canisters will be turned on in the morning of 10/16 to gather an 8 Hour Sample Ambient Air.

The Business Link office is located within an area of 3 (three) total offices. This area is within a hallway that can be closed by a door. The ventillation system / air conditioning unit appears to be in good working order.

ATTE 10/16/01

21:30 J. Fellinger and T. Engle depart ATTE 10/16/01 site.

10/16/01

Sparton WAR RU0707
Albuquerque, NM 10/16/01

Temperature of Albuquerque is approximately low, with forecast of mid 70's for the high. The sky is partially cloudy, with no chance of rain.

0734 IA-1-8 Start sample time for summa canister

0736 IA-2-8 start sample time for summa canister collection

0737 IA-3-8 start sample time for summa canister. IA-3-8 is a duplicate sample of IA-2-8.

These 8-hour summa canisters are co-located with the corresponding 24 hour summa canisters.

LATE ENTRY

0730 J. Fellinger and T. Engle of TechLaw arrive onto the Sparton / Melloy Dodge Dealership property to begin the 8-hour SUMMA canister collection / sample of indoor ambient air.

10/16/01

10/16/01

Sparton WA#R06707
Albuquerque 10/16/01

S. Ellinger and T. Engle await arrival of Sparton representatives to commence the outdoor soil vapor extraction (SVE) soil samples. These samples will be collected from 21 (twenty-one) locations, including vapor probes (VP), vapor recovery (VR), and monitoring wells (WTE 19/16/01 MW).

0800 Techlaw Team meet with
Don Gutierrez, Sparton
Don Briggs, Metric Corporation

0810 Techlaw Field Team meet with
Baird Swanson, NMED.

0817 Field Team arrive at VP-11

Sparton representative suggests that due to insufficient tubing (Tygon) that sampling be completed from least contaminated tubing to most contaminated tubing.

10/16/01

Spartan WA#R0007707
Albuquerque 10/16/01

Suggestions from NMED regarding the proposed use of non-dedicated tubing is that Spartan purchase more tubing from a supplier such as Home Depot.

Equipment Used:
Chamber Gauge
Well Gauge
Vacuum Chamber
Tygon Tubing
HNU photo ~~ionize~~ 10/16/01 ionizer model PI 101
Vacuum Pump

The exhaust from the soil vapor probe will be screened by the HNU PID to detect the organics. The vapor probes and monitoring wells will be purged by approximately three times the well volume.

0845 Purging of VP-11 begins
Purge Rate: 0.7 scfh
Probe Diameter: 1/2 inch
Probe Depth: 29 ft
Casing volume: 0.119 ft^3

Spartan WA # R06707
Albuquerque, NM 10/16/14

Approximate Purge Rate: 0.712 scfh
Selected Purge Rate 0.7 scfh
Minimum Purge Volume:

0848 PID: 0ppm purge volume: 0.119 ft^3

0852 Purge for VP11 Restart due to vacuum chamber not being closed disregard previous information for VP-11 PID Reading.

0855 PID reading: 0.05ppm Volume Purged: 0.035 ft^3
0858 PID reading: 0.05ppm Volume Purged: 0.070 ft^3
0901 PID reading: 0.05ppm Volume Purged: 0.105 ft^3
0904 PID reading: 0.05ppm Volume Purged: 0.140 ft^3

0908 Sample time for VP-11. EPA will collect split sample at this location. NMED will not be collecting split samples.

0909 Sample complete However, a premature bag eruption occurred. Sample will be collected again.

0910 New sample time for VP-11.

0911 Sample complete

Spectra WA#R04707
Albuquerque, NM 10/16/04

0915 Sample IA-1-24 was 'shut down'
there was 1 inch of vacuum left within
SUMMA canister.

0922 Gary Richardson, Metric Corporation
Arrives on site and meets with Tetra Tech
Field Team.

0920 Purging of MW-13 begins

0923 PID reading: 0.05 ppm volume purged: 1.00 ft^3
Probe Depth: 69.21 ft
Casing volume: 1.5 ft^3
Minimum Purge Volume: 4.53 ft^3
Approximate Purge Rate: 27.0 scfh
Selected Purge Rate: 30/20 scfh

0926 PID reading: 0.05 ppm volume purged: 2.00 ft^3
0929 PID reading: 0.1 ppm volume purged: 3.00 ft^3
0932 PID reading: 0.1 ppm volume purged: 4.00 ft^3
0935 PID reading: 0.1 ppm volume purged: 5.00 ft^3

0938 Sample time for MW-13 Split sample will be
collected by EPA/Tetra Tech, Inc and NMED

10/16/04

20

10/16/01

Sparton WAH Rel 707
Albuquerque, NM 10/16/01

0939 Sample for MW-13 complete. Premature Bag exhaust occurred, sample will be re collected.

0940 New sample time for MW11

0941 Sample Complete, depart MW-11 for MW-7

0947 Arrival MW-7

0954 Purging for MW-7 begins
Probe Depth: 72.81
Casing Volume: 1.66 ft^3
Minimum Purge Volume: 4.76 ft^3
Approximate Purge Rate 28.5 scfh
Selected Purge Rate: 30/20 scfh

0958 PID reading: 0.2ppm volume Purged: 1.33 ft^3
1002 PID reading: 0.5ppm volume Purged: 2.66 ft^3
1005 ~~1007~~ PID reading: 0.5ppm volume Purged: ~~3.66 ft³~~ 3.67 ft^3 10/16/01
1008 PID reading: 0.5ppm volume Purged: 4.67 ft^3
1011 PID reading 0.5ppm volume Purged: 5.67 ft^3

10/16/01

10/16/01

Spartan — NAA R0L707
Albuquerque, NM — 10/16/01

1014 Sample times for MW-7.
EPA/Techlaw will be collecting split samples
~~NEITE~~ 10/16/01 NMED will not be collecting split samples from this location.

1015 Sample complete. depart for VP-9.

1020 Arrive At VP-9
Probe Depth: 27 ft
Casing Volume: 0.037 ft^3
Minimum Purge Volume: 0.110 ft^3
Approximate Purge Rate: .66 scfh
Selected Purge Rate: 0.7 scfh

1024 Purge of VP-9 begins

1029 PID reading 0.1 ppm — Purged volume: ~~1.02 ft³~~ 0.035 ft^3 10/16/01
1031 PID reading 0.1 ppm — Purged volume: ~~1.67 ft³~~ 0.050 ft^3 10/16/01
1035 PID reading 0.1 ppm — Purged volume: ~~3.00 ft³~~ 0.105 ft^3 10/16/01

Log Entry: Note: High moisture content within MW-7.

1039 Sample time for VP-9. EPA will collect split samples
At this location, NMED will not be collecting split samples
from this location.

10/16/01

10/16/14

Sparton WA # R016707
Albuquerque, NM 10/16/14

1040 Sample collection complete; Depart for VP-10.

1045 Arrive at VP-10. EPA will be collecting split samples at this location. NMED will not.
Probe Depth: 30 ft
Casing Volume: 0.0409 ft^3
Minimum Purge Volume: 0.122 ft^3
Approximate Purge Rate: 0.736 scfh
Selected Purge Rate: 0.8 scfh

1049 Purging for VP-10 begins

1052 PID reading: 0.0 ppm Purged Volume 0.04 ft^3
1055 PID reading: 0.1 ppm Purged Volume: 0.08 ft^3
1058 PID Reading 0.1 ppm Purged Volume ~~0.58 ft^3~~ 0.12 ft^3 10/16/14
1101 PID Reading 0.1 ppm Purged Volume: 0.16 ft^3

1104 Sample time for VP-10

1107 Sample complete for VP-10; depart for MW-18

1114 Arrive at MW-18.

Sparton WA#R06707
Albuquerque, NM 10/16/01
Probe Depth: 76.75 ft
Casing Volume: 6.69 ft^3
Minimum Purge Volume: 20.09 ft^3
Approximate Purge Rate: 120 scfh
Selected Purge Rate: ~~20 scfh~~ TE 10/16/01 25 scfh

EPA/Tetrlaw will be collecting split samples from this location. NMED will not be collecting split samples.

1122 Purging for MW-18 begins

1128 Purging for MW-18 is momentarily stalled in order to readjust the flow rate.

1128 Purging is reconvened.
Selected Purge Rate is 20 scfh.

1135 PID Reading 0 ppm Purged Volume: 2.33 ft^3
1141 PID Reading 0.15 ppm Purged Volume: 4.33 ft^3
1148 PID Reading 0 ppm Purged Volume: 6.66 ft^3
1153 PID Reading 0.5 ppm Purged volume: 8.33 ft^3
1158 PID Reading 0.5 ppm Purged volume: 10.00 ft^3

10/16/01

Sparton WA # R016707
Albuquerque, NM 10/14/01

Thursday, October 18, 2001, is the date of which samples from the (CW2) air stripper area will will be sampled. Metric corporation personnel stated that the thought the inflow / outflow would be sampled

Electricity is currently supplied to the the Air stripper shed (C1)

Currently, it is believed that water will be pumped up and then contained. Testing will have to occur first to determine the hexavalent chromium level.

1203 PID Reading: 0.5ppm Purged Volume: 11.67 ft^3

Air stripper on property will run on 50 gal/min (CW2)
Air stripper off site (CW1) runs approximately 220-225 gal/minute

1209 PID Reading: 0.6ppm volume Purged: 13.67 ft^3
1214 PID Reading: 0.65ppm volume Purged: 15.33 ft^3
~~13 PID Reading: volume Purged:~~ 10/14/01

10/14/01

Sparton WA# R0U707
Albuquerque, NM 10/16/01
Gal Air stripper has been operating since
Approximately 1998 (Mitch personnel stated)

Sparton And NMED have 'hopeful prospects' of
having C2 operating by the end of the year.

1219 PID Reading: 0.6 Sppm Volume Purged: 17.0 Ft^3
1224 PID Reading: 0.6 Sppm Volume Purged: 18.67 Ft^3
1229 PID Reading: 0.6 Sppm Volume Purged: 20.33 Ft^3

LAK Entry RE: MTE 9/16/01 VP-9 10/16/01
Sparton has decided NOT to take Sample VP-9
because the organic vapor (PID reading)
has stabilized; however the well has not
been fully 3 (three) times purged the well
volume. The calculation for the purged volume
was incorrect which led to incomplete purging

1232 Sample time for MW-18. EPA/Techlaw will
be collecting split samples At this location.
NMED will not be split sampling At this location

1233 Sample collection Complete for MW-18
Field Team depart site for bridge break.

Jon A. Kirk
10/16/01

Spanton WA#R04707

Albuquerque, NM 10/16/01

1317 Purge began for VP-8

1320 PID readings 0.0 ppm Volume Purged 0.03 ft^3

1323 PID readings 0.1 ppm Volume Purged 0.06 ft^3

1326 PID readings 0.1 ppm Volume Purged 0.09 ft^3

1329 PID readings 0.1 ppm Volume Purged 0.12 ft^3

1340 PID readings 0.1 ppm Volume Purged

1344 Sample for VP-8. EPA/Techlaw will be collecting split samples, NMED will not.

1345 Sample collection complete.
Probe Depth 23.11 ft
Casing volume 0.0315 ft^3
Minimum Purge Volume 0.094 ft^3
Approximate Purge Rate 0.56 scfh
Selected Purge Rate 0.6 scfh

1350 Depart for MW-15

1351 Arrive At MW-15
EPA/Techlaw will be collecting split samples from this location. NMED will not.

10/16/01

Sparton WA#R06707
Albuquerque, NM 10/16/01
Probe Depth: 72.35 ft
Casing Volume: 1.578 ft³
Minimum Purge Volume: 4.73 ft³
Approximate Purge Rate 28.41 scfh
Selected Purge Rate: 20 scfh

1358 Purge for MW-15 begins

1343 Lab Entry,
IA-2-8 was shut down
le inlet of vacuum remain
le-tear run

1401 PID 0.15 ppm Volume Purged 1.0 ft³
1404 PID 0.20 ppm Volume Purged 2.0 ft³
1407 PID 0.2 ppm Volume Purged 3.0 ft³
1410 PID 0.2 ppm Volume Purged 4.0 ft³
1413 PID 0.2 ppm Volume Purged 5.0 ft³
1343 LATE ENTRY: A solvent rag was observed to be located approximately 20 feet from location of IA-2-8, IA-2-24, IA-3-8, and IA-3-24. This rag was removed from area by Bill Nelley. ~~and~~ 10/16/01 John Fellinger, Technician observed rag. John Fellinger will attempt to find

Sparton WA # R2W7107
Albuquerque, NM 10/14/01

out the ingredients of solvent vag from Sparton per Sunny

1414 Purging Process was restarted at MW-15. Due to vacuum chamber valve being left open.

1417 PID 0.4ppm Volume Purged 1.0 ft^3
1420 PID 0.4ppm Volume Purged 2.0 ft^3
1423 PID 0.45ppm Volume Purged 3.0 ft^3
1426 PID 0.45ppm Volume Purged 4.0 ft^3
1429 PID 0.45ppm Volume Purged 5.0 ft^3

1431 Sample time for MW-15
EPA / Techlaw will be collecting split samples
NMED will not be collecting split samples

1432 Sample collection complete.

1435 Sample collection restarted. Valves were not opened to Tedlar bags

1436 Sample collection complete. Depart for MW-21

10/14/01

Sparton WA #R0e707
Albuquerque, NM 10/14/01

1444 Arrive at MW-21
1448 Purge of MW-21 began
Probe Depth 69.93 ft
Casing Volume 1.53 ft^3
Minimum Purge volume 4.58 ft^3
Approximate Purge Rate 27.46 ft^3
Selected Purge Rate 20 scfh

A duplicate sample will be collected here. It will be called VP-14.

1451 PID 0.3ppm Volume Purged: 1.0 ft^3
1454 PID 0.3ppm Volume Purged: 2.0 ft^3
1457 PID 0.3ppm Volume Purged: 3.0 ft^3
1500 PID 0.3ppm Volume Purged: 4.0 ft^3
1503 PID 0.3ppm Volume Purged: 5.0 ft^3

1504 Sample time for MW-21. NMED is not collecting split; EPA/Technova is collecting split sample at this location

1505 Sample collection complete for MW-21

1506 Sample time for VP-14 (duplicate of MW-21)

10/14/01

Spartan WA#R06707
Albuquerque, NM 10/16/01

1507 Sample for VP-14 complete Depart
for MW-17

1512 Arrive At MW-17
EPA/TechLaw will be collecting
split samples from this location
NMED will not be collecting split samples.

1520 Purging At MW-17 began
Probe depth: 71.69 ft
Probe Diameter 2 inch
Casing Volume: 1.5164 ft^3
Minimum Purge Volume: 4.6492 ft^3
Approximate Purge Rate: 28.15 scfh
Selected Purge Rate: 20 scfh

1521 New Purge Start Time

1524 PID 0.1 ppm Volume Purged 1.0 ft^3
1527 PID 0.1 ppm Volume Purged 2.0 ft^3
1530 PID 0.1 ppm Volume Purged 3.0 ft^3
1533 PID 0.1 ppm Volume Purged 4.0 ft^3
1536 PID 0.1 ppm Volume Purged 5.0 ft^3

10/16/01

Sparton WA #R060707
Albuquerque, NM 10/16/01
MW-17 is located on the berm of
two infiltration ponds

1537 Sample time for MW-17
NMED will not be collecting splits
EPA/Techlaw will be collecting split samples.

1538 Sample complete

1534 Late Entry IA-1-8 Shut down
6" Vacuum remaining

1537 Late Entry IA-3-8 Shut down
10" Vacuum remaining

1600 Arrive at FedEx to ship samples to
Southwest Laboratory of Oklahoma
Air Bill Number 8279 0829 2206
Cooler is custody sealed (twice)
Chain of custody is within sealed cooler.

1626 J. Fellinger and T. Eng return to hotel
to ready shipment of Summa canisters.

Sparton WA # 296707
Albuquerque, NM 10/16/01

2100 J. Fellinger and T. Engle Petro to Melloy Dodge to shut off the 24-hour canisters from sampling collection.

The solvent/cleaner bottle that was discovered has the following ingredients:
Xylene (C.A.S. 133-20-7), Alphatic Petroleum Distillates (C.A.S. 64742-89-8), and Ethyl Benzene (C.A.S. 100-41-4).
The label reads: Malco Adhesive and Label Remover.
Purpose:
- Removes labels, stickers, + decals,
- Eliminates excess adhesives, overspray, undercoating, polishes and paint sealant

2134 IA-2-24 collection completed
16" vacuum remaining

2135 IA-3-24 collection completed
22" vacuum remaining

~~IA-1-24 collection completed.~~ TE 10/16/01

Sparton
Albuquerque, NM

WA# R06707
10/16/01

These Summa canisters were continuously observed by J. Fellinger of TechLaw during the 8 (Eight)- hour occupation time frame for security purposes and to ensure proper operation of the valves.

2150 J. Fellinger and T. Engle depart site for hotel to prepare Summa canisters for FedEx shipment.
FedEx 801608275683 Airbill number

10/16/01

10/16/01

Sample ID	Time Start	Date Start	Date Stop	Time Stop	Initial Vacuum	Vacuum Prior to Sampling	Vacuum After Sampling	Flow Controller	Canister No
IA-1 24-	2119	10-15-01	10-16-01	0915	30"	24"	1"	158	SWL-286
IA-1-8	0731	10-16-01	10-16-01	1531	30"	21"	6"	166	SWL-151
IA-2-24	2124	10-15-01	10-16-01	2131	30"	22"	6"	129	SWL-230
IA-2-8	0736	10-16-01	~~10-15-01~~ 10-16-01	1343	30"	22"	6"	120	SWL-178
IA-3-24	2125	10-15-01	10-16-01	~~2131~~ 2135	30"	24"	22"	139	SWL-282
IA-3-8	0737	10-16-01	10-16-01	~~2135~~ 1537	30"	24"	10"	137	SWL-321

Sparton WA # R06707
Albuquerque, NM 10/17/01

0747 T. Engle arrives at Sparton / McKay Dodge Dealership to await arrival of representatives.

0757 Don Gutierrez and Don Briggs ~~arrival TE 10/17/01~~ arrive at Site.

Temperature is approximately 65° C, high are forecasted to be mid 70's, clear skies, no chance of rain.

0800 Arrive at VR-5.
Probe Depth: 62.9 ft
Probe Diameter: 2 inch
Casing Volume: 1.37 ft^3
Minimum Purge Volume: 4.11 ft^3
Approximate Purge ~~Volume~~ TE Rate: 24.7 scfh
Selected Purge Rate: 1.0 scfh

0812 Purge for VR-5 Begin
EPA / Tech Law will be taking split samples from this location. NMED will ~~note~~ TE also be collecting.

10/17/01

Spartan
Albuquerque, NM

WA # R067107
10/17/01

The equipment used yesterday is again used today HNU was ~~calibrate~~ calibrated at 0815.

0816 PID reading 0.05ppm Volume Purged: 0.067 ft^3
0818 PID reading 0.05ppm Volume Purged 0.100 ft^3

0820 Selected Purge Rate is 20scfh

0820 PID reading 0.05ppm Volume Purged: 0.133 ft^3
0823 PID reading 0.05ppm Volume Purged: 1.13 ft^3
0826 PID reading 0.05ppm Volume Purged: 2.13 ft^3
0829 PID reading 0.05ppm Volume Purged: 3.13 ft^3
0831 PID reading 0.05ppm Volume Purged: 3.80 ft^3
0833 PID reading 0.05ppm Volume Purged: 4.46 ft^3

0835 Sample collection for VR-5 began

0836 Sample collection complete

New Purge must begin due to Tedlar bags being hooked to the vacuum chamber.

Jason A Lough
10/17/01

Spartan WA# 806707
Albuquerque, NM 10/17/01
New Purge Information for VR-5

0835 Purge begins
0840 PID 0.05ppm Volume Purged: 1.67 ft^3
0842 PID 0.05ppm Volume Purged: 2.33 ft^3
0844 PID 0.05ppm Volume Purged 3.00 ft^3
0846 PID: 0.05ppm Volume Purged 3.67 ft^3
0848 PID: 0.05ppm Volume Purged: 4.33 ft^3

0850 Sample collection begins for VR-5

0851 Sample collection completed for VR-5

Spartan / EPA collect split from dual collection. NMED will collect single collection immediately following.

0852 Split samples will be collected between EPA / NMED. Sample previously collected by EPA / Technos was lacking due to leak / hole in Tedlar Bag.

0856 Sample collection time
0857 Sample collection complete

Spectra WA # RO6707
Albuquerque, NM 10/17/01

VR-5 will have to be Purged And resampled A third time due to the well casing extension not being properly connected.

Note: Logbook page 55 tore half page.

VR-05 has An extension that detaches makes from air in if not properly Attached or secured

0908 Purge for VR-5 begins
0908 PID = 0.05ppm Volume Purged 1.67 ft^3
0910 PID : 0.05ppm Volume Purged 2.33 ft^3
0912 PID : 0.05ppm Volume Purged 3.00 ft^3

Moisture is observed in the Tygon Tubing that comes from VR-5 to well gauge. This tubing is dedicated to this well. The moisture was observed during the purging process.

0914 PID 0.05ppm Volume Purged 3.67 ft^3
0916 PID 0.05ppm Volume Purged 4.33 ft^3

0911 Sample collection begin Spectra Technology, will collect dual split samples; NMED will collect single split following dual split

Spartan WA# R0U707
Albuquerque, NM 10/17/01

0919 Sample collection complete.

0920 NMED sample collection begins

0921 NMED sample collection completed, depart for VR-4

Moisture was observed in Tedlar bags

0926 Arrive At VR-4.
Probe Depth: 106.8 ft
Probe Diameter: 2 inch
Casing Volume: 1.46 ft^3
Minimum Purge Rate: 26.2 scfh
Selected Purge Rate: 20 scfh

0931 ~~0951~~ Purge for VR-4 begins
EPA/TechLaw will be taking split samples
NMED will not be collecting split samples
At this location.

0934 PID 0.1 ppm Purged Volume: 1.0 ft^3
0937 PID 0.15 ppm Purged Volume: 2.0 ft^3
0940 PID 0.15 ppm Purged Volume: 3.0 ft^3
0943 PID 0.10 ppm Purged Volume: 4.0 ft^3

Dana A Pugh
10/17/01

Sparton WA4R0L7907
Albuquerque, NM 10/17/01

Moisture was observed in the Tygon tubing of VR-4. This Tygon tubing is dedicated. The observation was made during the purging process.

NOTE: Non dedicated tubing is from the Chamber Gauge to the vacuum chamber, the vacuum chamber to the pump generator. This tubing is silicon and Metric personnel Don Briggs stated that it has never been replaced.

The connectors within the vacuum chamber that connect with the Tedlar bags for sample collection are dedicated, they are replaced at each new location.

0946 PID: 0.10ppm ~~VACUUMTE~~ 10/17 Purged Volume: 5ft^3
0948 PID: 0.1 ppm Purged Volume: 6.0ft^3

0950 Sample time for VR-4

0951 Sample completed for VR-4 depart for VP-14I

Jon A Bugg
10/17/01

Sparton WA# RQ4707
Albuquerque, NM 10-17-01

1000 Arrive at VP-14.
Probe Diameter: 0.5 inch
Probe Depth: 13.3 ft
Casing Volume: 0.0368 ft^3
Minimum Purge Volume: 0.0544 ft^3
Approximate Purge Rate: 0.33 scfh
Selected Purge Rate: 0.4 scfh

1004 Purge Began for VP-14I.
Ambient PID = 0.9 ppm
EPA/TechLaw will be collecting
Split Sample
NMED will be collecting split sample immediately following the dual split sample by EPA/TechLaw and Sparton

1010 ~~1009~~ 10/17/01 PID 0.0 ppm Volume Purged 0.04 ft^3
1013 PID 0.0 ppm Volume Purged 0.06 ft^3
1016 PID 0.0 ppm Volume Purged 0.08 ft^3

The HNU was zeroed out prior to using it at VP-14I.

10/17/01

10/17/01

Sparton WDNR067707
Albuquerque, NM 10-17-01

Last Entry 0800

Previously, on 10-16-01, VP-14 designation was used for a duplicate sample.
Upon arrival to Sparton today 10-17-01, Sparton representatives made T. Erak aware of the actual VP-14 point which was to be sampled 10-17-01.
The real VP-14 will be designated as VP-14I.

1018 Sample collection begins for EPA/TechLaw and Sparton

1019 Sample collection complete

1020 Sample collection for NMED

1021 Sample collection for NMED complete
Depart for ~~VP-1 to~~ TE 10/17/01 VR-2.

1026 Arrival at VR-2
Probe Diameter: 2 inch
Probe Depth: 66.3 ft
Casing Volume: 1.45 ft^3
Minimum Purge Volume: 4.34 ft^3

Jean A. Hall 10/17/01

Spectron NA # R016707
Albuquerque, NM 10-17-01

Approximate Purge Rate: 26 scfh
Selected Purge Rate: 20 scfh

NMED will ~~not~~ be collecting split sample
at this location No split by NMED

EPA/TechLaw will be collecting split
samples at this location

1031 Purge of VR-2 begins

1035 PID reading 0.4ppm Volume Purged: 1.33 ft^3
1038 PID reading 0.4ppm Volume Purged: 2.33 ft^3
1041 PID reading 0.4 ppm Volume Purged: 3.33 ft^3
1044 PID reading 0.4ppm Volume Purged 4.33 ft^3

Moisture was observed in this Tygon Tubing
at VR-2. The Tygon Tubing is dedicated
Moisture was observed during the purging process.

1045 Sample for Spectron / EPA / TechLaw Diesel

1046 Sample complete, depart for VP 1-6.

10-17-01

Sperton WA #806707
Albuquerque, NM 10-17-01
~~NMED Sample collection time~~ TC 10/17/01

~~NMED Sample collection complete~~ TC 10/17/01

1046 Arrive at VP-1.

1047 VP-1 information
Probe Depth 10 ft
Probe Diameter 0.364 inch
Casing Volume 0.0072 ft^3
Minimum Purge Volume 0.0217 ft^3
Approximate Purge Rate 0.13 scfh
Selected Purge Rate 0.20 scfh

1054 Begin Purge VP-1
EPA/TechLaw will split sample
NMED will split sample

1057 PID 0.1 ppm Volume Purged 0.01 ft^3
1100 PID 0.1 ppm Volume Purged 0.02 ft^3
1104 PID 0.1 ppm Volume Purged 0.03 ft^3

Sparton WA # R06707
Albuquerque, NM 10-17-01

Late Entry 1030 Rob Warner and Steve Jetter of NMED Hazardous Waste / RCRA Bureau. Arrived on site to observe sampling practices

NMED personnel stated that Mellay personnel would like to make the location of VP1-6 and VR-1 and VR-2 an outside eating / luncheon area.

1105 Sample collection for EPA/TechLaw begins

1107 Sample collection complete

1108 Sample for NMED begin

1109 Sample complete

Extraction pump is installed in CW2.

Sam A Jetter
10-17-01

[illegible] 10-17-01

Sparton WA # B06707
Albuquerque, NM 10-17-01
Information Regarding VP-2
Probe Depth 20 ft
Probe Diameter 0.364 in
Casing Volume 0.0144 ft^3
Minimum Purge Volume 0.0433 ft^3
Approximate Purge Rate 0.26 scfh
Selected Purge Rate 0.4 scfh

1112 Begin Purge VP-2
EPA/Tech Law will collect
split samples At this location

1115 PID 0.1 ppm volume purged 0.02 ft^3
1118 PID 0.1 ppm volume purged 0.04 ft^3
1122 PID 0.1 ppm volume purged 0.067 ft^3

1127 Sample collection for VP-2.

1124 Sample collection complete

VP-03 will not be sampled due
to historically no sample able to be
collected from it.

Sparton WAHR016707

Albuquerque, NM 10-17-01

Information Regarding VP-04

Probe Depth: 40 ft.

Probe Diameter: 0.364 in

Casing Volume: 0.0289 ft^3

Minimum Purge Volume: 0.08167 ft^3

Approximate Purge Rate: 0.52 scfh

Selected Purge Rate: 0.8 scfh

1127 Purging of VP-4 begins

1130 PID 0.1 ppm Volume Purged: 0.040 ft^3

1133 PID 0.3 ppm Volume Purged 0.08 ft^3

1135 PID 0.3 ppm Volume Purged 0.11 ft^3

1137 PID 0.3 ppm Volume Purged

1138 Sample time for VP-04 Technician (EPA will) be collecting splits at this location

1139 Sample collection completed.

Information Regarding VP-5

Probe Depth 0.364 inch

Probe Diameter 50 ft

Casing Volume: 0.0361 ft^3

Minimum Purge Volume: 0.108 ft^3

Approximate Purge Rate: 0.65 scfh

Selected Purge Rate: 1.0 scfh

10/17/01

Sparton WA #R06707
Albuquerque, NM 10-1701

1141 Purging of VP-5 begins
EPA/Tech Law will be collecting split samples at this location.
NMED will not be collecting ~~through~~ TE 9/17 split samples

1144 PID 0.2 ppm Volume Purged: 0.05 ft^3
1147 PID 0.2 ppm Volume Purged 0.07 ft^3
1149 PID 0.2 ppm Volume Purged 0.13 ft^3
1151 PID 0.2 ppm Volume Purged

1152 Sample for VP-5 begins EPA/Tech will be collecting split samples

1153 Sample collection complete

Information Regarding VP6
Probe Depth 60 inch
Probe Diameter 0.364 in
Casing Volume: 0.433 ft^3
Minimum Purge Volume: 0.130 ft^3
Approximate Purge Rate: 0.78 scfh
Selected Purge Rate: 1.0 scfh

10-17-01

Sparton WA #R06707

Albuquerque, NM 10-17-01

1156 Purge for VP-6 began

EPA/Tetra Tech will be collecting

split samples at this location

1159 PID 0.2ppm Volume Purged: 0.050 ft^3

1202 PID 0.2ppm Volume Purged: 0.10 ft^3

1204 PID 0.2ppm Volume Purged: 0.13 ft^3

1206 PID 0.2ppm Volume Purged 0.17 ft^3

1207 Sample collection for VP-6 began

1208 Sample collection complete

VR-1 23" H_2O at well head

Probe Diameter: 4 inch

Selected Purge 10 scfh

1212 SVE was turned on to begin purge

1214 Influent PID: ~~0.4~~ 0.8ppm Volume Purged: 0.333 ft^3

1216 Influent PID: ~~0.5ppm~~ 1.0 ppm Volume Purged: 0.67 ft^3

1218 Influent PID: 1.0ppm Volume Purged: 1.0 ft^3

1220 Influent PID 1.0ppm Volume Purged: 1.33 ft^3

1222 Influent PID 1.1ppm Volume Purged: 1.67 ft^3

1224 Influent PID 1.1ppm Volume Purged: 2.0 ft^3

Thomas A. Gough 10-17-01

Sparton WA # R04707
Albuquerque, NM 10-17-01

A duplicate sample will be collected here.

1225 Sample for VR-1 begins
EPA will collect split sample
NMED will collect split sample
Following dual split between EPA/Sparton

1226 Sample complete

1227 NMED split sample begins

Duplicate sample will be called VR-41
sample collection is 1236

1229 Sample collection complete
SVE shut off

1231 Sparton representative will escort T. Engle to view Well 71.

1237 Arrive at Well 71

Jane A. Lingo 10-17-01

Sparton
Albuquerque, NM

NHARO4707 00
10-17-01

Well 71 is located Approximately 1/2 (one-half) way between the Sparton site and the Air stripper (CW1).

1249 Depart site for FedEx.

Note!. Well 71 is now plugged.
It is believed that the well was leaking.
Well 71 is a lower flow zone well And it is thought that the contamination that is located within the higher flow zone was coming through the well casing, contaminating the well.

1411 Arrive FedEx. Shipped samples with AirBill Number to 8279 0829 2331
Priority Overnight.

10-17-01

10/17/01

10/17/01

Sparton WH#R016707

Albuquerque, NM 10-17-01

LATE ENTRY 1250

Observations regarding sampling activities include the non-use of gloves or PPE while handling air samples or the collection of air samples. ALSO, there was no observation of the wall actually being measured for accuracy

This entry completes the Logbook entries for this task.

10/17/01

10-17-01

Date	Time	Roll	Frame	Subject	Dir	PI/W
10/15/01	2134	1	01	View of Sample IA-2-24 And IA-2-08, IA-3-24, And IA-3-08 located in the Business Links office	N	TE/JF
10/15/01	2139	1	02	View of Sample IA-1-24 and IA-1-08 located in the Delivery Office	E	TE/JF
10/16/01	0853	1	03	View of VP-11 Purging Process	Dam	TE/JF
10/16/01	1523	1	04	View of MW-17. MW-17 is located on the berm of two infiltration Ponds	S	TE/JF
10/16/01	2201	1	05	View of SUMMA canisters that contain Sample IA-2-24 And IA-2-8	Dam	TE/JF
10-17-01	0930	1	06	Photo of VR-4 Purging Process	W	TE
10-17-01	0951	1	07	View of VR-4 Sample Container (Tedlar Bags)	N	TE
10-17-01	0954	1	08	View of Garage Doors from pt of VP-14	E	TE
10-17-01	0953	1	09	View of Area surrounding VP-14	SW	TE
10-17-	0959	1	10	View of VP-14	↓	TE

Sami A Singh
10-17-01

Date	Time	Roll	Frame	Subject		PW
10-17-01	1212	1	11	View of VR-1 purging/sampling process	S	TDS
10-17-01	1238	1	12	View of Well 71 and Surrounding Area	SW	TE

No More Entries.

Sami A Singh
10-17-01

ATTACHMENT B

CHAIN-OF-CUSTODY FORMS

Air bill # 801608275683 FedEx.

CHAIN OF CUSTODY RECORD

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. Albany • Broken Arrow, Oklahoma 74012-1421
Office: 918-251-2858 • Fax 918-251-2599

TM

SAMPLING FIRM	CLIENT CONTACT	PHONE NUMBER
TechLaw	Tam Enbles	241572-0063

P.O. or PROPOSAL NUMBER	PROJECT NAME
	SPARTON Technology, Inc.

SAMPLER: (Signature) J. Fellinger T. Enbles

ANALYTICAL TESTS REQUESTED

SAMPLE NO.	DATE	TIME	COMP.	GRAB	LOCATION	MATRIX	NUMBER OF CONTAINERS	Total VOCs					Starting Pressure		Ending Pressure	START TIME	END TIME	REMARKS
IA-1-24	10-15-01	2119	X		Indoor	Air	1	X					24		1"	2119	10-16-01 0915	
IA-1-8	10-16-01	0734	X		Indoor	Air	1	X					21		6"	0734	1534	
IA-2-24	10-15-01	2124	X		Indoor	Air	1	X					22		6"	2124	10-16-01 2124	
IA-2-8	10-16-01	0736	X		Indoor	Air	1	X					22		6"	0736	1343	
IA-3-24	10-15-01	2125	X		Indoor	Air	1	X					24		22	2125	10-16-01 2135	
IA-3-8	10-16-01	0737	X		Indoor	Air	1	X					24		10"	0737	1537	

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
	10/17/01	2230					

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	REMARKS:

[SR012-1192-03]

CHAIN OF CUSTODY RECORD

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. Albany • Broken Arrow, Oklahoma 74012-1421
Office: 918-251-2858 • Fax 918-251-2599

TM

SAMPLING FIRM	CLIENT CONTACT	PHONE NUMBER
TechLaw	Tami Engle	214/572 0063

P.O. or PROPOSAL NUMBER	PROJECT NAME
	SPARTON Technology, Inc.

SAMPLER: (Signature) T. Engle / Tami A Engle

ANALYTICAL TESTS REQUESTED: Total VOCs

SAMPLE NO.	DATE	TIME	COMP.	GRAB	LOCATION	MATRIX	NUMBER OF CONTAINERS	Total VOCs								REMARKS
MW-15	10/16/01	1431		X	Sparton	Air	1	X								For any questions/concerns,
MW-7	10/16/01	1014		X	Sparton	Air	1	X								please contact Kristi Pawski
VP-10	10/16/01	1106		X	Sparton	Air	1	X								
MW-13	10/16/01	0940		X	Sparton	Air	1	X								
VP-9	10/16/01	1039		X	Sparton	Air	1	X								
VP-11	10/16/01	0910		X	Sparton	Air	1	X								
VP-8	10/16/01	1344		X	Sparton	Air	1	X								
MW18	10/16/01	1232		X	Sparton	Air	1	X								
VP-14	10/16/01	1506		X	Sparton	Air	1	X								
MW-21	10-16-01	1504		X	Sparton	Air	1	X								
MW-17	10-16-01	1637		X	Sparton	Air	1	X								

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
Tami A Engle	10-16-01	1420	

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)
	10-18-01	8:30	

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)

REMARKS:

3

[SR012-1192-03]

CHAIN OF CUSTODY RECORD

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. Albany • Broken Arrow, Oklahoma 74012-1421
Office: 918-251-2858 • Fax 918-251-2599

TM

SAMPLING FIRM	CLIENT CONTACT	PHONE NUMBER
TechLAW	Tami Engle	241953-0045

P.O. or PROPOSAL NUMBER	PROJECT NAME
	SPARTON Technology, INC

SAMPLER: (Signature) T. Engle

ANALYTICAL TESTS REQUESTED

SAMPLE NO.	DATE	TIME	COMP.	GRAB	LOCATION	MATRIX	NUMBER OF CONTAINERS	Total VOC								REMARKS
VR-5	10-17-01	0918		X	Sparton	Air	1	X								
VR-4	10-17-01	0950		X	Sparton	Air	1	X								
VP-14I	10-17-01	1018		X	Sparton	Air	1	X								For Questions
VR-2	10-17-01	1045		X	Sparton	Air	1	X								Please Call
VP-1	10-17-01	1105		X	Sparton	Air	1	X								Kristi Pawski
VP-2	10-17-01	1123		X	Sparton	Air	1	X								
VP-4	10-17-01	1138		X	Sparton	Air	1	X								
VP-5	10-17-01	1152		X	Sparton	Air	1	X								
VP-6	10-17-01	1207		X	Sparton	Air	1	X								
VR-1	10-17-01	1225		X	Sparton	Air	1	X								
VR-11	10-17-01	1236		X	Sparton	Air	1	X								

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
	10-17-01	1359					

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	REMARKS:

[SR012-1192-03]

ATTACHMENT C

PHOTOGRAPHIC LOG

Photograph No.:	1-1	**Facility:**	Sparton Technology, inc.
Date:	October 15, 2001	**Time:**	2134
Photo By:	T. Engle	**Direction:**	North

Description: View of sample IA-2-24 , IA-2-08, IA-3-24, and IA-3-08 located in the Business Links office of Melloy Dodge Dealership building.

Photograph No.:	1-2	**Facility:**	Sparton Technology, Incorporated
Date:	October 15, 2001	**Time:**	2139
Photo By:	T. Engle	**Direction:**	East

Description: View of sample IA-1-24 and IA-1-08 located in the Delivery Office of Melloy Dodge Dealership building. This office is situated next to a door that leads to the outside.

Photograph No.:	1-3	**Facility:**	Sparton Technology, Incorporated
Date:	October 16, 2001	**Time:**	0853
Photo By:	T. Engle	**Direction:**	N/A
Description:	View of VP-11 purging process.		

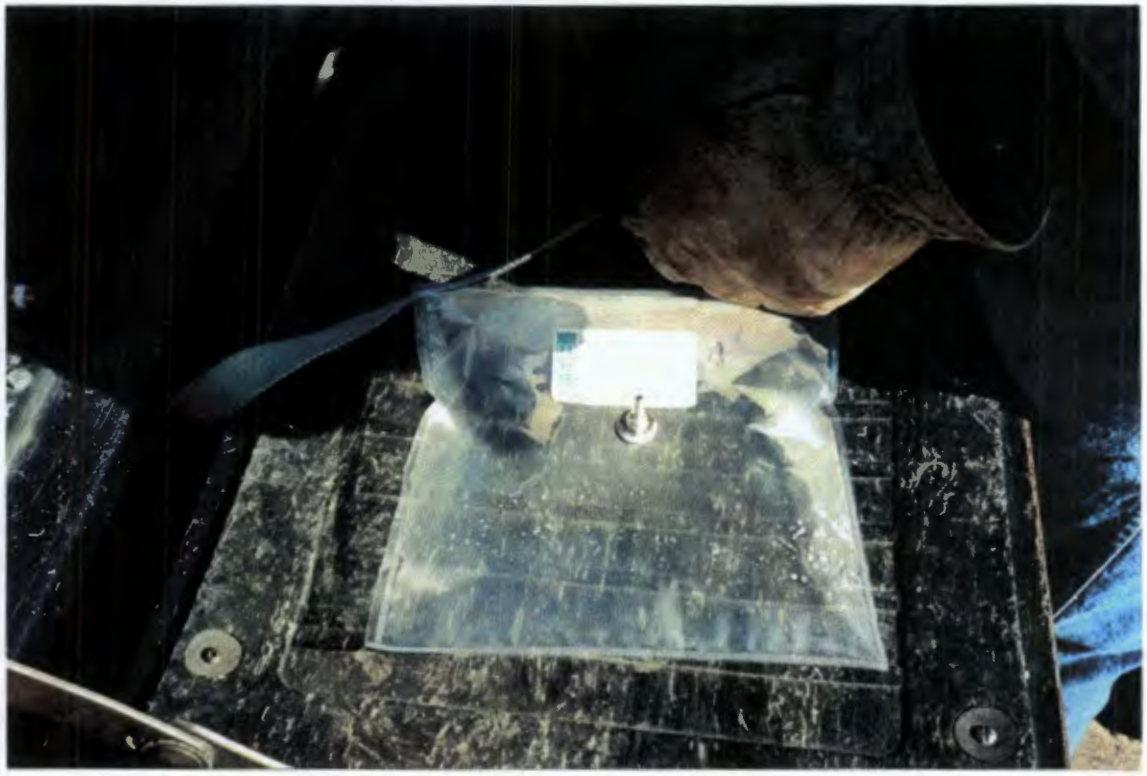
Photograph No.:	1-4	**Facility:**	Sparton Technology, incorporated
Date:	October 16, 2001	**Time:**	1523
Photo By:	T. Engle	**Direction:**	South
Description:	View of MW-17. MW-17 is located on the berm of two infiltration ponds.		

Photograph No.:	1-5	**Facility:**	Sparton Technology, Incorporated
Date:	October 16, 2001	**Time:**	2201
Photo By:	T. Engle	**Direction:**	N/A

Description: View of SUMMA canisters that contain sample IA-2-24 and IA-2-8. These canisters contain samples of air collected at the Melloy Dodge Dealership in the office area and are being prepared for shipment to the laboratory (SWLO).

Photograph No.:	1-6	**Facility:**	Sparton Technology, Incorporated
Date:	October 17, 2001	**Time:**	0930
Photo By:	T. Engle	**Direction:**	West

Description: Photo of VR-4 purging process.

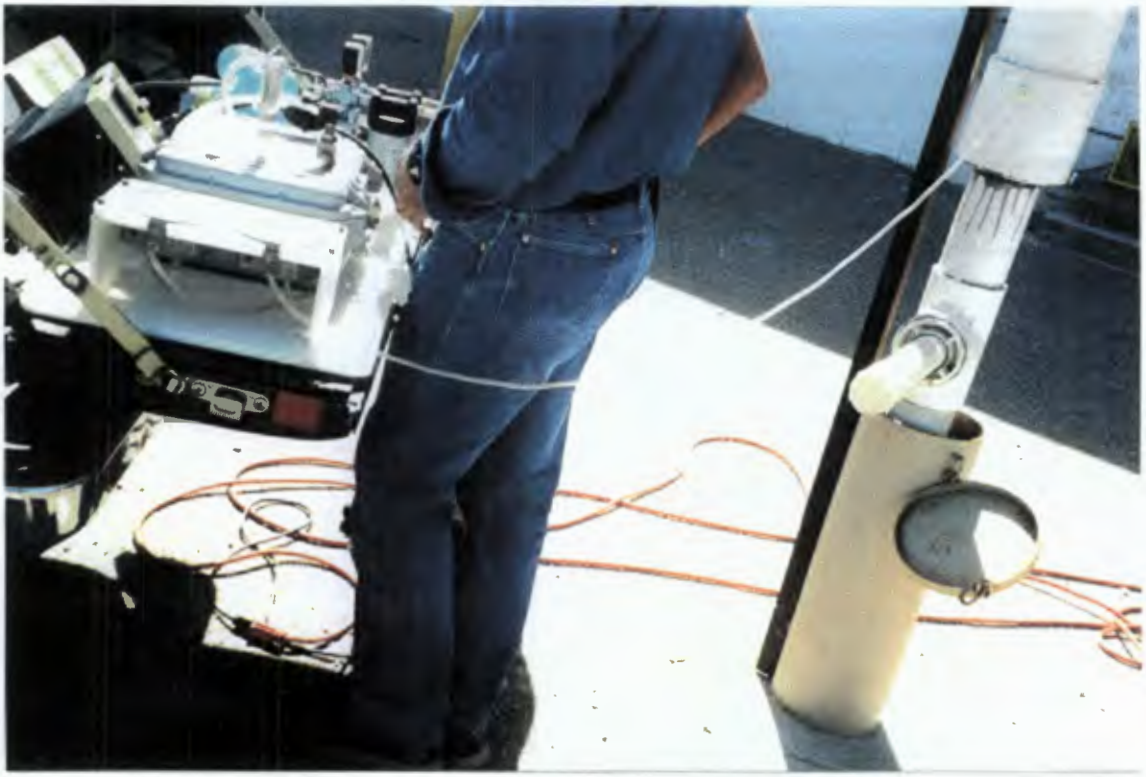


Photograph No.:	1-7	**Facility:**	Sparton Technology, Incorporated
Date:	October 17, 2001	**Time:**	0951
Photo By:	T. Engle	**Direction:**	North
Description:	View of VR-4 sample container, which is a Tedlar bag.		

Photograph No.:	1-8	**Facility:**	Sparton Technology, Incorporated
Date:	October 17, 2001	**Time:**	0956
Photo By:	T. Engle	**Direction:**	East
Description:	View of garage doors from VP-14I point of view. Notice the close proximity of the garage doors and the sample location.		

Photograph No.:	1-9	**Facility:**	Sparton Technology, Incorporated
Date:	October 17, 2001	**Time:**	0957
Photo By:	T. Engle	**Direction:**	Southwest
Description:	View of area surrounding VP-14 (sample VP-14I).		

Photograph No.:	1-10	**Facility:**	Sparton Technology, Incorporated
Date:	October 17, 2001	**Time:**	0959
Photo By:	T. Engle	**Direction:**	N/A
Description:	View of sampling location VP-14 (sample VP-14I).		



Photograph No.:	1-11	**Facility:**	Sparton Technology, Incorporated
Date:	October 17, 2001	**Time:**	1212
Photo By:	T. Engle	**Direction:**	N/A
Description:	View of VR-1 purge/sampling process.		

Photograph No.:	1-12	**Facility:**	Sparton Technology, Incorporated
Date:	September 17, 2001	**Time:**	1238
Photo By:	T. Engle	**Direction:**	N/A
Description:	View of Well 71 and surrounding area.		

ATTACHMENT D

SVE SPLIT AIR SAMPLING ANALYTICAL RESULTS

ATTACHMENT D

Analytical Results of EPA Split Samples

Compound	Analytical Results									
	MW-7		MW-13		MW-15		MW-17		MW-18	
	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³
Dichlorodifluoromethane	0.001U	0.005U	0.01U	0.05U	0.001U	0.005U	0.001U	0.005U	0.01U	0.05U
Chloromethane	0.001U	0.002U	0.01U	0.022U	0.001U	0.002U	0.001U	0.002U	0.01U	0.021U
1,2-Dichlorotetrafluoroethane	0.001U	0.007U	0.01U	0.071U	0.001U	0.007U	0.002	0.014	0.01U	0.071U
Chloroethane	0.001U	0.003U	0.01U	0.027U	0.001U	0.003U	0.001U	0.003U	0.01U	0.027U
Acetone	0.006	0.014	0.009J	0.022J	0.016	0.039	0.036	0.087	0.012	0.029
1,1-Dichloroethene	0.12D	0.48D	0.008J	0.032J	0.084	0.34	0.003	0.012	0.53	2.1
Trifluorotrichloroethane	0.13U	1.00U	0.01U	0.078U	0.016	0.12	0.002	0.016	0.017	0.29
Methylene Chloride	0.003	0.011	0.006J	0.021J	0.007	0.025	0.16D	0.56D	0.019	0.067
Carbon Disulfide	0.0003J	0.001J	0.01U	0.032U	0.001	0.003	0.001U	0.003U	0.01U	0.032U
trans-1,2-Dichloroethene	0.001U	0.004U	0.01U	0.04U	0.001U	0.004U	0.001U	0.004U	0.01U	0.04U
1,1-Dichloroethane	0.002	0.008	0.01U	0.041U	0.001U	0.004U	0.001U	0.004U	0.01U	0.041U
2-Butanone	0.001U	0.003U	0.01U	0.03U	0.001U	0.003U	0.001	0.003	0.01U	0.03U
Chloroform	0.006	0.03	0.006J	0.03J	0.002	0.01	0.001U	0.005U	0.01U	0.049U
1,2-Dichloroethane	0.022	0.091	0.01U	0.041U	0.001U	0.004U	0.001U	0.004U	0.01U	0.041U
1,1,1-Trichloroethane	0.26D	1.4D	0.032	0.18	0.022	0.12	0.003	0.017	0.054	0.3
Benzene	0.0005J	0.002J	0.01U	0.032U	0.0003J	0.001U	0.001	0.003	0.01U	0.032U
Carbon Tetrachloride	0.035	0.22	0.01U	0.064U	0.001U	0.006U	0.001U	0.006U	0.01U	0.064U
Trichloroethene	0.83D	7.8D	0.15	0.82	0.4D	2.2D	0.012	0.065	0.7	3.8
4-Methyl-2-Pentanone	0.001U	0.004U	0.01U	0.042U	0.001	0.004	0.001U	0.004U	0.01U	0.042U
Toluene	0.008	0.031	0.008J	0.031J	0.009	0.034	0.005	0.019	0.007J	0.027J
Tetrachloroethene	0.009	0.062	0.01U	0.069U	0.01	0.069	0.0006J	0.004J	0.007J	0.048J
Ethylbenzene	0.0008J	0.004J	0.01U	0.044U	0.002	0.009	0.0009J	0.004J	0.01U	0.044U
m,p-Xylene	0.003	0.013	0.01U	0.044U	0.009	0.04	0.004	0.018	0.01U	0.044U
o-Xylene	0.001	0.004	0.01U	0.044U	0.003	0.013	0.001	0.004	0.01U	0.044U
1,2,4-Trimethylbenzene	0.0007J	0.004J	0.01U	0.05U	0.001	0.005	0.001U	0.005U	0.01U	0.05U

This data is not validated, as specified in the QAPP;
U= Not Detected;
J= Estimated value; Concentration is below limit of quantitation;
MW = Monitoring Well;
D= Identifies compounds whose concentrations exceeded the calibration range; therefore the sample was diluted and reanalyzed;
mg/m³ = milligrams per cubic meter; and
ppmV= parts per million by volume.
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT D (continued)

Analytical Results of EPA Split Samples

Compound	Analytical Results									
	VP-1		VP-2		VR-4		VP-5		VP-6	
	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³
Dichlorodifluoromethane	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U
Chloromethane	0.01U	0.021U	0.01U	0.021U	0.01U	0.021U	0.01U	0.021U	0.01U	0.021U
1,2 Dichlorotetrafluoroethane	0.01U	0.071U	0.01U	0.071U	0.01U	0.071U	0.01U	0.071U	0.01U	0.071U
Chloroethane	0.38	1.0	0.1	0.27	0.01U	0.027U	0.01U	0.027U	0.01U	0.027U
Acetone	0.041	0.099	0.04	0.096	0.014	0.034	0.1	0.24	0.22	0.53
1,1-Dichloroethene	0.27	1.1	0.19	0.77	0.018	0.073	0.032	0.13	0.054	0.22
Trifluorotrichloroethane	0.24	1.9	0.083	0.65	0.01U	0.078U	0.01U	0.078U	0.016	0.12
Methylene Chloride	0.94D	3.3D	0.97D	3.4D	0.016	0.056	0.097	0.34	0.12	0.42
Carbon Disulfide	0.009J	0.028J	0.006J	0.019J	0.01U	0.032U	0.01U	0.032U	0.01U	0.032U
trans-1,2-Dichloroethene	0.01U	0.04U	0.01U	0.04U	0.01U	0.04U	0.01U	0.04U	0.01U	0.04U
1,1-Dichloroethane	0.12	0.49	0.035	0.14	0.01U	0.041U	0.01U	0.041U	0.006J	0.025J
2-Butanone	0.01U	0.03U	0.01U	0.03U	0.01U	0.03U	0.013	0.039	0.018	0.054
Chloroform	0.11	0.54	0.093	0.46	0.01U	0.049U	0.009J	0.045J	0.014	0.069
1,2-Dichloroethane	0.01U	0.041U	0.01U	0.041U	0.01U	0.041U	0.01U	0.041U	0.01U	0.041U
1,1,1-Trichloroethane	0.98D	5.4D	0.69D	3.8D	0.023	0.13	0.083	0.46	0.15	0.83
Benzene	0.021	0.068	0.008J	0.026J	0.01U	0.032U	0.01U	0.032U	0.01U	0.032U
Carbon Tetrachloride	0.01U	0.064U	0.01U	0.064U	0.01U	0.064U	0.01U	0.064U	0.01U	0.064U
Trichloroethene	0.77D	4.2D	0.95	5.2	0.22	1.2	0.33	1.8	0.61	3.3
4-Methyl-2-Pentanone	0.01U	0.042U	0.01U	0.042U	0.01U	0.042U	0.01U	0.042U	0.01U	0.042U
Toluene	0.21	0.8	0.14	0.54	0.008J	0.031J	0.031	0.12	0.039	0.15
Tetrachloroethene	0.033	0.23	0.027	0.19	0.01U	0.069U	0.012	0.083	0.034	0.23
Ethylbenzene	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.006J	0.026J
m,p-Xylene	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U
o-Xylene	0.007J	0.031J	0.012	0.053	0.01U	0.044U	0.01U	0.044U	0.035	0.15
1,2,4-Trimethylbenzene	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U

* This data is not validated, as specified in the QAPP;
U= Not Detected;
J= Estimated value; Concentration is below limit of quantitation;
VP = Vapor Probe;
D= Identifies compounds whose concentrations exceeded the calibration range; therefore the sample was diluted and reanalyzed;
mg/m³ = milligrams per cubic meter; and
ppmV= parts per million by volume.
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT D (continued)

Analytical Results of EPA Split Samples

Compound	Analytical Results									
	VP-8		VP-9		VP-10		VP-11		VR-2	
	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³
Dichlorodiflouromethane	0.001U	0.005U	0.01U	0.05U	0.001U	0.005U	0.001U	0.005U	0.01U	0.05U
Chloromethane	0.0006J	0.001J	0.01U	0.021U	0.001U	0.002U	0.001U	0.002U	0.01U	0.021U
1,2-Dichlorotetrafluoroethane	0.001U	0.007U	0.01U	0.071U	0.001U	0.007U	0.001U	0.007U	0.01U	0.071U
Chloroethane	0.001U	0.003U	0.01U	0.027U	0.001U	0.003U	0.001U	0.003U	0.01U	0.027U
Acetone	0.013	0.031	0.01	0.024	0.009	0.022	0.007	0.017	0.014	0.034
1,1-Dichloroethene	0.005	0.02	0.069	0.28	0.018	0.073	0.0009J	0.004J	0.059	0.24
Trifluorotrichloroethane	0.002	0.016	0.01U	0.078U	0.007	0.054	0.001	0.008	0.021	0.160
Methylene Chloride	0.032	0.11	0.005J	0.018J	0.003	0.011	0.013	0.046	0.058	0.2
Carbon Disulfide	0.0004J	0.001J	0.01U	0.032U	0.001U	0.003U	0.0004J	0.001J	0.01U	0.032U
trans-1,2-Dichloroethene	0.001U	0.004U	0.01U	0.04U	0.001U	0.004U	0.001U	0.004U	0.01U	0.04U
1,1-Dichloroethane	0.001U	0.004U	0.01U	0.041U	0.001U	0.004U	0.001U	0.004U	0.01U	0.041U
2-Butanone	0.002	0.006	0.01U	0.03U	0.002	0.006	0.001	0.003	0.01U	0.03U
Chloroform	0.001	0.005	0.014	0.069	0.005	0.025	0.001	0.005	0.007J	0.035J
1,2-Dichloroethane	0.001U	0.004U	0.01U	0.041U	0.001U	0.004U	0.001U	0.004U	0.01U	0.041U
1,1,1-Trichloroethane	0.006	0.033	0.054	0.3	0.033	0.18	0.016	0.088	0.15	0.83
Benzene	0.0007J	0.002J	0.01U	0.032U	0.003	0.01	0.0006J	0.002J	0.01U	0.032U
Carbon Tetrachloride	0.001U	0.006U	0.01U	0.064U	0.001U	0.006U	0.001U	0.006U	0.01U	0.064U
Trichloroethene	0.019	0.1	0.26	1.4	0.051	0.28	0.014	0.076	0.4	2.2
4-Methyl-2-Pentanone	0.001U	0.004U	0.01U	0.042U	0.001U	0.004U	0.001U	0.004U	0.01U	0.042U
Toluene	0.006	0.023	0.008J	0.031J	0.01	0.038	0.008	0.031	0.0091	0.0341
Tetrachloroethene	0.001	0.007	0.01U	0.069U	0.003	0.021	0.0005J	0.004J	0.01	0.069
Ethylbenzene	0.001	0.004	0.01U	0.044U	0.0002J	0.004J	0.0002J	0.002J	0.01U	0.044U
m,p-Xylene	0.006	0.026	0.01U	0.044U	0.004	0.018	0.003	0.013	0.01U	0.044U
o-Xylene	0.002	0.009	0.01U	0.044U	0.001	0.004	0.001	0.004	0.01U	0.044U
1,2,4-Trimethylbenzene	0.0008J	0.004J	0.01U	0.05U	0.001U	0.005U	0.0006J	0.003J	0.01U	0.05U

This data is not validated, as specified in the QAPP;
U= Not Detected;
J= Estimated value; Concentration is below limit of quantitation;
VP = Vapor Probe;
VR = Vapor Recovery Well;
mg/m³ = milligrams per cubic meter; and
ppmV= parts per million by volume.
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT D (continued)

Analytical Results of EPA Split Samples

Compound	Analytical Results									
	VP-14I		VP-14		MW-21		VR-11		VR-1	
	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³
Dichlorodifluoromethane	0.003	0.015	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U
Chloromethane	0.003	0.006	0.01U	0.021U	0.01U	0.021U	0.023	0.048	0.01U	0.021U
1,2-Dichlorotetrafluoroethane	0.001U	0.007U	0.01U	0.071U	0.01U	0.071U	0.01U	0.071U	0.01U	0.071U
Chloroethane	0.001U	0.003U	0.01U	0.027U	0.01U	0.027U	0.01U	0.027U	0.016	0.044
Acetone	0.047	0.11	0.012	0.029	0.012	0.029	0.046	0.11	0.01U	0.024U
1,1-Dichloroethene	0.002	0.008	0.026	0.1	0.025	0.1	0.037	0.15	0.073	0.29
Trifluorotrichloroethane	0.001	0.008	0.01U	0.078U	0.01U	0.078U	0.013	0.1	0.022	0.17
Methylene Chloride	0.065	0.23	0.022	0.078	0.025	0.088	0.21	0.74	0.31	1.1
Carbon Disulfide	0.001U	0.003U	0.01U	0.032U	0.01U	0.032U	0.01U	0.032U	0.01U	0.032U
trans-1,2-Dichloroethene	0.001U	0.004U	0.01U	0.04U	0.01U	0.04U	0.01U	0.04U	0.084	0.34
1,1-Dichloroethane	0.001U	0.004U	0.01U	0.041U	0.01U	0.041U	0.009J	0.037J	0.01U	0.041U
2-Butanone	0.001U	0.003U	0.01U	0.03U	0.01U	0.03U	0.01U	0.03U	0.01U	0.03U
Chloroform	0.0009J	0.005J	0.01U	0.049U	0.01U	0.049U	0.008J	0.04J	0.01U	0.049U
1,2-Dichloroethane	0.001U	0.004U	0.01U	0.041U	0.01U	0.041U	0.01U	0.041U	0.01U	0.041U
1,1,1-Trichloroethane	0.005	0.028	0.014	0.077	0.014	0.077	0.21	1.2	0.4	2.2
Benzene	0.002	0.007	0.01U	0.032U	0.01U	0.032U	0.01U	0.032U	0.01U	0.032U
Carbon Tetrachloride	0.001U	0.006U	0.01U	0.064U	0.01U	0.064U	0.01U	0.064U	0.01U	0.064U
Trichloroethene	0.02	0.11	0.33	1.8	0.36	2	0.42	2.3	0.88	4.8
4-Methyl-2-Pentanone	0.001U	0.004U	0.01U	0.042U	0.01U	0.042U	0.01U	0.042U	0.01U	0.042U
Toluene	0.008	0.031	0.007J	0.027J	0.007J	0.027J	0.075	0.29	0.14	0.54
Tetrachloroethene	0.001	0.007	0.01U	0.069U	0.01U	0.069U	0.007J	0.048J	0.012	0.083
Ethylbenzene	0.001	0.004	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.006J	0.026J
m,p-Xylene	0.007	0.031	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U
o-Xylene	0.002	0.009	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U	0.01U	0.044U
1,2,4-Trimethylbenzene	0.001U	0.005U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U	0.01U	0.05U

This data is not validated, as specified in the QAPP;
U= Not Detected;
J= Estimated value; Concentration is below limit of quantitation;
VP = Vapor Probe;
VR = Vapor Recovery Well;
MW = Monitoring Well;
mg/m³ = milligrams per cubic meter;
ppmV= parts per million by volume;
VP-14 = Duplicate sample of MW-21; and
VR-11 = Duplicate sample of VR-1.
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT D (Continued)

Analytical Results of EPA Split Samples

Compound	Analytical Results			
	VR-5		VP-4	
	ppmV	mg/m³	ppmV	mg/m³
Dichlorodifluoromethane	0.01U	0.05U	0.01U	0.05U
Chloromethane	0.01U	0.021U	0.01U	0.021U
1,2-Dichlorotetrafluoroethane	0.01U	0.071U	0.01U	0.071U
Chloroethane	0.01U	0.027U	0.012	0.033
Acetone	0.014	0.034	0.044	0.11
1,1-Dichloroethene	0.005J	0.02J	0.041	0.17
Trifluorotrichloroethane	0.01U	0.078U	0.01U	0.078U
Methylene Chloride	0.025	0.088	0.77	2.7
Carbon Disulfide	0.01U	0.032U	0.01U	0.032U
trans-1,2-Dichloroethene	0.01U	0.04U	0.01U	0.04U
1,1-Dichloroethane	0.01U	0.041U	0.01U	0.041U
2-Butanone	0.01U	0.03U	0.01U	0.03U
Chloroform	0.005J	0.025J	0.037	0.18
1,2-Dichloroethane	0.01U	0.041U	0.01U	0.041U
1,1,1-Trichloroethane	0.014	0.077	0.14	0.77
Benzene	0.01U	0.032U	0.01U	0.032U
Carbon Tetrachloride	0.01U	0.064U	0.01U	0.064U
Trichloroethene	0.045	0.25	0.5	2.7
4-Methyl-2-Pentanone	0.01U	0.042U	0.01U	0.042U
Toluene	0.009J	0.034J	0.069	0.26
Tetrachloroethene	0.01U	0.069U	0.042	0.29
Ethylbenzene	0.01U	0.044U	0.01U	0.044U
m,p-Xylene	0.01U	0.044U	0.01U	0.044U
o-Xylene	0.01U	0.044U	0.006J	0.026J
1,2,4-Trimethylbenzene	0.01U	0.05U	0.01U	0.05U

This data is not validated, as specified in the QAPP;
U= Not Detected;
J= Estimated value; Concentration is below limit of quantitation;
VP = Vapor Probe;
VR = Vapor Recovery Well;
mg/m³ = milligrams per cubic meter;
ppmV= parts per million by volume; and
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT E

INDEPENDENT INDOOR AIR SAMPLING ANALYTICAL RESULTS

ATTACHMENT E

Independent Indoor Air Sampling Analytical Results

Compound	Analytical Result							
	IA-1-24		IA-1-08		IA-2-24		IA-2-08	
	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³	ppmV	mg/m³
Acetone	0.096	0.23	0.024	0.058	0.047	0.11	0.04	0.096
1,1-Dichloroethene	0.002U	0.008U	0.002U	0.008U	0.002U	0.008U	0.002U	0.008U
Methylene Chloride	0.0005J	0.002J	0.002U	0.007U	0.002U	0.007U	0.002U	0.007U
1,2-Dichloroethane	0.002U	0.008U	0.002U	0.008U	0.001J	0.004J	0.002U	0.008U
1,1,1-Trichloroethane	0.004	0.022	0.005	0.028	0.012	0.066	0.002U	0.011U
Benzene	0.008	0.026	0.004	0.013	0.008	0.026	0.009	0.029
Toluene	0.15	0.5	0.09	0.34	0.12	0.46	0.16	0.61
Tetrachloroethene	0.0002J	0.001J	0.002U	0.014U	0.002U	0.014U	0.002U	0.014U
Ethylbenzene	0.012	0.053	0.009	0.04	0.037	0.16	0.033	0.15
m,p-Xylene	0.045	0.2	0.032	0.14	0.1	0.44	0.09	0.4
o-Xylene	0.02	0.088	0.013	0.057	0.032	0.14	0.026	0.11
1,2,4-Trimethylbenzene	0.01	0.05	0.006	0.03	0.008	0.04	0.008	0.04
Naphthalene	0.0008J	0.004J	0.0007J	0.004J	0.0006J	0.003J	0.0009J	0.005J

This data is not validated, as specified in the QAPP;
U = Not Detected;
J = Estimated value; Concentration is below limit of quantitation;
mg/m³ = milligrams per cubic meter; and
ppmV = parts per million by volume.
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT E (Continued)

Independent Indoor Air Sampling Analytical Results

Compound	Analytical Result			
	IA-3-24		IA-3-08	
	ppmV	mg/m³	ppmV	mg/m³
Acetone	0.14	0.34	0.087	0.21
1,1-Dichloroethene	0.046	0.19	0.003U	0.012U
Methylene Chloride	0.45	1.6	0.003U	0.011U
1,2-Dichloroethene	0.04U	0.16U	0.003U	0.012U
1,1,1-Trichloroethane	0.034J	0.19J	0.003U	0.017U
Benzene	0.019J	0.062J	0.009	0.029
Toluene	0.047	0.18	0.18	0.69
Tetrachloroethene	0.04U	0.28U	0.003U	0.021U
Ethylbenzene	0.04U	0.18U	0.068	0.3
m,p-Xylene	0.04U	0.18U	0.17	0.75
o-Xylene	0.04U	0.18U	0.048	0.21
1,2,4-Trimethylbenzene	0.04U	0.2U	0.006	0.03
Napthalene	0.04U	0.21U	0.003U	0.16U

This data is not validated, as specified in the QAPP;
U = Not Detected;
J = Estimated value; Concentration is below limit of quantitation;
mg/m³ = milligrams per cubic meter;
ppmV = parts per million by volume;
IA-3-24 = Duplicate Sample of IA-2-24; and
IA-3-08 = Duplicate Sample of IA-2-08.
Shaded cells indicate the compound concentration that has been detected for that location.

ATTACHMENT F

EPA/SPARTON TECHNOLOGY TCE ANALYTICAL COMPARISON

ATTACHMENT F

EPA/Sparton TCE Analytical Results Comparison (October 2001)

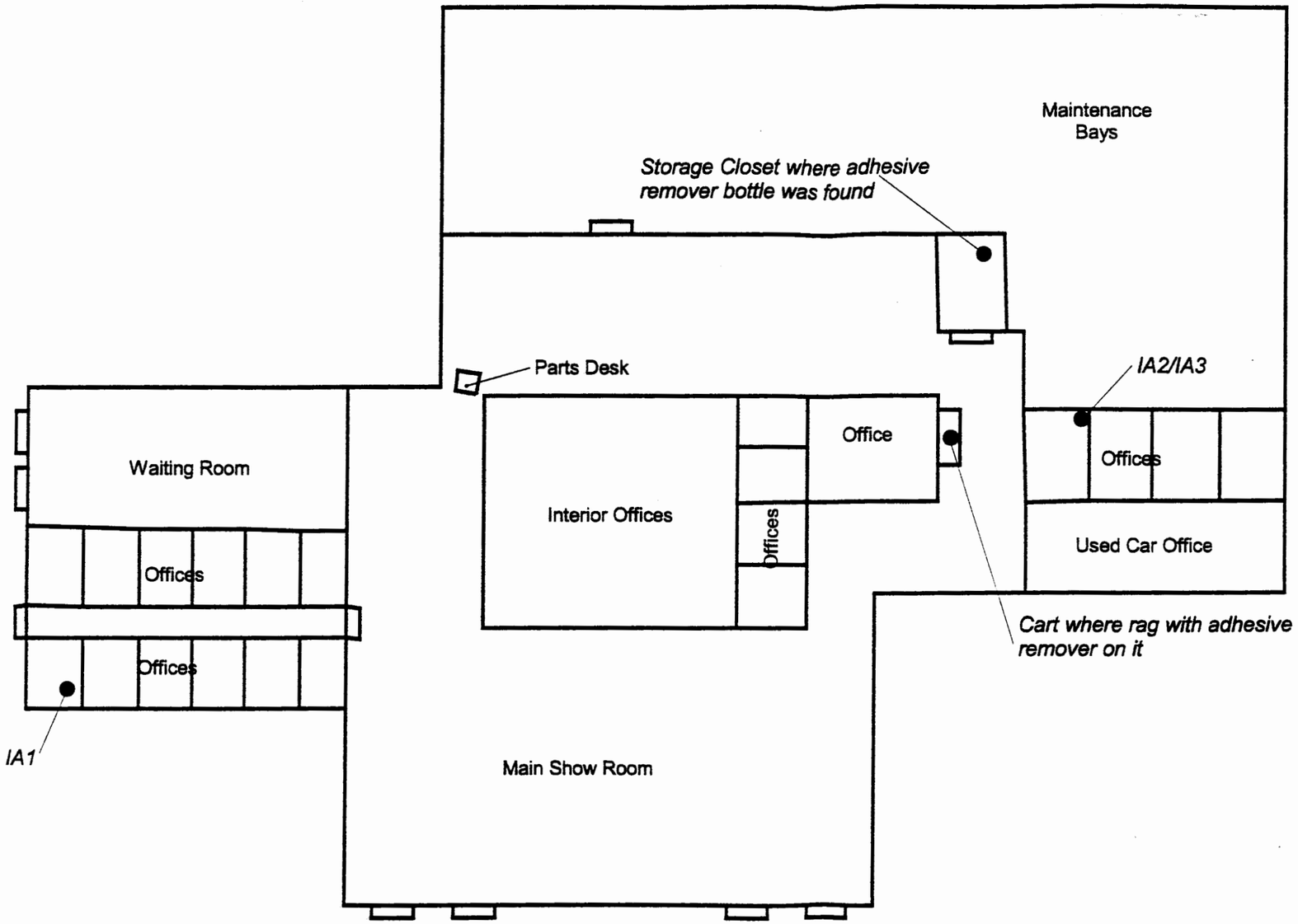
Location	TCE Analytical Result			
	EPA (ppmV)	SPARTON (ppmV)	EPA (mg/m³)	Sparton (mg/m³)
VR-1	0.88	1.1	4.8	4.9
VR-2	0.4	0.49	2.2	2.2
VR-4	0.22	0.25	1.2	1.1
VR-5	0.045	<0.022	0.25	<0.1
VP-1	0.77D	<0.022	4.2D	<0.1
VP-2	0.95	1.0	5.2	4.5
VP-3	NS	NS	NS	NS
VP-4	0.5	0.47	2.7	2.1
VP-5	0.33	0.4	1.8	1.8
VP-6	0.61	0.36	3.3	1.6
VP-8	0.019	<0.022	0.1	<0.1
VP-9	0.26	0.25	1.4	1.1
VP-10	0.051	0.05	0.28	0.22
VP-11	0.014	<0.022	0.076	<0.1
VP-14	0.02	0.027	0.11	0.12
MW-7	0.43D	0.43	2.3D	1.9
MW-13	0.15	0.11	0.82	0.48
MW-15	0.4D	0.4	2.2D	1.6
MW-17	0.012	0.03	0.065	0.14
MW-18	0.7	1.21	3.8	5.4
MW-21	0.36	0.2464	2.0	1.1

This data is not validated, as specified in the QAPP;
Shaded area indicated concentrations in which EPA TCE concentrations exceeds Sparton TCE concentration;
D = Identifies compounds whose concentrations exceeded the calibration range; therefore the sample was diluted and reanalyzed; and
NS= Not sampled.
Note: VP-14 is the same location as TechLaw VP-14I
TCE = Trichloroethylene, or Trichloroethene

ATTACHMENT G

INDOOR AIR SAMPLE LOCATIONS

Attachment G
Indoor Air Sample
Location Map



10 0 10 20 Feet

3 0 3 6 Meters

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Prepared By:
TechLaw, Inc.

ATTACHMENT H

ANALYTICAL DATA PACKAGE

FORM 1

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA-1-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.02

Lab File ID: W10578.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.9

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
74-87-3	Chloromethane	2	4	U
67-64-1	Acetone	24	58	
75-35-4	1,1-Dichloroethene	2	8	U
75-09-2	Methylene Chloride	2	7	U
75-15-0	Carbon Disulfide	2	6	U
156-60-5	trans-1,2-Dichloroethene	2	8	U
75-34-3	1,1-Dichloroethane	2	8	U
156-59-2	cis-1,2-Dichloroethene	2	8	U
67-66-3	Chloroform	2	10	U
107-06-2	1,2-Dichloroethane	2	8	U
71-55-6	1,1,1-Trichloroethane	5	28	
71-43-2	Benzene	4	13	
79-01-6	Trichloroethene	2	11	U
79-00-5	1,1,2-Trichloroethane	2	11	U
108-88-3	Toluene	90	340	
127-18-4	Tetrachloroethene	2	14	U
108-90-7	Chlorobenzene	2	9	U
100-41-4	Ethylbenzene	9	40	
13-302-07	m,p-Xylene	32	140	
95-47-6	o-Xylene	13	57	
79-34-5	1,1,2,2-Tetrachloroethane	2	14	U
95-63-6	1,2,4-Trimethylbenzene	6	30	
91-20-3	Napthalene	0.7	4	J

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

IA-1-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.02

Lab File ID: W10578.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.9

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA-1-24

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.01

Lab File ID: W10577.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.7

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
74-87-3	Chloromethane	2	4	U
67-64-1	Acetone	96	230	
75-35-4	1,1-Dichloroethene	2	8	U
75-09-2	Methylene Chloride	0.5	2	J
75-15-0	Carbon Disulfide	2	6	U
156-60-5	trans-1,2-Dichloroethene	2	8	U
75-34-3	1,1-Dichloroethane	2	8	U
156-59-2	cis-1,2-Dichloroethene	2	8	U
67-66-3	Chloroform	2	10	U
107-06-2	1,2-Dichloroethane	2	8	U
71-55-6	1,1,1-Trichloroethane	4	22	
71-43-2	Benzene	8	26	
79-01-6	Trichloroethene	2	11	U
79-00-5	1,1,2-Trichloroethane	2	11	U
108-88-3	Toluene	130	500	
127-18-4	Tetrachloroethene	0.2	1	J
108-90-7	Chlorobenzene	2	9	U
100-41-4	Ethylbenzene	12	53	
13-302-07	m,p-Xylene	45	200	
95-47-6	o-Xylene	20	88	
79-34-5	1,1,2,2-Tetrachloroethane	2	14	U
95-63-6	1,2,4-Trimethylbenzene	10	50	
91-20-3	Napthalene	0.8	4	J

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

IA-1-24

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.01

Lab File ID: W10577.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.7

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75-07-0	ACETALDEHYDE	3.63	21	JN
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1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA-2-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.04

Lab File ID: W10580.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 2.2

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
74-87-3	Chloromethane	2	4	U
67-64-1	Acetone	40	96	
75-35-4	1,1-Dichloroethene	2	8	U
75-09-2	Methylene Chloride	2	7	U
75-15-0	Carbon Disulfide	2	6	U
156-60-5	trans-1,2-Dichloroethene	2	8	U
75-34-3	1,1-Dichloroethane	2	8	U
156-59-2	cis-1,2-Dichloroethene	2	8	U
67-66-3	Chloroform	2	10	U
107-06-2	1,2-Dichloroethane	2	8	U
71-55-6	1,1,1-Trichloroethane	2	11	U
71-43-2	Benzene	9	29	
79-01-6	Trichloroethene	2	11	U
79-00-5	1,1,2-Trichloroethane	2	11	U
108-10-1	4-Methyl-2-Pentanone	2	8	U
108-88-3	Toluene	160	610	
10061-02-6	trans-1,3-Dichloropropene	2	9	U
127-18-4	Tetrachloroethene	2	14	U
108-90-7	Chlorobenzene	2	9	U
100-41-4	Ethylbenzene	33	150	
13-302-07	m,p-Xylene	90	400	
95-47-6	o-Xylene	26	110	
79-34-5	1,1,2,2-Tetrachloroethane	2	14	U
95-63-6	1,2,4-Trimethylbenzene	8	40	
91-20-3	Napthalene	0.9	5	J

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

IA-2-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.04

Lab File ID: W10580.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 2.2

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA-2-24

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.03

Lab File ID: W10579.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 2.2

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
74-87-3	Chloromethane	2	4	U
67-64-1	Acetone	47	110	
75-35-4	1,1-Dichloroethene	2	8	U
75-09-2	Methylene Chloride	2	7	U
75-15-0	Carbon Disulfide	2	6	U
156-60-5	trans-1,2-Dichloroethene	2	8	U
75-34-3	1,1-Dichloroethane	2	8	U
156-59-2	cis-1,2-Dichloroethene	2	8	U
67-66-3	Chloroform	2	10	U
107-06-2	1,2-Dichloroethane	1	4	J
71-55-6	1,1,1-Trichloroethane	12	66	
71-43-2	Benzene	8	26	
79-01-6	Trichloroethene	2	11	U
79-00-5	1,1,2-Trichloroethane	2	11	U
108-10-1	4-Methyl-2-Pentanone	2	8	U
108-88-3	Toluene	120	460	
10061-02-6	trans-1,3-Dichloropropene	2	9	U
127-18-4	Tetrachloroethene	2	14	U
108-90-7	Chlorobenzene	2	9	U
100-41-4	Ethylbenzene	37	160	
13-302-07	m,p-Xylene	100	440	
95-47-6	o-Xylene	32	140	
79-34-5	1,1,2,2-Tetrachloroethane	2	14	U
95-63-6	1,2,4-Trimethylbenzene	8	40	
91-20-3	Napthalene	0.6	3	J

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

IA-2-24

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.03

Lab File ID: W10579.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 2.2

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA-3-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.06

Lab File ID: W10582.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 2.7

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
74-87-3	Chloromethane	3	6	U
67-64-1	Acetone	87	210	
75-35-4	1,1-Dichloroethene	3	12	U
75-09-2	Methylene Chloride	3	11	U
75-15-0	Carbon Disulfide	3	10	U
156-60-5	trans-1,2-Dichloroethene	3	12	U
75-34-3	1,1-Dichloroethane	3	12	U
156-59-2	cis-1,2-Dichloroethene	3	12	U
67-66-3	Chloroform	3	15	U
107-06-2	1,2-Dichloroethane	3	12	U
71-55-6	1,1,1-Trichloroethane	3	17	U
71-43-2	Benzene	9	29	
79-01-6	Trichloroethene	3	16	U
79-00-5	1,1,2-Trichloroethane	3	17	U
108-10-1	4-Methyl-2-Pentanone	3	12	U
108-88-3	Toluene	180	690	
10061-02-6	trans-1,3-Dichloropropene	3	14	U
127-18-4	Tetrachloroethene	3	21	U
108-90-7	Chlorobenzene	3	14	U
100-41-4	Ethylbenzene	68	300	
13-302-07	m,p-Xylene	170	750	
95-47-6	o-Xylene	48	210	
79-34-5	1,1,2,2-Tetrachloroethane	3	21	U
95-63-6	1,2,4-Trimethylbenzene	6	30	
91-20-3	Napthalene	3	16	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

IA-3-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.06

Lab File ID: W10582.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 2.7

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA-3-24

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.05

Lab File ID: W10581.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 40.2

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
74-87-3	Chloromethane	40	84	U
67-64-1	Acetone	140	340	
75-35-4	1,1-Dichloroethene	46	190	
75-09-2	Methylene Chloride	450	1600	
75-15-0	Carbon Disulfide	40	130	U
156-60-5	trans-1,2-Dichloroethene	40	160	U
75-34-3	1,1-Dichloroethane	40	160	U
156-59-2	cis-1,2-Dichloroethene	40	160	U
67-66-3	Chloroform	40	200	U
107-06-2	1,2-Dichloroethane	40	160	U
71-55-6	1,1,1-Trichloroethane	34	190	J
71-43-2	Benzene	19	62	J
79-01-6	Trichloroethene	40	220	U
79-00-5	1,1,2-Trichloroethane	40	220	U
108-10-1	4-Methyl-2-Pentanone	40	170	U
108-88-3	Toluene	47	180	
10061-02-6	trans-1,3-Dichloropropene	40	180	U
127-18-4	Tetrachloroethene	40	280	U
108-90-7	Chlorobenzene	40	190	U
100-41-4	Ethylbenzene	40	180	U
13-302-07	m,p-Xylene	40	180	U
95-47-6	o-Xylene	40	180	U
79-34-5	1,1,2,2-Tetrachloroethane	40	280	U
95-63-6	1,2,4-Trimethylbenzene	40	200	U
91-20-3	Napthalene	40	210	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

IA-3-24

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47828

Matrix: AIR Lab Sample ID: 47828.05

Lab File ID: W10581.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 40.2

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-7

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.02

Lab File ID: W10556.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	1	5	U
74-87-3	Chloromethane	1	2	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	1	7	U
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	~~1~~ 6	~~2~~ 14	U as per SWL 1-29-02
75-35-4	1,1-Dichloroethene	160	630	E
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	150	1200	E
75-09-2	Methylene Chloride	3	11	
75-15-0	Carbon Disulfide	0.3	1.0	J
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	2	8	
78-93-3	2-Butanone	1	3	U
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	6	30	
107-06-2	1,2-Dichloroethane	22	91	
71-55-6	1,1,1-Trichloroethane	260	1400	E
71-43-2	Benzene	0.5	2	J
56-23-5	Carbon Tetrachloride	35	220	
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	250	1400	E
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	U
108-88-3	Toluene	8	31	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	9	62	
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	0.8	4	J
13-302-07	m,p-Xylene	3	13	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	1	4	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	0.7	4	J

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-7

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.02

Lab File ID: W10556.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-7

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.02

Lab File ID: W10556.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-95-2	PHENOL	13.96	54	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-7DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.02DL

Lab File ID: W10570.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	10	24	U
75-35-4	1,1-Dichloroethene	120	480	D
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	130	1000	D
75-09-2	Methylene Chloride	17	60	D
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	260	1400	D
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	430	2300	D
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	10	38	U
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-7DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.02DL

Lab File ID: W10570.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-7DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.02DL

Lab File ID: W10570.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.53	290	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-13

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.04

Lab File ID: W10558.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	9	22	J
75-35-4	1,1-Dichloroethene	8	32	J
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	6	21	J
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	6	30	J
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	32	180	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	150	820	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	8	31	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-13

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.04

Lab File ID: W10558.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-13

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.04

Lab File ID: W10558.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 124-38-9	CARBON DIOXIDE	3.16	290	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-15

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.01

Lab File ID: W10555.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	1	5	U
74-87-3	Chloromethane	1	2	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	1	7	U
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	16	39	
75-35-4	1,1-Dichloroethene	84	340	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	16	120	
75-09-2	Methylene Chloride	7	25	
75-15-0	Carbon Disulfide	1	3	
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	1	4	U
78-93-3	2-Butanone	1	3	U
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	2	10	
107-06-2	1,2-Dichloroethane	1	4	U
71-55-6	1,1,1-Trichloroethane	22	120	
71-43-2	Benzene	0.8	3	J
56-23-5	Carbon Tetrachloride	1	6	U
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	270	1500	E
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	
108-88-3	Toluene	9	34	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	10	69	
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	2	9	
13-302-07	m,p-Xylene	9	40	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	3	13	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	1	5	

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-15

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.01

Lab File ID: W10555.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-15

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.01

Lab File ID: W10555.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-15DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.01DL

Lab File ID: W10569.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	11	27	D
75-35-4	1,1-Dichloroethene	50	200	D
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	22	78	D
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	14	77	D
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	400	2200	D
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	7	27	DJ
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	5	35	DJ
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-15DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.01DL

Lab File ID: W10569.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-15DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.01DL

Lab File ID: W10569.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-17

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.11

Lab File ID: Z15941.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	1	5	U
74-87-3	Chloromethane	1	2	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	2	14	
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	36	87	
75-35-4	1,1-Dichloroethene	3	12	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	2	16	
75-09-2	Methylene Chloride	150	530	E
75-15-0	Carbon Disulfide	1	3	U
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	1	4	U
78-93-3	2-Butanone	1	3	
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	1	5	U
107-06-2	1,2-Dichloroethane	1	4	U
71-55-6	1,1,1-Trichloroethane	3	17	
71-43-2	Benzene	1	3	
56-23-5	Carbon Tetrachloride	1	6	U
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	12	65	
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	U
108-88-3	Toluene	5	19	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	0.6	4	J
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	0.9	4	J
13-302-07	m,p-Xylene	4	18	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	1	4	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	1	5	U

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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-17

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.11

Lab File ID: Z15941.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

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not needed
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-17

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.11

Lab File ID: Z15941.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	75-05-8	ACETONITRILE	4.49	13	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-17DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.11DL

Lab File ID: Z15942.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	25	60	D
75-35-4	1,1-Dichloroethene	10	40	U
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	160	560	D
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	10	55	U
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	11	60	D
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	10	38	U
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-17DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.11DL

Lab File ID: Z15942.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1/2 P

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-17DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.11DL

Lab File ID: Z15942.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-95-2	PHENOL	13.77	75	DJN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-18

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.08

Lab File ID: W10573.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	12	29	
75-35-4	1,1-Dichloroethene	320	1300	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	37	290	
75-09-2	Methylene Chloride	19	67	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	54	300	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	700	3800	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	7	27	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	7	48	J
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-18

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.08

Lab File ID: W10573.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-18

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.08

Lab File ID: W10573.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.45	1000	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-21

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.10

Lab File ID: W10575.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	12	29	
75-35-4	1,1-Dichloroethene	25	100	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	25	88	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	14	77	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	360	2000	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	7	27	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW-21

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.10

Lab File ID: W10575.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW-21

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.10

Lab File ID: W10575.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.33	790	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.07

Lab File ID: W10589.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	1	5	U
74-87-3	Chloromethane	0.6	1	J
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	1	7	U
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	13	31	
75-35-4	1,1-Dichloroethene	5	20	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	2	16	
75-09-2	Methylene Chloride	32	110	
75-15-0	Carbon Disulfide	0.4	1	J
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	1	4	U
78-93-3	2-Butanone	2	6	
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	1	5	
107-06-2	1,2-Dichloroethane	1	4	U
71-55-6	1,1,1-Trichloroethane	6	33	
71-43-2	Benzene	0.7	2	J
56-23-5	Carbon Tetrachloride	1	6	U
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	19	100	
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	U
108-88-3	Toluene	6	23	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	1	7	
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	1	4	
13-302-07	m,p-Xylene	6	26	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	2	9	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	0.8	4	J

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.07

Lab File ID: W10589.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-8

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.07

Lab File ID: W10589.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-9

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.05

Lab File ID: W10559.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	10	24	
75-35-4	1,1-Dichloroethene	69	280	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	5	18	J
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	14	69	
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	54	300	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	260	1400	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	8	31	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-9

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.05

Lab File ID: W10559.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-9

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.05

Lab File ID: W10559.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-10

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.03

Lab File ID: W10557.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	1	5	U
74-87-3	Chloromethane	1	2	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	1	7	U
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	9	22	
75-35-4	1,1-Dichloroethene	18	73	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	7	54	
75-09-2	Methylene Chloride	3	11	
75-15-0	Carbon Disulfide	1	3	U
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	1	4	U
78-93-3	2-Butanone	2	6	
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	5	25	
107-06-2	1,2-Dichloroethane	1	4	U
71-55-6	1,1,1-Trichloroethane	33	180	
71-43-2	Benzene	3	10	
56-23-5	Carbon Tetrachloride	1	6	U
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	51	280	
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	U
108-88-3	Toluene	10	38	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	3	21	
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	0.9	4	J
13-302-07	m,p-Xylene	4	18	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	1	4	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	1	5	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-10

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.03

Lab File ID: W10557.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-10

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.03

Lab File ID: W10557.D Date Received: 10/18/01

Date Analyzed: 10/24/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-11

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.06

Lab File ID: W10571.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	1	5	U
74-87-3	Chloromethane	1	2	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	1	7	U
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	7	17	
75-35-4	1,1-Dichloroethene	0.9	4	J
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	1	8	
75-09-2	Methylene Chloride	13	46	
75-15-0	Carbon Disulfide	0.4	1	J
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	1	4	U
78-93-3	2-Butanone	1	3	
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	1	5	
107-06-2	1,2-Dichloroethane	1	4	U
71-55-6	1,1,1-Trichloroethane	16	88	
71-43-2	Benzene	0.6	2	J
56-23-5	Carbon Tetrachloride	1	6	U
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	14	76	
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	U
108-88-3	Toluene	8	31	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	0.5	4	J
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	0.7	3	J
13-302-07	m,p-Xylene	3	13	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	1	4	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	0.6	3	J

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-11

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.06

Lab File ID: W10571.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-11

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.06

Lab File ID: W10571.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-95-2	PHENOL	13.90	81	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-14

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.09

Lab File ID: W10574.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	12	29	
75-35-4	1,1-Dichloroethene	26	100	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	22	78	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	14	77	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	330	1800	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	7	27	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-14

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47833A

Matrix: AIR Lab Sample ID: 47833.09

Lab File ID: W10574.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-14

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47833

Matrix: AIR Lab Sample ID: 47833.09

Lab File ID: W10574.D Date Received: 10/18/01

Date Analyzed: 10/25/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-95-2	PHENOL	13.93	34	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-1

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.05

Lab File ID: W10595.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	380	1000	
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	41	99	
75-35-4	1,1-Dichloroethene	270	1100	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	240	1900	
75-09-2	Methylene Chloride	1900	6700	E
75-15-0	Carbon Disulfide	9	28	J
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	120	490	
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	110	540	
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	1900	11000	E
71-43-2	Benzene	21	68	
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	1300	7100	E
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	210	800	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	33	230	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	7	31	J
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-1

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.05

Lab File ID: W10595.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-1

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.05

Lab File ID: W10595.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.68	270	JN
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1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-1DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.05DL

Lab File ID: Z15943.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 100.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	150 ~~100~~	310 ~~500~~	0 ~~U~~
74-87-3	Chloromethane	100	210	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	100	710	U
75-01-4	Vinyl Chloride	100	260	U
74-83-9	Bromomethane	100	390	U
75-00-3	Chloroethane	130	350	D
75-69-4	Trichlorofluoromethane (F11)	100	570	U
67-64-1	Acetone	110	270	D
75-35-4	1,1-Dichloroethene	100	400	U
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	100	780	U
75-09-2	Methylene Chloride	940	3300	D
75-15-0	Carbon Disulfide	100	320	U
156-60-5	trans-1,2-Dichloroethene	100	400	U
75-34-3	1,1-Dichloroethane	100	410	U
78-93-3	2-Butanone	100	300	U
156-59-2	cis-1,2-Dichloroethene	100	400	U
67-66-3	Chloroform	100	490	U
107-06-2	1,2-Dichloroethane	100	410	U
71-55-6	1,1,1-Trichloroethane	980	5400	D
71-43-2	Benzene	100	320	U
56-23-5	Carbon Tetrachloride	100	640	U
78-87-5	1,2-Dichloropropane	100	470	U
79-01-6	Trichloroethene	770	4200	D
10061-01-5	cis-1,3-Dichloropropene	100	460	U
10061-02-6	trans-1,3-Dichloropropene	100	460	U
79-00-5	1,1,2-Trichloroethane	100	550	U
591-78-6	2-Hexanone	100	420	U
108-10-1	4-Methyl-2-Pentanone	100	420	U
108-88-3	Toluene	81	310	DJ
106-93-4	1,2-Dibromoethane	100	780	U
127-18-4	Tetrachloroethene	91	630	DJ
108-90-7	Chlorobenzene	100	470	U
100-41-4	Ethylbenzene	100	440	U
13-302-07	m,p-Xylene	100	440	U
100-42-5	Styrene	100	430	U
95-47-6	o-Xylene	100	440	U
79-34-5	1,1,2,2-Tetrachloroethane	100	700	U
622-96-8	4-Ethyltoluene	100	500	U
108-67-8	1,3,5-Trimethylbenzene	100	500	U
95-63-6	1,2,4-Trimethylbenzene	100	500	U

Q as per SWL 1-30-02

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-1DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.05DL

Lab File ID: Z15943.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 100.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	100	610	U
100-44-7	Benzyl Chloride	100	530	U
106-46-7	1,4-Dichlorobenzene	100	610	U
95-50-1	1,2-Dichlorobenzene	100	610	U
120-82-1	1,2,4-Trichlorobenzene	100	750	U
87-68-3	Hexachlorobutadiene	100	1100	U

HDA

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-1DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.05DL

Lab File ID: Z15943.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 100.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.26	1200	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-14I

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.03

Lab File ID: Z15934.D Date Received: 10/18/01

Date Analyzed: 10/31/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	3	15	
74-87-3	Chloromethane	3	6	
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	1	7	U
75-01-4	Vinyl Chloride	1	3	U
74-83-9	Bromomethane	1	4	U
75-00-3	Chloroethane	1	3	U
75-69-4	Trichlorofluoromethane (F11)	1	6	U
67-64-1	Acetone	47	110	
75-35-4	1,1-Dichloroethene	2	8	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	1	8	
75-09-2	Methylene Chloride	65	230	
75-15-0	Carbon Disulfide	1	3	U
156-60-5	trans-1,2-Dichloroethene	1	4	U
75-34-3	1,1-Dichloroethane	1	4	U
78-93-3	2-Butanone	1	3	U
156-59-2	cis-1,2-Dichloroethene	1	4	U
67-66-3	Chloroform	0.9	5	U
107-06-2	1,2-Dichloroethane	1	4	U
71-55-6	1,1,1-Trichloroethane	5	29	
71-43-2	Benzene	2	7	
56-23-5	Carbon Tetrachloride	1	6	U
78-87-5	1,2-Dichloropropane	1	5	U
79-01-6	Trichloroethene	20	110	
10061-01-5	cis-1,3-Dichloropropene	1	5	U
10061-02-6	trans-1,3-Dichloropropene	1	5	U
79-00-5	1,1,2-Trichloroethane	1	6	U
591-78-6	2-Hexanone	1	4	U
108-10-1	4-Methyl-2-Pentanone	1	4	U
108-88-3	Toluene	8	31	
106-93-4	1,2-Dibromoethane	1	8	U
127-18-4	Tetrachloroethene	1	7	
108-90-7	Chlorobenzene	1	5	U
100-41-4	Ethylbenzene	1	4	
13-302-07	m,p-Xylene	7	31	
100-42-5	Styrene	1	4	U
95-47-6	o-Xylene	2	9	
79-34-5	1,1,2,2-Tetrachloroethane	1	7	U
622-96-8	4-Ethyltoluene	1	5	U
108-67-8	1,3,5-Trimethylbenzene	1	5	U
95-63-6	1,2,4-Trimethylbenzene	1	5	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-14I

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.03

Lab File ID: Z15934.D Date Received: 10/18/01

Date Analyzed: 10/31/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	1	6	U
100-44-7	Benzyl Chloride	1	5	U
106-46-7	1,4-Dichlorobenzene	1	6	U
95-50-1	1,2-Dichlorobenzene	1	6	U
120-82-1	1,2,4-Trichlorobenzene	1	8	U
87-68-3	Hexachlorobutadiene	1	11	U

54B

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-14I

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.03

Lab File ID: Z15934.D Date Received: 10/18/01

Date Analyzed: 10/31/01 Dilution Factor: 1.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	75-05-8	ACETONITRILE	4.47	15	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-14IDL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.03DL

Lab File ID: W10593.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	16	39	D
75-35-4	1,1-Dichloroethene	10	40	U
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	10	35	D
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	10	55	DJ
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	40	220	D
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	10	38	D
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-14IDL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.03DL

Lab File ID: W10593.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

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1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-14IDL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.03DL

Lab File ID: W10593.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 2

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	75-71-8	DICHLORODIFLUOROMETHANE	3.33	12	DJN
2.	127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.99	500	DJN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-2

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.06

Lab File ID: W10596.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	100	270	
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	40	96	
75-35-4	1,1-Dichloroethene	190	770	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	83	650	
75-09-2	Methylene Chloride	1600	5600	E
75-15-0	Carbon Disulfide	6	19	J
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	35	140	
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	93	460	
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	1100	6100	E
71-43-2	Benzene	8	26	J
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	950	5200	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	140	540	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	27	190	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	12	53	
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-2

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.06

Lab File ID: W10596.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

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not needed
SJ 12/26/01

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-2

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.06

Lab File ID: W10596.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.64	350	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-2DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.06DL

Lab File ID: Z15944.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 100.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	100	500	U
74-87-3	Chloromethane	70	150	DJ
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	100	710	U
75-01-4	Vinyl Chloride	100	260	U
74-83-9	Bromomethane	100	390	U
75-00-3	Chloroethane	100	270	U
75-69-4	Trichlorofluoromethane (F11)	100	570	U
67-64-1	Acetone	100	240	U
75-35-4	1,1-Dichloroethene	100	400	U
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	100	780	U
75-09-2	Methylene Chloride	970	3400	D
75-15-0	Carbon Disulfide	100	320	U
156-60-5	trans-1,2-Dichloroethene	100	400	U
75-34-3	1,1-Dichloroethane	100	410	U
78-93-3	2-Butanone	100	300	U
156-59-2	cis-1,2-Dichloroethene	100	400	U
67-66-3	Chloroform	100	490	U
107-06-2	1,2-Dichloroethane	100	410	U
71-55-6	1,1,1-Trichloroethane	690	3800	D
71-43-2	Benzene	100	320	U
56-23-5	Carbon Tetrachloride	100	640	U
78-87-5	1,2-Dichloropropane	100	470	U
79-01-6	Trichloroethene	640	3500	D
10061-01-5	cis-1,3-Dichloropropene	100	460	U
10061-02-6	trans-1,3-Dichloropropene	100	460	U
79-00-5	1,1,2-Trichloroethane	100	550	U
591-78-6	2-Hexanone	100	420	U
108-10-1	4-Methyl-2-Pentanone	100	420	U
108-88-3	Toluene	68	260	DJ
106-93-4	1,2-Dibromoethane	100	780	U
127-18-4	Tetrachloroethene	100	690	U
108-90-7	Chlorobenzene	100	470	U
100-41-4	Ethylbenzene	100	440	U
13-302-07	m,p-Xylene	100	440	U
100-42-5	Styrene	100	430	U
95-47-6	o-Xylene	100	440	U
79-34-5	1,1,2,2-Tetrachloroethane	100	700	U
622-96-8	4-Ethyltoluene	100	500	U
108-67-8	1,3,5-Trimethylbenzene	100	500	U
95-63-6	1,2,4-Trimethylbenzene	100	500	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-2DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.06DL

Lab File ID: Z15944.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 100.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	100	610	U
100-44-7	Benzyl Chloride	100	530	U
106-46-7	1,4-Dichlorobenzene	100	610	U
95-50-1	1,2-Dichlorobenzene	100	610	U
120-82-1	1,2,4-Trichlorobenzene	100	750	U
87-68-3	Hexachlorobutadiene	100	1100	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-2DL

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.06DL

Lab File ID: Z15944.D Date Received: 10/18/01

Date Analyzed: 11/01/01 Dilution Factor: 100.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-4

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.07

Lab File ID: W10597.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	12	33	
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	44	110	
75-35-4	1,1-Dichloroethene	41 ~~10~~	170 ~~10~~	~~U~~ U as per SWL 1-30-02
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	770	2700	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	37	180	
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	140	770	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	500	2700	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	69	260	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	42	290	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	6	26	J
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

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1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-4

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.07

Lab File ID: W10597.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-4

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.07

Lab File ID: W10597.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.69	700	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-5

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.08

Lab File ID: W10598.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	100	240	
75-35-4	1,1-Dichloroethene	32	130	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	97	340	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	13	39	
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	9	45	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	83	460	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	330	1800	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	31	120	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	12	83	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-5

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.08

Lab File ID: W10598.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-5

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.08

Lab File ID: W10598.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1 CONCENTRATION UNITS: (NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.65	1000	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-6

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.09

Lab File ID: W10599.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	220	530	
75-35-4	1,1-Dichloroethene	54 ~~10~~	220 ~~40~~	~~U~~ Q as per SWL 1-30-02
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	16	120	
75-09-2	Methylene Chloride	120	420	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	6	25	J
78-93-3	2-Butanone	18	54	
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	14	69	
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	150	830	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	610	3300	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	39	150	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	34	230	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	6	26	J
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	35	150	
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

157

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VP-6

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.09

Lab File ID: W10599.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

157A

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VP-6

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.09

Lab File ID: W10599.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.97	890	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-1

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.10

Lab File ID: W10600.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	16	44	
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	10	24	U
75-35-4	1,1-Dichloroethene	73	290	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	22	170	
75-09-2	Methylene Chloride	310 ~~10~~	1100 ~~35~~	~~U~~
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	84	340	
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	400	2200	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	880	4800	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	140	540	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	12	83	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	6	26	J
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-1

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.10

Lab File ID: W10600.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VR-1

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.10

Lab File ID: W10600.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-2

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.04

Lab File ID: W10594.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	14	34	
75-35-4	1,1-Dichloroethene	59	240	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	21	160	
75-09-2	Methylene Chloride	58	200	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	7	35	J
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	150	830	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	400	2200	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	9	34	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-2

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.04

Lab File ID: W10594.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VR-2

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.04

Lab File ID: W10594.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.62	590	JN
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1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-4

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.02

Lab File ID: W10592.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	14	34	
75-35-4	1,1-Dichloroethene	18	73	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	16	56	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	10	49	U
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	23	130	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	220	1200	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	8	31	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-4

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.02

Lab File ID: W10592.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VR-4

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.02

Lab File ID: W10592.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 1

CONCENTRATION UNITS:
(NG or PPBV) PPBV

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 127-19-5	ACETAMIDE, N,N-DIMETHYL-	12.94	380	JN
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VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-5

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.01

Lab File ID: W10591.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	10	21	U
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	14	34	
75-35-4	1,1-Dichloroethene	5	20	J
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	10	78	U
75-09-2	Methylene Chloride	25	88	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	10	41	U
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	5	25	J
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	14	77	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	45	250	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	9	34	J
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	10	69	U
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-5

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.01

Lab File ID: W10591.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

229A

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VR-5

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.01

Lab File ID: W10591.D Date Received: 10/18/01

Date Analyzed: 10/26/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-11

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.11

Lab File ID: Z15933.D Date Received: 10/18/01

Date Analyzed: 10/31/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
75-71-8	Dichlorodifluoromethane	10	50	U
74-87-3	Chloromethane	23	48	
76-14-2	1,2-DC-1,1,2,2-TFA (F114)	10	71	U
75-01-4	Vinyl Chloride	10	26	U
74-83-9	Bromomethane	10	39	U
75-00-3	Chloroethane	10	27	U
75-69-4	Trichlorofluoromethane (F11)	10	57	U
67-64-1	Acetone	46	110	
75-35-4	1,1-Dichloroethene	37	150	
76-13-1	1,1,2-TC-1,2,2-TFA (F113)	13	100	
75-09-2	Methylene Chloride	210	740	
75-15-0	Carbon Disulfide	10	32	U
156-60-5	trans-1,2-Dichloroethene	10	40	U
75-34-3	1,1-Dichloroethane	9	37	J
78-93-3	2-Butanone	10	30	U
156-59-2	cis-1,2-Dichloroethene	10	40	U
67-66-3	Chloroform	8	40	J
107-06-2	1,2-Dichloroethane	10	41	U
71-55-6	1,1,1-Trichloroethane	210	1200	
71-43-2	Benzene	10	32	U
56-23-5	Carbon Tetrachloride	10	64	U
78-87-5	1,2-Dichloropropane	10	47	U
79-01-6	Trichloroethene	420	2300	
10061-01-5	cis-1,3-Dichloropropene	10	46	U
10061-02-6	trans-1,3-Dichloropropene	10	46	U
79-00-5	1,1,2-Trichloroethane	10	55	U
591-78-6	2-Hexanone	10	42	U
108-10-1	4-Methyl-2-Pentanone	10	42	U
108-88-3	Toluene	75	290	
106-93-4	1,2-Dibromoethane	10	78	U
127-18-4	Tetrachloroethene	7	48	J
108-90-7	Chlorobenzene	10	47	U
100-41-4	Ethylbenzene	10	44	U
13-302-07	m,p-Xylene	10	44	U
100-42-5	Styrene	10	43	U
95-47-6	o-Xylene	10	44	U
79-34-5	1,1,2,2-Tetrachloroethane	10	70	U
622-96-8	4-Ethyltoluene	10	50	U
108-67-8	1,3,5-Trimethylbenzene	10	50	U
95-63-6	1,2,4-Trimethylbenzene	10	50	U

1A
VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VR-11

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHL SAS No.: SDG No.: 47831A

Matrix: AIR Lab Sample ID: 47831.11

Lab File ID: Z15933.D Date Received: 10/18/01

Date Analyzed: 10/31/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

CAS NO.	COMPOUND	CONCENTRATION: PPBV	UG/M3	Q
541-73-1	1,3-Dichlorobenzene	10	61	U
100-44-7	Benzyl Chloride	10	53	U
106-46-7	1,4-Dichlorobenzene	10	61	U
95-50-1	1,2-Dichlorobenzene	10	61	U
120-82-1	1,2,4-Trichlorobenzene	10	75	U
87-68-3	Hexachlorobutadiene	10	110	U

1E

VOLATILES IN AIR ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VR-11

Lab Name: SWL-TULSA Contract: NMS

Lab Code: SWOK Case No.: TECHLAW SAS No.: SDG No.: 47831

Matrix: AIR Lab Sample ID: 47831.11

Lab File ID: Z15933.D Date Received: 10/18/01

Date Analyzed: 10/31/01 Dilution Factor: 10.0

GC Column: DB-5 ID: 0.32 (mm)

Number TICs found: 0

CONCENTRATION UNITS:
(NG or PPBV) PPBV

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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