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1291-810.12-91

July 30, 1991

Mr. John Krueger
Los Alamos National Laboratory
HSE-13, MS K490
P.O. Box 1667
Los Alamos, New Mexico 87545

Re: Certification for TA-35 TSL-125 Closure Plan and Certification Report

I have reviewed the TA-35 TSL-125 Closure Plan and Certification Report (Plan and Report) prepared by Benchmark Environmental Consultants, a Los Alamos National Laboratory Memorandum written by Mr. Stephen McLin dated May 21, 1990, subject: Report for RCRA Surface Impoundment Closure; RCRA Closure Report for TA-35 TSL-125 Surface Impoundment (McLin memo), and a Los Alamos National Laboratory Memorandum written by Phil Fresquez dated March 6, 1991, subject: Results of an Environmental Restoration Verification Survey of a Former Waste Oil Surface Impoundment (TSL-125) at TA-35 (Fresquez memo).

After having reviewed these documents, and, specifically the following sections:

Closure Design (Plan),

Waste Removal Procedures, Decontamination and Removal Procedures for the Floor Trough and Piping, Verification Sampling and Analysis for Decontamination of the Liner and Subsequent Liner Removal Procedure, Soil Removal, Sampling and Analytical Results, and Risk Assessment (Report), and

Closure activities documented by Mr. McLin after his visual onsite inspection (McLin memo),

Drilling and sampling procedures documented by Mr. Fresquez after his visual onsite inspection (Fresquez memo),

the waste removal procedures reported to have been performed are documented correctly in the Report.

Marcia A. Pincus
Registered Professional Engineer

mp/lw

5058

TA-35

CERTIFICATION OF ACCURACY

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

Thomas C. Gunderson
Division Leader
Environmental Management Division
Los Alamos National Laboratory
Operator

8/16/91
Date Signed

Jerry L. Bellows
Area Manager
Los Alamos Area Office
U.S. Department of Energy
Albuquerque Operations
Owner

10/30/91
Date Signed

TA35TSL125

INTERNATIONAL TECHNOLOGY CORPORATION

Certification of Accuracy
TA-35 TSL-125 Surface Impoundment
Los Alamos National Laboratory

This certification of accuracy was prepared in accordance with generally accepted professional engineering principles and practice. These services have been performed with the care and skill ordinarily exercised by members of the profession practicing under similar conditions at the same time, and in the same or similar locality. We make no other warranty either expressed or implied. The finding and certification are based on (1) reviewing the New Mexico Environment Department (NMED) approved closure plan dated July 1991, (2) reviewing the NMED approved sampling and analysis plan amendment of September 4, 1992, (3) a site visit on April 19, 1993, (4) a review of a memorandum from Phil Fresquez to Dave McInroy, entitled "Results of the Final Closure Sampling Below Former Waste Oil Surface Impoundment TSL-125 Located at TA-35, dated March 5, 1993" and (5) a review of the analytical results from sampling activities conducted on December 1, 1992. With the signature and seal below, I certify that, except for the attached variances, the sampling and analysis data accurately document that additional sampling and analysis were conducted substantially in accordance with the NMED approved sampling plan dated September 4, 1992, pursuant to the requirements of 40 CFR Part 264.115 for an independent professional engineering certification.

Respectfully,
IT Corporation

P. Scott Den-Baars
NEW MEXICO
10653
REGISTERED PROFESSIONAL ENGINEER

P. Scott Den-Baars, P.E.
New Mexico Registered Professional Engineer No. 10653
Expires: December 31, 1993

Date: April 21, 1993

Attachment: Variances

Regional Office
557 Oppenheimer Road, Suite 200 • Los Alamos, New Mexico 87544 • 505-662-1200
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VARIANCES

The following variances were identified during review of the documentation regarding the TA-35 TSL-125 surface impoundment.

- An equipment blank was called for but no documentation was found to indicate that an equipment blank was collected and analyzed. The equipment blank was to be collected if equipment was decontaminated during the sampling activities. However, disposable equipment was used during sampling. Therefore, an equipment blank was not required.

- Radiation screening was not performed on the replicate sample from sample location #2. However, radiation screening was performed on the initial sample from this location and the results were negative. Since the samples were obtained from surface soils at the same location, the screening results from the initial sample can be used for the replicate sample.

CERTIFICATION

I certify under penalty of law that the additional sampling conducted as part of an Amendment to the Closure Plan for the Surface Impoundment TA-35 TSL-125 has been performed in accordance with the specifications in the approved sampling plan. This activity was performed under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possiblility of fine and imprisonment for knowing violation.

Thomas Gunderson, Division Leader
Environmental Management Division
Los Alamos National Laboratory
Operator

4/21/93
Date Signed

Joseph Vozella, Acting Chief
Environment, Safety, andHealth Branch
Los Alamos Area Office
U.S. Department of Energy
Albuquerque Operations
Owner

4/22/93
Date Signed

LAUR 91-2600

TA 35

CLOSURE CERTIFICATION REPORT
TA-35 TSL-125 SURFACE IMPOUNDMENT

Volume I

Los Alamos National Laboratory
Los Alamos, New Mexico

July 31, 1991

BENCHMARK
ENVIRONMENTAL CORPORATION

CLOSURE CERTIFICATION REPORT

DRAFT

TA-35 TSL-125
SURFACE IMPOUNDMENT

Facility ID No.:	NM0890010515
Facility Name:	Los Alamos National Laboratory
Legal Owner:	United States Department of Energy
Legal Operator:	University of California
Address:	Los Alamos Area Office
City, State:	Los Alamos, New Mexico 87544
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Date:	July 1991

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EXECUTIVE SUMMARY

This closure report documents closure activities for the TA-35 TSL-125 surface impoundment and associated structures at Los Alamos National Laboratory (the Laboratory). Closure activities were carried out pursuant to specifications in the Interim Status Closure Plan, TA-35 TSL-125 Surface Impoundment (Enclosure 1). Prior to formal approval of the closure plan, the decision was made to proceed with closure activities to prevent any further releases from the site following informal discussions with New Mexico Environment Department (NMED) personnel. The closure plan, attached as Enclosure 1, is a revision of the previously submitted draft dated July, 1988. Revisions were necessary to describe additional activities associated with the closure that were not anticipated in 1988.

All actions were performed to meet the requirements of 40 CFR §265.228 with regard to clean closure. (Throughout this document, references to federal regulatiopns include their state analog.) Clean closure of the TSL-125 site was accomplished through:

- Removal and proper disposal of all wastes contained within the surface impoundment system;
- Decontamination and/or removal and proper disposal of the surface impoundment, its associated structures, and contaminated soil underlying the impoundment area;
- Sampling and analysis of soil to determine the presence and concentrations of any hazardous constituents remaining in the soil at the TSL-125 site; and
- Demonstration through a risk assessment that any constituents remaining in the soil at the TSL-125 site pose no threat to human health and the environment.

All remaining soil concentrations of hazardous constituents were below health-based action levels (or background concentrations for metals). Analytical results indicated that benzidine, n-nitrosodimethylamine, and n-nitrosodi-n-propylamine were not detected at or above their limits of quantitation and beryllium was not present at or above its laboratory detection limit. However, the limits of quantitation and detection for these constituents were greater than their calculated health-based action levels. To demonstrate that these constituents were not present, historical data was researched and it was determined that the constituents were not utilized at the Building 125 site. Therefore, the closure of the TA-35 TSL-125 surface

impoundment can be demonstrated to meet all applicable regulatory requirements and associated U.S. EPA guidance for clean closure.

1.0 INTRODUCTION

This report summarizes the actions that were taken to clean close the TA-35 TSL-125 surface impoundment (Figure 1-1). They include removal of waste from the surface impoundment and its associated structures, decontamination of the floor trough and piping inside Building 125, grouting of the piping connecting the floor drain/trough system to the impoundment, decontamination, removal, and disposal of the impoundment liner and sandbags lining the top of the impoundment, and removal and disposal of contaminated soil underlying the impoundment area. To clarify the actual workings of the TSL-125 spill retention system, two figures are provided. Figure 1-2 illustrates the interconnection of the floor trough inside Building 125 and piping which served as a conduit to the TSL-125 surface impoundment structure. Figure 1-3 diagrams the surface impoundment in both plan and cross-section view.

Procedures followed to verify that clean closure objectives have been met are also documented in this report. Initial verification was performed through an extensive soil sampling and analysis program. Five sampling and analysis events were included in this program. They can be summarized as follows:

- Liner Decontamination Verification
  To verify that the gunite liner had been decontaminated and that no contamination was present in the soil underlying the impoundment, twelve soil samples immediately below the gunite liner were analyzed for volatile and semivolatile organic constituents, PCBs, and metals. (The results indicated that contamination was present in the soil, and, therefore, additional sampling and analysis were performed.)

- Phase 1 - Soil Removal
  After excavation of three to five feet of contaminated soil underlying the impoundment, four soil samples at the three-to-five foot depth were analyzed for volatile organic constituents to determine the need for further excavation. (The results indicated that contamination was present, and, therefore, further excavation, sampling, and analysis were performed.)

- Phase 2 - Additional Soil Removal (Verification Sampling)
  After further soil excavation to a depth of ten to fifteen feet, twelve soil samples were analyzed for volatile and semivolatile organic constituents, PCBs, and metals. The purpose of this phase was to verify that no hazardous constituents remained in the TSL-125 soil above acceptable levels. (Although the analytical data

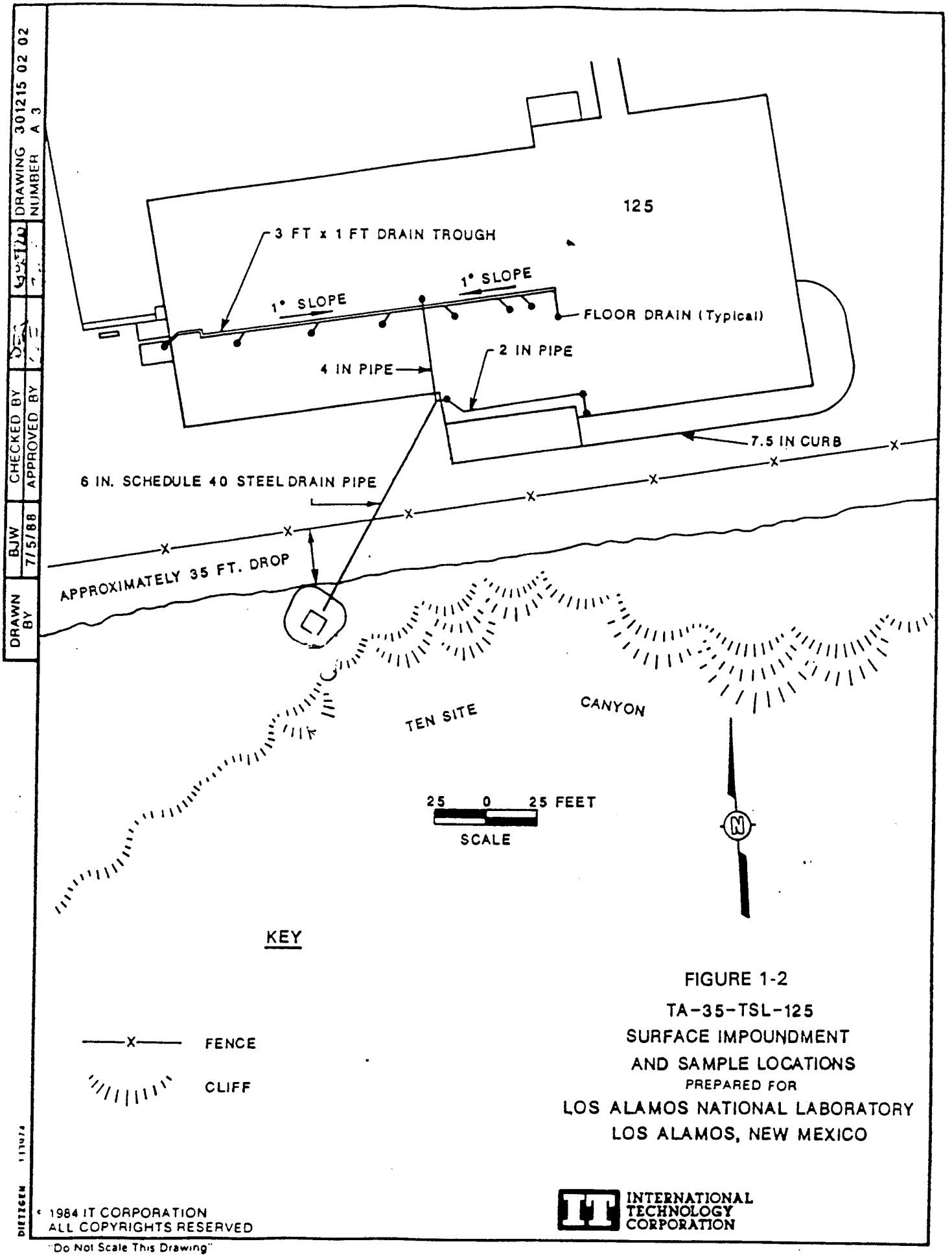

FIGURE 1-2
TA-35-TSL-125
SURFACE IMPOUNDMENT
AND SAMPLE LOCATIONS
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LOS ALAMOS, NEW MEXICO

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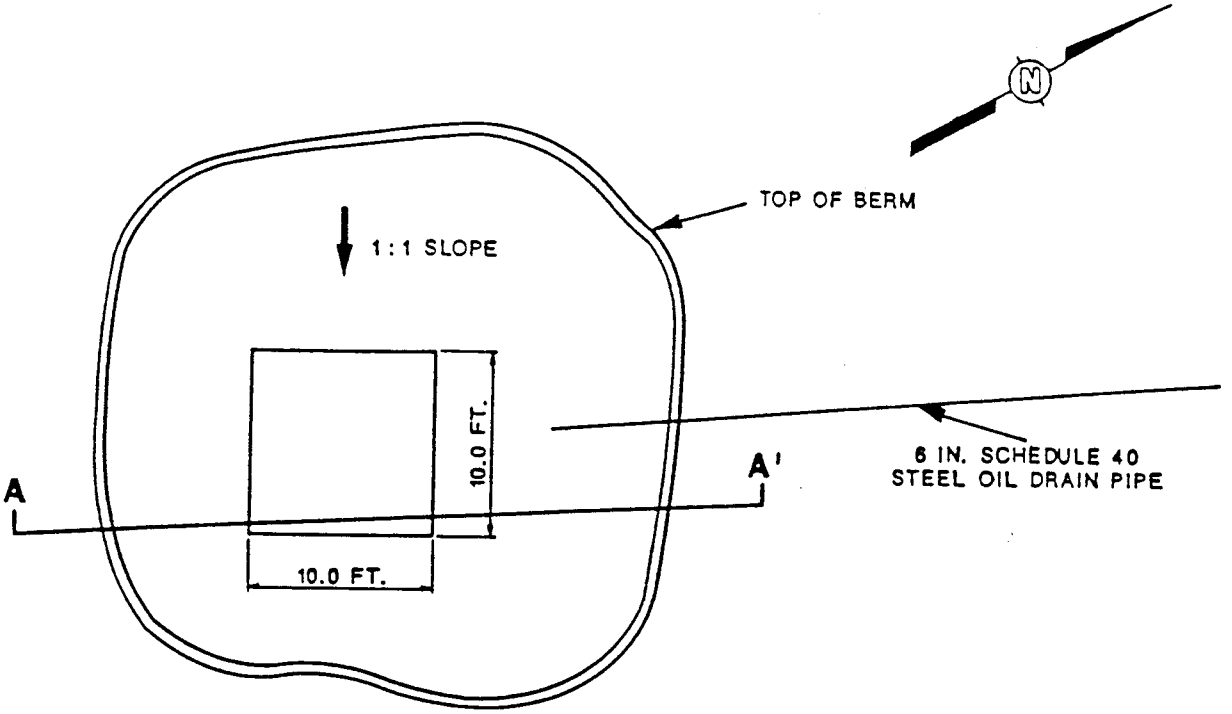
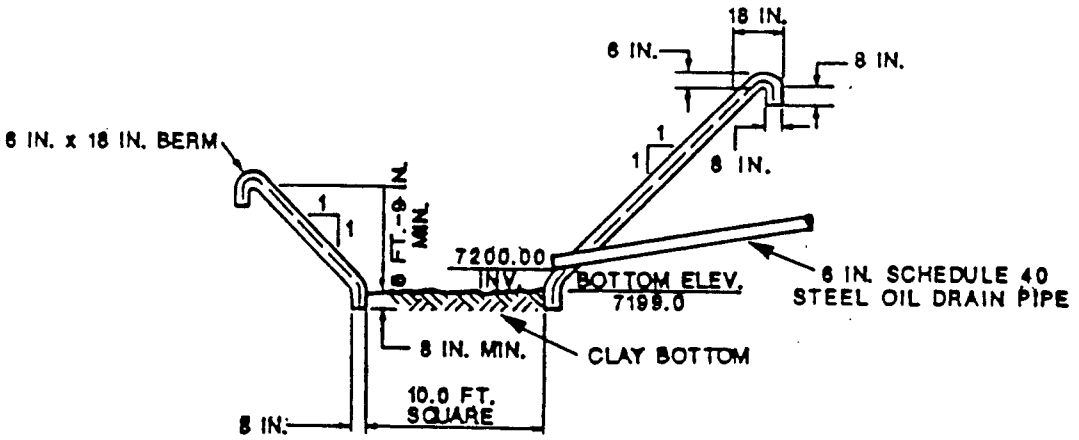


PLAN VIEW



CROSS SECTIONAL VIEW
A – A'

FIGURE 1-3
ENGINEERING DRAWING OF
TA-35-TSL-125
SURFACE IMPOUNDMENT
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indicated the site was probably clean, holding times were exceeded for several parameters, and it was decided that additional verification sampling should be performed after backfilling.)

- Phase 3 - Backfill Verification Sampling
  Prior to the additional verification sampling, the TSL-125 excavation was backfilled, and three samples of the fill dirt were analyzed for volatile organic constituents to verify that no unacceptable levels of hazardous constituents were introduced into the site via the backfill material. (The analytical results indicated that no unacceptable concentrations of volatile organic constituents were present.)

- Phase 4 - Corehole Verification Sampling
  A total of twenty-two soil samples were collected at five-foot depth intervals to a depth of fifty-five feet in two coreholes. The samples were analyzed for volatile and semivolatile organic constituents, and total petroleum hydrocarbons. (The results of volatile and semivolatile organic analyses were used to verify clean closure.)

The final clean closure verification procedure employed by the Laboratory involved comparing the levels of contaminants remaining in the soil at the TSL-125 site to health-based action levels calculated in a risk assessment. To assist in comparing analytical results, concentrations are reported in equivalent part per billion (ppb) or part per million (ppm) units.

Closure activities were completed in March 1991. Closure certifications are included as Enclosure 2. All waste generated during closure was sent offsite for incineration/disposal. Enclosure 3 contains copies of Certificates of Destruction for the waste generated during closure activities. All chemical analyses for this closure were performed by the Laboratory's Analytical Chemistry Group (HSE-9). All chemical analyses, quality assurance, and quality control were performed according to methods defined in Test Methods for Evaluating Solid Wastes, Chemical/Physical Methods (SW-846) unless otherwise specified. Enclosure 4 contains all laboratory reports and analytical summaries, along with a Statement of Adequacy of the Analyses and Decontamination.

2.0 WASTE REMOVAL PROCEDURES

The waste liquids and residues contained within the surface impoundment were removed as part of the closure process. All waste contained within the surface impoundment was disposed as a hazardous waste. HSE-7, the Laboratory's waste management group, arranged for an off-site transport contractor to collect and remove the liquid waste. This waste was

removed through the use of a dedicated transfer pump and hose; the fluid was then transported offsite to a RCRA-permitted TSD facility. All state and federal regulatory requirements pertaining to the management of these liquid wastes were observed.

Solid residue was separately removed from the floor trough and surface impoundment along with bottom liner clays after any standing liquids had been removed. Initially the solids were allowed to air dry in-situ in order to reduce volume and weight. The waste was then placed in DOT-approved containers, which were subsequently labelled and placed on pallets in a designated less-than-90-day accumulation area. Routine inspections of the area were performed and all required documentation was maintained. The containers were then transferred to TA-54, Area L, the Laboratory's permitted hazardous waste storage area, to await final disposition.

In order to avoid costly sampling, approximately fifty sandbags, which had lined the top of the impoundment, were declared hazardous waste, and treated as such. The sandbags were loaded into DOT-approved containers and placed in the 90-day-or-less accumulation area until they were shipped offsite to a RCRA-permitted facility.

3.0 DECONTAMINATION AND REMOVAL PROCEDURES FOR THE FLOOR TROUGH AND PIPING

The floor trough and piping were decontaminated two times using a mixture of Alconox and water, because initial rinseate samples indicated the presence of some metals slightly above detection limits, although below the EP toxic concentration (Enclosure 4). All rinseate was temporarily collected in the surface impoundment prior to TSL-125's removal, and subsequently transferred into DOT-approved containers. The liquid waste was disposed as a hazardous waste, using the same procedures outlined above for the surface impoundment waste.

After decontamination was completed, the trough system was disconnected from the six-inch steel drain pipe and the trough outfall was sealed. The six-inch steel drain pipe connecting the floor trough system to the surface impoundment was filled with a concrete slurry. Final decontamination rinseate analytical results contained no detectable contaminants (Enclosure 4).

4.0 VERIFICATION SAMPLING AND ANALYSIS FOR DECONTAMINATION OF THE LINER AND SUBSEQUENT LINER REMOVAL PROCEDURES

Prior to removal of the gunite liner, 12 soil samples immediately below the liner were collected and analyzed for volatile and semivolatile compounds, PCBs, and metals. To sample the soil, 12 sampling ports were cut through the gunite liner, following the procedures and sampling locations specified in Enclosure 1. Soil immediately below the liner was collected using a stainless steel trowel to a depth of six to eight inches (Figure 4-1). All of the sampling ports were closed and sealed immediately after sampling using a concrete patch material compatible with the original liner material so that no fluid (e.g., rainwater) could penetrate the sampling ports before the liner was removed.

Analytical results of the soil demonstrated that volatile and semivolatile organic constituents were present at trace levels to 71 ppm below the gunite liner (Enclosure 4). For this reason, the liner was broken into small pieces, placed into DOT-approved containers, and disposed along with the contaminated soil.

5.0 SOIL REMOVAL, SAMPLING AND ANALYTICAL RESULTS, AND RISK ASSESSMENT

This section provides the results of the four phases of soil removal, sampling and analysis, and the risk assessment performed to demonstrate that clean closure had been achieved. After completion of the four phases of field investigation, concentrations of volatile organic, semivolatile organic and metal constituents at the TSL-125 surface impoundment site were compared to calculated risk assessment action levels and, in the case of metal constituents, to background levels. Because the cleanup goal for this site was one that allowed unrestricted future land use, a conservative risk assessment was performed. The following text describes the risk assessment approach. Details of the results of the four phases of investigation and the risk assessment are presented in subsequent text.

U.S. EPA allows for a risk assessment to demonstrate that any hazardous constituents left in subsoils will not cause unacceptable risks to human health or the environment (52 FR 8704, March 19, 1987). Consistent with the U.S. EPA Superfund Public Health Evaluation Manual, discussions with NMED, and additional U.S. EPA risk assessment guidance (55 FR 30798, July 27, 1990), the Laboratory has performed risk assessment calculations to

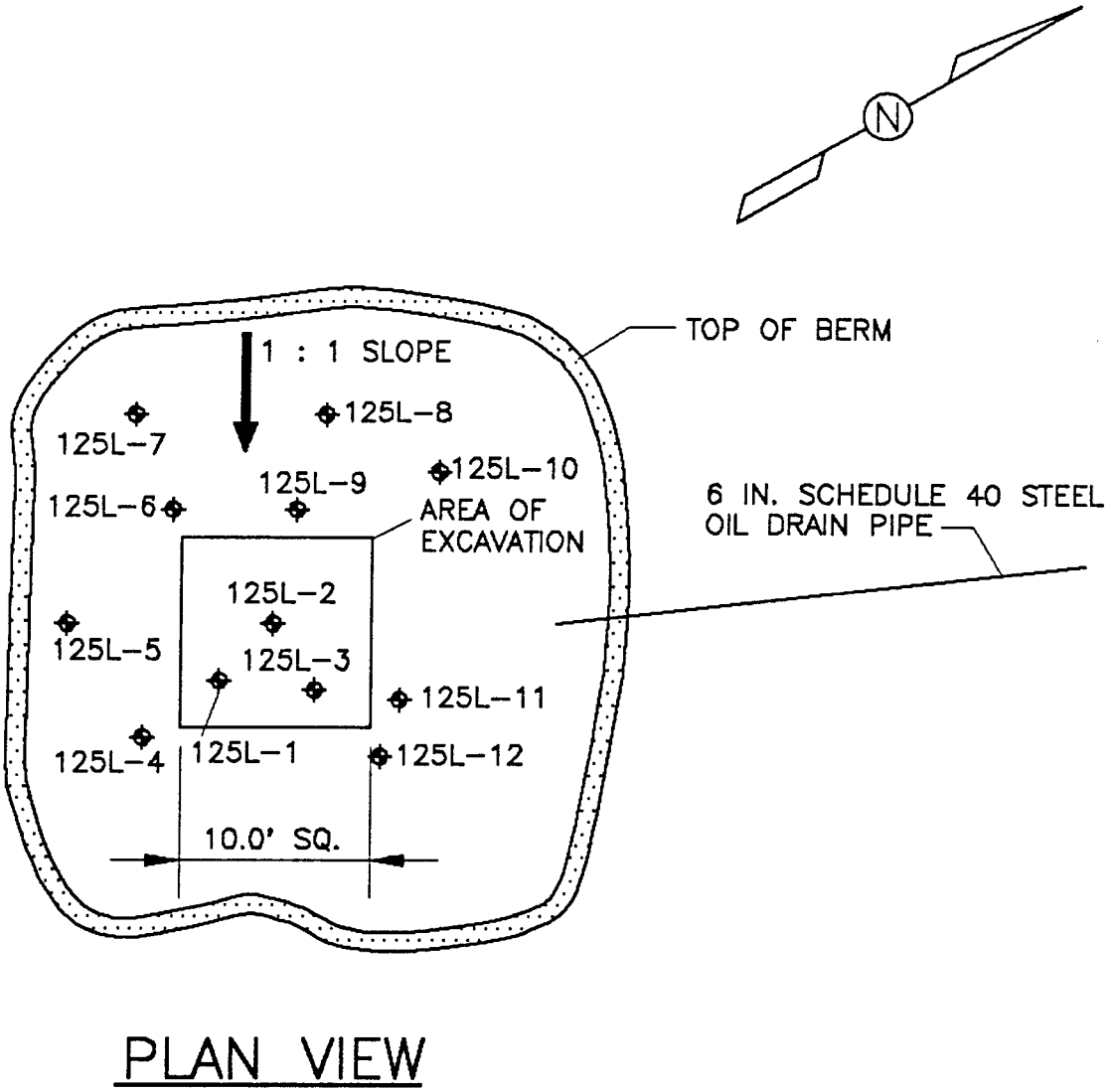

FIGURE 4-1

SOIL SAMPLE LOCATIONS
IMMEDIATELY BELOW GUNITE LINER

TA-35-TSL-125
SURFACE IMPOUNDMENT

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10 5 0 10 FEET
APPROXIMATE SCALE

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requires the use of insulating oil. Maintenance of the equipment and accidental spills have resulted in releases of the insulating oil into the floor trough, piping and surface impoundment.

3.1 SURFACE IMPOUNDMENT

The surface impoundment normally receives nonhazardous insulating oil and floor cleaning rinseate via the floor trough and a six-inch steel drain pipe from Building 125. In addition, the impoundment receives rainfall runoff from the curbed staging area. The liquids form two phases in the impoundment, an upper oil phase underlain by a water phase. Following the discharge of water and insulating oil into the impoundment from the building, the oil phase is pumped from the impoundment and transferred to the TA-54, Area L storage area. Based on analytical results, the insulating oil is transported offsite for either recycling or disposal at permitted facilities. The remaining water phase is also removed from the impoundment and handled in the same manner.

3.2 FLOOR TROUGH AND PIPING

The floor drain and trough system captures insulating oil spills that may occur inside Building 125. Rinseate from floor cleaning activities is also captured by the floor drain and trough system (Figure 2-4). These fluids are not retained inside Building 125 but drain directly from the drain and trough system to the surface impoundment via the steel drain pipe.

4.0 WASTE INVENTORY

Shell DIALA(R) OIL AX insulating oil is used and processed in Building 125. Use of this insulating oil brand has not varied with time. Manufacturer's Safety Data Sheets for Shell DIALA(R) OIL AX are contained in Appendix B.

4.1 SURFACE IMPOUNDMENT

The surface impoundment is subject to regulation as a hazardous waste management unit because of the suspected introduction of degreasers into the waste stream during cleaning and maintenance of equipment parts and the building's floors. Degreasers have entered the surface impoundment through the floor trough in Building 125.

Analytical results of a grab sample collected from the surface impoundment on June 9, 1988 confirmed the presence of degreasers. The sample was collected using a composite liquid

evaluate remaining contaminant concentrations at the site. Enclosure 5 includes the Risk Calculation Table and a detailed explanation of the methods used to perform the risk assessment. The Risk Calculation Table also includes a listing of analytical results and the calculated action levels for these constituents. In general, two soil ingestion scenarios were employed depending on whether the constituents were considered carcinogens or systemic toxicants. For carcinogens, adult scenarios were considered to reflect the effects of long-term exposures. For systemic toxicants, child scenarios were employed to reflect the effects of relatively short-term exposure on a highly vulnerable population group. EPA's Integrated Risk Information System (IRIS) data base (4/91 edition) was used as a source for classifying constituents as carcinogens or systemic toxicants and for individual carcinogenic slope factors and systemic toxicant reference doses. Additional factors in the action level calculations are specified in 55 FR 30815-30820 and 30865-30873, July 27, 1990.

The subsequent text provides a brief summary of the four phases of field investigation relative to the risk assessment evaluation. A detailed discussion of the procedures and results from each phase and the risk assessment follows in Sections 5.1 through 5.4.

- Phase 1 - Soil Removal
  The first phase involved soil removal to a depth of three to five feet, and review of the results of subsequent sampling and analysis performed at that level.

- Phase 2 - Additional Soil Removal (Verification Sampling)
  The second phase involved soil removal to a depth of ten to 15 feet, review of the results of subsequent sampling and analysis performed on soil at that level, and comparison of metals concentrations remaining in the soil to background and health-based action levels.

- Phase 3 - Backfill Verification Sampling
  The next phase involved backfilling of the excavated area, review of the results of sampling and analysis of the backfill material, and comparison of detected volatile organic concentrations to calculated health-based levels.

- Phase 4 - Corehole Sampling
  The final phase incorporates drilling of two coreholes, review of the results of sampling and analyses from the corehole samples, and comparison of remaining volatile and semivolatile hazardous constituent concentrations to health-based action levels.

5.1 PHASE 1 - SOIL REMOVAL

After the surface impoundment liner was removed, contaminated soil was excavated to a depth of approximately three to five feet where four additional samples were collected using a stainless steel trowel at locations depicted in Figure 5-1. The samples were analyzed for volatile organic constituents. The results, which showed volatiles present in the parts per billion range (Enclosure 4), were used as a basis for further excavation.

5.2 PHASE 2 - ADDITIONAL SOIL REMOVAL (VERIFICATION SAMPLING)

Additional soil was excavated to a depth of approximately ten to 15 feet where final clean closure verification samples were taken. Twelve sampling locations (Figure 5-2) were randomly selected on a grid in accordance with SW-846 sampling protocol. Soil samples were collected from these locations at a depth of approximately six inches below the excavated impoundment. The samples were analyzed for volatile and semivolatile organic compounds, PCBs, and metals.

Analytical results of the verification samples (Enclosure 4) revealed that two volatile organic constituents, 1,1,1-trichloroethane and tetrachloroethene, were present at levels of 1485 ppb and 2100 ppb, respectively. One other volatile organic constituent, 1,1,2-trichloro-1,2,2-trifluoroethane, was tentatively identified in two samples below the 500 ppb limit of quantitation. Both 1,1,1-trichloroethane and tetrachloroethane are listed in 40 CFR Part 261, Appendix VIII as hazardous constituents. Therefore, their concentrations were compared to health-based action levels (Enclosure 5). Neither concentration exceeded its calculated health-based action level.

Semivolatile organic analyses were performed outside of the 40-day holding time required by U.S. EPA protocol because of a malfunctioning instrument and, consequently, the results were used for information purposes only, and not for risk assessment comparison (Enclosure 4). Bis(2-ethylhexyl)phthalate was the only semivolatile compound found above its limit of quantitation. It was detected at levels of 3000 ppb, 4200 ppb, and 4700 ppb in three of the 12 samples. Because the samples contained elevated levels of petroleum hydrocarbons, presumably from the oil that had leaked from the surface impoundment, interference occurred in the semivolatile analytical capabilities. The petroleum hydrocarbon interference required the use of higher limits of quantitation (330 ppb to 16,995 ppb) for semivolatile constituents than would normally be used.

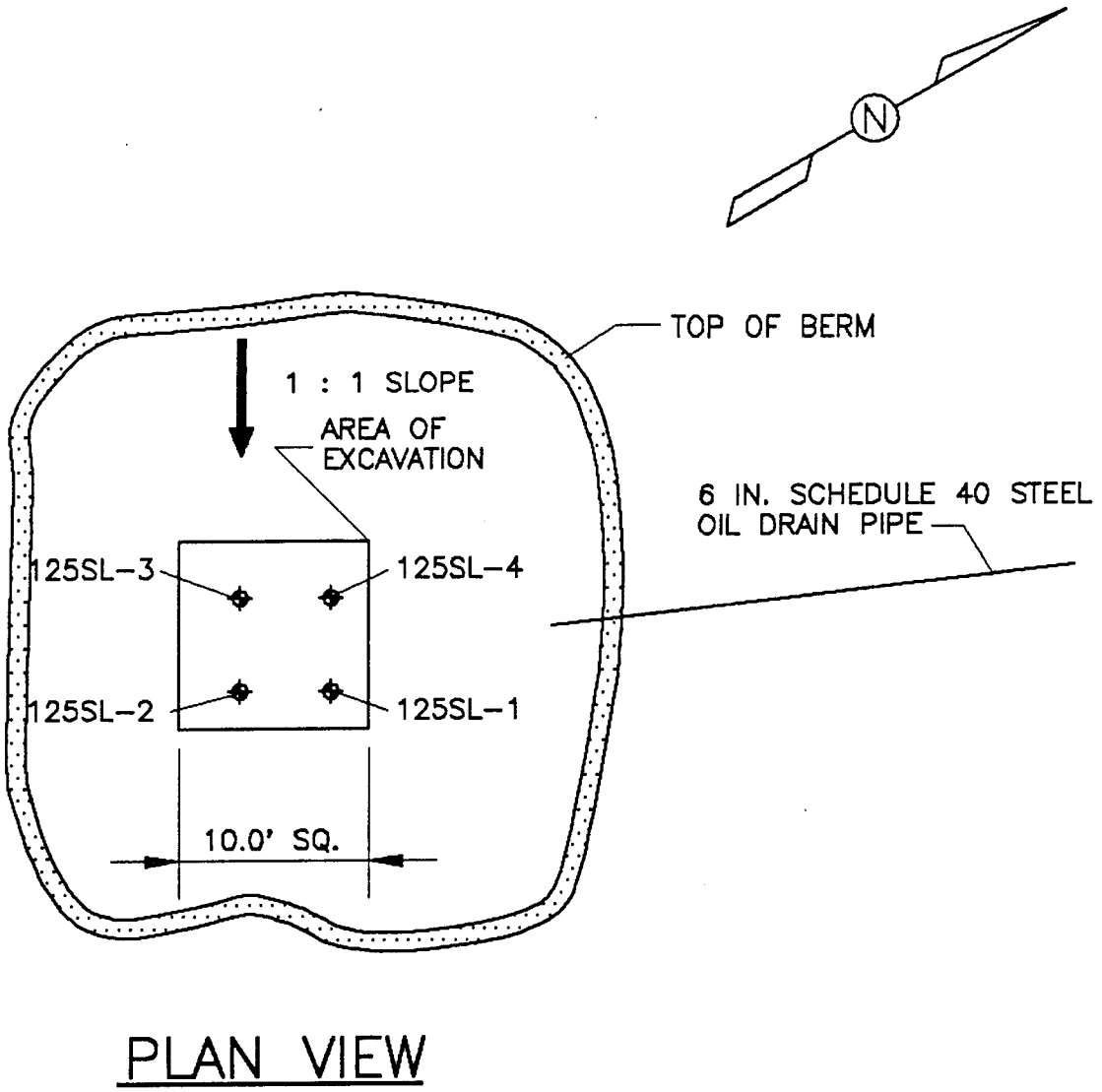

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FIGURE 5-1

SOIL SAMPLE LOCATIONS
THREE TO FIVE FEET BELOW GUNITE LINER

TA-35-TSL-125
SURFACE IMPOUNDMENT

PREPARED FOR

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LOS ALAMOS, NEW MEXICO

10 5 0 10 FEET

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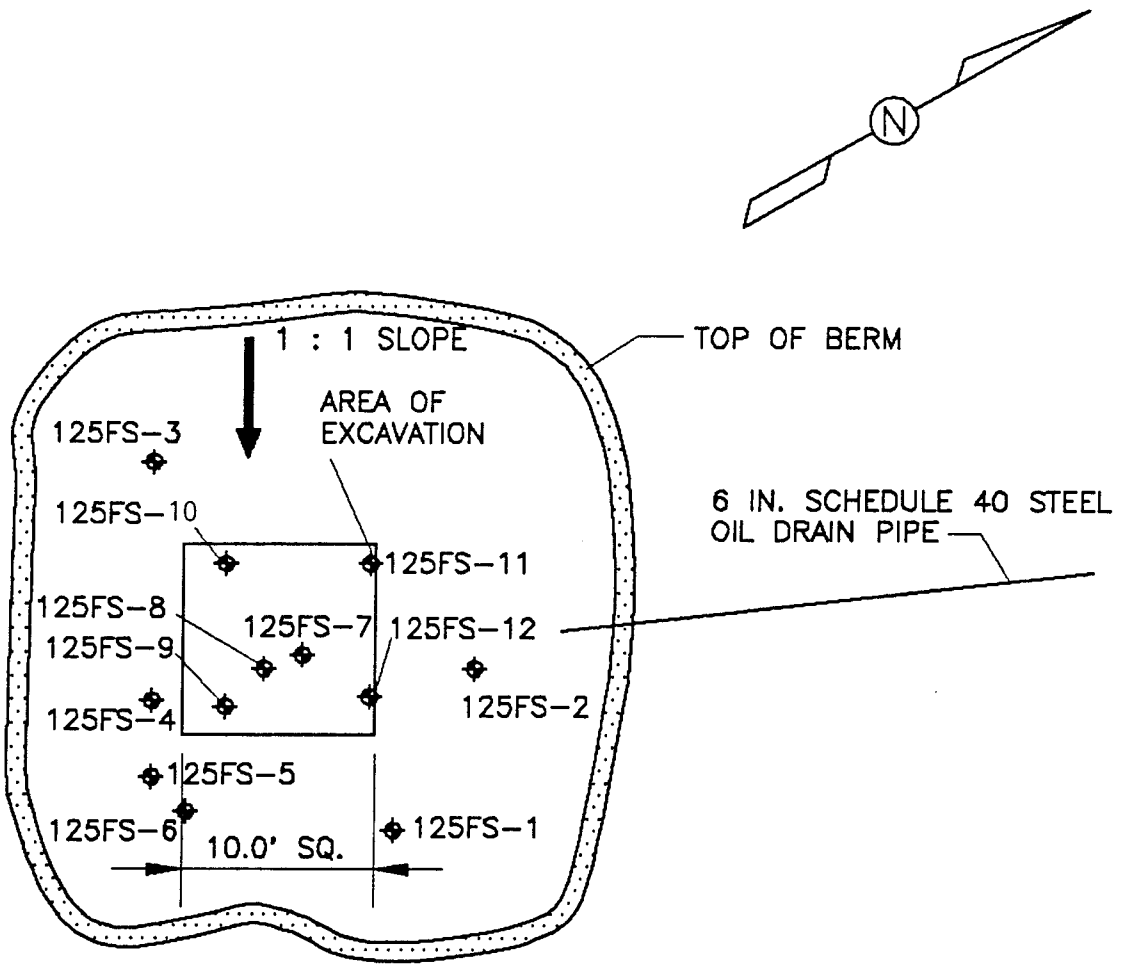

PLAN VIEW

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FIGURE 5-2

SOIL SAMPLE LOCATIONS
FINAL SOIL VERIFICATION SAMPLES

TA-35-TSL-125
SURFACE IMPOUNDMENT

PREPARED FOR

LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

10 5 0 10 FEET
APPROXIMATE SCALE

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No PCBs were detected in the 12 verification samples (Enclosure 4). For this reason, no further analyses for PCBs were performed and a risk assessment was not required. Results of metals analyses and background metals concentrations are summarized in Table 5-1. Background metals concentrations were derived from approximately 40 composite surface soil samples collected from Sigma Mesa (Ferenbaugh et al., 1990) A copy of this report is included as Enclosure 6.

When comparing metals concentrations with available background concentrations, detection limits for beryllium, cadmium, lead, and nickel were above the reported background levels of 1.9 ppm, 0.17 ppm, 24 ppm, and 8.9 ppm, respectively. The 0.090 ppm mercury concentration was above the reported background level of 0.018 ppm. Concentrations of arsenic, barium, and chromium were below reported background levels. No background levels were available for antimony, selenium, silver, and thallium.

Metal concentrations from this phase of sampling and analysis were also evaluated as part of the risk assessment. With the exception of beryllium, all metal concentrations that exceeded background levels fell below the calculated health-based action levels (Table 5-1, Enclosure 5). Although none of the 12 samples analyzed contained beryllium at or above the detection limit, the 2.5 ppm detection limit was above the calculated action level and the reported background level for beryllium. Thus, to establish that beryllium is not present at the TSL-125 site, its chemical uses were compared to the operations and practices in Building 125 (6.0, Comparison of Process Knowledge).

5.3 PHASE 3 - BACKFILL VERIFICATION SAMPLING

Because of the presence of volatile and semivolatile organic constituents found in the verification samples and due to the exceeded holding time prior to semivolatile analyses, additional soil sampling (via corehole drilling) and analyses were performed. However, prior to drilling, the excavation area was backfilled with clean fill to stabilize the site prior to initiating drilling operations. The clean fill used at the TSL-125 site had been excavated from a tuff pit and stockpiled on Sigma Mesa along with other piles of fill. During backfilling operations, a small amount (less than five gallons) of hydraulic fluid from the backhoe leaked onto the fill material. For this reason, the fill was sampled and analyzed for volatile organic constituents to verify that any contaminants introduced by the spill would not pose a threat

TABLE 5-1

SUMMARY OF CLEAN CLOSURE VERIFICATION FOR METALS

Metals Analyzed	TSL-125 Concentration* (ppm)	Background Concentration (ppm)	Health-based Action Levels (ppm)
Antimony	<0.005	NA	20
Arsenic	0.022	3.9	ND
Barium	53.0	410	3500
Beryllium	<2.5	1.9	0.163
Cadmium	<5	0.17	50
Chromium	<10	27	50,000
Lead	<100	24	ND
Mercury	0.090	0.018	ND
Nickel	<40	8.9	1000
Selenium	0.003	NA	ND
Silver	0.006	NA	150
Thallium	<100	NA	ND

* Concentrations listed are the highest detected amounts.
"<" indicates the detection limit is assumed to be the highest concentration.
All data is reported in parts per million (ppm).

** Background concentrations are taken from Ferenbaugh et al., 1990.
NA indicates no data were available.
ND indicates that the action level was not determined.

to human health and the environment. Three samples were collected from the fill material (Figure 5-3), one directly from the leak location. Acetone detected in the samples was attributed to laboratory contamination. However, methyl ethyl ketone, methyl butyl ketone, 4-methyl-2-pentanone, and 1,1,1-trichloroethane, were detected in the sample from the spill location at concentrations ranging from 11.7-22.7 ppb (Enclosure 4). Of the four volatile organic constituents, methyl ethyl ketone and 1,1,1-trichloroethane are considered hazardous constituents. For this reason, the detected concentrations were compared to health-based action levels calculated in a risk assessment (Enclosure 5). The detected levels of both constituents were five orders of magnitude less than the health-based action levels. These results indicate that the backfill material contains no hazardous constituents at levels that pose a threat to human health or the environment.

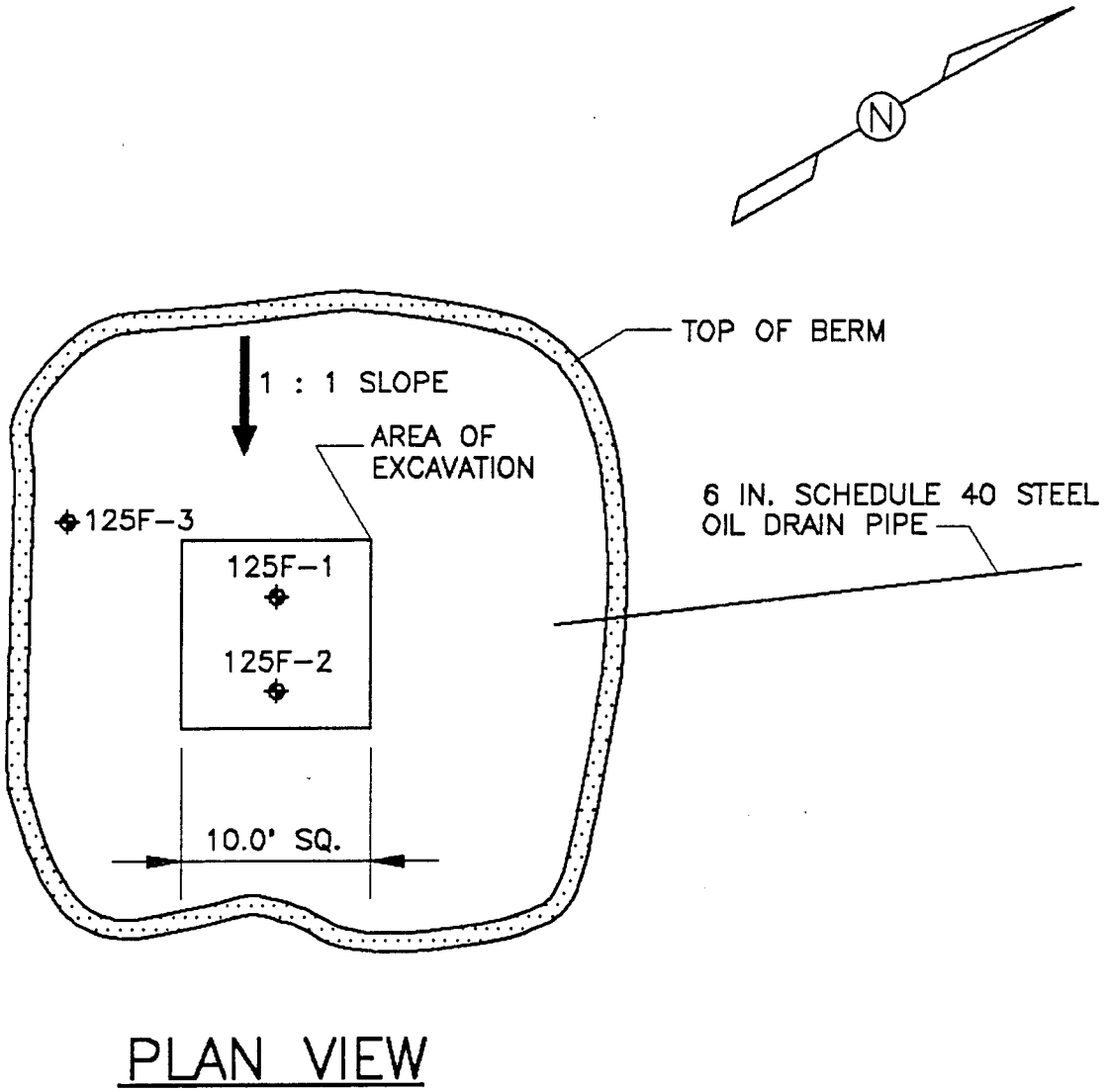
5.4 PHASE 4 - COREHOLE SAMPLING

Following the completion of backfilling operations, two test holes were drilled. One test hole was located just outside the impoundment's northeastern corner and the second hole was located in the center of the impoundment (Figure 5-4). Each test hole was drilled to approximately 55 feet below ground surface. Samples were collected from each test hole at five-foot depth intervals to determine the level and extent of contaminant migration.

A total of 22 soil samples at five-foot depth intervals were cored from the two test holes, screened for gross alpha, beta and gamma radioactivity, and then submitted to HSE-9 for analysis of volatile and semivolatile organic compounds. Total petroleum hydrocarbon analyses were also performed to define the levels that were interfering with the semivolatile quantitation capabilities.

Gross alpha activity ranged from the detection limit, ≤ 18 picoCuries per gram (pCi/g), to 40 pCi/g. Beta activity was below detection limits (≤ 18 pCi/g). Gamma activity ranged from 0.37 pCi/g to 0.57 pCi/g.

In general, the volatile organic contaminant profile shows the most concentrated contamination at about 20 feet; concentrations generally decrease with depth beyond that point. The highest concentrations of Appendix VIII volatile organic constituents detected overall were as follows: carbon disulfide at 26 ppb, 1,1-dichloroethane at 47 ppb, 4-methyl-2-pentanone at 120 ppb, methylene chloride at 70 ppb, methyl ethyl ketone at 410 ppb, tetrachloroethylene



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	7/17/91	APPROVED BY			

FIGURE 5-3

SOIL SAMPLE LOCATIONS
BACKFILL SAMPLES

TA-35-TSL-125
SURFACE IMPOUNDMENT

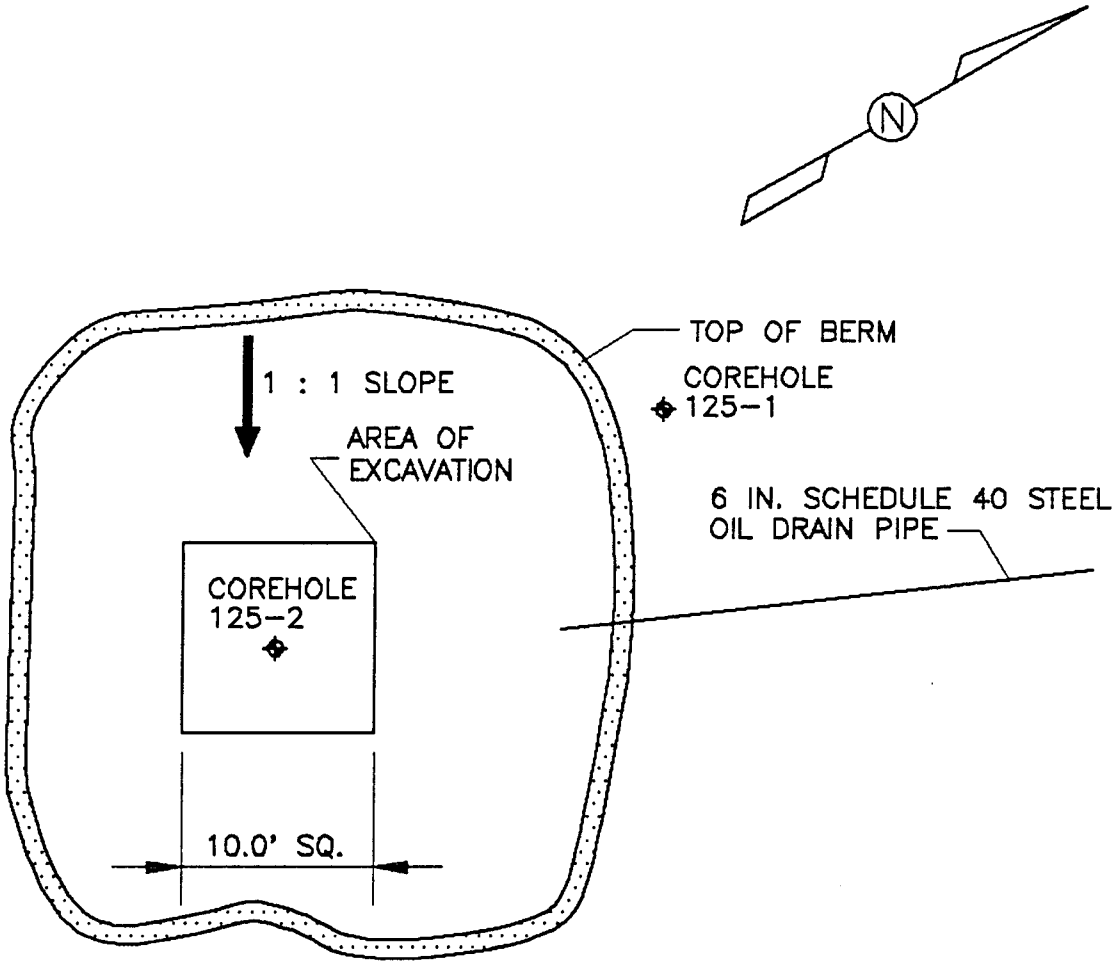
PREPARED FOR

LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

10 5 0 10 FEET

APPROXIMATE SCALE

BENCHMARK
ENVIRONMENTAL CORPORATION



PLAN VIEW

FIGURE 5-4

COREHOLE LOCATIONS

TA-35-TSL-125
SURFACE IMPOUNDMENT AND
PROPOSED TEST HOLE LOCATIONS

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LOS ALAMOS, NEW MEXICO

10 5 0 10 FEET
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at 1500 ppb, toluene at 58 ppb, 1,1,1-trichloroethane at 13,400 ppb, and trichloroethene at 5 ppb. Each constituent concentration was compared to a health-based calculated action level as part of the risk assessment (Enclosure 5). None of the volatile organic concentrations exceeded action level concentrations.

Interference from petroleum hydrocarbons in the soil samples resulted in high levels of quantitation (330 ppb) for the semivolatile organic analyses. No Appendix VIII semivolatile constituents were identified at or above the limit of quantitation. However, because of their detection limits, three semivolatile constituents exceeded the calculated action levels. One metal constituent exceeded the calculated action level.

The three semivolatile organic constituents, benzidine, n-nitrosodimethylamine, and n-nitrosodi-n-propylamine, were analyzed using a level of quantitation of 330 ppb because of petroleum hydrocarbon interference. None of these constituents were detected at or above the level of quantitation, but the level of quantitation exceeds the calculated action levels.

To demonstrate that these three constituents are not present at the TSL-125 site, each chemical's use was compared to practices and operations at Building 125 (6.0 Comparison of Process Knowledge).

Of the 22 soil samples analyzed, 17 samples had total petroleum hydrocarbon levels ranging from 3.18 ppm to 31.7 ppm. The other five samples had total petroleum hydrocarbon levels less than the 2 ppm laboratory detection limit. Because total petroleum hydrocarbon is not considered an Appendix VIII hazardous constituent, no risk assessment was performed.

Upon completion of analyses, all sample residues were collected from the HSE-9 analytical chemistry group, placed in DOT-approved containers and managed as hazardous waste. The following section describes results of a risk assessment performed to determine whether the contaminant levels remaining in the soil at TSL-125 surface impoundment site pose a threat to human health and the environment.

6.0 COMPARISON OF PROCESS KNOWLEDGE

No volatile organic constituents remaining in the soil exceed action level concentrations. When comparing the practices and operations at Building 125 to the chemical uses identified for the semivolatile constituents exceeding action levels, no relationship is found. Benzidine is primarily used in the manufacture of dyes, detection of blood stains, and as a stain in microscopy (Sax and Lewis, 1981). N-nitrosodimethylamine and n-nitrosodi-n-propylamine are both n-nitrosamines. They are organic compounds that have been useful as synthetic intermediates (Kirk-Othmer, 1985). N-nitrosodimethylamine was formerly used in the production of rocket fuels, and is presently used as an antioxidant, an additive for lubricants, and as a softener of copolymers (Merck, 1983). Building 125 is used for developing electron guns and related laser assemblies/equipment for a Laser Technology Research Program at the Laboratory.

Beryllium is used as a structural material in space technology, as a moderator and reflector of neutrons in nuclear reactors, as a source of neutrons when bombarded with alpha particles, as special windows for x-ray tubes, in gyroscopes and computer parts, and as an additive in solid propellant rocket fuels (Sax and Lewis, 1981). None of the uses of beryllium are consistent with operations and practices in Building 125.

7.0 CONCLUSIONS

All requirements of 40 CFR §265.228(a)(1) with regard to clean closure have been performed. Clean closure of the TSL-125 site was accomplished through:

- Removal and proper disposal of all wastes contained within surface impoundment system;
- Decontamination of the floor trough within Building 125;
- Decontamination of piping between Building 125 and the surface impoundment;
- Disconnection of the floor trough system from piping leading into the impoundment;
- Removal and proper disposal of the surface impoundment's gunite liner;
- Removal and proper disposal of contaminated soil underlying the surface impoundment site;

- Sampling and analysis of soil remaining in place at the surface impoundment site; and,
- Demonstration through a risk assessment that constituents remaining in the soil at the TSL-125 site pose no threat to human health and the environment.

All levels of hazardous constituents detected in soil at the TSL-125 site fell below health-based action levels or background metal levels, with the exception of three semivolatile constituents, benzidine, n-nitrosodimethylamine, and n-nitrosodi-n-propylamine, and one metal, beryllium. Although the concentrations of these analytes did not exceed their limits of quantitation/detection, the values for the analytical limits themselves were greater than the calculated health-based action levels. To demonstrate that the four constituents were not present at the site, the use of each chemical was compared to practices and operations at Building 125, and a Laboratory staff member familiar with the chemicals used at Building 125 was interviewed. No relationship was established when comparing the chemical uses to Building 125 practices and operations, nor during the interview with Laboratory staff.

The above activities and analytical results demonstrate that clean closure requirements have been satisfied for the TSL-125 surface impoundment site.

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ENCLOSURE 1

INTERIM STATUS CLOSURE PLAN
TA-35 TSL-125 SURFACE IMPOUNDMENT

INTERIM STATUS CLOSURE PLAN

TA-35 TSL-125
SURFACE IMPOUNDMENT

Facility ID No.:	NM0890010515
Facility Name:	Los Alamos National Laboratory
Legal Owner:	United States Department of Energy
Legal Operator:	University of California
Address:	Los Alamos Area Office
City, State:	Los Alamos, New Mexico 87544
Contact Person:	Mr. Jerry Bellows, Area Manager
Phone:	(505) 667-5105
Date:	July 1991

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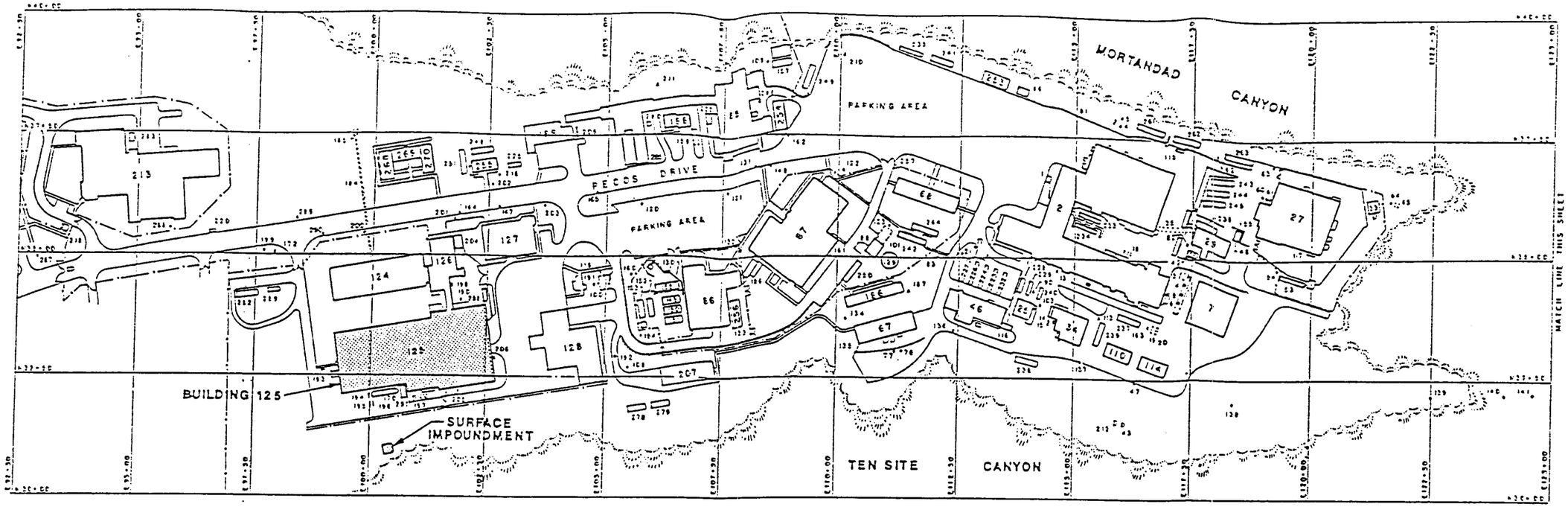

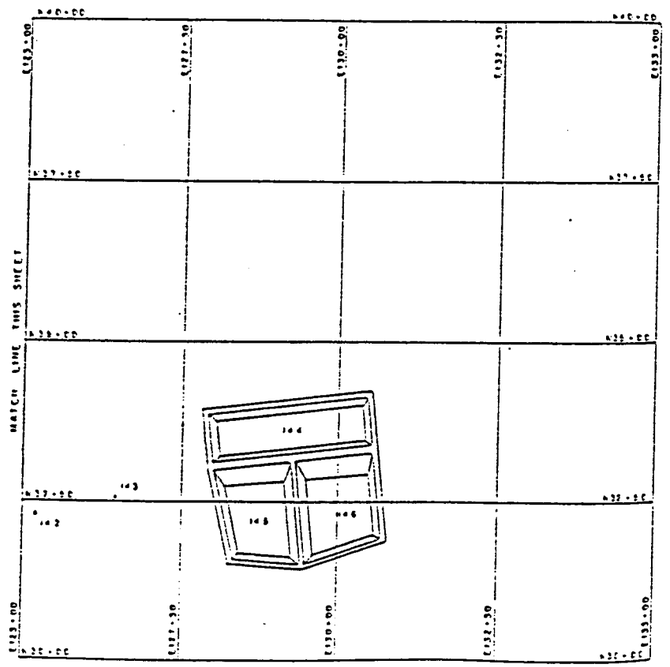

"MODIFIED FROM TECHNICAL AREA STRUCTURE LOCATION PLANS, TA-35, LOS ALAMOS NATIONAL LABORATORY, 1986"

0 50 100 200 300 FEET

0 25 50 75 100 METERS

SCALE

FIGURE 1-1

TECHNICAL AREA 35 SITE MAP

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LOS ALAMOS, NEW MEXICO

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1.0 INTRODUCTION

This Closure Plan is submitted to the New Mexico Environment Department (NMED) as documentation of Los Alamos National Laboratory's (the Laboratory's) intent to perform a clean closure of TA-35 TSL-125 surface impoundment in accordance with the requirements of 40 CFR §265.228 (here and throughout this document, references to federal regulations include their state analogs). A revision to the October 1988 Closure Plan for this unit, this plan incorporates the U.S. Environmental Protection Agency's (U.S. EPA's) guidance on the use of risk assessments to establish "clean" levels for closure, that is, concentrations of contaminants below which no threat to human health or the environment is considered to exist (52 FR 53, March 19, 1987).

The surface impoundment is located on the rim of Ten Site Canyon and, depending on the extent of any contamination associated with the unit, soil removal undertaken to attain "clean" closure potentially impacts the stability of the canyon wall. To minimize destabilization of the site, it is desirable to maintain the existing slope and to allow the native vegetation currently established to remain as undisturbed as possible. For this reason, if contamination at the site is found to be areally extensive, the Laboratory intends to follow U.S. EPA guidance in establishing health-based "clean level" concentrations for any hazardous wastes or constituents that analytical results show to have been released from the unit. The U.S. EPA states that closure to these levels is considered sufficient to meet the clean closure requirements of 40 CFR §265.228(a)(1). The documents that will be used in preparing a clean closure demonstration are included in Appendix A. This Closure Plan has been developed to provide information sufficient to satisfy the equivalency determination requirements given in 40 CFR §270.1(c)(6) and further described in the Office of Solid Waste and Emergency Response Directive 9476.00-18 (May 12, 1989).

The structures associated with the surface impoundment include a floor trough and piping in addition to a curbed staging area near the impoundment. Clean closure will entail removal of standing liquids, wastes and waste residues from the surface impoundment and associated structures, and removal of any underlying and/or surrounding soil contaminated with hazardous constituents. The results of a risk assessment will be used to determine the extent of soil removal necessary to meet clean closure criteria. Soils with documented contamination...

will be removed as part of the closure effort, and the site will be backfilled, regraded, and seeded.

2.0 FACILITY DESCRIPTION

Los Alamos National Laboratory occupies an area of 43 square miles in Los Alamos County (Figure 2-1) located in north central New Mexico. The Laboratory and the associated residential areas of Los Alamos and White Rock are situated on Pajarito Plateau, which consists of a series of finger-like mesas separated by deep east-west trending canyons. The mesa tops range in elevation from approximately 7,800 feet at the flank of the Jemez Mountains (located to the west of Los Alamos) to about 6,200 feet at their eastern extent where they terminate above the Rio Grande Valley. Streams flow intermittently through the bottoms of the east-west trending canyons.

Los Alamos is divided into 32 active Technical Areas (TAs) (Figure 2-2). TA-35 is north-centrally located and is flanked by Mortandad Canyon to the north and Ten Site Canyon to the south (Figure 2-3). TA-35 is underlain by volcanic bedrock; the main aquifer lies approximately 1,200 feet below the surface. Detailed descriptions of the geology and hydrology are presented in the RCRA Part B Permit Application for Los Alamos National Laboratory and in the Hydrogeologic Assessment of Technical Area 54, Areas G and L.

Building 125 is located in the southwestern portion of TA-35 (Figure 2-3). A floor trough located inside Building 125 drains to a surface impoundment situated just south of the building, close to Ten Site Canyon's rim (Figure 2-4). Relatively undisturbed ground, sloping to the south, occurs to the east and west of the impoundment.

2.1 SURFACE IMPOUNDMENT

The surface impoundment was built in 1978 and brought into use in late 1979 or early 1980. During its first few years of operation, the surface impoundment was used to contain accidental spills. Since the early 1980's, the impoundment was also used to contain liquids, primarily oil and mop water which were discharged through floor drains, from inside Building 125.

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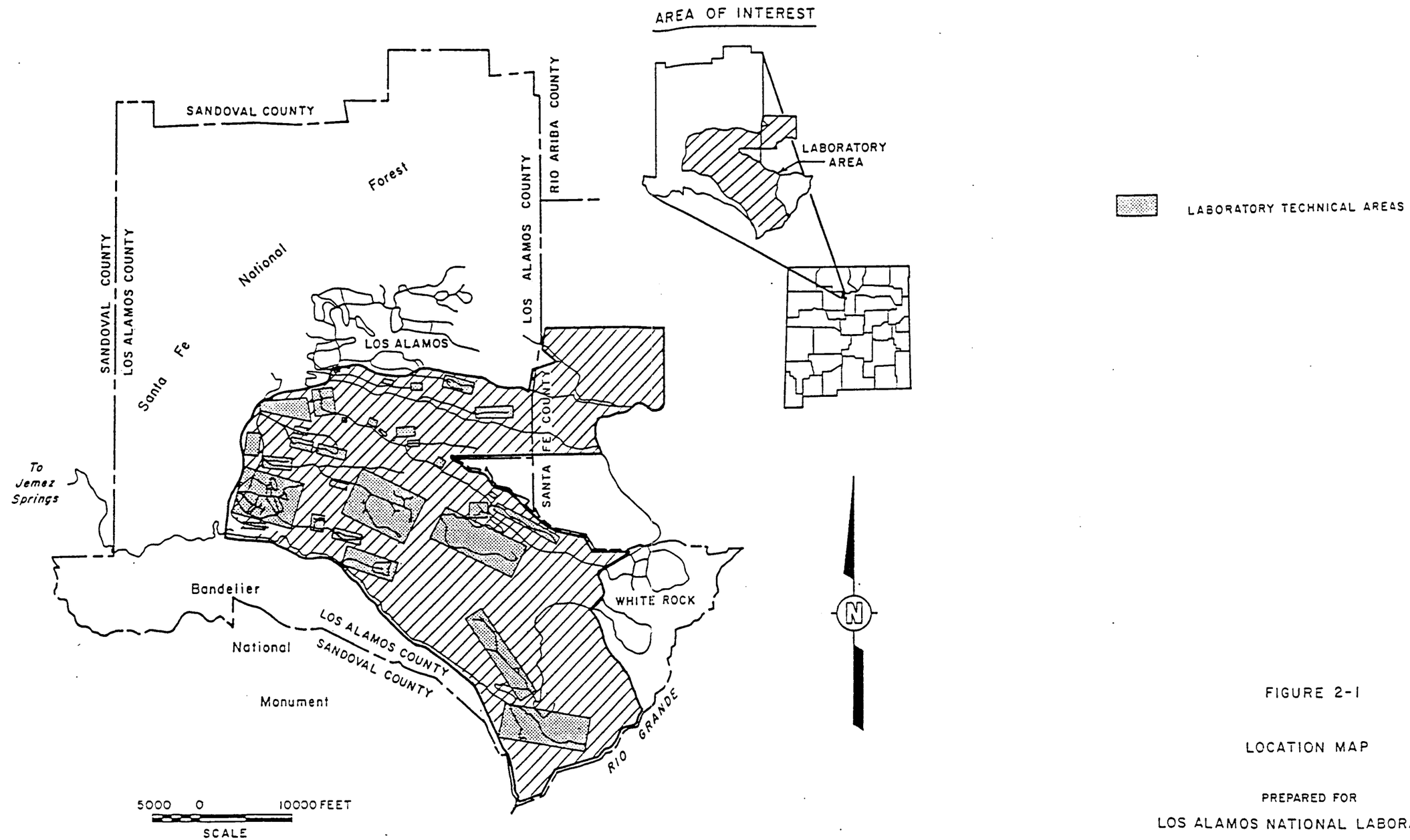

FIGURE 2-1

LOCATION MAP

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LOS ALAMOS, NEW MEXICO

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19 1253 HERCULENE, A&B SMITH CO., PGH., PA

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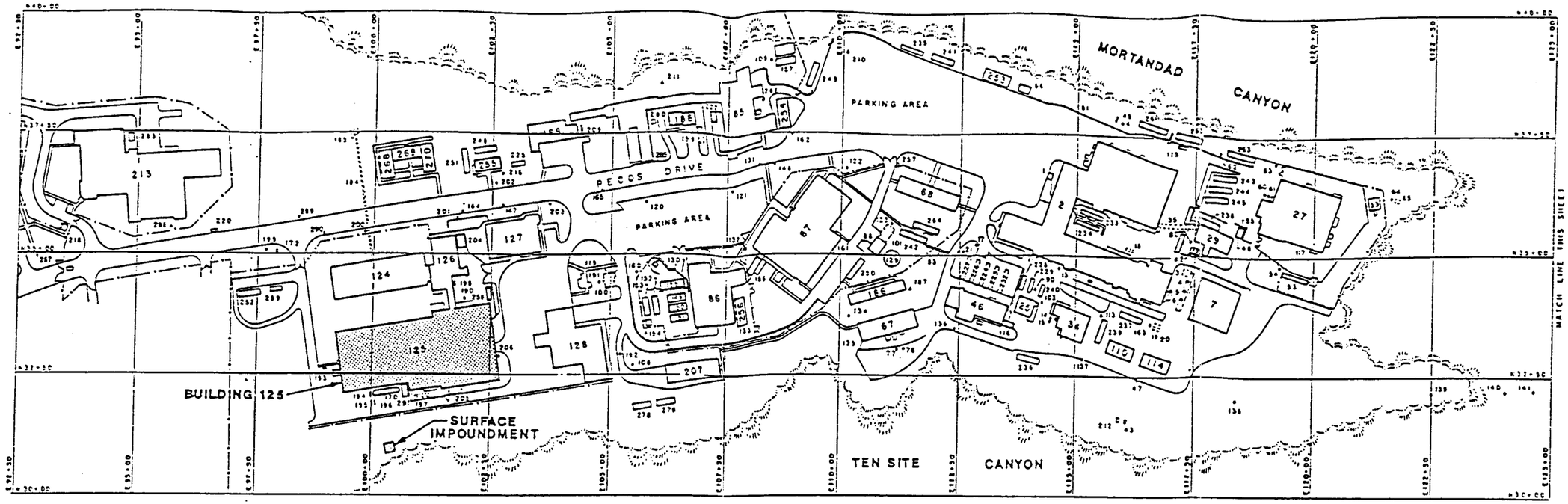

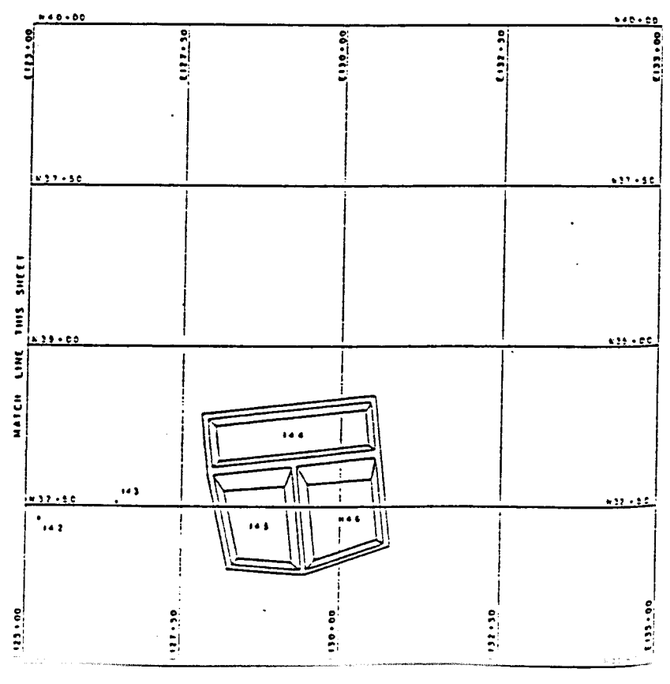

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0 50 100 200 300 FEET
0 25 50 75 100 METERS
SCALE

FIGURE 2-3

TECHNICAL AREA 35 SITE MAP

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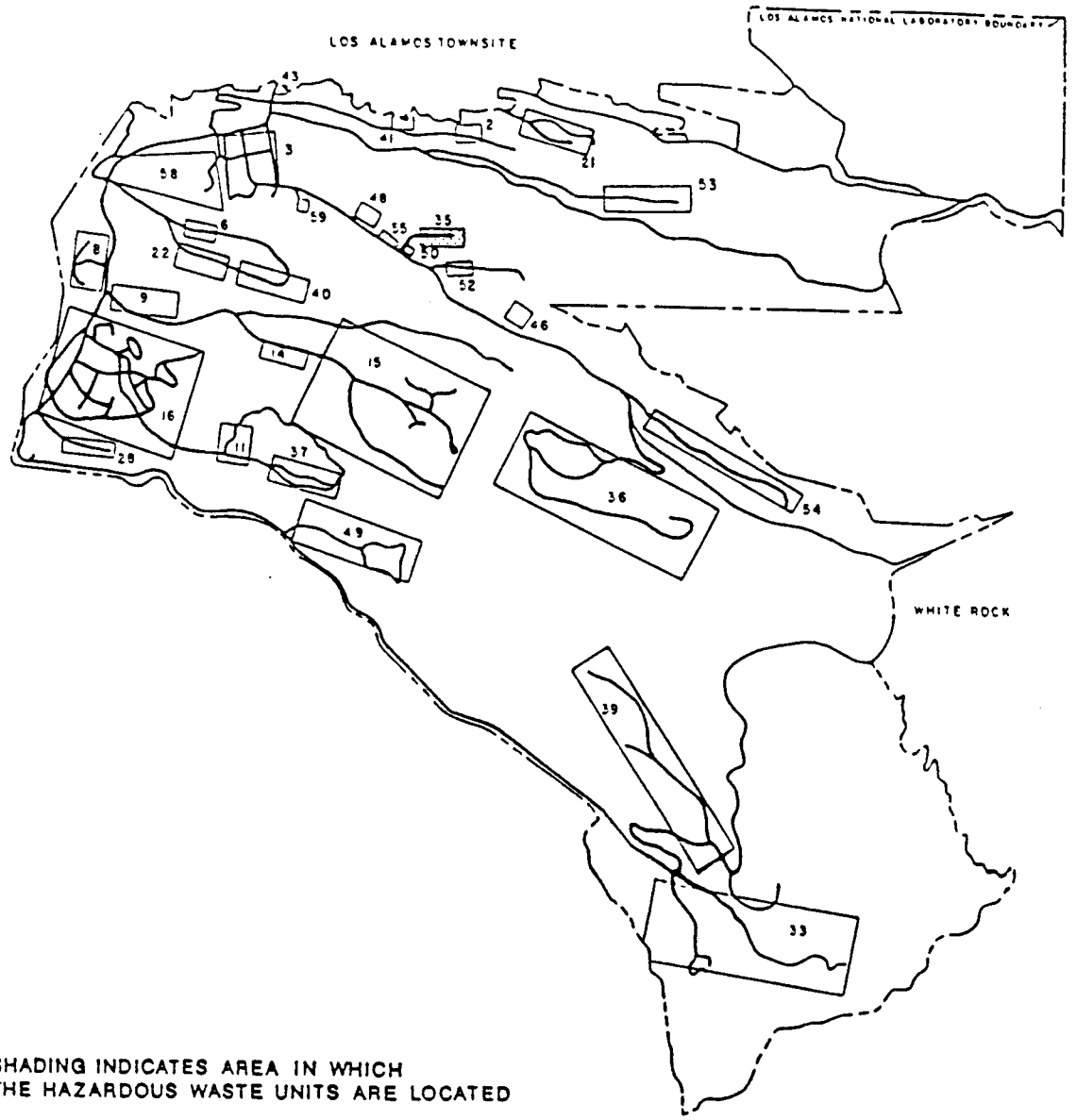

SHADING INDICATES AREA IN WHICH THE HAZARDOUS WASTE UNITS ARE LOCATED

N

4000 0 4000

SCALE

FIGURE 2-2

LOS ALAMOS TECHNICAL AREA 35

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LOS ALAMOS, NEW MEXICO

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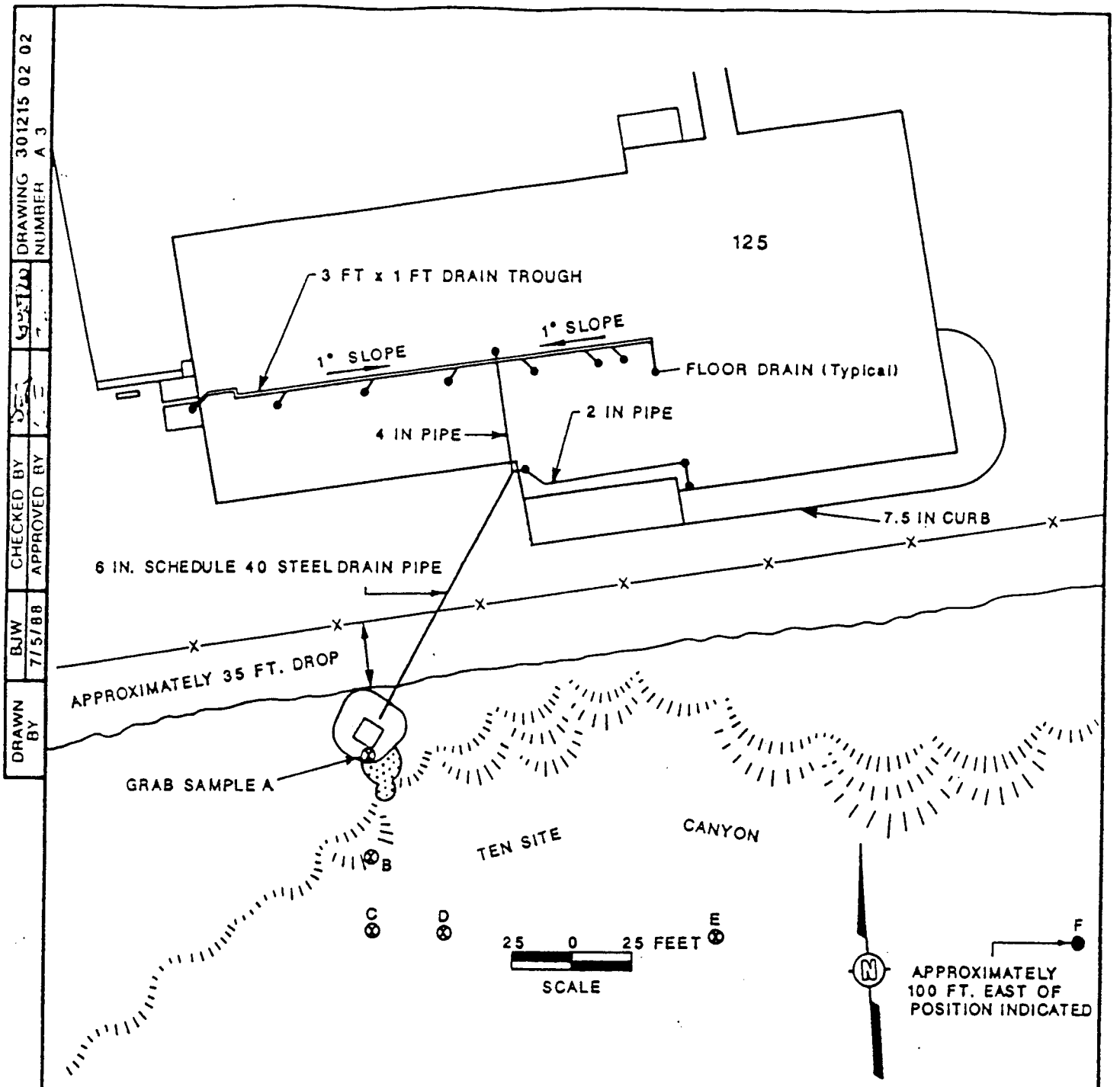

KEY

- SURFACE WATER SAMPLE LOCATION (APPROXIMATE)
- FENCE
- CLIFF
- APPROXIMATE AREA OF SOIL CONTAMINATION
- SOIL SAMPLE LOCATION (APPROXIMATE)

FIGURE 2-4

TA-35-TSL-125
SURFACE IMPOUNDMENT
AND SAMPLE LOCATIONS
PREPARED FOR
LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

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The surface impoundment is approximately 31 feet in length by 29 feet in width, covering an area of approximately 900 square feet. The impoundment sides are sloped at a ratio of one to one and are constructed of wire mesh sprayed with approximately four inches of gunite. The bottom of the impoundment consists of an eight-inch thick layer of clay and is ten feet in length by ten feet in width. The surface impoundment is 5.75 feet in depth at the center and has an effective capacity (with a two-foot freeboard) of 7,252 gallons. Engineering drawings for the impoundment are presented in Figure 2-5.

Only one point of inflow to the impoundment exists. The inflow consists of a six-inch schedule 40 steel drain pipe entering the surface impoundment in the center of the north side approximately 1.5 feet from the bottom (Figure 2-5). The drain pipe connects the surface impoundment to the outfall of the floor trough system in Building 125. There is no permanent outfall from the surface impoundment; however, the impoundment accidentally overtopped on December 3, 1986, spilling an unknown volume of insulating oil and water into Ten Site Canyon. On February 25, 1987, an unknown amount of water was siphoned from the impoundment into Ten Site Canyon in an attempt to prevent additional insulating oil from overtopping the impoundment. Sandbags were installed around the surface impoundment on June 25, 1988, to provide additional freeboard in the impoundment and reduce the risk of overtopping during a precipitation event. On July 1, 1988, the impoundment again overtopped releasing an unknown volume of insulating oil and water into Ten Site Canyon.

2.2 FLOOR TROUGH AND PIPING

An epoxy-coated floor trough runs length-wise through Building 125 (Figure 2-4). The trough is three feet in width and one foot in depth and is covered with a metal grate. Nine floor drains located throughout the center of the building direct oil spills and mop water to the floor trough via four-inch diameter or six-inch diameter drain pipes. Three floor drains direct spills into a two-inch diameter drain pipe (Figure 2-4). The floor trough and two-inch drain pipe transmit flows to a four-inch pipe which directs the spilled fluids outside Building 125 and into a six-inch pipe that delivers waste to the impoundment.

3.0 PROCESS INFORMATION

Building 125 is used for developing electron guns and related laser assemblies/equipment for a Laser Technology Research Program at the Laboratory. Equipment utilized in the building

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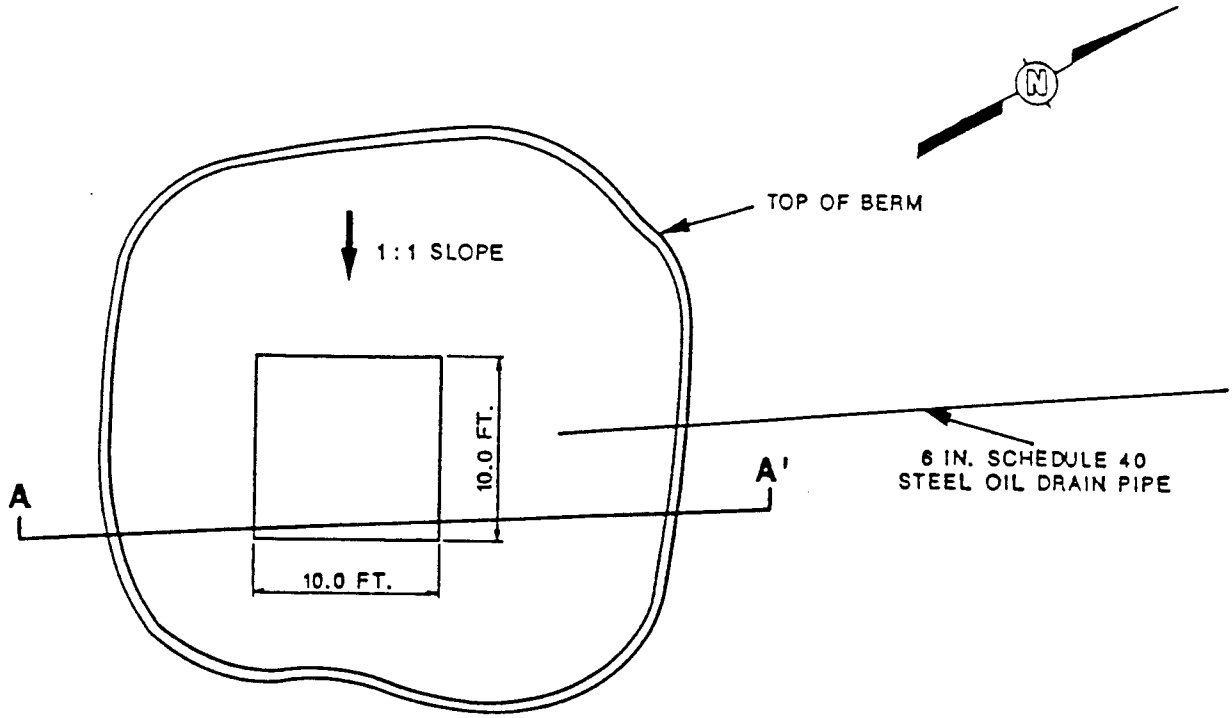
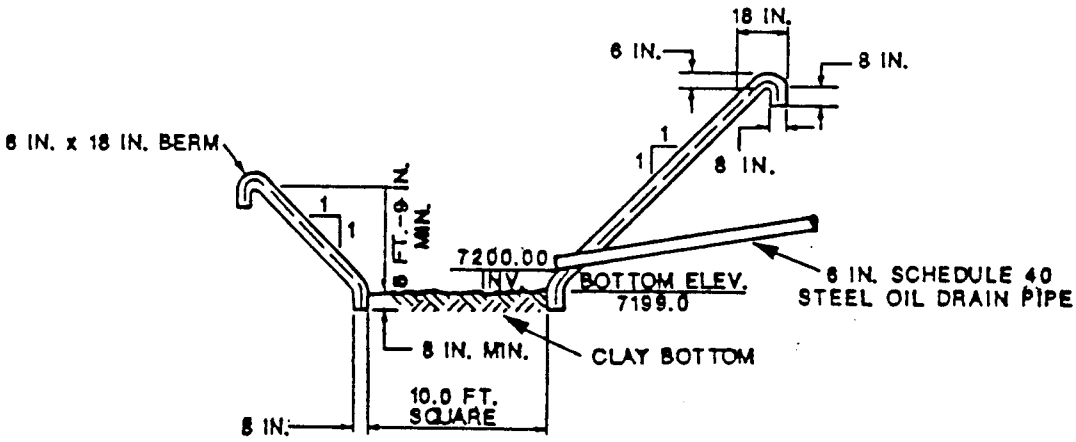


PLAN VIEW



CROSS SECTIONAL VIEW
A – A'

FIGURE 2-5
ENGINEERING DRAWING OF
TA-35-TSL-125
SURFACE IMPOUNDMENT
PREPARED FOR
LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

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Do Not Scale This Drawing

waste sampler (COLIWASA) to obtain a vertical composite of two-phase liquid and sludge (see Figure 2-4 for sample location). The sample was stored in appropriate containers and preserved as specified in Section 5.4.1. The sample was analyzed for volatile organics, semi-volatile organics, Extraction Procedure Toxicity (EP Toxic) metals, polychlorinated biphenyls (PCBs), and radionuclide activity. Results of volatile organic analyses indicate the presence of a cleaning degreaser profile with parts per million (ppm) concentrations of 1,1,1-trichloroethane and 1,1,2-trichloro-1,2,2-trifluoroethane (Table 4-1). Surrogate spike recoveries for the volatile organic analyses are reported in Table 4-2. Semivolatile organic results were inconclusive due to the presence of the oil phase in the sample. No EP Toxic concentrations of metals were detected in the sample (Table 4-3). Radiological analyses of the sample detected 5.0 picocuries per liter (pCi/L), 4.9 pCi/L, and -500 pCi/L* of alpha, beta, and gamma activity, respectively (Table 4-4). These values signify that radionuclide activity was below both background concentrations and the maximum contaminant concentration for drinking water established by U.S. EPA. Analytical results from surface impoundment oil/water grab samples collected on September 8, 1986, and July 29, 1987, indicate that PCBs were not present in the insulating oil waste stream on those dates (Table 4-5). Laboratory results for these analyses are provided in Appendix C. Although PCBs were not detected in the oil/water grab samples on the September 8, 1986 and July 29, 1987 sampling dates, low levels of PCBs (4.1 ppm) were detected in oil from a Marx generator that accidently overflowed inside Building 125 on December 3, 1986. The spilled oil drained into the curbed staging area and the surface impoundment. Some of the spilled oil (estimated at less than 100 gallons) overflowed into Ten Site Canyon. Documentation of this spill incident and its cleanup is included in Appendix C.

4.1.1 Estimate of Maximum Volume of Liquid in the Hazardous Waste Unit

The amount of waste oil/water stored in the surface impoundment has varied with time, and no complete records of the total waste volume contained at the TSL-125 surface impoundment are available. Based on its dimensions, the maximum capacity of the surface impoundment is 8,000 gallons. Allowing for two feet of freeboard, the maximum volume of liquid in the surface impoundment at any time would be 7,250 gallons. During the period of heavy rainfall in the summer of 1988, however, the maximum capacity of the unit was

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*Note: Negative value indicates concentration below analytical detection limits.

TABLE 4-1

RESULTS OF VOLATILE ORGANIC ANALYSES[1] FOR LIQUID AND SLUDGE SAMPLES COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 9, 1988

PARAMETER	LIQUID RESULTS (ppb)	LIQUID/SLUDGE RESULTS[2] (ppb)
Acetone	109.6 ± 54.8	D>200.0[3]
2-Butanone	ND<5.0[5]	48.1 ± 4.8
1,1-Dichloroethane	77.7 ± 7.8 (TIC)	ND<5.0
2-Hexanone	ND<5.0	35.3 ± 3.5
Methylene Chloride	ND<5.0	D>5.0 (TIC)
4-Methyl-2-Pentanone	ND<5.0	20.0 ± 20.0
Tetrachloroethene	ND<5.0	89.4 ± 8.9
1,1,1-Trichloroethane	ppm range[6]	151.2 ± 15.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND<20.0	ppm range
m,p-Xylenes	NA[7]	72.1 ± 7.2
o-Xylene	NA	81.8 ± 40.9
Xylenes (TOTAL)	ND<5.0	153.9 ± 40.9

(1) Modified EPA Method 524. Analytical methods are taken from Test Methods for Evaluating Solid Waste, EPA SW 846.
(2) Intermixed liquid and solids; analyzed liquid fraction only.
(3) D> = Detected at a concentration greater than the limit stated in the table above.
(4) TIC indicates a tentatively identified compound.
(5) ND = Not Detected; the limit of detection is the amount stated in the above table.
(6) The extremely high concentration of 1,1,1-Trichloroethane severely interfered with identification of some compounds.
(7) NA = Not Analyzed.

TABLE 4-2

PERCENT SURROGATE SPIKE RECOVERIES FOR VOLATILE ORGANIC ANALYSES OF LIQUID AND SLUDGE SAMPLES COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 9, 1988

COMPOUND	LIQUID RESULTS (%)	LIQUID/ SLUDGE RESULTS(%)	CLP ACCEPTABLE RANGE(%)[1]
1,2-Dichloroethane d4	62.6	89.6	76-114
Toluene d8	95.7	109.2	88-110
p-Bromofluorobenzene	82.8	75.6	86-115

[1]U.S. Environmental Protection Agency Contract Laboratory Program (CLP) acceptable range of percent recovery.

TABLE 4-3

RESULTS OF EXTRACTION PROCEDURE TOXICITY ANALYSES FOR A LIQUID SAMPLE COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 9, 1988

EPA HAZARDOUS WASTE NUMBER	PARAMETER	RESULTS (mg/1)	EP TOXIC REGULATED CONCENTRATIONS[1] (mg/1)
D004	Arsenic	0.0025	5.0
D005	Barium	ND<0.1[2]	100.0
D006	Cadmium	0.0017	1.0
D007	Chromium	0.0026	5.0
D008	Lead	0.065	5.0
D009	Mercury	0.0019	0.2
D010	Selemium	ND<0.001	1.0
D011	Silver	0.003	5.0

[1]40 CFR 261.24
[2]ND = Not Detected; the limit of detection is the amount stated in the table above.

TABLE 4-4

RESULTS OF RADIONUCLIDE ACTIVITY ANALYSES FOR A LIQUID SAMPLE COLLECTED FROM THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 9, 1988

RADIOACTIVE SOURCE	ACTIVITY[1] (pCi/l)	UNCERTAINTY
Alpha	5.0	± 1.0
Beta	4.9	± 0.7
Gamma-	500.0[2]	± 200.0

[1]See background radionuclide activity values for comparison.
[2]Negative value indicates concentration below analytical detection limits.

COMPARISON RADIONUCLIDE ACTIVITY[a]

SAMPLE NUMBER	SAMPLE TYPE	GROSS a (pCi/l)	GROSS b (pCi/l)
Trap 1	Water	5.0 ± 1.0	35.0 ± 4.0
Trap 2	Water	1.5 ± 0.7	26.0 ± 3.0
Trap 3	Water	2.4 ± 0.9	17.0 ± 2.0
EPA Drinking Water MCL[b]	Water	15	5
Avg. Air LANL	Air	---	$(13.3 \pm 3) \times 10^{-6}$
Avg. Air Santa Fe	Air	---	$(10 \pm 20) \times 10^{-6}$

[a] HSE-8, 1988, Environmental Surveillance at Los Alamos during 1987, Los Alamos National Laboratory, Report No. LA-11306-ENV, Los Alamos. (Water samples taken from Mortandad Canyon sediment traps.)
[b] MCL = maximum contaminant level.

TABLE 4-5

RESULTS OF POLYCHLORINATED BIPHENYLS (PCBs) ANALYSES FOR LIQUID AND SOIL SAMPLES COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT

SAMPLE NUMBER (mg/g)	SAMPLE DATE	SAMPLE TYPE	SAMPLE METHOD	SAMPLE LOCATION	ANALYTICAL RESULTS
86.05274	09/08/86	Oil/Water	Grab	Surface Impoundment	ND < 2.0[1]
86.05286	12/04/86	Soil	Grab	~450′ below rim (into Ten Site Canyon)	4.7
86.05287	12/04/86	Soil	Grab	~20′ below rim (into Ten Site Canyon)	11.7
86.05288	12/04/86	Soil	Grab	At confluence of Ten Site Canyon rim and spill path[2]	9.1
87.01842	07/29/87	Oil	Grab	Surface Impoundment	ND < 1.3

[1] ND = Not Detected; the limit of detection is the amount stated in the above table.
[2] Spill occurred December 3, 1986.

exceeded. Thus, the estimated maximum volume of liquid in the unit at any time is considered to be 8,000 gallons, its total capacity.

Preliminary Soil Sampling

Preliminary sampling of soil and water in Ten Site Canyon was conducted to determine impacts from surface impoundment spills. On December 4, 1986, soil samples were collected in Ten Site Canyon and analyzed for PCBs. The sampling was conducted prior to cleanup of the December 3, 1986 accidental overtopping of the surface impoundment. The samples were taken immediately downgradient of the impoundment, 20 feet downgradient of the impoundment, and 450 feet downgradient of the impoundment. PCBs were detected in the soil samples in concentrations of 9.1 ppm, 11.7 ppm, and 4.7 ppm, respectively. Appendix C contains documentation of the cleanup following the December 3, 1986 spill. No volatile organic compounds were detected. Additional soil samples were collected in Ten Site Canyon along the fall line of the overflow on June 20, 1988, and analyzed for volatile organic compounds (Tables 4-6, 4-7, and 4-8). Acetone in trace quantities was detected in two of the samples, one immediately downgradient of the impoundment and the other 30 feet downgradient of the impoundment. A grab sample of surface water in the bottom of Ten Site Canyon approximately a quarter mile downstream of the impoundment was collected on June 29, 1988, and analyzed for volatile organic compounds. No detectable levels of the constituents analyzed were found in the surface water samples (Tables 4-9 and 4-10). Laboratory results for these analyses are also provided in Appendix C.

4.2 FLOOR TROUGH AND PIPING

The floor trough and piping inside Building 125 have captured spills of insulating oil and equipment/floor cleaning rinseate and directed it to the surface impoundment. Introduction of volatile organic compounds such as 1,1,1-trichloroethane and 1,1,2-trichloro-1,2,2-trifluoroethane into the waste stream is suspected to be through the use of cleaning/degreaser compounds for floor cleaning and equipment maintenance.

4.2.1 Estimate of Floor Trough and Piping Waste Volume

The floor trough and piping which drain to the surface impoundment are designed such that liquid does not pond but instead is drained immediately into the impoundment. Therefore, there is no standing liquid in these areas.

TABLE 4-6

SOIL SAMPLES COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 20, 1988

SAMPLE IDENTIFICATION	SAMPLE METHOD	SAMPLE LOCATION
88.00353	Grab	~5 ft. below rim of impoundment along fall line of overflow (Location A, Figure 2-4)
88.00354	Grab	~30 ft. below rim of impoundment along fall line of overflow (Location B, Figure 2-4)
88.00355	Grab	~60 ft. below rim of impoundment along fall line of overflow (Location C, Figure 2-4)
88.00356	Grab	~20 ft. below confluence of fall line and stream channel (Location D, Figure 2-4)
88.00357	Grab	~100 ft. below confluence of fall line and stream channel (Location E, Figure 2-4)

TABLE 4-7

RESULTS OF VOLATILE ORGANIC ANALYSES[1] FOR SOIL SAMPLES COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 20, 1988

PARAMETERS	SAMPLE IDENTIFICATION 88.00353	88.00354	88.00355	88.00356	88.00357[2]
	CONCENTRATION (mg/gm)				
Acetone	Trace[3]	Trace[3]	ND<10	ND<10	ND<10
2-Butanone	ND<10[4]	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethane	ND<10	ND<10	ND<10	ND<10	ND<10
2-Hexanone	ND<10	ND<10	ND<10	ND<10	ND<10
Methylene Chloride	ND<10	ND<10	ND<10	ND<10	ND<10
4-Methyl-2-Pentanone	ND<10	ND<10	ND<10	ND<10	ND<10
Tetrachloroethene	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,1-Trichloroethane	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND<10	ND<10	ND<10	ND<10	ND<10
m, p-Xylenes	NA[5]	NA	NA	NA	NA
o-Xylenes	NA	NA	NA	NA	NA
Xylenes (TOTAL)	ND<10	ND<10	ND<10	ND<10	ND<10

(1) Modified EPA Method 524. Analytical methods are taken from Test Methods for Evaluating Solid Waste, EPA-SW-846.
(2) Detected hydrocarbons, substituted benzenes, and tentatively-identified camphene. Also detected p-Isopropyltoluene, but <MDL.
(3) Acetone is a common laboratory and glassware contaminant.
(4) ND = Not Detected; the limit of detection is the amount stated in the above table.
(5) NA = Not Analyzed.

TABLE 4-8

PERCENT SURROGATE SPIKE RECOVERIES FOR VOLATILE ORGANIC ANALYSES OF SOIL SAMPLES COLLECTED AT THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 20, 1988

SAMPLE IDENTIFICATION	PERCENT RECOVERY[2]			
	1,2-Dichloroethane d4	Toluene d8	p-Bromofluorobenzene	Bromobenzene
88.00353	128.0/130.6	118.3/116.4	96.6/96.7	139.6/54.5
88.00354	123.0/127.1	112.2/111.3	98.4/97.3	39.3/18.3
88.00355	123.6	104.6	93.5	78.6
88.00356	80.8/79.8	89.3/86.2	82.9/83.0	35.3/37.3
88.00357	83.3/75.3	81.7/85.8	86.0/84.2	35.8
CLP[1]				
ACCEPTABLE RANGE	76-114	88-110	86-115	---[3]

(1) U.S. Environmental Protection Agency Contract Laboratory Program (CLP) acceptable range of percent recovery.
(2) Two replicate performed, unless only one percentage listed.
(3) Spiked into soil prior to extraction, not a CLP required surrogate.

TABLE 4-9

RESULTS OF VOLATILE ORGANIC ANALYSIS(1) FOR SURFACE WATER SAMPLE COLLECTED DOWNSTREAM[2] OF THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 29, 1988

PARAMETER	SURFACE WATER RESULTS (mG/L)
Acetone	ND<10[3]
2-Butanone	ND<10
1,1-Dichloroethane	ND<10
2-Hexanone	ND<10
Methylene Chloride	ND<10
4-Methyl-2-Pentanone	ND<10
Tetrachloroethene	ND<10
1,1,1-Trichloroethane	ND<10
1,1,2-Trichloro-1,2,2-trifluoroethane	NA[4]
m,p-Xylenes	NA
o-Xylene	NA
Xylenes (TOTAL)	NA

(1) Modified EPA Method 524. Analytical methods are taken from Test Methods for Evaluating Solid Waste, EPA SW 846.
(2) Location F, Figure 2-4.
(3) ND = Not Detected; the limit of detection is the amount stated in the above table.
(4) NA = Not Analyzed.

TABLE 4-10

PERCENT SURROGATE SPIKE RECOVERIES FOR VOLATILE ORGANIC ANALYSIS OF SURFACE WATER SAMPLE COLLECTED DOWNSTREAM OF THE TA-35 TSL-125 SURFACE IMPOUNDMENT JUNE 29, 1988

COMPOUND	SURFACE WATER RESULTS (%)	CLP ACCEPTABLE RANGE (%)[1]
1,2-Dichloroethane d4	77.1	76-114
Toluene d8	83.8	88-110
p-Bromofluorobenzene	80.0	86-115

[1] U.S. Environmental Protection Agency Contract Laboratory Program (CLP) acceptable range of percent recovery.

5.0 CLOSURE DESIGN

The procedure that will be implemented to close the TA-35 TSL-125 surface impoundment and associated structures are designed to achieve the following performance standards:

- Protection of human health and the environment;
- Prevention of the escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or atmosphere; and
- Minimization of future maintenance.

The Laboratory plans final closure for this area by the end of 1991.

5.1 WASTE REMOVAL PROCEDURES

The waste liquids and residues contained within the surface impoundment will be removed as part of the closure process. The procedures used to remove these wastes are described in the following sections.

5.1.1 Liquid Removal

All liquid waste contained within the surface impoundment has been and will be disposed of as a hazardous waste. In the past, as fluid levels approached the two-foot freeboard limit, HSE-7, the Laboratory's waste management group, was contacted and an off-site transport contractor was scheduled to collect and remove the waste liquids. A dedicated transfer pump and hose were used to pump the liquid from the surface impoundment into a hazardous waste tanker truck. The fluid was then transported offsite to a RCRA-permitted TSD facility. Waste liquids disposal during closure of the surface impoundment will follow the above procedures.

All state and federal regulatory requirements pertaining to the management of these liquid wastes have been and will be observed, including the 40 CFR Part 268 land disposal restrictions.

5.1.2 Residue Removal

Solid residue remaining in the floor trough or surface impoundment will be excavated and placed in DOT-approved containers. The removal method used will depend on the physical characteristics of the residue. Because previous analytical results show the residue may be

hazardous (Section 4.0 and Appendix C), it will be placed in DOT-approved containers. To expedite closure activity, an area at or near the site will be constructed where containers are able to accumulate for less than 90 days. The area will be paved, blocked off from vehicular and pedestrian traffic, and appropriate signs will be posted around its perimeter. The containers will be properly labelled and stored on pallets, routine inspections of the area will be made, and all required documentation will be maintained. The containers will then be transferred to TA-54, Area L, the Laboratory's permitted hazardous waste storage area, to await final disposition. Any additional sampling necessary to facilitate treatment or disposal of the waste residues will be performed prior to transfer to Area L. All waste residues will be considered hazardous and managed accordingly.

5.2 DECONTAMINATION AND REMOVAL OF THE LINER, FLOOR TROUGH, PIPING, AND SOIL

The following steps will be taken to decontaminate and remove the liner, decontaminate the floor trough and piping, and remove the necessary soil so that clean closure criteria are met.

5.2.1 Floor Trough and Piping

A decontamination rinse of the trough and piping will be performed using a surfactant such as Liquinox or Alconox. All rinseate will be temporarily collected in the surface impoundment and subsequently transferred into DOT-approved containers. A representative sample will be composited from the containers and analyzed for volatile and semivolatile organic compounds, PCBs, and EP Toxic metals. If analytical results characterize the rinseate as a hazardous waste, it will be managed and disposed in compliance with all state and federal requirements.

The trough system will then be disconnected from the six-inch steel drain pipe and the trough outfall will be sealed. The six-inch steel drain pipe connecting the trough outfall to the surface impoundment will be filled with a concrete slurry following final decontamination.

5.2.2 Removal of Liner and Sandbags

Soil directly below the gunite liner will be sampled and analyzed prior to its removal. To sample the soil, several one-foot square sampling ports will be cut through the gunite liner, and soil immediately below the liner will be collected to a depth of six to eight inches. ("Soil" samples will include samples of tuff when encountered.) Samples will be analyzed for volatile and semivolatile organic compounds identified in Tables 5-1 and 5-2, PCBs, and metals

TABLE 5-1

VOLATILE ORGANIC COMPOUNDS TO BE ANALYZED IN SOIL SAMPLES

Acetone
Acrolein*
Acrylonitrile*
Benzene*
Bromobenzene
Bromochloromethane
Bromodichloromethane
Bromoform*
Bromomethane*
2-Butanone*
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
Carbon disulfide*
Carbon tetrachloride*
Chlorobenzene*
Chlorodibromomethane
Chloroethane
2-Chloroethylvinyl ether*
Chloroform*
Chloromethane*
o-Chlorotoluene
p-Chlorotoluene
1,2-Dibromo-3-chloropropane*
1,2-Dibromoethane*
Dibromomethane*
1,2-Dichlorobenzene*
1,3-Dichlorobenzene*
1,4-Dichlorobenzene*
Dichlorodifluoromethane*
1,1-Dichloroethane*
1,2-Dichloroethane*
1,1-Dichloroethene*
trans-1,2-Dichloroethene*
cis-1,2-Dichloroethylene
1,2-Dichloropropane*
1,3-Dichloropropane*
2,2-Dichloropropane*
1,1-Dichloropropene
cis-1,3-Dichloropropene*
trans-1,3-Dichloropropene
Ethylbenzene
2-Hexanone
Isopropylbenzene
4-Isopropyltoluene
Methyl iodide*
4-Methyl-2-Pentanone*
Methylene Chloride*
Propylbenzene
Styrene
1,1,1,2-Tetrachloroethane*
1,1,2,2-Tetrachloroethane*
Tetrachloroethylene*
Toluene*
1,1,2-Trichloro-
1,2,2-Trifluoroethane
1,1,1-Trichloroethane*
1,1,2-Trichloroethane
Trichloroethene*
Trichlorofluoromethane*
1,2,3-Trichloropropane*
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Vinyl Acetate
Vinyl Chloride*
Xylenes

*Hazardous constituents included in 40 CFR Part 261, Appendix VIII.

TABLE 5-2

SEMIVOLATILE ORGANIC COMPOUNDS TO BE ANALYZED IN SOIL SAMPLES

Acenaphthene
Acenaphthylene
Aniline*
Anthracene
Azobenzene
Benzidine*
Benzo(a)anthracene*
Benzo(a)pyrene*
Benzo(b)fluoranthene*
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Benzoic acid
Benzyl Alcohol
Bis(2-chloroethyoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate*
4-Bromophenyl phenyl ether*
Butylbenzyl phthalate*
4-Chloro-3-methylphenol
4-Chloroaniline*
2-Chloronaphthalene*
o-Chlorophenol*
4-Chlorophenylphenyl ether
Chrysene*
Di-n-butyl phthalate*
Di-n-octyl phthalate*
Dibenzo(a,h)anthracene*
Dibenzofuran
1,2-Dichlorobenzene*
1,3-Dichlorobenzene*
1,4-Dichlorobenzene*
3,3'-Dichlorobenzidine*
2,4-Dichlorophenol*
Diethyl phthalate*
Dimethyl phthalate*
2,4-Dimethylphenol*
2,4-Dinitrotoluene*
2,6-Dinitrotoluene*
Fluoranthene*
Fluorene
Hexachlorobenzene*
Hexachlorobutadiene*
Hexachlorocyclopentadiene*
Hexachloroethane*
Indeno(1,2,3-c,d)pyrene*
Isophorone
Naphthalene*
2-Nitroaniline
3-Nitroaniline
4-Nitroaniline*
Nitrobenzene*
2-Nitrophenol
4-Nitrophenol*
N-Nitroso-dipropylamine*
N-Nitrosodimethylamine*
N-Nitrosodiphenylamine*
Pentachlorophenol*
Phenanthrene
Phenol*
Pyrene
1,2,4-Trichlorobenzene*
2,4,5-Trichlorophenol*
2,4,6-Trichlorophenol*

*Hazardous constituents included in 40 CFR Part 261, Appendix VIII.

identified in Table 5-3. All of the sampling ports will be closed and sealed immediately after sampling using a gunite or concrete patch material compatible with the original liner material so that no future potential fluid seepage (e.g., rainwater) can penetrate these sampling ports before the liner is removed. Detailed soil sampling procedures and the methodology used to establish a clean level for any contaminants found in the subsoil are described in Section 5.3.

If the soil analyses demonstrate that contamination is present below the gunite liner, the liner will be removed and managed as a hazardous waste. The gunite liner and all below-grade contaminated soils will be broken into sizes suitable for placement into DOT-approved containers. The containers will be placed in the less-than-90-day accumulation area on or near the site and all procedures previously described in Section 5.1.2. will be followed. The containers will then be transferred to the TA-54, Area L storage area until they can be treated at Laboratory facilities or disposed offsite at a RCRA-permitted facility.

If analytical results of the soil sampled below the gunite liner demonstrate that no contamination is present, the liner surface will be decontaminated, using the following procedures, and managed as a nonhazardous waste. First, the liner will be rinsed using a high-pressure, hot-water sprayer to remove remaining residues. The rinseate and any commingled residues will be collected and disposed as hazardous waste. Then the liner will be scrubbed using a surfactant, such as Liquinox or Alconox, and rinsed with the high-pressure, hot-water sprayer. All rinseate will be collected and handled in the same manner as the waste liquids originally removed. The rinse/wash water, prior to use, and the rinseate will be sampled, analyzed and managed in the same manner as the other liquids. When decontamination is complete, the liner will then be broken, removed and disposed in a nonhazardous waste landfill.

As previously noted, sandbags were used to prevent overtopping of the surface impoundment in 1987. As part of the closure process, these sandbags will be drummed in DOT-approved containers and managed as hazardous waste in accordance with all applicable regulations.

5.3 SOIL REMOVAL, SAMPLING, ANALYSIS AND EVALUATION PLAN

After the liner has been removed, and if samples underneath the liner indicate that contamination is present, additional sampling and analysis of the soil below the liner will be performed. The following sections present plans for further soil removal, determining the

TABLE 5-3

METAL COMPOUNDS TO BE ANALYZED IN SOIL SAMPLES

Antimony*
Arsenic**
Barium**
Beryllium*
Cadmium**
Chromium**
Lead**
Mercury**
Nickel*
Selenium**
Silver**
Thallium*

* Hazardous constituents included in 40 CFR Part 261, Appendix VIII.
** Hazardous constituents included in 40 CFR Part 261, Appendix VIII and which have EP Toxicity Standards.

number and the location of samples to be collected and the procedures to be used for collection, storage, and preservation of samples.

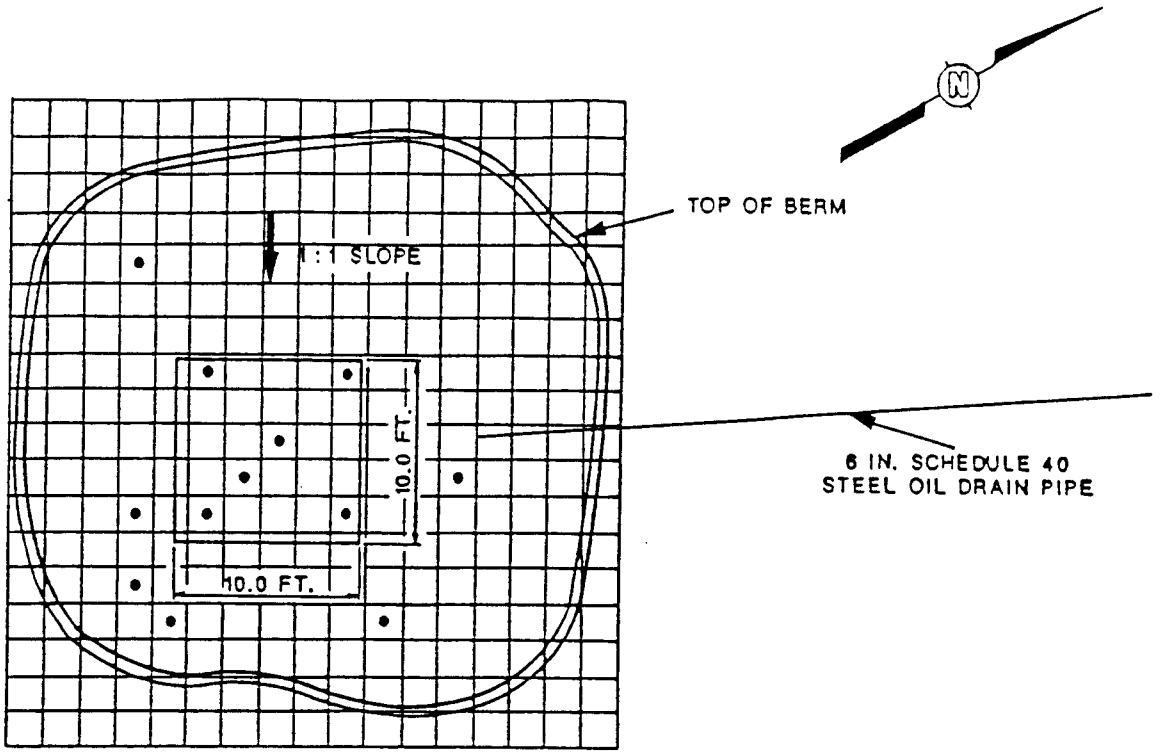
Following U.S. EPA guidance (Appendix A), the Laboratory will document that no unacceptable levels of contamination remain at the site as a result of releases from the units undergoing closure pursuant to this plan. "Contamination" is here defined as concentrations of naturally occurring contaminants that exceed background concentrations and, for non-naturally occurring contaminants, concentrations that exceed health-based limits acceptable to NMED.

As an initial screen, contaminated soil will be excavated if it exceeds the upper 90 percent confidence interval established for background concentration levels for each of the metals found in the waste liquids and waste residues. Background composite soil samples will be used to compare metal levels at the TSL-125 site. Metal concentrations of samples collected from Sigma Mesa (Ferenbaugh et al., 1990) will be used for the background samples.

A second screen in the removal process will involve excavating, to the extent possible, soil that contains volatile and semivolatile organic compounds in concentrations greater than 1.0 ppm. The 1.0 ppm guideline is arbitrarily established as a level below which concentrations are unlikely to exceed health-based levels. By using a field-screening technique rather than relying on time-consuming laboratory analysis, removal of soil indicating contamination over the 1.0 ppm level can expedite the clean-up process.

A three-phase approach to soil removal, sampling, and analysis is proposed. The results of each phase will be evaluated to determine whether the next phase is necessary to verify clean closure. The following outlines the Laboratory's plan for soil removal, sampling, and analysis.

- Phase One
  Clean closure verification sampling will be conducted after the surface impoundment liner and any contaminated soil located immediately below the liner have been removed. A 36-foot long by 34-foot wide grid will be centered over a diagram of the excavated impoundment location. This grid will consist of 306 individual two-foot square sampling locations, as seen in Figure 5-1. Twelve sampling locations will be randomly selected in accordance with Test Methods for Evaluating Solid Wastes, EPA SW-846 (SW-846). Soil samples will be collected from these locations at a depth of approximately six inches below grade of the excavated impoundment area. The samples will be analyzed for volatile and



PLAN VIEW

FIGURE 5-1

DECONTAMINATION VERIFICATION
SAMPLING LOCATIONS
AT TA-35 TSL-125
SURFACE IMPOUNDMENT

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LOS ALAMOS, NEW MEXICO

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semivolatile organic compounds (Tables 5-1 and 5-2), PCBs, and metals identified in Table 5-3.

If contaminants remain, their concentrations will be compared to background metals concentrations and the 1.0 ppm guideline established for volatiles and semivolatiles. Further excavation, sampling and analysis will be based on the contaminant concentrations remaining in the soil.

- Phase Two
  If previous soil sampling results indicate it is necessary, additional soil will be removed and soil samples will be collected. Chemical analyses performed on the second phase of samples will be based on whether the results of a particular analysis are needed to verify clean closure.

- Phase Three
  If sampling and analytical results from Phases One and Two are not adequate to verify clean closure, core samples will be collected to determine the vertical extent of any remaining contamination. Two test holes, one located in the center of the impoundment and the other located just outside of the impoundment, will penetrate to approximately 50 feet below ground surface. No less than ten samples will be collected from each test hole at five-foot depth intervals. Sample intervals will be adjusted, if necessary, based on actual field and drilling conditions. These soil samples will be collected and analyzed for final clean closure verification.

All samples will be collected, stored, and preserved in accordance with protocols described in Section 5.5. Surface and subsurface soil samples will be analyzed for volatile and semivolatile organic compounds (Tables 5-1 and 5-2), PCBs, and metals listed in Table 5-3. If soil remains that contains volatile and semivolatile organic compounds, PCBs, or metals, a risk assessment will be performed to determine if these constituent concentrations are below levels posing a threat to human health and the environment. If the risk assessment demonstrates that contaminants in the remaining soil pose no threat to human health or the environment, then the soil will be left in place. If the risk assessment determines that unacceptable levels of constituents remain in the soil, the soil will be excavated and removed to "clean level" concentrations.

If performed, the risk assessment will be conducted in accordance with U.S. EPA guidance documents (Appendix A) and will compare modeled exposure levels at the site to U.S. EPA-recommended limits or factors. These limits or factors include, at present, health-based limits calculated from verified reference doses (RFDs), carcinogenic potency factors (CPFs), and site-specific U.S. EPA-approved public health advisories. The exposure limits recommended by U.S. EPA are considered protective of human health and the environment.

It should be noted that, prior to performing the risk assessment, if the extent of contamination at the site is found to be minor and not extensive, then all soils within the contaminated area will be removed to the upper 90 percent confidence interval for background concentrations for total metals and to SW-846 analytical detection limits for volatile and semivolatile organic compounds and PCBs in soils. This extremely conservative approach would negate the need to perform a risk assessment and would expedite the closure process by eliminating the risk assessment step. If the volume of soil subject to removal significantly impacts the stability of the existing slopes, the risk assessment will be performed so that the most acceptable environmental impact can be determined.

5.4 GROUND WATER INVESTIGATION PLAN

A certified ground water monitoring waiver meeting the requirements of Pt. VI, sec. 265.90 is maintained at the facility. This waiver, which is available for inspection, precludes the need for ground water monitoring in connection with closure of the TA-35 TSL-125 surface impoundment. In the unlikely event that ground water is encountered during installation of any test hole drilled in connection with this plan, the ground water monitoring plan outlined in Appendix D will be implemented.

5.5 SAMPLING AND ANALYSIS PROCEDURES

The following sections define procedures and methods for sampling, analysis, and documentation applicable to this closure plan. While the procedures and methods are specific, any applicable procedure or method defined in SW-846, most current edition (SW-846) may be used if conditions or experience shows the alternate method to be more appropriate.

Adequate preparation ensures that proper sampling is accomplished. A checklist of items required for field sampling is given in Table 5-4.

The sample collection personnel will be instructed to heed the following precautions:

- Do not smoke, eat, or handle any objects not necessary for sampling while performing sampling procedures.
- Do not sample downwind of any potential volatile organic compound sources such as car exhausts, open fuel tanks, etc. These could result in contamination of the sample. If any such sources are unavoidable, make a note of them in the field logbook.

TABLE 5-4

CHECKLIST OF ITEMS FOR FIELD SAMPLING

ITEM	USE
Field log book	To keep sample records
Disposable towels or rags	To clean sampling equipment
Large polyethylene bags	To store waste papers, rags, etc.
Polyethylene bags	To store sample containers
Waterproof pens	To complete records and labels
Apron, oil and acid proof, or coveralls	Protective garment
Face mask	Protective garment
Liquinox or Alconox Detergent	Used to clean sampler
Protective gloves	Protective garment

- Leave caps on the sample containers until just before filling.
- Avoid handling the teflon bottle cap liners. Do not use any liner which falls out of the cap and onto the ground.
- Gloves should be worn when taking samples and when handling bottles, especially those with added preservative.

5.5.1 Waste Liquid and Rinseate Sampling Procedures

A COLIWASA sampler or similar device will be used to sample liquids in the surface impoundment and rinseate from the liner and equipment cleaning. The recommended model of the COLIWASA is shown in Figure 5-2. As an alternative to the COLIWASA, disposable COLIWASAs, or glass tubes may be used to sample liquids. The primary advantage in utilizing a disposable COLIWASA is that the COLIWASA will be disposed as hazardous waste after each sample is collected, thus eliminating the potential for cross-contamination.

Sampler Preparation

The COLIWASA sampler will be cleaned before each use. The sampler will be washed with a warm detergent solution (Liquinox or Alconox), rinsed several times with tap water, rinsed with distilled water, drained of excess water, and air-dried or wiped dry. A necessary piece of equipment for cleaning the tube of the COLIWASA is a bottle brush that fits tightly inside the diameter of the tube. The brush is connected to a rod of sufficient length to reach the entire length of the sampler tube. Using this ramrod and fiber-reinforced paper towels, the COLIWASA tube can be quickly cleaned. Clean COLIWASA samplers will be stored in polyethylene plastic tubes or bags in a clean and protected area until they are used.

Sampling Procedures

- Assemble the clean glass COLIWASA sampler or disposable COLIWASA.
- Wear necessary protective clothing and gear and observe required sampling precautions.
- Slowly lower the COLIWASA sampler into the liquid at a rate that permits the levels of the liquid inside and outside the sampler tube to remain the same.
- When the sampler reaches the bottom of the liquid, slowly withdraw the sampler with one hand while wiping the sampler tube with a disposable cloth with the other hand.

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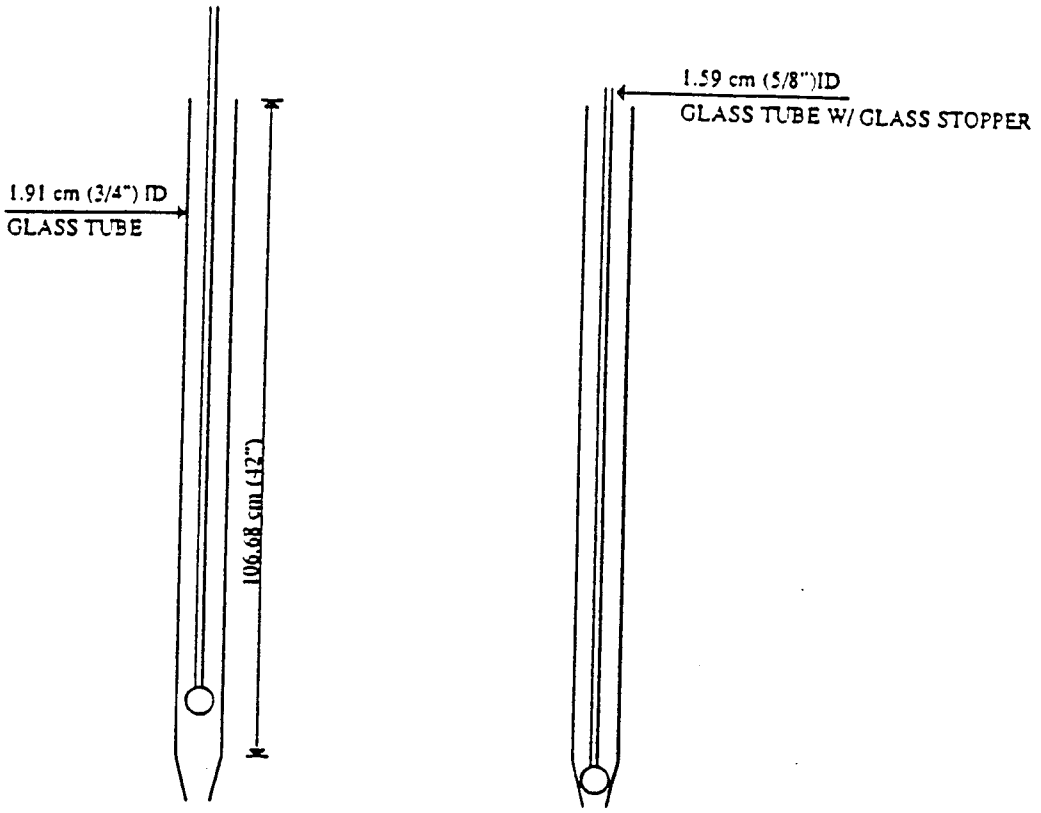

SAMPLING POSITION

CLOSED POSITION

FIGURE 5-2

COMPOSITE LIQUID WASTE SAMPLER
(COLIWASA)

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- Carefully discharge the sample into a glass container by slowly lifting the inner glass tube of the COLIWASA.

- Cap the glass container, attach a label and seal, record in the field logbook, and complete the sample analysis request sheet and chain-of-custody record (Section 5.5.3).

5.5.2 Soil Sampling Procedures

Soil sampled from the surface to five-foot depths will be collected with a trowel, scoop, or hand-held bucket auger. To sample below five-foot depths, samples will be collected using a drilling rig with continuous flight hollow stem augers and split-barrel dry core samplers and/or split-spoon samplers. Only clean sampling equipment will be used for soil sampling. All samples will be collected in U.S. EPA-approved containers and preserved in accordance with U.S. EPA methods (Table 5-5).

Trowel or Scoop Sampling Procedures

- Take small, equal portions of sample from the surface or near the surface of the material to be sampled.

- Composite the samples in a glass container.

- Cap the container, attach a label, record in field logbook, and complete the sample analysis request sheet and chain-of-custody record (Section 5.5.3).

Split-Barrel Sampler

- Assemble the clean split-barrel sampler to the drill rod.

- Continuously core (split-barrel sampler) to desired depth.

- Withdraw the drill rod from the auger string and retrieve the split-barrel sampler.

- Store the core sample in an appropriate sample container and pack in an insulated container with ice.

- Label the sample, affix the seals, record in the field logbook, complete sample analysis request sheet and chain-of-custody record, and deliver the samples to the laboratory for analysis (Section 5.5.3).

Cleaning of Downhole Drilling Tools

All downhole drilling tools (augers, drill rods, etc.) will be steam cleaned or high-pressure, hot-water washed after completion of each test hole. The split-barrel sampler will be cleaned after each location or depth interval is sampled. Drill cuttings and wash fluids will be

TABLE 5-5

SOIL SAMPLE COLLECTION METHODS

CONSTITUENT	CONTAINER TYPE	CONTAINER SIZE	PRESERVATIVE[a] TYPE	AMOUNT
Metals	Glass, silica/teflon septa	250 ml	---	---
Volatile Organics	Glass, silica/teflon septa	(2) 40 ml	---	---
Semi-Volatile Organics	Glass, silica/teflon septa	250 ml	---	---
PCB	Glass, silica/teflon	250 ml	---	---

[a] All samples will be cooled to 4°C upon collection.

separately collected in DOT-approved steel drums and containers, and analyzed to determine a proper disposal protocol.

Hazard Protection

Personnel involved with sampling, liquid removal, and residue removal from the surface impoundment and associated structures will use proper protective clothing and equipment. The Laboratory's Industrial Hygiene Group (HSE-5) will be responsible for assessing hazards and determining protective clothing requirements.

5.5.3 Sample Handling and Documentation

Sample containers will be sealed with a gummed paper seal attached to the container in such a way that the seal must be broken in order to open the container. The seal and sample label will be completed with a waterproof pen. The sample label is necessary to prevent misidentification of samples and shall include, if applicable, the grid number referenced to positions staked on the site perimeter. The "field information" in the case of soil sampling, shall include observations such as the soil texture and surface appearance, ambient temperature and cloud cover at the time of sampling, and precipitation conditions 24 hours before sampling. A chain-of-custody form is necessary to trace sample possession from the time of collection and must accompany every sample.

A separate closure sampling field logbook will be kept and will contain all information pertinent to field surveys and sampling. The logbook shall have bound and consecutively numbered pages in 8-1/2 by 11-inch format. Minimum entries include:

a. Purpose of sample (routine sampling, special sampling)

b. Location of sampling (coordinates referenced to staked field points, if soil sample)

c. Name and address of person making log entry

d. Type of process producing waste

e. Number and volume of sample taken

f. Description of each sampling location, sampling methodology, equipment used, etc.

g. Date and time of sample collection

h. Sample destination and transporter's name (name of laboratory, UPS, etc.)

i. Map or photograph of the sampling site, if any

j. Field observations (ambient temperature, sky conditions, past 24-hour precipitation, etc.)

k. Field measurements, if any (Ph, flammability, explosivity, specific conductance, etc.)

l. Collector's sample identification number(s)

m. Signature of person responsible for the log entry

n. Analytical parameters requested.

Sampling situations vary widely. No general rule can be given as to the extent of information that must be entered in the logbook. A good rule, however, is to record sufficient information so that someone can reconstruct the sampling situation without relying on the collector's memory.

The sample shipment and chain-of-custody record will be accompanied by a sample analysis request sheet similar to Figure 5-3. The request sheet has two parts: field and laboratory. The field portion of this form will be completed by the person collecting the sample and include most of the pertinent information noted in the logbook. The laboratory portion is intended to be completed by the laboratory personnel when the sample is received.

5.5.4 Sample Analysis

All analyses, quality assurance, and quality control will follow methods defined in SW-846. The analytical methods expected to be employed for analysis of samples collected during closure activities are denoted in Table 5-6.

5.6 EQUIPMENT DECONTAMINATION

Prior to use, equipment will be rinsed with distilled water. A representative sample of the wash water, prior to use, and the rinseate will be collected, preserved, and analyzed in accordance with the procedures described in Section 5.4. The samples will be analyzed for volatile and semivolatile organic compounds, PCBs, and metals for which there are EP Toxicity standards to determine if background concentrations of hazardous constituents are present in the equipment prior to use. After use, all equipment used in sampling and removal of liquids and residues that is not dedicated to handling hazardous wastes will be scraped and

PART I: FIELD SECTION

Collector_____ Date Sampled_____ Time_____ hours

Location of Sampling_____
name of company, disposal site, etc.

Address_____
number street city state zip

Telephone (____)_____ Company Contact_____

HML NO.. (Lab only)	COLLECTOR'S SAMPLE NO.	TYPE OF SAMPLE*	FIELD INFORMATION

Analysis Requested_____

Special Handling and/or Storage_____

PART II: LABORATORY SECTION

Received by _____ Title_____ Date_____
Sample Allocation: ___HML ___LBL ___SRL Date_____
Analysis Required_____

*Indicate whether sample is sludge, soil, etc.: Use back of page for additional information.

FIGURE 5-3

HAZARDOUS MATERIALS
SAMPLE ANALYSIS REQUEST

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TABLE 5-6

ANALYTICAL PARAMETERS AND METHODS FOR WASTE (LIQUID AND SLUDGE) AND/OR SOIL SAMPLES COLLECTED AT TA-35 TSL-125

EPA HAZARDOUS WASTE NUMBER	METALS	TOTAL METALS TEST METHOD	EXTRACTION PROCEDURE (EP) TOXICITY TEST METHOD	MINIMUM EP TOXIC CONCENTRATION (mg/l)
D004	Arsenic	3010	1310	5.0
D005	Barium	3010	1310	100.0
D006	Cadmium	3010	1310	1.0
D007	Chromium	3010	1310	5.0
D008	Lead	3010	1310	5.0
D009	Mercury	3010	1310	0.2
D010	Selenium	3010	1310	1.0
D011	Silver	3010	1310	5.0
	Antimony	3010		
P015	Beryllium	3010		
	Nickel	3010		
	Thallium	3010		

Organic Scan	
GC/MS for volatile organics	8240
GC/MS for semivolatile organics	8250 or 8270
PCB Scan	
GC/ECD	Modified EPA Method 8080

Analytical methods are taken from Test Methods for Evaluating Solid Waste, EPA SW 846, and may be superceded by more current or alternate methods from SW 846.

brushed to remove any residue and then washed, rinsed and steam cleaned. Any nondedicated pumps will be decontaminated by pumping soap and water through the instrument. Any equipment that cannot be decontaminated will be disposed as a hazardous waste. The residue collected will be placed in DOT-approved drums for treatment or disposal. Wash water, prior to use, and rinseate will be collected and handled in the same manner as rinseate generated from decontamination of the surface impoundment and tank. Representative samples of the final rinseate will be collected and analyzed as described above. Protective clothing will be collected and disposed as hazardous waste and shipped offsite to a RCRA-permitted facility.

After use, all equipment normally dedicated to handling hazardous wastes and used during the closure process will be scraped and brushed to remove residues and then returned to HSE-7 for routine decontamination and maintenance. The residues will be managed as described above.

6.0 CLOSURE CRITERIA

6.1 CLOSURE SCHEDULE

If the preparation of documentation to establish alternative concentration limits is necessitated by areally extensive contamination, the closure will require more than 180 days to complete and an extension to the 180-day time limit will be requested in accordance with Pt. VI, sec. 265.112(c). The following events will be completed on or before the time indicated below:

TIME (day)	ACTIVITY
0	Closure Plan approved, closure initiated
+15	Remove fluids and residue from surface impoundment, trough, and piping; decontaminate surface impoundment and ancillary structures
+75	Collection of soil samples
+135	Removal of contaminated soil (if necessary)
+150	Further soil removal, sampling, test hole drilling, and chemical analysis, as necessary
+160	Completion of risk assessment to establish exposure limits, if necessary

+175	Removal of additional soil, as appropriate
+210	Backfill, regrade and establish vegetative cover
+220	Certification completed.

The excavation will be filled with clean indigenous soil, and compacted and regraded to its original contour. Selection and application of soil additives, such as fertilizers, and seed mixtures will follow U.S. Forest Service recommendations. The site will be watered sufficiently to establish seedlings. If weather conditions at the time of final closure activities do not allow for planting, an extension to this closure schedule will be sought to allow completion of this step as soon as practicable after the last freeze of the season. If any other circumstances require an additional extension, a letter explaining the need for the extension and including a revised schedule will be provided to NMED.

6.2 MODIFICATIONS TO THE CLOSURE PLAN

Once the closure plan is approved, if it becomes necessary for the Laboratory to amend the plan, procedures outlined in 40 CFR §265.112(c)(1),(2) will be followed.

6.3 FINAL REPORT

The final report, due when all closure activities are completed, will contain at a minimum, the following:

a. A QA/QC summary on the adequacy of the analyses and the decontamination demonstration.

b. A copy of the file of supporting documentation such as laboratory sample analysis reports, QA/QC documentation, and chain of custody records.

c. Disposal location of all hazardous wastes and hazardous waste residues.

d. A narrative summary of all testing performed during closure activities.

e. The details of any variance from the approved closure plan and the reason for the variance.

6.4 CLOSURE CERTIFICATION

An independent registered professional engineer and the owner/operator of the facility shall certify the closure and ensure that the closure activities follow the approved closure plan. Upon completion of closure, the engineer and the U.S. Department of Energy (DOE) shall

prepare a letter, or letters, certifying that the area has been closed in accordance with the approved closure plan. The letter(s) shall be dated and signed by each party and stamped by the registered engineer, and the original copy(s) submitted by the DOE to the Secretary of the NMED. One set of copies shall be maintained at the DOE offices and one set maintained by the Laboratory Environmental Surveillance Group (HSE-8).

6.5 CONTINGENT CLOSURE AND POST-CLOSURE CARE PLANS

Because the Laboratory intends to perform a clean closure under interim status requirements, detailed contingent closure and post-closure care plans are not required at this time. Should the Laboratory be unable to perform a clean closure, a detailed closure plan and post-closure care plan will be submitted to NMED, pursuant to 40 CFR §265.112. The plans will provide the following:

a. A description of final cover placement, i.e. a multimedia cap designed and constructed in accordance with RCRA landfill requirements

b. A description of planned monitoring, maintenance and inspection activities and the frequencies at which they will be performed to ensure containment system integrity

c. The name, address, and phone number of the person or office to contact about the facility during the post-closure care period

d. Any additional information regarding the facility or planned activities for the facility that may be required to address post-closure care. This may include but may not be limited to information regarding post-closure notices and documentation, deed and access restrictions, signs and security, etc.

6.6 NOTIFICATION IN DEED TO PROPERTY

This section is not applicable because a closure by removal exempts the impoundment per 40 CFR §228(a)(1).

6.7 CLOSURE AND POST-CLOSURE CARE COST ESTIMATES

This section is not applicable because federal facilities are exempt from this section per 40 CFR §265.140(c). In addition, the Laboratory intends to perform a clean closure, precluding the need for post-closure care.

6.8 FINANCIAL ASSURANCE MECHANISMS FOR CLOSURE AND POST-CLOSURE CARE

This section is not applicable because federal facilities are exempt from this section per 40 CFR §265.140(c).

6.9 LIABILITY REQUIREMENTS

This section is not applicable because federal facilities are exempt from this section per 40 CFR §265.140(c).

7.0 REFERENCES

Ferenbaugh, R.W., Gladney, E.S., Brooks, G.H., 1990, Sigma Mesa: Background Elemental Concentrations in Soil and Vegetation, 1979, LA-11941-MS, 22 pgs.

APPENDIX A

TA-35 TSL-125
SURFACE IMPOUNDMENT

EPA CLEAN CLOSURE AND
RISK ASSESSMENT GUIDANCE
(Subappendices A-1 through A-3)

SUBAPPENDIX A-1

52 FR 53: 8704-8709, MARCH 19, 1987

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 265

[SW-FRL-3092-1]

Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Final Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Acency is today amending the interim status regulations for closing and providing postclosure care for hazardous waste surface impoundments (40 CFR Part 265, Subpart K), under the Resource Conservation and Recovery Act (RCRA).

The Agency proposed today's modifications to the interim status standards on July 26, 1982. Today's amendments provide conformance between certain interim status requirements for surface impoundments and those requirements contained in the permitting rules of 40 CFR Part 264, that were also published on July 26, 1982. The Agency is also setting forth its interpretation of the regulatory requirements applying to closure of storage facilities regulated under both permits and interim status.

EFFECTIVE DATE: These final regulations become effective on September 15, 1987, which is six months from the date of promulgation, as RCRA section 3010(b) requires.

ADDRESS: The docket for this rulemaking (Docket No. F-87-CCF-FFFFF) is located in Room MLG100, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC and is available for viewing from 9:00 a.m. to 3:30 p.m., Monday through Friday, excluding holidays. Call Mia Zmud at 475-9327 for appointments.

FOR FURTHER INFORMATION CONTACT: RCRA hotline at (800) 424-9346 (in Washington, DC, Call 382-3000) or for technical information contact Ossi Meyn, Office of Solid Waste (WH-565E), U.S. Environmental Protection Agency, Washington, DC 20460, telephone (202) 382-4654.

SUPPLEMENTARY INFORMATION:

I. Authority

These regulations are issued under the authority of sections 1006, 2002(a), 3004 and 3005 of the Solid Waste Disposal Act (SWDA), as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, as amended (42 U.S.C 6905, 6912(a), 6924, and 6925).

II. Background

Subtitle C of RCRA creates a "cradle-to-grave" management system intended to ensure that hazardous waste is safely treated, stored, or disposed. First, Subtitle C requires the Agency to identify hazardous waste. Second, it creates a manifest system designed to track the movement of hazardous waste, and requires hazardous waste generators and transporters to employ appropriate management practices as well as procedures to ensure the effective operation of the manifest system. Third, owners and operators of treatment, storage, and disposal facilities must comply with standards the Agency established under section 3004 of RCRA that "may be necessary to protect human health and the environment." Ultimately, these standards will be implemented exclusively through permits issued to owners and operators by authorized States or the Agency. However, until these permits are issued, existing facilities are controlled under the interim status regulations of 40 CFR Part 265 that were largely promulgated on May 19, 1980. Under RCRA interim status, the owner or operator of a facility may operate without a permit if: (1) It existed on November 19, 1980, (or it existed on the effective date of statutory or regulatory changes under RCRA that render the facility subject to the requirements to have a permit under section 3005); (2) he has complied with the notification requirements of section 3010 of RCRA; (3) he applied for a permit (Part A application) in accordance with section 3005 of RCRA. Interim status is retained until the regulatory agency makes a formal decision to issue or deny the permit or until the facility loses its interim status by statute for failure to submit Part B permit application and/or certification of compliance with applicable ground-water monitoring and financial assurance requirements.

In regulations promulgated on July 26, 1982, [40 CFR Part 264, 47 FR 32274], the Agency established permitting standards in 40 CFR Part 264 covering the treatment, storage, and disposal of hazardous wastes in surface impoundments, waste piles, land treatment units, and landfills. Owners and operators of such facilities must meet these standards to receive RCRA permits. Also included in the **Federal Register** on that date were a series of changes to the interim status requirements of Part 265, which were promulgated to ensure consistency with the new Part 264 standards. There were, however, a few additional Part 265 conforming changes that the Agency believed should first be proposed for public comment because, in most cases, the public had not had sufficient opportunity to comment on the appropriateness of applying them during the interim status period. Many of the changes that were proposed on July 26, 1982, were promulgated in final regulations on April 23, 1985 (50 FR 16044). Today, the Agency is making final the remaining changes to the surface impoundment closure and post-closure care requirements (§ 265.228) that were proposed on July 26, 1982.

III. Discussion of Today's Amendments

The Part 264 rules issued on July 26, 1982, for surface impoundment closure and post-closure care (§§ 264.228 and 264.310) are in many ways similar to the interim status requirements (§§ 265.228 and 265.310). The Part 264 closure rules, however, contain more specific performance standards to assure adequate protection of human health and the environment. For reasons discussed below, the Agency believes the more explicit Part 264 closure rules should also be implemented during interim status. Moreover, EPA believes that the closure process is adequate to apply these closure requirements. The existing review process for interim status closure and post-closure care plans will provide an opportunity for the Agency to review the specifics of the plans for compliance with the closure performance standards. Thus, any problems with misinterpretation of the closure requirements by the owner or operator would be identified and rectified prior to actual closure. In fact, the review process for closure and post-closure care plans during interim status is similar to the review process of closure and post-closure care plans conducted during the permitting process. Therefore, the Agency believes that these closure requirements are capable of being properly implemented during interim status.

The § 265.228 closure rules proposed on July 26, 1982, and promulgated today, retain the basic format of existing regulations by allowing owners and operators to choose between removing hazardous wastes and waste residues (and terminating responsibility for the unit) or retaining wastes and managing the unit as a landfill. (An additional choice for closure is proposed elsewhere in today's **Federal Register**.) The requirements for both choices are made more specific in today's amendments.

If the owner or operator chooses not to remove or decontaminate the waste and waste residues, then the rules promulgated today provide that the owner or operator must: (1) Eliminate free liquids by either removing them from the impoundment or solidifying them, (2) stabilize the remaining waste and waste residues to support a final cover, (3) install a final cover to provide long-term minimization of infiltration into the closed impoundment, and (4) perform post-closure care and ground-water monitoring.

The Part 265 regulations promulgated today (like the existing Part 264 regulations for permitted units) allow owners and operators of surface impoundments to remove or decontaminate wastes to avoid capping and post-closure care requirements (§ 265.228(a)(1)). They must remove or decontaminate all wastes, waste residues, contaminated containment system components (e.g., contaminated portions of liners), contaminated subsoils, and structures and equipment contaminated with waste and leachate. All removed residues, subsoils, and equipment must be managed as hazardous waste unless there is compliance with the delisting provisions of § 261.3(d). (Similar Part 265 closure and post-closure care rules for waste piles were promulgated on July 26, 1982.)

The new requirements for closure by removal differ significantly from the previous Part 265 requirements in one respect. The previous interim status requirement in § 265.228(b) required owners or operators to remove all waste residuals and contaminated soil or to demonstrate, using the procedures in § 261.3 (c) and (d), that the materials remaining at any stage of the removal were no longer a hazardous waste. Once an owner or operator made a successful demonstration under § 261.3 (c) and (d), (s)he could discontinue removal and certify closure.

Under § 261.3 (c) and (d), materials contaminated with listed waste (as evidenced by the presence of Appendix VIII constituents) are hazardous waste by definition unless the material is delisted. Materials contaminated with characteristic wastes, however, are only hazardous wastes to the extent that the material itself exhibits a characteristic. Thus to meet the old closure by removal standard, owners or operators of characteristic waste impoundments had only to demonstrate that the remaining material did not exhibit the characteristic that first brought the impoundment under regulatory control.

This demonstration, however, arguably allowed significant and potentially harmful levels of hazardous constituents (i.e., those contained in Appendix VIII of Part 261) to remain in surface impoundment units without subjecting the units to landfill closure, post-closure care, or monitoring requirements.

For example, the previous version of the rule allowed residues from waste that originally exhibited the characteristic of extraction procedure (EP) toxicity to remain in place at "clean closure" if the residue was no longer EP toxic. This could allow an environmentally significant quantity of hazardous constituents to remain at a facility site that will receive no further monitoring or management. While EP toxic criterion would preclude only a concentration that exceeds 100 times the drinking water standard, constituents may remain at levels significantly above the drinking water standards. If such constituents are close to the saturated zone, they may contaminate ground water at levels exceeding the ground-water protection standard. Furthermore, the waste residues may contain significant and potentially harmful levels of other hazardous constituents (listed in Appendix VIII of Part 261) that are not found through EP testing. Hence, the language "or demonstrate what remains is no longer a hazardous waste" has been dropped from the interim status regulations because it is inconsistent with the overall closure performance standard requiring units to close in a manner that eliminates or minimizes the post-closure escape of Appendix VIII constituents.

Making this conforming change ensures that no Appendix VIII constituent presents any threat to human health and the environment. This is also consistent with several of the new requirements added by the Hazardous and Solid Waste Amendments of 1984. For example, new section 3004(u) of PCRA requires corrective action for releases not only of hazardous wastes, but also hazardous constituents. Similarly, section 3001(f) requires the Agency to consider, when evaluating waste delisting petitions, all hazardous constituents found in the waste, not just those for which the waste was listed as hazardous. Finally, new section 3005(i) requires owners and operators of landfills, surface impoundments, waste piles, or land treatment units that qualify for interim status and receive waste after July 26, 1982, to meet the ground-water monitoring and corrective action standards found in Subpart F to 40 CFR Part 264. These regulations also require owners and operators to monitor and clean up the full range of Appendix VIII constituents found in a waste.

The question has also arisen during the implementation of previous closures by removal whether § 265.228 requires consideration of potential ground-water contamination in addition to soil contamination. The answer to this question is yes. The closure by removal requirements in § 265.228 (a)(1) and (b) require removal or decontamination (i.e. flushing, pumping/treating the aquifer) of "underlying and surrounding contaminated soils." Since contamination of both saturated and unsaturated soils may threaten human health or the environment, the Agency interprets the term "soil" broadly to include both unsaturated soils and soils containing ground water. Thus the closure by removal standard requires consideration of both saturated and unsaturated soils. Uncontaminated ground water is, therefore, a requirement for "clean closure" under Part 265 (and Part 264) as revised today as well as under the previous regulation.

The one comment received on the proposed § 265.228 surface impoundment closure and post-closure care requirements for "clean closure" argued that clay liners should be allowed to remain in place at closure even if they are contaminated because their excavation is expensive and hazardous to workers removing the waste. EPA disagrees. While excavation may be expensive, the additional cost of removing the liner will usually be small in comparison to the cost of removing the waste. Therefore, if an owner or operator is willing to expend the resources to remove the waste, it is not unduly burdensome to go one step further and remove the liner. This burden is justified by the benefit of removing contamination from the impoundment. (See discussion below.) If extensive excavation is needed, thereby considerably increasing the cost of removal, it is generally because extensive contamination of the clay and underlying soils has occurred. In these cases, it may be cheaper to install a proper final cover and perform post-closure care rather than remove the contamination. In addition, we do not believe that removal of the liner will be any more hazardous to workers than is the removal of the waste. With proper safety procedures, removal of the waste and liner should not pose an undue hazard to workers.

EPA's Interpretation of the "Remove or Decontaminate" Standard

The sole commenter on the proposed rule also suggested that, in addition to the case where all wastes, residues, and contaminated liners and soils are

removed, no final cover should be required where the type and quantity of waste in the liner can be shown to pose no public health or environmental threat. This comment touches upon an issue that has arisen in other contexts, that is: What is the necessary extent of removal or decontamination of wastes, waste residues, contaminated liners, and soils (including contaminated ground water) to avoid the landfill closure and post-closure care requirements under both Parts 264 and 265 regulations? The issue concerning how much removal or decontamination of wastes and waste residues is necessary to protect human health and the environment is relevant in a broad range of regulatory contexts currently being examined by the Agency including closure and corrective actions under RCRA and response actions under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) programs.

The removal and decontamination issue arises directly from differences in regulatory strategy between disposal and storage. A storage unit holds wastes temporarily, and the wastes are eventually removed for treatment or disposal elsewhere. The goal at closure is to leave no materials at the storage site that require further care. In contrast, a disposal unit, by definition, is closed with wastes and residues remaining at the site. The goal at closure is to assure that these remaining wastes and residues are managed in a manner that protects human health and the environment. There is no need for post-closure oversight of storage units since all potentially harmful wastes and contaminated materials are removed. This is not true for disposal units; hence, the Agency has promulgated regulations requiring post-closure care for disposal units. (For further discussions on a proposed alternative closure option, see the preamble to proposed §§ 264.310 and 265.310 elsewhere in today's **Federal Register**).

To assist the reader, we describe below EPA's interpretation of the "remove and decontaminate" language in §§ 264.228 and 265.228, i.e. we describe the amount of removal or decontamination that obviates the need for post-closure care for both interim status and permitted surface impoundment units. With regard to storage units regulated under both Parts 264 and 265, the Agency interprets the terms "remove" and "decontaminate" to mean removal of all wastes and liners, and the removal of leachate and materials contaminated with the waste or leachate (including ground water) that pose a substantial present or potential threat to human health or the environment. The Agency recognizes that at certain sites limited quantities of hazardous constituents might remain in the subsoil and yet present only insignificant risks to human health and the environment. Because regulations for storage facilities require no further post-closure care, the Agency must be certain that no hazardous constituents remain that could harm human health or the environment (now or in the future). To provide the necessary level of assurance, the Agency will require owners or operators to remove all wastes and contaminated liners and to demonstrate that any hazardous constituents left in the subsoils will not cause unacceptable risks to human health or the environment. The Agency will review site-specific demonstrations submitted by facility owners and operators that document that enough removal and decontamination has occurred so that no further action is necessary. Owners or operators wishing to avail themselves of the site-specific removal option must include in their closure plans specific details of how they expect to make the demonstration, including sampling protocols, schedules, and the exposure level that is intended to be used as a standard for assessing whether removal or decontamination is achieved (see discussion below). The Agency is presently developing a guidance document explaining the technical requirements for achieving a "clean closure". This guidance document should be available in draft form by January 1987. In the meantime, the following discussion presents the framework for the demonstration procedure.

The closure demonstrations submitted by facility owners and operators must document that the contaminants left in the subsoils will not impact any environmental media including ground water, surface water, or the atmosphere in excess of Agency-recommended limits or factors, and that direct contact through dermal exposure, inhalation, or ingestion will not result in a threat to human health or the environment. Agency recommended limits or factors are those that have undergone peer review by the Agency. At the present time these include water quality standards and criteria (Ambient Water Quality Criteria 45 FR 79318, November 28, 1980; 49 FR 5831, February 15, 1984; 50 FR 30784, July 29, 1985), health-based limits based on verified reference doses (RfDs) developed by the Agency's Risk Assessment Forum (Verified Reference Doses of USEPA, ECAO-CIN-475, January 1986) and Carcinogenic Potency Factors (CPF) developed by the Agency's Carcinogen Assessment Group (Table 9-11, Health Assessment Document for Tetrachloroethylene (Perchloroethylene) USEPA, OHEA/600/8-82/005F, July 1985) to be used to determine exposure at a given risk, or site-specific Agency-approved public health advisories issued by the Agency for Toxic Substance and Disease Registry of the Center for Disease Control, Department of Health and Human Services.

The Agency is currently compiling toxicity information on many of the hazardous constituents contained in Appendix VIII to Part 261. The facility owner and operators should check with the Office of Solid Waste, Characterization and Assessment Division, Technical Assessment Branch (202) 382-4761 for the latest toxicity information. However, for some hazardous constituents, formally recommended exposure limits do not yet exist. If no Agency recommended exposure limits exist for a hazardous constituent then the owner or operator must either remove the constituent down to background levels, submit data of sufficient quality for the Agency to determine the environmental and health effects of the constituent, or follow landfill closure and post-closure requirements. Data submitted by the owner or operator on environmental and health effects of a constituent should, when possible, follow the toxicity testing guidelines of 40 CFR Parts 797 and 798 (50 FR 39252, September 27, 1985). The Agency does not believe there are many situations where developing exposure levels will be a realistic option for owners and operators because the testing required by 40 CFR Parts 797 and 798 to produce reliable toxicity estimates is expensive and time-consuming.

The Agency believes it is necessary to present policy on the appropriate point of exposure for the various pathways of exposure in order to provide some national consistency in dealing with the potential impacts of the release of hazardous constituents from closing units. The following point of exposure was chosen because the Agency believes it represents a realistic and at the same time reasonably conservative estimate of where either environmental or human receptors could be exposed to the contaminants released from the unit. For the purpose of making a closure by removal demonstration, the potential point of exposure to hazardous waste constituents is assumed to be directly at or within the unit boundary for all

routes of exposure (surface-water contact, ground-water ingestion, inhalation, and direct contact). Potential exposure at or within the unit boundary must be assumed because no further oversight or monitoring of the unit is required if the unit is closed by removal. (Recall that the land overlying a unit that closes by removal may be transferred and developed freely without giving notice of its prior use.) Therefore, no attenuation of the hazardous waste constituents leaching from the waste residues can be presumed to occur before the constituents reach exposure points.

This approach differs from the existing "delisting procedure" developed in response to the requirements of §§ 261.3 (c) and (d), 260.20, and 260.22. As discussed previously, the "clean closure" approach is based on the premise that, after closure by removal is satisfied, no further management control over the waste (or unit) is necessary. In contrast, delisted solid waste remains subject to the regulatory controls promulgated by the Agency under Subtitle D of RCRA. Subtitle D contains performance criteria for the management of non-hazardous waste. Although the Agency is currently assessing whether more specific Federal regulatory requirements are needed for waste management under Subtitle D, most states have already adopted specific regulatory requirements for Subtitle D waste management. Therefore, even though a waste may be delisted its management continues to be controlled. In contrast, closure by removal will not be followed by any regulatory controls; hence, an environmentally conservative approach is needed to assure no further risk to human health and the environment. Therefore, unlike the current "delisting procedure" that is based on a generic process that only considers the ground-water route of exposure, the demonstration procedure discussed here is waste-specific and site-specific, considers all potential exposure pathways, and assumes no attenuation.

The demonstration should be conservative in the sense that it eliminates the uncertainties associated with contaminant fate and transport, focusing on the waste contaminant levels and contaminant characteristics. Therefore, arguments relying on fate and transport calculations will not be accepted. The Agency is pursuing this relatively conservative approach at this time because we are confident that it will be protective of human health and the environment. After a few years of experience with "clean closure" demonstrations, the Agency may decide that a less stringent approach is sufficiently reliable to assure that closures based on such analyses are fully protective of human health and the environment. At that time, the Agency may change its position on the use of fate and transport arguments for "clean closure" demonstrations. (Elsewhere in today's Federal Register, the Agency is proposing a third closure option that would incorporate fate and transport factors. However, unlike the closure by removal option, that option would require closure to be followed by verification monitoring to verify the fate and transport predictions and assume that the closure protects human health and the environment.)

To make the demonstration with respect to the direct contact pathway, owners or operators must demonstrate that contaminant levels in soil are less than levels established by the Agency as acceptable for ingestion or dermal contact. Total waste constituent levels in soil should be used for this analysis. Arguments based on exposure control measures such as fencing or capping will not be acceptable since the long-term future use of the property cannot be reliably controlled and hence the long-term effectiveness of these measures is uncertain.

To make the demonstration with respect to the ground-water pathway, owners or operators must remove enough contaminated soil and saturated subsoils (i.e., ground water) to demonstrate that constituent levels in ground water do not exceed Agency-established chronic health levels (based on Rfd or CPF values) and that residual contaminant levels remaining in the soil will not contribute to any future contamination of ground water. (Note: this demonstration may in some cases require constituent-specific ground water data beyond that required by §§ 265.90 through 2165.100). The demonstration related to residual soil contamination levels must show that levels of constituents found in leachate from the residual soil contamination are not above Agency-established exposure levels. Levels of constituents in leachate may be estimated based on known characteristics of the waste constituents (e.g., solubility and partitioning coefficients) or determined by the results of actual soil leaching tests. The Agency is exploring the appropriateness of using the extraction procedures (but not the acceptable contaminant levels) found in the Toxicity Characteristics Leaching Procedure (TCLP), **Federal Register** of January 14, 1985 (51 FR 1690). The current EP Toxicity leaching procedure is insufficient for this demonstration because it does not capture the organic constituents in the waste.

The analysis of potential air exposures should assess contaminants migrating from the soils into the atmosphere. The demonstration should include emission calculations, available monitoring data, and safe inhalation levels based on Agency-established exposure levels.

The potential surface water exposure analysis should compare Agency-established water quality standards and criteria (45 *FR* 79318, November 28, 1980) with the levels of constituents that may leach from the residual contaminated soil. Tests described previously should be used to estimate the level of constituents in the leachate. The surface water exposure analysis should also consider existing surface water contaminant concentrations.

IV. State Authority

A. Applicability of Rules in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. (See 40 CFR Part 271 for the standards and requirements for authorization.) Following authorization, the Agency retains enforcement authority under sections 3008, 7003 and 3013 of RCRA, although authorized States have primary enforcement responsibility.

Prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final authorization administered its hazardous waste program entirely in lieu of the Federal program. The Federal requirements no longer applied in the authorized State, and the Agency could not issue permits for any facilities in a State where the State was authorized to permit. When new, more stringent Federal requirements were promulgated or enacted, the State was obligated to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law.

In contrast, under section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by HSWA take effect in authorized States at the same time that they take effect in nonauthorized States. The Agency is directed to carry out those requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted

authorization to do so. While States must still adopt HSWA-related provisions as State law to retain final authorization, the HSWA applies in authorized States in the interim.

B. Effect on State Authorization

Today's rule promulgates standards that are not effective in authorized States since the requirements are not being imposed pursuant to Hazardous and Solid Waste Amendments of 1984. Thus, the requirements will be applicable only in those States that do not have final authorization. In authorized States, the requirements will not be applicable until the State revises its program to adopt equivalent requirements under State law.

40 CFR 271.21(e)(2) requires that States that have final authorization must modify their programs to reflect Federal program changes and must subsequently submit the modification to EPA for approval. The deadline by which the State must modify its program to adopt today's rule is July 1988. These deadlines can be extended in exceptional cases (40 CFR 271.21(e)(3)). Once EPA approves the revision, the State requirements become Subtitle C RCRA requirements.

States with authorized RCRA programs may already have requirements similar to those in today's rule. These State requirements have not been assessed against the Federal regulations being promulgated today to determine whether they meet the tests for authorization. Thus, a State is not authorized to carry out these requirements in lieu of the Agency until the State requirements are approved. Of course, States with existing standards may continue to administer and enforce their standards as a matter of State law.

States that submit official applications for final authorization less than 12 months after the effective date of these standards are not required to include standards equivalent to these standards in their application. However, the State must modify its program by the deadlines set forth in § 271.21(e). States that submit official applications for final authorization 12 months after the effective date of those standards must include standards equivalent to these standards in their application. 40 CFR 271.3 sets forth the requirements a State must meet when submitting its final authorization application.

V. Effective Date

Pursuant to section 3010(b) of RCRA, today's amendments will be effective six months after promulgation.

VI. Regulatory Impact

Under Executive Order 12291, the Agency must judge whether a regulation is "major" and, therefore, subject to the requirement of a Regulatory Impact Analysis. As stated in the proposed rule on July 28, 1982, the Agency does not believe these conforming changes will result in an annual effect on the economy of $100 million or more; a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or significant adverse effects on competition, employment, investment, productivity, innovation, or in domestic or export markets. In addition, the Part 265 conforming changes do not impose any requirements beyond those required for permitting facilities under Part 264. Therefore, the Agency believes that today's rule is not a major rule under Executive Order 12291.

This regulation was submitted to the Office of Management and Budget for review as required by Executive Order 12291.

VII. Regulatory Flexibility Act

Under the Regulatory Flexibility Act, (5 U.S.C. 601 *et seq.*), the Agency must prepare a regulatory flexibility analysis for all regulations that may have a significant impact on a substantial number of small entities. The Agency conducted such an analysis on the land disposal regulations and published a summary of the results in the **Federal Register**, Vol. 48, No. 15 on January 21, 1983. Today's conforming regulation does not impose significant additional burdens. In addition, they do not impose any requirements beyond those required for permitting facilities under Part 264.

VIII. Paperwork Reduction Act

The certification requirements contained in this rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number 2050-0008.

List of Subjects in 40 CFR Part 265

Hazardous materials, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds, Waste treatment and disposal, Water supply.

Dated: March 8, 1987.

Lee M. Thomas,

Administrator.

For the reasons set out in the preamble, Part 265, Subpart K of Title 40 of the Code of Federal Regulations is amended as follows:

PART 265—INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

1. The authority citation for Part 265 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3004, and 3005 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6924, and 6925).

2. In 40 CFR Part 265, Subpart K, § 265.228 is revised to read as follows:

§ 265.228 Closure and post-closure care.

(a) At closure, the owner or operator must:

(1) Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless § 261.3(d) of this chapter applies; or

(2) Close the impoundment and provide post-closure care for a landfill under Subpart G and § 265.310, including the following:

(i) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

(ii) Stabilize remaining wastes to a bearing capacity sufficient to support the final cover; and

(iii) Cover the surface impoundment with a final cover designed and constructed to:

(A) Provide long-term minimization of the migration of liquids through the closed impoundment;

(B) Function with minimum maintenance;

(C) Promote drainage and minimize erosion or abrasion of the cover;

(D) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(E) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) In addition to the requirements of Subpart G, and § 265.310, during the post-closure care period, the owner or operator of a surface impoundment in which wastes, waste residues, or contaminated materials remain after closure in accordance with the provisions of paragraph (a)(2) of this section must:

(1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cover as

necessary to correct the effects of settling, subsidence, erosion, or other events:

(2) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of Subpart F of this part; and

(3) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

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SUBAPPENDIX A-2

55 FR 145: 30815-30820, JULY 27, 1990

many cases contamination from SWMUs will greatly exceed action levels. The Agency believes that the diversity of SWMUs and contamination scenarios calls for some discretion in the requirement to perform statistical analyses. For example, in some situations, contamination from a SWMU may be known to be extensive in size and concentration. In such situations, statistical analyses are not needed to determine that an action level has been exceeded. In other situations, a contaminant release at a SWMU may not be extensive enough (either in size or concentration) to clearly indicate contamination. In these cases, a statistical test may be required to determine if a release has actually occurred in excess of action levels. The Agency requests comment on its proposed approach of providing discretion to the Regional Administrator in requiring statistical analyses, and on the alternative of making such analyses mandatory in determining whether action levels have been exceeded.

The Agency examined but did not propose two alternatives to requiring the Corrective Measure Study which did not involve the use of action levels. Under one approach, the Agency would have required the permittee to conduct a Corrective Measure Study concurrently with the remedial investigations conducted pursuant to § 264.510. Under this option, the Agency would have used the same trigger for requiring a CMS as is used to require an RFI—the finding of an existing or likely release pursuant to an RFA. This alternative was rejected because of its potential for requiring unnecessary studies.

The second alternative considered by the Agency would have required the permittee to conduct a Corrective Measure Study only after completion of the remedial investigation conducted pursuant to proposed § 264.510 and a determination of the need to protect human health and the environment. If the Agency had adopted this approach, it would not have required the permittee to conduct a CMS until all contamination and contaminant sources at the facility were fully characterized and the need for corrective measures at the facility was established. The Agency rejected the alternative because of the delay that would be associated with conducting these phases of the investigations sequentially even in cases where early data indicate that remediation is highly likely to be required.

The Agency also examined alternative approaches for setting action levels. One alternative would have required a Corrective Measure Study whenever background levels of contaminants were exceeded. Experience in the subpart F program has demonstrated that the determination of background levels can be a lengthy, controversial process. Furthermore, background levels will often be much lower than health-based levels. Thus, this alternative was rejected, since it might delay the initiation of the CMS and ultimate cleanup, and might often require Corrective Measure Studies even where levels were significantly below health and environmental-based standards.

A second alternative would have required a CMS whenever detection limits were exceeded. This alternative was also rejected, since detection limits can be difficult to define and do not directly relate to the goal of corrective action; that is, protection of human health and the environment.

The Agency also considered but did not adopt an alternative for requiring the Corrective Measure Study that would involve the use of a range of action levels. Under this approach, the Agency would select constituent-specific action levels within the 1×10^{-4} to 1×10^{-6} risk range based on the exposure scenarios proposed under §§ 264.521 (a)(2), (b), (c)(3), and (d), depending on the likelihood that exposure would in fact occur. For example, if the Agency could be convinced that there is a minimal opportunity for human exposure through one medium or several media, an action level could be established at the 1×10^{-3} risk level. This alternative was considered because the Agency is concerned about the possibility that some SWMUs might be triggered into a CMS at the 1×10^{-6} level even though they do not pose a threat to human health and the environment due to a lack of current and low probability of future exposure. Although it is the Agency's view that the proposed regulations have enough flexibility to avoid requiring a Corrective Measure Study where it is not necessary, the Agency is requesting comment on the use of a range of action levels.

The Agency believes the approach proposed in today's rule provides it with the flexibility to require the permittee to investigate corrective measures sufficiently early (whether simultaneously with the RFI or sequentially) in the corrective action process, while minimizing the potential for unnecessary investigations. Experience in the Superfund program suggests that early consideration of potential remedies allows focused investigations and prevents delays without imposing unnecessary resource burdens on either the permittee or the Agency.

b. *Criteria for Determining Action Levels.* In several cases, EPA has promulgated health-based standards appropriate for action levels for specific media. Where these standards are available, EPA intends to use them as action levels. The most obvious of these are maximum contaminant levels (MCLs), which establish drinking water standards under the Safe Drinking Water Act (SDWA). EPA will use these standards to set action levels for ground water, and, in some cases, for surface water.

In the overwhelming majority of cases, however, promulgated standards will not be available. Nevertheless, health-based levels that have undergone extensive scientific review, but which have not been formally promulgated, are available for many chemicals. The Agency is proposing today in § 264.521(a)(2) (i)–(iv) criteria which enable the Regional Administrator to use such non-promulgated health-based levels to derive action levels.

Concentrations derived from non-promulgated health-based levels that meet the following four criteria included in today's proposal could be used for action levels. First, the concentration must be derived in a manner consistent with principles and procedures set forth in Agency guidelines for assessing the health risks of environmental pollutants, which were published in the Federal Register on September 24, 1986 (51 FR 33992, 34006, 34014, 34028). Second, toxicology studies used to derive action levels must be scientifically valid, conducted in accordance with the Good Laboratory Practice Standards (40 CFR part 792), or equivalent. The Good Laboratory Practice Standards prescribe good laboratory practices for conducting studies related to health effects, environmental effects, and chemical fate testing, and are intended to assure quality data of integrity. The guidelines are for ensuring scientifically valid studies, and also may be useful as guidance. In addition, the Agency guidelines for assessing the health risks of environmental pollutants (cited above) cite several publications which outline procedures for evaluating studies for scientific adequacy and statistical soundness. Third, concentrations used as action levels must (for carcinogens) be associated with a 1×10^{-6} upperbound excess cancer risk for Class A and B carcinogens, and a 1×10^{-5} upperbound excess cancer risk for Class C carcinogens. Finally, for systemic toxicants (referring to toxic chemicals

that cause effects other than cancer or mutations), the action level must be a concentration to which the human population (including sensitive subgroups) could be exposed on a daily basis that is likely to be without appreciable risk of adverse effects during a lifetime. These criteria are similar to those upon which promulgated health-based standards and criteria are based. Action levels derived according to these criteria represent valid, reasonable estimates of levels in media at or below which corrective action is unlikely to be necessary.

As mentioned previously, guidance levels are available for many chemicals. Appendix A of this preamble lists concentrations for selected hazardous constituents in water, soil, and air which the Agency believes meet these four criteria. EPA established these concentrations by an assessment process which evaluated the quality and weight-of-evidence of supporting toxicological, epidemiological, and clinical studies, and which relied on the exposure assumptions in appendix D of this preamble.

The Agency's approach to assessing the risks associated with systemic toxicity is different from that for the risks associated with carcinogenicity. This is because different mechanisms of action are thought to be involved in the two cases. In the case of carcinogens, the Agency assumes that a small number of molecular events can evoke changes in a single cell that can lead to uncontrolled cellular proliferation. This mechanism for carcinogenesis is referred to as "nonthreshold," since there is essentially no level of exposure for such a chemical that does not pose a small, but finite, possibility of generating a carcinogenic response. In the case of systemic toxicity, organic homeostatic, compensating, and adaptive mechanisms exist that must be overcome before the toxic end point is manifested. For example, there could be a large number of cells performing the same or similar function whose population must be significantly depleted before the effect is seen.

The threshold concept is important in the regulatory context. The individual threshold hypothesis holds that a range of exposures from zero to some finite value can be tolerated by the organism with essentially no chance of expression of the toxic effect. Further, it is often prudent to focus on the most sensitive members of the population; therefore, regulatory efforts are generally made to keep exposures below the population threshold, which is defined as the lowest of the thresholds of the individuals within a population.

Thus, for the chemicals on appendix A which cause systemic toxic effects, the Agency has estimated reference doses (RfDs). The RfD is an estimate of the daily exposure an individual (including sensitive individuals) can experience without appreciable risk of health effects during a lifetime, and is consistent with the threshold concept described above.

For the chemicals on appendix A which are believed to cause cancer, the Agency has estimated carcinogenic slope factors (CSFs). Since the Agency assumes that no such threshold exists for carcinogens, the issue to be resolved in health assessments of carcinogens is the probability of the occurrence of an effect. The CSF, or unit cancer risk, is an estimate of the excess lifetime risk due to a continuous constant lifetime exposure from one unit of carcinogenic concentration (*e.g.*, mg/kg/day by ingestion, ug/m^3 by inhalation). Chemicals which cause cancer and mutations also commonly evoke other toxic effects. Thus, an RfD and CSF may both be available for a single chemical. In these cases, the level which is lower (more protective) should be used as an action level. Generally, the protective level for cancer will be lower.

For carcinogens, EPA believes that action levels corresponding to a 1×10^{-6} risk level (or 1×10^{-5} for Class C carcinogens) generally are appropriate. This is at the higher protective end of the 10^{-4} to 10^{-6} risk range. (See discussion in section VI.F.5 of today's preamble.) Using a value from the high end of this range ensures that the hazardous constituents screened out at this point are those for which corrective measures are unlikely to be necessary.

In adopting the 1×10^{-4} to 1×10^{-6} risk range for this proposed rule, the Agency recognized that 1×10^{-4} risk levels of constituents may not be protective at all sites, due to multiple constituents, multiple exposure pathways, or other site-specific factors.

Thus, the alternative of establishing actions levels at the lower protective end of the risk range (*e.g.*, 1×10^{-6}) was rejected since it would be too insensitive a trigger—*i.e.*, it would fail to require a Corrective Measure Study at some sites which may pose a threat to human health and the environment. The Agency believes that the selected risk levels are reasonable points to establish action levels for carcinogens.

Section 264.521(a)(2)(iii) provides some flexibility to the Regional Administrator to consider the overall weight of evidence of carcinogenicity in setting action levels for carcinogens. EPA has explained its classification scheme for carcinogens based on the weight of evidence for carcinogenicity in its cancer guidelines (51 FR 33992). The constituent concentrations provided as example action levels in appendix A reflect this approach. In this table, known or probable human carcinogens (known as Class A and Class B carcinogens, respectively, under the Agency guidelines) are listed at a 1×10^{-6} risk level, whereas concentrations listed for constituents for which the weight of evidence of carcinogenicity is weaker (known as Class C, or possible human carcinogens under the Agency's guidelines), correspond to a 1×10^{-5} risk level. Some experts have argued that it is inappropriate to weight Class C carcinogens in this way, and that all substances classified as carcinogens should be weighted equally, whereas others argue that Class C carcinogens should be weighted more heavily (*i.e.*, more stringently) because of the greater uncertainty associated with the limited evidence of their carcinogenicity. The Agency solicits comments on how it should handle Class C carcinogens in setting action levels.

Many of the RfDs and CSFs used to derive the concentrations listed in appendix A are available through the Integrated Risk Information System (IRIS), a computer-housed, electronically communicated catalogue of Agency risk assessment and risk management information for chemical substances. IRIS is designed especially for Federal, State, and local environmental health agencies as a source of the latest information about Agency health assessments and regulatory decisions for specific chemicals. (To establish an IRIS account, call Dialcom at (202) 488-0550.) The risk assessment information (*i.e.*, RfDs and CSFs) contained in IRIS, except as specifically noted, has been reviewed and agreed upon by intra-agency review groups, and represents an Agency consensus. As EPA working groups continue to review and verify risk assessment values, additional chemicals and data components will be added to IRIS. IRIS hardcopy will be available through the National Technical Information Service (NTIS). In addition, EPA will routinely update appendix A as new data on hazardous constituents are developed.

c. *Action Levels for Ground Water.* Proposed § 264.521(a) establishes action levels for ground water in aquifers. By specifying the term "aquifer" in this context, the Agency intends to define broadly the type of ground-water

contamination situations that may require Corrective Measure Studies, while triggering such studies only in situations where actual ground-water cleanup is a reasonable remedial approach.

The Agency considered using the term "uppermost aquifer," but decided that this would limit its flexibility in addressing contamination in lower aquifers that are not hydraulically connected with the uppermost aquifer. Such a situation could arise if waste were leaked from the casing of an underground injection well. Thus, the wording of § 264.521(a) will explicitly allow the Agency to address any such unusual instances where solid waste management units have contaminated ground water that is not in an "uppermost" aquifer as defined in § 264.510.

The Agency also considered not using the term "aquifer" in § 264.521(a). This would have required Corrective Measure Studies for ground water to be performed even when the ground water is of negligible use as a resource, such as a small pocket of soil which becomes saturated only episodically. Although contamination in any saturated zone that could act as a pathway transporting contaminants to aquifers could be a concern, the Agency would intend to address those situations in the context of setting action levels for soils (see § 264.521(d)), including "deep soils" that could act as a ground-water contaminant pathway.

EPA has, under a number of statutes, promulgated standards and criteria relevant to protection of environmental media. Among the most important of these are maximum contaminant levels (MCLs) promulgated under the Safe Drinking Water Act (42 U.S.C. section 300(f) *et seq.*), which have been incorporated into this rule as action levels for ground water under § 264.521(a)(1). MCLs promulgated under the Safe Drinking Water Act are maximum concentrations of contaminants allowed in water used for drinking (see appendix B). The use of MCLs for action levels is consistent with current RCRA ground-water protection standards (40 CFR part 264, subpart F), which set the interim primary drinking water standards (MCLs) for 14 constituents (which existed at the time subpart F regulations were promulgated) as ground-water protection standards in the absence of another Agency decision. Currently there are 34 MCLs promulgated, of which six are microbiological contaminants, three are radionuclides, and 25 are organic and inorganic contaminants; the MCLs for the chemical contaminants are listed in appendix B.

Where MCLs are available for a particular constituent but the ground water at a site is not currently used for a drinking water supply, and is unsuitable for use as a drinking water supply in the future, MCLs will still ordinarily be used as action levels (*i.e.*, to require a CMS); however, cleanup to the MCL might not be required (see section VI.F.5 for discussion of media cleanup standards). The Agency is persuaded that, in cases where ground water is contaminated at levels above action levels, further study is necessary (*e.g.*, to make sure that sources of releases are controlled).

Where MCLs have not been promulgated for hazardous constituents, EPA would develop levels according to the criteria specified in proposed § 264.521(a)(2)(i)–(iv) and described in detail above in this preamble (see section VI.E.2.b). In this analysis, the Agency would use the standard exposure assumptions of two liters a day for a 70 kilogram adult over a 70 year lifetime (see appendix D), assumptions that are used extensively throughout EPA and other agencies. Appendix A lists levels that were developed for water by the Agency according to these principles and which the Agency believes would be appropriate for ground-water action levels. In addition, proposed (but not yet promulgated) MCLs would also typically meet the criteria proposed in § 264.521(a)(2)(i)–(iv) and could serve as ground-water action levels.

Where data are insufficient to develop action levels according to these criteria, the Agency would establish levels according to the procedures in proposed § 264.521(e), which are described in more detail in section VI.E.2.g of this preamble. The Agency solicits comment on the proposed approach and alternative approaches to establishing action levels for ground water.

d. *Action Levels for Air.* Proposed § 264.521(b) identifies criteria for establishing action levels for air, assuming exposure through inhalation of air contaminated with the hazardous constituent. Appendix A lists possible action levels that meet these criteria. The Agency used the following procedures to develop concentrations in air listed in appendix A:

Note: Appendix A action levels are currently taken exclusively from the IRIS data base, and developed using only procedures 1 and 4; this appendix will be modified to include other health-based numbers not currently on IRIS, derived from procedures 2 and 3. This is consistent with current Superfund practices and policy.

1. Where an Agency-verified health-based intake level for inhalation (*e.g.*, RfD) was available, that level was used to calculate the concentration in air.

2. Where an Agency-verified level (as in (1), above) was not available, a level based on a valid inhalation study was used, even if it had not yet gone through the formal intra-Agency verification process.

3. If a level based on an inhalation study (as in (1) or (2) above) was not available, a health-based intake level (*e.g.*, RfD) based on an oral study was used, with a conversion factor of one for route-to-route extrapolation to calculate the concentration in air—except where such an extrapolation factor was determined to be inappropriate. For example, it is not appropriate where a constituent that is a systemic toxicant through the oral route of exposure causes local adverse effects on the lung through the inhalation route. A constituent might also be determined to be an inappropriate candidate for route-to-route extrapolation due to significant differences in metabolism or absorption. Where the extrapolation from oral route to inhalation route of exposure is determined to be inappropriate, and a level based on an inhalation study (as in (1) or (2) above) is not available, appendix A does not list a concentration in air (see section VI.E.2.g for a discussion of how to set action levels where health- and environment-based levels are not available). While the concentrations in air listed in appendix A (and C) are being evaluated further by the Agency with regard to the appropriateness of this route-to-route extrapolation, they will be used only as an interim measure. The Agency will adopt RfDs based on actual inhalation toxicity data as soon as the data become available.

4. The standard exposure assumption for air typically used in Agency risk assessments (i.e., $20m^3$/day for a 70 kilogram adult for a 70 year lifetime) was used (see appendix D).

Under proposed § 264.521(a)(2), action levels would be measured or estimated at the facility boundary, or another location closer to the unit if necessary to protect human health and the environment.

The Agency has chosen the facility boundary as the location where air action levels are proposed to be typically measured, for several reasons. Measuring at the facility boundary will have the effect of requiring Corrective Measure Studies to be conducted whenever potentially health-threatening levels of airborne constituents that originate from waste management units

are being released to areas outside the facility property. The Agency recognizes that in some cases this could require owner/operators to study potential remedial solutions where actual remediation of air releases will not be required—under today's proposal, the requirement actually to remediate air releases is tied to actual exposure; *i.e.*, exceedence of health-based levels at the most exposed individual (see the discussion of air cleanup standards in section VI.F.7.a of today's preamble). However, under this scenario, if exposure conditions were to subsequently change and trigger the need for corrective action for air emissions, the owner/operator would be able to more expeditiously implement the remedy that had already been developed in the Corrective Measure Study. The Agency believes that measuring action levels at the facility boundary, while environmentally conservative, will not represent an undue burden on owner/operators.

Under today's proposal, the Regional Administrator could, when necessary, require action levels to be measured at one or more locations within the facility. An example would be if individuals were actually residing on the facility property, as might be the case at a Federal facility (*e.g.*, a military base). On-site worker exposure would not generally be a determining factor in establishing locations for action levels, since such exposure is regulated by the Occupational Safety and Health Administration (see further discussion in section VI.F.7.a(2) of today's preamble).

The Agency considered, but did not propose, other locations for establishing action levels for air releases. These alternative locations would have involved determining action levels at (1) the unit boundary, or (2) the most exposed individual. The alternative of determining action levels at the unit boundary was rejected as unnecessarily stringent, since it would likely have the effect of very often triggering the need for a Corrective Measure Study, where no actual or potential threat to human health and the environment existed. The option of measuring action levels at the most exposed individual was not chosen because in some cases a CMS would not be triggered based on current locations of receptors, even though future residential development close to the facility were planned and could result in exposure above action levels. The Agency specifically requests comment on the most appropriate location for measuring action levels for the air medium.

e. *Action Levels for Surface Water.* Proposed § 264.521(c) identifies action levels for surface water. Notwithstanding these action levels, some releases from solid waste management units to surface water may be subject to the National Pollutant Discharge Elimination System (NPDES) pursuant to section 402 of the Clean Water Act (CWA). The CWA prohibits the unregulated discharge of any pollutant to waters of the United States from any point source. Releases to surface waters that are nonpoint sources may be subject to the Nonpoint Source Management Program established under sections 208 and 319 of the CWA. If the Agency discovers releases from solid waste management units which are point sources, but lack an NPDES permit, CWA authorities will generally be used to address the release. It should be understood that the term surface water in this context includes wetlands, as prescribed under section 404 of the CWA. Section 404 permits are required for dredge and/or fill into wetlands.

Proposed § 264.521(c) specifies that State water quality standards established pursuant to section 303 of the CWA that are expressed as numerical values will be used as action levels, where they have been established for the surface water body in question. However, EPA anticipates that such numerical standards may, in some cases, not have been established at the time when remedial investigations are being conducted at RCRA facilities. In these cases, action levels may be established as numeric interpretations of State narrative water quality standards.

Water quality standards both establish water quality goals, and serve as a basis for establishing treatment controls, based on the use or uses which the State designates for the receiving water (*e.g.*, recreation or public water supply). The standards consist of a designated use or uses, and the water quality criteria which will protect such uses. Criteria are expressed as either numeric constituent concentration levels or narrative statements that represent a quality of water that supports a particular use.

In applying narrative standards to specific water bodies, some States have prescribed methods for calculating numeric values for the water body. Such methods vary from State to State in their complexity, the time required to establish the numeric values, and the procedures involved. Although deriving these numeric interpretations from narrative standards will often be straightforward, the Agency expects that in some situations the derivation of such values could be relatively complex and time-intensive. In such cases, the Regional Administrator could determine that the use of numeric interpretations of narrative water quality standards was not appropriate for the purpose of establishing action levels. EPA emphasizes that the use of such narrative standards must not delay the corrective action process.

Where numeric water quality standards have not been established by the State, and where numeric interpretations of narrative standards are either unavailable or inappropriate (for reasons described above), proposed § 264.521(c)(3) provides that maximum contaminant levels (MCLs) promulgated under the Safe Drinking Water Act will be used as action levels, if the surface water has been designated as a drinking water source by the State (see discussion in previous section on the use of MCLs as action levels in ground water).

In situations where a numerical water quality standard, a numeric interpretation of narrative standards, or an MCL is not available for a particular hazardous constituent in surface water designated by the State for drinking, proposed § 264.524(c)(4) specifies that the criteria under § 264.521(a)(2) (i)-(iv) be used for establishing action levels in surface water, assuming exposure through consumption of the water contaminated with the hazardous constituent. The standard exposure assumptions of two liters/day for a 70 kg adult over a 70 year lifetime in appendix D should be used, unless people also consume aquatic organisms from the surface water. In these cases, the Agency suggests that Federal Water Quality Criteria be used as action levels, since they satisfy the criteria for action levels established under § 264.521(a)(2) (i)-(iv). Federal Water Quality Criteria are concentrations of contaminants determined to be protective of human health and/or aquatic organisms. Criteria for protection of human health are based on exposure through drinking water, as well as exposure through drinking water and ingesting aquatic organisms. Criteria for protection of freshwater/estuarine and marine organisms are also available. EPA has promulgated water quality criteria for 126 pollutants under the Clean Water Act.

In situations where a numerical water quality standard is not available for a particular hazardous constituent in surface water designated by the State for uses other than drinking, proposed § 264.524(c)(5) provides the Regional

Administrator with the flexibility to consider the State-designated use of the surface water in establishing a concentration as the action level. For example, in some surface waters designated for industrial uses, the Agency believes that an MCL may be too sensitive a trigger for a CMS. In other situations, MCLs may be too insensitive a trigger for a CMS (for example, in trout streams). Federal Water Quality Criteria may provide useful guidance in setting action levels under § 264.524(c)(5).

If Federal Water Quality Criteria are used as action levels, the purposes for which such criteria were developed should be considered in determining which criteria are appropriate to use. For example, for a surface water body used for fishing and drinking, the criteria for protection of human health based on drinking water and eating aquatic organisms would be most appropriate. For Class A and Class B carcinogens, the criteria corresponding to a 10^{-6} risk level should be used, whereas for Class G carcinogens, the Agency suggests that the criteria corresponding to 10^{-5} risk level be used. (See discussion of Agency-established classes of carcinogens and relative risk levels considered appropriate in section VI.E.2.c of this preamble.)

If contaminants attributable to releases from a SWMU exceed an action level anywhere in surface water, a Corrective Measure Study may be required. Proposed § 264.521(c) does not specify where in surface waters concentrations should be measured against action levels. In determining appropriate sampling locations, the Agency will generally attempt to specify locations in the surface water where the highest concentrations of hazardous constituents released from SWMUs are expected to occur—*i.e.*, at or near the point or points where releases enter the surface water. However, in some cases, establishing the precise point(s) where releases enter the surface water may be difficult and time-consuming, such as in the case of a ground-water plume in a complex hydrogeologic setting that flows into a lake. In these cases, the Agency would not wish to delay the initiation of a Corrective Measure Study while the point of release is located, if concentrations greater than action levels could already be detected in the surface water.

EPA specifically requests comment on today's proposal for establishing action levels for surface water.

Proposed § 264.520(b), which allows the Regional Administrator to require a CMS when necessary to protect human health and the environment, even when no action levels have been exceeded, may be particularly important for surface water. For example, the Regional Administrator may determine that a threat from consumption of aquatic organisms exists at levels at or below the MCL, since the MCL does not incorporate exposure through ingestion of contaminated organisms.

A Corrective Measure Study may also be required under § 264.520(b) if the Regional Administrator determines that there is a threat to human health or the environment from contaminated sediments even though action levels for surface water have not been exceeded. The Agency believes it is important to clarify its authority to address sediments contaminated by releases from solid waste management units under sections 3004 (u) and (v) of HSWA, although today's proposal does not establish action levels specifically for sediments. The Agency is currently developing sediment criteria which, when promulgated, may be used as guidance in evaluating contaminated sediments. However, no health-based or environmental levels are currently available which are appropriate as sediment action levels. Thus, until such criteria are developed, the need for Corrective Measure Studies based on sediment contamination will be determined on a case-by-case basis. The Agency requests comment on this approach to addressing sediments.

Finally, the Regional Administrator may require a Corrective Measure Study for surface water under § 264.520(b) when a threat to aquatic health exists at levels at or below action levels. Federal Water Quality Criteria for protection of aquatic health should be used as guidance in making this determination.

f. *Action Levels for Soil.* Proposed § 264.521(d) establishes criteria for establishing action levels for soil, assuming exposure through consumption of the soil contaminated with the hazardous constituent. Action levels would be set on the basis of the exposure assumptions in appendix D, which assume a residential use pattern, with long-term direct contact and soil ingestion by children. Action levels for soil would typically be measured on the surface (generally the upper two feet of earth).

The exception to this approach, is where EPA has already established standards for the cleanup of spilled polychlorinated biphenyls (PCBs), which are regulated under the Toxic Substances Control Act (TSCA). The Agency has determined that the use of these promulgated standards, as action levels and cleanup standards for soil, is relevant to RCRA corrective action. This policy is also consistent with Superfund policy. The PCB Spill Policy under TSCA is discussed more fully in section VIIB of this preamble.

Although action levels for soils are established using direct contact assumptions most appropriate for surficial soils, it is intended that these action levels will often also be used as a presumption that a CMS may be necessary for contaminated deep soils which may pose a threat to ground water in aquifers. The Agency does not believe that generic action levels based on the potential for hazardous constituents in soil to contaminate ground water can be developed at this time, since the type of soil, distance to ground water, and other site-specific factors, as well as the properties of the hazardous constituent, influence this potential. A permittee may attempt to rebut this presumption by demonstrating that there is no threat to human health and the environment from such deep soil contamination, either through direct contact or migration to aquifers or surface water. Alternatively, § 264.520(b) may be used to require a CMS in situations where deep soils are contaminated below action levels, but pose a threat to ground water in aquifers.

Although estimates of soil intake are not as frequently used by the Agency as are estimates of air or water intake, appendix D provides recommended exposure assumptions for non-carcinogenic and carcinogenic soil contaminants given an unrestricted use scenario. A soil ingestion rate of 0.1 g/day is recommended for carcinogens, and a rate of 0.2 g/day, based on an average child's body weight of 16 kg, is recommended for non-carcinogens.

In the case of non-carcinogenic contaminants, the oral RfD would be used to calculate an action level, or threshold concentration below which adverse effects would not occur, assuming 0.2 gram per day of soil is consumed. Sixteen kilograms represents an average body weight for children aged one to six. The Agency believes these exposure assumptions are reflective of a conservative average scenario in which children ages 1–6 years (*i.e.*, the time period during which children exhibit the greatest tendency for hand-to-mouth activity) are assumed to ingest an above-average amount of soil on a daily basis. The exposure levels estimated in this manner are calculated to keep exposures well below the population "threshold" for toxic effects (see earlier preamble discussion). Since the toxic effect of concern is assumed to occur once the threshold

level is exceeded, the amount of soil ingested on a daily basis becomes of major importance in determining non-carcinogenic effects. Therefore, to account properly for the risk from elevated exposure to non-carcinogenic soil contaminants during early childhood years, it is important that the exposure not be estimated over a lifetime; to do so would "smear" out the peak exposure occurring during the above-mentioned time period of five years and result in the failure to detect an unacceptable exposure level (*i.e.*, a level which exceeds the RfD).

In the case of carcinogens, the action level would be derived by assuming consumption of 0.1 g/day averaged out over a lifetime, based on an adult body weight of 70 kilograms. Because the expression of carcinogenic effects is principally a function of cumulative dose (*i.e.*, the time course of exposure is usually secondary), the Agency believes, in general, that elevated exposures during early childhood are relatively unimportant in determining lifetime cancer risk. Therefore, total lifetime (cumulative) soil ingestion can be averaged to derive a per day value. These exposure assumptions do, however, reflect a reasonable worst-case scenario—0.1 g/day is an upper-range estimate of soil ingestion for older children and adults.

The above recommendations are based on the conservative assumptions that 100 percent of the ingested non-carcinogenic and carcinogenic soil contaminants are absorbed across the gastrointestinal tract and that ingestion occurs 365 days/year, regardless of climatic conditions or age. The Agency solicits comment on the above assumptions for soil exposure for establishing action levels.

The Agency considered the use of other generic exposure assumptions for establishing action levels for soil based on direct contact (*e.g.*, exposure through dermal contact, exposure through ingestion under a non-residential scenario), but rejected these alternatives for several reasons. First, establishing action levels based on generic assumptions for dermal exposure or exposure via ingestion of soil under a non-residential scenario would be a far less sensitive trigger, and could in effect cause a "false negative" in situations where the Agency believes corrective action would be necessary. Second, the data base for developing action levels based on dermal exposure or exposure via ingestion of soil under a non-residential exposure scenario is limited.

In addition to considering generic exposure assumptions, the Agency considered the use of site-specific, direct contact exposure factors for deriving soil action levels. However, the Agency believes that assessing site-specific exposure in setting action levels would be a resource-intensive process, and would run counter to the objective of using action levels as a simple screening mechanism. The Agency recognizes that the proposed approach is conservative. Nevertheless, the Agency believes that these levels are appropriate as action levels (as opposed to cleanup targets)—that is, they can reasonably serve as rebuttable presumptions that further study, including analysis of possible remedies, is necessary.

Soil cleanup levels are discussed in more detail in section VI.F.5 of this preamble. However, it should be recognized that facilities with soil contamination above an action level—particularly where the levels would pose no threat under current conditions of exposure—would have a wide range of remedial options open to them, including "conditional" remedies (for which the permit would specify appropriate exposure controls), or the covering of the contaminated soil with a soil cap. In this case, a Corrective Measure Study might simply be a proposal to clean up to protective levels, assuming industrial land use, and to ensure restricted access for the life of the permit. This raises the issue of "conditional" remedies, which is discussed in more detail in section VI.F.8 of this preamble.

g. *Action Levels Where Health- and Environmental-Based Levels Are Not Available.* If, for any medium, Agency-promulgated standards or criteria, or other health-based levels meeting the proposed criteria are not available or cannot be developed for use as action levels, § 264.521(e) allows the Regional Administrator to set an action level for any constituent on the basis of available data and reasonable worst-case assumptions. In most cases, partial data or data on structural analogs will allow the Regional Administrator to estimate whether the detected level of a contaminant is likely to cause a problem. In other cases, other contaminants will be present at high levels (triggering a CMS in any case), and it will be clear that the constituent is not a driving factor in determining the risk at the site, even under worst-case assumptions concerning its toxicity. In such cases it may not be necessary to specify an action level for the constituent. Finally, under proposed § 264.521(e)(2), the Regional Administrator would have the authority to set the action level at background for a hazardous constituent for which data were inadequate to set a health- or environment-based action level. This option, however, is providad primarily as a fall-back position. The Agency believes that it will very rarely be necessary to set action levels at background.

As indicated earlier, appendix A lists possible action levels for a range of hazardous constituents based on the criteria proposed in § 264.521(a)(2). EPA's Office of Solid Waste (OSW) is developing, for the purpose of guidance, health-based numbers on additional constituents. These levels would also satisfy the criteria of proposed § 264.521(a)(2). As these additional health-based levels are developed, they will be entered into tha Integrated Risk Information System (IRIS). For information on these guidance numbers, the OSW Technical Assessment Branch/Health Assessment Section should be consulted at (202) 382-4761.

h. *Authority to Require a Corrective Measure Study Where Action Level Have Not Been Exceeded.* The Agency believes it is important to provide the Regional Administrator authority to require a CMS under § 264.520(b) even when no constituents exceed action levels. For example, a CMS could be required if there are threats to certain sensitive environmental receptors at a particular facility with contamination at or below action levels. Also, a CMS could be required in situations where the risk posed by the presence of multiple contaminants may be high enough to warrant a Corrective Measure Study even if no single constituent exceeds the individual action level for the constituent. Similarly, if individuals living near the site are receiving significant exposures from sources other than SWMUs at the site, the incremental exposure due to SWMUs at the site may result in a cumulative risk large enough to warrant a CMS. In addition, there may be situations where "cross-media" risks could indicate the need for a CMS, even though action levels in a particular medium have not been exceeded. An example might be where at nearby residences releases in both the air and ground water are present at very low levels, but the cumulative risks from both pathways of exposure are sufficiant to be of concern. Although such situations are expected to be relatively rare, the Agency will examine such cross-media risks when site-specific conditions indicate the potential for such exposure factors.

A CMS may also be required if constituents pose a threat through exposure pathways other than that assumed in setting action levels. For example, constituents in surface water that do not exceed MCLs may still pose

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develop and conduct these further Regulatory Impact Analyses.

The new analyses will be conducted in accordance with the existing Agency guidance on Regulatory Impact Analysis and the draft Regulatory Impact Analysis Guidance published in the 1988 Regulatory Program of the United States. The analyses will explicitly examine the costs, health and environmental benefits, and technological limitations for the key regulatory requirements contained in the proposal—especially for the several alternative approaches to ground water remediation outlined in the proposed rule. This analysis will also estimate the aggregate impacts, identified above, for sites eligible for remediation under this rule and for those sites which are listed on the NPL and will, therefore, look to this rule as an ARAR, under the provisions of CERCLA. Upon completion of the revised analyses, EPA will solicit comment on the results of the analyses and the methodology used to derive them. The Agency will then assess these comments, along with comments which will have been received previously on the proposed rule. Through these actions EPA will ensure that the net social benefits (including environmental and health benefits) of the rule proposed today are maximized, taking into account costs, technological limitations, risks, and realistic assessments of both actual and reasonably expected uses of each site. If the revised RIA, together with the comments received, demonstrate that the rule proposed today does not achieve this outcome, the Agency will make appropriate modifications to the final rule, or if necessary, will repropose the rule.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act requires Federal agencies to fully analyze the economic effects of regulations on small entities. The Agency analyzed the economic impacts for the regulatory options that are most similar to today's proposed rule (*i.e.*, "Immediate Cleanup to Health-Based Standards" and "Flexible Cleanup to Health-Based Standards").

The RIA assumes that a small business is significantly impacted if its excess of cash flow over ten percent of its total liabilities is insufficient to meet corrective action costs, or if its net income is insufficient to meet its corrective action costs.

For the alternative analyzed, it was found that small firms encounter more severe impacts from the corrective action requirements than large firms. The options most similar to the proposed rule result in incremental impacts (*i.e.*, relative to the baseline) on approximately 9 to 11 percent of small businesses owning RCRA facilities.

Based on the Agency's guidelines for implementing the Regulatory Feasibility Act, the results of the analysis as summarized above, suggest that the proposed rule does not impose significant impacts on small entities.

C. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* Reporting and recordkeeping burden on the public for this collection is estimated at 42,497 hours for the 674 respondents, with an average of 1.151 hours per response. (Burden estimates should include all aspects of the collection effort and may include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information, etc.)

If you wish to submit comments regarding any aspect of the collection of information, including suggestions for reducing the burden, or if you would like a copy of the information collection request (please reference ICR #1451), contact Rick Westlund, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 (202-382-2746); and Tim Hunt, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

List of Subjects in 40 CFR Parts 264, 265, 270, and 271

Administrative practice and procedure, Corrective action, Hazardous waste: Insurance, Reporting and recordkeeping requirements.

Dated: July 5, 1990.

William Reilly,

Administrator.

XI. Supplementary Documents

APPENDIX A.—EXAMPLES OF CONCENTRATIONS MEETING CRITERIA FOR ACTION LEVELS

[Section 264.521(a)(2)(i-v)]

Constituent name	Class	Air (µg/m^3)	Water (mg/L)	Soils (mg/kg)
Acetone	D		4E-00	8E+03
Acetonitrile	D		2E-01	5E+02
Acetophenone	D	2E-01	4E-00	8E-03
Acrylamide	B2	8E-04	8E-06	2E-01
Acrylonitrile	B1	1E-02	6E-05	1E-00
Aldicarb	D		5E-02	1E+02
Aldrin	B2	2E-04	2E-06	4E-02
Allyl alcohol	D		2E-01	4E+02
Aluminum phosphide	D		1E-02	3E+01
Aniline	B2		6E-03	1E+02
Antimony	D		1E-02	3E+01
Arsenic	A	7E-05	(1)	9E+01
Asbestos (2)	A	2E-02		
Barium cyanide	D		2E-00	5E+03
Barium, ionic	D	4E-01	(1)	4E+03
Benzidine	A	2E-05	2E-07	3E-03
Beryllium	B2	4E-04	8E-06	2E-01
Bis(2-ethylhexyl)phthalate	B2		3E-03	5E+01
Bis(chloroethyl)ether	B2	3E-03	3E-05	6E-01
Bromodichloromethane (3)	B2		3E-05	5E-01
Bromoform (3)	D		7E-01	2E+03
Bromomethane	D	3E+01	5E-02	1E+02
Butyl benzyl phthalate	C		7E-00	2E+04

APPENDIX A.—EXAMPLES OF CONCENTRATIONS MEETING CRITERIA FOR ACTION LEVELS—Continued

[Section 264.521(a)(2)(i-iv)]

Constituent name	Class	Air (µg/m^3)	Water (mg/L)	Soils (mg/kg)
Cadmium	B1	6E-04	(1)	4E+01
Calcium cyanide	D		1E-00	3E+03
Carbon disulfide	D		4E-00	8E+03
Carbon tetrachloride	B2	3E-02	3E-04	5E-00
Chlorol	D		7E-02	2E+02
Chlordane	B2	3E-03	3E-05	5E-01
Chlorine cyanide	D		2E-00	4E+03
Chlorobenzene	D	2E+01	7E-01	2E+03
Chloroform (3)	B2	4E-02	6E-03	1E+02
2-Chlorophenol	D		2E-01	4E+02
Chromium (VI)	A	9E-05	(1)	4E+02
Copper cyanide	D		2E-01	4E+02
m-Cresol	D		2E-00	4E+03
o-Cresol	D		2E-00	4E+03
p-Cresol	D		2E-00	4E+03
Cyanide	D		7E-01	2E+03
Cyanogen	D		1E-00	3E+03
Cyanogen bromide	D		3E-00	7E+03
DDD	B2		1E-04	3E-00
DDE	B2		1E-04	2E-00
DDT	B2	1E-02	1E-04	2E-00
Dibutyl phthalate	D		4E-00	8E+03
Dibutylnitrosamine	B2	6E-04	6E-06	1E-01
3,3'-Dichlorobenzidine	B2		3E-05	2E-00
Dichlorodifluoromethane	D	2E+02	7E-00	2E+04
1,2-Dichloroethane	B2	4E-02	(1)	6E-00
1,1-Dichloroethylene	C	3E-02	(1)	1E+01
2,4-Dichlorophenol	D		1E-01	2E+02
2,4-Dichlorophenoxyacetic acid	D		4E-01	8E+02
1,3-Dichloropropene	B2		1E-02	2E+01
Dieldrin	B2	2E-04	2E-06	4E-02
Diethyl phthalate	D		3E+01	6E+04
Diethylnitrosamine	B2	2E-05	2E-07	5E-03
Dimethoate	D		7E-01	2E+03
Dimethylnitrosamine	B2	7E-05	7E-07	1E-02
m-Dinitrobenzene	D		4E-03	8E-00
2,4-Dinitrophenol	D		7E-02	2E+02
2,3-Dinitrotoluene (and 2,6-, mixture)	B2		5E-05	1E-00
1,4-Dioxane	B2		3E-03	6E+01
Diphenylamine	D		9E-01	2E+03
1,2-Diphenylhydrazine	B2	4E-03	4E-05	9E-01
Disulfoton	D		1E-03	3E-00
Endosulfan	D		2E-03	4E-00
Endothall	D		7E-01	2E+03
Endrin	D		(1)	2E+01
Epichlorohydrin	B2	8E-01	4E-03	7E+01
Ethylbenzene	D		4E-00	8E+03
Ethylene dibromide	B2	5E-03	4E-07	8E-03
Formaldehyde	B1	8E-02		
Formic acid	D		7E-01	2E+05
Glycidylaldehyde	D		1E-02	3E+01
Heptachlor	B2	8E-04	8E-06	2E-01
Heptachlor epoxide	B2	4E-04	4E-06	8E-02
Hexachlorodibenzo-p-dioxin	B2	6E-07	1E-08	1E-04
Hexachlorobutadiene	C	4E-01	4E-03	9E+01
alpha-Hexachlorocyclohexane	B2	6E-04	6E-06	1E-01
beta-Hexachlorocyclohexane	C	2E-02	2E-04	4E-00
Hexachlorocyclopentadiene	D	7E-02	2E-01	6E+02
Hexachloroethane	C	3E-00	3E-02	8E+01
Hexachlorophene	D		1E-01	2E+01
Hydrazine	B2	2E-04	1E-05	2E-01
Hydrogen cyanide	D		7E-01	2E+03
Hydrogen sulfide	D		1E-01	2E+02
Isobutyl alcohol	D		1E+01	2E+04
Isophorone	C		9E-02	2E+03
Lead	B2		(1)	
Lindane (gamma-hexachlorocyclohexane)	B2/C		(1)	5E-01
m-Phenylenediamine	D		2E-01	5E+02
Maleic anhydride	D		4E-00	8E+03
Maleic hydrazide	D		2E+01	4E+04
Mercury (inorganic)	D		(1)	2E+01
Methacrylonitrile	D	7E-01	4E-03	8E-00
Methomyl	D		9E-01	2E+03
Methyl chlorocarbonate	D			
Methyl ethyl ketone	D	3E+02	2E-00	4E+03
Methyl isobutyl ketone	D	7E+01	2E-00	4E+03
Methyl parathion	D		9E-03	2E+01

APPENDIX A.—EXAMPLES OF CONCENTRATIONS MEETING CRITERIA FOR ACTION LEVELS—Continued

[Section 264.521(a)(2)(i-iv)]

Constituent name	Class	Air(µg/m^3)	Water (mg/L)	Soils (mg/kg)
Methylene chloride	B	3E−01	5E−03	9E+01
n-Nitroso-di-n-butylamine	B2	6E−04	6E−06	1E−01
n-Nitroso-n-ethylurea	B			
n-Nitroso-n-methylethylamine	B2		2E−06	3E−02
n-Nitrosodi-n-propylamine	B2		5E−06	1E−01
n-Nitrosodiethanolamine	B2		1E−05	3E−01
n-Nitrosodiphenylamine	B2		7E−03	1E−02
n-Nitrosopyrrolidine	B2	2E−03	2E−05	3E−01
Nickel	D		7E−01	2E+03
Nickel refinery dust	A	4E−03		
Nitric oxide	D		4E−00	8E+03
Nitrobenzene	D	2E−00	2E−02	4E+01
Nitrogen dioxide	D		4E+01	8E−04
Osmium tetroxide	D		4E−04	8E−01
Parathion	C		2E−01	5E−02
Pentachlorobenzene	D		3E−02	6E−01
Pentachloronitrobenzene	C	1E−01	1E−01	2E+02
Pentachlorophenol	D		1E−00	2E−03
Phenol	D		2E+01	5E+04
Phenyl mercuric acetate	D		3E−03	6E−00
Phosphine	D		1E−02	2E+01
Phthalic anhydride	D		7E+01	2E+05
Polychlorinated biphenyls	B2		5E−05	9E−02
Potassium cyanide	D		2E−00	4E+03
Potassium silver cyanide	D		7E−00	2E+04
Pronamide	D		3E−00	5E+03
Pyridine	D		4E−02	8E+01
Selenious acid	D		1E−01	2E+02
Selenourea	D		2E−01	4E+02
Silver	D		(1)	2E+02
Silver cyanide	D		4E−00	8E+03
Sodium cyanide	D		1E−00	3E−03
Strychnine	D		1E−02	2E+01
Styrene	C		7E−00	2E−04
1,1,1,2-Tetrachloroethane	C	1E−00	1E−02	3E+02
1,2,4,5-Tetrachlorobenzene	D		1E−02	2E+01
1,1,2,2-Tetrachloroethane	C	1E−00	1E−02	3E+02
2,2,2-Tetrachloroethane	C	2E−01	2E−03	4E+01
Tetrachloroethylene	B2	1E−00	7E−04	1E+01
2,3,4,6-Tetrachlorophenol	D		1E−00	2E+03
Tetraethyl lead	D		4E−06	8E−03
Tetraethyldithiopyrophosphate	D		2E−02	4E+01
Thallic oxide	D		2E−03	6E−00
Thallium acetate	D		3E−03	7E−00
Thallium carbonate	D		3E−03	6E−00
Thallium chloride	D		3E−03	6E−00
Thallium nitrate	D		3E−03	7E−00
Thallium sulfate	D		3E−03	6E−00
Thiosemicarbazide	D		2E−01	5E+02
Thiram	D		2E−01	4E+02
Toluene	D	7E−03	1E+01	2E−04
Toxaphene	B2	3E−03	(1)	6E−01
1,2,4-Trichlorobenzene	D	1E+01	7E−01	2E+03
1,1,1-Trichloroethane	D	1E+03	3E−00	7E+03
1,1,2-Trichloroethane	C	6E−01	6E−03	1E+02
Trichloroethylene	B2		(1)	6E+01
Trichloromonofluoromethane	D	7E+02	1E−01	2E+04
2,4,5-Trichlorophenol	D		4E−00	8E+03
2,4,6-Trichlorophenol	B2	2E−01	2E−03	4E+01
2,4,5-Trichlorophenoxyacetic acid	D		(1)	8E+02
1,2,3-Trichloropropane	D		2E−01	5E+02
Vanadium pentoxide	D		3E−01	7E+02
Xylenes	D	1E+03	7E+01	2E+05
Zinc cyanide	D		2E−00	4E+03
Zinc phosphide	D		1E−02	2E+01

(1) MCL available; see appendix B.

(2) The air action level for asbestos is measured in units of fibers/milliliters.

(3) There is an MCL for total trihalomethanes, which includes four constituents: bromoform, bromodichloromethane, chloroform, and dibromochloromethane. Concentration derived using exposure assumptions in appendix D and reference doses for systemic toxicants and verified risk-specific doses at 10−6 for Class A and B carcinogens and 10−5 for Class C carcinogens (see section VII.F.2.6 for further discussion).

A, B and C represents class A, B and C carcinogens, respectively; D represents a systemic toxicant.

APPENDIX B—MAXIMUM CONTAMINANT LEVELS

Constituent	MCL (ppm)
Arsenic	0.05
Barium	1
Benzene	0.005
Cadmium	0.010
Carbon tetrachloride	0.005
Chromium VI	0.05
p-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007

APPENDIX B—MAXIMUM CONTAMINANT LEVELS—Continued

Constituent	MCL (ppm)
2,4-D	0.1
2,4,5-TP Silvex	0.01
Endrin	0.0002
Fluoride	4.0
Lead	0.05
Lindane	0.004
Mercury	0.002
Methoxychlor	0.1
Nitrate	10

APPENDIX B—MAXIMUM CONTAMINANT LEVELS—Continued

Constituent	MCL (ppm)
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloroethane	0.2
Trichloroethylene	0.005
Trihalomethanes, total [1]	0.10
Vinyl chloride	0.002

[1] Including chloroform, bromoform, bromodichloromethane, and dibromochloromethane

APPENDIX C—RANGE OF CONCENTRATIONS FOR ESTABLISHING MEDIA PROTECTION STANDARDS FOR CARCINOGENS

Constituent name	Class	MaxAir (ug/m 3)	MinAir (ug/m 3)	Max-Water (mg/L)	MinWater (mg/L)	MaxSoil (mg/kg)	MinSoil (mg/kg)
Acetone	D						
Acetonitrile	D						
Acetophenone	D						
Acrylamide	B2	8E-02	8E-04	8E-04	8E-06	2E+01	2E-01
Acrylonitrile	B1	1E-00	1E-02	6E-03	6E-05	1E+02	1E-00
Aldicarb	D						
Aldrin	B2	2E-02	2E-04	2E-04	2E-06	4E-00	4E-02
Allyl alcohol	D						
Aluminum phosphide	D						
Aniline	B2			6E-01	6E-03	1E+04	1E+02
Antimony	D						
Arsenic	A	7E-03	7E-05				
Asbestos (2)	A	2E-00	2E-02				
Barium cyanide	D						
Barium, ionic	D						
Benzidine	A	2E-03	2E-05	2E-05	2E-07	3E-01	3E-03
Beryllium	B2	4E-02	4E-04	8E-04	8E-06	2E+01	2E-01
Bis(2-ethylhexyl)phthalate	B2			3E-01	3E-03	5E+03	5E+01
Bis(chloroethyl)ether	B2	3E-01	3E-03	3E-03	3E-05	6E+01	6E-01
Bromodichloromethane	B2			3E-03	3E-05	5E+01	5E-01
Bromoform	D						
Bromomethane	D						
Butyl benzyl phthalate	C						
Cadmium	B1	6E-02	6E-04				
Calcium cyanide	D						
Carbon disulfide	D						
Carbon tetrachloride	B2	3E-00	3E-02	3E-02	3E-04	5E+02	5E-00
Chloral	D						
Chlordane	B2	3E-01	3E-03	3E-03	3E-05	5E+01	5E-01
Chlorine cyanide	D						
Chlorobenzene	D						
Chloroform	B2	4E-00	4E-02	6E-01	6E-03	1E+04	1E+02
2-Chlorophenol	D						
Chromium (VI)	A	9E-03	9E-05				
Copper cyanide	D						
m-Cresol	D						
o-Cresol	D						
p-Cresol	D						
Cyanide	D						
Cyanogen	D						
Cyanogen bromide	D						
DDD	B2			1E-02	1E-04	3E+02	3E-00
DDE	B2			1E-02	1E-04	2E+02	2E-00
DDT	B2	1E-00	1E-02	1E-02	1E-04	2E+02	2E-00
Diethyl phthalate	D						
Diethylnitrosamine	B2	6E-02	6E-04	6E-04	6E-06	1E+01	1E-01
3,3'-Dichlorobenzidine	B2			8E-03	8E-05	2E+02	2E-00
Dichlorodifluoromethane	D						
1,2-Dichloroethane	B2	4E-00	4E-02	4E-02	4E-04	8E+02	8E-00
1,1-Dichloroethylene	C	3E-01	3E-03	6E-03	6E-05	1E+02	1E-00
2,4-Dichlorophenol	D						
2,4-Dichlorophenoxyacetic acid	D						
1,3-Dichloropropene	B2						
Dieldrin	B2	2E-02	2E-04	2E-04	2E-06	4E-00	4E-02
Diethyl phthalate	D						

APPENDIX C—RANGE OF CONCENTRATIONS FOR ESTABLISHING MEDIA PROTECTION STANDARDS FOR CARCINOGENS—Continued

Constituent name	Class	MaxAir (ug/m 3)	MinAir (ug/m 3)	Max-Water (mg/L)	MinWater (mg/L)	MaxSoil (mg/kg)	MinSoil (mg/kg)
Diethylnitrosamine	B2	2E-03	2E-05	2E-05	2E-07	5E-01	5E-03
Dimethoate	D						
Dimethylnitrosamine	B2	7E-03	7E-05	7E-05	7E-07	1E-00	1E-02
m-Dinitrobenzene	D						
2,4-Dinitrophenol	D						
2,3-Dinitrotoluene (and 2,6-, mixture)	B2			5E-03	5E-05	1E+02	1E-00
1,4-Dioxane	B2			3E-01	3E-03	6E+03	6E+01
Diphenylamine	D						
1,2-Diphenylhydrazine	B2	4E-01	4E-03	4E-03	4E-05	9E+01	9E-01
Diquat	D						
Endosulfan	D						
Endothall	D						
Endrin	D						
Epichlorohydrin	B2	8E+01	8E-01	4E-01	4E-03	7E+03	7E+01
Ethylbenzene	D						
Ethylene dibromide	B2	5E-01	5E-03	4E-05	4E-07	8E-01	8E-03
Formaldehyde	B1	8E-00	8E-02				
Formic acid	D						
Glyoxal dehyde	D						
Heptachlor	B2	8E-02	8E-04	8E-04	8E-06	2E+01	2E-01
Heptachlor epoxide	B2	4E-02	4E-04	4E-04	4E-06	8E-00	8E-02
Hexachlorodibenzo-p-dioxin	B2	6E-05	6E-07	6E-07	1E-09	1E-02	1E-04
Hexachlorobutadiene	C	4E-00	4E-02	4E-02	4E-04	9E+02	9E-00
alpha-Hexachlorocyclohexane	B2	6E-02	6E-04	6E-04	6E+06	1E-01	1E-01
beta-Hexachlorocyclohexane	C	2E-01	2E-03	2E-03	2E-05	4E+01	4E-01
Hexachlorocyclopentadiene	D						
Hexachloroethane	C	3E+01	3E-01	3E-01	3E-03	5E+03	5E+01
Hexachlorophene	D						
Hydrazine	B2	2E-02	2E-04	1E-03	1E-05	2E+01	2E-01
Hydrogen cyanide	D						
Hydrogen sulfide	D						
Isobutyl alcohol	D						
Isophorone	C			9E-01	9E-03	2E+04	2E+02
Lead	B2						
Lindane (gamma-hexachlorocyclohexane)	B2/C			3E-03	3E-05	5E+01	5E-01
m-Phenylenediamine	D						
Maleic anhydride	D						
Maleic hydrazide	D						
Mercury (inorganic)	D						
Methacrylonitrile	D						
Methomyl	D						
Methyl chlorocarbonate	D						
Methyl ethyl ketone	D						
Methyl isobutyl ketone	D						
Methyl parathion	D						
Methylene chloride	B	3E+01	3E-01	5E-01	5E-03	9E+03	9E+01
n-Nitroso-di-n-butylamine	B2	6E-02	6E-04	6E-04	6E+06	1E-01	1E-01
n-Nitroso-n-methylurea	B						
n-Nitroso-n-methylethylamine	B2			2E-04	2E-06	3E-00	3E-02
n-Nitrosodi-n-propylamine	B2			5E-04	5E-06	1E+01	1E-01
n-Nitrosodiethanolamine	B2			1E-03	1E-05	3E+01	3E-01
n-Nitrosodiphenylamine	B2			7E-01	7E-03	1E+04	1E+02
n-Nitrosopyrrolidine	B2	2E-01	2E-03	2E-03	2E-05	3E+01	3E-01
Nickel	D						
Nickel refinery dust	A	4E-01	4E-03				
Nitric oxide	D						
Nitrobenzene	D						
Nitrogen dioxide	D						
Osmium tetroxide	D						
Parathion	D						
Pentachlorobenzene	C						
Pentachloronitrobenzene	D						
Pentachlorophenol	C	1E-00	1E-02				
Phenol	D						
Phenyl mercuric acetate	D						
Phosgene	D						
Phthalic anhydride	D						
Polychlorinated biphenyls	D						
Potassium cyanide	B2			5E-04	5E-06	9E-00	9E-02
Potassium silver cyanide	D						
Pronamide	D						
Pyridine	D						
Selenious acid	D						
Selenourea	D						
Silver	D						
Silver cyanide	D						
Sodium cyanide	D						
Strychnine	D						

APPENDIX C—RANGE OF CONCENTRATIONS FOR ESTABLISHING MEDIA PROTECTION STANDARDS FOR CARCINOGENS—Continued

Constituent name	Class	MaxAir (ug/m 3)	MinAir (ug/m 3)	Max-Water (mg/L)	MinWater (mg/L)	MaxSoil (mg/kg)	MinSoil (mg/kg)
Styrene	C						
1,1,1,2-Tetrachloroethane	C	1E+01	1E-01	1E-01	3E+03	3E+03	3E+01
1,2,4 5-Tetrachlorobenzene	D						
1,1,1,2-Tetrachloroethane	C	1E+01	1E-01	1E-01	1E-03	3E+03	3E+01
1,1,2,2-Tetrachloroethane	C	2E-00	2E-02	2E-02	2E-04	4E+02	4E-00
Tetrachloroethylene	B2	1E+02	1E-00	7E-02	7E-04	1E+03	1E+01
2,3,4,6-Tetrachlorophenol	D						
Tetraethyl lead	D						
Tetraethyldithiopyrophosphate	D						
Thallic oxide	D						
Thallium acetate	D						
Thallium carbonate	D						
Thallium chloride	D						
Thallium nitrate	D						
Thallium sulfate	D						
Thiosemicarbazide	D						
Thiram	D						
Toluene	D						
Toxaphene	B2	3E-01	3E-03	3E-03	3E-05	6E+01	6E-01
1,2,4-Trichlorobenzene	D						
1,1,1,Trichloroethane	D						
1,1,2-Trichloroethane	C	6E-00	6E-02	6E-02	6E-04	1E+03	1E+01
Trichloroethylene	B2			3E-01	3E-03	6E+03	6E+01
Trichloromonofluoromethane	D						
2,4,5-Trichlorophenol	D						
2,4,6-Trichlorophenol	B2	2E+01	2E-01	2E-01	2E-03	4E+03	4E+01
2,4,5-Trichlorophenoxy acetic acid	D						
1,2,3-Trichloropropane	D						
Vanadium pentoxide	D						
Xylenes	D						
Zinc cyanide	D						
Zinc phosphide	D						

Appendix D: Recommended Exposusre Assumptions for Use in Deriving Action Levels

(Sections 264.521 (a)(2); (b); (c)(3); and (J))

1. In deriving action levels for hazardous constituents in ground-water, assume a water intake of 2 liters/day for 70 kg adult/70 year lifetime exposure period.

2. In deriving action levels for hazardous constituents in air, assume air intake of 20 cubic meters/day for 70 kg adult/70 year lifetime exposure period.

3. In deriving action levels for hazardous constituents in soil, which are known or suspected to be carcinogens, assume soil intake of 0.1 gram/day for 70 kg adult/70 year lifetime exposure period.

4. In deriving action levels for hazardous constituents in soil, other than those which are known or suspected to be carcinogens, assume soil intake of 0.2 gram/day for 16 kg child/5 year exposure period (age 1–6).*

5. In deriving action levels for hazardous constituents in surface water designated by the State for use as a drinking water source, assume a water intake of 2 liters/day for 70 kg adult/70 year lifetime exposure period, unless intake of aquatic organisms is also of concern.

*Not to be averaged over a 70-year lifetime.

Appendix E: Examples of Calculations of Action Levels

I. Governing Equations for Calculating Action Levels

A. *Systemic Toxicants*

$C_m = [RfD \cdot W]/[I \cdot A]$

where:

C_m = action level in medium (units are medium-dependent);
RfD = reference dose (mg/kg/day);
W = body weight (kg);
I = intake assumption (units are medium-dependent); and
A = absorption factor [1] (dimensionless).

B. *Carcinogenic Constituents*

$C_m = [R \cdot W \cdot LT]/[CSF \cdot I \cdot A \cdot ED]$

where:

C_m = action level in medium (units are medium-dependent);
R = assumed risk level (dimensionless) (10^{-6} for class A & B; 10^{-5} for class C carcinogens);
W = body weight (kg);
LT = assumed lifetime (years);
CSF = carcinogenic slope factor $(mg/kg/day)^{-1}$;
I = intake assumption (units are medium-dependent);
A = absorption factor (dimensionless); and
ED = exposure duration (years).

[1] Assumed to be 1 for this appendix, based upon the assumption that the human absorption rate will be the same as the rate in the study upon which the RfD or CPF was developed.

II. Example Calculations for Hazardous Constituents in Air

A. *Systemic Toxicants*

Example calculation for 2,4-dinitrophenol:

$C_a = [0.002\ (mg/kg/d) \cdot 1000\ (\mu g/mg) \cdot 70 (kg)]/[20\ (m^3/d) \cdot 1] = 7.0\ \mu g/m^3$

where:

C_a = action level in air ($\mu g/m^3$)
RfD = 0.002 mg/kg/day
W = 70 kg adult
I = 20 m^3/day
A = 1

B. *Carcinogenic Constituents*

Example calculation for 1,1,2,2-tetrachloroethane:

$C_a = [10^{-5} \cdot 1000\ (\mu g/mg) \cdot 70\ (yrs) \cdot 70\ (kg)]/[0.20\ (mg/kg/day)^{-1} \cdot 20\ (m^3/day) \cdot 1 \cdot 70\ (yrs)] = .175\ \mu g/m$

where:

C_a = action level in air ($\mu g/m^3$)
R = 10^{-5} (1,1,2,2-Tetrachloroethane is a Class C carcinogen)
W = 70 kg adult
LT = 70 year lifetime
CSF = 0.20 $(mg/kg/day)^{-1}$
I = 20 m^3/day
A = 1
ED = 70 year exposure duration

III. Sample Calculation for Hazardous Constituents in Water

A. *Systemic Toxicants*

Sample calculation for toluene:

$C_w = [0.30\ (mg/kg/day) \cdot 70\ (kg)]/[2\ (L/day) \cdot 1] = 10.5\ mg/L$

where:

C_w = action level in water (mg/L)

RfD = 0.30 mg/kg/day for toluene
W = 70 kg adult
I = 2 L/day
A = 1

B. *Carcinogenic Constituents*

Sample calculation for 1,1,2,2-tetrachloroethane:

$C_w = [10^{-6} * 70\ (kg) * 70\ (yr)]/[0.20\ (mg/kg/day)^{-1} * 2\ (L/day) * 1 * 70\ (yr)] = 1.75E-03\ mg/L$

where:
C_w = action level in water (mg/L)
R = 10^{-6} (1,1,2,2-Tetrachloroethane is a Class C carcinogen)
W = 70 kg adult
LT = 70 year lifetime
CSF = 0.20 $(mg/kg/day)^{-1}$
I = 2 L/day
A = 1
ED = 70 year exposure duration

IV. Sample Calculations for Hazardous Constituents in Soils

A. *Systemic Toxicants*

Example calculations for toluene:

$C_s = [0.30\ (mg/kg/day) * 16\ (kg)]/[0.2\ (g/day) * 1 * 0.001\ (kg/g)] = 24{,}000\ mg/kg$

where:
C_s = action level in soil (mg/kg)
RfD = 0.30 mg/kg/day for toluene
W = 16 kg (5 year old child)
I = 0.2 g/day
A = 1

B. *Carcinogenic Constituents*

Sample calculation for 1,1,2,2,-tetrachloroethane:

$C_s = [10^{-6} * 70\ (kg) * 70\ (yrs)]/[0.20\ (mg/kg/day)^{-1} * 0.1\ (g/day) * 0.001\ (kg/g) * 1 * 70\ (yrs)] = 35.0\ mg/kg$

where:
C_s = action level in soil (mg/kg)
R = 10^{-6} (1,1,2,2-tetrachloroethane is a Class C carcinogen)
W = 70 kg adult
LT = 70 year lifetime
CSF = 0.20 $(mg/kg/day)^{-1}$
I = 0.1 g/day
A = 1
ED = 70 year exposure duration

Appendix F—List of Constituents Showing Action Level Source Data

Constituent name	Class	Noncarcinogenic effects		Carcinogenic effects	
		Oral RfD (mg/kg/d)	Inhalation RfD (mg/kg/d)	Oral slope factor (mg/kg/d)-1	Inhalation slope factor (mg/kg/d)-1
Acetone	D	1.0E-01			
Acetonitrile	D	6.0E-03			
Acetophenone	D	1.0E-01	5.0E-05		
Acrylamide	B2	2.0E-04		4.5E-00	4.5E-00
Acrylonitrile	B1			5.4E-01	2.4E-01
Aldicarb	D	1.3E-03			
Aldrin	B2	3.0E-05		1.7E+01	1.7E+01
Allyl alcohol	D	5.0E-03			
Aluminum phosphide	D	4.0E-04			
Aniline	B2			5.7E-03	
Antimony	D	4.0E-04			
Arsenic	A	1.0E-03			5.0E+01
Asbestos (2)	A				2.3E-01
Barium cyanide	D	7.0E-02			
Barium, ionic	D	5.0E-02	1.0E-04		
Benzidine	A	3.0E-03		2.3E+02	2.3E-02
Beryllium	B2	5.0E-03		4.3E-00	8.4E-00
Bis(2-ethylhexyl)phthalate	B2	2.0E-02		1.4E-02	
Bis(chloroethyl)ether	B2			1.1E-00	1.1E-00
Bromodichloromethane	B2	2.0E-02		1.3E-00	
Bromoform	D	2.0E-02			
Bromomethane	D	1.4E-03	8.0E-03		
Butyl benzyl phthalate	C	2.0E-01			
Cadmium	B1	5.0E-04			6.1E-00
Calcium cyanide	D	4.0E-02			
Carbon disulfide	D	1.0E-01			
Carbon tetrachloride	B2	7.0E-04		1.3E-01	1.3E-01
Chloral	D	2.0E-03			
Chlordane	B2	6.0E-05		1.3E-00	1.3E-00
Chlorine cyanide	D	5.0E-02			
Chlorobenzene	D	2.0E-02	5.0E-03		
Chloroform	B2	1.0E-02		6.1E-03	8.1E-02
2-Chlorophenol	D	5.0E-03			
Chromium (VI)	A	5.0E-03			4.1E+01
Copper cyanide	D	5.0E-03			
m-Cresol	D	5.0E-02			
o-Cresol	D	5.0E-02			
p-Cresol	D	5.0E-02			
Cyanide	D	2.0E-02			
Cyanogen	D	4.0E-02			
Cyanogen bromide	D	9.0E-02			
DDD	B2			2.4E-01	
DDE	B2			3.4E-01	
DDT	B2	5.0E-04		3.4E-01	3.4E-01
Dibutyl phthalate	D	1.0E-01			
Dibutylnitrosamine	B2			5.4E-00	5.4E-00
3,3'-Dichlorobenzidine	B2			4.5E-01	
Dichlorodifluoromethane	D	2.0E-01	5.0E-02		
1,2-Dichloroethane	B2			9.1E-02	9.1E-02
1,1-Dichloroethylene	C	9.0E-03		6.0E-01	1.2E-00
2,4-Dichlorophenol	D	3.0E-03			
2,4-Dichlorophenoxyacetic acid	D	1.0E-02			
1,3-Dichloropropane	B2	3.0E-04			
Dieldrin	B2	5.0E-05		1.6E+01	1.6E+01
Diethyl phthalate	D	8.0E-01			
Diethylnitrosamine	B2			1.5E+02	1.5E+02

APPENDIX F—LIST OF CONSTITUENTS SHOWING ACTION LEVEL SOURCE DATA—Continued

Constituent name	Class	Noncarcinogenic effects		Carcinogenic effects	
		Oral RFD (mg/kg/d)	Inhalation RFD (mg/kg/d)	Oral slope factor (mg/kg/d)-1	Inhalation slope factor (mg/kg/d)-1
Dimethoate	D	2.0E-02			
Dimethylnitrosamine	B2			5.1E+01	5.1E+01
m-Dinitrobenzene	D	1.0E-04			
2,4-Dinitrophenol	D	2.0E-03			
2,3-Dinitrotoluene (and 2,6-, mixture)	B2			6.8E-01	
1,4-Dioxane	B2			1.1E-02	
Diphenylamine	D	2.5E-02			
1,2-Diphenylhydrazine	B2			8.0E-01	8.0E-01
Disulfoton	D	4.0E-05			
Endosulfan	D	5.0E-05			
Endothall	D	2.0E-02			
Endrin	D	3.0E-04			
Epichlorohydrin	B2	2.0E-03		9.9E-03	4.2E-03
Ethylbenzene	D	1.0E-01			
Ethylene dibromide	B2			8.5E+01	7.6E-01
Formaldehyde	B1				4.5E-02
Formic acid	D	2.0E-00			
Glycidaldehyde	D	4.0E-04			
Heptachlor	B2	5.0E-04		4.5E-00	4.5E-00
Heptachlor epoxide	B2	1.3E-05		9.1E-00	9.1E-00
Hexachlorodibenzo-p-dioxin	B2			6.2E+03	6.2E+03
Hexachlorobutadiene	C	2.0E-03		7.8E-02	7.8E-02
alpha-Hexachlorocyclohexane	B2			6.3E-00	6.3E-00
beta-Hexachlorocyclohexane	C			1.8E-00	1.8E-00
Hexachlorocyclopentadiene	D	7.0E-03	2.0E-05		
Hexachloroethane	C	1.0E-03		1.4E-02	1.4E-02
Hexachlorophene	D	3.0E-04			
Hydrazine	B2			3.0E-00	1.7E+01
Hydrogen cyanide	D	2.0E-02			
Hydrogen sulfide	D	3.0E-03			
Isobutyl alcohol	D	3.0E-01			
Isophorone	C	2.0E-01		4.1E-03	
Lead	B2				
Lindane (gamma-hexachlorocyclohexane)	B2/C	3.0E-04		1.3E-00	
m-Phenylenediamine	D	6.0E-03			
Maleic anhydride	D	1.0E-01			
Maleic hydrazide	D	5.0E-01			
Mercury (inorganic)	D	3.0E-04			
Methacrylonitrile	D	1.0E-04	2.0E-04		
Methomyl	D	2.5E-02			
Methyl chlorocarbonate	D				
Methyl ethyl ketone	D	5.0E-02	9.0E-02		
Methyl isobutyl ketone	D	5.0E-02	2.0E-02		
Methyl parathion	D	2.5E-04			
Methylene chloride	B	6.0E-02		7.5E-03	1.4E-02
n-Nitroso-di-n-butylamine	B2			5.4E-00	5.4E-00
n-Nitroso-n-ethylurea	B				
n-Nitroso-n-methylethylamine	B2			2.2E+01	
n-Nitrosodi-n-propylamine	B2			7.0E-00	
n-Nitrosodiethanolamine	B2			2.8E-00	
n-Nitrosodiethylamine	B2			4.3E-03	
n-Nitrosopyrrolidine	B2			2.1E-00	2.1E-00
Nickel	D	2.0E-02			
Nickel refinery dust	A				8.4E-01
Nitric oxide	D	1.0E-01			
Nitrobenzene	D	5.0E-04	6.0E-04		
Nitrogen dioxide	D	1.0E-00			
Osmium tetroxide	D	1.0E-05			
Parathion	C	6.0E-03			
Pentachlorobenzene	D	8.0E-04			
Pentachloronitrobenzene	C	3.0E-03			2.5E-01
Pentachlorophenol	D	3.0E-02			
Phenol	D	6.0E-01			
Phenylmercuric acetate	D	8.0E-05			
Phosphine	D	3.0E-04			
Phthalic anhydride	D	2.0E-00			
Polychlorinated biphenyls	B2			7.7E-00	
Potassium cyanide	D	5.0E-02			
Potassium silver cyanide	D	2.0E-01			
Pronamide	D	7.5E-02			
Pyridine	D	1.0E-03			
Selenious acid	D	3.0E-03			
Selenourea	D	5.0E-03			
Silver	D	3.0E-03			
Silver cyanide	D	1.0E-01			
Sodium cyanide	D	4.0E-02			

APPENDIX F—LIST OF CONSTITUENTS SHOWING ACTION LEVEL SOURCE DATA—Continued

Constituent name	Class	Noncarcinogenic effects		Carcinogenic effects	
		Oral RfD (mg/kg/d)	Inhalation RfD (mg/kg/d)	Oral slope factor (mg/kg/d)-1	Inhalation slope factor (mg/kg/d)-1
Strychnine	D	3.0E-04			
Styrene	C	2.0E-01			
1,1,1,2-Tetrachloroethane	C	3.0E-02		2.6E-02	2.6E-02
1,2,4,5-Tetrachlorobenzene	D	3.0E-04			
1,1,1,2-Tetrachloroethane	C	3.0E-02		2.6E-02	2.6E-02
1,1,2,2-Tetrachloroethane	C			2.0E-01	2.0E-01
Tetrachloroethylene	B2	1.0E-02		5.1E-02	3.3E-03
2,3,4,6-Tetrachlorophenol	D	3.0E-02			
Tetraethyl lead	D	1.0E-07			
Tetraethylthiopyrophosphate	D	5.0E-04			
Thallic oxide	D	7.0E-05			
Thallium acetate	D	9.0E-05			
Thallium carbonate	D	8.0E-05			
Thallium chloride	D	8.0E-05			
Thallium nitrate	D	9.0E-05			
Thallium sulfate	D	8.0E-05			
Thiosemicarbazide	D	6.0E-03			
Thiram	D	5.0E-03			
Toluene	D	3.0E-01	2.0E-00		
Toxaphene	B2			1.1E-00	1.1E-00
1,2,4-Trichlorobenzene	D	2.0E-02	3.0E-03		
1,1,1-Trichloroethane	D	9.0E-02	3.0E-01		
1,1,2-Trichloroethane	C	4.0E-03		5.7E-02	5.7E-02
Trichloroethylene	B2			1.1E-02	
Trichlorofluoromethane	D	3.0E-01	2.0E-01		
2,4,5-Trichlorophenol	D	1.0E-01			
2,4,6-Trichlorophenol	B2			2.0E-02	2.0E-02
2,4,5-Trichlorophenoxyacetic acid	D	1.0E-02			
1,2,3-Trichloropropane	D	6.0E-03			
Vanadium pentoxide	D	9.0E-03			
Xylenes	D	2.0E-00	3.0E-01		
Zinc cyanide	D	5.0E-02			
Zinc phosphide	D	3.0E-04			

For the reasons set out in the preamble, 40 CFR parts 264, 265, 270, and 271 are proposed to be amended as follows:

PART 264—STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

1. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, and 6925.

2. Section 264.1 is amended by revising paragraphs (d) and (g) introductory text to read as follows:

§ 264.1 Purpose, scope and applicability.

* * * * *

(d) The requirements of this part apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an Underground Injection control (UIC) program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by § 144.14 of this chapter and to the extent they are included in a RCRA permit by rule granted to such a person under part 270 of this chapter.

* * * * *

(g) Except as required under subpart S of this part governing releases from solid waste management units, the requirements of this part do not apply to:

* * * * *

§ 264.101 [Removed]

3. In 40 CFR part 264, subpart F, it is proposed to remove § 264.101.

4. In 40 CFR part 264, subpart G, it is proposed to amend § 264.113 by redesignating paragraphs (a)(1)(ii) as (a)(1)(iii) and (b)(1)(ii) as (b)(1)(iii), and by adding new paragraphs (a)(1)(ii) and (b)(1)(ii) to read as follows:

§ 264.113 Closure time allowed for closure.

* * * * *

(a) * * *

(1) * * *

(ii) Corrective action required at the unit or the facility under subpart S will delay the completion of partial or final closure; or

* * * * *

(b) * * *

(1) * * *

(ii) Corrective action required at the unit or the facility under subpart S will delay the completion of partial or final closure; or

* * * * *

5. 40 CFR part 264 is amended by adding subpart S to read as follows:

Subpart S—Corrective Action for Solid Waste Management Units

264.500 Purpose and applicability.
264.501 Definitions.
264.502–264.509 [Reserved].
264.510 Requirement to perform remedial investigations.
264.511 Scope of remedial investigations.
264.512 Plans for remedial investigations.
264.513 Reports of remedial investigations.
264.514 Determination of no further action.
264.515–264.519 [Reserved]
264.520 Requirement to perform corrective measure study.
264.521 Action levels.
264.522 Scope of corrective measure studies.
264.523 Plans for corrective measure studies.
264.524 Reports of corrective measure studies.
264.525 Selection of remedy
264.526 Permit modification for remedy.
264.527 Remedy design.
264.528 Progress reports.
264.529 Review of remedy implementation.
264.530 Completion of remedies.

APPENDIX B

TA-35 TSL-125
SURFACE IMPOUNDMENT

MATERIAL SAFETY DATA SHEETS
SHELL DIALA (R) OIL AX

Shell

MATERIAL SAFETY DATA SHEET

MSDS NUMBER ▶ 60,030-5 PAGE 1

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

ACUTE HEALTH	FIRE	REACTIVITY	HAZARD RATING ▶
1	1	0	LEAST 0 LIGHT 1 MODERATE 2 HIGH 3 EXTREME 4

BE SAFE — READ OUR PRODUCT SAFETY INFORMATION AND PRACTICE

For acute and chronic health effects refer to the discussion in Section III

SECTION I

	NAME
PRODUCT ▶	SHELL DIALA(R) OIL AX
CHEMICAL NAME ▶	MIXTURE (SEE SEC II-A)
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON; INDUSTRIAL OIL
SHELL CODE ▶	68702 68702 63702 63722

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL DIALA OIL AX	MIXTURE	100
1	SOLVENT REFINED HYDROTREATED MIDDLE DISTILLATE	64742-46-7	60-100
2	SEVERELY HYDROTREATED LIGHT NAPHTHENIC DISTILLATE	64742-53-6	0-40
3	BUTYLATED HYDROXY TOLUENE	128-37-0	<0.2

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	>10 ML/KG, RAT	>2 ML/KG, RAT	NOT AVAILABLE

BASED UPON DATA AVAILABLE TO SHELL, COMPONENT 3 IN THIS PRODUCT IS NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICTION (29 CFR 1910.1200).

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING PRODUCT IS PRESUMED TO BE NONIRRITATING TO THE EYES.

SKIN CONTACT
BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING PRODUCT IS PRESUMED TO BE SLIGHTLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT MAY RESULT IN VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, FOLLICULITIS OR OIL ACNE.

INHALATION
INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST MAY CAUSE A MILD IRRITATION OF THE MUCOUS MEMBRANES OF THE UPPER RESPIRATORY TRACT.

INGESTION
INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING OF VOMITUS INTO THE LUNGS) MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

NO.	OSHA PEL/TWA	OSHA PEL/CEILING	ACGIH TLV/TWA	ACGIH TLV/STEL	OTHER
P	5 MG/M3*	NONE	5 MG/M3*	10 MG/M3*	NONE

*OIL MIST, MINERAL

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
FLUSH EYES WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

SKIN CONTACT
REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN
IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VI SUPPLEMENTAL INFORMATION

NONE IDENTIFIED.

SECTION VII PHYSICAL DATA

BOILING POINT: >300 (DEG F)

SPECIFIC GRAVITY: 0.883 (H2O=1)

VAPOR PRESSURE: NOT AVAILABLE (MM HG)

MELTING POINT: -60 (POUR POINT) (DEG F)

SOLUBILITY: NEGLIGIBLE (IN WATER)

VAPOR DENSITY: NOT AVAILABLE (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

VIS CS (40 DEG C) 8.07-9.8

APPEARANCE AND ODOR: WHITE LIQUID SLIGHT HYDROCARBON ODOR

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
285-310 DEG F (COC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AVA UPPER: N/AVA

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

SECTION IX REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, OPEN FLAMES, AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION
IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910 134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES.

PROTECTIVE CLOTHING
WEAR CHEMICAL-RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. NO SPECIAL EYE PROTECTION IS ROUTINELY NECESSARY. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

SECTION XI ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES
MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ADSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

WASTE DISPOSAL
PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

ENVIRONMENTAL HAZARDS
THIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311 OF THE CLEAN WATER ACT. SPILLS ENTERING (A) SURFACE WATERS OR (B) ANY WATER COURSES OR SEWERS ENTERING/LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER. 800-424-8802.

SECTION XII SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES LAUNDER CONTAMINATED CLOTHING BEFORE REUSE PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED

SECTION XIII TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION: NOT HAZARDOUS BY D.O.T. REGULATIONS

SECTION XIV OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: JULY 28, 1986

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

JOHN P. SEPESI

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

APPENDIX C

TA-35 TSL-125
SURFACE IMPOUNDMENT

CERTIFICATES OF ANALYSIS
(Subappendices C-1 through C-6)

AND

DOCUMENTATION OF DECEMBER 3, 1986 SPILL AND CLEANUP
(Subappendix C-7)

SUBAPPENDIX C-1

JUNE 9, 1988
SAMPLING EVENT
VOLATILE ORGANICS

HSE-9 ORGANIC ANALYSIS RESULTS
VOLATILE ORGANICS

REQUEST SHEET NUMBER: 88.7061
SAMPLE NUMBERS: 88.00328-00332, 88.00337-00342
SUBMITTER: Tony Grieggs, HSE-8
DATE: June 21, 1988
NOTEBOOK/PAGE REFERENCE: R6572 p. 90

The above samples were received on June 9, 1988. They were refrigerated until analysis which began on June 14, 1988. The samples were analyzed using purge and trap/gas chromatography/mass spectrometry. The method used closely follows EPA method 524 for the analysis of volatiles. The results obtained for each sample are attached. Sample number 88.00339 was an oil which is not amenable to purge and trap. Sample number 88.00341 was analyzed, but the matrix spike and matrix spike duplicate analyses performed on this sample failed due apparently to some type of matrix interference in the sediment that was included in the matrix spike analyses. As per Toney Drypolcher's instructions, these samples were analyzed primarily for qualitative screening. No dilutions were performed on the samples and as such, many of the quantitiatve values are reported simply as greater than values. The samples were not run in duplicate as is normally done to expedite completion. Preliminary results from the semivolatile analysis of sample number 88.00349 indicate the presence of phthalates. The hydrocarbon contamination of the sample precludes any other meaningful interpretation of the results at this time. Work will continue on the semivolatile analyses. If you wish to do more sampling for a more complete quantitatve analyses please feel free to contact me.

Please call if you have any questions.

Suzanne Bell

Suzanne Bell
HSE-9 Organic Analysis Section Leader

QA/QC Approval NA

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET

SAMPLE NUMBER: 88-0328 REQUEST SHEET: 88.7061
NUMBER OF REPLICATE RUNS: 1

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	89.6	(76-114)
TOLUENE d8	109.2	(88-110)
p-BROMOFLUOROBENZENE	75.6	(86-115)

CAS #	COMPOUND	RESULT +/- (ppb)	MDL (ppb)
74873	CHLOROMETHANE		5.0
73839	BROMOMETHANE		5.0
75014	VINYL CHLORIDE		5.0
75003	CHLOROETHANE		5.0
75092	METHYLENE CHLORIDE	>MDL (TIC)	5.0
75150	CARBON DISULFIDE		5.0
75354	1,1-DICHLOROETHENE		5.0
75343	1,1-DICHLOROETHANE		5.0
540590	1,2-DICHLOROETHENE	(TOTAL)	5.0
67663	CHLOROFORM		5.0
107062	1,2-DICHLOROETHANE		5.0
78933	2-BUTANONE	48.1 ± 4.8	5.0
71556	1,1,1-TRICHLOROETHANE	151.2 ± 15.1	5.0
56235	CARBON TETRACHLORIDE		5.0
108054	VINYL ACETATE		5.0
75274	BROMODICHLOROMETHANE		5.0
78875	1,2-DICHLOROPROPANE		5.0
10061015	cis-1,3-DICHLOROPROPENE		5.0
79016	TRICHLOROETHENE		5.0
124481	DIBROMOCHLOROMETHANE		5.0
79005	1,1,2-TRICHLOROETHANE		5.0
71432	BENZENE		5.0
10061026	trans-1,3-DICHLOROPROPENE		5.0
75252	BROMOFORM		5.0
108101	4-METHYL-2-PENTANONE	20.0 ± 20.0	5.0
591786	2-HEXANONE	35.3 ± 3.5	5.0
127184	TETRACHLOROETHENE	89.4 ± 8.9	5.0
79345	1,1,2,2-TETRACHLOROETHANE		5.0
108883	TOLUENE		5.0
108907	CHLOROBENZENE		5.0
100414	ETHYLBENZENE		5.0
100425	STYRENE		5.0
133027	XYLENES	153.9 ± 40.9, x (TOTAL)	5.0
95501	1,2-DICHLOROBENZENE		5.0
541731	1,3-DICHLOROBENZENE		5.0

106467	1,4-DICHLOROBENZENE		5.0
91023	NAPHTHALENE		5.0
104518	n-BUTYLBENZENE		5.0
108861	BROMOBENZENE		5.0
95498	2-CHLOROTOLUENE		5.0
106434	4-CHLOROTOLUENE		5.0
142289	1,3-DICHLOROPROPANE		5.0
87683	HEXACHLOROBUTADIENE		5.0
630206	1,1,1,2-TETRACHLOROETHANE		5.0
120821	1,2,4-TRICHLOROBENZENE		5.0
96184	1,2,3-TRICHLOROPROPANE		5.0
95636	1,2,4-TRIMETHYLBENZENE		5.0
75694	TRICHLOROFLUOROMETHANE		5.0
106934	1,2-DIBROMOETHANE		5.0
98828	ISOPROPYLBENZENE		5.0
98066	t-BUTYLBENZENE		5.0
135988	s-BUTYLBENZENE		5.0
99876	p-ISOPROPYLTOLUENE		5.0
544105	1-CHLOROHEXANE		5.0
563586	1,1-DICHLOROPROPENE		5.0
108703	1,3,5-TRICHLOROBENZENE		5.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		5.0
67641	ACETONE		5.0
60297	DIETHYL ETHER	>200.0 TIC	5.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		50.0
		ppm range (parts per million)	20.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was 20 ppb.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

* m,p-xylene 72.1 ± 7.2
O-xylene 81.8 ± 40.9

SAMPLE NUMBER: 88-00328 REQUEST SHEET NUMBER: 88.7061

Water and solids, intermixed. Analyzed the liquid only.
TIC indicates a tentatively identified compound.
Unknown hydrocarbon detected.
No dilutions run

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET

SAMPLE NUMBER: 88-00330 REQUEST SHEET: 88.7061
NUMBER OF REPLICATE RUNS: 1

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	62.6	(76-114)
TOLUENE d8	95.7	(88-110)
p-BROMOFLUOROBENZENE	82.8	(86-115)

CAS #	COMPOUND	RESULT +/- (ppb)		MDL (ppb)
74873	CHLOROMETHANE			5.0
73839	BROMOMETHANE			5.0
75014	VINYL CHLORIDE			5.0
75003	CHLOROETHANE			5.0
75092	METHYLENE CHLORIDE			5.0
75150	CARBON DISULFIDE			5.0
75354	1,1-DICHLOROETHENE			5.0
75343	1,1-DICHLOROETHANE	77.7 I 7.8 TTC		5.0
540590	1,2-DICHLOROETHENE		(TOTAL)	5.0
67663	CHLOROFORM			5.0
107062	1,2-DICHLOROETHANE			5.0
78933	2-BUTANONE			5.0
71556	1,1,1-TRICHLOROETHANE	parts per million range		5.0
56235	CARBON TETRACHLORIDE			5.0
108054	VINYL ACETATE			5.0
75274	BROMODICHLOROMETHANE			5.0
78875	1,2-DICHLOROPROPANE			5.0
10061015	cis-1,3-DICHLOROPROPENE			5.0
79016	TRICHLOROETHENE			5.0
124481	DIBROMOCHLOROMETHANE			5.0
79005	1,1,2-TRICHLOROETHANE			5.0
71432	BENZENE			5.0
10061026	trans-1,3-DICHLOROPROPENE			5.0
75252	BROMOFORM			5.0
108101	4-METHYL-2-PENTANONE			5.0
591786	2-HEXANONE			5.0
127184	TETRACHLOROETHENE			5.0
79345	1,1,2,2-TETRACHLOROETHANE			5.0
108883	TOLUENE			5.0
108907	CHLOROBENZENE			5.0
100414	ETHYLBENZENE			5.0
100425	STYRENE			5.0
133027	XYLENES		(TOTAL)	5.0
95501	1,2-DICHLOROBENZENE			5.0
541731	1,3-DICHLOROBENZENE			5.0

106467	1,4-DICHLOROBENZENE		5.0
91023	NAPHTHALENE		5.0
104518	n-BUTYLBENZENE		5.0
108861	BROMOBENZENE		5.0
95498	2-CHLOROTOLUENE		5.0
106434	4-CHLOROTOLUENE		5.0
142289	1,3-DICHLOROPROPANE		5.0
87683	HEXACHLOROBUTADIENE		5.0
630206	1,1,1,2-TETRACHLOROETHANE		5.0
120821	1,2,4-TRICHLOROBENZENE		5.0
96184	1,2,3-TRICHLOROPROPANE		5.0
95636	1,2,4-TRIMETHYLBENZENE		5.0
75694	TRICHLOROFLUOROMETHANE		5.0
106934	1,2-DIBROMOETHANE		5.0
98828	ISOPROPYLBENZENE		5.0
98066	t-BUTYLBENZENE		5.0
135988	s-BUTYLBENZENE		5.0
99876	p-ISOPROPYLTOLUENE		5.0
544105	1-CHLOROHEXANE		5.0
563586	1,1-DICHLOROPROPENE		5.0
108703	1,3,5-TRICHLOROBENZENE		5.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		5.0
67641	ACETONE	109.6 ± 54.8	5.0
60297	DIETHYL ETHER		50.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		20.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was 20 ppb.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

SAMPLE NUMBER: 88-00330 REQUEST SHEET NUMBER: 88.7061

appeared to be primarily water. The extremely high concentration of the 1,1,1-Trichloroethane severly interferred with identification of some compounds. Since this was an identification scan, no additional dilutions were performed. "TIC" indicates a tentatively identified compound. Also detected 2 unknown peaks, apparently halogenated hydrocarbons

A blank next to a compound indicates a result of <MDL

SUBAPPENDIX C-2

JUNE 20, 1988
SAMPLING EVENT
VOLATILE ORGANICS

HSE-9 ORGANIC ANALYSIS RESULTS
VOLATILE ORGANICS

REQUEST SHEET NUMBER: 88.7067
SAMPLE NUMBERS: 88.00353-00357
SUBMITTER: Tony Grieggs, HSE-8
DATE: July 29, 1988
NOTEBOOK/PAGE REFERENCE: R6572, p.137

The above samples were received on June 20, 1988. They were refrigerated until extraction which began on June 24, 1988. The extracts were stored at (-) 20c until analysis which began on July 24, 1988. The samples were analyzed using purge and trap/gas chromatography/mass spectrometry. The results obtained for each sample are attached. The limits of detection for this analysis are relatively high. Please refer to the results sheets. A surrogate spike compound was added to each soil sample prior to extraction. The recovery of this compound is used to gauge the efficacy of the extraction technique. The percent recovery obtained for each sample is noted on the results sheets. The recoveries varied and were in general low which is not uncommon for this type of analysis. Several duplicates and replicates were analyzed although only 1 or 2 are included in the results tabulations.

Please call if you have any questions.

Suzanne Bell
HSE-9 Organic Analysis Section

RECEIVED
SEP 02 1988
IT CORP.-ALBUQUERQUE

88.00 -351

REQUESTOR DATA SHEET # 1051

Log Book Samp Page 15

Sampled by Tony Grieggs Collection Date 6/20/88 Time 0900 Weather _____ Witness _____

Presampling Conference Completed With _____ On _____ Send Report To Tony Grieggs MS K490

Phone 5-0451 Source of Sample: TA-35-125 (oil pit overflow) Reason for Sampling Closure

Group HSE-8 Site 59 Building ~~[illegible]~~ Room No. 103

Priority Assigned: 1. Emergency; 2. Recognized Danger; 3. Imminent Deadline; 4. Special Survey; 5. Routine;

(Circle One) Priority Approval: _____ (1. GL or DGL; 2. or 3. AGL; 4. or 5. SL)

Method of Analysis Complies With: _____

Background Information Useful to Analyst (Contamination Levels, Hazards, Etc.) _____

Chain of Custody: Yes ____ (See Attached Form) No X Other Information _____

All Samples Submitted to HSE-9 Must Be Screened For Radioactivity. Samples Containing Greater Than 20 dpm Total Alpha or 100 dpm Combined Gamma/Beta Contamination Cannot Be Handled At TA-59.

Sample Number	Other I.D.	Sampling Location	Analysis Requested	Sampling Method	Sample Type	Preservative Utilized	Radioactivity Scan (dpm) Alpha	Radioactivity Scan (dpm) Beta/Gamma	Remarks
88.00353-35?		35-125	VOA	G	SO	NONE			

Sampling Method: 24FC=24 Hour Flow-Weighted Composite; 24TC=24 Hour Time-Weighted Composite; G=Grab; B-Bail; D-Drill; C-Core; P=Pump; O=Other (Please Specify)

Sample Type: E-Effluent; SL=Sludge: SO=Soil; SC-Soil Core; WW Well Water; SW=Surface Water; O-Other

Preservative: F=Filtered; NF=Non-Filtered; NA=Non Acidified; A H_2SO_4(2 ml/l); A HNO_3(5 ml/l); A HNO_3(5 ml/l); A H_3PO_4 & $CuSO_4$; A-Other; I Iced; P NaOH.

INTERNATIONAL TECHNOLOGY CORPORATION

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET
SOIL ANALYSIS

SAMPLE NUMBER: 88.6853 REQUEST SHEET: 88.7067
NUMBER OF REPLICATE RUNS: 2

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	128.0/130.6	(76-114)
TOLUENE d8	118.3/116.4	(88-110)
p-BROMOFLUOROBENZENE	96.6/96.7	(86-115)
BROMOBENZENE	139.6/54.5	(SPIKED ONTO SOIL PRIOR TO EXTRACTION, NOT A CLP REQUIRED SURROGATE)

CAS #	COMPOUND	RESULT +/- (ppb)		MDL (ug/gm)
74873	CHLOROMETHANE	<MDL		10.0
73839	BROMOMETHANE			10.0
75014	VINYL CHLORIDE			10.0
75003	CHLOROETHANE			10.0
75092	METHYLENE CHLORIDE			10.0
75150	CARBON DISULFIDE			10.0
75354	1,1-DICHLOROETHENE			10.0
75343	1,1-DICHLOROETHANE			10.0
540590	1,2-DICHLOROETHENE		(TOTAL)	10.0
67663	CHLOROFORM			10.0
107062	1,2-DICHLOROETHANE			10.0
78933	2-BUTANONE			10.0
71556	1,1,1-TRICHLOROETHANE			10.0
56235	CARBON TETRACHLORIDE			10.0
108054	VINYL ACETATE			10.0
75274	BROMODICHLOROMETHANE			10.0
78875	1,2-DICHLOROPROPANE			10.0
10061015	cis-1,3-DICHLOROPROPENE			10.0
79016	TRICHLOROETHENE			10.0
124481	DIBROMOCHLOROMETHANE			10.0
79005	1,1,2-TRICHLOROETHANE			10.0
71432	BENZENE			10.0
10061026	trans-1,3-DICHLOROPROPENE			10.0
75252	BROMOFORM			10.0
108101	4-METHYL-2-PENTANONE			10.0
591786	2-HEXANONE			10.0
127184	TETRACHLOROETHENE			10.0
79345	1,1,2,2-TETRACHLOROETHANE			10.0
108883	TOLUENE			10.0
108907	CHLOROBENZENE			10.0
100414	ETHYLBENZENE			10.0
100425	STYRENE			10.0
133027	XYLENES		(TOTAL)	10.0

95501	1,2-DICHLOROBENZENE	<MDL	10.0
541731	1,3-DICHLOROBENZENE		10.0
106467	1,4-DICHLOROBENZENE		10.0
91023	NAPHTHALENE		10.0
104518	n-BUTYLBENZENE		10.0
108861	BROMOBENZENE		10.0
95498	2-CHLOROTOLUENE		10.0
106434	4-CHLOROTOLUENE		10.0
142289	1,3-DICHLOROPROPANE		10.0
87683	HEXACHLOROBUTADIENE		10.0
630206	1,1,1,2-TETRACHLOROETHANE		10.0
120821	1,2,4-TRICHLOROBENZENE		10.0
96184	1,2,3-TRICHLOROPROPANE		10.0
95636	1,2,4-TRIMETHYLBENZENE		10.0
75694	TRICHLOROFLUOROMETHANE		10.0
106934	1,2-DIBROMOETHANE		10.0
98828	ISOPROPYLBENZENE		10.0
98066	t-BUTYLBENZENE		10.0
135988	s-BUTYLBENZENE		10.0
99876	p-ISOPROPYLTOLUENE		10.0
544105	1-CHLOROHEXANE		10.0
563586	1,1-DICHLOROPROPENE		10.0
108703	1,3,5-TRICHLOROBENZENE		10.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		10.0
67641	ACETONE	TRACE	10.0
60297	DIETHYL ETHER	<MDL	10.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	<MDL	10.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was approximately 20 ppm (ug/gm of soil). A recovery of 10% was assumed.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

Acetone is a common laboratory and glassware contaminent

SAMPLE NUMBER: 88-08538 REQUEST SHEET NUMBER: 88.7067

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET
SOIL ANALYSIS

SAMPLE NUMBER: 88.08354 REQUEST SHEET: 88.7067
NUMBER OF REPLICATE RUNS: 2

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	123.0/127.1	(76-114)
TOLUENE d8	112.2/111.3	(88-110)
p-BROMOFLUOROBENZENE	98.4/97.3	(86-115)
BROMOBENZENE	39.3/18.3	(SPIKED ONTO SOIL PRIOR TO EXTRACTION, NOT A CLP REQUIRED SURROGATE)

CAS #	COMPOUND	RESULT +/- (ppb)		MDL (ug/gm)
74873	CHLOROMETHANE	<MDL		10.0
73839	BROMOMETHANE			10.0
75014	VINYL CHLORIDE			10.0
75003	CHLOROETHANE			10.0
75092	METHYLENE CHLORIDE			10.0
75150	CARBON DISULFIDE			10.0
75354	1,1-DICHLOROETHENE			10.0
75343	1,1-DICHLOROETHANE			10.0
540590	1,2-DICHLOROETHENE		(TOTAL)	10.0
67663	CHLOROFORM			10.0
107062	1,2-DICHLOROETHANE			10.0
78933	2-BUTANONE			10.0
71556	1,1,1-TRICHLOROETHANE			10.0
56235	CARBON TETRACHLORIDE			10.0
108054	VINYL ACETATE			10.0
75274	BROMODICHLOROMETHANE			10.0
78875	1,2-DICHLOROPROPANE			10.0
10061015	cis-1,3-DICHLOROPROPENE			10.0
79016	TRICHLOROETHENE			10.0
124481	DIBROMOCHLOROMETHANE			10.0
79005	1,1,2-TRICHLOROETHANE			10.0
71432	BENZENE			10.0
10061026	trans-1,3-DICHLOROPROPENE			10.0
75252	BROMOFORM			10.0
108101	4-METHYL-2-PENTANONE			10.0
591786	2-HEXANONE			10.0
127184	TETRACHLOROETHENE			10.0
79345	1,1,2,2-TETRACHLOROETHANE			10.0
108883	TOLUENE			10.0
108907	CHLOROBENZENE			10.0
100414	ETHYLBENZENE			10.0
100425	STYRENE			10.0
133027	XYLENES		(TOTAL)	10.0

95501	1,2-DICHLOROBENZENE	<MDL	10.0
541731	1,3-DICHLOROBENZENE		10.0
106467	1,4-DICHLOROBENZENE		10.0
91023	NAPHTHALENE		10.0
104518	n-BUTYLBENZENE		10.0
108861	BROMOBENZENE		10.0
95498	2-CHLOROTOLUENE		10.0
106434	4-CHLOROTOLUENE		10.0
142289	1,3-DICHLOROPROPANE		10.0
87683	HEXACHLOROBUTADIENE		10.0
630206	1,1,1,2-TETRACHLOROETHANE		10.0
120821	1,2,4-TRICHLOROBENZENE		10.0
96184	1,2,3-TRICHLOROPROPANE		10.0
95636	1,2,4-TRIMETHYLBENZENE		10.0
75694	TRICHLOROFLUOROMETHANE		10.0
106934	1,2-DIBROMOETHANE		10.0
98828	ISOPROPYLBENZENE		10.0
98066	t-BUTYLBENZENE		10.0
135988	s-BUTYLBENZENE		10.0
99876	p-ISOPROPYLTOLUENE		10.0
544105	1-CHLOROHEXANE		10.0
563586	1,1-DICHLOROPROPENE		10.0
108703	1,3,5-TRICHLOROBENZENE		10.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		10.0
67641	ACETONE	Trace	10.0
60297	DIETHYL ETHER	<MDL	10.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	<MDL	10.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was approximately 20 ppm (ug/gm of soil). A recovery of 10% was assumed.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

SAMPLE NUMBER: 88-00354 REQUEST SHEET NUMBER: 88.7067

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET
SOIL ANALYSIS

SAMPLE NUMBER: 8800355 REQUEST SHEET: 88.7067
NUMBER OF REPLICATE RUNS: 1

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	123.6	(76-114)
TOLUENE d8	104.6	(88-110)
p-BROMOFLUOROBENZENE	93.5	(86-115)
BROMOBENZENE	78.6	(SPIKED ONTO SOIL PRIOR TO EXTRACTION, NOT A CLP REQUIRED SURROGATE)

CAS #	COMPOUND	RESULT +/- (ppb)		MDL (ug/gm)
74873	CHLOROMETHANE	cmbl		10.0
73839	BROMOMETHANE			10.0
75014	VINYL CHLORIDE			10.0
75003	CHLOROETHANE			10.0
75092	METHYLENE CHLORIDE			10.0
75150	CARBON DISULFIDE			10.0
75354	1,1-DICHLOROETHENE			10.0
75343	1,1-DICHLOROETHANE			10.0
540590	1,2-DICHLOROETHENE		(TOTAL)	10.0
67663	CHLOROFORM			10.0
107062	1,2-DICHLOROETHANE			10.0
78933	2-BUTANONE			10.0
71556	1,1,1-TRICHLOROETHANE			10.0
56235	CARBON TETRACHLORIDE			10.0
108054	VINYL ACETATE			10.0
75274	BROMODICHLOROMETHANE			10.0
78875	1,2-DICHLOROPROPANE			10.0
10061015	cis-1,3-DICHLOROPROPENE			10.0
79016	TRICHLOROETHENE			10.0
124481	DIBROMOCHLOROMETHANE			10.0
79005	1,1,2-TRICHLOROETHANE			10.0
71432	BENZENE			10.0
10061026	trans-1,3-DICHLOROPROPENE			10.0
75252	BROMOFORM			10.0
108101	4-METHYL-2-PENTANONE			10.0
591786	2-HEXANONE			10.0
127184	TETRACHLOROETHENE			10.0
79345	1,1,2,2-TETRACHLOROETHANE			10.0
108883	TOLUENE			10.0
108907	CHLOROBENZENE			10.0
100414	ETHYLBENZENE			10.0
100425	STYRENE			10.0
133027	XYLENES		(TOTAL)	10.0

95501	1,2-DICHLOROBENZENE	Lmol	10.0
541731	1,3-DICHLOROBENZENE		10.0
106467	1,4-DICHLOROBENZENE		10.0
91023	NAPHTHALENE		10.0
104518	n-BUTYLBENZENE		10.0
108861	BROMOBENZENE		10.0
95498	2-CHLOROTOLUENE		10.0
106434	4-CHLOROTOLUENE		10.0
142289	1,3-DICHLOROPROPANE		10.0
87683	HEXACHLOROBUTADIENE		10.0
630206	1,1,1,2-TETRACHLOROETHANE		10.0
120821	1,2,4-TRICHLOROBENZENE		10.0
96184	1,2,3-TRICHLOROPROPANE		10.0
95636	1,2,4-TRIMETHYLBENZENE		10.0
75694	TRICHLOROFLUOROMETHANE		10.0
106934	1,2-DIBROMOETHANE		10.0
98828	ISOPROPYLBENZENE		10.0
98066	t-BUTYLBENZENE		10.0
135988	s-BUTYLBENZENE		10.0
99876	p-ISOPROPYLTOLUENE		10.0
544105	1-CHLOROHEXANE		10.0
563586	1,1-DICHLOROPROPENE		10.0
108703	1,3,5-TRICHLOROBENZENE		10.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		10.0
67641	ACETONE		10.0
60297	DIETHYL ETHER		10.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		10.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was approximately 20 ppm (ug/gm of soil). A recovery of 10% was assumed.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

SAMPLE NUMBER: 88-00355 REQUEST SHEET NUMBER: 88.7067

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET
SOIL ANALYSIS

SAMPLE NUMBER: 8i00356 REQUEST SHEET: 88.7067
NUMBER OF REPLICATE RUNS: 2

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	80.8/79.8	(76-114)
TOLUENE d8	99.3/98.2	(88-110)
p-BROMOFLUOROBENZENE	82.9/83.0	(86-115)
BROMOBENZENE	35.3/37.3	(SPIKED ONTO SOIL PRIOR TO EXTRACTION, NOT A CLP REQUIRED SURROGATE)

CAS #	COMPOUND	RESULT +/- (ppb)	MDL (ug/gm)
74873	CHLOROMETHANE	<MDL	10.0
73839	BROMOMETHANE		10.0
75014	VINYL CHLORIDE		10.0
75003	CHLOROETHANE		10.0
75092	METHYLENE CHLORIDE		10.0
75150	CARBON DISULFIDE		10.0
75354	1,1-DICHLOROETHENE		10.0
75343	1,1-DICHLOROETHANE		10.0
540590	1,2-DICHLOROETHENE	(TOTAL)	10.0
67663	CHLOROFORM		10.0
107062	1,2-DICHLOROETHANE		10.0
78933	2-BUTANONE		10.0
71556	1,1,1-TRICHLOROETHANE		10.0
56235	CARBON TETRACHLORIDE		10.0
108054	VINYL ACETATE		10.0
75274	BROMODICHLOROMETHANE		10.0
78875	1,2-DICHLOROPROPANE		10.0
10061015	cis-1,3-DICHLOROPROPENE		10.0
79016	TRICHLOROETHENE		10.0
124481	DIBROMOCHLOROMETHANE		10.0
79005	1,1,2-TRICHLOROETHANE		10.0
71432	BENZENE		10.0
10061026	trans-1,3-DICHLOROPROPENE		10.0
75252	BROMOFORM		10.0
108101	4-METHYL-2-PENTANONE		10.0
591786	2-HEXANONE		10.0
127184	TETRACHLOROETHENE		10.0
79345	1,1,2,2-TETRACHLOROETHANE		10.0
108883	TOLUENE		10.0
108907	CHLOROBENZENE		10.0
100414	ETHYLBENZENE		10.0
100425	STYRENE		10.0
133027	XYLENES	(TOTAL)	10.0

95501	1,2-DICHLOROBENZENE	<MDL	10.0
541731	1,3-DICHLOROBENZENE		10.0
106467	1,4-DICHLOROBENZENE		10.0
91023	NAPHTHALENE		10.0
104518	n-BUTYLBENZENE		10.0
108861	BROMOBENZENE		10.0
95498	2-CHLOROTOLUENE		10.0
106434	4-CHLOROTOLUENE		10.0
142289	1,3-DICHLOROPROPANE		10.0
87683	HEXACHLOROBUTADIENE		10.0
630206	1,1,1,2-TETRACHLOROETHANE		10.0
120821	1,2,4-TRICHLOROBENZENE		10.0
96184	1,2,3-TRICHLOROPROPANE		10.0
95636	1,2,4-TRIMETHYLBENZENE		10.0
75694	TRICHLOROFLUOROMETHANE		10.0
106934	1,2-DIBROMOETHANE		10.0
98828	ISOPROPYLBENZENE		10.0
98066	t-BUTYLBENZENE		10.0
135988	s-BUTYLBENZENE		10.0
99876	p-ISOPROPYLTOLUENE		10.0
544105	1-CHLOROHEXANE		10.0
563586	1,1-DICHLOROPROPENE		10.0
108703	1,3,5-TRICHLOROBENZENE		10.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		10.0
67641	ACETONE		10.0
60297	DIETHYL ETHER		10.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		10.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was approximately 20 ppm (ug/gm of soil). A recovery of 10% was assumed.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

SAMPLE NUMBER: 88-0C356 REQUEST SHEET NUMBER: 88.7067

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET
SOIL ANALYSIS

SAMPLE NUMBER: 88 00357 REQUEST SHEET: 88.7067
NUMBER OF REPLICATE RUNS: 2

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND		ACCEPTABLE RANGE (CLP)
1,2-DICHLOROETHANE d4	83.3/75.3	(76-114)
TOLUENE d8	81.7/85.8	(88-110)
p-BROMOFLUOROBENZENE	96.0/84.2	(86-115)
BROMOBENZENE	55.2	(SPIKED ONTO SOIL PRIOR TO EXTRACTION, NOT A CLP REQUIRED SURROGATE) (one replicate reported)

CAS #	COMPOUND	RESULT +/- (ppb)		MDL (ug/gm)
74873	CHLOROMETHANE	<MDL		10.0
73839	BROMOMETHANE			10.0
75014	VINYL CHLORIDE			10.0
75003	CHLOROETHANE			10.0
75092	METHYLENE CHLORIDE			10.0
75150	CARBON DISULFIDE			10.0
75354	1,1-DICHLOROETHENE			10.0
75343	1,1-DICHLOROETHANE			10.0
540590	1,2-DICHLOROETHENE		(TOTAL)	10.0
67663	CHLOROFORM			10.0
107062	1,2-DICHLOROETHANE			10.0
78933	2-BUTANONE			10.0
71556	1,1,1-TRICHLOROETHANE			10.0
56235	CARBON TETRACHLORIDE			10.0
108054	VINYL ACETATE			10.0
75274	BROMODICHLOROMETHANE			10.0
78875	1,2-DICHLOROPROPANE			10.0
10061015	cis-1,3-DICHLOROPROPENE			10.0
79016	TRICHLOROETHENE			10.0
124481	DIBROMOCHLOROMETHANE			10.0
79005	1,1,2-TRICHLOROETHANE			10.0
71432	BENZENE			10.0
10061026	trans-1,3-DICHLOROPROPENE			10.0
75252	BROMOFORM			10.0
108101	4-METHYL-2-PENTANONE			10.0
591786	2-HEXANONE			10.0
127184	TETRACHLOROETHENE			10.0
79345	1,1,2,2-TETRACHLOROETHANE			10.0
108883	TOLUENE			10.0
108907	CHLOROBENZENE			10.0
100414	ETHYLBENZENE			10.0
100425	STYRENE			10.0
133027	XYLENES		(TOTAL)	10.0

95501	1,2-DICHLOROBENZENE	<MDL	10.0
541731	1,3-DICHLOROBENZENE		10.0
106467	1,4-DICHLOROBENZENE		10.0
91023	NAPHTHALENE		10.0
104518	n-BUTYLBENZENE		10.0
108861	BROMOBENZENE		10.0
95498	2-CHLOROTOLUENE		10.0
106434	4-CHLOROTOLUENE		10.0
142289	1,3-DICHLOROPROPANE		10.0
87683	HEXACHLOROBUTADIENE		10.0
630206	1,1,1,2-TETRACHLOROETHANE		10.0
120821	1,2,4-TRICHLOROBENZENE		10.0
96184	1,2,3-TRICHLOROPROPANE		10.0
95636	1,2,4-TRIMETHYLBENZENE		10.0
75694	TRICHLOROFLUOROMETHANE		10.0
106934	1,2-DIBROMOETHANE		10.0
98828	ISOPROPYLBENZENE		10.0
98066	t-BUTYLBENZENE		10.0
135988	s-BUTYLBENZENE		10.0
99876	p-ISOPROPYLTOLUENE	Detected, but <MDL	10.0
544105	1-CHLOROHEXANE		10.0
563586	1,1-DICHLOROPROPENE		10.0
108703	1,3,5-TRICHLOROBENZENE		10.0
96128	1,2-DIBROMO-3-CHLOROPROPANE		10.0
67641	ACETONE		10.0
60297	DIETHYL ETHER		10.0
76131	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE		10.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was approximately 20 ppm (ug/gm of soil). A recovery of 10% was assumed.

All results are reported with a corresponding uncertainty. Values close to the MDL have larger uncertainties associated with them. If a sample is run at least in triplicate, the reported uncertainty represents the standard deviation of these values.

SAMPLE NUMBER: 88-00357 REQUEST SHEET NUMBER: 88.7067

Also detected hydrocarbons, substituted benzenes, and tentatively identified Camphene.

SUBAPPENDIX C-3

JUNE 29, 1988
SAMPLING EVENT
VOLATILE ORGANICS

HSE-9 ORGANIC ANALYSIS RESULTS
VOLATILE ORGANICS

REQUEST SHEET NUMBER: 88.7083
SAMPLE NUMBERS: 88.06203
SUBMITTER: TONY GRIEGGS, HSE-8
DATE: JULY 18,1988
NOTEBOOK/PAGE REFERENCE: R6572, p.115

The above samples were received on June 29, 1988. They were refrigerated until analysis which began on July 5, 1988. The samples were analyzed using purge and trap/gas chromatography/mass spectrometry. The results obtained for each sample are attached. Samples are normally run with a series of quality assurance/quality check (QA/QC) samples. The results obtained for the blind QA/QC sample analyzed with the above batch are attached. The results of other QA/QC check analyses are available from me if you need this information. Analysis of the laboratory blank showed the presence of methylene chloride and 1,2-dichloroethane at low levels. Please call if you have any questions.

Suzanne Bell
HSE-9 Organic Analysis Section

mag 7/20/88
QA/QC Approval

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Los Alamos
Los Alamos National Laboratory

HSE-9 Analytical Chemistry Request

INTERPRETATIONAL TECHNOLOGY CORPORATION

7083

Requestor	Program Code	Sample Owner	Date	Total No. Samples
HSE-8	W447	TG	6/29/00	1

Sample Numbers	Matrix	Analysis	Tech	Analyst	Priority	Remarks
28-062 03	WN	141	PTGC	SCB	2	
30-98519						
~~[illegible]~~						

(1083)

REQUESTOR DATA SHEET # 141

Log Book SAMP Page 16

Sampled by Tony Gruggs Collection Date 6/29/88 Time _____ Weather _____ Witness _____

Presampling Conference Completed With _____ On _____ Send Report To Tony Gruggs MS K490

Phone 5-0451 Source of Sample: TA-35 stream bed Reason for Sampling _____

Group HSE-8 Site 59 Building 0443 Room No. 103

Priority Assigned: 1. Emergency; 2. Recognized Danger; 3. Imminent Deadline; 4. Special Survey; 5. Routine;

(Circle One) Priority Approval: _____ (1. GL or BGL; 2. or 3. AGL; 4. or 5. SL)

Method of Analysis Complies With: _____

Background Information Useful to Analyst (Contamination Levels, Hazards, Etc.) _____

Chain of Custody: Yes _____ (See Attached Form) No _____ Other Information _____

All Samples Submitted to HSE-9 Must Be Screened For Radioactivity. Samples Containing Greater Than 20 dpm Total Alpha or 100 dpm Combined Gamma/Beta Contamination Cannot Be Handled At TA-59.

Sample Number	Other I.D.	Sampling Location	Analysis Requested	Sampling Method	Sample Type	Preservative Utilized	Radioactivity Scan (dpm) Alpha	Radioactivity Scan (dpm) Beta/Gamma	Remarks
88.06203	—	35 [redacted]	VOA	G	SW	—	—	—	—

Sampling Method: 24FC=24 Hour Flow-Weighted Composite; 24TC=24 Hour Time-Weighted Composite; G=Grab; B Ball; D-Drill; C-Core; P=Pump; O-Other (Please Specify)

Sample Type: E-Effluent; SL=Sludge: SO-Soil; SC Soil Core; WW Well Water; SW=Surface Water; O-Other

Preservative: F=Filtered; NF=Non-Filtered; NA-Non Acidified; A H_2SO_4(2 ml/l); A HNO_3(5 ml/l); A HNO_3(5 ml/l); A H_3PO_4 & $CuSO_4$; A Other; I Iced; P NaOH.

INTERNATIONAL TECHNOLOGY CORPORATION

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS RESULTS
PURGEABLE ORGANICS IN WATER

Stream water approx. 1/4 mile downstream of TA-35-125 inj. pit.

SAMPLE NUMBER: 88.06203
MISCELLANEOUS INFORMATION: 88.7083 ISM/PSS
ID FILE USED: VOLATILE ORGANIC COMPOUND INSTRUMENT #2 10-200 PPB
INJECTION TIME: 880705 21:45
QUANTITATION TIME: 880706 10:29
CALIBRATION TIME: 880706 10:22

SURROGATE SPIKE RECOVERIES: (IN UG/L)

COMPOUND	ADDED	RECOVERED	% RECOVERY
1,2-DICHLOROETHANE d4	50.0	38.574	77.1
TOLUENE d8	50.0	41.876	83.8
4-BROMOFLUOROBENZENE	50.0	40.023	80.0

THE EPA CONTRACT LABORATORY PROGRAM (CLP) SETS FORTH THE FOLLOWING AS ACCEPTABLE LIMITS FOR THE PERCENT RECOVERY OF THE SURROGATES:

1,2-DICHLOROETHANE d4	76-114%
TOLUENE d8	88-110%
4-BROMOFLUOROBENZENE	86-115%

TARGET COMPOUNDS

COMPOUND	CONCENTRATION IN UG/L	
CHLOROMETHANE	< MDL	
VINYL CHLORIDE	< MDL	
BROMOMETHANE	< MDL	
CHLOROETHANE	< MDL	
ACETONE	< MDL	
DIETHYL ETHER	< MDL	
TRICHLOROFLUOROMETHANE	< MDL	
IODOMETHANE	< MDL	
112TRICHLORO122TRIFLUOROETHANE	< MDL	
METHYLENE CHLORIDE	< MDL	
CARBON DISULFIDE	10.556	False positive.
t-1,2-DICHLOROETHENE	< MDL	
1,1-DICHLOROETHANE	< MDL	
c-1,2-DICHLOROETHENE	< MDL	
CHLOROFORM	< MDL	
1,2-DICHLOROETHANE	< MDL	
1,1-DICHLOROPROPENE	< MDL	

VINYL ACETATE	< MDL
2-BUTANONE	< MDL
2,2-DICHLOROPROPANE	< MDL
1,1,1-TRICHLOROETHANE	< MDL
CARBON TETRACHLORIDE	< MDL
1,2-DICHLOROPROPANE	< MDL
DIBROMOMETHANE	< MDL
BROMODICHLOROMETHANE	< MDL
t-1,3-DICHLOROPROPENE	< MDL
c-1,3-DICHLOROPROPENE	. MDL
1,1,2-TRICHLOROETHANE	< MDL
1,3-DICHLOROPROPANE	< MDL
CHLORODIBROMOMETHANE	< MDL
BROMOFORM	< MDL
4-METHYL-2-PENTANONE	< MDL
2-HEXANONE	< MDL
1,2-DIBROMOETHANE	< MDL
TETRACHLOROETHENE	< MDL
1,1,1,2-TETRACHLOROETHANE	< MDL
1-CHLOROHEXANE	< MDL
ETHYL BENZENE	< MDL
m,p-XYLENE	< MDL
o-XYLENE	< MDL
STYRENE	< MDL
1,1,2,2-TETRACHLOROETHANE	< MDL
1,2,3-TRICHLOROPROPANE	< MDL
ISOPROPYL BENZENE	< MDL
BROMOBENZENE	< MDL
n-PROPYL BENZENE	< MDL
2-CHLOROTOLUENE	< MDL
4-CHLOROTOLUENE	< MDL
1,3,5-TRIMETHYLBENZENE	< MDL
t-BUTYLBENZENE	< MDL
1,2,4-TRIMETHYLBENZENE	< MDL
s-BUTYLBENZENE	< MDL
1,3-DICHLOROBENZENE	< MDL
1,4-DICHLOROBENZENE	< MDL
p-ISOPROPYLTOLUENE	< MDL
1,2-DICHLOROBENZENE	< MDL
1,2-DIBROMO-3-CHLOROPROPANE	< MDL
1,2,4-TRICHLOROBENZENE	< MDL
NAPTHALENE	< MDL
1,2,3-TRICHLOROBENZENE	< MDL
1,1-DICHLOROETHENE	< MDL
BENZENE	< MDL
TRICHLOROETHENE	< MDL
TOLUENE	< MDL
CHLOROBENZENE	< MDL
n-BUTYLBENZENE	< MDL
HEXACHLOROBUTADIENE	< MDL

ALL UNCERTAINTIES ARE +/- 10% UNLESS OTHERWISE NOTED.

MINIMUM DETECTION LIMTS (MDL'S) ARE BETWEEN 1 AND 5 UG/L UNLESS OTHERWISE NOTED. THE MINUMUM QUANTITATION LIMIT FOR THIS SAMPLES WAS 10.0 UG/L FOR ALL COMPOUNDS.

COMMENTS: CS_2 is a common lab contaminent.
CS_2 Scan was not good, False positive.

SUBAPPENDIX C-4

JUNE 9, 1988
SAMPLING EVENT
METALS ANALYSIS

345 - 35-85 water
350 - 35-85 sludge

Cu pen EP-TOX METAL

INTERNATIONAL TECHNOLOGY CORPORATION

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: HG MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		1.9000	0.4000	UG/L	6/24/88	
88.00345 .		< 0.5000	0.5000	UG/L	6/27/88	
88.00345 .		< 0.5000	0.5000	UG/L	6/27/88	
88.00350 .		11.0000	2.0000	UG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: HG MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.00595 .		1.4300	0.2900	UG/L	1.4900	0.0600	6/24/88	UNDER CONTROL
00.00595 .		1.5600	0.3100	UG/L	1.4900	0.0600	6/24/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
M.C. Williams	RW	mag
6-27-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

NOTE!

IF UNITS ARE µg/l, ANALYSIS WAS E-P TOX

IF UNITS ARE µg/KG, ANALYSIS WAS TOTAL METALS

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: AG MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		0.0030	0.0030	MG/L	6/24/88	
88.00345 .		< 0.0030	0.0030	MG/L	6/24/88	
88.00350 .		0.3100	0.0600	MG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: AG MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01136 .		10.0000	3.0000	UG/L	10.0000	1.1800	6/24/88	UNDER CONTROL
00.01136 .		11.0000	3.0000	UG/L	10.0000	1.1800	6/24/88	UNDER CONTROL
00.97261 .		498.0000	50.0000	UG/L	500.0000	50.0000	6/24/88	UNDER CONTROL
00.97261 .		503.0000	50.0000	UG/L	500.0000	50.0000	6/24/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
6-28-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: AS MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		2.5000	1.0000	UG/L	6/24/88	
88.00345 .		5.5000	1.1000	UG/L	6/24/88	
88.00350 .		0.3000	0.0600	MG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: AS MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010 .		27.5000	5.5000	UG/L	27.0000	3.0000	6/24/88	UNDER CONTROL
00.01010 .		31.9000	6.4000	UG/L	27.0000	3.0000	6/24/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
6-28-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: CR MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		2.6000	0.5000	UG/L	6/24/88	
88.00345 .		6.0000	1.0000	UG/L	6/24/88	
88.00350 .		2.4000	0.5000	MG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: CR MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01030 .		103.0000	10.0000	UG/L	100.0000	10.2000	6/24/88	UNDER CONTROL
00.01030 .		96.9000	9.7000	UG/L	100.0000	10.2000	6/24/88	UNDER CONTROL
00.01030 .		118.0000	12.0000	UG/L	100.0000	10.2000	6/24/88	WARNING 1-2 SIG

Analyst	Section Leader	QA Officer
6-28-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: PB MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		65.0000	13.0000	UG/L	6/24/88	
88.00345 .		27.0000	5.0000	UG/L	6/24/88	
88.00350 .		5.2000	1.0000	MG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: PB MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010 .		45.7000	9.1000	UG/L	43.0000	6.0000	6/24/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
6-28-88	6/29/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: BA MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		< 0.1000	0.1000	MG/L	6/24/88	
88.00345 .		0.2100	0.1000	MG/L	6/27/88	
88.00345 .		0.2100	0.1000	MG/L	6/27/88	
88.00350 .		12.0000	1.0000	MG/Kg	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: BA MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01026 .		1.2900	0.1300	MG/L	1.2000	0.0800	6/24/88	UNDER CONTROL
00.01026 .		1.2100	0.1200	MG/L	1.2000	0.0800	6/24/88	UNDER CONTROL
00.01026 .		1.2300	0.1200	MG/L	1.2000	0.0800	6/24/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
6-28-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: SE MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		< 1.0000	1.0000	UG/L	6/24/88	
88.00345 .		< 1.0000	1.0000	UG/L	6/24/88	
88.00350 .		27.0000	5.0000	UG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: SE MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010 .		10.1000	2.0000	UG/L	11.0000	2.0000	6/24/88	UNDER CONTROL
00.01010 .		7.8000	1.5000	UG/L	11.0000	2.0000	6/24/88	WARNING 1-2 SIG

Analyst	Section Leader	QA Officer
6-28-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: CD MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00336 .		1.7000	0.2000	~~MG~~ UG/L	6/24/88	
88.00345 .		2.6000	0.5000	UG/L	6/27/88	
88.00350 .		0.1800	0.0400	MG/KG	6/27/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: M.C. WILLIAMS on 27-Jun-1988

REQUEST NUMBER: 6691 ANALYSIS: CD MATRIX: W OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010 .		9.7700	2.0000	UG/L	9.0000	1.0000	6/24/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
6-28-88	6/28/88	6/29/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

SUBAPPENDIX C-5

POLYCHORINATED BIPHENYL ANALYSES

REQUESTOR DATA SHEET # _____

Log Book _____ Page _____

Sampled by R. Fixlin Collection Date 9/3/86 Time 0930 Weather _____ Witness _____

Presampling Conference Completed With R. Seaty On 9/4/86 Send Report To Roy Fixlin MS K-490

Phone 5-0452 Source of Sample: 35-125, 35-85 Reason for Sampling oil cleanup

Group ~~HSE-8~~ DOE Site 35 Building 125 + 85 Room No. _____

Priority Assigned: 1. Emergency; 2. Recognized Danger; (3.) Imminent Deadline; 4. Special Survey; 5. Routine;

(Circle One) Priority Approval: _____ (1. GL or DGL; 2. or 3. AGL; 4. or 5. SL)

Method of Analysis Complies With: _____

Background Information Useful to Analyst (Contamination Levels, Hazards, Etc.) Suspect no PCB's

Chain of Custody: Yes _____ (See Attached Form) No _____ Other Information _____

All Samples Submitted to HSE-9 Must Be Screened For Radioactivity. Samples Containing Greater Than 20 dpm Total Alpha or 100 dpm Combined Gamma/Beta Contamination Cannot Be Handled At TA-59.

Sample Number	Other I.D.	Sampling Location	Analysis Requested	Sampling Method	Sample Type	Preservative Utilized	Radioactivity Scan (dpm) Alpha	Radioactivity Scan (dpm) Beta/Gamma	Remarks
86-05274		35-125	PCB	grab	oil/water	none	NA	NA	
86-05275		35-85	"	"	"	"	"	"	

Sampling Method: 24FC=24 Hour Flow-Weighted Composite; 24TC=24 Hour Time-Weighted Composite; G=Grab; B=Ball; D=Drill; C=Core; P=Pump; O=Other (Please Specify)

Sample Type: E=Effluent; SL=Sludge: SO=Soil; SC-Soil Core; WW-Well Water; SW=Surface Water; O=Other

Preservative: F=Filtered; NF=Non-Filtered; NA=Non Acidified; A-H_2SO_4(2 ml/l); A-HNO_3(5 ml/l); A-HNO_3(5 ml/l); A-H_3PO_4 & $CuSO_4$; A-Other; I=Iced; P-NaOH.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS DATA SHEET 5875

Post Sampling Conference Completed With _____ and Samples Submitted On _____ Time _____

Due _____ Project # _____ Estimate of Time Involved _____ Actual Time _____

Analytical Results and Remarks _____

If Chain of Custody, Seal(s) Intact: Yes___ No___ Seal(s) Broken By: _____ Date _____

Printed Data Output Attached: Yes___ No___ Other Sheets Attached: Yes___ No___ (DE=Date Extracted, DA=Date Analyzed)

Sample Number	DE/DA	Compound	CAS #	Analytical Result (Units)	Analytical Uncertainty	MDL	Comments
22. 05270			1336363	< MDL	± 25%	20 ppb	at catch basin
05275			1336363	< MDL	± 25%	20 ppb	

Approved By: Analyst [signature] Notebook ACD 290 Page 31 Date 9/1/86 QC Coordinator _____

Section Leader [signature] Date 9/11 Computer Entry _____ Date _____

0112S (002S)

INTERNATIONAL TECHNOLOGY CORPORATION

REQUESTOR DATA SHEET # 6343

Log Book _____ Page _____

Sampled by Roy Bohn Collection Date 7/29/87 Time _____ Weather _____ Witness _____

Presampling Conference Completed With _____ On _____ Send Report To Roy Bohn MS K490

Phone 5-0452 Source of Sample: TA-35 oil Basins Reason for Sampling discharge Ponds

Group CGS Site 35 Building 125 + 85 Room No. OUTSIDE

Priority Assigned: 1. Emergency; (2) Recognized Danger; 3. Imminent Deadline; 4. Special Survey; 5. Routine;

(Circle One) Priority Approval: _____ (1. GL or DGL; 2. or 3. AGL; 4. or 5. SL)

Method of Analysis Complies With: _____

Background Information Useful to Analyst (Contamination Levels, Hazards, Etc.) Suspect no PCB's

Chain of Custody: Yes _____ (See Attached Form) No _____ Other Information _____

All Samples Submitted to HSE-9 Must Be Screened For Radioactivity. Samples Containing Greater Than 20 dpm Total Alpha or 100 dpm Combined Gamma/Beta Contamination Cannot Be Handled At TA-59.

Sample Number	Other I.D.	Sampling Location	Analysis Requested	Sampling Method	Sample Type	Preservative Utilized	Radioactivity Scan (dpm) Alpha	Radioactivity Scan (dpm) Beta/Gamma	Remarks
87-0142									
87-0143									
X 87-01842		35-125	PCB	grab	oil	none	na	na	
87-01843		35-85	↓	↓	↓	↓	↓	↓	

Sampling Method: 24FC=24 Hour Flow-Weighted Composite; 24TC=24 Hour Time-Weighted Composite; G=Grab; B-Bail; D=Drill; C=Core; P=Pump; O=Other (Please Specify)

Sample Type: E-Effluent; SL=Sludge: SO=Soil; SC-Soil Core; WW-Well Water; SW=Surface Water; O=Other

Preservative: F=Filtered; NF=Non-Filtered; NA=Non Acidified; A H_2SO_4(2 ml/l); A HNO_3(5 ml/l); A HNO_3(5 ml/l); A H_3PO_4 & $CuSO_4$; A-Other; I=Iced; P NaOH.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS DATA SHEET # 6343

Post Sampling Conference Completed With _____ and Samples Submitted On _____ Time _____

Due _____ Project # _____ Estimate of Time Involved _____ Actual Time _____

Analytical Results and Remarks _____

If Chain of Custody, Seal(s) Intact: Yes___ No___ Seal(s) Broken By: _____ Date _____

Printed Data Output Attached: Yes___ No___ Other Sheets Attached: Yes___ No___ (DE-Date Extracted, DA-Date Analyzed)

Sample Number	DE/DA	Compound	CAS #	Analytical Result (Units)	Analytical Uncertainty	MDL	Comments
87.01842			13636-63	< MDL	± 0.1 ug/g	1.3 ug/g	
87.01843			13636-63	< MDL	± 0.1 ug/g	1.1 ug/g	
00.97416		1260	11096825	18.6 ug/g	± 2.0 ug/g	1.2 ug/g	Add % Rec
							21.4 87

Approved By: Analyst Barbara Hemberger Notebook AA#12 A003092 Page 98 Date 7/30/87 QC Coordinator _____

Section Leader _____ Date 8.4.87 Computer Intry _____ Date _____

01125 (0025)

INTERNATIONAL TECHNOLOGY CORPORATION

REQUESTOR DATA SHEET # _____

Sampled by Roy Bohn Collection Date 12/4/86 Time 1030 Weather _____ Log Book _____ Page _____ Witness _____

Presampling Conference Completed With Dec Sieth On 12/4/86 Send Report To R. Bohn MS K-490

Phone 5-0452 Source of Sample: Ten site canyon Reason for Sampling PCB analysis

Group ~~ATR~~ CLS-7 Site 35 Building 125 Room No. OUTSIDE

Priority Assigned: 1. Emergency; 2. Recognized Danger; 3. Imminent Deadline; 4. Special Survey; 5. Routine;

(Circle One) Priority Approval: _____ (1. GL or BGL; 2. or 3. AGL; 4. or 5 SL) ASAP

Method of Analysis Complies With: _____

Background Information Useful to Analyst (Contamination Levels, Hazards, Etc.) _____

Chain of Custody: Yes _____ (See Attached Form) No _____ Other Information _____

All Samples Submitted to HSE-9 Must Be Screened For Radioactivity. Samples Containing Greater Than 20 dpm Total Alpha or 100 dpm Combined Gamma/Beta Contamination Cannot Be Handled At TA-59.

Sample Number	Other I.D.	Sampling Location	Analysis Requested	Sampling Method	Sample Type	Preservative Utilized	Radioactivity Scan (dpm) Alpha	Radioactivity Scan (dpm) Beta/Gamma	Remarks
86.05286		Ten site	PCB	grab	soil	none	NA	NA	
86.05287		canyon	↓	↓	↓	↓	↓	↓	
86.05288									

Sampling Method: 24FC=24 Hour Flow-Weighted Composite; 24TC=24 Hour Time-Weighted Composite; G=Grab; B=Ball; D=Drill; C=Core; P=Pump; O=Other (Please Specify)

Sample Type: E=Effluent; SL=Sludge: SO=Soil; SC-Soil Core; WW-Well Water; SW=Surface Water; O=Other

Preservative: F=Filtered; NF=Non-Filtered; NA=Non Acidified; A-H_2SO_4(2 ml/l); A-HNO_3(5 ml/l); A-HNO_3(5 ml/l); A-H_3PO_4 & $CuSO_4$; A-Other; I=Iced; P-NaOH.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS DATA SHEET # 5352

Post Sampling Conference Completed With _____ and Samples Submitted On _____ Time _____

Due _____ Project # _____ Estimate of Time Involved _____ Actual Time _____

Analytical Results and Remarks _____

If Chain of Custody, Seal(s) Intact: Yes___ No___ Seal(s) Broken By: _____ Date _____

Printed Data Output Attached: Yes___ No___ Other Sheets Attached: Yes___ No___ (DE=Date Extracted, DA=Date Analyzed)

Sample Number	DE/DA	Compound	CAS #	Analytical Result (Units)	Analytical Uncertainty	MDL	Comments
05286		1242	53469219	4.7 µg/g	± 0.5 µg/g	1.3 µg/g	[illegible]
87			53469219	11.7 µg/g	± 1.2 µg/g	1.1 µg/g	"
88			53469219	9.1 µg/g	± 0.9 µg/g	1.3 µg/g	at [illegible]
							and spill [illegible]
							spill [illegible] 12/3/86

Approved By: Analyst [illegible] Notebook RCRA Acc 232 Page 96 Date 12/5/86 QC Coordinator _____

Section Leader _____ Date _____ Computer Entry _____ Date _____

0112S (002S)

INTERNATIONAL TECHNOLOGY CORPORATION

SUBAPPENDIX C-6

JUNE 9, 1988
SAMPLING EVENT
RADIOLOGICAL ANALYSES

Oil pits TA-35

INTERNATIONAL TECHNOLOGY CORPORATION

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: G. BROOKS on 21-Jun-1988

REQUEST NUMBER: 7294 ANALYSIS: ALPHA MATRIX: WW OWNER: AG

	SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125	88.00351	.	5.0000	1.0000	PCI/L	6/21/88	
85	88.00352	.	10.0000	2.0000	PCI/L	6/21/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: G. BROOKS on 21-Jun-1988

REQUEST NUMBER: 7294 ANALYSIS: ALPHA MATRIX: WW OWNER: AG

There were no Quality Assurance materials run with the samples reported above for one of the following reasons:

___ No QA samples for this constituent and matrix type available within HSE-9

___ Only qualitative data requested

GB		
Analyst	Section Leader	QA Officer
6/21/88		
Date	Date	Date

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: G. BROOKS on 21-Jun-1988

REQUEST NUMBER: 7294 ANALYSIS: BETA MATRIX: WW OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00351 .		4.9000	0.7000	PCI/L	6/21/88	
88.00352 .		5.6000	0.7000	PCI/L	6/21/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: G. BROOKS on 21-Jun-1988

REQUEST NUMBER: 7294 ANALYSIS: BETA MATRIX: WW OWNER: AG

There were no Quality Assurance materials run with the samples reported above for one of the following reasons:

___ No QA samples for this constituent and matrix type available within HSE-9

___ Only qualitative data requested

Analyst	Section Leader	QA Officer
Date	Date	Date

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: G. BROOKS on 20-Jun-1988

REQUEST NUMBER: 7294 ANALYSIS: GAMMA MATRIX: WW OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
88.00351 .	-	500.0000	200.0000	PCI/L	6/20/88	
88.00352 .	-	600.0000	200.0000	PCI/L	6/20/88	

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: G. BROOKS on 20-Jun-1988

REQUEST NUMBER: 7294 ANALYSIS: GAMMA MATRIX: WW OWNER: AG

SAMPLE NUM	SYMBOL	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.00760 .		1300.0000	200.0000	PCI/L	1465.0000	80.0000	6/20/88	UNDER CONTROL
00.00760 .		1200.0000	200.0000	PCI/L	1465.0000	80.0000	6/20/88	WARNING 1-2 SIG
00.00760 .		1300.0000	200.0000	PCI/L	1465.0000	80.0000	6/20/88	UNDER CONTROL

Analyst	Section Leader	QA Officer
GB		mag
6/20/88		6/20/88
Date	Date	Date

The control status of the preceeding data were evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

SUBAPPENDIX C-7

DOCUMENTATION OF DECEMBER 3, 1986 SPILL AND CLEANUP

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

memorandum

TO: File

DATE: December 10, 1986

THRU: Thomas C. Gunderson, HSE-8 Group Leader, MS K490

MAIL STOP/TELEPHONE: K490/5-0454

FROM: Charlie Nylander, HSE-8

SYMBOL: HSE8-86-1354

SUBJECT: OIL SPILL AT TA-35 TSL-125

On December 3, 1986 at 1100 hours, Charlie Nylander and Anthony Drypolcher of the Environmental Surveillance Group (HSE-8) were at TA-35 TSL-125 discussing oil storage practices and oil spill prevention and control with the following persons: Larry Blair, Bill Martin, Bob Anderson, and Jerry Umphres. At approximately 1115 hours, this group began walking northeast behind building TSL 125 when they observed liquid running out an open doorway and draining into a curbed area surrounding an oil reclaimation trailer behind the building. The liquid was at first believed to be water, but upon touch was determined to be oil.

The group went into the building to determine the source of the oil spill and discovered a Marx generator overflowing from the top. Evidently, the tank was being filled with oil and the pump transfer was left unattended resulting in over-filling and spillage. While trying to shut off the transfer pump the group called out to locate anyone in the vicinity with no reply. Suddenly, the spilling oil came in contact with the heating element on the diffusion pump and a fire broke out. A nearby fire extinguisher was used while the fire alarm was pulled. However, the group quickly moved outside the building due to heavy smoke and concern for safety.

Once outside, the group dispatched several people to locate absorbents to direct the flow of oil flowing out the door into the curbed drainage area, from where it would flow into the concrete lined holding pond on the canyon edge. Absorbents were also spread across the entrance to a drainage culvert in order to prevent oil from discharging to the canyon. Telephone calls were placed to Michael Bailey and Pete Carlson, Pan American World Services, Inc. to request environmental sampling and spill control assistance.

After the fire response vehicles arrived, water from the building fire control sprinkling system and pump truck leakage caused the absorbents spread for spill control to breech and oil and water discharged to the canyon. However, an estimate was made that less than 100 gallons of oil discharged to the canyon. As the fire was being brought under control, the Environmental Surveillance Group personnel directed Pan Am to siphon the water out of the concrete holding pond to prevent the oil that was floating on the water surface and nearing the spillway from overflowing into the canyon. Therefore, Pan Am placed a submersible pump in the bottom of the pond and water was discharged to the canyon.

An oil sample was taken of the oil remaining in the Marx tank inside the building and delivered to the Health and Environmental Chemistry Group (HSE-9) at 1230 hours for polychlorinated biphenyl (PCB) analysis. By 1330 hours an additional sample was submitted to the laboratory for analysis. The results (in parts per million) are as follows:

Marx tank	4.1 ppm
Oil in concrete pond	Less than minimum detection limit

Samples collected in the canyon bottom on December 4, 1986 contained the following PCB concentrations in parts per million, prior to clean-up.

Distal point of spill downstream	4.7
Mid-point of affected channel	11.7
Point below cement pond	9.1

The cement holding pond was pumped until the liquid level was well below the spillway and the pump disconnected. Unfortunately, Pan Am left the pump in the pond overnight and created a siphon that drained the pond entirely during the night. Therefore, oil and water were discharged accidently into the canyon for a distance of appoximately 400 yards.

On December 4th and 5th, Pan Am conducted clean-up operations in the canyon to remove the oil. Fortunately, snow melt in the channel bottom was frozen and the oil was spread on the ice. Absorbent pillows, towels, and shovels were used to pick up the oil. In many places, the frozen oil/water slush could be swept with a broom. Therefore, the canyon was cleaned up quite satisfactorily.

REGULATORY CONCERNS

The volume of oil spilled was estimated to be less than 1000 gallons and therefore the Laboratory will not be required to submit the Spill Prevention Control and Countermeasure (SPCC) Plan to the Environmental Protection Agency (EPA) for review and approval (40 CFR 112).

The low concentration of PCBs in the oil did not require reporting to EPA under 40 CFR 302 Designation, Reportable Quantities and Notification. Moreover, the low concentration of PCBs in the oil spilled falls below EPA's proposed clean-up criteria for limited access environmental sites. Therefore, especially given the oil clean-up, the spill was satisfactorily mitigated pursuant to 40 CFR 761.

CN:tms

Attachment: a/s

Cy: J. Aragon, HSE-DO, MS K491
W. Hansen, HSE-DO, MS K491
J. Jackson, HSE-5, MS K486
R. Garde, HSE-7, MS E518
A. Stoker, HSE-8, MS K490
A. Drypolcher, HSE-8, MS K490
R. Vocke, HSE-8, MS K490
D. Garvey, ADS-ECMO, MS A122
M. Heineman, HSE-3, MS K489
L. Blair, CLS-DO, MS E548
W. Cromeenes, SSMO, MS K306

BENCHMARK
ENVIRONMENTAL CORPORATION

RECORD OF TELEPHONE CALL

Date: 6/24/91 Time: 10:15
Project No.: 5005.01 TASK 33
Project Name: TA-35 CLOSURE

To: Roy Bolin of: HSE-8 Phone: 5-0452

From: MLL of: Phone:

Re: PCB IN SOIL (?) AT TEN SITE CANYON

Notes: DUE TO QUESTION OF WHETHER PCB-CONTAMINATED SOIL WAS REMOVED FROM TEN SITE CANYON DURING CLEANUP ON 12/4-5/86 AFTER THE 12/3/86 SPILL, I ASKED ROY IF HE REMEMBERED DETAILS OF CLEANUP. ROY SAID HE DID NOT REMEMBER THE DETAILS AND DIDN'T THINK THERE WAS A FOLLOW-UP SAMPLING EFFORT TO CONFIRM ALL OIL HAD BEEN REMOVED. HOWEVER, HE DID THINK THAT DIRT FROM TEN SITE CANYON WAS REMOVED DURING THE CLEANUP.

ROY ALSO SUGGESTED I TALK w/ RAUL MORALES (SP?)
PH: 667-0814.

MLL

BENCHMARK
ENVIRONMENTAL CORPORATION

RECORD OF TELEPHONE CALL

Date: 6/24/91 Time: 10:30
Project No.: 5005.01 TASK 33
Project Name: TA-35- CLOSURE

To: RAUL MORALES of: HSE-8 Phone: 7-0814

From: MLL of: BEC Phone:

Re: PCB IN SOIL (?) AT TEN SITE CANYON

Notes: RAUL SAID THAT HE WAS NOT AT THE LAB AT THE TIME, BUT HE WOULD CHECK BACK THROUGH HIS RECORDS TO LOOK FOR DOCUMENTATION REGARDING THE SPILL AND ITS CLEANUP.

MLL

CONV. W/ DAVE MCINROY 7/3/91 9:30 AM

DAVE CHECKED W/ TONY GRIGGS (SP?). FOLLOW-UP SAMPLING WAS PERFORMED FOR ALL CONSTITUENTS EXCEPT PCBs.

MLL

BENCHMARK
ENVIRONMENTAL CORPORATION

RECORD OF TELEPHONE CALL

Date: 6/25/91 Time: 11:00 AM
Project No.: 5005.01 TASK 33
Project Name: TA-35 CLOSURES

To: CHARLIE NYLANDER of: EBASCO (?) Phone: 1-303-988-2202

From: MLL of: BEC Phone:

Re: CLEANUP OF TEN SITE SOIL AFTER 12/3/86 OIL SPILL

Notes: CHARLIE RECALLED THAT THE CANYON SOIL WAS FROZEN AND THERE WERE PATCHES OF ICE. THE OIL DID NOT MOVE FAR ≈ 10'S OF FEET, & THE OIL WAS MOSTLY MOPPED UP W/ ABSORBENT PILLOWS. SOIL WAS REMOVED FROM THE CANYON W/ BUCKETS AND ROPES. CLEANUP WAS EXTENSIVE AND COST WAS ≈ > $10,000. ALL SOIL, PILLOWS, ETC. WAS PUT IN 55 GALLON DRUMS AND REMOVED.

THE SAMPLING REFERRED TO IN HIS MEMO DATED 12/10/86 WAS TO IDENTIFY AREAS TO BE CLEANED. THOSE WERE CLEANED UP. CHARLIE DOES NOT RECALL A FOLLOW-UP SAMPLING EVENT.

MLL

APPENDIX D

TA-35 TSL-125
SURFACE IMPOUNDMENT

GROUND WATER MONITORING PLAN

TA-35 TSL-125 SURFACE IMPOUNDMENT GROUND WATER ASSESSMENT PLAN

In the event recoverable volumes of ground water are encountered during the soil boring program, the test holes will be completed as ground water monitoring wells meeting the requirements of EPA's RCRA Ground Water Monitoring Technical Enforcement Guidance Document (September 1986). Drilling logs from test hole advancement will be prepared and submitted to the New Mexico Environment Department (NMED) to supplement existing documentation of geology and hydrology contained in the RCRA Part B Permit Application for Los Alamos National Laboratory. Each well will be surveyed to verify its horizontal and vertical location to 0.01 feet. The wells will be developed utilizing a combination of methods which may include bailing and surging to facilitate removal of fine sediments from the well and development of the sand filter pack. At a minimum, four to six well casing volumes of water will be removed from each of the wells. Depth-to-water measurements will be taken one week after each well completion to the nearest 0.01 feet using a graduated steel tape or equivalent. The elevation of the ground water surface will be determined using the depth-to-water measurements taken at each of the wells. If contaminated ground water is detected, the ground water quality assessment program, as outlined in Attachment I, will be implemented.

Ground Water Sampling

To ensure that the samples collected are representative of the ground water, monitoring wells will be purged prior to sampling, and the samples will be collected using devices that should not induce sample alteration. Well purging will be conducted according to the borehole volume removal procedure described below, but a check will also be made on the adequacy of the calculated purging time via measurements of pH, specific conductivity, and temperature. These measurements will be taken periodically during the calculated purging time. This extra check will give additional assurance that the stagnant well bore water has been removed from the well and that the samples collected are representative of the ground water.

After the water begins to flow from the purging pump, the well will be pumped for the length of time necessary to purge four to six well volumes and until pH, temperature, and conductivity stabilize. The pH, temperature, and conductivity of the discharged water will be

measured at least three times during purging. The pH will be considered stable when two consecutive measurements agree within 0.2 pH units. Temperature will be considered stable when two consecutive measurements agree within 0.2 degrees Centigrade. Conductivity will be considered stable when two consecutive measurements agree within ten mmhos.

If the well pumps dry while purging, the pump will be turned off and the well will be allowed to recharge. After sufficient recharge has occurred, samples will be collected with a sampling pump or bailers. All samples will be collected in EPA-approved containers and preserved in accordance with EPA methods (Table D-1).

Sample bottles will be filled slowly to prevent entrapment of any gas bubbles. For those bottles requiring no headspace, the bottle will be filled completely such that a meniscus forms. The cap will be replaced immediately and the bottle will be turned upside down, tapped a few times and checked for gas bubbles in the sample. If a gas bubble exists, the sample will be discarded and the sampling procedures repeated until a gas-free sample is obtained.

The time, date, and initials of the sampler will be entered on all sample labels. Information regarding pumping, field measurements, etc. will be entered in field logbook as it becomes available. Sample seals will be placed on each container and the container placed on ice in a cooler or ice chest.

Sample shipment and chain-of-custody record will be accompanied by a sample analysis request sheet. The request sheet has two parts: field and laboratory. The field portion of this form will be completed by the person collecting the sample and include most of the pertinent information noted in the logbook. The laboratory portion is intended to be completed by the laboratory personnel when the sample is received.

Sample Analysis

All analysis, quality assurance, and quality control will follow methods defined in SW-846 (Table D-2). The samples will be analyzed for volatile and semivolatile organic compounds, total metals, and PCBs. If ground water does not contain detectable concentrations of organic compounds or total metals in concentrations exceeding one standard deviation above background, then the hazardous units will be closed "clean," and no further ground water

monitoring will be conducted. Should ground water contamination be indicated, the extent of contamination will be investigated and necessary remediation efforts will be implemented.

ATTACHMENT I

OUTLINE OF A GROUND WATER QUALITY ASSESSMENT PROGRAM

DETERMINATION OF RATE AND EXTENT OF HAZARDOUS WASTE MIGRATION IN GROUND WATER

In the event that ground water contamination is detected in any of the downgradient monitoring wells, a program capable of determining the following would be implemented.

- Piezometers would be used to measure vertical and horizontal gradients which will in turn define the three-dimensional gradient of the ground water system.
- Wells and piezometers would be installed in both the vertical and horizontal planes in order to determine the extent of the migration.
- Ground water velocities would be determined by either tracer tests, borehole dilution tests, or Darcy's law.

DETERMINATION OF HAZARDOUS WASTE CONSTITUENTS

In the event that hazardous constituents are detected in the monitor wells, an assessment sampling and analysis plan would be developed for the ground water monitoring network. This plan would include:

- The number, location and depth of wells to be sampled.
- The sampling and analytical methods to be used to identify the hazardous waste constituents.
- Procedures for water-quality data.
- An implementation schedule.

TABLE D-1

WATER SAMPLE COLLECTION METHODS

CONSTITUENT	CONTAINER TYPE	CONTAINER SIZE	PRESERVATIVE[a] TYPE	PRESERVATIVE[a] AMOUNT
Arsenic				
Barium				
Cadmium				
Chromium	Plastic	0.5 liter	HNO_3 to pH <2	5 ml
Lead				
Mercury				
Selenium				
Silver				
Volatile Organics	Glass, silica/ teflon septa	(2) 40 ml	---	---
Base/Neutral Extractables	Glass, silica/ teflon septa	1.0 liter	---	---
Acid Extractables	Glass, silica/ teflon septa	1.0 liter	---	---
Nitroaromatics	Glass, silica/ teflon septa	1.0 liter	---	---

(a)All samples will be cooled to 4°C upon collection.

TABLE D-2

ANALYTICAL PARAMETERS AND METHODS FOR WATER SAMPLES COLLECTED AT TA-35 TSL-125

EPA HAZARDOUS WASTE NUMBER	METALS	EPA METHOD
D004	Arsenic	206.3
D005	Barium	208.1
D006	Cadmium	213.1
D007	Chromium	281.1
D008	Lead	239.1
D009	Mercury	245.1
D010	Selenium	270.3
D011	Silver	272.1
ORGANIC SCAN		
GC/MS for volatiles		623, 624
GC/MS for base/neutral extractables		625
GC/MS for acid extractables		625
GC/MS for nitroaromatics		625

ENCLOSURE 2

CLOSURE CERTIFICATIONS

CERTIFICATION OF ACCURACY

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

Thomas C. Gunderson
Division Leader
Environmental Management Division
Los Alamos National Laboratory
Operator

8/16/91
Date Signed

Jerry L. Bellows
Area Manager
Los Alamos Area Office
U.S. Department of Energy
Albuquerque Operations
Owner

10/30/91
Date Signed

LEEDSHILL-HERKENHOFF, INC.
500 Copper Avenue N.W.
P. O. Box 1217
Albuquerque, New Mexico 87103
(505) 247-0294

1291-810.12-91

July 30, 1991

Mr. John Krueger
Los Alamos National Laboratory
HSE-13, MS K490
P.O. Box 1667
Los Alamos, New Mexico 87545

Re: Certification for TA-35 TSL-125 Closure Plan and Certification Report

I have reviewed the TA-35 TSL-125 Closure Plan and Certification Report (Plan and Report) prepared by Benchmark Environmental Consultants, a Los Alamos National Laboratory Memorandum written by Mr. Stephen McLin dated May 21, 1990, subject: Report for RCRA Surface Impoundment Closure; RCRA Closure Report for TA-35 TSL-125 Surface Impoundment (McLin memo), and a Los Alamos National Laboratory Memorandum written by Phil Fresquez dated March 6, 1991, subject: Results of an Environmental Restoration Verification Survey of a Former Waste Oil Surface Impoundment (TSL-125) at TA-35 (Fresquez memo).

After having reviewed these documents, and, specifically the following sections:

Closure Design (Plan),

Waste Removal Procedures, Decontamination and Removal Procedures for the Floor Trough and Piping, Verification Sampling and Analysis for Decontamination of the Liner and Subsequent Liner Removal Procedure, Soil Removal, Sampling and Analytical Results, and Risk Assessment (Report), and

Closure activities documented by Mr. McLin after his visual onsite inspection (McLin memo),

Drilling and sampling procedures documented by Mr. Fresquez after his visual onsite inspection (Fresquez memo),

the waste removal procedures reported to have been performed are documented correctly in the Report.

Marcia A. Pincus
Registered Professional Engineer

mp/lw

ENCLOSURE 3

CERTIFICATES OF DESTRUCTION

COPY

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

NOVEMBER 15, 1989

LOS ALAMOS NATIONAL LABORATORY
P. O. BOX 1663
LOS ALAMOS, NM 87545

ATTN: Mr. Pat Josey

Dear Mr. Josey:

This is to certify the material referenced below was destroyed as of 09/26/89 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P. O. Box 609, Deer Park, Texas 77536.

DATE RECEIVED	-09/21/89
RES (TX) INC. B/L NUMBER	-111222
TWC MANIFEST NO.	-00067357

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES CHEMPAK/LA
Steve Bergersen

Please call (713) 930-2318 if there are any questions concerning the information on this Certificate of Destruction.

*** 8.9197 ***

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N M 0 8 9 0 0 1 0 5 1 5 Manifest Document No. 8 1 2 0 1

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Labs
P.O. Box 1663
Los Alamos, NM 87545
ATTN: PAT JOSEY

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number: № 00067357

B. State Generator's ID: 99935

5. Transporter 1 Company Name: CUSTOM ENVIRONMENTAL TRANSPORT

6. US EPA ID Number: D E D 9 8 0 9 1 8 8 5 8

C. State Transporter's ID: 40756

D. Transporter's Phone: (302) 479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
ROLLINS ENVIRONMENTAL SERVICE
2027 BATTLEGROUND ROAD
DEER PARK, TX 77536

10. US EPA ID Number: T X D 0 5 5 1 4 1 3 7 8

G. State Facility's ID: HW-50089-001

H. Facility's Phone: (713)-930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	RQ Hazardous Waste, solid, n.o.s. ORM-E NA 9189	5 0 65 OPB	DM	~~42250~~ 34540 45100 OPB	TS/KES P	D008
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: 40-44908-25
11a. F002, F003

K. Handling Codes for Wastes Listed Above: T

15. Special Handling Instructions and Additional Information: In case of accident or spills contact Chemtrec @ 1-800-424-9300 or Texas Water Commission @ 1-512-463-8175. Avoid contact. Avoid breathing vapors. Contain waste. If undeliverable, return to generator.
TRUCK # 79286E

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: PATRICK JOSEY — Signature: [signature] — Month Day Year: 9 1 2 8 9

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: GREGORY JONES — Signature: [signature] — Month Day Year: 9 1 2 0 8 9

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space
Per Matt Evans with Chemtak, the above quantity has been changed to reflect the correct amount rec'd by RES (TX) [signature] 9-25-89

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RES (TX) INC

Printed/Typed Name: ANTHONY OWEN — Signature: [signature] — Date: Month Day Year: 9 2 1 8 9

TWC-0311 (Rev. 01/01/89)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

COPY

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

NOVEMBER 15, 1989

LOS ALAMOS NATIONAL LABORATORY
P. O. BOX 1663
LOS ALAMOS, NM 87545

ATTN: Mr. Pat Josey

Dear Mr. Josey:

This is to certify the material referenced below was destroyed as of 10/03/89 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P. O. Box 609, Deer Park, Texas 77536.

DATE RECEIVED	-09/21/89
RES (TX) INC. B/L NUMBER	-111221
TWC MANIFEST NO.	-00067358

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES CHEMPAK/LA
Steve Bergersen

Please call (713) 930-2318 if there are any questions concerning the information on this Certificate of Destruction.

*** 8.9198 ***

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 89201

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Labs
P.O. Box 1663
Los Alamos, NM 87545
ATTN: PAT JOSEY

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number № 00067358

B. State Generator's ID 99935

5. Transporter 1 Company Name: CUSTOM ENVIRONMENTAL TRANSPORT

6. US EPA ID Number: DED980918858

C. State Transporter's ID 40756

D. Transporter's Phone (302) 479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
ROLLINS ENVIRONMENTAL SERVICE
2027 BATTLEGROUND ROAD
DEER PARK, TX 77536

10. US EPA ID Number: TXD055141378

G. State Facility's ID HW-50089-001

H. Facility's Phone (713)-930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	a. RQ Hazardous Waste, solid, n.o.s. ORM-E NA 9189	5 ~~0~~ 5	DM	~~45100~~ ~~42250~~ 42250	P	D008
	b.			35320	TS/RES	
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: 40-44908-25 11a F002, F003

K. Handling Codes for Wastes Listed Above: T-07

15. Special Handling Instructions and Additional Information: In case of accident or spills contact Chemtrec at 1-800-424-9300 or Texas Water Commission at 512-463-8175. Avoid contact, Avoid breathing vapors. Contain waste. If undeliverable, return to generator. (TRUCK # 79279E)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: PATRICK JOSEY Signature: [signature] Month Day Year: 9 20 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: REYNOLD ULMER Signature: Reynold Ulmer Month Day Year: 9 20 89

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Signature: Month Day Year:

FACILITY

19. Discrepancy Indication Space
Per Matt Evans with ChemPak, the above quantity has been changed to reflect the correct amount rec'd by RES (TX)
RES TX INC

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Date

Printed/Typed Name: ANTHONY OWNSEN Signature: [signature] Month Day Year: 9 21 89

TWC-0311 (Rev. 01/01/89) White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

COPY

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

FEBRUARY 19, 1990

LOS ALAMOS NATIONAL LABORATORY
P.O. BOX 1633 MAIL STOP E-518
LOS ALAMOS, NM 87545

ATTN: Mr. Larry Hupke

Dear Mr. Hupke:

This is to certify the material referenced below was destroyed as of 01/31/90 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P.O. Box 609 Deer Park, Texas 77536 (EPA ID# TXD055141378).

DATE RECEIVED	-10/14/89
RES (TX) INC. B/L NUMBER	-111987
TWC MANIFEST NO.	-00070317

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES Chempak - LA

Please call (713) 930-2317 if there are any questions concerning the information on this Certificate of Destruction.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

*** 8.9217 ***

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM 0 8 9 0 0 1 0 5 1 5 | Manifest Document No. 89204

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ATTN: Pat Josey
Los Alamos National Labs
P.O. Box 1663
Los Alamos, NM 87545

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number: No. 00070317

B. State Generator's ID: 99935

5. Transporter 1 Company Name: Custom Environmental Transport

6. US EPA ID Number: TED 9 8 0 9 1 8 8 5 8

C. State Transporter's ID: 40756

D. Transporter's Phone: (302) 479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Rollins Environmental Service
2027 Battleground Road
Deer Park, TX 77536

10. US EPA ID Number: TX D 0 5 5 1 4 1 3 7 8

G. State Facility's ID: HW-50089-001

H. Facility's Phone: (713) 930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ Hazardous Waste, solid, n.o.s. ORM-E NA 9189	72	DM	45200 ~~773~~	P	980790
	b.					
	c.					
	d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above: HO-44908-25 Ha-F002, F003

K. Handling Codes for Wastes Listed Above: T07

15. Special Handling Instructions and Additional Information: In case of accident or spills contact Chemtrec @ 1-800-424-9300 or the Texas Water Commission @ 512-463-8175. Avoid contact. Avoid breathing vapors. Contain waste. If undeliverable, return to generator.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Frank Josey | Signature: [signature] | Month Day Year: 10 12 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials | Date

Printed/Typed Name: Ronnie Rowe | Signature: [signature] | Month Day Year: 10 13 89

18. Transporter 2 Acknowledgement of Receipt of Materials | Date

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

RES (TX) INC

Printed/Typed Name: Anthony Carson | Signature: [signature] | Date Month Day Year: 10 16 89

TWC-0311 (Rev. 01/01/89) White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS)

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR**.

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

(2) Enter date received and sign in the presence of the driver declaring receipt of the wastes and verifying the quantities in the table in **PART I**.

(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR**.

U.S. EPA and TWC regulations require that copies of this Uniform Hazardous Waste Manifest be retained for a period of three (3) years in your company records. Do not send to TWC unless otherwise notified by these departments.

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

COPY

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

NOVEMBER 15, 1989

LOS ALAMOS NATIONAL LABORATORY
P. O. BOX 1663
LOS ALAMOS, NM 87545

ATTN: Mr. Pat Josey

Dear Mr. Josey:

This is to certify the material referenced below was destroyed as of 10/20/89 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P. O. Box 609, Deer Park, Texas 77536.

DATE RECEIVED	-10/20/89
RES (TX) INC. B/L NUMBER	-112122
TWC MANIFEST NO.	-00067350

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES CHEMPAK/LA
Steve Bergersen

Please call (713) 930-2318 if there are any questions concerning the information on this Certificate of Destruction.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

*** S.9219 ***

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 8905

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ATTN PAT JOSEY
Los Alamos National Labs
P.O. Box 1663
Los Alamos, NM 87545

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number: № 00067350

B. State Generator's ID: 99935

5. Transporter 1 Company Name: CUSTOM ENVIRONMENTAL TRANSPORT

6. US EPA ID Number: IDED980918858

C. State Transporter's ID: 40756

D. Transporter's Phone: 302-479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Rollins Environmental Services
2027 Battleground Road
Deer Park, TX 77536

10. US EPA ID Number: TXD055141378

G. State Facility's ID: HW-50089-001

H. Facility's Phone: 713-930-2300

GENERATOR

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ Hazardous Waste, solid, n.o.s. ORM-E NA 9189	066	DM	29400 ~~33850~~	P	980790
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: HO-44908-25 11a. F002, F003

K. Handling Codes for Wastes Listed Above: T05

15. Special Handling Instructions and Additional Information: In case of accident or spill call Chemtrec at 1-800-424-9300 or the Texas Water Commission at 512-463-8175. Avoid contact. Avoid breathing vapors. Contain waste. If unable to deliver, return to generator.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Patrick Josey | Signature: Pat Josey | Month Day Year: 10 19 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Reynold Ulmer | Signature: Reynold Ulmer | Date: Month Day Year: 10 19 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space
Per my telephone conversation with Pat Josey, the above quantity has been changed to reflect the actual amount received by RES (TX). J. Milum 10/23/89

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Anthony Oroman | Signature | Date: Month Day Year: 10 20 89

TWC-0311 (Rev. 01/01/89) White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS).

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

*(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR.**

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

*(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

(2) Enter date received and sign in the presence of the driver declaring receipt of the wastes and verifying the quantities in the table in **PART I.**

(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR.**

* U.S. EPA and TWC regulations require that copies of this Uniform Hazardous Waste Manifest be retained for a period of three (3) years in your company records. Do not send to TWC unless otherwise notified by these departments.

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

COPY

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

FEBRUARY 19, 1990

LOS ALAMOS NATIONAL LABORATORY
P.O. BOX 1633 MAIL STOP E-518
LOS ALAMOS, NM 87545

ATTN: Mr. Larry Hupke

Dear Mr. Hupke:

This is to certify the material referenced below was destroyed as of 01/31/90 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P.O. Box 609 Deer Park, Texas 77536 (EPA ID# TXD055141378).

DATE RECEIVED	-09/29/89
RES (TX) INC. B/L NUMBER	-111518
TWC MANIFEST NO.	-00067360

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES Chempak - LA

Please call (713) 930-2317 if there are any questions concerning the information on this Certificate of Destruction.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

ase print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved: OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N.M.0.8.9.0.0.1.0.5.1.5 Manifest Document No. 89.2.0.2

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Los Alamos National Labs, P.O. Box 1663, Los Alamos, NM 87545 ATTN PAT JOSEY

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number: № 00067360

B. State Generator's ID: 99935

5. Transporter 1 Company Name: CUSTOM ENVIRONMENTAL TRANSPORT

6. US EPA ID Number: D.E.D.9.8.0.9.1.8.8.5.8

C. State Transporter's ID: 40756

D. Transporter's Phone: 302-479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: Rollins Environmental Services, 2027 Battleground Road, Deer Park, TX 77536

10. US EPA ID Number: T.X.D.0.5.5.1.4.1.3.7.8

G. State Facility's ID: HW-50089-001

H. Facility's Phone: 713-930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ Hazardous Waste, solid, n.o.s. ORM-E NA 9189	063	DM	41160	P	980790
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: 110-44908-275 11a. F002, F003

K. Handling Codes for Wastes Listed Above: T07

15. Special Handling Instructions and Additional Information: In case of accident or spills contact Chemtrec @ 800-424-9300 or Texas Water Commission @ 512-463-8175. Avoid contact. Avoid breathing vapors. Contain waste. If undeliverable, return to generator.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: PATRICK JOSEY — Signature: [signature] — Month Day Year: 9 28 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: REYNOLD ULMER — Signature: [signature] — Month Day Year: 9 28 89

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ANTHONY OWNSEN — Signature: [signature] — Date Month Day Year: 9 29 89

TWC-0311 (Rev. 01/01/89) White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

COPY

FEBRUARY 19, 1990

LOS ALAMOS NATIONAL LABORATORY
P.O. BOX 1633 MAIL STOP E-518
LOS ALAMOS, NM 87545

ATTN: Mr. Larry Hupke

Dear Mr. Hupke:

This is to certify the material referenced below was destroyed as of 01/31/90 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P.O. Box 609 Deer Park, Texas 77536 (EPA ID# TXD055141378).

DATE RECEIVED	-09/29/89
RES (TX) INC. B/L NUMBER	-111517
TWC MANIFEST NO.	-00067359

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES Chempak - LA

Please call (713) 930-2317 if there are any questions concerning the information on this Certificate of Destruction.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Use print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N M 0 8 9 0 0 1 0 5 1 5 — Manifest Document No. 0 9 2 0 2

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Labs
P.O. Box 1663
Los Alamos, NM 87545
ATTN PAT JOSEY

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number № 00067359

B. State Generator's ID 99935

5. Transporter 1 Company Name: CUSTOM ENVIRONMENTAL TRANSPORT

6. US EPA ID Number: T X D 9 8 0 9 1 8 8 5 8

C. State Transporter's ID 40756

D. Transporter's Phone 302-479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Rollins Environmental Services
2027 Battleground Road
Deer Park, TX 77536

10. US EPA ID Number: T X D 0 5 5 1 4 1 3 7 8

G. State Facility's ID HW-50089-001

H. Facility's Phone 713-930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	(A) Waste No.
X	a. RQ Hazardous Waste, solid, n.o.s. ORM-E NA 9189	062	DM	37690	P	(B) 980790
	b.					(C)
	c.					(D)
	d.					(E)
						(F)

J. Additional Descriptions for Materials Listed Above 4044908-25 F002, F003

K. Handling Codes For Wastes Listed Above T-0

15. Special Handling Instructions and Additional Information In case of accident or spills contact Chemtrec @ 800-424-9300 or Texas Water Commission @ 512-463-8175. Avoid contact. Avoid breathing vapors. Contain waste. If undeliverable, return to generator.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: PATRICK JOSEY — Signature — Month Day Year: 9 28 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Ricky Reller — Signature — Date: Month Day Year: 9 28 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ANTHONY Oman — Signature — Date: Month Day Year: 9 28 89

TWC-0311 (Rev. 01/01/89)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

ROLLINS
ENVIRONMENTAL SERVICES (TX) INC.

P.O. Box 609, Deer Park, TX 77536, 713/930-2300, FAX 713/930-2316

COPY

FEBRUARY 19, 1990

LOS ALAMOS NATIONAL LABORATORY
P.O. BOX 1633 MAIL STOP E-518
LOS ALAMOS, NM 87545

ATTN: Mr. Larry Hupke

Dear Mr. Hupke:

This is to certify the material referenced below was destroyed as of 01/31/90 at our Deer Park facility - Rollins Environmental Services (TX) Inc., P.O. Box 609 Deer Park, Texas 77536 (EPA ID# TXD055141378).

DATE RECEIVED	-10/20/89
RES (TX) INC. B/L NUMBER	-112123
TWC MANIFEST NO.	-00067351

SINCERELY,
RES (TX) INC.

ROBERT S. WHITLOCK
OPERATIONS MANAGER

cc: RES Chempak - LA

Please call (713) 930-2317 if there are any questions concerning the information on this Certificate of Destruction.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

*** 8.9220 ***

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890001515 Manifest Document No. 89205

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ATTN: PAT JOSEY
Los Alamos National Labs
P.O. Box 1663
Los Alamos, NM 87545

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number № 00067351

B. State Generator's ID 99935

5. Transporter 1 Company Name: CUSTOM ENVIRONMENTAL TRANSPORT

6. US EPA ID Number: DED980918858

C. State Transporter's ID 40756

D. Transporter's Phone 302-479-2761

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Rollins Environmental Services
2027 Battleground Road
Deer Park, TX 77536

10. US EPA ID Number: TXD055141378

G. State Facility's ID HW-50089-001

H. Facility's Phone 713-930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	a. RQ Hazardous Waste, solid, n.o.s. ORM-E (F002) NA 9189	06	DM	41500	P	980790
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above 40-44908-25
11a. F002 F003

K. Handling Codes for Wastes Listed Above
T-07

15. Special Handling Instructions and Additional Information In case of accident or spills contact Chemtrec @ 1-800-424-9300 or the Texas Water Commission @ 512-463-8175. Avoid contact. Avoid Breathing vapors. Contain Waste. If unable to deliver, return to generator.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
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GENERATOR

Printed/Typed Name: PATRICK JOSEY | Signature | Month 10 Day 19 Year 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Rick Keller | Signature | Date: Month 10 Day 19 Year 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RES (TX) INC

Printed/Typed Name: CTLEYES | Signature | Date: Month 10 Day 20 Year 89

TWC-0311 (Rev. 01/01/89)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS)

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

*(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR**.

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

*(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

(2) Enter date received and sign in the presence of the driver declaring receipt of the wastes and verifying the quantities in the table in **PART I**.

(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR**.

* U.S. EPA and TWC regulations require that copies of this Uniform Hazardous Waste Manifest be retained for a period of three (3) years in your company records. Do not send to TWC unless otherwise notified by these departments.

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

COPY *** 8.0257 ***

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 89-21-1

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Contact: Pat Josey
Los Alamos National Laboratory
P.O. Box 1663
Los Alamos, NM 87545

4. Generator's Phone (505) 667-4301

5. ~~Transporter 1 Company Name~~ ~~Gastou Environmental Transport~~ 6. ~~US EPA ID Number~~ ~~TXA 1000 6 3 0 5 1 0~~

7. Transporter 2 Company Name
Environmental Transporters, Inc.

8. US EPA ID Number
LAD060830510

9. Designated Facility Name and Site Address
Rollins Environmental Services (TX), Inc.
2027 Battleground Rd.
Deer Park, TX 77536

10. US EPA ID Number
TXD055141378

A. State Manifest Document Number
Nº 00070291

B. State Generator's ID
99935

C. State Transporter's ID
41300

D. Transporter's Phone
10 - 0378

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID
HW-50089-001

H. Facility's Phone
(713) 930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ Hazardous Waste solid, N.O.S. ORM-E, NA 9189	065	DM	39310	P	980790
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above HO-44908-25
(Ha), F002, F003 - CONTAMINATED SOIL

K. Handling Codes for Wastes Listed Above
T01

15. Special Handling Instructions and Additional Information In case of accident or spills contact CHEMTREC at 800-424-9300 or the Texas Water Commission at 512-463-8175. Avoid contact with hazardous material. Avoid breathing vapors. Contain waste. If unable to deliver, return to generator.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: Patrick Josey
Signature: [signature]
Month Day Year: 1 1 6 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Ricky Keller
Signature: [signature]
Date: Month Day Year: 1 1 6 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Matt Evans
Signature: [signature]
Date: Month Day Year: 1 1 7 89

TWC-0311 (Rev. 01/01/89)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS)

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

*(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR**.

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

*(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

(2) Enter date received and sign in the presence of the driver declaring receipt of the wastes and verifying the quantities in the table in **PART I**.

(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR**.

U.S. EPA and TWC regulations require that copies of this Uniform Hazardous Waste Manifest be retained for a period of three (3) years in your company records. Do not send to TWC unless otherwise notified by these departments.

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

COPY *** 8.9258 ***

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N M 0 8 9 0 0 1 0 5 1 5 — Manifest Document No. 8 9 2 1 2

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Los Alamos National Laboratory, P.O. Box 1663, Los Alamos, NM 87545 — Attn: Pat Josey

4. Generator's Phone (505) 667-4301

A. State Manifest Document Number: No 00070287

B. State Generator's ID: 99935

5. Transporter 1 Company Name: Environmental Transporters Inc.

6. US EPA ID Number: L A D 0 6 0 8 3 0 5 1 0

C. State Transporter's ID: 4130D

D. Transporter's Phone: (504) 340-0378

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: Rollins Environmental Services (TX), Inc., 2027 Battleground Road, Deer Park, Tx 77536

10. US EPA ID Number: T X D 0 5 5 1 4 1 3 7 8

G. State Facility's ID: HW-50089-001

H. Facility's Phone: (713) 930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ Hazardous Waste Solid, N.O.S. ORM-E, NA 9189	031	DM	18500	P	980790
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: HD-44908-25; 11.a: F002, F003

K. Handling Codes for Wastes Listed Above: T-07

15. Special Handling Instructions and Additional Information: In case of accident or spills, contact CHEMTREC at 800-424-9300 or Texas Water Commission at 512-463-8175. Avoid contact with hazardous material. Avoid breathing vapors. Contain waste. If unable to deliver, return to the generator.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: A. Drypolcher — Signature: A. Drypolcher — Month Day Year: 11 28 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Ricky Keller — Signature: Ricky Keller — Month Day Year: 11 28 89

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

RSC (TX) Inc — Date

Printed/Typed Name: Karen Dowly — Signature: Karen Dowly — Month Day Year: 11 29 89

TWC-0311 (Rev. 01/01/89) White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS)

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR.**

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

(2) Enter date received and sign in the presence of the driver declaring receipt of the wastes and verifying the quantities in the table in **PART I.**

(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR.**

U.S. EPA and TWC regulations require that copies of this Uniform Hazardous Waste Manifest be retained for a period of three (3) years in your company records. Do not send to TWC unless otherwise notified by these departments.

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

98455

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N M 0 8 9 0 0 1 0 5 1 5 — Manifest Document No. 90025

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
LOS ALAMOS NATIONAL LABORATORY
P.O. BOX 1663 MS E518
LOS ALAMOS, NM 87545

4. Generator's Phone (505) 667-4301 ATTN: PAT JOSEY

A. State Manifest Document Number: № 00145184

B. State Generator's ID: 99935

5. Transporter 1 Company Name: ENVIRONMENTAL TRANSPORTERS, INC.

6. US EPA ID Number: LAD 0 6 0 8 3 0 5 1 D

C. State Transporter's ID: 41300

D. Transporter's Phone: (504) 340-0378

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
ROLLINS ENVIRONMENTAL SERVICES(TX), INC.
2027 BATTLEGROUND ROAD
DEER PARK, TX. 77536

10. US EPA ID Number: T X D 0 5 5 1 4 1 3 7 8

G. State Facility's ID: HW-50089-001

H. Facility's Phone: (713) 930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ HAZARDOUS WASTE SOLID, N.O.S. ORM-E (F002) NA9189	045	DM	18660 TS 21140	P	980790 F002, F003
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above
HO-44908-25
SOLVENT CONTAMINATED SOILS.

K. Handling Codes for Wastes Listed Above
T07

15. Special Handling Instructions and Additional Information
IN CASE OF ACCIDENT OR SPILLS, CONTACT CHEMTREC AT (800) 424-9300 and the TEXAS WATER COMMISSION AT (512)463-7727. AVOID CONTACT. AVOIED BREATHING VAPORS. CONTAIN WASTE. IF UNABLE TO DELIVER, RETURN TO THE GENERATOR.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: PATRICK JOSEY — Signature — Date (Month Day Year): 1 V 8 90

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Roosevelt Harris Jr. — Signature — Date (Month Day Year): 1 18 90

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name — Signature — Date (Month Day Year)

19. Discrepancy Indication Space
Per my phone conversation with Andy Montoya the above quantity has been changed to reflect the actual amount received by RES(TX) Inc. Lynlett Spiller 1-22-90

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RES (TX) Inc.

Printed/Typed Name: Donald Moore — Signature — Date (Month Day Year): 01 20 90

GENERATOR — TRANSPORTER — FACILITY

TWC-0311 (Rev. 01/01/89)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS)

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

*(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR.**

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

*(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

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(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR.**

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98447

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N M 0 8 9 0 0 1 0 5 1 5 — Manifest Document No. 90026

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
LOS ALAMOS NATIONAL LABORATORY
P.O. BOX 1663 MS E518
LOS ALAMOS, NM 87545

4. Generator's Phone (505) 667-4301 ATTN: PAT JOSEY

A. State Manifest Document Number: № 00145183

B. State Generator's ID: 99935

5. Transporter 1 Company Name: ENVIRONMENTAL TRANSPORTERS, INC

6. US EPA ID Number: LAD 060 830 510

C. State Transporter's ID: 41300

D. Transporter's Phone: (504) 340-0378

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
ROLLINS ENVIRONMENTAL SERVICES(TX), INC.
2027 BATTLEGROUND ROAD
DEER PARK, TX. 77536

10. US EPA ID Number: TXD 055 141 378

G. State Facility's ID: HW-50089-001

H. Facility's Phone: ~~XXXX~~ (713) 930-2300

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. RQ HAZARDOUS WASTE SOLID, N.O.S. ORM-E (F002) NA 9189	0.48	DM	27760 ~~31940~~	P	980790 F002,F003
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above
HO-44908-25
SOLVENT CONTAMINATED SOILS.

K. Handling Codes for Wastes Listed Above
T07

15. Special Handling Instructions and Additional Information
IN CASE OF ACCIDENT OR SPILLS, CONTACT CHEMTREC AT (800) 424-9300 AND THE TEXAS WATER COMMISSION AT (512) 463-7727. AVOID CONTACT. AVOID BREATHING VAPORS. CONTAIN WASTE. IF UNABLE TO DELIVER, RETURN TO THE GENERATOR.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: PATRICK JOSEY — Signature — Month Day Year: 1 18 90

TRANSPORTER — 17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: HAROLD ARCENEAUX — Signature — Date: Month Day Year: 1 18 90

18. Transporter 2 Acknowledgement of Receipt of Materials — Printed/Typed Name — Signature — Date: Month Day Year

FACILITY — 19. Discrepancy Indication Space
Per my phone conversation with Andy Monteya the above quantity has been changed to reflect the actual amount received by RES(TX) Inc.
Lewlett Spillr 1-22-90

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RES (TX) INC

Printed/Typed Name: ANTHONY OWNEN — Signature — Date: Month Day Year: 1 22 90

TWC-0311 (Rev. 01/01/89) White - original Pink-TSD Facility Yellow-Transporter

When using the Uniform Waste Manifest for rail or water (bulk shipment) or international shipments refer to the applicable TWC regulations.

REPORT SPILLS AND/OR DISCHARGES TO THE TEXAS SPILL RESPONSE CENTER AT 512/463-7727 (24 HOURS)

INSTRUCTIONS TO GENERATOR (Please Type or Print Clearly)

(1) Enter the Generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator if you are shipping hazardous waste.

(2) Enter the total number of pages used to complete this manifest.

(3) Enter the company name and mailing address.

(4) Provide a phone number where an authorized agent of your firm may be reached in the event of an emergency.

(5) Enter the company name of the first transporter and their U.S. EPA ID Number.

(6) If applicable, enter the company name of the second transporter and their U.S. EPA ID Number. If more than two transporters are used, enter each additional transporter's information on the Continuation Sheet (EPA form 8700-22A).

(7) Enter the company name, site address, and U.S. EPA ID Number of the facility designated to receive the waste listed on this manifest.

(8) **COMPLETE ALL STATE OF TEXAS INFORMATION A. THROUGH H. IN THE SHADED AREAS.**

(9) Complete the waste description table as follows:

(A) ITEM 11A - When shipping an EPA/DOT regulated hazardous waste or material in conjunction with solely state regulated waste enter an "x" in the HM box before each EPA/DOT regulated waste/material description.

(B) ITEM 11 - Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste identified. If it is a Class I nonhazardous waste use the Texas Waste Code description.

(C) ITEM 12 - Enter the number of containers for each waste and the appropriate abbreviation for type located in Subchapter A of the TWC Industrial Solid Waste Rules.

(D) ITEM 13 - Enter the total quantity of waste described on each line.

(E) ITEM 14 - Enter the appropriate letter from the table below for the unit of measure.

G = Gallons (liquids only)	Y = Cubic Yards	M = Metric Tons (1000 kg.)
P = Pounds	L = Liter (Liquids only)	N = Cubic Meters
T = Tons (2000 lbs.)	K = Kilograms	

(F) ITEM I - Enter the appropriate TWC State Waste Code for each waste you are shipping.

(10) The Generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water or air) inserted in the space below. In signing the waste minimization certification statement, those generators shipping hazardous waste who have not been exempted by statute or regulation from the duty to make a waste minimization certification are also certifying that they have complied with the waste minimization requirements.

(11) The manifest must be signed and dated by the first transporter in the presence of the Generator. If more than one transporter is to be used, the Generator must provide additional copies for their use.

*(12) Generator retains green copy, sending remaining copies with the driver.

INSTRUCTIONS FOR THE TRANSPORTER (Please Type or Print clearly)

(1) As driver of the transport vehicle, you are responsible for ensuring that all waste received by you arrives at the specified destination.

(2) Sign and date the space provided, certifying the waste amounts in **PART I** were received for transport. **NOTE:** If you are unable to carry out the delivery of the shipment as specified, dial the emergency phone numbers given in **PART I** notifying the **GENERATOR.**

(3) Upon delivery of the shipment, the **TSD** Facility Owner/Operator is to sign for the shipment in your presence and fill in "date received".

*(4) Separate the yellow copy and retain for your records. Leave the remaining copies with the **TSD** Facility Owner/Operator.

INSTRUCTIONS TO TREATMENT, STORAGE AND DISPOSAL (TSD) FACILITY OWNER/OPERATOR (Please Type or Print Clearly)

(1) The authorized representative of the designated (or alternate) facility's owner or operator must note in **ITEM 19** any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

(2) Enter date received and sign in the presence of the driver declaring receipt of the wastes and verifying the quantities in the table in **PART I.**

(3) Retain the pink copy for your records and return the completed original (white) copy to the **GENERATOR.**

* U.S. EPA and TWC regulations require that copies of this Uniform Hazardous Waste Manifest be retained for a period of three (3) years in your company records. Do not send to TWC unless otherwise notified by these departments.

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

BENCHMARK
ENVIRONMENTAL CORPORATION

RECORD OF ~~TELEPHONE CALL~~ CONVERSATION

Date: 7/10/91 Time: ~4:30 PM
Project No.: 5005.01.33
Project Name: TA-35 CLOSURES

To: DAVID MC INROY of: LANL HSE-8 Phone:

From: MARY LOU LEONARD of: BEC Phone:

Re: CERTIFICATES OF DESTRUCTION

Notes: WHEN DAVE TRANSFERRED COPIES OF CERTIFICATES OF DESTRUCTION TO ME, HE SHOWED ME THAT FORMS FOR TWC MANIFEST NOS. 00067350, 00076317, 00067358, + 00067357 HAD CHANGES ON THEM REGARDING DRUM NUMBERS + TOTAL WEIGHT. HE INDICATED THAT THE CHANGES WERE MADE PRIOR TO OFFSITE TRANSPORT OF THE WASTE BY LANL STAFF. THE CHANGES WERE MADE BECAUSE EARLIER NUMBERS WRITTEN ON THE FORMS WERE ESTIMATES, AND NOT CORRECT.

MLL

ENCLOSURE 4

STATEMENT OF ADEQUACY OF THE ANALYSES AND DECONTAMINATION

AND

SAMPLE SUBMITTAL/CHAIN-OF-CUSTODY FORMS, LABORATORY REPORTS, AND ANALYTICAL SUMMARIES (ENCLOSURES 4-A THROUGH 4-F)

ENCLOSURE 4-A EQUIPMENT DECONTAMINATION VERIFICATION: RINSEATE SAMPLES

ENCLOSURE 4-B LINER DECONTAMINATION VERIFICATION: SOIL SAMPLES IMMEDIATELY BELOW IMPOUNDMENT LINER

ENCLOSURE 4-C PHASE ONE SOIL REMOVAL: SOIL SAMPLES THREE TO FIVE FOOT DEPTH

ENCLOSURE 4-D PHASE TWO SOIL REMOVAL: SOIL SAMPLES TEN TO FIFTEEN FOOT DEPTH (VERIFICATION SAMPLES)

ENCLOSURE 4-E BACKFILL VERIFICATION: SOIL SAMPLES

ENCLOSURE 4-F COREHOLES: SOIL SAMPLES FROM FIVE TO FIFTY-FIVE FOOT DEPTH

STATEMENT OF ADEQUACY OF
THE ANALYSES AND DECONTAMINATION

Based on my oversight of the TA-35 TSL-125 surface impoundment closure, the quality of the performance on all key activities pertaining to this closure were done in such a manner to ensure that a clean closure of this unit has been achieved. I have reviewed all analytical and QA/QC reports and have determined that the data is accurate and adequate. All procedures described in the enclosed closure plan were followed. All wastes generated by this closure were incinerated/disposed as a hazardous waste.

Stephen G. McLin

Stephen McLin
Environmental Protection Group
Los Alamos National Laboratory

7-18-91

Date Signed

ENCLOSURE 4-A

EQUIPMENT DECONTAMINATION VERIFICATION SAMPLES

TSL-125
Backhoe service
[illegible] decon
3rd decon

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 8273

I. PRESAMPLING CONFERENCE

Program Code WA45 No. Samples Expected 2ea H2O } VOC SVOC PCB EP tox metals

Submission Date 11-3-89 Completion Date TBA

Chain of Custody? Yes Special Protocol? *(EPA etc.)* None

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

Container Type Glass/Teflon Preservative Acid (HCl) in EP tox metals only
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None (Refrigerate) Freeze Darkness

Sample Hazards Present? *(Circle one or more)*
(No hazard) Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return____ Discard ✓
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S.G. McLin HSE-9 Section Leader [signature] Organic
Customer Phone 5-1721 MS K49 [signature] Inorganic
Date 11/3/89 ____ Radiochem

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader ____
HSE-9 Group Leader ____
Date ____

REQ	SAM NUM	CUST NUM
8273	89.17467	125BH-5
8273	89.17468	125BH-6
8273	89.17469	00.01370
8273	00.01369	00.01369
8273	89.17473	00.20171
8273	89.17596	00.20172
8273	89.17470	00.99928
8273	89.17471	00.99985

III. SAMPLE RECEIPT

Signature [signature] Date 11/3/89 Total No. Samples Received 2

HSE-9 Sample No. Range 89.17467 to 89.17473.

Customer Sample No. Range 125BH-5 to 125BH-6.

Sets A, B, C - VOA
set D - SVOA
Set E - 1336363
set F = EPTOX

3-8-89

VOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5043

********** HSE-9 ANALYTICAL REPORT **********

TA-35
TSL-125 S.D.
Decon Rinse
Water from
Backflow
Rec'd
12/12/89

Prepared by: DLN on 6-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125BH-5	89.17467	67641	< 20.		UG/L	12/05/89		Acetone
125BH-5	89.17467	71432	< 10.		UG/L	12/05/89		Benzene
125BH-5	89.17467	108861	< 10.		UG/L	12/05/89		Bromobenzene
125BH-5	89.17467	74975	< 10.		UG/L	12/05/89		Bromochloromethane
125BH-5	89.17467	75274	< 10.		UG/L	12/05/89		Bromodichloromethane
125BH-5	89.17467	75252	< 10.		UG/L	12/05/89		Bromoform
125BH-5	89.17467	74839	< 20.		UG/L	12/05/89		Bromomethane
125BH-5	89.17467	78933	< 10.		UG/L	12/05/89		2-Butanone
125BH-5	89.17467	135988	< 10.		UG/L	12/05/89		sec-Butylbenzene
125BH-5	89.17467	104518	< 10.		UG/L	12/05/89		n-Butylbenzene
125BH-5	89.17467	98066	< 10.		UG/L	12/05/89		tert-Butylbenzene
125BH-5	89.17467	75150	< 10.		UG/L	12/05/89		Carbon disulfide
125BH-5	89.17467	56235	< 10.		UG/L	12/05/89		Carbon tetrachloride
125BH-5	89.17467	108907	< 10.		UG/L	12/05/89		Chlorobenzene
125BH-5	89.17467	124481	< 10.		UG/L	12/05/89		Chlorodibromomethane
125BH-5	89.17467	75003	< 20.		UG/L	12/05/89		Chloroethane
125BH-5	89.17467	67663	< 10.		UG/L	12/05/89		Chloroform
125BH-5	89.17467	74873	< 20.		UG/L	12/05/89		Chloromethane
125BH-5	89.17467	95498	< 10.		UG/L	12/05/89		o-Chlorotoluene
125BH-5	89.17467	106434	< 10.		UG/L	12/05/89		p-Chlorotoluene
125BH-5	89.17467	96128	< 10.		UG/L	12/05/89		1,2-Dibromo-3-chloropropane
125BH-5	89.17467	106934	< 10.		UG/L	12/05/89		1,2-Dibromoethane
125BH-5	89.17467	74953	< 10.		UG/L	12/05/89		Dibromomethane
125BH-5	89.17467	95501	< 10.		UG/L	12/05/89		o-Dichlorobenzene (1,2)
125BH-5	89.17467	541731	< 10.		UG/L	12/05/89		m-Dichlorobenzene (1,3)

125BH-5	89.17467	106467	< 10.	UG/L	12/05/89	p-Dichlorobenzene (1,4)
125BH-5	89.17467	107062	< 10.	UG/L	12/05/89	1,2-Dichloroethane
125BH-5	89.17467	75343	< 10.	UG/L	12/05/89	1,1-Dichloroethane
125BH-5	89.17467	156605	< 10.	UG/L	12/05/89	trans-1,2-Dichloroethene
125BH-5	89.17467	75354	< 10.	UG/L	12/05/89	1,1-Dichloroethene
125BH-5	89.17467	156592	< 10.	UG/L	12/05/89	cis-1,2-Dichloroethylene
125BH-5	89.17467	142289	< 10.	UG/L	12/05/89	1,3-Dichloropropane
125BH-5	89.17467	78875	< 10.	UG/L	12/05/89	1,2-Dichloropropane
125BH-5	89.17467	594207	< 10.	UG/L	12/05/89	2,2-Dichloropropane
125BH-5	89.17467	10061015	< 10.	UG/L	12/05/89	cis-1,3-Dichloropropene
125BH-5	89.17467	563586	< 10.	UG/L	12/05/89	1,1-Dichloropropene
125BH-5	89.17467	10061026	< 10.	UG/L	12/05/89	trans-1,3-Dichloropropene
125BH-5	89.17467	100414	< 10.	UG/L	12/05/89	Ethylbenzene
125BH-5	89.17467	106934	< 10.	UG/L	12/05/89	Ethylene bromide
125BH-5	89.17467	107062	< 10.	UG/L	12/05/89	Ethylene chloride
125BH-5	89.17467	106934	< 10.	UG/L	12/05/89	Ethylene dibromide
125BH-5	89.17467	87683	< 10.	UG/L	12/05/89	Hexachlorobutadiene
125BH-5	89.17467	591786	< 10.	UG/L	12/05/89	2-Hexanone
125BH-5	89.17467	98828	< 10.	UG/L	12/05/89	Isopropylbenzene
125BH-5	89.17467	99876	< 10.	UG/L	12/05/89	4-Isopropyltoluene
125BH-5	89.17467	108101	< 10.	UG/L	12/05/89	4-Methyl-2-pentanone
125BH-5	89.17467	75092	< 10.	UG/L	12/05/89	Methylene chloride
125BH-5	89.17467	91203	< 10.	UG/L	12/05/89	Naphthalene
125BH-5	89.17467	103651	< 10.	UG/L	12/05/89	Propylbenzene
125BH-5	89.17467	100425	< 10.	UG/L	12/05/89	Styrene
125BH-5	89.17467	630206	< 10.	UG/L	12/05/89	1,1,1,2-Tetrachloroethane
125BH-5	89.17467	79345	< 10.	UG/L	12/05/89	1,1,2,2-Tetrachloroethane
125BH-5	89.17467	127184	< 10.	UG/L	12/05/89	Tetrachloroethylene
125BH-5	89.17467	108883	< 10.	UG/L	12/05/89	Toluene
125BH-5	89.17467	120821	< 10.	UG/L	12/05/89	1,2,4-Trichlorobenzene
125BH-5	89.17467	87616	< 10.	UG/L	12/05/89	1,2,3-Trichlorobenzene
125BH-5	89.17467	79005	< 10.	UG/L	12/05/89	1,1,2-Trichloroethane
125BH-5	89.17467	71556	< 10.	UG/L	12/05/89	1,1,1-Trichloroethane
125BH-5	89.17467	79016	< 10.	UG/L	12/05/89	Trichloroethene
125BH-5	89.17467	75694	< 10.	UG/L	12/05/89	Trichlorofluoromethane
125BH-5	89.17467	96184	< 10.	UG/L	12/05/89	1,2,3-Trichloropropane
125BH-5	89.17467	95636	< 10.	UG/L	12/05/89	1,2,4-Trimethylbenzene
125BH-5	89.17467	108678	< 10.	UG/L	12/05/89	1,3,5-Trimethylbenzene
125BH-5	89.17467	108054	< 10.	UG/L	12/05/89	Vinyl acetate
125BH-5	89.17467	75014	< 20.	UG/L	12/05/89	Vinyl chloride
125BH-5	89.17467	95476	< 10.	UG/L	12/05/89	o-Xylene
125BH-5	89.17467	1330207	< 10.	UG/L	12/05/89	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5043 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: DLN on 6-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

There were no open (non-blind) Quality Assurance materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QA samples for this constituent and matrix type available within HSE-9

SURROGATE RESULTS FOR EPA VOLATILES

1,2-Dichloroethane d4 (CAS # = 17060070); EPA Range Limits: Water = 76-114 %, Soil = 70-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.17467	116.	UG/L	12/05/89	
89.17468	116.	UG/L	12/06/89	

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.17467	108.	UG/L	12/05/89	
89.17468	108.	UG/L	12/06/89	

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.17467	111.	UG/L	12/05/89	
89.17468	111.	UG/L	12/06/89	

Laura Biagkowis — Analyst

Section Leader

mag — QA Officer

12/11/89 — Date

12-11-89 — Date

12-12-89 — Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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SEMIVOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5764

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Feb-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125BH-5	89.17467	83329	< 10.		UG/L	2/12/90		Acenaphthene
125BH-5	89.17467	208968	< 10.		UG/L	2/12/90		Acenaphthylene
125BH-5	89.17467	62533	< 10.		UG/L	2/12/90		Aniline
125BH-5	89.17467	120127	< 10.		UG/L	2/12/90		Anthracene
125BH-5	89.17467	103333	< 10.		UG/L	2/12/90		Azobenzene
125BH-5	89.17467	56553	< 10.		UG/L	2/12/90		Benz(a)anthracene
125BH-5	89.17467	92875	< 10.		UG/L	2/12/90		m-Benzidine
125BH-5	89.17467	191242	< 10.		UG/L	2/12/90		Benzo(g,h,i)perylene
125BH-5	89.17467	50328	< 10.		UG/L	2/12/90		Benzo-a-pyrene
125BH-5	89.17467	205992	< 10.		UG/L	2/12/90		Benzo-b-fluoranthene
125BH-5	89.17467	207089	< 10.		UG/L	2/12/90		Benzo-k-fluoranthene
125BH-5	89.17467	65850	18.	3.6	UG/L	2/12/90		Benzoic acid
125BH-5	89.17467	100516	< 10.		UG/L	2/12/90		Benzyl alcohol
125BH-5	89.17467	111911	< 10.		UG/L	2/12/90		Bis(2-chloroethoxy)methane
125BH-5	89.17467	111444	< 10.		UG/L	2/12/90		Bis(2-chloroethyl)ether
125BH-5	89.17467	108601	< 10.		UG/L	2/12/90		Bis(2-chloroisopropyl)ether
125BH-5	89.17467	117817	24.	4.8	UG/L	2/12/90		Bis(2-ethylhexyl)phthalate
125BH-5	89.17467	101553	< 10.		UG/L	2/12/90		4-Bromophenylphenyl ether
125BH-5	89.17467	85687	< 10.		UG/L	2/12/90		Butylbenzyl phthalate
125BH-5	89.17467	59507	< 10.		UG/L	2/12/90		4-Chloro-3-methylphenol
125BH-5	89.17467	106478	< 10.		UG/L	2/12/90		4-Chloroaniline
125BH-5	89.17467	91587	< 10.		UG/L	2/12/90		2-Chloronaphthalene
125BH-5	89.17467	95578	< 10.		UG/L	2/12/90		o-Chlorophenol
125BH-5	89.17467	7005723	< 10.		UG/L	2/12/90		4-Chlorophenylphenyl ether
125BH-5	89.17467	218019	< 10.		UG/L	2/12/90		Chrysene

125BH-5	89.17467	106445	< 10.	UG/L	2/12/90	p-Cresol
125BH-5	89.17467	84742	< 10.	UG/L	2/12/90	Di-n-butyl phthalate
125BH-5	89.17467	117840	< 10.	UG/L	2/12/90	Di-n-octyl phthalate
125BH-5	89.17467	53703	< 10.	UG/L	2/12/90	Dibenzo(a,h)anthracene
125BH-5	89.17467	132649	< 10.	UG/L	2/12/90	Dibenzofuran
125BH-5	89.17467	95501	< 10.	UG/L	2/12/90	o-Dichlorobenzene (1,2)
125BH-5	89.17467	541731	< 10.	UG/L	2/12/90	m-Dichlorobenzene (1,3)
125BH-5	89.17467	106467	< 10.	UG/L	2/12/90	p-Dichlorobenzene (1,4)
125BH-5	89.17467	91941	< 10.	UG/L	2/12/90	3,3'-Dichlorobenzidine
125BH-5	89.17467	120832	< 10.	UG/L	2/12/90	2,4-Dichlorophenol
125BH-5	89.17467	84662	< 10.	UG/L	2/12/90	Diethyl phthalate
125BH-5	89.17467	131113	< 10.	UG/L	2/12/90	Dimethyl phthalate
125BH-5	89.17467	105679	< 10.	UG/L	2/12/90	2,4-Dimethylphenol
125BH-5	89.17467	51285	< 10.	UG/L	2/12/90	2,4-Dinitrophenol
125BH-5	89.17467	121142	< 10.	UG/L	2/12/90	2,4-Dinitrotoluene
125BH-5	89.17467	606202	< 10.	UG/L	2/12/90	2,6-Dinitrotoluene
125BH-5	89.17467	206440	< 10.	UG/L	2/12/90	Fluoranthene
125BH-5	89.17467	86737	< 10.	UG/L	2/12/90	Fluorene
125BH-5	89.17467	118741	< 10.	UG/L	2/12/90	Hexachlorobenzene
125BH-5	89.17467	87683	< 10.	UG/L	2/12/90	Hexachlorobutadiene
125BH-5	89.17467	77474	< 10.	UG/L	2/12/90	Hexachlorocyclopentadiene
125BH-5	89.17467	67721	< 10.	UG/L	2/12/90	Hexachloroethane
125BH-5	89.17467	193395	< 10.	UG/L	2/12/90	Indeno(1,2,3-cd)pyrene
125BH-5	89.17467	78591	< 10.	UG/L	2/12/90	Isophorone
125BH-5	89.17467	534521	< 10.	UG/L	2/12/90	2-Methyl-4,6-dinitrophenol
125BH-5	89.17467	91576	< 10.	UG/L	2/12/90	2-Methylnaphthalene
125BH-5	89.17467	106445	< 10.	UG/L	2/12/90	4-Methylphenol
125BH-5	89.17467	95487	< 10.	UG/L	2/12/90	2-Methylphenol
125BH-5	89.17467	91203	< 10.	UG/L	2/12/90	Naphthalene
125BH-5	89.17467	100016	< 10.	UG/L	2/12/90	4-Nitroaniline
125BH-5	89.17467	88744	< 10.	UG/L	2/12/90	2-Nitroaniline
125BH-5	89.17467	99092	< 10.	UG/L	2/12/90	3-Nitroaniline
125BH-5	89.17467	98953	< 10.	UG/L	2/12/90	Nitrobenzene
125BH-5	89.17467	100027	< 10.	UG/L	2/12/90	p-Nitrophenol
125BH-5	89.17467	100027	< 10.	UG/L	2/12/90	4-Nitrophenol
125BH-5	89.17467	88755	< 10.	UG/L	2/12/90	2-Nitrophenol
125BH-5	89.17467	621647	< 10.	UG/L	2/12/90	N-Nitrosodi-n-propylamine
125BH-5	89.17467	62759	< 10.	UG/L	2/12/90	N-Nitrosodimethylamine
125BH-5	89.17467	86306	< 10.	UG/L	2/12/90	N-Nitrosodiphenylamine
125BH-5	89.17467	87865	< 10.	UG/L	2/12/90	Pentachlorophenol
125BH-5	89.17467	85018	< 10.	UG/L	2/12/90	Phenanthrene
125BH-5	89.17467	108952	< 10.	UG/L	2/12/90	Phenol
125BH-5	89.17467	129000	< 10.	UG/L	2/12/90	Pyrene
125BH-5	89.17467	120821	< 10.	UG/L	2/12/90	1,2,4-Trichlorobenzene
125BH-5	89.17467	95954	< 10.	UG/L	2/12/90	2,4,5-Trichlorophenol

125BH-5	89.17467	88062	< 10.	UG/L	2/12/90	2,4,6-Trichlorophenol
125BH-5	89.17467	105679	< 10.	UG/L	2/12/90	2,4-Xylenol

REPORT NUMBER: 5764

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Feb-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125BH-6	89.17468	83329	< 10.		UG/L	2/12/90		Acenaphthene
125BH-6	89.17468	208968	< 10.		UG/L	2/12/90		Acenaphthylene
125BH-6	89.17468	62533	< 10.		UG/L	2/12/90		Aniline
125BH-6	89.17468	120127	< 10.		UG/L	2/12/90		Anthracene
125BH-6	89.17468	103333	< 10.		UG/L	2/12/90		Azobenzene
125BH-6	89.17468	56553	< 10.		UG/L	2/12/90		Benz(a)anthracene
125BH-6	89.17468	92875	< 10.		UG/L	2/12/90		m-Benzidine
125BH-6	89.17468	191242	< 10.		UG/L	2/12/90		Benzo(g,h,i)perylene
125BH-6	89.17468	50328	< 10.		UG/L	2/12/90		Benzo-a-pyrene
125BH-6	89.17468	205992	< 10.		UG/L	2/12/90		Benzo-b-fluoranthene
125BH-6	89.17468	207089	< 10.		UG/L	2/12/90		Benzo-k-fluoranthene
125BH-6	89.17468	65850	13.	2.6	UG/L	2/12/90		Benzoic acid
125BH-6	89.17468	100516	< 10.		UG/L	2/12/90		Benzyl alcohol
125BH-6	89.17468	111911	< 10.		UG/L	2/12/90		Bis(2-chloroethoxy)methane
125BH-6	89.17468	111444	< 10.		UG/L	2/12/90		Bis(2-chloroethyl)ether
125BH-6	89.17468	108601	< 10.		UG/L	2/12/90		Bis(2-chloroisopropyl)ether
125BH-6	89.17468	117817	18.	3.6	UG/L	2/12/90		Bis(2-ethylhexyl)phthalate
125BH-6	89.17468	101553	< 10.		UG/L	2/12/90		4-Bromophenylphenyl ether
125BH-6	89.17468	85687	< 10.		UG/L	2/12/90		Butylbenzyl phthalate
125BH-6	89.17468	59507	< 10.		UG/L	2/12/90		4-Chloro-3-methylphenol
125BH-6	89.17468	106478	< 10.		UG/L	2/12/90		4-Chloroaniline
125BH-6	89.17468	91587	< 10.		UG/L	2/12/90		2-Chloronaphthalene
125BH-6	89.17468	95578	< 10.		UG/L	2/12/90		o-Chlorophenol
125BH-6	89.17468	7005723	< 10.		UG/L	2/12/90		4-Chlorophenylphenyl ether
125BH-6	89.17468	218019	< 10.		UG/L	2/12/90		Chrysene

125BH-6	89.17468	106445	< 10.	UG/L	2/12/90	p-Cresol
125BH-6	89.17468	84742	< 10.	UG/L	2/12/90	Di-n-butyl phthalate
125BH-6	89.17468	117840	< 10.	UG/L	2/12/90	Di-n-octyl phthalate
125BH-6	89.17468	53703	< 10.	UG/L	2/12/90	Dibenzo(a,h)anthracene
125BH-6	89.17468	132649	< 10.	UG/L	2/12/90	Dibenzofuran
125BH-6	89.17468	95501	< 10.	UG/L	2/12/90	o-Dichlorobenzene (1,2)
125BH-6	89.17468	541731	< 10.	UG/L	2/12/90	m-Dichlorobenzene (1,3)
125BH-6	89.17468	106467	< 10.	UG/L	2/12/90	p-Dichlorobenzene (1,4)
125BH-6	89.17468	91941	< 10.	UG/L	2/12/90	3,3'-Dichlorobenzidine
125BH-6	89.17468	120832	< 10.	UG/L	2/12/90	2,4-Dichlorophenol
125BH-6	89.17468	84662	< 10.	UG/L	2/12/90	Diethyl phthalate
125BH-6	89.17468	131113	< 10.	UG/L	2/12/90	Dimethyl phthalate
125BH-6	89.17468	105679	< 10.	UG/L	2/12/90	2,4-Dimethylphenol
125BH-6	89.17468	51285	< 10.	UG/L	2/12/90	2,4-Dinitrophenol
125BH-6	89.17468	121142	< 10.	UG/L	2/12/90	2,4-Dinitrotoluene
125BH-6	89.17468	606202	< 10.	UG/L	2/12/90	2,6-Dinitrotoluene
125BH-6	89.17468	206440	< 10.	UG/L	2/12/90	Fluoranthene
125BH-6	89.17468	86737	< 10.	UG/L	2/12/90	Fluorene
125BH-6	89.17468	118741	< 10.	UG/L	2/12/90	Hexachlorobenzene
125BH-6	89.17468	87683	< 10.	UG/L	2/12/90	Hexachlorobutadiene
125BH-6	89.17468	77474	< 10.	UG/L	2/12/90	Hexachlorocyclopentadiene
125BH-6	89.17468	67721	< 10.	UG/L	2/12/90	Hexachloroethane
125BH-6	89.17468	193395	< 10.	UG/L	2/12/90	Indeno(1,2,3-cd)pyrene
125BH-6	89.17468	78591	< 10.	UG/L	2/12/90	Isophorone
125BH-6	89.17468	534521	< 10.	UG/L	2/12/90	2-Methyl-4,6-dinitrophenol
125BH-6	89.17468	91576	< 10.	UG/L	2/12/90	2-Methylnaphthalene
125BH-6	89.17468	106445	< 10.	UG/L	2/12/90	4-Methylphenol
125BH-6	89.17468	95487	< 10.	UG/L	2/12/90	2-Methylphenol
125BH-6	89.17468	91203	< 10.	UG/L	2/12/90	Naphthalene
125BH-6	89.17468	99092	< 10.	UG/L	2/12/90	3-Nitroaniline
125BH-6	89.17468	88744	< 10.	UG/L	2/12/90	2-Nitroaniline
125BH-6	89.17468	100016	< 10.	UG/L	2/12/90	4-Nitroaniline
125BH-6	89.17468	98953	< 10.	UG/L	2/12/90	Nitrobenzene
125BH-6	89.17468	100027	< 10.	UG/L	2/12/90	4-Nitrophenol
125BH-6	89.17468	100027	< 10.	UG/L	2/12/90	p-Nitrophenol
125BH-6	89.17468	88755	< 10.	UG/L	2/12/90	2-Nitrophenol
125BH-6	89.17468	621647	< 10.	UG/L	2/12/90	N-Nitrosodi-n-propylamine
125BH-6	89.17468	62759	< 10.	UG/L	2/12/90	N-Nitrosodimethylamine
125BH-6	89.17468	86306	< 10.	UG/L	2/12/90	N-Nitrosodiphenylamine
125BH-6	89.17468	87865	< 10.	UG/L	2/12/90	Pentachlorophenol
125BH-6	89.17468	85018	< 10.	UG/L	2/12/90	Phenanthrene
125BH-6	89.17468	108952	< 10.	UG/L	2/12/90	Phenol
125BH-6	89.17468	129000	< 10.	UG/L	2/12/90	Pyrene
125BH-6	89.17468	120821	< 10.	UG/L	2/12/90	1,2,4-Trichlorobenzene
125BH-6	89.17468	88062	< 10.	UG/L	2/12/90	2,4,6-Trichlorophenol

125BH-6	89.17468	95954	< 10.	UG/L	2/12/90	2,4,5-Trichlorophenol
125BH-6	89.17468	105679	< 10.	UG/L	2/12/90	2,4-Xylenol

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REPORT NUMBER: 5764 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 23-Feb-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

The following analyst QA's have no CV data for comparison

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.17473	106467	120.	24.	UG/L	167.	17.	2/12/90	UNDER CONTROL	p-Dichlorobenzene (1,4)

89.17473	118741	96.	19.2	UG/L	134.	13.	2/12/90	UNDER CONTROL	Hexachlorobenzene
89.17473	77474	89.	17.8	UG/L	170.	17.	2/12/90	OUT OF CONTROL	Hexachlorocyclopentadiene
89.17473	67721	104.	20.8	UG/L	166.	17.	2/12/90	WARNING 2-3 SIG	Hexachloroethane

SURROGATE RESULTS FOR EPA SEMIVOLATILES

Surrogate 1 = 2-Fluorophenol (CAS # = 367124)
Surrogate 2 = Phenol-d5 (CAS # = 4165622)
Surrogate 3 = Nitrobenzene-d5 (CAS # = 4165600)
Surrogate 4 = 2-Fluorobiphenyl (CAS # = 321608)
Surrogate 5 = 2,4,6-Tribromophenol (CAS # = 118796)
Surrogate 6 = p-Terphenyl-d14 (CAS # =)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	Surrogate 6	COMPLETION DATE
89.17467	%	81.	77.	76.	83.	91.	86.	12-Feb-1990
89.17468	%	75.	80.	69.	82.	95.	78.	12-Feb-1990
89.17473	%	85.	84.	77.	81.	66.	101.	12-Feb-1990
EPA Limits:								
Water	%	21 - 100	10 - 94	35 - 114	43 - 116	10 - 123	33 - 141	
Soil	%	25 - 121	24 - 113	23 - 120	30 - 115	19 - 122	18 - 137	

Analyst	Section Leader	QA Officer
2/26/90	2/27/90	2-27-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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METAL ANALYSES

REPORT NUMBER: 4854

TA-35 TBL-125
Backhoe decon rinse
3rd decon after
3rd use

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: TMF on 28-Nov-1989

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

EP tox metals

Rec'd 12/1/89

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	AG	< 0.003		MG/L	11/27/89	
125BH-5	89.17467	AG	< 0.003		MG/L	11/27/89	
125BH-5	89.17467	AS	2.3	2.	UG/L	11/27/89	
125BH-5	89.17467	AS	2.	2.	UG/L	11/27/89	
125BH-5	89.17467	SE	< 1.		UG/L	11/27/89	
125BH-5	89.17467	SE	< 1.		UG/L	11/27/89	
125BH-6	89.17468	AG	< 0.003		MG/L	11/27/89	
125BH-6	89.17468	AG	0.004	0.003	MG/L	11/27/89	
125BH-6	89.17468	AS	< 2.		UG/L	11/27/89	
125BH-6	89.17468	AS	< 2.		UG/L	11/27/89	
125BH-6	89.17468	SE	< 1.		UG/L	11/27/89	
125BH-6	89.17468	SE	< 1.		UG/L	11/27/89	

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REPORT NUMBER: 4854 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: TMF on 28-Nov-1989

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE
00.01010	00.01010	AS	27.	6.	UG/L	27.	3.	11/27/89 UNDER CONTROL
00.01010	00.01010	SE	10.8	2.	UG/L	11.	2.	11/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.486	0.05	MG/L	0.5	0.05	11/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.486	0.05	MG/L	0.5	0.05	11/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.502	0.05	MG/L	0.5	0.05	11/27/89 UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17471	AG	710.	70.	UG/L	11/27/89	UNDER CONTROL
89.17471	AS	102.	20.	UG/L	11/27/89	UNDER CONTROL
89.17471	SE	80.	16.	UG/L	11/27/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
		NK for MAG
11-28-89	11-28-89	11/29/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 4901

TA-35 TBL-125SA
3rd decon off
Backhoe
Rec'd 12/11/89

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: BA REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	40.	20.	UG/L	11/29/89	
125BH-6	89.17468	41.	20.	UG/L	11/29/89	

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REPORT NUMBER: 4901 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: BA REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17470	1.9	0.2	MG/L	11/29/89	UNDER CONTROL

JD Montoya	MGB	NK for MAG
Analyst	Section Leader	QA Officer
11-30-89	11-30-89	12/1/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 4904

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CD REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 0.1		MG/L	11/29/89	
125BH-6	89.17468	< 0.1		MG/L	11/29/89	

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REPORT NUMBER: 4904 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CD REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	9.9	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

J D Montoya	[signature]	NK for MAG
Analyst	Section Leader	QA Officer
11-30-89	11-30-89	12/1/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 4903

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CR REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 0.2		MG/L	11/29/89	
125BH-6	89.17468	< 0.2		MG/L	11/29/89	

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REPORT NUMBER: 4903 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CR REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

JDMontoya
Analyst

MAB
Section Leader

NK for MAG
QA Officer

11-30-89
Date

11-30-89
Date

12/1/89
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 4902

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: PB REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 2.		MG/L	11/29/89	
125BH-6	89.17468	< 2.		MG/L	11/29/89	

****

REPORT NUMBER: 4902 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: PB REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	9.8	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

J D Montoya
Analyst

SMLB
Section Leader

NK for MAG
QA Officer

11-30-89
Date

11-30-89
Date

12/1/89
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5079

********** HSE-9 ANALYTICAL REPORT **********

TA-35
TSL-125 SI
Decon Rinse H_2O
From Backhoe

Rec'd 12/14/89

Prepared by: MGBELL on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 8273 MATRIX: W ANALYST: Malti Bhatia

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7470

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 0.2		UG/L	12/06/89	
125BH-5	89.17467	< 0.2		UG/L	12/04/89	
125BH-5	89.17467	< 0.2		UG/L	12/05/89	
125BH-6	89.17468	< 0.2		UG/L	12/06/89	
125BH-6	89.17468	< 0.2		UG/L	12/05/89	
125BH-6	89.17468	< 0.2		UG/L	12/04/89	

****

REPORT NUMBER: 5079 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: MGBELL on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 8273 MATRIX: W ANALYST: Malti Bhatia

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7430

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	
00.00549	00.00549	1.38	0.2	UG/G	1.44	0.07	12/05/89	UNDER
00.00608	00.00608	1.35	0.2	UG/G	1.1	0.5	12/05/89	UNDER
00.20086	00.20086	3.96	0.4	UG/L	4.	0.4	12/05/89	UNDER
00.20087	00.20087	3.97	0.4	UG/L	4.	0.4	12/05/89	UNDER
00.20210	00.20210	2.02	0.2	UG/L	2.	0.2	12/05/89	UNDER

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17626	3.5	0.35	UG/L	12/04/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
MAB	MGB	mag
12/11/89	12-11-89	12-12-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4901

Rec'd
4-30-90

TA-35 TSL-125
Eq. Decon Rinse #3

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: BA REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	40.	20.	UG/L	11/29/89	
125BH-6	89.17468	41.	20.	UG/L	11/29/89	

****

REPORT NUMBER: 4901 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: BA REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17470	1.9	0.2	MG/L	11/29/89	UNDER CONTROL

JD Montoya	SMLB	NK for MAG
Analyst	Section Leader	QA Officer
11-30-89	11-30-89	12/1/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4902

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: PB REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 2.		MG/L	11/29/89	
125BH-6	89.17468	< 2.		MG/L	11/29/89	

****

REPORT NUMBER: 4902 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: PB REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	9.8	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

J D Montoya	SMLB	NK for MAG
Analyst	Section Leader	QA Officer
11-30-89	11-30-89	12/1/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4903

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CR REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 0.2		MG/L	11/29/89	
125BH-6	89.17468	< 0.2		MG/L	11/29/89	

****

REPORT NUMBER: 4903 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CR REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

JD Montoya	MAB	NK for MAG
Analyst	Section Leader	QA Officer
11-30-89	11-30-89	12/1/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4904

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CD REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 0.1		MG/L	11/29/89	
125BH-6	89.17468	< 0.1		MG/L	11/29/89	

****

REPORT NUMBER: 4904 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 30-Nov-1989

ANALYSIS: CD REQUEST NUMBER: 8273 MATRIX: W ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	9.9	1.	MG/L	10.	1.	11/29/89	UNDER CONTROL

J D Montoya	[illegible]	NK for MAG
Analyst	Section Leader	QA Officer
11-30-89	11-30-89	12/1/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5316

********** HSE-9 ANALYTICAL REPORT **********

SUBMITTED w/ 8357

Prepared by: ESG on 18-Jan-1990

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Dee Seitz PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

SUMMARY of TOTAL PCB's for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125BH-5	89.17467	1336363	< 1.		UG/L			Mixed-Aroclor
125BH-6	89.17468	1336363	< 1.		UG/L			Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125BH-5	89.17467	1336363	< 1.		UG/L			Mixed-Aroclor
125BH-5	89.17467	53469219	< 1.		UG/L	1/16/90		Aroclor 1242
125BH-5	89.17467	11097691	< 1.		UG/L	1/16/90		Aroclor 1254
125BH-5	89.17467	11096825	< 1.		UG/L	1/16/90		Aroclor 1260
125BH-6	89.17468	1336363	< 1.		UG/L			Mixed-Aroclor
125BH-6	89.17468	53469219	< 1.		UG/L	1/16/90		Aroclor 1242
125BH-6	89.17468	11097691	< 1.		UG/L	1/16/90		Aroclor 1254
125BH-6	89.17468	11096825	< 1.		UG/L	1/16/90		Aroclor 1260

REPORT NUMBER: 5316 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: ESG on 18-Jan-1990

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Dee Seitz PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.01411	00.01411	1336363	55.9	11.2	UG/L	50.	12.2	1/16/90	UNDER CONTROL	Mixed-Aroclor
00.01411	00.01411	53469219	55.9	11.2	UG/L	50.	12.2	1/16/90	UNDER CONTROL	Aroclor 1242
00.01411	00.01411	11097691	< 0.4		UG/L			1/16/90	UNDER CONTROL	Aroclor 1254
00.01411	00.01411	11096825	< 0.4		UG/L			1/16/90	UNDER CONTROL	Aroclor 1260
00.97364	00.97364	1336363	6.4	1.3	UG/G	7.9	0.8	1/16/90	UNDER CONTROL	Mixed-Aroclor
00.97364	00.97364	53469219	6.4	1.3	UG/G	7.9	0.8	1/16/90	UNDER CONTROL	Aroclor 1242
00.97364	00.97364	11097691	< 4.		UG/G			1/16/90	UNDER CONTROL	Aroclor 1254
00.97364	00.97364	11096825	< 4.		UG/G			1/16/90	UNDER CONTROL	Aroclor 1260

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.18342	1336363	250.8	50.2	UG/G	1/16/90	UNDER CONTROL	Mixed-Aroclor
89.18342	53469219	250.8	50.2	UG/G	1/16/90	UNDER CONTROL	Aroclor 1242
89.18342	11097691	< 4.		UG/G	1/16/90	UNDER CONTROL	Aroclor 1254
89.18342	11096825	< 4.		UG/G	1/16/90	UNDER CONTROL	Aroclor 1260

Analyst	Section Leader	QA Officer
1/22/90	1/23/90	1-23-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4854

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: TMF on 28-Nov-1989

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	AG	< 0.003		MG/L	11/27/89	
125BH-5	89.17467	AG	< 0.003		MG/L	11/27/89	
125BH-5	89.17467	AS	2.3	2.	UG/L	11/27/89	
125BH-5	89.17467	AS	2.	2.	UG/L	11/27/89	
125BH-5	89.17467	SE	< 1.		UG/L	11/27/89	
125BH-5	89.17467	SE	< 1.		UG/L	11/27/89	
125BH-6	89.17468	AG	< 0.003		MG/L	11/27/89	
125BH-6	89.17468	AG	0.004	0.003	MG/L	11/27/89	
125BH-6	89.17468	AS	< 2.		UG/L	11/27/89	
125BH-6	89.17468	AS	< 2.		UG/L	11/27/89	
125BH-6	89.17468	SE	< 1.		UG/L	11/27/89	
125BH-6	89.17468	SE	< 1.		UG/L	11/27/89	

****

REPORT NUMBER: 4854 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: TMF on 28-Nov-1989

REQUEST NUMBER: 8273 MATRIX: W ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE
00.01010	00.01010	AS	27.	6.	UG/L	27.	3.	11/27/89 UNDER CONTROL
00.01010	00.01010	SE	10.8	2.	UG/L	11.	2.	11/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.486	0.05	MG/L	0.5	0.05	11/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.486	0.05	MG/L	0.5	0.05	11/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.502	0.05	MG/L	0.5	0.05	11/27/89 UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17471	AG	710.	70.	UG/L	11/27/89	UNDER CONTROL
89.17471	AS	102.	20.	UG/L	11/27/89	UNDER CONTROL
89.17471	SE	80.	16.	UG/L	11/27/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
		NK for MAG
11-28-89	11-28-89	11/29/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5079

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: MGBELL on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 8273 MATRIX: W ANALYST: Malti Bhatia

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7480

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125BH-5	89.17467	< 0.2		UG/L	12/06/89	
125BH-5	89.17467	< 0.2		UG/L	12/04/89	
125BH-5	89.17467	< 0.2		UG/L	12/05/89	
125BH-6	89.17468	< 0.2		UG/L	12/06/89	
125BH-6	89.17468	< 0.2		UG/L	12/05/89	
125BH-6	89.17468	< 0.2		UG/L	12/04/89	

****

REPORT NUMBER: 5079 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: MGBELL on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 8273 MATRIX: W ANALYST: Malti Bhatia

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7480

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.00549	00.00549	1.38	0.2	UG/G	1.44	0.07	12/05/89	UNDER CONTROL
00.00608	00.00608	1.35	0.2	UG/G	1.1	0.5	12/05/89	UNDER CONTROL
00.20086	00.20086	3.96	0.4	UG/L	4.	0.4	12/05/89	UNDER CONTROL
00.20087	00.20087	3.97	0.4	UG/L	4.	0.4	12/05/89	UNDER CONTROL
00.20210	00.20210	2.02	0.2	UG/L	2.	0.2	12/05/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17626	3.5	0.35	UG/L	12/04/89	UNDER CONTROL

MAB — Analyst — 12/11/89 Date

MGB — Section Leader — 12-11-89 Date

mag — QA Officer — 12-12-89 Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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HSE-9 ANALYTICAL SERVICE AGREEMENT

8209

Request No. 8354

I. PRESAMPLING CONFERENCE

Program Code M292 No. Samples Expected ~~2 ea~~ only 1 sample submitted H_2O } VOC SVOC PCB EP tox metals

Submission Date 12-5-89 Completion Date

Chain of Custody? Special Protocol? *(EPA etc.)*

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

Container Type Glass/Teflon Preservative HNO_3 in metals
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None Refrigerate Freeze Darkness

Sample Hazards Present? *(Circle one or more)*
No hazard Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return Discard ✓
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S. G. McLin HSE-9 Section Leader SDM for CR Organic
Customer Phone 5-1721 MS K490 MHBell Inorganic
Date 12/4/89 Radioch.

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

REQ	SAM NUM	CUST NUM
8354	89.18188	DECON WATER
8354	89.18193	00.20246
8354	89.18194	00.01099
8354	00.01489	00.01489

REQ	SAM NUM	CUST NUM
8209	89.18188	DECON WATER

Sets A&B = EPTOX
Sets C-H = VOA
Sets I&J = SVOA
Sets K&L = PCBS

III. SAMPLE RECEIPT

Signature Elizabeth A. Jones Date 12/5/89 Total No. Samples Received 1 x 12 cts

HSE-9 Sample No. Range 89.18188 to .

Customer Sample No. Range "Decon Water" to .

Total of 6 VOAs, 2 SVOAS, 2 PCBs, & 2 EPTOX bottles.
Submitter maintains that they are all in fact the same sample. There is no identifying customer #

3-8-89

VOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5190

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8354 MATRIX: WW ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DECON WATER	89.18188	67641	< 20.		UG/L	12/18/89		Acetone
DECON WATER	89.18188	71432	< 5.		UG/L	12/18/89		Benzene
DECON WATER	89.18188	108861	< 5.		UG/L	12/18/89		Bromobenzene
DECON WATER	89.18188	74975	< 5.		UG/L	12/18/89		Bromochloromethane
DECON WATER	89.18188	75274	< 5.		UG/L	12/18/89		Bromodichloromethane
DECON WATER	89.18188	75252	< 5.		UG/L	12/18/89		Bromoform
DECON WATER	89.18188	74839	< 10.		UG/L	12/18/89		Bromomethane
DECON WATER	89.18188	78933	< 20.		UG/L	12/18/89		2-Butanone
DECON WATER	89.18188	98066	< 5.		UG/L	12/18/89		tert-Butylbenzene
DECON WATER	89.18188	104518	< 5.		UG/L	12/18/89		n-Butylbenzene
DECON WATER	89.18188	135988	< 5.		UG/L	12/18/89		sec-Butylbenzene
DECON WATER	89.18188	75150	< 5.		UG/L	12/18/89		Carbon disulfide
DECON WATER	89.18188	56235	< 5.		UG/L	12/18/89		Carbon tetrachloride
DECON WATER	89.18188	108907	< 5.		UG/L	12/18/89		Chlorobenzene
DECON WATER	89.18188	124481	< 5.		UG/L	12/18/89		Chlorodibromomethane
DECON WATER	89.18188	75003	< 10.		UG/L	12/18/89		Chloroethane
DECON WATER	89.18188	67663	< 5.		UG/L	12/18/89		Chloroform
DECON WATER	89.18188	74873	< 10.		UG/L	12/18/89		Chloromethane
DECON WATER	89.18188	95498	< 5.		UG/L	12/18/89		o-Chlorotoluene
DECON WATER	89.18188	106434	< 5.		UG/L	12/18/89		p-Chlorotoluene
DECON WATER	89.18188	96128	< 10.		UG/L	12/18/89		1,2-Dibromo-3-chloropropane
DECON WATER	89.18188	106934	< 5.		UG/L	12/18/89		1,2-Dibromoethane
DECON WATER	89.18188	74953	< 5.		UG/L	12/18/89		Dibromomethane
WATER	89.18188	95501	< 5.		UG/L	12/18/89		o-Dichlorobenzene (1,2)
WATER	89.18188	541731	< 5.		UG/L	12/18/89		m-Dichlorobenzene (1,3)

DECON WATER	89.18188	106467	< 5.	UG/L	12/18/89	p-Dichlorobenzene (1,4)
DECON WATER	89.18188	107062	< 5.	UG/L	12/18/89	1,2-Dichloroethane
DECON WATER	89.18188	75343	< 5.	UG/L	12/18/89	1,1-Dichloroethane
DECON WATER	89.18188	75354	< 5.	UG/L	12/18/89	1,1-Dichloroethene
DECON WATER	89.18188	156605	< 5.	UG/L	12/18/89	trans-1,2-Dichloroethene
DECON WATER	89.18188	156592	< 5.	UG/L	12/18/89	cis-1,2-Dichloroethylene
DECON WATER	89.18188	142289	< 5.	UG/L	12/18/89	1,3-Dichloropropane
DECON WATER	89.18188	594207	< 5.	UG/L	12/18/89	2,2-Dichloropropane
DECON WATER	89.18188	78875	< 5.	UG/L	12/18/89	1,2-Dichloropropane
DECON WATER	89.18188	10061015	< 5.	UG/L	12/18/89	cis-1,3-Dichloropropene
DECON WATER	89.18188	10061026	< 5.	UG/L	12/18/89	trans-1,3-Dichloropropene
DECON WATER	89.18188	563586	< 5.	UG/L	12/18/89	1,1-Dichloropropene
DECON WATER	89.18188	100414	< 5.	UG/L	12/18/89	Ethylbenzene
DECON WATER	89.18188	107062	< 5.	UG/L	12/18/89	Ethylene chloride
DECON WATER	89.18188	87683	< 5.	UG/L	12/18/89	Hexachlorobutadiene
DECON WATER	89.18188	591786	< 20.	UG/L	12/18/89	2-Hexanone
DECON WATER	89.18188	98828	< 5.	UG/L	12/18/89	Isopropylbenzene
DECON WATER	89.18188	99876	< 5.	UG/L	12/18/89	4-Isopropyltoluene
DECON WATER	89.18188	108101	< 20.	UG/L	12/18/89	4-Methyl-2-pentanone
DECON WATER	89.18188	75092	< 5.	UG/L	12/18/89	Methylene chloride
DECON WATER	89.18188	91203	< 5.	UG/L	12/18/89	Naphthalene
DECON WATER	89.18188	103651	< 5.	UG/L	12/18/89	Propylbenzene
DECON WATER	89.18188	100425	< 5.	UG/L	12/18/89	Styrene
DECON WATER	89.18188	79345	< 5.	UG/L	12/18/89	1,1,2,2-Tetrachloroethane
DECON WATER	89.18188	630206	< 5.	UG/L	12/18/89	1,1,1,2-Tetrachloroethane
DECON WATER	89.18188	127184	< 5.	UG/L	12/18/89	Tetrachloroethylene
DECON WATER	89.18188	108883	< 5.	UG/L	12/18/89	Toluene
DECON WATER	89.18188	120821	< 5.	UG/L	12/18/89	1,2,4-Trichlorobenzene
DECON WATER	89.18188	87616	< 5.	UG/L	12/18/89	1,2,3-Trichlorobenzene
DECON WATER	89.18188	71556	< 5.	UG/L	12/18/89	1,1,1-Trichloroethane
DECON WATER	89.18188	79005	< 5.	UG/L	12/18/89	1,1,2-Trichloroethane
DECON WATER	89.18188	79016	< 5.	UG/L	12/18/89	Trichloroethene
DECON WATER	89.18188	75694	< 5.	UG/L	12/18/89	Trichlorofluoromethane
DECON WATER	89.18188	96184	< 5.	UG/L	12/18/89	1,2,3-Trichloropropane
DECON WATER	89.18188	95636	< 5.	UG/L	12/18/89	1,2,4-Trimethylbenzene
DECON WATER	89.18188	108678	< 5.	UG/L	12/18/89	1,3,5-Trimethylbenzene
DECON WATER	89.18188	108054	< 10.	UG/L	12/18/89	Vinyl acetate
DECON WATER	89.18188	75014	< 10.	UG/L	12/18/89	Vinyl chloride
DECON WATER	89.18188	95476	< 5.	UG/L	12/18/89	o-Xylene
DECON WATER	89.18188	1330207	< 5.	UG/L	12/18/89	Mixed-Xylenes (m ± p)

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REPORT NUMBER: 5190 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8354 MATRIX: WW ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.18193	67641	< 20.		UG/L	12/18/89	UNDER CONTROL	Acetone
89.18193	71432	74.3	22.3	UG/L	12/18/89	UNDER CONTROL	Benzene
89.18193	108861	< 5.		UG/L	12/18/89	UNDER CONTROL	Bromobenzene
89.18193	74975	79.4	23.8	UG/L	12/18/89	UNDER CONTROL	Bromochloromethane
89.18193	75274	< 5.		UG/L	12/18/89	UNDER CONTROL	Bromodichloromethane
89.18193	75252	< 5.		UG/L	12/18/89	UNDER CONTROL	Bromoform
89.18193	74839	< 10.		UG/L	12/18/89	UNDER CONTROL	Bromomethane
89.18193	78933	99.9	30.	UG/L	12/18/89	UNDER CONTROL	2-Butanone

89.18193	98066	< 5.		UG/L	12/18/89	UNDER CONTROL	tert-Butylbenzene
89.18193	135988	< 5.		UG/L	12/18/89	UNDER CONTROL	sec-Butylbenzene
89.18193	104518	< 5.		UG/L	12/18/89	UNDER CONTROL	n-Butylbenzene
89.18193	75150	< 5.		UG/L	12/18/89	UNDER CONTROL	Carbon disulfide
89.18193	56235	64.5	19.4	UG/L	12/18/89	UNDER CONTROL	Carbon tetrachloride
89.18193	108907	< 5.		UG/L	12/18/89	UNDER CONTROL	Chlorobenzene
89.18193	124481	< 5.		UG/L	12/18/89	UNDER CONTROL	Chlorodibromomethane
89.18193	75003	< 10.		UG/L	12/18/89	UNDER CONTROL	Chloroethane
89.18193	67663	< 5.		UG/L	12/18/89	UNDER CONTROL	Chloroform
89.18193	74873	< 10.		UG/L	12/18/89	UNDER CONTROL	Chloromethane
89.18193	106434	< 5.		UG/L	12/18/89	UNDER CONTROL	p-Chlorotoluene
89.18193	95498	< 5.		UG/L	12/18/89	UNDER CONTROL	o-Chlorotoluene
89.18193	96128	< 10.		UG/L	12/18/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.18193	106934	85.	25.5	UG/L	12/18/89	UNDER CONTROL	1,2-Dibromoethane
89.18193	74953	< 5.		UG/L	12/18/89	UNDER CONTROL	Dibromomethane
89.18193	95501	< 5.		UG/L	12/18/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.18193	541731	< 5.		UG/L	12/18/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.18193	106467	< 5.		UG/L	12/18/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.18193	75343	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1-Dichloroethane
89.18193	107062	< 5.		UG/L	12/18/89	UNDER CONTROL	1,2-Dichloroethane
89.18193	75354	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1-Dichloroethene
89.18193	156605	< 5.		UG/L	12/18/89	UNDER CONTROL	trans-1,2-Dichloroethene
89.18193	156592	< 5.		UG/L	12/18/89	UNDER CONTROL	cis-1,2-Dichloroethylene
89.18193	142289	< 5.		UG/L	12/18/89	UNDER CONTROL	1,3-Dichloropropane
89.18193	78875	64.2	19.3	UG/L	12/18/89	UNDER CONTROL	1,2-Dichloropropane
89.18193	594207	< 5.		UG/L	12/18/89	UNDER CONTROL	2,2-Dichloropropane
89.18193	10061015	< 5.		UG/L	12/18/89	UNDER CONTROL	cis-1,3-Dichloropropene
89.18193	10061026	< 5.		UG/L	12/18/89	UNDER CONTROL	trans-1,3-Dichloropropene
89.18193	563586	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1-Dichloropropene
89.18193	100414	< 5.		UG/L	12/18/89	UNDER CONTROL	Ethylbenzene
89.18193	107062	< 5.		UG/L	12/18/89	UNDER CONTROL	Ethylene chloride
89.18193	87683	< 5.		UG/L	12/18/89	UNDER CONTROL	Hexachlorobutadiene
89.18193	591786	< 20.		UG/L	12/18/89	UNDER CONTROL	2-Hexanone
89.18193	98828	< 5.		UG/L	12/18/89	UNDER CONTROL	Isopropylbenzene
89.18193	99876	< 5.		UG/L	12/18/89	UNDER CONTROL	4-Isopropyltoluene
89.18193	108101	51.9	15.6	UG/L	12/18/89	UNDER CONTROL	4-Methyl-2-pentanone
89.18193	75092	< 5.		UG/L	12/18/89	UNDER CONTROL	Methylene chloride
89.18193	91203	< 5.		UG/L	12/18/89	UNDER CONTROL	Naphthalene
89.18193	103651	< 5.		UG/L	12/18/89	UNDER CONTROL	Propylbenzene
89.18193	100425	62.1	18.6	UG/L	12/18/89	UNDER CONTROL	Styrene
89.18193	630206	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1,1,2-Tetrachloroethane
89.18193	79345	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane
89.18193	127184	74.5	22.4	UG/L	12/18/89	UNDER CONTROL	Tetrachloroethylene
89.18193	108883	< 5.		UG/L	12/18/89	UNDER CONTROL	Toluene
89.18193	120821	< 5.		UG/L	12/18/89	UNDER CONTROL	1,2,4-Trichlorobenzene

89.18193	87616	< 5.		UG/L	12/18/89	UNDER CONTROL	1,2,3-Trichlorobenzene
89.18193	71556	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1,1-Trichloroethane
89.18193	79005	< 5.		UG/L	12/18/89	UNDER CONTROL	1,1,2-Trichloroethane
89.18193	79016	< 5.		UG/L	12/18/89	UNDER CONTROL	Trichloroethene
89.18193	75694	< 5.		UG/L	12/18/89	UNDER CONTROL	Trichlorofluoromethane
89.18193	96184	< 5.		UG/L	12/18/89	UNDER CONTROL	1,2,3-Trichloropropane
89.18193	95636	< 5.		UG/L	12/18/89	UNDER CONTROL	1,2,4-Trimethylbenzene
89.18193	108678	< 5.		UG/L	12/18/89	UNDER CONTROL	1,3,5-Trimethylbenzene
89.18193	108054	< 10.		UG/L	12/18/89	UNDER CONTROL	Vinyl acetate
89.18193	75014	< 10.		UG/L	12/18/89	UNDER CONTROL	Vinyl chloride
89.18193	95476	< 5.		UG/L	12/18/89	UNDER CONTROL	o-Xylene
89.18193	1330207	71.5	21.5	UG/L	12/18/89	UNDER CONTROL	Mixed-Xylenes (m ± p)

SURROGATE RESULTS FOR EPA VOLATILES

1,2-Dichloroethane d4 (CAS # = 17060070); EPA Range Limits: Water = 76-114 %, Soil = 70-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.18188	94.9	UG/L	12/18/89	
89.18193	98.8	UG/L	12/18/89	

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.18188	82.2	UG/L	12/18/89	
89.18193	97.6	UG/L	12/18/89	

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.18188	91.7	UG/L	12/18/89	
89.18193	101.	UG/L	12/18/89	

Laura Bischoris
Analyst

Section Leader

mag
QA Officer

1/3/~~89~~90 JKT	1/4/90	1-5-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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SEMIVOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5872

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8354 MATRIX: WW ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DECON WATER	89.18188	83329	< 1100.		UG/L	3/06/90		Acenaphthene
DECON WATER	89.18188	208968	< 1100.		UG/L	3/06/90		Acenaphthylene
DECON WATER	89.18188	62533	< 1100.		UG/L	3/06/90		Aniline
DECON WATER	89.18188	120127	< 1100.		UG/L	3/06/90		Anthracene
DECON WATER	89.18188	103333	< 1100.		UG/L	3/06/90		Azobenzene
DECON WATER	89.18188	56553	< 1100.		UG/L	3/06/90		Benz(a)anthracene
DECON WATER	89.18188	92875	< 1100.		UG/L	3/06/90		m-Benzidine
DECON WATER	89.18188	191242	< 1100.		UG/L	3/06/90		Benzo(g,h,i)perylene
DECON WATER	89.18188	50328	< 1100.		UG/L	3/06/90		Benzo-a-pyrene
DECON WATER	89.18188	205992	< 1100.		UG/L	3/06/90		Benzo-b-fluoranthene
DECON WATER	89.18188	207089	< 1100.		UG/L	3/06/90		Benzo-k-fluoranthene
DECON WATER	89.18188	65850	< 1100.		UG/L	3/06/90		Benzoic acid
DECON WATER	89.18188	100516	< 1100.		UG/L	3/06/90		Benzyl alcohol
DECON WATER	89.18188	111911	< 1100.		UG/L	3/06/90		Bis(2-chloroethoxy)methane
DECON WATER	89.18188	111444	< 1100.		UG/L	3/06/90		Bis(2-chloroethyl)ether
DECON WATER	89.18188	108601	< 1100.		UG/L	3/06/90		Bis(2-chloroisopropyl)ether
DECON WATER	89.18188	117817	4500.	900.	UG/L	3/06/90		Bis(2-ethylhexyl)phthalate
DECON WATER	89.18188	101553	< 1100.		UG/L	3/06/90		4-Bromophenylphenyl ether
DECON WATER	89.18188	85687	< 1100.		UG/L	3/06/90		Butylbenzyl phthalate
DECON WATER	89.18188	59507	< 1100.		UG/L	3/06/90		4-Chloro-3-methylphenol
DECON WATER	89.18188	106478	< 1100.		UG/L	3/06/90		4-Chloroaniline
DECON WATER	89.18188	91587	< 1100.		UG/L	3/06/90		2-Chloronaphthalene
DECON WATER	89.18188	95578	< 1100.		UG/L	3/06/90		o-Chlorophenol
DECON WATER	89.18188	7005723	< 1100.		UG/L	3/06/90		4-Chlorophenylphenyl ether
DECON WATER	89.18188	218019	< 1100.		UG/L	3/06/90		Chrysene

DECON WATER	89.18188	106445	< 1100.	UG/L	3/06/90	p-Cresol
DECON WATER	89.18188	84742	< 1100.	UG/L	3/06/90	Di-n-butyl phthalate
DECON WATER	89.18188	117840	< 1100.	UG/L	3/06/90	Di-n-octyl phthalate
DECON WATER	89.18188	53703	< 1100.	UG/L	3/06/90	Dibenzo(a,h)anthracene
DECON WATER	89.18188	132649	< 1100.	UG/L	3/06/90	Dibenzofuran
DECON WATER	89.18188	95501	< 1100.	UG/L	3/06/90	o-Dichlorobenzene (1,2)
DECON WATER	89.18188	541731	< 1100.	UG/L	3/06/90	m-Dichlorobenzene (1,3)
DECON WATER	89.18188	106467	< 1100.	UG/L	3/06/90	p-Dichlorobenzene (1,4)
DECON WATER	89.18188	91941	< 1100.	UG/L	3/06/90	3,3'-Dichlorobenzidine
DECON WATER	89.18188	120832	< 1100.	UG/L	3/06/90	2,4-Dichlorophenol
DECON WATER	89.18188	84662	< 1100.	UG/L	3/06/90	Diethyl phthalate
DECON WATER	89.18188	131113	< 1100.	UG/L	3/06/90	Dimethyl phthalate
DECON WATER	89.18188	105679	< 1100.	UG/L	3/06/90	2,4-Dimethylphenol
DECON WATER	89.18188	51285	< 1100.	UG/L	3/06/90	2,4-Dinitrophenol
DECON WATER	89.18188	606202	< 1100.	UG/L	3/06/90	2,6-Dinitrotoluene
DECON WATER	89.18188	121142	< 1100.	UG/L	3/06/90	2,4-Dinitrotoluene
DECON WATER	89.18188	206440	< 1100.	UG/L	3/06/90	Fluoranthene
DECON WATER	89.18188	86737	< 1100.	UG/L	3/06/90	Fluorene
DECON WATER	89.18188	118741	< 1100.	UG/L	3/06/90	Hexachlorobenzene
DECON WATER	89.18188	87683	< 1100.	UG/L	3/06/90	Hexachlorobutadiene
DECON WATER	89.18188	77474	< 1100.	UG/L	3/06/90	Hexachlorocyclopentadiene
DECON WATER	89.18188	67721	< 1100.	UG/L	3/06/90	Hexachloroethane
DECON WATER	89.18188	193395	< 1100.	UG/L	3/06/90	Indeno(1,2,3-cd)pyrene
DECON WATER	89.18188	78591	< 1100.	UG/L	3/06/90	Isophorone
DECON WATER	89.18188	534521	< 1100.	UG/L	3/06/90	2-Methyl-4,6-dinitrophenol
DECON WATER	89.18188	91576	< 1100.	UG/L	3/06/90	2-Methylnaphthalene
DECON WATER	89.18188	106445	< 1100.	UG/L	3/06/90	4-Methylphenol
DECON WATER	89.18188	95487	< 1100.	UG/L	3/06/90	2-Methylphenol
DECON WATER	89.18188	91203	< 1100.	UG/L	3/06/90	Naphthalene
DECON WATER	89.18188	100016	< 1100.	UG/L	3/06/90	4-Nitroaniline
DECON WATER	89.18188	88744	< 1100.	UG/L	3/06/90	2-Nitroaniline
DECON WATER	89.18188	99092	< 1100.	UG/L	3/06/90	3-Nitroaniline
DECON WATER	89.18188	98953	< 1100.	UG/L	3/06/90	Nitrobenzene
DECON WATER	89.18188	100027	< 1100.	UG/L	3/06/90	4-Nitrophenol
DECON WATER	89.18188	88755	< 1100.	UG/L	3/06/90	2-Nitrophenol
DECON WATER	89.18188	621647	< 1100.	UG/L	3/06/90	N-Nitrosodi-n-propylamine
DECON WATER	89.18188	62759	< 1100.	UG/L	3/06/90	N-Nitrosodimethylamine
DECON WATER	89.18188	86306	< 1100.	UG/L	3/06/90	N-Nitrosodiphenylamine
DECON WATER	89.18188	87865	< 1100.	UG/L	3/06/90	Pentachlorophenol
DECON WATER	89.18188	85018	< 1100.	UG/L	3/06/90	Phenanthrene
DECON WATER	89.18188	108952	< 1100.	UG/L	3/06/90	Phenol
DECON WATER	89.18188	1921706	TI	UG/L	3/06/90	Pristane
DECON WATER	89.18188	129000	< 1100.	UG/L	3/06/90	Pyrene
DECON WATER	89.18188	120821	< 1100.	UG/L	3/06/90	1,2,4-Trichlorobenzene
DECON WATER	89.18188	88062	< 1100.	UG/L	3/06/90	2,4,6-Trichlorophenol

DECON WATER	89.18188	95954	< 1100.	UG/L	3/06/90	2,4,5-Trichlorophenol
DECON WATER	89.18188	105679	< 1100.	UG/L	3/06/90	2,4-Xylenol

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********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8354 MATRIX: WW ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SURROGATE RESULTS FOR EPA SEMIVOLATILES

Surrogate 1 = 2-Fluorophenol (CAS # = 367124)
Surrogate 2 = Phenol-d5 (CAS # = 4165622)
Surrogate 3 = Nitrobenzene-d5 (CAS # = 4165600)
Surrogate 4 = 2-Fluorobiphenyl (CAS # = 321608)
Surrogate 5 = 2,4,6-Tribromophenol (CAS # = 118796)
Surrogate 6 = p-Terphenyl-d14 (CAS # =)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	Surrogate 6	COMPLETION DATE
89.18188	%	999.	999.	999.	999.	999.	999.	6-Mar-1990
EPA Limits:								
Water	%	21 - 100	10 - 94	35 - 114	43 - 116	10 - 123	33 - 141	

Soil	%	25 - 121	24 - 113	23 - 120	30 - 115	19 - 122	18 - 137

MMK	GPA	mag
Analyst	Section Leader	QA Officer
3/7/90	3/7/90	3/7/90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

POLYCHLORINATED BIPHENYL ANALYSES

REPORT NUMBER: 5305

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: ESG on 18-Jan-1990

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8354 MATRIX: WW ANALYST: Dee Seitz PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

SUMMARY of TOTAL PCB's for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DECON WATER	89.18188	1336363	< 0.24		UG/L			Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
DECON WATER	89.18188	1336363	< 0.24		UG/L			Mixed-Aroclor
DECON WATER	89.18188	53469219	< 0.24		UG/L	1/16/90		Aroclor 1242
DECON WATER	89.18188	11097691	< 0.24		UG/L	1/16/90		Aroclor 1254
DECON WATER	89.18188	11096825	< 0.24		UG/L	1/16/90		Aroclor 1260

THE FOLLOWING HAVE NO CERTIFIED VALUE DATA FOR COMPARISON
THESE MAY BE DOE EML, EPA, OR NIOSH BLIND PERFORMANCE EVALUATION SAMPLES

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	SAMPLE NAME
00.01411	00.01411	11096825	< 0.4		UG/L	1/16/90	EPA PCB 1242 in Water (WP1184)
00.01411	00.01411	11097691	< 0.4		UG/L	1/16/90	EPA PCB 1242 in Water (WP1184)

REPORT NUMBER: 5305 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: ESG on 18-Jan-1990

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8354 MATRIX: WW ANALYST: Dee Seitz PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.01411	00.01411	53469219	55.9	11.2	UG/L	50.	12.2	1/16/90	UNDER CONTROL	Aroclor 1242
00.97364	00.97364	1336363	6.4	1.3	UG/G	7.9	0.8	1/16/90	UNDER CONTROL	Mixed-Aroclor
00.97364	00.97364	53469219	6.4	1.3	UG/G	7.9	0.8	1/16/90	UNDER CONTROL	Aroclor 1242
00.97364	00.97364	11097691	< 4.		UG/G			1/16/90	UNDER CONTROL	Aroclor 1254
00.97364	00.97364	11096825	< 4.		UG/G			1/16/90	UNDER CONTROL	Aroclor 1260

The following analyst QA's have no CV data for comparison

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	
00.01411	00.01411	1336363	55.9	11.2	UG/L	1/16/90	NO DATA AVAIL.	Mixed-Aroclor
00.01411	00.01411	11097691	< 0.4		UG/L	1/16/90	NO DATA AVAIL.	Aroclor 1254
00.01411	00.01411	11096825	< 0.4		UG/L	1/16/90	NO DATA AVAIL.	Aroclor 1260

00.01411	00.01411 1336363	55.9	11.2	UG/L	1/16/90	EPA PCB 1242 in Water (WP1184)

****

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.18342	1336363	250.8	50.2	UG/G	1/16/90	UNDER CONTROL	Mixed-Aroclor
89.18342	53469219	250.8	50.2	UG/G	1/16/90	UNDER CONTROL	Aroclor 1242
89.18342	11097691	< 4.		UG/G	1/16/90	UNDER CONTROL	Aroclor 1254
89.18342	11096825	< 4.		UG/G	1/16/90	UNDER CONTROL	Aroclor 1260

Analyst — Section Leader — QA Officer

1/22/90 — 1/23/90 — 1-23-90

Date — Date — Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

METAL ANALYSES

REPORT NUMBER: 5288

Rec'd 1/25/90

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: PB REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

USER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	1.5	0.3	MG/L	1/16/90	
DECON WATER	89.18188	< 0.3		MG/L	1/16/90	

****

TSL-125 SI
Decon rinse water
from backhoe

NUMBER: 5288 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	12.	1.2	MG/L	10.	1.	1/16/90	UNDER CONTROL

J.D. Montoya
Analyst

MJB
Section Leader

mag
QA Officer

1-18-90
Date

1-18-90
Date

1-19-90
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5287

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: CR REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: DA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	2.3	0.2	MG/L	1/16/90	
DECON WATER	89.18188	30.	15.	UG/L	1/16/90	

REPORT NUMBER: 5287 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

USER: CA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/16/90	UNDER CONTROL

Janet Montoya
Analyst

Section Leader

mag
QA Officer

1-19-90
Date

1-18-90
Date

1-19-90
Date

The control status of the proceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5286

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: CD REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	1.8	0.2	MG/L	1/16/90	
DECON WATER	89.18188	< 10.		UG/L	1/16/90	

****

[illegible] NUMBER: 5286 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 17-Jan-1990

[illegible] NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

[illegible] GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
0.20193	00.20193	10.	1.	MG/L	10.	1.	1/16/90	UNDER CONTROL

J.D. Montoya
Analyst

Section Leader

QA Officer

1-19-90
Date

1-18-90
Date

1-19-90
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

RUN NUMBER: 5285

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: BA REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	2.3	0.2	MG/L	1/16/90	
DECON WATER	89.18188	0.2	0.02	MG/L	1/16/90	

****

REPORT NUMBER: 5285 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	1/16/90	UNDER CONTROL

J D Montoya	MJB	mag
Analyst	Section Leader	QA Officer
01-19-90	1-18-90	1-19-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5273

Rec'd 1/24/90

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: MAB on 16-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Malti Bhatia PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	HG	< 0.2		UG/L	12/22/89	
DECON WATER	89.18188	HG	< 0.2		UG/L	12/22/89	

****

TSL-125 S.I.
Decon rinse water from backhoe
Also see Request #'s 8354

REPORT NUMBER: 5273 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: MAB on 16-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Malti Bhatia PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE
00.20086	00.20086	HG	3.9	0.4	UG/L	4.	0.4	12/22/89
							UNDER CONTROL	
00.20087	00.20087	HG	4.	0.4	UG/L	4.	0.4	12/22/89
							UNDER CONTROL	
00.20210	00.20210	HG	1.95	0.2	UG/L	2.	0.2	12/22/89
							UNDER CONTROL	

MAB	MAB	mag
Analyst	Section Leader	QA Officer
1/17/90	1-18-90	1-18-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5273

Rec'd 4-30-90

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: MAB on 16-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Malti Bhatia PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	HG	< 0.2		UG/L	12/22/89	
DECON WATER	89.18188	HG	< 0.2		UG/L	12/22/89	

****

TA-35 TSL-125
Eq. Decon Rinse Water
Also see #s
8354 for
VOC
SVOC
PCB

REPORT NUMBER: 5273 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: MAB on 16-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Malti Bhatia PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE
00.20086	00.20086	HG	3.9	0.4	UG/L	4.	0.4	12/22/89
							UNDER CONTROL	
00.20087	00.20087	HG	4.	0.4	UG/L	4.	0.4	12/22/89
							UNDER CONTROL	
00.20210	00.20210	HG	1.95	0.2	UG/L	2.	0.2	12/22/89
							UNDER CONTROL	

MAB	MAB	maq
Analyst	Section Leader	QA Officer
1/17/90	1-18-90	1-18-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5285

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: BA REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	2.3	0.2	MG/L	1/16/90	
DECON WATER	89.18188	0.2	0.02	MG/L	1/16/90	

****

Only 1 sample collected on 12-5-89 & labelled as "decon water"

REPORT NUMBER: 5285 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	1/16/90	UNDER CONTROL

J D Montoya
Analyst

Section Leader

QA Officer

01-18-90
Date

1-18-90
Date

1-19-90
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5286

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: CD REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	1.8	0.2	MG/L	1/16/90	
DECON WATER	89.18188	< 10.		UG/L	1/16/90	

****

REPORT NUMBER: 5286 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	1/16/90	UNDER CONTROL

J D Montoya	MJB	mag
Analyst	Section Leader	QA Officer
1-18-90	1-18-90	1-19-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5287

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: CR REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	2.3	0.2	MG/L	1/16/90	
DECON WATER	89.18188	30.	15.	UG/L	1/16/90	

****

REPORT NUMBER: 5287 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/16/90	UNDER CONTROL

J D Montoya
Analyst

Section Leader

mag
QA Officer

1-19-90
Date

1-18-90
Date

1-19-90
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5288

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J.D. MONTOYA on 17-Jan-1990

ANALYSIS: PB REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18116	89.18116	1.5	0.3	MG/L	1/16/90	
DECON WATER	89.18188	< 0.3		MG/L	1/16/90	

****

REPORT NUMBER: 5288 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J.D. MONTOYA on 17-Jan-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Janet Montoya PROGRAM CODE: M292

OWNER: QA GROUP: MAIL-STOP: PHONE: TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	12.	1.2	MG/L	10.	1.	1/16/90	UNDER CONTROL

J.D. Montoya
Analyst

MSB
Section Leader

mag
QA Officer

1-18-90
Date

1-18-90
Date

1-19-90
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5602

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M. C. WILLIAMS on 7-Feb-1990

ANALYSIS: AG REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7760

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	5.	3.	UG/L	2/06/90	

****

REPORT NUMBER: 5602 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: M. C. WILLIAMS on 7-Feb-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.98805	00.98805	0.506	0.05	MG/L	0.5	0.05	2/06/90	UNDER CONTROL

Analyst	Section Leader	QA Officer
2-8-90	2-8-90	2-8-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 5604

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

ANALYSIS: AS REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7060

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	2.9	2.	UG/L	2/06/90	
DECON WATER	89.18188	2.2	2.	UG/L	2/06/90	EPTOX

****

REPORT NUMBER: 5604 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010	00.01010	29.8	3.	UG/L	27.	3.	2/06/90	UNDER CONTROL

Analyst	Section Leader	QA Officer
2-8-90	2-8-90	2-8-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 5605

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

ANALYSIS: SE REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7740

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	1.	1.	UG/L	2/06/90	
DECON WATER	89.18188	< 1.		UG/L	2/06/90	

****

REPORT NUMBER: 5605 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010	00.01010	12.1	1.2	UG/L	11.	2.	2/06/90	UNDER CONTROL

Analyst	Section Leader	QA Officer
2-8-90	2-8-90	2-8-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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TSL-125
Eq. Decon Rinse Water
See #s 8354 for VOC
SVOC
PCB

REPORT NUMBER: 5605

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

ANALYSIS: SE REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7740

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	1.	1.	UG/L	2/06/90	
DECON WATER	89.18188	< 1.		UG/L	2/06/90	

****

REPORT NUMBER: 5605 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010	00.01010	12.1	1.2	UG/L	11.	2.	2/06/90	UNDER CONTROL

Analyst	Section Leader	QA Officer
2-8-90	2-8-90	2-8-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 5604

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

ANALYSIS: AS REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7060

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	2.9	2.	UG/L	2/06/90	
DECON WATER	89.18188	2.2	2.	UG/L	2/06/90	EPTOX

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REPORT NUMBER: 5604 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: M. C. WILLIAMS on 8-Feb-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010	00.01010	29.8	3.	UG/L	27.	3.	2/06/90	UNDER CONTROL

Analyst	Section Leader	QA Officer
[illegible]	MHB	mag
Date	2-8-90 Date	2-8-90 Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 5602

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: M. C. WILLIAMS on 7-Feb-1990

ANALYSIS: AG REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7760

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
DECON WATER	89.18188	5.	3.	UG/L	2/06/90	

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REPORT NUMBER: 5602 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: M. C. WILLIAMS on 7-Feb-1990

REQUEST NUMBER: 8209 MATRIX: W ANALYST: Trudi Foreman PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.98805	00.98805	0.506	0.05	MG/L	0.5	0.05	2/06/90	UNDER CONTROL

Analyst	Section Leader	QA Officer
Date	2-8-90 Date	2-8-90 Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 3588 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: SCB on 6-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Suzanne Bell

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

The following analyst QA's have no CV data for comparison

There were no open (non-blind) Quality Assurance materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QA samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.14194	67641	< 20.		UG/L	8/06/89	UNDER CONTROL	Acetone
89.14194	71432	< 10.		UG/L	8/06/89	UNDER CONTROL	Benzene
89.14194	108861	< 10.		UG/L	8/06/89	UNDER CONTROL	Bromobenzene
89.14194	74975	< 10.		UG/L	8/06/89	UNDER CONTROL	Bromochloromethane

125TD-4	89.14193	79016	< 10.	UG/L	8/06/89	>V8316::D2	Trichloroethene
125TD-4	89.14193	79016	< 10.	UG/L	8/06/89	>V8316::D2	Trichloroethylene
125TD-4	89.14193	75694	< 10.	UG/L	8/06/89	>V8316::D2	Trichlorofluoromethane
125TD-4	89.14193	96184	< 10.	UG/L	8/06/89	>V8316::D2	1,2,3-Trichloropropane
125TD-4	89.14193	95636	< 10.	UG/L	8/06/89	>V8316::D2	1,2,4-Trimethylbenzene
125TD-4	89.14193	108678	< 10.	UG/L	8/06/89	>V8316::D2	1,3,5-Trimethylbenzene
125TD-4	89.14193	108054	< 10.	UG/L	8/06/89	>V8316::D2	Vinyl acetate
125TD-4	89.14193	75014	< 20.	UG/L	8/06/89	>V8316::D2	Vinyl chloride
125TD-4	89.14193	75354	< 10.	UG/L	8/06/89	>V8316::D2	Vinylidene chloride
125TD-4	89.14193	108383	< 10.	UG/L	8/06/89	>V8316::D2	m-Xylene
125TD-4	89.14193	95476	< 10.	UG/L	8/06/89	>V8316::D2	o-Xylene

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125TD-4	89.14193	74953	< 10.		UG/L	8/06/89	>V8316::D2	Dibromomethane
125TD-4	89.14193	563586	< 10.		UG/L	8/06/89	>V8316::D2	1,1-Dichloro-1-propene
125TD-4	89.14193	95501	< 10.		UG/L	8/06/89	>V8316::D2	o-Dichlorobenzene (1,2)
125TD-4	89.14193	541731	< 10.		UG/L	8/06/89	>V8316::D2	m-Dichlorobenzene (1,3)
125TD-4	89.14193	106467	< 10.		UG/L	8/06/89	>V8316::D2	p-Dichlorobenzene (1,4)
125TD-4	89.14193	75274	< 10.		UG/L	8/06/89	>V8316::D2	Dichlorobromomethane
125TD-4	89.14193	75343	< 10.		UG/L	8/06/89	>V8316::D2	1,1-Dichloroethane
125TD-4	89.14193	107062	< 10.		UG/L	8/06/89	>V8316::D2	1,2-Dichloroethane
125TD-4	89.14193	75354	< 10.		UG/L	8/06/89	>V8316::D2	1,1-Dichloroethene
125TD-4	89.14193	156605	< 10.		UG/L	8/06/89	>V8316::D2	trans-1,2-Dichloroethene
125TD-4	89.14193	75354	< 10.		UG/L	8/06/89	>V8316::D2	1,1-Dichloroethylene
125TD-4	89.14193	156605	< 10.		UG/L	8/06/89	>V8316::D2	trans-1,2-Dichloroethylene
125TD-4	89.14193	156592	< 10.		UG/L	8/06/89	>V8316::D2	cis-1,2-Dichloroethylene
125TD-4	89.14193	75092	< 10.		UG/L	8/06/89	>V8316::D2	Dichloromethane
125TD-4	89.14193	142289	< 10.		UG/L	8/06/89	>V8316::D2	1,3-Dichloropropane
125TD-4	89.14193	594207	< 10.		UG/L	8/06/89	>V8316::D2	2,2-Dichloropropane
125TD-4	89.14193	78875	< 10.		UG/L	8/06/89	>V8316::D2	1,2-Dichloropropane
125TD-4	89.14193	563586	< 10.		UG/L	8/06/89	>V8316::D2	1,1-Dichloropropene
125TD-4	89.14193	100414	< 10.		UG/L	8/06/89	>V8316::D2	Ethylbenzene
125TD-4	89.14193	106934	< 10.		UG/L	8/06/89	>V8316::D2	Ethylene bromide
125TD-4	89.14193	107062	< 10.		UG/L	8/06/89	>V8316::D2	Ethylene chloride
125TD-4	89.14193	106934	< 10.		UG/L	8/06/89	>V8316::D2	Ethylene dibromide
125TD-4	89.14193	75354	< 10.		UG/L	8/06/89	>V8316::D2	Ethylidene chloride
125TD-4	89.14193	75694	< 10.		UG/L	8/06/89	>V8316::D2	Fluorotrichloromethane
125TD-4	89.14193	98828	< 10.		UG/L	8/06/89	>V8316::D2	Isopropylbenzene
125TD-4	89.14193	99876	< 10.		UG/L	8/06/89	>V8316::D2	4-Isopropyltoluene
125TD-4	89.14193	108678	< 10.		UG/L	8/06/89	>V8316::D2	Mesitylene
125TD-4	89.14193	74839	< 20.		UG/L	8/06/89	>V8316::D2	Methyl bromide
125TD-4	89.14193	74873	< 20.		UG/L	8/06/89	>V8316::D2	Methyl chloride
125TD-4	89.14193	71556	< 10.		UG/L	8/06/89	>V8316::D2	Methylchloroform
125TD-4	89.14193	75092	< 10.		UG/L	8/06/89	>V8316::D2	Methylene chloride
125TD-4	89.14193	78933	< 10.		UG/L	8/06/89	>V8316::D2	Methylethyl ketone
125TD-4	89.14193	91203	< 10.		UG/L	8/06/89	>V8316::D2	Naphthalene
125TD-4	89.14193	135988	< 10.		UG/L	8/06/89	>V8316::D2	2-Phenylbutane
125TD-4	89.14193	104518	< 10.		UG/L	8/06/89	>V8316::D2	1-Phenylbutane
125TD-4	89.14193	103651	< 10.		UG/L	8/06/89	>V8316::D2	Propylbenzene
125TD-4	89.14193	100425	< 10.		UG/L	8/06/89	>V8316::D2	Styrene
125TD-4	89.14193	630206	< 10.		UG/L	8/06/89	>V8316::D2	1,1,1,2-Tetrachloroethane
125TD-4	89.14193	79345	< 10.		UG/L	8/06/89	>V8316::D2	1,1,2,2-Tetrachloroethane
125TD-4	89.14193	127184	< 10.		UG/L	8/06/89	>V8316::D2	Tetrachloroethylene
125TD-4	89.14193	108883	< 10.		UG/L	8/06/89	>V8316::D2	Toluene
125TD-4	89.14193	75252	19.6	5.88	UG/L	8/06/89	>V8316::D2	Tribromomethane
125TD-4	89.14193	120821	< 10.		UG/L	8/06/89	>V8316::D2	1,2,4-Trichlorobenzene
125TD-4	89.14193	79005	< 10.		UG/L	8/06/89	>V8316::D2	1,1,2-Trichloroethane
125TD-4	89.14193	71556	< 10.		UG/L	8/06/89	>V8316::D2	1,1,1-Trichloroethane

REPORT NUMBER: 3588

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 6-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Suzanne Bell

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-4	89.14193	67641	< 20.		UG/L	8/06/89	>V8316::D2	Acetone
125TD-4	89.14193	71432	< 10.		UG/L	8/06/89	>V8316::D2	Benzene
125TD-4	89.14193	108861	< 10.		UG/L	8/06/89	>V8316::D2	Bromobenzene
125TD-4	89.14193	74975	< 10.		UG/L	8/06/89	>V8316::D2	Bromochloromethane
125TD-4	89.14193	75274	< 10.		UG/L	8/06/89	>V8316::D2	Bromodichloromethane
125TD-4	89.14193	75252	19.6	5.88	UG/L	8/06/89	>V8316::D2	Bromoform
125TD-4	89.14193	74839	< 20.		UG/L	8/06/89	>V8316::D2	Bromomethane
125TD-4	89.14193	78933	< 10.		UG/L	8/06/89	>V8316::D2	2-Butanone
125TD-4	89.14193	135988	< 10.		UG/L	8/06/89	>V8316::D2	sec-Butylbenzene
125TD-4	89.14193	104518	< 10.		UG/L	8/06/89	>V8316::D2	n-Butylbenzene
125TD-4	89.14193	98066	< 10.		UG/L	8/06/89	>V8316::D2	tert-Butylbenzene
125TD-4	89.14193	75150	< 10.		UG/L	8/06/89	>V8316::D2	Carbon disulfide
125TD-4	89.14193	56235	< 10.		UG/L	8/06/89	>V8316::D2	Carbon tetrachloride
125TD-4	89.14193	108907	< 10.		UG/L	8/06/89	>V8316::D2	Chlorobenzene
125TD-4	89.14193	124481	< 10.		UG/L	8/06/89	>V8316::D2	Chlorodibromomethane
125TD-4	89.14193	75003	< 20.		UG/L	8/06/89	>V8316::D2	Chloroethane
125TD-4	89.14193	67663	< 10.		UG/L	8/06/89	>V8316::D2	Chloroform
125TD-4	89.14193	74873	< 20.		UG/L	8/06/89	>V8316::D2	Chloromethane
125TD-4	89.14193	95498	< 10.		UG/L	8/06/89	>V8316::D2	o-Chlorotoluene
125TD-4	89.14193	106434	< 10.		UG/L	8/06/89	>V8316::D2	p-Chlorotoluene
125TD-4	89.14193	98828	< 10.		UG/L	8/06/89	>V8316::D2	Cumene
125TD-4	89.14193	99876	< 10.		UG/L	8/06/89	>V8316::D2	p-Cymene
125TD-4	89.14193	96128	< 10.		UG/L	8/06/89	>V8316::D2	1,2-Dibromo-3-chloropropane
125TD-4	89.14193	124481	< 10.		UG/L	8/06/89	>V8316::D2	Dibromochloromethane
125TD-4	89.14193	106934	< 10.		UG/L	8/06/89	>V8316::D2	1,2-Dibromoethane

125TD-3	89.14192	79016	< 10.	UG/L	8/06/89	>V8315::D2	Trichloroethene
125TD-3	89.14192	79016	< 10.	UG/L	8/06/89	>V8315::D2	Trichloroethylene
125TD-3	89.14192	75694	< 10.	UG/L	8/06/89	>V8315::D2	Trichlorofluoromethane
125TD-3	89.14192	96184	< 10.	UG/L	8/06/89	>V8315::D2	1,2,3-Trichloropropane
125TD-3	89.14192	95636	< 10.	UG/L	8/06/89	>V8315::D2	1,2,4-Trimethylbenzene
125TD-3	89.14192	108678	< 10.	UG/L	8/06/89	>V8315::D2	1,3,5-Trimethylbenzene
125TD-3	89.14192	108054	< 10.	UG/L	8/06/89	>V8315::D2	Vinyl acetate
125TD-3	89.14192	75014	< 20.	UG/L	8/06/89	>V8315::D2	Vinyl chloride
125TD-3	89.14192	75354	< 10.	UG/L	8/06/89	>V8315::D2	Vinylidene chloride
125TD-3	89.14192	95476	< 10.	UG/L	8/06/89	>V8315::D2	o-Xylene
125TD-3	89.14192	108383	< 10.	UG/L	8/06/89	>V8315::D2	m-Xylene

125TD-3	89.14192	74953	< 10.		UG/L	8/06/89	>V8315::D2	Dibromomethane
125TD-3	89.14192	563586	< 10.		UG/L	8/06/89	>V8315::D2	1,1-Dichloro-1-propene
125TD-3	89.14192	95501	< 10.		UG/L	8/06/89	>V8315::D2	o-Dichlorobenzene (1,2)
125TD-3	89.14192	541731	< 10.		UG/L	8/06/89	>V8315::D2	m-Dichlorobenzene (1,3)
125TD-3	89.14192	106467	< 10.		UG/L	8/06/89	>V8315::D2	p-Dichlorobenzene (1,4)
125TD-3	89.14192	75274	< 10.		UG/L	8/06/89	>V8315::D2	Dichlorobromomethane
125TD-3	89.14192	75343	< 10.		UG/L	8/06/89	>V8315::D2	1,1-Dichloroethane
125TD-3	89.14192	107062	< 10.		UG/L	8/06/89	>V8315::D2	1,2-Dichloroethane
125TD-3	89.14192	75354	< 10.		UG/L	8/06/89	>V8315::D2	1,1-Dichloroethene
125TD-3	89.14192	156605	< 10.		UG/L	8/06/89	>V8315::D2	trans-1,2-Dichloroethene
125TD-3	89.14192	156592	< 10.		UG/L	8/06/89	>V8315::D2	cis-1,2-Dichloroethylene
125TD-3	89.14192	156605	< 10.		UG/L	8/06/89	>V8315::D2	trans-1,2-Dichloroethylene
125TD-3	89.14192	75354	< 10.		UG/L	8/06/89	>V8315::D2	1,1-Dichloroethylene
125TD-3	89.14192	75092	< 10.		UG/L	8/06/89	>V8315::D2	Dichloromethane
125TD-3	89.14192	78875	< 10.		UG/L	8/06/89	>V8315::D2	1,2-Dichloropropane
125TD-3	89.14192	142289	< 10.		UG/L	8/06/89	>V8315::D2	1,3-Dichloropropane
125TD-3	89.14192	594207	< 10.		UG/L	8/06/89	>V8315::D2	2,2-Dichloropropane
125TD-3	89.14192	563586	< 10.		UG/L	8/06/89	>V8315::D2	1,1-Dichloropropene
125TD-3	89.14192	100414	< 10.		UG/L	8/06/89	>V8315::D2	Ethylbenzene
125TD-3	89.14192	106934	< 10.		UG/L	8/06/89	>V8315::D2	Ethylene bromide
125TD-3	89.14192	107062	< 10.		UG/L	8/06/89	>V8315::D2	Ethylene chloride
125TD-3	89.14192	106934	< 10.		UG/L	8/06/89	>V8315::D2	Ethylene dibromide
125TD-3	89.14192	75354	< 10.		UG/L	8/06/89	>V8315::D2	Ethylidene chloride
125TD-3	89.14192	75694	< 10.		UG/L	8/06/89	>V8315::D2	Fluorotrichloromethane
125TD-3	89.14192	98828	< 10.		UG/L	8/06/89	>V8315::D2	Isopropylbenzene
125TD-3	89.14192	99876	< 10.		UG/L	8/06/89	>V8315::D2	4-Isopropyltoluene
125TD-3	89.14192	108678	< 10.		UG/L	8/06/89	>V8315::D2	Mesitylene
125TD-3	89.14192	74839	< 20.		UG/L	8/06/89	>V8315::D2	Methyl bromide
125TD-3	89.14192	74873	< 20.		UG/L	8/06/89	>V8315::D2	Methyl chloride
125TD-3	89.14192	71556	< 10.		UG/L	8/06/89	>V8315::D2	Methylchloroform
125TD-3	89.14192	75092	< 10.		UG/L	8/06/89	>V8315::D2	Methylene chloride
125TD-3	89.14192	78933	< 10.		UG/L	8/06/89	>V8315::D2	Methylethyl ketone
125TD-3	89.14192	91203	< 10.		UG/L	8/06/89	>V8315::D2	Naphthalene
125TD-3	89.14192	135988	< 10.		UG/L	8/06/89	>V8315::D2	2-Phenylbutane
125TD-3	89.14192	104518	< 10.		UG/L	8/06/89	>V8315::D2	1-Phenylbutane
125TD-3	89.14192	103651	< 10.		UG/L	8/06/89	>V8315::D2	Propylbenzene
125TD-3	89.14192	100425	< 10.		UG/L	8/06/89	>V8315::D2	Styrene
125TD-3	89.14192	630206	< 10.		UG/L	8/06/89	>V8315::D2	1,1,1,2-Tetrachloroethane
125TD-3	89.14192	79345	< 10.		UG/L	8/06/89	>V8315::D2	1,1,2,2-Tetrachloroethane
125TD-3	89.14192	127184	< 10.		UG/L	8/06/89	>V8315::D2	Tetrachloroethylene
125TD-3	89.14192	108883	< 10.		UG/L	8/06/89	>V8315::D2	Toluene
125TD-3	89.14192	75252	19.7	5.91	UG/L	8/06/89	>V8315::D2	Tribromomethane
125TD-3	89.14192	120821	< 10.		UG/L	8/06/89	>V8315::D2	1,2,4-Trichlorobenzene
125TD-3	89.14192	79005	< 10.		UG/L	8/06/89	>V8315::D2	1,1,2-Trichloroethane
125TD-3	89.14192	71556	< 10.		UG/L	8/06/89	>V8315::D2	1,1,1-Trichloroethane

REPORT NUMBER: 3588

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 6-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Suzanne Bell

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-3	89.14192	67641	< 20.		UG/L	8/06/89	>V8315::D2	Acetone
125TD-3	89.14192	71432	< 10.		UG/L	8/06/89	>V8315::D2	Benzene
125TD-3	89.14192	108861	< 10.		UG/L	8/06/89	>V8315::D2	Bromobenzene
125TD-3	89.14192	74975	< 10.		UG/L	8/06/89	>V8315::D2	Bromochloromethane
125TD-3	89.14192	75274	< 10.		UG/L	8/06/89	>V8315::D2	Bromodichloromethane
125TD-3	89.14192	75252	19.7	5.91	UG/L	8/06/89	>V8315::D2	Bromoform
125TD-3	89.14192	74839	< 20.		UG/L	8/06/89	>V8315::D2	Bromomethane
125TD-3	89.14192	78933	< 10.		UG/L	8/06/89	>V8315::D2	2-Butanone
125TD-3	89.14192	135988	< 10.		UG/L	8/06/89	>V8315::D2	sec-Butylbenzene
125TD-3	89.14192	104518	< 10.		UG/L	8/06/89	>V8315::D2	n-Butylbenzene
125TD-3	89.14192	98066	< 10.		UG/L	8/06/89	>V8315::D2	tert-Butylbenzene
125TD-3	89.14192	75150	< 10.		UG/L	8/06/89	>V8315::D2	Carbon disulfide
125TD-3	89.14192	56235	< 10.		UG/L	8/06/89	>V8315::D2	Carbon tetrachloride
125TD-3	89.14192	108907	< 10.		UG/L	8/06/89	>V8315::D2	Chlorobenzene
125TD-3	89.14192	124481	< 10.		UG/L	8/06/89	>V8315::D2	Chlorodibromomethane
125TD-3	89.14192	75003	< 20.		UG/L	8/06/89	>V8315::D2	Chloroethane
125TD-3	89.14192	67663	< 10.		UG/L	8/06/89	>V8315::D2	Chloroform
125TD-3	89.14192	74873	< 20.		UG/L	8/06/89	>V8315::D2	Chloromethane
125TD-3	89.14192	95498	< 10.		UG/L	8/06/89	>V8315::D2	o-Chlorotoluene
125TD-3	89.14192	106434	< 10.		UG/L	8/06/89	>V8315::D2	p-Chlorotoluene
125TD-3	89.14192	98828	< 10.		UG/L	8/06/89	>V8315::D2	Cumene
125TD-3	89.14192	99876	< 10.		UG/L	8/06/89	>V8315::D2	p-Cymene
125TD-3	89.14192	96128	< 10.		UG/L	8/06/89	>V8315::D2	1,2-Dibromo-3-chloropropane
125TD-3	89.14192	124481	< 10.		UG/L	8/06/89	>V8315::D2	Dibromochloromethane
125TD-3	89.14192	106934	< 10.		UG/L	8/06/89	>V8315::D2	1,2-Dibromoethane

REPORT NUMBER: 3588

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 6-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Suzanne Bell

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-1	89.14190	67641	< 20.		UG/L	8/06/89	>V8313::D1	Acetone
125TD-1	89.14190	71432	< 10.		UG/L	8/06/89	>V8313::D1	Benzene
125TD-1	89.14190	108861	< 10.		UG/L	8/06/89	>V8313::D1	Bromobenzene
125TD-1	89.14190	74975	< 10.		UG/L	8/06/89	>V8313::D1	Bromochloromethane
125TD-1	89.14190	75274	< 10.		UG/L	8/06/89	>V8313::D1	Bromodichloromethane
125TD-1	89.14190	75252	19.3	5.79	UG/L	8/06/89	>V8313::D1	Bromoform
125TD-1	89.14190	74839	< 20.		UG/L	8/06/89	>V8313::D1	Bromomethane
125TD-1	89.14190	78933	< 10.		UG/L	8/06/89	>V8313::D1	2-Butanone
125TD-1	89.14190	98066	< 10.		UG/L	8/06/89	>V8313::D1	tert-Butylbenzene
125TD-1	89.14190	135988	< 10.		UG/L	8/06/89	>V8313::D1	sec-Butylbenzene
125TD-1	89.14190	104518	< 10.		UG/L	8/06/89	>V8313::D1	n-Butylbenzene
125TD-1	89.14190	75150	< 10.		UG/L	8/06/89	>V8313::D1	Carbon disulfide
125TD-1	89.14190	56235	< 10.		UG/L	8/06/89	>V8313::D1	Carbon tetrachloride
125TD-1	89.14190	108907	< 10.		UG/L	8/06/89	>V8313::D1	Chlorobenzene
125TD-1	89.14190	124481	< 10.		UG/L	8/06/89	>V8313::D1	Chlorodibromomethane
125TD-1	89.14190	75003	< 20.		UG/L	8/06/89	>V8313::D1	Chloroethane
125TD-1	89.14190	67663	< 10.		UG/L	8/06/89	>V8313::D1	Chloroform
125TD-1	89.14190	74873	< 20.		UG/L	8/06/89	>V8313::D1	Chloromethane
125TD-1	89.14190	106434	< 10.		UG/L	8/06/89	>V8313::D1	p-Chlorotoluene
125TD-1	89.14190	95498	< 10.		UG/L	8/06/89	>V8313::D1	o-Chlorotoluene
125TD-1	89.14190	98828	< 10.		UG/L	8/06/89	>V8313::D1	Cumene
125TD-1	89.14190	99876	< 10.		UG/L	8/06/89	>V8313::D1	p-Cymene
125TD-1	89.14190	96128	< 10.		UG/L	8/06/89	>V8313::D1	1,2-Dibromo-3-chloropropane
125TD-1	89.14190	124481	< 10.		UG/L	8/06/89	>V8313::D1	Dibromochloromethane
125TD-1	89.14190	106934	< 10.		UG/L	8/06/89	>V8313::D1	1,2-Dibromoethane

125TD-1	89.14190	74953	< 10.		UG/L	8/06/89	>V8313::D1	Dibromomethane
125TD-1	89.14190	563586	< 10.		UG/L	8/06/89	>V8313::D1	1,1-Dichloro-1-propene
125TD-1	89.14190	95501	< 10.		UG/L	8/06/89	>V8313::D1	o-Dichlorobenzene (1,2)
125TD-1	89.14190	541731	< 10.		UG/L	8/06/89	>V8313::D1	m-Dichlorobenzene (1,3)
125TD-1	89.14190	106467	< 10.		UG/L	8/06/89	>V8313::D1	p-Dichlorobenzene (1,4)
125TD-1	89.14190	75274	< 10.		UG/L	8/06/89	>V8313::D1	Dichlorobromomethane
125TD-1	89.14190	107062	< 10.		UG/L	8/06/89	>V8313::D1	1,2-Dichloroethane
125TD-1	89.14190	75343	< 10.		UG/L	8/06/89	>V8313::D1	1,1-Dichloroethane
125TD-1	89.14190	156605	< 10.		UG/L	8/06/89	>V8313::D1	trans-1,2-Dichloroethene
125TD-1	89.14190	75354	< 10.		UG/L	8/06/89	>V8313::D1	1,1-Dichloroethene
125TD-1	89.14190	75354	< 10.		UG/L	8/06/89	>V8313::D1	1,1-Dichloroethylene
125TD-1	89.14190	156605	< 10.		UG/L	8/06/89	>V8313::D1	trans-1,2-Dichloroethylene
125TD-1	89.14190	156592	< 10.		UG/L	8/06/89	>V8313::D1	cis-1,2-Dichloroethylene
125TD-1	89.14190	75092	< 10.		UG/L	8/06/89	>V8313::D1	Dichloromethane
125TD-1	89.14190	78875	< 10.		UG/L	8/06/89	>V8313::D1	1,2-Dichloropropane
125TD-1	89.14190	594207	< 10.		UG/L	8/06/89	>V8313::D1	2,2-Dichloropropane
125TD-1	89.14190	142289	< 10.		UG/L	8/06/89	>V8313::D1	1,3-Dichloropropane
125TD-1	89.14190	563586	< 10.		UG/L	8/06/89	>V8313::D1	1,1-Dichloropropene
125TD-1	89.14190	100414	< 10.		UG/L	8/06/89	>V8313::D1	Ethylbenzene
125TD-1	89.14190	106934	< 10.		UG/L	8/06/89	>V8313::D1	Ethylene bromide
125TD-1	89.14190	107062	< 10.		UG/L	8/06/89	>V8313::D1	Ethylene chloride
125TD-1	89.14190	106934	< 10.		UG/L	8/06/89	>V8313::D1	Ethylene dibromide
125TD-1	89.14190	75354	< 10.		UG/L	8/06/89	>V8313::D1	Ethylidene chloride
125TD-1	89.14190	75694	< 10.		UG/L	8/06/89	>V8313::D1	Fluorotrichloromethane
125TD-1	89.14190	98828	< 10.		UG/L	8/06/89	>V8313::D1	Isopropylbenzene
125TD-1	89.14190	99876	< 10.		UG/L	8/06/89	>V8313::D1	4-Isopropyltoluene
125TD-1	89.14190	108678	< 10.		UG/L	8/06/89	>V8313::D1	Mesitylene
125TD-1	89.14190	74839	< 20.		UG/L	8/06/89	>V8313::D1	Methyl bromide
125TD-1	89.14190	74873	< 20.		UG/L	8/06/89	>V8313::D1	Methyl chloride
125TD-1	89.14190	71556	< 10.		UG/L	8/06/89	>V8313::D1	Methylchloroform
125TD-1	89.14190	75092	< 10.		UG/L	8/06/89	>V8313::D1	Methylene chloride
125TD-1	89.14190	78933	< 10.		UG/L	8/06/89	>V8313::D1	Methylethyl ketone
125TD-1	89.14190	91203	< 10.		UG/L	8/06/89	>V8313::D1	Naphthalene
125TD-1	89.14190	104518	< 10.		UG/L	8/06/89	>V8313::D1	1-Phenylbutane
125TD-1	89.14190	135988	< 10.		UG/L	8/06/89	>V8313::D1	2-Phenylbutane
125TD-1	89.14190	103651	< 10.		UG/L	8/06/89	>V8313::D1	Propylbenzene
125TD-1	89.14190	100425	< 10.		UG/L	8/06/89	>V8313::D1	Styrene
125TD-1	89.14190	79345	< 10.		UG/L	8/06/89	>V8313::D1	1,1,2,2-Tetrachloroethane
125TD-1	89.14190	630206	< 10.		UG/L	8/06/89	>V8313::D1	1,1,1,2-Tetrachloroethane
125TD-1	89.14190	127184	< 10.		UG/L	8/06/89	>V8313::D1	Tetrachloroethylene
125TD-1	89.14190	108883	< 10.		UG/L	8/06/89	>V8313::D1	Toluene
125TD-1	89.14190	75252	19.3	5.79	UG/L	8/06/89	>V8313::D1	Tribromomethane
125TD-1	89.14190	120821	< 10.		UG/L	8/06/89	>V8313::D1	1,2,4-Trichlorobenzene
125TD-1	89.14190	71556	< 10.		UG/L	8/06/89	>V8313::D1	1,1,1-Trichloroethane
125TD-1	89.14190	79005	< 10.		UG/L	8/06/89	>V8313::D1	1,1,2-Trichloroethane

125TD-1	89.14190	79016	< 10.	UG/L	8/06/89	>V8313::D1	Trichloroethene
125TD-1	89.14190	79016	< 10.	UG/L	8/06/89	>V8313::D1	Trichloroethylene
125TD-1	89.14190	75694	< 10.	UG/L	8/06/89	>V8313::D1	Trichlorofluoromethane
125TD-1	89.14190	96184	< 10.	UG/L	8/06/89	>V8313::D1	1,2,3-Trichloropropane
125TD-1	89.14190	108678	< 10.	UG/L	8/06/89	>V8313::D1	1,3,5-Trimethylbenzene
125TD-1	89.14190	95636	< 10.	UG/L	8/06/89	>V8313::D1	1,2,4-Trimethylbenzene
125TD-1	89.14190	108054	< 10.	UG/L	8/06/89	>V8313::D1	Vinyl acetate
125TD-1	89.14190	75014	< 20.	UG/L	8/06/89	>V8313::D1	Vinyl chloride
125TD-1	89.14190	75354	< 10.	UG/L	8/06/89	>V8313::D1	Vinylidene chloride
125TD-1	89.14190	108383	< 10.	UG/L	8/06/89	>V8313::D1	m-Xylene
125TD-1	89.14190	95476	< 10.	UG/L	8/06/89	>V8313::D1	o-Xylene

REPORT NUMBER: 3588

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 6-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Suzanne Bell

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-2	89.14191	67641	< 20.		UG/L	8/06/89	>V8314::D2	Acetone
125TD-2	89.14191	71432	< 10.		UG/L	8/06/89	>V8314::D2	Benzene
125TD-2	89.14191	108861	< 10.		UG/L	8/06/89	>V8314::D2	Bromobenzene
125TD-2	89.14191	74975	< 10.		UG/L	8/06/89	>V8314::D2	Bromochloromethane
125TD-2	89.14191	75274	< 10.		UG/L	8/06/89	>V8314::D2	Bromodichloromethane
125TD-2	89.14191	75252	< 10.		UG/L	8/06/89	>V8314::D2	Bromoform
125TD-2	89.14191	74839	< 20.		UG/L	8/06/89	>V8314::D2	Bromomethane
125TD-2	89.14191	78933	< 10.		UG/L	8/06/89	>V8314::D2	2-Butanone
125TD-2	89.14191	104518	< 10.		UG/L	8/06/89	>V8314::D2	n-Butylbenzene
125TD-2	89.14191	135988	< 10.		UG/L	8/06/89	>V8314::D2	sec-Butylbenzene
125TD-2	89.14191	98066	< 10.		UG/L	8/06/89	>V8314::D2	tert-Butylbenzene
125TD-2	89.14191	75150	< 10.		UG/L	8/06/89	>V8314::D2	Carbon disulfide
125TD-2	89.14191	56235	< 10.		UG/L	8/06/89	>V8314::D2	Carbon tetrachloride
125TD-2	89.14191	108907	< 10.		UG/L	8/06/89	>V8314::D2	Chlorobenzene
125TD-2	89.14191	124481	< 10.		UG/L	8/06/89	>V8314::D2	Chlorodibromomethane
125TD-2	89.14191	75003	< 20.		UG/L	8/06/89	>V8314::D2	Chloroethane
125TD-2	89.14191	67663	< 10.		UG/L	8/06/89	>V8314::D2	Chloroform
125TD-2	89.14191	74873	< 20.		UG/L	8/06/89	>V8314::D2	Chloromethane
125TD-2	89.14191	95498	< 10.		UG/L	8/06/89	>V8314::D2	o-Chlorotoluene
125TD-2	89.14191	106434	< 10.		UG/L	8/06/89	>V8314::D2	p-Chlorotoluene
125TD-2	89.14191	98828	< 10.		UG/L	8/06/89	>V8314::D2	Cumene
125TD-2	89.14191	99876	< 10.		UG/L	8/06/89	>V8314::D2	p-Cymene
125TD-2	89.14191	96128	< 10.		UG/L	8/06/89	>V8314::D2	1,2-Dibromo-3-chloropropane
125TD-2	89.14191	124481	< 10.		UG/L	8/06/89	>V8314::D2	Dibromochloromethane
125TD-2	89.14191	106934	< 10.		UG/L	8/06/89	>V8314::D2	1,2-Dibromoethane

125TD-2	89.14191	74953	< 10.	UG/L	8/06/89	>V8314::D2	Dibromomethane
125TD-2	89.14191	563586	< 10.	UG/L	8/06/89	>V8314::D2	1,1-Dichloro-1-propene
125TD-2	89.14191	95501	< 10.	UG/L	8/06/89	>V8314::D2	o-Dichlorobenzene (1,2)
125TD-2	89.14191	541731	< 10.	UG/L	8/06/89	>V8314::D2	m-Dichlorobenzene (1,3)
125TD-2	89.14191	106467	< 10.	UG/L	8/06/89	>V8314::D2	p-Dichlorobenzene (1,4)
125TD-2	89.14191	75274	< 10.	UG/L	8/06/89	>V8314::D2	Dichlorobromomethane
125TD-2	89.14191	107062	< 10.	UG/L	8/06/89	>V8314::D2	1,2-Dichloroethane
125TD-2	89.14191	75343	< 10.	UG/L	8/06/89	>V8314::D2	1,1-Dichloroethane
125TD-2	89.14191	75354	< 10.	UG/L	8/06/89	>V8314::D2	1,1-Dichloroethene
125TD-2	89.14191	156605	< 10.	UG/L	8/06/89	>V8314::D2	trans-1,2-Dichloroethene
125TD-2	89.14191	75354	< 10.	UG/L	8/06/89	>V8314::D2	1,1-Dichloroethylene
125TD-2	89.14191	156605	< 10.	UG/L	8/06/89	>V8314::D2	trans-1,2-Dichloroethylene
125TD-2	89.14191	156592	< 10.	UG/L	8/06/89	>V8314::D2	cis-1,2-Dichloroethylene
125TD-2	89.14191	75092	< 10.	UG/L	8/06/89	>V8314::D2	Dichloromethane
125TD-2	89.14191	594207	< 10.	UG/L	8/06/89	>V8314::D2	2,2-Dichloropropane
125TD-2	89.14191	142289	< 10.	UG/L	8/06/89	>V8314::D2	1,3-Dichloropropane
125TD-2	89.14191	78875	< 10.	UG/L	8/06/89	>V8314::D2	1,2-Dichloropropane
125TD-2	89.14191	563586	< 10.	UG/L	8/06/89	>V8314::D2	1,1-Dichloropropene
125TD-2	89.14191	100414	< 10.	UG/L	8/06/89	>V8314::D2	Ethylbenzene
125TD-2	89.14191	106934	< 10.	UG/L	8/06/89	>V8314::D2	Ethylene bromide
125TD-2	89.14191	107062	< 10.	UG/L	8/06/89	>V8314::D2	Ethylene chloride
125TD-2	89.14191	106934	< 10.	UG/L	8/06/89	>V8314::D2	Ethylene dibromide
125TD-2	89.14191	75354	< 10.	UG/L	8/06/89	>V8314::D2	Ethylidene chloride
125TD-2	89.14191	75694	< 10.	UG/L	8/06/89	>V8314::D2	Fluorotrichloromethane
125TD-2	89.14191	98828	< 10.	UG/L	8/06/89	>V8314::D2	Isopropylbenzene
125TD-2	89.14191	99876	< 10.	UG/L	8/06/89	>V8314::D2	4-Isopropyltoluene
125TD-2	89.14191	108678	< 10.	UG/L	8/06/89	>V8314::D2	Mesitylene
125TD-2	89.14191	74839	< 20.	UG/L	8/06/89	>V8314::D2	Methyl bromide
125TD-2	89.14191	74873	< 20.	UG/L	8/06/89	>V8314::D2	Methyl chloride
125TD-2	89.14191	71556	< 10.	UG/L	8/06/89	>V8314::D2	Methylchloroform
125TD-2	89.14191	75092	< 10.	UG/L	8/06/89	>V8314::D2	Methylene chloride
125TD-2	89.14191	78933	< 10.	UG/L	8/06/89	>V8314::D2	Methylethyl ketone
125TD-2	89.14191	91203	< 10.	UG/L	8/06/89	>V8314::D2	Naphthalene
125TD-2	89.14191	104518	< 10.	UG/L	8/06/89	>V8314::D2	1-Phenylbutane
125TD-2	89.14191	135988	< 10.	UG/L	8/06/89	>V8314::D2	2-Phenylbutane
125TD-2	89.14191	103651	< 10.	UG/L	8/06/89	>V8314::D2	Propylbenzene
125TD-2	89.14191	100425	< 10.	UG/L	8/06/89	>V8314::D2	Styrene
125TD-2	89.14191	630206	< 10.	UG/L	8/06/89	>V8314::D2	1,1,1,2-Tetrachloroethane
125TD-2	89.14191	79345	< 10.	UG/L	8/06/89	>V8314::D2	1,1,2,2-Tetrachloroethane
125TD-2	89.14191	127184	< 10.	UG/L	8/06/89	>V8314::D2	Tetrachloroethylene
125TD-2	89.14191	108883	< 10.	UG/L	8/06/89	>V8314::D2	Toluene
125TD-2	89.14191	75252	< 10.	UG/L	8/06/89	>V8314::D2	Tribromomethane
125TD-2	89.14191	120821	< 10.	UG/L	8/06/89	>V8314::D2	1,2,4-Trichlorobenzene
125TD-2	89.14191	79005	< 10.	UG/L	8/06/89	>V8314::D2	1,1,2-Trichloroethane
125TD-2	89.14191	71556	< 10.	UG/L	8/06/89	>V8314::D2	1,1,1-Trichloroethane

125TD-2	89.14191	79016	< 10.	UG/L	8/06/89	>V8314::D2	Trichloroethene
125TD-2	89.14191	79016	< 10.	UG/L	8/06/89	>V8314::D2	Trichloroethylene
125TD-2	89.14191	75694	< 10.	UG/L	8/06/89	>V8314::D2	Trichlorofluoromethane
125TD-2	89.14191	96184	< 10.	UG/L	8/06/89	>V8314::D2	1,2,3-Trichloropropane
125TD-2	89.14191	95636	< 10.	UG/L	8/06/89	>V8314::D2	1,2,4-Trimethylbenzene
125TD-2	89.14191	108678	< 10.	UG/L	8/06/89	>V8314::D2	1,3,5-Trimethylbenzene
125TD-2	89.14191	108054	< 10.	UG/L	8/06/89	>V8314::D2	Vinyl acetate
125TD-2	89.14191	75014	< 20.	UG/L	8/06/89	>V8314::D2	Vinyl chloride
125TD-2	89.14191	75354	< 10.	UG/L	8/06/89	>V8314::D2	Vinylidene chloride
125TD-2	89.14191	108383	< 10.	UG/L	8/06/89	>V8314::D2	m-Xylene
125TD-2	89.14191	95476	< 10.	UG/L	8/06/89	>V8314::D2	o-Xylene

Final Trench Decon

TA-35-125 Rinse water

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 6956

I. PRESAMPLING CONFERENCE

Program Code 5708 - W57R

No. Samples Expected 4ea H_2O } VOA ✓ SVOA ✓ PCB EP toxic metals

Submission Date 8-1-89

Completion Date VOA - 8/9/89 SVOA - in que

Chain of Custody? No.

Special Protocol? *(EPA etc.)*

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet. *(Indicate expected concentration range and required detection limits under remarks.)* VOA SVOA EP Tox metl PCB

Container Type Glass/Teflon Preservative None

(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None Refrigerate Freeze Darkness

Sample Hazards Present? *(Circle one or more)*
No hazard Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return____ Discard ✓
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S. McLin

Customer Phone 5-1721 MS K490

Date August 1, 1989

HSE-9 Section Leader [signature] Organic
McKullicin for RDR Inorganic
Radiochem

II. EMERGENCY SAMPLES

Emergency Status requires the following signatur

Customer Group Leader____

HSE-9 Group Leader ____

Date____

REQ	SAM NUM	CUST NUM
6956	89.14190	125TD-1
6956	89.14191	125TD-2
6956	89.14192	125TD-3
6956	89.14193	125TD-4
6956	89.14194	00.99944
6956	89.14195	00.01489
6956	00.01370	00.01370
6956	89.14196	00.01104
6956	89.14093	00.99957
6956	89.14094	00.99958

III. SAMPLE RECEIPT

Signature Ellen Tallon Date 8/1/89 Total No. Samples Received 4 + 6QC

HSE-9 Sample No. Range 89.14190 to 89.14196, 89.14093-89.14094

Customer Sample No. Range 125TD-1 to 125TD-4.

3-8-89

VOLATILE ORGANIC ANALYSES

89.14194	75274	< 10.		UG/L	8/06/89	UNDER CONTROL	Bromodichloromethane
89.14194	75252	70.7	21.21	UG/L	8/06/89	UNDER CONTROL	Bromoform
89.14194	74839	< 20.		UG/L	8/06/89	UNDER CONTROL	Bromomethane
89.14194	78933	< 10.		UG/L	8/06/89	UNDER CONTROL	2-Butanone
89.14194	98066	< 10.		UG/L	8/06/89	UNDER CONTROL	tert-Butylbenzene
89.14194	104518	< 10.		UG/L	8/06/89	UNDER CONTROL	n-Butylbenzene
89.14194	135988	< 10.		UG/L	8/06/89	UNDER CONTROL	sec-Butylbenzene
89.14194	75150	< 10.		UG/L	8/06/89	UNDER CONTROL	Carbon disulfide
89.14194	56235	81.3	24.39	UG/L	8/06/89	UNDER CONTROL	Carbon tetrachloride
89.14194	108907	< 10.		UG/L	8/06/89	UNDER CONTROL	Chlorobenzene
89.14194	124481	74.6	22.38	UG/L	8/06/89	UNDER CONTROL	Chlorodibromomethane
89.14194	75003	< 20.		UG/L	8/06/89	UNDER CONTROL	Chloroethane
89.14194	67663	< 10.		UG/L	8/06/89	UNDER CONTROL	Chloroform
89.14194	74873	< 20.		UG/L	8/06/89	UNDER CONTROL	Chloromethane
89.14194	95498	< 10.		UG/L	8/06/89	UNDER CONTROL	o-Chlorotoluene
89.14194	106434	75.3	22.59	UG/L	8/06/89	UNDER CONTROL	p-Chlorotoluene
89.14194	98828	< 10.		UG/L	8/06/89	UNDER CONTROL	Cumene
89.14194	99876	< 10.		UG/L	8/06/89	UNDER CONTROL	p-Cymene
89.14194	96128	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.14194	124481	74.6	22.38	UG/L	8/06/89	UNDER CONTROL	Dibromochloromethane
89.14194	106934	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2-Dibromoethane
89.14194	74953	< 10.		UG/L	8/06/89	UNDER CONTROL	Dibromomethane
89.14194	563586	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1-Dichloro-1-propene
89.14194	95501	< 10.		UG/L	8/06/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.14194	541731	< 10.		UG/L	8/06/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.14194	106467	< 10.		UG/L	8/06/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.14194	75274	< 10.		UG/L	8/06/89	UNDER CONTROL	Dichlorobromomethane
89.14194	107062	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2-Dichloroethane
89.14194	75343	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1-Dichloroethane
89.14194	75354	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1-Dichloroethene
89.14194	156605	< 10.		UG/L	8/06/89	UNDER CONTROL	trans-1,2-Dichloroethene
89.14194	75354	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1-Dichloroethylene
89.14194	156592	< 10.		UG/L	8/06/89	UNDER CONTROL	cis-1,2-Dichloroethylene
89.14194	156605	< 10.		UG/L	8/06/89	UNDER CONTROL	trans-1,2-Dichloroethylene
89.14194	75092	< 10.		UG/L	8/06/89	UNDER CONTROL	Dichloromethane
89.14194	78875	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2-Dichloropropane
89.14194	594207	< 10.		UG/L	8/06/89	UNDER CONTROL	2,2-Dichloropropane
89.14194	142289	42.1	12.63	UG/L	8/06/89	UNDER CONTROL	1,3-Dichloropropane
89.14194	563586	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1-Dichloropropene
89.14194	100414	< 10.		UG/L	8/06/89	UNDER CONTROL	Ethylbenzene
89.14194	106934	< 10.		UG/L	8/06/89	UNDER CONTROL	Ethylene bromide
89.14194	107062	< 10.		UG/L	8/06/89	UNDER CONTROL	Ethylene chloride
89.14194	106934	< 10.		UG/L	8/06/89	UNDER CONTROL	Ethylene dibromide
89.14194	75354	< 10.		UG/L	8/06/89	UNDER CONTROL	Ethylidene chloride
89.14194	75694	< 10.		UG/L	8/06/89	UNDER CONTROL	Fluorotrichloromethane

89.14194	98828	< 10.		UG/L	8/06/89	UNDER CONTROL	Isopropylbenzene
89.14194	99876	< 10.		UG/L	8/06/89	UNDER CONTROL	4-Isopropyltoluene
89.14194	108678	< 10.		UG/L	8/06/89	UNDER CONTROL	Mesitylene
89.14194	74839	< 20.		UG/L	8/06/89	UNDER CONTROL	Methyl bromide
89.14194	74873	< 20.		UG/L	8/06/89	UNDER CONTROL	Methyl chloride
89.14194	71556	< 10.		UG/L	8/06/89	UNDER CONTROL	Methylchloroform
89.14194	75092	< 10.		UG/L	8/06/89	UNDER CONTROL	Methylene chloride
89.14194	78933	< 10.		UG/L	8/06/89	UNDER CONTROL	Methylethyl ketone
89.14194	91203	< 10.		UG/L	8/06/89	UNDER CONTROL	Naphthalene
89.14194	135988	< 10.		UG/L	8/06/89	UNDER CONTROL	2-Phenylbutane
89.14194	104518	< 10.		UG/L	8/06/89	UNDER CONTROL	1-Phenylbutane
89.14194	103651	< 10.		UG/L	8/06/89	UNDER CONTROL	Propylbenzene
89.14194	100425	< 10.		UG/L	8/06/89	UNDER CONTROL	Styrene
89.14194	79345	47.9	14.37	UG/L	8/06/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane
89.14194	630206	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1,1,2-Tetrachloroethane
89.14194	127184	< 10.		UG/L	8/06/89	UNDER CONTROL	Tetrachloroethylene
89.14194	108883	75.3	22.59	UG/L	8/06/89	UNDER CONTROL	Toluene
89.14194	75252	70.7	21.21	UG/L	8/06/89	UNDER CONTROL	Tribromomethane
89.14194	120821	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2,4-Trichlorobenzene
89.14194	71556	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1,1-Trichloroethane
89.14194	79005	< 10.		UG/L	8/06/89	UNDER CONTROL	1,1,2-Trichloroethane
89.14194	79016	< 10.		UG/L	8/06/89	UNDER CONTROL	Trichloroethene
89.14194	79016	< 10.		UG/L	8/06/89	UNDER CONTROL	Trichloroethylene
89.14194	75694	< 10.		UG/L	8/06/89	UNDER CONTROL	Trichlorofluoromethane
89.14194	96184	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2,3-Trichloropropane
89.14194	95636	< 10.		UG/L	8/06/89	UNDER CONTROL	1,2,4-Trimethylbenzene
89.14194	108678	< 10.		UG/L	8/06/89	UNDER CONTROL	1,3,5-Trimethylbenzene
89.14194	108054	< 10.		UG/L	8/06/89	UNDER CONTROL	Vinyl acetate
89.14194	75014	< 20.		UG/L	8/06/89	UNDER CONTROL	Vinyl chloride
89.14194	75354	< 10.		UG/L	8/06/89	UNDER CONTROL	Vinylidene chloride
89.14194	108383	< 10.		UG/L	8/06/89	UNDER CONTROL	m-Xylene
89.14194	95476	< 10.		UG/L	8/06/89	UNDER CONTROL	o-Xylene

SURROGATE RESULTS FOR EPA VOLATILES

1,2-Dichloroethane d4 (CAS # = 17060070); EPA Range Limits: Water = 76-114 %, Soil = 70-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	76.5	%	8/06/89	>V8313::D1
89.14191	135.5	%	8/06/89	>V8314::D2
89.14192	79.1	%	8/06/89	>V8315::D2
89.14193	76.2	%	8/06/89	>V8316::D2
89.14194	74.7	%	8/06/89	>V8318::D2

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	115.9	%	8/06/89	>V8313::D1
89.14191	111.8	%	8/06/89	>V8314::D2
89.14192	122.9	%	8/06/89	>V8315::D2
89.14193	115.9	%	8/06/89	>V8316::D2
89.14194	117.1	%	8/06/89	>V8318::D2

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	118.2	%	8/06/89	>V8313::D1
89.14191	135.4	%	8/06/89	>V8314::D2
89.14192	115.9	%	8/06/89	>V8315::D2
89.14193	122.3	%	8/06/89	>V8316::D2
89.14194	120.	%	8/06/89	>V8318::D2

Analyst	Section Leader	QA Officer
8/6/89	8-8-89	8/7/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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SEMIVOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5200

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-1	89.14190	83329	< 10.		UG/L	12/21/89		Acenaphthene
125TD-1	89.14190	208968	< 10.		UG/L	12/21/89		Acenaphthylene
125TD-1	89.14190	62533	< 10.		UG/L	12/21/89		Aniline
125TD-1	89.14190	120127	< 10.		UG/L	12/21/89		Anthracene
125TD-1	89.14190	103333	< 10.		UG/L	12/21/89		Azobenzene
125TD-1	89.14190	56553	< 10.		UG/L	12/21/89		Benz(a)anthracene
125TD-1	89.14190	92875	< 10.		UG/L	12/21/89		m-Benzidine
125TD-1	89.14190	191242	< 10.		UG/L	12/21/89		Benzo(g,h,i)perylene
125TD-1	89.14190	50328	< 10.		UG/L	12/21/89		Benzo-a-pyrene
125TD-1	89.14190	205992	< 10.		UG/L	12/21/89		Benzo-b-fluoranthene
125TD-1	89.14190	207089	< 10.		UG/L	12/21/89		Benzo-k-fluoranthene
125TD-1	89.14190	65850	< 10.		UG/L	12/21/89		Benzoic acid
125TD-1	89.14190	100516	< 10.		UG/L	12/21/89		Benzyl alcohol
125TD-1	89.14190	111911	< 10.		UG/L	12/21/89		Bis(2-chloroethoxy)methane
125TD-1	89.14190	111444	< 10.		UG/L	12/21/89		Bis(2-chloroethyl)ether
125TD-1	89.14190	108601	< 10.		UG/L	12/21/89		Bis(2-chloroisopropyl)ether
125TD-1	89.14190	117817	< 10.		UG/L	12/21/89		Bis(2-ethylhexyl)phthalate
125TD-1	89.14190	101553	< 10.		UG/L	12/21/89		4-Bromophenylphenyl ether
125TD-1	89.14190	85687	< 10.		UG/L	12/21/89		Butylbenzyl phthalate
125TD-1	89.14190	59507	< 10.		UG/L	12/21/89		4-Chloro-3-methylphenol
125TD-1	89.14190	106478	< 10.		UG/L	12/21/89		4-Chloroaniline
125TD-1	89.14190	91587	< 10.		UG/L	12/21/89		2-Chloronaphthalene
125TD-1	89.14190	95578	< 10.		UG/L	12/21/89		o-Chlorophenol
125TD-1	89.14190	7005723	< 10.		UG/L	12/21/89		4-Chlorophenylphenyl ether
125TD-1	89.14190	218019	< 10.		UG/L	12/21/89		Chrysene

125TD-1	89.14190	106445	< 10.	UG/L	12/21/89	p-Cresol
125TD-1	89.14190	84742	< 10.	UG/L	12/21/89	Di-n-butyl phthalate
125TD-1	89.14190	117840	< 10.	UG/L	12/21/89	Di-n-octyl phthalate
125TD-1	89.14190	53703	< 10.	UG/L	12/21/89	Dibenzo(a,h)anthracene
125TD-1	89.14190	132649	< 10.	UG/L	12/21/89	Dibenzofuran
125TD-1	89.14190	95501	< 10.	UG/L	12/21/89	o-Dichlorobenzene (1,2)
125TD-1	89.14190	541731	< 10.	UG/L	12/21/89	m-Dichlorobenzene (1,3)
125TD-1	89.14190	106467	< 10.	UG/L	12/21/89	p-Dichlorobenzene (1,4)
125TD-1	89.14190	91941	< 10.	UG/L	12/21/89	3,3'-Dichlorobenzidine
125TD-1	89.14190	120832	< 10.	UG/L	12/21/89	2,4-Dichlorophenol
125TD-1	89.14190	84662	< 10.	UG/L	12/21/89	Diethyl phthalate
125TD-1	89.14190	131113	< 10.	UG/L	12/21/89	Dimethyl phthalate
125TD-1	89.14190	105679	< 10.	UG/L	12/21/89	2,4-Dimethylphenol
125TD-1	89.14190	51285	< 10.	UG/L	12/21/89	2,4-Dinitrophenol
125TD-1	89.14190	121142	< 10.	UG/L	12/21/89	2,4-Dinitrotoluene
125TD-1	89.14190	606202	< 10.	UG/L	12/21/89	2,6-Dinitrotoluene
125TD-1	89.14190	206440	< 10.	UG/L	12/21/89	Fluoranthene
125TD-1	89.14190	86737	< 10.	UG/L	12/21/89	Fluorene
125TD-1	89.14190	118741	< 10.	UG/L	12/21/89	HCB
125TD-1	89.14190	118741	< 10.	UG/L	12/21/89	Hexachlorobenzene
125TD-1	89.14190	87683	< 10.	UG/L	12/21/89	Hexachlorobutadiene
125TD-1	89.14190	77474	< 10.	UG/L	12/21/89	Hexachlorocyclopentadiene
125TD-1	89.14190	67721	< 10.	UG/L	12/21/89	Hexachloroethane
125TD-1	89.14190	193395	< 10.	UG/L	12/21/89	Indeno(1,2,3-cd)pyrene
125TD-1	89.14190	78591	< 10.	UG/L	12/21/89	Isophorone
125TD-1	89.14190	534521	< 10.	UG/L	12/21/89	2-Methyl-4,6-dinitrophenol
125TD-1	89.14190	91576	< 10.	UG/L	12/21/89	2-Methylnaphthalene
125TD-1	89.14190	95487	< 10.	UG/L	12/21/89	2-Methylphenol
125TD-1	89.14190	106445	< 10.	UG/L	12/21/89	4-Methylphenol
125TD-1	89.14190	91203	< 10.	UG/L	12/21/89	Naphthalene
125TD-1	89.14190	100016	< 10.	UG/L	12/21/89	4-Nitroaniline
125TD-1	89.14190	88744	< 10.	UG/L	12/21/89	2-Nitroaniline
125TD-1	89.14190	99092	< 10.	UG/L	12/21/89	3-Nitroaniline
125TD-1	89.14190	98953	< 10.	UG/L	12/21/89	Nitrobenzene
125TD-1	89.14190	100027	< 10.	UG/L	12/21/89	4-Nitrophenol
125TD-1	89.14190	100027	< 10.	UG/L	12/21/89	p-Nitrophenol
125TD-1	89.14190	88755	< 10.	UG/L	12/21/89	2-Nitrophenol
125TD-1	89.14190	621647	< 10.	UG/L	12/21/89	N-Nitrosodi-n-propylamine
125TD-1	89.14190	62759	< 10.	UG/L	12/21/89	N-Nitrosodimethylamine
125TD-1	89.14190	86306	< 10.	UG/L	12/21/89	N-Nitrosodiphenylamine
125TD-1	89.14190	87865	< 10.	UG/L	12/21/89	Pentachlorophenol
125TD-1	89.14190	85018	< 10.	UG/L	12/21/89	Phenanthrene
125TD-1	89.14190	108952	< 10.	UG/L	12/21/89	Phenol
125TD-1	89.14190	129000	< 10.	UG/L	12/21/89	Pyrene
125TD-1	89.14190	120821	< 10.	UG/L	12/21/89	1,2,4-Trichlorobenzene

125TD-1	89.14190	88062	< 10.	UG/L	12/21/89	2,4,6-Trichlorophenol
125TD-1	89.14190	95954	< 10.	UG/L	12/21/89	2,4,5-Trichlorophenol
125TD-1	89.14190	105679	< 10.	UG/L	12/21/89	2,4-Xylenol

REPORT NUMBER: 5200

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-2	89.14191	83329	< 10.		UG/L	12/21/89		Acenaphthene
125TD-2	89.14191	208968	< 10.		UG/L	12/21/89		Acenaphthylene
125TD-2	89.14191	62533	< 10.		UG/L	12/21/89		Aniline
125TD-2	89.14191	120127	< 10.		UG/L	12/21/89		Anthracene
125TD-2	89.14191	103333	< 10.		UG/L	12/21/89		Azobenzene
125TD-2	89.14191	56553	< 10.		UG/L	12/21/89		Benz(a)anthracene
125TD-2	89.14191	92875	< 10.		UG/L	12/21/89		m-Benzidine
125TD-2	89.14191	191242	< 10.		UG/L	12/21/89		Benzo(g,h,i)perylene
125TD-2	89.14191	50328	< 10.		UG/L	12/21/89		Benzo-a-pyrene
125TD-2	89.14191	205992	< 10.		UG/L	12/21/89		Benzo-b-fluoranthene
125TD-2	89.14191	207089	< 10.		UG/L	12/21/89		Benzo-k-fluoranthene
125TD-2	89.14191	65850	< 10.		UG/L	12/21/89		Benzoic acid
125TD-2	89.14191	100516	< 10.		UG/L	12/21/89		Benzyl alcohol
125TD-2	89.14191	111911	< 10.		UG/L	12/21/89		Bis(2-chloroethoxy)methane
125TD-2	89.14191	111444	< 10.		UG/L	12/21/89		Bis(2-chloroethyl)ether
125TD-2	89.14191	108601	< 10.		UG/L	12/21/89		Bis(2-chloroisopropyl)ether
125TD-2	89.14191	117817	< 10.		UG/L	12/21/89		Bis(2-ethylhexyl)phthalate
125TD-2	89.14191	101553	< 10.		UG/L	12/21/89		4-Bromophenylphenyl ether
125TD-2	89.14191	85687	< 10.		UG/L	12/21/89		Butylbenzyl phthalate
125TD-2	89.14191	59507	< 10.		UG/L	12/21/89		4-Chloro-3-methylphenol
125TD-2	89.14191	106478	< 10.		UG/L	12/21/89		4-Chloroaniline
125TD-2	89.14191	91587	< 10.		UG/L	12/21/89		2-Chloronaphthalene
125TD-2	89.14191	95578	< 10.		UG/L	12/21/89		o-Chlorophenol
125TD-2	89.14191	7005723	< 10.		UG/L	12/21/89		4-Chlorophenylphenyl ether
125TD-2	89.14191	218019	< 10.		UG/L	12/21/89		Chrysene

125TD-2	89.14191	106445	< 10.	UG/L	12/21/89	p-Cresol
125TD-2	89.14191	84742	< 10.	UG/L	12/21/89	Di-n-butyl phthalate
125TD-2	89.14191	117840	< 10.	UG/L	12/21/89	Di-n-octyl phthalate
125TD-2	89.14191	53703	< 10.	UG/L	12/21/89	Dibenzo(a,h)anthracene
125TD-2	89.14191	132649	< 10.	UG/L	12/21/89	Dibenzofuran
125TD-2	89.14191	95501	< 10.	UG/L	12/21/89	o-Dichlorobenzene (1,2)
125TD-2	89.14191	541731	< 10.	UG/L	12/21/89	m-Dichlorobenzene (1,3)
125TD-2	89.14191	106467	< 10.	UG/L	12/21/89	p-Dichlorobenzene (1,4)
125TD-2	89.14191	91941	< 10.	UG/L	12/21/89	3,3'-Dichlorobenzidine
125TD-2	89.14191	120832	< 10.	UG/L	12/21/89	2,4-Dichlorophenol
125TD-2	89.14191	84662	< 10.	UG/L	12/21/89	Diethyl phthalate
125TD-2	89.14191	131113	< 10.	UG/L	12/21/89	Dimethyl phthalate
125TD-2	89.14191	105679	< 10.	UG/L	12/21/89	2,4-Dimethylphenol
125TD-2	89.14191	51285	< 10.	UG/L	12/21/89	2,4-Dinitrophenol
125TD-2	89.14191	121142	< 10.	UG/L	12/21/89	2,4-Dinitrotoluene
125TD-2	89.14191	606202	< 10.	UG/L	12/21/89	2,6-Dinitrotoluene
125TD-2	89.14191	206440	< 10.	UG/L	12/21/89	Fluoranthene
125TD-2	89.14191	86737	< 10.	UG/L	12/21/89	Fluorene
125TD-2	89.14191	118741	< 10.	UG/L	12/21/89	HCB
125TD-2	89.14191	118741	< 10.	UG/L	12/21/89	Hexachlorobenzene
125TD-2	89.14191	87683	< 10.	UG/L	12/21/89	Hexachlorobutadiene
125TD-2	89.14191	77474	< 10.	UG/L	12/21/89	Hexachlorocyclopentadiene
125TD-2	89.14191	67721	< 10.	UG/L	12/21/89	Hexachloroethane
125TD-2	89.14191	193395	< 10.	UG/L	12/21/89	Indeno(1,2,3-cd)pyrene
125TD-2	89.14191	78591	< 10.	UG/L	12/21/89	Isophorone
125TD-2	89.14191	534521	< 10.	UG/L	12/21/89	2-Methyl-4,6-dinitrophenol
125TD-2	89.14191	91576	< 10.	UG/L	12/21/89	2-Methylnaphthalene
125TD-2	89.14191	106445	< 10.	UG/L	12/21/89	4-Methylphenol
125TD-2	89.14191	95487	< 10.	UG/L	12/21/89	2-Methylphenol
125TD-2	89.14191	91203	< 10.	UG/L	12/21/89	Naphthalene
125TD-2	89.14191	88744	< 10.	UG/L	12/21/89	2-Nitroaniline
125TD-2	89.14191	100016	< 10.	UG/L	12/21/89	4-Nitroaniline
125TD-2	89.14191	99092	< 10.	UG/L	12/21/89	3-Nitroaniline
125TD-2	89.14191	98953	< 10.	UG/L	12/21/89	Nitrobenzene
125TD-2	89.14191	100027	< 10.	UG/L	12/21/89	4-Nitrophenol
125TD-2	89.14191	100027	< 10.	UG/L	12/21/89	p-Nitrophenol
125TD-2	89.14191	88755	< 10.	UG/L	12/21/89	2-Nitrophenol
125TD-2	89.14191	621647	< 10.	UG/L	12/21/89	N-Nitrosodi-n-propylamine
125TD-2	89.14191	62759	< 10.	UG/L	12/21/89	N-Nitrosodimethylamine
125TD-2	89.14191	86306	< 10.	UG/L	12/21/89	N-Nitrosodiphenylamine
125TD-2	89.14191	87865	< 10.	UG/L	12/21/89	Pentachlorophenol
125TD-2	89.14191	85018	< 10.	UG/L	12/21/89	Phenanthrene
125TD-2	89.14191	108952	< 10.	UG/L	12/21/89	Phenol
125TD-2	89.14191	129000	< 10.	UG/L	12/21/89	Pyrene
125TD-2	89.14191	120821	< 10.	UG/L	12/21/89	1,2,4-Trichlorobenzene

125TD-2	89.14191	88062	< 10.	UG/L	12/21/89	2,4,6-Trichlorophenol
125TD-2	89.14191	95954	< 10.	UG/L	12/21/89	2,4,5-Trichlorophenol
125TD-2	89.14191	105679	< 10.	UG/L	12/21/89	2,4-Xylenol

REPORT NUMBER: 5200

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-3	89.14192	83329	< 10.		UG/L	12/21/89		Acenaphthene
125TD-3	89.14192	208968	< 10.		UG/L	12/21/89		Acenaphthylene
125TD-3	89.14192	62533	< 10.		UG/L	12/21/89		Aniline
125TD-3	89.14192	120127	< 10.		UG/L	12/21/89		Anthracene
125TD-3	89.14192	103333	< 10.		UG/L	12/21/89		Azobenzene
125TD-3	89.14192	56553	< 10.		UG/L	12/21/89		Benz(a)anthracene
125TD-3	89.14192	92875	< 10.		UG/L	12/21/89		m-Benzidine
125TD-3	89.14192	191242	< 10.		UG/L	12/21/89		Benzo(g,h,i)perylene
125TD-3	89.14192	50328	< 10.		UG/L	12/21/89		Benzo-a-pyrene
125TD-3	89.14192	205992	< 10.		UG/L	12/21/89		Benzo-b-fluoranthene
125TD-3	89.14192	207089	< 10.		UG/L	12/21/89		Benzo-k-fluoranthene
125TD-3	89.14192	65850	< 10.		UG/L	12/21/89		Benzoic acid
125TD-3	89.14192	100516	< 10.		UG/L	12/21/89		Benzyl alcohol
125TD-3	89.14192	111911	< 10.		UG/L	12/21/89		Bis(2-chloroethoxy)methane
125TD-3	89.14192	111444	< 10.		UG/L	12/21/89		Bis(2-chloroethyl)ether
125TD-3	89.14192	108601	< 10.		UG/L	12/21/89		Bis(2-chloroisopropyl)ether
125TD-3	89.14192	117817	< 10.		UG/L	12/21/89		Bis(2-ethylhexyl)phthalate
125TD-3	89.14192	101553	< 10.		UG/L	12/21/89		4-Bromophenylphenyl ether
125TD-3	89.14192	85687	< 10.		UG/L	12/21/89		Butylbenzyl phthalate
125TD-3	89.14192	59507	< 10.		UG/L	12/21/89		4-Chloro-3-methylphenol
125TD-3	89.14192	106478	< 10.		UG/L	12/21/89		4-Chloroaniline
125TD-3	89.14192	91587	< 10.		UG/L	12/21/89		2-Chloronaphthalene
125TD-3	89.14192	95578	< 10.		UG/L	12/21/89		o-Chlorophenol
125TD-3	89.14192	7005723	< 10.		UG/L	12/21/89		4-Chlorophenylphenyl ether
125TD-3	89.14192	218019	< 10.		UG/L	12/21/89		Chrysene

125TD-3	89.14192	106445	< 10.	UG/L	12/21/89	p-Cresol
125TD-3	89.14192	84742	< 10.	UG/L	12/21/89	Di-n-butyl phthalate
125TD-3	89.14192	117840	< 10.	UG/L	12/21/89	Di-n-octyl phthalate
125TD-3	89.14192	53703	< 10.	UG/L	12/21/89	Dibenzo(a,h)anthracene
125TD-3	89.14192	132649	< 10.	UG/L	12/21/89	Dibenzofuran
125TD-3	89.14192	95501	< 10.	UG/L	12/21/89	o-Dichlorobenzene (1,2)
125TD-3	89.14192	541731	< 10.	UG/L	12/21/89	m-Dichlorobenzene (1,3)
125TD-3	89.14192	106467	< 10.	UG/L	12/21/89	p-Dichlorobenzene (1,4)
125TD-3	89.14192	91941	< 10.	UG/L	12/21/89	3,3'-Dichlorobenzidine
125TD-3	89.14192	120832	< 10.	UG/L	12/21/89	2,4-Dichlorophenol
125TD-3	89.14192	84662	< 10.	UG/L	12/21/89	Diethyl phthalate
125TD-3	89.14192	131113	< 10.	UG/L	12/21/89	Dimethyl phthalate
125TD-3	89.14192	105679	< 10.	UG/L	12/21/89	2,4-Dimethylphenol
125TD-3	89.14192	51285	< 10.	UG/L	12/21/89	2,4-Dinitrophenol
125TD-3	89.14192	606202	< 10.	UG/L	12/21/89	2,6-Dinitrotoluene
125TD-3	89.14192	121142	< 10.	UG/L	12/21/89	2,4-Dinitrotoluene
125TD-3	89.14192	206440	< 10.	UG/L	12/21/89	Fluoranthene
125TD-3	89.14192	86737	< 10.	UG/L	12/21/89	Fluorene
125TD-3	89.14192	118741	< 10.	UG/L	12/21/89	HCB
125TD-3	89.14192	118741	< 10.	UG/L	12/21/89	Hexachlorobenzene
125TD-3	89.14192	87683	< 10.	UG/L	12/21/89	Hexachlorobutadiene
125TD-3	89.14192	77474	< 10.	UG/L	12/21/89	Hexachlorocyclopentadiene
125TD-3	89.14192	67721	< 10.	UG/L	12/21/89	Hexachloroethane
125TD-3	89.14192	193395	< 10.	UG/L	12/21/89	Indeno(1,2,3-cd)pyrene
125TD-3	89.14192	78591	< 10.	UG/L	12/21/89	Isophorone
125TD-3	89.14192	534521	< 10.	UG/L	12/21/89	2-Methyl-4,6-dinitrophenol
125TD-3	89.14192	91576	< 10.	UG/L	12/21/89	2-Methylnaphthalene
125TD-3	89.14192	106445	< 10.	UG/L	12/21/89	4-Methylphenol
125TD-3	89.14192	95487	< 10.	UG/L	12/21/89	2-Methylphenol
125TD-3	89.14192	91203	< 10.	UG/L	12/21/89	Naphthalene
125TD-3	89.14192	100016	< 10.	UG/L	12/21/89	4-Nitroaniline
125TD-3	89.14192	99092	< 10.	UG/L	12/21/89	3-Nitroaniline
125TD-3	89.14192	88744	< 10.	UG/L	12/21/89	2-Nitroaniline
125TD-3	89.14192	98953	< 10.	UG/L	12/21/89	Nitrobenzene
125TD-3	89.14192	88755	< 10.	UG/L	12/21/89	2-Nitrophenol
125TD-3	89.14192	100027	< 10.	UG/L	12/21/89	p-Nitrophenol
125TD-3	89.14192	100027	< 10.	UG/L	12/21/89	4-Nitrophenol
125TD-3	89.14192	621647	< 10.	UG/L	12/21/89	N-Nitrosodi-n-propylamine
125TD-3	89.14192	62759	< 10.	UG/L	12/21/89	N-Nitrosodimethylamine
125TD-3	89.14192	86306	< 10.	UG/L	12/21/89	N-Nitrosodiphenylamine
125TD-3	89.14192	87865	< 10.	UG/L	12/21/89	Pentachlorophenol
125TD-3	89.14192	85018	< 10.	UG/L	12/21/89	Phenanthrene
125TD-3	89.14192	108952	< 10.	UG/L	12/21/89	Phenol
125TD-3	89.14192	129000	< 10.	UG/L	12/21/89	Pyrene
125TD-3	89.14192	120821	< 10.	UG/L	12/21/89	1,2,4-Trichlorobenzene

125TD-3	89.14192	88062	< 10.	UG/L	12/21/89	2,4,6-Trichlorophenol
125TD-3	89.14192	95954	< 10.	UG/L	12/21/89	2,4,5-Trichlorophenol
125TD-3	89.14192	105679	< 10.	UG/L	12/21/89	2,4-Xylenol

REPORT NUMBER: 5200

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-4	89.14193	83329	< 10.		UG/L	12/21/89		Acenaphthene
125TD-4	89.14193	208968	< 10.		UG/L	12/21/89		Acenaphthylene
125TD-4	89.14193	62533	< 10.		UG/L	12/21/89		Aniline
125TD-4	89.14193	120127	< 10.		UG/L	12/21/89		Anthracene
125TD-4	89.14193	103333	< 10.		UG/L	12/21/89		Azobenzene
125TD-4	89.14193	56553	< 10.		UG/L	12/21/89		Benz(a)anthracene
125TD-4	89.14193	92875	< 10.		UG/L	12/21/89		m-Benzidine
125TD-4	89.14193	191242	< 10.		UG/L	12/21/89		Benzo(g,h,i)perylene
125TD-4	89.14193	50328	< 10.		UG/L	12/21/89		Benzo-a-pyrene
125TD-4	89.14193	205992	< 10.		UG/L	12/21/89		Benzo-b-fluoranthene
125TD-4	89.14193	207089	< 10.		UG/L	12/21/89		Benzo-k-fluoranthene
125TD-4	89.14193	65850	< 10.		UG/L	12/21/89		Benzoic acid
125TD-4	89.14193	100516	< 10.		UG/L	12/21/89		Benzyl alcohol
125TD-4	89.14193	111911	< 10.		UG/L	12/21/89		Bis(2-chloroethoxy)methane
125TD-4	89.14193	111444	< 10.		UG/L	12/21/89		Bis(2-chloroethyl)ether
125TD-4	89.14193	108601	< 10.		UG/L	12/21/89		Bis(2-chloroisopropyl)ether
125TD-4	89.14193	117817	< 10.		UG/L	12/21/89		Bis(2-ethylhexyl)phthalate
125TD-4	89.14193	101553	< 10.		UG/L	12/21/89		4-Bromophenylphenyl ether
125TD-4	89.14193	85687	< 10.		UG/L	12/21/89		Butylbenzyl phthalate
125TD-4	89.14193	59507	< 10.		UG/L	12/21/89		4-Chloro-3-methylphenol
125TD-4	89.14193	106478	< 10.		UG/L	12/21/89		4-Chloroaniline
125TD-4	89.14193	91587	< 10.		UG/L	12/21/89		2-Chloronaphthalene
125TD-4	89.14193	95578	< 10.		UG/L	12/21/89		o-Chlorophenol
125TD-4	89.14193	7005723	< 10.		UG/L	12/21/89		4-Chlorophenylphenyl ether
125TD-4	89.14193	218019	< 10.		UG/L	12/21/89		Chrysene

125TD-4	89.14193	106445	< 10.	UG/L	12/21/89	p-Cresol
125TD-4	89.14193	84742	< 10.	UG/L	12/21/89	Di-n-butyl phthalate
125TD-4	89.14193	117840	< 10.	UG/L	12/21/89	Di-n-octyl phthalate
125TD-4	89.14193	53703	< 10.	UG/L	12/21/89	Dibenzo(a,h)anthracene
125TD-4	89.14193	132649	< 10.	UG/L	12/21/89	Dibenzofuran
125TD-4	89.14193	95501	< 10.	UG/L	12/21/89	o-Dichlorobenzene (1,2)
125TD-4	89.14193	541731	< 10.	UG/L	12/21/89	m-Dichlorobenzene (1,3)
125TD-4	89.14193	106467	< 10.	UG/L	12/21/89	p-Dichlorobenzene (1,4)
125TD-4	89.14193	91941	< 10.	UG/L	12/21/89	3,3'-Dichlorobenzidine
125TD-4	89.14193	120832	< 10.	UG/L	12/21/89	2,4-Dichlorophenol
125TD-4	89.14193	84662	< 10.	UG/L	12/21/89	Diethyl phthalate
125TD-4	89.14193	131113	< 10.	UG/L	12/21/89	Dimethyl phthalate
125TD-4	89.14193	105679	< 10.	UG/L	12/21/89	2,4-Dimethylphenol
125TD-4	89.14193	51285	< 10.	UG/L	12/21/89	2,4-Dinitrophenol
125TD-4	89.14193	121142	< 10.	UG/L	12/21/89	2,4-Dinitrotoluene
125TD-4	89.14193	606202	< 10.	UG/L	12/21/89	2,6-Dinitrotoluene
125TD-4	89.14193	206440	< 10.	UG/L	12/21/89	Fluoranthene
125TD-4	89.14193	86737	< 10.	UG/L	12/21/89	Fluorene
125TD-4	89.14193	118741	< 10.	UG/L	12/21/89	HCB
125TD-4	89.14193	118741	< 10.	UG/L	12/21/89	Hexachlorobenzene
125TD-4	89.14193	87683	< 10.	UG/L	12/21/89	Hexachlorobutadiene
125TD-4	89.14193	77474	< 10.	UG/L	12/21/89	Hexachlorocyclopentadiene
125TD-4	89.14193	67721	< 10.	UG/L	12/21/89	Hexachloroethane
125TD-4	89.14193	193395	< 10.	UG/L	12/21/89	Indeno(1,2,3-cd)pyrene
125TD-4	89.14193	78591	< 10.	UG/L	12/21/89	Isophorone
125TD-4	89.14193	534521	< 10.	UG/L	12/21/89	2-Methyl-4,6-dinitrophenol
125TD-4	89.14193	91576	< 10.	UG/L	12/21/89	2-Methylnaphthalene
125TD-4	89.14193	95487	< 10.	UG/L	12/21/89	2-Methylphenol
125TD-4	89.14193	106445	< 10.	UG/L	12/21/89	4-Methylphenol
125TD-4	89.14193	91203	< 10.	UG/L	12/21/89	Naphthalene
125TD-4	89.14193	88744	< 10.	UG/L	12/21/89	2-Nitroaniline
125TD-4	89.14193	99092	< 10.	UG/L	12/21/89	3-Nitroaniline
125TD-4	89.14193	100016	< 10.	UG/L	12/21/89	4-Nitroaniline
125TD-4	89.14193	98953	< 10.	UG/L	12/21/89	Nitrobenzene
125TD-4	89.14193	100027	< 10.	UG/L	12/21/89	p-Nitrophenol
125TD-4	89.14193	100027	< 10.	UG/L	12/21/89	4-Nitrophenol
125TD-4	89.14193	88755	< 10.	UG/L	12/21/89	2-Nitrophenol
125TD-4	89.14193	621647	< 10.	UG/L	12/21/89	N-Nitrosodi-n-propylamine
125TD-4	89.14193	62759	< 10.	UG/L	12/21/89	N-Nitrosodimethylamine
125TD-4	89.14193	86306	< 10.	UG/L	12/21/89	N-Nitrosodiphenylamine
125TD-4	89.14193	87865	< 10.	UG/L	12/21/89	Pentachlorophenol
125TD-4	89.14193	85018	< 10.	UG/L	12/21/89	Phenanthrene
125TD-4	89.14193	108952	< 10.	UG/L	12/21/89	Phenol
125TD-4	89.14193	129000	< 10.	UG/L	12/21/89	Pyrene
125TD-4	89.14193	120821	< 10.	UG/L	12/21/89	1,2,4-Trichlorobenzene

125TD-4	89.14193	88062	< 10.	UG/L	12/21/89	2,4,6-Trichlorophenol
125TD-4	89.14193	95954	< 10.	UG/L	12/21/89	2,4,5-Trichlorophenol
125TD-4	89.14193	105679	< 10.	UG/L	12/21/89	2,4-Xylenol

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********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.14196	83329	< 10.		UG/L	12/21/89	UNDER CONTROL	Acenaphthene
89.14196	208968	< 10.		UG/L	12/21/89	UNDER CONTROL	Acenaphthylene
89.14196	62533	< 10.		UG/L	12/21/89	UNDER CONTROL	Aniline
89.14196	120127	< 10.		UG/L	12/21/89	UNDER CONTROL	Anthracene
89.14196	103333	< 10.		UG/L	12/21/89	UNDER CONTROL	Azobenzene
89.14196	56553	< 10.		UG/L	12/21/89	UNDER CONTROL	Benz(a)anthracene
89.14196	92875	< 10.		UG/L	12/21/89	UNDER CONTROL	m-Benzidine
89.14196	191242	< 10.		UG/L	12/21/89	UNDER CONTROL	Benzo(g,h,i)perylene

89.14196	50328	< 10.		UG/L	12/21/89	UNDER CONTROL	Benzo-a-pyrene
89.14196	205992	< 10.		UG/L	12/21/89	UNDER CONTROL	Benzo-b-fluoranthene
89.14196	207089	< 10.		UG/L	12/21/89	UNDER CONTROL	Benzo-k-fluoranthene
89.14196	65850	< 10.		UG/L	12/21/89	UNDER CONTROL	Benzoic acid
89.14196	100516	< 10.		UG/L	12/21/89	UNDER CONTROL	Benzyl alcohol
89.14196	111911	< 10.		UG/L	12/21/89	UNDER CONTROL	Bis(2-chloroethoxy)methane
89.14196	111444	< 10.		UG/L	12/21/89	UNDER CONTROL	Bis(2-chloroethyl)ether
89.14196	108601	< 10.		UG/L	12/21/89	UNDER CONTROL	Bis(2-chloroisopropyl)ether
89.14196	117817	< 10.		UG/L	12/21/89	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
89.14196	101553	< 10.		UG/L	12/21/89	UNDER CONTROL	4-Bromophenylphenyl ether
89.14196	85687	< 10.		UG/L	12/21/89	UNDER CONTROL	Butylbenzyl phthalate
89.14196	59507	97.	19.4	UG/L	12/21/89	UNDER CONTROL	4-Chloro-3-methylphenol
89.14196	106478	< 10.		UG/L	12/21/89	UNDER CONTROL	4-Chloroaniline
89.14196	91587	< 10.		UG/L	12/21/89	UNDER CONTROL	2-Chloronaphthalene
89.14196	95578	81.	16.2	UG/L	12/21/89	UNDER CONTROL	o-Chlorophenol
89.14196	7005723	< 10.		UG/L	12/21/89	UNDER CONTROL	4-Chlorophenylphenyl ether
89.14196	218019	< 10.		UG/L	12/21/89	UNDER CONTROL	Chrysene
89.14196	106445	< 10.		UG/L	12/21/89	UNDER CONTROL	p-Cresol
89.14196	84742	< 10.		UG/L	12/21/89	UNDER CONTROL	Di-n-butyl phthalate
89.14196	117840	< 10.		UG/L	12/21/89	UNDER CONTROL	Di-n-octyl phthalate
89.14196	53703	< 10.		UG/L	12/21/89	UNDER CONTROL	Dibenzo(a,h)anthracene
89.14196	132649	< 10.		UG/L	12/21/89	UNDER CONTROL	Dibenzofuran
89.14196	95501	< 10.		UG/L	12/21/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.14196	541731	< 10.		UG/L	12/21/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.14196	106467	< 10.		UG/L	12/21/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.14196	91941	< 10.		UG/L	12/21/89	UNDER CONTROL	3,3'-Dichlorobenzidine
89.14196	120832	81.	16.2	UG/L	12/21/89	UNDER CONTROL	2,4-Dichlorophenol
89.14196	84662	< 10.		UG/L	12/21/89	UNDER CONTROL	Diethyl phthalate
89.14196	131113	< 10.		UG/L	12/21/89	UNDER CONTROL	Dimethyl phthalate
89.14196	105679	77.	15.2	UG/L	12/21/89	UNDER CONTROL	2,4-Dimethylphenol
89.14196	51285	< 10.		UG/L	12/21/89	UNDER CONTROL	2,4-Dinitrophenol
89.14196	121142	< 10.		UG/L	12/21/89	UNDER CONTROL	2,4-Dinitrotoluene
89.14196	606202	< 10.		UG/L	12/21/89	UNDER CONTROL	2,6-Dinitrotoluene
89.14196	206440	< 10.		UG/L	12/21/89	UNDER CONTROL	Fluoranthene
89.14196	86737	< 10.		UG/L	12/21/89	UNDER CONTROL	Fluorene
89.14196	118741	< 10.		UG/L	12/21/89	UNDER CONTROL	HCB
89.14196	118741	< 10.		UG/L	12/21/89	UNDER CONTROL	Hexachlorobenzene
89.14196	87683	< 10.		UG/L	12/21/89	UNDER CONTROL	Hexachlorobutadiene
89.14196	77474	< 10.		UG/L	12/21/89	UNDER CONTROL	Hexachlorocyclopentadiene
89.14196	67721	< 10.		UG/L	12/21/89	UNDER CONTROL	Hexachloroethane
89.14196	193395	< 10.		UG/L	12/21/89	UNDER CONTROL	Indeno(1,2,3-cd)pyrene
89.14196	78591	< 10.		UG/L	12/21/89	UNDER CONTROL	Isophorone
89.14196	534521	91.	18.2	UG/L	12/21/89	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
89.14196	91576	< 10.		UG/L	12/21/89	UNDER CONTROL	2-Methylnaphthalene
89.14196	95487	< 10.		UG/L	12/21/89	UNDER CONTROL	2-Methylphenol

89.14196	106445	< 10.		UG/L	12/21/89	UNDER CONTROL	4-Methylphenol
89.14196	91203	< 10.		UG/L	12/21/89	UNDER CONTROL	Naphthalene
89.14196	99092	< 10.		UG/L	12/21/89	UNDER CONTROL	3-Nitroaniline
89.14196	88744	< 10.		UG/L	12/21/89	UNDER CONTROL	2-Nitroaniline
89.14196	100016	< 10.		UG/L	12/21/89	UNDER CONTROL	4-Nitroaniline
89.14196	98953	< 10.		UG/L	12/21/89	UNDER CONTROL	Nitrobenzene
89.14196	100027	100.	20.	UG/L	12/21/89	UNDER CONTROL	4-Nitrophenol
89.14196	88755	83.	16.6	UG/L	12/21/89	UNDER CONTROL	2-Nitrophenol
89.14196	100027	100.	20.	UG/L	12/21/89	UNDER CONTROL	p-Nitrophenol
89.14196	621647	< 10.		UG/L	12/21/89	UNDER CONTROL	N-Nitrosodi-n-propylamine
89.14196	62759	< 10.		UG/L	12/21/89	UNDER CONTROL	N-Nitrosodimethylamine
89.14196	86306	< 10.		UG/L	12/21/89	UNDER CONTROL	N-Nitrosodiphenylamine
89.14196	87865	60.	12.	UG/L	12/21/89	UNDER CONTROL	Pentachlorophenol
89.14196	85018	< 10.		UG/L	12/21/89	UNDER CONTROL	Phenanthrene
89.14196	108952	79.	15.8	UG/L	12/21/89	UNDER CONTROL	Phenol
89.14196	129000	< 10.		UG/L	12/21/89	UNDER CONTROL	Pyrene
89.14196	120821	< 10.		UG/L	12/21/89	UNDER CONTROL	1,2,4-Trichlorobenzene
89.14196	95954	< 10.		UG/L	12/21/89	UNDER CONTROL	2,4,5-Trichlorophenol
89.14196	88062	89.	17.8	UG/L	12/21/89	UNDER CONTROL	2,4,6-Trichlorophenol
89.14196	105679	77.	15.2	UG/L	12/21/89	UNDER CONTROL	2,4-Xylenol

SURROGATE RESULTS FOR EPA SEMIVOLATILES

2-Fluorophenol (CAS # =); EPA Range Limits: Water = 21-100 %, Soil = 25-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	65.	%	12/21/89	
89.14191	69.	%	12/21/89	
89.14192	63.	%	12/21/89	
89.14193	68.	%	12/21/89	
89.14196	75.	%	12/21/89	

Phenol-d5 (CAS # =); EPA Range Limits: Water = 10-94 %, Soil = 24-113 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	70.	%	12/21/89	
89.14191	69.	%	12/21/89	
89.14192	58.	%	12/21/89	
89.14193	69.	%	12/21/89	
89.14196	78.	%	12/21/89	

Nitrobenzene-d5 (CAS # =); EPA Range Limits: Water = 35-114 %, Soil = 23-120 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	80.	%	12/21/89	
89.14191	81.	%	12/21/89	
89.14192	79.	%	12/21/89	
89.14193	78.	%	12/21/89	
89.14196	83.	%	12/21/89	

2-Fluorobiphenyl (CAS # =); EPA Range Limits: Water = 43-116 %, Soil = 30-115 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	85.	%	12/21/89	
89.14191	88.	%	12/21/89	
89.14192	90.	%	12/21/89	
89.14193	88.	%	12/21/89	
89.14196	94.	%	12/21/89	

2,4,6-Tribromophenol (CAS # =); EPA Range Limits: Water = 10-123 %, Soil = 19-122 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	75.	%	12/21/89	
89.14191	75.	%	12/21/89	
89.14192	72.	%	12/21/89	
89.14193	73.	%	12/21/89	
89.14196	87.	%	12/21/89	

p-Terphenyl-d14 (CAS # =); EPA Range Limits: Water = 33-141 %, Soil = 18-137 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.14190	98.	%	12/21/89	
89.14191	100.	%	12/21/89	
89.14192	79.	%	12/21/89	
89.14193	83.	%	12/21/89	
89.14196	99.	%	12/21/89	

Analyst	Section Leader	QA Officer
1/2/90	1/2/90	1-2-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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POLYCHLORINATED BIPHENYL ANALYSES

REPORT NUMBER: 3666

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: ESG on 15-Aug-1989

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Dee Seitz

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

SUMMARY of TOTAL PCB's for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-1	89.14190	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor
125TD-2	89.14191	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor
125TD-3	89.14192	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor
125TD-4	89.14193	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125TD-1	89.14190	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor
125TD-1	89.14190	53469219	< 1.		UG/L	8/14/89		Aroclor 1242
125TD-1	89.14190	11097691	< 1.		UG/L	8/14/89		Aroclor 1254
125TD-1	89.14190	11096825	< 1.		UG/L	8/14/89		Aroclor 1260
125TD-2	89.14191	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor
125TD-2	89.14191	53469219	< 1.		UG/L	8/14/89		Aroclor 1242
125TD-2	89.14191	11097691	< 1.		UG/L	8/14/89		Aroclor 1254
125TD-2	89.14191	11096825	< 1.		UG/L	8/14/89		Aroclor 1260
125TD-3	89.14192	1336363	< 1.		UG/L	8/14/89		Mixed-Aroclor
125TD-3	89.14192	53469219	< 1.		UG/L	8/14/89		Aroclor 1242
125TD-3	89.14192	11097691	< 1.		UG/L	8/14/89		Aroclor 1254
125TD-3	89.14192	11096825	< 1.		UG/L	8/14/89		Aroclor 1260

125TD-4	89.14193	1336363	< 1.	UG/L	8/14/89	Mixed-Aroclor
125TD-4	89.14193	53469219	< 1.	UG/L	8/14/89	Aroclor 1242
125TD-4	89.14193	11097691	< 1.	UG/L	8/14/89	Aroclor 1254
125TD-4	89.14193	11096825	< 1.	UG/L	8/14/89	Aroclor 1260

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REPORT NUMBER: 3666 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: ESG on 15-Aug-1989

REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Dee Seitz

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.01370	00.01370	1336363	3.75	0.75	UG/L	3.4	0.8	8/14/89	UNDER CONTROL	Mixed-Aroclor
00.01370	00.01370	53469219	< 1.		UG/L			8/14/89	UNDER CONTROL	Aroclor 1242
00.01370	00.01370	11097691	< 1.		UG/L			8/14/89	UNDER CONTROL	Aroclor 1254
00.01370	00.01370	11096825	3.75	0.75	UG/L	3.38	0.81	8/14/89	UNDER CONTROL	Aroclor 1260

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.14195	1336363	47.	9.4	UG/L	8/14/89	UNDER CONTROL	Mixed-Aroclor
89.14195	53469219	< 1.		UG/L	8/14/89	UNDER CONTROL	Aroclor 1242
89.14195	11097691	< 1.		UG/L	8/14/89	UNDER CONTROL	Aroclor 1254
89.14195	11096825	47.	9.4	UG/L	8/14/89	UNDER CONTROL	Aroclor 1260

Dee Seitz
Analyst
8/16/89

Section Leader
8-17-89

mag
QA Officer
8-17-89

METAL ANALYSES

REPORT NUMBER: 3794

Rec'd 4-30-90

TA-35 TSL-125

Bldg. 125 Trench Decon

Rinse #2 of 2

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: TMF on 7-Sep-1989

REQUEST NUMBER: 6956 MATRIX: W ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125TD-1	89.14190	AG	3.	3.	UG/L	9/07/89	
125TD-1	89.14190	AS	2.	2.	UG/L	9/07/89	
125TD-1	89.14190	BA	0.16	0.1	MG/L	9/07/89	
125TD-1	89.14190	CD	< 10.		UG/L	9/07/89	
125TD-1	89.14190	CR	0.11	0.04	MG/L	9/07/89	
125TD-1	89.14190	HG	< 0.2		UG/L	8/31/89	
125TD-1	89.14190	HG	< 0.2		UG/L	8/31/89	
125TD-1	89.14190	PB	< 0.1		MG/L	9/07/89	
125TD-1	89.14190	SE	< 1.		UG/L	9/07/89	
125TD-2	89.14191	AG	< 3.		UG/L	9/07/89	
125TD-2	89.14191	AS	< 2.		UG/L	9/07/89	
125TD-2	89.14191	BA	0.19	0.1	MG/L	9/07/89	
125TD-2	89.14191	CD	< 10.		UG/L	9/07/89	
125TD-2	89.14191	CR	< 0.04		MG/L	9/07/89	
125TD-2	89.14191	HG	< 0.2		UG/L	8/31/89	
125TD-2	89.14191	PB	< 0.1		MG/L	9/07/89	
125TD-2	89.14191	SE	< 1.		UG/L	9/07/89	
125TD-3	89.14192	AG	< 3.		UG/L	9/07/89	
125TD-3	89.14192	AS	2.	2.	UG/L	9/07/89	
125TD-3	89.14192	BA	0.22	0.1	MG/L	9/07/89	
125TD-3	89.14192	CD	< 10.		UG/L	9/07/89	
125TD-3	89.14192	CR	0.063	0.04	MG/L	9/07/89	
125TD-3	89.14192	HG	< 0.2		UG/L	8/31/89	
125TD-3	89.14192	PB	< 0.1		MG/L	9/07/89	
125TD-3	89.14192	SE	< 1.		UG/L	9/07/89	
125TD-4	89.14193	AG	< 3.		UG/L	9/07/89	
125TD-4	89.14193	AS	2.	2.	UG/L	9/07/89	
125TD-4	89.14193	BA	0.25	0.1	MG/L	9/07/89	
125TD-4	89.14193	CD	< 10.		UG/L	9/07/89	
125TD-4	89.14193	CR	0.1	0.04	MG/L	9/07/89	
125TD-4	89.14193	HG	< 0.2		UG/L	8/31/89	
125TD-4	89.14193	PB	< 0.1		MG/L	9/07/89	
125TD-4	89.14193	SE	< 1.		UG/L	9/07/89	

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REPORT NUMBER: 3794 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: TMF on 7-Sep-1989

REQUEST NUMBER: 6956 MATRIX: W ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE
00.01010	00.01010	AS	29.5	6.	UG/L	27.	3.	9/07/89 UNDER CONTROL
00.01010	00.01010	AS	29.6	6.	UG/L	27.	3.	9/07/89 UNDER CONTROL
00.01010	00.01010	SE	10.8	2.	UG/L	11.	2.	9/07/89 UNDER CONTROL
00.01010	00.01010	SE	9.6	2.	UG/L	11.	2.	9/07/89 UNDER CONTROL
00.01026	00.01026	BA	1.26	0.1	MG/L	1.2	0.08	9/07/89 UNDER CONTROL
00.01026	00.01026	BA	1.17	0.1	MG/L	1.2	0.08	9/07/89 UNDER CONTROL
00.01026	00.01026	BA	1.21	0.1	MG/L	1.2	0.08	9/07/89 UNDER CONTROL
00.01036	00.01036	CD	26.	6.	UG/L	25.	2.	9/07/89 UNDER CONTROL
00.01036	00.01036	CD	24.	4.	UG/L	25.	2.	9/07/89 UNDER CONTROL
00.01036	00.01036	CD	23.	4.	UG/L	25.	2.	9/07/89 UNDER CONTROL
00.01036	00.01036	CR	97.	40.	UG/L	100.	8.	9/07/89 UNDER CONTROL
00.01036	00.01036	PB	80.	50.	UG/L	100.	8.	9/07/89 UNDER CONTROL
00.01036	00.01036	PB	80.	50.	UG/L	100.	8.	9/07/89 UNDER CONTROL
00.98805	00.98805	AG	0.493	0.05	MG/L	0.5	0.05	9/07/89 UNDER CONTROL
00.98805	00.98805	AG	0.502	0.05	MG/L	0.5	0.05	9/07/89 UNDER CONTROL
00.99929	00.99929	HG	2.2	0.2	UG/L	2.5	0.3	9/07/89 UNDER CONTROL
00.99929	00.99929	HG	2.3	0.2	UG/L	2.5	0.3	9/07/89 UNDER CONTROL
00.99929	00.99929	HG	2.3	0.2	UG/L	2.5	0.3	9/05/89 UNDER CONTROL
00.99929	00.99929	HG	2.2	0.2	UG/L	2.5	0.3	9/05/89 UNDER CONTROL
00.99929	00.99929	HG	2.2	0.2	UG/L	2.5	0.3	9/07/89

							UNDER CONTROL
00.99929	00.99929 HG	2.2	0.2	UG/L	2.5	0.3	9/05/89
							UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.14093	AG	0.74	0.03	UG/ML	9/07/89	UNDER CONTROL
89.14093	AS	0.75	0.16	UG/ML	9/07/89	UNDER CONTROL
89.14093	BA	1.3	0.1	UG/ML	9/07/89	UNDER CONTROL
89.14093	CD	0.69	0.14	UG/ML	9/07/89	UNDER CONTROL
89.14093	CR	1.4	0.1	UG/ML	9/07/89	UNDER CONTROL
89.14093	PB	1.3	0.1	UG/ML	9/07/89	UNDER CONTROL
89.14093	SE	1.5	0.2	UG/ML	9/07/89	UNDER CONTROL
89.14094	HG	1.6	0.2	UG/L	8/31/89	OUT OF CONTROL

See below - Certified Value 3.2 ± 0.3 mag

Analyst: [signature] Section Leader: [signature] QA Officer: mag

Date: 9-12-89 Date: 9/13/89 Date: 9-13-89

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

QC sample rerun 89.14094 HG 2.7 ± 0.3 IN CONTROL

mag

REPORT NUMBER: 3867 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: TMF on 12-Sep-1989

ANALYSIS: HG REQUEST NUMBER: 6956 MATRIX: WW ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7450

There were no open (non-blind) Quality Assurance materials run with the samples reported above for one of the following reasons

____ Only qualitative data requested

____ No QA samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.14094	2.7	0.3	UG/L	9/12/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
9-12-89	9/15/89	9-13-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

LAUR 91-2600

CLOSURE CERTIFICATION REPORT
TA-35 TSL-125 SURFACE IMPOUNDMENT

Volume II

Los Alamos National Laboratory
Los Alamos, New Mexico

July 31, 1991

BENCHMARK
ENVIRONMENTAL CORPORATION

ENCLOSURE 4-B

SOIL SAMPLES: IMMEDIATELY BELOW IMPOUNDMENT LINER

DRAFT

TA 55 TSL-57
Sample Characterization

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7773

I. PRESAMPLING CONFERENCE

Program Code W57R

No. Samples Expected 15ea Soils } VOAs, SVOAs, PCB, EP tox metals

Submission Date 6/13/89

Completion Date 6-30-89

Chain of Custody? No

Special Protocol? *(EPA etc.)* None

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

Container Type Glass/Teflon Preservative None
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None Refrigerate Freeze Darkness

Received 6/16/89

Sample Hazards Present? *(Circle one or more)*
No hazard Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return _____ Discard ✓
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S. McLin
Customer Phone 5-1721 MS K490
Date 6-12-89

HSE-9 Section Leader C. [illegible] for S. [illegible] Organic
McWilliams Inorganic
_____ Radiochem

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

III. SAMPLE RECEIPT

Signature Elizabeth A. Jones Date 6/15/89 Total No. Samples Received 12 + 4QC

HSE-9 Sample No. Range 89.13340 to ~~89.13354~~ 89.13351, 89.13376 – 89.13378

Customer Sample No. Range 125L-1 to 125L-12.

Los Alamos
Los Alamos National Laboratory

HSE-9 Analytical Chemistry Request

7773

Requestor	Program Code	Sample Owner	Date	Total No. Samples
HSE-8	W57R	SGM	~~6-12-89~~ 6/14/89	~~15~~ 12

Sample Numbers	Matrix	Analysis	Tech	Analyst	Priority	Remarks
89.13340-~~89.13354~~ 89.13351	SS	VOA's	PT GC/MS	CPR	1	VOA's
	SS	SVOA	GC/MS	MWK	1	Semi-VOA's
	SS	1336363	ECGC	DMS	1	PCB's
	SS	AG	ICPES ~~FAA~~	JDM ~~FMT~~		EPTOX ~~EXTRN~~
		BA				
		CR				
		CD				
		PB				
		~~AS~~	~~ETVAA~~			
		SE				
		HG	CVAA	TMF		
89.13355	SS	1336363	ECGC	DMS	1	~~[illegible]~~ PCBs
89.13378	SS	AG	ICPES	JDM		EPTOX
		BA				
		CR				
		CD				
		PB				
		AS				
		SE				set A = EPTOX
		HG	CVAA	TMF		set B = SVOA
89.13376-89.13377	SS	VOA	PH GC/MS	CPR	1	set C = VOA
						set D = PCB

VOLATILE ORGANIC ANALYSES

Summary for Request 89.7773

The following soil samples were analyzed for Volatile Organic Components (VOC's) using a modified EPA 524.2 Heated Purge & Trap (P/T) GC/MS method of analysis:

89.13340
89.13341
89.13342
89.13343
89.13344
89.13345
89.13346
89.13347
89.13348
89.13349
89.13350
89.13351

The samples were prepared by weighing-out approximately 5.0 gram aliquots of each sample into separate 5 ml VOA purge tubes. 5.0 mls of deionized water containing 10 ul of the ISM/PSS mixture was added to each VOA tube containing a sample, mixed with a glass stirring rod and connected to the P/T device for analysis.

Results:

	Components	Conc. (ug/Kg)	LOQ
89.13340	1,1-Dichloroethene	160	20
	Carbon Disulfide	2,200	20
	1,1,1-Trichloroethane	13,000	100
	Tetrachloroethene	1,800	20
	1,1,2-Trichloro-1,2,2-Trifluoroethane	T	NQ
89.13341	1,1-Dichloroethene	32	20
	Carbon Disulfide	880	20
	1,1,1-Trichloroethane	4,200	100
	Tetrachloroethene	1,100	20
	1,1,2-Trichloro-1,2,2-Trifluoroethane	T	NQ
89.13342	1,1-Dichloroethene	1,200	20
	Carbon Disulfide	640	20
	1,1,1-Trichloroethane	71,000	100
	11,1,2-Trichloro-1,2,2-Trifluoroethane	T	NQ
89.13343	Carbon Disulfide	840	20
	1,1,1-Trichloroethane	1,000	100
	1,1,2-Trichloro-1,2,2-Trifluoroethane	T	NQ
	Tetrahydrofuran	T	NQ
	1-Hexanol, 2-ethyl	T	NQ

	Component	Conc. (ug/Kg)	LOQ
89.13344	Acetone	490	20
	Carbon Disulfide	570	20
	1,1,1-Trichloroethane	170	100
	2-Hexanone	250	200
	1,1,2-Trichloro-1,2,2-Trifluoroethane	T	NQ
	2-Heptanone	T	NQ
	2-Heptanone, 6-methyl	T	NQ
89.13345	2-Butanone	45	10
	1,1,1-Trichloroethane	20	10
	Tetrahydrofuran	T	NQ
	2-Heptanone, 6-methyl	T	NQ
89.13346	None Detected		
89.13347	Acetone	120	10
	Carbon Disulfide	270	2
	1,1,1-Trichloroethane	140	10
	1,1,2-Trichloro-1,2,2-Trifluoroethane	T	NQ
	2-Heptanone, 6-methyl	T	NQ
	2-Heptanone	T	NQ
89.13348	1,1,1-Trichloroethane	15	10
89.13349	Carbon Disulfide	89	2
	2-Butanone	120	10
	1,1,1-Trichloroethane	23	10
	2-Hexanone	38	20
89.13350	Acetone	1,500	2
	2-Butanone	1,500	10
	1,1,1-Trichloroethane	63	10
	4-Methyl-2-Pentanone	48	10
	2-Hexanone	240	20
	Tetrachloroethene	8.8	2
	2-Heptanone	T	NQ
	2-Heptanone, 6-methyl	T	NQ
	2-Hexanone	T	NQ
	2-Nonanone	T	NQ
89.13351	1,1,1-Trichloroethane	17	10

LOQ = Limit of Quantitation
T = Tentative Identification
NQ = Not Quantified

All tentative identifications are based solely upon spectral comparison of the sample spectrum to a library search matched spectra. The tentatively identified components are NOT compared to actual standards of the identified components. Therefore, these identifications are only tentative. Misidentifications are possible with this technique.

QC Summary:

Sample #89.13376 and #89.13377 were received from Marybeth Phillips and analyzed with the soil samples in this request group. The results are as follows:

Component	Conc. Added,ug/kg	Recovery,ug/kg (%)
		89.13377
1 Carbon Tetrachloride	150	46.5 (31%)
2 1,3-Dichloropropane	130	138 (106%)
3 Chlorodibromomethane	140	138 (99%)
4 Bromoform	150	255 (170%)
5 Toluene	170	164 (96%)
6 2-Hexanone	140	261 (186%)
7 1,1,2,2-Tetrachloroethane	150	14 (9%)
8 4-Chlorotoluene	170	300 (177%)

Sample #89.13376 did not purge/desorb properly. Therefore, there is no recovery data available for this sample.

Sample #89.13339 (Request #89.7851) was used as the matrix spike media by adding 10ul of the Matrix Spike Mix to 2 separate 5.0 gram sample aliquots. These served as the matrix spike and matrix spike duplicate. The results are listed in the summary report for Request #89.7851. Please refer to either the request folder or C. Rzeszutko's logbook (#R7526 p. 109) for a copy of this report.

July 11, 1989

7/14/89

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13350 HEATED *CORRECTED WEIGHT 5.001 GMS
REQUEST SHEET: RS 7773 CPR 5.2520G/5MLS WATER+ISM/PSS 06-19-8
DATA FILE NAME: >V6I09::D7
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890619 23:22
QUANTITATION DATE/TIME: 890626 12:14
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	94.9	189.7	70-121
TOLUENE d-8	50.0	56.8	113.5	81-117
4-BROMOFLUOROBENZENE	50.0	50.9	101.8	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
1548.9	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
<LOQ	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
1538.1	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	594-20-7	10
63.1	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13350 HEATED
REQUEST SHEET: RS 7773 CPR 5.2520G/5MLS WATER+ISM/PSS 06-19-8
DATA FILE NAME: >V6I09::D7

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
48.5	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
239.7	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
8.8	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative Identifications: 2-Heptanone CAS# 110430
2-Heptanone, 6-Methyl CAS# 928687

2-Hexanone CAS# 105420
2-Nonanone CAS# 821556

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13351 HEATED *CORRECTED WEIGHT 4.606 GMS
REQUEST SHEET: RS 7773 CPR 5.0466G/5MLS WATER+ISM/PSS 06-19-8
DATA FILE NAME: >V6I10::D7
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890620 00:21
QUANTITATION DATE/TIME: 890626 12:22
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	58.4	116.9	70-121
TOLUENE d-8	50.0	59.0	118.0	81-117
4-BROMOFLUOROBENZENE	50.0	49.0	97.9	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
<LOQ	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
<LOQ	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	594-20-7	10
16.9	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13351 HEATED
REQUEST SHEET: RS 7773 CPR 5.0466G/5MLS WATER+ISM/PSS 06-19-8
DATA FILE NAME: >V6I10::D7

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS:

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13377 HEATED *CORRECTED WEIGHT 3.406 GMS
REQUEST SHEET: RS 7773 CPR 3.4056G/5MLS WATER+ISM/PSS 06-19-8
DATA FILE NAME: >V6I07::D2
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890619 21:22
QUANTITATION DATE/TIME: 890626 12:09
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	35.7	71.4	70-121
TOLUENE d-8	50.0	61.4	122.8	81-117
4-BROMOFLUOROBENZENE	50.0	83.4	166.8	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***		
<LOQ	Chloromethane	74-87-3	10		
<LOQ	Vinyl Chloride	75-01-4	2		
<LOQ	Bromomethane	74-83-9	2		
<LOQ	Chloroethane	75-00-3	2		
124.8	Acetone	67-64-1	2	—	
<LOQ	Trichlorofluoromethane	75-69-4	2		
<LOQ	1,1-Dichloroethene	75-35-4	2		
<LOQ	Methylene Chloride	75-09-2	10		
<LOQ	Carbon Disulfide	75-15-0	2		
<LOQ	t-1,2-Dichloroethene	156-60-5	2		
<LOQ	1,1-Dichloroethane	75-34-3	2		
<LOQ	c-1,2-Dichloroethene	156-59-4	2		
<LOQ	Bromochloromethane	74-97-5	2		
<LOQ	Chloroform	67-66-3	2		
<LOQ	1,2-Dichloroethane	107-06-2	2		
<LOQ	1,1-Dichloropropene	563-58-6	2		
<LOQ	Vinyl Acetate	108-05-4	10		
169.2	2-Butanone (MEK)	78-93-3	10	—	
<LOQ	2,2-Dichloropropane	590-20-7	10		
<LOQ	1,1,1-Trichloroethane	71-55-6	10		
46.5	Carbon Tetrachloride	56-23-5	2	150	31%
<LOQ	Benzene	71-43-2	2		
<LOQ	1,2-Dichloropropane	78-87-5	2		
103.1	Trichloroethene	79-01-6	2	—	
<LOQ	Dibromomethane	74-95-3	2		
<LOQ	Bromodichloromethane	75-27-4	2		
<LOQ	t-1,3-Dichloropropene	1006-10-26	10		
<LOQ	c-1,3-Dichloropropene	1006-10-15	10		
<LOQ	1,1,2-Trichloroethane	79-00-5	2		
138.3	1,3-Dichloropropane	142-28-9	2	130	106%
138.4	Chlorodibromomethane	124-48-1	2	140	99%

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13377 HEATED
REQUEST SHEET: RS 7773 CPR 3.4056G/5MLS WATER+ISM/PSS 06-19-8
DATA FILE NAME: >V6I07::D2

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***		
254.9	Bromoform	75-25-2	2	150	170%
43.7	4-Methyl-2-Pentanone (MIK)	10-81-1	10	—	
164.0	Toluene	108-88-3	2	170	96%
260.9	2-Hexanone	59-17-86	20	140	156
<LOQ	1,2-Dibromomethane	74-95-3	2		
<LOQ	Tetrachloroethene	127-18-4	2		
<LOQ	Chlorobenzene	108-90-7	2		
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2		
<LOQ	1-Chlorohexane	544-10-5	200		
7.8	Ethylbenzene	100-41-4	2		
<LOQ	m,p-Xylene (Total)	108-38-3	2	—	
6.9	o-Xylene	95-47-6	2		
14.0	Styrene	100-42-5	2	—	
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10	150	9%
<LOQ	1,2,3-Trichloropropane	96-18-4	2		
<LOQ	Isopropylbenzene	98-82-8	2		
<LOQ	Bromobenzene	108-86-1	2		
<LOQ	n-Propylbenzene	103-65-1	2		
<LOQ	2-Chlorotoluene	95-49-8	2		
300.8	4-Chlorotoluene	106-43-4	2	170	177%
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2		
<LOQ	tert-Butylbenzene	98-06-6	2		
<LOQ	1,2,4-Trimethylbenzene	98-63-6	2		
<LOQ	sec-Butylbenzene	135-98-8	2		
<LOQ	1,3-Dichlorobenzene	541-73-1	2		
<LOQ	1,4-Dichlorobenzene	106-46-7	2		
<LOQ	p-Isopropyltoluene	99-87-6	2		
<LOQ	1,2-Dichlorobenzene	95-50-1	2		
<LOQ	n-Butylbenzene	104-51-8	2		
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2		
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2		
<LOQ	Napthalene	91-20-3	2		
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2		
<LOQ	Hexachlorobutadiene	87-68-3	2		

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS:

mag 7/7/89

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13347 HEATED *CORRECTED WEIGHT 4.739 GMS
REQUEST SHEET: RS 7773 CPR 4.6226G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q15::D3
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890627 23:52
QUANTITATION DATE/TIME: 890628 00:51
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	43.0	86.0	70-121
TOLUENE d-8	50.0	38.6	77.2	81-117
4-BROMOFLUOROBENZENE	50.0	23.0	46.0	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
106.5	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
250.3	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
<LOQ	2-Butanone (MEK)	78-93-3	10
126.7	2,2-Dichloropropane	594-20-7	10
<LOQ	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13347 HEATED
REQUEST SHEET: RS 7773 CPR 4.6226G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q15::D3

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS:

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13347 HEATED
REQUEST SHEET: RS 7773 CPR 4.6226G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q15::D3

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
~~12.5~~ <LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative Identifications: 1,1,2-Trichloro-1,2,2-Trifluoro Ethane CAS# 76131
2-Heptanone, 6-methyl CAS# 928687

2-Heptanone CAS# 110430

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13345 HEATED *CORRECTED WEIGHT 4.676 GMS
REQUEST SHEET: RS 7773 CPR 4.9564G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J09::D4
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890620 16:52
QUANTITATION DATE/TIME: 890620 17:52
CALIBRATION DATE/TIME: 890616 13:34

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	45.5	91.1	70-121
TOLUENE d-8	50.0	58.3	116.5	81-117
4-BROMOFLUOROBENZENE	50.0	53.8	107.6	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
<LOQ	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
<LOQ	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
45.2	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	594-20-7	10
20.4	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13345 HEATED
REQUEST SHEET: RS 7773 CPR 4.9564G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J09::D4

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
~~9.0~~ <LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative Identifications: Tetrahydrofuran CAS # 109999
2-Heptanone, 6-Methyl CAS # 928687

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13346 HEATED *CORRECTED WEIGHT 4.683 GMS
REQUEST SHEET: RS 7773 CPR 5.0114G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J10::D4
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890620 17:52
QUANTITATION DATE/TIME: 890620 18:52
CALIBRATION DATE/TIME: 890616 13:34

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	67.6	135.2	70-121
TOLUENE d-8	50.0	273.5	547.0	81-117
4-BROMOFLUOROBENZENE	50.0	257.0	514.0	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
<LOQ	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
<LOQ	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	594-20-7	10
<LOQ	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13346 HEATED
REQUEST SHEET: RS 7773 CPR 5.0114G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J10::D4

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS:

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13348 HEATED *CORRECTED WEIGHT 4.739 GMS
REQUEST SHEET: RS 7773 CPR 4.9234G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J12::D4
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890620 19:52
QUANTITATION DATE/TIME: 890620 20:51
CALIBRATION DATE/TIME: 890616 13:34

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	41.0	81.9	70-121
TOLUENE d-8	50.0	71.2	142.5	81-117
4-BROMOFLUOROBENZENE	50.0	72.8	145.7	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
<LOQ	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
<LOQ	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
<LOQ	2-Butanone (MEK)	78-93-3	10
14.6	2,2-Dichloropropane	594-20-7	10
<LOQ	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13348 HEATED
REQUEST SHEET: RS 7773 CPR 4.9234G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J12::D4

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS:

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13349 HEATED *CORRECTED WEIGHT 4.707 GMS
REQUEST SHEET: RS 7773 CPR 5.0973G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J13::D4
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890620 20:52
QUANTITATION DATE/TIME: 890620 21:51
CALIBRATION DATE/TIME: 890616 13:34

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	24.5	49.0	70-121
TOLUENE d-8	50.0	59.0	117.9	81-117
4-BROMOFLUOROBENZENE	50.0	51.0	102.0	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	10
<LOQ	Vinyl Chloride	75-01-4	2
<LOQ	Bromomethane	74-83-9	2
<LOQ	Chloroethane	75-00-3	2
<LOQ	Acetone	67-64-1	2
<LOQ	Trichlorofluoromethane	75-69-4	2
<LOQ	1,1-Dichloroethene	75-35-4	2
<LOQ	Methylene Chloride	75-09-2	10
88.8	Carbon Disulfide	75-15-0	2
<LOQ	t-1,2-Dichloroethene	156-60-5	2
<LOQ	1,1-Dichloroethane	75-34-3	2
<LOQ	c-1,2-Dichloroethene	156-59-2	2
<LOQ	Bromochloromethane	74-97-5	2
<LOQ	Chloroform	67-66-3	2
<LOQ	1,2-Dichloroethane	107-06-2	2
<LOQ	1,1-Dichloropropene	563-58-6	2
<LOQ	Vinyl Acetate	108-05-4	10
118.9	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	594-20-7	10
22.5	1,1,1-Trichloroethane	71-55-6	10
<LOQ	Carbon Tetrachloride	56-23-5	2
<LOQ	Benzene	71-43-2	2
<LOQ	1,2-Dichloropropane	78-87-5	2
<LOQ	Trichloroethene	79-01-6	2
<LOQ	Dibromomethane	74-95-3	2
<LOQ	Bromodichloromethane	75-27-4	2
<LOQ	t-1,3-Dichloropropene	1006-10-26	10
<LOQ	c-1,3-Dichloropropene	1006-10-15	10
<LOQ	1,1,2-Trichloroethane	79-00-5	2
<LOQ	1,3-Dichloropropane	142-28-9	2
<LOQ	Chlorodibromomethane	124-48-1	2

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13349 HEATED
REQUEST SHEET: RS 7773 CPR 5.0973G/5MLS WATER+ISM/PSS 06-20-89
DATA FILE NAME: >V6J13::D4

TARGET COMPOUNDS

RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	10
<LOQ	Toluene	108-88-3	2
38.0	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
<LOQ	Tetrachloroethene	127-18-4	2
<LOQ	Chlorobenzene	108-90-7	2
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2
<LOQ	1-Chlorohexane	544-10-5	200
<LOQ	Ethylbenzene	100-41-4	2
<LOQ	m,p-Xylene (Total)	108-38-3	2
<LOQ	o-Xylene	95-47-6	2
<LOQ	Styrene	100-42-5	2
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10
<LOQ	1,2,3-Trichloropropane	96-18-4	2
<LOQ	Isopropylbenzene	98-82-8	2
<LOQ	Bromobenzene	108-86-1	2
<LOQ	n-Propylbenzene	103-65-1	2
<LOQ	2-Chlorotoluene	95-49-8	2
<LOQ	4-Chlorotoluene	106-43-4	2
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2
<LOQ	tert-Butylbenzene	98-06-6	2
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2
<LOQ	sec-Butylbenzene	135-98-8	2
<LOQ	1,3-Dichlorobenzene	541-73-1	2
<LOQ	1,4-Dichlorobenzene	106-46-7	2
<LOQ	p-Isopropyltoluene	99-87-6	2
<LOQ	1,2-Dichlorobenzene	95-50-1	2
<LOQ	n-Butylbenzene	104-51-8	2
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	2
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2
<LOQ	Napthalene	91-20-3	2
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2
<LOQ	Hexachlorobutadiene	87-68-3	2

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS:

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13340 HEATED *CORRECTED WEIGHT .273 GMS
REQUEST SHEET: RS 7773 CPR 0.3433G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q09::D3
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890627 17:55
QUANTITATION DATE/TIME: 890627 18:54
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	33.7	67.4	70-121
TOLUENE d-8	50.0	49.2	98.3	81-117
4-BROMOFLUOROBENZENE	50.0	40.0	80.0	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	100
<LOQ	Vinyl Chloride	75-01-4	20
<LOQ	Bromomethane	74-83-9	20
<LOQ	Chloroethane	75-00-3	20
<LOQ	Acetone	67-64-1	20
158.8	Trichlorofluoromethane	75-69-4	20
<LOQ	1,1-Dichloroethene	75-35-4	20
2180.4	Methylene Chloride	75-09-2	100
<LOQ	Carbon Disulfide	75-15-0	20
<LOQ	t-1,2-Dichloroethene	156-60-5	20
<LOQ	1,1-Dichloroethane	75-34-3	20
<LOQ	c-1,2-Dichloroethene	156-59-2	20
<LOQ	Bromochloromethane	74-97-5	20
<LOQ	Chloroform	67-66-3	20
<LOQ	1,2-Dichloroethane	107-06-2	20
<LOQ	1,1-Dichloropropene	563-58-6	20
<LOQ	Vinyl Acetate	108-05-4	100
<LOQ	2-Butanone (MEK)	78-93-3	100
12503.1	2,2-Dichloropropane	594-20-7	100
<LOQ	1,1,1-Trichloroethane	71-55-6	100
<LOQ	Carbon Tetrachloride	56-23-5	20
<LOQ	Benzene	71-43-2	20
<LOQ	1,2-Dichloropropane	78-87-5	20
<LOQ	Trichloroethene	79-01-6	20
<LOQ	Dibromomethane	74-95-3	20
<LOQ	Bromodichloromethane	75-27-4	20
<LOQ	t-1,3-Dichloropropene	1006-10-26	100
<LOQ	c-1,3-Dichloropropene	1006-10-15	100
<LOQ	1,1,2-Trichloroethane	79-00-5	20
<LOQ	1,3-Dichloropropane	142-28-9	20
<LOQ	Chlorodibromomethane	124-48-1	20

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13340 HEATED
REQUEST SHEET: RS 7773 CPR 0.3433G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q09::D3

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	20
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	100
<LOQ	Toluene	108-88-3	20
<LOQ	2-Hexanone	59-17-86	200
<LOQ	1,2-Dibromomethane	74-95-3	20
1752.8	Tetrachloroethene	127-18-4	20
<LOQ	Chlorobenzene	108-90-7	20
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	20
<LOQ	1-Chlorohexane	544-10-5	2000
<LOQ	Ethylbenzene	100-41-4	20
<LOQ	m,p-Xylene (Total)	108-38-3	20
<LOQ	o-Xylene	95-47-6	20
<LOQ	Styrene	100-42-5	20
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	100
<LOQ	1,2,3-Trichloropropane	96-18-4	20
<LOQ	Isopropylbenzene	98-82-8	20
<LOQ	Bromobenzene	108-86-1	20
<LOQ	n-Propylbenzene	103-65-1	20
<LOQ	2-Chlorotoluene	95-49-8	20
<LOQ	4-Chlorotoluene	106-43-4	20
<LOQ	1,3,5-Trimethylbenzene	108-67-8	20
<LOQ	tert-Butylbenzene	98-06-6	20
<LOQ	1,2,4-Trimethylbenzene	95-63-6	20
<LOQ	sec-Butylbenzene	135-98-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	p-Isopropyltoluene	99-87-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	n-Butylbenzene	104-51-8	20
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Napthalene	91-20-3	20
<LOQ	1,2,3-Trichlorobenzene	87-61-6	20
<LOQ	Hexachlorobutadiene	87-68-3	20

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative identification: 1,1,2-Trichloro-1,2,2-Trifluoro Ethane Cas# 76131

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13341 HEATED *CORRECTED WEIGHT .844 GMS
REQUEST SHEET: RS 7773 CPR 0.9684G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q10::D3
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890627 18:55
QUANTITATION DATE/TIME: 890627 19:54
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	55.8	111.5	70-121
TOLUENE d-8	50.0	61.5	123.1	81-117
4-BROMOFLUOROBENZENE	50.0	51.0	102.0	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	100
<LOQ	Vinyl Chloride	75-01-4	20
<LOQ	Bromomethane	74-83-9	20
<LOQ	Chloroethane	75-00-3	20
<LOQ	Acetone	67-64-1	20
<LOQ	Trichlorofluoromethane	75-69-4	20
32.4	1,1-Dichloroethene	75-35-4	20
<LOQ	Methylene Chloride	75-09-2	100
878.2	Carbon Disulfide	75-15-0	20
<LOQ	t-1,2-Dichloroethene	156-60-5	20
<LOQ	1,1-Dichloroethane	75-34-3	20
<LOQ	c-1,2-Dichloroethene	156-59-2	20
<LOQ	Bromochloromethane	74-97-5	20
<LOQ	Chloroform	67-66-3	20
<LOQ	1,2-Dichloroethane	107-06-2	20
<LOQ	1,1-Dichloropropene	563-58-6	20
<LOQ	Vinyl Acetate	108-05-4	100
<LOQ	2-Butanone (MEK)	78-93-3	100
4217.1	2,2-Dichloropropane	594-20-7	100
<LOQ	1,1,1-Trichloroethane	71-55-6	100
<LOQ	Carbon Tetrachloride	56-23-5	20
<LOQ	Benzene	71-43-2	20
<LOQ	1,2-Dichloropropane	78-87-5	20
<LOQ	Trichloroethene	79-01-6	20
<LOQ	Dibromomethane	74-95-3	20
<LOQ	Bromodichloromethane	75-27-4	20
<LOQ	t-1,3-Dichloropropene	1006-10-26	100
<LOQ	c-1,3-Dichloropropene	1006-10-15	100
<LOQ	1,1,2-Trichloroethane	79-00-5	20
<LOQ	1,3-Dichloropropane	142-28-9	20
<LOQ	Chlorodibromomethane	124-48-1	20

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13341 HEATED
REQUEST SHEET: RS 7773 CPR 0.9684G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q10::D3

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	20
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	100
<LOQ	Toluene	108-88-3	20
<LOQ	2-Hexanone	59-17-86	200
<LOQ	1,2-Dibromomethane	74-95-3	20
1072.0	Tetrachloroethene	127-18-4	20
<LOQ	Chlorobenzene	108-90-7	20
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	20
<LOQ	1-Chlorohexane	544-10-5	2000
<LOQ	Ethylbenzene	100-41-4	20
<LOQ	m,p-Xylene (Total)	108-38-3	20
<LOQ	o-Xylene	95-47-6	20
<LOQ	Styrene	100-42-5	20
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	100
<LOQ	1,2,3-Trichloropropane	96-18-4	20
<LOQ	Isopropylbenzene	98-82-8	20
<LOQ	Bromobenzene	108-86-1	20
<LOQ	n-Propylbenzene	103-65-1	20
<LOQ	2-Chlorotoluene	95-49-8	20
<LOQ	4-Chlorotoluene	106-43-4	20
<LOQ	1,3,5-Trimethylbenzene	108-67-8	20
<LOQ	tert-Butylbenzene	98-06-6	20
<LOQ	1,2,4-Trimethylbenzene	95-63-6	20
<LOQ	sec-Butylbenzene	135-98-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	p-Isopropyltoluene	99-87-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	n-Butylbenzene	104-51-8	20
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Napthalene	91-20-3	20
<LOQ	1,2,3-Trichlorobenzene	87-61-6	20
<LOQ	Hexachlorobutadiene	87-68-3	20

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative identifications: 1,1,2-Trichloro- 1,2,2-Trifluoro Ethane CAS# 76131

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13342 HEATED *CORRECTED WEIGHT .116 GMS
REQUEST SHEET: RS 7773 CPR 0.1396G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q11::D3
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890627 19:54
QUANTITATION DATE/TIME: 890627 20:54
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	40.7	81.4	70-121
TOLUENE d-8	50.0	59.2	118.4	81-117
4-BROMOFLUOROBENZENE	50.0	54.1	108.2	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	100
<LOQ	Vinyl Chloride	75-01-4	20
<LOQ	Bromomethane	74-83-9	20
<LOQ	Chloroethane	75-00-3	20
<LOQ	Acetone	67-64-1	20
1237.8	Trichlorofluoromethane	75-69-4	20
<LOQ	1,1-Dichloroethene	75-35-4	20
643.5	Methylene Chloride	75-09-2	100
<LOQ	Carbon Disulfide	75-15-0	20
<LOQ	t-1,2-Dichloroethene	156-60-5	20
<LOQ	1,1-Dichloroethane	75-34-3	20
<LOQ	c-1,2-Dichloroethene	156-59-2	20
<LOQ	Bromochloromethane	74-97-5	20
<LOQ	Chloroform	67-66-3	20
<LOQ	1,2-Dichloroethane	107-06-2	20
<LOQ	1,1-Dichloropropene	563-58-6	20
<LOQ	Vinyl Acetate	108-05-4	100
<LOQ	2-Butanone (MEK)	78-93-3	100
70603.9	2,2-Dichloropropane	594-20-7	100
<LOQ	1,1,1-Trichloroethane	71-55-6	100
<LOQ	Carbon Tetrachloride	56-23-5	20
<LOQ	Benzene	71-43-2	20
<LOQ	1,2-Dichloropropane	78-87-5	20
<LOQ	Trichloroethene	79-01-6	20
<LOQ	Dibromomethane	74-95-3	20
<LOQ	Bromodichloromethane	75-27-4	20
<LOQ	t-1,3-Dichloropropene	1006-10-26	100
<LOQ	c-1,3-Dichloropropene	1006-10-15	100
<LOQ	1,1,2-Trichloroethane	79-00-5	20
<LOQ	1,3-Dichloropropane	142-28-9	20
<LOQ	Chlorodibromomethane	124-48-1	20

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13342 HEATED
REQUEST SHEET: RS 7773 CPR 0.1396G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q11::D3

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	20
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	100
<LOQ	Toluene	108-88-3	20
<LOQ	2-Hexanone	59-17-86	200
<LOQ	1,2-Dibromomethane	74-95-3	20
<LOQ	Tetrachloroethene	127-18-4	20
<LOQ	Chlorobenzene	108-90-7	20
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	20
<LOQ	1-Chlorohexane	544-10-5	2000
<LOQ	Ethylbenzene	100-41-4	20
<LOQ	m,p-Xylene (Total)	108-38-3	20
<LOQ	o-Xylene	95-47-6	20
<LOQ	Styrene	100-42-5	20
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	100
<LOQ	1,2,3-Trichloropropane	96-18-4	20
<LOQ	Isopropylbenzene	98-82-8	20
<LOQ	Bromobenzene	108-86-1	20
<LOQ	n-Propylbenzene	103-65-1	20
<LOQ	2-Chlorotoluene	95-49-8	20
<LOQ	4-Chlorotoluene	106-43-4	20
<LOQ	1,3,5-Trimethylbenzene	108-67-8	20
<LOQ	tert-Butylbenzene	98-06-6	20
<LOQ	1,2,4-Trimethylbenzene	95-63-6	20
<LOQ	sec-Butylbenzene	135-98-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	p-Isopropyltoluene	99-87-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	n-Butylbenzene	104-51-8	20
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Napthalene	91-20-3	20
<LOQ	1,2,3-Trichlorobenzene	87-61-6	20
<LOQ	Hexachlorobutadiene	87-68-3	20

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative Identification: 1,1,2-Trichloro-1,2,2-Trifluoro Ethane Cas# 76131

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13343 HEATED *CORRECTED WEIGHT .442 GMS
REQUEST SHEET: RS 7773 CPR 0.4763G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q12::D3
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890627 20:54
QUANTITATION DATE/TIME: 890627 21:54
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	58.2	116.4	70-121
TOLUENE d-8	50.0	45.5	91.1	81-117
4-BROMOFLUOROBENZENE	50.0	35.2	70.4	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	100
<LOQ	Vinyl Chloride	75-01-4	20
<LOQ	Bromomethane	74-83-9	20
<LOQ	Chloroethane	75-00-3	20
<LOQ	Acetone	67-64-1	20
<LOQ	Trichlorofluoromethane	75-69-4	20
<LOQ	1,1-Dichloroethene	75-35-4	20
<LOQ	Methylene Chloride	75-09-2	100
837.7	Carbon Disulfide	75-15-0	20
<LOQ	t-1,2-Dichloroethene	156-60-5	20
<LOQ	1,1-Dichloroethane	75-34-3	20
<LOQ	c-1,2-Dichloroethene	156-59-2	20
<LOQ	Bromochloromethane	74-97-5	20
<LOQ	Chloroform	67-66-3	20
<LOQ	1,2-Dichloroethane	107-06-2	20
<LOQ	1,1-Dichloropropene	563-58-6	20
<LOQ	Vinyl Acetate	108-05-4	100
<LOQ	2-Butanone (MEK)	78-93-3	100
<LOQ	2,2-Dichloropropane	594-20-7	100
1003.2	1,1,1-Trichloroethane	71-55-6	100
<LOQ	Carbon Tetrachloride	56-23-5	20
<LOQ	Benzene	71-43-2	20
<LOQ	1,2-Dichloropropane	78-87-5	20
<LOQ	Trichloroethene	79-01-6	20
<LOQ	Dibromomethane	74-95-3	20
<LOQ	Bromodichloromethane	75-27-4	20
<LOQ	t-1,3-Dichloropropene	1006-10-26	100
<LOQ	c-1,3-Dichloropropene	1006-10-15	100
<LOQ	1,1,2-Trichloroethane	79-00-5	20
<LOQ	1,3-Dichloropropane	142-28-9	20
<LOQ	Chlorodibromomethane	124-48-1	20

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13343 HEATED
REQUEST SHEET: RS 7773 CPR 0.4763G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q12::D3

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	20
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	100
<LOQ	Toluene	108-88-3	20
<LOQ	2-Hexanone	59-17-86	200
<LOQ	1,2-Dibromomethane	74-95-3	20
<LOQ	Tetrachloroethene	127-18-4	20
<LOQ	Chlorobenzene	108-90-7	20
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	20
<LOQ	1-Chlorohexane	544-10-5	2000
<LOQ	Ethylbenzene	100-41-4	20
<LOQ	m,p-Xylene (Total)	108-38-3	20
<LOQ	o-Xylene	95-47-6	20
<LOQ	Styrene	100-42-5	20
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	100
<LOQ	1,2,3-Trichloropropane	96-18-4	20
<LOQ	Isopropylbenzene	98-82-8	20
<LOQ	Bromobenzene	108-86-1	20
<LOQ	n-Propylbenzene	103-65-1	20
<LOQ	2-Chlorotoluene	95-49-8	20
<LOQ	4-Chlorotoluene	106-43-4	20
<LOQ	1,3,5-Trimethylbenzene	108-67-8	20
<LOQ	tert-Butylbenzene	98-06-6	20
<LOQ	1,2,4-Trimethylbenzene	95-63-6	20
<LOQ	sec-Butylbenzene	135-98-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	p-Isopropyltoluene	99-87-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	n-Butylbenzene	104-51-8	20
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Napthalene	91-20-3	20
<LOQ	1,2,3-Trichlorobenzene	87-61-6	20
<LOQ	Hexachlorobutadiene	87-68-3	20

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative Identifications: 1,1,2-Trichloro-1,2,2-Trifluoro Ethane Cas# 76131
Tetrahydrofuran Cas# 109999

1-Hexanol, 2-ethyl Cas# 104767

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13344 HEATED *CORRECTED WEIGHT .898 GMS
REQUEST SHEET: RS 7773 CPR 0.9758G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q13::D3
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890627 21:54
QUANTITATION DATE/TIME: 890627 22:54
CALIBRATION DATE/TIME: 890626 11:50

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS(%)
1,2-DICHLOROETHANE d4	50.0	36.7	73.4	70-121
TOLUENE d-8	50.0	53.8	107.6	81-117
4-BROMOFLUOROBENZENE	50.0	38.3	76.5	74-121

TARGET COMPOUNDS

**RESULTS (ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	100
<LOQ	Vinyl Chloride	75-01-4	20
<LOQ	Bromomethane	74-83-9	20
<LOQ	Chloroethane	75-00-3	20
492.2	Acetone	67-64-1	20
<LOQ	Trichlorofluoromethane	75-69-4	20
<LOQ	1,1-Dichloroethene	75-35-4	20
<LOQ	Methylene Chloride	75-09-2	100
569.0	Carbon Disulfide	75-15-0	20
<LOQ	t-1,2-Dichloroethene	156-60-5	20
<LOQ	1,1-Dichloroethane	75-34-3	20
<LOQ	c-1,2-Dichloroethene	156-59-2	20
<LOQ	Bromochloromethane	74-97-5	20
<LOQ	Chloroform	67-66-3	20
<LOQ	1,2-Dichloroethane	107-06-2	20
<LOQ	1,1-Dichloropropene	563-58-6	20
<LOQ	Vinyl Acetate	108-05-4	100
<LOQ	2-Butanone (MEK)	78-93-3	100
171.8	2,2-Dichloropropane	594-20-7	100
<LOQ	1,1,1-Trichloroethane	71-55-6	100
<LOQ	Carbon Tetrachloride	56-23-5	20
<LOQ	Benzene	71-43-2	20
<LOQ	1,2-Dichloropropane	78-87-5	20
<LOQ	Trichloroethene	79-01-6	20
<LOQ	Dibromomethane	74-95-3	20
<LOQ	Bromodichloromethane	75-27-4	20
<LOQ	t-1,3-Dichloropropene	1006-10-26	100
<LOQ	c-1,3-Dichloropropene	1006-10-15	100
<LOQ	1,1,2-Trichloroethane	79-00-5	20
<LOQ	1,3-Dichloropropane	142-28-9	20
<LOQ	Chlorodibromomethane	124-48-1	20

** RESULTS ARE ug/kg,+/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

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HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN SOIL
HEATED PURGE AND TRAP METHOD (MODIFIED CLP)

SAMPLE NUMBER: 89.13344 HEATED
REQUEST SHEET: RS 7773 CPR 0.9758G/5MLS WATER + ISM/PSS 06-27-8
DATA FILE NAME: >V6Q13::D3

TARGET COMPOUNDS

**RESULTS(ug/kg)	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	20
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-01	100
<LOQ	Toluene	108-88-3	20
253.1	2-Hexanone	59-17-86	200
<LOQ	1,2-Dibromomethane	74-95-3	20
<LOQ	Tetrachloroethene	127-18-4	20
<LOQ	Chlorobenzene	108-90-7	20
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	20
<LOQ	1-Chlorohexane	544-10-5	2006
<LOQ	Ethylbenzene	100-41-4	20
<LOQ	m,p-Xylene (Total)	108-38-3	20
<LOQ	o-Xylene	95-47-6	20
<LOQ	Styrene	100-42-5	20
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	100
<LOQ	1,2,3-Trichloropropane	96-18-4	20
<LOQ	Isopropylbenzene	98-82-8	20
<LOQ	Bromobenzene	108-86-1	20
<LOQ	n-Propylbenzene	103-65-1	20
<LOQ	2-Chlorotoluene	95-49-8	20
<LOQ	4-Chlorotoluene	106-43-4	20
<LOQ	1,3,5-Trimethylbenzene	108-67-8	20
<LOQ	tert-Butylbenzene	98-06-6	20
<LOQ	1,2,4-Trimethylbenzene	95-63-6	20
<LOQ	sec-Butylbenzene	135-98-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	p-Isopropyltoluene	99-87-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	n-Butylbenzene	104-51-8	20
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Napthalene	91-20-3	20
<LOQ	1,2,3-Trichlorobenzene	87-61-6	20
<LOQ	Hexachlorobutadiene	87-68-3	20

** RESULTS ARE ug/kg +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/kg

COMMENTS: Tentative Identifications: 1,1,2-Trichloro-1,2,2-Trifluoro Ethane CAS# 76131
2-Heptanone CAS# 110430

2-Heptanone, 6-methyl CAS# 928687

SEMIVOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-1	89.13340	83329	< 13200.		UG/KG	12/20/89		Acenaphthene
125L-1	89.13340	208968	< 13200.		UG/KG	12/20/89		Acenaphthylene
125L-1	89.13340	62533	< 13200.		UG/KG	12/20/89		Aniline
125L-1	89.13340	120127	< 13200.		UG/KG	12/20/89		Anthracene
125L-1	89.13340	103333	< 13200.		UG/KG	12/20/89		Azobenzene
125L-1	89.13340	56553	< 13200.		UG/KG	12/20/89		Benz(a)anthracene
125L-1	89.13340	92875	< 13200.		UG/KG	12/20/89		m-Benzidine
125L-1	89.13340	191242	< 13200.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-1	89.13340	50328	< 13200.		UG/KG	12/20/89		Benzo-a-pyrene
125L-1	89.13340	205992	< 13200.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-1	89.13340	207089	< 13200.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-1	89.13340	65850	< 13200.		UG/KG	12/20/89		Benzoic acid
125L-1	89.13340	100516	< 13200.		UG/KG	12/20/89		Benzyl alcohol
125L-1	89.13340	111911	< 13200.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-1	89.13340	111444	< 13200.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-1	89.13340	108601	< 13200.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-1	89.13340	117817	< 13200.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-1	89.13340	101553	< 13200.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-1	89.13340	85687	< 13200.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-1	89.13340	59507	< 13200.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-1	89.13340	106478	< 13200.		UG/KG	12/20/89		4-Chloroaniline
125L-1	89.13340	91587	< 13200.		UG/KG	12/20/89		2-Chloronaphthalene
125L-1	89.13340	95578	< 13200.		UG/KG	12/20/89		o-Chlorophenol
125L-1	89.13340	7005723	< 13200.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-1	89.13340	218019	< 13200.		UG/KG	12/20/89		Chrysene

125L-1	89.13340	106445	< 13200.	UG/KG	12/20/89	p-Cresol
125L-1	89.13340	84742	< 13200.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-1	89.13340	117840	< 13200.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-1	89.13340	53703	< 13200.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-1	89.13340	132649	< 13200.	UG/KG	12/20/89	Dibenzofuran
125L-1	89.13340	95501	< 13200.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-1	89.13340	541731	< 13200.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-1	89.13340	106467	< 13200.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-1	89.13340	91941	< 13200.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-1	89.13340	120832	< 13200.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-1	89.13340	84662	< 13200.	UG/KG	12/20/89	Diethyl phthalate
125L-1	89.13340	131113	< 13200.	UG/KG	12/20/89	Dimethyl phthalate
125L-1	89.13340	105679	< 13200.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-1	89.13340	51285	< 13200.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-1	89.13340	121142	< 13200.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-1	89.13340	606202	< 13200.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-1	89.13340	206440	< 13200.	UG/KG	12/20/89	Fluoranthene
125L-1	89.13340	86737	< 13200.	UG/KG	12/20/89	Fluorene
125L-1	89.13340	118741	< 13200.	UG/KG	12/20/89	HCB
125L-1	89.13340	118741	< 13200.	UG/KG	12/20/89	Hexachlorobenzene
125L-1	89.13340	87683	< 13200.	UG/KG	12/20/89	Hexachlorobutadiene
125L-1	89.13340	77474	< 13200.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-1	89.13340	67721	< 13200.	UG/KG	12/20/89	Hexachloroethane
125L-1	89.13340	193395	< 13200.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-1	89.13340	78591	< 13200.	UG/KG	12/20/89	Isophorone
125L-1	89.13340	534521	< 13200.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-1	89.13340	91576	< 13200.	UG/KG	12/20/89	2-Methylnaphthalene
125L-1	89.13340	95487	< 13200.	UG/KG	12/20/89	2-Methylphenol
125L-1	89.13340	106445	< 13200.	UG/KG	12/20/89	4-Methylphenol
125L-1	89.13340	91203	< 13200.	UG/KG	12/20/89	Naphthalene
125L-1	89.13340	100016	< 13200.	UG/KG	12/20/89	4-Nitroaniline
125L-1	89.13340	88744	< 13200.	UG/KG	12/20/89	2-Nitroaniline
125L-1	89.13340	99092	< 13200.	UG/KG	12/20/89	3-Nitroaniline
125L-1	89.13340	98953	< 13200.	UG/KG	12/20/89	Nitrobenzene
125L-1	89.13340	100027	< 13200.	UG/KG	12/20/89	4-Nitrophenol
125L-1	89.13340	100027	< 13200.	UG/KG	12/20/89	p-Nitrophenol
125L-1	89.13340	88755	< 13200.	UG/KG	12/20/89	2-Nitrophenol
125L-1	89.13340	621647	< 13200.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-1	89.13340	62759	< 13200.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-1	89.13340	86306	< 13200.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-1	89.13340	87865	< 13200.	UG/KG	12/20/89	Pentachlorophenol
125L-1	89.13340	85018	< 13200.	UG/KG	12/20/89	Phenanthrene
125L-1	89.13340	108952	< 13200.	UG/KG	12/20/89	Phenol
125L-1	89.13340	129000	< 13200.	UG/KG	12/20/89	Pyrene
125L-1	89.13340	120821	< 13200.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-1	89.13340	88062	< 13200.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-1	89.13340	95954	< 13200.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-1	89.13340	105679	< 13200.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-2	89.13341	83329	< 6600.		UG/KG	12/20/89		Acenaphthene
125L-2	89.13341	208968	< 6600.		UG/KG	12/20/89		Acenaphthylene
125L-2	89.13341	62533	< 6600.		UG/KG	12/20/89		Aniline
125L-2	89.13341	120127	< 6600.		UG/KG	12/20/89		Anthracene
125L-2	89.13341	103333	< 6600.		UG/KG	12/20/89		Azobenzene
125L-2	89.13341	56553	< 6600.		UG/KG	12/20/89		Benz(a)anthracene
125L-2	89.13341	92875	< 6600.		UG/KG	12/20/89		m-Benzidine
125L-2	89.13341	191242	< 6600.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-2	89.13341	50328	< 6600.		UG/KG	12/20/89		Benzo-a-pyrene
125L-2	89.13341	205992	< 6600.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-2	89.13341	207089	< 6600.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-2	89.13341	65850	< 6600.		UG/KG	12/20/89		Benzoic acid
125L-2	89.13341	100516	< 6600.		UG/KG	12/20/89		Benzyl alcohol
125L-2	89.13341	111911	< 6600.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-2	89.13341	111444	< 6600.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-2	89.13341	108601	< 6600.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-2	89.13341	117817	< 6600.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-2	89.13341	101553	< 6600.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-2	89.13341	85687	< 6600.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-2	89.13341	59507	< 6600.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-2	89.13341	106478	< 6600.		UG/KG	12/20/89		4-Chloroaniline
125L-2	89.13341	91587	< 6600.		UG/KG	12/20/89		2-Chloronaphthalene
125L-2	89.13341	95578	< 6600.		UG/KG	12/20/89		o-Chlorophenol
125L-2	89.13341	7005723	< 6600.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-2	89.13341	218019	< 6600.		UG/KG	12/20/89		Chrysene

125L-2	89.13341	106445	< 6600.	UG/KG	12/20/89	p-Cresol
125L-2	89.13341	84742	< 6600.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-2	89.13341	117840	< 6600.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-2	89.13341	53703	< 6600.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-2	89.13341	132649	< 6600.	UG/KG	12/20/89	Dibenzofuran
125L-2	89.13341	95501	< 6600.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-2	89.13341	541731	< 6600.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-2	89.13341	106467	< 6600.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-2	89.13341	91941	< 6600.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-2	89.13341	120832	< 6600.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-2	89.13341	84662	< 6600.	UG/KG	12/20/89	Diethyl phthalate
125L-2	89.13341	131113	< 6600.	UG/KG	12/20/89	Dimethyl phthalate
125L-2	89.13341	105679	< 6600.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-2	89.13341	51285	< 6600.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-2	89.13341	121142	< 6600.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-2	89.13341	606202	< 6600.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-2	89.13341	206440	< 6600.	UG/KG	12/20/89	Fluoranthene
125L-2	89.13341	86737	< 6600.	UG/KG	12/20/89	Fluorene
125L-2	89.13341	118741	< 6600.	UG/KG	12/20/89	HCB
125L-2	89.13341	118741	< 6600.	UG/KG	12/20/89	Hexachlorobenzene
125L-2	89.13341	87683	< 6600.	UG/KG	12/20/89	Hexachlorobutadiene
125L-2	89.13341	77474	< 6600.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-2	89.13341	67721	< 6600.	UG/KG	12/20/89	Hexachloroethane
125L-2	89.13341	193395	< 6600.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-2	89.13341	78591	< 6600.	UG/KG	12/20/89	Isophorone
125L-2	89.13341	534521	< 6600.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-2	89.13341	91576	< 6600.	UG/KG	12/20/89	2-Methylnaphthalene
125L-2	89.13341	106445	< 6600.	UG/KG	12/20/89	4-Methylphenol
125L-2	89.13341	95487	< 6600.	UG/KG	12/20/89	2-Methylphenol
125L-2	89.13341	91203	< 6600.	UG/KG	12/20/89	Naphthalene
125L-2	89.13341	88744	< 6600.	UG/KG	12/20/89	2-Nitroaniline
125L-2	89.13341	100016	< 6600.	UG/KG	12/20/89	4-Nitroaniline
125L-2	89.13341	99092	< 6600.	UG/KG	12/20/89	3-Nitroaniline
125L-2	89.13341	98953	< 6600.	UG/KG	12/20/89	Nitrobenzene
125L-2	89.13341	100027	< 6600.	UG/KG	12/20/89	4-Nitrophenol
125L-2	89.13341	100027	< 6600.	UG/KG	12/20/89	p-Nitrophenol
125L-2	89.13341	88755	< 6600.	UG/KG	12/20/89	2-Nitrophenol
125L-2	89.13341	621647	< 6600.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-2	89.13341	62759	< 6600.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-2	89.13341	86306	< 6600.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-2	89.13341	87865	< 6600.	UG/KG	12/20/89	Pentachlorophenol
125L-2	89.13341	85018	< 6600.	UG/KG	12/20/89	Phenanthrene
125L-2	89.13341	108952	< 6600.	UG/KG	12/20/89	Phenol
125L-2	89.13341	129000	< 6600.	UG/KG	12/20/89	Pyrene
125L-2	89.13341	120821	< 6600.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-2	89.13341	88062	< 6600.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-2	89.13341	95954	< 6600.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-2	89.13341	105679	< 6600.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-3	89.13342	83329	< 33000.		UG/KG	12/20/89		Acenaphthene
125L-3	89.13342	208968	< 33000.		UG/KG	12/20/89		Acenaphthylene
125L-3	89.13342	62533	< 33000.		UG/KG	12/20/89		Aniline
125L-3	89.13342	120127	< 33000.		UG/KG	12/20/89		Anthracene
125L-3	89.13342	103333	< 33000.		UG/KG	12/20/89		Azobenzene
125L-3	89.13342	56553	< 33000.		UG/KG	12/20/89		Benz(a)anthracene
125L-3	89.13342	92875	< 33000.		UG/KG	12/20/89		m-Benzidine
125L-3	89.13342	191242	< 33000.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-3	89.13342	50328	< 33000.		UG/KG	12/20/89		Benzo-a-pyrene
125L-3	89.13342	205992	< 33000.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-3	89.13342	207089	< 33000.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-3	89.13342	65850	< 33000.		UG/KG	12/20/89		Benzoic acid
125L-3	89.13342	100516	< 33000.		UG/KG	12/20/89		Benzyl alcohol
125L-3	89.13342	111911	< 33000.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-3	89.13342	111444	< 33000.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-3	89.13342	108601	< 33000.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-3	89.13342	117817	< 33000.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-3	89.13342	101553	< 33000.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-3	89.13342	85687	< 33000.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-3	89.13342	59507	< 33000.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-3	89.13342	106478	< 33000.		UG/KG	12/20/89		4-Chloroaniline
125L-3	89.13342	91587	< 33000.		UG/KG	12/20/89		2-Chloronaphthalene
125L-3	89.13342	95578	< 33000.		UG/KG	12/20/89		o-Chlorophenol
125L-3	89.13342	7005723	< 33000.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-3	89.13342	218019	< 33000.		UG/KG	12/20/89		Chrysene

125L-3	89.13342	106445	< 33000.	UG/KG	12/20/89	p-Cresol
125L-3	89.13342	84742	< 33000.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-3	89.13342	117840	< 33000.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-3	89.13342	53703	< 33000.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-3	89.13342	132649	< 33000.	UG/KG	12/20/89	Dibenzofuran
125L-3	89.13342	95501	< 33000.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-3	89.13342	541731	< 33000.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-3	89.13342	106467	< 33000.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-3	89.13342	91941	< 33000.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-3	89.13342	120832	< 33000.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-3	89.13342	84662	< 33000.	UG/KG	12/20/89	Diethyl phthalate
125L-3	89.13342	131113	< 33000.	UG/KG	12/20/89	Dimethyl phthalate
125L-3	89.13342	105679	< 33000.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-3	89.13342	51285	< 33000.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-3	89.13342	606202	< 33000.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-3	89.13342	121142	< 33000.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-3	89.13342	206440	< 33000.	UG/KG	12/20/89	Fluoranthene
125L-3	89.13342	86737	< 33000.	UG/KG	12/20/89	Fluorene
125L-3	89.13342	118741	< 33000.	UG/KG	12/20/89	HCB
125L-3	89.13342	118741	< 33000.	UG/KG	12/20/89	Hexachlorobenzene
125L-3	89.13342	87683	< 33000.	UG/KG	12/20/89	Hexachlorobutadiene
125L-3	89.13342	77474	< 33000.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-3	89.13342	67721	< 33000.	UG/KG	12/20/89	Hexachloroethane
125L-3	89.13342	193395	< 33000.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-3	89.13342	78591	< 33000.	UG/KG	12/20/89	Isophorone
125L-3	89.13342	534521	< 33000.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-3	89.13342	91576	< 33000.	UG/KG	12/20/89	2-Methylnaphthalene
125L-3	89.13342	106445	< 33000.	UG/KG	12/20/89	4-Methylphenol
125L-3	89.13342	95487	< 33000.	UG/KG	12/20/89	2-Methylphenol
125L-3	89.13342	91203	< 33000.	UG/KG	12/20/89	Naphthalene
125L-3	89.13342	100016	< 33000.	UG/KG	12/20/89	4-Nitroaniline
125L-3	89.13342	99092	< 33000.	UG/KG	12/20/89	3-Nitroaniline
125L-3	89.13342	88744	< 33000.	UG/KG	12/20/89	2-Nitroaniline
125L-3	89.13342	98953	< 33000.	UG/KG	12/20/89	Nitrobenzene
125L-3	89.13342	88755	< 33000.	UG/KG	12/20/89	2-Nitrophenol
125L-3	89.13342	100027	< 33000.	UG/KG	12/20/89	p-Nitrophenol
125L-3	89.13342	100027	< 33000.	UG/KG	12/20/89	4-Nitrophenol
125L-3	89.13342	621647	< 33000.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-3	89.13342	62759	33000.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-3	89.13342	86306	< 33000.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-3	89.13342	87865	< 33000.	UG/KG	12/20/89	Pentachlorophenol
125L-3	89.13342	85018	< 33000.	UG/KG	12/20/89	Phenanthrene
125L-3	89.13342	108952	< 33000.	UG/KG	12/20/89	Phenol
125L-3	89.13342	129000	< 33000.	UG/KG	12/20/89	Pyrene
125L-3	89.13342	120821	< 33000.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-3	89.13342	88062	< 33000.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-3	89.13342	95954	< 33000.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-3	89.13342	105679	< 33000.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-4	89.13343	83329	< 33000.		UG/KG	12/20/89		Acenaphthene
125L-4	89.13343	208968	< 33000.		UG/KG	12/20/89		Acenaphthylene
125L-4	89.13343	62533	< 33000.		UG/KG	12/20/89		Aniline
125L-4	89.13343	120127	< 33000.		UG/KG	12/20/89		Anthracene
125L-4	89.13343	103333	< 33000.		UG/KG	12/20/89		Azobenzene
125L-4	89.13343	56553	< 33000.		UG/KG	12/20/89		Benz(a)anthracene
125L-4	89.13343	92875	< 33000.		UG/KG	12/20/89		m-Benzidine
125L-4	89.13343	191242	< 33000.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-4	89.13343	50328	< 33000.		UG/KG	12/20/89		Benzo-a-pyrene
125L-4	89.13343	205992	< 33000.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-4	89.13343	207089	< 33000.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-4	89.13343	65850	< 33000.		UG/KG	12/20/89		Benzoic acid
125L-4	89.13343	100516	< 33000.		UG/KG	12/20/89		Benzyl alcohol
125L-4	89.13343	111911	< 33000.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-4	89.13343	111444	< 33000.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-4	89.13343	108601	< 33000.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-4	89.13343	117817	< 33000.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-4	89.13343	101553	< 33000.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-4	89.13343	85687	< 33000.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-4	89.13343	59507	< 33000.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-4	89.13343	106478	< 33000.		UG/KG	12/20/89		4-Chloroaniline
125L-4	89.13343	91587	< 33000.		UG/KG	12/20/89		2-Chloronaphthalene
125L-4	89.13343	95578	< 33000.		UG/KG	12/20/89		o-Chlorophenol
125L-4	89.13343	7005723	< 33000.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-4	89.13343	218019	< 33000.		UG/KG	12/20/89		Chrysene

125L-4	89.13343	106445	< 33000.	UG/KG	12/20/89	p-Cresol
125L-4	89.13343	84742	< 33000.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-4	89.13343	117840	< 33000.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-4	89.13343	53703	< 33000.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-4	89.13343	132649	< 33000.	UG/KG	12/20/89	Dibenzofuran
125L-4	89.13343	95501	< 33000.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-4	89.13343	541731	< 33000.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-4	89.13343	106467	< 33000.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-4	89.13343	91941	< 33000.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-4	89.13343	120832	< 33000.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-4	89.13343	84662	< 33000.	UG/KG	12/20/89	Diethyl phthalate
125L-4	89.13343	131113	< 33000.	UG/KG	12/20/89	Dimethyl phthalate
125L-4	89.13343	105679	< 33000.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-4	89.13343	51285	< 33000.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-4	89.13343	121142	< 33000.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-4	89.13343	606202	< 33000.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-4	89.13343	206440	< 33000.	UG/KG	12/20/89	Fluoranthene
125L-4	89.13343	86737	< 33000.	UG/KG	12/20/89	Fluorene
125L-4	89.13343	118741	< 33000.	UG/KG	12/20/89	HCB
125L-4	89.13343	118741	< 33000.	UG/KG	12/20/89	Hexachlorobenzene
125L-4	89.13343	87683	< 33000.	UG/KG	12/20/89	Hexachlorobutadiene
125L-4	89.13343	77474	< 33000.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-4	89.13343	67721	< 33000.	UG/KG	12/20/89	Hexachloroethane
125L-4	89.13343	193395	< 33000.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-4	89.13343	78591	< 33000.	UG/KG	12/20/89	Isophorone
125L-4	89.13343	534521	< 33000.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-4	89.13343	91576	< 33000.	UG/KG	12/20/89	2-Methylnaphthalene
125L-4	89.13343	95487	< 33000.	UG/KG	12/20/89	2-Methylphenol
125L-4	89.13343	106445	< 33000.	UG/KG	12/20/89	4-Methylphenol
125L-4	89.13343	91203	< 33000.	UG/KG	12/20/89	Naphthalene
125L-4	89.13343	88744	< 33000.	UG/KG	12/20/89	2-Nitroaniline
125L-4	89.13343	99092	< 33000.	UG/KG	12/20/89	3-Nitroaniline
125L-4	89.13343	100016	< 33000.	UG/KG	12/20/89	4-Nitroaniline
125L-4	89.13343	98953	< 33000.	UG/KG	12/20/89	Nitrobenzene
125L-4	89.13343	100027	< 33000.	UG/KG	12/20/89	p-Nitrophenol
125L-4	89.13343	100027	< 33000.	UG/KG	12/20/89	4-Nitrophenol
125L-4	89.13343	88755	< 33000.	UG/KG	12/20/89	2-Nitrophenol
125L-4	89.13343	621647	< 33000.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-4	89.13343	62759	< 33000.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-4	89.13343	86306	< 33000.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-4	89.13343	87865	< 33000.	UG/KG	12/20/89	Pentachlorophenol
125L-4	89.13343	85018	< 33000.	UG/KG	12/20/89	Phenanthrene
125L-4	89.13343	108952	< 33000.	UG/KG	12/20/89	Phenol
125L-4	89.13343	129000	< 33000.	UG/KG	12/20/89	Pyrene
125L-4	89.13343	120821	< 33000.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-4	89.13343	88062	< 33000.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-4	89.13343	95954	< 33000.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-4	89.13343	105679	< 33000.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-5	89.13344	83329	< 33000.		UG/KG	12/20/89		Acenaphthene
125L-5	89.13344	208968	< 33000.		UG/KG	12/20/89		Acenaphthylene
125L-5	89.13344	62533	< 33000.		UG/KG	12/20/89		Aniline
125L-5	89.13344	120127	< 33000.		UG/KG	12/20/89		Anthracene
125L-5	89.13344	103333	< 33000.		UG/KG	12/20/89		Azobenzene
125L-5	89.13344	56553	< 33000.		UG/KG	12/20/89		Benz(a)anthracene
125L-5	89.13344	92875	< 33000.		UG/KG	12/20/89		m-Benzidine
125L-5	89.13344	191242	< 33000.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-5	89.13344	50328	< 33000.		UG/KG	12/20/89		Benzo-a-pyrene
125L-5	89.13344	205992	< 33000.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-5	89.13344	207089	< 33000.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-5	89.13344	65850	< 33000.		UG/KG	12/20/89		Benzoic acid
125L-5	89.13344	100516	< 33000.		UG/KG	12/20/89		Benzyl alcóhol
125L-5	89.13344	111911	< 33000.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-5	89.13344	111444	< 33000.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-5	89.13344	108601	< 33000.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-5	89.13344	117817	< 33000.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-5	89.13344	101553	< 33000.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-5	89.13344	85687	< 33000.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-5	89.13344	59507	< 33000.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-5	89.13344	106478	< 33000.		UG/KG	12/20/89		4-Chloroaniline
125L-5	89.13344	91587	< 33000.		UG/KG	12/20/89		2-Chloronaphthalene
125L-5	89.13344	95578	< 33000.		UG/KG	12/20/89		o-Chlorophenol
125L-5	89.13344	7005723	< 33000.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-5	89.13344	218019	< 33000.		UG/KG	12/20/89		Chrysene

125L-5	89.13344	106445	< 33000.	UG/KG	12/20/89	p-Cresol
125L-5	89.13344	84742	< 33000.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-5	89.13344	117840	< 33000.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-5	89.13344	53703	< 33000.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-5	89.13344	132649	< 33000.	UG/KG	12/20/89	Dibenzofuran
125L-5	89.13344	95501	< 33000.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-5	89.13344	541731	< 33000.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-5	89.13344	106467	< 33000.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-5	89.13344	91941	< 33000.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-5	89.13344	120832	< 33000.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-5	89.13344	84662	< 33000.	UG/KG	12/20/89	Diethyl phthalate
125L-5	89.13344	131113	< 33000.	UG/KG	12/20/89	Dimethyl phthalate
125L-5	89.13344	105679	< 33000.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-5	89.13344	51285	< 33000.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-5	89.13344	121142	< 33000.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-5	89.13344	606202	< 33000.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-5	89.13344	206440	< 33000.	UG/KG	12/20/89	Fluoranthene
125L-5	89.13344	86737	< 33000.	UG/KG	12/20/89	Fluorene
125L-5	89.13344	118741	< 33000.	UG/KG	12/20/89	HCB
125L-5	89.13344	118741	< 33000.	UG/KG	12/20/89	Hexachlorobenzene
125L-5	89.13344	87683	< 33000.	UG/KG	12/20/89	Hexachlorobutadiene
125L-5	89.13344	77474	< 33000.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-5	89.13344	67721	< 33000.	UG/KG	12/20/89	Hexachloroethane
125L-5	89.13344	193395	< 33000.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-5	89.13344	78591	< 33000.	UG/KG	12/20/89	Isophorone
125L-5	89.13344	534521	< 33000.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-5	89.13344	91576	< 33000.	UG/KG	12/20/89	2-Methylnaphthalene
125L-5	89.13344	95487	< 33000.	UG/KG	12/20/89	2-Methylphenol
125L-5	89.13344	106445	< 33000.	UG/KG	12/20/89	4-Methylphenol
125L-5	89.13344	91203	< 33000.	UG/KG	12/20/89	Naphthalene
125L-5	89.13344	100016	< 33000.	UG/KG	12/20/89	4-Nitroaniline
125L-5	89.13344	99092	< 33000.	UG/KG	12/20/89	3-Nitroaniline
125L-5	89.13344	88744	< 33000.	UG/KG	12/20/89	2-Nitroaniline
125L-5	89.13344	98953	< 33000.	UG/KG	12/20/89	Nitrobenzene
125L-5	89.13344	100027	< 33000.	UG/KG	12/20/89	4-Nitrophenol
125L-5	89.13344	88755	< 33000.	UG/KG	12/20/89	2-Nitrophenol
125L-5	89.13344	100027	< 33000.	UG/KG	12/20/89	p-Nitrophenol
125L-5	89.13344	621647	< 33000.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-5	89.13344	62759	< 33000.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-5	89.13344	86306	< 33000.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-5	89.13344	87865	< 33000.	UG/KG	12/20/89	Pentachlorophenol
125L-5	89.13344	85018	< 33000.	UG/KG	12/20/89	Phenanthrene
125L-5	89.13344	108952	< 33000.	UG/KG	12/20/89	Phenol
125L-5	89.13344	129000	< 33000.	UG/KG	12/20/89	Pyrene
125L-5	89.13344	120821	< 33000.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-5	89.13344	95954	< 33000.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-5	89.13344	88062	< 33000.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-5	89.13344	105679	< 33000.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-6	89.13345	83329	< 6600.		UG/KG	12/20/89		Acenaphthene
125L-6	89.13345	208968	< 6600.		UG/KG	12/20/89		Acenaphthylene
125L-6	89.13345	62533	< 6600.		UG/KG	12/20/89		Aniline
125L-6	89.13345	120127	< 6600.		UG/KG	12/20/89		Anthracene
125L-6	89.13345	103333	< 6600.		UG/KG	12/20/89		Azobenzene
125L-6	89.13345	56553	< 6600.		UG/KG	12/20/89		Benz(a)anthracene
125L-6	89.13345	92875	< 6600.		UG/KG	12/20/89		m-Benzidine
125L-6	89.13345	191242	< 6600.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-6	89.13345	50328	< 6600.		UG/KG	12/20/89		Benzo-a-pyrene
125L-6	89.13345	205992	< 6600.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-6	89.13345	207089	< 6600.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-6	89.13345	65850	< 6600.		UG/KG	12/20/89		Benzoic acid
125L-6	89.13345	100516	< 6600.		UG/KG	12/20/89		Benzyl alcohol
125L-6	89.13345	111911	< 6600.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-6	89.13345	111444	< 6600.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-6	89.13345	108601	< 6600.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-6	89.13345	117817	< 6600.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-6	89.13345	101553	< 6600.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-6	89.13345	85687	< 6600.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-6	89.13345	59507	< 6600.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-6	89.13345	106478	< 6600.		UG/KG	12/20/89		4-Chloroaniline
125L-6	89.13345	91587	< 6600.		UG/KG	12/20/89		2-Chloronaphthalene
125L-6	89.13345	95578	< 6600.		UG/KG	12/20/89		o-Chlorophenol
125L-6	89.13345	7005723	< 6600.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-6	89.13345	218019	< 6600.		UG/KG	12/20/89		Chrysene

125L-6	89.13345	106445	< 6600.	UG/KG	12/20/89	p-Cresol
125L-6	89.13345	84742	< 6600.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-6	89.13345	117840	< 6600.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-6	89.13345	53703	< 6600.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-6	89.13345	132649	< 6600.	UG/KG	12/20/89	Dibenzofuran
125L-6	89.13345	95501	< 6600.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-6	89.13345	541731	< 6600.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-6	89.13345	106467	< 6600.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-6	89.13345	91941	< 6600.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-6	89.13345	120832	< 6600.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-6	89.13345	84662	< 6600.	UG/KG	12/20/89	Diethyl phthalate
125L-6	89.13345	131113	< 6600.	UG/KG	12/20/89	Dimethyl phthalate
125L-6	89.13345	105679	< 6600.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-6	89.13345	51285	< 6600.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-6	89.13345	606202	< 6600.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-6	89.13345	121142	< 6600.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-6	89.13345	206440	< 6600.	UG/KG	12/20/89	Fluoranthene
125L-6	89.13345	86737	< 6600.	UG/KG	12/20/89	Fluorene
125L-6	89.13345	118741	< 6600.	UG/KG	12/20/89	HCB
125L-6	89.13345	118741	< 6600.	UG/KG	12/20/89	Hexachlorobenzene
125L-6	89.13345	87683	< 6600.	UG/KG	12/20/89	Hexachlorobutadiene
125L-6	89.13345	77474	< 6600.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-6	89.13345	67721	< 6600.	UG/KG	12/20/89	Hexachloroethane
125L-6	89.13345	193395	< 6600.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-6	89.13345	78591	< 6600.	UG/KG	12/20/89	Isophorone
125L-6	89.13345	534521	< 6600.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-6	89.13345	91576	< 6600.	UG/KG	12/20/89	2-Methylnaphthalene
125L-6	89.13345	95487	< 6600.	UG/KG	12/20/89	2-Methylphenol
125L-6	89.13345	106445	< 6600.	UG/KG	12/20/89	4-Methylphenol
125L-6	89.13345	91203	< 6600.	UG/KG	12/20/89	Naphthalene
125L-6	89.13345	88744	< 6600.	UG/KG	12/20/89	2-Nitroaniline
125L-6	89.13345	99092	< 6600.	UG/KG	12/20/89	3-Nitroaniline
125L-6	89.13345	100016	< 6600.	UG/KG	12/20/89	4-Nitroaniline
125L-6	89.13345	98953	< 6600.	UG/KG	12/20/89	Nitrobenzene
125L-6	89.13345	100027	< 6600.	UG/KG	12/20/89	p-Nitrophenol
125L-6	89.13345	88755	< 6600.	UG/KG	12/20/89	2-Nitrophenol
125L-6	89.13345	100027	< 6600.	UG/KG	12/20/89	4-Nitrophenol
125L-6	89.13345	621647	< 6600.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-6	89.13345	62759	< 6600.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-6	89.13345	86306	< 6600.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-6	89.13345	87865	< 6600.	UG/KG	12/20/89	Pentachlorophenol
125L-6	89.13345	85018	< 6600.	UG/KG	12/20/89	Phenanthrene
125L-6	89.13345	108952	< 6600.	UG/KG	12/20/89	Phenol
125L-6	89.13345	129000	< 6600.	UG/KG	12/20/89	Pyrene
125L-6	89.13345	120821	< 6600.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-6	89.13345	88062	< 6600.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-6	89.13345	95954	< 6600.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-6	89.13345	105679	< 6600.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-7	89.13346	83329	< 330.		UG/KG	12/20/89		Acenaphthene
125L-7	89.13346	208968	< 330.		UG/KG	12/20/89		Acenaphthylene
125L-7	89.13346	62533	< 330.		UG/KG	12/20/89		Aniline
125L-7	89.13346	120127	< 330.		UG/KG	12/20/89		Anthracene
125L-7	89.13346	103333	< 330.		UG/KG	12/20/89		Azobenzene
125L-7	89.13346	56553	< 330.		UG/KG	12/20/89		Benz(a)anthracene
125L-7	89.13346	92875	< 330.		UG/KG	12/20/89		m-Benzidine
125L-7	89.13346	191242	< 330.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-7	89.13346	50328	< 330.		UG/KG	12/20/89		Benzo-a-pyrene
125L-7	89.13346	205992	< 330.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-7	89.13346	207089	< 330.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-7	89.13346	65850	< 330.		UG/KG	12/20/89		Benzoic acid
125L-7	89.13346	100516	< 330.		UG/KG	12/20/89		Benzyl alcohol
125L-7	89.13346	111911	< 330.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-7	89.13346	111444	< 330.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-7	89.13346	108601	< 330.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-7	89.13346	117817	1600.	320.	UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-7	89.13346	101553	< 330.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-7	89.13346	85687	< 330.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-7	89.13346	59507	< 330.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-7	89.13346	106478	< 330.		UG/KG	12/20/89		4-Chloroaniline
125L-7	89.13346	91587	< 330.		UG/KG	12/20/89		2-Chloronaphthalene
125L-7	89.13346	95578	< 330.		UG/KG	12/20/89		o-Chlorophenol
125L-7	89.13346	7005723	< 330.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-7	89.13346	218019	< 330.		UG/KG	12/20/89		Chrysene

125L-7	89.13346	106445	< 330.	UG/KG	12/20/89	p-Cresol
125L-7	89.13346	84742	< 330.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-7	89.13346	117840	< 330.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-7	89.13346	53703	< 330.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-7	89.13346	132649	< 330.	UG/KG	12/20/89	Dibenzofuran
125L-7	89.13346	95501	< 330.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-7	89.13346	541731	< 330.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-7	89.13346	106467	< 330.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-7	89.13346	91941	< 330.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-7	89.13346	120832	< 330.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-7	89.13346	84662	< 330.	UG/KG	12/20/89	Diethyl phthalate
125L-7	89.13346	131113	< 330.	UG/KG	12/20/89	Dimethyl phthalate
125L-7	89.13346	105679	< 330.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-7	89.13346	51285	< 330.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-7	89.13346	606202	< 330.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-7	89.13346	121142	< 330.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-7	89.13346	206440	< 330.	UG/KG	12/20/89	Fluoranthene
125L-7	89.13346	86737	< 330.	UG/KG	12/20/89	Fluorene
125L-7	89.13346	118741	< 330.	UG/KG	12/20/89	HCB
125L-7	89.13346	118741	< 330.	UG/KG	12/20/89	Hexachlorobenzene
125L-7	89.13346	87683	< 330.	UG/KG	12/20/89	Hexachlorobutadiene
125L-7	89.13346	77474	< 330.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-7	89.13346	67721	< 330.	UG/KG	12/20/89	Hexachloroethane
125L-7	89.13346	193395	< 330.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-7	89.13346	78591	< 330.	UG/KG	12/20/89	Isophorone
125L-7	89.13346	534521	< 330.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-7	89.13346	91576	< 330.	UG/KG	12/20/89	2-Methylnaphthalene
125L-7	89.13346	95487	< 330.	UG/KG	12/20/89	2-Methylphenol
125L-7	89.13346	106445	< 330.	UG/KG	12/20/89	4-Methylphenol
125L-7	89.13346	91203	< 330.	UG/KG	12/20/89	Naphthalene
125L-7	89.13346	99092	< 330.	UG/KG	12/20/89	3-Nitroaniline
125L-7	89.13346	88744	< 330.	UG/KG	12/20/89	2-Nitroaniline
125L-7	89.13346	100016	< 330.	UG/KG	12/20/89	4-Nitroaniline
125L-7	89.13346	98953	< 330.	UG/KG	12/20/89	Nitrobenzene
125L-7	89.13346	88755	< 330.	UG/KG	12/20/89	2-Nitrophenol
125L-7	89.13346	100027	< 330.	UG/KG	12/20/89	p-Nitrophenol
125L-7	89.13346	100027	< 330.	UG/KG	12/20/89	4-Nitrophenol
125L-7	89.13346	621647	< 330.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-7	89.13346	62759	< 330.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-7	89.13346	86306	< 330.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-7	89.13346	87865	< 330.	UG/KG	12/20/89	Pentachlorophenol
125L-7	89.13346	85018	< 330.	UG/KG	12/20/89	Phenanthrene
125L-7	89.13346	108952	< 330.	UG/KG	12/20/89	Phenol
125L-7	89.13346	129000	< 330.	UG/KG	12/20/89	Pyrene
125L-7	89.13346	120821	< 330.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-7	89.13346	95954	< 330.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-7	89.13346	88062	< 330.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-7	89.13346	105679	< 330.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-8	89.13347	83329	< 6600.		UG/KG	12/20/89		Acenaphthene
125L-8	89.13347	208968	< 6600.		UG/KG	12/20/89		Acenaphthylene
125L-8	89.13347	62533	< 6600.		UG/KG	12/20/89		Aniline
125L-8	89.13347	120127	< 6600.		UG/KG	12/20/89		Anthracene
125L-8	89.13347	103333	< 6600.		UG/KG	12/20/89		Azobenzene
125L-8	89.13347	56553	< 6600.		UG/KG	12/20/89		Benz(a)anthracene
125L-8	89.13347	92875	< 6600.		UG/KG	12/20/89		m-Benzidine
125L-8	89.13347	191242	< 6600.		UG/KG	12/20/89		Benzo(g,h,i)perylene
125L-8	89.13347	50328	< 6600.		UG/KG	12/20/89		Benzo-a-pyrene
125L-8	89.13347	205992	< 6600.		UG/KG	12/20/89		Benzo-b-fluoranthene
125L-8	89.13347	207089	< 6600.		UG/KG	12/20/89		Benzo-k-fluoranthene
125L-8	89.13347	65850	< 6600.		UG/KG	12/20/89		Benzoic acid
125L-8	89.13347	100516	< 6600.		UG/KG	12/20/89		Benzyl alcohol
125L-8	89.13347	111911	< 6600.		UG/KG	12/20/89		Bis(2-chloroethoxy)methane
125L-8	89.13347	111444	< 6600.		UG/KG	12/20/89		Bis(2-chloroethyl)ether
125L-8	89.13347	108601	< 6600.		UG/KG	12/20/89		Bis(2-chloroisopropyl)ether
125L-8	89.13347	117817	< 6600.		UG/KG	12/20/89		Bis(2-ethylhexyl)phthalate
125L-8	89.13347	101553	< 6600.		UG/KG	12/20/89		4-Bromophenylphenyl ether
125L-8	89.13347	85687	< 6600.		UG/KG	12/20/89		Butylbenzyl phthalate
125L-8	89.13347	59507	< 6600.		UG/KG	12/20/89		4-Chloro-3-methylphenol
125L-8	89.13347	106478	< 6600.		UG/KG	12/20/89		4-Chloroaniline
125L-8	89.13347	91587	< 6600.		UG/KG	12/20/89		2-Chloronaphthalene
125L-8	89.13347	95578	< 6600.		UG/KG	12/20/89		o-Chlorophenol
125L-8	89.13347	7005723	< 6600.		UG/KG	12/20/89		4-Chlorophenylphenyl ether
125L-8	89.13347	218019	< 6600.		UG/KG	12/20/89		Chrysene

125L-8	89.13347	106445	< 6600.	UG/KG	12/20/89	p-Cresol
125L-8	89.13347	84742	< 6600.	UG/KG	12/20/89	Di-n-butyl phthalate
125L-8	89.13347	117840	< 6600.	UG/KG	12/20/89	Di-n-octyl phthalate
125L-8	89.13347	53703	< 6600.	UG/KG	12/20/89	Dibenzo(a,h)anthracene
125L-8	89.13347	132649	< 6600.	UG/KG	12/20/89	Dibenzofuran
125L-8	89.13347	95501	< 6600.	UG/KG	12/20/89	o-Dichlorobenzene (1,2)
125L-8	89.13347	541731	< 6600.	UG/KG	12/20/89	m-Dichlorobenzene (1,3)
125L-8	89.13347	106467	< 6600.	UG/KG	12/20/89	p-Dichlorobenzene (1,4)
125L-8	89.13347	91941	< 6600.	UG/KG	12/20/89	3,3'-Dichlorobenzidine
125L-8	89.13347	120832	< 6600.	UG/KG	12/20/89	2,4-Dichlorophenol
125L-8	89.13347	84662	< 6600.	UG/KG	12/20/89	Diethyl phthalate
125L-8	89.13347	131113	< 6600.	UG/KG	12/20/89	Dimethyl phthalate
125L-8	89.13347	105679	< 6600.	UG/KG	12/20/89	2,4-Dimethylphenol
125L-8	89.13347	51285	< 6600.	UG/KG	12/20/89	2,4-Dinitrophenol
125L-8	89.13347	606202	< 6600.	UG/KG	12/20/89	2,6-Dinitrotoluene
125L-8	89.13347	121142	< 6600.	UG/KG	12/20/89	2,4-Dinitrotoluene
125L-8	89.13347	206440	< 6600.	UG/KG	12/20/89	Fluoranthene
125L-8	89.13347	86737	< 6600.	UG/KG	12/20/89	Fluorene
125L-8	89.13347	118741	< 6600.	UG/KG	12/20/89	HCB
125L-8	89.13347	118741	< 6600.	UG/KG	12/20/89	Hexachlorobenzene
125L-8	89.13347	87683	< 6600.	UG/KG	12/20/89	Hexachlorobutadiene
125L-8	89.13347	77474	< 6600.	UG/KG	12/20/89	Hexachlorocyclopentadiene
125L-8	89.13347	67721	< 6600.	UG/KG	12/20/89	Hexachloroethane
125L-8	89.13347	193395	< 6600.	UG/KG	12/20/89	Indeno(1,2,3-cd)pyrene
125L-8	89.13347	78591	< 6600.	UG/KG	12/20/89	Isophorone
125L-8	89.13347	534521	< 6600.	UG/KG	12/20/89	2-Methyl-4,6-dinitrophenol
125L-8	89.13347	91576	< 6600.	UG/KG	12/20/89	2-Methylnaphthalene
125L-8	89.13347	95487	< 6600.	UG/KG	12/20/89	2-Methylphenol
125L-8	89.13347	106445	< 6600.	UG/KG	12/20/89	4-Methylphenol
125L-8	89.13347	91203	< 6600.	UG/KG	12/20/89	Naphthalene
125L-8	89.13347	100016	< 6600.	UG/KG	12/20/89	4-Nitroaniline
125L-8	89.13347	88744	< 6600.	UG/KG	12/20/89	2-Nitroaniline
125L-8	89.13347	99092	< 6600.	UG/KG	12/20/89	3-Nitroaniline
125L-8	89.13347	98953	< 6600.	UG/KG	12/20/89	Nitrobenzene
125L-8	89.13347	100027	< 6600.	UG/KG	12/20/89	p-Nitrophenol
125L-8	89.13347	88755	< 6600.	UG/KG	12/20/89	2-Nitrophenol
125L-8	89.13347	100027	< 6600.	UG/KG	12/20/89	4-Nitrophenol
125L-8	89.13347	621647	< 6600.	UG/KG	12/20/89	N-Nitrosodi-n-propylamine
125L-8	89.13347	62759	< 6600.	UG/KG	12/20/89	N-Nitrosodimethylamine
125L-8	89.13347	86306	< 6600.	UG/KG	12/20/89	N-Nitrosodiphenylamine
125L-8	89.13347	87865	< 6600.	UG/KG	12/20/89	Pentachlorophenol
125L-8	89.13347	85018	< 6600.	UG/KG	12/20/89	Phenanthrene
125L-8	89.13347	108952	< 6600.	UG/KG	12/20/89	Phenol
125L-8	89.13347	129000	< 6600.	UG/KG	12/20/89	Pyrene
125L-8	89.13347	120821	< 6600.	UG/KG	12/20/89	1,2,4-Trichlorobenzene

125L-8	89.13347	95954	< 6600.	UG/KG	12/20/89	2,4,5-Trichlorophenol
125L-8	89.13347	88062	< 6600.	UG/KG	12/20/89	2,4,6-Trichlorophenol
125L-8	89.13347	105679	< 6600.	UG/KG	12/20/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-9	89.13348	83329	< 330.		UG/KG	12/21/89		Acenaphthene
125L-9	89.13348	208968	< 330.		UG/KG	12/21/89		Acenaphthylene
125L-9	89.13348	62533	< 330.		UG/KG	12/21/89		Aniline
125L-9	89.13348	120127	< 330.		UG/KG	12/21/89		Anthracene
125L-9	89.13348	103333	< 330.		UG/KG	12/21/89		Azobenzene
125L-9	89.13348	56553	< 330.		UG/KG	12/21/89		Benz(a)anthracene
125L-9	89.13348	92875	< 330.		UG/KG	12/21/89		m-Benzidine
125L-9	89.13348	191242	< 330.		UG/KG	12/21/89		Benzo(g,h,i)perylene
125L-9	89.13348	50328	< 330.		UG/KG	12/21/89		Benzo-a-pyrene
125L-9	89.13348	205992	< 330.		UG/KG	12/21/89		Benzo-b-fluoranthene
125L-9	89.13348	207089	< 330.		UG/KG	12/21/89		Benzo-k-fluoranthene
125L-9	89.13348	65850	< 330.		UG/KG	12/21/89		Benzoic acid
125L-9	89.13348	100516	< 330.		UG/KG	12/21/89		Benzyl alcohol
125L-9	89.13348	111911	< 330.		UG/KG	12/21/89		Bis(2-chloroethoxy)methane
125L-9	89.13348	111444	< 330.		UG/KG	12/21/89		Bis(2-chloroethyl)ether
125L-9	89.13348	108601	< 330.		UG/KG	12/21/89		Bis(2-chloroisopropyl)ether
125L-9	89.13348	117817	< 330.		UG/KG	12/21/89		Bis(2-ethylhexyl)phthalate
125L-9	89.13348	101553	< 330.		UG/KG	12/21/89		4-Bromophenylphenyl ether
125L-9	89.13348	85687	< 330.		UG/KG	12/21/89		Butylbenzyl phthalate
125L-9	89.13348	59507	< 330.		UG/KG	12/21/89		4-Chloro-3-methylphenol
125L-9	89.13348	106478	< 330.		UG/KG	12/21/89		4-Chloroaniline
125L-9	89.13348	91587	< 330.		UG/KG	12/21/89		2-Chloronaphthalene
125L-9	89.13348	95578	< 330.		UG/KG	12/21/89		o-Chlorophenol
125L-9	89.13348	7005723	< 330.		UG/KG	12/21/89		4-Chlorophenylphenyl ether
125L-9	89.13348	218019	< 330.		UG/KG	12/21/89		Chrysene

125L-9	89.13348	106445	< 330.	UG/KG	12/21/89	p-Cresol
125L-9	89.13348	84742	< 330.	UG/KG	12/21/89	Di-n-butyl phthalate
125L-9	89.13348	117840	< 330.	UG/KG	12/21/89	Di-n-octyl phthalate
125L-9	89.13348	53703	< 330.	UG/KG	12/21/89	Dibenzo(a,h)anthracene
125L-9	89.13348	132649	< 330.	UG/KG	12/21/89	Dibenzofuran
125L-9	89.13348	95501	< 330.	UG/KG	12/21/89	o-Dichlorobenzene (1,2)
125L-9	89.13348	541731	< 330.	UG/KG	12/21/89	m-Dichlorobenzene (1,3)
125L-9	89.13348	106467	< 330.	UG/KG	12/21/89	p-Dichlorobenzene (1,4)
125L-9	89.13348	91941	< 330.	UG/KG	12/21/89	3,3'-Dichlorobenzidine
125L-9	89.13348	120832	< 330.	UG/KG	12/21/89	2,4-Dichlorophenol
125L-9	89.13348	84662	< 330.	UG/KG	12/21/89	Diethyl phthalate
125L-9	89.13348	131113	< 330.	UG/KG	12/21/89	Dimethyl phthalate
125L-9	89.13348	105679	< 330.	UG/KG	12/21/89	2,4-Dimethylphenol
125L-9	89.13348	51285	< 330.	UG/KG	12/21/89	2,4-Dinitrophenol
125L-9	89.13348	121142	< 330.	UG/KG	12/21/89	2,4-Dinitrotoluene
125L-9	89.13348	606202	< 330.	UG/KG	12/21/89	2,6-Dinitrotoluene
125L-9	89.13348	206440	< 330.	UG/KG	12/21/89	Fluoranthene
125L-9	89.13348	86737	< 330.	UG/KG	12/21/89	Fluorene
125L-9	89.13348	118741	< 330.	UG/KG	12/21/89	HCB
125L-9	89.13348	118741	< 330.	UG/KG	12/21/89	Hexachlorobenzene
125L-9	89.13348	87683	< 330.	UG/KG	12/21/89	Hexachlorobutadiene
125L-9	89.13348	77474	< 330.	UG/KG	12/21/89	Hexachlorocyclopentadiene
125L-9	89.13348	67721	< 330.	UG/KG	12/21/89	Hexachloroethane
125L-9	89.13348	193395	< 330.	UG/KG	12/21/89	Indeno(1,2,3-cd)pyrene
125L-9	89.13348	78591	< 330.	UG/KG	12/21/89	Isophorone
125L-9	89.13348	534521	< 330.	UG/KG	12/21/89	2-Methyl-4,6-dinitrophenol
125L-9	89.13348	91576	< 330.	UG/KG	12/21/89	2-Methylnaphthalene
125L-9	89.13348	95487	< 330.	UG/KG	12/21/89	2-Methylphenol
125L-9	89.13348	106445	< 330.	UG/KG	12/21/89	4-Methylphenol
125L-9	89.13348	91203	< 330.	UG/KG	12/21/89	Naphthalene
125L-9	89.13348	100016	< 330.	UG/KG	12/21/89	4-Nitroaniline
125L-9	89.13348	88744	< 330.	UG/KG	12/21/89	2-Nitroaniline
125L-9	89.13348	99092	< 330.	UG/KG	12/21/89	3-Nitroaniline
125L-9	89.13348	98953	< 330.	UG/KG	12/21/89	Nitrobenzene
125L-9	89.13348	100027	< 330.	UG/KG	12/21/89	p-Nitrophenol
125L-9	89.13348	100027	< 330.	UG/KG	12/21/89	4-Nitrophenol
125L-9	89.13348	88755	< 330.	UG/KG	12/21/89	2-Nitrophenol
125L-9	89.13348	621647	< 330.	UG/KG	12/21/89	N-Nitrosodi-n-propylamine
125L-9	89.13348	62759	< 330.	UG/KG	12/21/89	N-Nitrosodimethylamine
125L-9	89.13348	86306	< 330.	UG/KG	12/21/89	N-Nitrosodiphenylamine
125L-9	89.13348	87865	< 330.	UG/KG	12/21/89	Pentachlorophenol
125L-9	89.13348	85018	< 330.	UG/KG	12/21/89	Phenanthrene
125L-9	89.13348	108952	< 330.	UG/KG	12/21/89	Phenol
125L-9	89.13348	129000	< 330.	UG/KG	12/21/89	Pyrene
125L-9	89.13348	120821	< 330.	UG/KG	12/21/89	1,2,4-Trichlorobenzene

125L-9	89.13348	95954	< 330.	UG/KG	12/21/89	2,4,5-Trichlorophenol
125L-9	89.13348	88062	< 330.	UG/KG	12/21/89	2,4,6-Trichlorophenol
125L-9	89.13348	105679	< 330.	UG/KG	12/21/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-10	89.13349	83329	< 6600.		UG/KG	12/21/89		Acenaphthene
125L-10	89.13349	208968	< 6600.		UG/KG	12/21/89		Acenaphthylene
125L-10	89.13349	62533	< 6600.		UG/KG	12/21/89		Aniline
125L-10	89.13349	120127	< 6600.		UG/KG	12/21/89		Anthracene
125L-10	89.13349	103333	< 6600.		UG/KG	12/21/89		Azobenzene
125L-10	89.13349	56553	< 6600.		UG/KG	12/21/89		Benz(a)anthracene
125L-10	89.13349	92875	< 6600.		UG/KG	12/21/89		m-Benzidine
125L-10	89.13349	191242	< 6600.		UG/KG	12/21/89		Benzo(g,h,i)perylene
125L-10	89.13349	50328	< 6600.		UG/KG	12/21/89		Benzo-a-pyrene
125L-10	89.13349	205992	< 6600.		UG/KG	12/21/89		Benzo-b-fluoranthene
125L-10	89.13349	207089	< 6600.		UG/KG	12/21/89		Benzo-k-fluoranthene
125L-10	89.13349	65850	< 6600.		UG/KG	12/21/89		Benzoic acid
125L-10	89.13349	100516	< 6600.		UG/KG	12/21/89		Benzyl alcohol
125L-10	89.13349	111911	< 6600.		UG/KG	12/21/89		Bis(2-chloroethoxy)methane
125L-10	89.13349	111444	< 6600.		UG/KG	12/21/89		Bis(2-chloroethyl)ether
125L-10	89.13349	108601	< 6600.		UG/KG	12/21/89		Bis(2-chloroisopropyl)ether
125L-10	89.13349	117817	< 6600.		UG/KG	12/21/89		Bis(2-ethylhexyl)phthalate
125L-10	89.13349	101553	< 6600.		UG/KG	12/21/89		4-Bromophenylphenyl ether
125L-10	89.13349	85687	< 6600.		UG/KG	12/21/89		Butylbenzyl phthalate
125L-10	89.13349	59507	< 6600.		UG/KG	12/21/89		4-Chloro-3-methylphenol
125L-10	89.13349	106478	< 6600.		UG/KG	12/21/89		4-Chloroaniline
125L-10	89.13349	91587	< 6600.		UG/KG	12/21/89		2-Chloronaphthalene
125L-10	89.13349	95578	< 6600.		UG/KG	12/21/89		o-Chlorophenol
125L-10	89.13349	7005723	< 6600.		UG/KG	12/21/89		4-Chlorophenylphenyl ether
125L-10	89.13349	218019	< 6600.		UG/KG	12/21/89		Chrysene

125L-10	89.13349	106445	< 6600.	UG/KG	12/21/89	p-Cresol
125L-10	89.13349	84742	< 6600.	UG/KG	12/21/89	Di-n-butyl phthalate
125L-10	89.13349	117840	< 6600.	UG/KG	12/21/89	Di-n-octyl phthalate
125L-10	89.13349	53703	< 6600.	UG/KG	12/21/89	Dibenzo(a,h)anthracene
125L-10	89.13349	132649	< 6600.	UG/KG	12/21/89	Dibenzofuran
125L-10	89.13349	95501	< 6600.	UG/KG	12/21/89	o-Dichlorobenzene (1,2)
125L-10	89.13349	541731	< 6600.	UG/KG	12/21/89	m-Dichlorobenzene (1,3)
125L-10	89.13349	106467	< 6600.	UG/KG	12/21/89	p-Dichlorobenzene (1,4)
125L-10	89.13349	91941	< 6600.	UG/KG	12/21/89	3,3'-Dichlorobenzidine
125L-10	89.13349	120832	< 6600.	UG/KG	12/21/89	2,4-Dichlorophenol
125L-10	89.13349	84662	< 6600.	UG/KG	12/21/89	Diethyl phthalate
125L-10	89.13349	131113	< 6600.	UG/KG	12/21/89	Dimethyl phthalate
125L-10	89.13349	105679	< 6600.	UG/KG	12/21/89	2,4-Dimethylphenol
125L-10	89.13349	51285	< 6600.	UG/KG	12/21/89	2,4-Dinitrophenol
125L-10	89.13349	121142	< 6600.	UG/KG	12/21/89	2,4-Dinitrotoluene
125L-10	89.13349	606202	< 6600.	UG/KG	12/21/89	2,6-Dinitrotoluene
125L-10	89.13349	206440	< 6600.	UG/KG	12/21/89	Fluoranthene
125L-10	89.13349	86737	< 6600.	UG/KG	12/21/89	Fluorene
125L-10	89.13349	118741	< 6600.	UG/KG	12/21/89	HCB
125L-10	89.13349	118741	< 6600.	UG/KG	12/21/89	Hexachlorobenzene
125L-10	89.13349	87683	< 6600.	UG/KG	12/21/89	Hexachlorobutadiene
125L-10	89.13349	77474	< 6600.	UG/KG	12/21/89	Hexachlorocyclopentadiene
125L-10	89.13349	67721	< 6600.	UG/KG	12/21/89	Hexachloroethane
125L-10	89.13349	193395	< 6600.	UG/KG	12/21/89	Indeno(1,2,3-cd)pyrene
125L-10	89.13349	78591	< 6600.	UG/KG	12/21/89	Isophorone
125L-10	89.13349	534521	< 6600.	UG/KG	12/21/89	2-Methyl-4,6-dinitrophenol
125L-10	89.13349	91576	< 6600.	UG/KG	12/21/89	2-Methylnaphthalene
125L-10	89.13349	106445	< 6600.	UG/KG	12/21/89	4-Methylphenol
125L-10	89.13349	95487	< 6600.	UG/KG	12/21/89	2-Methylphenol
125L-10	89.13349	91203	< 6600.	UG/KG	12/21/89	Naphthalene
125L-10	89.13349	88744	< 6600.	UG/KG	12/21/89	2-Nitroaniline
125L-10	89.13349	99092	< 6600.	UG/KG	12/21/89	3-Nitroaniline
125L-10	89.13349	100016	< 6600.	UG/KG	12/21/89	4-Nitroaniline
125L-10	89.13349	98953	< 6600.	UG/KG	12/21/89	Nitrobenzene
125L-10	89.13349	88755	< 6600.	UG/KG	12/21/89	2-Nitrophenol
125L-10	89.13349	100027	< 6600.	UG/KG	12/21/89	p-Nitrophenol
125L-10	89.13349	100027	< 6600.	UG/KG	12/21/89	4-Nitrophenol
125L-10	89.13349	621647	< 6600.	UG/KG	12/21/89	N-Nitrosodi-n-propylamine
125L-10	89.13349	62759	< 6600.	UG/KG	12/21/89	N-Nitrosodimethylamine
125L-10	89.13349	86306	< 6600.	UG/KG	12/21/89	N-Nitrosodiphenylamine
125L-10	89.13349	87865	< 6600.	UG/KG	12/21/89	Pentachlorophenol
125L-10	89.13349	85018	< 6600.	UG/KG	12/21/89	Phenanthrene
125L-10	89.13349	108952	< 6600.	UG/KG	12/21/89	Phenol
125L-10	89.13349	129000	< 6600.	UG/KG	12/21/89	Pyrene
125L-10	89.13349	120821	< 6600.	UG/KG	12/21/89	1,2,4-Trichlorobenzene

125L-10	89.13349	95954	< 6600.	UG/KG	12/21/89	2,4,5-Trichlorophenol
125L-10	89.13349	88062	< 6600.	UG/KG	12/21/89	2,4,6-Trichlorophenol
125L-10	89.13349	105679	< 6600.	UG/KG	12/21/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-11	89.13350	83329	< 6600.		UG/KG	12/21/89		Acenaphthene
125L-11	89.13350	208968	< 6600.		UG/KG	12/21/89		Acenaphthylene
125L-11	89.13350	62533	< 6600.		UG/KG	12/21/89		Aniline
125L-11	89.13350	120127	< 6600.		UG/KG	12/21/89		Anthracene
125L-11	89.13350	103333	< 6600.		UG/KG	12/21/89		Azobenzene
125L-11	89.13350	56553	< 6600.		UG/KG	12/21/89		Benz(a)anthracene
125L-11	89.13350	92875	< 6600.		UG/KG	12/21/89		m-Benzidine
125L-11	89.13350	191242	< 6600.		UG/KG	12/21/89		Benzo(g,h,i)perylene
125L-11	89.13350	50328	< 6600.		UG/KG	12/21/89		Benzo-a-pyrene
125L-11	89.13350	205992	< 6600.		UG/KG	12/21/89		Benzo-b-fluoranthene
125L-11	89.13350	207089	< 6600.		UG/KG	12/21/89		Benzo-k-fluoranthene
125L-11	89.13350	65850	< 6600.		UG/KG	12/21/89		Benzoic acid
125L-11	89.13350	100516	< 6600.		UG/KG	12/21/89		Benzyl alcohol
125L-11	89.13350	111911	< 6600.		UG/KG	12/21/89		Bis(2-chloroethoxy)methane
125L-11	89.13350	111444	< 6600.		UG/KG	12/21/89		Bis(2-chloroethyl)ether
125L-11	89.13350	108601	< 6600.		UG/KG	12/21/89		Bis(2-chloroisopropyl)ether
125L-11	89.13350	117817	7900.	1580.	UG/KG	12/21/89		Bis(2-ethylhexyl)phthalate
125L-11	89.13350	101553	< 6600.		UG/KG	12/21/89		4-Bromophenylphenyl ether
125L-11	89.13350	85687	< 6600.		UG/KG	12/21/89		Butylbenzyl phthalate
125L-11	89.13350	59507	< 6600.		UG/KG	12/21/89		4-Chloro-3-methylphenol
125L-11	89.13350	106478	< 6600.		UG/KG	12/21/89		4-Chloroaniline
125L-11	89.13350	91587	< 6600.		UG/KG	12/21/89		2-Chloronaphthalene
125L-11	89.13350	95578	< 6600.		UG/KG	12/21/89		o-Chlorophenol
125L-11	89.13350	7005723	< 6600.		UG/KG	12/21/89		4-Chlorophenylphenyl ether
125L-11	89.13350	218019	< 6600.		UG/KG	12/21/89		Chrysene

125L-11	89.13350	106445	< 6600.	UG/KG	12/21/89	p-Cresol
125L-11	89.13350	84742	< 6600.	UG/KG	12/21/89	Di-n-butyl phthalate
125L-11	89.13350	117840	< 6600.	UG/KG	12/21/89	Di-n-octyl phthalate
125L-11	89.13350	53703	< 6600.	UG/KG	12/21/89	Dibenzo(a,h)anthracene
125L-11	89.13350	132649	< 6600.	UG/KG	12/21/89	Dibenzofuran
125L-11	89.13350	95501	< 6600.	UG/KG	12/21/89	o-Dichlorobenzene (1,2)
125L-11	89.13350	541731	< 6600.	UG/KG	12/21/89	m-Dichlorobenzene (1,3)
125L-11	89.13350	106467	< 6600.	UG/KG	12/21/89	p-Dichlorobenzene (1,4)
125L-11	89.13350	91941	< 6600.	UG/KG	12/21/89	3,3'-Dichlorobenzidine
125L-11	89.13350	120832	< 6600.	UG/KG	12/21/89	2,4-Dichlorophenol
125L-11	89.13350	84662	< 6600.	UG/KG	12/21/89	Diethyl phthalate
125L-11	89.13350	131113	< 6600.	UG/KG	12/21/89	Dimethyl phthalate
125L-11	89.13350	105679	< 6600.	UG/KG	12/21/89	2,4-Dimethylphenol
125L-11	89.13350	51285	< 6600.	UG/KG	12/21/89	2,4-Dinitrophenol
125L-11	89.13350	121142	< 6600.	UG/KG	12/21/89	2,4-Dinitrotoluene
125L-11	89.13350	606202	< 6600.	UG/KG	12/21/89	2,6-Dinitrotoluene
125L-11	89.13350	206440	< 6600.	UG/KG	12/21/89	Fluoranthene
125L-11	89.13350	86737	< 6600.	UG/KG	12/21/89	Fluorene
125L-11	89.13350	118741	< 6600.	UG/KG	12/21/89	HCB
125L-11	89.13350	118741	< 6600.	UG/KG	12/21/89	Hexachlorobenzene
125L-11	89.13350	87683	< 6600.	UG/KG	12/21/89	Hexachlorobutadiene
125L-11	89.13350	77474	< 6600.	UG/KG	12/21/89	Hexachlorocyclopentadiene
125L-11	89.13350	67721	< 6600.	UG/KG	12/21/89	Hexachloroethane
125L-11	89.13350	193395	< 6600.	UG/KG	12/21/89	Indeno(1,2,3-cd)pyrene
125L-11	89.13350	78591	< 6600.	UG/KG	12/21/89	Isophorone
125L-11	89.13350	534521	< 6600.	UG/KG	12/21/89	2-Methyl-4,6-dinitrophenol
125L-11	89.13350	91576	< 6600.	UG/KG	12/21/89	2-Methylnaphthalene
125L-11	89.13350	106445	< 6600.	UG/KG	12/21/89	4-Methylphenol
125L-11	89.13350	95487	< 6600.	UG/KG	12/21/89	2-Methylphenol
125L-11	89.13350	91203	< 6600.	UG/KG	12/21/89	Naphthalene
125L-11	89.13350	100016	< 6600.	UG/KG	12/21/89	4-Nitroaniline
125L-11	89.13350	99092	< 6600.	UG/KG	12/21/89	3-Nitroaniline
125L-11	89.13350	88744	< 6600.	UG/KG	12/21/89	2-Nitroaniline
125L-11	89.13350	98953	< 6600.	UG/KG	12/21/89	Nitrobenzene
125L-11	89.13350	88755	< 6600.	UG/KG	12/21/89	2-Nitrophenol
125L-11	89.13350	100027	< 6600.	UG/KG	12/21/89	4-Nitrophenol
125L-11	89.13350	100027	< 6600.	UG/KG	12/21/89	p-Nitrophenol
125L-11	89.13350	621647	< 6600.	UG/KG	12/21/89	N-Nitrosodi-n-propylamine
125L-11	89.13350	62759	< 6600.	UG/KG	12/21/89	N-Nitrosodimethylamine
125L-11	89.13350	86306	< 6600.	UG/KG	12/21/89	N-Nitrosodiphenylamine
125L-11	89.13350	87865	< 6600.	UG/KG	12/21/89	Pentachlorophenol
125L-11	89.13350	85018	< 6600.	UG/KG	12/21/89	Phenanthrene
125L-11	89.13350	108952	< 6600.	UG/KG	12/21/89	Phenol
125L-11	89.13350	129000	< 6600.	UG/KG	12/21/89	Pyrene
125L-11	89.13350	120821	< 6600.	UG/KG	12/21/89	1,2,4-Trichlorobenzene

125L-11	89.13350	88062	< 6600.	UG/KG	12/21/89	2,4,6-Trichlorophenol
125L-11	89.13350	95954	< 6600.	UG/KG	12/21/89	2,4,5-Trichlorophenol
125L-11	89.13350	105679	< 6600.	UG/KG	12/21/89	2,4-Xylenol

REPORT NUMBER: 5199

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125L-12	89.13351	83329	< 330.		UG/KG	12/21/89		Acenaphthene
125L-12	89.13351	208968	< 330.		UG/KG	12/21/89		Acenaphthylene
125L-12	89.13351	62533	< 330.		UG/KG	12/21/89		Aniline
125L-12	89.13351	120127	< 330.		UG/KG	12/21/89		Anthracene
125L-12	89.13351	103333	< 330.		UG/KG	12/21/89		Azobenzene
125L-12	89.13351	56553	< 330.		UG/KG	12/21/89		Benz(a)anthracene
125L-12	89.13351	92875	< 330.		UG/KG	12/21/89		m-Benzidine
125L-12	89.13351	191242	< 330.		UG/KG	12/21/89		Benzo(g,h,i)perylene
125L-12	89.13351	50328	< 330.		UG/KG	12/21/89		Benzo-a-pyrene
125L-12	89.13351	205992	< 330.		UG/KG	12/21/89		Benzo-b-fluoranthene
125L-12	89.13351	207089	< 330.		UG/KG	12/21/89		Benzo-k-fluoranthene
125L-12	89.13351	65850	< 330.		UG/KG	12/21/89		Benzoic acid
125L-12	89.13351	100516	< 330.		UG/KG	12/21/89		Benzyl alcohol
125L-12	89.13351	111911	< 330.		UG/KG	12/21/89		Bis(2-chloroethoxy)methane
125L-12	89.13351	111444	< 330.		UG/KG	12/21/89		Bis(2-chloroethyl)ether
125L-12	89.13351	108601	< 330.		UG/KG	12/21/89		Bis(2-chloroisopropyl)ether
125L-12	89.13351	117817	< 330.		UG/KG	12/21/89		Bis(2-ethylhexyl)phthalate
125L-12	89.13351	101553	< 330.		UG/KG	12/21/89		4-Bromophenylphenyl ether
125L-12	89.13351	85687	< 330.		UG/KG	12/21/89		Butylbenzyl phthalate
125L-12	89.13351	59507	< 330.		UG/KG	12/21/89		4-Chloro-3-methylphenol
125L-12	89.13351	106478	< 330.		UG/KG	12/21/89		4-Chloroaniline
125L-12	89.13351	91587	< 330.		UG/KG	12/21/89		2-Chloronaphthalene
125L-12	89.13351	95578	< 330.		UG/KG	12/21/89		o-Chlorophenol
125L-12	89.13351	7005723	< 330.		UG/KG	12/21/89		4-Chlorophenylphenyl ether
125L-12	89.13351	218019	< 330.		UG/KG	12/21/89		Chrysene

125L-12	89.13351	106445	< 330.	UG/KG	12/21/89	p-Cresol
125L-12	89.13351	84742	< 330.	UG/KG	12/21/89	Di-n-butyl phthalate
125L-12	89.13351	117840	< 330.	UG/KG	12/21/89	Di-n-octyl phthalate
125L-12	89.13351	53703	< 330.	UG/KG	12/21/89	Dibenzo(a,h)anthracene
125L-12	89.13351	132649	< 330.	UG/KG	12/21/89	Dibenzofuran
125L-12	89.13351	95501	< 330.	UG/KG	12/21/89	o-Dichlorobenzene (1,2)
125L-12	89.13351	541731	< 330.	UG/KG	12/21/89	m-Dichlorobenzene (1,3)
125L-12	89.13351	106467	< 330.	UG/KG	12/21/89	p-Dichlorobenzene (1,4)
125L-12	89.13351	91941	< 330.	UG/KG	12/21/89	3,3'-Dichlorobenzidine
125L-12	89.13351	120832	< 330.	UG/KG	12/21/89	2,4-Dichlorophenol
125L-12	89.13351	84662	< 330.	UG/KG	12/21/89	Diethyl phthalate
125L-12	89.13351	131113	< 330.	UG/KG	12/21/89	Dimethyl phthalate
125L-12	89.13351	105679	< 330.	UG/KG	12/21/89	2,4-Dimethylphenol
125L-12	89.13351	51285	< 330.	UG/KG	12/21/89	2,4-Dinitrophenol
125L-12	89.13351	121142	< 330.	UG/KG	12/21/89	2,4-Dinitrotoluene
125L-12	89.13351	606202	< 330.	UG/KG	12/21/89	2,6-Dinitrotoluene
125L-12	89.13351	206440	< 330.	UG/KG	12/21/89	Fluoranthene
125L-12	89.13351	86737	< 330.	UG/KG	12/21/89	Fluorene
125L-12	89.13351	118741	< 330.	UG/KG	12/21/89	HCB
125L-12	89.13351	118741	< 330.	UG/KG	12/21/89	Hexachlorobenzene
125L-12	89.13351	87683	< 330.	UG/KG	12/21/89	Hexachlorobutadiene
125L-12	89.13351	77474	< 330.	UG/KG	12/21/89	Hexachlorocyclopentadiene
125L-12	89.13351	67721	< 330.	UG/KG	12/21/89	Hexachloroethane
125L-12	89.13351	193395	< 330.	UG/KG	12/21/89	Indeno(1,2,3-cd)pyrene
125L-12	89.13351	78591	< 330.	UG/KG	12/21/89	Isophorone
125L-12	89.13351	534521	< 330.	UG/KG	12/21/89	2-Methyl-4,6-dinitrophenol
125L-12	89.13351	91576	< 330.	UG/KG	12/21/89	2-Methylnaphthalene
125L-12	89.13351	95487	< 330.	UG/KG	12/21/89	2-Methylphenol
125L-12	89.13351	106445	< 330.	UG/KG	12/21/89	4-Methylphenol
125L-12	89.13351	91203	< 330.	UG/KG	12/21/89	Naphthalene
125L-12	89.13351	100016	< 330.	UG/KG	12/21/89	4-Nitroaniline
125L-12	89.13351	99092	< 330.	UG/KG	12/21/89	3-Nitroaniline
125L-12	89.13351	88744	< 330.	UG/KG	12/21/89	2-Nitroaniline
125L-12	89.13351	98953	< 330.	UG/KG	12/21/89	Nitrobenzene
125L-12	89.13351	88755	< 330.	UG/KG	12/21/89	2-Nitrophenol
125L-12	89.13351	100027	< 330.	UG/KG	12/21/89	p-Nitrophenol
125L-12	89.13351	100027	< 330.	UG/KG	12/21/89	4-Nitrophenol
125L-12	89.13351	621647	< 330.	UG/KG	12/21/89	N-Nitrosodi-n-propylamine
125L-12	89.13351	62759	< 330.	UG/KG	12/21/89	N-Nitrosodimethylamine
125L-12	89.13351	86306	< 330.	UG/KG	12/21/89	N-Nitrosodiphenylamine
125L-12	89.13351	87865	< 330.	UG/KG	12/21/89	Pentachlorophenol
125L-12	89.13351	85018	< 330.	UG/KG	12/21/89	Phenanthrene
125L-12	89.13351	108952	< 330.	UG/KG	12/21/89	Phenol
125L-12	89.13351	129000	< 330.	UG/KG	12/21/89	Pyrene
125L-12	89.13351	120821	< 330.	UG/KG	12/21/89	1,2,4-Trichlorobenzene

125L-12	89.13351	95954	< 330.	UG/KG	12/21/89	2,4,5-Trichlorophenol
125L-12	89.13351	88062	< 330.	UG/KG	12/21/89	2,4,6-Trichlorophenol
125L-12	89.13351	105679	< 330.	UG/KG	12/21/89	2,4-Xylenol

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REPORT NUMBER: 5199 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Martin Koby

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

✓ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SURROGATE RESULTS FOR EPA SEMIVOLATILES

2-Fluorophenol (CAS # =); EPA Range Limits: Water = 21-100 %, Soil = 25-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13340	49.	%	12/20/89	
89.13341	59.	%	12/20/89	
89.13342		%	12/20/89	
89.13343		%	12/20/89	
89.13344		%	12/20/89	
89.13345	41.	%	12/20/89	
89.13346	71.	%	12/20/89	
89.13347	63.	%	12/20/89	
89.13348	58.	%	12/21/89	

89.13349	60.	%	12/21/89
89.13350	62.	%	12/21/89
89.13351	53.	%	12/21/89

Phenol-d5 (CAS # =); EPA Range Limits: Water = 10-94 %, Soil = 24-113 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13340	64.	%	12/20/89	
89.13341	71.	%	12/20/89	
89.13342		%	12/20/89	
89.13343		%	12/20/89	
89.13344		%	12/20/89	
89.13345	65.	%	12/20/89	
89.13346	81.	%	12/20/89	
89.13347	73.	%	12/20/89	
89.13348	65.	%	12/21/89	
89.13349	70.	%	12/21/89	
89.13350	68.	%	12/21/89	
89.13351	63.	%	12/21/89	

Nitrobenzene-d5 (CAS # =); EPA Range Limits: Water = 35-114 %, Soil = 23-120 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13340	73.	%	12/20/89	
89.13341	78.	%	12/20/89	
89.13342		%	12/20/89	
89.13343		%	12/20/89	
89.13344		%	12/20/89	
89.13345	72.	%	12/20/89	
89.13346	83.	%	12/20/89	
89.13347	85.	%	12/20/89	
89.13348	82.	%	12/21/89	
89.13349	92.	%	12/21/89	
89.13350	78.	%	12/21/89	
89.13351	87.	%	12/21/89	

2-Fluorobiphenyl (CAS # =); EPA Range Limits: Water = 43-116 %, Soil = 30-115 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT

89.13340	101.	%	12/20/89
89.13341	109.	%	12/20/89
89.13342		%	12/20/89
89.13343		%	12/20/89
89.13344		%	12/20/89
89.13345	106.	%	12/20/89
89.13346	88.	%	12/20/89
89.13347	117.	%	12/20/89
89.13348	101.	%	12/21/89
89.13349	110.	%	12/21/89
89.13350	253.	%	12/21/89
89.13351	92.	%	12/21/89

2,4,6-Tribromophenol (CAS # =); EPA Range Limits: Water = 10-123 %, Soil = 19-122 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13340	77.	%	12/20/89	
89.13341	117.	%	12/20/89	
89.13342		%	12/20/89	
89.13343		%	12/20/89	
89.13344		%	12/20/89	
89.13345	38.	%	12/20/89	
89.13346	81.	%	12/20/89	
89.13347		%	12/20/89	
89.13348	61.	%	12/21/89	
89.13349	99.	%	12/21/89	
89.13350		%	12/21/89	
89.13351	53.	%	12/21/89	

p-Terphenyl-d14 (CAS # =); EPA Range Limits: Water = 33-141 %, Soil = 18-137 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13340	98.	%	12/20/89	
89.13341	91.	%	12/20/89	
89.13342		%	12/20/89	
89.13343		%	12/20/89	
89.13344		%	12/20/89	
89.13345	78.	%	12/20/89	
89.13346	97.	%	12/20/89	
89.13347	93.	%	12/20/89	
89.13348	102.	%	12/21/89	

89.13349	113.	%	12/21/89
89.13350	89.	%	12/21/89
89.13351	95.	%	12/21/89

mwKoby	[illegible]	mag
Analyst	Section Leader	QA Officer
1/2/90	1/2/90	1-2-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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POLYCHLORINATED BIPHENYL ANALYSES

REPORT NUMBER: 3166

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: DMS on 26-Jun-1989

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Dee Seitz

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS		RESULT	UNCERTAINTY	UNITS	COMPLETION DATE		COMMENT
125L-1	89.13340	1336363	>	50.		PPM	6/26/89	KIT	Mixed-Aroclor
125L-1	89.13340	1336363		< 0.1		UG/G	6/26/89		Mixed-Aroclor
125L-1	89.13340	53469219		< 0.1		UG/G	6/26/89		Aroclor 1242
125L-1	89.13340	11097691		< 0.1		UG/G	6/26/89		Aroclor 1254
125L-1	89.13340	11096825		< 0.1		UG/G	6/26/89		Aroclor 1260
125L-2	89.13341	1336363		< 0.1		UG/G	6/26/89		Mixed-Aroclor
125L-2	89.13341	1336363	>	50.		PPM	6/26/89	KIT	Mixed-Aroclor
125L-2	89.13341	53469219		< 0.1		UG/G	6/26/89		Aroclor 1242
125L-2	89.13341	11097691		< 0.1		UG/G	6/26/89		Aroclor 1254
125L-2	89.13341	11096825		< 0.1		UG/G	6/26/89		Aroclor 1260
125L-3	89.13342	1336363		< 50.		PPM	6/26/89	KIT	Mixed-Aroclor
125L-3	89.13342	1336363		< 0.1		UG/G	6/26/89		Mixed-Aroclor
125L-3	89.13342	53469219		< 0.1		UG/G	6/26/89		Aroclor 1242
125L-3	89.13342	11097691		< 0.1		UG/G	6/26/89		Aroclor 1254
125L-3	89.13342	11096825		< 0.1		UG/G	6/26/89		Aroclor 1260
125L-4	89.13343	1336363		< 50.		PPM	6/26/89	KIT	Mixed-Aroclor
125L-4	89.13343	1336363		< 0.1		UG/G	6/26/89		Mixed-Aroclor
125L-4	89.13343	53469219		< 0.1		UG/G	6/26/89		Aroclor 1242
125L-4	89.13343	11097691		< 0.1		UG/G	6/26/89		Aroclor 1254
125L-4	89.13343	11096825		< 0.1		UG/G	6/26/89		Aroclor 1260
125L-5	89.13344	1336363		< 0.1		UG/G	6/26/89		Mixed-Aroclor
125L-5	89.13344	1336363		< 50.		PPM	6/26/89	KIT	Mixed-Aroclor
125L-5	89.13344	53469219		< 0.1		UG/G	6/26/89		Aroclor 1242
125L-5	89.13344	11097691		< 0.1		UG/G	6/26/89		Aroclor 1254
125L-5	89.13344	11096825		< 0.1		UG/G	6/26/89		Aroclor 1260

125L-6	89.13345	1336363	< 50.	PPM	6/26/89	KIT	Mixed-Aroclor
125L-6	89.13345	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-6	89.13345	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-6	89.13345	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-6	89.13345	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260
125L-7	89.13346	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-7	89.13346	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-7	89.13346	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-7	89.13346	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260
125L-8	89.13347	1336363	< 50.	PPM	6/26/89	KIT	Mixed-Aroclor
125L-8	89.13347	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-8	89.13347	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-8	89.13347	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-8	89.13347	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260
125L-9	89.13348	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-9	89.13348	1336363	< 50.	PPM	6/26/89	KIT	Mixed-Aroclor
125L-9	89.13348	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-9	89.13348	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-9	89.13348	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260
125L-10	89.13349	1336363	< 50.	PPM	6/26/89	KIT	Mixed-Aroclor
125L-10	89.13349	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-10	89.13349	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-10	89.13349	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-10	89.13349	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260
125L-11	89.13350	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-11	89.13350	1336363	< 50.	PPM	6/26/89	KIT	Mixed-Aroclor
125L-11	89.13350	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-11	89.13350	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-11	89.13350	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260
125L-12	89.13351	1336363	< 50.	PPM	6/26/89	KIT	Mixed-Aroclor
125L-12	89.13351	1336363	< 0.1	UG/G	6/26/89		Mixed-Aroclor
125L-12	89.13351	53469219	< 0.1	UG/G	6/26/89		Aroclor 1242
125L-12	89.13351	11097691	< 0.1	UG/G	6/26/89		Aroclor 1254
125L-12	89.13351	11096825	< 0.1	UG/G	6/26/89		Aroclor 1260

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REPORT NUMBER: 3166 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: DMS on 26-Jun-1989

REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Dee Seitz 5-2214

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

There were no open (non-blind) Quality Assurance materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QA samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.13355	1336363	36.9	7.4	UG/G	6/26/89	UNDER CONTROL	Mixed-Aroclor
89.13355	53469219	< 0.1		UG/G	6/26/89	UNDER CONTROL	Aroclor 1242
89.13355	11097691	< 0.1		UG/G	6/26/89	UNDER CONTROL	Aroclor 1254
89.13355	11096825	36.9	7.4	UG/G	6/26/89	UNDER CONTROL	Aroclor 1260

Dee Seitz
Analyst
6/27/89

Section Leader
6/27/89

mag
QA Officer
6/30/89

METAL ANALYSES

Ag
As
Ba
Cd
Cr
Hg
Pb
Se

REPORT NUMBER: 3246

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: AG REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 20.		UG/L	6/30/89	
125L-2	89.13341	< 20.		UG/L	6/30/89	
125L-3	89.13342	< 20.		UG/L	6/30/89	
125L-4	89.13343	< 20.		UG/L	6/30/89	
125L-5	89.13344	< 20.		UG/L	6/30/89	
125L-6	89.13345	< 20.		UG/L	6/30/89	
125L-7	89.13346	< 20.		UG/L	6/30/89	
125L-8	89.13347	< 20.		UG/L	6/30/89	
125L-9	89.13348	< 20.		UG/L	6/30/89	
125L-10	89.13349	< 20.		UG/L	6/30/89	
125L-11	89.13350	< 20.		UG/L	6/30/89	
125L-12	89.13351	< 20.		UG/L	6/30/89	

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REPORT NUMBER: 3246 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: AG REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01100	00.01100	5.	0.5	MG/L	5.	0.28	6/30/89	UNDER CONTROL
00.01100	00.01100	5.	0.5	MG/L	5.	0.28	6/30/89	UNDER CONTROL
00.01100	00.01100	5.3	0.53	MG/L	5.	0.28	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	5.5	0.5	MG/L	6/30/89	UNDER CONTROL

J D Montoya	[illegible]	[illegible]
Analyst	Section Leader	QA Officer
7-6-89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 3247

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: AS REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 0.2		MG/L	6/30/89	
125L-2	89.13341	< 0.2		MG/L	6/30/89	
125L-3	89.13342	< 0.2		MG/L	6/30/89	
125L-4	89.13343	< 0.2		MG/L	6/30/89	
125L-5	89.13344	< 0.2		MG/L	6/30/89	
125L-6	89.13345	< 0.2		MG/L	6/30/89	
125L-7	89.13346	< 0.2		MG/L	6/30/89	
125L-8	89.13347	< 0.2		MG/L	6/30/89	
125L-9	89.13348	< 0.2		MG/L	6/30/89	
125L-10	89.13349	< 0.2		MG/L	6/30/89	
125L-11	89.13350	< 0.2		MG/L	6/30/89	
125L-12	89.13351	< 0.2		MG/L	6/30/89	

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REPORT NUMBER: 3247 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: AS REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01101	00.01101	5.	0.5	MG/L	5.	0.7	6/30/89	UNDER CONTROL
00.01101	00.01101	5.	0.5	MG/L	5.	0.7	6/30/89	UNDER CONTROL
00.01101	00.01101	5.	0.5	MG/L	5.	0.7	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	20.	2.	MG/L	6/30/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
7-6-89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 3249

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: BA REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	0.2	0.02	MG/L	6/30/89	
125L-2	89.13341	0.1	0.01	MG/L	6/30/89	
125L-3	89.13342	0.2	0.02	MG/L	6/30/89	
125L-4	89.13343	0.45	0.05	MG/L	6/30/89	
125L-5	89.13344	0.4	0.04	MG/L	6/30/89	
125L-6	89.13345	0.3	0.03	MG/L	6/30/89	
125L-7	89.13346	0.45	0.05	MG/L	6/30/89	
125L-8	89.13347	90.	9.	UG/L	6/30/89	
125L-9	89.13348	0.2	0.02	MG/L	6/30/89	
125L-10	89.13349	0.2	0.02	MG/L	6/30/89	
125L-11	89.13350	0.2	0.02	MG/L	6/30/89	
125L-12	89.13351	90.	9.	UG/L	6/30/89	

****

REPORT NUMBER: 3249 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: BA REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01100	00.01100	110.	11.	MG/L	100.	10.2	6/30/89	UNDER CONTROL
00.01100	00.01100	110.	11.	MG/L	100.	10.2	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	11.	1.	MG/L	6/30/89	UNDER CONTROL

JD Montoya	SMLB	mag
Analyst	Section Leader	QA Officer
7-6-89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 3251

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: CD REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 90.		UG/L	6/30/89	
125L-2	89.13341	< 90.		UG/L	6/30/89	
125L-3	89.13342	< 90.		UG/L	6/30/89	
125L-4	89.13343	< 90.		UG/L	6/30/89	
125L-5	89.13344	< 90.		UG/L	6/30/89	
125L-6	89.13345	< 90.		UG/L	6/30/89	
125L-7	89.13346	< 90.		UG/L	6/30/89	
125L-8	89.13347	< 90.		UG/L	6/30/89	
125L-9	89.13348	< 90.		UG/L	6/30/89	
125L-10	89.13349	< 90.		UG/L	6/30/89	
125L-11	89.13350	< 90.		UG/L	6/30/89	
125L-12	89.13351	< 90.		UG/L	6/30/89	

****

REPORT NUMBER: 3251 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: CD REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01100	00.01100	1.	0.1	MG/L	1.	0.03	6/30/89	UNDER CONTROL
00.01100	00.01100	1.	0.1	MG/L	1.	0.03	6/30/89	UNDER CONTROL
00.01100	00.01100	1.	0.1	MG/L	1.	0.03	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	4.	0.4	MG/L	6/30/89	UNDER CONTROL

JD Montoya	MGB	mag
Analyst	Section Leader	QA Officer
7-6-89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 3252

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: CR REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 20.		UG/L	6/30/89	
125L-2	89.13341	< 20.		UG/L	6/30/89	
125L-3	89.13342	< 20.		UG/L	6/30/89	
125L-4	89.13343	< 20.		UG/L	6/30/89	
125L-5	89.13344	< 20.		UG/L	6/30/89	
125L-6	89.13345	< 20.		UG/L	6/30/89	
125L-7	89.13346	50.	20.	UG/L	6/30/89	
125L-8	89.13347	< 20.		UG/L	6/30/89	
125L-9	89.13348	< 20.		UG/L	6/30/89	
125L-10	89.13349	30.	20.	UG/L	6/30/89	
125L-11	89.13350	< 20.		UG/L	6/30/89	
125L-12	89.13351	< 20.		UG/L	6/30/89	

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REPORT NUMBER: 3252 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: CR REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01100	00.01100	5.1	0.51	MG/L	5.	0.42	6/30/89	UNDER CONTROL
00.01100	00.01100	5.3	0.53	MG/L	5.	0.42	6/30/89	UNDER CONTROL
00.01100	00.01100	5.3	0.53	MG/L	5.	0.42	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	6.5	0.6	MG/L	6/30/89	UNDER CONTROL

J D Montoya	GMSB	mag
Analyst	Section Leader	QA Officer
7-6-89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 3352

TSL-95
Soil [illegible]

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: TMF on 13-Jul-1989

Rec'd 7/20/89

ANALYSIS: HG REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 245.1

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 0.2		UG/L	7/13/89	
125L-2	89.13341	< 0.2		UG/L	7/13/89	
125L-3	89.13342	< 0.2		UG/L	7/13/89	
125L-4	89.13343	< 0.2		UG/L	7/13/89	
125L-5	89.13344	< 0.2		UG/L	7/13/89	
125L-6	89.13345	< 0.2		UG/L	7/13/89	
125L-7	89.13346	< 0.2		UG/L	7/13/89	
125L-8	89.13347	< 0.2		UG/L	7/13/89	
125L-9	89.13348	< 0.2		UG/L	7/13/89	
125L-10	89.13349	< 0.2		UG/L	7/13/89	
125L-11	89.13350	< 0.2		UG/L	7/13/89	
125L-12	89.13351	< 0.2		UG/L	7/13/89	

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REPORT NUMBER: 3352 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: TMF on 13-Jul-1989

ANALYSIS: HG REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 245.1

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.99497	00.99497	2.76	0.3	UG/L	3.	0.3	7/13/89	UNDER CONTROL
00.99497	00.99497	2.75	0.3	UG/L	3.	0.3	7/13/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
7-13-89	7-13-89	7-14-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 3250

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: PB REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 40.		UG/L	6/30/89	
125L-2	89.13341	< 40.		UG/L	6/30/89	
125L-3	89.13342	< 40.		UG/L	6/30/89	
125L-4	89.13343	< 40.		UG/L	6/30/89	
125L-5	89.13344	< 40.		UG/L	6/30/89	
125L-6	89.13345	< 40.		UG/L	6/30/89	
125L-7	89.13346	< 40.		UG/L	6/30/89	
125L-8	89.13347	< 40.		UG/L	6/30/89	
125L-9	89.13348	< 40.		UG/L	6/30/89	
125L-10	89.13349	< 40.		UG/L	6/30/89	
125L-11	89.13350	< 40.		UG/L	6/30/89	
125L-12	89.13351	< 40.		UG/L	6/30/89	

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REPORT NUMBER: 3250 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: PB REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01100	00.01100	5.7	0.57	MG/L	5.	0.44	6/30/89	UNDER CONTROL
00.01100	00.01100	5.7	0.57	MG/L	5.	0.44	6/30/89	UNDER CONTROL
00.01100	00.01100	5.4	0.54	MG/L	5.	0.44	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	23.	2.3	MG/L	6/30/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
J D Montoya	CMHB	mag
7-6-89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 3248

TA-35 TSL-125
[illegible]

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: SE REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125L-1	89.13340	< 0.2		MG/L	6/30/89	
125L-2	89.13341	< 0.2		MG/L	6/30/89	
125L-3	89.13342	<	0.2	MG/L	6/30/89	
125L-4	89.13343	< 0.2		MG/L	6/30/89	
125L-5	89.13344	< 0.2		MG/L	6/30/89	
125L-6	89.13345	< 0.2		MG/L	6/30/89	
125L-7	89.13346	< 0.2		MG/L	6/30/89	
125L-8	89.13347	< 0.2		MG/L	6/30/89	
125L-9	89.13348	< 0.2		MG/L	6/30/89	
125L-10	89.13349	< 0.2		MG/L	6/30/89	
125L-11	89.13350	< 0.2		MG/L	6/30/89	
125L-12	89.13351	< 0.2		MG/L	6/30/89	

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REPORT NUMBER: 3248 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: JDMONTOYA on 6-Jul-1989

ANALYSIS: SE REQUEST NUMBER: 7773 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve Mclin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE :

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01101	00.01101	1.	0.1	MG/L	0.99	0.15	6/30/89	UNDER CONTROL
00.01101	00.01101	1.	0.1	MG/L	0.99	0.15	6/30/89	UNDER CONTROL
00.01101	00.01101	1.	0.1	MG/L	0.99	0.15	6/30/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13378	60.	6.	MG/L	6/30/89	UNDER CONTROL

J D Montoya	[illegible]	mag
Analyst	Section Leader	QA Officer
7-6 89	7-7-89	7-7-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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ENCLOSURE 4-C

SOIL SAMPLES: THREE TO FIVE FOOT DEPTH

NOT FINAL
SC - VERIFICATION
SAMPLES.

FL-25
Soils 3 to 5'
below liner
Removed 3' below
this level

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 8175

I. PRESAMPLING CONFERENCE

Program Code WA-T5 No. Samples Expected 4ea soil } VOC's ✓

Submission Date 10/16/89 Completion Date verbal 10/23 final 10/27

Chain of Custody? ~~Yes~~ No Special Protocol? *(EPA etc.)*

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

Container Type Glass Preservative None
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None Refrigerate Freeze Darkness

Sample Hazards Present? *(Circle one or more)*
No hazard Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return _____ Discard ✓
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S.G. McLin HSE-9 Section Leader C. R. Smith Organic
Customer Phone 5-1721 MS K41 Inorganic
Date 10/16/89 Radiochem

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

REQ	SAM NUM	CUST NUM
8175	89.16898	125SL-1
8175	89.16899	125SL-2
8175	89.16900	125SL-3
8175	89.16901	125SL-4

III. SAMPLE RECEIPT

Signature Elizabeth A. Jones Date 10/16/89 Total No. Samples Received 4

HSE-9 Sample No. Range 89.16898 to 89.16901.

Customer Sample No. Range 125SL-1 to 125SL-4.

VOLATILE ORGANIC ANALYSES

89.16898

89.168989

89.168990

89.168991

REPORT NUMBER: 4586

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 30-Oct-1989

EPA VOLATILES

REQUEST NUMBER: 8175 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: SMG GROUP: HSE-8 MAIL-STOP: PHONE:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125SL-1	89.16898	67641	< 20.		UG/KG	10/30/89		Acetone
125SL-1	89.16898	71432	< 10.		UG/KG	10/30/89		Benzene
125SL-1	89.16898	108861	< 10.		UG/KG	10/30/89		Bromobenzene
125SL-1	89.16898	74975	< 10.		UG/KG	10/30/89		Bromochloromethane
125SL-1	89.16898	75274	< 10.		UG/KG	10/30/89		Bromodichloromethane
125SL-1	89.16898	75252	< 10.		UG/KG	10/30/89		Bromoform
125SL-1	89.16898	74839	< 20.		UG/KG	10/30/89		Bromomethane
125SL-1	89.16898	78933	< 10.		UG/KG	10/30/89		2-Butanone
125SL-1	89.16898	104518	< 10.		UG/KG	10/30/89		n-Butylbenzene
125SL-1	89.16898	135988	< 10.		UG/KG	10/30/89		sec-Butylbenzene
125SL-1	89.16898	98066	< 10.		UG/KG	10/30/89		tert-Butylbenzene
125SL-1	89.16898	75150	< 30.		UG/KG	10/30/89		Carbon disulfide
125SL-1	89.16898	56235	< 10.		UG/KG	10/30/89		Carbon tetrachloride
125SL-1	89.16898	108907	< 10.		UG/KG	10/30/89		Chlorobenzene
125SL-1	89.16898	124481	< 10.		UG/KG	10/30/89		Chlorodibromomethane
125SL-1	89.16898	75003	< 20.		UG/KG	10/30/89		Chloroethane
125SL-1	89.16898	67663	< 10.		UG/KG	10/30/89		Chloroform
125SL-1	89.16898	74873	< 20.		UG/KG	10/30/89		Chloromethane
125SL-1	89.16898	106434	< 10.		UG/KG	10/30/89		p-Chlorotoluene
125SL-1	89.16898	95498	< 10.		UG/KG	10/30/89		o-Chlorotoluene
125SL-1	89.16898	96128	< 10.		UG/KG	10/30/89		1,2-Dibromo-3-chloropropane
125SL-1	89.16898	106934	< 10.		UG/KG	10/30/89		1,2-Dibromoethane
125SL-1	89.16898	74953	< 10.		UG/KG	10/30/89		Dibromomethane
125SL-1	89.16898	95501	< 10.		UG/KG	10/30/89		o-Dichlorobenzene (1,2)
125SL-1	89.16898	541731	< 10.		UG/KG	10/30/89		m-Dichlorobenzene (1,3)

125SL-1	89.16898	106467		< 10.		UG/KG	10/30/89	p-Dichlorobenzene (1,4)
125SL-1	89.16898	107062		< 10.		UG/KG	10/30/89	1,2-Dichloroethane
125SL-1	89.16898	75343		< 10.		UG/KG	10/30/89	1,1-Dichloroethane
125SL-1	89.16898	75354		< 10.		UG/KG	10/30/89	1,1-Dichloroethene
125SL-1	89.16898	156605		< 10.		UG/KG	10/30/89	trans-1,2-Dichloroethene
125SL-1	89.16898	156592		< 10.		UG/KG	10/30/89	cis-1,2-Dichloroethylene
125SL-1	89.16898	594207		< 10.		UG/KG	10/30/89	2,2-Dichloropropane
125SL-1	89.16898	78875		< 10.		UG/KG	10/30/89	1,2-Dichloropropane
125SL-1	89.16898	142289		< 10.		UG/KG	10/30/89	1,3-Dichloropropane
125SL-1	89.16898	10061026		< 10.		UG/KG	10/30/89	trans-1,3-Dichloropropene
125SL-1	89.16898	10061015		< 10.		UG/KG	10/30/89	cis-1,3-Dichloropropene
125SL-1	89.16898	563586		< 10.		UG/KG	10/30/89	1,1-Dichloropropene
125SL-1	89.16898	100414		< 10.		UG/KG	10/30/89	Ethylbenzene
125SL-1	89.16898	106934		< 10.		UG/KG	10/30/89	Ethylene bromide
125SL-1	89.16898	107062		< 10.		UG/KG	10/30/89	Ethylene chloride
125SL-1	89.16898	106934		< 10.		UG/KG	10/30/89	Ethylene dibromide
125SL-1	89.16898	928687	TI			UG/KG	10/30/89	2-Heptanone, 6-Methyl-
125SL-1	89.16898	87683		< 10.		UG/KG	10/30/89	Hexachlorobutadiene
125SL-1	89.16898	591786		26.3	7.9	UG/KG	10/30/89	2-Hexanone
125SL-1	89.16898	98828		< 10.		UG/KG	10/30/89	Isopropylbenzene
125SL-1	89.16898	99876		< 10.		UG/KG	10/30/89	4-Isopropyltoluene
125SL-1	89.16898	108101		< 10.		UG/KG	10/30/89	Methyl isobutyl ketone
125SL-1	89.16898	108101		< 10.		UG/KG	10/30/89	4-Methyl-2-pentanone
125SL-1	89.16898	75092		< 10.		UG/KG	10/30/89	Methylene chloride
125SL-1	89.16898	91203		< 10.		UG/KG	10/30/89	Naphthalene
125SL-1	89.16898	103651		< 10.		UG/KG	10/30/89	Propylbenzene
125SL-1	89.16898	100425		< 10.		UG/KG	10/30/89	Styrene
125SL-1	89.16898	79345		< 10.		UG/KG	10/30/89	1,1,2,2-Tetrachloroethane
125SL-1	89.16898	630206		< 10.		UG/KG	10/30/89	1,1,1,2-Tetrachloroethane
125SL-1	89.16898	127184		< 10.		UG/KG	10/30/89	Tetrachloroethylene
125SL-1	89.16898	108883		< 10.		UG/KG	10/30/89	Toluene
125SL-1	89.16898	76131	TI			UG/KG	10/30/89	1,1,2-Trichloro-1,2,2-trifluoroethane
125SL-1	89.16898	87616		< 10.		UG/KG	10/30/89	1,2,3-Trichlorobenzene
125SL-1	89.16898	120821		< 10.		UG/KG	10/30/89	1,2,4-Trichlorobenzene
125SL-1	89.16898	71556		29.1	8.7	UG/KG	10/30/89	1,1,1-Trichloroethane
125SL-1	89.16898	79005		< 10.		UG/KG	10/30/89	1,1,2-Trichloroethane
125SL-1	89.16898	79016		< 10.		UG/KG	10/30/89	Trichloroethene
125SL-1	89.16898	75694		< 10.		UG/KG	10/30/89	Trichlorofluoromethane
125SL-1	89.16898	96184		< 10.		UG/KG	10/30/89	1,2,3-Trichloropropane
125SL-1	89.16898	108678		< 10.		UG/KG	10/30/89	1,3,5-Trimethylbenzene
125SL-1	89.16898	95636		< 10.		UG/KG	10/30/89	1,2,4-Trimethylbenzene
125SL-1	89.16898	108054		< 10.		UG/KG	10/30/89	Vinyl acetate
125SL-1	89.16898	75014		< 20.		UG/KG	10/30/89	Vinyl chloride
125SL-1	89.16898	108383		< 10.		UG/KG	10/30/89	m-Xylene
125SL-1	89.16898	95476		< 10.		UG/KG	10/30/89	o-Xylene

REPORT NUMBER: 4586

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 30-Oct-1989

EPA VOLATILES

REQUEST NUMBER: 8175 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: SMG GROUP: HSE-8 MAIL-STOP: PHONE:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125SL-2	89.16899	67641	< 20.		UG/KG	10/30/89		Acetone
125SL-2	89.16899	71432	< 10.		UG/KG	10/30/89		Benzene
125SL-2	89.16899	108861	< 10.		UG/KG	10/30/89		Bromobenzene
125SL-2	89.16899	74975	< 10.		UG/KG	10/30/89		Bromochloromethane
125SL-2	89.16899	75274	< 10.		UG/KG	10/30/89		Bromodichloromethane
125SL-2	89.16899	75252	< 10.		UG/KG	10/30/89		Bromoform
125SL-2	89.16899	74839	< 20.		UG/KG	10/30/89		Bromomethane
125SL-2	89.16899	78933	78.7	23.6	UG/KG	10/30/89		2-Butanone
125SL-2	89.16899	98066	< 10.		UG/KG	10/30/89		tert-Butylbenzene
125SL-2	89.16899	135988	< 10.		UG/KG	10/30/89		sec-Butylbenzene
125SL-2	89.16899	104518	< 10.		UG/KG	10/30/89		n-Butylbenzene
125SL-2	89.16899	75150	< 30.		UG/KG	10/30/89		Carbon disulfide
125SL-2	89.16899	56235	< 10.		UG/KG	10/30/89		Carbon tetrachloride
125SL-2	89.16899	108907	< 10.		UG/KG	10/30/89		Chlorobenzene
125SL-2	89.16899	124481	< 10.		UG/KG	10/30/89		Chlorodibromomethane
125SL-2	89.16899	75003	< 20.		UG/KG	10/30/89		Chloroethane
125SL-2	89.16899	67663	< 10.		UG/KG	10/30/89		Chloroform
125SL-2	89.16899	74873	< 20.		UG/KG	10/30/89		Chloromethane
125SL-2	89.16899	95498	< 10.		UG/KG	10/30/89		o-Chlorotoluene
125SL-2	89.16899	106434	< 10.		UG/KG	10/30/89		p-Chlorotoluene
125SL-2	89.16899	96128	< 10.		UG/KG	10/30/89		1,2-Dibromo-3-chloropropane
125SL-2	89.16899	106934	< 10.		UG/KG	10/30/89		1,2-Dibromoethane
125SL-2	89.16899	74953	< 10.		UG/KG	10/30/89		Dibromomethane
125SL-2	89.16899	95501	< 10.		UG/KG	10/30/89		o-Dichlorobenzene (1,2)
125SL-2	89.16899	541731	< 10.		UG/KG	10/30/89		m-Dichlorobenzene (1,3)

125SL-2	89.16899	106467		< 10.		UG/KG	10/30/89	p-Dichlorobenzene (1,4)
125SL-2	89.16899	107062		< 10.		UG/KG	10/30/89	1,2-Dichloroethane
125SL-2	89.16899	75343		< 10.		UG/KG	10/30/89	1,1-Dichloroethane
125SL-2	89.16899	156605		< 10.		UG/KG	10/30/89	trans-1,2-Dichloroethene
125SL-2	89.16899	75354		< 10.		UG/KG	10/30/89	1,1-Dichloroethene
125SL-2	89.16899	156592		< 10.		UG/KG	10/30/89	cis-1,2-Dichloroethylene
125SL-2	89.16899	78875		< 10.		UG/KG	10/30/89	1,2-Dichloropropane
125SL-2	89.16899	594207		< 10.		UG/KG	10/30/89	2,2-Dichloropropane
125SL-2	89.16899	142289		< 10.		UG/KG	10/30/89	1,3-Dichloropropane
125SL-2	89.16899	10061026		< 10.		UG/KG	10/30/89	trans-1,3-Dichloropropene
125SL-2	89.16899	10061015		< 10.		UG/KG	10/30/89	cis-1,3-Dichloropropene
125SL-2	89.16899	563586		< 10.		UG/KG	10/30/89	1,1-Dichloropropene
125SL-2	89.16899	100414		< 10.		UG/KG	10/30/89	Ethylbenzene
125SL-2	89.16899	106934		< 10.		UG/KG	10/30/89	Ethylene bromide
125SL-2	89.16899	107062		< 10.		UG/KG	10/30/89	Ethylene chloride
125SL-2	89.16899	106934		< 10.		UG/KG	10/30/89	Ethylene dibromide
125SL-2	89.16899	87683		< 10.		UG/KG	10/30/89	Hexachlorobutadiene
125SL-2	89.16899	591786		< 20.		UG/KG	10/30/89	2-Hexanone
125SL-2	89.16899	98828		< 10.		UG/KG	10/30/89	Isopropylbenzene
125SL-2	89.16899	99876		< 10.		UG/KG	10/30/89	4-Isopropyltoluene
125SL-2	89.16899	108101		< 10.		UG/KG	10/30/89	Methyl isobutyl ketone
125SL-2	89.16899	108101		< 10.		UG/KG	10/30/89	4-Methyl-2-pentanone
125SL-2	89.16899	75092		< 10.		UG/KG	10/30/89	Methylene chloride
125SL-2	89.16899	91203		< 10.		UG/KG	10/30/89	Naphthalene
125SL-2	89.16899	103651		< 10.		UG/KG	10/30/89	Propylbenzene
125SL-2	89.16899	100425		< 10.		UG/KG	10/30/89	Styrene
125SL-2	89.16899	79345		< 10.		UG/KG	10/30/89	1,1,2,2-Tetrachloroethane
125SL-2	89.16899	630206		< 10.		UG/KG	10/30/89	1,1,1,2-Tetrachloroethane
125SL-2	89.16899	127184		245.	73.5	UG/KG	10/30/89	Tetrachloroethylene
125SL-2	89.16899	108883		< 10.		UG/KG	10/30/89	Toluene
125SL-2	89.16899	76131	TI			UG/KG	10/30/89	1,1,2-Trichloro-1,2,2-trifluoroethane
125SL-2	89.16899	120821		< 10.		UG/KG	10/30/89	1,2,4-Trichlorobenzene
125SL-2	89.16899	87616		< 10.		UG/KG	10/30/89	1,2,3-Trichlorobenzene
125SL-2	89.16899	71556		201.	60.3	UG/KG	10/30/89	1,1,1-Trichloroethane
125SL-2	89.16899	79005		< 10.		UG/KG	10/30/89	1,1,2-Trichloroethane
125SL-2	89.16899	79016		< 10.		UG/KG	10/30/89	Trichloroethene
125SL-2	89.16899	75694		< 10.		UG/KG	10/30/89	Trichlorofluoromethane
125SL-2	89.16899	96184		< 10.		UG/KG	10/30/89	1,2,3-Trichloropropane
125SL-2	89.16899	108678		< 10.		UG/KG	10/30/89	1,3,5-Trimethylbenzene
125SL-2	89.16899	95636		< 10.		UG/KG	10/30/89	1,2,4-Trimethylbenzene
125SL-2	89.16899	108054		< 10.		UG/KG	10/30/89	Vinyl acetate
125SL-2	89.16899	75014		< 20.		UG/KG	10/30/89	Vinyl chloride
125SL-2	89.16899	95476		< 10.		UG/KG	10/30/89	o-Xylene
125SL-2	89.16899	108383		< 10.		UG/KG	10/30/89	m-Xylene

REPORT NUMBER: 4586

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 30-Oct-1989

EPA VOLATILES

REQUEST NUMBER: 8175 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: SMG GROUP: HSE-8 MAIL-STOP: PHONE:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125SL-3	89.16900	67641	< 20.		UG/KG	10/30/89		Acetone
125SL-3	89.16900	71432	< 10.		UG/KG	10/30/89		Benzene
125SL-3	89.16900	108861	< 10.		UG/KG	10/30/89		Bromobenzene
125SL-3	89.16900	74975	< 10.		UG/KG	10/30/89		Bromochloromethane
125SL-3	89.16900	75274	< 10.		UG/KG	10/30/89		Bromodichloromethane
125SL-3	89.16900	75252	< 10.		UG/KG	10/30/89		Bromoform
125SL-3	89.16900	74839	< 20.		UG/KG	10/30/89		Bromomethane
125SL-3	89.16900	78933	< 10.		UG/KG	10/30/89		2-Butanone
125SL-3	89.16900	98066	< 10.		UG/KG	10/30/89		tert-Butylbenzene
125SL-3	89.16900	104518	< 10.		UG/KG	10/30/89		n-Butylbenzene
125SL-3	89.16900	135988	< 10.		UG/KG	10/30/89		sec-Butylbenzene
125SL-3	89.16900	75150	< 30.		UG/KG	10/30/89		Carbon disulfide
125SL-3	89.16900	56235	< 10.		UG/KG	10/30/89		Carbon tetrachloride
125SL-3	89.16900	108907	< 10.		UG/KG	10/30/89		Chlorobenzene
125SL-3	89.16900	124481	< 10.		UG/KG	10/30/89		Chlorodibromomethane
125SL-3	89.16900	75003	< 20.		UG/KG	10/30/89		Chloroethane
125SL-3	89.16900	67663	< 10.		UG/KG	10/30/89		Chloroform
125SL-3	89.16900	74873	< 20.		UG/KG	10/30/89		Chloromethane
125SL-3	89.16900	106434	< 10.		UG/KG	10/30/89		p-Chlorotoluene
125SL-3	89.16900	95498	< 10.		UG/KG	10/30/89		o-Chlorotoluene
125SL-3	89.16900	96128	< 10.		UG/KG	10/30/89		1,2-Dibromo-3-chloropropane
125SL-3	89.16900	106934	< 10.		UG/KG	10/30/89		1,2-Dibromoethane
125SL-3	89.16900	74953	< 10.		UG/KG	10/30/89		Dibromomethane
125SL-3	89.16900	95501	< 10.		UG/KG	10/30/89		o-Dichlorobenzene (1,2)
125SL-3	89.16900	541731	< 10.		UG/KG	10/30/89		m-Dichlorobenzene (1,3)

125SL-3	89.16900	106467		< 10.		UG/KG	10/30/89	p-Dichlorobenzene (1,4)
125SL-3	89.16900	107062		< 10.		UG/KG	10/30/89	1,2-Dichloroethane
125SL-3	89.16900	75343		< 10.		UG/KG	10/30/89	1,1-Dichloroethane
125SL-3	89.16900	156605		< 10.		UG/KG	10/30/89	trans-1,2-Dichloroethene
125SL-3	89.16900	75354		< 10.		UG/KG	10/30/89	1,1-Dichloroethene
125SL-3	89.16900	156592		< 10.		UG/KG	10/30/89	cis-1,2-Dichloroethylene
125SL-3	89.16900	594207		< 10.		UG/KG	10/30/89	2,2-Dichloropropane
125SL-3	89.16900	142289		< 10.		UG/KG	10/30/89	1,3-Dichloropropane
125SL-3	89.16900	78875		< 10.		UG/KG	10/30/89	1,2-Dichloropropane
125SL-3	89.16900	563586		< 10.		UG/KG	10/30/89	1,1-Dichloropropene
125SL-3	89.16900	10061026		< 10.		UG/KG	10/30/89	trans-1,3-Dichloropropene
125SL-3	89.16900	10061015		< 10.		UG/KG	10/30/89	cis-1,3-Dichloropropene
125SL-3	89.16900	100414		< 10.		UG/KG	10/30/89	Ethylbenzene
125SL-3	89.16900	106934		< 10.		UG/KG	10/30/89	Ethylene bromide
125SL-3	89.16900	107062		< 10.		UG/KG	10/30/89	Ethylene chloride
125SL-3	89.16900	106934		< 10.		UG/KG	10/30/89	Ethylene dibromide
125SL-3	89.16900	87683		< 10.		UG/KG	10/30/89	Hexachlorobutadiene
125SL-3	89.16900	591786		< 20.		UG/KG	10/30/89	2-Hexanone
125SL-3	89.16900	98828		< 10.		UG/KG	10/30/89	Isopropylbenzene
125SL-3	89.16900	99876		< 10.		UG/KG	10/30/89	4-Isopropyltoluene
125SL-3	89.16900	108101		< 10.		UG/KG	10/30/89	Methyl isobutyl ketone
125SL-3	89.16900	108101		< 10.		UG/KG	10/30/89	4-Methyl-2-pentanone
125SL-3	89.16900	75092		< 10.		UG/KG	10/30/89	Methylene chloride
125SL-3	89.16900	91203		< 10.		UG/KG	10/30/89	Naphthalene
125SL-3	89.16900	103651		< 10.		UG/KG	10/30/89	Propylbenzene
125SL-3	89.16900	100425		< 10.		UG/KG	10/30/89	Styrene
125SL-3	89.16900	630206		< 10.		UG/KG	10/30/89	1,1,1,2-Tetrachloroethane
125SL-3	89.16900	79345		< 10.		UG/KG	10/30/89	1,1,2,2-Tetrachloroethane
125SL-3	89.16900	127184		300.	90.	UG/KG	10/30/89	Tetrachloroethylene
125SL-3	89.16900	108883		< 10.		UG/KG	10/30/89	Toluene
125SL-3	89.16900	76131	TI			UG/KG	10/30/89	1,1,2-Trichloro-1,2,2-trifluoroethane
125SL-3	89.16900	120821		< 10.		UG/KG	10/30/89	1,2,4-Trichlorobenzene
125SL-3	89.16900	87616		< 10.		UG/KG	10/30/89	1,2,3-Trichlorobenzene
125SL-3	89.16900	79005		< 10.		UG/KG	10/30/89	1,1,2-Trichloroethane
125SL-3	89.16900	71556		45.3	13.6	UG/KG	10/30/89	1,1,1-Trichloroethane
125SL-3	89.16900	79016		< 10.		UG/KG	10/30/89	Trichloroethene
125SL-3	89.16900	75694		< 10.		UG/KG	10/30/89	Trichlorofluoromethane
125SL-3	89.16900	96184		< 10.		UG/KG	10/30/89	1,2,3-Trichloropropane
125SL-3	89.16900	108678		< 10.		UG/KG	10/30/89	1,3,5-Trimethylbenzene
125SL-3	89.16900	95636		< 10.		UG/KG	10/30/89	1,2,4-Trimethylbenzene
125SL-3	89.16900	108054		< 10.		UG/KG	10/30/89	Vinyl acetate
125SL-3	89.16900	75014		< 20.		UG/KG	10/30/89	Vinyl chloride
125SL-3	89.16900	95476		< 10.		UG/KG	10/30/89	o-Xylene
125SL-3	89.16900	108383		< 10.		UG/KG	10/30/89	m-Xylene

REPORT NUMBER: 4586

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 30-Oct-1989

EPA VOLATILES

REQUEST NUMBER: 8175 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: SMG GROUP: HSE-8 MAIL-STOP: PHONE:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125SL-4	89.16901	67641	< 20.		UG/KG	10/30/89		Acetone
125SL-4	89.16901	71432	< 10.		UG/KG	10/30/89		Benzene
125SL-4	89.16901	108861	< 10.		UG/KG	10/30/89		Bromobenzene
125SL-4	89.16901	74975	< 10.		UG/KG	10/30/89		Bromochloromethane
125SL-4	89.16901	75274	< 10.		UG/KG	10/30/89		Bromodichloromethane
125SL-4	89.16901	75252	< 10.		UG/KG	10/30/89		Bromoform
125SL-4	89.16901	74839	< 20.		UG/KG	10/30/89		Bromomethane
125SL-4	89.16901	78933	< 10.		UG/KG	10/30/89		2-Butanone
125SL-4	89.16901	98066	< 10.		UG/KG	10/30/89		tert-Butylbenzene
125SL-4	89.16901	104518	< 10.		UG/KG	10/30/89		n-Butylbenzene
125SL-4	89.16901	135988	< 10.		UG/KG	10/30/89		sec-Butylbenzene
125SL-4	89.16901	75150	< 30.		UG/KG	10/30/89		Carbon disulfide
125SL-4	89.16901	56235	< 10.		UG/KG	10/30/89		Carbon tetrachloride
125SL-4	89.16901	108907	< 10.		UG/KG	10/30/89		Chlorobenzene
125SL-4	89.16901	124481	< 10.		UG/KG	10/30/89		Chlorodibromomethane
125SL-4	89.16901	75003	< 20.		UG/KG	10/30/89		Chloroethane
125SL-4	89.16901	67663	< 10.		UG/KG	10/30/89		Chloroform
125SL-4	89.16901	74873	< 20.		UG/KG	10/30/89		Chloromethane
125SL-4	89.16901	95498	< 10.		UG/KG	10/30/89		o-Chlorotoluene
125SL-4	89.16901	106434	< 10.		UG/KG	10/30/89		p-Chlorotoluene
125SL-4	89.16901	1129904	TI		UG/KG	10/30/89		Cyclododecyne
125SL-4	89.16901	96128	< 10.		UG/KG	10/30/89		1,2-Dibromo-3-chloropropane
125SL-4	89.16901	106934	< 10.		UG/KG	10/30/89		1,2-Dibromoethane
125SL-4	89.16901	74953	< 10.		UG/KG	10/30/89		Dibromomethane
125SL-4	89.16901	95501	< 10.		UG/KG	10/30/89		o-Dichlorobenzene (1,2)

125SL-4	89.16901	541731		< 10.		UG/KG	10/30/89	m-Dichlorobenzene (1,3)
125SL-4	89.16901	106467		< 10.		UG/KG	10/30/89	p-Dichlorobenzene (1,4)
125SL-4	89.16901	107062		< 10.		UG/KG	10/30/89	1,2-Dichloroethane
125SL-4	89.16901	75343		< 10.		UG/KG	10/30/89	1,1-Dichloroethane
125SL-4	89.16901	156605		< 10.		UG/KG	10/30/89	trans-1,2-Dichloroethene
125SL-4	89.16901	75354		< 10.		UG/KG	10/30/89	1,1-Dichloroethene
125SL-4	89.16901	156592		< 10.		UG/KG	10/30/89	cis-1,2-Dichloroethylene
125SL-4	89.16901	78875		< 10.		UG/KG	10/30/89	1,2-Dichloropropane
125SL-4	89.16901	594207		< 10.		UG/KG	10/30/89	2,2-Dichloropropane
125SL-4	89.16901	142289		< 10.		UG/KG	10/30/89	1,3-Dichloropropane
125SL-4	89.16901	10061015		< 10.		UG/KG	10/30/89	cis-1,3-Dichloropropene
125SL-4	89.16901	563586		< 10.		UG/KG	10/30/89	1,1-Dichloropropene
125SL-4	89.16901	10061026		< 10.		UG/KG	10/30/89	trans-1,3-Dichloropropene
125SL-4	89.16901	100414		< 10.		UG/KG	10/30/89	Ethylbenzene
125SL-4	89.16901	106934		< 10.		UG/KG	10/30/89	Ethylene bromide
125SL-4	89.16901	107062		< 10.		UG/KG	10/30/89	Ethylene chloride
125SL-4	89.16901	106934		< 10.		UG/KG	10/30/89	Ethylene dibromide
125SL-4	89.16901	87683		< 10.		UG/KG	10/30/89	Hexachlorobutadiene
125SL-4	89.16901	591786		< 20.		UG/KG	10/30/89	2-Hexanone
125SL-4	89.16901	98828		< 10.		UG/KG	10/30/89	Isopropylbenzene
125SL-4	89.16901	99876		< 10.		UG/KG	10/30/89	4-Isopropyltoluene
125SL-4	89.16901	108101		< 10.		UG/KG	10/30/89	Methyl isobutyl ketone
125SL-4	89.16901	108101		< 10.		UG/KG	10/30/89	4-Methyl-2-pentanone
125SL-4	89.16901	75092		< 10.		UG/KG	10/30/89	Methylene chloride
125SL-4	89.16901	91203		< 10.		UG/KG	10/30/89	Naphthalene
125SL-4	89.16901	103651		< 10.		UG/KG	10/30/89	Propylbenzene
125SL-4	89.16901	100425		< 10.		UG/KG	10/30/89	Styrene
125SL-4	89.16901	79345		< 10.		UG/KG	10/30/89	1,1,2,2-Tetrachloroethane
125SL-4	89.16901	630206		< 10.		UG/KG	10/30/89	1,1,1,2-Tetrachloroethane
125SL-4	89.16901	127184		37.4	11.2	UG/KG	10/30/89	Tetrachloroethylene
125SL-4	89.16901	108883		< 10.		UG/KG	10/30/89	Toluene
125SL-4	89.16901	76131	TI			UG/KG	10/30/89	1,1,2-Trichloro-1,2,2-trifluoroethane
125SL-4	89.16901	87616		< 10.		UG/KG	10/30/89	1,2,3-Trichlorobenzene
125SL-4	89.16901	120821		< 10.		UG/KG	10/30/89	1,2,4-Trichlorobenzene
125SL-4	89.16901	71556		63.9	19.2	UG/KG	10/30/89	1,1,1-Trichloroethane
125SL-4	89.16901	79005		< 10.		UG/KG	10/30/89	1,1,2-Trichloroethane
125SL-4	89.16901	79016		< 10.		UG/KG	10/30/89	Trichloroethene
125SL-4	89.16901	75694		< 10.		UG/KG	10/30/89	Trichlorofluoromethane
125SL-4	89.16901	96184		< 10.		UG/KG	10/30/89	1,2,3-Trichloropropane
125SL-4	89.16901	95636		< 10.		UG/KG	10/30/89	1,2,4-Trimethylbenzene
125SL-4	89.16901	108678		< 10.		UG/KG	10/30/89	1,3,5-Trimethylbenzene
125SL-4	89.16901	108054		< 10.		UG/KG	10/30/89	Vinyl acetate
125SL-4	89.16901	75014		< 20.		UG/KG	10/30/89	Vinyl chloride
125SL-4	89.16901	108383		< 10.		UG/KG	10/30/89	m-Xylene
125SL-4	89.16901	95476		< 10.		UG/KG	10/30/89	o-Xylene

****

REPORT NUMBER: 4586 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 30-Oct-1989

EPA VOLATILES

REQUEST NUMBER: 8175 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: SMG GROUP: HSE-8 MAIL-STOP: PHONE:

There were no open (non-blind) Quality Assurance materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QA samples for this constituent and matrix type available within HSE-9

SURROGATE RESULTS FOR EPA VOLATILES

1,2-Dichloroethane d4 (CAS # = 17060070); EPA Range Limits: Water = 76-114 %, Soil = 70-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.16898	199.	%	10/30/89	
89.16899	148.	%	10/30/89	
89.16900	145.	%	10/30/89	
89.16901	211.	%	10/30/89	

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.16898	102.	%	10/30/89	

89.16899	109.	%	10/30/89
89.16900	113.	%	10/30/89
89.16901	104.	%	10/30/89

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.16898	187.	%	10/30/89	
89.16899	203.	%	10/30/89	
89.16900	184.	%	10/30/89	
89.16901	210.	%	10/30/89	

Analyst	Section Leader	QA Officer
11/6/89	11-6-89	11-6-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

ENCLOSURE 4-D

SOIL SAMPLES: TEN TO FIFTEEN FOOT DEPTH (VERIFICATION SAMPLES)

Final TSL-125
Soils verification

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 8275

I. PRESAMPLING CONFERENCE

Program Code WA45 No. Samples Expected 12 ea soil } VOC, SVOC, PCB, EP tox metals + list of metals below

Submission Date 11-7-89 Completion Date TBA

Chain of Custody? YES Special Protocol? (EPA etc.) None

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

Container Type Glass/Teflon Preservative NONE - COOL TO 4°C
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None Refrigerate Freeze Darkness

Sample Hazards Present? *(Circle one or more)*
No hazard Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return _____ Discard ✓
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S. G. McLin HSE-9 Section Leader C. P. Rolfe Organic
Customer Phone 5-1721 MS K4 _____ Inorganic
_____ Radiochem

Date 11-7-89

Note: ① EP toxic metals
② List of metals below (TOTAL METALS)

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

11/14/89: Request of Mike Boll (HSE-9) to J. White to cancel EP tox metal analyses. SYM.

III. SAMPLE RECEIPT

Signature Elizabeth A. Jones Date 11/7/89 Total No. Samples Received 12 x 4 cuts ea

HSE-9 Sample No. Range 89.17609 to 89.17626.

Customer Sample No. Range 125FS-1 to 125FS-12.

LIST OF METALS (TOTAL METALS) Ref: 40CFR261 Appendix VIII.

1. Antimony
2. Arsenic
3. Barium
4. Beryllium
5. Cadmium
6. Chromium
7. Lead
8. Mercury
9. Nickel
10. Selenium
11. Silver

3-8-89
Set A = VOA
Set B = SVOA
Set C = PCB
Set D = Metals

REQ	SAM NUM	CUST NUM
8275	89.17609	125FS-1
8275	89.17610	125FS-2
8275	89.17611	125FS-3
8275	89.17612	125FS-4
8275	89.17613	125FS-5
8275	89.17614	125FS-6
8275	89.17615	125FS-7
8275	89.17616	125FS-8
8275	89.17617	125FS-9
8275	89.17618	125FS-10
8275	89.17619	125FS-11
8275	89.17620	125FS-12

Probe No. α	Probe No. β	Surface / Subsurface	Sample ID	Counts/5' α	Counts/5' β	Counts/5' γ	pCi/g α	pCi/g β	pCi/g γ	Date	Requestor	Analyst
		Surface	TA-35							12/18/90	PRF	RR
2	3	Subsurface	125-1-5'	48	384	875	27	≤18	0.52			
1	4		125-1-5'	67	406	848	60		0.47			
1	3		125-1-10'	49	386	812	36		0.40			
2	3		125-1-15'	38	392	798	≤18		0.38			
2	4		125-1-20'	40	376	906			0.57			
1	4		125-1-25'	38	386	844			0.46			
	3		125-1-30'	42	415	849			0.47			
	4		125-1-35'	49	390	813	36		0.41			
	3		125-1-40'	35	423	864	≤18		0.50			
	3		125-1-45'	43	410	853			0.48			
2	4		125-1-50'	29	355	826			0.43			
2	4		125-1-55'	38	410	853			0.48			
1	3		125-2-5'	52	422	843	30		0.46			
1	4		125-2-5'	39	379	884	≤18		0.53			
2	3		125-2-10'	60	369	821	41		0.42			
2	4		125-2-15'	38	358	882	≤18		0.53			
1	3		125-2-20'	43	449	883			0.53			
1	4		125-2-25'	46	362	877			0.52			
	3		125-2-30'	51	417	840	30		0.45			
	4		125-2-35'	38	337	838	≤18		0.45			
	4		125-2-40'	42	359	795			0.37			
	3		125-2-45'	35	445	861			0.49			
	4		125-2-50'	50	384	844	29		0.46			
	3		125-2-55	45	434	863	≤18		0.50			

unbiased Tuff

Grab & Bk

was fill material

ENCLOSURE 5

RISK ASSESSMENT CALCULATION RESULTS AND METHODOLOGY

Explanation for Risk Calculation Table

*Calculation for Action Level in Soil = **(RFD x W x R)/(CSF x I x AF)**
Where:

For calculating an action level for a carcinogen, an adult soil ingestion scenario is used based on the Superfund Public Health Evaluation Manual (10/86) (SPHEM), discussions with NMED, and 55 FR 30815-20, July 27, 1987. For calculating an action level for a systemic toxicant (non-carcinogen), a child soil ingestion scenario is used based on the SPHEM, discussions with NMED, and 55 FR 30815-20, July 27, 1987.

Class = EPA category based on the weight of evidence that a constituent is a potential carcinogen.

1.0×10^{-6}

- **A** human carcinogen (sufficient evidence)
- **B1** probable human carcinogen (limited evidence in humans)
- **B2** probable human carcinogen (sufficient evidence in animals, limited evidence in humans)

1.0×10^{-5}

- **C** possible human carcinogen (limited evidence in animals)
- **D** systemic toxicant (not classified as a carcinogen due to inadequate evidence)
- **ND** no data given for class, CSF, or RFD.

[Explanations were taken from the SPHEM, discussions with NMED, and 55 FR 30815-20, July 27, 1987. Reference for classifications is EPA's Integrated Risk Information System (IRIS) data base (4/91 edition)].

CSF = carcinogenic slope factor for a carcinogen [1/(mg/kg-day)]; when calculating the action level for a systemic toxicant, the CSF is not applicable, and therefore, is set to 1 (1.00E+00) as a default.

RFD = reference dose for a systemic toxicant (mg/kg-day); when calculating the action level for a carcinogen, the RFD is not applicable, and therefore, is set to 1 (1.00E+00) as a default.

Reference for CSF and RFD data is EPA's IRIS data base (4/91 edition).

W = assumed weight (kg); NMED recommends assuming 10 kg for a child's body weight and 55 FR 30820 recommends assuming 70 kg for an adult's body weight.

R = assumed risk level for calculating the action level for a carcinogen (dimensionless); 55 FR 30815-30820 recommends using a 1.0E-06 risk for a Class A or B carcinogen, and a 1.0E-05 risk for a Class C carcinogen; when calculating the action level for a systemic toxicant, R is not applicable, and therefore, is set to 1 (1.00E+00) as a default.

Some constituents are classified as carcinogens, but have risk data developed only for systemic toxicant risk calculations. In these situations, the constituents were designated as "carcinogenic class/systemic toxicant class" (i.e., "C/D" for butylbenzyl phthalate). For calculating risk based action levels, the constituents were treated as systemic toxicants.

Some constituents have risk data developed both for carcinogenic and systemic toxicant effects. In this case, both calculations were performed and the data that yielded the most conservative (lowest) action level was retained. In all cases, the carcinogenic action level was the most conservative.

LT = assumed lifetime (years); 55 FR 30815-30820 recommends a 70 year average lifetime be assumed for an adult. LT is not applicable for a child soil ingestion scenario because the limited exposure duration for a child (1-6 years) cannot be averaged over an assumed 70 year lifetime to obtain the long term exposure effects associated with carcinogens. For this reason, it is not appropriate to use a child soil ingestion scenario when calculating carcinogenic action levels. When calculating the action level for a systemic toxicant, LT is not applicable, and therefore, is set to 1 (1.00E+00) as a default.

ED = assumed exposure duration (years); 55 FR 30815-30820 recommends a 70 year exposure duration be assumed for an adult. When calculating an action level for a systemic toxicant, ED is not applicable, and therefore, is set to 1 as a default.

I = assumed intake (kg/day); 55 FR 30815-30820 recommends that 1.0E-04 kg/day be assumed for an adult soil ingestion scenario and 2.0E-04 kg/day be assumed for a child soil ingestion scenario.

AF = assumed absorption factor (dimensionless); AF = 1 (or 100%) based on 55 FR 30820.

TSL-125 = constituent levels found in analyses of soil from TSL-125. A "<" sign if front of these numbers indicates that the actual constituent concentration in soil from TSL-125 is less than the limit of quantitation.

The TSL-125 field is shaded to indicate that the analytical result is greater than an action level and a background soil level.

Footnotes/Bkgd category refers to footnotes and background soil metal levels (explained below).

Footnotes:

1 Volatile organic compound concentrations used for this risk analysis were taken from results of corehole analyses. After the surface impoundment and surficial soil had been removed, two coreholes were drilled at the surface impoundment's former location to depth of 55 feet. Soil samples were taken from each corehole at 5-foot intervals. The soil samples were analyzed for volatile organic components using SW 846 purge-and-trap (P/T) GC/MS method 8260. See Enclosure 4 for analytical results.

2 Semivolatile organic compound concentrations used for this risk analysis were taken from results of corehole analyses. After the surface impoundment and surficial soil had been removed, two coreholes were drilled at the surface impoundment's former location to depth of 55 feet. Soil samples were taken from each corehole at 5-foot intervals. The soil samples were analyzed for semivolatile organic components using SW 846 extraction and GC/MS method 8270. See Enclosure 4 for analytical results.

3 The limit of quantitation (LOQ) is 0.330 mg/kg except for sample 90.191972 which had a LOQ of 265 mg/kg. This deviation was caused by a high level of total petroleum hydrocarbons (waste oil) which interfered with the analysis and resulted in the elevated LOQ. The high LOQ does <u>not</u> imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ for this sample. The actual concentration of the analytes of interest can be inferred only to be less than the LOQ for this sample and may be as low as 0.000 mg/kg. Since twenty-one other samples had LOQs of 0.330 mg/kg, from which it can be inferred that the concentration of the analytes of interest is between 0.000 and 0.330 mg/kg, sample 90.191972 is not representative of the concentration of the analytes of interest in this area. Since this sample is not representative, a known interference is present in the sample, and it is not an analytical result for the analytes of interest, only an elevated LOQ, this value is not used in the risk assessment analyses supporting the closure plan.

4 The chemical compounds 2,4-Dinitrotoluene and 2,6-Dinitrotoluene were analyzed using a level of quantitation of 0.330 mg/kg. Because the IRIS data base has risk characterization for the mixture of both compounds, the risk was calculated and the action level (1.03 mg/kg) was compared to the sum total of both compounds (0.330 mg/kg + 0.330 mg/kg = 0.660 mg/kg).

5 Metals levels used for this risk analysis were taken from results of soil sampled from an approximate depth of 8 feet below the surface impoundment. The soil samples were taken after the surface impoundment and surficial soils had been removed.

6 Reference for background concentrations of metals is Ferenbaugh, et.al.(1990) (Enclosure 6). Units are in mg/kg equivalents. Actual analytical results may have been reported as mg/kg, ug/kg, ug/g (for solids), and ug/l and mg/l (for leachate).

Date	Sample ID	Surface Subsurface	Probe # α	Counts (5 min.) α	pCi/g α	Probe # β	Counts (5 min.) β	pCi/g β	Counts (100 sec.) γ	pCi/g γ	Requestor	Analyst
07/23/91	TA-35 125-1-5'	Subsurface	5	30	≤25	3	358	≤25	934	0.63	PRF	RR

RISK CALCULATION TABLE

Appendix VIII Constituent	Class	ORAL CSF	ORAL RFD	Risk	Weight	LT	Intake	AF	ED	Action Level*		TSL-125	Footnotes/
	(units)	1/(mg/kg-day)	(mg/kg-day)		(kg)	(yrs)	(kg/day)		(yrs)	(mg/kg)		(mg/kg)	Bkgd
VOAs													(mg/kg)
(Corehole Samples)													1
Carbon disulfide	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03		2.60E-02	
1,1-Dichloroethane	C-ND											4.70E-02	
4-Methyl-2-pentanone	ND											1.20E-01	
Methylene Chloride	B2	7.53E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	9.30E+01		7.00E-02	
Methyl ethyl ketone	D	1.00E+00	5.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.50E+03		4.10E-01	
Tetrachloroethylene	D	1.00E+00	1.00E-02	1.00E+00	10	1	2.00E-04	1	1	5.00E+02		1.50E+00	
Toluene	D	1.00E+00	2.00E-01	1.00E+00	10	1	2.00E-04	1	1	1.00E+04		5.80E-02	
1,1,1-Trichloroethane	D	1.00E+00	9.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.50E+03		1.34E+01	
Trichloroethene	ND											5.10E-03	
Semi-VOAs													
(Corehole Samples)													2,3
Aniline	B2	5.70E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.23E+02	<	3.30E-01	
Benzidine	A	2.30E+02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	3.04E-03	<	3.30E-01	
Benzo(a)anthracene	B2-ND										<	3.30E-01	
Benzo(b)fluoranthene	B2-ND										<	3.30E-01	
Benzo(a)pyrene	B2-ND										<	3.30E-01	
Bis (2-ethylhexyl) phthalate	B2	1.40E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.00E+01	<	3.30E-01	
4-Bromophenyl phenyl ether	D-ND										<	3.30E-01	
Butylbenzyl phthalate	C/D	1.00E+00	2.00E-01	1.00E+00	10	1	2.00E-04	1	1	1.00E+04	<	3.30E-01	
4-Chloroaniline	D	1.00E+00	4.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.00E+02	<	3.30E-01	
2-Chloronaphthalene	ND										<	3.30E-01	
o-Chlorophenol	D	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	<	3.30E-01	
Chrysene	B2-ND										<	3.30E-01	
Dibenzo(a,h)anthracene	B2-ND										<	3.30E-01	
o-Dichlorobenzene	D	1.00E+00	9.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.50E+03	<	3.30E-01	
m-Dichlorobenzene	D-ND										<	3.30E-01	
p-Dichlorobenzene	ND										<	3.30E-01	
3,3'-Dichlorobenzidine	B2	4.50E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.56E+00	<	3.30E-01	
2,4-Dichlorophenol	D	1.00E+00	3.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.50E+02	<	3.30E-01	
Diethyl phthalate	D	1.00E+00	8.00E-01	1.00E+00	10	1	2.00E-04	1	1	4.00E+04	<	3.30E-01	
Dimethyl phthalate	D-ND										<	3.30E-01	
2,4-Dimethylphenol	D	1.00E+00	2.00E-02	1.00E+00	10	1	2.00E-04	1	1	1.00E+03	<	3.30E-01	
Di-n-butylphthalate	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	<	3.30E-01	
Di-n-octylphthalate	ND										<	3.30E-01	
2,4-Dinitrophenol	D	1.00E+00	2.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.00E+02	<	3.30E-01	
2,4-Dinitrotoluene and													
2,6-Dinitrotoluene (mixture)	B2	6.80E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.03E+00	<	6.60E-01	4
Fluoranthene	D	1.00E+00	4.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.00E+03	<	3.30E-01	
Hexachlorobenzene	B2	1.60E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	4.38E-01	<	3.30E-01	

RISK CALCULATION TABLE (continued)

Hexachlorobutadiene	C	7.80E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	8.97E+01	<	3.30E-01	
Hexachlorocyclopentadiene	D	1.00E+00	7.00E-03	1.00E+00	10	1	2.00E-04	1	1	3.50E+02	<	3.30E-01	
Hexachloroethane	C	1.40E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	5.00E+02	<	3.30E-01	
Indeno(1,2,3-cd)pyrene	B2-ND										<	3.30E-01	
Naphthalene	D-ND										<	3.30E-01	
4-Nitroaniline	ND										<	3.30E-01	
Nitrobenzene	D	1.00E+00	5.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.50E+01	<	3.30E-01	
4-Nitrophenol	ND										<	3.30E-01	
n-Nitrosodimethylamine	B2	5.10E+01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.37E-02	<	3.30E-01	
n-Nitrosodi-n-propylamine	B2	7.00E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.00E-01	<	3.30E-01	
n-Nitrosodiphenylamine	B2	4.90E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.43E+02	<	3.30E-01	
Pentachlorophenol	B2	1.21E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.79E+00	<	3.30E-01	
Phenol	D	1.00E+00	6.00E-01	1.00E+00	10	1	2.00E-04	1	1	3.00E+04	<	3.30E-01	
1,2,4-Trichlorobenzene	D-ND										<	3.30E-01	
2,4,5-Trichlorophenol	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	<	3.30E-01	
2,4,6-Trichlorophenol	B2	1.10E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	6.36E+01	<	3.30E-01	
METALS													
(Final Soil Verification Samples)													5,6
Antimony	D	1.00E+00	4.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.00E+01	<	5.00E-03	
Arsenic	A-ND											2.20E-02	3.90E+00
Barium	D	1.00E+00	7.00E-02	1.00E+00	10	1	2.00E-04	1	1	3.50E+03		5.30E+01	4.10E+02
Beryllium	B2	4.30E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.63E-01	<	2.50E+00	1.90E+00
Cadmium	B1/D	1.00E+00	1.00E-03	1.00E+00	10	1	2.00E-04	1	1	5.00E+01	<	5.00E+00	1.70E-01
Chromium	A/D	1.00E+00	1.00E+00	1.00E+00	10	1	2.00E-04	1	1	5.00E+04	<	1.00E+01	2.70E+01
Lead	B2-ND										<	1.00E+02	2.40E+01
Mercury	D-ND											9.00E-02	1.80E-02
Nickel	D	1.00E+00	2.00E-02	1.00E+00	10	1	2.00E-04	1	1	1.00E+03	<	4.00E+01	8.90E+00
Selenium	D-ND											2.60E-03	
Silver	D	1.00E+00	3.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.50E+02		7.00E-03	
Thallium	ND										<	1.00E+02	

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Sigma Mesa: Background Elemental Concentrations in Soil and Vegetation, 1979

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SIGMA MESA:

BACKGROUND ELEMENTAL CONCENTRATIONS IN SOIL AND VEGETATION, 1979

by

Roger W. Ferenbaugh, Ernest S. Gladney, and George H. Brooks, Jr.

ABSTRACT

In 1979, soil and vegetation samples were collected on Sigma Mesa to provide background data before construction on the mesa. Elemental data are presented for soil, grass, juniper, piñon pine, and oak. None of the data looks out of the ordinary.

I. INTRODUCTION

In 1979, Sigma Mesa was a relatively undisturbed area east of the buildings located immediately adjacent to Diamond Drive. At that time, the only activity that had occurred on the mesa at any distance from Diamond Drive was the erection of an antenna farm about 1 mile from the road. In 1979, the decision was made to drill a geothermal well on Sigma Mesa. This activity was scheduled to begin in the summer of 1979. Sigma Mesa also was projected to be a growth area for contractor facilities. For these reasons, a project was initiated in the Environmental Surveillance Group (H-8, renamed the Environmental Protection Group [HSE-8] in 1989) to undertake a comprehensive soil and vegetation sampling program on Sigma Mesa. The purpose of the sampling program was to acquire, before any disturbance, a set of data to be used as background for future impact analysis.

II. METHODS

A sampling grid was established using the proposed location of the geothermal well as the center of the grid. Transects were run at eight compass points: N, NE, E, SE, S, SW, W, and NW. Samples were collected along these transects at 250 ft, 500 ft, and thereafter at intervals of 500 ft out to 2500 ft, or as far as possible before the transect was terminated because of obstacles (such as mesa walls and roads). Table I gives a tabulation of sampling sites and samples collected at each site. Figure 1 shows the location of the sampling area within Laboratory boundaries, and Fig. 2 shows individual sampling locations.

At each location, surface soil samples (0 to 2 in. deep) and grass samples were collected. Foliage samples were collected if tree species were present. The three tree species that were encountered were oak (*Quercus undulata*), piñon pine (*Pinus edulis*), and juniper (*Juniperus monosperma*). Grasses were not identified as to species.

Soil samples were passed through a coarse sieve (20 mesh) to remove matter such as pebbles and twigs, and then the samples were air-dried and ground in a Spex Industries shatterbox. Vegetation samples were dried in a

TABLE I. Sampling Locations and Samples Collected

Sample Designation	Location	Type of Sample Collected				
		Soil	Grass	Juniper	Piñon	Oak
1N	250 ft	X	X	X		
2N	500 ft	X	X		X	X
3N	1000 ft	X	X		X	
4N	Gravel pit	X	X		X	
5N	Above pit	X	X	X		
1NE	250 ft	X	X	X		
2NE	500 ft	X	X	X		X
3NE	1000 ft	X	X	X		
4NE	1500 ft	X	X		X	
5NE	2000 ft	X	X		X	
6NE	2640 ft	X	X		X	
1E	250 ft	X	X	X		
2E	500 ft	X	X	X		X
3E	1000 ft	X	X	X		
4E	1500 ft	X	X	X		
5E	2000 ft	X	X	X		
6E	2640 ft	X	X		X	
7E	Knoll	X	X	X		
1SE	250 ft	X	X	X		X
2SE	500 ft	X	X		X	X
3SE	TA-35, above ponds	X	X		X	
1S	250 ft	X	X	X		X
2S	500 ft	X	X		X	X
3S	TA-35	X	X		X	
1SW	250 ft	X	X	X		X
2SW	500 ft	X	X			X
3SW	Trailers at TA-35	X	X		X	
1W	Wellhead	X	X	X		
2W	250 ft	X	X	X		
3W	500 ft	X	X	X		
4W	1000 ft	X	X	X		
5W	1500 ft	X	X		X	
6W	2000 ft	X	X	X		
7W	2640 ft	X	X	X		
1NW	250 ft	X	X	X		
2NW	500 ft	X	X		X	
3NW	1000 ft	X	X		X	
4NW	1500 ft	X	X		X	
5NW	2000 ft	X	X		X	
6NW	2640 ft	X	X		X	

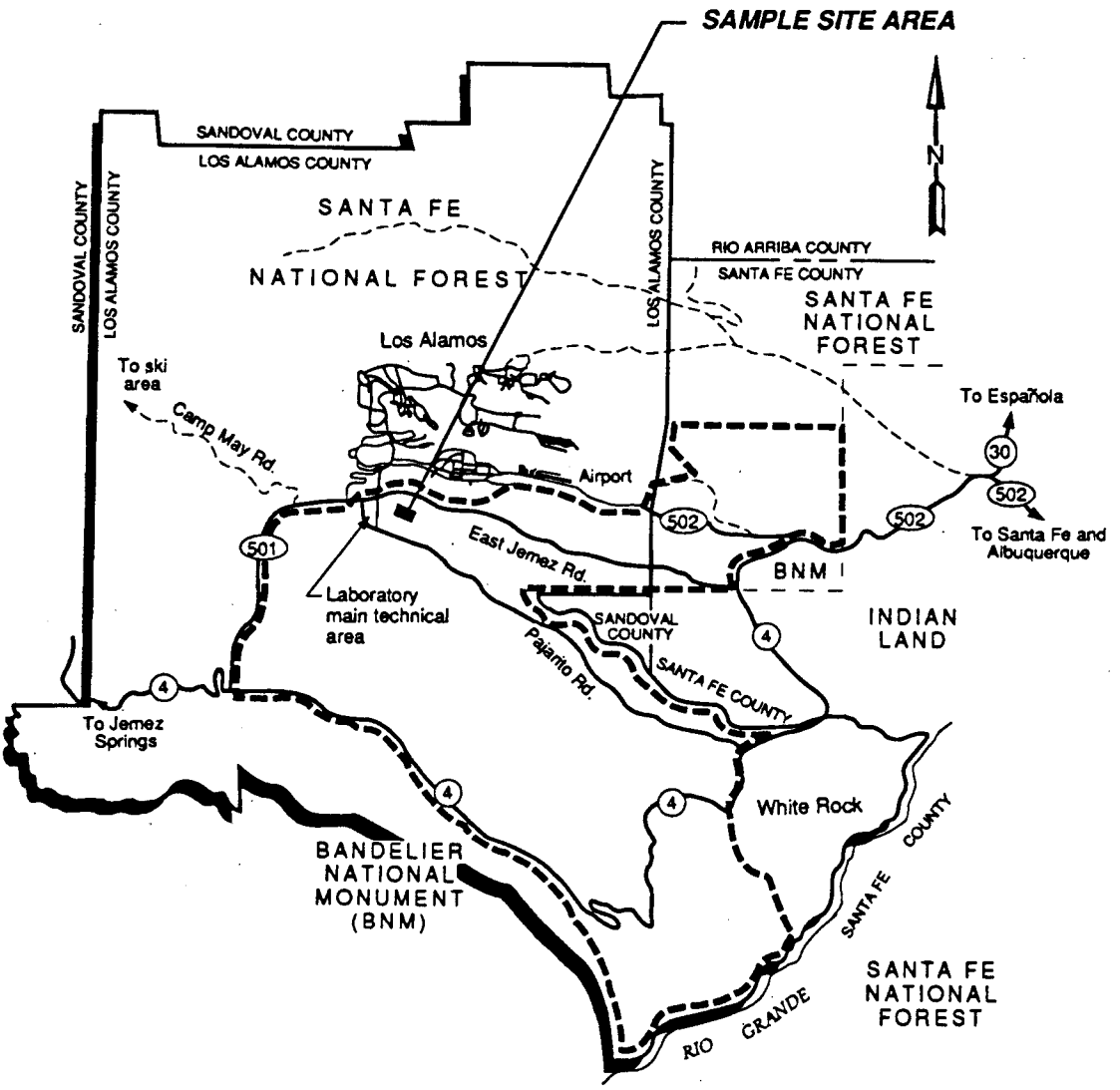

Fig. 1. Location of sampling area.

forced-air circulation oven at 60°C for 2 days and then were ground in the shatterbox.

After the samples were prepared, as described above, they were submitted for a variety of elemental analyses. Several analytical techniques were used, including neutron activation analysis, atomic absorption, ion chromatography, ion selective electrode analysis, and some special analytical techniques. The procedures used for these analyses have been described in detail in Gautier and Gladney (1986) and Gladney et al. (1980). Quality assurance was provided by concurrent analysis of a variety of National Bureau of Standards (NBS), United States Environmental Protection Agency (EPA), and United States Geological Survey (USGS) reference materials using the approach documented in Gladney et al. (1981).

III. RESULTS

Table II summarizes the means and standard deviations of the soil data, Tables III through VI summarize

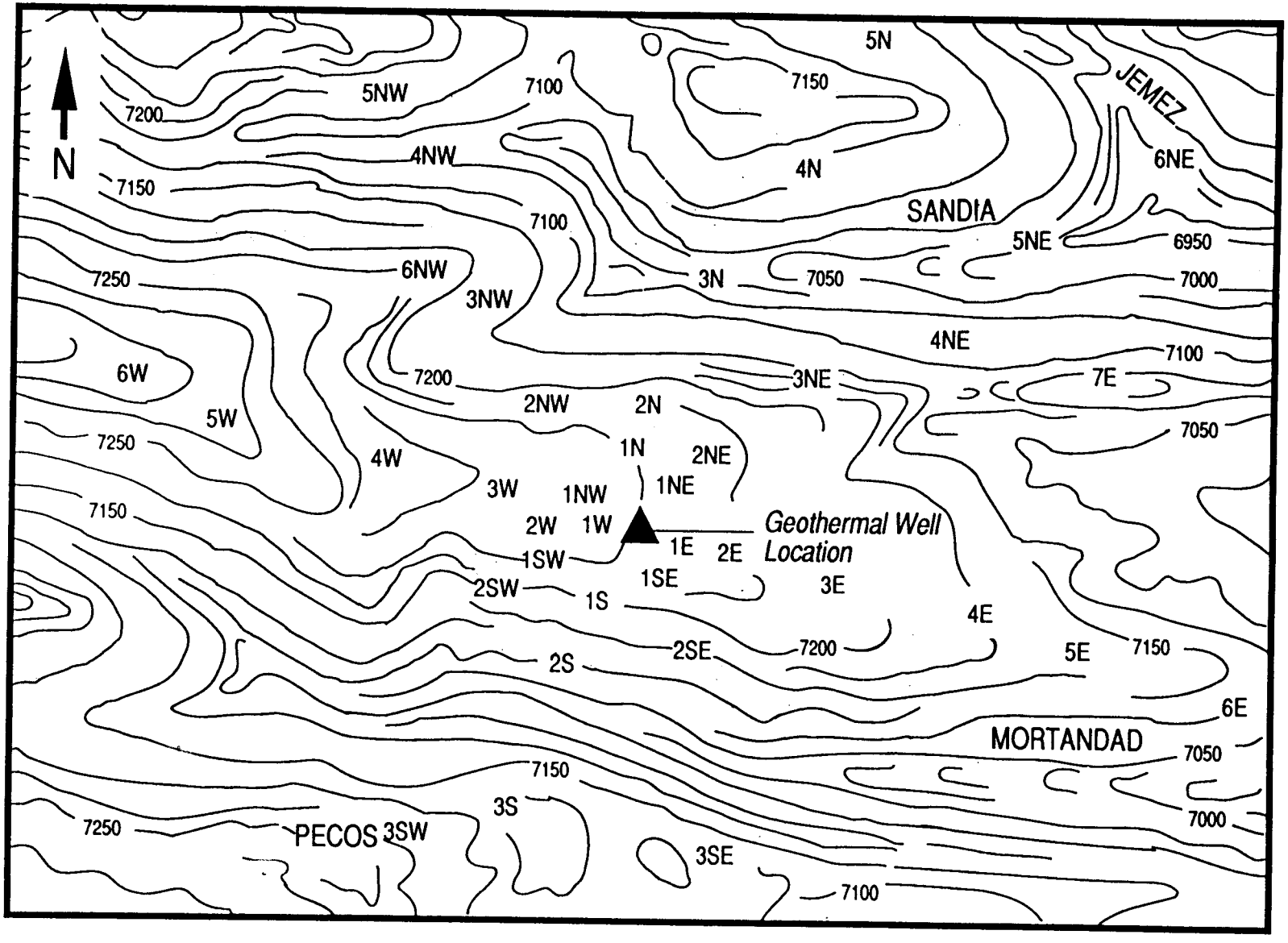

Fig. 2. Locations of sampling sites.

TABLE II. Elemental Concentrations in Soil

Element[a]	Mean	Standard Deviation	No. of Samples	Maximum	Minimum
Al (%)	5.8	0.35	40	6.7	5.3
As	3.9	1.6	40	6.7	1.3
B	16	7.2	38	27	7.0
Ba	410	220	40	810	120
Be	1.9	0.49	37	3.3	1.1
Br	1.9	1.2	38	5.7	0.40
Cd (ppb)	170	100	36	520	30
Cl	<100		40		
Cr	27	24	40	136	4.2
Cu	10	4.5	40	18	2.0
F	240	74	40	390	50
Fe (%)	1.7	0.48	40	2.6	1.0
Hg (ppb)	18	6.0	39	29	7.0
Li	24	4.6	40	39	19
Mg (%)	0.23	0.12	40	0.40	0.051
Mn	510	130	40	840	330
Ni	8.9	4.8	40	19	1.6
NO_3	8.1	6.5	30	26	0.50
Pb	24	15	40	98	8.0
PO_4	11	20	21	94	0.10
Rb	120	15	40	160	90
SO_4	10	13	39	59	2.0
Ti (%)	0.26	0.15	40	0.49	0.079
Zn	54	12	40	71	38

[a]Data are reported in parts per million (ppm) unless otherwise noted.

vegetation data, and Table VII shows soil data from other sources for comparison with the data in Table II. In general, the Sigma Mesa data agree well with the data from other sources. Those instances where there is some discrepancy can be attributed to the chemical characteristics of the volcanic tuff from which the Sigma Mesa soil is derived.

The results of the individual analyses are tabulated in the Appendix, Tables A-I through A-V.

TABLE III. Elemental Concentrations in Grass

Element[a]	Mean	Standard Deviation	No. of Samples	Maximum	Minimum
Al	650	770	39	4400	150
As (ppb)	360	210	38	960	60
B	14	7.0	29	34	7.0
Ba	73	50	15	200	13
Be (ppb)	12	10	14	42	4.0
Br	40	41	40	160	2.7
Cd	<200		15		
Cl (%)	0.19	0.12	40	0.60	0.034
Cr	5.5	3.2	40	13	1.6
Cu	6.8	3.0	16	14	3.3
F	1.1	0.60	40	3.4	0.60
Fe	260	190	40	810	60
Li (ppb)	40	190	11	750	200
Mg (%)	0.12	0.028	16	0.17	0.061
Mn	48	35	40	180	13
Ni	26	11	15	55	7.0
NO_3	420	380	37	1300	60
Pb	1.7	1.1	11	4.0	1.0
PO_4 (%)	0.19	0.083	40	0.47	0.070
Rb	5.6	3.2	37	18	2.1
SO_4	690	360	40	1500	120
Ti	46	60	15	250	12
Zn	21	11	15	52	9.4

[a]Data are reported in parts per million (ppm) unless otherwise noted.

TABLE IV. Elemental Concentrations in Juniper

Element[a]	Mean	Standard Deviation	No. of Samples	Maximum	Minimum
Al	350	180	21	960	140
As (ppb)	90	40	18	170	40
B	23	8.0	21	50	15
Ba	110	100	9	290	22
Be (ppb)	18	7.0	9	29	11
Br	21	18	21	65	3.2
Cd (ppb)	140	60	10	250	100
Cl	910	390	21	2000	350
Cr	3.5	1.4	21	5.9	1.5
Cu	5.9	2.5	9	10	3.5
F (ppb)	250	140	21	600	100
Fe	160	91	21	500	60
Li (ppb)	320	90	6	440	200
Mg (%)	0.24	0.061	9	0.36	0.17
Mn	48	10	21	62	26
Ni	5.2	3.7	9	11	1.9
NO_3	110	41	19	240	43
Pb	2.5	1.3	4	4.0	1.0
PO_4 (%)	0.23	0.096	21	0.43	0.11
Rb	3.1	1.4	19	6.9	1.1
SO_4	470	210	21	830	170
Ti	67	51	9	150	16
Zn	21	5.0	9	27	9.2

[a]Data are reported in parts per million (ppm) unless otherwise noted.

TABLE V. Elemental Concentrations in Piñon Pine

Element[a]	Mean	Standard Deviation	No. of Samples	Maximum	Minimum
Al	200	65	18	310	100
As (ppb)	150	60	17	300	80
B	22	7.0	18	46	11
Ba	24	6.0	3	28	17
Be (ppb)	16	7.0	4	24	8.0
Br	13	14	18	55	1.7
Cd (ppb)	110	60	4	200	50
Cl	570	860	18	4000	230
Cr	3.2	1.5	18	6.8	1.0
Cu	3.9	2.2	4	7.0	2.2
F (ppb)	190	160	18	700	100
Fe	87	33	18	150	40
Li	3.4	2.7	5	7.0	0.70
Mg (%)	0.19	0.064	6	0.31	0.12
Mn	200	160	18	540	58
Ni	5.5	4.4	4	12	2.2
NO_3 [b]					
Pb [b]					
PO_4 (%)	0.18	0.077	17	0.32	0.080
Rb	4.4	2.2	16	9.8	1.5
SO_4	750	380	17	1700	19
Ti	94	160	4	340	11
Zn	34	26	6	69	4.0

[a]Data are reported in parts per million (ppm) unless otherwise noted.
[b]No average was calculated (see data in the Appendix).

TABLE VI. Elemental Concentrations in Oak

Element[a]	Mean	Standard Deviation	No. of Samples	Maximum	Minimum
Al	510	220	9	860	210
As (ppb)	170	110	9	440	70
B	63	13	9	81	48
Ba	39	30	3	73	18
Be (ppb)	46	39	3	90	18
Br	6.4	4.6	9	16	2.2
Cd (ppb)	<200		3		
Cl	260	92	9	380	65
Cr	4.0	2.0	9	6.9	1.9
Cu	7.0	1.3	3	8.1	5.5
F (ppb)	260	150	9	600	100
Fe	210	68	9	350	140
Li	4.3	3.5	3	7.1	0.31
Mg (%)	0.25	0.026	3	0.28	0.23
Mn	500	180	9	870	220
Ni	4.4	0.40	3	4.8	4.0
NO_3	120	34	7	190	80
Pb	<3.0		3		
PO_4 (%)	0.17	0.076	9	0.28	0.019
Rb	17	10	3	26	5.9
SO_4	470	320	8	990	200
Ti	29	5.0	3	34	24
Zn	25	6.0	3	30	18

[a]Data are reported in parts per million (ppm) unless otherwise noted.

TABLE VII. Elemental Abundance in the Earth's Crust

Element	Concentrations (ppm)			
	Mason[a]	Vinogradov[b]	Vinogradov[c]	Wedepohl[d]
Al	81 300	104 500	71 300	78 300
As	1.8	6.6	5	1.7
Ba	425	800	500	590
Be	2.8	7	6	2
Br	2.5	6	5	2.9
Cd	0.2	0.3	0.5	0.1
Cl	130	160	100	320
Cr	100	160	200	70
Cu	55	57	20	30
F	625	500	200	720
Fe	50 000	33 300	38 000	35 400
Hg	0.08	0.4	0.01	0.03
Li	20	60	30	30
Mg	20 900	13 400	6 300	13 900
Mn	950	670	850	690
Ni	75	95	40	44
Pb	13	20	10	15
Rb	90	400	100	120
Ti	4 400	4 500	4 600	4 700
Zn	70	80	50	60
Ag	0.07	0.9	0.1	0.06
Au	0.004	—	—	0.004
Ca	36 300	25 300	13 700	28 700
Ce	60	30	50	75
Co	25	23	8	12
Cs	3	12	5	2.7
Dy	3	4	—	6.1
Eu	1.2	1	—	1.4
Ga	15	40	30	17
Gd	5.4	5	—	8
Ge	1.5	7	1	1.3
Hf	3	4	6	3
I	0.5	1	5	0.5
In	0.1	—	—	0.07
K	25 900	22 800	13 600	28 200
La	30	40	40	44
Lu	0.5	0.2	—	0.6
Mo	1.5	2	2	1
Na	28 300	6 600	6 300	24 500
Nb	20	20	—	20
Nd	28	18	—	>30
S	260	3 000	850	310
Sb	0.2	1	—	0.2
Sc	22	10	7	14
Se	0.05	0.6	—	0.09
Si	277 000	248 000	330 000	305 000

ENCLOSURE 6

SIGMA MESA: BACKGROUND ELEMENTAL CONCENTRATIONS IN SOIL AND VEGETATION, 1979

TABLE VII (Continued)

Element	Concentrations (ppm)			
	Mason[a]	Vinogradov[b]	Vinogradov[c]	Wedepohl[d]
Sm	6	5	—	>7
Sn	2	30	10	3
Sr	375	450	300	290
Ta	2	3.5	—	3.4
Tb	0.9	0.9	—	<1.4
Te	0.01	—	—	0.002
Th	7.2	11	6	11
U	1.8	3.2	1	3.5
V	135	130	100	95
W	1.5	—	—	1.3
Y	33	33	50	34
Yb	3.4	2.2	—	3.4
Zr	165	200	300	160

[a]Crustal concentrations (Mason 1966).
[b]Sedimentary rocks, shales, and clays (Vinogradov 1959).
[c]Soil concentrations (Vinogradov 1959).
[d]Crustal concentrations (Wedepohl 1968).

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APPENDIX

TABLE A-I. Soil: Elemental Concentrations[a]

Location	Al (%)	As (ppm)	B (ppm)	Ba (ppm)	Be (ppm)	Br (ppm)	Cd (ppb)	Cl (ppm)	Cr (ppm)	Cu (ppm)	F (ppm)	Fe (%)
1N	5.5 ± 0.5	5.8 ± 0.7	24 ± 5	680 ± 100	2.7 ± 0.2	4.0 ± 0.5	170 ± 20	<100	41 ± 4	16 ± 2	280 ± 30	2.4 ± 0.1
2N	5.8 ± 0.5	6.0 ± 0.7	27 ± 5	620 ± 90	<0.2	<0.3	150 ± 20	<100	43 ± 4	13 ± 1	260 ± 30	2.2 ± 0.1
3N	5.8 ± 0.5	3.0 ± 0.5	10 ± 5	210 ± 30	<0.2	0.87 ± 0.5	80 ± 20	<100	9.2 ± 1.1	6 ± 1	180 ± 20	1.3 ± 0.1
4N	5.9 ± 0.5	1.8 ± 0.4	10 ± 5	180 ± 30	2.6 ± 0.2	0.61 ± 0.5	290 ± 30	<100	9.0 ± 1.4	6 ± 1	50 ± 10	1.2 ± 0.1
5N	5.7 ± 0.5	3.1 ± 0.4	8 ± 5	400 ± 60	2.1 ± 0.2	1.3 ± 0.4	210 ± 20	<100	6.7 ± 1.0	15 ± 2	150 ± 10	1.2 ± 0.1
1NE	6.2 ± 0.5	4.8 ± 0.5	20 ± 5	570 ± 90	1.5 ± 0.2	5.7 ± 0.7	140 ± 20	<100	27 ± 2	13 ± 1	310 ± 30	2.0 ± 0.1
2NE	6.0 ± 0.5	6.2 ± 0.7	25 ± 5	620 ± 90	1.4 ± 0.2	3.3 ± 0.5	260 ± 20	<100	41 ± 4	18 ± 2	340 ± 30	2.1 ± 0.1
3NE	5.8 ± 0.5	1.3 ± 0.3	<5	150 ± 20	3.3 ± 0.3	0.72 ± 0.5	210 ± 20	<100	140 ± 11	6 ± 1	150 ± 10	1.1 ± 0.1
4NE	6.2 ± 0.5	1.8 ± 0.4	7 ± 5	120 ± 20	1.8 ± 0.2	1.5 ± 0.6	200 ± 20	<100	5.1 ± 1.1	5 ± 1	160 ± 20	1.1 ± 0.1
5NE	5.8 ± 0.5	2.7 ± 0.4	10 ± 5	180 ± 30	1.6 ± 0.2	0.99 ± 0.3	200 ± 20	<100	8.9 ± 1.1	6 ± 1	170 ± 20	1.2 ± 0.1
6NE	5.3 ± 0.5	3.7 ± 0.5	11 ± 5	240 ± 40	2.2 ± 0.2	1.6 ± 0.3		<100	13 ± 2	8 ± 1	190 ± 20	1.3 ± 0.1
1E	5.5 ± 0.5	5.7 ± 0.6	27 ± 5	720 ± 110	1.6 ± 0.2	2.2 ± 0.5	170 ± 20	<100	39 ± 4	15 ± 2	360 ± 40	2.1 ± 0.1
2E	6.2 ± 0.5	5.0 ± 0.6	23 ± 5	590 ± 90	<0.2	2.3 ± 0.4	80 ± 20	<100	40 ± 4	14 ± 1	210 ± 20	2.4 ± 0.1
3E	6.2 ± 0.5	4.1 ± 0.5	15 ± 5	390 ± 60	1.7 ± 0.2	1.4 ± 0.4	110 ± 20	<100	27 ± 2	9 ± 3	220 ± 20	2.1 ± 0.1
4E	5.7 ± 0.5	4.2 ± 0.6	13 ± 5	300 ± 50	2.1 ± 0.2	2.8 ± 0.6	60 ± 20	<100	15 ± 2	11 ± 1	210 ± 20	1.5 ± 0.1
5E	6.3 ± 0.5	2.8 ± 0.5	10 ± 5	260 ± 40	2.3 ± 0.2	0.57 ± 0.4	160 ± 20	<100	14 ± 2	6 ± 2	210 ± 20	1.7 ± 0.1
6E	5.9 ± 0.5	2.6 ± 0.5	9 ± 5	190 ± 30	2.0 ± 0.2	1.2 ± 0.4		<100	8.9 ± 1.2	3 ± 1	230 ± 20	1.0 ± 0.1
7E	6.2 ± 0.5	1.8 ± 0.5	10 ± 5	180 ± 30	2.6 ± 0.2	1.7 ± 0.6	100 ± 20	<100	6.8 ± 1.0	4 ± 1	300 ± 30	1.2 ± 0.1
1SE	6.0 ± 0.5	3.5 ± 0.4	14 ± 5	440 ± 70	1.8 ± 0.2	2.8 ± 0.4	160 ± 20	<100	18 ± 2	10 ± 1	240 ± 20	1.5 ± 0.1
2SE	5.4 ± 0.5	1.7 ± 0.3	9 ± 5	130 ± 20	2.1 ± 0.2	3.5 ± 0.5	140 ± 20	<100	4.4 ± 1.2	5 ± 1	190 ± 20	1.0 ± 0.1
3SE	6.0 ± 0.5	1.6 ± 0.3	7 ± 5	140 ± 20	2.2 ± 0.2	1.6 ± 0.3	260 ± 20	<100	4.3 ± 0.9	2 ± 2	270 ± 30	1.1 ± 0.1
1S	5.3 ± 0.5	4.3 ± 0.5	16 ± 5	390 ± 60	1.7 ± 0.2	3.6 ± 0.7	390 ± 30	<100	21 ± 2	14 ± 1	220 ± 20	1.7 ± 0.1
2S	5.4 ± 0.5	2.1 ± 0.4	9 ± 5	150 ± 20	1.9 ± 0.2	1.9 ± 0.6	180 ± 20	<100	4.2 ± 0.8	5 ± 1	140 ± 10	1.0 ± 0.1
3S	5.7 ± 0.5	1.7 ± 0.3	<5	350 ± 50	2.3 ± 0.2	0.70 ± 0.5	110 ± 20	<100	54 ± 4	7 ± 1	150 ± 10	2.6 ± 0.1
1SW	6.0 ± 0.5	4.5 ± 0.5	19 ± 5	590 ± 90	1.8 ± 0.2	2.9 ± 0.4	140 ± 20	<100	39 ± 4	11 ± 1	270 ± 30	2.2 ± 0.1
2SW	6.4 ± 0.5	4.9 ± 0.6	18 ± 5	380 ± 60	2.0 ± 0.2	2.7 ± 0.5		<100	26 ± 3	16 ± 2	300 ± 30	1.9 ± 0.1
3SW	6.7 ± 0.5	3.5 ± 0.4	13 ± 5	200 ± 30	2.4 ± 0.2	1.7 ± 0.5	100 ± 20	<100	16 ± 2	13 ± 1	320 ± 30	1.7 ± 0.1
1W	5.3 ± 0.5	6.7 ± 0.7	27 ± 5	810 ± 120	1.4 ± 0.2	2.8 ± 0.4	260 ± 20	<100	40 ± 4	17 ± 2	270 ± 30	2.2 ± 0.1
2W	5.9 ± 0.5	5.5 ± 0.6	24 ± 5	610 ± 90	0.9 ± 0.2	1.8 ± 0.4	190 ± 20	<100	48 ± 4	14 ± 1	320 ± 30	2.2 ± 0.1
3W	5.5 ± 0.5	4.8 ± 0.6	25 ± 5	570 ± 90	1.4 ± 0.2	0.44 ± 0.4	90 ± 20	<100	38 ± 3	11 ± 1	340 ± 30	1.9 ± 0.1
4W	6.0 ± 0.5	5.7 ± 0.6	20 ± 5	690 ± 100	1.7 ± 0.2	4.1 ± 0.6	30 ± 20	<100	42 ± 4	15 ± 2	390 ± 40	2.2 ± 0.1
5W	5.7 ± 0.5	5.7 ± 0.6	19 ± 5	700 ± 110	1.6 ± 0.2	1.0 ± 0.4	520 ± 50	<100	46 ± 4	14 ± 1	320 ± 30	2.0 ± 0.1
6W	5.5 ± 0.5	5.4 ± 0.6	25 ± 5	650 ± 100	1.8 ± 0.2	1.4 ± 0.4	130 ± 20	<100	41 ± 4	13 ± 1	160 ± 20	1.9 ± 0.1
7W	5.3 ± 0.5	5.3 ± 0.6	24 ± 5	620 ± 90	1.3 ± 0.2	3.0 ± 0.5	30 ± 20	<100	40 ± 4	12 ± 1	280 ± 30	2.0 ± 0.1
1NW	5.5 ± 0.5	5.6 ± 0.6	27 ± 5	660 ± 100	1.1 ± 0.2	2.4 ± 0.5		<100	32 ± 4	16 ± 2	310 ± 30	2.0 ± 0.1
2NW	5.4 ± 0.5	5.1 ± 0.6	26 ± 5	700 ± 110	1.4 ± 0.2	0.42 ± 0.3	150 ± 20	<100	45 ± 4	14 ± 1	250 ± 20	2.1 ± 0.1
3NW	5.7 ± 0.5	3.2 ± 0.4	9 ± 5	200 ± 30	1.5 ± 0.2	<0.3	250 ± 20	<100	7.6 ± 1.1	6 ± 1	180 ± 20	1.1 ± 0.1
4NW	5.8 ± 0.5	2.5 ± 0.4	10 ± 5	160 ± 20	2.1 ± 0.2	0.73 ± 0.5	100 ± 20	<100	8.8 ± 1.3	6 ± 1	160 ± 20	1.2 ± 0.1
5NW	6.3 ± 0.5	3.0 ± 0.4	11 ± 5	260 ± 40	2.4 ± 0.2	0.40 ± 0.4	150 ± 20	<100	11 ± 1	7 ± 1	220 ± 20	1.6 ± 0.1
6NW	6.2 ± 0.5	2.4 ± 0.4	8 ± 5	220 ± 30	2.1 ± 0.2	0.65 ± 0.5	140 ± 20	<100	8.5 ± 1.3	5 ± 1	190 ± 20	1.3 ± 0.1

TABLE A-I (Continued)

Location	Hg (ppb)	Li (ppm)	Mg (ppm)	Mn (ppm)	Ni (ppm)	NO_3 (ppm)	Pb (ppm)	PO_4 (ppm)	Rb (ppm)	SO_4 (ppm)	Ti (ppm)	Zn (ppm)
1N	22 ± 4	24 ± 2	3800 ± 380	770 ± 80	15 ± 2	6.0 ± 0.6	18 ± 2	15 ± 1	120 ± 15	10 ± 1	4200 ± 400	51 ± 3
2N	14 ± 4	23 ± 2	3400 ± 340	530 ± 50	13 ± 2	6.0 ± 0.6	33 ± 3	<0.6	120 ± 14	9.0 ± 0.9	4300 ± 450	41 ± 2
3N	18 ± 4	29 ± 3	1500 ± 150	400 ± 40	6.5 ± 1	2.0 ± 0.2	18 ± 2	<0.6	130 ± 15	4.0 ± 0.4	1200 ± 170	58 ± 3
4N		28 ± 3	850 ± 90	400 ± 40	4.7 ± 1	6.0 ± 0.6	28 ± 2	<0.6	150 ± 18	4.0 ± 0.4	1100 ± 170	52 ± 3
5N	12 ± 4	25 ± 3	2400 ± 240	350 ± 40	6.8 ± 1	10 ± 1	65 ± 6	<0.6	120 ± 13	4.0 ± 0.4	1300 ± 220	64 ± 3
1NE	22 ± 4	25 ± 3	3700 ± 370	740 ± 70	14 ± 2	23 ± 2	18 ± 2	<0.6	120 ± 14	59 ± 6	3700 ± 390	52 ± 3
2NE	27 ± 4	25 ± 3	4000 ± 400	570 ± 60	14 ± 2	<0.9	20 ± 2	2.0 ± 0.2	150 ± 18	10 ± 1	3800 ± 390	52 ± 3
3NE	14 ± 4	24 ± 2	670 ± 70	390 ± 40	3.1 ± 1	<0.9	12 ± 2	7.0 ± 0.7	120 ± 14	6.0 ± 0.6	810 ± 140	64 ± 3
4NE	10 ± 4	26 ± 3	510 ± 50	460 ± 50	2.7 ± 1	<0.9	15 ± 2	4.0 ± 0.4	130 ± 15	2.0 ± 0.2	1000 ± 180	71 ± 4
5NE	17 ± 4	26 ± 3	1200 ± 120	470 ± 50	6.8 ± 1	<0.9	32 ± 3	<0.6	120 ± 13	3.0 ± 0.3	1300 ± 140	63 ± 3
6NE	22 ± 4	26 ± 3	1600 ± 160	640 ± 60	5.2 ± 1	<0.9	30 ± 3	3.0 ± 0.3	130 ± 15	6.0 ± 0.6	1200 ± 120	71 ± 4
1E	21 ± 4	25 ± 3	3800 ± 380	630 ± 60	15 ± 2	7.0 ± 0.7	25 ± 2	8.0 ± 0.8	120 ± 17	9.0 ± 0.9	4300 ± 450	45 ± 2
2E	13 ± 4	25 ± 3	4000 ± 400	840 ± 80	19 ± 2	6.0 ± 0.6	12 ± 2	<0.6	120 ± 14	8.0 ± 0.8	4900 ± 280	50 ± 3
3E	17 ± 4	24 ± 2	2700 ± 270	430 ± 40	6.9 ± 1	11 ± 1	20 ± 2	<0.6	110 ± 12	7.0 ± 0.7	2900 ± 330	48 ± 2
4E	27 ± 4	24 ± 2	1800 ± 180	430 ± 40	6.3 ± 1	14 ± 1	25 ± 2	<0.6	90 ± 11	14 ± 1	2000 ± 240	62 ± 3
5E	11 ± 4	27 ± 3	1400 ± 140	390 ± 40	5.6 ± 1	16 ± 1	16 ± 2	<0.6	120 ± 14	5.0 ± 0.5	1700 ± 210	53 ± 3
6E	13 ± 4	26 ± 3	930 ± 90	360 ± 40	3.2 ± 1	4.0 ± 0.4	8 ± 2	<0.6	110 ± 12	3.0 ± 0.3	1100 ± 180	47 ± 2
7E	17 ± 4	29 ± 3	1100 ± 110	400 ± 40	3.8 ± 1	12 ± 1	19 ± 2	5.0 ± 0.5	130 ± 14	3.0 ± 0.3	790 ± 150	55 ± 6
1SE	15 ± 4	25 ± 3	2700 ± 270	390 ± 40	8.1 ± 1	6.0 ± 0.6	19 ± 2	3.0 ± 0.3	90 ± 10	6.0 ± 0.6	2500 ± 260	45 ± 2
2SE	13 ± 4	19 ± 2	810 ± 80	440 ± 40	3.8 ± 1	<0.9	14 ± 2	25 ± 2	120 ± 14	34 ± 3	850 ± 90	59 ± 3
3SE	7 ± 4	26 ± 3	860 ± 90	420 ± 40	12 ± 2	<0.9	8 ± 2	<0.6	110 ± 12	2.0 ± 0.2	950 ± 100	58 ± 3
1S	29 ± 4	25 ± 2	2200 ± 220	540 ± 50	8.7 ± 1	0.5 ± 0.1	28 ± 2	94 ± 9	120 ± 15	22 ± 2	2100 ± 240	62 ± 3
2S	16 ± 4	22 ± 2	760 ± 80	400 ± 40	34 ± 1	4.0 ± 0.4	19 ± 2	23 ± 2	110 ± 12	<0.6	810 ± 140	56 ± 2
3S	22 ± 4	22 ± 2	1700 ± 170	460 ± 50	13 ± 2	12 ± 1	11 ± 2	5.0 ± 0.5	100 ± 15	56 ± 6	4000 ± 920	60 ± 3
1SW	18 ± 4	24 ± 2	3400 ± 340	460 ± 50	1.6 ± 1	<0.9	19 ± 2	0.3 ± 0.1	120 ± 15	8.0 ± 0.8	4200 ± 430	49 ± 3
2SW	20 ± 4	27 ± 3	3000 ± 300	520 ± 50	7.5 ± 1	6.0 ± 0.6	20 ± 2	<0.6	120 ± 14	9.0 ± 0.9	3100 ± 340	51 ± 3
3SW	29 ± 4	28 ± 3	2800 ± 280	330 ± 30	10 ± 2	<0.9	24 ± 2	2.0 ± 0.2	110 ± 14	13 ± 1	1400 ± 190	56 ± 3
1W	17 ± 4	22 ± 2	3300 ± 330	690 ± 70	16 ± 2	8.0 ± 0.8	25 ± 2	4.0 ± 0.4	120 ± 15	10 ± 1	4200 ± 250	48 ± 2
2W	22 ± 4	25 ± 3	3600 ± 360	670 ± 70	11 ± 2	6.0 ± 0.6	24 ± 2	10 ± 1	150 ± 20	10 ± 1	3800 ± 400	46 ± 2
3W	16 ± 4	20 ± 2	3000 ± 300	540 ± 50	9.5 ± 1	22 ± 2	25 ± 2	4.0 ± 0.4	120 ± 15	10 ± 1	3600 ± 220	39 ± 2
4W	23 ± 4	26 ± 3	3900 ± 390	650 ± 60	16 ± 2	5.0 ± 0.5	25 ± 2	2.0 ± 0.2	110 ± 14	2.0 ± 0.2	3900 ± 410	45 ± 2
5W	21 ± 4	24 ± 2	3900 ± 370	600 ± 60	14 ± 2	26 ± 2	23 ± 2	<0.6	120 ± 14	12 ± 1	4200 ± 240	41 ± 2
6W	10 ± 4	21 ± 2	3300 ± 330	530 ± 50	12 ± 2	8.0 ± 0.8	25 ± 2	<0.6	100 ± 14	7.0 ± 0.7	4300 ± 460	42 ± 2
7W	18 ± 4	23 ± 2	2700 ± 270	570 ± 60	12 ± 2	6.0 ± 0.6	23 ± 2	<0.6	120 ± 14	7.0 ± 0.7	4500 ± 260	38 ± 2
1NW	31 ± 4	23 ± 2	3400 ± 340	660 ± 70	16 ± 2	2.0 ± 0.2	98 ± 9	8.0 ± 0.8	110 ± 13	12 ± 1	4300 ± 440	47 ± 2
2NW	20 ± 4	22 ± 2	3300 ± 330	640 ± 60	14 ± 2	4.0 ± 0.4	24 ± 2	<0.6	130 ± 16	9.0 ± 0.9	4400 ± 460	39 ± 2
3NW	18 ± 4	24 ± 2	1100 ± 110	330 ± 30	4.5 ± 1	2.0 ± 0.2	22 ± 2	<0.6	100 ± 12	3.0 ± 0.3	940 ± 160	48 ± 2
4NW	20 ± 4	28 ± 3	950 ± 100	360 ± 40	3.6 ± 1	2.0 ± 0.2	16 ± 2	2.0 ± 0.2	130 ± 15	4.0 ± 0.4	940 ± 150	56 ± 3
5NW	7 ± 4	39 ± 4	1200 ± 120	600 ± 60	4.8 ± 1	<0.9	22 ± 2	<0.6	160 ± 17	2.0 ± 0.2	1200 ± 160	110 ± 5
6NW	15 ± 4	23 ± 2	1100 ± 110	370 ± 40	3.7 ± 1	1.0 ± 0.1	23 ± 2	0.1 ± 0.1	110 ± 13	3.0 ± 0.3	1100 ± 170	52 ± 3

[a]Insufficient sample for analysis where no data are reported. Uncertainties represent analytical uncertainties.

TABLE A-II. Grass: Elemental Concentrations[a]

Location	Al (ppm)	As (ppm)	B (ppm)	Ba (ppm)	Be (ppb)	Br (ppm)	Cd (ppm)	Cl (ppm)	Cr (ppm)	Cu (ppm)	F (ppm)
1N	1300 ± 380	<0.08	<10			160 ± 20		2700 ± 400	5.0 ± 0.5		1.6 ± 0.2
2N	1500 ± 460	0.17 ± 0.05	22 ± 5			130 ± 10		1700 ± 260	4.3 ± 0.4		2.6 ± 0.3
3N	230 ± 70	0.06 ± 0.02	7 ± 5			16 ± 2	<0.2	1500 ± 220	3.1 ± 0.3		2.4 ± 0.2
4N	4400 ± 1300	<0.03	6 ± 5	44 ± 10	21 ± 2	31 ± 3	<0.2	2400 ± 360	4.0 ± 0.4	3.3 ± 0.3	2.2 ± 0.2
5N	320 ± 100	0.32 ± 0.06	14 ± 5	90 ± 20	11 ± 2	20 ± 2		2000 ± 300	3.7 ± 0.4	4.4 ± 0.4	1.3 ± 0.1
1NE	720 ± 220	0.57 ± 0.10	<5			110 ± 10		2400 ± 360	7.5 ± 0.8		0.8 ± 0.1
2NE	460 ± 140	0.25 ± 0.06	8 ± 5			32 ± 3		1500 ± 220	13 ± 1.3		0.9 ± 0.1
3NE	260 ± 80	0.55 ± 0.08	23 ± 5			10 ± 1		900 ± 140	9.7 ± 1.0		0.7 ± 0.1
4NE	280 ± 90	0.23 ± 0.05	<5			11 ± 1	0.07 ± 0.01	1500 ± 230	6.1 ± 0.6		0.6 ± 0.1
5NE	220 ± 70	0.51 ± 0.07	9 ± 5			10 ± 1		2600 ± 380	6.5 ± 0.7		0.6 ± 0.1
6NE	300 ± 90	0.53 ± 0.08	8 ± 5			13 ± 1		1500 ± 230	4.3 ± 0.4		0.7 ± 0.1
1E	1300 ± 380	0.17 ± 0.06	<5			51 ± 5		1400 ± 210	3.9 ± 0.4		0.9 ± 0.1
2E	310 ± 90	0.08 ± 0.05	<5			34 ± 3		960 ± 140	2.1 ± 0.2		1.5 ± 0.1
3E	2000 ± 610	0.15 ± 0.07	13 ± 5			29 ± 3	<0.2	2100 ± 310	9.6 ± 1.0		1.6 ± 0.2
4E	240 ± 70	0.50 ± 0.07	11 ± 5	50 ± 10	4 ± 2	12 ± 1		980 ± 150	2.1 ± 0.2	5.0 ± 0.5	1.1 ± 0.1
5E	290 ± 90	0.19 ± 0.07	<5			50 ± 5		2700 ± 400	2.5 ± 0.3		0.8 ± 0.1
6E	150 ± 50	0.31 ± 0.05	10 ± 5			6.2 ± 0.6	<0.2	1300 ± 190	1.6 ± 0.2		0.8 ± 0.1
7E	250 ± 80	0.61 ± 0.08	10 ± 5	42 ± 10	6 ± 2	13 ± 1	<0.2	1400 ± 220	3.5 ± 0.4	5.0 ± 0.5	1.0 ± 0.1
1SE	330 ± 100	0.33 ± 0.06	8 ± 5	13 ± 10	17 ± 2	12 ± 1	<0.2	1500 ± 220	3.3 ± 0.3	6.6 ± 0.7	0.9 ± 0.1
2SE	260 ± 80	0.24 ± 0.04	9 ± 5	86 ± 20	8 ± 2	2.7 ± 0.3	<0.2	400 ± 60	3.1 ± 0.3	4.8 ± 0.5	1.0 ± 0.1
3SE	240 ± 70	0.32 ± 0.06	14 ± 5	90 ± 20	8 ± 2	33 ± 3	<0.2	2100 ± 320	7.6 ± 0.8	14 ± 1.4	0.9 ± 0.1
1S	290 ± 90	0.19 ± 0.04	12 ± 5			13 ± 1		1100 ± 160	3.9 ± 0.4		0.6 ± 0.1
2S	250 ± 70	0.27 ± 0.04	10 ± 5			25 ± 2		1600 ± 240	3.5 ± 0.4		0.7 ± 0.1
3S	240 ± 70	0.39 ± 0.06	<5	90 ± 20	<3	15 ± 2	<0.3	6000 ± 890	13 ± 1.3	6.9 ± 0.7	0.7 ± 0.1
1SW	460 ± 140	0.31 ± 0.05	21 ± 5	22 ± 10	6 ± 2	3.9 ± 0.4	<0.2	340 ± 50	3.9 ± 0.4	9.2 ± 0.9	1.2 ± 0.1
2SW	250 ± 70	0.29 ± 0.05	9 ± 5	45 ± 10	6 ± 2	19 ± 2	<0.2	1300 ± 200	3.5 ± 0.4	7.6 ± 0.8	0.7 ± 0.1
3SW	240 ± 70	0.31 ± 0.07	<5	150 ± 30	5 ± 2	23 ± 2	<0.2	5600 ± 850	13 ± 1.3	3.9 ± 0.4	0.6 ± 0.1
1W	1500 ± 460	0.81 ± 0.12	34 ± 5			77 ± 8		1600 ± 250	6.9 ± 0.7		3.4 ± 0.3
2W	600 ± 180	0.37 ± 0.11	<5	100 ± 20	10 ± 2	98 ± 10	<0.5	1900 ± 280	4.1 ± 0.4	3.4 ± 0.3	1.3 ± 0.1
3W	1100 ± 340	0.72 ± 0.13	12 ± 5	44 ± 10	10 ± 2	150 ± 15	<0.2	4200 ± 630	5.9 ± 0.6	6.8 ± 0.7	1.2 ± 0.1
4W	810 ± 240	0.48 ± 0.10	26 ± 5			69 ± 7		940 ± 140	3.2 ± 0.3	9.7 ± 1.0	1.6 ± 0.2
5W		0.96 ± 0.14	12 ± 5			91 ± 9		2300 ± 340	13 ± 1.3	11 ± 1.1	1.5 ± 0.1
6W	1200 ± 350	0.59 ± 0.10	29 ± 5	200 ± 40	42 ± 4	72 ± 7	<0.2	2400 ± 370	2.1 ± 0.2	7.6 ± 0.8	1.0 ± 0.1
7W	710 ± 210	0.20 ± 0.06	11 ± 5	32 ± 10	16 ± 2	37 ± 4	<0.2	2000 ± 300	5.1 ± 0.5		0.8 ± 0.1
1NW	880 ± 260	0.29 ± 0.08	7 ± 5			47 ± 5		1900 ± 280	5.2 ± 0.5		1.1 ± 0.1
2NW	540 ± 160	0.62 ± 0.11	17 ± 5			24 ± 2		410 ± 60	6.3 ± 0.6		1.1 ± 0.1
3NW	190 ± 60	0.13 ± 0.04	11 ± 5			5.9 ± 0.6		1800 ± 270	8.1 ± 0.8		0.6 ± 0.1
4NW	390 ± 120	0.22 ± 0.04	<5			15 ± 2		970 ± 150	4.3 ± 0.4		0.9 ± 0.1
5NW	220 ± 70	0.25 ± 0.05	<5			17 ± 2		2300 ± 350	6.3 ± 0.6		0.7 ± 0.1
6NW	150 ± 50	0.32 ± 0.05	9 ± 5			19 ± 2		1900 ± 290	2.8 ± 0.3		0.7 ± 0.1

TABLE A-II (Continued)

Location	Fe (ppm)	Li (ppm)	Mg (ppm)	Mn (ppm)	Ni (ppm)	NO_3 (ppm)	Pb (ppm)	PO_4 (ppm)	Rb (ppm)	SO_4 (ppm)	Ti (ppm)	Zn (ppm)
1N	490 ± 100			52 ± 11		110 ± 10		2500 ± 250	4.4 ± 1.2	360 ± 40		
2N	540 ± 100			45 ± 10		810 ± 80		1400 ± 140	4.9 ± 1.2	450 ± 50		
3N	90 ± 20			28 ± 6		4.0 ± 0.4		2000 ± 200	5.3 ± 1.2	990 ± 100		
4N	810 ± 160	0.20 ± 0.10	1300 ± 130	52 ± 11	18 ± 2	1300 ± 130	3.0 ± 1.0	2000 ± 200	18 ± 1.2	270 ± 30	21 ± 3	9.4 ± 0.9
5N	130 ± 30	<0.20	1200 ± 120	17 ± 5	7.0 ± 1.0	450 ± 50	2.0 ± 1.0	1100 ± 110	7.1 ± 1.2	570 ± 60	16 ± 3	21 ± 2
1NE	300 ± 60			39 ± 8		200 ± 20		2600 ± 260	11 ± 1.2	920 ± 90		
2NE	270 ± 50			33 ± 7		93 ± 9		2100 ± 210	2.2 ± 1.2	1300 ± 130		
3NE	240 ± 50			73 ± 15		<0.9		2000 ± 200	4.3 ± 1.2	520 ± 50		
4NE	140 ± 30			32 ± 7		190 ± 20		2000 ± 200	6.4 ± 1.2	540 ± 50		
5NE	100 ± 20			35 ± 7		300 ± 30		2000 ± 200	9.5 ± 1.2	470 ± 50		
6NE	100 ± 20			57 ± 12		200 ± 20		1300 ± 130	2.6 ± 1.2	740 ± 70		
1E	460 ± 90			36 ± 8		200 ± 20		1600 ± 160	5.4 ± 1.2	320 ± 30		
2E	110 ± 20			24 ± 5		100 ± 10		1900 ± 190	<1.2	610 ± 60		
3E	230 ± 40			17 ± 4		600 ± 60		1500 ± 150	5.5 ± 1.2	1100 ± 110		
4E	110 ± 20	<0.20	1100 ± 110	23 ± 5	35 ± 4	150 ± 20	<3.0	1100 ± 110	3.6 ± 1.2	820 ± 80	16 ± 3	14 ± 1
5E	110 ± 20			24 ± 5		410 ± 40		700 ± 70	11 ± 1.2	230 ± 20		
6E	60 ± 10			31 ± 6		250 ± 30		2000 ± 200	4.2 ± 1.2	990 ± 100		
7E	90 ± 20	<0.20	1200 ± 120	31 ± 6	15 ± 2	60 ± 6	1.0 ± 1.0	820 ± 80	2.7 ± 1.2	1200 ± 120	12 ± 3	16 ± 2
1SE	150 ± 30	0.50 ± 0.05	820 ± 80	26 ± 5	28 ± 3	270 ± 30	1.0 ± 1.0	1900 ± 190	2.2 ± 1.2	1500 ± 150	29 ± 3	12 ± 1
2SE	170 ± 30	0.37 ± 0.04	1100 ± 110	79 ± 16	20 ± 3	260 ± 30	1.0 ± 1.0	1100 ± 110	2.6 ± 1.2	270 ± 30	25 ± 3	22 ± 2
3SE	150 ± 30	0.20 ± 0.10	1500 ± 150	32 ± 7	29 ± 3	<0.9	1.0 ± 1.0	1100 ± 110	8.8 ± 1.2	320 ± 30	17 ± 3	24 ± 2
1S	130 ± 20			25 ± 5		100 ± 10		1700 ± 170	4.4 ± 1.2	840 ± 80		
2S	70 ± 20			30 ± 6		100 ± 10		2300 ± 230	3.8 ± 1.2	950 ± 90		
3S	200 ± 40	<0.20	1500 ± 150	64 ± 13	32 ± 4	660 ± 70	<3.0	2000 ± 200	2.3 ± 1.2	130 ± 10	16 ± 3	39 ± 4
1SW	160 ± 30	0.71 ± 0.07	1100 ± 110	180 ± 35	22 ± 3	600 ± 60	1.0 ± 1.0	760 ± 80	<1.2	290 ± 30	22 ± 3	16 ± 2
2SW	150 ± 30	0.35 ± 0.04	980 ± 100	61 ± 12	28 ± 3	<0.9	<3.0	1400 ± 140	2.1 ± 1.2	1100 ± 110	24 ± 3	19 ± 2
3SW	150 ± 30	<0.20	1300 ± 130	60 ± 12	20 ± 3	180 ± 20	<1.0	4700 ± 470	7.0 ± 1.2	590 ± 60	36 ± 3	52 ± 5
1W	720 ± 140			87 ± 18		1200 ± 120		4100 ± 410	8.0 ± 1.2	1200 ± 120		
2W	270 ± 50	0.27 ± 0.10	610 ± 60	38 ± 8	24 ± 3	110 ± 10	<3.0	1900 ± 190	5.0 ± 1.2	880 ± 90	88 ± 8	14 ± 1
3W	610 ± 120	0.75 ± 0.08	1100 ± 110	54 ± 11	25 ± 3	690 ± 70	3.0 ± 1.0	3100 ± 310	7.0 ± 1.2	970 ± 100	56 ± 5	23 ± 2
4W	350 ± 70	0.45 ± 0.05	1000 ± 100	59 ± 12		1100 ± 110	4.0 ± 1.0	3200 ± 320	2.6 ± 1.2	450 ± 50		
5W	580 ± 120			41 ± 9		200 ± 20		1800 ± 180	4.8 ± 1.2	750 ± 80		
6W	470 ± 90	0.34 ± 0.03	1500 ± 150	52 ± 11	34 ± 4	1100 ± 110	1.0 ± 1.0	2400 ± 240	6.9 ± 1.2	740 ± 70	250 ± 25	22 ± 2
7W	430 ± 80	0.28 ± 0.03	1700 ± 170	74 ± 15	55 ± 6	310 ± 30	1.0 ± 1.0	1600 ± 160	5.0 ± 1.2	1100 ± 110	64 ± 6	15 ± 2
1NW	380 ± 70			38 ± 8		240 ± 20		2100 ± 210	3.5 ± 1.2	810 ± 80		
2NW	270 ± 50			170 ± 33		140 ± 10		910 ± 90	<1.2	880 ± 90		
3NW	130 ± 30			26 ± 6		1200 ± 120		1900 ± 190	8.1 ± 1.2	280 ± 30		
4NW	170 ± 30			26 ± 6		290 ± 30		1300 ± 130	4.3 ± 1.2	120 ± 10		
5NW	160 ± 30			31 ± 7		960 ± 100		2000 ± 200	6.3 ± 1.2	170 ± 20		
6NW	80 ± 20			13 ± 3		380 ± 40		980 ± 100	2.8 ± 1.2	850 ± 90		

[a]Insufficient sample for analysis where no data are reported. Uncertainties represent analytical uncertainties.

TABLE A-III. Juniper: Elemental Concentrations[a]

Location	Al (ppm)	As (ppm)	B (ppm)	Ba (ppm)	Be (ppb)	Br (ppm)	Cd (ppm)	Cl (ppm)	Cr (ppm)	Cu (ppm)	F (ppm)
1N	300 ± 90	0.17 ± 0.05	28 ± 5			26 ± 3		790 ± 120	3.7 ± 0.4		0.40 ± 0.04
5N	560 ± 160	0.08 ± 0.02	17 ± 5			9.5 ± 1.0	0.13 ± 0.01	780 ± 120	4.7 ± 0.5		0.30 ± 0.03
1NE	400 ± 120	0.10 ± 0.03	16 ± 5			33 ± 3		1200 ± 180	4.0 ± 0.4		0.40 ± 0.04
2NE	270 ± 80	0.05 ± 0.02	22 ± 5			5.5 ± 0.5		1100 ± 170	5.9 ± 0.6		0.30 ± 0.03
3NE	250 ± 70	0.06 ± 0.02	27 ± 5			6.3 ± 0.6	0.11 ± 0.02	1200 ± 180	3.0 ± 0.3		0.10 ± 0.01
1E	260 ± 80	0.10 ± 0.04	23 ± 5			38 ± 4	0.10 ± 0.02	1300 ± 200	2.0 ± 0.2		0.10 ± 0.01
2E	240 ± 70	0.06 ± 0.03	24 ± 5	22 ± 10	12 ± 2	42 ± 5	<0.20	920 ± 140	2.9 ± 0.3	4.7 ± 0.5	0.30 ± 0.03
3E	200 ± 60	0.06 ± 0.02	18 ± 5			7.6 ± 0.8	0.20 ± 0.02	460 ± 70	2.9 ± 0.3		0.10 ± 0.01
4E	140 ± 40	<0.02	16 ± 5			3.7 ± 0.4		350 ± 50	5.0 ± 0.5		0.10 ± 0.01
5E	150 ± 50	0.04 ± 0.02	15 ± 5			4.3 ± 0.4	0.22 ± 0.02	540 ± 80	3.5 ± 0.4		0.10 ± 0.01
7E	280 ± 80	0.15 ± 0.02	16 ± 5	52 ± 20	27 ± 2	3.8 ± 0.4	<0.20	480 ± 70	1.6 ± 0.2	3.6 ± 0.4	0.10 ± 0.01
1SE	480 ± 150	0.15 ± 0.04	17 ± 5	290 ± 50	29 ± 3	5.7 ± 0.6	<1.0	460 ± 70	1.5 ± 0.2	4.0 ± 2.0	0.20 ± 0.02
1S	250 ± 70	0.08 ± 0.02	21 ± 5			3.2 ± 0.3	0.10 ± 0.01	800 ± 120	5.9 ± 0.6		0.20 ± 0.02
1SW	330 ± 100	0.06 ± 0.02	23 ± 5	31 ± 10	14 ± 4	3.6 ± 0.4	0.10 ± 0.10	710 ± 110	1.7 ± 0.2	3.5 ± 0.4	0.10 ± 0.01
1W	310 ± 90	0.14 ± 0.04	22 ± 5			34 ± 3	0.13 ± 0.01	990 ± 150	2.9 ± 0.3		0.60 ± 0.06
2W	250 ± 70	<0.03	34 ± 5	28 ± 10	11 ± 2	30 ± 3	0.25 ± 0.10	1100 ± 170	2.5 ± 0.3	5.9 ± 0.6	0.40 ± 0.04
3W	520 ± 220	0.08 ± 0.03	27 ± 5	180 ± 40	12 ± 2	27 ± 3	<0.30	830 ± 120	4.0 ± 0.4	9.4 ± 0.9	0.30 ± 0.03
4W	460 ± 140	<0.03	50 ± 5	83 ± 20	24 ± 2	51 ± 5	0.10 ± 0.10	1400 ± 210	4.6 ± 0.5	7.7 ± 0.8	0.30 ± 0.03
6W	960 ± 290	0.06 ± 0.04	29 ± 5	220 ± 40	22 ± 2	65 ± 7	<0.70	2000 ± 290	4.7 ± 0.5	10 ± 1.0	0.40 ± 0.04
7W	430 ± 130	0.06 ± 0.02	22 ± 5	44 ± 10	14 ± 2	18 ± 2	<0.20	780 ± 120	1.9 ± 0.2	4.7 ± 0.5	0.30 ± 0.03
1NW	300 ± 90	0.08 ± 0.04	21 ± 5			32 ± 3		970 ± 150	4.1 ± 0.4		0.10 ± 0.01

TABLE A-III (Continued)

Location	Fe (ppm)	Li (ppm)	Mg (ppm)	Mn (ppm)	Ni (ppm)	NO_3 (ppm)	Pb (ppm)	PO_4 (ppm)	Rb (ppm)	SO_4 (ppm)	Ti (ppm)	Zn (ppm)
1N	140 ± 30			55 ± 11		<0.9		2400 ± 240	1.9 ± 1.2	610 ± 60		
5N	200 ± 40			37 ± 8		43 ± 4		1100 ± 110	3.0 ± 1.2	180 ± 20		
1NE	180 ± 40			38 ± 8		98 ± 10		4300 ± 430	6.9 ± 1.2	830 ± 80		
2NE	140 ± 30			57 ± 11		110 ± 10		3800 ± 380	2.4 ± 1.2	790 ± 80		
3NE	170 ± 30			58 ± 12		<0.9		1400 ± 140	2.9 ± 1.2	440 ± 40		
1E	90 ± 20			44 ± 9		88 ± 9		3400 ± 340	3.4 ± 1.2	520 ± 50		
2E	60 ± 10	<0.20	2500 ± 250	56 ± 11	9.0 ± 1.0	130 ± 10	<3.0	3200 ± 320	1.9 ± 1.2	350 ± 40	30 ± 3	20 ± 2
3E	80 ± 20			38 ± 8		90 ± 9		1500 ± 150	2.1 ± 1.2	280 ± 30		
4E	70 ± 20			26 ± 5		88 ± 9		1600 ± 160	5.0 ± 1.2	220 ± 20		
5E	80 ± 20			37 ± 8		97 ± 10		1200 ± 120	2.0 ± 1.2	280 ± 30		
7E	110 ± 20	0.24 ± 0.10	1700 ± 170	43 ± 9	3.0 ± 1.0	150 ± 20	3.0 ± 1.0	1600 ± 160	1.8 ± 1.2	530 ± 50	41 ± 5	19 ± 2
1SE	180 ± 40	<1.0	1700 ± 170	30 ± 6	2.0 ± 1.0	130 ± 10	4.0 ± 2.0	1200 ± 120	<1.2	170 ± 20	150 ± 20	9.2 ± 0.9
1S	140 ± 30			53 ± 11		55 ± 5		1900 ± 190	2.6 ± 1.2	340 ± 30		
1SW	110 ± 20	<0.20	2300 ± 230	46 ± 9	2.0 ± 1.0	71 ± 7	<3.0	1600 ± 160	1.9 ± 1.2	240 ± 20	23 ± 6	24 ± 2
1W	160 ± 30			54 ± 11		240 ± 20		2200 ± 220	<1.2	370 ± 40		
2W	140 ± 30	0.20 ± 0.10	2500 ± 250	62 ± 13	11.0 ± 2.0	120 ± 10	<3.0	2100 ± 210	2.5 ± 1.2	820 ± 80	16 ± 3	21 ± 5
3W	190 ± 40	0.30 ± 0.10	3000 ± 300	51 ± 10	4.3 ± 0.5	110 ± 10	1.0 ± 1.0	3100 ± 310	3.5 ± 1.2	560 ± 60	65 ± 6	20 ± 2
4W	240 ± 40	0.35 ± 0.04	2600 ± 260	58 ± 12	1.9 ± 0.5	110 ± 10	2.0 ± 1.0	3400 ± 340	4.7 ± 1.2	520 ± 50	48 ± 3	27 ± 3
6W	500 ± 100	0.44 ± 0.04	3600 ± 360	55 ± 11	9.8 ± 1.0	110 ± 10	<3.0	3400 ± 340	4.1 ± 1.2	600 ± 60	150 ± 15	27 ± 3
7W	170 ± 40	0.41 ± 0.04	2000 ± 200	44 ± 9	4.1 ± 0.5	110 ± 10	<3.0	2400 ± 240	1.1 ± 1.2	720 ± 70	78 ± 8	19 ± 2
1NW	160 ± 30			56 ± 11		90 ± 9		2400 ± 240	4.3 ± 1.2	590 ± 60		

[a]Insufficient sample for analysis where no data are reported. Uncertainties represent analytical uncertainties.

TABLE A-IV. Piñon: Elemental Concentrations[a]

Location	Al (ppm)	As (ppm)	B (ppm)	Ba (ppm)	Be (ppb)	Br (ppm)	Cd (ppm)	Cl (ppm)	Cr (ppm)	Cu (ppm)	F (ppm)
2N	140 ± 40	<0.03	18 ± 5			19 ± 2		320 ± 50	2.9 ± 0.3		0.40 ± 0.04
3N	190 ± 60	0.09 ± 0.03	14 ± 5			7.9 ± 0.8		230 ± 30	3.6 ± 0.4		0.30 ± 0.03
4N	130 ± 40	0.18 ± 0.04	22 ± 5			5.0 ± 0.5	0.10 ± 0.01	420 ± 60	3.1 ± 0.3		0.30 ± 0.03
4NE	220 ± 70	0.15 ± 0.03	22 ± 5			15 ± 2		280 ± 40	4.2 ± 0.4		0.10 ± 0.01
5NE	140 ± 40	0.10 ± 0.02	21 ± 5			5.1 ± 0.5		470 ± 70	2.8 ± 0.3		0.10 ± 0.01
6NE	180 ± 60	0.11 ± 0.03	11 ± 5			9.9 ± 1		330 ± 50	2.3 ± 0.2		0.10 ± 0.01
6E	140 ± 40	0.15 ± 0.02	25 ± 5	27 ±10	18 ± 2	6.0 ± 0.6	<0.30	400 ± 60	1.4 ± 0.1	2.2 ± 0.2	0.10 ± 0.01
2SE	250 ± 70	0.20 ± 0.03	17 ± 5			5.1 ± 0.5	0.10 ± 0.02	260 ± 40	1.9 ± 0.2	7.0 ± 3.0	0.20 ± 0.02
3SE	310 ± 90	0.17 ± 0.03	28 ± 5	28 ±10	13 ± 2	8.3 ± 0.8	0.20 ± 0.01	370 ± 60	3.6 ± 0.4	2.5 ± 0.3	0.10 ± 0.01
2S	230 ± 70	0.08 ± 0.02	19 ± 5	17 ±10	8 ± 2	1.7 ± 0.2	<0.20	440 ± 70	1.0 ± 0.1		0.10 ± 0.01
3S	290 ± 90	0.30 ± 0.04	18 ± 5			7.3 ± 0.7	<0.50	230 ± 40	1.8 ± 0.2	4.0 ± 1.0	0.20 ± 0.02
3SW	220 ± 70	0.21 ± 0.03	46 ± 5			9.4 ± 0.9		4000 ± 600	4.1 ± 0.4		0.20 ± 0.02
5W	280 ± 80	0.19 ± 0.04	23 ± 5			55 ± 6	0.05 ± 0.01	710 ± 110	2.1 ± 0.2		0.70 ± 0.07
2NW	100 ± 30	0.18 ± 0.05	17 ± 5			41 ± 4		460 ± 70	6.8 ± 0.7		0.10 ± 0.01
3NW	290 ± 90	0.15 ± 0.03	17 ± 5			9.7 ± 1		390 ± 60	5.2 ± 0.5		0.10 ± 0.01
4NW	200 ± 60	0.14 ± 0.04	23 ± 5	<100	24 ± 4	29 ± 3	<8.0	450 ± 70	3.3 ± 0.3	<15	0.10 ± 0.01
5NW	230 ± 70	0.08 ± 0.02	25 ± 5			3.0 ± 0.3		250 ± 40	4.8 ± 0.5		0.20 ± 0.02
6NW	120 ± 40	0.09 ± 0.02	23 ± 5			3.6 ± 0.4		330 ± 50	2.7 ± 0.3		0.10 ± 0.01

TABLE A-IV (Continued)

Location	Fe (ppm)	Li (ppm)	Mg (ppm)	Mn (ppm)	Ni (ppm)	NO_3 (ppm)	Pb (ppm)	PO_4 (ppm)	Rb (ppm)	SO_4 (ppm)	Ti (ppm)	Zn (ppm)
2N	72 ± 20			74 ± 15		<0.9		<0.6	4.8 ±1.2	19 ± 2		
3N	110 ± 20			190 ± 39		8 ± 1		1600 ± 160	4.9 ±1.2	1000 ±100		
4N	53 ± 10			100 ± 18		<0.9		2400 ± 240	9.8 ±1.2	730 ± 70		
4NE	95 ± 20			500 ±100		<0.9		820 ± 80	2.7 ±1.2	1300 ±130		
5NE	40 ± 10			220 ± 44		<0.9		2000 ± 20	3.8 ±1.2	770 ± 80		
6NE	47 ± 10			150 ± 31		100 ±10		800 ± 80	1.6 ±1.2	470 ± 50		
6E	40 ± 10	5.3 ± 0.5	2000 ± 200	86 ± 17	2.2± 0.5	<0.9	1.0 ± 1.0	2200 ± 220	5.3 ±1.2	840 ± 80	13 ± 3	39 ± 4
2SE	99 ± 20	7.0 ± 2.0	1200 ± 120	130 ± 25		<0.9	<20	1400 ± 140	4.0 ±1.2	610 ± 60		
3SE	130 ± 30	1.1 ± 0.1	1800 ± 180	190 ± 38	3.5± 0.5	50 ± 5	1.0 ± 1.0	890 ± 90	1.8 ±1.2	960 ±100	11 ± 3	23 ± 2
2S	70 ± 20	2.7 ± 0.3	1700 ± 170	150 ± 31	4.1± 0.5	<0.9		3100 ± 310	6.7 ±1.2	650 ± 70	13 ± 3	39 ± 4
3S	150 ± 30	0.7 ± 0.5	1600 ± 160	120 ± 24		62 ± 6	<3.0	1100 ± 110	<1.2	550 ± 60		28 ± 3
3SW	120 ± 20			76 ± 15		130 ±10		1300 ± 130	<1.2	420 ± 40		4.0± 0.4
5W	130 ± 30			58 ± 12		110 ±10		2500 ± 250	3.3 ±1.2	360 ± 40		
2NW	94 ± 20			77 ± 15		92 ± 9		3200 ± 320	3.3 ±1.2	130 ± 10		
3NW	89 ± 20			340 ± 70		120 ±10		1100 ± 110	1.5 ±1.2	1100 ±110		
4NW	60 ± 10	<8.0	3100 ± 310	540 ±110	12 ±10	100 ±10	<99	1600 ± 160	4.6 ±1.2	630 ± 60	340 ± 100	69 ± 7
5NW	86 ± 20			460 ± 90		<0.9		2400 ± 240	6.8 ±1.2	1700 ±170		
6NW	79 ± 20			61 ± 12		<0.9		1400 ± 140	5.8 ±1.2	460 ± 50		

[a]Insufficient sample for analysis where no data are reported. Uncertainties represent analytical uncertainties.

TABLE A-V. Oak: Elemental Concentrations[a]

Location	Al (ppm)	As (ppm)	B (ppm)	Ba (ppm)	Be (ppb)	Br (ppm)	Cd (ppm)	Cl (ppm)	Cr (ppm)	Cu (ppm)	F (ppm)
2N	860 ±260	0.44 ± 0.07	81 ± 8			12 ± 1		65 ± 10	3.5 ± 0.4		0.60 ± 0.06
2NE	300 ± 90	0.07 ± 0.03	62 ± 6			3.1 ± 0.3		200 ± 30	2.9 ± 0.3		0.20 ± 0.02
2E	760 ±230	0.16 ± 0.04	69 ± 7			16 ± 2	0.34 ± 0.03	230 ± 30	2.4 ± 0.2		0.20 ± 0.02
1SE	370 ±110	0.20 ± 0.03	48 ± 5	25 ±10	18 ± 2	5.3 ± 0.5	<0.20	260 ± 40	2.2 ± 0.2	5.5 ± 0.6	0.10 ± 0.01
2SE	650 ±200	0.13 ± 0.03	63 ± 6	18 ±10	29 ± 3	3.4 ± 0.4	<0.20	360 ± 50	1.9 ± 0.2	7.3 ± 0.7	0.20 ± 0.02
1S	350 ±110	0.10 ± 0.04	66 ± 7			5.3 ± 0.5		280 ± 40	6.5 ± 0.7		0.20 ± 0.02
2S	580 ±180	0.14 ± 0.04	79 ± 8	73 ±20	90 ± 9	5.3 ± 0.5	<0.20	280 ± 40	3.3 ± 0.3	8.1 ± 0.8	0.40 ± 0.04
1SW	470 ±140	0.12 ± 0.04	48 ± 5			5.4 ± 0.5		380 ± 60	6.9 ± 0.7		0.20 ± 0.02
2SW	210 ± 60	0.14 ± 0.03	49 ± 5			2.2 ± 0.2		240 ± 40	6.4 ± 0.6		0.20 ± 0.02

Location	Fe (ppm)	Li (ppm)	Mg (ppm)	Mn (ppm)	Ni (ppm)	NO_3 (ppm)	Pb (ppm)	PO_4 (ppm)	Rb (ppm)	SO_4 (ppm)	Ti (ppm)	Zn (ppm)
2N	350 ± 70			430 ± 86		<0.9		190 ± 20		<0.6		
2NE	190 ± 40			220 ± 43		<0.9		1900 ± 190		230 ± 20		
2E	280 ± 60			390 ± 78		120 ± 10		2800 ± 280		930 ± 90	24 ± 3	18 ± 2
1SE	180 ± 40	0.31 ± 0.03	2300 ± 230	500 ± 100	4.8 ± 0.5	80 ± 10	<3.0	1100 ± 110	18 ± 2	200 ± 20	34 ± 10	26 ± 3
2SE	150 ± 30	7.1 ± 0.7	2400 ± 240	550 ± 110	4.0 ± 1.0	110 ± 10	<3.0	1400 ± 140	26 ± 3	290 ± 30		
1S	140 ± 30			450 ± 90		100 ± 10		1800 ± 180		490 ± 50		
2S	210 ± 40	5.4 ± 0.5	2800 ± 280	590 ± 120	4.4 ± 0.5	130 ± 10	3.0 ± 1	2500 ± 250	5.9 ± 1.2	990 ± 100	30 ± 3	30 ± 3
1SW	240 ± 50			500 ± 100		190 ± 20		1600 ± 160		250 ± 30		
2SW	170 ± 40			870 ± 170		120 ± 10		1600 ± 160		380 ± 40		

[a]Insufficient sample for analysis where no data are reported. Uncertainties represent analytical uncertainties.

Analytical Technologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 212304

TEST : SEMI-VOLATILE ORGANICS (EPA 8270)

COMPOUNDS	RESULTS
FLUORENE	<0.17
4-NITROANILINE	<0.85
4,6-DINITRO-2-METHYLPHENOL	<0.85
N-NITROSODIPHENYLAMINE	<0.17
4-BROMOPHENYL-PHENYLETHER	<0.17
HEXACHLOROBENZENE	<0.17
PENTACHLOROPHENOL	<0.85
PHENANTHRENE	<0.17
ANTHRACENE	<0.17
DI-N-BUTYLPHTHALATE	<0.17
FLUORANTHENE	<0.17
BENZIDINE	<1.7
PYRENE	<0.17
BUTYLBENZYLPHTHALATE	<0.17
3,3-DICHLOROBENZIDINE	<0.34
BENZO(a)ANTHRACENE	<0.17
BIS(2-ETHYLHEXYL)PHTHALATE	<0.17
CHRYSENE	<0.17
DI-N-OCTYLPHTHALATE	<0.17
BENZO(b)FLUORANTHENE	<0.17
BENZO(k)FLUORANTHENE	<0.17
BENZO(a)PYRENE	<0.17
INDENO(1,2,3-cd)PYRENE	<0.17
DIBENZO(a,h)ANTHRACENE	<0.17
BENZO(g,h,i)PERYLENE	<0.17

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	72
2-FLUOROBIPHENYL (%)	79
TERPHENYL (%)	75
PHENOL-D6 (%)	61
2-FLUOROPHENOL (%)	69
2,4,6-TRIBROMOPHENOL (%)	57

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 212304

TEST : SEMI-VOLATILE ORGANICS (EPA 8270)

CLIENT : NEW MEXICO ENVIRONMENTAL DEPT.
PROJECT # : (NONE)
PROJECT NAME : TA-35-125
REF I.D. : 21249919

DATE ANALYZED : 12/09/92
SAMPLE MATRIX : NON-AQUEOUS
UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<0.17	1.7	0.88	52	0.90	53	2
ACENAPHTHENE	<0.17	1.7	1.1	65	1.1	65	0
2,4-DINITROTOLUENE	<0.17	1.7	1.1	65	1.1	65	0
PYRENE	<0.17	1.7	1.6	94	1.7	100	6
N-NITROSO-DI-N-PROPYLAMINE	<0.17	1.7	0.78	46	0.81	48	4
1,4-DICHLOROBENZENE	<0.17	1.7	0.97	57	1.0	59	3
PENTACHLOROPHENOL	<0.85	3.3	2.3	70	2.6	79	12
PHENOL	<0.17	3.3	2.1	64	2.1	64	0
2-CHLOROPHENOL	<0.17	3.3	2.2	67	2.3	70	4
4-CHLORO-3-METHYLPHENOL	<0.17	3.3	2.6	79	2.7	82	4
4-NITROPHENOL	<0.85	3.3	1.5	45	1.6	48	6

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque

CHAIN OF CUSTODY

DATE: 12/1/92 PAGE 1 OF 1

ATI LAB I.D. 213304

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: Teri Davis

COMPANY: New Mexico Environment Dept.
ADDRESS: 525 Camino De Los Marquez Suite 4
Santa Fe, NM 87502
PHONE: (505) 827-4308
FAX: (505) 827-4361

BILL TO: Hazardous & Radioactive Materials Bureau
COMPANY: P.O. Box 26110
ADDRESS: Santa Fe NM 87502

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTXE/MTBE (8020)			Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (~~624/8240~~) (8260)	Polynuclear Aromatics (610/8310)	Hg, As, Ba, Be, Cd, Cr, Hg, Ni, Pb, Se, Sc		SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal			The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)		NUMBER OF CONTAINERS
PF-35-1	12/1/92	1300	soil	1															1														1
PF-35-2	12/1/92	1302	soil	2															1														1
PF-35-3	12/1/92	1352	soil	3														1	1		1												3
PF-35-4	12/1/92	1355	soil	4														1	1														2
PF-35-5	12/1/92	1348	soil	5															1														1
PF-35-6	12/1/92	1413	soil	6															1		1												2
PF-35-7	12/1/92	1416	soil	7															1		1												2
PF-35-8	12/1/92	1426	soil	8															1														1

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJ. NO.:	—	NO. CONTAINERS	12
PROJ. NAME:	TA-35-125	CUSTODY SEALS	Y / N / NA
P.O. NO.:		RECEIVED INTACT	Y
SHIPPED VIA:		RECEIVED COLD	Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☐ 2 WEEK

Comments:

SAMPLED & RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Time:	Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:	Printed Name: Date:
Company: Phone:	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY:(LAB) 3.
Signature: Time:	Signature: Time:	Signature: Time: 1185
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 12/1/92
Company:	Company:	Analytical Technologies, Inc.

AnalyticalTechnologies,Inc. Albuquerque, NM

Chain of Custody

DATE 12/2/92 PAGE 1 OF 1

NETWORK PROJECT MANAGER: BETH PROFFITT

COMPANY: **Analytical Technologies, Inc.**

ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87106

CLIENT PROJECT MANAGER: SP

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TOX	TOC	ORGANIC LEAD	SULFIDE	SURFACTANTS (MBAS)		632/632 MOD	619/619 MOD	610/8310			8240 (TCLP 1311) ZHE	8270	Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)	Volatile Organics GC/MS (624/8240)	Hg, As, Ba, Be, Cd, Cr, Hg, Ni, Pb, Sb, Se	NACE	ASBESTOS		BOD	TOTAL COLIFORM	FECAL COLIFORM		GROSS ALPHA/BETA	RADIUM 226/228		AIR - O2, CO2, METHANE	AIR/Diesel/Gasoline/BTXE/ (MOD 8015/8020)	NUMBER OF CONTAINERS
212304-03 SP	12/1/92	1352	Soil	3													X			X														2
-04	↓	1357	↓	4													X																	1
-06		1413		6																X														1
-07	↓	1426	↓	7																X														1

PROJECT INFORMATION	
PROJECT NUMBER: 212304	
PROJECT NAME: NMED	
QC LEVEL: (STD.) IV	
QC REQUIRED: MS MSD BLANK	
TAT: (STANDARD) RUSH!	

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	5
CHAIN OF CUSTODY SEALS	NA
INTACT?	Y
RECEIVED GOOD COND./COLD	Y
LAB NUMBER 212304	

DUE DATE: 12/15/92
RUSH SURCHARGE: —
CLIENT DISCOUNT: 10 %

W.O. BP#120

SAMPLES SENT TO:	
SAN DIEGO	
FT. COLLINS	
RENTON	
PENSACOLA	
PHOENIX	X
BARRINGER	
FIBERQUANT	

RELINQUISHED BY: 1.
Signature: Terri Dotto Time: 1730
Printed Name: Terri Dotto Date 12/2/92
Analytical Technologies, Inc. Albuquerque
Company:

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date
Company:

RECEIVED BY: (LAB) 1.
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY: (LAB) 2.
Signature: Marcia Smith Time: 1002
Printed Name: MARCIA SMITH Date: 12/3/92
Company:

...s, Inc. Albuquerque, NM

Chain of Custody 92-9973

DATE 12/2/92 PAGE 1 OF 1

...MANAGER: BETH PROFFITT

...MPANY: **Analytical Technologies, Inc.**

ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87106

CLIENT PROJECT MANAGER: GH

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	TOX	TOC	ORGANIC LEAD	SULFIDE	SURFACTANTS (MBAS)		632/632 MOD	619/619 MOD	610/8310	8260 - See Attached		8240 (TCLP 1311) ZHE		Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)	Volatile Organics GC/MS (624/8240)		NACE	ASBESTOS		BOD	TOTAL COLIFORM	FECAL COLIFORM		GROSS ALPHA/BETA	RADIUM 226/228		AIR - O2, CO2, METHANE	AIR/Diesel/Gasoline/BTXE/ (MOD 8015/8020)	NUMBER OF CONTAINERS
212304-01	12/1/92	1320	Soil											X																				1
-02	12/1/92	1322												X																				1
-03	12/1/92	1352												X																				1
-04	12/1/92	1357												X																				1
-05	12/1/92	1348												X																				1
-06	12/1/92	1413												X																				1
-07	12/1/92	1426												X																				1
-08	12/1/92	1426												X																				1

PROJECT INFORMATION	
PROJECT NUMBER:	212304
PROJECT NAME:	NMED
QC LEVEL:	STD. IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS	
INTACT?	
RECEIVED GOOD COND./COLD	
LAB NUMBER	

SAMPLES SENT TO:	
SAN DIEGO	
FT. COLLINS	
RENTON	
PENSACOLA	X
PHOENIX	
BARRINGER	
FIBERQUANT	

RELINQUISHED BY: 1.
Signature: Elizabeth Proffitt Time: 530
Printed Name: E PROFFITT Date 12/2/92
Analytical Technologies, Inc. Albuquerque

RELINQUISHED BY: 2.
Signature: Time:
Printed Name: Date
Company:

RECEIVED BY: (LAB) 1.
Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY: (LAB) 2.
Signature: Greg Foote Time: 0840
Printed Name: GREG FOOTE Date: 12/03/92
Company: ATI PENSACOLA

DUE DATE: Lab 12/15 HC 12/18
RUSH SURCHARGE: 0
CLIENT DISCOUNT: 10 %

W.O.# BP118

HOLDING TIME UP 12/15/92

Analytical **Technologies**, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87106

ALBUQUERQUE, NM PM 14 DEC 1992 87106

ALBUQUERQUE DEC 14 '92 NM

WE MEET THE CHALLENGE

TO: NMED / Haz and Rad. Bureau
P.O. Box 26110
Santa Fe, NM 87502-6110

ATTENTION: Teri Davis

RECEIVED DEC 17 1992

FIELD SCREENING RESULTS
FOR ALPHA, BETA, AND GAMMA ACTIVITY

VOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-1	89.17609	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-1	89.17609	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-1	89.17609	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-1	89.17609	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-1	89.17609	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-1	89.17609	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-1	89.17609	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-1	89.17609	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-1	89.17609	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-1	89.17609	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-1	89.17609	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-1	89.17609	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-1	89.17609	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-1	89.17609	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-1	89.17609	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-1	89.17609	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-1	89.17609	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-1	89.17609	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-1	89.17609	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-1	89.17609	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-1	89.17609	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-1	89.17609	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-1	89.17609	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-1	89.17609	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-1	89.17609	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-1	89.17609	106467	< 500.	UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-1	89.17609	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-1	89.17609	75343	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-1	89.17609	75354	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-1	89.17609	156605	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-1	89.17609	156592	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-1	89.17609	142289	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-1	89.17609	594207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-1	89.17609	78875	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-1	89.17609	10061015	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-1	89.17609	10061026	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-1	89.17609	563586	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-1	89.17609	100414	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-1	89.17609	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-1	89.17609	87683	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-1	89.17609	591786	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-1	89.17609	98828	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-1	89.17609	99876	< 500.	UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-1	89.17609	108101	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-1	89.17609	75092	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-1	89.17609	91203	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-1	89.17609	103651	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-1	89.17609	100425	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-1	89.17609	79345	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-1	89.17609	630206	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-1	89.17609	127184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-1	89.17609	108883	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-1	89.17609	120821	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-1	89.17609	87616	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-1	89.17609	71556	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-1	89.17609	79005	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-1	89.17609	79016	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-1	89.17609	75694	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-1	89.17609	96184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-1	89.17609	95636	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-1	89.17609	108678	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-1	89.17609	108054	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-1	89.17609	75014	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-1	89.17609	95476	< 500.	UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-1	89.17609	1330207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-2	89.17610	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-2	89.17610	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-2	89.17610	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-2	89.17610	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-2	89.17610	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-2	89.17610	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-2	89.17610	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-2	89.17610	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-2	89.17610	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-2	89.17610	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-2	89.17610	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-2	89.17610	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-2	89.17610	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-2	89.17610	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-2	89.17610	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-2	89.17610	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-2	89.17610	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-2	89.17610	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-2	89.17610	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-2	89.17610	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-2	89.17610	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-2	89.17610	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-2	89.17610	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-2	89.17610	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-2	89.17610	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-2	89.17610	106467	< 500.	UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-2	89.17610	75343	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-2	89.17610	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-2	89.17610	156605	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-2	89.17610	75354	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-2	89.17610	156592	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-2	89.17610	594207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-2	89.17610	142289	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-2	89.17610	78875	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-2	89.17610	10061026	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-2	89.17610	563586	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-2	89.17610	10061015	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-2	89.17610	100414	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-2	89.17610	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-2	89.17610	87683	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-2	89.17610	591786	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-2	89.17610	98828	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-2	89.17610	99876	< 500.	UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-2	89.17610	108101	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-2	89.17610	75092	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-2	89.17610	91203	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-2	89.17610	103651	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-2	89.17610	100425	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-2	89.17610	79345	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-2	89.17610	630206	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-2	89.17610	127184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-2	89.17610	108883	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-2	89.17610	120821	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-2	89.17610	87616	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-2	89.17610	71556	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-2	89.17610	79005	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-2	89.17610	79016	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-2	89.17610	75694	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-2	89.17610	96184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-2	89.17610	108678	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-2	89.17610	95636	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-2	89.17610	108054	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-2	89.17610	75014	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-2	89.17610	95476	< 500.	UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-2	89.17610	1330207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-3	89.17611	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-3	89.17611	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-3	89.17611	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-3	89.17611	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-3	89.17611	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-3	89.17611	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-3	89.17611	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-3	89.17611	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-3	89.17611	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-3	89.17611	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-3	89.17611	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-3	89.17611	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-3	89.17611	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-3	89.17611	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-3	89.17611	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-3	89.17611	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-3	89.17611	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-3	89.17611	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-3	89.17611	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-3	89.17611	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-3	89.17611	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-3	89.17611	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-3	89.17611	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-3	89.17611	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-3	89.17611	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-3	89.17611	106467	< 500.	UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-3	89.17611	75343	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-3	89.17611	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-3	89.17611	156605	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-3	89.17611	75354	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-3	89.17611	156592	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-3	89.17611	142289	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-3	89.17611	594207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-3	89.17611	78875	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-3	89.17611	563586	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-3	89.17611	10061026	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-3	89.17611	10061015	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-3	89.17611	100414	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-3	89.17611	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-3	89.17611	87683	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-3	89.17611	591786	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-3	89.17611	98828	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-3	89.17611	99876	< 500.	UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-3	89.17611	108101	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-3	89.17611	75092	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-3	89.17611	91203	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-3	89.17611	103651	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-3	89.17611	100425	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-3	89.17611	630206	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-3	89.17611	79345	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-3	89.17611	127184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-3	89.17611	108883	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-3	89.17611	120821	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-3	89.17611	87616	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-3	89.17611	79005	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-3	89.17611	71556	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-3	89.17611	79016	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-3	89.17611	75694	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-3	89.17611	96184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-3	89.17611	108678	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-3	89.17611	95636	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-3	89.17611	108054	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-3	89.17611	75014	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-3	89.17611	95476	< 500.	UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-3	89.17611	1330207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-4	89.17612	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-4	89.17612	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-4	89.17612	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-4	89.17612	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-4	89.17612	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-4	89.17612	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-4	89.17612	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-4	89.17612	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-4	89.17612	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-4	89.17612	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-4	89.17612	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-4	89.17612	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-4	89.17612	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-4	89.17612	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-4	89.17612	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-4	89.17612	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-4	89.17612	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-4	89.17612	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-4	89.17612	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-4	89.17612	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-4	89.17612	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-4	89.17612	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-4	89.17612	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-4	89.17612	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-4	89.17612	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-4	89.17612	106467	< 500.	UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-4	89.17612	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-4	89.17612	75343	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-4	89.17612	75354	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-4	89.17612	156605	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-4	89.17612	156592	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-4	89.17612	142289	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-4	89.17612	594207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-4	89.17612	78875	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-4	89.17612	563586	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-4	89.17612	10061015	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-4	89.17612	10061026	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-4	89.17612	100414	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-4	89.17612	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-4	89.17612	87683	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-4	89.17612	591786	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-4	89.17612	98828	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-4	89.17612	99876	< 500.	UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-4	89.17612	108101	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-4	89.17612	75092	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-4	89.17612	91203	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-4	89.17612	103651	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-4	89.17612	100425	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-4	89.17612	79345	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-4	89.17612	630206	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-4	89.17612	127184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-4	89.17612	108883	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-4	89.17612	120821	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-4	89.17612	87616	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-4	89.17612	79005	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-4	89.17612	71556	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-4	89.17612	79016	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-4	89.17612	75694	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-4	89.17612	96184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-4	89.17612	95636	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-4	89.17612	108678	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-4	89.17612	108054	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-4	89.17612	75014	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-4	89.17612	95476	< 500.	UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-4	89.17612	1330207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-5	89.17613	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-5	89.17613	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-5	89.17613	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-5	89.17613	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-5	89.17613	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-5	89.17613	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-5	89.17613	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-5	89.17613	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-5	89.17613	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-5	89.17613	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-5	89.17613	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-5	89.17613	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-5	89.17613	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-5	89.17613	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-5	89.17613	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-5	89.17613	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-5	89.17613	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-5	89.17613	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-5	89.17613	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-5	89.17613	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-5	89.17613	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-5	89.17613	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-5	89.17613	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-5	89.17613	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-5	89.17613	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-5	89.17613	106467	< 500.	UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-5	89.17613	75343	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-5	89.17613	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-5	89.17613	156605	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-5	89.17613	75354	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-5	89.17613	156592	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-5	89.17613	594207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-5	89.17613	78875	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-5	89.17613	142289	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-5	89.17613	10061015	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-5	89.17613	10061026	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-5	89.17613	563586	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-5	89.17613	100414	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-5	89.17613	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-5	89.17613	87683	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-5	89.17613	591786	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-5	89.17613	98828	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-5	89.17613	99876	< 500.	UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-5	89.17613	108101	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-5	89.17613	75092	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-5	89.17613	91203	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-5	89.17613	103651	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-5	89.17613	100425	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-5	89.17613	79345	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-5	89.17613	630206	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-5	89.17613	127184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-5	89.17613	108883	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-5	89.17613	87616	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-5	89.17613	120821	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-5	89.17613	79005	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-5	89.17613	71556	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-5	89.17613	79016	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-5	89.17613	75694	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-5	89.17613	96184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-5	89.17613	95636	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-5	89.17613	108678	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-5	89.17613	108054	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-5	89.17613	75014	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-5	89.17613	95476	< 500.	UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-5	89.17613	1330207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-6	89.17614	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-6	89.17614	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-6	89.17614	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-6	89.17614	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-6	89.17614	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-6	89.17614	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-6	89.17614	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-6	89.17614	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-6	89.17614	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-6	89.17614	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-6	89.17614	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-6	89.17614	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-6	89.17614	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-6	89.17614	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-6	89.17614	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-6	89.17614	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-6	89.17614	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-6	89.17614	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-6	89.17614	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-6	89.17614	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-6	89.17614	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-6	89.17614	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-6	89.17614	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-6	89.17614	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-6	89.17614	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-6	89.17614	106467	< 500.	UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-6	89.17614	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-6	89.17614	75343	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-6	89.17614	156605	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-6	89.17614	75354	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-6	89.17614	156592	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-6	89.17614	142289	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-6	89.17614	78875	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-6	89.17614	594207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-6	89.17614	10061015	< 500.	UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-6	89.17614	563586	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-6	89.17614	10061026	< 500.	UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-6	89.17614	100414	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-6	89.17614	107062	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-6	89.17614	87683	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-6	89.17614	591786	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-6	89.17614	98828	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-6	89.17614	99876	< 500.	UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-6	89.17614	108101	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-6	89.17614	75092	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-6	89.17614	91203	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-6	89.17614	103651	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-6	89.17614	100425	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-6	89.17614	630206	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-6	89.17614	79345	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-6	89.17614	127184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-6	89.17614	108883	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-6	89.17614	87616	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-6	89.17614	120821	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-6	89.17614	79005	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-6	89.17614	71556	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-6	89.17614	79016	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-6	89.17614	75694	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-6	89.17614	96184	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-6	89.17614	108678	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-6	89.17614	95636	< 500.	UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-6	89.17614	108054	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-6	89.17614	75014	< 1000.	UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-6	89.17614	95476	< 500.	UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-6	89.17614	1330207	< 500.	UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-7	89.17615	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-7	89.17615	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-7	89.17615	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-7	89.17615	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-7	89.17615	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-7	89.17615	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-7	89.17615	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-7	89.17615	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-7	89.17615	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-7	89.17615	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-7	89.17615	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-7	89.17615	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-7	89.17615	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-7	89.17615	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-7	89.17615	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-7	89.17615	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-7	89.17615	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-7	89.17615	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-7	89.17615	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-7	89.17615	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-7	89.17615	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-7	89.17615	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-7	89.17615	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-7	89.17615	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-7	89.17615	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-7	89.17615	106467	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-7	89.17615	75343	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-7	89.17615	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-7	89.17615	75354	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-7	89.17615	156605	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-7	89.17615	156592	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-7	89.17615	594207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-7	89.17615	78875	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-7	89.17615	142289	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-7	89.17615	563586	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-7	89.17615	10061026	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-7	89.17615	10061015	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-7	89.17615	100414	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-7	89.17615	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-7	89.17615	87683	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-7	89.17615	591786	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-7	89.17615	98828	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-7	89.17615	99876	< 500.		UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-7	89.17615	108101	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-7	89.17615	75092	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-7	89.17615	91203	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-7	89.17615	103651	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-7	89.17615	100425	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-7	89.17615	79345	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-7	89.17615	630206	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-7	89.17615	127184	793.	237.9	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-7	89.17615	108883	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-7	89.17615	120821	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-7	89.17615	87616	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-7	89.17615	79005	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-7	89.17615	71556	1480.	444.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-7	89.17615	79016	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-7	89.17615	75694	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-7	89.17615	96184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-7	89.17615	95636	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-7	89.17615	108678	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-7	89.17615	108054	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-7	89.17615	75014	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-7	89.17615	95476	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-7	89.17615	1330207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-8	89.17616	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-8	89.17616	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-8	89.17616	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-8	89.17616	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-8	89.17616	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-8	89.17616	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-8	89.17616	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-8	89.17616	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-8	89.17616	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-8	89.17616	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-8	89.17616	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-8	89.17616	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-8	89.17616	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-8	89.17616	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-8	89.17616	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-8	89.17616	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-8	89.17616	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-8	89.17616	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-8	89.17616	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-8	89.17616	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-8	89.17616	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-8	89.17616	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-8	89.17616	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-8	89.17616	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-8	89.17616	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-8	89.17616	106467	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-8	89.17616	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-8	89.17616	75343	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-8	89.17616	75354	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-8	89.17616	156605	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-8	89.17616	156592	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-8	89.17616	142289	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-8	89.17616	594207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-8	89.17616	78875	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-8	89.17616	10061015	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-8	89.17616	563586	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-8	89.17616	10061026	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-8	89.17616	100414	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-8	89.17616	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-8	89.17616	87683	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-8	89.17616	591786	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-8	89.17616	98828	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-8	89.17616	99876	< 500.		UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-8	89.17616	108101	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-8	89.17616	75092	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-8	89.17616	91203	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-8	89.17616	103651	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-8	89.17616	100425	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-8	89.17616	630206	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-8	89.17616	79345	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-8	89.17616	127184	2100.	630.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-8	89.17616	108883	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-8	89.17616	120821	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-8	89.17616	87616	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-8	89.17616	79005	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-8	89.17616	71556	1600.	480.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-8	89.17616	79016	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-8	89.17616	75694	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-8	89.17616	96184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-8	89.17616	95636	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-8	89.17616	108678	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-8	89.17616	108054	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-8	89.17616	75014	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-8	89.17616	95476	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-8	89.17616	1330207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-9	89.17617	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-9	89.17617	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-9	89.17617	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-9	89.17617	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-9	89.17617	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-9	89.17617	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-9	89.17617	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-9	89.17617	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-9	89.17617	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-9	89.17617	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-9	89.17617	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-9	89.17617	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-9	89.17617	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-9	89.17617	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-9	89.17617	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-9	89.17617	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-9	89.17617	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-9	89.17617	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-9	89.17617	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-9	89.17617	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-9	89.17617	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-9	89.17617	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-9	89.17617	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-9	89.17617	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-9	89.17617	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-9	89.17617	106467	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-9	89.17617	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-9	89.17617	75343	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-9	89.17617	75354	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-9	89.17617	156605	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-9	89.17617	156592	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-9	89.17617	594207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-9	89.17617	78875	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-9	89.17617	142289	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-9	89.17617	10061026	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-9	89.17617	10061015	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-9	89.17617	563586	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-9	89.17617	100414	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-9	89.17617	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-9	89.17617	87683	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-9	89.17617	591786	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-9	89.17617	98828	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-9	89.17617	99876	< 500.		UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-9	89.17617	108101	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-9	89.17617	75092	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-9	89.17617	91203	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-9	89.17617	103651	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-9	89.17617	100425	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-9	89.17617	630206	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-9	89.17617	79345	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-9	89.17617	127184	1300.	390.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-9	89.17617	108883	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-9	89.17617	87616	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-9	89.17617	120821	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-9	89.17617	79005	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-9	89.17617	71556	1100.	330.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-9	89.17617	79016	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-9	89.17617	75694	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-9	89.17617	96184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-9	89.17617	108678	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-9	89.17617	95636	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-9	89.17617	108054	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-9	89.17617	75014	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-9	89.17617	95476	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-9	89.17617	1330207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-10	89.17618	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-10	89.17618	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-10	89.17618	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-10	89.17618	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-10	89.17618	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-10	89.17618	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-10	89.17618	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-10	89.17618	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-10	89.17618	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-10	89.17618	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-10	89.17618	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-10	89.17618	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-10	89.17618	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-10	89.17618	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-10	89.17618	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-10	89.17618	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-10	89.17618	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-10	89.17618	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-10	89.17618	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-10	89.17618	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-10	89.17618	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-10	89.17618	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-10	89.17618	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-10	89.17618	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-10	89.17618	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-10	89.17618	106467	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-10	89.17618	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-10	89.17618	75343	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-10	89.17618	75354	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-10	89.17618	156605	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-10	89.17618	156592	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-10	89.17618	594207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-10	89.17618	78875	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-10	89.17618	142289	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-10	89.17618	563586	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-10	89.17618	10061015	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-10	89.17618	10061026	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-10	89.17618	100414	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-10	89.17618	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-10	89.17618	87683	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-10	89.17618	591786	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-10	89.17618	98828	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-10	89.17618	99876	< 500.		UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-10	89.17618	108101	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-10	89.17618	75092	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-10	89.17618	91203	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-10	89.17618	103651	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-10	89.17618	100425	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-10	89.17618	630206	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-10	89.17618	79345	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-10	89.17618	127184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-10	89.17618	108883	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-10	89.17618	120821	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-10	89.17618	87616	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-10	89.17618	71556	530.	159.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-10	89.17618	79005	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-10	89.17618	79016	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-10	89.17618	75694	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-10	89.17618	96184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-10	89.17618	108678	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-10	89.17618	95636	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-10	89.17618	108054	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-10	89.17618	75014	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-10	89.17618	95476	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-10	89.17618	1330207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-11	89.17619	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-11	89.17619	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-11	89.17619	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-11	89.17619	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-11	89.17619	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-11	89.17619	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-11	89.17619	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-11	89.17619	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-11	89.17619	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-11	89.17619	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-11	89.17619	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-11	89.17619	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-11	89.17619	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-11	89.17619	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-11	89.17619	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-11	89.17619	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-11	89.17619	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-11	89.17619	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-11	89.17619	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-11	89.17619	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-11	89.17619	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-11	89.17619	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-11	89.17619	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-11	89.17619	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-11	89.17619	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-11	89.17619	106467	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-11	89.17619	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-11	89.17619	75343	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-11	89.17619	156605	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-11	89.17619	75354	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-11	89.17619	156592	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-11	89.17619	594207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-11	89.17619	78875	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-11	89.17619	142289	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-11	89.17619	10061015	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-11	89.17619	10061026	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-11	89.17619	563586	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-11	89.17619	100414	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-11	89.17619	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-11	89.17619	87683	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-11	89.17619	591786	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-11	89.17619	98828	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-11	89.17619	99876	< 500.		UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-11	89.17619	108101	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-11	89.17619	75092	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-11	89.17619	91203	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-11	89.17619	103651	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-11	89.17619	100425	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-11	89.17619	630206	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-11	89.17619	79345	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-11	89.17619	127184	540.	162.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-11	89.17619	108883	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-11	89.17619	87616	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-11	89.17619	120821	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-11	89.17619	79005	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-11	89.17619	71556	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-11	89.17619	79016	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-11	89.17619	75694	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-11	89.17619	96184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-11	89.17619	95636	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-11	89.17619	108678	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-11	89.17619	108054	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-11	89.17619	75014	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-11	89.17619	95476	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-11	89.17619	1330207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5117

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-12	89.17620	67641	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Acetone
125FS-12	89.17620	71432	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Benzene
125FS-12	89.17620	108861	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromobenzene
125FS-12	89.17620	74975	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromochloromethane
125FS-12	89.17620	75274	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromodichloromethane
125FS-12	89.17620	75252	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Bromoform
125FS-12	89.17620	74839	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Bromomethane
125FS-12	89.17620	78933	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Butanone
125FS-12	89.17620	104518	< 500.		UG/KG	12/14/89	MEOH EXTRACT	n-Butylbenzene
125FS-12	89.17620	135988	< 500.		UG/KG	12/14/89	MEOH EXTRACT	sec-Butylbenzene
125FS-12	89.17620	98066	< 500.		UG/KG	12/14/89	MEOH EXTRACT	tert-Butylbenzene
125FS-12	89.17620	75150	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon disulfide
125FS-12	89.17620	56235	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Carbon tetrachloride
125FS-12	89.17620	108907	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorobenzene
125FS-12	89.17620	124481	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chlorodibromomethane
125FS-12	89.17620	75003	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloroethane
125FS-12	89.17620	67663	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Chloroform
125FS-12	89.17620	74873	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Chloromethane
125FS-12	89.17620	106434	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Chlorotoluene
125FS-12	89.17620	95498	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Chlorotoluene
125FS-12	89.17620	96128	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromo-3-chloropropane
125FS-12	89.17620	106934	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dibromoethane
125FS-12	89.17620	74953	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Dibromomethane
125FS-12	89.17620	95501	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Dichlorobenzene (1,2)
125FS-12	89.17620	541731	< 500.		UG/KG	12/14/89	MEOH EXTRACT	m-Dichlorobenzene (1,3)

125FS-12	89.17620	106467	< 500.		UG/KG	12/14/89	MEOH EXTRACT	p-Dichlorobenzene (1,4)
125FS-12	89.17620	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloroethane
125FS-12	89.17620	75343	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethane
125FS-12	89.17620	156605	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,2-Dichloroethene
125FS-12	89.17620	75354	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloroethene
125FS-12	89.17620	156592	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,2-Dichloroethylene
125FS-12	89.17620	594207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	2,2-Dichloropropane
125FS-12	89.17620	78875	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2-Dichloropropane
125FS-12	89.17620	142289	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3-Dichloropropane
125FS-12	89.17620	563586	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1-Dichloropropene
125FS-12	89.17620	10061015	< 500.		UG/KG	12/14/89	MEOH EXTRACT	cis-1,3-Dichloropropene
125FS-12	89.17620	10061026	< 500.		UG/KG	12/14/89	MEOH EXTRACT	trans-1,3-Dichloropropene
125FS-12	89.17620	100414	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylbenzene
125FS-12	89.17620	107062	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Ethylene chloride
125FS-12	89.17620	87683	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Hexachlorobutadiene
125FS-12	89.17620	591786	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	2-Hexanone
125FS-12	89.17620	98828	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Isopropylbenzene
125FS-12	89.17620	99876	< 500.		UG/KG	12/14/89	MEOH EXTRACT	4-Isopropyltoluene
125FS-12	89.17620	108101	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	4-Methyl-2-pentanone
125FS-12	89.17620	75092	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Methylene chloride
125FS-12	89.17620	91203	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Naphthalene
125FS-12	89.17620	103651	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Propylbenzene
125FS-12	89.17620	100425	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Styrene
125FS-12	89.17620	79345	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2,2-Tetrachloroethane
125FS-12	89.17620	630206	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,1,2-Tetrachloroethane
125FS-12	89.17620	127184	850.	255.	UG/KG	12/14/89	MEOH EXTRACT	Tetrachloroethylene
125FS-12	89.17620	108883	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Toluene
125FS-12	89.17620	87616	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichlorobenzene
125FS-12	89.17620	120821	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trichlorobenzene
125FS-12	89.17620	79005	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,1,2-Trichloroethane
125FS-12	89.17620	71556	560.	168.	UG/KG	12/14/89	MEOH EXTRACT	1,1,1-Trichloroethane
125FS-12	89.17620	79016	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichloroethene
125FS-12	89.17620	75694	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Trichlorofluoromethane
125FS-12	89.17620	96184	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,3-Trichloropropane
125FS-12	89.17620	95636	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,2,4-Trimethylbenzene
125FS-12	89.17620	108678	< 500.		UG/KG	12/14/89	MEOH EXTRACT	1,3,5-Trimethylbenzene
125FS-12	89.17620	108054	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl acetate
125FS-12	89.17620	75014	< 1000.		UG/KG	12/14/89	MEOH EXTRACT	Vinyl chloride
125FS-12	89.17620	95476	< 500.		UG/KG	12/14/89	MEOH EXTRACT	o-Xylene
125FS-12	89.17620	1330207	< 500.		UG/KG	12/14/89	MEOH EXTRACT	Mixed-Xylenes (m ± p)

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REPORT NUMBER: 5117 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 14-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

The following analyst QA's have no CV data for comparison

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.17621	67641	5600.	1680.	UG/KG	12/14/89	OUT OF CONTROL	Acetone
89.17621	71432	< 500.		UG/KG	12/14/89	UNDER CONTROL	Benzene

added 0.0 mg/kg

89.17621	108861	< 500.		UG/KG	12/14/89	UNDER CONTROL	Bromobenzene	
89.17621	74975	< 500.		UG/KG	12/14/89	UNDER CONTROL	Bromochloromethane	
89.17621	75274	< 500.		UG/KG	12/14/89	UNDER CONTROL	Bromodichloromethane	
89.17621	75252	< 500.		UG/KG	12/14/89	UNDER CONTROL	Bromoform	
89.17621	74839	< 1000.		UG/KG	12/14/89	UNDER CONTROL	Bromomethane	
89.17621	78933	< 1000.		UG/KG	12/14/89	UNDER CONTROL	2-Butanone	
89.17621	98066	< 500.		UG/KG	12/14/89	UNDER CONTROL	tert-Butylbenzene	
89.17621	135988	< 500.		UG/KG	12/14/89	UNDER CONTROL	sec-Butylbenzene	
89.17621	104518	< 500.		UG/KG	12/14/89	UNDER CONTROL	n-Butylbenzene	
89.17621	75150	< 500.		UG/KG	12/14/89	UNDER CONTROL	Carbon disulfide	
89.17621	56235	< 500.		UG/KG	12/14/89	UNDER CONTROL	Carbon tetrachloride	
89.17621	108907	< 500.		UG/KG	12/14/89	UNDER CONTROL	Chlorobenzene	
89.17621	124481	< 500.		UG/KG	12/14/89	UNDER CONTROL	Chlorodibromomethane	
89.17621	75003	< 1000.		UG/KG	12/14/89	UNDER CONTROL	Chloroethane	
89.17621	67663	< 500.		UG/KG	12/14/89	UNDER CONTROL	Chloroform	
89.17621	74873	< 1000.		UG/KG	12/14/89	UNDER CONTROL	Chloromethane	
89.17621	106434	< 500.		UG/KG	12/14/89	UNDER CONTROL	p-Chlorotoluene	
89.17621	95498	< 500.		UG/KG	12/14/89	UNDER CONTROL	o-Chlorotoluene	
89.17621	96128	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane	
89.17621	106934	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2-Dibromoethane	
89.17621	74953	< 500.		UG/KG	12/14/89	UNDER CONTROL	Dibromomethane	
89.17621	95501	< 500.		UG/KG	12/14/89	UNDER CONTROL	o-Dichlorobenzene (1,2)	
89.17621	541731	< 500.		UG/KG	12/14/89	UNDER CONTROL	m-Dichlorobenzene (1,3)	
89.17621	106467	< 500.		UG/KG	12/14/89	UNDER CONTROL	p-Dichlorobenzene (1,4)	
89.17621	75343	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,1-Dichloroethane	
89.17621	107062	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2-Dichloroethane	
89.17621	75354	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,1-Dichloroethene	
89.17621	156605	< 500.		UG/KG	12/14/89	UNDER CONTROL	trans-1,2-Dichloroethene	
89.17621	156592	< 500.		UG/KG	12/14/89	UNDER CONTROL	cis-1,2-Dichloroethylene	
89.17621	142289	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,3-Dichloropropane	
89.17621	78875	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2-Dichloropropane	
89.17621	594207	< 500.		UG/KG	12/14/89	UNDER CONTROL	2,2-Dichloropropane	
89.17621	10061015	< 500.		UG/KG	12/14/89	UNDER CONTROL	cis-1,3-Dichloropropene	
89.17621	10061026	< 500.		UG/KG	12/14/89	UNDER CONTROL	trans-1,3-Dichloropropene	
89.17621	563586	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,1-Dichloropropene	
89.17621	100414	< 500.		UG/KG	12/14/89	UNDER CONTROL	Ethylbenzene	
89.17621	107062	< 500.		UG/KG	12/14/89	UNDER CONTROL	Ethylene chloride	
89.17621	87683	1700.	510.	UG/KG	12/14/89	OUT OF CONTROL	Hexachlorobutadiene	180.0
89.17621	591786	6500.	1950.	UG/KG	12/14/89	OUT OF CONTROL	2-Hexanone	0.0
89.17621	98828	< 500.		UG/KG	12/14/89	UNDER CONTROL	Isopropylbenzene	
89.17621	99876	< 500.		UG/KG	12/14/89	UNDER CONTROL	4-Isopropyltoluene	
89.17621	108101	< 1000.		UG/KG	12/14/89	UNDER CONTROL	4-Methyl-2-pentanone	
89.17621	75092	< 500.		UG/KG	12/14/89	UNDER CONTROL	Methylene chloride	
89.17621	91203	< 500.		UG/KG	12/14/89	UNDER CONTROL	Naphthalene	
89.17621	103651	< 500.		UG/KG	12/14/89	UNDER CONTROL	Propylbenzene	

89.17621	100425	< 500.		UG/KG	12/14/89	UNDER CONTROL	Styrene	
89.17621	630206	1100.	330.	UG/KG	12/14/89	OUT OF CONTROL	1,1,1,2-Tetrachloroethane	170.0
89.17621	79345	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane	
89.17621	127184	< 500.		UG/KG	12/14/89	UNDER CONTROL	Tetrachloroethylene	
89.17621	108883	< 500.		UG/KG	12/14/89	UNDER CONTROL	Toluene	
89.17621	120821	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2,4-Trichlorobenzene	
89.17621	87616	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2,3-Trichlorobenzene	
89.17621	71556	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,1,1-Trichloroethane	
89.17621	79005	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,1,2-Trichloroethane	
89.17621	79016	< 500.		UG/KG	12/14/89	UNDER CONTROL	Trichloroethene	
89.17621	75694	< 500.		UG/KG	12/14/89	UNDER CONTROL	Trichlorofluoromethane	
89.17621	96184	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,2,3-Trichloropropane	
89.17621	95636	560.	168.	UG/KG	12/14/89	OUT OF CONTROL	1,2,4-Trimethylbenzene	160.0
89.17621	108678	< 500.		UG/KG	12/14/89	UNDER CONTROL	1,3,5-Trimethylbenzene	
89.17621	108054	< 500.		UG/KG	12/14/89	UNDER CONTROL	Vinyl acetate	
89.17621	75014	< 1000.		UG/KG	12/14/89	UNDER CONTROL	Vinyl chloride	
89.17621	95476	< 500.		UG/KG	12/14/89	UNDER CONTROL	o-Xylene	
89.17621	1330207	< 500.		UG/KG	12/14/89	NO DATA AVAIL. under Control	Mixed-Xylenes (m ± p)	180.0

SURROGATE RESULTS FOR EPA VOLATILES

1,2-Dichloroethane d4 (CAS # = 17060070); EPA Range Limits: Water = 76-114 %, Soil = 70-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.17609	102.	%	12/14/89	MEOH EXTRACT
89.17610	119.	%	12/14/89	MEOH EXTRACT
89.17611	94.	%	12/14/89	MEOH EXTRACT
89.17612	103.	%	12/14/89	MEOH EXTRACT
89.17613	106.	%	12/14/89	MEOH EXTRACT
89.17614	103.	%	12/14/89	MEOH EXTRACT
89.17615	109.	%	12/14/89	MEOH EXTRACT
89.17616	97.8	%	12/14/89	MEOH EXTRACT
89.17617	91.4	%	12/14/89	MEOH EXTRACT
89.17618	80.2	%	12/14/89	MEOH EXTRACT
89.17619	91.1	%	12/14/89	MEOH EXTRACT
89.17620	99.8	%	12/14/89	MEOH EXTRACT
89.17621	86.3	%	12/14/89	MEOH EXTRACT

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT

89.17609	101.	%	12/14/89	MEOH EXTRACT
89.17610	87.2	%	12/14/89	MEOH EXTRACT
89.17611	99.3	%	12/14/89	MEOH EXTRACT
89.17612	98.9	%	12/14/89	MEOH EXTRACT
89.17613	99.8	%	12/14/89	MEOH EXTRACT
89.17614	96.9	%	12/14/89	MEOH EXTRACT
89.17615	98.1	%	12/14/89	MEOH EXTRACT
89.17616	90.6	%	12/14/89	MEOH EXTRACT
89.17617	92.3	%	12/14/89	MEOH EXTRACT
89.17618	93.2	%	12/14/89	MEOH EXTRACT
89.17619	93.5	%	12/14/89	MEOH EXTRACT
89.17620	83.6	%	12/14/89	MEOH EXTRACT
89.17621	101.	%	12/14/89	MEOH EXTRACT

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.17609	102.	%	12/14/89	MEOH EXTRACT
89.17610	83.	%	12/14/89	MEOH EXTRACT
89.17611	90.4	%	12/14/89	MEOH EXTRACT
89.17612	98.	%	12/14/89	MEOH EXTRACT
89.17613	94.4	%	12/14/89	MEOH EXTRACT
89.17614	95.2	%	12/14/89	MEOH EXTRACT
89.17615	99.8	%	12/14/89	MEOH EXTRACT
89.17616	94.4	%	12/14/89	MEOH EXTRACT
89.17617	89.7	%	12/14/89	MEOH EXTRACT
89.17618	81.4	%	12/14/89	MEOH EXTRACT
89.17619	89.4	%	12/14/89	MEOH EXTRACT
89.17620	94.3	%	12/14/89	MEOH EXTRACT
89.17621	93.3	%	12/14/89	MEOH EXTRACT

Analyst	Section Leader	QA Officer
12/21/89	12/21/89	1-2-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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SEMIVOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-1	89.17609	83329	< 330.		UG/KG	3/05/90		Acenaphthene
125FS-1	89.17609	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
125FS-1	89.17609	62533	< 330.		UG/KG	3/05/90		Aniline
125FS-1	89.17609	120127	< 330.		UG/KG	3/05/90		Anthracene
125FS-1	89.17609	103333	< 330.		UG/KG	3/05/90		Azobenzene
125FS-1	89.17609	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
125FS-1	89.17609	92875	< 330.		UG/KG	3/05/90		m-Benzidine
125FS-1	89.17609	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-1	89.17609	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-1	89.17609	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-1	89.17609	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-1	89.17609	65850	< 330.		UG/KG	3/05/90		Benzoic acid
125FS-1	89.17609	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
125FS-1	89.17609	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-1	89.17609	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-1	89.17609	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-1	89.17609	117817	< 330.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-1	89.17609	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-1	89.17609	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-1	89.17609	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-1	89.17609	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
125FS-1	89.17609	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-1	89.17609	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
125FS-1	89.17609	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-1	89.17609	218019	< 330.		UG/KG	3/05/90		Chrysene

125FS-1	89.17609	106445	< 330.	UG/KG	3/05/90	p-Cresol
125FS-1	89.17609	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-1	89.17609	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-1	89.17609	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-1	89.17609	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
125FS-1	89.17609	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-1	89.17609	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-1	89.17609	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-1	89.17609	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-1	89.17609	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-1	89.17609	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
125FS-1	89.17609	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
125FS-1	89.17609	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-1	89.17609	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-1	89.17609	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-1	89.17609	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-1	89.17609	206440	< 330.	UG/KG	3/05/90	Fluoranthene
125FS-1	89.17609	86737	< 330.	UG/KG	3/05/90	Fluorene
125FS-1	89.17609	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
125FS-1	89.17609	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-1	89.17609	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-1	89.17609	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
125FS-1	89.17609	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-1	89.17609	78591	< 330.	UG/KG	3/05/90	Isophorone
125FS-1	89.17609	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-1	89.17609	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-1	89.17609	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
125FS-1	89.17609	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
125FS-1	89.17609	91203	< 330.	UG/KG	3/05/90	Naphthalene
125FS-1	89.17609	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
125FS-1	89.17609	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
125FS-1	89.17609	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
125FS-1	89.17609	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
125FS-1	89.17609	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
125FS-1	89.17609	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
125FS-1	89.17609	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-1	89.17609	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-1	89.17609	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-1	89.17609	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
125FS-1	89.17609	85018	< 330.	UG/KG	3/05/90	Phenanthrene
125FS-1	89.17609	108952	< 330.	UG/KG	3/05/90	Phenol
125FS-1	89.17609	129000	< 330.	UG/KG	3/05/90	Pyrene
125FS-1	89.17609	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-1	89.17609	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol
125FS-1	89.17609	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol

125FS-1	89.17609	105679	< 330.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-2	89.17610	83329	< 1716.		UG/KG	3/05/90		Acenaphthene
125FS-2	89.17610	208968	< 1716.		UG/KG	3/05/90		Acenaphthylene
125FS-2	89.17610	62533	< 1716.		UG/KG	3/05/90		Aniline
125FS-2	89.17610	120127	< 1716.		UG/KG	3/05/90		Anthracene
125FS-2	89.17610	103333	< 1716.		UG/KG	3/05/90		Azobenzene
125FS-2	89.17610	56553	< 1716.		UG/KG	3/05/90		Benz(a)anthracene
125FS-2	89.17610	92875	< 1716.		UG/KG	3/05/90		m-Benzidine
125FS-2	89.17610	191242	< 1716.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-2	89.17610	50328	< 1716.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-2	89.17610	205992	< 1716.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-2	89.17610	207089	< 1716.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-2	89.17610	65850	< 1716.		UG/KG	3/05/90		Benzoic acid
125FS-2	89.17610	100516	< 1716.		UG/KG	3/05/90		Benzyl alcohol
125FS-2	89.17610	111911	< 1716.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-2	89.17610	111444	< 1716.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-2	89.17610	108601	< 1716.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-2	89.17610	117817	< 1716.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-2	89.17610	101553	< 1716.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-2	89.17610	85687	< 1716.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-2	89.17610	59507	< 1716.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-2	89.17610	106478	< 1716.		UG/KG	3/05/90		4-Chloroaniline
125FS-2	89.17610	91587	< 1716.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-2	89.17610	95578	< 1716.		UG/KG	3/05/90		o-Chlorophenol
125FS-2	89.17610	7005723	< 1716.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-2	89.17610	218019	< 1716.		UG/KG	3/05/90		Chrysene

125FS-2	89.17610	106445	< 1716.	UG/KG	3/05/90	p-Cresol
125FS-2	89.17610	84742	< 1716.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-2	89.17610	117840	< 1716.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-2	89.17610	53703	< 1716.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-2	89.17610	132649	< 1716.	UG/KG	3/05/90	Dibenzofuran
125FS-2	89.17610	95501	< 1716.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-2	89.17610	541731	< 1716.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-2	89.17610	106467	< 1716.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-2	89.17610	91941	< 1716.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-2	89.17610	120832	< 1716.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-2	89.17610	84662	< 1716.	UG/KG	3/05/90	Diethyl phthalate
125FS-2	89.17610	131113	< 1716.	UG/KG	3/05/90	Dimethyl phthalate
125FS-2	89.17610	105679	< 1716.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-2	89.17610	51285	< 1716.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-2	89.17610	121142	< 1716.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-2	89.17610	606202	< 1716.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-2	89.17610	206440	< 1716.	UG/KG	3/05/90	Fluoranthene
125FS-2	89.17610	86737	< 1716.	UG/KG	3/05/90	Fluorene
125FS-2	89.17610	118741	< 1716.	UG/KG	3/05/90	Hexachlorobenzene
125FS-2	89.17610	87683	< 1716.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-2	89.17610	77474	< 1716.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-2	89.17610	67721	< 1716.	UG/KG	3/05/90	Hexachloroethane
125FS-2	89.17610	193395	< 1716.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-2	89.17610	78591	< 1716.	UG/KG	3/05/90	Isophorone
125FS-2	89.17610	534521	< 1716.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-2	89.17610	91576	< 1716.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-2	89.17610	106445	< 1716.	UG/KG	3/05/90	4-Methylphenol
125FS-2	89.17610	95487	< 1716.	UG/KG	3/05/90	2-Methylphenol
125FS-2	89.17610	91203	< 1716.	UG/KG	3/05/90	Naphthalene
125FS-2	89.17610	88744	< 1716.	UG/KG	3/05/90	2-Nitroaniline
125FS-2	89.17610	100016	< 1716.	UG/KG	3/05/90	4-Nitroaniline
125FS-2	89.17610	99092	< 1716.	UG/KG	3/05/90	3-Nitroaniline
125FS-2	89.17610	98953	< 1716.	UG/KG	3/05/90	Nitrobenzene
125FS-2	89.17610	100027	< 1716.	UG/KG	3/05/90	4-Nitrophenol
125FS-2	89.17610	88755	< 1716.	UG/KG	3/05/90	2-Nitrophenol
125FS-2	89.17610	621647	< 1716.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-2	89.17610	62759	< 1716.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-2	89.17610	86306	< 1716.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-2	89.17610	87865	< 1716.	UG/KG	3/05/90	Pentachlorophenol
125FS-2	89.17610	85018	< 1716.	UG/KG	3/05/90	Phenanthrene
125FS-2	89.17610	108952	< 1716.	UG/KG	3/05/90	Phenol
125FS-2	89.17610	129000	< 1716.	UG/KG	3/05/90	Pyrene
125FS-2	89.17610	120821	< 1716.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-2	89.17610	95954	< 1716.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-2	89.17610	88062	< 1716.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-2	89.17610	105679	< 1716.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-3	89.17611	83329	< 6600.		UG/KG	3/05/90		Acenaphthene
125FS-3	89.17611	208968	< 6600.		UG/KG	3/05/90		Acenaphthylene
125FS-3	89.17611	62533	< 6600.		UG/KG	3/05/90		Aniline
125FS-3	89.17611	120127	< 6600.		UG/KG	3/05/90		Anthracene
125FS-3	89.17611	103333	< 6600.		UG/KG	3/05/90		Azobenzene
125FS-3	89.17611	56553	< 6600.		UG/KG	3/05/90		Benz(a)anthracene
125FS-3	89.17611	92875	< 6600.		UG/KG	3/05/90		m-Benzidine
125FS-3	89.17611	191242	< 6600.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-3	89.17611	50328	< 6600.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-3	89.17611	205992	< 6600.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-3	89.17611	207089	< 6600.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-3	89.17611	65850	< 6600.		UG/KG	3/05/90		Benzoic acid
125FS-3	89.17611	100516	< 6600.		UG/KG	3/05/90		Benzyl alcohol
125FS-3	89.17611	111911	< 6600.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-3	89.17611	111444	< 6600.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-3	89.17611	108601	< 6600.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-3	89.17611	117817	< 6600.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-3	89.17611	101553	< 6600.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-3	89.17611	85687	< 6600.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-3	89.17611	59507	< 6600.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-3	89.17611	106478	< 6600.		UG/KG	3/05/90		4-Chloroaniline
125FS-3	89.17611	91587	< 6600.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-3	89.17611	95578	< 6600.		UG/KG	3/05/90		o-Chlorophenol
125FS-3	89.17611	7005723	< 6600.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-3	89.17611	218019	< 6600.		UG/KG	3/05/90		Chrysene

125FS-3	89.17611	106445	< 6600.	UG/KG	3/05/90	p-Cresol
125FS-3	89.17611	84742	< 6600.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-3	89.17611	117840	< 6600.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-3	89.17611	53703	< 6600.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-3	89.17611	132649	< 6600.	UG/KG	3/05/90	Dibenzofuran
125FS-3	89.17611	95501	< 6600.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-3	89.17611	541731	< 6600.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-3	89.17611	106467	< 6600.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-3	89.17611	91941	< 6600.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-3	89.17611	120832	< 6600.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-3	89.17611	84662	< 6600.	UG/KG	3/05/90	Diethyl phthalate
125FS-3	89.17611	131113	< 6600.	UG/KG	3/05/90	Dimethyl phthalate
125FS-3	89.17611	105679	< 6600.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-3	89.17611	51285	< 6600.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-3	89.17611	121142	< 6600.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-3	89.17611	606202	< 6600.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-3	89.17611	206440	< 6600.	UG/KG	3/05/90	Fluoranthene
125FS-3	89.17611	86737	< 6600.	UG/KG	3/05/90	Fluorene
125FS-3	89.17611	118741	< 6600.	UG/KG	3/05/90	Hexachlorobenzene
125FS-3	89.17611	87683	< 6600.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-3	89.17611	77474	< 6600.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-3	89.17611	67721	< 6600.	UG/KG	3/05/90	Hexachloroethane
125FS-3	89.17611	193395	< 6600.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-3	89.17611	78591	< 6600.	UG/KG	3/05/90	Isophorone
125FS-3	89.17611	534521	< 6600.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-3	89.17611	91576	< 6600.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-3	89.17611	95487	< 6600.	UG/KG	3/05/90	2-Methylphenol
125FS-3	89.17611	106445	< 6600.	UG/KG	3/05/90	4-Methylphenol
125FS-3	89.17611	91203	< 6600.	UG/KG	3/05/90	Naphthalene
125FS-3	89.17611	88744	< 6600.	UG/KG	3/05/90	2-Nitroaniline
125FS-3	89.17611	99092	< 6600.	UG/KG	3/05/90	3-Nitroaniline
125FS-3	89.17611	100016	< 6600.	UG/KG	3/05/90	4-Nitroaniline
125FS-3	89.17611	98953	< 6600.	UG/KG	3/05/90	Nitrobenzene
125FS-3	89.17611	100027	< 6600.	UG/KG	3/05/90	4-Nitrophenol
125FS-3	89.17611	88755	< 6600.	UG/KG	3/05/90	2-Nitrophenol
125FS-3	89.17611	621647	< 6600.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-3	89.17611	62759	< 6600.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-3	89.17611	86306	< 6600.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-3	89.17611	87865	< 6600.	UG/KG	3/05/90	Pentachlorophenol
125FS-3	89.17611	85018	< 6600.	UG/KG	3/05/90	Phenanthrene
125FS-3	89.17611	108952	< 6600.	UG/KG	3/05/90	Phenol
125FS-3	89.17611	129000	< 6600.	UG/KG	3/05/90	Pyrene
125FS-3	89.17611	120821	< 6600.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-3	89.17611	95954	< 6600.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-3	89.17611	88062	< 6600.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-3	89.17611	105679	< 6600.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-4	89.17612	83329	< 16995.		UG/KG	3/05/90		Acenaphthene
125FS-4	89.17612	208968	< 16995.		UG/KG	3/05/90		Acenaphthylene
125FS-4	89.17612	62533	< 16995.		UG/KG	3/05/90		Aniline
125FS-4	89.17612	120127	< 16995.		UG/KG	3/05/90		Anthracene
125FS-4	89.17612	103333	< 16995.		UG/KG	3/05/90		Azobenzene
125FS-4	89.17612	56553	< 16995.		UG/KG	3/05/90		Benz(a)anthracene
125FS-4	89.17612	92875	< 16995.		UG/KG	3/05/90		m-Benzidine
125FS-4	89.17612	191242	< 16995.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-4	89.17612	50328	< 16995.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-4	89.17612	205992	< 16995.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-4	89.17612	207089	< 16995.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-4	89.17612	65850	< 16995.		UG/KG	3/05/90		Benzoic acid
125FS-4	89.17612	100516	< 16995.		UG/KG	3/05/90		Benzyl alcohol
125FS-4	89.17612	111911	< 16995.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-4	89.17612	111444	< 16995.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-4	89.17612	108601	< 16995.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-4	89.17612	117817	< 16995.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-4	89.17612	101553	< 16995.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-4	89.17612	85687	< 16995.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-4	89.17612	59507	< 16995.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-4	89.17612	106478	< 16995.		UG/KG	3/05/90		4-Chloroaniline
125FS-4	89.17612	91587	< 16995.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-4	89.17612	95578	< 16995.		UG/KG	3/05/90		o-Chlorophenol
125FS-4	89.17612	7005723	< 16995.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-4	89.17612	218019	< 16995.		UG/KG	3/05/90		Chrysene

125FS-4	89.17612	106445	< 16995.	UG/KG	3/05/90	p-Cresol
125FS-4	89.17612	84742	< 16995.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-4	89.17612	117840	< 16995.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-4	89.17612	53703	< 16995.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-4	89.17612	132649	< 16995.	UG/KG	3/05/90	Dibenzofuran
125FS-4	89.17612	95501	< 16995.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-4	89.17612	541731	< 16995.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-4	89.17612	106467	< 16995.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-4	89.17612	91941	< 16995.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-4	89.17612	120832	< 16995.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-4	89.17612	84662	< 16995.	UG/KG	3/05/90	Diethyl phthalate
125FS-4	89.17612	131113	< 16995.	UG/KG	3/05/90	Dimethyl phthalate
125FS-4	89.17612	105679	< 16995.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-4	89.17612	51285	< 16995.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-4	89.17612	121142	< 16995.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-4	89.17612	606202	< 16995.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-4	89.17612	206440	< 16995.	UG/KG	3/05/90	Fluoranthene
125FS-4	89.17612	86737	< 16995.	UG/KG	3/05/90	Fluorene
125FS-4	89.17612	118741	< 16995.	UG/KG	3/05/90	Hexachlorobenzene
125FS-4	89.17612	87683	< 16995.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-4	89.17612	77474	< 16995.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-4	89.17612	67721	< 16995.	UG/KG	3/05/90	Hexachloroethane
125FS-4	89.17612	193395	< 16995.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-4	89.17612	78591	< 16995.	UG/KG	3/05/90	Isophorone
125FS-4	89.17612	534521	< 16995.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-4	89.17612	91576	< 16995.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-4	89.17612	95487	< 16995.	UG/KG	3/05/90	2-Methylphenol
125FS-4	89.17612	106445	< 16995.	UG/KG	3/05/90	4-Methylphenol
125FS-4	89.17612	91203	< 16995.	UG/KG	3/05/90	Naphthalene
125FS-4	89.17612	88744	< 16995.	UG/KG	3/05/90	2-Nitroaniline
125FS-4	89.17612	99092	< 16995.	UG/KG	3/05/90	3-Nitroaniline
125FS-4	89.17612	100016	< 16995.	UG/KG	3/05/90	4-Nitroaniline
125FS-4	89.17612	98953	< 16995.	UG/KG	3/05/90	Nitrobenzene
125FS-4	89.17612	100027	< 16995.	UG/KG	3/05/90	4-Nitrophenol
125FS-4	89.17612	88755	< 16995.	UG/KG	3/05/90	2-Nitrophenol
125FS-4	89.17612	621647	< 16995.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-4	89.17612	62759	< 16995.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-4	89.17612	86306	< 16995.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-4	89.17612	87865	< 16995.	UG/KG	3/05/90	Pentachlorophenol
125FS-4	89.17612	85018	< 16995.	UG/KG	3/05/90	Phenanthrene
125FS-4	89.17612	108952	< 16995.	UG/KG	3/05/90	Phenol
125FS-4	89.17612	129000	< 16995.	UG/KG	3/05/90	Pyrene
125FS-4	89.17612	120821	< 16995.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-4	89.17612	95954	< 16995.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-4	89.17612	88062	< 16995.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-4	89.17612	105679	< 16995.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-5	89.17613	83329	< 33000.		UG/KG	3/05/90		Acenaphthene
125FS-5	89.17613	208968	< 33000.		UG/KG	3/05/90		Acenaphthylene
125FS-5	89.17613	62533	< 33000.		UG/KG	3/05/90		Aniline
125FS-5	89.17613	120127	< 33000.		UG/KG	3/05/90		Anthracene
125FS-5	89.17613	103333	< 33000.		UG/KG	3/05/90		Azobenzene
125FS-5	89.17613	56553	< 33000.		UG/KG	3/05/90		Benz(a)anthracene
125FS-5	89.17613	92875	< 33000.		UG/KG	3/05/90		m-Benzidine
125FS-5	89.17613	191242	< 33000.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-5	89.17613	50328	< 33000.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-5	89.17613	205992	< 33000.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-5	89.17613	207089	< 33000.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-5	89.17613	65850	< 33000.		UG/KG	3/05/90		Benzoic acid
125FS-5	89.17613	100516	< 33000.		UG/KG	3/05/90		Benzyl alcohol
125FS-5	89.17613	111911	< 33000.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-5	89.17613	111444	< 33000.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-5	89.17613	108601	< 33000.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-5	89.17613	117817	< 33000.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-5	89.17613	101553	< 33000.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-5	89.17613	85687	< 33000.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-5	89.17613	59507	< 33000.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-5	89.17613	106478	< 33000.		UG/KG	3/05/90		4-Chloroaniline
125FS-5	89.17613	91587	< 33000.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-5	89.17613	95578	< 33000.		UG/KG	3/05/90		o-Chlorophenol
125FS-5	89.17613	7005723	< 33000.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-5	89.17613	218019	< 33000.		UG/KG	3/05/90		Chrysene

125FS-5	89.17613	106445	< 33000.	UG/KG	3/05/90	p-Cresol
125FS-5	89.17613	84742	< 33000.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-5	89.17613	117840	< 33000.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-5	89.17613	53703	< 33000.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-5	89.17613	132649	< 33000.	UG/KG	3/05/90	Dibenzofuran
125FS-5	89.17613	95501	< 33000.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-5	89.17613	541731	< 33000.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-5	89.17613	106467	< 33000.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-5	89.17613	91941	< 33000.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-5	89.17613	120832	< 33000.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-5	89.17613	84662	< 33000.	UG/KG	3/05/90	Diethyl phthalate
125FS-5	89.17613	131113	< 33000.	UG/KG	3/05/90	Dimethyl phthalate
125FS-5	89.17613	105679	< 33000.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-5	89.17613	51285	< 33000.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-5	89.17613	121142	< 33000.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-5	89.17613	606202	< 33000.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-5	89.17613	206440	< 33000.	UG/KG	3/05/90	Fluoranthene
125FS-5	89.17613	86737	< 33000.	UG/KG	3/05/90	Fluorene
125FS-5	89.17613	118741	< 33000.	UG/KG	3/05/90	Hexachlorobenzene
125FS-5	89.17613	87683	< 33000.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-5	89.17613	77474	< 33000.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-5	89.17613	67721	< 33000.	UG/KG	3/05/90	Hexachloroethane
125FS-5	89.17613	193395	< 33000.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-5	89.17613	78591	< 33000.	UG/KG	3/05/90	Isophorone
125FS-5	89.17613	534521	< 33000.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-5	89.17613	91576	< 33000.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-5	89.17613	106445	< 33000.	UG/KG	3/05/90	4-Methylphenol
125FS-5	89.17613	95487	< 33000.	UG/KG	3/05/90	2-Methylphenol
125FS-5	89.17613	91203	< 33000.	UG/KG	3/05/90	Naphthalene
125FS-5	89.17613	99092	< 33000.	UG/KG	3/05/90	3-Nitroaniline
125FS-5	89.17613	100016	< 33000.	UG/KG	3/05/90	4-Nitroaniline
125FS-5	89.17613	88744	< 33000.	UG/KG	3/05/90	2-Nitroaniline
125FS-5	89.17613	98953	< 33000.	UG/KG	3/05/90	Nitrobenzene
125FS-5	89.17613	88755	< 33000.	UG/KG	3/05/90	2-Nitrophenol
125FS-5	89.17613	100027	< 33000.	UG/KG	3/05/90	4-Nitrophenol
125FS-5	89.17613	621647	< 33000.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-5	89.17613	62759	< 33000.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-5	89.17613	86306	< 33000.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-5	89.17613	87865	< 33000.	UG/KG	3/05/90	Pentachlorophenol
125FS-5	89.17613	85018	< 33000.	UG/KG	3/05/90	Phenanthrene
125FS-5	89.17613	108952	< 33000.	UG/KG	3/05/90	Phenol
125FS-5	89.17613	129000	< 33000.	UG/KG	3/05/90	Pyrene
125FS-5	89.17613	120821	< 33000.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-5	89.17613	95954	< 33000.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-5	89.17613	88062	< 33000.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-5	89.17613	105679	< 33000.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-6	89.17614	83329	< 6699.		UG/KG	3/05/90		Acenaphthene
125FS-6	89.17614	208968	< 6699.		UG/KG	3/05/90		Acenaphthylene
125FS-6	89.17614	62533	< 6699.		UG/KG	3/05/90		Aniline
125FS-6	89.17614	120127	< 6699.		UG/KG	3/05/90		Anthracene
125FS-6	89.17614	103333	< 6699.		UG/KG	3/05/90		Azobenzene
125FS-6	89.17614	56553	< 6699.		UG/KG	3/05/90		Benz(a)anthracene
125FS-6	89.17614	92875	< 6699.		UG/KG	3/05/90		m-Benzidine
125FS-6	89.17614	191242	< 6699.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-6	89.17614	50328	< 6699.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-6	89.17614	205992	< 6699.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-6	89.17614	207089	< 6699.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-6	89.17614	65850	< 6699.		UG/KG	3/05/90		Benzoic acid
125FS-6	89.17614	100516	< 6699.		UG/KG	3/05/90		Benzyl alcohol
125FS-6	89.17614	111911	< 6699.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-6	89.17614	111444	< 6699.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-6	89.17614	108601	< 6699.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-6	89.17614	117817	< 6699.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-6	89.17614	101553	< 6699.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-6	89.17614	85687	< 6699.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-6	89.17614	59507	< 6699.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-6	89.17614	106478	< 6699.		UG/KG	3/05/90		4-Chloroaniline
125FS-6	89.17614	91587	< 6699.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-6	89.17614	95578	< 6699.		UG/KG	3/05/90		o-Chlorophenol
125FS-6	89.17614	7005723	< 6699.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-6	89.17614	218019	< 6699.		UG/KG	3/05/90		Chrysene

125FS-6	89.17614	106445	< 6699.	UG/KG	3/05/90	p-Cresol
125FS-6	89.17614	84742	< 6699.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-6	89.17614	117840	< 6699.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-6	89.17614	53703	< 6699.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-6	89.17614	132649	< 6699.	UG/KG	3/05/90	Dibenzofuran
125FS-6	89.17614	95501	< 6699.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-6	89.17614	541731	< 6699.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-6	89.17614	106467	< 6699.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-6	89.17614	91941	< 6699.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-6	89.17614	120832	< 6699.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-6	89.17614	84662	< 6699.	UG/KG	3/05/90	Diethyl phthalate
125FS-6	89.17614	131113	< 6699.	UG/KG	3/05/90	Dimethyl phthalate
125FS-6	89.17614	105679	< 6699.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-6	89.17614	51285	< 6699.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-6	89.17614	606202	< 6699.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-6	89.17614	121142	< 6699.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-6	89.17614	206440	< 6699.	UG/KG	3/05/90	Fluoranthene
125FS-6	89.17614	86737	< 6699.	UG/KG	3/05/90	Fluorene
125FS-6	89.17614	118741	< 6699.	UG/KG	3/05/90	Hexachlorobenzene
125FS-6	89.17614	87683	< 6699.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-6	89.17614	77474	< 6699.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-6	89.17614	67721	< 6699.	UG/KG	3/05/90	Hexachloroethane
125FS-6	89.17614	193395	< 6699.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-6	89.17614	78591	< 6699.	UG/KG	3/05/90	Isophorone
125FS-6	89.17614	534521	< 6699.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-6	89.17614	91576	< 6699.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-6	89.17614	106445	< 6699.	UG/KG	3/05/90	4-Methylphenol
125FS-6	89.17614	95487	< 6699.	UG/KG	3/05/90	2-Methylphenol
125FS-6	89.17614	91203	< 6699.	UG/KG	3/05/90	Naphthalene
125FS-6	89.17614	100016	< 6699.	UG/KG	3/05/90	4-Nitroaniline
125FS-6	89.17614	88744	< 6699.	UG/KG	3/05/90	2-Nitroaniline
125FS-6	89.17614	99092	< 6699.	UG/KG	3/05/90	3-Nitroaniline
125FS-6	89.17614	98953	< 6699.	UG/KG	3/05/90	Nitrobenzene
125FS-6	89.17614	100027	< 6699.	UG/KG	3/05/90	4-Nitrophenol
125FS-6	89.17614	88755	< 6699.	UG/KG	3/05/90	2-Nitrophenol
125FS-6	89.17614	621647	< 6699.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-6	89.17614	62759	< 6699.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-6	89.17614	86306	< 6699.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-6	89.17614	87865	< 6699.	UG/KG	3/05/90	Pentachlorophenol
125FS-6	89.17614	85018	< 6699.	UG/KG	3/05/90	Phenanthrene
125FS-6	89.17614	108952	< 6699.	UG/KG	3/05/90	Phenol
125FS-6	89.17614	129000	< 6699.	UG/KG	3/05/90	Pyrene
125FS-6	89.17614	120821	< 6699.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-6	89.17614	88062	< 6699.	UG/KG	3/05/90	2,4,6-Trichlorophenol
125FS-6	89.17614	95954	< 6699.	UG/KG	3/05/90	2,4,5-Trichlorophenol

125FS-6	89.17614	105679	< 6699.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-7	89.17615	83329	< 6699.		UG/KG	3/05/90		Acenaphthene
125FS-7	89.17615	208968	< 6699.		UG/KG	3/05/90		Acenaphthylene
125FS-7	89.17615	62533	< 6699.		UG/KG	3/05/90		Aniline
125FS-7	89.17615	120127	< 6699.		UG/KG	3/05/90		Anthracene
125FS-7	89.17615	103333	< 6699.		UG/KG	3/05/90		Azobenzene
125FS-7	89.17615	56553	< 6699.		UG/KG	3/05/90		Benz(a)anthracene
125FS-7	89.17615	92875	< 6699.		UG/KG	3/05/90		m-Benzidine
125FS-7	89.17615	191242	< 6699.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-7	89.17615	50328	< 6699.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-7	89.17615	205992	< 6699.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-7	89.17615	207089	< 6699.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-7	89.17615	65850	< 6699.		UG/KG	3/05/90		Benzoic acid
125FS-7	89.17615	100516	< 6699.		UG/KG	3/05/90		Benzyl alcohol
125FS-7	89.17615	111911	< 6699.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-7	89.17615	111444	< 6699.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-7	89.17615	108601	< 6699.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-7	89.17615	117817	< 6699.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-7	89.17615	101553	< 6699.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-7	89.17615	85687	< 6699.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-7	89.17615	59507	< 6699.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-7	89.17615	106478	< 6699.		UG/KG	3/05/90		4-Chloroaniline
125FS-7	89.17615	91587	< 6699.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-7	89.17615	95578	< 6699.		UG/KG	3/05/90		o-Chlorophenol
125FS-7	89.17615	7005723	< 6699.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-7	89.17615	218019	< 6699.		UG/KG	3/05/90		Chrysene

125FS-7	89.17615	106445	< 6699.	UG/KG	3/05/90	p-Cresol
125FS-7	89.17615	84742	< 6699.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-7	89.17615	117840	< 6699.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-7	89.17615	53703	< 6699.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-7	89.17615	132649	< 6699.	UG/KG	3/05/90	Dibenzofuran
125FS-7	89.17615	95501	< 6699.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-7	89.17615	541731	< 6699.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-7	89.17615	106467	< 6699.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-7	89.17615	91941	< 6699.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-7	89.17615	120832	< 6699.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-7	89.17615	84662	< 6699.	UG/KG	3/05/90	Diethyl phthalate
125FS-7	89.17615	131113	< 6699.	UG/KG	3/05/90	Dimethyl phthalate
125FS-7	89.17615	105679	< 6699.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-7	89.17615	51285	< 6699.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-7	89.17615	121142	< 6699.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-7	89.17615	606202	< 6699.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-7	89.17615	206440	< 6699.	UG/KG	3/05/90	Fluoranthene
125FS-7	89.17615	86737	< 6699.	UG/KG	3/05/90	Fluorene
125FS-7	89.17615	118741	< 6699.	UG/KG	3/05/90	Hexachlorobenzene
125FS-7	89.17615	87683	< 6699.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-7	89.17615	77474	< 6699.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-7	89.17615	67721	< 6699.	UG/KG	3/05/90	Hexachloroethane
125FS-7	89.17615	193395	< 6699.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-7	89.17615	78591	< 6699.	UG/KG	3/05/90	Isophorone
125FS-7	89.17615	534521	< 6699.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-7	89.17615	91576	< 6699.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-7	89.17615	106445	< 6699.	UG/KG	3/05/90	4-Methylphenol
125FS-7	89.17615	95487	< 6699.	UG/KG	3/05/90	2-Methylphenol
125FS-7	89.17615	91203	< 6699.	UG/KG	3/05/90	Naphthalene
125FS-7	89.17615	88744	< 6699.	UG/KG	3/05/90	2-Nitroaniline
125FS-7	89.17615	99092	< 6699.	UG/KG	3/05/90	3-Nitroaniline
125FS-7	89.17615	100016	< 6699.	UG/KG	3/05/90	4-Nitroaniline
125FS-7	89.17615	98953	< 6699.	UG/KG	3/05/90	Nitrobenzene
125FS-7	89.17615	100027	< 6699.	UG/KG	3/05/90	4-Nitrophenol
125FS-7	89.17615	88755	< 6699.	UG/KG	3/05/90	2-Nitrophenol
125FS-7	89.17615	621647	< 6699.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-7	89.17615	62759	< 6699.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-7	89.17615	86306	< 6699.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-7	89.17615	87865	< 6699.	UG/KG	3/05/90	Pentachlorophenol
125FS-7	89.17615	85018	< 6699.	UG/KG	3/05/90	Phenanthrene
125FS-7	89.17615	108952	< 6699.	UG/KG	3/05/90	Phenol
125FS-7	89.17615	129000	< 6699.	UG/KG	3/05/90	Pyrene
125FS-7	89.17615	120821	< 6699.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-7	89.17615	95954	< 6699.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-7	89.17615	88062	< 6699.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-7	89.17615	105679	< 6699.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-8	89.17616	83329	< 6699.		UG/KG	3/05/90		Acenaphthene
125FS-8	89.17616	208968	< 6699.		UG/KG	3/05/90		Acenaphthylene
125FS-8	89.17616	62533	< 6699.		UG/KG	3/05/90		Aniline
125FS-8	89.17616	120127	< 6699.		UG/KG	3/05/90		Anthracene
125FS-8	89.17616	103333	< 6699.		UG/KG	3/05/90		Azobenzene
125FS-8	89.17616	56553	< 6699.		UG/KG	3/05/90		Benz(a)anthracene
125FS-8	89.17616	92875	< 6699.		UG/KG	3/05/90		m-Benzidine
125FS-8	89.17616	191242	< 6699.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-8	89.17616	50328	< 6699.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-8	89.17616	205992	< 6699.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-8	89.17616	207089	< 6699.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-8	89.17616	65850	< 6699.		UG/KG	3/05/90		Benzoic acid
125FS-8	89.17616	100516	< 6699.		UG/KG	3/05/90		Benzyl alcohol
125FS-8	89.17616	111911	< 6699.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-8	89.17616	111444	< 6699.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-8	89.17616	108601	< 6699.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-8	89.17616	117817	< 6699.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-8	89.17616	101553	< 6699.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-8	89.17616	85687	< 6699.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-8	89.17616	59507	< 6699.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-8	89.17616	106478	< 6699.		UG/KG	3/05/90		4-Chloroaniline
125FS-8	89.17616	91587	< 6699.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-8	89.17616	95578	< 6699.		UG/KG	3/05/90		o-Chlorophenol
125FS-8	89.17616	7005723	< 6699.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-8	89.17616	218019	< 6699.		UG/KG	3/05/90		Chrysene

125FS-8	89.17616	106445	< 6699.	UG/KG	3/05/90	p-Cresol
125FS-8	89.17616	84742	< 6699.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-8	89.17616	117840	< 6699.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-8	89.17616	53703	< 6699.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-8	89.17616	132649	< 6699.	UG/KG	3/05/90	Dibenzofuran
125FS-8	89.17616	95501	< 6699.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-8	89.17616	541731	< 6699.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-8	89.17616	106467	< 6699.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-8	89.17616	91941	< 6699.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-8	89.17616	120832	< 6699.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-8	89.17616	84662	< 6699.	UG/KG	3/05/90	Diethyl phthalate
125FS-8	89.17616	131113	< 6699.	UG/KG	3/05/90	Dimethyl phthalate
125FS-8	89.17616	105679	< 6699.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-8	89.17616	51285	< 6699.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-8	89.17616	606202	< 6699.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-8	89.17616	121142	< 6699.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-8	89.17616	206440	< 6699.	UG/KG	3/05/90	Fluoranthene
125FS-8	89.17616	86737	< 6699.	UG/KG	3/05/90	Fluorene
125FS-8	89.17616	118741	< 6699.	UG/KG	3/05/90	Hexachlorobenzene
125FS-8	89.17616	87683	< 6699.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-8	89.17616	77474	< 6699.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-8	89.17616	67721	< 6699.	UG/KG	3/05/90	Hexachloroethane
125FS-8	89.17616	193395	< 6699.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-8	89.17616	78591	< 6699.	UG/KG	3/05/90	Isophorone
125FS-8	89.17616	534521	< 6699.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-8	89.17616	91576	< 6699.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-8	89.17616	106445	< 6699.	UG/KG	3/05/90	4-Methylphenol
125FS-8	89.17616	95487	< 6699.	UG/KG	3/05/90	2-Methylphenol
125FS-8	89.17616	91203	< 6699.	UG/KG	3/05/90	Naphthalene
125FS-8	89.17616	88744	< 6699.	UG/KG	3/05/90	2-Nitroaniline
125FS-8	89.17616	99092	< 6699.	UG/KG	3/05/90	3-Nitroaniline
125FS-8	89.17616	100016	< 6699.	UG/KG	3/05/90	4-Nitroaniline
125FS-8	89.17616	98953	< 6699.	UG/KG	3/05/90	Nitrobenzene
125FS-8	89.17616	100027	< 6699.	UG/KG	3/05/90	4-Nitrophenol
125FS-8	89.17616	88755	< 6699.	UG/KG	3/05/90	2-Nitrophenol
125FS-8	89.17616	621647	< 6699.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-8	89.17616	62759	< 6699.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-8	89.17616	86306	< 6699.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-8	89.17616	87865	< 6699.	UG/KG	3/05/90	Pentachlorophenol
125FS-8	89.17616	85018	< 6699.	UG/KG	3/05/90	Phenanthrene
125FS-8	89.17616	108952	< 6699.	UG/KG	3/05/90	Phenol
125FS-8	89.17616	129000	< 6699.	UG/KG	3/05/90	Pyrene
125FS-8	89.17616	120821	< 6699.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-8	89.17616	95954	< 6699.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-8	89.17616	88062	< 6699.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-8	89.17616	105679	< 6699.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-9	89.17617	83329	< 6699.		UG/KG	3/05/90		Acenaphthene
125FS-9	89.17617	208968	< 6699.		UG/KG	3/05/90		Acenaphthylene
125FS-9	89.17617	62533	< 6699.		UG/KG	3/05/90		Aniline
125FS-9	89.17617	120127	< 6699.		UG/KG	3/05/90		Anthracene
125FS-9	89.17617	103333	< 6699.		UG/KG	3/05/90		Azobenzene
125FS-9	89.17617	56553	< 6699.		UG/KG	3/05/90		Benz(a)anthracene
125FS-9	89.17617	92875	< 6699.		UG/KG	3/05/90		m-Benzidine
125FS-9	89.17617	191242	< 6699.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-9	89.17617	50328	< 6699.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-9	89.17617	205992	< 6699.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-9	89.17617	207089	< 6699.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-9	89.17617	65850	< 6699.		UG/KG	3/05/90		Benzoic acid
125FS-9	89.17617	100516	< 6699.		UG/KG	3/05/90		Benzyl alcohol
125FS-9	89.17617	111911	< 6699.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-9	89.17617	111444	< 6699.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-9	89.17617	108601	< 6699.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-9	89.17617	117817	< 6699.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-9	89.17617	101553	< 6699.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-9	89.17617	85687	< 6699.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-9	89.17617	59507	< 6699.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-9	89.17617	106478	< 6699.		UG/KG	3/05/90		4-Chloroaniline
125FS-9	89.17617	91587	< 6699.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-9	89.17617	95578	< 6699.		UG/KG	3/05/90		o-Chlorophenol
125FS-9	89.17617	7005723	< 6699.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
125FS-9	89.17617	218019	< 6699.		UG/KG	3/05/90		Chrysene

125FS-9	89.17617	106445	< 6699.	UG/KG	3/05/90	p-Cresol
125FS-9	89.17617	84742	< 6699.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-9	89.17617	117840	< 6699.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-9	89.17617	53703	< 6699.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-9	89.17617	132649	< 6699.	UG/KG	3/05/90	Dibenzofuran
125FS-9	89.17617	95501	< 6699.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-9	89.17617	541731	< 6699.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-9	89.17617	106467	< 6699.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-9	89.17617	91941	< 6699.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-9	89.17617	120832	< 6699.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-9	89.17617	84662	< 6699.	UG/KG	3/05/90	Diethyl phthalate
125FS-9	89.17617	131113	< 6699.	UG/KG	3/05/90	Dimethyl phthalate
125FS-9	89.17617	105679	< 6699.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-9	89.17617	51285	< 6699.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-9	89.17617	121142	< 6699.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-9	89.17617	606202	< 6699.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-9	89.17617	206440	< 6699.	UG/KG	3/05/90	Fluoranthene
125FS-9	89.17617	86737	< 6699.	UG/KG	3/05/90	Fluorene
125FS-9	89.17617	118741	< 6699.	UG/KG	3/05/90	Hexachlorobenzene
125FS-9	89.17617	87683	< 6699.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-9	89.17617	77474	< 6699.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-9	89.17617	67721	< 6699.	UG/KG	3/05/90	Hexachloroethane
125FS-9	89.17617	193395	< 6699.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-9	89.17617	78591	< 6699.	UG/KG	3/05/90	Isophorone
125FS-9	89.17617	534521	< 6699.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-9	89.17617	91576	< 6699.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-9	89.17617	95487	< 6699.	UG/KG	3/05/90	2-Methylphenol
125FS-9	89.17617	106445	< 6699.	UG/KG	3/05/90	4-Methylphenol
125FS-9	89.17617	91203	< 6699.	UG/KG	3/05/90	Naphthalene
125FS-9	89.17617	88744	< 6699.	UG/KG	3/05/90	2-Nitroaniline
125FS-9	89.17617	99092	< 6699.	UG/KG	3/05/90	3-Nitroaniline
125FS-9	89.17617	100016	< 6699.	UG/KG	3/05/90	4-Nitroaniline
125FS-9	89.17617	98953	< 6699.	UG/KG	3/05/90	Nitrobenzene
125FS-9	89.17617	88755	< 6699.	UG/KG	3/05/90	2-Nitrophenol
125FS-9	89.17617	100027	< 6699.	UG/KG	3/05/90	4-Nitrophenol
125FS-9	89.17617	621647	< 6699.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-9	89.17617	62759	< 6699.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-9	89.17617	86306	< 6699.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-9	89.17617	87865	< 6699.	UG/KG	3/05/90	Pentachlorophenol
125FS-9	89.17617	85018	< 6699.	UG/KG	3/05/90	Phenanthrene
125FS-9	89.17617	108952	< 6699.	UG/KG	3/05/90	Phenol
125FS-9	89.17617	129000	< 6699.	UG/KG	3/05/90	Pyrene
125FS-9	89.17617	120821	< 6699.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-9	89.17617	88062	< 6699.	UG/KG	3/05/90	2,4,6-Trichlorophenol
125FS-9	89.17617	95954	< 6699.	UG/KG	3/05/90	2,4,5-Trichlorophenol

125FS-9	89.17617	105679	< 6699.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-10	89.17618	83329	< 2706.		UG/KG	3/05/90		Acenaphthene
125FS-10	89.17618	208968	< 2706.		UG/KG	3/05/90		Acenaphthylene
125FS-10	89.17618	62533	< 2706.		UG/KG	3/05/90		Aniline
125FS-10	89.17618	120127	< 2706.		UG/KG	3/05/90		Anthracene
125FS-10	89.17618	103333	< 2706.		UG/KG	3/05/90		Azobenzene
125FS-10	89.17618	56553	< 2706.		UG/KG	3/05/90		Benz(a)anthracene
125FS-10	89.17618	92875	< 2706.		UG/KG	3/05/90		m-Benzidine
125FS-10	89.17618	191242	< 2706.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-10	89.17618	50328	< 2706.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-10	89.17618	205992	< 2706.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-10	89.17618	207089	< 2706.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-10	89.17618	65850	< 2706.		UG/KG	3/05/90		Benzoic acid
125FS-10	89.17618	100516	< 2706.		UG/KG	3/05/90		Benzyl alcohol
125FS-10	89.17618	111911	< 2706.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-10	89.17618	111444	< 2706.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-10	89.17618	108601	< 2706.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-10	89.17618	117817	4200.	840.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-10	89.17618	101553	< 2706.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-10	89.17618	85687	< 2706.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-10	89.17618	59507	< 2706.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-10	89.17618	106478	< 2706.		UG/KG	3/05/90		4-Chloroaniline
125FS-10	89.17618	91587	< 2706.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-10	89.17618	95578	< 2706.		UG/KG	3/05/90		o-Chlorophenol
25FS-10	89.17618	7005723	< 2706.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
5FS-10	89.17618	218019	< 2706.		UG/KG	3/05/90		Chrysene

125FS-10	89.17618	106445	< 2706.	UG/KG	3/05/90	p-Cresol
125FS-10	89.17618	84742	< 2706.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-10	89.17618	117840	< 2706.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-10	89.17618	53703	< 2706.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-10	89.17618	132649	< 2706.	UG/KG	3/05/90	Dibenzofuran
125FS-10	89.17618	95501	< 2706.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-10	89.17618	541731	< 2706.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-10	89.17618	106467	< 2706.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-10	89.17618	91941	< 2706.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-10	89.17618	120832	< 2706.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-10	89.17618	84662	< 2706.	UG/KG	3/05/90	Diethyl phthalate
125FS-10	89.17618	131113	< 2706.	UG/KG	3/05/90	Dimethyl phthalate
125FS-10	89.17618	105679	< 2706.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-10	89.17618	51285	< 2706.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-10	89.17618	606202	< 2706.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-10	89.17618	121142	< 2706.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-10	89.17618	206440	< 2706.	UG/KG	3/05/90	Fluoranthene
125FS-10	89.17618	86737	< 2706.	UG/KG	3/05/90	Fluorene
125FS-10	89.17618	118741	< 2706.	UG/KG	3/05/90	Hexachlorobenzene
125FS-10	89.17618	87683	< 2706.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-10	89.17618	77474	< 2706.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-10	89.17618	67721	< 2706.	UG/KG	3/05/90	Hexachloroethane
125FS-10	89.17618	193395	< 2706.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-10	89.17618	78591	< 2706.	UG/KG	3/05/90	Isophorone
125FS-10	89.17618	534521	< 2706.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-10	89.17618	91576	< 2706.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-10	89.17618	95487	< 2706.	UG/KG	3/05/90	2-Methylphenol
125FS-10	89.17618	106445	< 2706.	UG/KG	3/05/90	4-Methylphenol
125FS-10	89.17618	91203	< 2706.	UG/KG	3/05/90	Naphthalene
125FS-10	89.17618	100016	< 2706.	UG/KG	3/05/90	4-Nitroaniline
125FS-10	89.17618	99092	< 2706.	UG/KG	3/05/90	3-Nitroaniline
125FS-10	89.17618	88744	< 2706.	UG/KG	3/05/90	2-Nitroaniline
125FS-10	89.17618	98953	< 2706.	UG/KG	3/05/90	Nitrobenzene
125FS-10	89.17618	88755	< 2706.	UG/KG	3/05/90	2-Nitrophenol
125FS-10	89.17618	100027	< 2706.	UG/KG	3/05/90	4-Nitrophenol
125FS-10	89.17618	621647	< 2706.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-10	89.17618	62759	< 2706.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-10	89.17618	86306	< 2706.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-10	89.17618	87865	< 2706.	UG/KG	3/05/90	Pentachlorophenol
125FS-10	89.17618	85018	< 2706.	UG/KG	3/05/90	Phenanthrene
125FS-10	89.17618	108952	< 2706.	UG/KG	3/05/90	Phenol
125FS-10	89.17618	129000	< 2706.	UG/KG	3/05/90	Pyrene
125FS-10	89.17618	120821	< 2706.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-10	89.17618	95954	< 2706.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-10	89.17618	88062	< 2706.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-10	89.17618	105679	< 2706.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-11	89.17619	83329	< 2706.		UG/KG	3/05/90		Acenaphthene
125FS-11	89.17619	208968	< 2706.		UG/KG	3/05/90		Acenaphthylene
125FS-11	89.17619	62533	< 2706.		UG/KG	3/05/90		Aniline
125FS-11	89.17619	120127	< 2706.		UG/KG	3/05/90		Anthracene
125FS-11	89.17619	103333	< 2706.		UG/KG	3/05/90		Azobenzene
125FS-11	89.17619	56553	< 2706.		UG/KG	3/05/90		Benz(a)anthracene
125FS-11	89.17619	92875	< 2706.		UG/KG	3/05/90		m-Benzidine
125FS-11	89.17619	191242	< 2706.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-11	89.17619	50328	< 2706.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-11	89.17619	205992	< 2706.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-11	89.17619	207089	< 2706.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-11	89.17619	65850	< 2706.		UG/KG	3/05/90		Benzoic acid
125FS-11	89.17619	100516	< 2706.		UG/KG	3/05/90		Benzyl alcohol
125FS-11	89.17619	111911	< 2706.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-11	89.17619	111444	< 2706.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-11	89.17619	108601	< 2706.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-11	89.17619	117817	3000.	600.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-11	89.17619	101553	< 2706.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-11	89.17619	85687	< 2706.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-11	89.17619	59507	< 2706.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-11	89.17619	106478	< 2706.		UG/KG	3/05/90		4-Chloroaniline
125FS-11	89.17619	91587	< 2706.		UG/KG	3/05/90		2-Chloronaphthalene
[illegible]S-11	89.17619	95578	< 2706.		UG/KG	3/05/90		o-Chlorophenol
[illegible]-11	89.17619	7005723	< 2706.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
[illegible]11	89.17619	218019	< 2706.		UG/KG	3/05/90		Chrysene

125FS-11	89.17619	106445	< 2706.	UG/KG	3/05/90	p-Cresol
125FS-11	89.17619	84742	< 2706.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-11	89.17619	117840	< 2706.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-11	89.17619	53703	< 2706.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-11	89.17619	132649	< 2706.	UG/KG	3/05/90	Dibenzofuran
125FS-11	89.17619	95501	< 2706.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-11	89.17619	541731	< 2706.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-11	89.17619	106467	< 2706.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-11	89.17619	91941	< 2706.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-11	89.17619	120832	< 2706.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-11	89.17619	84662	< 2706.	UG/KG	3/05/90	Diethyl phthalate
125FS-11	89.17619	131113	< 2706.	UG/KG	3/05/90	Dimethyl phthalate
125FS-11	89.17619	105679	< 2706.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-11	89.17619	51285	< 2706.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-11	89.17619	121142	< 2706.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-11	89.17619	606202	< 2706.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-11	89.17619	206440	< 2706.	UG/KG	3/05/90	Fluoranthene
125FS-11	89.17619	86737	< 2706.	UG/KG	3/05/90	Fluorene
125FS-11	89.17619	118741	< 2706.	UG/KG	3/05/90	Hexachlorobenzene
125FS-11	89.17619	87683	< 2706.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-11	89.17619	77474	< 2706.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-11	89.17619	67721	< 2706.	UG/KG	3/05/90	Hexachloroethane
125FS-11	89.17619	193395	< 2706.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-11	89.17619	78591	< 2706.	UG/KG	3/05/90	Isophorone
125FS-11	89.17619	534521	< 2706.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-11	89.17619	91576	< 2706.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-11	89.17619	95487	< 2706.	UG/KG	3/05/90	2-Methylphenol
125FS-11	89.17619	106445	< 2706.	UG/KG	3/05/90	4-Methylphenol
125FS-11	89.17619	91203	< 2706.	UG/KG	3/05/90	Naphthalene
125FS-11	89.17619	99092	< 2706.	UG/KG	3/05/90	3-Nitroaniline
125FS-11	89.17619	88744	< 2706.	UG/KG	3/05/90	2-Nitroaniline
125FS-11	89.17619	100016	< 2706.	UG/KG	3/05/90	4-Nitroaniline
125FS-11	89.17619	98953	< 2706.	UG/KG	3/05/90	Nitrobenzene
125FS-11	89.17619	88755	< 2706.	UG/KG	3/05/90	2-Nitrophenol
125FS-11	89.17619	100027	< 2706.	UG/KG	3/05/90	4-Nitrophenol
125FS-11	89.17619	621647	< 2706.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-11	89.17619	62759	< 2706.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-11	89.17619	86306	< 2706.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-11	89.17619	87865	< 2706.	UG/KG	3/05/90	Pentachlorophenol
125FS-11	89.17619	85018	< 2706.	UG/KG	3/05/90	Phenanthrene
125FS-11	89.17619	108952	< 2706.	UG/KG	3/05/90	Phenol
125FS-11	89.17619	129000	< 2706.	UG/KG	3/05/90	Pyrene
125FS-11	89.17619	120821	< 2706.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-11	89.17619	95954	< 2706.	UG/KG	3/05/90	2,4,5-Trichlorophenol
125FS-11	89.17619	88062	< 2706.	UG/KG	3/05/90	2,4,6-Trichlorophenol

125FS-11	89.17619	105679	< 2706.	UG/KG	3/05/90	2,4-Xylenol

REPORT NUMBER: 5866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-12	89.17620	83329	< 2706.		UG/KG	3/05/90		Acenaphthene
125FS-12	89.17620	208968	< 2706.		UG/KG	3/05/90		Acenaphthylene
125FS-12	89.17620	62533	< 2706.		UG/KG	3/05/90		Aniline
125FS-12	89.17620	120127	< 2706.		UG/KG	3/05/90		Anthracene
125FS-12	89.17620	103333	< 2706.		UG/KG	3/05/90		Azobenzene
125FS-12	89.17620	56553	< 2706.		UG/KG	3/05/90		Benz(a)anthracene
125FS-12	89.17620	92875	< 2706.		UG/KG	3/05/90		m-Benzidine
125FS-12	89.17620	191242	< 2706.		UG/KG	3/05/90		Benzo(g,h,i)perylene
125FS-12	89.17620	50328	< 2706.		UG/KG	3/05/90		Benzo-a-pyrene
125FS-12	89.17620	205992	< 2706.		UG/KG	3/05/90		Benzo-b-fluoranthene
125FS-12	89.17620	207089	< 2706.		UG/KG	3/05/90		Benzo-k-fluoranthene
125FS-12	89.17620	65850	< 2706.		UG/KG	3/05/90		Benzoic acid
125FS-12	89.17620	100516	< 2706.		UG/KG	3/05/90		Benzyl alcohol
125FS-12	89.17620	111911	< 2706.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
125FS-12	89.17620	111444	< 2706.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
125FS-12	89.17620	108601	< 2706.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
125FS-12	89.17620	117817	4700.	940.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
125FS-12	89.17620	101553	< 2706.		UG/KG	3/05/90		4-Bromophenylphenyl ether
125FS-12	89.17620	85687	< 2706.		UG/KG	3/05/90		Butylbenzyl phthalate
125FS-12	89.17620	59507	< 2706.		UG/KG	3/05/90		4-Chloro-3-methylphenol
125FS-12	89.17620	106478	< 2706.		UG/KG	3/05/90		4-Chloroaniline
125FS-12	89.17620	91587	< 2706.		UG/KG	3/05/90		2-Chloronaphthalene
125FS-12	89.17620	95578	< 2706.		UG/KG	3/05/90		o-Chlorophenol
FS-12	89.17620	7005723	< 2706.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
S-12	89.17620	218019	< 2706.		UG/KG	3/05/90		Chrysene

125FS-12	89.17620	106445	< 2706.	UG/KG	3/05/90	p-Cresol
125FS-12	89.17620	84742	< 2706.	UG/KG	3/05/90	Di-n-butyl phthalate
125FS-12	89.17620	117840	< 2706.	UG/KG	3/05/90	Di-n-octyl phthalate
125FS-12	89.17620	53703	< 2706.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
125FS-12	89.17620	132649	< 2706.	UG/KG	3/05/90	Dibenzofuran
125FS-12	89.17620	95501	< 2706.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
125FS-12	89.17620	541731	< 2706.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
125FS-12	89.17620	106467	< 2706.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
125FS-12	89.17620	91941	< 2706.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
125FS-12	89.17620	120832	< 2706.	UG/KG	3/05/90	2,4-Dichlorophenol
125FS-12	89.17620	84662	< 2706.	UG/KG	3/05/90	Diethyl phthalate
125FS-12	89.17620	131113	< 2706.	UG/KG	3/05/90	Dimethyl phthalate
125FS-12	89.17620	105679	< 2706.	UG/KG	3/05/90	2,4-Dimethylphenol
125FS-12	89.17620	51285	< 2706.	UG/KG	3/05/90	2,4-Dinitrophenol
125FS-12	89.17620	121142	< 2706.	UG/KG	3/05/90	2,4-Dinitrotoluene
125FS-12	89.17620	606202	< 2706.	UG/KG	3/05/90	2,6-Dinitrotoluene
125FS-12	89.17620	206440	< 2706.	UG/KG	3/05/90	Fluoranthene
125FS-12	89.17620	86737	< 2706.	UG/KG	3/05/90	Fluorene
125FS-12	89.17620	118741	< 2706.	UG/KG	3/05/90	Hexachlorobenzene
125FS-12	89.17620	87683	< 2706.	UG/KG	3/05/90	Hexachlorobutadiene
125FS-12	89.17620	77474	< 2706.	UG/KG	3/05/90	Hexachlorocyclopentadiene
125FS-12	89.17620	67721	< 2706.	UG/KG	3/05/90	Hexachloroethane
125FS-12	89.17620	193395	< 2706.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
125FS-12	89.17620	78591	< 2706.	UG/KG	3/05/90	Isophorone
125FS-12	89.17620	534521	< 2706.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
125FS-12	89.17620	91576	< 2706.	UG/KG	3/05/90	2-Methylnaphthalene
125FS-12	89.17620	95487	< 2706.	UG/KG	3/05/90	2-Methylphenol
125FS-12	89.17620	106445	< 2706.	UG/KG	3/05/90	4-Methylphenol
125FS-12	89.17620	91203	< 2706.	UG/KG	3/05/90	Naphthalene
125FS-12	89.17620	88744	< 2706.	UG/KG	3/05/90	2-Nitroaniline
125FS-12	89.17620	99092	< 2706.	UG/KG	3/05/90	3-Nitroaniline
125FS-12	89.17620	100016	< 2706.	UG/KG	3/05/90	4-Nitroaniline
125FS-12	89.17620	98953	< 2706.	UG/KG	3/05/90	Nitrobenzene
125FS-12	89.17620	100027	< 2706.	UG/KG	3/05/90	4-Nitrophenol
125FS-12	89.17620	88755	< 2706.	UG/KG	3/05/90	2-Nitrophenol
125FS-12	89.17620	621647	< 2706.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
125FS-12	89.17620	62759	< 2706.	UG/KG	3/05/90	N-Nitrosodimethylamine
125FS-12	89.17620	86306	< 2706.	UG/KG	3/05/90	N-Nitrosodiphenylamine
125FS-12	89.17620	87865	< 2706.	UG/KG	3/05/90	Pentachlorophenol
125FS-12	89.17620	85018	< 2706.	UG/KG	3/05/90	Phenanthrene
125FS-12	89.17620	108952	< 2706.	UG/KG	3/05/90	Phenol
125FS-12	89.17620	129000	< 2706.	UG/KG	3/05/90	Pyrene
125FS-12	89.17620	120821	< 2706.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
125FS-12	89.17620	88062	< 2706.	UG/KG	3/05/90	2,4,6-Trichlorophenol
125FS-12	89.17620	95954	< 2706.	UG/KG	3/05/90	2,4,5-Trichlorophenol

125FS-12	89.17620	105679	< 2706.	UG/KG	3/05/90	2,4-Xylenol

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REPORT NUMBER: 5866 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.17622	83329	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Acenaphthene
89.17622	208968	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Acenaphthylene
89.17622	62533	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Aniline
89.17622	120127	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Anthracene
89.17622	103333	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Azobenzene
89.17622	56553	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benz(a)anthracene
89.17622	92875	< 0.33		MG/KG			3/05/90	UNDER CONTROL	m-Benzidine

89.17622	191242	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo(g,h,i)perylene
89.17622	50328	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo-a-pyrene
89.17622	205992	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo-b-fluoranthene
89.17622	207089	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo-k-fluoranthene
89.17622	65850	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzoic acid
89.17622	100516	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzyl alcohol
89.17622	111911	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-chloroethoxy)methane
89.17622	111444	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-chloroethyl)ether
89.17622	108601	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-chloroisopropyl)ether
89.17622	117817	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
89.17622	101553	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Bromophenylphenyl ether
89.17622	85687	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Butylbenzyl phthalate
89.17622	59507	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Chloro-3-methylphenol
89.17622	106478	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Chloroaniline
89.17622	91587	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Chloronaphthalene
89.17622	95578	< 0.33		MG/KG			3/05/90	UNDER CONTROL	o-Chlorophenol
89.17622	7005723	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Chlorophenylphenyl ether
89.17622	218019	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Chrysene
89.17622	106445	< 0.33		MG/KG			3/05/90	UNDER CONTROL	p-Cresol
89.17622	84742	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Di-n-butyl phthalate
89.17622	117840	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Di-n-octyl phthalate
89.17622	53703	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Dibenzo(a,h)anthracene
89.17622	132649	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Dibenzofuran
89.17622	95501	< 0.33		MG/KG			3/05/90	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.17622	541731	< 0.33		MG/KG			3/05/90	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.17622	106467	< 0.33		MG/KG			3/05/90	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.17622	91941	< 0.33		MG/KG			3/05/90	UNDER CONTROL	3,3'-Dichlorobenzidine
89.17622	120832	2.	0.4	MG/KG	3.3	0.3	3/05/90	WARNING 2-3 SIG	2,4-Dichlorophenol
89.17622	84662	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Diethyl phthalate
89.17622	131113	2.7	0.54	MG/KG	3.5	0.4	3/05/90	UNDER CONTROL	Dimethyl phthalate
89.17622	105679	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Dimethylphenol
89.17622	51285	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Dinitrophenol
89.17622	606202	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,6-Dinitrotoluene
89.17622	121142	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Dinitrotoluene
89.17622	206440	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Fluoranthene
89.17622	86737	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Fluorene
89.17622	118741	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachlorobenzene
89.17622	87683	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachlorobutadiene
89.17622	77474	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachlorocyclopentadiene
89.17622	67721	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachloroethane
89.17622	193395	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Indeno(1,2,3-cd)pyrene
89.17622	78591	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Isophorone
89.17622	534521	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
89.17622	91576	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Methylnaphthalene
89.17622	95487	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Methylphenol

89.17622	106445	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Methylphenol
89.17622	91203	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Naphthalene
89.17622	100016	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Nitroaniline
89.17622	99092	< 0.33		MG/KG			3/05/90	UNDER CONTROL	3-Nitroaniline
89.17622	88744	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Nitroaniline
89.17622	98953	1.9	0.38	MG/KG	2.9	0.3	3/05/90	WARNING 2-3 SIG	Nitrobenzene
89.17622	100027	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Nitrophenol
89.17622	88755	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Nitrophenol
89.17622	621647	< 0.33		MG/KG			3/05/90	UNDER CONTROL	N-Nitrosodi-n-propylamine
89.17622	62759	< 0.33		MG/KG			3/05/90	UNDER CONTROL	N-Nitrosodimethylamine
89.17622	86306	< 0.33		MG/KG			3/05/90	UNDER CONTROL	N-Nitrosodiphenylamine
89.17622	87865	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Pentachlorophenol
89.17622	85018	2.5	0.5	MG/KG	2.8	0.3	3/05/90	UNDER CONTROL	Phenanthrene
89.17622	108952	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Phenol
89.17622	129000	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Pyrene
89.17622	120821	< 0.33		MG/KG			3/05/90	UNDER CONTROL	1,2,4-Trichlorobenzene
89.17622	95954	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4,5-Trichlorophenol
89.17622	88062	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4,6-Trichlorophenol
89.17622	105679	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Xylenol

SURROGATE RESULTS FOR EPA SEMIVOLATILES

Surrogate 1 = 2-Fluorophenol (CAS # = 367124)
Surrogate 2 = Phenol-d5 (CAS # = 4165622)
Surrogate 3 = Nitrobenzene-d5 (CAS # = 4165600)
Surrogate 4 = 2-Fluorobiphenyl (CAS # = 321608)
Surrogate 5 = 2,4,6-Tribromophenol (CAS # = 118796)
Surrogate 6 = p-Terphenyl-d14 (CAS # =)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	Surrogate 6	COMPLETION DATE
89.17609	%	57.	70.	75.	91.	110.	74.	5-Mar-1990
89.17610	%	999.	85.	63.	117.	97.	999.	5-Mar-1990
89.17611	%	67.	84.	74.	130.	123.	999.	5-Mar-1990
89.17612	%	52.	85.	67.	133.	140.	156.	5-Mar-1990
89.17613	%	999.	74.	999.	999.	999.	999.	5-Mar-1990
89.17614	%	999.	57.	67.	113.	56.	106.	5-Mar-1990
89.17615	%	61.	83.	75.	140.	160.	99.	5-Mar-1990
89.17616	%	59.	87.	78.	130.	122.	116.	5-Mar-1990
89.17617	%	70.	82.	81.	120.	114.	120.	5-Mar-1990
89.17618	%	60.	80.	68.	150.	207.	69.	5-Mar-1990
89.17619	%	61.	999.	84.	140.	170.	70.	5-Mar-1990
89.17620	%	62.	85.	81.	160.	220.	62.	5-Mar-1990
89.17622	%	58.	69.	66.	76.	75.	91.	5-Mar-1990

EPA Limits:

Water	%	21 - 100	10 - 94	35 - 114	43 - 116	10 - 123	33 - 141
Soil	%	25 - 121	24 - 113	23 - 120	30 - 115	19 - 122	18 - 137

Analyst	Section Leader	QA Officer
3/7/90	3/7/90	3-7-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS

REQUEST NUMBER: 8298
SAMPLE NUMBER: Blank 12/13
DATA FILE NAME: >S2Q04

TARGET COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/Kg)	LOQ** (ug/Kg)
2-Nitroaniline	88-74-4	<LOQ	330.0
Dimethylphthalate	131-11-3	<LOQ	330.0
Acenaphthylene	208-96-8	<LOQ	330.0
3-Nitroaniline	99-09-2	<LOQ	330.0
Acenaphthene	83-32-9	<LOQ	330.0
2,4-Dinitrophenol	51-28-5	<LOQ	330.0
4-Nitrophenol	100-02-7	<LOQ	330.0
Dibenzofuran	132-64-9	<LOQ	330.0
2,4-Dinitrotoluene	121-14-2	<LOQ	330.0
2,6-Dinitrotoluene	606-20-2	<LOQ	330.0
Diethylphthalate	84-66-2	<LOQ	330.0
4-Chlorophenyl-phenylether	7005-72-3	<LOQ	330.0
Fluorene	86-73-7	<LOQ	330.0
4-Nitroaniline	100-01-6	<LOQ	330.0
4,6-Dinitro-2-methylphenol	534-52-1	<LOQ	330.0
N-Nitrosodiphenylamine	86-30-6	<LOQ	330.0
Azobenzene	103-33-3	<LOQ	330.0
4-Bromophenyl-phenylether	101-55-3	<LOQ	330.0
Hexachlorobenzene	118-74-1	<LOQ	330.0
Pentachlorophenol	87-86-5	<LOQ	330.0
Phenanthrene	85-01-8	<LOQ	330.0
Anthracene	120-12-7	<LOQ	330.0
Di-n-Butylphthalate	87-74-2	<LOQ	330.0
Fluoranthene	206-44-0	<LOQ	330.0
Benzidine	92-87-5	<LOQ	330.0
Pyrene	129-00-0	<LOQ	330.0
Butylbenzylphthalate	85-68-7	<LOQ	330.0
3,3'-Dichlorobenzidine	91-94-1	<LOQ	330.0
Benzo(a)Anthracene	56-55-3	<LOQ	330.0
Bis(2-Ethylhexyl)Phthalate	117-81-7	<LOQ	330.0
Chrysene	218-01-9	<LOQ	330.0
Di-n-octyl phthalate	117-84-0	<LOQ	330.0
Benzo(b)fluoranthene	205-99-2	<LOQ	330.0
Benzo(k)fluoranthene	207-08-9	<LOQ	330.0
Benzo(a)Pyrene	50-32-8	<LOQ	330.0
Indeno(1,2,3-cd)Pyrene	193-39-5	<LOQ	330.0
Dibenzo(a,h)Anthracene	53-70-3	<LOQ	330.0
Benzo(g,h,i)Perylene	191-24-2	<LOQ	330.0

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY, AND ENVIRONMENT DIVISION
HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS

REQUEST NUMBER: 8298	DATE EXTRACTED: 12/13/89
SAMPLE NUMBER: Blank 12/13	AMOUNT EXTRACTED: 61.1 g
DATA FILE ID: PS2004	DATE ANALYZED: 2/27/90
MATRIX: Sodium Sulfate blank	SUMMARY DATE: 3/1/90

TARGET COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/Kg)	LOQ** (ug/Kg)
N-Nitrosodimethylamine	62-75-9	<LOQ	330.0
Aniline	62-53-3	<LOQ	330.0
Phenol	108-95-2	<LOQ	330.0
bis(-2-Chloroethyl)Ether	111-44-4	<LOQ	330.0
2-Chlorophenol	95-57-8	<LOQ	330.0
1,3 Dichlorobenzene	541-73-1	<LOQ	330.0
1,4 Dichlorobenzene	106-46-7	<LOQ	330.0
Benzyl Alcohol	100-51-6	<LOQ	330.0
1,2-Dichlorobenzene	95-50-1	<LOQ	330.0
2-Methylphenol	95-48-7	<LOQ	330.0
bis(2-Chloroisopropyl)Ether	108-60-1	<LOQ	330.0
4-Methylphenol	106-44-5	<LOQ	330.0
N-Nitroso-Di-n-propylamine	621-64-7	<LOQ	330.0
Hexachloroethane	67-72-1	<LOQ	330.0
Nitrobenzene	98-95-3	<LOQ	330.0
Isophorone	78-59-1	<LOQ	330.0
2-Nitrophenol	88-75-5	<LOQ	330.0
2,4-Dimethylphenol	105-67-9	<LOQ	330.0
Benzoic Acid	65-85-0	<LOQ	330.0
bis(-2-Chloroethoxy)Methane	111-91-1	<LOQ	330.0
2,4-Dichlorophenol	120-83-2	<LOQ	330.0
1,2,4-Trichlorobenzene	120-82-1	<LOQ	330.0
Naphthalene	91-20-3	<LOQ	330.0
4-Chloroaniline	106-47-8	<LOQ	330.0
Hexachlorobutadiene	87-68-3	<LOQ	330.0
4-Chloro-3-methylphenol	59-50-7	<LOQ	330.0
2-Methylnaphthalene	91-57-6	<LOQ	330.0
Hexachlorocyclopentadiene	77-47-4	<LOQ	330.0
2,4,6-Trichlorophenol	88-06-2	<LOQ	330.0
2,4,5-Trichlorophenol	95-95-4	<LOQ	330.0
2-Chloronaphthalene	91-58-7	<LOQ	330.0

**LOQ = Limit Of Quantitation

POLYCHLORINATED BIPHENYL ANALYSES

REPORT NUMBER: 5242

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: DMS on 8-Jan-1990

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Dee Seitz

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 PROGRAM CODE: M292 TASK-ID:

SUMMARY of TOTAL PCB's for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-1	89.17609	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-2	89.17610	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-3	89.17611	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-4	89.17612	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-5	89.17613	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-6	89.17614	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-7	89.17615	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-8	89.17616	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-9	89.17617	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-10	89.17618	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-11	89.17619	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-12	89.17620	1336363	< 0.05		UG/G			Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125FS-1	89.17609	1336363	< 0.05		UG/G			Mixed-Aroclor
125FS-1	89.17609	53469219	< 0.05		UG/G	1/08/90		Aroclor 1242

125FS-1	89.17609	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-1	89.17609	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-2	89.17610	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-2	89.17610	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-2	89.17610	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-2	89.17610	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-3	89.17611	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-3	89.17611	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-3	89.17611	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-3	89.17611	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-4	89.17612	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-4	89.17612	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-4	89.17612	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-4	89.17612	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-5	89.17613	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-5	89.17613	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-5	89.17613	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-5	89.17613	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-6	89.17614	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-6	89.17614	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-6	89.17614	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-6	89.17614	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-7	89.17615	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-7	89.17615	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-7	89.17615	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-7	89.17615	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-8	89.17616	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-8	89.17616	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-8	89.17616	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-8	89.17616	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-9	89.17617	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-9	89.17617	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-9	89.17617	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-9	89.17617	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-10	89.17618	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-10	89.17618	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-10	89.17618	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-10	89.17618	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-11	89.17619	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-11	89.17619	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-11	89.17619	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254
125FS-11	89.17619	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260
125FS-12	89.17620	1336363	< 0.05	UG/G		Mixed-Aroclor
125FS-12	89.17620	53469219	< 0.05	UG/G	1/08/90	Aroclor 1242
125FS-12	89.17620	11097691	< 0.05	UG/G	1/08/90	Aroclor 1254

125FS-12	89.17620	11096825	< 0.05	UG/G	1/08/90	Aroclor 1260

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REPORT NUMBER: 5242 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: DMS on 8-Jan-1990

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Dee Seitz

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 PROGRAM CODE: M292 TASK-ID:

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.20096	00.20096	1336363	10.1	2.	UG/G	11.	1.	1/08/90	UNDER CONTROL	Mixed-Aroclor
00.20096	00.20096	53469219	< 0.05		UG/G			1/08/90	UNDER CONTROL	Aroclor 1242
00.20096	00.20096	11097691	< 0.05		UG/G			1/08/90	UNDER CONTROL	Aroclor 1254
00.20096	00.20096	11096825	10.1	2.	UG/G	11.	1.	1/08/90	UNDER CONTROL	Aroclor 1260

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.17623	1336363	13.4	2.7	UG/G	1/08/90	UNDER CONTROL	Mixed-Aroclor
89.17623	53469219	< 0.05		UG/G	1/08/90	UNDER CONTROL	Aroclor 1242
89.17623	11097691	< 0.05		UG/G	1/08/90	UNDER CONTROL	Aroclor 1254
89.17623	11096825	13.4	2.7	UG/G	1/08/90	UNDER CONTROL	Aroclor 1260
89.18314	1336363	22.8	4.6	UG/G	1/08/90	UNDER CONTROL	Mixed-Aroclor
89.18314	53469219	< 0.05		UG/G	1/08/90	UNDER CONTROL	Aroclor 1242
89.18314	11097691	< 0.05		UG/G	1/08/90	UNDER CONTROL	Aroclor 1254
89.18314	11096825	22.8	4.6	UG/G	1/08/90	UNDER CONTROL	Aroclor 1260

Analyst	Section Leader	QA Officer
1/10/90	1/12/90	1-12-90
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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METAL ANALYSES

39.17609 - 20

REPORT NUMBER: 5083

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: IMF on 11-Dec-1989

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Trudi Freeman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

TA-35
TSL-125 SF
Final Soils Verification

Rec'd 12/14/89
Posted 12/14/89

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	AG	0.004	0.003	MG/L	12/08/89	
125FS-1	89.17609	AG	0.004	0.003	MG/L	12/08/89	
125FS-1	89.17609	AS	< 10.		UG/L	12/08/89	
125FS-1	89.17609	AS	11.	10.	UG/L	12/08/89	
125FS-1	89.17609	SB	< 5.		UG/L	12/11/89	
125FS-1	89.17609	SB	< 5.		UG/L	12/08/89	
125FS-1	89.17609	SE	1.	1.	UG/L	12/11/89	
125FS-1	89.17609	SE	2.	1.	UG/L	12/08/89	
125FS-2	89.17610	AG	< 0.003		MG/L	12/08/89	
125FS-2	89.17610	AG	< 0.003		MG/L	12/08/89	
125FS-2	89.17610	AS	< 10.		UG/L	12/08/89	
125FS-2	89.17610	AS	< 10.		UG/L	12/08/89	
125FS-2	89.17610	SB	< 5.		UG/L	12/08/89	
125FS-2	89.17610	SB	< 5.		UG/L	12/11/89	
125FS-2	89.17610	SE	1.	1.	UG/L	12/11/89	
125FS-2	89.17610	SE	< 1.		UG/L	12/08/89	
125FS-3	89.17611	AG	< 0.003		MG/L	12/08/89	
125FS-3	89.17611	AG	< 0.003		MG/L	12/08/89	
125FS-3	89.17611	AG	0.003	0.003	MG/L	12/08/89	
125FS-3	89.17611	AS	< 10.		UG/L	12/08/89	
125FS-3	89.17611	AS	< 10.		UG/L	12/08/89	
125FS-3	89.17611	SB	< 5.		UG/L	12/08/89	
125FS-3	89.17611	SB	< 5.		UG/L	12/11/89	
125FS-3	89.17611	SE	< 1.		UG/L	12/08/89	
125FS-3	89.17611	SE	< 1.		UG/L	12/11/89	
125FS-4	89.17612	AG	< 0.003		MG/L	12/08/89	
125FS-4	89.17612	AG	0.003	0.003	MG/L	12/08/89	
125FS-4	89.17612	AS	22.	10.	UG/L	12/08/89	
125FS-4	89.17612	SB	< 5.		UG/L	12/08/89	
125FS-4	89.17612	SB	< 5.		UG/L	12/11/89	
125FS-4	89.17612	SE	2.6	1.	UG/L	12/11/89	
125FS-4	89.17612	SE	2.4	1.	UG/L	12/08/89	
125FS-5	89.17613	AG	< 0.003		MG/L	12/08/89	
125FS-5	89.17613	AG	0.003	0.003	MG/L	12/08/89	
125FS-5	89.17613	AS	< 10.		UG/L	12/08/89	
125FS-5	89.17613	AS	10.	10.	UG/L	12/08/89	
125FS-5	89.17613	SB	< 5.		UG/L	12/11/89	
125FS-5	89.17613	SB	< 5.		UG/L	12/08/89	
125FS-5	89.17613	SE	< 1.		UG/L	12/08/89	

125FS-5	89.17613 SE	< 1.		UG/L	12/11/89
125FS-6	89.17614 AG	< 0.003		MG/L	12/08/89
125FS-6	89.17614 AG	< 0.003		MG/L	12/08/89
125FS-6	89.17614 AS	10.	10.	UG/L	12/08/89
125FS-6	89.17614 AS	< 10.		UG/L	12/08/89
125FS-6	89.17614 SB	< 5.		UG/L	12/08/89
125FS-6	89.17614 SB	< 5.		UG/L	12/11/89
125FS-6	89.17614 SE	< 1.		UG/L	12/08/89
125FS-6	89.17614 SE	< 1.		UG/L	12/11/89
125FS-7	89.17615 AG	0.004	0.003	MG/L	12/08/89
125FS-7	89.17615 AG	< 0.003		MG/L	12/08/89
125FS-7	89.17615 AS	< 10.		UG/L	12/08/89
125FS-7	89.17615 AS	< 10.		UG/L	12/08/89
125FS-7	89.17615 SB	< 5.		UG/L	12/11/89
125FS-7	89.17615 SB	< 5.		UG/L	12/08/89
125FS-7	89.17615 SE	< 1.		UG/L	12/08/89
125FS-7	89.17615 SE	< 1.		UG/L	12/11/89
125FS-8	89.17616 AG	< 0.003		MG/L	12/08/89
125FS-8	89.17616 AG	< 0.003		MG/L	12/08/89
125FS-8	89.17616 AS	< 10.		UG/L	12/08/89
125FS-8	89.17616 AS	< 10.		UG/L	12/08/89
125FS-8	89.17616 SB	< 5.		UG/L	12/11/89
125FS-8	89.17616 SB	< 5.		UG/L	12/08/89
125FS-8	89.17616 SE	< 1.		UG/L	12/11/89
125FS-8	89.17616 SE	< 1.		UG/L	12/08/89
125FS-9	89.17617 AG	0.003	0.003	MG/L	12/08/89
125FS-9	89.17617 AS	< 10.		UG/L	12/08/89
125FS-9	89.17617 AS	< 10.		UG/L	12/08/89
125FS-9	89.17617 SB	< 5.		UG/L	12/11/89
125FS-9	89.17617 SB	< 5.		UG/L	12/08/89
125FS-9	89.17617 SE	< 1.		UG/L	12/08/89
125FS-9	89.17617 SE	< 1.		UG/L	12/11/89
125FS-10	89.17618 AG	0.007	0.003	MG/L	12/08/89
125FS-10	89.17618 AG	< 0.003		MG/L	12/08/89
125FS-10	89.17618 AS	< 10.		UG/L	12/08/89
125FS-10	89.17618 AS	< 10.		UG/L	12/08/89
125FS-10	89.17618 SB	< 5.		UG/L	12/08/89
125FS-10	89.17618 SB	< 5.		UG/L	12/11/89
125FS-10	89.17618 SE	< 1.		UG/L	12/11/89
125FS-10	89.17618 SE	< 1.		UG/L	12/08/89
125FS-11	89.17619 AG	0.005	0.003	MG/L	12/08/89
125FS-11	89.17619 AG	0.006	0.003	MG/L	12/08/89
125FS-11	89.17619 AS	< 10.		UG/L	12/08/89
125FS-11	89.17619 AS	< 10.		UG/L	12/08/89
125FS-11	89.17619 SB	< 5.		UG/L	12/08/89
125FS-11	89.17619 SB	< 5.		UG/L	12/11/89
125FS-11	89.17619 SE	2.3	1.	UG/L	12/08/89
125FS-11	89.17619 SE	< 1.		UG/L	12/11/89
125FS-12	89.17620 AG	< 0.003		MG/L	12/08/89
125FS-12	89.17620 AG	< 0.003		MG/L	12/08/89
125FS-12	89.17620 AS	< 10.		UG/L	12/08/89
125FS-12	89.17620 AS	< 10.		UG/L	12/08/89
125FS-12	89.17620 SB	< 5.		UG/L	12/08/89
125FS-12	89.17620 SB	< 5.		UG/L	12/11/89
125FS-12	89.17620 SE	< 1.		UG/L	12/08/89
125FS-12	89.17620 SE	< 1.		UG/L	12/11/89

REPORT NUMBER: 5083 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: TMF on 11-Dec-1989

REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COM
00.01010	00.01010	AS	32.9	6.	UG/L	27.	3.	12 UNDER CONT
00.01010	00.01010	AS	29.7	6.	UG/L	27.	3.	12 UNDER CONT
00.01010	00.01010	AS	29.7	6.	UG/L	27.	3.	12/ UNDER CONT
00.01010	00.01010	SE	12.	2.	UG/L	11.	2.	12 UNDER CONT
00.01010	00.01010	SE	13.3	2.	UG/L	11.	2.	12/ UNDER CONT
00.01010	00.01010	SE	15.	3.	UG/L	11.	2.	12/ UNDER CONT
00.01024	00.01024	SB	9.1	5.	UG/L	8.46	0.73	12/ UNDER CONT
00.01024	00.01024	SB	8.5	5.	UG/L	8.46	0.73	12/ UNDER CONT
00.01024	00.01024	SB	9.3	5.	UG/L	8.46	0.73	12/ UNDER CONT
00.98805	00.98805	AG	0.502	0.05	MG/L	0.5	0.05	12 UNDER CONT
00.98805	00.98805	AG	0.495	0.05	MG/L	0.5	0.05	12/ UNDER CONTROL
00.98805	00.98805	AG	0.516	0.05	MG/L	0.5	0.05	12/ UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17625	AG	1.5	0.2	MG/L	12/08/89	UNDER CONTROL
89.17625	AG	1.5	0.2	MG/L	12/08/89	UNDER CONTROL
89.17625	AS	87.6	18.	UG/L	12/08/89	UNDER CONTROL
89.17625	AS	86.	18.	UG/L	12/08/89	UNDER CONTROL
89.17625	SE	51.8	10.	UG/L	12/11/89	UNDER CONTROL
89.17625	SE	56.	10.	UG/L	12/08/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
12-11-89	12-11-89	12-12-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 4862

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: BA REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	28.	2.8	UG/G	11/16/89	TOTALS
125FS-2	89.17610	53.	5.3	UG/G	11/16/89	TOTALS
125FS-3	89.17611	11.	1.1	UG/G	11/16/89	TOTALS
125FS-4	89.17612	16.	1.6	UG/G	11/16/89	TOTALS
125FS-5	89.17613	15.	1.5	UG/G	11/16/89	TOTALS
125FS-6	89.17614	15.	1.5	UG/G	11/16/89	TOTALS
125FS-7	89.17615	13.	1.3	UG/G	11/16/89	TOTALS
125FS-8	89.17616	11.	1.1	UG/G	11/16/89	TOTALS
125FS-9	89.17617	11.	1.1	UG/G	11/16/89	TOTALS
125FS-10	89.17618	13.	1.3	UG/G	11/16/89	TOTALS
125FS-11	89.17619	12.	1.2	UG/G	11/16/89	TOTALS
125FS-12	89.17620	12.	1.2	UG/G	11/16/89	TOTALS

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REPORT NUMBER: 4862 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: BA REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	9.8	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.5	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	9.8	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	4.8	0.5	MG/L	11/16/89	UNDER CONTROL

JD Montoya
Analyst

MYB
Section Leader

NK for MAG
QA Officer

11-29-89
Date

11-29-89
Date

11/29/89
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4863

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: BE REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 2.5		UG/G	11/16/89	TOTALS
125FS-2	89.17610	< 2.5		UG/G	11/16/89	TOTALS
125FS-3	89.17611	< 2.5		UG/G	11/16/89	TOTALS
125FS-4	89.17612	< 2.5		UG/G	11/16/89	TOTALS
125FS-5	89.17613	< 2.5		UG/G	11/16/89	TOTALS
125FS-6	89.17614	< 2.5		UG/G	11/16/89	TOTALS
125FS-7	89.17615	< 2.5		UG/G	11/16/89	TOTALS
125FS-8	89.17616	< 2.5		UG/G	11/16/89	TOTALS
125FS-9	89.17617	< 2.5		UG/G	11/16/89	TOTALS
125FS-10	89.17618	< 2.5		UG/G	11/16/89	TOTALS
125FS-11	89.17619	< 2.5		UG/G	11/16/89	TOTALS
125FS-12	89.17620	< 2.5		UG/G	11/16/89	TOTALS

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REPORT NUMBER: 4863 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: BE REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	9.9	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	2.	0.2	MG/L	11/16/89	UNDER CONTROL

JD Montoya	MYB	NK for MAG
Analyst	Section Leader	QA Officer
11-29-89	11-29-89	11/29/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4864

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: CD REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 5.		UG/G	11/16/89	TOTALS
125FS-2	89.17610	< 5.		UG/G	11/16/89	TOTALS
125FS-3	89.17611	< 5.		UG/G	11/16/89	TOTALS
125FS-4	89.17612	< 5.		UG/G	11/16/89	TOTALS
125FS-5	89.17613	< 5.		UG/G	11/16/89	TOTALS
125FS-6	89.17614	< 5.		UG/G	11/16/89	TOTALS
125FS-7	89.17615	< 5.		UG/G	11/16/89	TOTALS
125FS-8	89.17616	< 5.		UG/G	11/16/89	TOTALS
125FS-9	89.17617	< 5.		UG/G	11/16/89	TOTALS
125FS-10	89.17618	< 5.		UG/G	11/16/89	TOTALS
125FS-11	89.17619	< 5.		UG/G	11/16/89	TOTALS
125FS-12	89.17620	< 5.		UG/G	11/16/89	TOTALS

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REPORT NUMBER: 4864 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: CD REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	9.8	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	9.8	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.5	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	1.	0.1	MG/L	11/16/89	UNDER CONTROL

JD Montoya
Analyst

MAG
Section Leader

NK for MAG
QA Officer

11-29-89
Date

11-29-89
Date

11/29/89
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 4865

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: CR REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 10.		UG/G	11/16/89	TOTALS
125FS-2	89.17610	< 10.		UG/G	11/16/89	TOTALS
125FS-3	89.17611	< 10.		UG/G	11/16/89	TOTALS
125FS-4	89.17612	< 10.		UG/G	11/16/89	TOTALS
125FS-5	89.17613	< 10.		UG/G	11/16/89	TOTALS
125FS-6	89.17614	< 10.		UG/G	11/16/89	TOTALS
125FS-7	89.17615	< 10.		UG/G	11/16/89	TOTALS
125FS-8	89.17616	< 10.		UG/G	11/16/89	TOTALS
125FS-9	89.17617	< 10.		UG/G	11/16/89	TOTALS
125FS-10	89.17618	< 10.		UG/G	11/16/89	TOTALS
125FS-11	89.17619	< 10.		UG/G	11/16/89	TOTALS
125FS-12	89.17620	< 10.		UG/G	11/16/89	TOTALS

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REPORT NUMBER: 4865 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: CR REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.6	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.6	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	4.	0.4	MG/L	11/16/89	UNDER CONTROL

JD Montoya
Analyst

MAB
Section Leader

NK for MAG
QA Officer

11-24-89
Date

11-29-89
Date

11/29/89
Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 5084

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: MAB on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Malti Bhatia

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7480

TA-35
TSL-125 SF
Final Soils
Verification
Rec'd
12/14/89

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 0.025		UG/G	12/04/89	
125FS-1	89.17609	< 0.025		UG/G	12/04/89	
125FS-2	89.17610	0.032	0.025	UG/G	12/04/89	
125FS-2	89.17610	0.027	0.025	UG/G	12/04/89	
125FS-3	89.17611	< 0.025		UG/G	12/04/89	
125FS-3	89.17611	< 0.025		UG/G	12/04/89	
125FS-4	89.17612	< 0.025		UG/G	12/04/89	
125FS-4	89.17612	< 0.025		UG/G	12/04/89	
125FS-5	89.17613	< 0.025		UG/G	12/04/89	
125FS-5	89.17613	< 0.025		UG/G	12/04/89	
125FS-6	89.17614	< 0.025		UG/G	12/04/89	
125FS-6	89.17614	0.028	0.025	UG/G	12/04/89	
125FS-7	89.17615	< 0.025		UG/G	12/04/89	
125FS-7	89.17615	< 0.025		UG/G	12/04/89	
125FS-8	89.17616	< 0.025		UG/G	12/06/89	
125FS-8	89.17616	< 0.025		UG/G	12/04/89	
125FS-9	89.17617	0.073	0.025	UG/G	12/04/89	
125FS-9	89.17617	0.073	0.025	UG/G	12/06/89	
125FS-10	89.17618	0.07	0.025	UG/G	12/06/89	
125FS-10	89.17618	0.09	0.025	UG/G	12/04/89	
125FS-11	89.17619	0.065	0.025	UG/G	12/04/89	
125FS-11	89.17619	0.074	0.025	UG/G	12/06/89	
125FS-11	89.17619	0.065	0.025	UG/G	12/06/89	
125FS-12	89.17620	0.075	0.025	UG/G	12/04/89	

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REPORT NUMBER: 5084 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: MAB on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Malti Bhatia

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7480

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	
00.00549	00.00549	1.38	0.2	UG/G	1.44	0.07	12/05/89	UNDER
00.00608	00.00608	1.35	0.2	UG/G	1.1	0.5	12/05/89	UNDER
00.20086	00.20086	3.96	0.4	UG/L	4.	0.4	12/05/89	UNDER
00.20087	00.20087	3.97	0.4	UG/L	4.	0.4	12/05/89	UNDER
00.20210	00.20210	2.02	0.2	UG/L	2.	0.2	12/05/89	UNDER

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17626	3.5	0.35	UG/L	12/04/89	UNDER CONTROL

Analyst	Section Leader	QA Officer
12/11/89	12-11-89	12-12-89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

NUMBER: 4866

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: PB REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 100.		UG/G	11/16/89	TOTALS
125FS-2	89.17610	< 100.		UG/G	11/16/89	TOTALS
125FS-3	89.17611	< 100.		UG/G	11/16/89	TOTALS
125FS-4	89.17612	< 100.		UG/G	11/16/89	TOTALS
125FS-5	89.17613	< 100.		UG/G	11/16/89	TOTALS
125FS-6	89.17614	< 100.		UG/G	11/16/89	TOTALS
125FS-7	89.17615	< 100.		UG/G	11/16/89	TOTALS
125FS-8	89.17616	< 100.		UG/G	11/16/89	TOTALS
125FS-9	89.17617	< 100.		UG/G	11/16/89	TOTALS
125FS-10	89.17618	< 100.		UG/G	11/16/89	TOTALS
125FS-11	89.17619	< 100.		UG/G	11/16/89	TOTALS
125FS-12	89.17620	< 100.		UG/G	11/16/89	TOTALS

****

REPORT NUMBER: 4866 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: PB REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.7	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.7	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	4.8	2.	MG/L	11/16/89	UNDER CONTROL

JD Montoya	[illegible]	NK for MAG
Analyst	Section Leader	QA Officer
11-29-89	11-29-89	11/29/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4867

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: NI REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 40.		UG/G	11/16/89	TOTALS
125FS-2	89.17610	< 40.		UG/G	11/16/89	TOTALS
125FS-3	89.17611	< 40.		UG/G	11/16/89	TOTALS
125FS-4	89.17612	< 40.		UG/G	11/16/89	TOTALS
125FS-5	89.17613	< 40.		UG/G	11/16/89	TOTALS
125FS-6	89.17614	< 40.		UG/G	11/16/89	TOTALS
125FS-7	89.17615	< 40.		UG/G	11/16/89	TOTALS
125FS-8	89.17616	< 40.		UG/G	11/16/89	TOTALS
125FS-9	89.17617	< 40.		UG/G	11/16/89	TOTALS
125FS-10	89.17618	< 40.		UG/G	11/16/89	TOTALS
125FS-11	89.17619	< 40.		UG/G	11/16/89	TOTALS
125FS-12	89.17620	< 40.		UG/G	11/16/89	TOTALS

****

REPORT NUMBER: 4867 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: NI REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	10.8	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.2	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.3	1.	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	10.7	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	2.	0.8	MG/L	11/16/89	UNDER CONTROL

JD Montoya	MGB	NK for MAG
Analyst	Section Leader	QA Officer
11-29-89	11-29-89	11/29/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

REPORT NUMBER: 4868

TA-35 TSL-125
final ~~trifs~~ verification
App. VIII metals (total)

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: TL REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

Rec'd 12/1/89

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
125FS-1	89.17609	< 100.		UG/G	11/16/89	TOTALS
125FS-2	89.17610	< 100.		UG/G	11/16/89	TOTALS
125FS-3	89.17611	< 100.		UG/G	11/16/89	TOTALS
125FS-4	89.17612	< 100.		UG/G	11/16/89	TOTALS
125FS-5	89.17613	< 100.		UG/G	11/16/89	TOTALS
125FS-6	89.17614	< 100.		UG/G	11/16/89	TOTALS
125FS-7	89.17615	< 100.		UG/G	11/16/89	TOTALS
125FS-8	89.17616	< 100.		UG/G	11/16/89	TOTALS
125FS-9	89.17617	< 100.		UG/G	11/16/89	TOTALS
125FS-10	89.17618	< 100.		UG/G	11/16/89	TOTALS
125FS-11	89.17619	< 100.		UG/G	11/16/89	TOTALS
125FS-12	89.17620	< 100.		UG/G	11/16/89	TOTALS

****

REPORT NUMBER: 4868 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT *********

Prepared by: J. D. MONTOYA on 28-Nov-1989

ANALYSIS: TL REQUEST NUMBER: 8275 MATRIX: SS ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.20193	00.20193	11.7	1.2	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	11.4	1.1	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	11.5	1.2	MG/L	10.	1.	11/22/89	UNDER CONTROL
00.20193	00.20193	12.	1.2	MG/L	10.	1.	11/22/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.17624	5.2	2.	MG/L	11/16/89	UNDER CONTROL

JD Montoya	MAB	NK for MAG
Analyst	Section Leader	QA Officer
11-29-89	11-29-89	11/29/89
Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

ENCLOSURE 4-E

SOIL SAMPLES: EXCAVATION BACKFILL

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 8364

TSL-125 fill material

I. PRESAMPLING CONFERENCE

Program Code M292 Task# RC3 No. Samples Expected 3 Soil { VOC

Submission Date 12/14/89 Completion Date TBA

Chain of Custody? No. Special Protocol? (EPA etc.) None

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.) Volatiles/Soil

Container Type Glass/Teflon Preservative NONE
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions *(circle one or more)*: None Refrigerate Freeze Darkness

Sample Hazards Present? *(Circle one or more)*
No hazard Toxic Radioactive: alpha beta gamma Flammable Explosive/Reactive

Sample Disposal: Return____ Discard ____
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S. McLin HSE-9 Section Leader ____ Organic
Customer Phone 5-1721 MS K490 ____ Inorganic
Date 12/14/89 ____ Radiochem

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader ____
HSE-9 Group Leader ____
Date ____

REQ	SAM NUM	CUST NUM
8364	89.18398	125F-1
8364	89.18399	125F-2
8364	89.18400	125F-3

III. SAMPLE RECEIPT

Signature Elizabeth A. Jones Date 12/14/89 Total No. Samples Received 3 + ~~10C~~

HSE-9 Sample No. Range 89.18398 to 89.18400.

Customer Sample No. Range 125F-1 to 125F-3.

Rec'd analyses back on 1/16/90

3-8-89

VOLATILE ORGANIC ANALYSES

REPORT NUMBER: 5238

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 8364 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS		RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125F-1	89.18398	67641		130.	39.	UG/KG	1/04/90		Acetone
125F-1	89.18398	71432		< 5.		UG/KG	1/04/90		Benzene
125F-1	89.18398	108861		< 5.		UG/KG	1/04/90		Bromobenzene
125F-1	89.18398	74975		< 5.		UG/KG	1/04/90		Bromochloromethane
125F-1	89.18398	75274		< 5.		UG/KG	1/04/90		Bromodichloromethane
125F-1	89.18398	75252		< 5.		UG/KG	1/04/90		Bromoform
125F-1	89.18398	74839		< 10.		UG/KG	1/04/90		Bromomethane
125F-1	89.18398	78933		22.7	6.8	UG/KG	1/04/90		2-Butanone
125F-1	89.18398	98066		< 5.		UG/KG	1/04/90		tert-Butylbenzene
125F-1	89.18398	135988		< 5.		UG/KG	1/04/90		sec-Butylbenzene
125F-1	89.18398	104518		< 5.		UG/KG	1/04/90		n-Butylbenzene
125F-1	89.18398	75150		< 5.		UG/KG	1/04/90		Carbon disulfide
125F-1	89.18398	56235		< 5.		UG/KG	1/04/90		Carbon tetrachloride
125F-1	89.18398	108907		< 5.		UG/KG	1/04/90		Chlorobenzene
125F-1	89.18398	124481		< 5.		UG/KG	1/04/90		Chlorodibromomethane
125F-1	89.18398	75003		< 10.		UG/KG	1/04/90		Chloroethane
125F-1	89.18398	67663		< 5.		UG/KG	1/04/90		Chloroform
125F-1	89.18398	74873		< 10.		UG/KG	1/04/90		Chloromethane
125F-1	89.18398	95498		< 5.		UG/KG	1/04/90		o-Chlorotoluene
125F-1	89.18398	106434		< 5.		UG/KG	1/04/90		p-Chlorotoluene
125F-1	89.18398	54823982	TI			UG/KG	1/04/90		Cyclohexane, trans-1-(cyclohexylmethyl)-4-methyl-
125F-1	89.18398	873949	TI			UG/KG	1/04/90		Cyclohexanone, 3,3,5-Trimethyl-
125F-1	89.18398	96128		< 10.		UG/KG	1/04/90		1,2-Dibromo-3-chloropropane
125F-1	89.18398	106934		< 5.		UG/KG	1/04/90		1,2-Dibromoethane
125F-1	89.18398	74953		< 5.		UG/KG	1/04/90		Dibromomethane

125F-1	89.18398	95501		< 5.		UG/KG	1/04/90	o-Dichlorobenzene (1,2)
125F-1	89.18398	541731		< 5.		UG/KG	1/04/90	m-Dichlorobenzene (1,3)
125F-1	89.18398	106467		< 5.		UG/KG	1/04/90	p-Dichlorobenzene (1,4)
125F-1	89.18398	107062		< 5.		UG/KG	1/04/90	1,2-Dichloroethane
125F-1	89.18398	75343		< 5.		UG/KG	1/04/90	1,1-Dichloroethane
125F-1	89.18398	156605		< 5.		UG/KG	1/04/90	trans-1,2-Dichloroethene
125F-1	89.18398	75354		< 5.		UG/KG	1/04/90	1,1-Dichloroethene
125F-1	89.18398	156592		< 5.		UG/KG	1/04/90	cis-1,2-Dichloroethylene
125F-1	89.18398	142289		< 5.		UG/KG	1/04/90	1,3-Dichloropropane
125F-1	89.18398	594207		< 5.		UG/KG	1/04/90	2,2-Dichloropropane
125F-1	89.18398	78875		< 5.		UG/KG	1/04/90	1,2-Dichloropropane
125F-1	89.18398	10061026		< 5.		UG/KG	1/04/90	trans-1,3-Dichloropropene
125F-1	89.18398	563586		< 5.		UG/KG	1/04/90	1,1-Dichloropropene
125F-1	89.18398	10061015		< 5.		UG/KG	1/04/90	cis-1,3-Dichloropropene
125F-1	89.18398	3664753	TI			UG/KG	1/04/90	Ethanone, 1-(2,2-dimethylcyclopentyl)-
125F-1	89.18398	100414		< 5.		UG/KG	1/04/90	Ethylbenzene
125F-1	89.18398	107062		< 5.		UG/KG	1/04/90	Ethylene chloride
125F-1	89.18398	55937923	TI			UG/KG	1/04/90	Heptane, 2-methyl-7-Pentyl-bicyclo[4.1.0]-
125F-1	89.18398	110430	TI			UG/KG	1/04/90	2-Heptanone
125F-1	89.18398	928687	TI			UG/KG	1/04/90	2-Heptanone, 6-Methyl-
125F-1	89.18398	87683		< 5.		UG/KG	1/04/90	Hexachlorobutadiene
125F-1	89.18398	591786		27.1	8.1	UG/KG	1/04/90	2-Hexanone
125F-1	89.18398	50598215	TI			UG/KG	1/04/90	4-Hexen-1-ol, 2-ethenyl-2,5-dimethyl-
125F-1	89.18398	98828		< 5.		UG/KG	1/04/90	Isopropylbenzene
125F-1	89.18398	99876		< 5.		UG/KG	1/04/90	4-Isopropyltoluene
125F-1	89.18398	108101		25.1	7.5	UG/KG	1/04/90	4-Methyl-2-pentanone
125F-1	89.18398	75092		< 5.		UG/KG	1/04/90	Methylene chloride
125F-1	89.18398	91203		< 5.		UG/KG	1/04/90	Naphthalene
125F-1	89.18398	2530861	TI			UG/KG	1/04/90	1-Propanamine, N,N-dimethyl-3-(trimethoxysilyl)-
125F-1	89.18398	103651		< 5.		UG/KG	1/04/90	Propylbenzene
125F-1	89.18398	100425		< 5.		UG/KG	1/04/90	Styrene
125F-1	89.18398	630206		< 5.		UG/KG	1/04/90	1,1,1,2-Tetrachloroethane
125F-1	89.18398	79345		< 5.		UG/KG	1/04/90	1,1,2,2-Tetrachloroethane
125F-1	89.18398	127184		< 5.		UG/KG	1/04/90	Tetrachloroethylene
125F-1	89.18398	108883		< 5.		UG/KG	1/04/90	Toluene
125F-1	89.18398	76131	TI			UG/KG	1/04/90	1,1,2-Trichloro-1,2,2-trifluoroethane
125F-1	89.18398	87616		< 5.		UG/KG	1/04/90	1,2,3-Trichlorobenzene
125F-1	89.18398	120821		< 5.		UG/KG	1/04/90	1,2,4-Trichlorobenzene
125F-1	89.18398	71556		11.7	3.5	UG/KG	1/04/90	1,1,1-Trichloroethane
125F-1	89.18398	79005		< 5.		UG/KG	1/04/90	1,1,2-Trichloroethane
125F-1	89.18398	79016		< 5.		UG/KG	1/04/90	Trichloroethene
125F-1	89.18398	75694		< 5.		UG/KG	1/04/90	Trichlorofluoromethane
125F-1	89.18398	96184		< 5.		UG/KG	1/04/90	1,2,3-Trichloropropane
125F-1	89.18398	108678		< 5.		UG/KG	1/04/90	1,3,5-Trimethylbenzene
125F-1	89.18398	95636		< 5.		UG/KG	1/04/90	1,2,4-Trimethylbenzene

125F-1	89.18398	108054	< 10.	UG/KG	1/04/90	Vinyl acetate
125F-1	89.18398	75014	< 10.	UG/KG	1/04/90	Vinyl chloride
125F-1	89.18398	95476	< 5.	UG/KG	1/04/90	o-Xylene
125F-1	89.18398	1330207	< 5.	UG/KG	1/04/90	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5238

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 8364 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS		RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125F-2	89.18399	67641		24.5	7.4	UG/KG	1/04/90		Acetone
125F-2	89.18399	71432		< 5.		UG/KG	1/04/90		Benzene
125F-2	89.18399	108861		< 5.		UG/KG	1/04/90		Bromobenzene
125F-2	89.18399	74975		< 5.		UG/KG	1/04/90		Bromochloromethane
125F-2	89.18399	75274		< 5.		UG/KG	1/04/90		Bromodichloromethane
125F-2	89.18399	75252		< 5.		UG/KG	1/04/90		Bromoform
125F-2	89.18399	74839		< 10.		UG/KG	1/04/90		Bromomethane
125F-2	89.18399	78933		< 20.		UG/KG	1/04/90		2-Butanone
125F-2	89.18399	135988		< 5.		UG/KG	1/04/90		sec-Butylbenzene
125F-2	89.18399	104518		< 5.		UG/KG	1/04/90		n-Butylbenzene
125F-2	89.18399	98066		< 5.		UG/KG	1/04/90		tert-Butylbenzene
125F-2	89.18399	75150		< 5.		UG/KG	1/04/90		Carbon disulfide
125F-2	89.18399	56235		< 5.		UG/KG	1/04/90		Carbon tetrachloride
125F-2	89.18399	108907		< 5.		UG/KG	1/04/90		Chlorobenzene
125F-2	89.18399	124481		< 5.		UG/KG	1/04/90		Chlorodibromomethane
125F-2	89.18399	75003		< 10.		UG/KG	1/04/90		Chloroethane
125F-2	89.18399	67663		< 5.		UG/KG	1/04/90		Chloroform
125F-2	89.18399	74873		< 10.		UG/KG	1/04/90		Chloromethane
125F-2	89.18399	106434		< 5.		UG/KG	1/04/90		p-Chlorotoluene
125F-2	89.18399	95498		< 5.		UG/KG	1/04/90		o-Chlorotoluene
125F-2	89.18399	54823959	TI			UG/KG	1/04/90		Cyclohexane, trans-1-(cyclohexylmethyl)-3-methyl-
125F-2	89.18399	69147031	TI			UG/KG	1/04/90		Cyclopropane, 1,1-dimethyl-2-(2-methyl-2-propenyl)- *
125F-2	89.18399	96128		< 10.		UG/KG	1/04/90		1,2-Dibromo-3-chloropropane
125F-2	89.18399	106934		< 5.		UG/KG	1/04/90		1,2-Dibromoethane
125F-2	89.18399	74953		< 5.		UG/KG	1/04/90		Dibromomethane

125F-2	89.18399	95501		< 5.	UG/KG	1/04/90	o-Dichlorobenzene (1,2)
125F-2	89.18399	541731		< 5.	UG/KG	1/04/90	m-Dichlorobenzene (1,3)
125F-2	89.18399	106467		< 5.	UG/KG	1/04/90	p-Dichlorobenzene (1,4)
125F-2	89.18399	75343		< 5.	UG/KG	1/04/90	1,1-Dichloroethane
125F-2	89.18399	107062		< 5.	UG/KG	1/04/90	1,2-Dichloroethane
125F-2	89.18399	75354		< 5.	UG/KG	1/04/90	1,1-Dichloroethene
125F-2	89.18399	156605		< 5.	UG/KG	1/04/90	trans-1,2-Dichloroethene
125F-2	89.18399	156592		< 5.	UG/KG	1/04/90	cis-1,2-Dichloroethylene
125F-2	89.18399	594207		< 5.	UG/KG	1/04/90	2,2-Dichloropropane
125F-2	89.18399	142289		< 5.	UG/KG	1/04/90	1,3-Dichloropropane
125F-2	89.18399	78875		< 5.	UG/KG	1/04/90	1,2-Dichloropropane
125F-2	89.18399	10061015		< 5.	UG/KG	1/04/90	cis-1,3-Dichloropropene
125F-2	89.18399	10061026		< 5.	UG/KG	1/04/90	trans-1,3-Dichloropropene
125F-2	89.18399	563586		< 5.	UG/KG	1/04/90	1,1-Dichloropropene
125F-2	89.18399	3664753	TI		UG/KG	1/04/90	Ethanone, 1-(2,2-dimethylcyclopentyl)-
125F-2	89.18399	100414		< 5.	UG/KG	1/04/90	Ethylbenzene
125F-2	89.18399	107062		< 5.	UG/KG	1/04/90	Ethylene chloride
125F-2	89.18399	928687	TI		UG/KG	1/04/90	2-Heptanone, 6-Methyl-
125F-2	89.18399	87683		< 5.	UG/KG	1/04/90	Hexachlorobutadiene
125F-2	89.18399	591786		< 20.	UG/KG	1/04/90	2-Hexanone
125F-2	89.18399	50598215	TI		UG/KG	1/04/90	4-Hexen-1-ol, 2-ethenyl-2,5-dimethyl-
125F-2	89.18399	98828		< 5.	UG/KG	1/04/90	Isopropylbenzene
125F-2	89.18399	99876		< 5.	UG/KG	1/04/90	4-Isopropyltoluene
125F-2	89.18399	108101		< 20.	UG/KG	1/04/90	4-Methyl-2-pentanone
125F-2	89.18399	75092		< 5.	UG/KG	1/04/90	Methylene chloride
125F-2	89.18399	91203		< 5.	UG/KG	1/04/90	Naphthalene
125F-2	89.18399	103651		< 5.	UG/KG	1/04/90	Propylbenzene
125F-2	89.18399	100425		< 5.	UG/KG	1/04/90	Styrene
125F-2	89.18399	630206		< 5.	UG/KG	1/04/90	1,1,1,2-Tetrachloroethane
125F-2	89.18399	79345		< 5.	UG/KG	1/04/90	1,1,2,2-Tetrachloroethane
125F-2	89.18399	127184		< 5.	UG/KG	1/04/90	Tetrachloroethylene
125F-2	89.18399	108883		< 5.	UG/KG	1/04/90	Toluene
125F-2	89.18399	76131	TI		UG/KG	1/04/90	1,1,2-Trichloro-1,2,2-trifluoroethane
125F-2	89.18399	87616		< 5.	UG/KG	1/04/90	1,2,3-Trichlorobenzene
125F-2	89.18399	120821		< 5.	UG/KG	1/04/90	1,2,4-Trichlorobenzene
125F-2	89.18399	79005		< 5.	UG/KG	1/04/90	1,1,2-Trichloroethane
125F-2	89.18399	71556		< 5.	UG/KG	1/04/90	1,1,1-Trichloroethane
125F-2	89.18399	79016		< 5.	UG/KG	1/04/90	Trichloroethene
125F-2	89.18399	75694		< 5.	UG/KG	1/04/90	Trichlorofluoromethane
125F-2	89.18399	96184		< 5.	UG/KG	1/04/90	1,2,3-Trichloropropane
125F-2	89.18399	108678		< 5.	UG/KG	1/04/90	1,3,5-Trimethylbenzene
125F-2	89.18399	95636		< 5.	UG/KG	1/04/90	1,2,4-Trimethylbenzene
125F-2	89.18399	108054		< 10.	UG/KG	1/04/90	Vinyl acetate
125F-2	89.18399	75014		< 10.	UG/KG	1/04/90	Vinyl chloride
125F-2	89.18399	95476		< 5.	UG/KG	1/04/90	o-Xylene

125F-2	89.18399	1330207	< 5.	UG/KG	1/04/90	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5238

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: CPR on 6-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 8364 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M292

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125F-3	89.18400	67641	< 20.		UG/KG	1/04/90		Acetone
125F-3	89.18400	71432	< 5.		UG/KG	1/04/90		Benzene
125F-3	89.18400	108861	< 5.		UG/KG	1/04/90		Bromobenzene
125F-3	89.18400	74975	< 5.		UG/KG	1/04/90		Bromochloromethane
125F-3	89.18400	75274	< 5.		UG/KG	1/04/90		Bromodichloromethane
125F-3	89.18400	75252	< 5.		UG/KG	1/04/90		Bromoform
125F-3	89.18400	74839	< 10.		UG/KG	1/04/90		Bromomethane
125F-3	89.18400	78933	< 20.		UG/KG	1/04/90		2-Butanone
125F-3	89.18400	135988	< 5.		UG/KG	1/04/90		sec-Butylbenzene
125F-3	89.18400	98066	< 5.		UG/KG	1/04/90		tert-Butylbenzene
125F-3	89.18400	104518	< 5.		UG/KG	1/04/90		n-Butylbenzene
125F-3	89.18400	75150	< 5.		UG/KG	1/04/90		Carbon disulfide
125F-3	89.18400	56235	< 5.		UG/KG	1/04/90		Carbon tetrachloride
125F-3	89.18400	108907	< 5.		UG/KG	1/04/90		Chlorobenzene
125F-3	89.18400	124481	< 5.		UG/KG	1/04/90		Chlorodibromomethane
125F-3	89.18400	75003	< 10.		UG/KG	1/04/90		Chloroethane
125F-3	89.18400	67663	< 5.		UG/KG	1/04/90		Chloroform
125F-3	89.18400	74873	< 10.		UG/KG	1/04/90		Chloromethane
125F-3	89.18400	95498	< 5.		UG/KG	1/04/90		o-Chlorotoluene
125F-3	89.18400	106434	< 5.		UG/KG	1/04/90		p-Chlorotoluene
125F-3	89.18400	96128	< 10.		UG/KG	1/04/90		1,2-Dibromo-3-chloropropane
125F-3	89.18400	106934	< 5.		UG/KG	1/04/90		1,2-Dibromoethane
125F-3	89.18400	74953	< 5.		UG/KG	1/04/90		Dibromomethane
125F-3	89.18400	95501	< 5.		UG/KG	1/04/90		o-Dichlorobenzene (1,2)
125F-3	89.18400	541731	< 5.		UG/KG	1/04/90		m-Dichlorobenzene (1,3)

125F-3	89.18400	106467		< 5.	UG/KG	1/04/90	p-Dichlorobenzene (1,4)
125F-3	89.18400	75343		< 5.	UG/KG	1/04/90	1,1-Dichloroethane
125F-3	89.18400	107062		< 5.	UG/KG	1/04/90	1,2-Dichloroethane
125F-3	89.18400	156605		< 5.	UG/KG	1/04/90	trans-1,2-Dichloroethene
125F-3	89.18400	75354		< 5.	UG/KG	1/04/90	1,1-Dichloroethene
125F-3	89.18400	156592		< 5.	UG/KG	1/04/90	cis-1,2-Dichloroethylene
125F-3	89.18400	78875		< 5.	UG/KG	1/04/90	1,2-Dichloropropane
125F-3	89.18400	594207		< 5.	UG/KG	1/04/90	2,2-Dichloropropane
125F-3	89.18400	142289		< 5.	UG/KG	1/04/90	1,3-Dichloropropane
125F-3	89.18400	10061026		< 5.	UG/KG	1/04/90	trans-1,3-Dichloropropene
125F-3	89.18400	10061015		< 5.	UG/KG	1/04/90	cis-1,3-Dichloropropene
125F-3	89.18400	563586		< 5.	UG/KG	1/04/90	1,1-Dichloropropene
125F-3	89.18400	100414		< 5.	UG/KG	1/04/90	Ethylbenzene
125F-3	89.18400	107062		< 5.	UG/KG	1/04/90	Ethylene chloride
125F-3	89.18400	928687	TI		UG/KG	1/04/90	2-Heptanone, 6-Methyl-
125F-3	89.18400	87683		< 5.	UG/KG	1/04/90	Hexachlorobutadiene
125F-3	89.18400	591786		< 20.	UG/KG	1/04/90	2-Hexanone
125F-3	89.18400	98828		< 5.	UG/KG	1/04/90	Isopropylbenzene
125F-3	89.18400	99876		< 5.	UG/KG	1/04/90	4-Isopropyltoluene
125F-3	89.18400	108101		< 20.	UG/KG	1/04/90	4-Methyl-2-pentanone
125F-3	89.18400	75092		< 5.	UG/KG	1/04/90	Methylene chloride
125F-3	89.18400	91203		< 5.	UG/KG	1/04/90	Naphthalene
125F-3	89.18400	103651		< 5.	UG/KG	1/04/90	Propylbenzene
125F-3	89.18400	100425		< 5.	UG/KG	1/04/90	Styrene
125F-3	89.18400	79345		< 5.	UG/KG	1/04/90	1,1,2,2-Tetrachloroethane
125F-3	89.18400	630206		< 5.	UG/KG	1/04/90	1,1,1,2-Tetrachloroethane
125F-3	89.18400	127184		< 5.	UG/KG	1/04/90	Tetrachloroethylene
125F-3	89.18400	108883		< 5.	UG/KG	1/04/90	Toluene
125F-3	89.18400	76131	TI		UG/KG	1/04/90	1,1,2-Trichloro-1,2,2-trifluoroethane
125F-3	89.18400	87616		< 5.	UG/KG	1/04/90	1,2,3-Trichlorobenzene
125F-3	89.18400	120821		< 5.	UG/KG	1/04/90	1,2,4-Trichlorobenzene
125F-3	89.18400	71556		< 5.	UG/KG	1/04/90	1,1,1-Trichloroethane
125F-3	89.18400	79005		< 5.	UG/KG	1/04/90	1,1,2-Trichloroethane
125F-3	89.18400	79016		< 5.	UG/KG	1/04/90	Trichloroethene
125F-3	89.18400	75694		< 5.	UG/KG	1/04/90	Trichlorofluoromethane
125F-3	89.18400	96184		< 5.	UG/KG	1/04/90	1,2,3-Trichloropropane
125F-3	89.18400	108678		< 5.	UG/KG	1/04/90	1,3,5-Trimethylbenzene
125F-3	89.18400	95636		< 5.	UG/KG	1/04/90	1,2,4-Trimethylbenzene
125F-3	89.18400	108054		< 10.	UG/KG	1/04/90	Vinyl acetate
125F-3	89.18400	75014		< 10.	UG/KG	1/04/90	Vinyl chloride
125F-3	89.18400	95476		< 5.	UG/KG	1/04/90	o-Xylene
125F-3	89.18400	1330207		< 5.	UG/KG	1/04/90	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5238 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: CPR on 6-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 8364 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 PROGRAM CODE: M292 TASK-ID:

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

✓ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SURROGATE RESULTS FOR EPA VOLATILES

1,2-Dichloroethane d4 (CAS # = 17060070); EPA Range Limits: Water = 76-114 %, Soil = 70-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.18398	138.	%	1/04/90	
89.18399	85.2	%	1/04/90	
89.18400	108.	%	1/04/90	

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT

89.18398	97.4	%	1/04/90
89.18399	98.5	%	1/04/90
89.18400	115.	%	1/04/90

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.18398	59.5	%	1/04/90	
89.18399	71.6	%	1/04/90	
89.18400	95.7	%	1/04/90	

Analyst — Section Leader — QA Officer

1-8-90 — 1/8/90 — 1-10-90

Date — Date — Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

****

ENCLOSURE 4-F

SOIL SAMPLES: TWO COREHOLES; FIVE TO FIFTY-FIVE FOOT DEPTH

+SL - 125 TA-35

****

HSE-9 ANALYTICAL SERVICE AGREEMENT REQUEST-NUMBER: 11044

****

I. PRESAMPLING CONFERENCE: Organic Section

Program code: M236 Task ID #: No. Samples Expected: 0020

Request date: 12-Dec-1990 Completion date: 16-Dec-1991

Chain of Custody: Y Special protocol: NONE

Container Type: NOTHING SPECIAL Preservative: KEEP @ 4 DEG C Storage Conditions: REFRIGERATE

(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples)

Sample Hazards Present:
NONE

Sample Disposal: DISCARD (All hazardous samples or TRU wastes will be returned to the Customer.)

Customer: Philip R. Fresquez HSE_9 SECTION LEADER: CPR

Customer initials: PRF Customer phone: 7-0815 ~~HSE-K490~~ Date: 13-Dec-1990

==========

II. EMERGENCY SAMPLES: Priority 1 2 (3) Emergency status REQUIRES the following approvals:

Customer Group Leader _____ HSE-9 Group Leader _____ Date _____

==========

III. SAMPLE RECEIPT

Signature Sandra Ramos Date: 13-Dec-1990 Total No. received: 24 + 2QC

Matrix	Initial SN		Final SN	# Received	
SS	90.19759	to	90.19769	11	
SS	90.19771	to	90.19772	2	59-75
SS	90.19773	to	90.19773	1	
SS	90.19774	to	90.19774	1	
SS	90.19775	to	90.19775	1	
SS	90.19781	to	90.19791	11	
SS	90.19793	to	90.19795	3	81-91
SS	90.19796	to	90.19797	2	93
W	90.19770	to	90.19770	1	95
W	90.19792	to	90.19792	1	

Translation table of HSE-9/Customer numbers will be provided by Sample-Receiving and appear on each final data report

****

HSE-9 ANALYTICAL CHEMISTRY REQUEST REQUEST-NUMBER: 11044

****

Program code: M236 Task ID number: Request date: 12-Dec-1990

Customer initials: PRF Customer phone: 7-0815 MS: K490

MATRIX	Initial		Final
SS	90.19759	to	90.19769
SS	90.19771	to	90.19772
SS	90.19773	to	90.19773
SS	90.19774	to	90.19774
SS	90.19775	to	90.19775
SS	90.19781	to	90.19791
SS	90.19793	to	90.19795
SS	90.19796	to	90.19797
W	90.19770	to	90.19770
W	90.19792	to	90.19792

Section	Analysis	Technique	Analyst	Due-date
O	VOLATILES	PTGC	LAT	1/16/91
O	SEMIVOL	GCMS	MWK	1/16/91
O	177	IR	SDN	1/16/91

REMARKS:

FINAL CLOSURE VERIFICATION OF TA-35
SAMPLES HAVE A HIGH CONTENT OF PETROELUM HYDROCARBONS
SVOA EXTRACTS WILL REQUIRE GEL PERMEATION CLEAN-UP !!

177 = TOTAL PETROLEUM HYDROCARBONS (tph)

90.19759 - 90.19769 = ALL ANALYSES
90.19770 - 90.19772, 90.19774 = VOA ONLY
90.19773, 90.19775 = SVOA ONLY
BLANKS:
90.19771 & 90.19772 = VOA METHOD BLANK
90.19773 = SVOA METHOD BLANK

ONLY 1 SAMPLE CONTAINER - MUST BE SHARED

90.19781 TO 90.19791 = ALL ANALYSIS
90.19792 = VOLATILES ONLY!!!!

QCS:
90.19793 = VOLATILES
90.19794, 90.19795 = VOLATILES SOIL BLANK
90.19796 = SEMI-VOLATILES
90.19797 = SEMI-VOLATILES SOIL BLANK

ONLY 1 CONTAINER - MUST BE SHARED

****

HSE-9 ANALYTICAL SERVICE AGREEMENT REQUEST-NUMBER: 11044

****

I. PRESAMPLING CONFERENCE: Organic Section

Program code: M236 Task ID #: No. Samples Expected: 0020

Request date: 12-Dec-1990 Completion date: 16-Dec-1991

Chain of Custody: Y Special protocol: NONE

Container Type: NOTHING SPECIAL Preservative: KEEP @ 4 DEG C Storage Conditions: REFRIGERATE

(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples)

Sample Hazards Present:
NONE

Sample Disposal: DISCARD (All hazardous samples or TRU wastes will be returned to the Customer.)

Customer: **Philip R. Fresquez** HSE_9 SECTION LEADER: CPR

Customer initials: PRF Customer phone: 7-0815 **MS: K490** Date: 12-Dec-1990

==========

II. EMERGENCY SAMPLES: Priority 1 2 3 Emergency status REQUIRES the following approvals:

Customer Group Leader _____ HSE-9 Group Leader _____ Date _____

==========

III. SAMPLE RECEIPT

Signature _____ Date: 12-Dec-1990 Total No. received: 12+5 QC's

Matrix	Initial SN		Final SN	# Received
SS	90.19759	to	90.19769	11
SS	90.19771	to	90.19772	2
SS	90.19773	to	90.19773	1
SS	90.19774	to	90.19774	1
SS	90.19775	to	90.19775	1
W	90.19770	to	90.19770	1

Translation table of HSE-9/Customer numbers will be provided by Sample-Receiving and appear on each final data report

****

HSE-9 ANALYTICAL CHEMISTRY REQUEST REQUEST-NUMBER: 11044

****

Program code: M236 Task ID number: Request date: 12-Dec-1990

Customer initials: PRF Customer phone: 7-0815 MS: K490

MATRIX	Initial		Final
SS	90.19759	to	90.19769
SS	90.19771	to	90.19772
SS	90.19773	to	90.19773
SS	90.19774	to	90.19774
SS	90.19775	to	90.19775
W	90.19770	to	90.19770

Section	Analysis	Technique	Analyst	Due-date
0	VOLATILES	PTGC	LAT	1/16/91
0	SEMIVOL	GCMS	MWK	1/16/91
0	177	IR	SDN	1/16/91

REMARKS:

FINAL CLOSURE VERIFICATION OF TA-35
SAMPLES HAVE A HIGH CONTENT OF PETROELUM HYDROCARBONS
SVOA EXTRACTS WILL REQUIRE GEL PERMEATION CLEAN-UP !!

177 = TOTAL PETROLEUM HYDROCARBONS (tph)

0.19759 - 90.19769 = ALL ANALYSES
0.19770 - 90.19772, 90.19774 = VOA ONLY
90.19773, 90.19775 = SVOA ONLY
BLANKS:
90.19771 & 90.19772 = VOA METHOD BLANK
90.19773 = SVOA METHOD BLANK

ONLY 1 SAMPLE CONTAINER - MUST BE SHARED

VOLATILE ORGANIC ANALYSES

JANUARY 4, 1991

TO: PHIL FRESQUIZE
THRU: CHRIS LEIBMAN
FROM: LAURA TSIAGKOURIS
REQUEST: 11044

The following soil samples were analyzed for Volatile Organic Components (VOC's) using a SW 846 Purge & Trap(P/T) GC/MS method 8260 of analysis:

90.19759	90.19760	90.19761	90.19762
90.19763	90.19764	90.19765	90.19766
90.19767	90.19768	90.19769	90.19781
90.19782	90.19783	90.19784	90.19785
90.19786	90.19787	90.19788	90.19789
90.19790	90.19791	90.19770	90.19792

A 5 - 6 gram sample aliquot was used for the analysis. Since the final results are not blank subtracted, the results from the associated method blanks (samples 90.19771, 90.19772, and 90.19794) have been included in the report. The 14 day holding time for all soil samples was met.

RESULTS:

Sample ID	Target Compounds Found	Amount (ug/kg)	LOQ (ug/kg)	TICs (Y/N)
90.19771 (blank 12/13)	Carbon disulfide	6.1	5.0	N
90.19772 (Blank 12/14)	Carbon disulfide Methylene chloride	6 6	5.0 5.0	N N
90.19794 (Blank 12/17)	Carbon disulfide	5.0	5.0	N
125-1-5' 90.19759	Carbon disulfide Methylene chloride	6.1 5.2	5.0 5.0	N N
10' 90.19760	Carbon disulfide Methylene chloride	6 5	5.0 5.0	N N
15' 90.19761	NONE	--	5.0	N

1-10-91

REQUEST: 11044

20'	90.19762	Trichloro-trifluoroethane	8100	5.0	N	
		Methylene chloride	70 ?	5.0	N	< 90 ppm
		1,1-dichloroethane	47	5.0	N	< 1 ppm
		2-Butanone	410	20	N	
		1,1,1-Trichloroethane	13400	5.0	N	< 7000 ppm
		Trichloroethene	5.1	5.0	N	< 60 ppm
		4-methyl-2-pentanone	120	20	N	
		Toluene	58	5.0	N	< 20,000 ppm
		Tetrachloroethene	1500	5.0	N	< 10 ppm
		2-Hexanone	680	20	N	< 4800 ppm
		Mixed xylenes	12	5.0	N	< 2 X 10^5
		Oxygenated hydrocarbon	130	--	Y	
		Saturated hydrocarbon	82	--	Y	
		Saturated hydrocarbon	53	--	Y	
		5-Methyl-2-hexanone	80	--	Y	
		2-Heptanone	226	--	Y	
		unsaturated hydrocarbon	52	--	Y	
		6-Methyl-2-heptanone	502	--	Y	
		Unknown ketone	74	--	Y	
		Unknown ketone	71	--	Y	
		Oxygenated hydrocarbon	56	--	Y	
25'	90.19763	Carbon disulfide	6.3 3	5.0	N	
		Acetone	86	20	N	< 8000 ppm
30'	90.19764	NONE	--	5.0	N	
35'	90.19765	Carbon disulfide	6.5 3	5.0	N	
		Methylene chloride	5.2 3	5.0	N	
40'	90.19766	Carbon disulfide	6.1 3	5.0	N	
45'	90.19767	Carbon disulfide	6.1 3	5.0	N	
		Methylene chloride	5.3 3	5.0	N	
50'	90.19768	Carbon disulfide	5.2 3	5.0	N	
		Trichloro-trifluoroethane	26	5.0	N	
55'	90.19769	NONE	--	5.0	N	
	90.19770 (Trip blank)	Carbon disulfide	6.1	5.0	N	Blank
		Methylene chloride	5.0	5.0	N	
125-2-5'	90.19781	Carbon disulfide	5.3 3	5.0	N	
10'	90.19782	Carbon disulfide	6.3 3	5.0	N	

REQUEST: 11044

15'	90.19783	Carbon disulfide	5 B	5.0	N	
		Trichloro-trifluoroethane	18	5.0	N	
		1,1,1-Trichloroethane	10	5.0	N	< 7000ppm
20'	90.19784	Carbon disulfide	5.3 B	5.0	N	
		Methylene chloride	5.3 B	5.0	N	
25'	90.19785	Trichloro-trifluoroethane	14	5.0	N	
30'	90.19786	Carbon disulfide	6 B	5.0	N	
		Trichloro-trifluoroethane	29	5.0	N	
		Acetone	24	20	N	< 8000ppm
35'	90.19787	Carbon disulfide	5.5 B	5.0	N	
		Trichloro-trifluoroethane	7.8	5.0	N	
40'	90.19788	Carbon disulfide	5.5 B	5.0	N	
45'	90.19789	Carbon disulfide	5.4 B	5.0	N	
50'	90.19790	Carbon disulfide	5.6 B	5.0	N	
		Trichloro-trifluoroethane	6.5	5.0	N	
55'	90.19791	Carbon disulfide	5.3 B	5.0	N	
		Methylene chloride	5.2 B	5.0	N	
		Trichloro-trifluoroethane	9.0	5.0	N	
	90.19792 (Trip blank)	NONE	--	5.0	N	

It should be noted that the limit of quantitation (LOQ) for the majority of the volatile organic compounds (VOC) is 5.0 ug/kg. The limit of quantitation for VOC's ranges from 5 - 100 ug/kg as indicated on the final report.

A tentatively identified compound (TIC) is one which is present in a sample extract but is not included on a specific target compound list. The identification is based solely upon the comparison of the spectra of interest to that of a mass spectral database. No comparison is made to an actual standard reference material for which a specific instrument has been calibrated. Identification is frequently limited to a compound class rather than a discreet chemical name. Thus, the identification is strictly tentative and should not be interpreted as being absolute.

REQUEST 11044

As indicated, the analysis of samples 90.19759 - 90.19770 and 90.19781 - 90.19791 detected several target VOC's above the limit of quantitation (LOQ). Since carbon disulfide and methylene chloride were detected in the associated method blanks and trip blank (# 90.19770), the detection of these compounds is most likely attributed to laboratory and/or field contamination. The surrogate recoveries were within the control limits for all samples analyzed with the exception of samples 90.19762 and 90.19767. Since the surrogate recoveries were similar in the matrix spike and matrix spike duplicate of sample 90.19767, the high recovery of 1,2-dichloroethane-d4 is most likely due to matrix effect. Sample 90.19762 contain a high concentration of target/non-target volatile compounds; therefore, the out of control surrogate recoveries is most likely due to matrix effect and/or co-eluting interferences.

QC Summary for Request 90.10932

Sample 90.19767 was used as the matrix spike media by adding 10 uL of the matrix spike mix to two separate 5 gram aliquots. The accuracy and precision for all spiked components were within the control limits.

Samples 90.19774 and 90.19793 were received from QA/DM as "blind" Q.C. samples for this request group. The results are included in the final report.

SEE NOD LANL RED 92

AT 1/4/91

Suzanne Bell 1-10-91

[illegible]

[illegible] Surrogate Recovery...	117	[illegible]	[illegible]
[illegible] Lower QC Limits (%)...	70	[illegible]	[illegible]
[illegible] Upper QC Limits (%)...	[illegible]	[illegible]	[illegible]

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY AND ENVIRONMENT DIVISION
HSE-9
SURROGATE RECOVERIES FOR VOLATILES
SW8

PROJECT #: 11344

NUMBER OF SAMPLES: 9
MATRIX: S
ANALYST: JAT
DATE: 10/19/90

JAT 11/4/90 BB 1-10-91

SURROGATE RECOVERIES

SURROGATE
RECOVERIES IN PERCENT ***

	SAMPLE NUMBERS	TYPE	1,2-DICHLORO-ETHANE	BROMO-FLUORO-BENZENE (BFB)	4-BROMO-FLUORO-BENZENE
1	BP0.19794	BLANK	91	89	84
2	BP0.19795	SAMPLE	93	90	88
3	BP0.19793	SAMPLE	93	89	92
4	BP0.19797	SAMPLE	91	87	86
5	BP0.19798	SAMPLE	105	87	88
6	BP0.19796	SAMPLE	95	87	89
7	BP0.19791	SAMPLE	98	91	88
8	BP0.19792	SAMPLE	102	92	88
9	BP0.19794	SAMPLE	93	86	95
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
	Average % Surrogate Recovery...		94	89	91
	Defined Lower QC Limits (%)....		70	81	74
	Defined Upper QC Limits (%)....		121	117	121
	Observed Lower QC Limits (%)...		88	86	[illegible]
	Observed Upper QC Limits (%)...		105	98	[illegible]

* [illegible] Surrogate Recovery is Followed by a "*", it is [illegible] the limits.

Reviewed By: [illegible]

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY AND ENVIRONMENT DIVISION
-EE-9
MATRIX SPIKE RECOVERIES FOR VOLATILES

		SPK AMOUNT		DILUTION	AMOUNT	LOD
REQUEST #:	11044	5 or 10		FACTOR	SPIKED	LEVEL OF 10
NUMBER OF SPIKES:	31					
SPIKE ID: METHYL ACETATE	X91.1576T	SPIKE	5.16ST	1	49	5
SPIKE DUP ID: METHYL ACETATE	D91.1576T	SPIKE-DUP	5.01-P	1	50	5
RAW DATA WITH:	---					
ANALYST:	LAT					

LAT 1/4/91

	SPIKE REC.	SPIKE-DUP REC.	SPIKE % REC.	SPIKE-DUP % REC.	RPD	LOW. REC. LIM.	UPP. REC. LIM.	RPD LIM.
1,1-Dichloroethene	47	51	97%	102%	5%	59	172	22
Benzene	54	54	111%	108%	3%	66	142	21
Trichloroethene	44	47	91%	94%	4%	62	137	24
Toluene	45	46	93%	92%	1%	59	139	21
Chlorobenzene	46	47	95%	94%	1%	60	133	21

(*) If % Matrix Recovery is Followed by a "*", it is out of QC Limits.

Reviewed By: Suzanne Bell 1-10-91

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19759

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-5'	90.19759	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-5'	90.19759	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-5'	90.19759	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-5'	90.19759	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-5'	90.19759	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-5'	90.19759	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-5'	90.19759	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-5'	90.19759	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-5'	90.19759	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-5'	90.19759	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-5'	90.19759	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-5'	90.19759	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-5'	90.19759	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-5'	90.19759	75150	6.	1.8	UG/KG	1/11/91		Carbon disulfide
125-1-5'	90.19759	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-5'	90.19759	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-5'	90.19759	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-5'	90.19759	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-5'	90.19759	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-5'	90.19759	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-5'	90.19759	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-5'	90.19759	95498	< 5.	UG/KG	1/11/91	o-Chlorotoluene
125-1-5'	90.19759	106434	< 5.	UG/KG	1/11/91	p-Chlorotoluene
125-1-5'	90.19759	96128	< 10.	UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-5'	90.19759	106934	< 5.	UG/KG	1/11/91	1,2-Dibromoethane
125-1-5'	90.19759	74953	< 5.	UG/KG	1/11/91	Dibromomethane
125-1-5'	90.19759	95501	< 5.	UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-5'	90.19759	541731	< 5.	UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-5'	90.19759	106467	< 5.	UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-5'	90.19759	75718	< 10.	UG/KG	1/11/91	Dichlorodifluoromethane
125-1-5'	90.19759	75343	< 5.	UG/KG	1/11/91	1,1-Dichloroethane
125-1-5'	90.19759	107062	< 5.	UG/KG	1/11/91	1,2-Dichloroethane
125-1-5'	90.19759	75354	< 5.	UG/KG	1/11/91	1,1-Dichloroethene
125-1-5'	90.19759	156605	< 5.	UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-5'	90.19759	156592	< 5.	UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-5'	90.19759	78875	< 5.	UG/KG	1/11/91	1,2-Dichloropropane
125-1-5'	90.19759	142289	< 5.	UG/KG	1/11/91	1,3-Dichloropropane
125-1-5'	90.19759	594207	< 5.	UG/KG	1/11/91	2,2-Dichloropropane
125-1-5'	90.19759	563586	< 5.	UG/KG	1/11/91	1,1-Dichloropropene
125-1-5'	90.19759	10061015	< 5.	UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-5'	90.19759	10061026	< 5.	UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-5'	90.19759	100414	< 5.	UG/KG	1/11/91	Ethylbenzene
125-1-5'	90.19759	591786	< 20.	UG/KG	1/11/91	2-Hexanone
125-1-5'	90.19759	98828	< 5.	UG/KG	1/11/91	Isopropylbenzene
125-1-5'	90.19759	99876	< 5.	UG/KG	1/11/91	4-Isopropyltoluene
125-1-5'	90.19759	74884	< 5.	UG/KG	1/11/91	Methyl iodide
125-1-5'	90.19759	108101	< 20.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-5'	90.19759	75092	< 5.	UG/KG	1/11/91	Methylene chloride
125-1-5'	90.19759	103651	< 5.	UG/KG	1/11/91	Propylbenzene
125-1-5'	90.19759	100425	< 5.	UG/KG	1/11/91	Styrene
125-1-5'	90.19759	630206	< 5.	UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-5'	90.19759	79345	< 5.	UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-5'	90.19759	127184	< 5.	UG/KG	1/11/91	Tetrachloroethylene
125-1-5'	90.19759	108883	< 5.	UG/KG	1/11/91	Toluene
125-1-5'	90.19759	76131	< 5.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-5'	90.19759	71556	< 5.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-5'	90.19759	79005	< 5.	UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-5'	90.19759	79016	< 5.	UG/KG	1/11/91	Trichloroethene
125-1-5'	90.19759	75694	< 5.	UG/KG	1/11/91	Trichlorofluoromethane
125-1-5'	90.19759	96184	< 5.	UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-5'	90.19759	95636	< 5.	UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-5'	90.19759	108678	< 5.	UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-5'	90.19759	108054	< 10.	UG/KG	1/11/91	Vinyl acetate
125-1-5'	90.19759	75014	< 10.	UG/KG	1/11/91	Vinyl chloride
125-1-5'	90.19759	1330207	< 5.	UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19759

none

Customer Sample Duplicate Results for Sample # 90.19759

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19759

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19760

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-10'	90.19760	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-10'	90.19760	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-10'	90.19760	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-10'	90.19760	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-10'	90.19760	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-10'	90.19760	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-10'	90.19760	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-10'	90.19760	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-10'	90.19760	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-10'	90.19760	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-10'	90.19760	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-10'	90.19760	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-10'	90.19760	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-10'	90.19760	75150	6.1	1.83	UG/KG	1/11/91		Carbon disulfide
125-1-10'	90.19760	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-10'	90.19760	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-10'	90.19760	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-10'	90.19760	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-10'	90.19760	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-10'	90.19760	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-10'	90.19760	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-10'	90.19760	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-1-10'	90.19760	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-1-10'	90.19760	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-10'	90.19760	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-1-10'	90.19760	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-1-10'	90.19760	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-10'	90.19760	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-10'	90.19760	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-10'	90.19760	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-1-10'	90.19760	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-1-10'	90.19760	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-1-10'	90.19760	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-1-10'	90.19760	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-10'	90.19760	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-10'	90.19760	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-1-10'	90.19760	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-1-10'	90.19760	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-1-10'	90.19760	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-1-10'	90.19760	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-10'	90.19760	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-10'	90.19760	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-1-10'	90.19760	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-1-10'	90.19760	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-1-10'	90.19760	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-1-10'	90.19760	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-1-10'	90.19760	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-10'	90.19760	75092	5.2	1.56	UG/KG	1/11/91	Methylene chloride
125-1-10'	90.19760	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-1-10'	90.19760	100425	< 5.		UG/KG	1/11/91	Styrene
125-1-10'	90.19760	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-10'	90.19760	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-10'	90.19760	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-1-10'	90.19760	108883	< 5.		UG/KG	1/11/91	Toluene
125-1-10'	90.19760	76131	< 5.		UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-10'	90.19760	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-10'	90.19760	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-10'	90.19760	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-1-10'	90.19760	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-1-10'	90.19760	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-10'	90.19760	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-10'	90.19760	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-10'	90.19760	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-1-10'	90.19760	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-1-10'	90.19760	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19760

none

Customer Sample Duplicate Results for Sample # 90.19760

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19760

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19761

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-15'	90.19761	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-15'	90.19761	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-15'	90.19761	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-15'	90.19761	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-15'	90.19761	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-15'	90.19761	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-15'	90.19761	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-15'	90.19761	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-15'	90.19761	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-15'	90.19761	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-15'	90.19761	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-15'	90.19761	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-15'	90.19761	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-15'	90.19761	75150	< 5.		UG/KG	1/11/91		Carbon disulfide
125-1-15'	90.19761	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-15'	90.19761	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-15'	90.19761	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-15'	90.19761	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-15'	90.19761	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-15'	90.19761	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-15'	90.19761	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-15'	90.19761	95498	< 5.	UG/KG	1/11/91	o-Chlorotoluene
125-1-15'	90.19761	106434	< 5.	UG/KG	1/11/91	p-Chlorotoluene
125-1-15'	90.19761	96128	< 10.	UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-15'	90.19761	106934	< 5.	UG/KG	1/11/91	1,2-Dibromoethane
125-1-15'	90.19761	74953	< 5.	UG/KG	1/11/91	Dibromomethane
125-1-15'	90.19761	95501	< 5.	UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-15'	90.19761	541731	< 5.	UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-15'	90.19761	106467	< 5.	UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-15'	90.19761	75718	< 10.	UG/KG	1/11/91	Dichlorodifluoromethane
125-1-15'	90.19761	75343	< 5.	UG/KG	1/11/91	1,1-Dichloroethane
125-1-15'	90.19761	107062	< 5.	UG/KG	1/11/91	1,2-Dichloroethane
125-1-15'	90.19761	75354	< 5.	UG/KG	1/11/91	1,1-Dichloroethene
125-1-15'	90.19761	156605	< 5.	UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-15'	90.19761	156592	< 5.	UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-15'	90.19761	78875	< 5.	UG/KG	1/11/91	1,2-Dichloropropane
125-1-15'	90.19761	142289	< 5.	UG/KG	1/11/91	1,3-Dichloropropane
125-1-15'	90.19761	594207	< 5.	UG/KG	1/11/91	2,2-Dichloropropane
125-1-15'	90.19761	563586	< 5.	UG/KG	1/11/91	1,1-Dichloropropene
125-1-15'	90.19761	10061015	< 5.	UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-15'	90.19761	10061026	< 5.	UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-15'	90.19761	100414	< 5.	UG/KG	1/11/91	Ethylbenzene
125-1-15'	90.19761	591786	< 20.	UG/KG	1/11/91	2-Hexanone
125-1-15'	90.19761	98828	< 5.	UG/KG	1/11/91	Isopropylbenzene
125-1-15'	90.19761	99876	< 5.	UG/KG	1/11/91	4-Isopropyltoluene
125-1-15'	90.19761	74884	< 5.	UG/KG	1/11/91	Methyl iodide
125-1-15'	90.19761	108101	< 20.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-15'	90.19761	75092	< 5.	UG/KG	1/11/91	Methylene chloride
125-1-15'	90.19761	103651	< 5.	UG/KG	1/11/91	Propylbenzene
125-1-15'	90.19761	100425	< 5.	UG/KG	1/11/91	Styrene
125-1-15'	90.19761	630206	< 5.	UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-15'	90.19761	79345	< 5.	UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-15'	90.19761	127184	< 5.	UG/KG	1/11/91	Tetrachloroethylene
125-1-15'	90.19761	108883	< 5.	UG/KG	1/11/91	Toluene
125-1-15'	90.19761	76131	< 5.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-15'	90.19761	71556	< 5.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-15'	90.19761	79005	< 5.	UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-15'	90.19761	79016	< 5.	UG/KG	1/11/91	Trichloroethene
125-1-15'	90.19761	75694	< 5.	UG/KG	1/11/91	Trichlorofluoromethane
125-1-15'	90.19761	96184	< 5.	UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-15'	90.19761	95636	< 5.	UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-15'	90.19761	108678	< 5.	UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-15'	90.19761	108054	< 10.	UG/KG	1/11/91	Vinyl acetate
125-1-15'	90.19761	75014	< 10.	UG/KG	1/11/91	Vinyl chloride
125-1-15'	90.19761	1330207	< 5.	UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19761

none

Customer Sample Duplicate Results for Sample # 90.19761

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19761

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19762

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-20'	90.19762	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-20'	90.19762	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-20'	90.19762	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-20'	90.19762	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-20'	90.19762	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-20'	90.19762	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-20'	90.19762	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-20'	90.19762	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-20'	90.19762	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-20'	90.19762	78933	410.	123.	UG/KG	1/11/91		2-Butanone
125-1-20'	90.19762	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-20'	90.19762	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-20'	90.19762	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-20'	90.19762	75150	< 5.		UG/KG	1/11/91		Carbon disulfide
125-1-20'	90.19762	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-20'	90.19762	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-20'	90.19762	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-20'	90.19762	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-20'	90.19762	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-20'	90.19762	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-20'	90.19762	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-20'	90.19762	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-1-20'	90.19762	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-1-20'	90.19762	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-20'	90.19762	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-1-20'	90.19762	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-1-20'	90.19762	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-20'	90.19762	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-20'	90.19762	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-20'	90.19762	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-1-20'	90.19762	75343	47.	14.1	UG/KG	1/11/91	1,1-Dichloroethane
125-1-20'	90.19762	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-1-20'	90.19762	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-1-20'	90.19762	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-20'	90.19762	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-20'	90.19762	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-1-20'	90.19762	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-1-20'	90.19762	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-1-20'	90.19762	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-1-20'	90.19762	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-20'	90.19762	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-20'	90.19762	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-1-20'	90.19762	591786	680.	204.	UG/KG	1/11/91	2-Hexanone
125-1-20'	90.19762	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-1-20'	90.19762	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-1-20'	90.19762	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-1-20'	90.19762	108101	120.	36.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-20'	90.19762	75092	70.	21.	UG/KG	1/11/91	Methylene chloride
125-1-20'	90.19762	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-1-20'	90.19762	100425	< 5.		UG/KG	1/11/91	Styrene
125-1-20'	90.19762	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-20'	90.19762	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-20'	90.19762	127184	1500.	450.	UG/KG	1/11/91	Tetrachloroethylene
125-1-20'	90.19762	108883	58.	17.4	UG/KG	1/11/91	Toluene
125-1-20'	90.19762	76131	8100.	2430.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-20'	90.19762	71556	13400.	4020.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-20'	90.19762	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-20'	90.19762	79016	5.1	1.53	UG/KG	1/11/91	Trichloroethene
125-1-20'	90.19762	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-1-20'	90.19762	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-20'	90.19762	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-20'	90.19762	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-20'	90.19762	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-1-20'	90.19762	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-1-20'	90.19762	1330207	12.	3.6	UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19762

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS		RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-20'	90.19762	110430	TI	226.		UG/KG	1/11/91		2-Heptanone
125-1-20'	90.19762	928687	TI	502.		UG/KG	1/11/91		2-Heptanone, 6-Methyl-
125-1-20'	90.19762	110123	TI	80.		UG/KG	1/11/91		5-Methyl-2-hexanone
125-1-20'	90.19762	171	TI	56.		UG/KG	1/11/91		Oxygenated Hydrocarbon
125-1-20'	90.19762	171	TI	130.		UG/KG	1/11/91		Oxygenated Hydrocarbon
125-1-20'	90.19762	165	TI	53.		UG/KG	1/11/91		Saturated Hydrocarbons
125-1-20'	90.19762	165	TI	82.		UG/KG	1/11/91		Saturated Hydrocarbons
125-1-20'	90.19762	168	TI	74.		UG/KG	1/11/91		Unknown Ketone
125-1-20'	90.19762	168	TI	71.		UG/KG	1/11/91		Unknown Ketone
125-1-20'	90.19762	166	TI	52.		UG/KG	1/11/91		Unsaturated Hydrocarbons

Customer Sample Duplicate Results for Sample # 90.19762

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19762

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19763

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-25'	90.19763	67641	86.	25.8	UG/KG	1/11/91		Acetone
125-1-25'	90.19763	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-25'	90.19763	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-25'	90.19763	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-25'	90.19763	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-25'	90.19763	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-25'	90.19763	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-25'	90.19763	75252	< 5.		UG/KG	1/11/91		Bromoform.
125-1-25'	90.19763	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-25'	90.19763	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-25'	90.19763	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-25'	90.19763	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-25'	90.19763	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-25'	90.19763	75150	6.	1.8	UG/KG	1/11/91		Carbon disulfide
125-1-25'	90.19763	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-25'	90.19763	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-25'	90.19763	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-25'	90.19763	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-25'	90.19763	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-25'	90.19763	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-25'	90.19763	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-25'	90.19763	95498	< 5.	UG/KG	1/11/91	o-Chlorotoluene
125-1-25'	90.19763	106434	< 5.	UG/KG	1/11/91	p-Chlorotoluene
125-1-25'	90.19763	96128	< 10.	UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-25'	90.19763	106934	< 5.	UG/KG	1/11/91	1,2-Dibromoethane
125-1-25'	90.19763	74953	< 5.	UG/KG	1/11/91	Dibromomethane
125-1-25'	90.19763	95501	< 5.	UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-25'	90.19763	541731	< 5.	UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-25'	90.19763	106467	< 5.	UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-25'	90.19763	75718	< 10.	UG/KG	1/11/91	Dichlorodifluoromethane
125-1-25'	90.19763	75343	< 5.	UG/KG	1/11/91	1,1-Dichloroethane
125-1-25'	90.19763	107062	< 5.	UG/KG	1/11/91	1,2-Dichloroethane
125-1-25'	90.19763	75354	< 5.	UG/KG	1/11/91	1,1-Dichloroethene
125-1-25'	90.19763	156605	< 5.	UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-25'	90.19763	156592	< 5.	UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-25'	90.19763	78875	< 5.	UG/KG	1/11/91	1,2-Dichloropropane
125-1-25'	90.19763	142289	< 5.	UG/KG	1/11/91	1,3-Dichloropropane
125-1-25'	90.19763	594207	< 5.	UG/KG	1/11/91	2,2-Dichloropropane
125-1-25'	90.19763	563586	< 5.	UG/KG	1/11/91	1,1-Dichloropropene
125-1-25'	90.19763	10061015	< 5.	UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-25'	90.19763	10061026	< 5.	UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-25'	90.19763	100414	< 5.	UG/KG	1/11/91	Ethylbenzene
125-1-25'	90.19763	591786	< 20.	UG/KG	1/11/91	2-Hexanone
125-1-25'	90.19763	98828	< 5.	UG/KG	1/11/91	Isopropylbenzene
125-1-25'	90.19763	99876	< 5.	UG/KG	1/11/91	4-Isopropyltoluene
125-1-25'	90.19763	74884	< 5.	UG/KG	1/11/91	Methyl iodide
125-1-25'	90.19763	108101	< 20.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-25'	90.19763	75092	< 5.	UG/KG	1/11/91	Methylene chloride
125-1-25'	90.19763	103651	< 5.	UG/KG	1/11/91	Propylbenzene
125-1-25'	90.19763	100425	< 5.	UG/KG	1/11/91	Styrene
125-1-25'	90.19763	630206	< 5.	UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-25'	90.19763	79345	< 5.	UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-25'	90.19763	127184	< 5.	UG/KG	1/11/91	Tetrachloroethylene
125-1-25'	90.19763	108883	< 5.	UG/KG	1/11/91	Toluene
125-1-25'	90.19763	76131	< 5.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-25'	90.19763	71556	< 5.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-25'	90.19763	79005	< 5.	UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-25'	90.19763	79016	< 5.	UG/KG	1/11/91	Trichloroethene
125-1-25'	90.19763	75694	< 5.	UG/KG	1/11/91	Trichlorofluoromethane
125-1-25'	90.19763	96184	< 5.	UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-25'	90.19763	95636	< 5.	UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-25'	90.19763	108678	< 5.	UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-25'	90.19763	108054	< 10.	UG/KG	1/11/91	Vinyl acetate
125-1-25'	90.19763	75014	< 10.	UG/KG	1/11/91	Vinyl chloride
125-1-25'	90.19763	1330207	< 5.	UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19763

none

Customer Sample Duplicate Results for Sample # 90.19763

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19763

none

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19764

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-30'	90.19764	67641	< 20.		UG/KG	1/24/91		Acetone
125-1-30'	90.19764	107028	< 100.		UG/KG	1/24/91		Acrolein
125-1-30'	90.19764	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
125-1-30'	90.19764	71432	< 5.		UG/KG	1/24/91		Benzene
125-1-30'	90.19764	108861	< 5.		UG/KG	1/24/91		Bromobenzene
125-1-30'	90.19764	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
125-1-30'	90.19764	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
125-1-30'	90.19764	75252	< 5.		UG/KG	1/24/91		Bromoform
125-1-30'	90.19764	74839	< 10.		UG/KG	1/24/91		Bromomethane
125-1-30'	90.19764	78933	< 20.		UG/KG	1/24/91		2-Butanone
125-1-30'	90.19764	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
125-1-30'	90.19764	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
125-1-30'	90.19764	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
125-1-30'	90.19764	75150	< 5.		UG/KG	1/24/91		Carbon disulfide
125-1-30'	90.19764	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
125-1-30'	90.19764	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
125-1-30'	90.19764	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
125-1-30'	90.19764	75003	< 10.		UG/KG	1/24/91		Chloroethane
125-1-30'	90.19764	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
125-1-30'	90.19764	67663	< 5.		UG/KG	1/24/91		Chloroform
125-1-30'	90.19764	74873	< 10.		UG/KG	1/24/91		Chloromethane

125-1-30'	90.19764	95498	< 5.	UG/KG	1/24/91	o-Chlorotoluene
125-1-30'	90.19764	106434	< 5.	UG/KG	1/24/91	p-Chlorotoluene
125-1-30'	90.19764	96128	< 10.	UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
125-1-30'	90.19764	106934	< 5.	UG/KG	1/24/91	1,2-Dibromoethane
125-1-30'	90.19764	74953	< 5.	UG/KG	1/24/91	Dibromomethane
125-1-30'	90.19764	95501	< 5.	UG/KG	1/24/91	o-Dichlorobenzene (1,2)
125-1-30'	90.19764	541731	< 5.	UG/KG	1/24/91	m-Dichlorobenzene (1,3)
125-1-30'	90.19764	106467	< 5.	UG/KG	1/24/91	p-Dichlorobenzene (1,4)
125-1-30'	90.19764	75718	< 10.	UG/KG	1/24/91	Dichlorodifluoromethane
125-1-30'	90.19764	75343	< 5.	UG/KG	1/24/91	1,1-Dichloroethane
125-1-30'	90.19764	107062	< 5.	UG/KG	1/24/91	1,2-Dichloroethane
125-1-30'	90.19764	75354	< 5.	UG/KG	1/24/91	1,1-Dichloroethene
125-1-30'	90.19764	156605	< 5.	UG/KG	1/24/91	trans-1,2-Dichloroethene
125-1-30'	90.19764	156592	< 5.	UG/KG	1/24/91	cis-1,2-Dichloroethylene
125-1-30'	90.19764	78875	< 5.	UG/KG	1/24/91	1,2-Dichloropropane
125-1-30'	90.19764	142289	< 5.	UG/KG	1/24/91	1,3-Dichloropropane
125-1-30'	90.19764	594207	< 5.	UG/KG	1/24/91	2,2-Dichloropropane
125-1-30'	90.19764	563586	< 5.	UG/KG	1/24/91	1,1-Dichloropropene
125-1-30'	90.19764	10061015	< 5.	UG/KG	1/24/91	cis-1,3-Dichloropropene
125-1-30'	90.19764	10061026	< 5.	UG/KG	1/24/91	trans-1,3-Dichloropropene
125-1-30'	90.19764	100414	< 5.	UG/KG	1/24/91	Ethylbenzene
125-1-30'	90.19764	591786	< 20.	UG/KG	1/24/91	2-Hexanone
125-1-30'	90.19764	98828	< 5.	UG/KG	1/24/91	Isopropylbenzene
125-1-30'	90.19764	99876	< 5.	UG/KG	1/24/91	4-Isopropyltoluene
125-1-30'	90.19764	74884	< 5.	UG/KG	1/24/91	Methyl iodide
125-1-30'	90.19764	108101	< 20.	UG/KG	1/24/91	4-Methyl-2-pentanone
125-1-30'	90.19764	75092	< 5.	UG/KG	1/24/91	Methylene chloride
125-1-30'	90.19764	103651	< 5.	UG/KG	1/24/91	Propylbenzene
125-1-30'	90.19764	100425	< 5.	UG/KG	1/24/91	Styrene
125-1-30'	90.19764	630206	< 5.	UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
125-1-30'	90.19764	79345	< 5.	UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
125-1-30'	90.19764	127184	< 5.	UG/KG	1/24/91	Tetrachloroethylene
125-1-30'	90.19764	108883	< 5.	UG/KG	1/24/91	Toluene
125-1-30'	90.19764	76131	< 5.	UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-30'	90.19764	71556	< 5.	UG/KG	1/24/91	1,1,1-Trichloroethane
125-1-30'	90.19764	79005	< 5.	UG/KG	1/24/91	1,1,2-Trichloroethane
125-1-30'	90.19764	79016	< 5.	UG/KG	1/24/91	Trichloroethene
125-1-30'	90.19764	75694	< 5.	UG/KG	1/24/91	Trichlorofluoromethane
125-1-30'	90.19764	96184	< 5.	UG/KG	1/24/91	1,2,3-Trichloropropane
125-1-30'	90.19764	95636	< 5.	UG/KG	1/24/91	1,2,4-Trimethylbenzene
125-1-30'	90.19764	108678	< 5.	UG/KG	1/24/91	1,3,5-Trimethylbenzene
125-1-30'	90.19764	108054	< 10.	UG/KG	1/24/91	Vinyl acetate
125-1-30'	90.19764	75014	< 10.	UG/KG	1/24/91	Vinyl chloride
125-1-30'	90.19764	1330207	< 5.	UG/KG	1/24/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19764

none

Customer Sample Duplicate Results for Sample # 90.19764

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19764

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19765

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-35'	90.19765	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-35'	90.19765	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-35'	90.19765	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-35'	90.19765	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-35'	90.19765	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-35'	90.19765	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-35'	90.19765	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-35'	90.19765	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-35'	90.19765	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-35'	90.19765	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-35'	90.19765	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-35'	90.19765	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-35'	90.19765	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-35'	90.19765	75150	6.4	1.92	UG/KG	1/11/91		Carbon disulfide
125-1-35'	90.19765	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-35'	90.19765	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-35'	90.19765	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-35'	90.19765	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-35'	90.19765	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-35'	90.19765	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-35'	90.19765	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-35'	90.19765	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-1-35'	90.19765	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-1-35'	90.19765	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-35'	90.19765	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-1-35'	90.19765	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-1-35'	90.19765	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-35'	90.19765	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-35'	90.19765	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-35'	90.19765	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-1-35'	90.19765	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-1-35'	90.19765	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-1-35'	90.19765	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-1-35'	90.19765	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-35'	90.19765	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-35'	90.19765	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-1-35'	90.19765	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-1-35'	90.19765	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-1-35'	90.19765	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-1-35'	90.19765	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-35'	90.19765	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-35'	90.19765	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-1-35'	90.19765	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-1-35'	90.19765	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-1-35'	90.19765	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-1-35'	90.19765	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-1-35'	90.19765	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-35'	90.19765	75092	5.1	1.53	UG/KG	1/11/91	Methylene chloride
125-1-35'	90.19765	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-1-35'	90.19765	100425	< 5.		UG/KG	1/11/91	Styrene
125-1-35'	90.19765	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-35'	90.19765	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-35'	90.19765	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-1-35'	90.19765	108883	< 5.		UG/KG	1/11/91	Toluene
125-1-35'	90.19765	76131	< 5.		UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-35'	90.19765	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-35'	90.19765	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-35'	90.19765	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-1-35'	90.19765	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-1-35'	90.19765	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-35'	90.19765	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-35'	90.19765	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-35'	90.19765	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-1-35'	90.19765	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-1-35'	90.19765	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19765

none

Customer Sample Duplicate Results for Sample # 90.19765

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19765

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19766

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-40'	90.19766	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-40'	90.19766	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-40'	90.19766	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-40'	90.19766	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-40'	90.19766	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-40'	90.19766	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-40'	90.19766	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-40'	90.19766	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-40'	90.19766	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-40'	90.19766	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-40'	90.19766	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-40'	90.19766	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-40'	90.19766	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-40'	90.19766	75150	6.	1.8	UG/KG	1/11/91		Carbon disulfide
125-1-40'	90.19766	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-40'	90.19766	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-40'	90.19766	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-40'	90.19766	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-40'	90.19766	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-40'	90.19766	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-40'	90.19766	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-40'	90.19766	95498	< 5.	UG/KG	1/11/91	o-Chlorotoluene
125-1-40'	90.19766	106434	< 5.	UG/KG	1/11/91	p-Chlorotoluene
125-1-40'	90.19766	96128	< 10.	UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-40'	90.19766	106934	< 5.	UG/KG	1/11/91	1,2-Dibromoethane
125-1-40'	90.19766	74953	< 5.	UG/KG	1/11/91	Dibromomethane
125-1-40'	90.19766	95501	< 5.	UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-40'	90.19766	541731	< 5.	UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-40'	90.19766	106467	< 5.	UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-40'	90.19766	75718	< 10.	UG/KG	1/11/91	Dichlorodifluoromethane
125-1-40'	90.19766	75343	< 5.	UG/KG	1/11/91	1,1-Dichloroethane
125-1-40'	90.19766	107062	< 5.	UG/KG	1/11/91	1,2-Dichloroethane
125-1-40'	90.19766	75354	< 5.	UG/KG	1/11/91	1,1-Dichloroethene
125-1-40'	90.19766	156605	< 5.	UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-40'	90.19766	156592	< 5.	UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-40'	90.19766	78875	< 5.	UG/KG	1/11/91	1,2-Dichloropropane
125-1-40'	90.19766	142289	< 5.	UG/KG	1/11/91	1,3-Dichloropropane
125-1-40'	90.19766	594207	< 5.	UG/KG	1/11/91	2,2-Dichloropropane
125-1-40'	90.19766	563586	< 5.	UG/KG	1/11/91	1,1-Dichloropropene
125-1-40'	90.19766	10061015	< 5.	UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-40'	90.19766	10061026	< 5.	UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-40'	90.19766	100414	< 5.	UG/KG	1/11/91	Ethylbenzene
125-1-40'	90.19766	591786	< 20.	UG/KG	1/11/91	2-Hexanone
125-1-40'	90.19766	98828	< 5.	UG/KG	1/11/91	Isopropylbenzene
125-1-40'	90.19766	99876	< 5.	UG/KG	1/11/91	4-Isopropyltoluene
125-1-40'	90.19766	74884	< 5.	UG/KG	1/11/91	Methyl iodide
125-1-40'	90.19766	108101	< 20.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-40'	90.19766	75092	< 5.	UG/KG	1/11/91	Methylene chloride
125-1-40'	90.19766	103651	< 5.	UG/KG	1/11/91	Propylbenzene
125-1-40'	90.19766	100425	< 5.	UG/KG	1/11/91	Styrene
125-1-40'	90.19766	630206	< 5.	UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-40'	90.19766	79345	< 5.	UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-40'	90.19766	127184	< 5.	UG/KG	1/11/91	Tetrachloroethylene
125-1-40'	90.19766	108883	< 5.	UG/KG	1/11/91	Toluene
125-1-40'	90.19766	76131	< 5.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-40'	90.19766	71556	< 5.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-40'	90.19766	79005	< 5.	UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-40'	90.19766	79016	< 5.	UG/KG	1/11/91	Trichloroethene
125-1-40'	90.19766	75694	< 5.	UG/KG	1/11/91	Trichlorofluoromethane
125-1-40'	90.19766	96184	< 5.	UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-40'	90.19766	95636	< 5.	UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-40'	90.19766	108678	< 5.	UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-40'	90.19766	108054	< 10.	UG/KG	1/11/91	Vinyl acetate
125-1-40'	90.19766	75014	< 10.	UG/KG	1/11/91	Vinyl chloride
125-1-40'	90.19766	1330207	< 5.	UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19766

none

Customer Sample Duplicate Results for Sample # 90.19766

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19766

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19767

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-45'	90.19767	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-45'	90.19767	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-45'	90.19767	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-45'	90.19767	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-45'	90.19767	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-45'	90.19767	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-45'	90.19767	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-45'	90.19767	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-45'	90.19767	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-45'	90.19767	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-45'	90.19767	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-45'	90.19767	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-45'	90.19767	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-45'	90.19767	75150	6.1	1.83	UG/KG	1/11/91		Carbon disulfide
125-1-45'	90.19767	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-45'	90.19767	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-45'	90.19767	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-45'	90.19767	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-45'	90.19767	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-45'	90.19767	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-45'	90.19767	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-45'	90.19767	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-1-45'	90.19767	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-1-45'	90.19767	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-45'	90.19767	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-1-45'	90.19767	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-1-45'	90.19767	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-45'	90.19767	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-45'	90.19767	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-45'	90.19767	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-1-45'	90.19767	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-1-45'	90.19767	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-1-45'	90.19767	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-1-45'	90.19767	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-45'	90.19767	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-45'	90.19767	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-1-45'	90.19767	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-1-45'	90.19767	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-1-45'	90.19767	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-1-45'	90.19767	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-45'	90.19767	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-45'	90.19767	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-1-45'	90.19767	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-1-45'	90.19767	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-1-45'	90.19767	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-1-45'	90.19767	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-1-45'	90.19767	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-45'	90.19767	75092	5.2	1.56	UG/KG	1/11/91	Methylene chloride
125-1-45'	90.19767	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-1-45'	90.19767	100425	< 5.		UG/KG	1/11/91	Styrene
125-1-45'	90.19767	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-45'	90.19767	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-45'	90.19767	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-1-45'	90.19767	108883	< 5.		UG/KG	1/11/91	Toluene
125-1-45'	90.19767	76131	< 5.		UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-45'	90.19767	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-45'	90.19767	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-45'	90.19767	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-1-45'	90.19767	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-1-45'	90.19767	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-45'	90.19767	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-45'	90.19767	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-45'	90.19767	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-1-45'	90.19767	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-1-45'	90.19767	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19767

none

Customer Sample Duplicate Results for Sample # 90.19767

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19767

none

Matrix Spike Results for Sample # 90.19767

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-45'	90.19767	71432	48.44	54.	UG/KG	1/11/91		Benzene
125-1-45'	90.19767	108907	48.44	46.	UG/KG	1/11/91		Chlorobenzene
125-1-45'	90.19767	75343	48.44	47.	UG/KG	1/11/91		1,1-Dichloroethane
125-1-45'	90.19767	108883	48.44	45.	UG/KG	1/11/91		Toluene
125-1-45'	90.19767	79016	48.44	44.	UG/KG	1/11/91		Trichloroethene

Matrix Spike Duplicate Results for Sample # 90.19767

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-45'	90.19767	71432	49.85	54.	UG/KG	1/11/91		Benzene
125-1-45'	90.19767	108907	49.85	47.	UG/KG	1/11/91		Chlorobenzene
125-1-45'	90.19767	75343	49.85	51.	UG/KG	1/11/91		1,1-Dichloroethane
125-1-45'	90.19767	108883	49.85	46.	UG/KG	1/11/91		Toluene
125-1-45'	90.19767	79016	49.85	47.	UG/KG	1/11/91		Trichloroethene

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19768

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-50'	90.19768	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-50'	90.19768	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-50'	90.19768	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-50'	90.19768	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-50'	90.19768	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-50'	90.19768	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-50'	90.19768	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-50'	90.19768	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-50'	90.19768	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-50'	90.19768	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-50'	90.19768	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-50'	90.19768	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-50'	90.19768	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-50'	90.19768	75150	26.	7.8	UG/KG	1/11/91		Carbon disulfide
125-1-50'	90.19768	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-50'	90.19768	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-50'	90.19768	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-50'	90.19768	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-50'	90.19768	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-50'	90.19768	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-50'	90.19768	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-50'	90.19768	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-1-50'	90.19768	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-1-50'	90.19768	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-50'	90.19768	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-1-50'	90.19768	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-1-50'	90.19768	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-50'	90.19768	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-50'	90.19768	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-50'	90.19768	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-1-50'	90.19768	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-1-50'	90.19768	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-1-50'	90.19768	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-1-50'	90.19768	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-50'	90.19768	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-50'	90.19768	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-1-50'	90.19768	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-1-50'	90.19768	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-1-50'	90.19768	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-1-50'	90.19768	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-50'	90.19768	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-50'	90.19768	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-1-50'	90.19768	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-1-50'	90.19768	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-1-50'	90.19768	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-1-50'	90.19768	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-1-50'	90.19768	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-50'	90.19768	75092	5.1	1.53	UG/KG	1/11/91	Methylene chloride
125-1-50'	90.19768	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-1-50'	90.19768	100425	< 5.		UG/KG	1/11/91	Styrene
125-1-50'	90.19768	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-50'	90.19768	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-50'	90.19768	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-1-50'	90.19768	108883	< 5.		UG/KG	1/11/91	Toluene
125-1-50'	90.19768	76131	< 5.		UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-50'	90.19768	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-50'	90.19768	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-50'	90.19768	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-1-50'	90.19768	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-1-50'	90.19768	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-50'	90.19768	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-50'	90.19768	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-50'	90.19768	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-1-50'	90.19768	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-1-50'	90.19768	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19768

none

Customer Sample Duplicate Results for Sample # 90.19768

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19768

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19769

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-55'	90.19769	67641	< 20.		UG/KG	1/11/91		Acetone
125-1-55'	90.19769	107028	< 100.		UG/KG	1/11/91		Acrolein
125-1-55'	90.19769	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-1-55'	90.19769	71432	< 5.		UG/KG	1/11/91		Benzene
125-1-55'	90.19769	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-1-55'	90.19769	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-1-55'	90.19769	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-1-55'	90.19769	75252	< 5.		UG/KG	1/11/91		Bromoform
125-1-55'	90.19769	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-1-55'	90.19769	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-1-55'	90.19769	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-1-55'	90.19769	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-1-55'	90.19769	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-1-55'	90.19769	75150	< 5.		UG/KG	1/11/91		Carbon disulfide
125-1-55'	90.19769	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-1-55'	90.19769	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-1-55'	90.19769	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-1-55'	90.19769	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-1-55'	90.19769	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-1-55'	90.19769	67663	< 5.		UG/KG	1/11/91		Chloroform
125-1-55'	90.19769	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-1-55'	90.19769	95498	< 5.	UG/KG	1/11/91	o-Chlorotoluene
125-1-55'	90.19769	106434	< 5.	UG/KG	1/11/91	p-Chlorotoluene
125-1-55'	90.19769	96128	< 10.	UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-1-55'	90.19769	106934	< 5.	UG/KG	1/11/91	1,2-Dibromoethane
125-1-55'	90.19769	74953	< 5.	UG/KG	1/11/91	Dibromomethane
125-1-55'	90.19769	95501	< 5.	UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-1-55'	90.19769	541731	< 5.	UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-1-55'	90.19769	106467	< 5.	UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-1-55'	90.19769	75718	< 10.	UG/KG	1/11/91	Dichlorodifluoromethane
125-1-55'	90.19769	75343	< 5.	UG/KG	1/11/91	1,1-Dichloroethane
125-1-55'	90.19769	107062	< 5.	UG/KG	1/11/91	1,2-Dichloroethane
125-1-55'	90.19769	75354	< 5.	UG/KG	1/11/91	1,1-Dichloroethene
125-1-55'	90.19769	156605	< 5.	UG/KG	1/11/91	trans-1,2-Dichloroethene
125-1-55'	90.19769	156592	< 5.	UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-1-55'	90.19769	78875	< 5.	UG/KG	1/11/91	1,2-Dichloropropane
125-1-55'	90.19769	142289	< 5.	UG/KG	1/11/91	1,3-Dichloropropane
125-1-55'	90.19769	594207	< 5.	UG/KG	1/11/91	2,2-Dichloropropane
125-1-55'	90.19769	563586	< 5.	UG/KG	1/11/91	1,1-Dichloropropene
125-1-55'	90.19769	10061015	< 5.	UG/KG	1/11/91	cis-1,3-Dichloropropene
125-1-55'	90.19769	10061026	< 5.	UG/KG	1/11/91	trans-1,3-Dichloropropene
125-1-55'	90.19769	100414	< 5.	UG/KG	1/11/91	Ethylbenzene
125-1-55'	90.19769	591786	< 20.	UG/KG	1/11/91	2-Hexanone
125-1-55'	90.19769	98828	< 5.	UG/KG	1/11/91	Isopropylbenzene
125-1-55'	90.19769	99876	< 5.	UG/KG	1/11/91	4-Isopropyltoluene
125-1-55'	90.19769	74884	< 5.	UG/KG	1/11/91	Methyl iodide
125-1-55'	90.19769	108101	< 20.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-1-55'	90.19769	75092	< 5.	UG/KG	1/11/91	Methylene chloride
125-1-55'	90.19769	103651	< 5.	UG/KG	1/11/91	Propylbenzene
125-1-55'	90.19769	100425	< 5.	UG/KG	1/11/91	Styrene
125-1-55'	90.19769	630206	< 5.	UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-1-55'	90.19769	79345	< 5.	UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-1-55'	90.19769	127184	< 5.	UG/KG	1/11/91	Tetrachloroethylene
125-1-55'	90.19769	108883	< 5.	UG/KG	1/11/91	Toluene
125-1-55'	90.19769	76131	< 5.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-1-55'	90.19769	71556	< 5.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-1-55'	90.19769	79005	< 5.	UG/KG	1/11/91	1,1,2-Trichloroethane
125-1-55'	90.19769	79016	< 5.	UG/KG	1/11/91	Trichloroethene
125-1-55'	90.19769	75694	< 5.	UG/KG	1/11/91	Trichlorofluoromethane
125-1-55'	90.19769	96184	< 5.	UG/KG	1/11/91	1,2,3-Trichloropropane
125-1-55'	90.19769	95636	< 5.	UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-1-55'	90.19769	108678	< 5.	UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-1-55'	90.19769	108054	< 10.	UG/KG	1/11/91	Vinyl acetate
125-1-55'	90.19769	75014	< 10.	UG/KG	1/11/91	Vinyl chloride
125-1-55'	90.19769	1330207	< 5.	UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19769

none

Customer Sample Duplicate Results for Sample # 90.19769

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19769

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19770

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: Date Analyzed:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
TRIP BLANK	90.19770	67641	< 20.		UG/KG	1/11/91		Acetone
TRIP BLANK	90.19770	107028	< 100.		UG/KG	1/11/91		Acrolein
TRIP BLANK	90.19770	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
TRIP BLANK	90.19770	71432	< 5.		UG/KG	1/11/91		Benzene
TRIP BLANK	90.19770	108861	< 5.		UG/KG	1/11/91		Bromobenzene
TRIP BLANK	90.19770	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
TRIP BLANK	90.19770	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
TRIP BLANK	90.19770	75252	< 5.		UG/KG	1/11/91		Bromoform
TRIP BLANK	90.19770	74839	< 10.		UG/KG	1/11/91		Bromomethane
TRIP BLANK	90.19770	78933	< 20.		UG/KG	1/11/91		2-Butanone
TRIP BLANK	90.19770	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
TRIP BLANK	90.19770	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
TRIP BLANK	90.19770	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
TRIP BLANK	90.19770	75150	6.1	1.83	UG/KG	1/11/91		Carbon disulfide
TRIP BLANK	90.19770	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
TRIP BLANK	90.19770	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
TRIP BLANK	90.19770	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
TRIP BLANK	90.19770	75003	< 10.		UG/KG	1/11/91		Chloroethane
TRIP BLANK	90.19770	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
TRIP BLANK	90.19770	67663	< 5.		UG/KG	1/11/91		Chloroform
TRIP BLANK	90.19770	74873	< 10.		UG/KG	1/11/91		Chloromethane

TRIP BLANK	90.19770	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
TRIP BLANK	90.19770	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
TRIP BLANK	90.19770	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
TRIP BLANK	90.19770	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
TRIP BLANK	90.19770	74953	< 5.		UG/KG	1/11/91	Dibromomethane
TRIP BLANK	90.19770	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
TRIP BLANK	90.19770	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
TRIP BLANK	90.19770	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
TRIP BLANK	90.19770	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
TRIP BLANK	90.19770	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
TRIP BLANK	90.19770	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
TRIP BLANK	90.19770	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
TRIP BLANK	90.19770	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
TRIP BLANK	90.19770	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
TRIP BLANK	90.19770	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
TRIP BLANK	90.19770	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
TRIP BLANK	90.19770	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
TRIP BLANK	90.19770	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
TRIP BLANK	90.19770	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
TRIP BLANK	90.19770	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
TRIP BLANK	90.19770	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
TRIP BLANK	90.19770	591786	< 20.		UG/KG	1/11/91	2-Hexanone
TRIP BLANK	90.19770	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
TRIP BLANK	90.19770	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
TRIP BLANK	90.19770	74884	< 5.		UG/KG	1/11/91	Methyl iodide
TRIP BLANK	90.19770	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
TRIP BLANK	90.19770	75092	5.1	1.53	UG/KG	1/11/91	Methylene chloride
TRIP BLANK	90.19770	103651	< 5.		UG/KG	1/11/91	Propylbenzene
TRIP BLANK	90.19770	100425	< 5.		UG/KG	1/11/91	Styrene
TRIP BLANK	90.19770	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
TRIP BLANK	90.19770	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
TRIP BLANK	90.19770	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
TRIP BLANK	90.19770	108883	< 5.		UG/KG	1/11/91	Toluene
TRIP BLANK	90.19770	76131	< 5.		UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
TRIP BLANK	90.19770	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
TRIP BLANK	90.19770	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
TRIP BLANK	90.19770	79016	< 5.		UG/KG	1/11/91	Trichloroethene
TRIP BLANK	90.19770	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
TRIP BLANK	90.19770	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
TRIP BLANK	90.19770	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
TRIP BLANK	90.19770	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
TRIP BLANK	90.19770	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
TRIP BLANK	90.19770	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
TRIP BLANK	90.19770	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19770

none

Customer Sample Duplicate Results for Sample # 90.19770

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19770

none

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19781

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-5'	90.19781	67641	< 20.		UG/KG	1/24/91		Acetone
125-2-5'	90.19781	107028	< 100.		UG/KG	1/24/91		Acrolein
125-2-5'	90.19781	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
125-2-5'	90.19781	71432	< 5.		UG/KG	1/24/91		Benzene
125-2-5'	90.19781	108861	< 5.		UG/KG	1/24/91		Bromobenzene
125-2-5'	90.19781	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
125-2-5'	90.19781	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
125-2-5'	90.19781	75252	< 5.		UG/KG	1/24/91		Bromoform
125-2-5'	90.19781	74839	< 10.		UG/KG	1/24/91		Bromomethane
125-2-5'	90.19781	78933	< 20.		UG/KG	1/24/91		2-Butanone
125-2-5'	90.19781	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
125-2-5'	90.19781	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
125-2-5'	90.19781	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
125-2-5'	90.19781	75150	5.3	1.59	UG/KG	1/24/91		Carbon disulfide
125-2-5'	90.19781	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
125-2-5'	90.19781	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
125-2-5'	90.19781	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
125-2-5'	90.19781	75003	< 10.		UG/KG	1/24/91		Chloroethane
125-2-5'	90.19781	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
125-2-5'	90.19781	67663	< 5.		UG/KG	1/24/91		Chloroform
125-2-5'	90.19781	74873	< 10.		UG/KG	1/24/91		Chloromethane

125-2-5'	90.19781	95498	< 5.	UG/KG	1/24/91	o-Chlorotoluene
125-2-5'	90.19781	106434	< 5.	UG/KG	1/24/91	p-Chlorotoluene
125-2-5'	90.19781	96128	< 10.	UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
125-2-5'	90.19781	106934	< 5.	UG/KG	1/24/91	1,2-Dibromoethane
125-2-5'	90.19781	74953	< 5.	UG/KG	1/24/91	Dibromomethane
125-2-5'	90.19781	95501	< 5.	UG/KG	1/24/91	o-Dichlorobenzene (1,2)
125-2-5'	90.19781	541731	< 5.	UG/KG	1/24/91	m-Dichlorobenzene (1,3)
125-2-5'	90.19781	106467	< 5.	UG/KG	1/24/91	p-Dichlorobenzene (1,4)
125-2-5'	90.19781	75718	< 10.	UG/KG	1/24/91	Dichlorodifluoromethane
125-2-5'	90.19781	75343	< 5.	UG/KG	1/24/91	1,1-Dichloroethane
125-2-5'	90.19781	107062	< 5.	UG/KG	1/24/91	1,2-Dichloroethane
125-2-5'	90.19781	75354	< 5.	UG/KG	1/24/91	1,1-Dichloroethene
125-2-5'	90.19781	156605	< 5.	UG/KG	1/24/91	trans-1,2-Dichloroethene
125-2-5'	90.19781	156592	< 5.	UG/KG	1/24/91	cis-1,2-Dichloroethylene
125-2-5'	90.19781	78875	< 5.	UG/KG	1/24/91	1,2-Dichloropropane
125-2-5'	90.19781	142289	< 5.	UG/KG	1/24/91	1,3-Dichloropropane
125-2-5'	90.19781	594207	< 5.	UG/KG	1/24/91	2,2-Dichloropropane
125-2-5'	90.19781	563586	< 5.	UG/KG	1/24/91	1,1-Dichloropropene
125-2-5'	90.19781	10061015	< 5.	UG/KG	1/24/91	cis-1,3-Dichloropropene
125-2-5'	90.19781	10061026	< 5.	UG/KG	1/24/91	trans-1,3-Dichloropropene
125-2-5'	90.19781	100414	< 5.	UG/KG	1/24/91	Ethylbenzene
125-2-5'	90.19781	591786	< 20.	UG/KG	1/24/91	2-Hexanone
125-2-5'	90.19781	98828	< 5.	UG/KG	1/24/91	Isopropylbenzene
125-2-5'	90.19781	99876	< 5.	UG/KG	1/24/91	4-Isopropyltoluene
125-2-5'	90.19781	74884	< 5.	UG/KG	1/24/91	Methyl iodide
125-2-5'	90.19781	108101	< 20.	UG/KG	1/24/91	4-Methyl-2-pentanone
125-2-5'	90.19781	75092	< 5.	UG/KG	1/24/91	Methylene chloride
125-2-5'	90.19781	103651	< 5.	UG/KG	1/24/91	Propylbenzene
125-2-5'	90.19781	100425	< 5.	UG/KG	1/24/91	Styrene
125-2-5'	90.19781	630206	< 5.	UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
125-2-5'	90.19781	79345	< 5.	UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
125-2-5'	90.19781	127184	< 5.	UG/KG	1/24/91	Tetrachloroethylene
125-2-5'	90.19781	108883	< 5.	UG/KG	1/24/91	Toluene
125-2-5'	90.19781	76131	< 5.	UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-5'	90.19781	71556	< 5.	UG/KG	1/24/91	1,1,1-Trichloroethane
125-2-5'	90.19781	79005	< 5.	UG/KG	1/24/91	1,1,2-Trichloroethane
125-2-5'	90.19781	79016	< 5.	UG/KG	1/24/91	Trichloroethene
125-2-5'	90.19781	75694	< 5.	UG/KG	1/24/91	Trichlorofluoromethane
125-2-5'	90.19781	96184	< 5.	UG/KG	1/24/91	1,2,3-Trichloropropane
125-2-5'	90.19781	95636	< 5.	UG/KG	1/24/91	1,2,4-Trimethylbenzene
125-2-5'	90.19781	108678	< 5.	UG/KG	1/24/91	1,3,5-Trimethylbenzene
125-2-5'	90.19781	108054	< 10.	UG/KG	1/24/91	Vinyl acetate
125-2-5'	90.19781	75014	< 10.	UG/KG	1/24/91	Vinyl chloride
125-2-5'	90.19781	1330207	< 5.	UG/KG	1/24/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19781

none

Customer Sample Duplicate Results for Sample # 90.19781

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19781

none

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19782

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-10'	90.19782	67641	< 20.		UG/KG	1/24/91		Acetone
125-2-10'	90.19782	107028	< 100.		UG/KG	1/24/91		Acrolein
125-2-10'	90.19782	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
125-2-10'	90.19782	71432	< 5.		UG/KG	1/24/91		Benzene
125-2-10'	90.19782	108861	< 5.		UG/KG	1/24/91		Bromobenzene
125-2-10'	90.19782	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
125-2-10'	90.19782	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
125-2-10'	90.19782	75252	< 5.		UG/KG	1/24/91		Bromoform
125-2-10'	90.19782	74839	< 10.		UG/KG	1/24/91		Bromomethane
125-2-10'	90.19782	78933	< 20.		UG/KG	1/24/91		2-Butanone
125-2-10'	90.19782	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
125-2-10'	90.19782	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
125-2-10'	90.19782	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
125-2-10'	90.19782	75150	6.	1.8	UG/KG	1/24/91		Carbon disulfide
125-2-10'	90.19782	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
125-2-10'	90.19782	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
125-2-10'	90.19782	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
125-2-10'	90.19782	75003	< 10.		UG/KG	1/24/91		Chloroethane
125-2-10'	90.19782	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
125-2-10'	90.19782	67663	< 5.		UG/KG	1/24/91		Chloroform
125-2-10'	90.19782	74873	< 10.		UG/KG	1/24/91		Chloromethane

125-2-10'	90.19782	95498	< 5.	UG/KG	1/24/91	o-Chlorotoluene
125-2-10'	90.19782	106434	< 5.	UG/KG	1/24/91	p-Chlorotoluene
125-2-10'	90.19782	96128	< 10.	UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
125-2-10'	90.19782	106934	< 5.	UG/KG	1/24/91	1,2-Dibromoethane
125-2-10'	90.19782	74953	< 5.	UG/KG	1/24/91	Dibromomethane
125-2-10'	90.19782	95501	< 5.	UG/KG	1/24/91	o-Dichlorobenzene (1,2)
125-2-10'	90.19782	541731	< 5.	UG/KG	1/24/91	m-Dichlorobenzene (1,3)
125-2-10'	90.19782	106467	< 5.	UG/KG	1/24/91	p-Dichlorobenzene (1,4)
125-2-10'	90.19782	75718	< 10.	UG/KG	1/24/91	Dichlorodifluoromethane
125-2-10'	90.19782	75343	< 5.	UG/KG	1/24/91	1,1-Dichloroethane
125-2-10'	90.19782	107062	< 5.	UG/KG	1/24/91	1,2-Dichloroethane
125-2-10'	90.19782	75354	< 5.	UG/KG	1/24/91	1,1-Dichloroethene
125-2-10'	90.19782	156605	< 5.	UG/KG	1/24/91	trans-1,2-Dichloroethene
125-2-10'	90.19782	156592	< 5.	UG/KG	1/24/91	cis-1,2-Dichloroethylene
125-2-10'	90.19782	78875	< 5.	UG/KG	1/24/91	1,2-Dichloropropane
125-2-10'	90.19782	142289	< 5.	UG/KG	1/24/91	1,3-Dichloropropane
125-2-10'	90.19782	594207	< 5.	UG/KG	1/24/91	2,2-Dichloropropane
125-2-10'	90.19782	563586	< 5.	UG/KG	1/24/91	1,1-Dichloropropene
125-2-10'	90.19782	10061015	< 5.	UG/KG	1/24/91	cis-1,3-Dichloropropene
125-2-10'	90.19782	10061026	< 5.	UG/KG	1/24/91	trans-1,3-Dichloropropene
125-2-10'	90.19782	100414	< 5.	UG/KG	1/24/91	Ethylbenzene
125-2-10'	90.19782	591786	< 20.	UG/KG	1/24/91	2-Hexanone
125-2-10'	90.19782	98828	< 5.	UG/KG	1/24/91	Isopropylbenzene
125-2-10'	90.19782	99876	< 5.	UG/KG	1/24/91	4-Isopropyltoluene
125-2-10'	90.19782	74884	< 5.	UG/KG	1/24/91	Methyl iodide
125-2-10'	90.19782	108101	< 20.	UG/KG	1/24/91	4-Methyl-2-pentanone
125-2-10'	90.19782	75092	< 5.	UG/KG	1/24/91	Methylene chloride
125-2-10'	90.19782	103651	< 5.	UG/KG	1/24/91	Propylbenzene
125-2-10'	90.19782	100425	< 5.	UG/KG	1/24/91	Styrene
125-2-10'	90.19782	630206	< 5.	UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
125-2-10'	90.19782	79345	< 5.	UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
125-2-10'	90.19782	127184	< 5.	UG/KG	1/24/91	Tetrachloroethylene
125-2-10'	90.19782	108883	< 5.	UG/KG	1/24/91	Toluene
125-2-10'	90.19782	76131	< 5.	UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-10'	90.19782	71556	< 5.	UG/KG	1/24/91	1,1,1-Trichloroethane
125-2-10'	90.19782	79005	< 5.	UG/KG	1/24/91	1,1,2-Trichloroethane
125-2-10'	90.19782	79016	< 5.	UG/KG	1/24/91	Trichloroethene
125-2-10'	90.19782	75694	< 5.	UG/KG	1/24/91	Trichlorofluoromethane
125-2-10'	90.19782	96184	< 5.	UG/KG	1/24/91	1,2,3-Trichloropropane
125-2-10'	90.19782	95636	< 5.	UG/KG	1/24/91	1,2,4-Trimethylbenzene
125-2-10'	90.19782	108678	< 5.	UG/KG	1/24/91	1,3,5-Trimethylbenzene
125-2-10'	90.19782	108054	< 10.	UG/KG	1/24/91	Vinyl acetate
125-2-10'	90.19782	75014	< 10.	UG/KG	1/24/91	Vinyl chloride
125-2-10'	90.19782	1330207	< 5.	UG/KG	1/24/91	Mixed-Xylenes (o + m + p)

Tentatively Identified Compounds in Customer Sample # 90.19782

none

Customer Sample Duplicate Results for Sample # 90.19782

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19782

none

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19783

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-15'	90.19783	67641	< 20.		UG/KG	1/24/91		Acetone
125-2-15'	90.19783	107028	< 100.		UG/KG	1/24/91		Acrolein
125-2-15'	90.19783	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
125-2-15'	90.19783	71432	< 5.		UG/KG	1/24/91		Benzene
125-2-15'	90.19783	108861	< 5.		UG/KG	1/24/91		Bromobenzene
125-2-15'	90.19783	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
125-2-15'	90.19783	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
125-2-15'	90.19783	75252	< 5.		UG/KG	1/24/91		Bromoform
125-2-15'	90.19783	74839	< 10.		UG/KG	1/24/91		Bromomethane
125-2-15'	90.19783	78933	< 20.		UG/KG	1/24/91		2-Butanone
125-2-15'	90.19783	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
125-2-15'	90.19783	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
125-2-15'	90.19783	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
125-2-15'	90.19783	75150	5.3	1.59	UG/KG	1/24/91		Carbon disulfide
125-2-15'	90.19783	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
125-2-15'	90.19783	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
125-2-15'	90.19783	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
125-2-15'	90.19783	75003	< 10.		UG/KG	1/24/91		Chloroethane
125-2-15'	90.19783	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
125-2-15'	90.19783	67663	< 5.		UG/KG	1/24/91		Chloroform
125-2-15'	90.19783	74873	< 10.		UG/KG	1/24/91		Chloromethane

125-2-15'	90.19783	95498	< 5.		UG/KG	1/24/91	o-Chlorotoluene
125-2-15'	90.19783	106434	< 5.		UG/KG	1/24/91	p-Chlorotoluene
125-2-15'	90.19783	96128	< 10.		UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
125-2-15'	90.19783	106934	< 5.		UG/KG	1/24/91	1,2-Dibromoethane
125-2-15'	90.19783	74953	< 5.		UG/KG	1/24/91	Dibromomethane
125-2-15'	90.19783	95501	< 5.		UG/KG	1/24/91	o-Dichlorobenzene (1,2)
125-2-15'	90.19783	541731	< 5.		UG/KG	1/24/91	m-Dichlorobenzene (1,3)
125-2-15'	90.19783	106467	< 5.		UG/KG	1/24/91	p-Dichlorobenzene (1,4)
125-2-15'	90.19783	75718	< 10.		UG/KG	1/24/91	Dichlorodifluoromethane
125-2-15'	90.19783	75343	< 5.		UG/KG	1/24/91	1,1-Dichloroethane
125-2-15'	90.19783	107062	< 5.		UG/KG	1/24/91	1,2-Dichloroethane
125-2-15'	90.19783	75354	< 5.		UG/KG	1/24/91	1,1-Dichloroethene
125-2-15'	90.19783	156605	< 5.		UG/KG	1/24/91	trans-1,2-Dichloroethene
125-2-15'	90.19783	156592	< 5.		UG/KG	1/24/91	cis-1,2-Dichloroethylene
125-2-15'	90.19783	78875	< 5.		UG/KG	1/24/91	1,2-Dichloropropane
125-2-15'	90.19783	142289	< 5.		UG/KG	1/24/91	1,3-Dichloropropane
125-2-15'	90.19783	594207	< 5.		UG/KG	1/24/91	2,2-Dichloropropane
125-2-15'	90.19783	563586	< 5.		UG/KG	1/24/91	1,1-Dichloropropene
125-2-15'	90.19783	10061015	< 5.		UG/KG	1/24/91	cis-1,3-Dichloropropene
125-2-15'	90.19783	10061026	< 5.		UG/KG	1/24/91	trans-1,3-Dichloropropene
125-2-15'	90.19783	100414	< 5.		UG/KG	1/24/91	Ethylbenzene
125-2-15'	90.19783	591786	< 20.		UG/KG	1/24/91	2-Hexanone
125-2-15'	90.19783	98828	< 5.		UG/KG	1/24/91	Isopropylbenzene
125-2-15'	90.19783	99876	< 5.		UG/KG	1/24/91	4-Isopropyltoluene
125-2-15'	90.19783	74884	< 5.		UG/KG	1/24/91	Methyl iodide
125-2-15'	90.19783	108101	< 20.		UG/KG	1/24/91	4-Methyl-2-pentanone
125-2-15'	90.19783	75092	< 5.		UG/KG	1/24/91	Methylene chloride
125-2-15'	90.19783	103651	< 5.		UG/KG	1/24/91	Propylbenzene
125-2-15'	90.19783	100425	< 5.		UG/KG	1/24/91	Styrene
125-2-15'	90.19783	630206	< 5.		UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
125-2-15'	90.19783	79345	< 5.		UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
125-2-15'	90.19783	127184	< 5.		UG/KG	1/24/91	Tetrachloroethylene
125-2-15'	90.19783	108883	< 5.		UG/KG	1/24/91	Toluene
125-2-15'	90.19783	76131	18.	5.4	UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-15'	90.19783	71556	9.7	2.91	UG/KG	1/24/91	1,1,1-Trichloroethane
125-2-15'	90.19783	79005	< 5.		UG/KG	1/24/91	1,1,2-Trichloroethane
125-2-15'	90.19783	79016	< 5.		UG/KG	1/24/91	Trichloroethene
125-2-15'	90.19783	75694	< 5.		UG/KG	1/24/91	Trichlorofluoromethane
125-2-15'	90.19783	96184	< 5.		UG/KG	1/24/91	1,2,3-Trichloropropane
125-2-15'	90.19783	95636	< 5.		UG/KG	1/24/91	1,2,4-Trimethylbenzene
125-2-15'	90.19783	108678	< 5.		UG/KG	1/24/91	1,3,5-Trimethylbenzene
125-2-15'	90.19783	108054	< 10.		UG/KG	1/24/91	Vinyl acetate
125-2-15'	90.19783	75014	< 10.		UG/KG	1/24/91	Vinyl chloride
125-2-15'	90.19783	1330207	< 5.		UG/KG	1/24/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19783

none

Customer Sample Duplicate Results for Sample # 90.19783

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19783

none

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19784

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-20'	90.19784	67641	< 20.		UG/KG	1/24/91		Acetone
125-2-20'	90.19784	107028	< 100.		UG/KG	1/24/91		Acrolein
125-2-20'	90.19784	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
125-2-20'	90.19784	71432	< 5.		UG/KG	1/24/91		Benzene
125-2-20'	90.19784	108861	< 5.		UG/KG	1/24/91		Bromobenzene
125-2-20'	90.19784	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
125-2-20'	90.19784	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
125-2-20'	90.19784	75252	< 5.		UG/KG	1/24/91		Bromoform
125-2-20'	90.19784	74839	< 10.		UG/KG	1/24/91		Bromomethane
125-2-20'	90.19784	78933	< 20.		UG/KG	1/24/91		2-Butanone
125-2-20'	90.19784	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
125-2-20'	90.19784	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
125-2-20'	90.19784	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
125-2-20'	90.19784	75150	5.3	1.59	UG/KG	1/24/91		Carbon disulfide
125-2-20'	90.19784	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
125-2-20'	90.19784	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
125-2-20'	90.19784	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
125-2-20'	90.19784	75003	< 10.		UG/KG	1/24/91		Chloroethane
125-2-20'	90.19784	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
125-2-20'	90.19784	67663	< 5.		UG/KG	1/24/91		Chloroform
125-2-20'	90.19784	74873	< 10.		UG/KG	1/24/91		Chloromethane

125-2-20'	90.19784	95498	< 5.		UG/KG	1/24/91	o-Chlorotoluene
125-2-20'	90.19784	106434	< 5.		UG/KG	1/24/91	p-Chlorotoluene
125-2-20'	90.19784	96128	< 10.		UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
125-2-20'	90.19784	106934	< 5.		UG/KG	1/24/91	1,2-Dibromoethane
125-2-20'	90.19784	74953	< 5.		UG/KG	1/24/91	Dibromomethane
125-2-20'	90.19784	95501	< 5.		UG/KG	1/24/91	o-Dichlorobenzene (1,2)
125-2-20'	90.19784	541731	< 5.		UG/KG	1/24/91	m-Dichlorobenzene (1,3)
125-2-20'	90.19784	106467	< 5.		UG/KG	1/24/91	p-Dichlorobenzene (1,4)
125-2-20'	90.19784	75718	< 10.		UG/KG	1/24/91	Dichlorodifluoromethane
125-2-20'	90.19784	75343	< 5.		UG/KG	1/24/91	1,1-Dichloroethane
125-2-20'	90.19784	107062	< 5.		UG/KG	1/24/91	1,2-Dichloroethane
125-2-20'	90.19784	75354	< 5.		UG/KG	1/24/91	1,1-Dichloroethene
125-2-20'	90.19784	156605	< 5.		UG/KG	1/24/91	trans-1,2-Dichloroethene
125-2-20'	90.19784	156592	< 5.		UG/KG	1/24/91	cis-1,2-Dichloroethylene
125-2-20'	90.19784	78875	< 5.		UG/KG	1/24/91	1,2-Dichloropropane
125-2-20'	90.19784	142289	< 5.		UG/KG	1/24/91	1,3-Dichloropropane
125-2-20'	90.19784	594207	< 5.		UG/KG	1/24/91	2,2-Dichloropropane
125-2-20'	90.19784	563586	< 5.		UG/KG	1/24/91	1,1-Dichloropropene
125-2-20'	90.19784	10061015	< 5.		UG/KG	1/24/91	cis-1,3-Dichloropropene
125-2-20'	90.19784	10061026	< 5.		UG/KG	1/24/91	trans-1,3-Dichloropropene
125-2-20'	90.19784	100414	< 5.		UG/KG	1/24/91	Ethylbenzene
125-2-20'	90.19784	591786	< 20.		UG/KG	1/24/91	2-Hexanone
125-2-20'	90.19784	98828	< 5.		UG/KG	1/24/91	Isopropylbenzene
125-2-20'	90.19784	99876	< 5.		UG/KG	1/24/91	4-Isopropyltoluene
125-2-20'	90.19784	74884	< 5.		UG/KG	1/24/91	Methyl iodide
125-2-20'	90.19784	108101	< 20.		UG/KG	1/24/91	4-Methyl-2-pentanone
125-2-20'	90.19784	75092	5.3	1.59	UG/KG	1/24/91	Methylene chloride
125-2-20'	90.19784	103651	< 5.		UG/KG	1/24/91	Propylbenzene
125-2-20'	90.19784	100425	< 5.		UG/KG	1/24/91	Styrene
125-2-20'	90.19784	630206	< 5.		UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
125-2-20'	90.19784	79345	< 5.		UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
125-2-20'	90.19784	127184	< 5.		UG/KG	1/24/91	Tetrachloroethylene
125-2-20'	90.19784	108883	< 5.		UG/KG	1/24/91	Toluene
125-2-20'	90.19784	76131	< 5.		UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-20'	90.19784	71556	< 5.		UG/KG	1/24/91	1,1,1-Trichloroethane
125-2-20'	90.19784	79005	< 5.		UG/KG	1/24/91	1,1,2-Trichloroethane
125-2-20'	90.19784	79016	< 5.		UG/KG	1/24/91	Trichloroethene
125-2-20'	90.19784	75694	< 5.		UG/KG	1/24/91	Trichlorofluoromethane
125-2-20'	90.19784	96184	< 5.		UG/KG	1/24/91	1,2,3-Trichloropropane
125-2-20'	90.19784	95636	< 5.		UG/KG	1/24/91	1,2,4-Trimethylbenzene
125-2-20'	90.19784	108678	< 5.		UG/KG	1/24/91	1,3,5-Trimethylbenzene
125-2-20'	90.19784	108054	< 10.		UG/KG	1/24/91	Vinyl acetate
125-2-20'	90.19784	75014	< 10.		UG/KG	1/24/91	Vinyl chloride
125-2-20'	90.19784	1330207	< 5.		UG/KG	1/24/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19784

none

Customer Sample Duplicate Results for Sample # 90.19784

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19784

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19785

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-25'	90.19785	67641	< 20.		UG/KG	1/11/91		Acetone
125-2-25'	90.19785	107028	< 100.		UG/KG	1/11/91		Acrolein
125-2-25'	90.19785	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-2-25'	90.19785	71432	< 5.		UG/KG	1/11/91		Benzene
125-2-25'	90.19785	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-2-25'	90.19785	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-2-25'	90.19785	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-2-25'	90.19785	75252	< 5.		UG/KG	1/11/91		Bromoform
125-2-25'	90.19785	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-2-25'	90.19785	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-2-25'	90.19785	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-2-25'	90.19785	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-2-25'	90.19785	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-2-25'	90.19785	75150	< 5.		UG/KG	1/11/91		Carbon disulfide
125-2-25'	90.19785	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-2-25'	90.19785	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-2-25'	90.19785	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-2-25'	90.19785	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-2-25'	90.19785	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-2-25'	90.19785	67663	< 5.		UG/KG	1/11/91		Chloroform
125-2-25'	90.19785	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-2-25'	90.19785	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-2-25'	90.19785	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-2-25'	90.19785	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-2-25'	90.19785	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-2-25'	90.19785	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-2-25'	90.19785	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-2-25'	90.19785	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-2-25'	90.19785	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-2-25'	90.19785	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-2-25'	90.19785	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-2-25'	90.19785	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-2-25'	90.19785	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-2-25'	90.19785	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-2-25'	90.19785	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-2-25'	90.19785	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-2-25'	90.19785	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-2-25'	90.19785	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-2-25'	90.19785	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-2-25'	90.19785	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-2-25'	90.19785	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-2-25'	90.19785	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-2-25'	90.19785	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-2-25'	90.19785	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-2-25'	90.19785	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-2-25'	90.19785	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-2-25'	90.19785	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-2-25'	90.19785	75092	< 5.		UG/KG	1/11/91	Methylene chloride
125-2-25'	90.19785	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-2-25'	90.19785	100425	< 5.		UG/KG	1/11/91	Styrene
125-2-25'	90.19785	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-2-25'	90.19785	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-2-25'	90.19785	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-2-25'	90.19785	108883	< 5.		UG/KG	1/11/91	Toluene
125-2-25'	90.19785	76131	14.	4.2	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-25'	90.19785	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-2-25'	90.19785	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-2-25'	90.19785	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-2-25'	90.19785	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-2-25'	90.19785	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-2-25'	90.19785	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-2-25'	90.19785	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-2-25'	90.19785	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-2-25'	90.19785	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-2-25'	90.19785	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19785

none

Customer Sample Duplicate Results for Sample # 90.19785

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19785

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19786

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-30'	90.19786	67641	24.	7.2	UG/KG	1/11/91		Acetone
125-2-30'	90.19786	107028	< 100.		UG/KG	1/11/91		Acrolein
125-2-30'	90.19786	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-2-30'	90.19786	71432	< 5.		UG/KG	1/11/91		Benzene
125-2-30'	90.19786	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-2-30'	90.19786	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-2-30'	90.19786	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-2-30'	90.19786	75252	< 5.		UG/KG	1/11/91		Bromoform
125-2-30'	90.19786	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-2-30'	90.19786	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-2-30'	90.19786	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-2-30'	90.19786	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-2-30'	90.19786	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-2-30'	90.19786	75150	6.	1.8	UG/KG	1/11/91		Carbon disulfide
125-2-30'	90.19786	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-2-30'	90.19786	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-2-30'	90.19786	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-2-30'	90.19786	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-2-30'	90.19786	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-2-30'	90.19786	67663	< 5.		UG/KG	1/11/91		Chloroform
125-2-30'	90.19786	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-2-30'	90.19786	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-2-30'	90.19786	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-2-30'	90.19786	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-2-30'	90.19786	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-2-30'	90.19786	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-2-30'	90.19786	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-2-30'	90.19786	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-2-30'	90.19786	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-2-30'	90.19786	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-2-30'	90.19786	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-2-30'	90.19786	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-2-30'	90.19786	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-2-30'	90.19786	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-2-30'	90.19786	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-2-30'	90.19786	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-2-30'	90.19786	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-2-30'	90.19786	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-2-30'	90.19786	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-2-30'	90.19786	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-2-30'	90.19786	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-2-30'	90.19786	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-2-30'	90.19786	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-2-30'	90.19786	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-2-30'	90.19786	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-2-30'	90.19786	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-2-30'	90.19786	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-2-30'	90.19786	75092	< 5.		UG/KG	1/11/91	Methylene chloride
125-2-30'	90.19786	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-2-30'	90.19786	100425	< 5.		UG/KG	1/11/91	Styrene
125-2-30'	90.19786	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-2-30'	90.19786	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-2-30'	90.19786	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-2-30'	90.19786	108883	< 5.		UG/KG	1/11/91	Toluene
125-2-30'	90.19786	76131	29.	8.7	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-30'	90.19786	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-2-30'	90.19786	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-2-30'	90.19786	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-2-30'	90.19786	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-2-30'	90.19786	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-2-30'	90.19786	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-2-30'	90.19786	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-2-30'	90.19786	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-2-30'	90.19786	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-2-30'	90.19786	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19786

none

Customer Sample Duplicate Results for Sample # 90.19786

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19786

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19787

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-35'	90.19787	67641	< 20.		UG/KG	1/11/91		Acetone
125-2-35'	90.19787	107028	< 100.		UG/KG	1/11/91		Acrolein
125-2-35'	90.19787	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-2-35'	90.19787	71432	< 5.		UG/KG	1/11/91		Benzene
125-2-35'	90.19787	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-2-35'	90.19787	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-2-35'	90.19787	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-2-35'	90.19787	75252	< 5.		UG/KG	1/11/91		Bromoform
125-2-35'	90.19787	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-2-35'	90.19787	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-2-35'	90.19787	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-2-35'	90.19787	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-2-35'	90.19787	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-2-35'	90.19787	75150	6.	1.8	UG/KG	1/11/91		Carbon disulfide
125-2-35'	90.19787	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-2-35'	90.19787	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-2-35'	90.19787	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-2-35'	90.19787	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-2-35'	90.19787	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-2-35'	90.19787	67663	< 5.		UG/KG	1/11/91		Chloroform
125-2-35'	90.19787	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-2-35'	90.19787	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-2-35'	90.19787	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-2-35'	90.19787	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-2-35'	90.19787	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-2-35'	90.19787	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-2-35'	90.19787	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-2-35'	90.19787	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-2-35'	90.19787	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-2-35'	90.19787	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-2-35'	90.19787	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-2-35'	90.19787	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-2-35'	90.19787	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-2-35'	90.19787	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-2-35'	90.19787	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-2-35'	90.19787	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-2-35'	90.19787	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-2-35'	90.19787	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-2-35'	90.19787	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-2-35'	90.19787	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-2-35'	90.19787	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-2-35'	90.19787	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-2-35'	90.19787	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-2-35'	90.19787	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-2-35'	90.19787	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-2-35'	90.19787	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-2-35'	90.19787	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-2-35'	90.19787	75092	< 5.		UG/KG	1/11/91	Methylene chloride
125-2-35'	90.19787	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-2-35'	90.19787	100425	< 5.		UG/KG	1/11/91	Styrene
125-2-35'	90.19787	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-2-35'	90.19787	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-2-35'	90.19787	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-2-35'	90.19787	108883	< 5.		UG/KG	1/11/91	Toluene
125-2-35'	90.19787	76131	8.	2.4	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-35'	90.19787	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-2-35'	90.19787	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-2-35'	90.19787	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-2-35'	90.19787	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-2-35'	90.19787	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-2-35'	90.19787	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-2-35'	90.19787	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-2-35'	90.19787	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-2-35'	90.19787	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-2-35'	90.19787	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19787

none

Customer Sample Duplicate Results for Sample # 90.19787

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19787

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19788

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-40'	90.19788	67641	< 20.		UG/KG	1/11/91		Acetone
125-2-40'	90.19788	107028	< 100.		UG/KG	1/11/91		Acrolein
125-2-40'	90.19788	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-2-40'	90.19788	71432	< 5.		UG/KG	1/11/91		Benzene
125-2-40'	90.19788	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-2-40'	90.19788	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-2-40'	90.19788	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-2-40'	90.19788	75252	< 5.		UG/KG	1/11/91		Bromoform
125-2-40'	90.19788	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-2-40'	90.19788	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-2-40'	90.19788	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-2-40'	90.19788	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-2-40'	90.19788	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-2-40'	90.19788	75150	6.	1.8	UG/KG	1/11/91		Carbon disulfide
125-2-40'	90.19788	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-2-40'	90.19788	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-2-40'	90.19788	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-2-40'	90.19788	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-2-40'	90.19788	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-2-40'	90.19788	67663	< 5.		UG/KG	1/11/91		Chloroform
125-2-40'	90.19788	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-2-40'	90.19788	95498	< 5.	UG/KG	1/11/91	o-Chlorotoluene
125-2-40'	90.19788	106434	< 5.	UG/KG	1/11/91	p-Chlorotoluene
125-2-40'	90.19788	96128	< 10.	UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-2-40'	90.19788	106934	< 5.	UG/KG	1/11/91	1,2-Dibromoethane
125-2-40'	90.19788	74953	< 5.	UG/KG	1/11/91	Dibromomethane
125-2-40'	90.19788	95501	< 5.	UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-2-40'	90.19788	541731	< 5.	UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-2-40'	90.19788	106467	< 5.	UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-2-40'	90.19788	75718	< 10.	UG/KG	1/11/91	Dichlorodifluoromethane
125-2-40'	90.19788	75343	< 5.	UG/KG	1/11/91	1,1-Dichloroethane
125-2-40'	90.19788	107062	< 5.	UG/KG	1/11/91	1,2-Dichloroethane
125-2-40'	90.19788	75354	< 5.	UG/KG	1/11/91	1,1-Dichloroethene
125-2-40'	90.19788	156605	< 5.	UG/KG	1/11/91	trans-1,2-Dichloroethene
125-2-40'	90.19788	156592	< 5.	UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-2-40'	90.19788	78875	< 5.	UG/KG	1/11/91	1,2-Dichloropropane
125-2-40'	90.19788	142289	< 5.	UG/KG	1/11/91	1,3-Dichloropropane
125-2-40'	90.19788	594207	< 5.	UG/KG	1/11/91	2,2-Dichloropropane
125-2-40'	90.19788	563586	< 5.	UG/KG	1/11/91	1,1-Dichloropropene
125-2-40'	90.19788	10061015	< 5.	UG/KG	1/11/91	cis-1,3-Dichloropropene
125-2-40'	90.19788	10061026	< 5.	UG/KG	1/11/91	trans-1,3-Dichloropropene
125-2-40'	90.19788	100414	< 5.	UG/KG	1/11/91	Ethylbenzene
125-2-40'	90.19788	591786	< 20.	UG/KG	1/11/91	2-Hexanone
125-2-40'	90.19788	98828	< 5.	UG/KG	1/11/91	Isopropylbenzene
125-2-40'	90.19788	99876	< 5.	UG/KG	1/11/91	4-Isopropyltoluene
125-2-40'	90.19788	74884	< 5.	UG/KG	1/11/91	Methyl iodide
125-2-40'	90.19788	108101	< 20.	UG/KG	1/11/91	4-Methyl-2-pentanone
125-2-40'	90.19788	75092	< 5.	UG/KG	1/11/91	Methylene chloride
125-2-40'	90.19788	103651	< 5.	UG/KG	1/11/91	Propylbenzene
125-2-40'	90.19788	100425	< 5.	UG/KG	1/11/91	Styrene
125-2-40'	90.19788	630206	< 5.	UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-2-40'	90.19788	79345	< 5.	UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-2-40'	90.19788	127184	< 5.	UG/KG	1/11/91	Tetrachloroethylene
125-2-40'	90.19788	108883	< 5.	UG/KG	1/11/91	Toluene
125-2-40'	90.19788	76131	< 5.	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-40'	90.19788	71556	< 5.	UG/KG	1/11/91	1,1,1-Trichloroethane
125-2-40'	90.19788	79005	< 5.	UG/KG	1/11/91	1,1,2-Trichloroethane
125-2-40'	90.19788	79016	< 5.	UG/KG	1/11/91	Trichloroethene
125-2-40'	90.19788	75694	< 5.	UG/KG	1/11/91	Trichlorofluoromethane
125-2-40'	90.19788	96184	< 5.	UG/KG	1/11/91	1,2,3-Trichloropropane
125-2-40'	90.19788	95636	< 5.	UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-2-40'	90.19788	108678	< 5.	UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-2-40'	90.19788	108054	< 10.	UG/KG	1/11/91	Vinyl acetate
125-2-40'	90.19788	75014	< 10.	UG/KG	1/11/91	Vinyl chloride
125-2-40'	90.19788	1330207	< 5.	UG/KG	1/11/91	Mixed-Xylenes (o + m + p)

Tentatively Identified Compounds in Customer Sample # 90.19788

none

Customer Sample Duplicate Results for Sample # 90.19788

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19788

none

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19789

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-45'	90.19789	67641	< 20.		UG/KG	1/24/91		Acetone
125-2-45'	90.19789	107028	< 100.		UG/KG	1/24/91		Acrolein
125-2-45'	90.19789	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
125-2-45'	90.19789	71432	< 5.		UG/KG	1/24/91		Benzene
125-2-45'	90.19789	108861	< 5.		UG/KG	1/24/91		Bromobenzene
125-2-45'	90.19789	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
125-2-45'	90.19789	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
125-2-45'	90.19789	75252	< 5.		UG/KG	1/24/91		Bromoform
125-2-45'	90.19789	74839	< 10.		UG/KG	1/24/91		Bromomethane
125-2-45'	90.19789	78933	< 20.		UG/KG	1/24/91		2-Butanone
125-2-45'	90.19789	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
125-2-45'	90.19789	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
125-2-45'	90.19789	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
125-2-45'	90.19789	75150	5.5	1.65	UG/KG	1/24/91		Carbon disulfide
125-2-45'	90.19789	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
125-2-45'	90.19789	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
125-2-45'	90.19789	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
125-2-45'	90.19789	75003	< 10.		UG/KG	1/24/91		Chloroethane
125-2-45'	90.19789	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
125-2-45'	90.19789	67663	< 5.		UG/KG	1/24/91		Chloroform
125-2-45'	90.19789	74873	< 10.		UG/KG	1/24/91		Chloromethane

125-2-45'	90.19789	95498	< 5.	UG/KG	1/24/91	o-Chlorotoluene
125-2-45'	90.19789	106434	< 5.	UG/KG	1/24/91	p-Chlorotoluene
125-2-45'	90.19789	96128	< 10.	UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
125-2-45'	90.19789	106934	< 5.	UG/KG	1/24/91	1,2-Dibromoethane
125-2-45'	90.19789	74953	< 5.	UG/KG	1/24/91	Dibromomethane
125-2-45'	90.19789	95501	< 5.	UG/KG	1/24/91	o-Dichlorobenzene (1,2)
125-2-45'	90.19789	541731	< 5.	UG/KG	1/24/91	m-Dichlorobenzene (1,3)
125-2-45'	90.19789	106467	< 5.	UG/KG	1/24/91	p-Dichlorobenzene (1,4)
125-2-45'	90.19789	75718	< 10.	UG/KG	1/24/91	Dichlorodifluoromethane
125-2-45'	90.19789	75343	< 5.	UG/KG	1/24/91	1,1-Dichloroethane
125-2-45'	90.19789	107062	< 5.	UG/KG	1/24/91	1,2-Dichloroethane
125-2-45'	90.19789	75354	< 5.	UG/KG	1/24/91	1,1-Dichloroethene
125-2-45'	90.19789	156605	< 5.	UG/KG	1/24/91	trans-1,2-Dichloroethene
125-2-45'	90.19789	156592	< 5.	UG/KG	1/24/91	cis-1,2-Dichloroethylene
125-2-45'	90.19789	78875	< 5.	UG/KG	1/24/91	1,2-Dichloropropane
125-2-45'	90.19789	142289	< 5.	UG/KG	1/24/91	1,3-Dichloropropane
125-2-45'	90.19789	594207	< 5.	UG/KG	1/24/91	2,2-Dichloropropane
125-2-45'	90.19789	563586	< 5.	UG/KG	1/24/91	1,1-Dichloropropene
125-2-45'	90.19789	10061015	< 5.	UG/KG	1/24/91	cis-1,3-Dichloropropene
125-2-45'	90.19789	10061026	< 5.	UG/KG	1/24/91	trans-1,3-Dichloropropene
125-2-45'	90.19789	100414	< 5.	UG/KG	1/24/91	Ethylbenzene
125-2-45'	90.19789	591786	< 20.	UG/KG	1/24/91	2-Hexanone
125-2-45'	90.19789	98828	< 5.	UG/KG	1/24/91	Isopropylbenzene
125-2-45'	90.19789	99876	< 5.	UG/KG	1/24/91	4-Isopropyltoluene
125-2-45'	90.19789	74884	< 5.	UG/KG	1/24/91	Methyl iodide
125-2-45'	90.19789	108101	< 20.	UG/KG	1/24/91	4-Methyl-2-pentanone
125-2-45'	90.19789	75092	< 5.	UG/KG	1/24/91	Methylene chloride
125-2-45'	90.19789	103651	< 5.	UG/KG	1/24/91	Propylbenzene
125-2-45'	90.19789	100425	< 5.	UG/KG	1/24/91	Styrene
125-2-45'	90.19789	630206	< 5.	UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
125-2-45'	90.19789	79345	< 5.	UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
125-2-45'	90.19789	127184	< 5.	UG/KG	1/24/91	Tetrachloroethylene
125-2-45'	90.19789	108883	< 5.	UG/KG	1/24/91	Toluene
125-2-45'	90.19789	76131	< 5.	UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-45'	90.19789	71556	< 5.	UG/KG	1/24/91	1,1,1-Trichloroethane
125-2-45'	90.19789	79005	< 5.	UG/KG	1/24/91	1,1,2-Trichloroethane
125-2-45'	90.19789	79016	< 5.	UG/KG	1/24/91	Trichloroethene
125-2-45'	90.19789	75694	< 5.	UG/KG	1/24/91	Trichlorofluoromethane
125-2-45'	90.19789	96184	< 5.	UG/KG	1/24/91	1,2,3-Trichloropropane
125-2-45'	90.19789	95636	< 5.	UG/KG	1/24/91	1,2,4-Trimethylbenzene
125-2-45'	90.19789	108678	< 5.	UG/KG	1/24/91	1,3,5-Trimethylbenzene
125-2-45'	90.19789	108054	< 10.	UG/KG	1/24/91	Vinyl acetate
125-2-45'	90.19789	75014	< 10.	UG/KG	1/24/91	Vinyl chloride
125-2-45'	90.19789	1330207	< 5.	UG/KG	1/24/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19789

none

Customer Sample Duplicate Results for Sample # 90.19789

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19789

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19790

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-50'	90.19790	67641	< 20.		UG/KG	1/11/91		Acetone
125-2-50'	90.19790	107028	< 100.		UG/KG	1/11/91		Acrolein
125-2-50'	90.19790	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-2-50'	90.19790	71432	< 5.		UG/KG	1/11/91		Benzene
125-2-50'	90.19790	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-2-50'	90.19790	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-2-50'	90.19790	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-2-50'	90.19790	75252	< 5.		UG/KG	1/11/91		Bromoform
125-2-50'	90.19790	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-2-50'	90.19790	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-2-50'	90.19790	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-2-50'	90.19790	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-2-50'	90.19790	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-2-50'	90.19790	75150	6.2	1.86	UG/KG	1/11/91		Carbon disulfide
125-2-50'	90.19790	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-2-50'	90.19790	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-2-50'	90.19790	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-2-50'	90.19790	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-2-50'	90.19790	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-2-50'	90.19790	67663	< 5.		UG/KG	1/11/91		Chloroform
125-2-50'	90.19790	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-2-50'	90.19790	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-2-50'	90.19790	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-2-50'	90.19790	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-2-50'	90.19790	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-2-50'	90.19790	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-2-50'	90.19790	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-2-50'	90.19790	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-2-50'	90.19790	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-2-50'	90.19790	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-2-50'	90.19790	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-2-50'	90.19790	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-2-50'	90.19790	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-2-50'	90.19790	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-2-50'	90.19790	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-2-50'	90.19790	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-2-50'	90.19790	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-2-50'	90.19790	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-2-50'	90.19790	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-2-50'	90.19790	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-2-50'	90.19790	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-2-50'	90.19790	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-2-50'	90.19790	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-2-50'	90.19790	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-2-50'	90.19790	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-2-50'	90.19790	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-2-50'	90.19790	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-2-50'	90.19790	75092	5.3	1.59	UG/KG	1/11/91	Methylene chloride
125-2-50'	90.19790	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-2-50'	90.19790	100425	< 5.		UG/KG	1/11/91	Styrene
125-2-50'	90.19790	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-2-50'	90.19790	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-2-50'	90.19790	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-2-50'	90.19790	108883	< 5.		UG/KG	1/11/91	Toluene
125-2-50'	90.19790	76131	< 5.		UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-50'	90.19790	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-2-50'	90.19790	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-2-50'	90.19790	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-2-50'	90.19790	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-2-50'	90.19790	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-2-50'	90.19790	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-2-50'	90.19790	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-2-50'	90.19790	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-2-50'	90.19790	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-2-50'	90.19790	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19790

none

Customer Sample Duplicate Results for Sample # 90.19790

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19790

none

REPORT NUMBER: 9268

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19791

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/14/90 Date Analyzed: 12/14/90

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-55'	90.19791	67641	< 20.		UG/KG	1/11/91		Acetone
125-2-55'	90.19791	107028	< 100.		UG/KG	1/11/91		Acrolein
125-2-55'	90.19791	107131	< 100.		UG/KG	1/11/91		Acrylonitrile
125-2-55'	90.19791	71432	< 5.		UG/KG	1/11/91		Benzene
125-2-55'	90.19791	108861	< 5.		UG/KG	1/11/91		Bromobenzene
125-2-55'	90.19791	74975	< 5.		UG/KG	1/11/91		Bromochloromethane
125-2-55'	90.19791	75274	< 5.		UG/KG	1/11/91		Bromodichloromethane
125-2-55'	90.19791	75252	< 5.		UG/KG	1/11/91		Bromoform
125-2-55'	90.19791	74839	< 10.		UG/KG	1/11/91		Bromomethane
125-2-55'	90.19791	78933	< 20.		UG/KG	1/11/91		2-Butanone
125-2-55'	90.19791	104518	< 5.		UG/KG	1/11/91		n-Butylbenzene
125-2-55'	90.19791	135988	< 5.		UG/KG	1/11/91		sec-Butylbenzene
125-2-55'	90.19791	98066	< 5.		UG/KG	1/11/91		tert-Butylbenzene
125-2-55'	90.19791	75150	5.2	1.56	UG/KG	1/11/91		Carbon disulfide
125-2-55'	90.19791	56235	< 5.		UG/KG	1/11/91		Carbon tetrachloride
125-2-55'	90.19791	108907	< 5.		UG/KG	1/11/91		Chlorobenzene
125-2-55'	90.19791	124481	< 5.		UG/KG	1/11/91		Chlorodibromomethane
125-2-55'	90.19791	75003	< 10.		UG/KG	1/11/91		Chloroethane
125-2-55'	90.19791	110758	< 50.		UG/KG	1/11/91		2-Chloroethylvinyl ether
125-2-55'	90.19791	67663	< 5.		UG/KG	1/11/91		Chloroform
125-2-55'	90.19791	74873	< 10.		UG/KG	1/11/91		Chloromethane

125-2-55'	90.19791	95498	< 5.		UG/KG	1/11/91	o-Chlorotoluene
125-2-55'	90.19791	106434	< 5.		UG/KG	1/11/91	p-Chlorotoluene
125-2-55'	90.19791	96128	< 10.		UG/KG	1/11/91	1,2-Dibromo-3-chloropropane
125-2-55'	90.19791	106934	< 5.		UG/KG	1/11/91	1,2-Dibromoethane
125-2-55'	90.19791	74953	< 5.		UG/KG	1/11/91	Dibromomethane
125-2-55'	90.19791	95501	< 5.		UG/KG	1/11/91	o-Dichlorobenzene (1,2)
125-2-55'	90.19791	541731	< 5.		UG/KG	1/11/91	m-Dichlorobenzene (1,3)
125-2-55'	90.19791	106467	< 5.		UG/KG	1/11/91	p-Dichlorobenzene (1,4)
125-2-55'	90.19791	75718	< 10.		UG/KG	1/11/91	Dichlorodifluoromethane
125-2-55'	90.19791	75343	< 5.		UG/KG	1/11/91	1,1-Dichloroethane
125-2-55'	90.19791	107062	< 5.		UG/KG	1/11/91	1,2-Dichloroethane
125-2-55'	90.19791	75354	< 5.		UG/KG	1/11/91	1,1-Dichloroethene
125-2-55'	90.19791	156605	< 5.		UG/KG	1/11/91	trans-1,2-Dichloroethene
125-2-55'	90.19791	156592	< 5.		UG/KG	1/11/91	cis-1,2-Dichloroethylene
125-2-55'	90.19791	78875	< 5.		UG/KG	1/11/91	1,2-Dichloropropane
125-2-55'	90.19791	142289	< 5.		UG/KG	1/11/91	1,3-Dichloropropane
125-2-55'	90.19791	594207	< 5.		UG/KG	1/11/91	2,2-Dichloropropane
125-2-55'	90.19791	563586	< 5.		UG/KG	1/11/91	1,1-Dichloropropene
125-2-55'	90.19791	10061015	< 5.		UG/KG	1/11/91	cis-1,3-Dichloropropene
125-2-55'	90.19791	10061026	< 5.		UG/KG	1/11/91	trans-1,3-Dichloropropene
125-2-55'	90.19791	100414	< 5.		UG/KG	1/11/91	Ethylbenzene
125-2-55'	90.19791	591786	< 20.		UG/KG	1/11/91	2-Hexanone
125-2-55'	90.19791	98828	< 5.		UG/KG	1/11/91	Isopropylbenzene
125-2-55'	90.19791	99876	< 5.		UG/KG	1/11/91	4-Isopropyltoluene
125-2-55'	90.19791	74884	< 5.		UG/KG	1/11/91	Methyl iodide
125-2-55'	90.19791	108101	< 20.		UG/KG	1/11/91	4-Methyl-2-pentanone
125-2-55'	90.19791	75092	5.1	1.53	UG/KG	1/11/91	Methylene chloride
125-2-55'	90.19791	103651	< 5.		UG/KG	1/11/91	Propylbenzene
125-2-55'	90.19791	100425	< 5.		UG/KG	1/11/91	Styrene
125-2-55'	90.19791	630206	< 5.		UG/KG	1/11/91	1,1,1,2-Tetrachloroethane
125-2-55'	90.19791	79345	< 5.		UG/KG	1/11/91	1,1,2,2-Tetrachloroethane
125-2-55'	90.19791	127184	< 5.		UG/KG	1/11/91	Tetrachloroethylene
125-2-55'	90.19791	108883	< 5.		UG/KG	1/11/91	Toluene
125-2-55'	90.19791	76131	8.9	2.67	UG/KG	1/11/91	1,1,2-Trichloro-1,2,2-trifluoroethane
125-2-55'	90.19791	71556	< 5.		UG/KG	1/11/91	1,1,1-Trichloroethane
125-2-55'	90.19791	79005	< 5.		UG/KG	1/11/91	1,1,2-Trichloroethane
125-2-55'	90.19791	79016	< 5.		UG/KG	1/11/91	Trichloroethene
125-2-55'	90.19791	75694	< 5.		UG/KG	1/11/91	Trichlorofluoromethane
125-2-55'	90.19791	96184	< 5.		UG/KG	1/11/91	1,2,3-Trichloropropane
125-2-55'	90.19791	95636	< 5.		UG/KG	1/11/91	1,2,4-Trimethylbenzene
125-2-55'	90.19791	108678	< 5.		UG/KG	1/11/91	1,3,5-Trimethylbenzene
125-2-55'	90.19791	108054	< 10.		UG/KG	1/11/91	Vinyl acetate
125-2-55'	90.19791	75014	< 10.		UG/KG	1/11/91	Vinyl chloride
125-2-55'	90.19791	1330207	< 5.		UG/KG	1/11/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19791

none

Customer Sample Duplicate Results for Sample # 90.19791

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19791

none

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REPORT NUMBER: 9268 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: SCB on 11-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QA SAMPLES RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ Only Blind QC samples run with this batch.

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

REPORT NUMBER: 9385

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19792

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: Date Analyzed:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
TA-35 BLANK	90.19792	67641	< 20.		UG/KG	1/24/91		Acetone
TA-35 BLANK	90.19792	107028	< 100.		UG/KG	1/24/91		Acrolein
TA-35 BLANK	90.19792	107131	< 100.		UG/KG	1/24/91		Acrylonitrile
TA-35 BLANK	90.19792	71432	< 5.		UG/KG	1/24/91		Benzene
TA-35 BLANK	90.19792	108861	< 5.		UG/KG	1/24/91		Bromobenzene
TA-35 BLANK	90.19792	74975	< 5.		UG/KG	1/24/91		Bromochloromethane
TA-35 BLANK	90.19792	75274	< 5.		UG/KG	1/24/91		Bromodichloromethane
TA-35 BLANK	90.19792	75252	< 5.		UG/KG	1/24/91		Bromoform
TA-35 BLANK	90.19792	74839	< 10.		UG/KG	1/24/91		Bromomethane
TA-35 BLANK	90.19792	78933	< 20.		UG/KG	1/24/91		2-Butanone
TA-35 BLANK	90.19792	104518	< 5.		UG/KG	1/24/91		n-Butylbenzene
TA-35 BLANK	90.19792	135988	< 5.		UG/KG	1/24/91		sec-Butylbenzene
TA-35 BLANK	90.19792	98066	< 5.		UG/KG	1/24/91		tert-Butylbenzene
TA-35 BLANK	90.19792	75150	< 5.		UG/KG	1/24/91		Carbon disulfide
TA-35 BLANK	90.19792	56235	< 5.		UG/KG	1/24/91		Carbon tetrachloride
TA-35 BLANK	90.19792	108907	< 5.		UG/KG	1/24/91		Chlorobenzene
TA-35 BLANK	90.19792	124481	< 5.		UG/KG	1/24/91		Chlorodibromomethane
TA-35 BLANK	90.19792	75003	< 10.		UG/KG	1/24/91		Chloroethane
TA-35 BLANK	90.19792	110758	< 50.		UG/KG	1/24/91		2-Chloroethylvinyl ether
TA-35 BLANK	90.19792	67663	< 5.		UG/KG	1/24/91		Chloroform
TA-35 BLANK	90.19792	74873	< 10.		UG/KG	1/24/91		Chloromethane

TA-35	BLANK	90.19792	95498	< 5.	UG/KG	1/24/91	o-Chlorotoluene
TA-35	BLANK	90.19792	106434	< 5.	UG/KG	1/24/91	p-Chlorotoluene
TA-35	BLANK	90.19792	96128	< 10.	UG/KG	1/24/91	1,2-Dibromo-3-chloropropane
TA-35	BLANK	90.19792	106934	< 5.	UG/KG	1/24/91	1,2-Dibromoethane
TA-35	BLANK	90.19792	74953	< 5.	UG/KG	1/24/91	Dibromomethane
TA-35	BLANK	90.19792	95501	< 5.	UG/KG	1/24/91	o-Dichlorobenzene (1,2)
TA-35	BLANK	90.19792	541731	< 5.	UG/KG	1/24/91	m-Dichlorobenzene (1,3)
TA-35	BLANK	90.19792	106467	< 5.	UG/KG	1/24/91	p-Dichlorobenzene (1,4)
TA-35	BLANK	90.19792	75718	< 10.	UG/KG	1/24/91	Dichlorodifluoromethane
TA-35	BLANK	90.19792	75343	< 5.	UG/KG	1/24/91	1,1-Dichloroethane
TA-35	BLANK	90.19792	107062	< 5.	UG/KG	1/24/91	1,2-Dichloroethane
TA-35	BLANK	90.19792	75354	< 5.	UG/KG	1/24/91	1,1-Dichloroethene
TA-35	BLANK	90.19792	156605	< 5.	UG/KG	1/24/91	trans-1,2-Dichloroethene
TA-35	BLANK	90.19792	156592	< 5.	UG/KG	1/24/91	cis-1,2-Dichloroethylene
TA-35	BLANK	90.19792	78875	< 5.	UG/KG	1/24/91	1,2-Dichloropropane
TA-35	BLANK	90.19792	142289	< 5.	UG/KG	1/24/91	1,3-Dichloropropane
TA-35	BLANK	90.19792	594207	< 5.	UG/KG	1/24/91	2,2-Dichloropropane
TA-35	BLANK	90.19792	563586	< 5.	UG/KG	1/24/91	1,1-Dichloropropene
TA-35	BLANK	90.19792	10061015	< 5.	UG/KG	1/24/91	cis-1,3-Dichloropropene
TA-35	BLANK	90.19792	10061026	< 5.	UG/KG	1/24/91	trans-1,3-Dichloropropene
TA-35	BLANK	90.19792	100414	< 5.	UG/KG	1/24/91	Ethylbenzene
TA-35	BLANK	90.19792	591786	< 20.	UG/KG	1/24/91	2-Hexanone
TA-35	BLANK	90.19792	98828	< 5.	UG/KG	1/24/91	Isopropylbenzene
TA-35	BLANK	90.19792	99876	< 5.	UG/KG	1/24/91	4-Isopropyltoluene
TA-35	BLANK	90.19792	74884	< 5.	UG/KG	1/24/91	Methyl iodide
TA-35	BLANK	90.19792	108101	< 20.	UG/KG	1/24/91	4-Methyl-2-pentanone
TA-35	BLANK	90.19792	75092	< 5.	UG/KG	1/24/91	Methylene chloride
TA-35	BLANK	90.19792	103651	< 5.	UG/KG	1/24/91	Propylbenzene
TA-35	BLANK	90.19792	100425	< 5.	UG/KG	1/24/91	Styrene
TA-35	BLANK	90.19792	630206	< 5.	UG/KG	1/24/91	1,1,1,2-Tetrachloroethane
TA-35	BLANK	90.19792	79345	< 5.	UG/KG	1/24/91	1,1,2,2-Tetrachloroethane
TA-35	BLANK	90.19792	127184	< 5.	UG/KG	1/24/91	Tetrachloroethylene
TA-35	BLANK	90.19792	108883	< 5.	UG/KG	1/24/91	Toluene
TA-35	BLANK	90.19792	76131	< 5.	UG/KG	1/24/91	1,1,2-Trichloro-1,2,2-trifluoroethane
TA-35	BLANK	90.19792	71556	< 5.	UG/KG	1/24/91	1,1,1-Trichloroethane
TA-35	BLANK	90.19792	79005	< 5.	UG/KG	1/24/91	1,1,2-Trichloroethane
TA-35	BLANK	90.19792	79016	< 5.	UG/KG	1/24/91	Trichloroethene
TA-35	BLANK	90.19792	75694	< 5.	UG/KG	1/24/91	Trichlorofluoromethane
TA-35	BLANK	90.19792	96184	< 5.	UG/KG	1/24/91	1,2,3-Trichloropropane
TA-35	BLANK	90.19792	95636	< 5.	UG/KG	1/24/91	1,2,4-Trimethylbenzene
TA-35	BLANK	90.19792	108678	< 5.	UG/KG	1/24/91	1,3,5-Trimethylbenzene
TA-35	BLANK	90.19792	108054	< 10.	UG/KG	1/24/91	Vinyl acetate
TA-35	BLANK	90.19792	75014	< 10.	UG/KG	1/24/91	Vinyl chloride
TA-35	BLANK	90.19792	1330207	< 5.	UG/KG	1/24/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 90.19792

none

Customer Sample Duplicate Results for Sample # 90.19792

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19792

none

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SUMMARY OF CONTROL STATUS OF BLANK QC SAMPLES RUN WITH THIS BATCH

Blank Results

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUN
00.20227	90.19771	67641	< 20.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acetone
00.20227	90.19771	107028	< 100.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acrolein
00.20227	90.19771	107131	< 100.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acrylonitrile
00.20227	90.19771	71432	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Benzene
00.20227	90.19771	108861	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromobenzene
00.20227	90.19771	74975	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromochloromethane
00.20227	90.19771	75274	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromodichloromethane
00.20227	90.19771	75252	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromoform
00.20227	90.19771	74839	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromomethane
00.20227	90.19771	78933	< 20.		UG/KG	0.0		1/11/91	UNDER CONTROL	2-Butanone
00.20227	90.19771	104518	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	n-Butylbenzene
00.20227	90.19771	135988	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	sec-Butylbenzene
00.20227	90.19771	98066	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	tert-Butylbenzene
00.20227	90.19771	75150	6.	1.8	UG/KG	0.0		1/11/91	OUT OF CONTROL	Carbon disulfide
00.20227	90.19771	56235	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Carbon tetrachloride
00.20227	90.19771	108907	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chlorobenzene
00.20227	90.19771	124481	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chlorodibromomethane
00.20227	90.19771	75003	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloroethane
00.20227	90.19771	110758	< 50.		UG/KG	0.0		1/11/91	UNDER CONTROL	2-Chloroethylvinyl ether
00.20227	90.19771	67663	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloroform
00.20227	90.19771	74873	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloromethane
00.20227	90.19771	95498	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	o-Chlorotoluene
00.20227	90.19771	106434	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	p-Chlorotoluene
00.20227	90.19771	96128	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.20227	90.19771	106934	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dibromoethane
00.20227	90.19771	74953	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Dibromomethane
00.20227	90.19771	95501	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20227	90.19771	541731	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	90.19771	106467	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20227	90.19771	75718	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Dichlorodifluoromethane
00.20227	90.19771	75343	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloroethane
00.20227	90.19771	107062	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dichloroethane

00.20227	90.19771	75354	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1-Dichloroethene
00.20227	90.19771	156605	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	trans-1,2-Dichloroethene
00.20227	90.19771	156592	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20227	90.19771	78875	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,2-Dichloropropane
00.20227	90.19771	142289	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,3-Dichloropropane
00.20227	90.19771	594207	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	2,2-Dichloropropane
00.20227	90.19771	563586	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1-Dichloropropene
00.20227	90.19771	10061015	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	cis-1,3-Dichloropropene
00.20227	90.19771	10061026	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	trans-1,3-Dichloropropene
00.20227	90.19771	100414	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Ethylbenzene
00.20227	90.19771	591786	< 20.	UG/KG	0.0	1/11/91	UNDER CONTROL	2-Hexanone
00.20227	90.19771	98828	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Isopropylbenzene
00.20227	90.19771	99876	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	4-Isopropyltoluene
00.20227	90.19771	74884	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Methyl iodide
00.20227	90.19771	108101	< 20.	UG/KG	0.0	1/11/91	UNDER CONTROL	4-Methyl-2-pentanone
00.20227	90.19771	75092	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Methylene chloride
00.20227	90.19771	103651	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Propylbenzene
00.20227	90.19771	100425	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Styrene
00.20227	90.19771	630206	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20227	90.19771	79345	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20227	90.19771	127184	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Tetrachloroethylene
00.20227	90.19771	108883	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Toluene
00.20227	90.19771	76131	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroet
00.20227	90.19771	71556	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,1-Trichloroethane
00.20227	90.19771	79005	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,2-Trichloroethane
00.20227	90.19771	79016	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Trichloroethene
00.20227	90.19771	75694	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Trichlorofluoromethane
00.20227	90.19771	96184	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,2,3-Trichloropropane
00.20227	90.19771	95636	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20227	90.19771	108678	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20227	90.19771	108054	< 10.	UG/KG	0.0	1/11/91	UNDER CONTROL	Vinyl acetate
00.20227	90.19771	75014	< 10.	UG/KG	0.0	1/11/91	UNDER CONTROL	Vinyl chloride
00.20227	90.19771	1330207	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)
00.20227	90.19772	67641	< 20.	UG/KG	0.0	1/11/91	UNDER CONTROL	Acetone
00.20227	90.19772	107028	< 100.	UG/KG	0.0	1/11/91	UNDER CONTROL	Acrolein
00.20227	90.19772	107131	< 100.	UG/KG	0.0	1/11/91	UNDER CONTROL	Acrylonitrile
00.20227	90.19772	71432	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Benzene
00.20227	90.19772	108861	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Bromobenzene
00.20227	90.19772	74975	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Bromochloromethane
00.20227	90.19772	75274	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Bromodichloromethane
00.20227	90.19772	75252	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Bromoform
00.20227	90.19772	74839	< 10.	UG/KG	0.0	1/11/91	UNDER CONTROL	Bromomethane
00.20227	90.19772	78933	< 20.	UG/KG	0.0	1/11/91	UNDER CONTROL	2-Butanone
00.20227	90.19772	104518	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	n-Butylbenzene
00.20227	90.19772	135988	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	sec-Butylbenzene

00.20227	90.19772	98066	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	tert-Butylbenzene
00.20227	90.19772	75150	6.	1.8	UG/KG	0.0	1/11/91	OUT OF CONTROL	Carbon disulfide
00.20227	90.19772	56235	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Carbon tetrachloride
00.20227	90.19772	108907	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Chlorobenzene
00.20227	90.19772	124481	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Chlorodibromomethane
00.20227	90.19772	75003	< 10.		UG/KG	0.0	1/11/91	UNDER CONTROL	Chloroethane
00.20227	90.19772	110758	< 50.		UG/KG	0.0	1/11/91	UNDER CONTROL	2-Chloroethylvinyl ether
00.20227	90.19772	67663	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Chloroform
00.20227	90.19772	74873	< 10.		UG/KG	0.0	1/11/91	UNDER CONTROL	Chloromethane
00.20227	90.19772	95498	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	o-Chlorotoluene
00.20227	90.19772	106434	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	p-Chlorotoluene
00.20227	90.19772	96128	< 10.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.20227	90.19772	106934	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,2-Dibromoethane
00.20227	90.19772	74953	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Dibromomethane
00.20227	90.19772	95501	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20227	90.19772	541731	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	90.19772	106467	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20227	90.19772	75718	< 10.		UG/KG	0.0	1/11/91	UNDER CONTROL	Dichlorodifluoromethane
00.20227	90.19772	75343	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1-Dichloroethane
00.20227	90.19772	107062	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,2-Dichloroethane
00.20227	90.19772	75354	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1-Dichloroethene
00.20227	90.19772	156605	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	trans-1,2-Dichloroethene
00.20227	90.19772	156592	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20227	90.19772	78875	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,2-Dichloropropane
00.20227	90.19772	142289	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,3-Dichloropropane
00.20227	90.19772	594207	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	2,2-Dichloropropane
00.20227	90.19772	563586	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1-Dichloropropene
00.20227	90.19772	10061015	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	cis-1,3-Dichloropropene
00.20227	90.19772	10061026	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	trans-1,3-Dichloropropene
00.20227	90.19772	100414	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Ethylbenzene
00.20227	90.19772	591786	< 20.		UG/KG	0.0	1/11/91	UNDER CONTROL	2-Hexanone
00.20227	90.19772	98828	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Isopropylbenzene
00.20227	90.19772	99876	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	4-Isopropyltoluene
00.20227	90.19772	74884	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Methyl iodide
00.20227	90.19772	108101	< 20.		UG/KG	0.0	1/11/91	UNDER CONTROL	4-Methyl-2-pentanone
00.20227	90.19772	75092	6.	1.8	UG/KG	0.0	1/11/91	OUT OF CONTROL	Methylene chloride
00.20227	90.19772	103651	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Propylbenzene
00.20227	90.19772	100425	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Styrene
00.20227	90.19772	630206	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20227	90.19772	79345	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20227	90.19772	127184	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Tetrachloroethylene
00.20227	90.19772	108883	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	Toluene
00.20227	90.19772	76131	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroet
00.20227	90.19772	71556	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,1-Trichloroethane
00.20227	90.19772	79005	< 5.		UG/KG	0.0	1/11/91	UNDER CONTROL	1,1,2-Trichloroethane

00.20227	90.19772	79016	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Trichloroethene
00.20227	90.19772	75694	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Trichlorofluoromethane
00.20227	90.19772	96184	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,2,3-Trichloropropane
00.20227	90.19772	95636	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20227	90.19772	108678	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20227	90.19772	108054	< 10.	UG/KG	0.0	1/11/91	UNDER CONTROL	Vinyl acetate
00.20227	90.19772	75014	< 10.	UG/KG	0.0	1/11/91	UNDER CONTROL	Vinyl chloride
00.20227	90.19772	1330207	< 5.	UG/KG	0.0	1/11/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)

Blank Spike Results

none

Blank Spike Duplicate Results

none

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

Blind QC Results, Sample # 90.19774

Date Collected: Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
90.19774	67641	< 20.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acetone
90.19774	107028	< 100.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acrolein
90.19774	107131	< 100.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acrylonitrile
90.19774	71432	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Benzene
90.19774	108861	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromobenzene
90.19774	74975	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromochloromethane
90.19774	75274	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromodichloromethane
90.19774	75252	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromoform
90.19774	74839	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromomethane
90.19774	78933	26.	7.8	UG/KG	0.0		1/11/91	OUT OF CONTROL	2-Butanone
90.19774	104518	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	n-Butylbenzene
90.19774	135988	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	sec-Butylbenzene
90.19774	98066	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	tert-Butylbenzene
90.19774	75150	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Carbon disulfide
90.19774	56235	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Carbon tetrachloride

90.19774	108907	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chlorobenzene
90.19774	124481	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chlorodibromomethane
90.19774	75003	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloroethane
90.19774	110758	< 50.		UG/KG	0.0		1/11/91	UNDER CONTROL	2-Chloroethylvinyl ether
90.19774	67663	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloroform
90.19774	74873	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloromethane
90.19774	95498	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	o-Chlorotoluene
90.19774	106434	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	p-Chlorotoluene
90.19774	96128	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
90.19774	106934	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dibromoethane
90.19774	74953	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Dibromomethane
90.19774	95501	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
90.19774	541731	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
90.19774	106467	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
90.19774	75718	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Dichlorodifluoromethane
90.19774	75343	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloroethane
90.19774	107062	53.	15.9	UG/KG	75.	8.	1/11/91	UNDER CONTROL	1,2-Dichloroethane
90.19774	75354	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloroethene
90.19774	156605	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	trans-1,2-Dichloroethene
90.19774	156592	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	cis-1,2-Dichloroethylene
90.19774	78875	< 5.		UG/KG	88.	9.	1/11/91	OUT OF CONTROL	1,2-Dichloropropane
90.19774	142289	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,3-Dichloropropane
90.19774	594207	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	2,2-Dichloropropane
90.19774	563586	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloropropene
90.19774	10061015	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	cis-1,3-Dichloropropene
90.19774	10061026	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	trans-1,3-Dichloropropene
90.19774	100414	60.	18.	UG/KG	87.	9.	1/11/91	UNDER CONTROL	Ethylbenzene
90.19774	591786	55.	16.5	UG/KG	80.	8.	1/11/91	UNDER CONTROL	2-Hexanone
90.19774	98828	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Isopropylbenzene
90.19774	99876	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	4-Isopropyltoluene
90.19774	74884	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Methyl iodide
90.19774	108101	< 20.		UG/KG	0.0		1/11/91	UNDER CONTROL	4-Methyl-2-pentanone
90.19774	75092	6.	1.8	UG/KG	0.0		1/11/91	OUT OF CONTROL	Methylene chloride
90.19774	103651	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Propylbenzene
90.19774	100425	59.	17.7	UG/KG	82.	8.	1/11/91	UNDER CONTROL	Styrene
90.19774	630206	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
90.19774	79345	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
90.19774	127184	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Tetrachloroethylene
90.19774	108883	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Toluene
90.19774	76131	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
90.19774	71556	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,1-Trichloroethane
90.19774	79005	61.	18.3	UG/KG	86.	9.	1/11/91	UNDER CONTROL	1,1,2-Trichloroethane
90.19774	79016	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Trichloroethene
90.19774	75694	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Trichlorofluoromethane
90.19774	96184	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2,3-Trichloropropane

90.19774	95636	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2,4-Trimethylbenzene
90.19774	108678	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,3,5-Trimethylbenzene
90.19774	108054	64.	19.2	UG/KG	89.	9.	1/11/91	UNDER CONTROL	Vinyl acetate
90.19774	75014	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Vinyl chloride
90.19774	1330207	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)

SURROGATE RESULTS FOR EPA VOLATILES

Surrogate 1 = 1,2-Dichloroethane d4 (CAS # = 17060070)
Surrogate 2 = Toluene d8 (CAS # = 2037265)
Surrogate 3 = 4-Bromofluorobenzene (CAS # = 460004)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	COMPLETION DATE
90.19759	%	119.66	102.74	99.82	11-Jan-1991
90.19760	%	119.72	101.64	97.92	11-Jan-1991
90.19761	%	91.78	89.14	88.38	11-Jan-1991
90.19762	%	304.94	64.9	182.64	11-Jan-1991
90.19763	%	118.2	101.52	109.18	11-Jan-1991
90.19765	%	109.82	104.52	98.68	11-Jan-1991
90.19766	%	117.22	102.52	95.04	11-Jan-1991
90.19767	%	122.14	101.08	98.84	11-Jan-1991
90.19767	%	128.9	98.82	97.62	11-Jan-1991
90.19767	%	126.86	105.76	99.34	11-Jan-1991
90.19768	%	98.96	93.32	86.64	11-Jan-1991
90.19769	%	83.72	93.42	88.24	11-Jan-1991
90.19770	%	118.92	103.64	94.9	11-Jan-1991
90.19771	%	105.34	103.68	93.68	11-Jan-1991
90.19772	%	82.08	88.44	82.78	11-Jan-1991
90.19774	%	111.4	102.72	95.38	11-Jan-1991
90.19785	%	95.3	89.84	86.32	11-Jan-1991
90.19786	%	95.78	91.52	86.12	11-Jan-1991
90.19787	%	93.2	89.5	83.68	11-Jan-1991
90.19788	%	91.82	89.58	85.58	11-Jan-1991
90.19790	%	94.7	89.32	89.58	11-Jan-1991
90.19791	%	100.44	93.52	85.5	11-Jan-1991

EPA Limits:				
Water	%	76 - 114	88 - 110	86 - 115
Soil	%	70 - 121	81 - 117	74 - 121

REPORT NUMBER: 9268

Analyst	Reviewer	Section Leader	QA Officer
1-15-91	1-14-91	1/21/91	1/22/91
Date	Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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REPORT NUMBER: 9385 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: LAT on 25-Jan-1991

EPA VOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QA SAMPLES RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ Only Blind QC samples run with this batch.

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLANK QC SAMPLES RUN WITH THIS BATCH

Blank Results

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUN
00.20227	90.19794	67641	< 20.		UG/KG	0.0		1/24/91	UNDER CONTROL	Acetone
00.20227	90.19794	107028	< 100.		UG/KG	0.0		1/24/91	UNDER CONTROL	Acrolein
00.20227	90.19794	107131	< 100.		UG/KG	0.0		1/24/91	UNDER CONTROL	Acrylonitrile
00.20227	90.19794	71432	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Benzene
00.20227	90.19794	108861	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromobenzene
00.20227	90.19794	74975	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromochloromethane
00.20227	90.19794	75274	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromodichloromethane
00.20227	90.19794	75252	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromoform
00.20227	90.19794	74839	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromomethane
00.20227	90.19794	78933	< 20.		UG/KG	0.0		1/24/91	UNDER CONTROL	2-Butanone
00.20227	90.19794	104518	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	n-Butylbenzene
00.20227	90.19794	135988	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	sec-Butylbenzene
00.20227	90.19794	98066	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	tert-Butylbenzene
00.20227	90.19794	75150	5.1	1.53	UG/KG	0.0		1/24/91	OUT OF CONTROL	Carbon disulfide
00.20227	90.19794	56235	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Carbon tetrachloride
00.20227	90.19794	108907	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chlorobenzene
00.20227	90.19794	124481	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chlorodibromomethane
00.20227	90.19794	75003	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chloroethane
00.20227	90.19794	110758	< 50.		UG/KG	0.0		1/24/91	UNDER CONTROL	2-Chloroethylvinyl ether
00.20227	90.19794	67663	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chloroform
00.20227	90.19794	74873	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chloromethane
00.20227	90.19794	95498	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	o-Chlorotoluene
00.20227	90.19794	106434	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	p-Chlorotoluene
00.20227	90.19794	96128	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.20227	90.19794	106934	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dibromoethane
00.20227	90.19794	74953	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Dibromomethane
00.20227	90.19794	95501	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20227	90.19794	541731	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	90.19794	106467	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20227	90.19794	75718	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Dichlorodifluoromethane
00.20227	90.19794	75343	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1-Dichloroethane
00.20227	90.19794	107062	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dichloroethane

00.20227	90.19794	75354	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1-Dichloroethene
00.20227	90.19794	156605	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	trans-1,2-Dichloroethene
00.20227	90.19794	156592	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20227	90.19794	78875	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,2-Dichloropropane
00.20227	90.19794	142289	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,3-Dichloropropane
00.20227	90.19794	594207	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	2,2-Dichloropropane
00.20227	90.19794	563586	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1-Dichloropropene
00.20227	90.19794	10061015	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	cis-1,3-Dichloropropene
00.20227	90.19794	10061026	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	trans-1,3-Dichloropropene
00.20227	90.19794	100414	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Ethylbenzene
00.20227	90.19794	591786	< 20.	UG/KG	0.0	1/24/91	UNDER CONTROL	2-Hexanone
00.20227	90.19794	98828	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Isopropylbenzene
00.20227	90.19794	99876	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	4-Isopropyltoluene
00.20227	90.19794	74884	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Methyl iodide
00.20227	90.19794	108101	< 20.	UG/KG	0.0	1/24/91	UNDER CONTROL	4-Methyl-2-pentanone
00.20227	90.19794	75092	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Methylene chloride
00.20227	90.19794	103651	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Propylbenzene
00.20227	90.19794	100425	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Styrene
00.20227	90.19794	630206	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20227	90.19794	79345	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20227	90.19794	127184	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Tetrachloroethylene
00.20227	90.19794	108883	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Toluene
00.20227	90.19794	76131	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroet
00.20227	90.19794	71556	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1,1-Trichloroethane
00.20227	90.19794	79005	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,1,2-Trichloroethane
00.20227	90.19794	79016	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Trichloroethene
00.20227	90.19794	75694	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Trichlorofluoromethane
00.20227	90.19794	96184	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,2,3-Trichloropropane
00.20227	90.19794	95636	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20227	90.19794	108678	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20227	90.19794	108054	< 10.	UG/KG	0.0	1/24/91	UNDER CONTROL	Vinyl acetate
00.20227	90.19794	75014	< 10.	UG/KG	0.0	1/24/91	UNDER CONTROL	Vinyl chloride
00.20227	90.19794	1330207	< 5.	UG/KG	0.0	1/24/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)

Blank Spike Results

none

Blank Spike Duplicate Results

none

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

Blind QC Results, Sample # 90.19774

Date Collected: Date Received: 12/12/90 Date Extracted: 12/13/90 Date Analyzed: 12/13/90

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
90.19774	67641	< 20.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acetone
90.19774	107028	< 100.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acrolein
90.19774	107131	< 100.		UG/KG	0.0		1/11/91	UNDER CONTROL	Acrylonitrile
90.19774	71432	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Benzene
90.19774	108861	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromobenzene
90.19774	74975	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromochloromethane
90.19774	75274	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromodichloromethane
90.19774	75252	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromoform
90.19774	74839	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Bromomethane
90.19774	78933	26.	7.8	UG/KG	0.0		1/11/91	OUT OF CONTROL	2-Butanone
90.19774	104518	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	n-Butylbenzene
90.19774	135988	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	sec-Butylbenzene
90.19774	98066	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	tert-Butylbenzene
90.19774	75150	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Carbon disulfide
90.19774	56235	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Carbon tetrachloride
90.19774	108907	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chlorobenzene
90.19774	124481	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chlorodibromomethane
90.19774	75003	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloroethane
90.19774	110758	< 50.		UG/KG	0.0		1/11/91	UNDER CONTROL	2-Chloroethylvinyl ether
90.19774	67663	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloroform
90.19774	74873	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Chloromethane
90.19774	95498	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	o-Chlorotoluene
90.19774	106434	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	p-Chlorotoluene
90.19774	96128	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
90.19774	106934	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2-Dibromoethane
90.19774	74953	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Dibromomethane
90.19774	95501	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
90.19774	541731	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
90.19774	106467	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
90.19774	75718	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Dichlorodifluoromethane
90.19774	75343	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloroethane
90.19774	107062	53.	15.9	UG/KG	75.	8.	1/11/91	UNDER CONTROL	1,2-Dichloroethane
90.19774	75354	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloroethene
90.19774	156605	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	trans-1,2-Dichloroethene
90.19774	156592	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	cis-1,2-Dichloroethylene

90.19774	78875	< 5.		UG/KG	88.	9.	1/11/91	OUT OF CONTROL	1,2-Dichloropropane
90.19774	142289	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,3-Dichloropropane
90.19774	594207	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	2,2-Dichloropropane
90.19774	563586	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1-Dichloropropene
90.19774	10061015	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	cis-1,3-Dichloropropene
90.19774	10061026	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	trans-1,3-Dichloropropene
90.19774	100414	60.	18.	UG/KG	87.	9.	1/11/91	UNDER CONTROL	Ethylbenzene
90.19774	591786	55.	16.5	UG/KG	80.	8.	1/11/91	UNDER CONTROL	2-Hexanone
90.19774	98828	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Isopropylbenzene
90.19774	99876	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	4-Isopropyltoluene
90.19774	74884	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Methyl iodide
90.19774	108101	< 20.		UG/KG	0.0		1/11/91	UNDER CONTROL	4-Methyl-2-pentanone
90.19774	75092	6.	1.8	UG/KG	0.0		1/11/91	OUT OF CONTROL	Methylene chloride
90.19774	103651	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Propylbenzene
90.19774	100425	59.	17.7	UG/KG	82.	8.	1/11/91	UNDER CONTROL	Styrene
90.19774	630206	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
90.19774	79345	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
90.19774	127184	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Tetrachloroethylene
90.19774	108883	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Toluene
90.19774	76131	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
90.19774	71556	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,1,1-Trichloroethane
90.19774	79005	61.	18.3	UG/KG	86.	9.	1/11/91	UNDER CONTROL	1,1,2-Trichloroethane
90.19774	79016	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Trichloroethene
90.19774	75694	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Trichlorofluoromethane
90.19774	96184	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2,3-Trichloropropane
90.19774	95636	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,2,4-Trimethylbenzene
90.19774	108678	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	1,3,5-Trimethylbenzene
90.19774	108054	64.	19.2	UG/KG	89.	9.	1/11/91	UNDER CONTROL	Vinyl acetate
90.19774	75014	< 10.		UG/KG	0.0		1/11/91	UNDER CONTROL	Vinyl chloride
90.19774	1330207	< 5.		UG/KG	0.0		1/11/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)

Blind QC Results, Sample # 90.19793

Date Collected: 12/11/90 Date Received: 12/13/90 Date Extracted: 12/17/90 Date Analyzed: 12/17/90

90.19793	67641	< 20.		UG/KG	0.0		1/24/91	UNDER CONTROL	Acetone
90.19793	107028	< 100.		UG/KG	0.0		1/24/91	UNDER CONTROL	Acrolein
90.19793	107131	< 100.		UG/KG	0.0		1/24/91	UNDER CONTROL	Acrylonitrile
90.19793	71432	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Benzene
90.19793	108861	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromobenzene
90.19793	74975	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromochloromethane
90.19793	75274	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromodichloromethane
90.19793	75252	75.	22.5	UG/KG	110.	10.	1/24/91	UNDER CONTROL	Bromoform
90.19793	74839	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Bromomethane
90.19793	78933	< 20.		UG/KG	0.0		1/24/91	UNDER CONTROL	2-Butanone
90.19793	104518	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	n-Butylbenzene

90.19793	135988	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	sec-Butylbenzene
90.19793	98066	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	tert-Butylbenzene
90.19793	75150	33.	9.9	UG/KG	90.	9.	1/24/91	OUT OF CONTROL	Carbon disulfide
90.19793	56235	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Carbon tetrachloride
90.19793	108907	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chlorobenzene
90.19793	124481	64.	19.2	UG/KG	94.	9.	1/24/91	UNDER CONTROL	Chlorodibromomethane
90.19793	75003	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chloroethane
90.19793	110758	< 50.		UG/KG	0.0		1/24/91	UNDER CONTROL	2-Chloroethylvinyl ether
90.19793	67663	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chloroform
90.19793	74873	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Chloromethane
90.19793	95498	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	o-Chlorotoluene
90.19793	106434	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	p-Chlorotoluene
90.19793	96128	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
90.19793	106934	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dibromoethane
90.19793	74953	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Dibromomethane
90.19793	95501	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
90.19793	541731	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
90.19793	106467	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
90.19793	75718	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Dichlorodifluoromethane
90.19793	75343	31.	9.3	UG/KG	71.	7.	1/24/91	OUT OF CONTROL	1,1-Dichloroethane
90.19793	107062	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dichloroethane
90.19793	75354	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1-Dichloroethene
90.19793	156605	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	trans-1,2-Dichloroethene
90.19793	156592	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	cis-1,2-Dichloroethylene
90.19793	78875	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2-Dichloropropane
90.19793	142289	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,3-Dichloropropane
90.19793	594207	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	2,2-Dichloropropane
90.19793	563586	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1-Dichloropropene
90.19793	10061015	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	cis-1,3-Dichloropropene
90.19793	10061026	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	trans-1,3-Dichloropropene
90.19793	100414	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Ethylbenzene
90.19793	591786	< 20.		UG/KG	0.0		1/24/91	UNDER CONTROL	2-Hexanone
90.19793	98828	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Isopropylbenzene
90.19793	99876	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	4-Isopropyltoluene
90.19793	74884	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Methyl iodide
90.19793	108101	< 20.		UG/KG	0.0		1/24/91	UNDER CONTROL	4-Methyl-2-pentanone
90.19793	75092	6.	1.8	UG/KG	0.0		1/24/91	OUT OF CONTROL	Methylene chloride
90.19793	103651	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Propylbenzene
90.19793	100425	54.	16.2	UG/KG	82.	8.	1/24/91	UNDER CONTROL	Styrene
90.19793	630206	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
90.19793	79345	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
90.19793	127184	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Tetrachloroethylene
90.19793	108883	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Toluene
90.19793	76131	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
90.19793	71556	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,1,1-Trichloroethane

90.19793	79005	56.	16.8	UG/KG	86.	9.	1/24/91	UNDER CONTROL	1,1,2-Trichloroethane
90.19793	79016	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Trichloroethene
90.19793	75694	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Trichlorofluoromethane
90.19793	96184	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2,3-Trichloropropane
90.19793	95636	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,2,4-Trimethylbenzene
90.19793	108678	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	1,3,5-Trimethylbenzene
90.19793	108054	58.	17.4	UG/KG	89.	9.	1/24/91	UNDER CONTROL	Vinyl acetate
90.19793	75014	< 10.		UG/KG	0.0		1/24/91	UNDER CONTROL	Vinyl chloride
90.19793	1330207	< 5.		UG/KG	0.0		1/24/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)

SURROGATE RESULTS FOR EPA VOLATILES

Surrogate 1 = 1,2-Dichloroethane d4 (CAS # = 17060070)
Surrogate 2 = Toluene d8 (CAS # = 2037265)
Surrogate 3 = 4-Bromofluorobenzene (CAS # = 460004)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	COMPLETION DATE
90.19764	%	101.98	91.68	88.24	24-Jan-1991
90.19774	%	111.4	102.72	95.38	11-Jan-1991
90.19781	%	91.56	90.76	94.5	24-Jan-1991
90.19782	%	94.86	86.92	88.32	24-Jan-1991
90.19783	%	102.74	86.92	98.34	24-Jan-1991
90.19784	%	93.44	86.46	95.62	24-Jan-1991
90.19789	%	91.22	89.	85.88	24-Jan-1991
90.19792	%	91.78	89.66	85.16	24-Jan-1991
90.19793	%	88.48	89.02	89.98	24-Jan-1991
90.19794	%	91.42	89.16	84.2	24-Jan-1991

EPA Limits:

Water	%	76 - 114	88 - 110	86 - 115
Soil	%	70 - 121	81 - 117	74 - 121

REPORT NUMBER: 9385

Analyst — 1/25/91 Date

Reviewer — 1-25-91 Date

Section Leader — 1-25-91 Date

QA Officer — 1-25-91 Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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SEMIVOLATILE ORGANIC ANALYSES

Request: 11044
Matrix: Soil

The samples were extracted by mixing approximately 30 g of sample with 60 g sodium sulfate and sonicating with 100 ml of methylene chloride. This was repeated two more times. Sample extracts were centrifuged, combined, and concentrated to a 1.0 ml final volume. In one instance the extract could be concentrated only to 10.0 ml. Appropriate surrogate standards were added prior to extraction as a check of method efficiency. Analysis was performed by capillary column GC/MS methods. These methods are consistent with EPA SW-846 protocol.

In order to minimize the amount of coextracted interference, Sample 90.19762 was cleaned using gel permeation chromatography prior to analysis. This was of limited usefulness as a significant amount of aliphatic material was present in the collected fraction. This leads me to conclude that the nature of the interference was a light oil (having a low molecular weight). As can be seen, the LOQ for this sample was considerably greater. Saturated hydrocarbon interference was also present in sample 90.19763 but not to the extent of that previously mentioned.

Reportable concentrations of target compounds were not detected in any of the sample extracts.

All analytical holding times were satisfied regarding this request. If you have any questions concerning this data, please do not hesitate to call either myself or Suzanne Bell at 667-5889.

B 2-1-91

HSE-9 SEMIVOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

To: Phil Freeguen
From: Martin Koby

Request Number: 11044
Matrix: Soil
Summary Date: 1/31/91

Sample ID	Target Compounds Found	Amount (ug/L)	LOQ (ug/L)	TICs (Y/N)
Blank 12/18	NONE	NA	330	N
90.19759	NONE	NA	330	N
90.19760	NONE	NA	330	N
90.19761	NONE	NA	330	N
90.19762	NONE	NA	265000	Y
90.19763	NONE	NA	330	Y
90.19764	NONE	NA	330	N
90.19765	NONE	NA	330	N
90.19766	NONE	NA	330	N
90.19767	NONE	NA	330	N
90.19768	NONE	NA	330	N
90.19769	NONE	NA	330	N
90.19775	NONE	NA	330	N
90.19781	NONE	NA	330	N
90.19782	NONE	NA	330	N
90.19783	NONE	NA	330	N
90.19784	NONE	NA	330	N
90.19785	NONE	NA	330	N
90.19786	NONE	NA	330	N
90.19787	NONE	NA	330	N
90.19788	NONE	NA	330	N
90.19789	NO RESULTS FOR THIS SAMPLE - LAB ERROR			
90.19790	NONE	NA	330	N
90.19791	NONE	NA	330	N

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19759

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/18/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-5'	90.19759	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-5'	90.19759	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-5'	90.19759	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-5'	90.19759	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-5'	90.19759	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-5'	90.19759	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-5'	90.19759	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-5'	90.19759	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-5'	90.19759	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-5'	90.19759	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-5'	90.19759	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-5'	90.19759	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-5'	90.19759	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-5'	90.19759	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-5'	90.19759	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-5'	90.19759	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-5'	90.19759	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-5'	90.19759	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-5'	90.19759	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-5'	90.19759	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-5'	90.19759	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-5'	90.19759	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-5'	90.19759	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-5'	90.19759	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-5'	90.19759	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-5'	90.19759	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-5'	90.19759	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-5'	90.19759	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-5'	90.19759	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-5'	90.19759	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-5'	90.19759	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-5'	90.19759	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-5'	90.19759	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-5'	90.19759	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-5'	90.19759	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-5'	90.19759	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-5'	90.19759	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-5'	90.19759	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-5'	90.19759	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-5'	90.19759	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-5'	90.19759	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-5'	90.19759	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-5'	90.19759	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-5'	90.19759	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-5'	90.19759	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-5'	90.19759	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-5'	90.19759	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-5'	90.19759	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-5'	90.19759	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-5'	90.19759	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-5'	90.19759	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-5'	90.19759	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-5'	90.19759	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-5'	90.19759	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-5'	90.19759	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-5'	90.19759	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-5'	90.19759	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-5'	90.19759	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-5'	90.19759	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-5'	90.19759	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-5'	90.19759	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-5'	90.19759	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-5'	90.19759	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-5'	90.19759	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-5'	90.19759	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-5'	90.19759	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-5'	90.19759	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-5'	90.19759	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-5'	90.19759	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19759

none

Customer Sample Duplicate Results for Sample # 90.19759

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19759

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19760

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/18/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-10'	90.19760	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-10'	90.19760	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-10'	90.19760	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-10'	90.19760	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-10'	90.19760	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-10'	90.19760	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-10'	90.19760	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-10'	90.19760	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-10'	90.19760	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-10'	90.19760	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-10'	90.19760	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-10'	90.19760	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-10'	90.19760	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-10'	90.19760	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-10'	90.19760	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-10'	90.19760	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-10'	90.19760	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-10'	90.19760	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-10'	90.19760	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-10'	90.19760	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-10'	90.19760	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-10'	90.19760	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-10'	90.19760	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-10'	90.19760	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-10'	90.19760	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-10'	90.19760	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-10'	90.19760	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-10'	90.19760	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-10'	90.19760	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-10'	90.19760	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-10'	90.19760	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-10'	90.19760	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-10'	90.19760	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-10'	90.19760	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-10'	90.19760	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-10'	90.19760	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-10'	90.19760	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-10'	90.19760	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-10'	90.19760	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-10'	90.19760	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-10'	90.19760	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-10'	90.19760	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-10'	90.19760	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-10'	90.19760	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-10'	90.19760	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-10'	90.19760	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-10'	90.19760	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-10'	90.19760	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-10'	90.19760	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-10'	90.19760	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-10'	90.19760	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-10'	90.19760	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-10'	90.19760	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-10'	90.19760	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-10'	90.19760	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-10'	90.19760	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-10'	90.19760	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-10'	90.19760	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-10'	90.19760	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-10'	90.19760	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-10'	90.19760	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-10'	90.19760	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-10'	90.19760	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-10'	90.19760	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-10'	90.19760	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-10'	90.19760	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-10'	90.19760	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-10'	90.19760	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-10'	90.19760	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19760

none

Customer Sample Duplicate Results for Sample # 90.19760

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19760

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19761

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/18/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-15'	90.19761	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-15'	90.19761	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-15'	90.19761	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-15'	90.19761	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-15'	90.19761	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-15'	90.19761	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-15'	90.19761	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-15'	90.19761	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-15'	90.19761	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-15'	90.19761	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-15'	90.19761	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-15'	90.19761	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-15'	90.19761	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-15'	90.19761	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-15'	90.19761	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-15'	90.19761	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-15'	90.19761	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-15'	90.19761	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-15'	90.19761	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-15'	90.19761	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-15'	90.19761	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-15'	90.19761	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-15'	90.19761	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-15'	90.19761	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-15'	90.19761	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-15'	90.19761	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-15'	90.19761	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-15'	90.19761	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-15'	90.19761	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-15'	90.19761	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-15'	90.19761	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-15'	90.19761	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-15'	90.19761	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-15'	90.19761	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-15'	90.19761	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-15'	90.19761	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-15'	90.19761	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-15'	90.19761	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-15'	90.19761	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-15'	90.19761	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-15'	90.19761	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-15'	90.19761	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-15'	90.19761	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-15'	90.19761	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-15'	90.19761	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-15'	90.19761	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-15'	90.19761	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-15'	90.19761	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-15'	90.19761	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-15'	90.19761	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-15'	90.19761	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-15'	90.19761	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-15'	90.19761	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-15'	90.19761	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-15'	90.19761	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-15'	90.19761	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-15'	90.19761	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-15'	90.19761	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-15'	90.19761	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-15'	90.19761	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-15'	90.19761	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-15'	90.19761	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-15'	90.19761	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-15'	90.19761	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-15'	90.19761	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-15'	90.19761	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-15'	90.19761	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-15'	90.19761	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-15'	90.19761	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19761

none

Customer Sample Duplicate Results for Sample # 90.19761

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19761

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19762

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/29/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-20'	90.19762	83329	< 265000.		UG/KG	2/04/91	GPC CLEANED	Acenaphthene
125-1-20'	90.19762	208968	< 265000.		UG/KG	2/04/91	GPC CLEANED	Acenaphthylene
125-1-20'	90.19762	62533	< 265000.		UG/KG	2/04/91	GPC CLEANED	Aniline
125-1-20'	90.19762	120127	< 265000.		UG/KG	2/04/91	GPC CLEANED	Anthracene
125-1-20'	90.19762	103333	< 265000.		UG/KG	2/04/91	GPC CLEANED	Azobenzene
125-1-20'	90.19762	92875	< 265000.		UG/KG	2/04/91	GPC CLEANED	m-Benzidine
125-1-20'	90.19762	56553	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzo[a]anthracene
125-1-20'	90.19762	50328	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzo[a]pyrene
125-1-20'	90.19762	205992	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzo[b]fluoranthene
125-1-20'	90.19762	191242	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzo[g,h,i]perylene
125-1-20'	90.19762	207089	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzo[k]fluoranthene
125-1-20'	90.19762	65850	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzoic acid
125-1-20'	90.19762	100516	< 265000.		UG/KG	2/04/91	GPC CLEANED	Benzyl alcohol
125-1-20'	90.19762	111911	< 265000.		UG/KG	2/04/91	GPC CLEANED	Bis(2-chloroethoxy)methane
125-1-20'	90.19762	111444	< 265000.		UG/KG	2/04/91	GPC CLEANED	Bis(2-chloroethyl)ether
125-1-20'	90.19762	108601	< 265000.		UG/KG	2/04/91	GPC CLEANED	Bis(2-chloroisopropyl)ether
125-1-20'	90.19762	117817	< 265000.		UG/KG	2/04/91	GPC CLEANED	Bis(2-ethylhexyl)phthalate
125-1-20'	90.19762	101553	< 265000.		UG/KG	2/04/91	GPC CLEANED	4-Bromophenylphenyl ether
125-1-20'	90.19762	85687	< 265000.		UG/KG	2/04/91	GPC CLEANED	Butylbenzyl phthalate
125-1-20'	90.19762	59507	< 265000.		UG/KG	2/04/91	GPC CLEANED	4-Chloro-3-methylphenol
125-1-20'	90.19762	106478	< 265000.		UG/KG	2/04/91	GPC CLEANED	4-Chloroaniline

125-1-20'	90.19762	91587	< 265000.	UG/KG	2/04/91	GPC CLEANED	2-Chloronaphthalene
125-1-20'	90.19762	95578	< 265000.	UG/KG	2/04/91	GPC CLEANED	o-Chlorophenol
125-1-20'	90.19762	7005723	< 265000.	UG/KG	2/04/91	GPC CLEANED	4-Chlorophenylphenyl ether
125-1-20'	90.19762	218019	< 265000.	UG/KG	2/04/91	GPC CLEANED	Chrysene
125-1-20'	90.19762	84742	< 265000.	UG/KG	2/04/91	GPC CLEANED	Di-n-butyl phthalate
125-1-20'	90.19762	117840	< 265000.	UG/KG	2/04/91	GPC CLEANED	Di-n-octyl phthalate
125-1-20'	90.19762	53703	< 265000.	UG/KG	2/04/91	GPC CLEANED	Dibenzo[a,h]anthracene
125-1-20'	90.19762	132649	< 265000.	UG/KG	2/04/91	GPC CLEANED	Dibenzofuran
125-1-20'	90.19762	95501	< 265000.	UG/KG	2/04/91	GPC CLEANED	o-Dichlorobenzene (1,2)
125-1-20'	90.19762	541731	< 265000.	UG/KG	2/04/91	GPC CLEANED	m-Dichlorobenzene (1,3)
125-1-20'	90.19762	106467	< 265000.	UG/KG	2/04/91	GPC CLEANED	p-Dichlorobenzene (1,4)
125-1-20'	90.19762	91941	< 265000.	UG/KG	2/04/91	GPC CLEANED	3,3'-Dichlorobenzidine
125-1-20'	90.19762	120832	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,4-Dichlorophenol
125-1-20'	90.19762	84662	< 265000.	UG/KG	2/04/91	GPC CLEANED	Diethyl phthalate
125-1-20'	90.19762	131113	< 265000.	UG/KG	2/04/91	GPC CLEANED	Dimethyl phthalate
125-1-20'	90.19762	105679	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,4-Dimethylphenol
125-1-20'	90.19762	51285	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,4-Dinitrophenol
125-1-20'	90.19762	121142	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,4-Dinitrotoluene
125-1-20'	90.19762	606202	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,6-Dinitrotoluene
125-1-20'	90.19762	206440	< 265000.	UG/KG	2/04/91	GPC CLEANED	Fluoranthene
125-1-20'	90.19762	86737	< 265000.	UG/KG	2/04/91	GPC CLEANED	Fluorene
125-1-20'	90.19762	118741	< 265000.	UG/KG	2/04/91	GPC CLEANED	Hexachlorobenzene
125-1-20'	90.19762	87683	< 265000.	UG/KG	2/04/91	GPC CLEANED	Hexachlorobutadiene
125-1-20'	90.19762	77474	< 265000.	UG/KG	2/04/91	GPC CLEANED	Hexachlorocyclopentadiene
125-1-20'	90.19762	67721	< 265000.	UG/KG	2/04/91	GPC CLEANED	Hexachloroethane
125-1-20'	90.19762	193395	< 265000.	UG/KG	2/04/91	GPC CLEANED	Indeno[1,2,3-cd]pyrene
125-1-20'	90.19762	78591	< 265000.	UG/KG	2/04/91	GPC CLEANED	Isophorone
125-1-20'	90.19762	534521	< 265000.	UG/KG	2/04/91	GPC CLEANED	2-Methyl-4,6-dinitrophenol
125-1-20'	90.19762	91576	< 265000.	UG/KG	2/04/91	GPC CLEANED	2-Methylnaphthalene
125-1-20'	90.19762	95487	< 265000.	UG/KG	2/04/91	GPC CLEANED	2-Methylphenol
125-1-20'	90.19762	106445	< 265000.	UG/KG	2/04/91	GPC CLEANED	4-Methylphenol
125-1-20'	90.19762	91203	< 265000.	UG/KG	2/04/91	GPC CLEANED	Naphthalene
125-1-20'	90.19762	88744	< 265000.	UG/KG	2/04/91	GPC CLEANED	2-Nitroaniline
125-1-20'	90.19762	99092	< 265000.	UG/KG	2/04/91	GPC CLEANED	3-Nitroaniline
125-1-20'	90.19762	100016	< 265000.	UG/KG	2/04/91	GPC CLEANED	4-Nitroaniline
125-1-20'	90.19762	98953	< 265000.	UG/KG	2/04/91	GPC CLEANED	Nitrobenzene
125-1-20'	90.19762	88755	< 265000.	UG/KG	2/04/91	GPC CLEANED	2-Nitrophenol
125-1-20'	90.19762	100027	< 265000.	UG/KG	2/04/91	GPC CLEANED	4-Nitrophenol
125-1-20'	90.19762	621647	< 265000.	UG/KG	2/04/91	GPC CLEANED	N-Nitrosodi-n-propylamine
125-1-20'	90.19762	62759	< 265000.	UG/KG	2/04/91	GPC CLEANED	N-Nitrosodimethylamine
125-1-20'	90.19762	86306	< 265000.	UG/KG	2/04/91	GPC CLEANED	N-Nitrosodiphenylamine
125-1-20'	90.19762	87865	< 265000.	UG/KG	2/04/91	GPC CLEANED	Pentachlorophenol
125-1-20'	90.19762	85018	< 265000.	UG/KG	2/04/91	GPC CLEANED	Phenanthrene
125-1-20'	90.19762	108952	< 265000.	UG/KG	2/04/91	GPC CLEANED	Phenol
125-1-20'	90.19762	129000	< 265000.	UG/KG	2/04/91	GPC CLEANED	Pyrene

125-1-20'	90.19762	120821	< 265000.	UG/KG	2/04/91	GPC CLEANED	1,2,4-Trichlorobenzene
125-1-20'	90.19762	95954	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,4,5-Trichlorophenol
125-1-20'	90.19762	88062	< 265000.	UG/KG	2/04/91	GPC CLEANED	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19762

none

Customer Sample Duplicate Results for Sample # 90.19762

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19762

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19763

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/18/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-25'	90.19763	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-25'	90.19763	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-25'	90.19763	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-25'	90.19763	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-25'	90.19763	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-25'	90.19763	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-25'	90.19763	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-25'	90.19763	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-25'	90.19763	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-25'	90.19763	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-25'	90.19763	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-25'	90.19763	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-25'	90.19763	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-25'	90.19763	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-25'	90.19763	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-25'	90.19763	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-25'	90.19763	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-25'	90.19763	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-25'	90.19763	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-25'	90.19763	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-25'	90.19763	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-25'	90.19763	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-25'	90.19763	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-25'	90.19763	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-25'	90.19763	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-25'	90.19763	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-25'	90.19763	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-25'	90.19763	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-25'	90.19763	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-25'	90.19763	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-25'	90.19763	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-25'	90.19763	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-25'	90.19763	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-25'	90.19763	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-25'	90.19763	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-25'	90.19763	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-25'	90.19763	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-25'	90.19763	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-25'	90.19763	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-25'	90.19763	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-25'	90.19763	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-25'	90.19763	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-25'	90.19763	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-25'	90.19763	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-25'	90.19763	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-25'	90.19763	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-25'	90.19763	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-25'	90.19763	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-25'	90.19763	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-25'	90.19763	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-25'	90.19763	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-25'	90.19763	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-25'	90.19763	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-25'	90.19763	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-25'	90.19763	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-25'	90.19763	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-25'	90.19763	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-25'	90.19763	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-25'	90.19763	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-25'	90.19763	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-25'	90.19763	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-25'	90.19763	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-25'	90.19763	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-25'	90.19763	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-25'	90.19763	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-25'	90.19763	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-25'	90.19763	120821	< 330.		UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-25'	90.19763	95954	< 330.		UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-25'	90.19763	88062	< 330.		UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19763

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS		RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-25'	90.19763	165	TI	26.59		UG/KG	2/04/91		Saturated Hydrocarbons
125-1-25'	90.19763	165	TI	22.35		UG/KG	2/04/91		Saturated Hydrocarbons
125-1-25'	90.19763	165	TI	23.57		UG/KG	2/04/91		Saturated Hydrocarbons

Customer Sample Duplicate Results for Sample # 90.19763

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19763

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19764

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/18/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-30'	90.19764	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-30'	90.19764	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-30'	90.19764	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-30'	90.19764	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-30'	90.19764	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-30'	90.19764	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-30'	90.19764	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-30'	90.19764	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-30'	90.19764	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-30'	90.19764	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-30'	90.19764	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-30'	90.19764	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-30'	90.19764	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-30'	90.19764	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-30'	90.19764	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-30'	90.19764	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-30'	90.19764	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-30'	90.19764	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-30'	90.19764	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-30'	90.19764	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-30'	90.19764	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-30'	90.19764	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-30'	90.19764	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-30'	90.19764	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-30'	90.19764	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-30'	90.19764	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-30'	90.19764	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-30'	90.19764	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-30'	90.19764	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-30'	90.19764	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-30'	90.19764	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-30'	90.19764	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-30'	90.19764	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-30'	90.19764	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-30'	90.19764	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-30'	90.19764	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-30'	90.19764	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-30'	90.19764	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-30'	90.19764	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-30'	90.19764	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-30'	90.19764	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-30'	90.19764	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-30'	90.19764	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-30'	90.19764	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-30'	90.19764	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-30'	90.19764	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-30'	90.19764	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-30'	90.19764	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-30'	90.19764	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-30'	90.19764	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-30'	90.19764	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-30'	90.19764	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-30'	90.19764	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-30'	90.19764	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-30'	90.19764	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-30'	90.19764	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-30'	90.19764	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-30'	90.19764	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-30'	90.19764	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-30'	90.19764	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-30'	90.19764	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-30'	90.19764	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-30'	90.19764	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-30'	90.19764	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-30'	90.19764	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-30'	90.19764	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-30'	90.19764	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-30'	90.19764	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-30'	90.19764	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19764

none

Customer Sample Duplicate Results for Sample # 90.19764

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19764

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19765

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/18/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-35'	90.19765	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-35'	90.19765	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-35'	90.19765	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-35'	90.19765	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-35'	90.19765	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-35'	90.19765	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-35'	90.19765	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-35'	90.19765	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-35'	90.19765	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-35'	90.19765	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-35'	90.19765	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-35'	90.19765	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-35'	90.19765	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-35'	90.19765	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-35'	90.19765	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-35'	90.19765	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-35'	90.19765	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-35'	90.19765	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-35'	90.19765	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-35'	90.19765	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-35'	90.19765	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-35'	90.19765	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-35'	90.19765	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-35'	90.19765	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-35'	90.19765	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-35'	90.19765	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-35'	90.19765	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-35'	90.19765	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-35'	90.19765	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-35'	90.19765	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-35'	90.19765	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-35'	90.19765	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-35'	90.19765	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-35'	90.19765	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-35'	90.19765	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-35'	90.19765	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-35'	90.19765	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-35'	90.19765	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-35'	90.19765	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-35'	90.19765	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-35'	90.19765	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-35'	90.19765	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-35'	90.19765	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-35'	90.19765	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-35'	90.19765	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-35'	90.19765	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-35'	90.19765	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-35'	90.19765	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-35'	90.19765	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-35'	90.19765	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-35'	90.19765	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-35'	90.19765	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-35'	90.19765	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-35'	90.19765	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-35'	90.19765	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-35'	90.19765	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-35'	90.19765	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-35'	90.19765	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-35'	90.19765	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-35'	90.19765	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-35'	90.19765	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-35'	90.19765	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-35'	90.19765	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-35'	90.19765	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-35'	90.19765	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-35'	90.19765	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-35'	90.19765	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-35'	90.19765	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-35'	90.19765	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19765

none

Customer Sample Duplicate Results for Sample # 90.19765

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19765

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19766

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/91 Date Analyzed: 1/24/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-40'	90.19766	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-40'	90.19766	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-40'	90.19766	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-40'	90.19766	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-40'	90.19766	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-40'	90.19766	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-40'	90.19766	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-40'	90.19766	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-40'	90.19766	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-40'	90.19766	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-40'	90.19766	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-40'	90.19766	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-40'	90.19766	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-40'	90.19766	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-40'	90.19766	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-40'	90.19766	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-40'	90.19766	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-40'	90.19766	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-40'	90.19766	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-40'	90.19766	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-40'	90.19766	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-40'	90.19766	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-40'	90.19766	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-40'	90.19766	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-40'	90.19766	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-40'	90.19766	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-40'	90.19766	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-40'	90.19766	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-40'	90.19766	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-40'	90.19766	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-40'	90.19766	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-40'	90.19766	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-40'	90.19766	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-40'	90.19766	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-40'	90.19766	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-40'	90.19766	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-40'	90.19766	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-40'	90.19766	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-40'	90.19766	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-40'	90.19766	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-40'	90.19766	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-40'	90.19766	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-40'	90.19766	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-40'	90.19766	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-40'	90.19766	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-40'	90.19766	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-40'	90.19766	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-40'	90.19766	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-40'	90.19766	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-40'	90.19766	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-40'	90.19766	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-40'	90.19766	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-40'	90.19766	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-40'	90.19766	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-40'	90.19766	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-40'	90.19766	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-40'	90.19766	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-40'	90.19766	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-40'	90.19766	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-40'	90.19766	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-40'	90.19766	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-40'	90.19766	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-40'	90.19766	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-40'	90.19766	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-40'	90.19766	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-40'	90.19766	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-40'	90.19766	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-40'	90.19766	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-40'	90.19766	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19766

none

Customer Sample Duplicate Results for Sample # 90.19766

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19766

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19767

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/91 Date Analyzed: 1/24/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-45'	90.19767	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-45'	90.19767	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-45'	90.19767	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-45'	90.19767	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-45'	90.19767	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-45'	90.19767	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-45'	90.19767	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-45'	90.19767	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-45'	90.19767	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-45'	90.19767	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-45'	90.19767	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-45'	90.19767	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-45'	90.19767	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-45'	90.19767	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-45'	90.19767	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-45'	90.19767	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-45'	90.19767	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-45'	90.19767	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-45'	90.19767	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-45'	90.19767	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-45'	90.19767	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-45'	90.19767	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-45'	90.19767	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-45'	90.19767	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-45'	90.19767	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-45'	90.19767	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-45'	90.19767	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-45'	90.19767	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-45'	90.19767	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-45'	90.19767	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-45'	90.19767	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-45'	90.19767	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-45'	90.19767	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-45'	90.19767	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-45'	90.19767	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-45'	90.19767	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-45'	90.19767	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-45'	90.19767	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-45'	90.19767	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-45'	90.19767	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-45'	90.19767	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-45'	90.19767	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-45'	90.19767	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-45'	90.19767	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-45'	90.19767	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-45'	90.19767	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-45'	90.19767	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-45'	90.19767	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-45'	90.19767	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-45'	90.19767	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-45'	90.19767	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-45'	90.19767	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-45'	90.19767	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-45'	90.19767	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-45'	90.19767	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-45'	90.19767	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-45'	90.19767	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-45'	90.19767	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-45'	90.19767	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-45'	90.19767	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-45'	90.19767	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-45'	90.19767	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-45'	90.19767	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-45'	90.19767	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-45'	90.19767	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-45'	90.19767	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-45'	90.19767	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-45'	90.19767	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-45'	90.19767	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19767

none

Customer Sample Duplicate Results for Sample # 90.19767

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19767

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19768

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: 12/18/90 Date Analyzed: 1/23/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-50'	90.19768	83329	< 330.		UG/KG	2/04/91		Acenaphthene
125-1-50'	90.19768	208968	< 330.		UG/KG	2/04/91		Acenaphthylene
125-1-50'	90.19768	62533	< 330.		UG/KG	2/04/91		Aniline
125-1-50'	90.19768	120127	< 330.		UG/KG	2/04/91		Anthracene
125-1-50'	90.19768	103333	< 330.		UG/KG	2/04/91		Azobenzene
125-1-50'	90.19768	92875	< 330.		UG/KG	2/04/91		m-Benzidine
125-1-50'	90.19768	56553	< 330.		UG/KG	2/04/91		Benzo[a]anthracene
125-1-50'	90.19768	50328	< 330.		UG/KG	2/04/91		Benzo[a]pyrene
125-1-50'	90.19768	205992	< 330.		UG/KG	2/04/91		Benzo[b]fluoranthene
125-1-50'	90.19768	191242	< 330.		UG/KG	2/04/91		Benzo[g,h,i]perylene
125-1-50'	90.19768	207089	< 330.		UG/KG	2/04/91		Benzo[k]fluoranthene
125-1-50'	90.19768	65850	< 330.		UG/KG	2/04/91		Benzoic acid
125-1-50'	90.19768	100516	< 330.		UG/KG	2/04/91		Benzyl alcohol
125-1-50'	90.19768	111911	< 330.		UG/KG	2/04/91		Bis(2-chloroethoxy)methane
125-1-50'	90.19768	111444	< 330.		UG/KG	2/04/91		Bis(2-chloroethyl)ether
125-1-50'	90.19768	108601	< 330.		UG/KG	2/04/91		Bis(2-chloroisopropyl)ether
125-1-50'	90.19768	117817	< 330.		UG/KG	2/04/91		Bis(2-ethylhexyl)phthalate
125-1-50'	90.19768	101553	< 330.		UG/KG	2/04/91		4-Bromophenylphenyl ether
125-1-50'	90.19768	85687	< 330.		UG/KG	2/04/91		Butylbenzyl phthalate
125-1-50'	90.19768	59507	< 330.		UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-50'	90.19768	106478	< 330.		UG/KG	2/04/91		4-Chloroaniline

125-1-50'	90.19768	91587	< 330.	UG/KG	2/04/91	2-Chloronaphthalene
125-1-50'	90.19768	95578	< 330.	UG/KG	2/04/91	o-Chlorophenol
125-1-50'	90.19768	7005723	< 330.	UG/KG	2/04/91	4-Chlorophenylphenyl ether
125-1-50'	90.19768	218019	< 330.	UG/KG	2/04/91	Chrysene
125-1-50'	90.19768	84742	< 330.	UG/KG	2/04/91	Di-n-butyl phthalate
125-1-50'	90.19768	117840	< 330.	UG/KG	2/04/91	Di-n-octyl phthalate
125-1-50'	90.19768	53703	< 330.	UG/KG	2/04/91	Dibenzo[a,h]anthracene
125-1-50'	90.19768	132649	< 330.	UG/KG	2/04/91	Dibenzofuran
125-1-50'	90.19768	95501	< 330.	UG/KG	2/04/91	o-Dichlorobenzene (1,2)
125-1-50'	90.19768	541731	< 330.	UG/KG	2/04/91	m-Dichlorobenzene (1,3)
125-1-50'	90.19768	106467	< 330.	UG/KG	2/04/91	p-Dichlorobenzene (1,4)
125-1-50'	90.19768	91941	< 330.	UG/KG	2/04/91	3,3'-Dichlorobenzidine
125-1-50'	90.19768	120832	< 330.	UG/KG	2/04/91	2,4-Dichlorophenol
125-1-50'	90.19768	84662	< 330.	UG/KG	2/04/91	Diethyl phthalate
125-1-50'	90.19768	131113	< 330.	UG/KG	2/04/91	Dimethyl phthalate
125-1-50'	90.19768	105679	< 330.	UG/KG	2/04/91	2,4-Dimethylphenol
125-1-50'	90.19768	51285	< 330.	UG/KG	2/04/91	2,4-Dinitrophenol
125-1-50'	90.19768	121142	< 330.	UG/KG	2/04/91	2,4-Dinitrotoluene
125-1-50'	90.19768	606202	< 330.	UG/KG	2/04/91	2,6-Dinitrotoluene
125-1-50'	90.19768	206440	< 330.	UG/KG	2/04/91	Fluoranthene
125-1-50'	90.19768	86737	< 330.	UG/KG	2/04/91	Fluorene
125-1-50'	90.19768	118741	< 330.	UG/KG	2/04/91	Hexachlorobenzene
125-1-50'	90.19768	87683	< 330.	UG/KG	2/04/91	Hexachlorobutadiene
125-1-50'	90.19768	77474	< 330.	UG/KG	2/04/91	Hexachlorocyclopentadiene
125-1-50'	90.19768	67721	< 330.	UG/KG	2/04/91	Hexachloroethane
125-1-50'	90.19768	193395	< 330.	UG/KG	2/04/91	Indeno[1,2,3-cd]pyrene
125-1-50'	90.19768	78591	< 330.	UG/KG	2/04/91	Isophorone
125-1-50'	90.19768	534521	< 330.	UG/KG	2/04/91	2-Methyl-4,6-dinitrophenol
125-1-50'	90.19768	91576	< 330.	UG/KG	2/04/91	2-Methylnaphthalene
125-1-50'	90.19768	95487	< 330.	UG/KG	2/04/91	2-Methylphenol
125-1-50'	90.19768	106445	< 330.	UG/KG	2/04/91	4-Methylphenol
125-1-50'	90.19768	91203	< 330.	UG/KG	2/04/91	Naphthalene
125-1-50'	90.19768	88744	< 330.	UG/KG	2/04/91	2-Nitroaniline
125-1-50'	90.19768	99092	< 330.	UG/KG	2/04/91	3-Nitroaniline
125-1-50'	90.19768	100016	< 330.	UG/KG	2/04/91	4-Nitroaniline
125-1-50'	90.19768	98953	< 330.	UG/KG	2/04/91	Nitrobenzene
125-1-50'	90.19768	88755	< 330.	UG/KG	2/04/91	2-Nitrophenol
125-1-50'	90.19768	100027	< 330.	UG/KG	2/04/91	4-Nitrophenol
125-1-50'	90.19768	621647	< 330.	UG/KG	2/04/91	N-Nitrosodi-n-propylamine
125-1-50'	90.19768	62759	< 330.	UG/KG	2/04/91	N-Nitrosodimethylamine
125-1-50'	90.19768	86306	< 330.	UG/KG	2/04/91	N-Nitrosodiphenylamine
125-1-50'	90.19768	87865	< 330.	UG/KG	2/04/91	Pentachlorophenol
125-1-50'	90.19768	85018	< 330.	UG/KG	2/04/91	Phenanthrene
125-1-50'	90.19768	108952	< 330.	UG/KG	2/04/91	Phenol
125-1-50'	90.19768	129000	< 330.	UG/KG	2/04/91	Pyrene

125-1-50'	90.19768	120821	< 330.	UG/KG	2/04/91	1,2,4-Trichlorobenzene
125-1-50'	90.19768	95954	< 330.	UG/KG	2/04/91	2,4,5-Trichlorophenol
125-1-50'	90.19768	88062	< 330.	UG/KG	2/04/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19768

none

Customer Sample Duplicate Results for Sample # 90.19768

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19768

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19769

Date Collected: 12/12/90 Date Received: 12/12/90 Date Extracted: Date Analyzed:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME

Tentatively Identified Compounds in Customer Sample # 90.19769

none

Customer Sample Duplicate Results for Sample # 90.19769

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19769

none

Matrix Spike Results for Sample # 90.19769

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-55'	90.19769	83329	1655.63	1500.	UG/KG	2/04/91		Acenaphthene
125-1-55'	90.19769	59507	3311.26	2600.	UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-55'	90.19769	95578	3311.26	2400.	UG/KG	2/04/91		o-Chlorophenol

125-1-55'	90.19769	106467	1655.63	1300.	UG/KG	2/04/91		p-Dichlorobenzene (1,4)
125-1-55'	90.19769	121142	1655.63	1400.	UG/KG	2/04/91		2,4-Dinitrotoluene
125-1-55'	90.19769	100027	3311.26	2600.	UG/KG	2/04/91		4-Nitrophenol
125-1-55'	90.19769	621647	1655.63	1300.	UG/KG	2/04/91		N-Nitrosodi-n-propylamine
125-1-55'	90.19769	87865	3311.26	2900.	UG/KG	2/04/91		Pentachlorophenol
125-1-55'	90.19769	108952	3311.26	2400.	UG/KG	2/04/91		Phenol
125-1-55'	90.19769	129000	1655.63	1400.	UG/KG	2/04/91		Pyrene
125-1-55'	90.19769	120821	1655.63	1500.	UG/KG	2/04/91		1,2,4-Trichlorobenzene

Matrix Spike Duplicate Results for Sample # 90.19769

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-55'	90.19769	83329	1650.17	1400.	UG/KG	2/04/91		Acenaphthene
125-1-55'	90.19769	59507	3300.33	2700.	UG/KG	2/04/91		4-Chloro-3-methylphenol
125-1-55'	90.19769	95578	3300.33	2300.	UG/KG	2/04/91		o-Chlorophenol
125-1-55'	90.19769	106467	1650.17	1300.	UG/KG	2/04/91		p-Dichlorobenzene (1,4)
125-1-55'	90.19769	121142	1650.17	1400.	UG/KG	2/04/91		2,4-Dinitrotoluene
125-1-55'	90.19769	100027	3300.33	2500.	UG/KG	2/04/91		4-Nitrophenol
125-1-55'	90.19769	621647	1650.17	1400.	UG/KG	2/04/91		N-Nitrosodi-n-propylamine
125-1-55'	90.19769	87865	3300.33	3100.	UG/KG	2/04/91		Pentachlorophenol
125-1-55'	90.19769	108952	3300.33	2400.	UG/KG	2/04/91		Phenol
125-1-55'	90.19769	129000	1650.17	1300.	UG/KG	2/04/91		Pyrene
125-1-55'	90.19769	120821	1650.17	1400.	UG/KG	2/04/91		1,2,4-Trichlorobenzene

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19781

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/23/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-5'	90.19781	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-5'	90.19781	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-5'	90.19781	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-5'	90.19781	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-5'	90.19781	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-5'	90.19781	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-5'	90.19781	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-5'	90.19781	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-5'	90.19781	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-5'	90.19781	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-5'	90.19781	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-5'	90.19781	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-5'	90.19781	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-5'	90.19781	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-5'	90.19781	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-5'	90.19781	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-5'	90.19781	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-5'	90.19781	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-5'	90.19781	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-5'	90.19781	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-5'	90.19781	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-5'	90.19781	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-5'	90.19781	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-5'	90.19781	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-5'	90.19781	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-5'	90.19781	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-5'	90.19781	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-5'	90.19781	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-5'	90.19781	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-5'	90.19781	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-5'	90.19781	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-5'	90.19781	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-5'	90.19781	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-5'	90.19781	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-5'	90.19781	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-5'	90.19781	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-5'	90.19781	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-5'	90.19781	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-5'	90.19781	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-5'	90.19781	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-5'	90.19781	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-5'	90.19781	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-5'	90.19781	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-5'	90.19781	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-5'	90.19781	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-5'	90.19781	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-5'	90.19781	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-5'	90.19781	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-5'	90.19781	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-5'	90.19781	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-5'	90.19781	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-5'	90.19781	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-5'	90.19781	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-5'	90.19781	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-5'	90.19781	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-5'	90.19781	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-5'	90.19781	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-5'	90.19781	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-5'	90.19781	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-5'	90.19781	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-5'	90.19781	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-5'	90.19781	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-5'	90.19781	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-5'	90.19781	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-5'	90.19781	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-5'	90.19781	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-5'	90.19781	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-5'	90.19781	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-5'	90.19781	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19781

none

Customer Sample Duplicate Results for Sample # 90.19781

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19781

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19782

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/23/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-10'	90.19782	83329	< 330.		UG/KG	2/01/91	PAHS <LOQ	Acenaphthene
125-2-10'	90.19782	208968	< 330.		UG/KG	2/01/91	PAHS <LOQ	Acenaphthylene
125-2-10'	90.19782	62533	< 330.		UG/KG	2/01/91	PAHS <LOQ	Aniline
125-2-10'	90.19782	120127	< 330.		UG/KG	2/01/91	PAHS <LOQ	Anthracene
125-2-10'	90.19782	103333	< 330.		UG/KG	2/01/91	PAHS <LOQ	Azobenzene
125-2-10'	90.19782	92875	< 330.		UG/KG	2/01/91	PAHS <LOQ	m-Benzidine
125-2-10'	90.19782	56553	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzo[a]anthracene
125-2-10'	90.19782	50328	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzo[a]pyrene
125-2-10'	90.19782	205992	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzo[b]fluoranthene
125-2-10'	90.19782	191242	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzo[g,h,i]perylene
125-2-10'	90.19782	207089	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzo[k]fluoranthene
125-2-10'	90.19782	65850	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzoic acid
125-2-10'	90.19782	100516	< 330.		UG/KG	2/01/91	PAHS <LOQ	Benzyl alcohol
125-2-10'	90.19782	111911	< 330.		UG/KG	2/01/91	PAHS <LOQ	Bis(2-chloroethoxy)methane
125-2-10'	90.19782	111444	< 330.		UG/KG	2/01/91	PAHS <LOQ	Bis(2-chloroethyl)ether
125-2-10'	90.19782	108601	< 330.		UG/KG	2/01/91	PAHS <LOQ	Bis(2-chloroisopropyl)ether
125-2-10'	90.19782	117817	< 330.		UG/KG	2/01/91	PAHS <LOQ	Bis(2-ethylhexyl)phthalate
125-2-10'	90.19782	101553	< 330.		UG/KG	2/01/91	PAHS <LOQ	4-Bromophenylphenyl ether
125-2-10'	90.19782	85687	< 330.		UG/KG	2/01/91	PAHS <LOQ	Butylbenzyl phthalate
125-2-10'	90.19782	59507	< 330.		UG/KG	2/01/91	PAHS <LOQ	4-Chloro-3-methylphenol
125-2-10'	90.19782	106478	< 330.		UG/KG	2/01/91	PAHS <LOQ	4-Chloroaniline

125-2-10'	90.19782	91587	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2-Chloronaphthalene
125-2-10'	90.19782	95578	< 330.	UG/KG	2/01/91	PAHS	<LOQ	o-Chlorophenol
125-2-10'	90.19782	7005723	< 330.	UG/KG	2/01/91	PAHS	<LOQ	4-Chlorophenylphenyl ether
125-2-10'	90.19782	218019	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Chrysene
125-2-10'	90.19782	84742	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Di-n-butyl phthalate
125-2-10'	90.19782	117840	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Di-n-octyl phthalate
125-2-10'	90.19782	53703	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Dibenzo[a,h]anthracene
125-2-10'	90.19782	132649	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Dibenzofuran
125-2-10'	90.19782	95501	< 330.	UG/KG	2/01/91	PAHS	<LOQ	o-Dichlorobenzene (1,2)
125-2-10'	90.19782	541731	< 330.	UG/KG	2/01/91	PAHS	<LOQ	m-Dichlorobenzene (1,3)
125-2-10'	90.19782	106467	< 330.	UG/KG	2/01/91	PAHS	<LOQ	p-Dichlorobenzene (1,4)
125-2-10'	90.19782	91941	< 330.	UG/KG	2/01/91	PAHS	<LOQ	3,3'-Dichlorobenzidine
125-2-10'	90.19782	120832	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2,4-Dichlorophenol
125-2-10'	90.19782	84662	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Diethyl phthalate
125-2-10'	90.19782	131113	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Dimethyl phthalate
125-2-10'	90.19782	105679	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2,4-Dimethylphenol
125-2-10'	90.19782	51285	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2,4-Dinitrophenol
125-2-10'	90.19782	121142	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2,4-Dinitrotoluene
125-2-10'	90.19782	606202	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2,6-Dinitrotoluene
125-2-10'	90.19782	206440	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Fluoranthene
125-2-10'	90.19782	86737	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Fluorene
125-2-10'	90.19782	118741	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Hexachlorobenzene
125-2-10'	90.19782	87683	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Hexachlorobutadiene
125-2-10'	90.19782	77474	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Hexachlorocyclopentadiene
125-2-10'	90.19782	67721	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Hexachloroethane
125-2-10'	90.19782	193395	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Indeno[1,2,3-cd]pyrene
125-2-10'	90.19782	78591	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Isophorone
125-2-10'	90.19782	534521	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2-Methyl-4,6-dinitrophenol
125-2-10'	90.19782	91576	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2-Methylnaphthalene
125-2-10'	90.19782	95487	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2-Methylphenol
125-2-10'	90.19782	106445	< 330.	UG/KG	2/01/91	PAHS	<LOQ	4-Methylphenol
125-2-10'	90.19782	91203	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Naphthalene
125-2-10'	90.19782	88744	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2-Nitroaniline
125-2-10'	90.19782	99092	< 330.	UG/KG	2/01/91	PAHS	<LOQ	3-Nitroaniline
125-2-10'	90.19782	100016	< 330.	UG/KG	2/01/91	PAHS	<LOQ	4-Nitroaniline
125-2-10'	90.19782	98953	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Nitrobenzene
125-2-10'	90.19782	88755	< 330.	UG/KG	2/01/91	PAHS	<LOQ	2-Nitrophenol
125-2-10'	90.19782	100027	< 330.	UG/KG	2/01/91	PAHS	<LOQ	4-Nitrophenol
125-2-10'	90.19782	621647	< 330.	UG/KG	2/01/91	PAHS	<LOQ	N-Nitrosodi-n-propylamine
125-2-10'	90.19782	62759	< 330.	UG/KG	2/01/91	PAHS	<LOQ	N-Nitrosodimethylamine
125-2-10'	90.19782	86306	< 330.	UG/KG	2/01/91	PAHS	<LOQ	N-Nitrosodiphenylamine
125-2-10'	90.19782	87865	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Pentachlorophenol
125-2-10'	90.19782	85018	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Phenanthrene
125-2-10'	90.19782	108952	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Phenol
125-2-10'	90.19782	129000	< 330.	UG/KG	2/01/91	PAHS	<LOQ	Pyrene

125-2-10'	90.19782	120821	< 330.	UG/KG	2/01/91	PAHS <LOQ	1,2,4-Trichlorobenzene
125-2-10'	90.19782	95954	< 330.	UG/KG	2/01/91	PAHS <LOQ	2,4,5-Trichlorophenol
125-2-10'	90.19782	88062	< 330.	UG/KG	2/01/91	PAHS <LOQ	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19782

none

Customer Sample Duplicate Results for Sample # 90.19782

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19782

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19783

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/23/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-15'	90.19783	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-15'	90.19783	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-15'	90.19783	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-15'	90.19783	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-15'	90.19783	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-15'	90.19783	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-15'	90.19783	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-15'	90.19783	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-15'	90.19783	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-15'	90.19783	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-15'	90.19783	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-15'	90.19783	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-15'	90.19783	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-15'	90.19783	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-15'	90.19783	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-15'	90.19783	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-15'	90.19783	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-15'	90.19783	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-15'	90.19783	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-15'	90.19783	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-15'	90.19783	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-15'	90.19783	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-15'	90.19783	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-15'	90.19783	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-15'	90.19783	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-15'	90.19783	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-15'	90.19783	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-15'	90.19783	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-15'	90.19783	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-15'	90.19783	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-15'	90.19783	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-15'	90.19783	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-15'	90.19783	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-15'	90.19783	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-15'	90.19783	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-15'	90.19783	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-15'	90.19783	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-15'	90.19783	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-15'	90.19783	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-15'	90.19783	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-15'	90.19783	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-15'	90.19783	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-15'	90.19783	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-15'	90.19783	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-15'	90.19783	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-15'	90.19783	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-15'	90.19783	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-15'	90.19783	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-15'	90.19783	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-15'	90.19783	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-15'	90.19783	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-15'	90.19783	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-15'	90.19783	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-15'	90.19783	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-15'	90.19783	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-15'	90.19783	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-15'	90.19783	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-15'	90.19783	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-15'	90.19783	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-15'	90.19783	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-15'	90.19783	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-15'	90.19783	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-15'	90.19783	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-15'	90.19783	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-15'	90.19783	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-15'	90.19783	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-15'	90.19783	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-15'	90.19783	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-15'	90.19783	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19783

none

Customer Sample Duplicate Results for Sample # 90.19783

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19783

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19784

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/23/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-20'	90.19784	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-20'	90.19784	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-20'	90.19784	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-20'	90.19784	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-20'	90.19784	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-20'	90.19784	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-20'	90.19784	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-20'	90.19784	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-20'	90.19784	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-20'	90.19784	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-20'	90.19784	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-20'	90.19784	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-20'	90.19784	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-20'	90.19784	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-20'	90.19784	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-20'	90.19784	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-20'	90.19784	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-20'	90.19784	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-20'	90.19784	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-20'	90.19784	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-20'	90.19784	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-20'	90.19784	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-20'	90.19784	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-20'	90.19784	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-20'	90.19784	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-20'	90.19784	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-20'	90.19784	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-20'	90.19784	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-20'	90.19784	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-20'	90.19784	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-20'	90.19784	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-20'	90.19784	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-20'	90.19784	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-20'	90.19784	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-20'	90.19784	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-20'	90.19784	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-20'	90.19784	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-20'	90.19784	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-20'	90.19784	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-20'	90.19784	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-20'	90.19784	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-20'	90.19784	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-20'	90.19784	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-20'	90.19784	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-20'	90.19784	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-20'	90.19784	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-20'	90.19784	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-20'	90.19784	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-20'	90.19784	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-20'	90.19784	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-20'	90.19784	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-20'	90.19784	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-20'	90.19784	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-20'	90.19784	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-20'	90.19784	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-20'	90.19784	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-20'	90.19784	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-20'	90.19784	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-20'	90.19784	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-20'	90.19784	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-20'	90.19784	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-20'	90.19784	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-20'	90.19784	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-20'	90.19784	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-20'	90.19784	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-20'	90.19784	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-20'	90.19784	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-20'	90.19784	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-20'	90.19784	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19784

none

Customer Sample Duplicate Results for Sample # 90.19784

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19784

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19785

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/23/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-25'	90.19785	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-25'	90.19785	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-25'	90.19785	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-25'	90.19785	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-25'	90.19785	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-25'	90.19785	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-25'	90.19785	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-25'	90.19785	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-25'	90.19785	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-25'	90.19785	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-25'	90.19785	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-25'	90.19785	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-25'	90.19785	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-25'	90.19785	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-25'	90.19785	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-25'	90.19785	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-25'	90.19785	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-25'	90.19785	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-25'	90.19785	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-25'	90.19785	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-25'	90.19785	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-25'	90.19785	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-25'	90.19785	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-25'	90.19785	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-25'	90.19785	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-25'	90.19785	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-25'	90.19785	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-25'	90.19785	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-25'	90.19785	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-25'	90.19785	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-25'	90.19785	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-25'	90.19785	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-25'	90.19785	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-25'	90.19785	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-25'	90.19785	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-25'	90.19785	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-25'	90.19785	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-25'	90.19785	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-25'	90.19785	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-25'	90.19785	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-25'	90.19785	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-25'	90.19785	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-25'	90.19785	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-25'	90.19785	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-25'	90.19785	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-25'	90.19785	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-25'	90.19785	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-25'	90.19785	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-25'	90.19785	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-25'	90.19785	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-25'	90.19785	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-25'	90.19785	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-25'	90.19785	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-25'	90.19785	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-25'	90.19785	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-25'	90.19785	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-25'	90.19785	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-25'	90.19785	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-25'	90.19785	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-25'	90.19785	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-25'	90.19785	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-25'	90.19785	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-25'	90.19785	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-25'	90.19785	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-25'	90.19785	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-25'	90.19785	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-25'	90.19785	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-25'	90.19785	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-25'	90.19785	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19785

none

Customer Sample Duplicate Results for Sample # 90.19785

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19785

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19786

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/22/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-30'	90.19786	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-30'	90.19786	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-30'	90.19786	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-30'	90.19786	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-30'	90.19786	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-30'	90.19786	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-30'	90.19786	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-30'	90.19786	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-30'	90.19786	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-30'	90.19786	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-30'	90.19786	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-30'	90.19786	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-30'	90.19786	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-30'	90.19786	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-30'	90.19786	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-30'	90.19786	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-30'	90.19786	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-30'	90.19786	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-30'	90.19786	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-30'	90.19786	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-30'	90.19786	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-30'	90.19786	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-30'	90.19786	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-30'	90.19786	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-30'	90.19786	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-30'	90.19786	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-30'	90.19786	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-30'	90.19786	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-30'	90.19786	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-30'	90.19786	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-30'	90.19786	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-30'	90.19786	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-30'	90.19786	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-30'	90.19786	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-30'	90.19786	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-30'	90.19786	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-30'	90.19786	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-30'	90.19786	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-30'	90.19786	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-30'	90.19786	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-30'	90.19786	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-30'	90.19786	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-30'	90.19786	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-30'	90.19786	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-30'	90.19786	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-30'	90.19786	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-30'	90.19786	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-30'	90.19786	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-30'	90.19786	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-30'	90.19786	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-30'	90.19786	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-30'	90.19786	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-30'	90.19786	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-30'	90.19786	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-30'	90.19786	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-30'	90.19786	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-30'	90.19786	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-30'	90.19786	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-30'	90.19786	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-30'	90.19786	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-30'	90.19786	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-30'	90.19786	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-30'	90.19786	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-30'	90.19786	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-30'	90.19786	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-30'	90.19786	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-30'	90.19786	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-30'	90.19786	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-30'	90.19786	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19786

none

Customer Sample Duplicate Results for Sample # 90.19786

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19786

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19787

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/22/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-35'	90.19787	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-35'	90.19787	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-35'	90.19787	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-35'	90.19787	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-35'	90.19787	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-35'	90.19787	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-35'	90.19787	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-35'	90.19787	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-35'	90.19787	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-35'	90.19787	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-35'	90.19787	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-35'	90.19787	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-35'	90.19787	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-35'	90.19787	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-35'	90.19787	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-35'	90.19787	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-35'	90.19787	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-35'	90.19787	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-35'	90.19787	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-35'	90.19787	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-35'	90.19787	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-35'	90.19787	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-35'	90.19787	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-35'	90.19787	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-35'	90.19787	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-35'	90.19787	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-35'	90.19787	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-35'	90.19787	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-35'	90.19787	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-35'	90.19787	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-35'	90.19787	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-35'	90.19787	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-35'	90.19787	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-35'	90.19787	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-35'	90.19787	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-35'	90.19787	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-35'	90.19787	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-35'	90.19787	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-35'	90.19787	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-35'	90.19787	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-35'	90.19787	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-35'	90.19787	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-35'	90.19787	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-35'	90.19787	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-35'	90.19787	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-35'	90.19787	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-35'	90.19787	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-35'	90.19787	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-35'	90.19787	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-35'	90.19787	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-35'	90.19787	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-35'	90.19787	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-35'	90.19787	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-35'	90.19787	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-35'	90.19787	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-35'	90.19787	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-35'	90.19787	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-35'	90.19787	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-35'	90.19787	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-35'	90.19787	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-35'	90.19787	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-35'	90.19787	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-35'	90.19787	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-35'	90.19787	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-35'	90.19787	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-35'	90.19787	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-35'	90.19787	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-35'	90.19787	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-35'	90.19787	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19787

none

Customer Sample Duplicate Results for Sample # 90.19787

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19787

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19788

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/22/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-40'	90.19788	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-40'	90.19788	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-40'	90.19788	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-40'	90.19788	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-40'	90.19788	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-40'	90.19788	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-40'	90.19788	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-40'	90.19788	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-40'	90.19788	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-40'	90.19788	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-40'	90.19788	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-40'	90.19788	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-40'	90.19788	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-40'	90.19788	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-40'	90.19788	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-40'	90.19788	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-40'	90.19788	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-40'	90.19788	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-40'	90.19788	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-40'	90.19788	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-40'	90.19788	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-40'	90.19788	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-40'	90.19788	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-40'	90.19788	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-40'	90.19788	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-40'	90.19788	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-40'	90.19788	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-40'	90.19788	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-40'	90.19788	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-40'	90.19788	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-40'	90.19788	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-40'	90.19788	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-40'	90.19788	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-40'	90.19788	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-40'	90.19788	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-40'	90.19788	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-40'	90.19788	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-40'	90.19788	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-40'	90.19788	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-40'	90.19788	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-40'	90.19788	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-40'	90.19788	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-40'	90.19788	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-40'	90.19788	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-40'	90.19788	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-40'	90.19788	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-40'	90.19788	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-40'	90.19788	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-40'	90.19788	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-40'	90.19788	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-40'	90.19788	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-40'	90.19788	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-40'	90.19788	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-40'	90.19788	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-40'	90.19788	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-40'	90.19788	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-40'	90.19788	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-40'	90.19788	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-40'	90.19788	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-40'	90.19788	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-40'	90.19788	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-40'	90.19788	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-40'	90.19788	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-40'	90.19788	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-40'	90.19788	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-40'	90.19788	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-40'	90.19788	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-40'	90.19788	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-40'	90.19788	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19788

none

Customer Sample Duplicate Results for Sample # 90.19788

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19788

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19789

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: Date Analyzed:

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME

Tentatively Identified Compounds in Customer Sample # 90.19789

none

Customer Sample Duplicate Results for Sample # 90.19789

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19789

none

Matrix Spike Results for Sample # 90.19789

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-45'	90.19789	83329	1787.94	1400.	UG/KG	2/01/91		Acenaphthene
125-2-45'	90.19789	59507	3575.87	2600.	UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-45'	90.19789	95578	3575.87	2200.	UG/KG	2/01/91		o-Chlorophenol

125-2-45'	90.19789	106467	1787.94	1300.	UG/KG	2/01/91		p-Dichlorobenzene (1,4)
125-2-45'	90.19789	121142	1787.94	1300.	UG/KG	2/01/91		2,4-Dinitrotoluene
125-2-45'	90.19789	100027	3575.87	2500.	UG/KG	2/01/91		4-Nitrophenol
125-2-45'	90.19789	621647	1787.94	1200.	UG/KG	2/01/91		N-Nitrosodi-n-propylamine
125-2-45'	90.19789	87865	3575.87	2900.	UG/KG	2/01/91		Pentachlorophenol
125-2-45'	90.19789	108952	3575.87	2400.	UG/KG	2/01/91		Phenol
125-2-45'	90.19789	129000	1787.94	1400.	UG/KG	2/01/91		Pyrene
125-2-45'	90.19789	120821	1787.94	1500.	UG/KG	2/01/91		1,2,4-Trichlorobenzene

Matrix Spike Duplicate Results for Sample # 90.19789

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-45'	90.19789	83329	1787.76	1300.	UG/KG	2/01/91	2X SURROGATES	Acenaphthene
125-2-45'	90.19789	59507	3575.52	2300.	UG/KG	2/01/91	2X SURROGATES	4-Chloro-3-methylphenol
125-2-45'	90.19789	95578	3575.52	2100.	UG/KG	2/01/91	2X SURROGATES	o-Chlorophenol
125-2-45'	90.19789	106467	1787.76	1100.	UG/KG	2/01/91	2X SURROGATES	p-Dichlorobenzene (1,4)
125-2-45'	90.19789	121142	1787.76	1400.	UG/KG	2/01/91	2X SURROGATES	2,4-Dinitrotoluene
125-2-45'	90.19789	100027	3575.52	2500.	UG/KG	2/01/91	2X SURROGATES	4-Nitrophenol
125-2-45'	90.19789	621647	1787.76	1200.	UG/KG	2/01/91	2X SURROGATES	N-Nitrosodi-n-propylamine
125-2-45'	90.19789	87865	3575.52	2600.	UG/KG	2/01/91	2X SURROGATES	Pentachlorophenol
125-2-45'	90.19789	108952	3575.52	2100.	UG/KG	2/01/91	2X SURROGATES	Phenol
125-2-45'	90.19789	129000	1787.76	1500.	UG/KG	2/01/91	2X SURROGATES	Pyrene
125-2-45'	90.19789	120821	1787.76	1300.	UG/KG	2/01/91	2X SURROGATES	1,2,4-Trichlorobenzene

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19790

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/22/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-50'	90.19790	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-50'	90.19790	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-50'	90.19790	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-50'	90.19790	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-50'	90.19790	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-50'	90.19790	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-50'	90.19790	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-50'	90.19790	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-50'	90.19790	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-50'	90.19790	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-50'	90.19790	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-50'	90.19790	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-50'	90.19790	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-50'	90.19790	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-50'	90.19790	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-50'	90.19790	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-50'	90.19790	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-50'	90.19790	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-50'	90.19790	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-50'	90.19790	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-50'	90.19790	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-50'	90.19790	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-50'	90.19790	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-50'	90.19790	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-50'	90.19790	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-50'	90.19790	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-50'	90.19790	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-50'	90.19790	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-50'	90.19790	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-50'	90.19790	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-50'	90.19790	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-50'	90.19790	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-50'	90.19790	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-50'	90.19790	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-50'	90.19790	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-50'	90.19790	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-50'	90.19790	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-50'	90.19790	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-50'	90.19790	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-50'	90.19790	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-50'	90.19790	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-50'	90.19790	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-50'	90.19790	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-50'	90.19790	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-50'	90.19790	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-50'	90.19790	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-50'	90.19790	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-50'	90.19790	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-50'	90.19790	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-50'	90.19790	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-50'	90.19790	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-50'	90.19790	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-50'	90.19790	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-50'	90.19790	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-50'	90.19790	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-50'	90.19790	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-50'	90.19790	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-50'	90.19790	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-50'	90.19790	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-50'	90.19790	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-50'	90.19790	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-50'	90.19790	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-50'	90.19790	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-50'	90.19790	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-50'	90.19790	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-50'	90.19790	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-50'	90.19790	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-50'	90.19790	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-50'	90.19790	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19790

none

Customer Sample Duplicate Results for Sample # 90.19790

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19790

none

REPORT NUMBER: 9456

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19791

Date Collected: 12/13/90 Date Received: 12/13/90 Date Extracted: 12/18/90 Date Analyzed: 1/22/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-55'	90.19791	83329	< 330.		UG/KG	2/01/91		Acenaphthene
125-2-55'	90.19791	208968	< 330.		UG/KG	2/01/91		Acenaphthylene
125-2-55'	90.19791	62533	< 330.		UG/KG	2/01/91		Aniline
125-2-55'	90.19791	120127	< 330.		UG/KG	2/01/91		Anthracene
125-2-55'	90.19791	103333	< 330.		UG/KG	2/01/91		Azobenzene
125-2-55'	90.19791	92875	< 330.		UG/KG	2/01/91		m-Benzidine
125-2-55'	90.19791	56553	< 330.		UG/KG	2/01/91		Benzo[a]anthracene
125-2-55'	90.19791	50328	< 330.		UG/KG	2/01/91		Benzo[a]pyrene
125-2-55'	90.19791	205992	< 330.		UG/KG	2/01/91		Benzo[b]fluoranthene
125-2-55'	90.19791	191242	< 330.		UG/KG	2/01/91		Benzo[g,h,i]perylene
125-2-55'	90.19791	207089	< 330.		UG/KG	2/01/91		Benzo[k]fluoranthene
125-2-55'	90.19791	65850	< 330.		UG/KG	2/01/91		Benzoic acid
125-2-55'	90.19791	100516	< 330.		UG/KG	2/01/91		Benzyl alcohol
125-2-55'	90.19791	111911	< 330.		UG/KG	2/01/91		Bis(2-chloroethoxy)methane
125-2-55'	90.19791	111444	< 330.		UG/KG	2/01/91		Bis(2-chloroethyl)ether
125-2-55'	90.19791	108601	< 330.		UG/KG	2/01/91		Bis(2-chloroisopropyl)ether
125-2-55'	90.19791	117817	< 330.		UG/KG	2/01/91		Bis(2-ethylhexyl)phthalate
125-2-55'	90.19791	101553	< 330.		UG/KG	2/01/91		4-Bromophenylphenyl ether
125-2-55'	90.19791	85687	< 330.		UG/KG	2/01/91		Butylbenzyl phthalate
125-2-55'	90.19791	59507	< 330.		UG/KG	2/01/91		4-Chloro-3-methylphenol
125-2-55'	90.19791	106478	< 330.		UG/KG	2/01/91		4-Chloroaniline

125-2-55'	90.19791	91587	< 330.	UG/KG	2/01/91	2-Chloronaphthalene
125-2-55'	90.19791	95578	< 330.	UG/KG	2/01/91	o-Chlorophenol
125-2-55'	90.19791	7005723	< 330.	UG/KG	2/01/91	4-Chlorophenylphenyl ether
125-2-55'	90.19791	218019	< 330.	UG/KG	2/01/91	Chrysene
125-2-55'	90.19791	84742	< 330.	UG/KG	2/01/91	Di-n-butyl phthalate
125-2-55'	90.19791	117840	< 330.	UG/KG	2/01/91	Di-n-octyl phthalate
125-2-55'	90.19791	53703	< 330.	UG/KG	2/01/91	Dibenzo[a,h]anthracene
125-2-55'	90.19791	132649	< 330.	UG/KG	2/01/91	Dibenzofuran
125-2-55'	90.19791	95501	< 330.	UG/KG	2/01/91	o-Dichlorobenzene (1,2)
125-2-55'	90.19791	541731	< 330.	UG/KG	2/01/91	m-Dichlorobenzene (1,3)
125-2-55'	90.19791	106467	< 330.	UG/KG	2/01/91	p-Dichlorobenzene (1,4)
125-2-55'	90.19791	91941	< 330.	UG/KG	2/01/91	3,3'-Dichlorobenzidine
125-2-55'	90.19791	120832	< 330.	UG/KG	2/01/91	2,4-Dichlorophenol
125-2-55'	90.19791	84662	< 330.	UG/KG	2/01/91	Diethyl phthalate
125-2-55'	90.19791	131113	< 330.	UG/KG	2/01/91	Dimethyl phthalate
125-2-55'	90.19791	105679	< 330.	UG/KG	2/01/91	2,4-Dimethylphenol
125-2-55'	90.19791	51285	< 330.	UG/KG	2/01/91	2,4-Dinitrophenol
125-2-55'	90.19791	121142	< 330.	UG/KG	2/01/91	2,4-Dinitrotoluene
125-2-55'	90.19791	606202	< 330.	UG/KG	2/01/91	2,6-Dinitrotoluene
125-2-55'	90.19791	206440	< 330.	UG/KG	2/01/91	Fluoranthene
125-2-55'	90.19791	86737	< 330.	UG/KG	2/01/91	Fluorene
125-2-55'	90.19791	118741	< 330.	UG/KG	2/01/91	Hexachlorobenzene
125-2-55'	90.19791	87683	< 330.	UG/KG	2/01/91	Hexachlorobutadiene
125-2-55'	90.19791	77474	< 330.	UG/KG	2/01/91	Hexachlorocyclopentadiene
125-2-55'	90.19791	67721	< 330.	UG/KG	2/01/91	Hexachloroethane
125-2-55'	90.19791	193395	< 330.	UG/KG	2/01/91	Indeno[1,2,3-cd]pyrene
125-2-55'	90.19791	78591	< 330.	UG/KG	2/01/91	Isophorone
125-2-55'	90.19791	534521	< 330.	UG/KG	2/01/91	2-Methyl-4,6-dinitrophenol
125-2-55'	90.19791	91576	< 330.	UG/KG	2/01/91	2-Methylnaphthalene
125-2-55'	90.19791	95487	< 330.	UG/KG	2/01/91	2-Methylphenol
125-2-55'	90.19791	106445	< 330.	UG/KG	2/01/91	4-Methylphenol
125-2-55'	90.19791	91203	< 330.	UG/KG	2/01/91	Naphthalene
125-2-55'	90.19791	88744	< 330.	UG/KG	2/01/91	2-Nitroaniline
125-2-55'	90.19791	99092	< 330.	UG/KG	2/01/91	3-Nitroaniline
125-2-55'	90.19791	100016	< 330.	UG/KG	2/01/91	4-Nitroaniline
125-2-55'	90.19791	98953	< 330.	UG/KG	2/01/91	Nitrobenzene
125-2-55'	90.19791	88755	< 330.	UG/KG	2/01/91	2-Nitrophenol
125-2-55'	90.19791	100027	< 330.	UG/KG	2/01/91	4-Nitrophenol
125-2-55'	90.19791	621647	< 330.	UG/KG	2/01/91	N-Nitrosodi-n-propylamine
125-2-55'	90.19791	62759	< 330.	UG/KG	2/01/91	N-Nitrosodimethylamine
125-2-55'	90.19791	86306	< 330.	UG/KG	2/01/91	N-Nitrosodiphenylamine
125-2-55'	90.19791	87865	< 330.	UG/KG	2/01/91	Pentachlorophenol
125-2-55'	90.19791	85018	< 330.	UG/KG	2/01/91	Phenanthrene
125-2-55'	90.19791	108952	< 330.	UG/KG	2/01/91	Phenol
125-2-55'	90.19791	129000	< 330.	UG/KG	2/01/91	Pyrene

125-2-55'	90.19791	120821	< 330.	UG/KG	2/01/91	1,2,4-Trichlorobenzene
125-2-55'	90.19791	95954	< 330.	UG/KG	2/01/91	2,4,5-Trichlorophenol
125-2-55'	90.19791	88062	< 330.	UG/KG	2/01/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 90.19791

none

Customer Sample Duplicate Results for Sample # 90.19791

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 90.19791

none

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REPORT NUMBER: 9456 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: SCB on 5-Feb-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QA SAMPLES RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ Only Blind QC samples run with this batch.

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

Blind QC Results, Sample # 90.19775

Date Collected: 12/11/90 Date Received: 12/12/90 Date Extracted: 12/18/91 Date Analyzed: 1/23/91

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
90.19775	83329	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Acenaphthene
90.19775	208968	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Acenaphthylene
90.19775	62533	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Aniline
90.19775	120127	1.4	0.42	MG/KG	1.6	0.2	2/04/91	UNDER CONTROL	Anthracene
90.19775	103333	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Azobenzene
90.19775	92875	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	m-Benzidine
90.19775	56553	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Benzo[a]anthracene
90.19775	50328	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Benzo[a]pyrene
90.19775	205992	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Benzo[b]fluoranthene
90.19775	191242	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Benzo[g,h,i]perylene
90.19775	207089	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Benzo[k]fluoranthene
90.19775	65850	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Benzoic acid
90.19775	100516	1.8	0.54	MG/KG	2.	0.2	2/04/91	UNDER CONTROL	Benzyl alcohol
90.19775	111911	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Bis(2-chloroethoxy)methane
90.19775	111444	2.5	0.75	MG/KG	3.3	0.3	2/04/91	UNDER CONTROL	Bis(2-chloroethyl)ether
90.19775	108601	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Bis(2-chloroisopropyl)ether
90.19775	117817	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
90.19775	101553	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	4-Bromophenylphenyl ether
90.19775	85687	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Butylbenzyl phthalate
90.19775	59507	2.2	0.66	MG/KG	2.9	0.3	2/04/91	UNDER CONTROL	4-Chloro-3-methylphenol
90.19775	106478	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	4-Chloroaniline
90.19775	91587	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2-Chloronaphthalene
90.19775	95578	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	o-Chlorophenol
90.19775	7005723	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	4-Chlorophenylphenyl ether
90.19775	218019	1.7	0.51	MG/KG	2.3	0.2	2/04/91	UNDER CONTROL	Chrysene
90.19775	84742	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Di-n-butyl phthalate
90.19775	117840	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Di-n-octyl phthalate
90.19775	53703	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Dibenzo[a,h]anthracene
90.19775	132649	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Dibenzofuran
90.19775	95501	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	o-Dichlorobenzene (1,2)

90.1	541731	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
90.19775	106467	1.8	0.54	MG/KG	3.1	0.3	2/04/91	WARNING 2-3 SIG	p-Dichlorobenzene (1,4)
90.19775	91941	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	3,3'-Dichlorobenzidine
90.19775	120832	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,4-Dichlorophenol
90.19775	84662	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Diethyl phthalate
90.19775	131113	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Dimethyl phthalate
90.19775	105679	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,4-Dimethylphenol
90.19775	51285	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,4-Dinitrophenol
90.19775	121142	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,4-Dinitrotoluene
90.19775	606202	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,6-Dinitrotoluene
90.19775	206440	1.8	0.54	MG/KG	1.9	0.2	2/04/91	UNDER CONTROL	Fluoranthene
90.19775	86737	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Fluorene
90.19775	118741	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Hexachlorobenzene
90.19775	87683	2.2	0.66	MG/KG	2.8	0.3	2/04/91	UNDER CONTROL	Hexachlorobutadiene
90.19775	77474	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Hexachlorocyclopentadiene
90.19775	67721	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Hexachloroethane
90.19775	193395	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Indeno[1,2,3-cd]pyrene
90.19775	78591	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Isophorone
90.19775	534521	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
90.19775	91576	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2-Methylnaphthalene
90.19775	95487	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2-Methylphenol
90.19775	106445	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	4-Methylphenol
90.19775	91203	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Naphthalene
90.19775	88744	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2-Nitroaniline
90.19775	99092	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	3-Nitroaniline
90.19775	100016	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	4-Nitroaniline
90.19775	98953	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Nitrobenzene
90.19775	88755	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2-Nitrophenol
90.19775	100027	1.9	0.57	MG/KG	2.9	0.3	2/04/91	UNDER CONTROL	4-Nitrophenol
90.19775	621647	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	N-Nitrosodi-n-propylamine
90.19775	62759	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	N-Nitrosodimethylamine
90.19775	86306	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	N-Nitrosodiphenylamine
90.19775	87865	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Pentachlorophenol
90.19775	85018	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Phenanthrene
90.19775	108952	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Phenol
90.19775	129000	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	Pyrene
90.19775	120821	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	1,2,4-Trichlorobenzene
90.19775	95954	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,4,5-Trichlorophenol
90.19775	88062	< 0.33		MG/KG	0.0		2/04/91	UNDER CONTROL	2,4,6-Trichlorophenol

Blind QC Results, Sample # 90.19796

Date Collected: 12/11/90 Date Received: 12/13/90 Date Extracted: 12/18/91 Date Analyzed: 1/24/91

90.19796	83329	< 0.33	MG/KG	0.0	2/01/91	UNDER CONTROL	Acenaphthene
90.19796	208968	< 0.33	MG/KG	0.0	2/01/91	UNDER CONTROL	Acenaphthylene

90.19796	62533	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Aniline
90.19796	120127	1.8	0.54	MG/KG	2.4	0.2	2/01/91	UNDER CONTROL	Anthracene
90.19796	103333	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Azobenzene
90.19796	92875	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	m-Benzidine
90.19796	56553	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Benzo[a]anthracene
90.19796	50328	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Benzo[a]pyrene
90.19796	205992	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Benzo[b]fluoranthene
90.19796	191242	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Benzo[g,h,i]perylene
90.19796	207089	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Benzo[k]fluoranthene
90.19796	65850	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Benzoic acid
90.19796	100516	2.2	0.66	MG/KG	3.	0.3	2/01/91	UNDER CONTROL	Benzyl alcohol
90.19796	111911	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Bis(2-chloroethoxy)methane
90.19796	111444	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Bis(2-chloroethyl)ether
90.19796	108601	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Bis(2-chloroisopropyl)ether
90.19796	117817	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
90.19796	101553	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	4-Bromophenylphenyl ether
90.19796	85687	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Butylbenzyl phthalate
90.19796	59507	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	4-Chloro-3-methylphenol
90.19796	106478	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	4-Chloroaniline
90.19796	91587	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2-Chloronaphthalene
90.19796	95578	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	o-Chlorophenol
90.19796	7005723	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	4-Chlorophenylphenyl ether
90.19796	218019	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Chrysene
90.19796	84742	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Di-n-butyl phthalate
90.19796	117840	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Di-n-octyl phthalate
90.19796	53703	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Dibenzo[a,h]anthracene
90.19796	132649	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Dibenzofuran
90.19796	95501	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
90.19796	541731	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
90.19796	106467	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
90.19796	91941	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	3,3'-Dichlorobenzidine
90.19796	120832	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,4-Dichlorophenol
90.19796	84662	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Diethyl phthalate
90.19796	131113	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Dimethyl phthalate
90.19796	105679	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,4-Dimethylphenol
90.19796	51285	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,4-Dinitrophenol
90.19796	121142	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,4-Dinitrotoluene
90.19796	606202	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,6-Dinitrotoluene
90.19796	206440	2.5	0.75	MG/KG	2.9	0.3	2/01/91	UNDER CONTROL	Fluoranthene
90.19796	86737	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Fluorene
90.19796	118741	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Hexachlorobenzene
90.19796	87683	2.9	0.87	MG/KG	4.1	0.4	2/01/91	UNDER CONTROL	Hexachlorobutadiene
90.19796	77474	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Hexachlorocyclopentadiene
90.19796	67721	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Hexachloroethane
90.19796	193395	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Indeno[1,2,3-cd]pyrene

90.19796	78591	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Isophorone
90.19796	534521	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
90.19796	91576	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2-Methylnaphthalene
90.19796	95487	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2-Methylphenol
90.19796	106445	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	4-Methylphenol
90.19796	91203	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Naphthalene
90.19796	88744	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2-Nitroaniline
90.19796	99092	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	3-Nitroaniline
90.19796	100016	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	4-Nitroaniline
90.19796	98953	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Nitrobenzene
90.19796	88755	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2-Nitrophenol
90.19796	100027	3.	0.9	MG/KG	4.	0.4	2/01/91	UNDER CONTROL	4-Nitrophenol
90.19796	621647	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	N-Nitrosodi-n-propylamine
90.19796	62759	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	N-Nitrosodimethylamine
90.19796	86306	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	N-Nitrosodiphenylamine
90.19796	87865	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Pentachlorophenol
90.19796	85018	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Phenanthrene
90.19796	108952	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Phenol
90.19796	129000	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	Pyrene
90.19796	120821	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	1,2,4-Trichlorobenzene
90.19796	95954	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,4,5-Trichlorophenol
90.19796	88062	< 0.33		MG/KG	0.0		2/01/91	UNDER CONTROL	2,4,6-Trichlorophenol

SURROGATE RESULTS FOR EPA SEMIVOLATILES

Surrogate 1 = 2-Fluorophenol (CAS # = 367124)
Surrogate 2 = Phenol-d5 (CAS # = 4165622)
Surrogate 3 = Nitrobenzene-d5 (CAS # = 4165600)
Surrogate 4 = 2-Fluorobiphenyl (CAS # = 321608)
Surrogate 5 = 2,4,6-Tribromophenol (CAS # = 118796)
Surrogate 6 = p-Terphenyl-d14 (CAS # =)

SAMPLE NUMBER	UNITS	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	Surrogate 6	COMPLETION DATE
90.19759	%	66.94	74.73	76.08	87.52	79.78	85.52	4-Feb-1991
90.19760	%	70.57	70.15	71.52	87.28	82.12	82.7	4-Feb-1991
90.19761	%	66.05	75.52	67.78	84.14	88.3	85.48	4-Feb-1991
90.19762	%	0.0		0.0		0.0		4-Feb-1991
90.19763	%	70.89	88.09	67.4	93.68	107.73	80.28	4-Feb-1991
90.19764	%	72.42	68.7	70.02	94.3	111.76	84.88	4-Feb-1991
90.19765	%	61.9	83.57	55.92	83.	102.11	87.72	4-Feb-1991
90.19766	%	61.86	79.64	69.94	99.34	90.04	91.4	4-Feb-1991
90.19767	%	64.81	77.57	62.8	93.64	75.39	88.36	4-Feb-1991
90.19768	%	56.07	63.86	65.86	73.66	95.52	90.62	4-Feb-1991

90.19769	%	69.05	79.28	77.72	91.9	106.	94.18	4-Feb-1991
90.19769	%	73.34	81.45	80.38	94.18	110.	86.94	4-Feb-1991
90.19775	%	66.17	86.67	80.5	102.34	125.	92.06	4-Feb-1991
90.19781	%	58.89	62.75	69.86	81.56	85.07	81.4	1-Feb-1991
90.19782	%	67.51	70.99	73.82	82.5	92.43	89.54	1-Feb-1991
90.19783	%	60.67	69.64	67.08	77.2	94.24	92.44	1-Feb-1991
90.19784	%	65.81	74.59	71.28	77.58	86.09	92.54	1-Feb-1991
90.19785	%	69.29	72.76	74.92	79.18	91.39	93.78	1-Feb-1991
90.19786	%	65.67	81.87	70.94	39.28	108.24	90.94	1-Feb-1991
90.19787	%	82.33	91.89	80.4	87.16	105.17	98.58	1-Feb-1991
90.19788	%	49.58	58.97	68.7	82.36	79.63	50.46	1-Feb-1991
90.19789	%	65.04	72.8	70.92	77.36	92.41	85.28	1-Feb-1991
90.19789	%	118.	134.	145.84	140.76	195.	153.2	1-Feb-1991
90.19790	%	71.81	73.81	70.72	79.06	92.86	88.88	1-Feb-1991
90.19791	%	83.3	77.01	65.2	78.48	89.77	98.94	1-Feb-1991
90.19796	%	66.81	77.09	77.08	87.4	113.	94.88	1-Feb-1991
90.19797	%	67.84	76.41	77.4	82.1	82.98	82.3	4-Feb-1991

EPA Limits:

Water	%	21 - 100	10 - 94	35 - 114	43 - 116	10 - 123	33 - 141
Soil	%	25 - 121	24 - 113	23 - 120	30 - 115	19 - 122	18 - 137

REPORT NUMBER: 9456

Analyst	Reviewer	Section Leader	QA Officer
2/6/91	2-6-91	2/10/91	2/11/91
Date	Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in 'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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TOTAL PETROLEUM HYDROCARBON ANALYSES

To : Philip R. Fresquez, HSE-8, MS K490

Thru : Chris Leibman, Section Leader, Organic Analysis CL

From : Stuart Nielsen

Date : 7 February 1991

Subject: Results for Analytical Request 11044

Samples numbers 90.19759 through 90.19769 and 90.19781 through 90.19791 received under request number 11044 were soil samples. The request was for total petroleum hydrocarbons by EPA method 418.1.

EPA method 418.1 is a method for the measurement of fluorocarbon-113 extractable petroleum hydrocarbons from waters. It was used with the modifications necessitated by these samples being soils. The determination was carried out using a 1.0 cm cell in the Digilab FTS-11E FTIR Spectrophotometer. The results obtained are given in the attached table.

These data are recorded in notebook S022666 on pages 2 through 14. If you have any questions please contact me (7-6934) or Chris (7-5889).

Analytical Results for Request Number 11044

	Sample Number	Total Recoverable Petroleum Hydrocarbons µg/g of soil
125-1-5	90.19759	4.87 ± 2.0
	90.19760	12.1 ± 2.4
	90.19761	<MDL
	90.19762	<MDL
25'	90.19763	339 ± 60
	90.19764	19.5 ± 3.9
	90.19765	31.7 ± 6.2
	90.19766	8.40 ± 2.0
	90.19767	11.3 ± 2.0
	90.19768	18.9 ± 3.8
55'	90.19769	<MDL
125-2-5	90.19781	7.00 ± 2.0
	90.19782	6.89 ± 2.0
	90.19783	8.35 ± 2.0
	90.19784	<MDL
	90.19785	3.18 ± 2.0
	90.19786	8.16 ± 2.0
	90.19787	9.44 ± 2.0
	90.19788	3.70 ± 2.0
	90.19789	5.32 ± 2.0
	90.19790	6.64 ± 2.0
55'	90.19791	<MDL

MDL = 2.0

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19759

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-5'	90.19759	177	4.87	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19760

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-10'	90.19760	177	12.1	2.4	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: [illegible] ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19761

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-15'	90.19761	177	< 2.		UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

RE... NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19762

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-20'	90.19762	177	< 2.		UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

RE NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19763

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-25'	90.19763	177	339.	60.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REP... NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19764

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-30'	90.19764	177	19.5	3.9	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

RL , NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19765

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-35'	90.19765	177	31.7	6.2	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19766

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-40'	90.19766	177	8.4	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19767

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-45'	90.19767	177	11.3	2.2	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19768

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-50'	90.19768	177	18.9	3.8	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19769

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-1-55'	90.19769	177	< 2.		UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19781

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-5'	90.19781	177	7.	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19782

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-10'	90.19782	177	6.89	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19783

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-15'	90.19783	177	8.35	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19784

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-20'	90.19784	177	< 2.		UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19785

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-25'	90.19785	177	3.18	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19786

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-30'	90.19786	177	8.16	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19787

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-35'	90.19787	177	9.44	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90,19788

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-40'	90.19788	177	3.7	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19789

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-45'	90.19789	177	5.32	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: [illegible] ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19790

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-50'	90.19790	177	6.64	2.	UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 9469

********** HSE-9 ANALYTICAL REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SO ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 90.19791

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
125-2-55'	90.19791	177	< 2.		UG/G SOIL	2/07/91		Petroleum Hydrocarbons, Total Recoverable

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REPORT NUMBER: 9469 (continued)

********** HSE-9 QUALITY ASSURANCE REPORT **********

Prepared by: NIELSEN on 7-Feb-1991

REQUEST NUMBER: 11044 MATRIX: SS ANALYST: Stuart Nielsen PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: HSE-8 MAIL-STOP: K490 PHONE: 7-0815

SUMMARY OF CONTROL STATUS OF OPEN (NON-BLIND) QA SAMPLES RUN WITH THIS BATCH

There were no open (non-blind) Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

____ Only Blind QC samples run with this batch.

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

SUMMARY OF CONTROL STATUS OF BLANK QC SAMPLES RUN WITH THIS BATCH

Blank Results

none

Blank Spike Results

none

Blank Spike Duplicate Results

none

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

There were no blind Quality Control materials run with the samples reported above for one of the following reasons:

____ Only qualitative data requested

___✓ Only Open (non-blind) QC samples run with this sample batch.

____ No QC samples run with this sample batch.

____ No QC samples for this constituent and matrix type available within HSE-9

REPORT NUMBER: 9469

Analyst	Reviewer	Section Leader	QA Officer
2/7/91	2/10/91	2/10/91	2-11-91
Date	Date	Date	Date

The control status of the preceeding data was evaluated using the standard statistical criteria set forth in

'Quality Assurance for Health and Environmental Chemistry: 1986,' LA-11114-MS, pp. 3-4.

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