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CLOSURE CERTIFICATION REPORT
TA-35 TSL-85 Surface Impoundment

Volume I

Los Alamos National Laboratory
Los Alamos, New Mexico

December 5, 1991



DRAFT

CLOSURE CERTIFICATION REPORT

**TA-35 TSL-85
SURFACE IMPOUNDMENT**

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EXECUTIVE SUMMARY

This closure report documents closure activities for the TA-35 TSL-85 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-85 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) staff. The closure plan, attached as Enclosure 1, is a revision of the previously submitted draft dated October, 1988. Revisions to the closure plan 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 regulations include their state analog.) Clean closure of the TSL-85 site was addressed 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, contaminated soil underlying the impoundment area, and the inactive underground storage tank and associated piping;
- Sampling and analysis of soil to determine the presence and concentrations of any hazardous constituents remaining in the soil at the TSL-85 site; and
- Demonstration through a risk assessment that any constituents remaining in the soil at the TSL-85 site pose no threat to human health and the environment.

Most remaining soil concentrations of hazardous constituents were below health-based action levels (or background concentrations for metals). Six semivolatile organic constituents did not exceed their limits of quantitation (LOQs), but the values for the analytical limits were greater than their calculated health-based limits. The six semivolatile organic constituents are:

- benzidine;
- 3,3'-dichlorobenzidine;

- 2,4-dinitrotoluene and 2,6-dinitrotoluene (mixture);
- hexachlorobenzene;
- n-nitrosodimethylamine; and
- n-nitrosodi-n-propylamine.

(To confirm that it was unlikely that these constituents were actually present, historical data were researched and it was determined that the constituents were not utilized at Building 85 or at Building 188. (In addition to the waste disposal lines from Building 85, lines from Building 188 may, at one time, have been connected to the waste disposal system at TSL-85). PCBs and antimony were detected above health-based action levels. PCBs were not used at either site, and the concentrations found were well below the 10 part per million (ppm) levels accepted by NMED for clean closure (Sides, 1991). Antimony was used, but only in minute quantities (10 to 20 grams), in a soldering process at Building 188 (Umphres, 1991).

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-85 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). This plan is a revision to the October 1988 Closure Plan for the TA-35 TSL-85 surface impoundment, incorporating 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).

Initial investigations of the surface impoundment determined that an inactive underground storage tank connects to the surface impoundment. The Laboratory intends to address decontamination and removal of the tank as part of the surface impoundment closure. The surface impoundment is located on the rim of Mortandad 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).

Clean closure will entail removal of standing liquids, wastes and waste residues from the surface impoundment, the inactive underground storage tank, and their 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. Soil with documented contamination will be removed as part of the closure effort, and the site will be backfilled, regraded, and seeded. In addition, decontamination and removal of the underground storage tank system will be addressed as part of this closure effort.

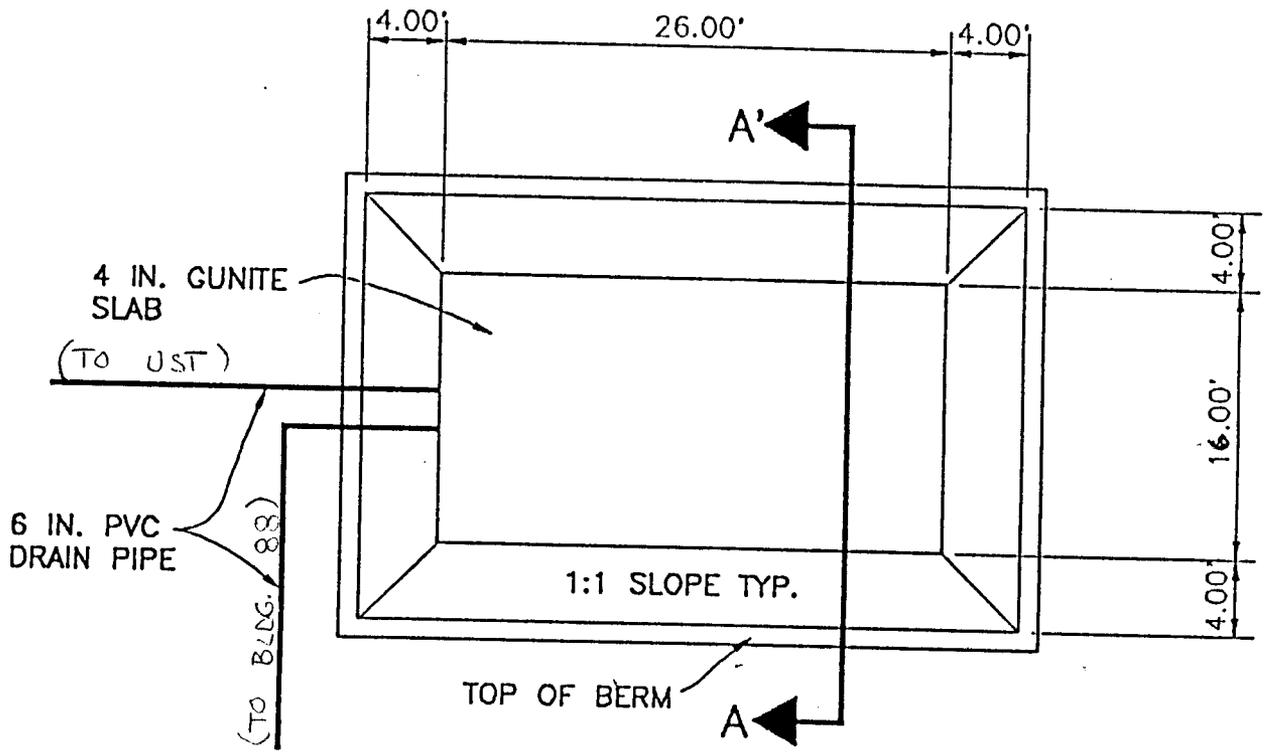
1.0 INTRODUCTION

This report summarizes the actions that were taken to clean close the TA-35 TSL-85 surface impoundment (Figure 1-1). These actions include removal of waste from the surface impoundment and its associated structures, decontamination and removal of the inactive underground storage tank and associated piping, 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. Figure 1-2 illustrates the interconnection of the two six-inch schedule 40 PVC pipes that drains into the surface impoundment on its west side, five feet from the bottom. One pipe leads to a drain in a bermed storage pad located on the east side of Building 85. This storage pad contains a 15,000-gallon aboveground Marx tank. The other pipe is connected to an inactive underground tank located west of the surface impoundment. Figure 1-2 diagrams the surface impoundment in both plan and cross-section view.

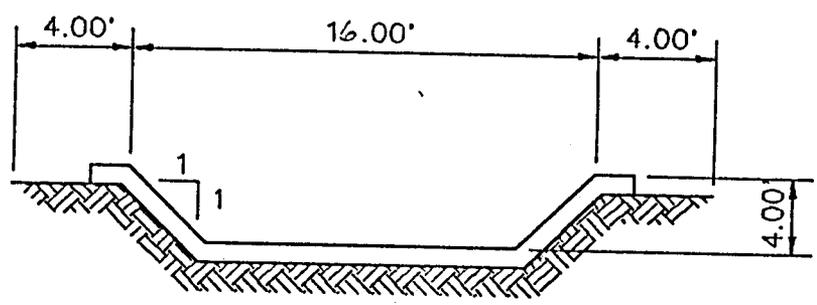
Procedures followed to verify that clean closure objectives have been met are also documented in this report. Initial verification was performed through an extensive soil sampling and analysis program. Six sampling and analysis events were included in this program. They can be summarized as follows:

- **Gunite Liner Decontamination Verification:**
To verify that the gunite liner had been decontaminated and that no contamination was present in the soil underlying the impoundment, 14 soil samples immediately below the gunite liner were analyzed for volatile and semivolatile organic constituents, PCBs, and metals (Figure 1-3). (The results indicated that contamination was present in the soil, and, therefore, additional sampling and analysis were performed, and the gunite liner was disposed as a hazardous waste.)
- **Clean Closure Verification Phase 1 - Soil Removal, Sampling and Analysis:**
After excavation of one-to-two feet of contaminated soil underlying the impoundment, 24 soil samples at the one-to-two foot depth were analyzed for volatile and semivolatile organic constituents, PCBs, and metals (Figure 1-4). The results were grouped together with corehole sample results from Phase 2 for the purpose of risk analysis to determine the need for further excavation.

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PLAN VIEW



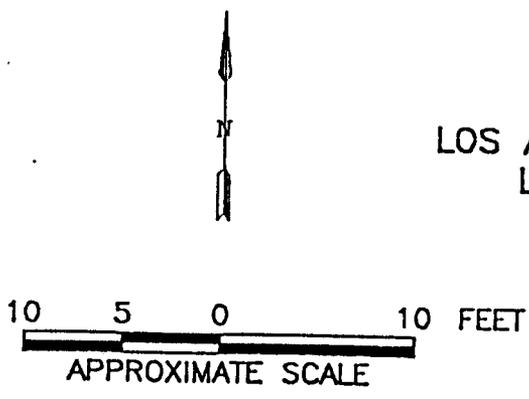
CROSS SECTIONAL VIEW
 A - A'

ENGINEERING DRAWING
 TA-35-TSL-85
 SURFACE IMPOUNDMENT

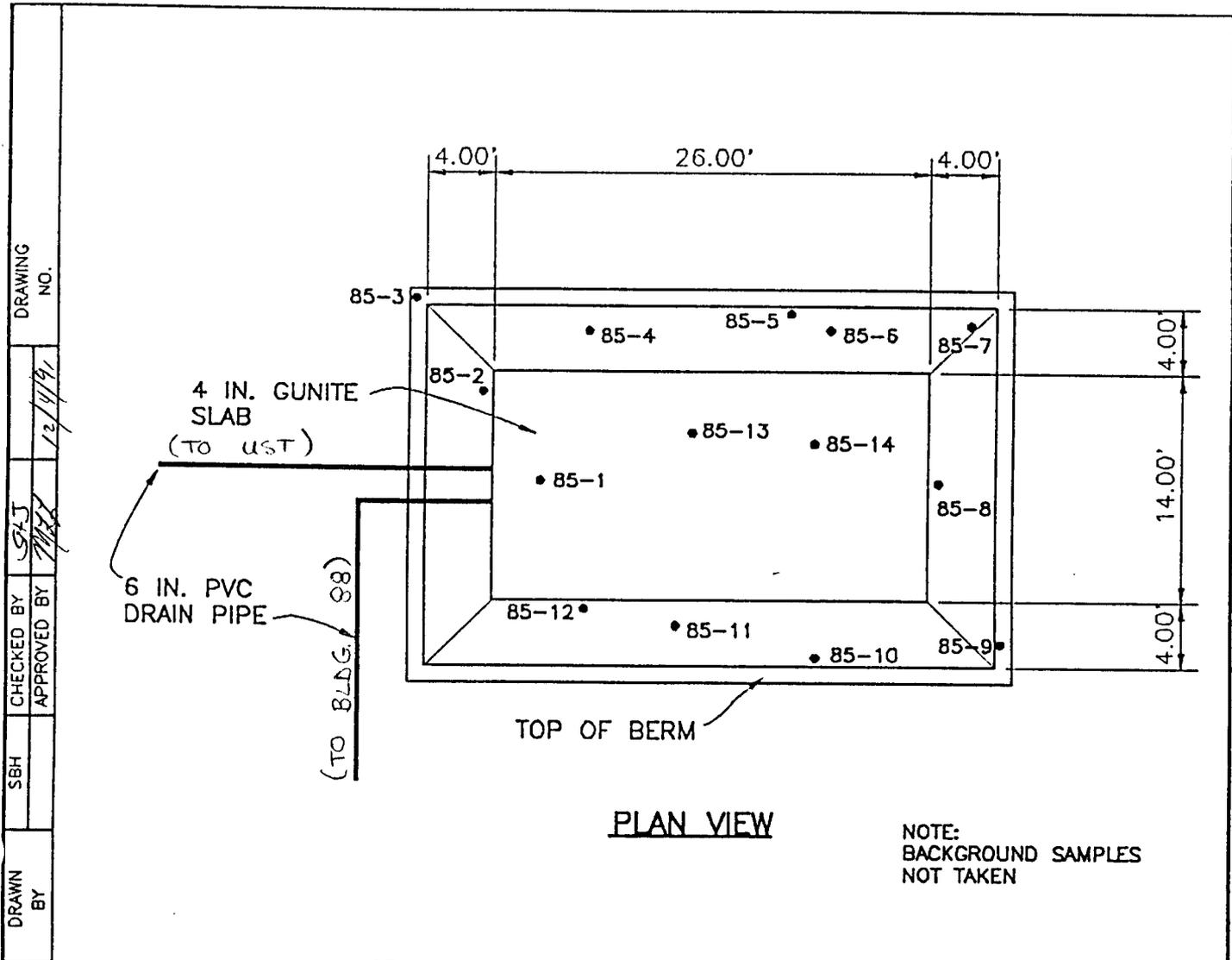
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FIGURE 1-2



 **BENCHMARK**
 ENVIRONMENTAL CORPORATION



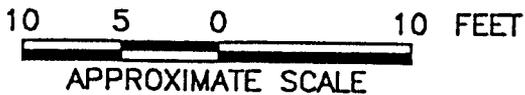
Decontamination
SOIL SAMPLE LOCATIONS
IMMEDIATELY BELOW GUNITE LINER

TA-35-TSL-85
 SURFACE IMPOUNDMENT

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FIGURE 1-3



BENCHMARK

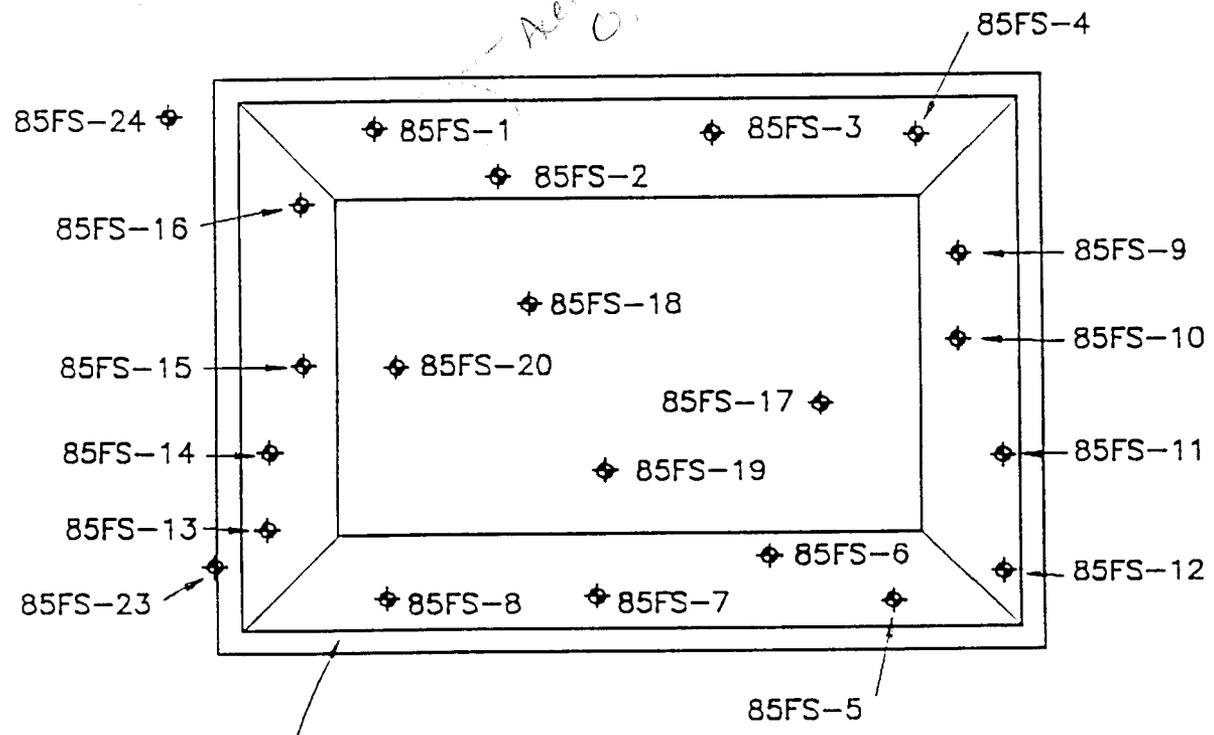
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PLAN VIEW

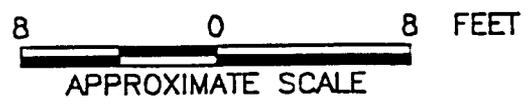
◆ 85FS-1 SAMPLE LOCATION

Phase 1
SOIL SAMPLE LOCATIONS
FINAL SOIL VERIFICATION SAMPLES
 2 FOOT DEPTH
 TA-35-TSL-85
 SURFACE IMPOUNDMENT

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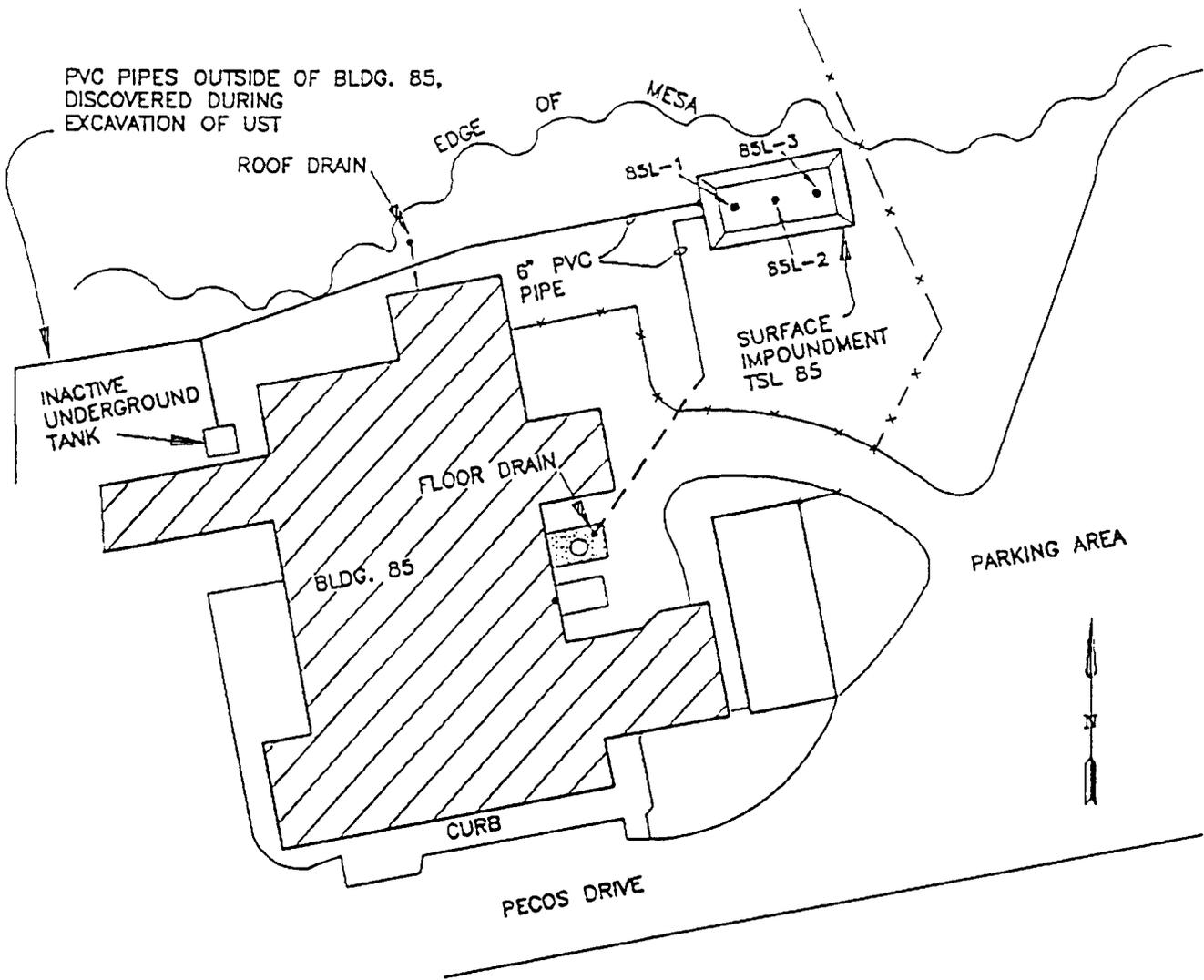
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FIGURE 1-4



 **BENCHMARK**
 ENVIRONMENTAL CORPORATION

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LEGEND

- x-----x FENCE
- APPROX. LINE LOCATION
- 85L-1 • CORE HOLE LOCATIONS

Phase 2
COREHOLE LOCATIONS

TA-35-TSL-85
 SURFACE IMPOUNDMENT
 PROPOSED TEST HOLE LOCATIONS

PREPARED FOR

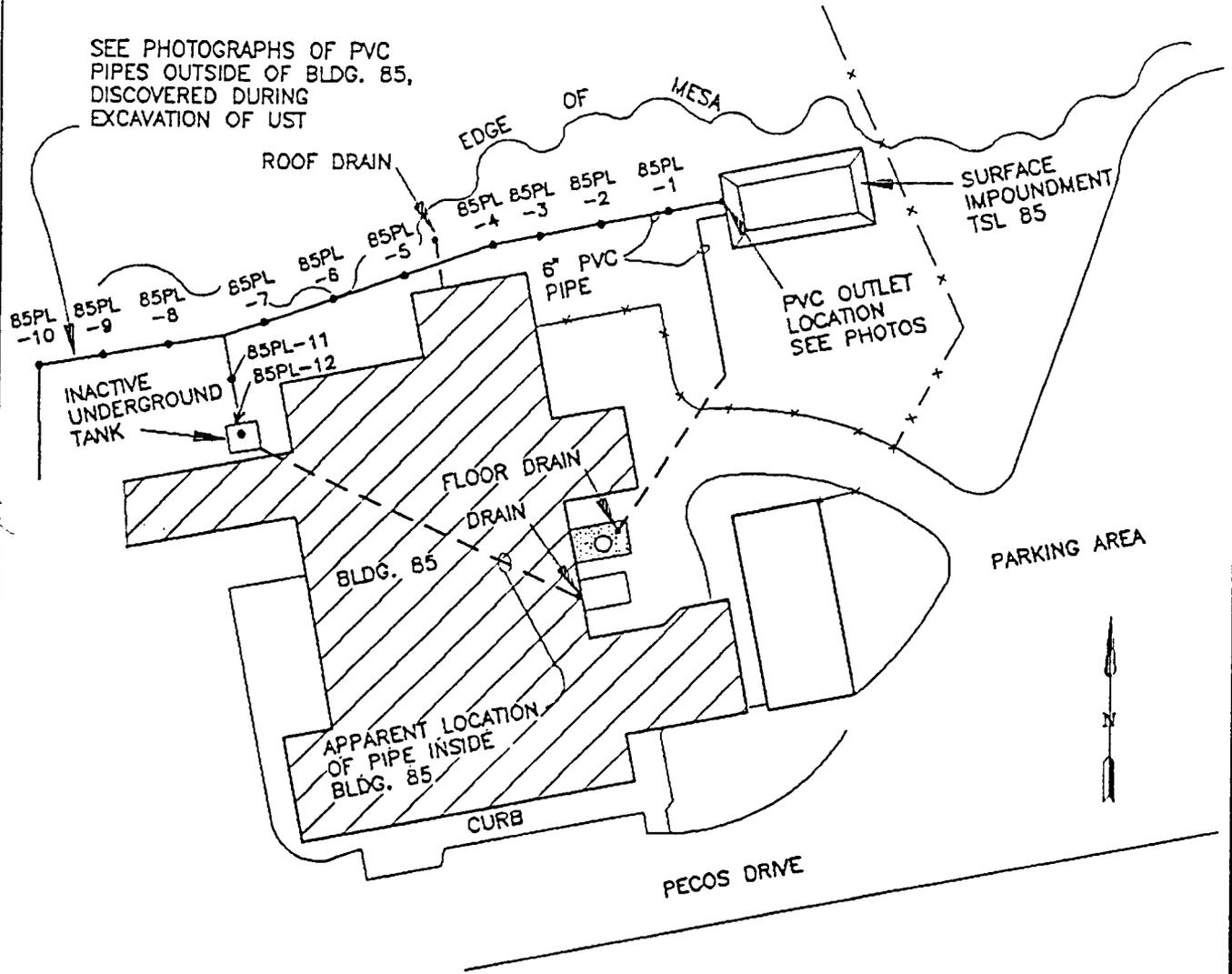
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FIGURE 1 of 5



SEE PHOTOGRAPHS OF PVC
PIPES OUTSIDE OF BLDG. 85,
DISCOVERED DURING
EXCAVATION OF UST

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LEGEND

- x—x—x— FENCE
- - - - - APPROX. LINE LOCATION
- B5PL-1 • SAMPLE LOCATION

Phase 3
**SOIL SAMPLE LOCATIONS
BELOW UNDERGROUND STORAGE TANK
AND ASSOCIATED LINES/PIPING**

TA-35-TSL-85
SURFACE IMPOUNDMENT
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FIGURE 1-6



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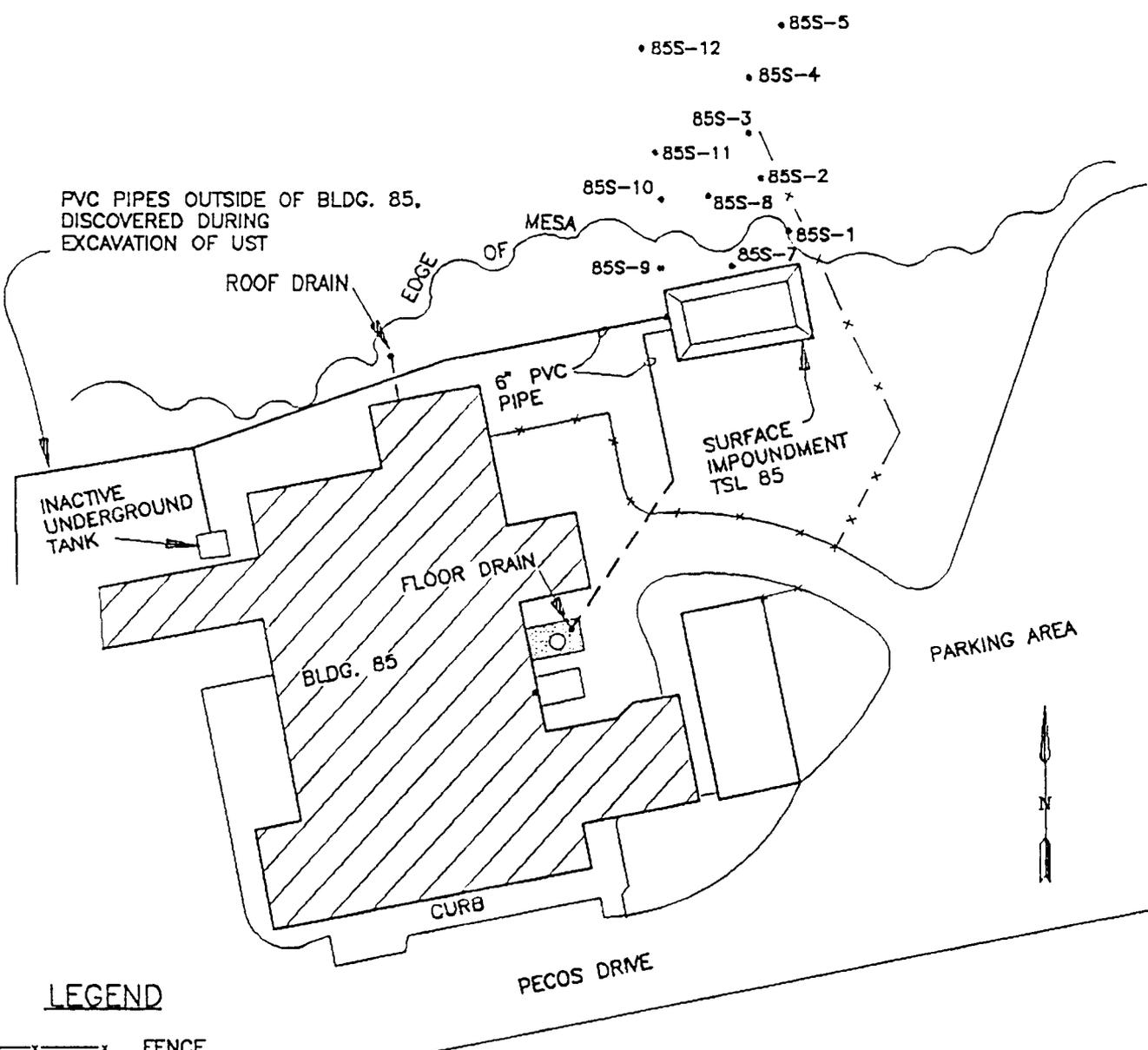
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PVC PIPES OUTSIDE OF BLDG. 85,
DISCOVERED DURING
EXCAVATION OF UST



LEGEND

- x — x — x FENCE
- - - - - APPROX. LINE LOCATION
- 85S-1 • SAMPLE LOCATION

Phase 4
CANYON SAMPLES

TA-35-TSL-85
SURFACE DRAINAGE INTO
MORTANDAD CANYON

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FIGURE 1-7

50 25 0 50 FEET

APPROXIMATE SCALE



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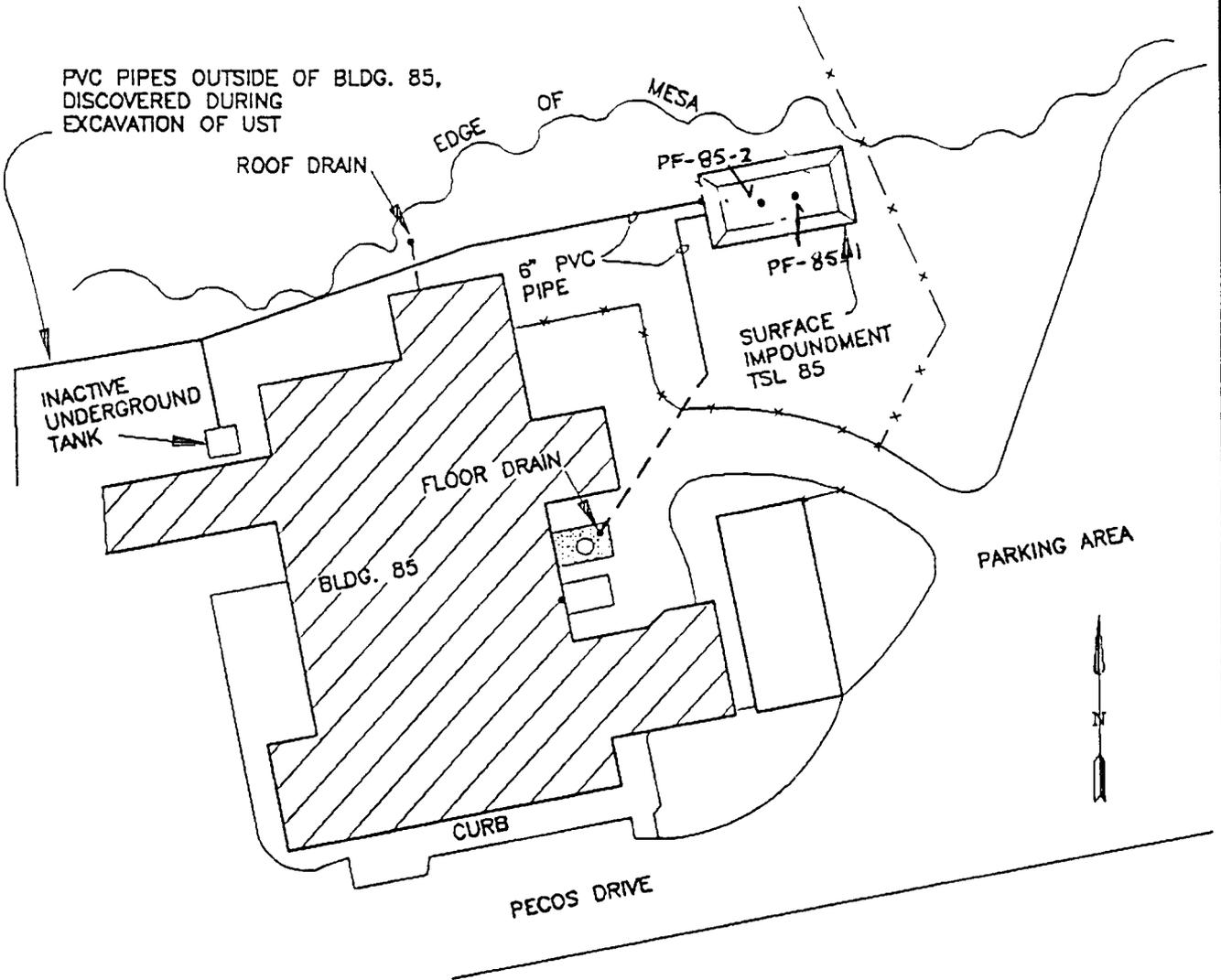
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PVC PIPES OUTSIDE OF BLDG. 85,
DISCOVERED DURING
EXCAVATION OF UST



LEGEND

- x — x — x FENCE
- - - - - APPROX. LINE LOCATION
- 85L-1 • CORE HOLE LOCATIONS

Phase 5
COREHOLE LOCATIONS

TA-35-TSL-85
SURFACE IMPOUNDMENT
PROPOSED TEST HOLE LOCATIONS

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FIGURE 1-8

50 25 0 50 FEET

APPROXIMATE SCALE



BENCHMARK

ENVIRONMENTAL CORPORATION

- **Clean Closure Verification Phase 2 - Corehole Drilling, Sampling and Analysis:**
 Three coreholes were drilled to a depth of approximately 49 feet, and five to ten soil samples from each corehole were taken at selected depth intervals (creating a total of 23 corehole samples) for chemical analysis (Figure 1-5) . The 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-85 soil above acceptable levels.
- **Clean Closure Verification Phase 3 - Soil Sampling and Analysis Below the Underground Storage Tank and Lines:**
 A total of 12 soil samples were taken from underneath the underground storage tank and excavated PVC pipe connecting to the TSL-85 surface impoundment (Figure 1-6). The 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 soil related to the use of the underground storage tank.
- **Clean Closure Verification Phase 4 - Soil Sampling and Analysis Along Canyon Spill Path Routes:**
 A total of 11 soil samples were collected downgradient of the surface impoundment into Mortandad Canyon along possible spill path routes (Figure 1-7). The 11 samples were spaced approximately 10 to 15 feet apart and were collected at a depth of approximately six inches. The samples were analyzed for volatile and semivolatile organic constituents, PCBs, and metals.
- **Clean Closure Verification Phase 5 - Additional Corehole Drilling, Sampling, and Analysis:**
 Two additional coreholes were drilled to a depth of 45 feet, and soil samples were collected at five-foot depth intervals (creating a total of 20 additional corehole samples) for chemical analysis (Figure 1-8) . The soil samples were analyzed for volatile and semivolatile organic constituents, and total petroleum hydrocarbons. The purpose of this phase was to provide additional corehole verification analytical results with lower semivolatile analytical LOQs, so that the existence of previously identified semivolatile constituents could be verified or refuted, and to verify the presence and amount of total petroleum hydrocarbons in the soil.

The final clean closure verification procedure employed by the Laboratory involved comparing the levels of contaminants remaining in the soil at the TSL-85 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 ppm units.

Closure activities were completed in the Spring of 1991. Closure certifications are included as Enclosure 2. All wastes generated during closure were sent offsite for incineration/disposal. Enclosure 3 contains copies of the Chemical Waste Disposal Request Forms, the Certificates of Destruction for the waste generated during closure activities, and the time-pressure chart that displays a constant pressure that was held by the underground storage tank during pressure testing. All chemical analyses for this closure were performed by the Laboratory's Analytical Chemistry Group (EM-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 standing liquids in the surface impoundment including wastes, rainfall run-off accumulations, and decontamination wash fluids were contained in the surface impoundment. All of these commingled fluids were considered to be, and disposed as, hazardous waste. EM-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.

All solid residue was separately removed from the surface impoundment after standing liquids had been completely removed. Initially these solids were allowed to air dry in-situ in order to reduce residual volume and weight. The waste was then placed in DOT-approved containers, which were subsequently labelled and placed on pallets in a designated 90-day-or-less accumulation area, which was paved. 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.

To avoid costly sampling, several hundred 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 INACTIVE UNDERGROUND STORAGE TANK AND PIPING

A 48-hour pressure test was performed on the underground storage tank by a contractor prior to its removal. The tank held constant pressure during this test, as exhibited by the time-pressure chart in Enclosure 3. However, during the initial portions of this test, fluids in the tank were apparently forced back into Building 85 through an undocumented drain connected to the underground storage tank by a bottom-tank steel pipeline. This pipeline was subsequently disconnected and capped so that the pressure test could be completed. Response to the spill was implemented by a Laboratory contractor and all response actions were documented.

To facilitate decontamination of the underground storage tank, it was placed in a bermed and lined containment area after the pressure test was completed and steam-cleaned using a high-pressure, hot-water washer. The underground storage tank and the two six-inch schedule 40 PVC pipes leading to the surface impoundment were decontaminated using a rinse containing a surfactant such as Liquinox or Alconox. All rinseate was collected in the bermed area and subsequently transferred to DOT-approved containers. Representative samples of the rinseate were composited from the containers and analyzed for volatile organic compounds, EP toxic metals, and PCBs. The rinseate was disposed as a hazardous waste, using the same procedures outlined previously for the surface impoundment waste. In addition, the underground storage tank could never be certified as completely decontaminated after several washings and was, therefore, declared hazardous waste. The underground storage tank, including its lining, was then transported offsite for proper disposal as a hazardous waste.

All ancillary PVC piping that was connected between the underground storage tank and the surface impoundment was excavated. In addition, the drain from the bermed storage pad was disconnected from the pipe, the drain was capped, and the pipe was removed. Piping located inside Building 85 was not removed, but instead, was grouted in place and all outside connections were sealed.

Most of the outside PVC pipe was successfully decontaminated; however, additional ancillary PVC piping was discovered after the impoundment liner had been removed and this piping was never decontaminated. Since the gunite-lined surface impoundment was used to contain all decontamination wash fluids and this liner was no longer present after the additional PVC piping was found, this additional piping was placed in DOT-approved containers and disposed as hazardous waste. All the exterior ancillary PVC piping that connected between the underground storage tank and the surface impoundment was also placed in DOT-approved containers and disposed as hazardous waste at an offsite RCRA-permitted disposal facility.

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

Prior to removal of the gunite liner, 14 soil samples immediately below the liner were collected and analyzed for volatile and semivolatile organic compounds, PCBs, and metals. To sample the soil, 14 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 1-3). 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 sampled below the gunite layer demonstrated that concentrations of volatile and semivolatile organic constituents ranged from below LOQs (and possibly as low as 0.0 ppm) to 1,040 ppm (Enclosure 4). For this reason, the liner was considered a hazardous waste. It was broken into small pieces, placed into DOT-approved containers, and disposed as a hazardous waste along with the contaminated soil.

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

This section provides the results of the five phases of soil removal, sampling and analysis, and the resulting risk assessment performed to demonstrate that clean closure had been achieved. After completion of the five phases of field investigation, concentrations of volatile and semivolatile organic constituents, metal constituents and PCBs at the TSL-85 surface impoundment site and all associated areas where closure activities were performed were compared to calculated health-based action levels, and, in the case of some metal constituents, to background levels. A combination of total metal and EP toxic metal analyses were performed on the collected soil samples in order to provide comprehensive data on metal content in the soils and to allow comparison with background total metal concentrations, if available. Because the cleanup goal for the areas where closure activities were performed was one that allowed unrestricted future land use, conservative risk assessments were performed. The following text describes the risk assessment approach. Details of the results of the five phases of investigation and risk assessments 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 (SPHEM), 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 evaluate remaining contaminant concentrations at the TSL-surface impoundment site and all associated areas where closure activities were performed. Enclosure 5 includes the risk calculation tables and detailed explanations of the methods used to perform the risk assessment. The risk calculation tables also include applicable analytical results and the calculated action levels for the 40 CFR Part 261 Appendix VIII constituents. The risk calculation tables were developed for the TSL-85 site and all associated areas where closure activities were performed. With the exception of the Phase 5 (additional corehole samples), each set of samples was chemically analyzed for volatile and semivolatile organic constituents, PCBs, and metals. The Phase 5 samples were analyzed for volatile and semivolatile organic constituents, and total petroleum hydrocarbons. Unless otherwise

indicated, the highest concentration of each 40 CFR Part 261 Appendix VIII constituent identified above the LOQ was used in the risk analysis to provide the most conservative risk assessment results. For calculating an action level for a carcinogen, an adult scenario was considered to reflect the effects of long-term exposures. The scenario was based on the SPHEM (1986), discussions with NMED, and 55 FR 30815-20 and 30865-73, July 27, 1990. For calculating an action level for a systemic toxicant (non-carcinogen) to reflect the effects of relatively short-term exposure on a highly vulnerable population group, a child soil ingestion scenario was used based on the above regulatory guidance. EPA's Integrated Risk Information System (IRIS) data base (July 1991 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. The IRIS data base does lack carcinogenic slope factors and/or systemic toxicant reference doses for some of the constituents analyzed. In this case, the term "ND" for "no data" is listed next to the constituent. Additional factors in the action level calculations are specified in Enclosure 5, 55 FR 30815-30820 and 30865-30873, July 27, 1990.

The subsequent text provides a brief summary of the five phases of field investigation relative to the risk assessment evaluation. A detailed discussion of the procedures and results from each phase of investigation and risk assessment follows in Sections 5.1 through 5.3. The results from investigative Phases 1 and 2 were combined for the purpose of the risk assessment evaluation; therefore, they are addressed together in Section 5.1.

- **Phase 1 - Soil Removal Verification Sampling**
The first phase involved soil removal to a depth of one to two feet, review of the results of subsequent sampling and analysis performed at that level, and combining the results with corehole data for risk assessment purposes.
- **Phase 2 - Corehole Verification Sampling**
The second phase involved drilling three coreholes to a depth of approximately 49 feet, and review of the results of subsequent corehole soil sampling and analysis. Phase 1 and Phase 2 analytical results were then combined and reviewed. Evaluation of the data determined that an additional corehole investigative phase (Phase 5) was necessary to provide further substantiation (or refutation) of the semivolatiles whose LOQs exceeded health-based levels, and to verify the presence and amount of total petroleum hydrocarbons present in the soil. No further investigation for PCBs and metals were required, and the Phase 1 and Phase 2 analytical results were combined and used for risk assessment purposes, and

contaminant concentrations were compared with calculated action levels and, when available, background metal concentrations.

- **Phase 3 - Underground Storage Tank/Lines Verification Sampling**

The third phase involved collecting soil samples from below the underground storage tank and underground storage tank lines, chemically analyzing the soil samples, and comparing the analytical results with calculated action levels, and, when available, background metal concentrations.

- **Phase 4 - Canyon Verification Sampling**

The fourth phase involved collecting soil samples downgradient of the surface impoundment along spill path routes in Mortandad Canyon. This phase then included performing chemical analyses on the samples, and comparing the results with calculated action levels, and, when available, background metal concentrations.

- **Phase 5 - Additional Corehole Verification Sampling**

The final phase involved drilling two additional coreholes to a depth of 45 feet, and review of the results of subsequent corehole sampling and analysis. Analytical results from Phase 1, Phase 2, and Phase 5 were incorporated together for risk assessment purposes, and contaminant concentrations were compared with health-based action levels, and, when available, background metal concentrations.

5.1 PHASE 1 and 2 - SOIL REMOVAL AND COREHOLE VERIFICATION SAMPLING

After the surface impoundment liner was removed, contaminated soil was excavated to a depth of approximately one to two feet where 24 samples were collected using a stainless steel trowel at locations depicted in Figure 1-4. In addition, three coreholes were drilled to a depth of approximately 49 feet, and five to ten soil samples from each corehole were taken at selected depths, resulting in a total of 23 corehole samples (Figure 1-5). The samples were analyzed for volatile and semivolatile organic constituents, PCBs, and metals. Upon review of the analytical results, it was determined that a second set of coreholes were needed to provide additional verification samples at lower LOQs (semivolatile analyses), and to verify the presence and amount of total petroleum hydrocarbons in the soil. The two additional coreholes were drilled to a depth of 45 feet, and samples were collected every five feet, resulting in a total of 20 additional corehole samples (Figure 1-8). The 20 additional samples were analyzed for volatile and semivolatile organic constituents, and total petroleum hydrocarbons.

5.1.1 Soil Removal/Corehole Sample Risk Analysis

40 CFR Part 261 Appendix VIII constituent concentrations used for this risk analysis were taken from results of volatile organic, PCB, and metal analyses performed on TSL-85 soil samples taken from a two-foot depth surface after excavation (Phase 1), and from three coreholes drilled to approximately 49 feet (Phase 4). The semivolatile organic analytical results from the two additional corehole samples (Phase 5) were employed in the risk assessment, because the analytical LOQs were lowered, providing more accurate levels for comparison.

The analyses were performed by the following methods:

- volatile organic compounds (VOCs) using SW 846 purge-and-trap (P/T) GC/MS Method 8260;
- semivolatile organic compounds using SW 846 extraction and GC/MS Method 8270;
- EP Toxic metals (extraction procedure Method ³1310) analyzed via inductively coupled plasma/ atomic absorption spectroscopy (ICP/AAS);
- PCBs using Method 8080; and
- total petroleum hydrocarbons using EPA Method 418.1.

4 The semivolatile organic analyses on the soil samples collected from two feet of depth were performed after the EPA-allowable 40-day holding time. In addition, 14 of the Phase 4 corehole samples submitted for semivolatile analysis exceeded this EPA holding time. For this reason, and because the Phase 5 semivolatile analytical LOQs could be lowered, the Phase 5 semivolatile analytical results were utilized in this risk analysis to provide the most valid and accurate results for the risk assessment.

Analytical results of the soil samples (Enclosure 4) revealed that most concentrations of hazardous constituents were below health-based action levels, and may have been as low as 0.000 ppm. Five semivolatile organic constituents had LOQs exceeding health-based action levels. These constituents include:

- benzidine;
- 2,4-dinitrotoluene and 2,6-dinitrotoluene (mixture);
- hexachlorobenzene;
- n-nitrosodimethylamine; and
- n-nitrosodi-n-propylamine.

LOQs for the semivolatile organic compound analyses ranged from 0.330 mg/kg to 1.300 mg/kg. High levels (up to 314 ppm) of total petroleum hydrocarbons (waste oil) interfered with the analyses and resulted in the elevated LOQs. The heightened LOQs do not imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ. The actual concentration of the analytes of interest can be inferred only to be less than the 1.300 mg/kg LOQ, and may be as low as 0.000 mg/kg, unless a specific concentration above the LOQ has been detected. Although the 1.300 mg/kg LOQ was employed to provide the most conservative scenario for the risk assessment, the absence of these five constituents is documented in **Section 6.0, Comparison of Process Knowledge.**

5.2 PHASE 3 - UNDERGROUND STORAGE TANK/LINES VERIFICATION SAMPLING

A total of 12 soil samples were taken from underneath the underground storage tank and excavated PVC pipe connecting to the TSL-85 surface impoundment (Figure 1-6). The samples were analyzed for volatile and semivolatile organic compounds, PCBs, and metals.

5.2.1 Underground Storage Tank/Lines Verification Sample Risk Analysis

40 CFR Part 261 Appendix VIII constituent concentrations used for this risk analysis were taken from results of chemical analyses performed on twelve soil samples taken from underneath the underground storage tank and lines connecting it to the TSL-85 surface impoundment.

All samples were subjected to the following analyses:

- volatile organic compounds using SW 846 purge-and-trap (P/T) GC/MS Method 8260;
- semivolatile organic compounds using SW 846 extraction and GC/MS Method 8270;
- total metals using Method 1310 (ICP/AAS); and
- PCBs using Method 8080.

The semivolatile analyses on the soil samples collected from beneath the underground storage tank and underground storage tank lines were performed after the EPA-allowable 40-day holding time. For this reason, semivolatile organic analytical results are not considered valid. However, the most elevated LOQ is presented in this risk analysis to provide a "worst case" scenario.

Analytical results of the soil samples (Enclosure 4) revealed that most of the hazardous constituent concentrations were below health-based action levels, and may have been as low as 0.000 ppm. Five semivolatile organic constituents had LOQs exceeding health-based action levels. The semivolatile constituents include:

- benzidine;
- 2,4-dinitrotoluene and 2,6-dinitrotoluene (mixture);
- hexachlorobenzene;
- n-nitrosodimethylamine; and
- n-nitrosodi-n-propylamine.

The LOQs for the semivolatile organic compound analyses ranged from 0.330 mg/kg to 1.386 mg/kg. Elevated levels of total petroleum hydrocarbons (waste oil) interfered with the analyses and resulted in the elevated LOQs. The elevated LOQs do not imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ. The actual concentration of the analytes of interest can be inferred only to be less than the 1.386 mg/kg LOQ, and may be as low as

0.000 mg/kg, unless a specific concentration above the LOQ has been detected. However, to employ the most conservative scenario in the risk assessment, the 1.386 mg/kg LOQ was used in comparing action levels.

Analytical results indicated that two other constituents, PCBs and antimony were present in concentrations that exceeded their health-based action levels. The calculated action level for PCBs is 0.0909 mg/kg (ppm). However, consultation with the NMED (Sides, 1991) indicated that an acceptable level for clean closure was 10 ppm. The highest concentration of PCBs detected was from a sample collected from beneath the underground storage tank system. The sample contained 1.100 mg/kg PCBs, falling within NMED's acceptable level for clean closure. These samples were analyzed using Method 8080 (see SW 846).

The 35 mg/kg concentration of antimony detected in the sampled soil exceeded the health-based action level concentration of 20 mg/kg, and no background concentrations were available for antimony. Thus, the presence of antimony in the waste stream, and the absence of the semivolatile constituents with LOQs exceeding health-based concentrations, will be addressed in **Section 6.0, Comparison of Process Knowledge.**

5.3 PHASE 4 - CANYON VERIFICATION SAMPLING

5.3.1 Canyon Verification Sample Risk Analysis

40 CFR Part 261 Appendix VIII constituent concentrations used for this risk analysis were taken from results of chemical analyses performed on 11 soil samples taken from the spill path route from the TSL-85 surface impoundment into Mortandad Canyon (Figure 1-7).

All samples were subjected to the following analyses:

- volatile organic compounds (VOCs) using SW 846 purge-and-trap (P/T) GC/MS Method 8260;
- semivolatile organic compounds using SW 846 extraction and GC/MS Method 8270;

- EP Toxic metals using extraction Method 1310 (ICP/AAS); and
- PCBs using Method 8080.

The semivolatile analyses on the soil samples collected from the canyon spill path route were performed after the EPA-allowable 40-day holding time. For this reason, semivolatile organic analytical results are not considered valid. However, the most elevated LOQ is presented in this risk analysis to provide a "worst case" (most conservative) scenario.

Analytical results of the soil samples (Enclosure 4) revealed that concentrations for most hazardous constituents were below health-based action levels, and may have been as low as 0.000 ppm. LOQs for six semivolatile organic constituents were present at levels exceeding health-based action levels. These constituents include:

- benzidine;
- 3,3'-dichlorobenzidine;
- 2,4-dinitrotoluene and 2,6-dinitrotoluene (mixture);
- hexachlorobenzene;
- n-nitrosodimethylamine; and
- n-nitrosodi-n-propylamine.

LOQs for the semivolatile organic compound analyses ranged from 0.330 mg/kg to 1.650 mg/kg. Elevated levels of total petroleum hydrocarbons (waste oil) interfered with the analyses and resulted in the elevated LOQs. The elevated LOQs do not imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ. The actual concentration of the analytes of interest can be inferred only to be less than the 1.650 mg/kg LOQ, and may be as low as 0.000 mg/kg, unless a specific concentration above the LOQ has been detected. However, in order to employ the most conservative scenario in the risk assessment, the 1.650 mg/kg LOQ was used in comparing action levels. The absence of these constituents in the waste stream is addressed in **Section 6.0, Comparison of Process Knowledge.**

Upon completion of analyses, all sample residues were collected from the EM-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-85 surface impoundment site and all associated areas where closure activities were performed pose a threat to human health and the environment.

6.0 COMPARISON OF PROCESS KNOWLEDGE

In summary, the sampling and analyses associated with clean closure verification of TSL-85 and its associated piping, the underground storage tank and its associated lines, and the spill path routes in Mortandad Canyon identified no volatile organic constituents that exceeded health-based action levels. Six semivolatile constituents, which include benzidine, 3,3'-dichlorobenzidine, 2,4-dinitrotoluene and 2,6-dinitrotoluene (mixture), hexachlorobenzene, n-nitrosodimethylamine, and n-nitrosodi-n-propylamine, did not exceed their LOQs, but the values for the analytical limits themselves were greater than their calculated health-based action levels. Additionally, in a sample taken from the underground storage tank/lines investigative phase, a PCB concentration, analyzed as mixed aroclors, exceeded the calculated health-based action level, but was well below the NMED-acceptable clean closure PCB level. Analytical data from this same area indicated that one metal, antimony, exceeded its calculated health-based action level.

In order to address those constituents with LOQs or concentrations exceeding health-based action levels, a comparison of the constituents with facility processes was performed. The industrial uses of the constituents of interest were identified by referring to several references including: the Merck Index (1983); Sax and Lewis (1981); and Kirk-Othmer (1985). After the potential uses of the constituents were identified, a Laboratory staff member was contacted regarding the use of these constituents at Buildings 85 and 188. The results of the document research and communication with a Laboratory staff member are summarized below.

When comparing the practices and operations at Buildings 85 and 188 to the chemical uses identified for the semivolatile constituents exceeding action levels, no relationship was found. Benzidine and 3,3'-dichlorobenzidine are primarily used in the manufacture of dyes, while benzidine is also used in the detection of bloodstains, and as a stain in microscopy (Sax and Lewis, 1981). N-nitrosodimethylamine and n-nitrosodi-n-propylamine are both n-nitro-samines. 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). Hexachlorobenzene is used in organic syntheses and as a fungicide. 2,6-Dinitrotoluene could not be located in the Merck Index, nor in Gardner's Chemical Synonyms and Trade Names other than the acronym DNT for dinitrotoluene. Consultation with the Scientific Laboratory Division of the NMED (Meyerhein, 1991) indicated that DNT is in the family of explosives and is utilized as such.

Building 85 is used for developing electron guns and related laser assemblies/equipment for a Laser Technology Research Program at the Laboratory. Consultation with a Laboratory staff member concerning the use, past or present, of the above semivolatile substances indicated that these substances have not and are currently not being used in conjunction with laser research operations conducted in Building 85. Although the potential for Building 188 to have historically contributed to the TSL-85 waste stream is not certain, the potential for its contribution to the waste stream makes it necessary to review its known process knowledge. Building 188 was meant to be used as a high voltage test area and was used for that purpose for a short time, before becoming a facility for chemical analysis (gasses only) and a machine shop (Umphres, 1991). Like Building 85, consultation with a Laboratory staff member concerning the use, past or present, of the six semivolatile constituents indicated that they have not been and are currently not being used in Building 188 (Umphres, 1991).

PCBs are used in electrical capacitors and transformers, vacuum pumps, and in gas-transmission turbines. They were formerly used as hydraulic fluids, plasticizers, adhesives, fire retardants, wax extenders, dedusting agents, pesticide extenders, inks, lubricants, cutting oils, heat transfer systems, and in carbonless reproducing paper. A Laboratory staff member indicated that PCBs had never been utilized in conjunction with operations conducted in Building 85 or Building 188 (Umphres, 1991).

Antimony is used in the manufacture of alloys, fireworks, thermoelectric piles, blackening iron, and for coating metals. Discussions with a Laboratory staff member indicate that antimony was not used at Building 85, but may have been used in "minute quantities" (10 to 20 grams) during soldering performed at Building 188 (Umphres, 1991).

In summary, no relationship could be verified between the detection of the six semi-volatiles, PCBs, and antimony, and operations conducted in Building 85.

7.0 CONCLUSIONS

Requirements of 40 CFR §265.228(a)(1) with regard to clean closure have been addressed by the performance of the following activities at the TSL-85 site and all associated areas where closure activities were performed:

- removal and proper disposal of all wastes contained within the underground storage tank and surface impoundment system;
- decontamination and removal of all exterior ancillary piping between Building 85 and the surface impoundment, and between the Marx tank drain and the surface impoundment;
- decontamination and grouting of ancillary piping inside Building 85;
- removal and proper disposal of the surface impoundment's gunite liner, the underground storage tank, and the underground storage tank's inside liner;
- removal and proper disposal of contaminated soil underlying the surface impoundment site ;
- sampling and analysis of soil remaining in place at the TSL-85 site and all associated areas where closure activities were performed; and
- demonstration through a risk assessment that constituents remaining in the soil at the TSL-85 site and all associated areas where closure activities were performed do not indicate a threat to human health and the environment.

Most levels of hazardous constituents detected in soil at the TSL-85 site and all associated areas where closure activities were performed fell below health-based action levels or background metal levels, with the exception of one metal, antimony, and PCBs that were detected in soil sampled beneath the underground storage tank and lines. Concentrations of six semivolatile constituents, benzidine, 3,3'-dichlorobenzidine, 2,4-dinitrotoluene and 2,6-dinitrotoluene (mixture), hexachlorobenzene, n-nitrosodimethylamine, and n-nitrosodipropylamine, did not exceed their LOQs, but the values for the analytical limits themselves were greater than the calculated health-based action levels. To demonstrate that the eight constituents were not likely to be present at the site or associated areas where closure activities were performed, the use of each chemical was compared to practices and operations at Building 85 and Building 188, and a Laboratory staff member familiar with the chemicals

used at Buildings 85 and 188 was interviewed. Only one relationship was established when comparing the chemical uses to the practices and operations at Buildings 85 and 188, and during the interview with Laboratory staff. Antimony may have been used during soldering processes at Building 188, but only in minute quantities.

The above activities and analytical results demonstrate that clean closure requirements have been addressed for the TSL-85 surface impoundment site and all associated areas where closure activities were performed.

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ENCLOSURE 1

**INTERIM STATUS CLOSURE PLAN
TA-35 TSL-85 SURFACE IMPOUNDMENT**

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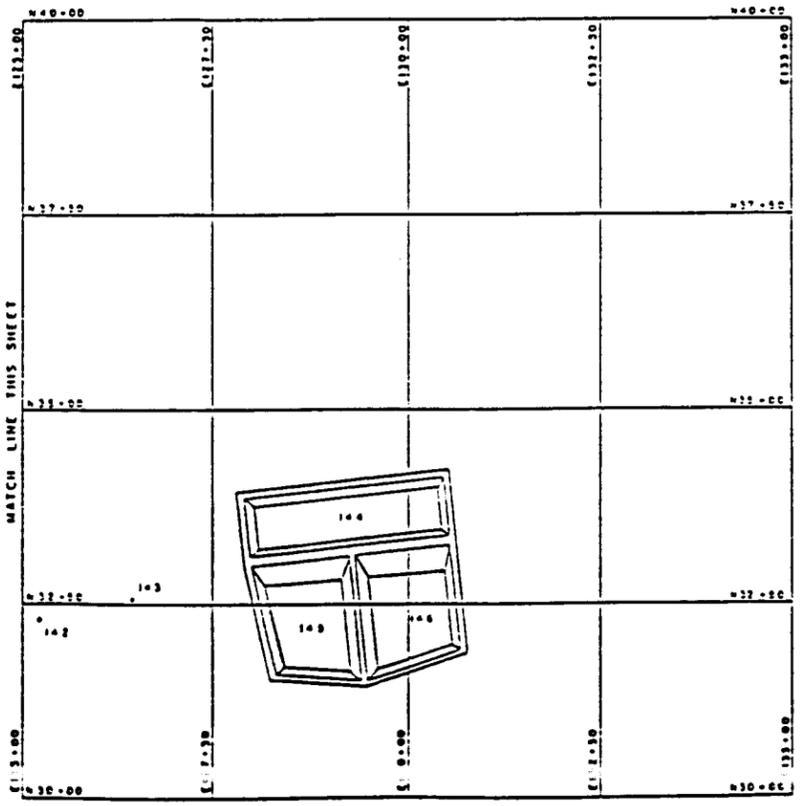
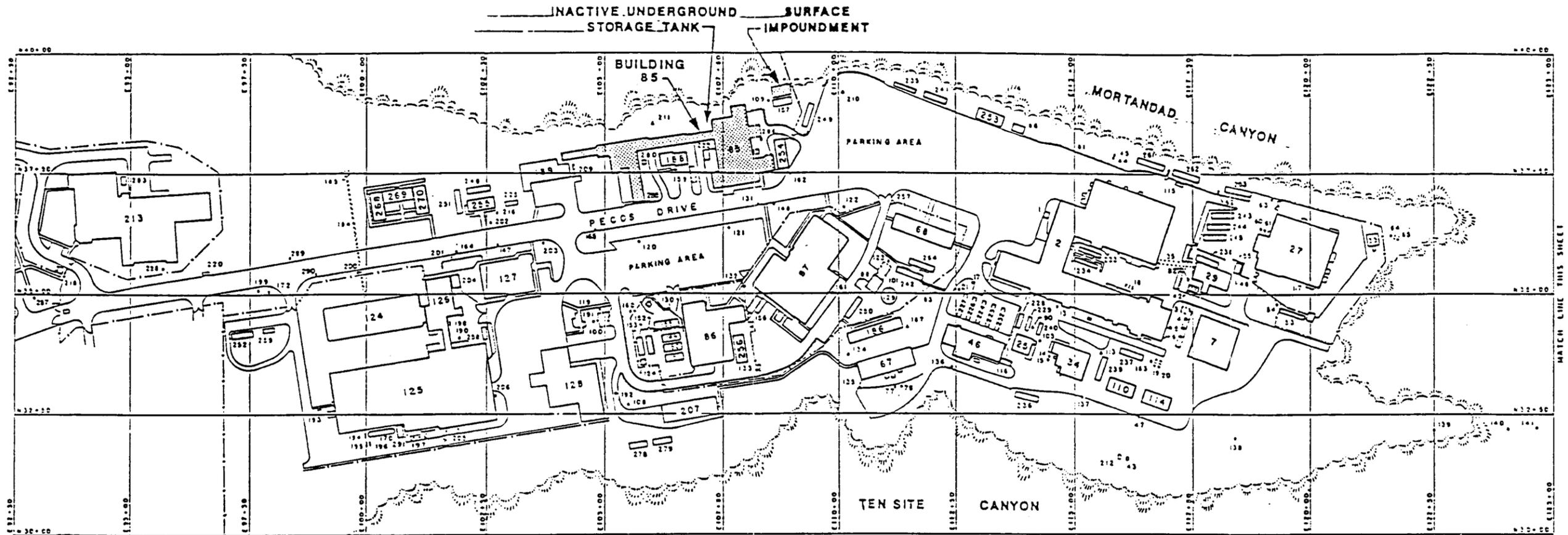
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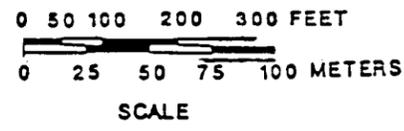


FIGURE 1-1
 SURFACE IMPOUNDMENT
 TECHNICAL AREA 35 SITE MAP
 PREPARED FOR
 LOS ALAMOS NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO

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2.0 FACILITY DESCRIPTION

The 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.

The Laboratory is divided into 48 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 the Laboratory and in the Hydrogeologic Assessment of Technical Area 54, Areas G and L.

Building 85 is centrally located on the northern edge of TA-35 (Figure 2-3). The surface impoundment, built in 1985 and brought into use by early 1986, is situated just northeast of the building, close to the rim of Mortandad Canyon.

2.1 SURFACE IMPOUNDMENT

The surface impoundment was initially used to contain accidental spills. The impoundment was also used to contain liquids, primarily oil and mop water which were discharged through floor drains, from inside Building 85.

The surface impoundment is approximately 34 feet in length by 24 feet in width, covering an area of approximately 816 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 a four-inch thick wire reinforced gunite slab, the

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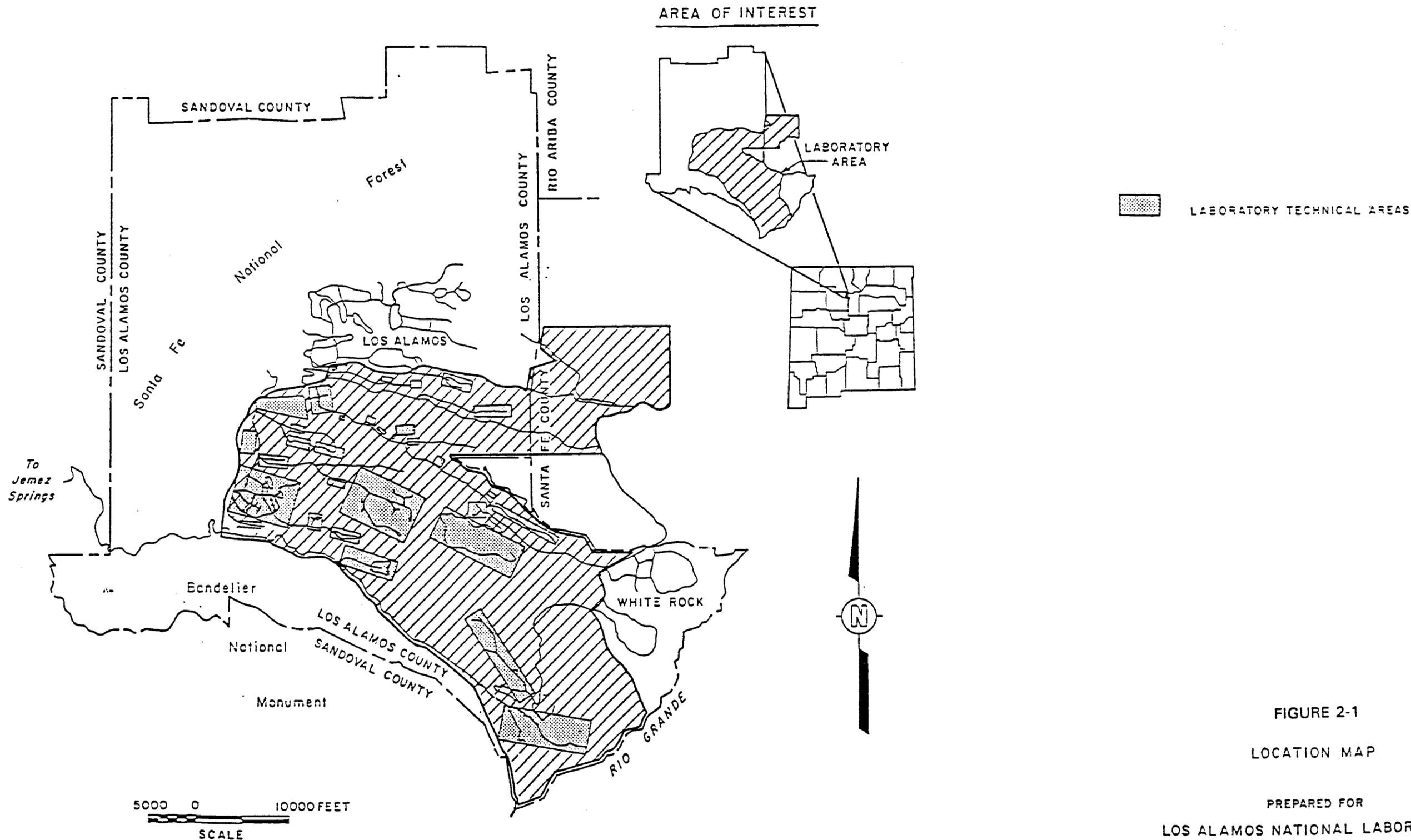


FIGURE 2-1
 LOCATION MAP

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 LOS ALAMOS NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO

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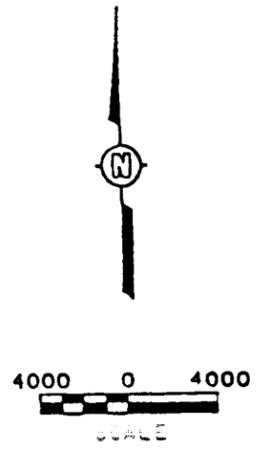
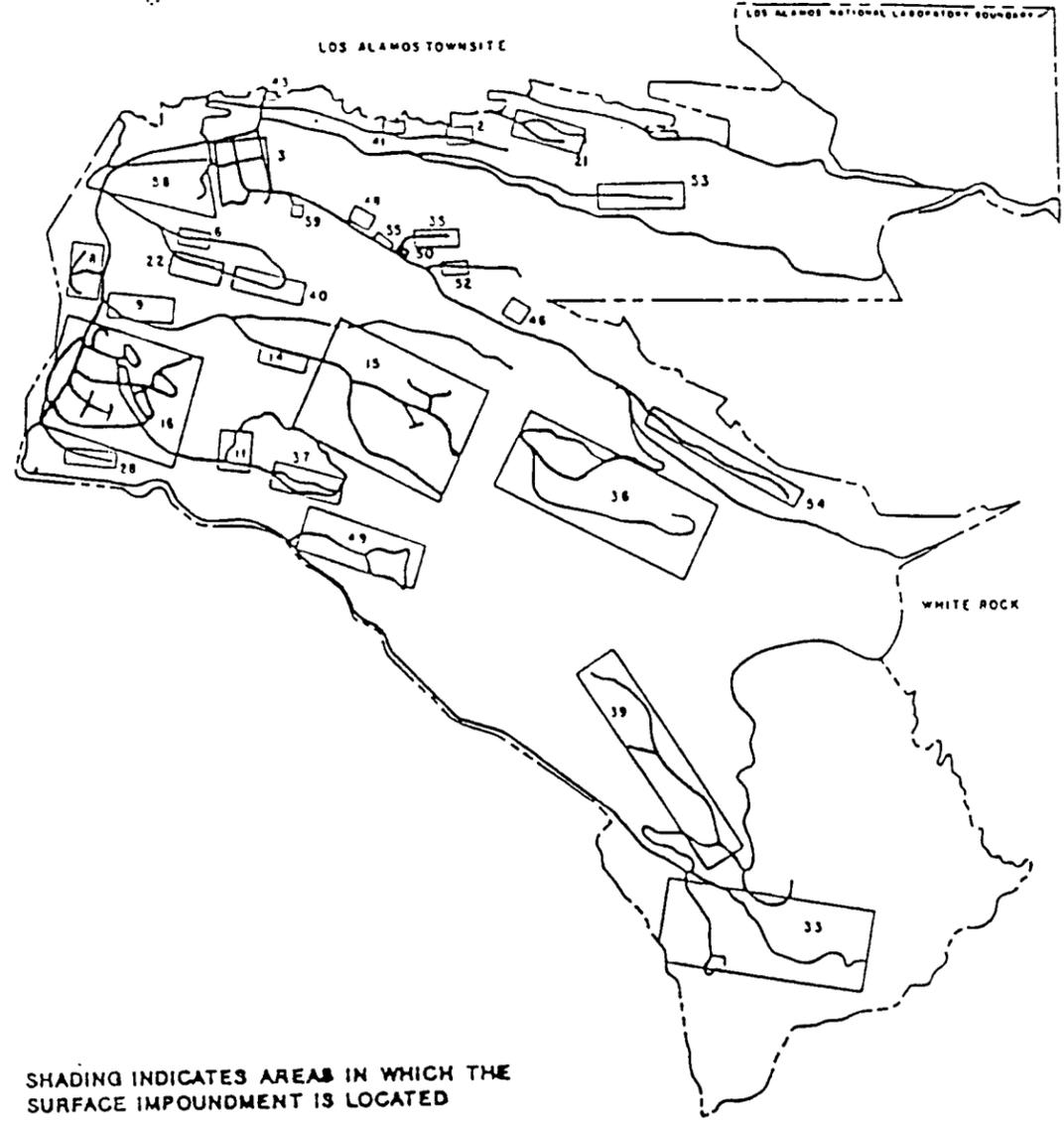
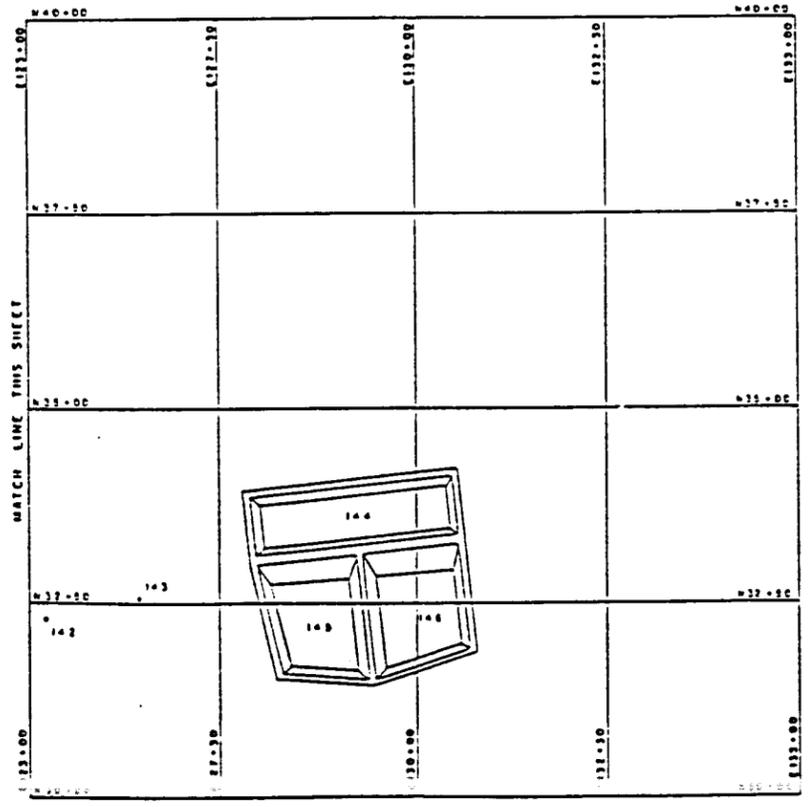
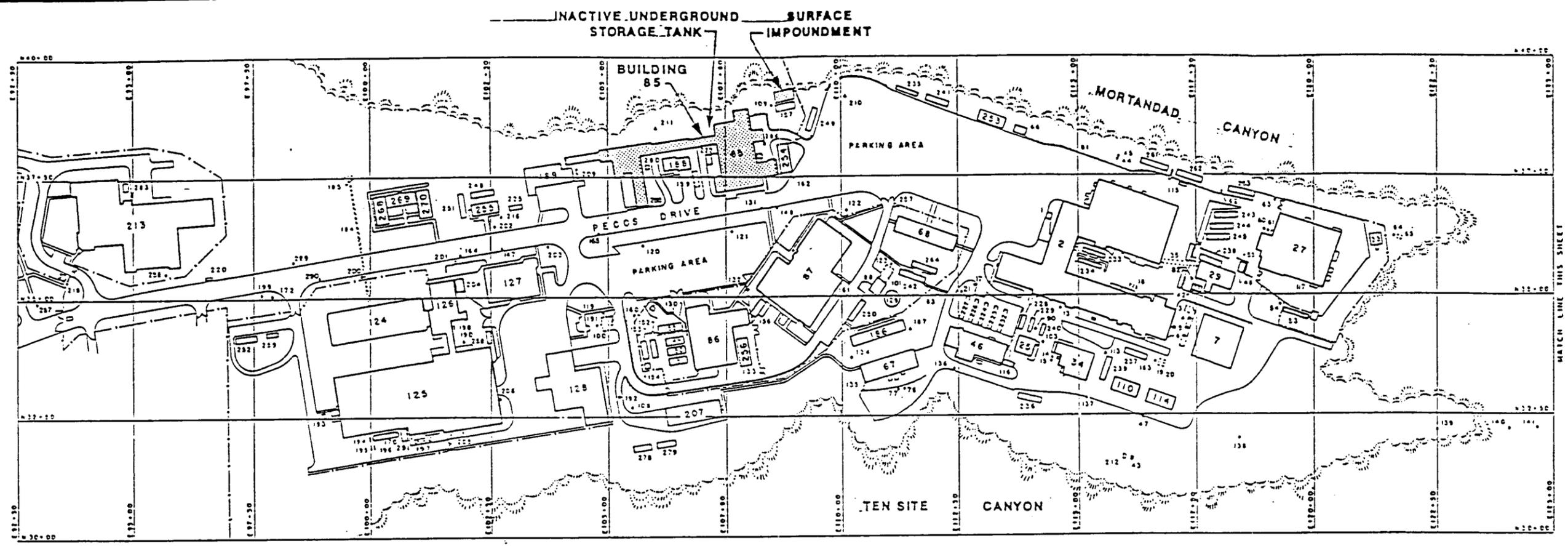


FIGURE 2-2
 LOS ALAMOS TECHNICAL AREAS
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 LOS ALAMOS NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO

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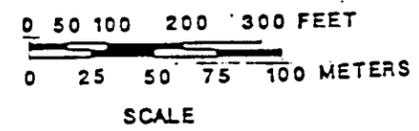


FIGURE 2-3
 TECHNICAL AREA 35 SITE MAP
 PREPARED FOR
 LOS ALAMOS NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO

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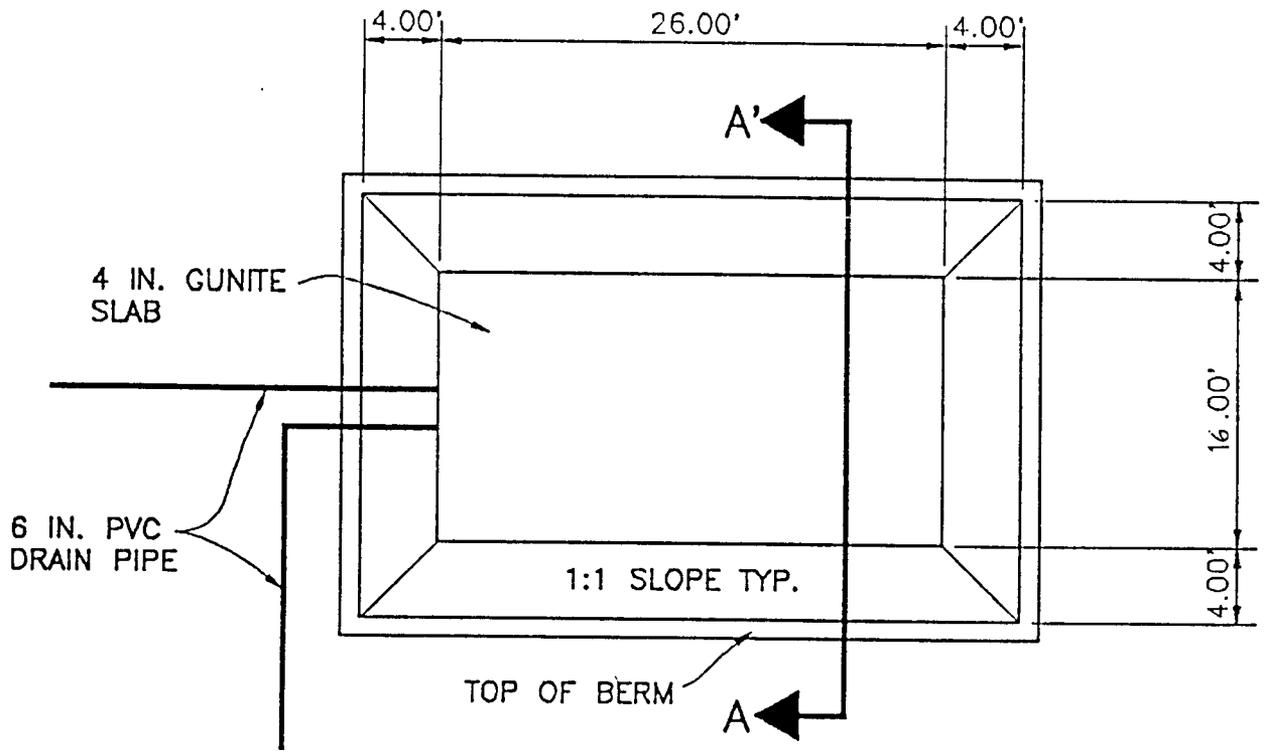
surface of which is protected with a 15-mil waterproof coating. The surface impoundment is four feet deep and has an effective capacity (with a two-foot freeboard) of 7,640 gallons. Engineering drawings for the impoundment are presented in Figure 2-4.

There is no permanent outfall from the surface impoundment; however, the impoundment is suspected of having overtopped during the rainy spring of 1988, releasing an unknown volume of liquids. Sandbags were subsequently installed around the surface impoundment in an effort to prevent any additional overtopping.

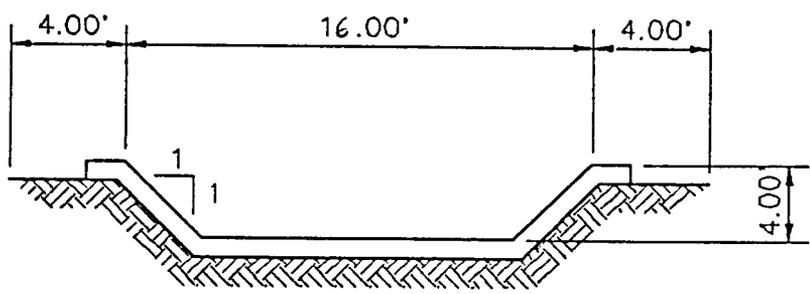
2.2 PIPING AND ASSOCIATED STRUCTURES

Two six-inch schedule 40 PVC pipes drain into the surface impoundment on its west side, by traversing along the top of the impoundment, five feet from the bottom, and tapering down into the impoundment. Therefore, the PVC pipe does not penetrate the gunite liner (Figure 2-4). One pipe leads to a drain in a bermed storage pad located on the east side of Building 85. This storage pad contains a 15,000 gallon above ground Marx tank. The other pipe is connected to an inactive underground storage tank located to the west of the surface impoundment. Although the original purpose of the underground storage tank is not known and no inflow lines are currently connected to it, Laboratory personnel indicate that it was thought to be a flow-through settling tank (McInroy, 1991). The period during which the tank was actively used also is not known, but is believed to have ceased prior to 1985. Activities conducted in Building 85 and the nature of any discharges to the surface impoundment associated with these activities are described in Section 3.0.

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PLAN VIEW



CROSS SECTIONAL VIEW
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ENGINEERING DRAWING
 TA-35-TSL-85
 SURFACE IMPOUNDMENT

PREPARED FOR

LOS ALAMOS NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO



 **BENCHMARK**
 ENVIRONMENTAL CORPORATION

FIGURE 2-4

3.0 PROCESS INFORMATION

Building 85 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 requires the use of nonhazardous insulating oil. The storage pad, upon which the Marx tank is located outside Building 85, drains to the surface impoundment and may have discharged cleanup water containing accidental spills and de minimus losses of insulating oil to the surface impoundment. Other potential sources of releases that may have drained to the surface impoundment include the Marx tanks located inside Building 85 and washwater from equipment- and floor-cleaning activities. Some of these oils and liquids may have contained degreasing solvents, the primary source of hazardous constituents in the waste oil stored in the surface impoundment.

Although the likelihood for Building 188 to have historically contributed to the TSL-85 waste stream is not certain, it is considered a potential source because lines that may have been connected to the underground storage tank at one time were traced to Building 188. It is thought that the wastes from Building 188 may have been similar to those from Building 85. Building 188 was meant to be used as a high voltage test area and was used for that purpose for a short period of time, before becoming a facility for chemical analysis (gasses only) and a machine shop (Umphres, 1991). No records are available to document this potential waste stream contribution.

3.1 SURFACE IMPOUNDMENT

The surface impoundment normally receives nonhazardous insulating oil and equipment/floor cleaning rinseate via the floor drain in the bermed storage pad located outside of Building 85. In addition, the impoundment receives rainfall runoff from the bermed storage pad area. The liquids form two phases in the impoundment, an upper oil phase underlain by a water phase. Subsequent to the accumulation of rinseate from cleanup operations and insulating oil from Marx tank losses in the surface impoundment, the oil phase is pumped out 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 RCRA permitted facilities. The remaining water phase is also removed from the impoundment and handled in the same manner.

3.2 FLOOR DRAIN AND PIPING

The floor drain in the bermed storage pad area captures rinseate and insulating oil spills that may occur inside Building 85, spills from the Marx tank located on the storage pad, and rainfall. These fluids empty directly from the floor drain to the surface impoundment via the PVC drain pipe.

3.3 UNDERGROUND STORAGE TANK AND PIPING

A past potential intermediate receptor of waste from Building 85, and possibly from Building 188, is the inactive underground storage tank system. Although no inflow lines to the underground storage tank exist today, lines may have transmitted waste to the underground storage tank from Building 85 and possibly from Building 188 in the past. Because the underground storage tank is connected to the surface impoundment via a PVC drain pipe, most waste flowing into the underground storage tank eventually drained into the surface impoundment.

4.0 WASTE INVENTORY

Shell DIALA(R) OIL AX is the only insulating oil that has been used in Building 85. 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 floors in Building 85. Degreasers have entered the surface impoundment through the piping that connect the floor drain in the storage pad to TSL-85.

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 waste sampler (COLIWASA) to obtain a vertical composite of the two-phase liquid and sludge. The sample was stored in appropriate containers and preserved as specified in Section 5.5.1. The sample was analyzed for volatile organics, semivolatile 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 1,1,2-trichloro-1,2,2-trifluoroethane and parts per million (ppm) concentrations of acetone (Table 4-1). Surrogate spike recoveries for the volatile organic analyses are reported in Table 4-2. Semivolatile organic results were inconclusive because of the presence of the oil phase in the sample. No EP Toxic concentrations of metals were detected in the liquid sample; however, the sludge sample contained a total lead concentration of 5.2 ppm (Table 4-3). Radiological analyses of the sample detected 10.0 picocuries per liter (pCi/L), 5.6 pCi/L, and -600 pCi/L¹ of alpha, beta, and gamma activity, respectively (Table 4-4). These values indicate 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

¹Note: 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-85 SURFACE IMPOUNDMENT
 JUNE 9, 1988

PARAMETER	LIQUID RESULTS (ppb)	LIQUID/SLUDGE RESULTS ⁽²⁾ (ppb)
Acetone	ppm range	ppm range
2-Butanone	D>200.0	D>200.0
2-Hexanone	42.9 ± 4.3	42.8 ± 4.3
Methylene Chloride	D>5.0 ⁽³⁾ (TIC) ⁽⁴⁾	D>5.0 (TIC)
1,1,2-Trichloro-1,2,2-trifluoroethane	D>200.0	ppm range

(1) Modified EPA Method 524. Analytical methods are taken from Test Methods for Evaluating Solid Waste, EPA SW 846.

(2) Intermixed liquids and solids; analyzed liquid fraction only.

(3) D = Detected at a concentration greater than the limit stated in the above table.

(4) TIC indicates a tentatively-identified compound.

TABLE 4-2

PERCENT SURROGATE SPIKE RECOVERIES FOR
VOLATILE ORGANIC ANALYSES OF LIQUID AND SLUDGE SAMPLES
COLLECTED AT THE TA-35-TSL-85 SURFACE IMPOUNDMENT
JUNE 9, 1988

COMPOUND	LIQUID RESULTS (%)	SLUDGE RESULTS (%)	CLP ACCEPTABLE RANGE (%) ⁽¹⁾
1,2-Dichloroethane d4	127	88.5	76-114
Toluene d8	93.8	91.0	88-110
p-Bromofluorobenzene	91.1	85.8	86-115

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

**TABLE 4-3
RESULTS OF EP TOXIC METALS ANALYSES
FOR LIQUID AND SLUDGE SAMPLES COLLECTED AT
THE TA-35-TSL-85 SURFACE IMPOUNDMENT**

JUNE 9, 1988

EPA HAZARDOUS WASTE NUMBER	PARAMETER	LIQUID RESULTS (mg/l)	SLUDGE RESULTS (mg/kg)	EP TOXIC MINIMUM CONCENTRATIONS ⁽¹⁾ (mg/l)
D004	Arsenic	0.0055	0.30	5.0
D005	Barium	0.21	12.0	100.0
D006	Cadmium	0.0026	0.18	1.0
D007	Chromium	0.006	2.40	5.0
D008	Lead	0.027	5.20	5.0
D009	Mercury	ND<0.0005 ⁽²⁾	.011	0.2
D010	Selenium	ND<0.001	0.027	1.0
D011	Silver	ND<0.003	0.31	5.0

⁽¹⁾40 CFR 261.24

⁽²⁾ND = Not Detected; the limit of detection is the amount stated in the table above.

NOTE: Total metals results for liquid samples are equivalent to results that would be obtained through the EP toxicity extraction procedure, and therefore a direct comparison of liquid results to EP toxic minimum concentrations is possible. For sludge samples, results obtained through the extraction procedure are a fraction representing the leachable portion of the total metals present.

TABLE 4-4

RESULTS OF RADIONUCLIDE ACTIVITY FOR A LIQUID SAMPLE
COLLECTED FROM THE TA-35-TSL-85 SURFACE IMPOUNDMENT
JUNE 9, 1988

RADIOACTIVE SOURCE	ACTIVITY(1) (pCi/l)	UNCERTAINTY (pCi/l)
Alpha	10.0	±2.0
Beta	5.6	±0.7
Gamma	-600.0(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 α (pCi/l)	GROSS β (pCi/l)	
Trap 1	Water	5.0 ±1.0	35.0 ±4.0	Samples from Mortandad Canyon sediment traps
Trap 2	Water	1.5 ±0.7	26.0 ±3.0	
Trap 3	Water	2.4 ±0.9	17.0 ±2.0	
MCL(b) in Drinking Water	EPA Water	15	5	Action level of 50 pCi/L
Avg. Air LANL	Air		(13.3 ±3) x 10 ⁻⁶	
Avg. Air Santa Fe	Air	---	(10 ±20) x 10 ⁻⁶	

(a) HSE-8, 1988, Environmental Surveillance at Los Alamos during 1987, Los Alamos National Laboratory, Report No. LA-11306-ENV, Los Alamos.

(b) MCL = maximum contaminant level.

collected on June 9, 1988 and previous dates indicate the absence of detectable levels of PCBs in the insulating oil waste stream on those dates (Table 4-5). Laboratory results for these analyses are provided in Appendix C.

4.1.1 Estimate of Maximum Volume of Liquid in the Surface Impoundment

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-85 surface impoundment are available. Based on its dimensions, the maximum capacity of the surface impoundment, including the two feet of freeboard, is 7,640 gallons. During the period of heavy rainfall in the summer of 1988, however, the maximum capacity of the unit was exceeded.

4.2 FLOOR DRAIN AND PIPING

The floor drain and piping inside Building 85 and the drain below the bermed storage pad outside of Building 85 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 1,1,2-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 Drain and Piping Waste Volume

The floor drain and piping that drain to the surface impoundment are designed such that liquid does not pond, but instead is drained immediately into TSL-85. Therefore, there is no standing liquid in these areas.

4.3 UNDERGROUND STORAGE TANK AND PIPING

The inactive underground storage tank located west of the surface impoundment is connected to TSL-85 through a six-inch schedule 40 PVC pipe. Laboratory personnel believe that piping from Building 85 and possibly from Building 188 may have been connected to the

TABLE 4-5

RESULTS OF POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSES FOR LIQUID SAMPLES
COLLECTED AT THE TA-35-TSL-85 SURFACE IMPOUNDMENT

SAMPLE NUMBER	DATE SAMPLED	SAMPLE TYPE	SAMPLE METHOD	SAMPLE LOCATION	ANALYTICAL RESULTS (µg/g)
86.05275	09/08/86	Oil/water	Grab	Surface Impoundment	ND<2.0 ⁽¹⁾
87.01843	07/29/87	Oil	Grab	Surface Impoundment	ND<1.1

⁽¹⁾ND = Not Detected; the limit of detection is the amount stated in the above table.

underground storage tank in the past. Because the contents in the underground storage tank were able to drain to TSL-85 via the PVC pipe, the underground storage tank was an intermediate receptor of surface impoundment waste prior to its decommissioning.

4.3.1 Estimate of Waste Volume in the Underground Storage Tank

No records are available identifying the total waste volume that passed through the underground storage tank. The underground storage tank has a capacity of 3,000 gallons. The contents of the underground storage tank drain through the piping into TSL-85, and the maximum volume of waste stored in the underground storage tank system would be less than the 3,000 gallons.

5.0 CLOSURE DESIGN

The procedures that will be implemented to close the TA-35 TSL-85 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 spring of 1992.

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 as a hazardous waste. In the past, as fluid levels approached the two-foot freeboard limit, EM-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 liquid 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 90 days or less. 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 UNDERGROUND STORAGE TANK, SURFACE IMPOUNDMENT LINER, SANDBAGS, AND ASSOCIATED PIPING

The following steps will be taken to decontaminate and remove the underground storage tank, liner and sandbags, associated piping, and soil so that clean closure criteria are met.

5.2.1 Leak Testing, Decontamination, and Removal of the Underground Storage Tank and Piping

Prior to removal, the tank will be pressure tested for possible leakage. This pressure test will be conducted as follows: all plumbing fixtures will be sealed, and the tank will be filled with compressed air to approximately 10 to 25 pounds per square inch gauge. If the tank can maintain its initial charge pressure for approximately 48 hours, then it will be considered a non-leaking tank.

Both the underground storage tank and the two six-inch schedule 40 PVC pipes leading to the surface impoundment will be decontaminated using a rinse containing a surfactant such as

Liquinox or Alconox. All rinseate will be collected in a temporary containment system, and subsequently transferred into DOT-approved containers. A representative sample will be composited from the containers and analyzed for volatile organic compounds identified in Table 5-1, PCBs, and EP Toxic metals identified in Table 5-3. If analytical results characterize the rinseate as a hazardous waste, the rinseate will be managed and disposed in compliance with all state and federal requirements. The decontamination washing, rinseate collection, sampling and analyses will be repeated until the results no longer show detectable or EP Toxic concentrations of contaminants, as appropriate.

To facilitate decontamination of the underground storage tank, it will be placed in a temporary containment system constructed for this purpose and steam-cleaned using a high-pressure, hot-water washer. The water will be collected, containerized, sampled, and analyzed in the manner described above. If decontamination of the underground storage tank and/or any of the lines cannot be accomplished, the material will be excavated, drummed, and disposed as a hazardous waste.

5.2.2 Decontamination and Removal of Surface Impoundment 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 identified in Table 5-3 (using either the EP Toxic test procedure or a total metals analysis). 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 analytical results demonstrate that contamination is associated with the gunite liner, the liner will be removed and managed as a hazardous waste. The gunite liner and all below-grade

TABLE 5-1

**VOLATILE ORGANIC COMPOUNDS
TO BE ANALYZED IN SOIL SAMPLES**

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

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

TABLE 5-2**SEMIVOLATILE ORGANIC COMPOUNDS
TO BE ANALYZED IN SOIL SAMPLES**

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

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

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.

contaminated soils will be broken into sizes suitable for placement into DOT-approved containers. The containers will be placed in the 90-day-or-less 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. 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.

5.2.3 Decontamination and Removal of Associated Piping

Following decontamination and removal of the liner and sandbags, the drain from the bermed storage pad will be disconnected from the pipe, capped, and the PVC pipe will be removed. If it is not economical to remove all of the six-inch PVC piping, then it will be decontaminated in place. The remaining portions of decontaminated piping will be sealed and filled with cement. In no event will any piping be left in place if it has not been completely decontaminated.

The decontaminated underground storage tank's excavated piping will be disposed in a nonhazardous waste landfill along with the underground storage tank. In the event that the tank or piping cannot be decontaminated, these materials will be cut into smaller sizes and placed in DOT-approved containers. These will then be transported to an off-site RCRA-permitted TSD facility.

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 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-85 site. Metals concentrations in 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 six-stage 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.

- **Gunite Liner Decontamination Verification:** Decontamination verification of the gunite liner will include sampling of soil immediately below the liner and disposal of the liner. Fourteen soil samples will be taken immediately below the gunite liner and analyzed for volatile and semivolatile organic constituents, PCBs, and metals. If the results of soil analyses indicate contamination exceeds "clean levels," further soil sampling will be performed, as described in the following phases, and the gunite liner will be disposed as a hazardous waste. If the results of soil analyses indicate contamination meets "clean levels," no further sampling below the gunite liner will be performed, and the liner will be disposed as a nonhazardous waste.
- **Clean Closure Verification Phase 1-Soil Removal, Sampling, and Analysis:** If necessary, further 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 48-foot long by 32-foot wide grid will be centered over a diagram of the excavated impoundment location. This grid will consist of 384 individual two-foot square sampling locations, as seen in Figure 5-1. Approximately 24 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 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.

- **Clean Closure Verification Phase 2-Corehole Drilling, Sampling, and Analysis:** If sampling and analytical results from Phase I are not adequate to verify clean closure, core samples will be collected to determine the vertical extent of any remaining contamination. Three test holes will be drilled within the surface impoundment boundaries to approximately 45-50 feet below ground surface. Five to ten samples will be collected from each test hole at

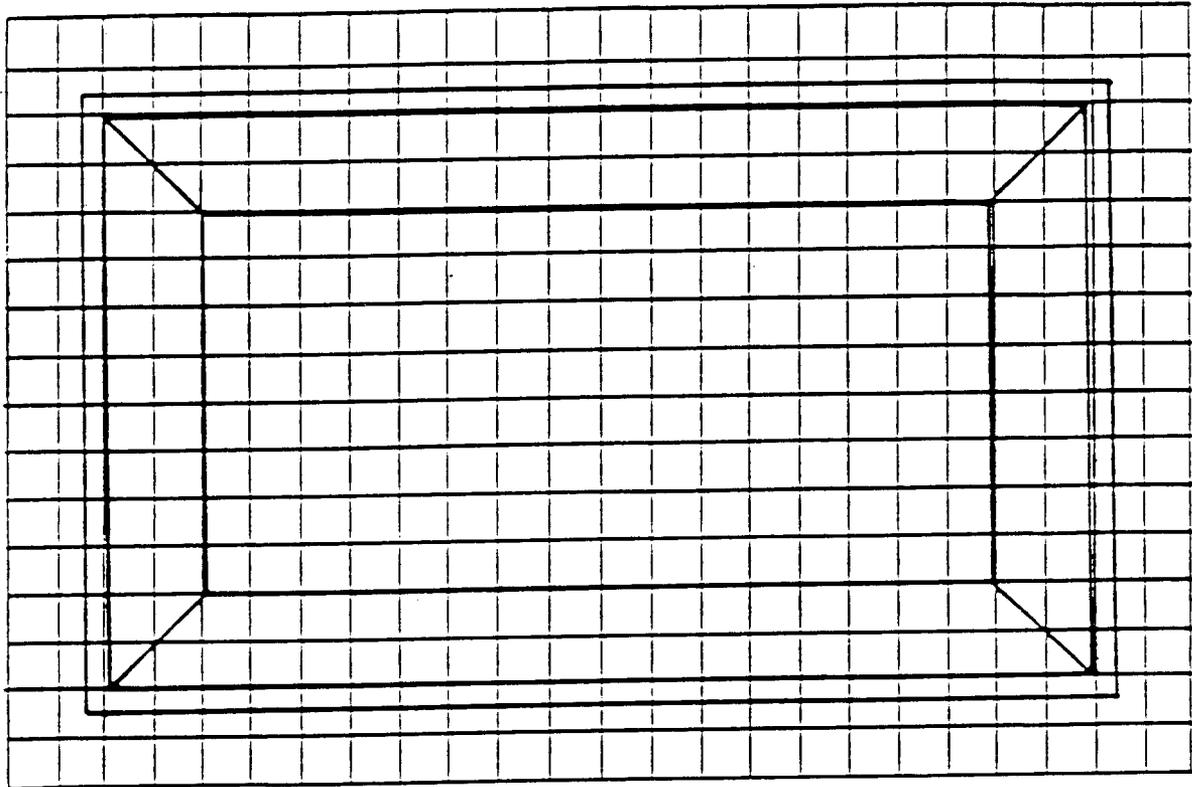
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PLAN VIEW



SCALE

FIGURE 5-1
Grid Used For
DECONTAMINATION VERIFICATION
SAMPLING LOCATIONS AT
TA-35-TSL-85
PREPARED FOR
LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

selected intervals, based on actual field and drilling conditions. These soil samples will be collected and analyzed for final clean closure verification.

- **Clean Closure Verification Phase 3-Soil, Sampling and Analysis Below the UST and Lines:** To verify decontamination of the soil below the UST and lines, approximately twelve locations will be sampled and analyzed for volatile and semivolatile organic compounds, PCBs, and metals.
- **Clean Closure Verification Phase 4-Soil Sampling and Analysis Along Canyon Spill Path Routes:** To verify that contamination above clean levels has not migrated along spill path routes into Mortandad Canyon, approximately eleven samples will be collected downgradient of the surface impoundment into Mortandad Canyon along spill path routes. The samples will be spaced approximately ten to fifteen feet apart, and collected at a depth of approximately six inches. The soil samples will be analyzed for volatile and semivolatile organic constituents, PCBs, and metals.
- **Clean Closure Verification Phase 5-Corehole Drilling, Sampling, and Analysis:** Because of the anticipated high levels of total petroleum hydrocarbons in the soil around the TSL-85 site, an additional investigative phase may be necessary. If sampling and analytical results from Phase 1 and 2 are not adequate to verify clean closure in the area of the impoundment, additional coreholes will be drilled. Soil samples from the additional coreholes will be collected at five-foot intervals to approximately 45 feet. The soil samples will be analyzed for volatile and semivolatile organic constituents, and petroleum hydrocarbons.

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-

Proposed Subpart 5

recommended limits or factors. These limits or factors include, at present, health-based limits calculated from verified reference doses (RFDs), carcinogenic potency factors (CPF), 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 40 CFR §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-85 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) 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.
- 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

TABLE 5-4

CHECKLIST OF ITEMS FOR FIELD SAMPLING

<u>ITEM</u>	<u>USE</u>
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

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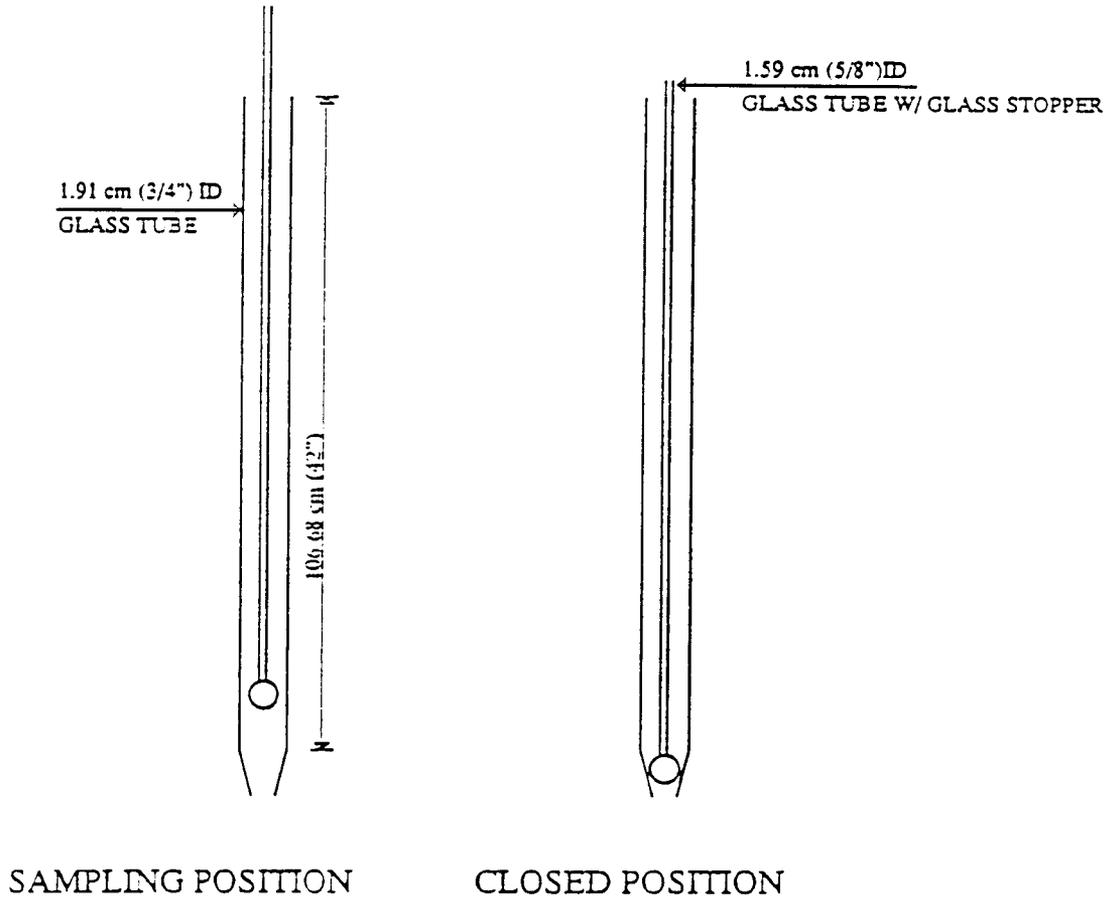


FIGURE 5-2
COMPOSITE LIQUID WASTE SAMPLER
(COLIWASA)
PREPARED FOR
LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

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.
- 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.

TABLE 5-5**SOIL SAMPLE COLLECTION METHODS**

<u>CONSTITUENT</u>	<u>CONTAINER TYPE</u>	<u>CONTAINER SIZE</u>	<u>PRESERVATIVE^(a)</u>	
			<u>TYPE</u>	<u>AMOUNT</u>
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.

- 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 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 (HS-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 closure sampling log will be kept and will contain all information pertinent to field surveys/investigation, sampling, and analysis. Sampling situations vary widely. No specific rule can be given as to the extent of information that must be entered in the logbook. A good general 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.

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BY

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

PREPARED FOR

LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

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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-85**

EPA HAZARDOUS WASTE NUMBER	METALS METHOD	TOTAL METALS TEST METHOD (mg/l)	EXTRACTION PROCEDURE (EP) TOXICITY TEST	MINIMUM EP TOXIC CONCENTRATION
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		
<u>Organic Scan</u>				
	GC/MS for volatile organics			8240
	GC/MS for semivolatile organics			8250 or 8270
<u>PCB Scan</u>				
	GC/ECD			Modified EPA Method 8080

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 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 EM-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:

<u>TIME (day)</u>	<u>ACTIVITY</u>
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 of the facility shall certify the closure and confirm that the closure activities follow this 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 this 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 (EM-8).

6.5 CONTINGENT CLOSURE AND POST-CLOSURE CARE PLANS

6.5.1 Contingent Closure Plan

The existence of the tank as part of the system undergoing closure requires that additional closure regulations be addressed. Specifically, these regulations, set forth in 40 CFR §265.197, require that a contingent closure plan be provided for tanks without a secondary containment system. The contingent closure plan must describe closure activities that will be implemented in the event the tank has leaked and all contaminated soils cannot be removed. Under such circumstances, the tank and tank system will be considered a landfill and must meet all closure requirements applicable to landfills.

At this time, it is believed that the tank has never leaked. When the tank was first discovered, it was filled with a water-based fluid. Since the contents could not be immediately removed, they remained in place for several weeks. At the end of that time, the original fluid level had not changed.

If any potential contaminated soils associated with the tank cannot be removed to the clean levels established by the results of the risk assessment, the tank and associated equipment will be closed as a landfill. A cover will be designed and constructed to minimize the migration of liquids through the unit; to function with minimum maintenance; to promote drainage and minimize erosion or abrasion of the cover; to accommodate settling and subsidence so that the cover's integrity is maintained; and to have a permeability less than or equal to the permeability of the natural subsoils present. A berm will be constructed to prevent run-on and run-off from eroding or otherwise damaging the final cover. The cover will be maintained and repaired as necessary to correct the effects of settling, subsidence, erosion, or other events.

Should closure as a landfill be necessary, a revised closure plan will be submitted to further specify the steps by which these objectives will be met. A revised closure schedule will also be submitted.

6.5.2 Post-Closure Care Plan

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

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APPENDIX A

**TA-35 TSL-85
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 Agency 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-FFFF) 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) 424-6346 (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 groundwater 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 28, 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 28, 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. 1008, 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, 1988 (51 FR 33992, 34008, 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^{-4} upperbound excess cancer risk for Class A and B carcinogens, and a 1×10^{-6} 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/m³ 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 VLF.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 action levels at the lower protective end of the risk range (e.g., 1×10^{-9}) 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.*, 20m³/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 128 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 C 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 assumes 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 VII.B 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 18 kg, is recommended for non-carcinogens.

In the case of non-carcinogenic contaminants, the oral RD 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 provided 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 the 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 sufficient 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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JULY 27, 1990**

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 1989 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 (202-382-2745); 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 264.52(a)(2)(i-iv)

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-02	8E-03
Acrylamide	B2	9E-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	6E+03
Barium, ionlc	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(chloroethoxy)ether	B2	3E-03	3E-05	6E-01
Bromochloromethane (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-v)]

Constituent name	Class	Air (ug/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
Chloral	D		7E-02	2E+02
Chlordane	B2	3E-03	3E-05	5E-01
Chlorine cyanide	D		2E-00	4E+03
Chlorobenzene	D		7E-01	2E+03
Chloroform (3)	B2	2E+01	6E-03	1E-02
2-Chlorophenol	D	4E-02	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
DDO	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
Dibutyltin diamine	B2	6E-04	6E-08	1E-01
3,3'-Dichlorobenzidine	B2		3E-05	2E-00
Dichlorodifluoromethane	D		7E-00	2E+04
1,2-Dichloroethane	B2	2E+02	(1)	2E+00
1,1-Dichloroethylene	C	4E-02	(1)	1E+01
2,4-Dichlorophenol	D	3E-02	(1)	1E+01
2,4-Dichlorophenoxyacetic acid	D		1E-01	2E+02
1,3-Dichloropropane	D		4E-01	8E+02
Dieldrin	B2		1E-02	2E+01
Diethyl phthalate	B2	2E-04	2E-06	4E-02
Diethyltin diamine	D		3E+01	6E+04
Dimethyltin diamine	B2	2E-05	2E-07	5E-03
m-Dinitrobenzene	D		7E-01	2E+03
2,4-Dinitrophenol	B2	7E-05	7E-07	1E-02
2,3-Dinitrotoluene (and 2,6- mixture)	D		4E-03	8E-00
1,4-Dioxane	D		7E-02	2E+02
Diphenylamine	B2		5E-05	1E-00
1,2-Diphenylhydrazine	B2		3E-03	6E+01
Disulfoton	D	4E-03	4E-05	9E-01
Endosulfan	D		9E-01	2E+03
Endothal	D		1E-03	3E-00
Endrin	D		2E-03	4E-00
Epichlorohydrin	D		7E-01	2E+03
Ethylbenzene	B2	6E-01	4E-03	7E-01
Ethylene dibromide	D		4E-00	8E+03
Formaldehyde	B2	5E-03	4E-07	8E-03
Formic acid	B1	6E-02		
Glyoxylic acid	D		7E-01	2E+05
Heptachlor	D		1E-02	3E+01
Heptachlor epoxide	B2	8E-04	8E-06	2E-01
Hexachlorbenzo-p-dioxin	B2	4E-04	4E-06	8E-02
Hexachlorcyclopentadiene	B2	6E-07	1E-08	1E-04
alpha-Hexachlorocyclohexane	C	4E-01	4E-03	8E+01
beta-Hexachlorocyclohexane	B2	6E-04	6E-08	1E-01
Hexachlorocyclopentadiene	D	2E-02	2E-04	4E-00
Hexachloroethane	D	7E-02	2E-01	6E+02
Hexachlorophene	C	3E-00	3E-02	6E+01
Hydrazine	D		1E-02	2E-01
Hydrogen cyanide	B2	2E-04	1E-05	2E-01
Hydrogen sulfite	D		7E-01	2E+03
Isobutyl alcohol	D		1E-01	2E+02
Isophorone	D		1E+01	2E+04
Lead	C		9E-02	2E+03
Lindane (gamma-hexachlorocyclohexane)	B2		(1)	
m-Phenylenediamine	B2, C		(1)	5E-01
Maleic anhydride	D		2E-01	5E-02
Maleic hydrazide	D		4E-07	3E+03
Mercury (inorganic)	D		2E-01	4E+04
Methacrylonitrile	D		(1)	2E+01
Methylol	D	7E-01	4E-03	6E-00
Methyl chloroformate	D		9E-01	2E+03
Methyl ethyl ketone	D			
Methyl isobutyl ketone	D	3E+02	2E-00	4E+03
Methyl parathion	D	7E+01	2E-00	4E+03
	D		9E-03	2E+01

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

[Section 254.521(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-d-n-butylamine	B2	6E-04	6E-06	1E-01
n-Nitroso-methylurea	B			
n-Nitroso-N-methylethylamine	B2		2E-06	3E-02
n-Nitrosodipropylamine	B2		5E-06	1E-01
n-Nitrosodipropylamine	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	D			
Nitro oxide	A	4E-03		
Nitrobenzene	D		4E-00	8E+03
Nitrogen dioxide	D	2E-00	2E-02	4E+01
Osmium tetroxide	D		4E-01	8E-04
Parathion	D		4E-04	8E-01
Pentachlorocyclopentadiene	C		2E-01	5E-02
Pentachloronitrobenzene	D		3E-02	6E-01
Pentachlorophenol	C	1E-01	1E-01	2E+02
Phenol	D		1E-00	2E+03
Phenyl mercuric acetate	D		2E-01	5E+04
Phosphine	D		3E-03	6E-00
Phthalic anhydride	D		1E-02	2E+01
Polychlorinated biphenyls	B2		7E-01	2E+05
Potassium cyanide	D		5E-06	3E-02
Potassium silver cyanide	D		2E-00	4E+03
Pronefide	D		7E-00	2E+04
Pyridine	D		3E-00	5E+03
Selenous acid	D		4E-02	8E+01
Selenocourea	D		1E-01	2E+02
Silver	D		2E-01	4E+02
Silver cyanide	D		(1)	2E-02
Sodium cyanide	D		4E-00	8E+03
Strychnine	D		1E-00	3E-03
Styrene	D		1E-02	2E+01
1,1,1,2-Tetrachloroethane	C		7E-00	2E+04
* 2,4,5-Tetrachlorobenzene	D	1E-00	1E-02	3E-02
1,1,2-Tetrachloroethane	C		1E-02	2E+01
2,2-Tetrachloroethane	C	1E-00	1E-02	3E+02
Tetrachloroethylene	C	2E-01	2E-03	4E+01
2,3,4,5-Tetrachlorophenol	B2	1E-00	7E-04	1E-01
Tetraethyl lead	D		1E-00	2E-03
Tetraethylthiopyrophosphate	D		4E-06	8E-03
Thalio oxide	D		2E-02	4E-01
Thallium acetate	D		2E-03	6E-00
Thallium carbonate	D		3E-03	7E-00
Thallium chloride	D		3E-03	6E-00
Thallium nitrate	D		3E-03	6E-00
Thallium sulfate	D		3E-03	7E-00
Thiosemicarbazide	D		3E-03	6E-00
Thiram	D		2E-01	5E-02
Toluene	D		2E-01	4E-02
Toxaphene	D	7E-03	1E-01	2E-04
1,2,4-Trichlorobenzene	B2	3E-03	(1)	6E-01
1,1,1-Trichloroethane	D	1E-01	7E-01	2E+03
1,1,2-Trichloroethane	D	1E-03	3E-00	7E-03
Trichloroethylene	C	6E-01	6E-03	1E+02
Trichloromono-fluoromethane	B2		(1)	6E+01
2,4,5-Trichlorophenol	C	7E-02	1E-01	2E+04
2,4,6-Trichlorophenol	D		4E-00	8E+03
2,4,5-Trichlorophenoxyacetic acid	B2	2E-01	2E-03	4E+01
1,2,3-Trichloropropane	D		(1)	8E+02
Vanadium pentoxide	D		2E-01	5E+02
Xylenes	D		3E-01	7E+02
Zinc cyanide	D	1E+03	7E+01	2E+05
Zinc propoxide	D		2E-00	4E+03
	D		1E-02	2E+01

(1) MCL available; see appendix B.

(2) The air action level for asbestos is measured in units of fibers/m³liters.

(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 VI.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
Tetrahalomethanes, total	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	Max Air (ug/m ³)	Min Air (ug/m ³)	Max Water (mg/L)	Min Water (mg/L)	Max Soil (mg/kg)	Min Soil (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-03	6E-03	6E-05	1E+02	1E-00
Adipic acid	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, toxic	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
1,1-Dichloroethane	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	C						
Carbon tetrachloride	B2	3E-00	3E-02	3E-02	3E-04	5E+02	5E-00
Chlordane	D						
Chloroform	B2	3E-01	3E-03	3E-03	3E-05	5E+01	5E-01
Chlorobenzene	D						
Chlorobenzonitrile	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						
Dibutyltinamine	B2	6E-02	6E-04	6E-04	6E-06	1E-01	1E-01
3,3'-Dibromobenzidine	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
Dinitroaata	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)	D						
1,4-Dioxane	B2			5E-03	5E-05	1E+02	1E-00
Diphenylamine	B2			3E-01	3E-03	6E+03	6E+01
1,2-Diphenylhydrazine	D						
Disulfoton	B2	4E-01	4E-03	4E-03	4E-05	9E-01	9E-01
Endosulfan	D						
Endosulfan	D						
Endrin	D						
Epothiorhydrin	D						
Ethylbenzene	B2	9E+01	8E-01	4E-01	4E-03	7E+03	7E+01
Ethylene diamine	D						
Formaldehyde	B2	5E-01	5E-03	4E-05	4E-07	8E-01	8E-03
Formic acid	B1	8E-00	8E-02				
Glyoxyaldehyde	D						
Heptachlor	D						
Heptachlor epoxide	B2	8E-02	8E-04	8E-04	8E-06	2E+01	2E-01
Hexachlorobenzene-p-dioxin	B2	4E-02	4E-04	4E-04	4E-06	8E-00	8E-02
Hexachlorobutadiene	B2	6E-05	6E-07	6E-07	1E-09	1E-02	1E-04
alpha-Hexachlorocyclohexane	C	4E-00	4E-02	4E-02	4E-04	9E+02	9E-00
beta-Hexachlorocyclohexane	B2	6E-02	6E-04	6E-04	6E-06	1E-01	1E-01
Hexachlorocyclopentadiene	C	2E-01	2E-03	2E-03	2E-05	4E+01	4E-01
Hexachloroethane	C						
Hexachlorophene	C	3E+01	3E-01	3E-01	3E-03	5E+03	5E+01
Hydrazine	D						
Hydrogen cyanide	B2	2E-02	2E-04	1E-03	1E-05	2E+01	2E-01
Hydrogen sulfide	D						
Isobutyl alcohol	D						
Isophorone	D						
Lead	B2			9E-01	9E-03	2E+04	2E+02
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 chloroacetate	D						
Methyl ethyl ketone	D						
Methyl isobutyl ketone	D						
Methyl parathion	D						
Methylene chloride	B						
n-Nitrosodimethylamine	B2	3E+01	3E-01	5E-01	5E-03	9E-03	9E+01
n-Nitrosodimethylurea	B	6E-02	6E-04	6E-04	6E-06	1E-01	1E-01
n-Nitrosodimethylethylamine	B2						
n-Nitrosodipropylamine	B2			2E-04	2E-06	3E-00	3E-02
n-Nitrosodipropylamine	B2			5E-04	5E-06	1E+01	1E-01
n-Nitrosodipropylamine	B2			1E-03	1E-05	3E-01	3E-01
n-Nitrosodipropylamine	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				
Nitro oxide	D						
Nitrobenzene	D						
Nitrogen dioxide	D						
Osmium tetroxide	D						
Parathion	C						
Pentachlorobenzene	D						
Pentachloronitrobenzene	D						
Pentachlorophenol	C	1E-00	1E-02				
Phenol	D						
Phenyl mercuric acetate	D						
Phosphine	D						
Phthalic anhydride	D						
Polychlorinated biphenyls	B2			5E-04	5E-06	9E-00	9E-02
Potassium cyanide	D						
Potassium silver cyanide	D						
Pronamide	D						
Pyridine	D						
Selenious acid	C						
Selenocourea	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	Max Air (ug/m ³)	Min Air (ug/m ³)	Max Water (mg/L)	Min Water (mg/L)	Max Soil (mg/kg)	Min Soil (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	C						
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	E2	1E+02	1E-00	7E-02	7E-04	1E+03	1E-01
2,3,4,6-Tetrachlorophenol	D						
Tetramethyl lead	D						
Tetraethyl dithiopyrophosphate	D						
Thallium oxide	D						
Thallium acetate	D						
Thallium carbonate	D						
Thallium chloride	D						
Thallium nitrate	D						
Thallium sulfate	D						
Thiosemicarbazide	D						
Thorium	D						
Toluene	D						
Toxaphene	E2	3E-01	3E-03	3E-03	3E-05	6E+01	6E-01
1,2,4-Trichlorobenzene	D						
1,1,1-Trichloroethane	C						
1,1,2-Trichloroethane	C	6E-00	6E-02	6E-02	6E-04	1E+03	1E-01
Trichloroethylene	E2			3E-01	3E-03	6E+03	6E-01
Trichloromonofluoromethane	D						
2,4,5-Trichlorophenol	D						
2,4,6-Trichlorophenol	E2	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 Exposure 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 18 kg child/5 year exposure period (age 1-8).*

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

$$C_m = [R \cdot D \cdot W] / [I \cdot A]$$

where:

C_m = action level in medium (units are medium-dependent);

R/D = reference dose (mg/kg/day);

W = body weight (kg);

I = intake assumption (units are medium-dependent); and

A = absorption factor¹ (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 R/D or CPF was developed.

II. Example Calculations for Hazardous Constituents in Air

A. Systemic Toxicants

Example calculation for 2,4-dinitrophenol:

$$C_a = [0.002 \text{ (mg/kg/d)} \cdot 1000 \text{ (ug/mg)} \cdot 70 \text{ (kg)}] / [20 \text{ (m}^3/\text{d)} \cdot 1] = 7.0 \text{ ug/m}^3$$

where:

C_a = action level in air (ug/m³)

R/D = 0.002 mg/kg/day

W = 70 kg adult

I = 20 m³/day

A = 1

B. Carcinogenic Constituents

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

$$C_a = [10^{-6} \cdot 1000 \text{ (ug/mg)} \cdot 70 \text{ (kg)} \cdot \text{yrs}] / [0.20 \text{ (mg/kg/day)} \cdot 1 \cdot 20 \text{ (m}^3/\text{day)} \cdot 1 \cdot 70 \text{ (yrs)}] = 1.75 \text{ ug/m}^3$$

where:

C_a = action level in air (ug/m³)

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 = 20 m³/day

A = 1

ED = 70 year exposure duration

III. Sample Calculation for Hazardous Constituents in Water

A. Systemic Toxicants

Sample calculation for toluene:

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

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:

$$C_w = \frac{10^{-5} \cdot 70 \text{ (kg)} \cdot 70 \text{ (yr)}}{[0.20 \text{ (mg/kg/day)} \cdot 2 \text{ (L/day)} \cdot 1 \cdot 70 \text{ (yr)}]} = 1.75E-03 \text{ mg/L}$$

where:

C_w = action level in water (mg/L)
 $R = 10^{-5}$ (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=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:

$$C_s = \frac{[0.30 \text{ (mg/kg/day)} \cdot 18 \text{ (kg)}] / [0.2 \text{ (g/day)} \cdot 1 \cdot 0.001 \text{ (kg/g)}]}{24,000 \text{ mg/kg}}$$

where:

C_s = action level in soil (mg/kg)
 RFD=0.30 mg/kg/day for toluene
 W=18 kg (5 year old child)
 I=0.2 g/day
 A=1

B. Carcinogenic Constituents

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

$$C_s = \frac{10^{-5} \cdot 70 \text{ (kg)} \cdot 70 \text{ (yrs)}}{[0.20 \text{ (mg/kg/day)} \cdot 0.1 \text{ (g/day)} \cdot 0.001 \text{ (kg/g)} \cdot 1 \cdot 70 \text{ (yrs)}]} = 35.0 \text{ mg/kg}$$

where:

C_s = action level in soil (mg/kg)
 $R = 10^{-5}$ (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=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			5.3E-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	
Bromofom	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			
DDO	B2			2.4E-01	
DOE	B2			3.4E-01	
DOT	B2	5.0E-04		3.4E-01	3.4E-01
Dibutyl phthalate	D	1.0E-01			
Dibutyltinamine	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	Case	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-Dinitrochlorobenzene (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			
Endosulfat	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			6.5E-01	7.6E-01
Formaldehyde	B1			4.5E-02	
Formic acid	D	2.0E-00			
Glycidyl acrylate	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
Hexachloro-2,3-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		
Hexachlorocyclopentadiene	D	1.0E-03		1.4E-02	1.4E-02
Hexachlorocyclopentadiene	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			
Isophthalate	C	2.0E-01		4.1E-03	
Lead	B2				
Lindane (gamma-hexachlorocyclohexane)	B2	3.0E-04		1.3E-00	
m-Phenylenediamine	D	6.0E-01			
Maleic anhydride	D	1.0E-01			
Maleic hydrazide	D	5.0E-01			
Mercury (inorganic)	D	3.0E-04			
Methyl acrylonitrile	D	1.0E-04	2.0E-04		
Methyl acrylate	D	2.5E-02			
Methyl chloroacetate	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-Nitrosodimethylamine	B2			5.4E-00	5.4E-00
n-Nitrosodimethylurea	B				
n-Nitrosodipropylamine	B2			2.2E+01	
n-Nitrosodipropylamine	B2			7.0E-00	
n-Nitrosodipropylamine	B2			2.9E-00	
n-Nitrosodipropylamine	B2			4.3E-02	
n-Nitrosopyrrolidine	B2			2.1E-00	2.1E-00
Nickel	D	2.0E-02			
Nickel refinery dust	A				6.4E-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			
Penta-chlorobenzene	D	8.0E-04			
Penta-chloronitrobenzene	C	3.0E-03			2.5E-01
Pentachlorophenol	D	3.0E-02			
Phenol	D	6.0E-01			
Phenyl mercury acetate	D	6.0E-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			
Selenic acid	D	3.0E-03			
Selenous acid	D	5.0E-01			
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		2.5E-02	2.5E-02
1,2,4,5-Tetrachlorobenzene	C	3.0E-04			
1,1,1,2-Tetrachloroethane	C	3.0E-02		2.5E-02	2.5E-02
1,1,2,2-Tetrachloroethane	C			2.0E-01	2.0E-01
Tetrachloroethylene	B2	1.0E-02		5.1E-02	3.3E-03
2,3,4,5-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	
Trichloromonofluoromethane	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-01	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)(iii) 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-85
SURFACE IMPOUNDMENT**

**MATERIAL SAFETY DATA SHEETS
SHELL DIALA (R) OIL AX**



MATERIAL SAFETY DATA SHEET

MSDS NUMBER 60,030-5

PAGE

24 HOUR EMERGENCY ASSISTANCE			GENERAL MSDS ASSISTANCE		
SHELL: 713-473-8481 CHEMTREC: 800-424-9300			SHELL: 713-241-4818		
ACUTE HEALTH +	FIRE F	REACTIVITY O	HAZARD RATING LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4		
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 CODES	68702 68703 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	64742-48-7	60-100
2	SEVERELY HYDROTREATED LIGHT NAPHTHENIC DISTILLATE	64742-83-8	0-40
3	BUTYLATED HYDROXY TOLUENE	128-37-0	10.2

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 COMMUNICATION (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 FOAM/FOUL INTO THE LUNGS) MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

PRODUCT NAME: SHELL DIALA(R) OIL AX

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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		ACGIH		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
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: 0.889 (N20=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) 0.07-0.12

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PRODUCT NAME: SHELL DIALA(R) OIL AX

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APPEARANCE AND ODOR: WHITE LIQUID SLIGHT HYDROCARBON ODOR

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
295-310 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 BUMPER GEAR (HELMET WITH FACE SHIELD, BUMPER 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 ADSORBENT 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. 800-424-9603.

247011N SHELL OIL CU

PRODUCT NAME SHELL DIALAIR OIL AX

MSDS 80,030-1
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.....
SECTION XII - SPECIAL PRECAUTIONS
.....

MINIMIZE SKIN CONTACT WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES LAUNDRY 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, 1988
.....

BE SAFE

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

.....
JOHN P. SEPEZI
.....

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

APPENDIX C

TA-35 TSL-85
SURFACE IMPOUNDMENT

CERTIFICATES OF ANALYSIS

VOLATILE ORGANIC ANALYSES

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 quantitative 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 quantitative analyses please feel free to contact me.

Please call if you have any questions.



Suzanne Bell
HSE-9 Organic Analysis Section Leader

QA/QC Approval

NA

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET

SAMPLE NUMBER: 88-0034 | REQUEST SHEET: 88.7061
NUMBER OF REPLICATE RUNS: 1

35-85 storage

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND ACCEPTABLE RANGE (CLP)

1,2-DICHLOROETHANE d4 88.5 (76-114)
TOLUENE d8 91.0 (88-110)
p-BROMOFLUOROBENZENE 85.8 (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	> mol (TIC)	5.0
75354	1,1-DICHLOROETHENE		5.0
75343	1,1-DICHLOROETHANE		5.0
540590	1,2-DICHLOROETHENE		5.0
67663	CHLOROFORM	(TOTAL)	5.0
107062	1,2-DICHLOROETHANE		5.0
78933	2-BUTANONE		5.0
71556	1,1,1-TRICHLOROETHANE	> 200.0	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	42.8 ± 4.3	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		5.0
95501	1,2-DICHLOROBENZENE	(TOTAL)	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	ppm range	5.0
60297	DIETHYL ETHER		50.0
76131	1,1,2-TRICHLORO- 1,2,2-TRIFLUOROETHANE	ppm range	20.0

MDL: Estimated minimum detection limit. The minimum limit of quantitation for these samples was 10 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: 88-00341 REQUEST SHEET NUMBER: 88.7061

Sample was sediment and liquid. Analyzed the liquid
TIC = tentatively identified compound
No dilutions run

HSE-9 ORGANIC ANALYSIS SECTION
VOLATILE ORGANICS RESULT SHEET

SAMPLE NUMBER: 88-00337 REQUEST SHEET: 88.7061
NUMBER OF REPLICATE RUNS: 1

SURROGATE SPIKE RECOVERIES: (% RECOVERY)

COMPOUND ACCEPTABLE RANGE (CLP)

1,2-DICHLOROETHANE d4 127% (76-114)
TOLUENE d8 93.8 (88-110)
p-BROMOFLUOROBENZENE 91.1 (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	<u>>MDL (TIC)</u>	5.0
75354	1,1-DICHLOROETHENE		5.0
75343	1,1-DICHLOROETHANE		5.0
540590	1,2-DICHLOROETHENE		5.0
67663	CHLOROFORM		5.0
107062	1,2-DICHLOROETHANE		5.0
78933	2-BUTANONE		5.0
71556	1,1,1-TRICHLOROETHANE	<u>>200.0</u>	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	<u>42.9 ± 4.3</u>	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		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	ppm range	50.0
76131	1,1,2-TRICHLORO- 1,2,2-TRIFLUOROETHANE	>200.0	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: 88-00337

REQUEST SHEET NUMBER: 88.7061

Appeared to be water.

TIC indicates a tentatively identified compound.

No dilutions run.

EXTRACTION PROCEDURE TOXICITY ANALYSES

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

Oil pits = P-TOX METALS

***** 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 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

M.C. Williams
Analyst

RW
Section Leader

mag
QA Officer

6-27-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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: 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 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

Lucy Williams
Analyst

RWF
Section Leader

mag
QA Officer

6-28-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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 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

Indi/owner
Analyst

RF
Section Leader

mag
QA Officer

6-28-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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.

***** KSE-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 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

W.C. Williams
Analyst

J.W.F.
Section Leader

mag
QA Officer

6-28-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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 UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010 .		45.7000	9.1000	UG/L	43.0000	4.0000	6/24/88	UNDER CONTROL

Ind/ouner
Analyst

RF
Section Leader

mag
QA Officer

6-28-88
Date

6/29/88
Date

6/29/88
Date

The control status of the preceding 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 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

Jud/orene
Analyst

DJF
Section Leader

mag
QA Officer

6-28-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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.

***** MSE-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	

***** MSE-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 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

Indiference
Analyst

DWF
Section Leader

mag
QA Officer

6-28-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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	^{ug} MG/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 UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010 .		9.7700	2.0000	UG/L	9.0000	1.0000	6/24/88	UNDER CONTROL

Inci/orena
Analyst

RJF
Section Leader

mag
QA Officer

6-28-88
Date

6/28/88
Date

6/29/88
Date

The control status of the preceding 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.

RADIOLOGICAL ANALYSES

Oil pits TA-35

***** 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	PC1/L	6/21/88	
⁸⁵ 88.00352	.	10.0000	2.0000	PC1/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

GP
Analyst

Section Leader

QA Officer

6/21/88
Date

Date

Date

***** KSE-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

***** KSE-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 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

GB
Analyst

Section Leader

mag
QA Officer

6/20/88
Date

Date

6/20/88
Date

The control status of the preceding 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.

POLYCHLORINATED BIPHENYL ANALYSES

REQUESTOR DATA SHEET # _____

Sampled by A. Paxon Collection Date 9/3/96 Time 07:30 Weather _____ Log Book _____ Page _____
 Witness _____

Presampling Conference Completed With P. Seely On 9/2/96 Send Report To Roy Paxon MS K-490

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

Group HSE-9 PDU 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)		Remarks
							Alpha	Beta/Gamma	
86-05274		35-125	PCB	grab	oil/water	NUAC	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; MW=Well Water; SW=Surface Water; O=Other

Preservative: F=Filtered; NF=Non-Filtered; NA=Non Acidified; A-H₂SO₄ (2 ml/l); A-HNO₃ (5 ml/l); A-HNO₃ (5 ml/l); A-H₃PO₄ & CuSO₄; A=Other; I=Iced; P=NaOH.

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
05274	/						
05275	/		1336363	< MDL	± 25%	2.0/4	oil catch basin
	/		1336363	< MDL	± 25%	2.0/4	
	/						
	/						
	/						
	/						
	/						

Approved By: Analyst *[Signature]* Notebook SK⁹ ACD 390 Page 7/1 Date 9/4/86 QC Coordinator _____
 Section Leader *[Signature]* Date 8/11 Computer Entry _____ Date: 1:11

APPENDIX D

TA-35 TSL-85
SURFACE IMPOUNDMENT

GROUND WATER MONITORING PLAN

TA-35 TSL-85 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.

TABLE D-1
WATER SAMPLE COLLECTION METHODS

CONSTITUENT	CONTAINER TYPE	CONTAINER SIZE	PRESERVATIVE ^(a)	
			TYPE	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.

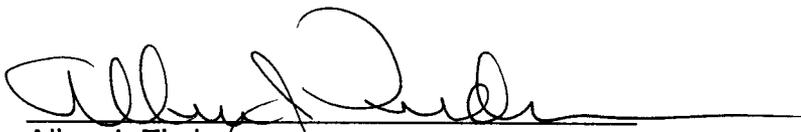
TABLE D-2
ANALYTICAL PARAMETERS AND METHODS FOR WATER SAMPLES
COLLECTED AT TA-35 TSL-85

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
 <u>ORGANIC SCAN</u>		
	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.


Allen J. Tiedman
Associated Director for Operations
Los Alamos National Laboratory
Operator

12-18-91
Date Signed


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

12/19/91
Date Signed



LEEDSHILL-HERKENHOFF, INC.

500 Copper Avenue N.W.

P. O. Box 1217

Albuquerque, New Mexico 87103

(505) 247-0294

1989-810.12-91

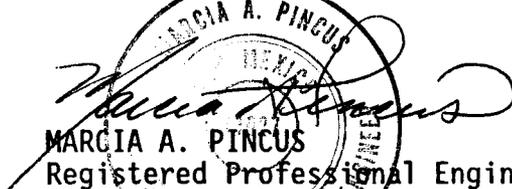
December 5, 1991

Mr. Larry Maaseen
Los Alamos National Laboratory
HSE-13, MS K490
P.O. Box 1667
Los Alamos, New Mexico 897545

RE: CERTIFICATION OF TA-35 TSL-85 CLOSURE PLAN AND CERTIFICATION REPORT

I have reviewed: the TA-35 TSL-85 Closure Plan and Certification Report (Plan and Report) prepared by Benchmark Environmental Consultants; a Los Alamos National Laboratory Memorandum written by Mr. Phil Fresquez dated November 27, 1991, Subject: Final Closure Verification Sampling of Two Former Waste Oil Surface Impoundments (TSL-85 and 125) located at TA-35; a Los Alamos National Laboratory Memorandum written by Phil Fresquez dated July 9, 1991, Subject: Results of an Environmental Restoration Verification Survey of a Former Waste Oil Surface Impoundment (TSL-85) at TA-35; and the closure activities documented by Mr. McLin after his visual onsite inspection of the subject surface impoundment.

After reviewing the above reports, I became aware that some analytical holding times were exceeded during analysis of the soil samples obtained from the initial three coreholes; however, these exceedences were documented correctly in the report, and were addressed. The remainder of the documentation, concerning the waste removal procedures, reported to have been performed are documented correctly.


MARCIA A. PINCUS
Registered Professional Engineer

er

cc: Benchmark Environmental Consultants

ENCLOSURE 3

**CHEMICAL WASTE DISPOSAL REQUEST FORMS
CERTIFICATES OF DESTRUCTION
UNDERGROUND STORAGE TANK PRESSURE-TIME CHART**

15052622698:# 2/ 2

EM-8-

BY: LOS ALAMOS NAT'L LAB : 10-30-91 : 9:02AM :

Los AlamosLos Alamos National Laboratory
Los Alamos, New Mexico 87545**CHEMICAL WASTE DISPOSAL REQUEST**
RETURN FORM TO WASTE MANAGEMENT, MS J593
Telephone Number 667-7579FOR DISPOSAL INQUIRIES
PLEASE CALL
665-4000

Requested By (Name A)	DAVID MCINROY	Telephone Number	7-0819	Group	HSE-8	Date Sent	4/12/90
Waste Generator (Name B)	HSE-DO/ER	Telephone Number	5 4557	Tech Area	59	Building	OH3
				Area/Wing	2nd Floor	Room	224

Line Number	Number of Containers	Volume of Each Container	CHEMICAL NAME ¹	HAZARD ²
1	6	55gal	CUT up UST CONTAMINATED w/ F001 → F005	
2	4	55gal	RINSATE CONTAMINATED w/ F001 → F005	
3	2	55gal	PLASTIC TARPS USED AS SECONDARY CONTAINMENT F001 → F005	
4	1	55gal	SOIL AND SLUDGE removed from UST CONTAMINATED w/ F001 → F005	
5				
6				
7				
8				
9		*	This Disposal must BE CHARGED TO	
10			5708, M292, AL-LA-RC-3	
11				
12		*	MUST HAS CERTIFICATE OF DISPOSAL	
13				
14				

DID 4/20/90

I hereby certify that the information supplied above is correct.

Generator Signature

Date

4/12/90

¹CHEMICAL NAME - Name of single compound, names of all compounds in mixture, trade name and/or number of commercial product. For trade name products, attach the manufacturer's MSDS.

²For HAZARD insert the appropriate letter: C - corrosive, I - ignitable, R - radioactive, T - toxic, X - reactive, S - solid, L - liquid, G - gas.

ROLLINS

ENVIRONMENTAL SERVICES (LA) INC.

P.O. Box 74137, Baton Rouge, LA 70874-4137, 504/778-1234 General Offices, 504/778-1242 Sales Office

CERTIFICATE OF DISPOSAL

THIS CERTIFIES THAT ROLLINS ENVIRONMENTAL SERVICES (LA) INC. (RES) HAS PROPERLY DISPOSED OF WASTE COVERED UNDER BR 33400 ACCEPTED BY RES ON 4/30/90 BILL OF LADING NUMBER 889362 MANIFEST NUMBER LA 1178796 - 800, LA 1168473 & 475 TRAILER NUMBER Matlack 6345 IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, ORDINANCES AND REGULATIONS.

All drums on the above mentioned manifest were incinerated.

THIS CERTIFIES THAT THE ABOVE DESCRIBED WASTE WAS DISPOSED OF BY:

X INCINERATION DIRECT LANDFILL
 STABILIZATION/ENCAPSULATION OTHER

ON 4/30/90 (DATE)

ROLLINS ENVIRONMENTAL SERVICES (LA) INC.
BATON ROUGE, LOUISIANA

LOS ALAMOS NATIONAL BANK
P. O. BOX 1663 MSI 593
Los Alamos, NM 87545

NAME Bill Keslick
Bill Keslick

TITLE: CHEMPAK Q C SUPERVISOR

DATE 4/30/90

Attn: Pat Josey

TO: <u>Marylan</u>	FROM: <u>Andy Montoya</u>	DATE: <u>1/1</u>	TDP 14650
FAX #: <u>262-2698</u>	FAX #: <u>5-3961</u>	PAGES INCLUDING THIS PAGE: <u> </u>	
		PHONE #: <u>7-7159</u>	

* ONLY LINES C'd OF MANIFEST APPLY TO TSL-85

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P.O. BOX 44307
BATON ROUGE, LOUISIANA 70804

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NM089001051590V3D	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address ATTN: ANNE MARIE GUSTAFSSON		LOS ALAMOS NATIONAL LAB P.O. Box 1663 MS J593 LOS ALAMOS, NM 87545		State Manifest Document Number LA 1178799		
4. Generator's Phone 505 667-7574		8. US EPA ID Number DEDR8110166		State Generator's ID		
5. Transporter 1 Company Name MATLACK INC		6. US EPA ID Number		State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		State Transporter's ID		
9. Designated Facility Name and Site Address ROLLINS ENVIRONMENTAL SERVICES (LA), INC. 1351 SCENIC HIGHWAY BATON ROUGE, LA 70807		10. US EPA ID Number		State Facility's ID		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity	14. Unit Wt/Vol	
a. Waste Corrosive liquid, N.O.S. Corrosive Material, UN1760		009DF00573			P	
b. Waste Flammable Solid, N.O.S. Flammable Solid, UN1325		009DF00186			P	
c. Hazardous Waste Solid, N.O.S. ORM-E, NA 9189		019DF02400			P	
d. Hazardous Waste liquid, N.O.S. ORM-E, NA 9189		015DM06530			P	
15. Special Handling Instructions and Additional Information		IN CASE OF ACCIDENT OR SPILLS CONTACT CHEMPROC AT 1-800-424-9300. DOT EMERGENCY RESPONSE IN LOUISIANA CONTACT LA. DEPT. OF PUBLIC SAFETY AT (504)925-6595. GUIDE REFERENCE NUMBERS AVOID CONTACT WITH HAZARDOUS MATERIAL. AVOID BREATHING VAPORS. 11A:60 11B:32 CONTAIN WASTE. DO NOT WASH INTO DRAIN OR WATERWAY. 11C:31 11D:31 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. 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 minimize 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 selected the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Andres J. Mantoya		Signature Andres J. Mantoya		Month Day Year 04 27 90		
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name George R. Westex		Signature G. Westex		Month Day Year 04 27 90
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature		Month Day Year
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 William B Keslick		Signature William B Keslick		Month Day Year 04 30 90

MONDAY
8 10 NOON 2 4

TUESDAY
8 10 NOON 2 4

NIGHT 6 8 10 12 2 4 6

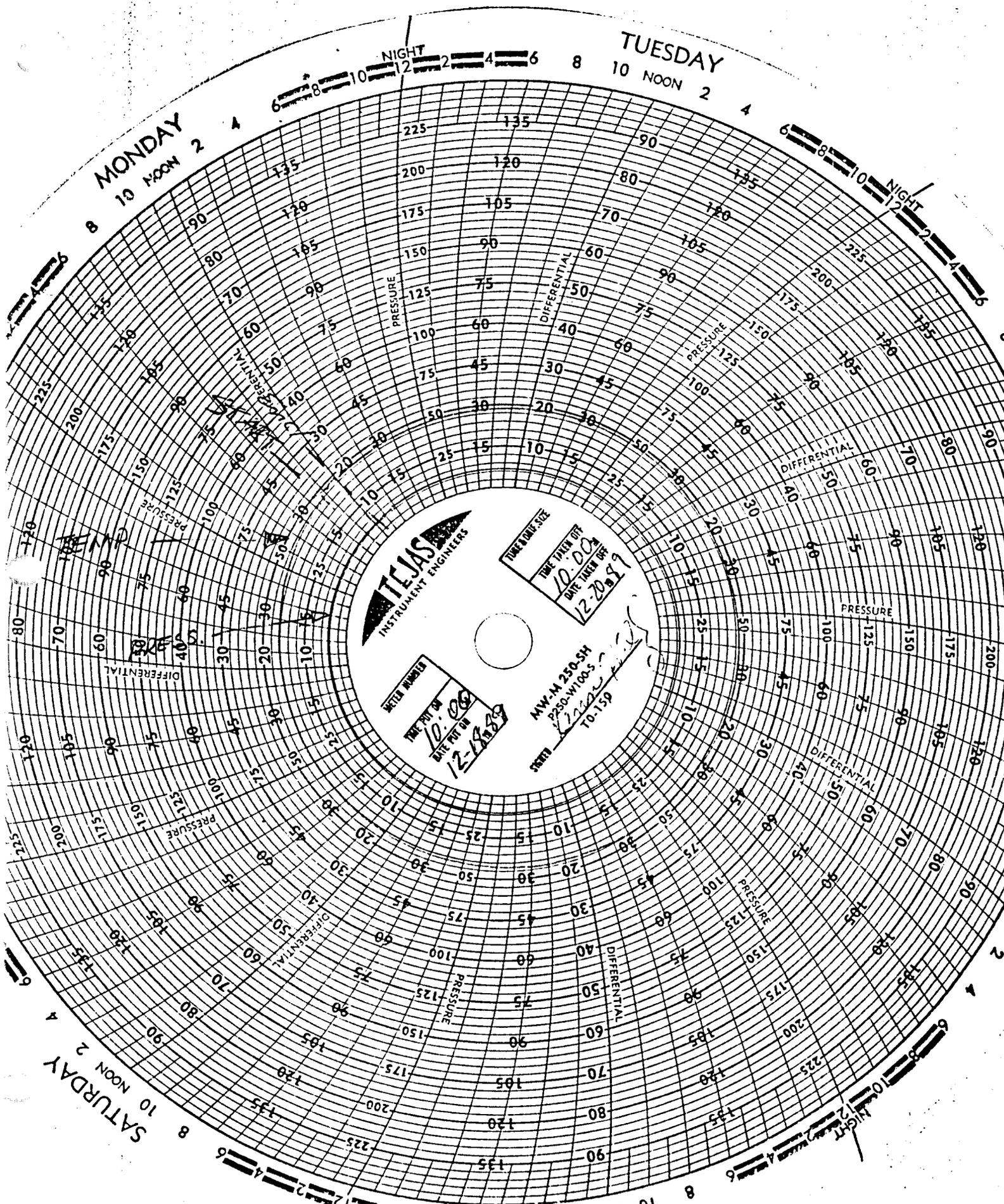
NIGHT 6 8 10 12 2 4 6



TIME TAKEN OFF
10:00
DATE TAKEN OFF
12-20-89

WIRE NUMBER
TIME PUT ON
10:00
DATE PUT ON
12-18-89

TYPE
MW-M 250-SH
P250-W100-S
651-101



SATURDAY
8 10 NOON 2 4

NIGHT 6 8 10 12 2 4 6

NIGHT 6 8 10 12 2 4 6

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-H)**

**ENCLOSURE 4-A EQUIPMENT DECONTAMINATION VERIFICATION:
RINSEATE SAMPLES FROM SURFACE IMPOUNDMENT AND
LINES**

**ENCLOSURE 4-B EQUIPMENT DECONTAMINATION VERIFICATION:
RINSEATE SAMPLES FROM UNDERGROUND STORAGE
TANK SYSTEM**

**ENCLOSURE 4-C LINER DECONTAMINATION VERIFICATION: SOIL SAMPLES
IMMEDIATELY BELOW IMPOUNDMENT LINER 85-**

**ENCLOSURE 4-D PHASE ONE CLEAN CLOSURE VERIFICATION SAMPLES:
SOIL SAMPLES AT TWO FOOT DEPTH 85FS-**

**ENCLOSURE 4-E PHASE TWO CLEAN CLOSURE VERIFICATION SAMPLES:
COREHOLE SAMPLES TO APPROXIMATELY 49 FEET
85h-**

**ENCLOSURE 4-F PHASE THREE CLEAN CLOSURE VERIFICATION SAMPLES:
SOIL SAMPLES FROM BENEATH THE UNDERGROUND
STORAGE GROUND TANK AND LINES 85PH-**

ENCLOSURE 4 (CONTINUED)

**ENCLOSURE 4-G PHASE FOUR CLEAN CLOSURE VERIFICATION SAMPLES:
SOIL SAMPLES ALONG SPILL PATH ROUTE IN
MORTANDAD CANYON**

85 S -

**ENCLOSURE 4-H PHASE FIVE CLEAN CLOSURE VERIFICATION SAMPLES:
ADDITIONAL COREHOLE SAMPLES TO APPROXIMATELY
45 FEET**

PF-85 -

**STATEMENT OF ADEQUACY OF THE
ANALYSES AND DECONTAMINATION**

Based on my oversight of the TA-35 TSL-85 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

Dec. 12, 1991
Date Signed

ENCLOSURE 4-A

**EQUIPMENT DECONTAMINATION VERIFICATION: RINSEATE SAMPLES
FROM SURFACE IMPOUNDMENT AND LINES**

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7423

I. PRESAMPLING CONFERENCE

Program Code 2447 Total No. Samples 15

Submission Date 3/2/89 Completion Date 3/16/89

Chain of Custody? NO Special Protocol? (EPA etc.) Usual

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA
SVCA
PCB

Container Type Jar Preservative None
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions (circle one): 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 J. McR. HSE-9 Section Leader James Bell

Date 3/2/89

II. EMERGENCY SAMPLES

Emergency Status requires the following Group Leader signatures:

Customer _____ HSE-9 _____

Date _____

III. SAMPLE RECEIPT

Signature MB Phillips Date 3/3/89

HSE-9 Sample No. Range 89.10857 to 89.10871

Customer Sample No. Range 89.01260 to 89.01286

Summary for Request 89.7423

The following water samples were analyzed by Modified EPA 524.4 :

89.10862
89.10863
89.10864
89.10865
89.10866
0.99520 (QC)

Sample #89.10864 was used for the matrix spike and 89.10863 was analyzed in duplicate.

Results:

No significant VOA components were found in these samples much above the limit of quantification. Consult the individual sample reports in the folder for additional details.

QC Summary:

Sample # 0.99520 was received from Marybeth Phillips and analyzed with the water samples in this request group. The results are as follows:

Component	Amt Added (ug/L)	Recovered, ug/L (%)
Carbon Tetrachloride	84	52.8 (63%)
Bromodichloromethane	74	53.8 (73%)
Trichloroethene	67	32.8 (49%)
Bromoform	96	70.6 (74%)
Chlorobenzene	92	41.4 (45%)
Ethylbenzene	65	46.0 (71%)
o-Xylene	57	26.4 (46%)
1,1,2,2-Tetrachloroethane	81	42.5 (52%)

March 7, 1989



PK

ANALYSIS DATA SHEET # 7423

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 Chem #	CAS #	Analytical Result (Units)	Analytical Uncertainty	MDL	Comments
89.10857	/	89.01260	1336363	< MDL	±0.001 µg/ml	0.007 µg/ml	
10858	/	89.01277	↓	< MDL	↓	↓	
10859	/	89.01278	↓	< MDL	↓	↓	
10860	/	89.01280	↓	< MDL	↓	↓	
10861	/	89.01279	↓	< MDL	↓	↓	
00.01367	/		1254 11097691	5.8 µg/L	±1.1 µg/L	0.5 µg/L	Added % Rec 5.4 107

Approved By: Analyst _____
 Section Leader _____

Dee Sant
Gene Bell

Blk 23
 Notebook A6009 Page 3
 Date 3/7/89

Date 3/6/89 QC Coordinator mag 3/7/89
 Computer Entry _____ Date: 1:11

VOLATILE ORGANIC ANALYSES

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7423

I. PRESAMPLING CONFERENCE

Program Code 10447 Total No. Samples 15

Submission Date 3/2/89 Completion Date 3/16/89

Chain of Custody? NO Special Protocol? (EPA etc.) Usual

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA
SVCA
PCB

Container Type Jar Preservative None
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions (circle one): 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 JSMcR

HSE-9 Section Leader [Signature]

Date 3/2/89

II. EMERGENCY SAMPLES

Emergency Status requires the following Group Leader signatures:

Customer _____ HSE-9 _____

Date _____

III. SAMPLE RECEIPT

Signature MBPhillips Date 3/3/89

HSE-9 Sample No. Range 89.10857 to 89.10871

Customer Sample No. Range 89.01260 to 89.01286

Summary for Request 89.7423

The following water samples were analyzed by Modified EPA 524.4 :

89.10862
89.10863
89.10864
89.10865
89.10866
0.99520 (QC)

*TA 89.10864 pipe decommissioned
and in use*

Sample #89.10844 was used for the matrix spike and 89.10843 was analyzed in duplicate.

Results:

No significant VOA components were found in these samples much above the limit of quantification. Consult the individual sample reports in the folder for additional details.

QC Summary:

Sample # 0.99520 was received from Marybeth Phillips and analyzed with the water samples in this request group. The results are as follows:

Component	Amt Added (ug/L)	Recovered, ug/L (%)
Carbon Tetrachloride	84	52.8 (63%)
Bromodichloromethane	74	53.8 (73%)
Trichloroethene	67	32.8 (49%)
Bromoform	96	70.6 (74%)
Chlorobenzene	92	41.4 (45%)
Ethylbenzene	65	46.0 (71%)
o-Xylene	57	26.4 (46%)
1,1,2,2-Tetrachloroethane	81	42.5 (52%)

March 7, 1989



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 WATER
MODIFIED EPA METHOD 524.4

```
=====
SAMPLE NUMBER: 0.99520   QC
REQUEST SHEET: 89.7423   VOA SAMPLE 5MLS WATER + ISM/PSS 3-
DATA FILE NAME: >V3312::D2          *DILUTION FACTOR:      1.0
ID FILE USED: ID524W::AQ
INJECTION DATE/TIME: 890303 19:58
QUANTITATION DATE/TIME: 890306 10:57
CALIBRATION DATE/TIME: 890306 10:36
=====
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* VALUES BELOW ARE CORRECTED FOR THIS DILUTION FACTOR.

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	CLP LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	55.4	110.8	76-114
TOLUENE d8	50.0	45.3	90.6	81-117
4-BROMOFLUOROBENZENE	50.0	66.2	132.4	74-121

TARGET COMPOUNDS

RESULTS (ug/L)**	COMPOUND	CAS #	LOQ***	
<LOQ	Chloromethane	74-87-3	2.0	<i>corrected 71</i>
<LOQ	Vinyl Chloride	75-01-4	2.0	
<LOQ	Bromomethane	74-83-9	2.0	
<LOQ	Chloroethane	75-00-3	2.0	
<LOQ	Acetone	67-64-1	2.0	
<LOQ	Trichlorofluoromethane	75-69-4	2.0	
<LOQ	1,1-Dichloroethene	75-35-4	2.0	
7.2	Methylene Chloride	75-09-2	2.0	—
13.9	Carbon Disulfide	75-15-0	10.0	—
<LOQ	t-1,2-Dichloroethene	156-60-5	2.0	
<LOQ	1,1-Dichloroethane	75-34-3	2.0	
<LOQ	c-1,2-Dichloroethene	156-59-2	2.0	
<LOQ	Bromochloromethane	74-97-5	10.0	
<LOQ	Chloroform	67-66-3	2.0	
<LOQ	1,2-Dichloroethane	107-06-2	2.0	
<LOQ	1,1-Dichloropropene	563-58-6	10.0	
<LOQ	Vinyl Acetate	108-05-4	2.0	
<LOQ	2-Butanone (MEK)	78-93-3	10.0	
<LOQ	2,2-Dichloropropane	590-20-7	2.0	—
0.0	1,1,1-Trichloroethane	71-55-6	2.0	
52.8	Carbon Tetrachloride	56-23-5	2.0	84 63
<LOQ	Benzene	71-43-2	2.0	
<LOQ	1,2-Dichloropropane	78-87-5	2.0	
32.8	Trichloroethene	79-01-6	2.0	67 49
<LOQ	Dibromomethane	74-95-3	2.0	
53.8	Bromodichloromethane	75-27-4	2.0	74 73
<LOQ	t-1,3-Dichloropropene	1006-10-26	2.0	
<LOQ	c-1,3-Dichloropropene	1006-10-15	10.0	
<LOQ	1,1,2-Trichloroethane	79-00-5	2.0	
<LOQ	1,3-Dichloropropane	142-28-9	2.0	
<LOQ	Chlorodibromomethane	124-48-1	2.0	

** RESULTS ARE ug/L, +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/L

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ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN WATER
MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 0.99520 QC
REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + I
DATA FILE NAME: >V3312::D2

=====

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***	
70.6	Bromoform	75-25-2	10.0	46
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10.0	
<LOQ	Toluene	108-88-3	2.0	
<LOQ	2-Hexanone	59-17-86	10.0	
<LOQ	1,2-Dibromoethane	106-93-4	2.0	
<LOQ	Tetrachloroethene	127-18-4	2.0	
41.4	Chlorobenzene	108-90-7	2.0	45
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2.0	
<LOQ	1-Chlorohexane	544-10-5	2.0	
46.0	Ethylbenzene	100-41-4	2.0	65 71
<LOQ	m,p-Xylene (Total)	108-38-3	2.0	
		106-42-3		
26.4	o-Xylene	95-47-6	2.0	57 46
<LOQ	Styrene	100-42-5	2.0	
42.5	1,1,2,2-Tetrachloroethane	79-34-5	10.0	81 52
<LOQ	1,2,3-Trichloropropane	96-18-4	10.0	
<LOQ	Isopropylbenzene	98-82-8	10.0	
<LOQ	Bromobenzene	108-86-1	2.0	
<LOQ	n-Propylbenzene	103-65-1	2.0	
<LOQ	2-Chlorotoluene	95-49-8	2.0	
<LOQ	4-Chlorotoluene	106-43-4	10.0	
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2.0	
<LOQ	tert-Butylbenzene	98-06-6	2.0	
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2.0	
<LOQ	sec-Butylbenzene	135-98-8	2.0	
<LOQ	1,3-Dichlorobenzene	541-73-1	2.0	
<LOQ	1,4-Dichlorobenzene	106-46-7	10.0	
<LOQ	p-Isopropyltoluene	99-87-6	2.0	
<LOQ	1,2-Dichlorobenzene	95-50-1	2.0	
<LOQ	n-Butylbenzene	104-51-8	2.0	
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	10.0	
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2.0	
<LOQ	Napthalene	91-20-3	2.0	
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2.0	
<LOQ	Hexachlorobutadiene	87-68-3	2.0	

** RESULTS ARE ug/L +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS: mag 3/7/89

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HEALTH AND ENVIRONMENTAL CHEMISTRY GROUP HSE-9
ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN WATER
MODIFIED EPA METHOD 524.4

```
=====
SAMPLE NUMBER: 89.10862
REQUEST SHEET: 89.7423   VOA SAMPLE 5MLS WATER + ISM/PSS 3-
DATA FILE NAME: >V3307::D2
ID FILE USED: ID524W::AQ   *DILUTION FACTOR:      1.0
INJECTION DATE/TIME: 890303 14:58
QUANTITATION DATE/TIME: 890306 10:45
CALIBRATION DATE/TIME: 890306 10:36
=====
```

* VALUES BELOW ARE CORRECTED FOR THIS DILUTION FACTOR.

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	CLP LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	70.8	141.6	76-114
TOLUENE d8	50.0	62.0	124.1	81-117
4-BROMOFLUOROBENZENE	50.0	67.2	134.3	74-121

TARGET COMPOUNDS

RESULTS (ug/L)**	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	2.0
<LOQ	Vinyl Chloride	75-01-4	2.0
<LOQ	Bromomethane	74-83-9	2.0
<LOQ	Chloroethane	75-00-3	2.0
<LOQ	Acetone	67-64-1	2.0
<LOQ	Trichlorofluoromethane	75-69-4	2.0
<LOQ	1,1-Dichloroethene	75-35-4	2.0
6.7	Methylene Chloride	75-09-2	2.0
<LOQ	Carbon Disulfide	75-15-0	10.0
<LOQ	t-1,2-Dichloroethene	156-60-5	2.0
<LOQ	1,1-Dichloroethane	75-34-3	2.0
<LOQ	c-1,2-Dichloroethene	156-59-2	2.0
<LOQ	Bromochloromethane	74-97-5	10.0
<LOQ	Chloroform	67-66-3	2.0
<LOQ	1,2-Dichloroethane	107-06-2	2.0
<LOQ	1,1-Dichloropropene	563-58-6	10.0
<LOQ	Vinyl Acetate	108-05-4	2.0
<LOQ	2-Butanone (MEK)	78-93-3	10.0
0.0	2,2-Dichloropropane	590-20-7	2.0
<LOQ	1,1,1-Trichloroethane	71-55-6	2.0
<LOQ	Carbon Tetrachloride	56-23-5	2.0
<LOQ	Benzene	71-43-2	2.0
<LOQ	1,2-Dichloropropane	78-87-5	2.0
<LOQ	Trichloroethene	79-01-6	2.0
<LOQ	Dibromomethane	74-95-3	2.0
<LOQ	Bromodichloromethane	75-27-4	2.0
<LOQ	t-1,3-Dichloropropene	1006-10-26	2.0
<LOQ	c-1,3-Dichloropropene	1006-10-15	10.0
<LOQ	1,1,2-Trichloroethane	79-00-5	2.0
<LOQ	1,3-Dichloropropane	142-28-9	2.0
<LOQ	Chlorodibromomethane	124-48-1	2.0

** RESULTS ARE ug/L, +/- 30% UNCERTAINTY
* LOQ: LIMIT OF QUANTITATION IN ug/L

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 ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
 VOLATILE ORGANICS IN WATER
 MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 89.10862
 REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + I
 DATA FILE NAME: >V3307::D2

=====

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	10.0
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10.0
<LOQ	Toluene	108-88-3	2.0
<LOQ	2-Hexanone	59-17-86	10.0
<LOQ	1,2-Dibromoethane	106-93-4	2.0
<LOQ	Tetrachloroethene	127-18-4	2.0
<LOQ	Chlorobenzene	108-90-7	2.0
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2.0
<LOQ	1-Chlorohexane	544-10-5	2.0
<LOQ	Ethylbenzene	100-41-4	2.0
<LOQ	m,p-Xylene (Total)	108-38-3	2.0
<LOQ	o-Xylene	106-42-3	
<LOQ	Styrene	95-47-6	2.0
<LOQ	1,1,2,2-Tetrachloroethane	100-42-5	2.0
<LOQ	1,2,3-Trichloropropane	79-34-5	10.0
<LOQ	Isopropylbenzene	96-18-4	10.0
<LOQ	Bromobenzene	98-82-8	10.0
<LOQ	n-Propylbenzene	108-86-1	2.0
<LOQ	2-Chlorotoluene	103-65-1	2.0
<LOQ	4-Chlorotoluene	95-49-8	2.0
<LOQ	1,3,5-Trimethylbenzene	106-43-4	10.0
<LOQ	tert-Butylbenzene	108-67-8	2.0
<LOQ	1,2,4-Trimethylbenzene	98-06-6	2.0
<LOQ	sec-Butylbenzene	95-63-6	2.0
<LOQ	1,3-Dichlorobenzene	135-98-8	2.0
<LOQ	1,4-Dichlorobenzene	541-73-1	2.0
<LOQ	p-Isopropyltoluene	106-46-7	10.0
<LOQ	1,2-Dichlorobenzene	99-87-6	2.0
<LOQ	n-Butylbenzene	95-50-1	2.0
<LOQ	1,2-Dibromo-3-chloropropane	104-51-8	2.0
<LOQ	1,2,4-Trichlorobenzene	96-12-8	10.0
<LOQ	Napthalene	120-82-1	2.0
<LOQ	1,2,3-Trichlorobenzene	91-20-3	2.0
<LOQ	Hexachlorobutadiene	87-61-6	2.0
<LOQ		87-68-3	2.0

** RESULTS ARE ug/L +/- 30% UNCERTAINTY
 *** LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
 MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 89.10863
 REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + ISM/PSS 3-
 DATA FILE NAME: >V3308::D2 *DILUTION FACTOR: 1.0
 ID FILE USED: ID524W::AQ
 INJECTION DATE/TIME: 890303 15:58
 QUANTITATION DATE/TIME: 890306 10:48
 CALIBRATION DATE/TIME: 890306 10:36

=====

* VALUES BELOW ARE CORRECTED FOR THIS DILUTION FACTOR.

=====

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	CLP LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	57.6	115.3	76-114
TOLUENE d8	50.0	44.0	88.1	81-117
4-BROMOFLUOROBENZENE	50.0	65.4	130.9	74-121

=====

TARGET COMPOUNDS

RESULTS (ug/L)**	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	2.0
<LOQ	Vinyl Chloride	75-01-4	2.0
<LOQ	Bromomethane	74-83-9	2.0
<LOQ	Chloroethane	75-00-3	2.0
<LOQ	Acetone	67-64-1	2.0
<LOQ	Trichlorofluoromethane	75-69-4	2.0
<LOQ	1,1-Dichloroethene	75-35-4	2.0
<LOQ	Methylene Chloride	75-09-2	2.0
<LOQ	Carbon Disulfide	75-15-0	10.0
<LOQ	t-1,2-Dichloroethene	156-60-5	2.0
<LOQ	1,1-Dichloroethane	75-34-3	2.0
<LOQ	c-1,2-Dichloroethene	156-59-2	2.0
<LOQ	Bromochloromethane	74-97-5	10.0
<LOQ	Chloroform	67-66-3	2.0
<LOQ	1,2-Dichloroethane	107-06-2	2.0
<LOQ	1,1-Dichloropropene	563-58-6	10.0
<LOQ	Vinyl Acetate	108-05-4	2.0
<LOQ	2-Butanone (MEK)	78-93-3	10.0
0.0	2,2-Dichloropropane	590-20-7	2.0
<LOQ	1,1,1-Trichloroethane	71-55-6	2.0
<LOQ	Carbon Tetrachloride	56-23-5	2.0
<LOQ	Benzene	71-43-2	2.0
<LOQ	1,2-Dichloropropane	78-87-5	2.0
<LOQ	Trichloroethene	79-01-6	2.0
<LOQ	Dibromomethane	74-95-3	2.0
<LOQ	Bromodichloromethane	75-27-4	2.0
<LOQ	t-1,3-Dichloropropene	1006-10-26	2.0
<LOQ	c-1,3-Dichloropropene	1006-10-15	10.0
<LOQ	1,1,2-Trichloroethane	79-00-5	2.0
<LOQ	1,3-Dichloropropane	142-28-9	2.0
<LOQ	Chlorodibromomethane	124-48-1	2.0

** RESULTS ARE ug/L, +/- 30% UNCERTAINTY
 * LOQ: LIMIT OF QUANTITATION IN ug/L

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ORGANIC ANALYSIS SECTION

VOLATILE ORGANICS ANALYTICAL RESULTS
VOLATILE ORGANICS IN WATER
MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 89.10863
REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + I
DATA FILE NAME: >V3308::D2

=====

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	10.0
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10.0
<LOQ	Toluene	108-88-3	2.0
<LOQ	2-Hexanone	59-17-86	10.0
<LOQ	1,2-Dibromoethane	106-93-4	2.0
<LOQ	Tetrachloroethene	127-18-4	2.0
<LOQ	Chlorobenzene	108-90-7	2.0
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2.0
<LOQ	1-Chlorohexane	544-10-5	2.0
<LOQ	Ethylbenzene	100-41-4	2.0
<LOQ	m,p-Xylene (Total)	108-38-3	2.0
<LOQ	o-Xylene	106-42-3	
<LOQ	Styrene	95-47-6	2.0
<LOQ	1,1,2,2-Tetrachloroethane	100-42-5	2.0
<LOQ	1,2,3-Trichloropropane	79-34-5	10.0
<LOQ	Isopropylbenzene	96-18-4	10.0
<LOQ	Bromobenzene	98-82-8	10.0
<LOQ	n-Propylbenzene	108-86-1	2.0
<LOQ	2-Chlorotoluene	103-65-1	2.0
<LOQ	4-Chlorotoluene	95-49-8	2.0
<LOQ	1,3,5-Trimethylbenzene	106-43-4	10.0
<LOQ	tert-Butylbenzene	108-67-8	2.0
<LOQ	1,2,4-Trimethylbenzene	98-06-6	2.0
<LOQ	sec-Butylbenzene	95-63-6	2.0
<LOQ	1,3-Dichlorobenzene	135-98-8	2.0
<LOQ	1,4-Dichlorobenzene	541-73-1	2.0
<LOQ	p-Isopropyltoluene	106-46-7	10.0
<LOQ	1,2-Dichlorobenzene	99-87-6	2.0
<LOQ	n-Butylbenzene	95-50-1	2.0
<LOQ	1,2-Dibromo-3-chloropropane	104-51-8	2.0
<LOQ	1,2,4-Trichlorobenzene	96-12-8	10.0
<LOQ	Napthalene	120-82-1	2.0
<LOQ	1,2,3-Trichlorobenzene	91-20-3	2.0
<LOQ	Hexachlorobutadiene	87-61-6	2.0
<LOQ		87-68-3	2.0

** RESULTS ARE ug/L +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
MODIFIED EPA METHOD 524.4

```
=====
SAMPLE NUMBER: 89.10864
REQUEST SHEET: 89.7423   VOA SAMPLE 5MLS WATER + ISM/PSS 3-
DATA FILE NAME: >V3309::D2
ID FILE USED: ID524W::AQ          *DILUTION FACTOR:      1.0
INJECTION DATE/TIME: 890303 16:58
QUANTITATION DATE/TIME: 890306 10:50
CALIBRATION DATE/TIME: 890306 10:36
=====
```

* VALUES BELOW ARE CORRECTED FOR THIS DILUTION FACTOR.

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	CLP LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	73.6	147.2	76-114
TOLUENE d8	50.0	64.3	128.5	81-117
4-BROMOFLUOROBENZENE	50.0	62.6	125.3	74-121

TARGET COMPOUNDS

RESULTS (ug/L)**	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane		
<LOQ	Vinyl Chloride	74-87-3	2.0
<LOQ	Bromomethane	75-01-4	2.0
<LOQ	Chloroethane	74-83-9	2.0
<LOQ	Acetone	75-00-3	2.0
<LOQ	Trichlorofluoromethane	67-64-1	2.0
<LOQ	1,1-Dichloroethene	75-69-4	2.0
<LOQ	Methylene Chloride	75-35-4	2.0
<LOQ	Carbon Disulfide	75-09-2	2.0
<LOQ	t-1,2-Dichloroethene	75-15-0	10.0
<LOQ	1,1-Dichloroethane	156-60-5	2.0
<LOQ	c-1,2-Dichloroethene	75-34-3	2.0
<LOQ	Bromochloromethane	156-59-2	2.0
<LOQ	Chloroform	74-97-5	10.0
<LOQ	1,2-Dichloroethane	67-66-3	2.0
<LOQ	1,1-Dichloropropene	107-06-2	2.0
<LOQ	Vinyl Acetate	563-58-6	10.0
<LOQ	2-Butanone (MEK)	108-05-4	2.0
<LOQ	2,2-Dichloropropane	78-93-3	10.0
0.0	1,1,1-Trichloroethane	590-20-7	2.0
<LOQ	Carbon Tetrachloride	71-55-6	2.0
<LOQ	Benzene	56-23-5	2.0
<LOQ	1,2-Dichloropropane	71-43-2	2.0
<LOQ	Trichloroethene	78-87-5	2.0
<LOQ	Dibromomethane	79-01-6	2.0
<LOQ	Bromodichloromethane	74-95-3	2.0
<LOQ	t-1,3-Dichloropropene	75-27-4	2.0
<LOQ	c-1,3-Dichloropropene	1006-10-26	2.0
<LOQ	1,1,2-Trichloroethane	1006-10-15	10.0
<LOQ	1,3-Dichloropropane	79-00-5	2.0
<LOQ	Chlorodibromomethane	142-28-9	2.0
		124-48-1	2.0

** RESULTS ARE ug/L, +/- 30% UNCERTAINTY
LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 89.10864
REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + I
DATA FILE NAME: >V3309::D2

=====

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	10.0
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10.0
<LOQ	Toluene	108-88-3	2.0
<LOQ	2-Hexanone	59-17-86	10.0
<LOQ	1,2-Dibromoethane	106-93-4	2.0
<LOQ	Tetrachloroethene	127-18-4	2.0
<LOQ	Chlorobenzene	108-90-7	2.0
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2.0
<LOQ	1-Chlorohexane	544-10-5	2.0
<LOQ	Ethylbenzene	100-41-4	2.0
<LOQ	m,p-Xylene (Total)	108-38-3	2.0
<LOQ	o-Xylene	106-42-3	
<LOQ	Styrene	95-47-6	2.0
<LOQ	1,1,2,2-Tetrachloroethane	100-42-5	2.0
<LOQ	1,2,3-Trichloropropane	79-34-5	10.0
<LOQ	Isopropylbenzene	96-18-4	10.0
<LOQ	Bromobenzene	98-82-8	10.0
<LOQ	n-Propylbenzene	108-86-1	2.0
<LOQ	2-Chlorotoluene	103-65-1	2.0
<LOQ	4-Chlorotoluene	95-49-8	2.0
<LOQ	1,3,5-Trimethylbenzene	106-43-4	10.0
<LOQ	tert-Butylbenzene	108-67-8	2.0
<LOQ	1,2,4-Trimethylbenzene	98-06-6	2.0
<LOQ	sec-Butylbenzene	95-63-6	2.0
<LOQ	1,3-Dichlorobenzene	135-98-8	2.0
<LOQ	1,4-Dichlorobenzene	541-73-1	2.0
<LOQ	p-Isopropyltoluene	106-46-7	10.0
<LOQ	1,2-Dichlorobenzene	99-87-6	2.0
<LOQ	n-Butylbenzene	95-50-1	2.0
<LOQ	1,2-Dibromo-3-chloropropane	104-51-8	2.0
<LOQ	1,2,4-Trichlorobenzene	96-12-8	10.0
<LOQ	Napthalene	120-82-1	2.0
<LOQ	1,2,3-Trichlorobenzene	91-20-3	2.0
<LOQ	Hexachlorobutadiene	87-61-6	2.0
		87-68-3	2.0

** RESULTS ARE ug/L +/- 30% UNCERTAINTY
*** LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
MODIFIED EPA METHOD 524.4

```
=====
SAMPLE NUMBER: 89.10865
REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + ISM/PSS 3-
DATA FILE NAME: >V3310::D2 *DILUTION FACTOR: 1.0
ID FILE USED: ID524W::AQ
INJECTION DATE/TIME: 890303 17:58
QUANTITATION DATE/TIME: 890306 10:52
CALIBRATION DATE/TIME: 890306 10:36
=====
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* VALUES BELOW ARE CORRECTED FOR THIS DILUTION FACTOR.

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	CLP LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	75.4	150.8	76-114
TOLUENE d8	50.0	63.2	126.4	81-117
4-BROMOFLUOROBENZENE	50.0	65.7	131.5	74-121

TARGET COMPOUNDS

RESULTS (ug/L)**	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	2.0
<LOQ	Vinyl Chloride	75-01-4	2.0
<LOQ	Bromomethane	74-83-9	2.0
<LOQ	Chloroethane	75-00-3	2.0
<LOQ	Acetone	67-64-1	2.0
<LOQ	Trichlorofluoromethane	75-69-4	2.0
<LOQ	1,1-Dichloroethene	75-35-4	2.0
<LOQ	Methylene Chloride	75-09-2	2.0
<LOQ	Carbon Disulfide	75-15-0	10.0
<LOQ	t-1,2-Dichloroethene	156-60-5	2.0
<LOQ	1,1-Dichloroethane	75-34-3	2.0
<LOQ	c-1,2-Dichloroethene	156-59-2	2.0
<LOQ	Bromochloromethane	74-97-5	10.0
<LOQ	Chloroform	67-66-3	2.0
<LOQ	1,2-Dichloroethane	107-06-2	2.0
<LOQ	1,1-Dichloropropene	563-58-6	10.0
<LOQ	Vinyl Acetate	108-05-4	2.0
<LOQ	2-Butanone (MEK)	78-93-3	10.0
<LOQ	2,2-Dichloropropane	590-20-7	2.0
0.0	1,1,1-Trichloroethane	71-55-6	2.0
<LOQ	Carbon Tetrachloride	56-23-5	2.0
<LOQ	Benzene	71-43-2	2.0
<LOQ	1,2-Dichloropropane	78-87-5	2.0
<LOQ	Trichloroethene	79-01-6	2.0
<LOQ	Dibromomethane	74-95-3	2.0
<LOQ	Bromodichloromethane	75-27-4	2.0
<LOQ	t-1,3-Dichloropropene	1006-10-26	2.0
<LOQ	c-1,3-Dichloropropene	1006-10-15	10.0
<LOQ	1,1,2-Trichloroethane	79-00-5	2.0
<LOQ	1,3-Dichloropropane	142-28-9	2.0
<LOQ	Chlorodibromomethane	124-48-1	2.0

** RESULTS ARE ug/L, +/- 30% UNCERTAINTY
* LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
 MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 89.10865
 REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + I
 DATA FILE NAME: >V3310::D2

=====

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	10.0
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10.0
<LOQ	Toluene	108-88-3	2.0
<LOQ	2-Hexanone	59-17-86	10.0
<LOQ	1,2-Dibromoethane	106-93-4	2.0
<LOQ	Tetrachloroethene	127-18-4	2.0
<LOQ	Chlorobenzene	108-90-7	2.0
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2.0
<LOQ	1-Chlorohexane	544-10-5	2.0
<LOQ	Ethylbenzene	100-41-4	2.0
<LOQ	m,p-Xylene (Total)	108-38-3	2.0
<LOQ	o-Xylene	106-42-3	
<LOQ	Styrene	95-47-6	2.0
<LOQ	1,1,2,2-Tetrachloroethane	100-42-5	2.0
<LOQ	1,2,3-Trichloropropane	79-34-5	10.0
<LOQ	Isopropylbenzene	96-18-4	10.0
<LOQ	Bromobenzene	98-82-8	10.0
<LOQ	n-Propylbenzene	108-86-1	2.0
<LOQ	2-Chlorotoluene	103-65-1	2.0
<LOQ	4-Chlorotoluene	95-49-8	2.0
<LOQ	1,3,5-Trimethylbenzene	106-43-4	10.0
<LOQ	tert-Butylbenzene	108-67-8	2.0
<LOQ	1,2,4-Trimethylbenzene	98-06-6	2.0
<LOQ	sec-Butylbenzene	95-63-6	2.0
<LOQ	1,3-Dichlorobenzene	135-98-8	2.0
<LOQ	1,4-Dichlorobenzene	541-73-1	2.0
<LOQ	p-Isopropyltoluene	106-46-7	10.0
<LOQ	1,2-Dichlorobenzene	99-87-6	2.0
<LOQ	n-Butylbenzene	95-50-1	2.0
<LOQ	1,2-Dibromo-3-chloropropane	104-51-8	2.0
<LOQ	1,2,4-Trichlorobenzene	96-12-8	10.0
<LOQ	Napthalene	120-82-1	2.0
<LOQ	1,2,3-Trichlorobenzene	91-20-3	2.0
<LOQ	Hexachlorobutadiene	87-61-6	2.0
<LOQ		87-68-3	2.0

** RESULTS ARE ug/L +/- 30% UNCERTAINTY
 *** LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
MODIFIED EPA METHOD 524.4

```
=====
SAMPLE NUMBER: 89.10866
REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + ISM/PSS 3-
DATA FILE NAME: >V3311::D2 *DILUTION FACTOR: 1.0
ID FILE USED: ID524W::AQ
INJECTION DATE/TIME: 890303 18:58
QUANTITATION DATE/TIME: 890306 10:55
CALIBRATION DATE/TIME: 890306 10:36
=====
```

* VALUES BELOW ARE CORRECTED FOR THIS DILUTION FACTOR.

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	CLP LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	57.0	113.9	76-114
TOLUENE d8	50.0	46.1	92.2	81-117
4-BROMOFLUOROBENZENE	50.0	60.5	120.9	74-121

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***
<LOQ	Chloromethane	74-87-3	2.0
<LOQ	Vinyl Chloride	75-01-4	2.0
<LOQ	Bromomethane	74-83-9	2.0
<LOQ	Chloroethane	75-00-3	2.0
<LOQ	Acetone	67-64-1	2.0
<LOQ	Trichlorofluoromethane	75-69-4	2.0
<LOQ	1,1-Dichloroethene	75-35-4	2.0
<LOQ	Methylene Chloride	75-09-2	2.0
<LOQ	Carbon Disulfide	75-15-0	10.0
<LOQ	t-1,2-Dichloroethene	156-60-5	2.0
<LOQ	1,1-Dichloroethane	75-34-3	2.0
<LOQ	c-1,2-Dichloroethene	156-59-2	2.0
<LOQ	Bromochloromethane	74-97-5	10.0
<LOQ	Chloroform	67-66-3	2.0
<LOQ	1,2-Dichloroethane	107-06-2	2.0
<LOQ	1,1-Dichloropropene	563-58-6	10.0
<LOQ	Vinyl Acetate	108-05-4	2.0
<LOQ	2-Butanone (MEK)	78-93-3	10.0
<LOQ	2,2-Dichloropropane	590-20-7	2.0
0.0	1,1,1-Trichloroethane	71-55-6	2.0
<LOQ	Carbon Tetrachloride	56-23-5	2.0
<LOQ	Benzene	71-43-2	2.0
<LOQ	1,2-Dichloropropane	78-87-5	2.0
<LOQ	Trichloroethene	79-01-6	2.0
<LOQ	Dibromomethane	74-95-3	2.0
<LOQ	Bromodichloromethane	75-27-4	2.0
<LOQ	t-1,3-Dichloropropene	1006-10-26	2.0
<LOQ	c-1,3-Dichloropropene	1006-10-15	10.0
<LOQ	1,1,2-Trichloroethane	79-00-5	2.0
<LOQ	1,3-Dichloropropane	142-28-9	2.0
<LOQ	Chlorodibromomethane	124-48-1	2.0

** RESULTS ARE ug/L, +/- 30% UNCERTAINTY

*** LOQ: LIMIT OF QUANTITATION IN ug/L

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 WATER
 MODIFIED EPA METHOD 524.4

=====

SAMPLE NUMBER: 89.10866
 REQUEST SHEET: 89.7423 VOA SAMPLE 5MLS WATER + I
 DATA FILE NAME: >V3311::D2

=====

TARGET COMPOUNDS

RESULTS (ug/L) **	COMPOUND	CAS #	LOQ***
<LOQ	Bromoform	75-25-2	10.0
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10.0
<LOQ	Toluene	108-88-3	2.0
<LOQ	2-Hexanone	59-17-86	10.0
<LOQ	1,2-Dibromoethane	106-93-4	2.0
<LOQ	Tetrachloroethene	127-18-4	2.0
<LOQ	Chlorobenzene	108-90-7	2.0
<LOQ	1,1,1,2-Tetrachloroethane	630-20-6	2.0
<LOQ	1-Chlorohexane	544-10-5	2.0
<LOQ	Ethylbenzene	100-41-4	2.0
<LOQ	m,p-Xylene (Total)	108-38-3	2.0
<LOQ		106-42-3	
<LOQ	o-Xylene	95-47-6	2.0
<LOQ	Styrene	100-42-5	2.0
<LOQ	1,1,2,2-Tetrachloroethane	79-34-5	10.0
<LOQ	1,2,3-Trichloropropane	96-18-4	10.0
<LOQ	Isopropylbenzene	98-82-8	10.0
<LOQ	Bromobenzene	108-86-1	2.0
<LOQ	n-Propylbenzene	103-65-1	2.0
<LOQ	2-Chlorotoluene	95-49-8	2.0
<LOQ	4-Chlorotoluene	106-43-4	10.0
<LOQ	1,3,5-Trimethylbenzene	108-67-8	2.0
<LOQ	tert-Butylbenzene	98-06-6	2.0
<LOQ	1,2,4-Trimethylbenzene	95-63-6	2.0
<LOQ	sec-Butylbenzene	135-98-8	2.0
<LOQ	1,3-Dichlorobenzene	541-73-1	2.0
<LOQ	1,4-Dichlorobenzene	106-46-7	10.0
<LOQ	p-Isopropyltoluene	99-87-6	2.0
<LOQ	1,2-Dichlorobenzene	95-50-1	2.0
<LOQ	n-Butylbenzene	104-51-8	2.0
<LOQ	1,2-Dibromo-3-chloropropane	96-12-8	10.0
<LOQ	1,2,4-Trichlorobenzene	120-82-1	2.0
<LOQ	Napthalene	91-20-3	2.0
<LOQ	1,2,3-Trichlorobenzene	87-61-6	2.0
<LOQ	Hexachlorobutadiene	87-68-3	2.0

** RESULTS ARE ug/L +/- 30% UNCERTAINTY
 *** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

SEMIVOLATILE ORGANIC ANALYSES

Final report

HSE-9 ORGANIC ANALYSIS RESULTS
SEMIVOLATILE ORGANICS

REQUEST NUMBER: 7423
HSE-9 SAMPLE NUMBERS: 89.10867 - 89.10871
CUSTOMER SAMPLE NUMBERS: 89.01286, 89.01273 - 89.01276
SUBMITTER: STEVE McLIN
DATE: MARCH 9, 1989
NOTEBOOK/PAGE REFERENCE: R6155/PAGE 153

THE ABOVE SAMPLES WERE RECEIVED ON MARCH 2, 1989 AND WERE REFRIGERATED UNTIL EXTRACTION ON MARCH 6. EXTRACTION WAS COMPLETED ON MARCH 6 AND EXTRACT CONCENTRATION WAS COMPLETED ON MARCH 7. SAMPLE ANALYSIS WAS DONE BETWEEN MARCH 8 AND 9. THE SAMPLES WERE ANALYZED USING GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS). THE RESULTS FOR THESE SAMPLES ARE ATTACHED.

NO TARGET COMPOUNDS WERE DETECTED ABOVE THE LIMIT OF QUANTITATION OF 20 ug/L IN ANY OF THE SAMPLES.

PLEASE CALL IF YOU HAVE ANY QUESTIONS.

Dave Dogruel 3/9/89
DAVE DOGRUEL
HSE-9 ORGANIC SECTION

Jan Bell 3/16/89

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7423

I. PRESAMPLING CONFERENCE

Program Code W447 Total No. Samples 15

Submission Date 3/2/89 Completion Date 3/16/89

Chain of Custody? NO Special Protocol? (EPA etc.) Usual

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)
VOA
SVOA
PCB

Container Type Jar Preservative None
(See Memo HSE-9/88-304. Guidelines for Collection and Preservation of Liquid Samples.)

Storage Conditions (circle one): 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 [Signature] HSE-9 Section Leader [Signature]

Date 3/2/89

II. EMERGENCY SAMPLES

Emergency Status requires the following Group Leader signatures:

Customer _____ HSE-9 _____

Date _____

III. SAMPLE RECEIPT

Signature [Signature] Date 3/3/89

HSE-9 Sample No. Range 89.10857 to 89.10871

Customer Sample No. Range 89.01260 to 89.01286

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

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=====
SAMPLE NUMBER: 89.10867                DILUTION FACTOR:      .960
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3903::D4
ID FILE USED: ID BCA::ME
INJECTION DATE/TIME: 890309 03:34
QUANTITATION DATE/TIME: 890309 04:30
CALIBRATION DATE/TIME: 890303 10:49
=====
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=====

SURROGATE STANDARD RECOVERIES

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SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
2-Fluorophenol	100.0	21.9	21.9	21-100
Phenol-d5	100.0	7.2	7.2	10-94
Nitrobenzene-d5	50.0	27.6	55.2	35-114
2-Fluorobiphenyl	50.0	27.0	54.0	43-116
2,4,6-Tribromophenol	100.0	27.9	27.9	10-123
Terphenyl-d14	50.0	46.0	92.0	33-141

=====

TARGET COMPOUNDS

=====

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	N-Nitrosodimethylamine	62-75-9	20
<LOQ	Aniline	62-55-3	20
<LOQ	Phenol	108-95-2	20
<LOQ	bis(-2-Chloroethyl) Ether	111-44-4	20
<LOQ	2-Chlorophenol	95-57-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	Benzyl Alcohol	100-51-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	2-Methylphenol	95-48-7	20
<LOQ	bis(2-Chloroisopropyl) ether	39638-32-9	20
<LOQ	4-Methylphenol	106-44-5	20
<LOQ	N-Nitroso-Di-n-propylamine	621-64-7	20
<LOQ	Hexachloroethane	67-72-1	20
<LOQ	Nitrobenzene	98-95-3	20
<LOQ	Isophorone	78-59-1	20
<LOQ	2-Nitrophenol	88-75-5	20
<LOQ	2,4-Dimethylphenol	105-67-9	20
<LOQ	Benzoic Acid	65-85-0	20
<LOQ	bis(-2-Chloroethoxy) Methane	111-91-1	20
<LOQ	2,4-Dichlorophenol	120-83-2	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Naphthalene	91-20-3	20
<LOQ	4-Chloroaniline	106-47-8	20
<LOQ	Hexachlorobutadiene	87-68-3	20
<LOQ	4-Chloro-3-methylphenol	59-50-7	20
<LOQ	2-Methylnaphthalene	91-57-6	20
<LOQ	Hexachlorocyclopentadiene	77-47-4	20
<LOQ	2,4,6-Trichlorophenol	88-06-2	20
<LOQ	2,4,5-Trichlorophenol	95-95-4	20
<LOQ	2-Chloronaphthalene	91-58-7	20

* RESULTS ARE ug/L, +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

=====

SAMPLE NUMBER: 89.10867
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3903::D4

=====

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	2-Nitroaniline	88-74-4	20
<LOQ	Dimethyl Phthalate	131-11-3	20
<LOQ	Acenaphthylene	208-96-8	20
<LOQ	3-Nitroaniline	99-09-2	20
<LOQ	Acenaphthene	83-32-9	20
<LOQ	2,4-Dinitrophenol	51-28-5	20
<LOQ	4-Nitrophenol	100-02-7	20
<LOQ	Dibenzofuran	132-64-9	20
<LOQ	2,4-Dinitrotoluene	121-14-2	20
<LOQ	2,6-Dinitrotoluene	606-20-2	20
<LOQ	Diethylphthalate	84-66-2	20
<LOQ	4-Chlorophenyl-phenylether	7005-72-3	20
<LOQ	Fluorene	86-73-7	20
<LOQ	4-Nitroaniline	100-01-6	20
<LOQ	4,6-Dinitro-2-methylphenol	534-52-1	20
<LOQ	N-Nitrosodiphenylamine	86-30-6	20
<LOQ	Azobenzene	103-33-3	20
<LOQ	4-Bromophenyl-phenylether	101-55-3	20
<LOQ	Hexachlorobenzene	118-74-1	20
<LOQ	Pentachlorophenol	87-86-5	20
<LOQ	Phenanthrene	85-01-8	20
<LOQ	Anthracene	120-12-7	20
<LOQ	Di-n-Butylphthalate	84-74-2	20
<LOQ	Fluoranthene	206-44-0	20
<LOQ	Benzidine	92-87-5	20
<LOQ	Pyrene	129-00-0	20
<LOQ	Butylbenzylphthalate	85-68-7	20
<LOQ	3,3'-Dichlorobenzidine	91-94-1	20
<LOQ	Benzo(a)Anthracene	56-55-3	20
<LOQ	Bis(2-Ethylhexyl)Phthalate	117-81-7	20
<LOQ	Chrysene	218-01-9	20
<LOQ	Di-n-octyl phthalate	117-84-0	20
<LOQ	Benzo(b)fluoranthene	205-99-2	20
<LOQ	Benzo(k)fluoranthene	207-08-9	20
<LOQ	Benzo(a)Pyrene	50-32-8	20
<LOQ	Indeno(1,2,3-cd)Pyrene	193-39-5	20
<LOQ	Dibenzo(a,h)Anthracene	53-70-3	20
<LOQ	Benzo(g,h,i)Perylene	191-24-2	20

* RESULTS ARE ug/L +/- 20% UNCERTAINTY

** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

```
=====
SAMPLE NUMBER: 89.10868          DILUTION FACTOR: .955
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3904::D4
ID FILE USED: ID BCA::ME
INJECTION DATE/TIME: 890309 04:55
QUANTITATION DATE/TIME: 890309 05:51
CALIBRATION DATE/TIME: 890303 10:49
=====
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=====
SURROGATE STANDARD RECOVERIES
=====

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
2-Fluorophenol	100.0	25.2	25.2	21-100
Phenol-d5	100.0	13.1	13.1	10-94
Nitrobenzene-d5	50.0	26.4	52.9	35-114
2-Fluorobiphenyl	50.0	27.6	55.1	43-116
2,4,6-Tribromophenol	100.0	35.9	35.9	10-123
Terphenyl-d14	50.0	45.1	90.1	33-141

=====
TARGET COMPOUNDS
=====

RESULTS (ug/L)*	COMPOUND	CAS #	LOQ**
<LOQ	N-Nitrosodimethylamine	62-75-9	20
<LOQ	Aniline	62-55-3	20
<LOQ	Phenol	108-95-2	20
<LOQ	bis(-2-Chloroethyl) Ether	111-44-4	20
<LOQ	2-Chlorophenol	95-57-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	Benzyl Alcohol	100-51-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	2-Methylphenol	95-48-7	20
<LOQ	bis(2-Chloroisopropyl) ether	39638-32-9	20
<LOQ	4-Methylphenol	106-44-5	20
<LOQ	N-Nitroso-Di-n-propylamine	621-64-7	20
<LOQ	Hexachloroethane	67-72-1	20
<LOQ	Nitrobenzene	98-95-3	20
<LOQ	Isophorone	78-59-1	20
<LOQ	2-Nitrophenol	88-75-5	20
<LOQ	2,4-Dimethylphenol	105-67-9	20
<LOQ	Benzoic Acid	65-85-0	20
<LOQ	bis(-2-Chloroethoxy) Methane	111-91-1	20
<LOQ	2,4-Dichlorophenol	120-83-2	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Naphthalene	91-20-3	20
<LOQ	4-Chloroaniline	106-47-8	20
<LOQ	Hexachlorobutadiene	87-68-3	20
<LOQ	4-Chloro-3-methylphenol	59-50-7	20
<LOQ	2-Methylnaphthalene	91-57-6	20
<LOQ	Hexachlorocyclopentadiene	77-47-4	20
<LOQ	2,4,6-Trichlorophenol	88-06-2	20
<LOQ	2,4,5-Trichlorophenol	95-95-4	20
<LOQ	2-Chloronaphthalene	91-58-7	20

* RESULTS ARE ug/L, +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

=====

SAMPLE NUMBER: 89.10868
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3904::D4

=====

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	2-Nitroaniline	88-74-4	20
<LOQ	Dimethyl Phthalate	131-11-3	20
<LOQ	Acenaphthylene	208-96-8	20
<LOQ	3-Nitroaniline	99-09-2	20
<LOQ	Acenaphthene	83-32-9	20
<LOQ	2,4-Dinitrophenol	51-28-5	20
<LOQ	4-Nitrophenol	100-02-7	20
<LOQ	Dibenzofuran	132-64-9	20
<LOQ	2,4-Dinitrotoluene	121-14-2	20
<LOQ	2,6-Dinitrotoluene	606-20-2	20
<LOQ	Diethylphthalate	84-66-2	20
<LOQ	4-Chlorophenyl-phenylether	7005-72-3	20
<LOQ	Fluorene	86-73-7	20
<LOQ	4-Nitroaniline	100-01-6	20
<LOQ	4,6-Dinitro-2-methylphenol	534-52-1	20
<LOQ	N-Nitrosodiphenylamine	86-30-6	20
<LOQ	Azobenzene	103-33-3	20
<LOQ	4-Bromophenyl-phenylether	101-55-3	20
<LOQ	Hexachlorobenzene	118-74-1	20
<LOQ	Pentachlorophenol	87-86-5	20
<LOQ	Phenanthrene	85-01-8	20
<LOQ	Anthracene	120-12-7	20
<LOQ	Di-n-Butylphthalate	84-74-2	20
<LOQ	Fluoranthene	206-44-0	20
<LOQ	Benzidine	92-87-5	20
<LOQ	Pyrene	129-00-0	20
<LOQ	Butylbenzylphthalate	85-68-7	20
<LOQ	3,3'-Dichlorobenzidine	91-94-1	20
<LOQ	Benzo(a)Anthracene	56-55-3	20
<LOQ	Bis(2-Ethylhexyl)Phthalate	117-81-7	20
<LOQ	Chrysene	218-01-9	20
<LOQ	Di-n-octyl phthalate	117-84-0	20
<LOQ	Benzo(b)fluoranthene	205-99-2	20
<LOQ	Benzo(k)fluoranthene	207-08-9	20
<LOQ	Benzo(a)Pyrene	50-32-8	20
<LOQ	Indeno(1,2,3-cd)Pyrene	193-39-5	20
<LOQ	Dibenzo(a,h)Anthracene	53-70-3	20
<LOQ	Benzo(g,h,i)Perylene	191-24-2	20

* RESULTS ARE ug/L +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

```

=====
SAMPLE NUMBER: 89.10869          DILUTION FACTOR:      .960
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3905::D5
ID FILE USED: ID BCA::ME
INJECTION DATE/TIME: 890309 06:16
QUANTITATION DATE/TIME: 890309 07:12
CALIBRATION DATE/TIME: 890303 10:49
=====

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SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
2-Fluorophenol	100.0	26.2	26.2	21-100
Phenol-d5	100.0	15.1	15.1	10-94
Nitrobenzene-d5	50.0	25.6	51.2	35-114
2-Fluorobiphenyl	50.0	23.9	47.9	43-116
2,4,6-Tribromophenol	100.0	41.2	41.2	10-123
Terphenyl-d14	50.0	45.8	91.6	33-141

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	N-Nitrosodimethylamine	62-75-9	20
<LOQ	Aniline	62-55-3	20
<LOQ	Phenol	108-95-2	20
<LOQ	bis(-2-Chloroethyl) Ether	111-44-4	20
<LOQ	2-Chlorophenol	95-57-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	Benzyl Alcohol	100-51-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	2-Methylphenol	95-48-7	20
<LOQ	bis(2-Chloroisopropyl) ether	39638-32-9	20
<LOQ	4-Methylphenol	106-44-5	20
<LOQ	N-Nitroso-Di-n-propylamine	621-64-7	20
<LOQ	Hexachloroethane	67-72-1	20
<LOQ	Nitrobenzene	98-95-3	20
<LOQ	Isophorone	78-59-1	20
<LOQ	2-Nitrophenol	88-75-5	20
<LOQ	2,4-Dimethylphenol	105-67-9	20
<LOQ	Benzoic Acid	65-85-0	20
<LOQ	bis(-2-Chloroethoxy) Methane	111-91-1	20
<LOQ	2,4-Dichlorophenol	120-83-2	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Naphthalene	91-20-3	20
<LOQ	4-Chloroaniline	106-47-8	20
<LOQ	Hexachlorobutadiene	87-68-3	20
<LOQ	4-Chloro-3-methylphenol	59-50-7	20
<LOQ	2-Methylnaphthalene	91-57-6	20
<LOQ	Hexachlorocyclopentadiene	77-47-4	20
<LOQ	2,4,6-Trichlorophenol	88-06-2	20
<LOQ	2,4,5-Trichlorophenol	95-95-4	20
<LOQ	2-Chloronaphthalene	91-58-7	20

* RESULTS ARE ug/L, +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

=====

SAMPLE NUMBER: 89.10869
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3905::D5

=====

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	2-Nitroaniline	88-74-4	20
<LOQ	Dimethyl Phthalate	131-11-3	20
<LOQ	Acenaphthylene	208-96-8	20
<LOQ	3-Nitroaniline	99-09-2	20
<LOQ	Acenaphthene	83-32-9	20
<LOQ	2,4-Dinitrophenol	51-28-5	20
<LOQ	4-Nitrophenol	100-02-7	20
<LOQ	Dibenzofuran	132-64-9	20
<LOQ	2,4-Dinitrotoluene	121-14-2	20
<LOQ	2,6-Dinitrotoluene	606-20-2	20
<LOQ	Diethylphthalate	84-66-2	20
<LOQ	4-Chlorophenyl-phenylether	7005-72-3	20
<LOQ	Fluorene	86-73-7	20
<LOQ	4-Nitroaniline	100-01-6	20
<LOQ	4,6-Dinitro-2-methylphenol	534-52-1	20
<LOQ	N-Nitrosodiphenylamine	86-30-6	20
<LOQ	Azobenzene	103-33-3	20
<LOQ	4-Bromophenyl-phenylether	101-55-3	20
<LOQ	Hexachlorobenzene	118-74-1	20
<LOQ	Pentachlorophenol	87-86-5	20
<LOQ	Phenanthrene	85-01-8	20
<LOQ	Anthracene	120-12-7	20
<LOQ	Di-n-Butylphthalate	84-74-2	20
<LOQ	Fluoranthene	206-44-0	20
<LOQ	Benzidine	92-87-5	20
<LOQ	Pyrene	129-00-0	20
<LOQ	Butylbenzylphthalate	85-68-7	20
<LOQ	3,3'-Dichlorobenzidine	91-94-1	20
<LOQ	Benzo(a)Anthracene	56-55-3	20
<LOQ	Bis(2-Ethylhexyl)Phthalate	117-81-7	20
<LOQ	Chrysene	218-01-9	20
<LOQ	Di-n-octyl phthalate	117-84-0	20
<LOQ	Benzo(b)fluoranthene	205-99-2	20
<LOQ	Benzo(k)fluoranthene	207-08-9	20
<LOQ	Benzo(a)Pyrene	50-32-8	20
<LOQ	Indeno(1,2,3-cd)Pyrene	193-39-5	20
<LOQ	Dibenzo(a,h)Anthracene	53-70-3	20
<LOQ	Benzo(g,h,i)Perylene	191-24-2	20

* RESULTS ARE ug/L +/- 20% UNCERTAINTY

** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

```

=====
SAMPLE NUMBER: 89.10870          DILUTION FACTOR:      .945
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3906::D5
ID FILE USED: ID BCA::ME
INJECTION DATE/TIME: 890309 07:38
QUANTITATION DATE/TIME: 890309 08:33
CALIBRATION DATE/TIME: 890303 10:49
=====

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=====

SURROGATE STANDARD RECOVERIES

=====

SURROGATE -----	ADDED -----	RECOVERED -----	% RECOVERY -----	LIMITS (%) -----
2-Fluorophenol	100.0	28.5	28.5	21-100
Phenol-d5	100.0	15.9	15.9	10-94
Nitrobenzene-d5	50.0	29.2	58.3	35-114
2-Fluorobiphenyl	50.0	26.3	52.7	43-116
2,4,6-Tribromophenol	100.0	36.8	36.8	10-123
Terphenyl-d14	50.0	44.6	89.3	33-141

=====

TARGET COMPOUNDS

=====

RESULTS (ug/L)*	COMPOUND	CAS #	LOQ**
<LOQ	N-Nitrosodimethylamine	62-75-9	20
<LOQ	Aniline	62-55-3	20
<LOQ	Phenol	108-95-2	20
<LOQ	bis(-2-Chloroethyl)Ether	111-44-4	20
<LOQ	2-Chlorophenol	95-57-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	Benzyl Alcohol	100-51-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	2-Methylphenol	95-48-7	20
<LOQ	bis(2-Chloroisopropyl) ether	39638-32-9	20
<LOQ	4-Methylphenol	106-44-5	20
<LOQ	N-Nitroso-Di-n-propylamine	621-64-7	20
<LOQ	Hexachloroethane	67-72-1	20
<LOQ	Nitrobenzene	98-95-3	20
<LOQ	Isophorone	78-59-1	20
<LOQ	2-Nitrophenol	88-75-5	20
<LOQ	2,4-Dimethylphenol	105-67-9	20
<LOQ	Benzoic Acid	65-85-0	20
<LOQ	bis(-2-Chloroethoxy)Methane	111-91-1	20
<LOQ	2,4-Dichlorophenol	120-83-2	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Naphthalene	91-20-3	20
<LOQ	4-Chloroaniline	106-47-8	20
<LOQ	Hexachlorobutadiene	87-68-3	20
<LOQ	4-Chloro-3-methylphenol	59-50-7	20
<LOQ	2-Methylnaphthalene	91-57-6	20
<LOQ	Hexachlorocyclopentadiene	77-47-4	20
<LOQ	2,4,6-Trichlorophenol	88-06-2	20
<LOQ	2,4,5-Trichlorophenol	95-95-4	20
<LOQ	2-Chloronaphthalene	91-58-7	20

* RESULTS ARE ug/L, +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

=====

SAMPLE NUMBER: 89.10870
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3906::D5

=====

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	2-Nitroaniline	88-74-4	20
<LOQ	Dimethyl Phthalate	131-11-3	20
<LOQ	Acenaphthylene	208-96-8	20
<LOQ	3-Nitroaniline	99-09-2	20
<LOQ	Acenaphthene	83-32-9	20
<LOQ	2,4-Dinitrophenol	51-28-5	20
<LOQ	4-Nitrophenol	100-02-7	20
<LOQ	Dibenzofuran	132-64-9	20
<LOQ	2,4-Dinitrotoluene	121-14-2	20
<LOQ	2,6-Dinitrotoluene	606-20-2	20
<LOQ	Diethylphthalate	84-66-2	20
<LOQ	4-Chlorophenyl-phenylether	7005-72-3	20
<LOQ	Fluorene	86-73-7	20
<LOQ	4-Nitroaniline	100-01-6	20
<LOQ	4,6-Dinitro-2-methylphenol	534-52-1	20
<LOQ	N-Nitrosodiphenylamine	86-30-6	20
<LOQ	Azobenzene	103-33-3	20
<LOQ	4-Bromophenyl-phenylether	101-55-3	20
<LOQ	Hexachlorobenzene	118-74-1	20
<LOQ	Pentachlorophenol	87-86-5	20
<LOQ	Phenanthrene	85-01-8	20
<LOQ	Anthracene	120-12-7	20
<LOQ	Di-n-Butylphthalate	84-74-2	20
<LOQ	Fluoranthene	206-44-0	20
<LOQ	Benzidine	92-87-5	20
<LOQ	Pyrene	129-00-0	20
<LOQ	Butylbenzylphthalate	85-68-7	20
<LOQ	3,3'-Dichlorobenzidine	91-94-1	20
<LOQ	Benzo(a)Anthracene	56-55-3	20
<LOQ	Bis(2-Ethylhexyl)Phthalate	117-81-7	20
<LOQ	Chrysene	218-01-9	20
<LOQ	Di-n-octyl phthalate	117-84-0	20
<LOQ	Benzo(b)fluoranthene	205-99-2	20
<LOQ	Benzo(k)fluoranthene	207-08-9	20
<LOQ	Benzo(a)Pyrene	50-32-8	20
<LOQ	Indeno(1,2,3-cd)Pyrene	193-39-5	20
<LOQ	Dibenzo(a,h)Anthracene	53-70-3	20
<LOQ	Benzo(g,h,i)Perylene	191-24-2	20

* RESULTS ARE ug/L +/- 20% UNCERTAINTY

** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

```
=====
SAMPLE NUMBER: 89.10871
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3907::D5
ID FILE USED: ID BCA::ME
INJECTION DATE/TIME: 890309 08:52
QUANTITATION DATE/TIME: 890309 09:48
CALIBRATION DATE/TIME: 890303 10:49
DILUTION FACTOR: .945
=====
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=====

SURROGATE STANDARD RECOVERIES

=====

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
2-Fluorophenol	100.0	28.2	28.2	21-100
Phenol-d5	100.0	15.3	15.3	10-94
Nitrobenzene-d5	50.0	28.1	56.2	35-114
2-Fluorobiphenyl	50.0	27.6	55.2	43-116
2,4,6-Tribromophenol	100.0	42.0	42.0	10-123
Terphenyl-d14	50.0	46.0	92.0	33-141

=====

TARGET COMPOUNDS

=====

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	N-Nitrosodimethylamine	62-75-9	20
<LOQ	Aniline	62-55-3	20
<LOQ	Phenol	108-95-2	20
<LOQ	bis(-2-Chloroethyl) Ether	111-44-4	20
<LOQ	2-Chlorophenol	95-57-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	Benzyl Alcohol	100-51-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	2-Methylphenol	95-48-7	20
<LOQ	bis(2-Chloroisopropyl) ether	39638-32-9	20
<LOQ	4-Methylphenol	106-44-5	20
<LOQ	N-Nitroso-Di-n-propylamine	621-64-7	20
<LOQ	Hexachloroethane	67-72-1	20
<LOQ	Nitrobenzene	98-95-3	20
<LOQ	Isophorone	78-59-1	20
<LOQ	2-Nitrophenol	88-75-5	20
<LOQ	2,4-Dimethylphenol	105-67-9	20
<LOQ	Benzoic Acid	65-85-0	20
<LOQ	bis(-2-Chloroethoxy) Methane	111-91-1	20
<LOQ	2,4-Dichlorophenol	120-83-2	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Naphthalene	91-20-3	20
<LOQ	4-Chloroaniline	106-47-8	20
<LOQ	Hexachlorobutadiene	87-68-3	20
<LOQ	4-Chloro-3-methylphenol	59-50-7	20
<LOQ	2-Methylnaphthalene	91-57-6	20
<LOQ	Hexachlorocyclopentadiene	77-47-4	20
<LOQ	2,4,6-Trichlorophenol	88-06-2	20
<LOQ	2,4,5-Trichlorophenol	95-95-4	20
<LOQ	2-Chloronaphthalene	91-58-7	20

* RESULTS ARE ug/L, +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

=====

AMPLE NUMBER: 89.10871
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3907::D5

=====

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	2-Nitroaniline	88-74-4	20
<LOQ	Dimethyl Phthalate	131-11-3	20
<LOQ	Acenaphthylene	208-96-8	20
<LOQ	3-Nitroaniline	99-09-2	20
<LOQ	Acenaphthene	83-32-9	20
<LOQ	2,4-Dinitrophenol	51-28-5	20
<LOQ	4-Nitrophenol	100-02-7	20
<LOQ	Dibenzofuran	132-64-9	20
<LOQ	2,4-Dinitrotoluene	121-14-2	20
<LOQ	2,6-Dinitrotoluene	606-20-2	20
<LOQ	Diethylphthalate	84-66-2	20
<LOQ	4-Chlorophenyl-phenylether	7005-72-3	20
<LOQ	Fluorene	86-73-7	20
<LOQ	4-Nitroaniline	100-01-6	20
<LOQ	4,6-Dinitro-2-methylphenol	534-52-1	20
<LOQ	N-Nitrosodiphenylamine	86-30-6	20
<LOQ	Azobenzene	103-33-3	20
<LOQ	4-Bromophenyl-phenylether	101-55-3	20
<LOQ	Hexachlorobenzene	118-74-1	20
<LOQ	Pentachlorophenol	87-86-5	20
<LOQ	Phenanthrene	85-01-8	20
<LOQ	Anthracene	120-12-7	20
<LOQ	Di-n-Butylphthalate	84-74-2	20
<LOQ	Fluoranthene	206-44-0	20
<LOQ	Benzidine	92-87-5	20
<LOQ	Pyrene	129-00-0	20
<LOQ	Butylbenzylphthalate	85-68-7	20
<LOQ	3,3'-Dichlorobenzidine	91-94-1	20
<LOQ	Benzo(a)Anthracene	56-55-3	20
<LOQ	Bis(2-Ethylhexyl)Phthalate	117-81-7	20
<LOQ	Chrysene	218-01-9	20
<LOQ	Di-n-octyl phthalate	117-84-0	20
<LOQ	Benzo(b)fluoranthene	205-99-2	20
<LOQ	Benzo(k)fluoranthene	207-08-9	20
<LOQ	Benzo(a)Pyrene	50-32-8	20
<LOQ	Indeno(1,2,3-cd)Pyrene	193-39-5	20
<LOQ	Dibenzo(a,h)Anthracene	53-70-3	20
<LOQ	Benzo(g,h,i)Perylene	191-24-2	20

RESULTS ARE ug/L +/- 20% UNCERTAINTY
* LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

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SAMPLE NUMBER: BLANK
REQUEST SHEET: RS 7423
DATA FILE NAME: >S3908::D5
ID FILE USED: ID BCA::ME
INJECTION DATE/TIME: 890309 10:07
QUANTITATION DATE/TIME: 890309 11:03
CALIBRATION DATE/TIME: 890303 10:49
=====
DILUTION FACTOR: 1.000
=====

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SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
2-Fluorophenol	100.0	29.8	29.8	21-100
Phenol-d5	100.0	15.3	15.3	10-94
Nitrobenzene-d5	50.0	31.1	62.2	35-114
2-Fluorobiphenyl	50.0	27.8	55.6	43-116
2,4,6-Tribromophenol	100.0	32.7	32.7	10-123
Terphenyl-d14	50.0	46.9	93.9	33-141

TARGET COMPOUNDS

RESULTS (ug/L)*	COMPOUND	CAS #	LOQ**
<LOQ	N-Nitrosodimethylamine	62-75-9	20
<LOQ	Aniline	62-55-3	20
<LOQ	Phenol	108-95-2	20
<LOQ	bis(-2-Chloroethyl) Ether	111-44-4	20
<LOQ	2-Chlorophenol	95-57-8	20
<LOQ	1,3-Dichlorobenzene	541-73-1	20
<LOQ	1,4-Dichlorobenzene	106-46-7	20
<LOQ	Benzyl Alcohol	100-51-6	20
<LOQ	1,2-Dichlorobenzene	95-50-1	20
<LOQ	2-Methylphenol	95-48-7	20
<LOQ	bis(2-Chloroisopropyl) ether	39638-32-9	20
<LOQ	4-Methylphenol	106-44-5	20
<LOQ	N-Nitroso-Di-n-propylamine	621-64-7	20
<LOQ	Hexachloroethane	67-72-1	20
<LOQ	Nitrobenzene	98-95-3	20
<LOQ	Isophorone	78-59-1	20
<LOQ	2-Nitrophenol	88-75-5	20
<LOQ	2,4-Dimethylphenol	105-67-9	20
<LOQ	Benzoic Acid	65-85-0	20
<LOQ	bis(-2-Chloroethoxy) Methane	111-91-1	20
<LOQ	2,4-Dichlorophenol	120-83-2	20
<LOQ	1,2,4-Trichlorobenzene	120-82-1	20
<LOQ	Naphthalene	91-20-3	20
<LOQ	4-Chloroaniline	106-47-8	20
<LOQ	Hexachlorobutadiene	87-68-3	20
<LOQ	4-Chloro-3-methylphenol	59-50-7	20
<LOQ	2-Methylnaphthalene	91-57-6	20
<LOQ	Hexachlorocyclopentadiene	77-47-4	20
<LOQ	2,4,6-Trichlorophenol	88-06-2	20
<LOQ	2,4,5-Trichlorophenol	95-95-4	20
<LOQ	2-Chloronaphthalene	91-58-7	20

* RESULTS ARE ug/L, +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

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

SEMIVOLATILE ORGANICS ANALYTICAL RESULTS
SEMIVOLATILE ORGANICS IN WATER

=====

AMPLE NUMBER: BLANK
REQUEST SHEET: RS 7423
ATA FILE NAME: >S3908::D5

=====

TARGET COMPOUNDS

RESULTS (ug/L) *	COMPOUND	CAS #	LOQ**
<LOQ	2-Nitroaniline	88-74-4	20
<LOQ	Dimethyl Phthalate	131-11-3	20
<LOQ	Acenaphthylene	208-96-8	20
<LOQ	3-Nitroaniline	99-09-2	20
<LOQ	Acenaphthene	83-32-9	20
<LOQ	2,4-Dinitrophenol	51-28-5	20
<LOQ	4-Nitrophenol	100-02-7	20
<LOQ	Dibenzofuran	132-64-9	20
<LOQ	2,4-Dinitrotoluene	121-14-2	20
<LOQ	2,6-Dinitrotoluene	606-20-2	20
<LOQ	Diethylphthalate	84-66-2	20
<LOQ	4-Chlorophenyl-phenylether	7005-72-3	20
<LOQ	Fluorene	86-73-7	20
<LOQ	4-Nitroaniline	100-01-6	20
<LOQ	4,6-Dinitro-2-methylphenol	534-52-1	20
<LOQ	N-Nitrosodiphenylamine	86-30-6	20
<LOQ	Azobenzene	103-33-3	20
<LOQ	4-Bromophenyl-phenylether	101-55-3	20
<LOQ	Hexachlorobenzene	118-74-1	20
<LOQ	Pentachlorophenol	87-86-5	20
<LOQ	Phenanthrene	85-01-8	20
<LOQ	Anthracene	120-12-7	20
<LOQ	Di-n-Butylphthalate	84-74-2	20
<LOQ	Fluoranthene	206-44-0	20
<LOQ	Benzidine	92-87-5	20
<LOQ	Pyrene	129-00-0	20
<LOQ	Butylbenzylphthalate	85-68-7	20
<LOQ	3,3'-Dichlorobenzidine	91-94-1	20
<LOQ	Benzo(a)Anthracene	56-55-3	20
<LOQ	Bis(2-Ethylhexyl) Phthalate	117-81-7	20
<LOQ	Chrysene	218-01-9	20
<LOQ	Di-n-octyl phthalate	117-84-0	20
<LOQ	Benzo(b)fluoranthene	205-99-2	20
<LOQ	Benzo(k)fluoranthene	207-08-9	20
<LOQ	Benzo(a)Pyrene	50-32-8	20
<LOQ	Indeno(1,2,3-cd)Pyrene	193-39-5	20
<LOQ	Dibenzo(a,h)Anthracene	53-70-3	20
<LOQ	Benzo(g,h,i)Perylene	191-24-2	20

* RESULTS ARE ug/L +/- 20% UNCERTAINTY
** LOQ: LIMIT OF QUANTITATION IN ug/L

COMMENTS:

ENCLOSURE 4-B

**EQUIPMENT DECONTAMINATION VERIFICATION:
RINSEATE SAMPLES FROM UNDERGROUND STORAGE TANK SYSTEM**

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7869

I. PRESAMPLING CONFERENCE

Program Code W57R

No. Samples Expected Sea water

} VOA
SVOA
PCB
EP tox metals

Submission Date 6-26-89

Completion Date Whenever - in que

Chain of Custody? Yes

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 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

Customer Phone 5-1721

MS K490



Organic
Inorganic
Radiochem

Date 6/26/89

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____

HSE-9 Group Leader _____

Date _____

REQ	SAM NUM	CUST NUM
7869	89.13554	85UST-1
7869	89.13555	85UST-2
7869	89.13556	85UST-3
7869	89.13557	85UST-4
7869	89.13558	85UST-5

III. SAMPLE RECEIPT

Signature Elizabeth Jones Date 6/26/89 Total No. Samples Received 5+4QC

HSE-9 Sample No. Range 89.13554 to 89.13553

Customer Sample No. Range 85UST-1 to 85UST-5

VOLATILE ORGANIC ANALYSES

74 5 850
 2-11-89

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

Prepared by: CPR on 4-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Chuck Rzeszutko

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
85UST-1	89.13554	67641	< 2.		UG/L	7/27/89		Acetone
85UST-1	89.13554	71432	< 2.		UG/L	7/27/89		Benzene
85UST-1	89.13554	108861	< 2.		UG/L	7/27/89		Bromobenzene
85UST-1	89.13554	74975	< 10.		UG/L	7/27/89		Bromochloromethane
85UST-1	89.13554	75274	< 2.		UG/L	7/27/89		Bromodichloromethane
85UST-1	89.13554	75252	< 10.		UG/L	7/27/89		Bromoform
85UST-1	89.13554	74839	< 2.		UG/L	7/27/89		Bromomethane
85UST-1	89.13554	78933	< 10.		UG/L	7/27/89		2-Butanone
85UST-1	89.13554	98066	< 2.		UG/L	7/27/89		tert-Butylbenzene
85UST-1	89.13554	104518	< 2.		UG/L	7/27/89		n-Butylbenzene
85UST-1	89.13554	135988	< 2.		UG/L	7/27/89		sec-Butylbenzene
85UST-1	89.13554	75150	< 10.		UG/L	7/27/89		Carbon disulfide
85UST-1	89.13554	56235	< 2.		UG/L	7/27/89		Carbon tetrachloride
85UST-1	89.13554	108907	< 2.		UG/L	7/27/89		Chlorobenzene
85UST-1	89.13554	124481	< 2.		UG/L	7/27/89		Chlorodibromomethane
85UST-1	89.13554	75003	< 2.		UG/L	7/27/89		Chloroethane
85UST-1	89.13554	67663	< 2.		UG/L	7/27/89		Chloroform
85UST-1	89.13554	74873	< 2.		UG/L	7/27/89		Chloromethane
85UST-1	89.13554	95498	< 2.		UG/L	7/27/89		o-Chlorotoluene
85UST-1	89.13554	106434	< 10.		UG/L	7/27/89		p-Chlorotoluene
85UST-1	89.13554	98828	< 10.		UG/L	7/27/89		Cumene
85UST-1	89.13554	99876	< 2.		UG/L	7/27/89		p-Cymene
85UST-1	89.13554	96128	< 10.		UG/L	7/27/89		1,2-Dibromo-3-chloropropane
85UST-1	89.13554	124481	< 2.		UG/L	7/27/89		Dibromochloromethane
85UST-1	89.13554	106934	< 2.		UG/L	7/27/89		1,2-Dibromoethane

85UST-1	89.13554	74953	< 2.	UG/L	7/27/89	Dibromomethane
85UST-1	89.13554	563586	< 10.	UG/L	7/27/89	1,1-Dichloro-1-propene
85UST-1	89.13554	95501	< 2.	UG/L	7/27/89	o-Dichlorobenzene (1,2)
85UST-1	89.13554	541731	< 2.	UG/L	7/27/89	m-Dichlorobenzene (1,3)
85UST-1	89.13554	106467	< 10.	UG/L	7/27/89	p-Dichlorobenzene (1,4)
85UST-1	89.13554	75274	< 2.	UG/L	7/27/89	Dichlorobromomethane
85UST-1	89.13554	75343	< 2.	UG/L	7/27/89	1,1-Dichloroethane
85UST-1	89.13554	107062	< 2.	UG/L	7/27/89	1,2-Dichloroethane
85UST-1	89.13554	75354	< 2.	UG/L	7/27/89	1,1-Dichloroethene
85UST-1	89.13554	156605	< 2.	UG/L	7/27/89	trans-1,2-Dichloroethene
85UST-1	89.13554	156605	< 2.	UG/L	7/27/89	trans-1,2-Dichloroethylene
85UST-1	89.13554	75354	< 2.	UG/L	7/27/89	1,1-Dichloroethylene
85UST-1	89.13554	156592	< 2.	UG/L	7/27/89	cis-1,2-Dichloroethylene
85UST-1	89.13554	75092	< 2.	UG/L	7/27/89	Dichloromethane
85UST-1	89.13554	594207	< 2.	UG/L	7/27/89	2,2-Dichloropropane
85UST-1	89.13554	78875	< 2.	UG/L	7/27/89	1,2-Dichloropropane
85UST-1	89.13554	142289	< 2.	UG/L	7/27/89	1,3-Dichloropropane
85UST-1	89.13554	563586	< 10.	UG/L	7/27/89	1,1-Dichloropropene
85UST-1	89.13554	10061015	< 10.	UG/L	7/27/89	cis-1,3-Dichloropropene
85UST-1	89.13554	10061026	< 2.	UG/L	7/27/89	trans-1,3-Dichloropropene
85UST-1	89.13554	100414	< 2.	UG/L	7/27/89	Ethylbenzene
85UST-1	89.13554	106934	< 2.	UG/L	7/27/89	Ethylene bromide
85UST-1	89.13554	107062	< 2.	UG/L	7/27/89	Ethylene chloride
85UST-1	89.13554	106934	< 2.	UG/L	7/27/89	Ethylene dibromide
85UST-1	89.13554	75354	< 2.	UG/L	7/27/89	Ethylidene chloride
85UST-1	89.13554	75694	< 2.	UG/L	7/27/89	Fluorotrichloromethane
85UST-1	89.13554	87683	< 2.	UG/L	7/27/89	Hexachloro-1,3-butadiene
85UST-1	89.13554	87683	< 2.	UG/L	7/27/89	Hexachlorobutadiene
85UST-1	89.13554	591786	< 10.	UG/L	7/27/89	2-Hexanone
85UST-1	89.13554	98828	< 10.	UG/L	7/27/89	Isopropylbenzene
85UST-1	89.13554	99876	< 2.	UG/L	7/27/89	4-Isopropyltoluene
85UST-1	89.13554	108678	< 2.	UG/L	7/27/89	Mesitylene
85UST-1	89.13554	74839	< 2.	UG/L	7/27/89	Methyl bromide
85UST-1	89.13554	74873	< 2.	UG/L	7/27/89	Methyl chloride
85UST-1	89.13554	108101	< 10.	UG/L	7/27/89	Methyl isobutyl ketone
85UST-1	89.13554	108101	< 10.	UG/L	7/27/89	4-Methyl-2-pentanone
85UST-1	89.13554	71556	< 2.	UG/L	7/27/89	Methylchloroform
85UST-1	89.13554	75092	< 2.	UG/L	7/27/89	Methylene chloride
85UST-1	89.13554	78933	< 10.	UG/L	7/27/89	Methylethyl ketone
85UST-1	89.13554	91203	< 2.	UG/L	7/27/89	Naphthalene
85UST-1	89.13554	104518	< 2.	UG/L	7/27/89	1-Phenylbutane
85UST-1	89.13554	135988	< 2.	UG/L	7/27/89	2-Phenylbutane
85UST-1	89.13554	103651	< 2.	UG/L	7/27/89	Propylbenzene
85UST-1	89.13554	100425	< 2.	UG/L	7/27/89	Styrene
85UST-1	89.13554	630206	< 2.	UG/L	7/27/89	1,1,1,2-Tetrachloroethane

85UST-1	89.13554	79345	< 10.
85UST-1	89.13554	127184	< 2.
85UST-1	89.13554	108883	< 2.
85UST-1	89.13554	75252	< 10.
85UST-1	89.13554	120821	< 2.
85UST-1	89.13554	87616	< 2.
85UST-1	89.13554	71556	< 2.
85UST-1	89.13554	79005	< 2.
85UST-1	89.13554	79016	< 2.
85UST-1	89.13554	79016	< 2.
85UST-1	89.13554	75694	< 2.
85UST-1	89.13554	96184	< 10.
85UST-1	89.13554	95636	< 2.
85UST-1	89.13554	108678	< 2.
85UST-1	89.13554	108054	< 2.
85UST-1	89.13554	75014	< 2.
85UST-1	89.13554	75354	< 2.
85UST-1	89.13554	95476	< 2.
85UST-1	89.13554	108383	< 2.

UG/L	7/27/89

1,1,2,2-Tetrachloroethane
 Tetrachloroethylene
 Toluene
 Tribromomethane
 1,2,4-Trichlorobenzene
 1,2,3-Trichlorobenzene
 1,1,1-Trichloroethane
 1,1,2-Trichloroethane
 Trichloroethene
 Trichloroethylene
 Trichlorofluoromethane
 1,2,3-Trichloropropane
 1,2,4-Trimethylbenzene
 1,3,5-Trimethylbenzene
 Vinyl acetate
 Vinyl chloride
 Vinylidene chloride
 o-Xylene
 m-Xylene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 4-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Chuck Rzeszutko

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
85UST-2	89.13555	67641	< 2.		UG/L	8/04/89	>W7504::D5	Acetone
85UST-2	89.13555	71432	< 2.		UG/L	8/04/89	>W7504::D5	Benzene
85UST-2	89.13555	108861	< 2.		UG/L	8/04/89	>W7504::D5	Bromobenzene
85UST-2	89.13555	74975	< 10.		UG/L	8/04/89	>W7504::D5	Bromochloromethane
85UST-2	89.13555	75274	< 2.		UG/L	8/04/89	>W7504::D5	Bromodichloromethane
85UST-2	89.13555	75252	< 10.		UG/L	8/04/89	>W7504::D5	Bromoform
85UST-2	89.13555	74839	< 2.		UG/L	8/04/89	>W7504::D5	Bromomethane
85UST-2	89.13555	78933	< 10.		UG/L	8/04/89	>W7504::D5	2-Butanone
85UST-2	89.13555	98066	< 2.		UG/L	8/04/89	>W7504::D5	tert-Butylbenzene
85UST-2	89.13555	104518	< 2.		UG/L	8/04/89	>W7504::D5	n-Butylbenzene
85UST-2	89.13555	135988	< 2.		UG/L	8/04/89	>W7504::D5	sec-Butylbenzene
85UST-2	89.13555	75150	< 10.		UG/L	8/04/89	>W7504::D5	Carbon disulfide
85UST-2	89.13555	56235	< 2.		UG/L	8/04/89	>W7504::D5	Carbon tetrachloride
85UST-2	89.13555	108907	< 2.		UG/L	8/04/89	>W7504::D5	Chlorobenzene
85UST-2	89.13555	124481	< 2.		UG/L	8/04/89	>W7504::D5	Chlorodibromomethane
85UST-2	89.13555	75003	< 2.		UG/L	8/04/89	>W7504::D5	Chloroethane
85UST-2	89.13555	67663	< 2.		UG/L	8/04/89	>W7504::D5	Chloroform
85UST-2	89.13555	74873	< 2.		UG/L	8/04/89	>W7504::D5	Chloromethane
85UST-2	89.13555	95498	< 2.		UG/L	8/04/89	>W7504::D5	o-Chlorotoluene
85UST-2	89.13555	106434	< 10.		UG/L	8/04/89	>W7504::D5	p-Chlorotoluene
85UST-2	89.13555	98828	< 10.		UG/L	8/04/89	>W7504::D5	Cumene
85UST-2	89.13555	99876	< 2.		UG/L	8/04/89	>W7504::D5	p-Cymene
85UST-2	89.13555	96128	< 10.		UG/L	8/04/89	>W7504::D5	1,2-Dibromo-3-chloropropane
85UST-2	89.13555	124481	< 2.		UG/L	8/04/89	>W7504::D5	Dibromochloromethane
85UST-2	89.13555	106934	< 2.		UG/L	8/04/89	>W7504::D5	1,2-Dibromoethane

85UST-2	89.13555	74953	< 2.		UG/L	8/04/89	>W7504::D5	Dibromomethane
85UST-2	89.13555	563586	< 10.		UG/L	8/04/89	>W7504::D5	1,1-Dichloro-1-propene
85UST-2	89.13555	95501	< 2.		UG/L	8/04/89	>W7504::D5	o-Dichlorobenzene (1,2)
85UST-2	89.13555	541731	< 2.		UG/L	8/04/89	>W7504::D5	m-Dichlorobenzene (1,3)
85UST-2	89.13555	106467	< 10.		UG/L	8/04/89	>W7504::D5	p-Dichlorobenzene (1,4)
85UST-2	89.13555	75274	< 2.		UG/L	8/04/89	>W7504::D5	Dichlorobromomethane
85UST-2	89.13555	107062	< 2.		UG/L	8/04/89	>W7504::D5	1,2-Dichloroethane
85UST-2	89.13555	75343	< 2.		UG/L	8/04/89	>W7504::D5	1,1-Dichloroethane
85UST-2	89.13555	75354	< 2.		UG/L	8/04/89	>W7504::D5	1,1-Dichloroethene
85UST-2	89.13555	156605	< 2.		UG/L	8/04/89	>W7504::D5	trans-1,2-Dichloroethene
85UST-2	89.13555	156592	< 2.		UG/L	8/04/89	>W7504::D5	cis-1,2-Dichloroethylene
85UST-2	89.13555	75354	< 2.		UG/L	8/04/89	>W7504::D5	1,1-Dichloroethylene
85UST-2	89.13555	156605	< 2.		UG/L	8/04/89	>W7504::D5	trans-1,2-Dichloroethylene
85UST-2	89.13555	75092	18.5	5.55	UG/L	8/04/89	>W7504::D5	Dichloromethane
85UST-2	89.13555	78875	< 2.		UG/L	8/04/89	>W7504::D5	1,2-Dichloropropane
85UST-2	89.13555	594207	< 2.		UG/L	8/04/89	>W7504::D5	2,2-Dichloropropane
85UST-2	89.13555	142289	< 2.		UG/L	8/04/89	>W7504::D5	1,3-Dichloropropane
85UST-2	89.13555	563586	< 10.		UG/L	8/04/89	>W7504::D5	1,1-Dichloropropene
85UST-2	89.13555	100414	< 2.		UG/L	8/04/89	>W7504::D5	Ethylbenzene
85UST-2	89.13555	106934	< 2.		UG/L	8/04/89	>W7504::D5	Ethylene bromide
85UST-2	89.13555	107062	< 2.		UG/L	8/04/89	>W7504::D5	Ethylene chloride
85UST-2	89.13555	106934	< 2.		UG/L	8/04/89	>W7504::D5	Ethylene dibromide
85UST-2	89.13555	75354	< 2.		UG/L	8/04/89	>W7504::D5	Ethylidene chloride
85UST-2	89.13555	75694	< 2.		UG/L	8/04/89	>W7504::D5	Fluorotrichloromethane
85UST-2	89.13555	98828	< 10.		UG/L	8/04/89	>W7504::D5	Isopropylbenzene
85UST-2	89.13555	99876	< 2.		UG/L	8/04/89	>W7504::D5	4-Isopropyltoluene
85UST-2	89.13555	108678	< 2.		UG/L	8/04/89	>W7504::D5	Mesitylene
85UST-2	89.13555	74839	< 2.		UG/L	8/04/89	>W7504::D5	Methyl bromide
85UST-2	89.13555	74873	< 2.		UG/L	8/04/89	>W7504::D5	Methyl chloride
85UST-2	89.13555	71556	107.4	32.22	UG/L	8/04/89	>W7504::D5	Methylchloroform
85UST-2	89.13555	75092	18.5	5.55	UG/L	8/04/89	>W7504::D5	Methylene chloride
85UST-2	89.13555	78933	< 10.		UG/L	8/04/89	>W7504::D5	Methylethyl ketone
85UST-2	89.13555	91203	< 2.		UG/L	8/04/89	>W7504::D5	Naphthalene
85UST-2	89.13555	135988	< 2.		UG/L	8/04/89	>W7504::D5	2-Phenylbutane
85UST-2	89.13555	104518	< 2.		UG/L	8/04/89	>W7504::D5	1-Phenylbutane
85UST-2	89.13555	103651	< 2.		UG/L	8/04/89	>W7504::D5	Propylbenzene
85UST-2	89.13555	100425	< 2.		UG/L	8/04/89	>W7504::D5	Styrene
85UST-2	89.13555	79345	< 10.		UG/L	8/04/89	>W7504::D5	1,1,2,2-Tetrachloroethane
85UST-2	89.13555	630206	< 2.		UG/L	8/04/89	>W7504::D5	1,1,1,2-Tetrachloroethane
85UST-2	89.13555	127184	< 2.		UG/L	8/04/89	>W7504::D5	Tetrachloroethylene
85UST-2	89.13555	108883	< 2.		UG/L	8/04/89	>W7504::D5	Toluene
85UST-2	89.13555	75252	< 10.		UG/L	8/04/89	>W7504::D5	Tribromomethane
85UST-2	89.13555	120821	< 2.		UG/L	8/04/89	>W7504::D5	1,2,4-Trichlorobenzene
85UST-2	89.13555	79005	< 2.		UG/L	8/04/89	>W7504::D5	1,1,2-Trichloroethane
85UST-2	89.13555	71556	107.4	32.22	UG/L	8/04/89	>W7504::D5	1,1,1-Trichloroethane

85UST-2	89.13555	79016	< 2.	UG/L	8/04/89	>W7504::D5	Trichloroethene
85UST-2	89.13555	79016	< 2.	UG/L	8/04/89	>W7504::D5	Trichloroethylene
85UST-2	89.13555	75694	< 2.	UG/L	8/04/89	>W7504::D5	Trichlorofluoromethane
85UST-2	89.13555	96184	< 10.	UG/L	8/04/89	>W7504::D5	1,2,3-Trichloropropane
85UST-2	89.13555	108678	< 2.	UG/L	8/04/89	>W7504::D5	1,3,5-Trimethylbenzene
85UST-2	89.13555	95636	< 2.	UG/L	8/04/89	>W7504::D5	1,2,4-Trimethylbenzene
85UST-2	89.13555	108054	< 2.	UG/L	8/04/89	>W7504::D5	Vinyl acetate
85UST-2	89.13555	75014	< 2.	UG/L	8/04/89	>W7504::D5	Vinyl chloride
85UST-2	89.13555	75354	< 2.	UG/L	8/04/89	>W7504::D5	Vinylidene chloride
85UST-2	89.13555	95476	< 2.	UG/L	8/04/89	>W7504::D5	o-Xylene
85UST-2	89.13555	108383	< 2.	UG/L	8/04/89	>W7504::D5	m-Xylene

Tentative I.D.

1,1,2-Trichloro-1,2,2-Trifluoroethane

CAS # 76131

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

Prepared by: CPR on 4-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Chuck Rzeszutko

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
85UST-3	89.13556	67641	< 2.		UG/L	8/04/89	>W7506::D5	Acetone
85UST-3	89.13556	71432	< 2.		UG/L	8/04/89	>W7506::D5	Benzene
85UST-3	89.13556	108861	< 2.		UG/L	8/04/89	>W7506::D5	Bromobenzene
85UST-3	89.13556	74975	< 10.		UG/L	8/04/89	>W7506::D5	Bromochloromethane
85UST-3	89.13556	75274	< 2.		UG/L	8/04/89	>W7506::D5	Bromodichloromethane
85UST-3	89.13556	75252	< 10.		UG/L	8/04/89	>W7506::D5	Bromoform
85UST-3	89.13556	74839	< 2.		UG/L	8/04/89	>W7506::D5	Bromomethane
85UST-3	89.13556	78933	< 10.		UG/L	8/04/89	>W7506::D5	2-Butanone
85UST-3	89.13556	135988	< 2.		UG/L	8/04/89	>W7506::D5	sec-Butylbenzene
85UST-3	89.13556	98066	< 2.		UG/L	8/04/89	>W7506::D5	tert-Butylbenzene
85UST-3	89.13556	104518	< 2.		UG/L	8/04/89	>W7506::D5	n-Butylbenzene
85UST-3	89.13556	75150	< 10.		UG/L	8/04/89	>W7506::D5	Carbon disulfide
85UST-3	89.13556	56235	< 2.		UG/L	8/04/89	>W7506::D5	Carbon tetrachloride
85UST-3	89.13556	108907	< 2.		UG/L	8/04/89	>W7506::D5	Chlorobenzene
85UST-3	89.13556	124481	< 2.		UG/L	8/04/89	>W7506::D5	Chlorodibromomethane
85UST-3	89.13556	75003	< 2.		UG/L	8/04/89	>W7506::D5	Chloroethane
85UST-3	89.13556	67663	< 2.		UG/L	8/04/89	>W7506::D5	Chloroform
85UST-3	89.13556	74873	< 2.		UG/L	8/04/89	>W7506::D5	Chloromethane
85UST-3	89.13556	106434	< 10.		UG/L	8/04/89	>W7506::D5	p-Chlorotoluene
85UST-3	89.13556	95498	< 2.		UG/L	8/04/89	>W7506::D5	o-Chlorotoluene
85UST-3	89.13556	98828	< 10.		UG/L	8/04/89	>W7506::D5	Cumene
85UST-3	89.13556	99876	< 2.		UG/L	8/04/89	>W7506::D5	p-Cymene
85UST-3	89.13556	96128	< 10.		UG/L	8/04/89	>W7506::D5	1,2-Dibromo-3-chloropropane
85UST-3	89.13556	124481	< 2.		UG/L	8/04/89	>W7506::D5	Dibromochloromethane
85UST-3	89.13556	106934	< 2.		UG/L	8/04/89	>W7506::D5	1,2-Dibromoethane

85UST-3	89.13556	74953	< 2.		UG/L	8/04/89	>W7506::D5	Dibromomethane
85UST-3	89.13556	563586	< 10.		UG/L	8/04/89	>W7506::D5	1,1-Dichloro-1-propene
85UST-3	89.13556	95501	< 2.		UG/L	8/04/89	>W7506::D5	o-Dichlorobenzene (1,2)
85UST-3	89.13556	541731	< 2.		UG/L	8/04/89	>W7506::D5	m-Dichlorobenzene (1,3)
85UST-3	89.13556	106467	< 10.		UG/L	8/04/89	>W7506::D5	p-Dichlorobenzene (1,4)
85UST-3	89.13556	75274	< 2.		UG/L	8/04/89	>W7506::D5	Dichlorobromomethane
85UST-3	89.13556	107062	< 2.		UG/L	8/04/89	>W7506::D5	1,2-Dichloroethane
85UST-3	89.13556	75343	< 2.		UG/L	8/04/89	>W7506::D5	1,1-Dichloroethane
85UST-3	89.13556	156605	< 2.		UG/L	8/04/89	>W7506::D5	trans-1,2-Dichloroethene
85UST-3	89.13556	75354	< 2.		UG/L	8/04/89	>W7506::D5	1,1-Dichloroethene
85UST-3	89.13556	75354	< 2.		UG/L	8/04/89	>W7506::D5	1,1-Dichloroethylene
85UST-3	89.13556	156605	< 2.		UG/L	8/04/89	>W7506::D5	trans-1,2-Dichloroethylene
85UST-3	89.13556	156592	< 2.		UG/L	8/04/89	>W7506::D5	cis-1,2-Dichloroethylene
85UST-3	89.13556	75092	17.9	5.37	UG/L	8/04/89	>W7506::D5	Dichloromethane
85UST-3	89.13556	142289	< 2.		UG/L	8/04/89	>W7506::D5	1,3-Dichloropropane
85UST-3	89.13556	78875	< 2.		UG/L	8/04/89	>W7506::D5	1,2-Dichloropropane
85UST-3	89.13556	594207	< 2.		UG/L	8/04/89	>W7506::D5	2,2-Dichloropropane
85UST-3	89.13556	563586	< 10.		UG/L	8/04/89	>W7506::D5	1,1-Dichloropropene
85UST-3	89.13556	100414	< 2.		UG/L	8/04/89	>W7506::D5	Ethylbenzene
85UST-3	89.13556	106934	< 2.		UG/L	8/04/89	>W7506::D5	Ethylene bromide
85UST-3	89.13556	107062	< 2.		UG/L	8/04/89	>W7506::D5	Ethylene chloride
85UST-3	89.13556	106934	< 2.		UG/L	8/04/89	>W7506::D5	Ethylene dibromide
85UST-3	89.13556	75354	< 2.		UG/L	8/04/89	>W7506::D5	Ethylidene chloride
85UST-3	89.13556	75694	< 2.		UG/L	8/04/89	>W7506::D5	Fluorotrichloromethane
85UST-3	89.13556	98828	< 10.		UG/L	8/04/89	>W7506::D5	Isopropylbenzene
85UST-3	89.13556	99876	< 2.		UG/L	8/04/89	>W7506::D5	4-Isopropyltoluene
85UST-3	89.13556	108678	< 2.		UG/L	8/04/89	>W7506::D5	Mesitylene
85UST-3	89.13556	74839	< 2.		UG/L	8/04/89	>W7506::D5	Methyl bromide
85UST-3	89.13556	74873	< 2.		UG/L	8/04/89	>W7506::D5	Methyl chloride
85UST-3	89.13556	71556	106.1	31.83	UG/L	8/04/89	>W7506::D5	Methylchloroform
85UST-3	89.13556	75092	17.9	5.37	UG/L	8/04/89	>W7506::D5	Methylene chloride
85UST-3	89.13556	78933	< 10.		UG/L	8/04/89	>W7506::D5	Methylethyl ketone
85UST-3	89.13556	91203	< 2.		UG/L	8/04/89	>W7506::D5	Naphthalene
85UST-3	89.13556	104518	< 2.		UG/L	8/04/89	>W7506::D5	1-Phenylbutane
85UST-3	89.13556	135988	< 2.		UG/L	8/04/89	>W7506::D5	2-Phenylbutane
85UST-3	89.13556	103651	< 2.		UG/L	8/04/89	>W7506::D5	Propylbenzene
85UST-3	89.13556	100425	< 2.		UG/L	8/04/89	>W7506::D5	Styrene
85UST-3	89.13556	630206	< 2.		UG/L	8/04/89	>W7506::D5	1,1,1,2-Tetrachloroethane
85UST-3	89.13556	79345	< 10.		UG/L	8/04/89	>W7506::D5	1,1,2,2-Tetrachloroethane
85UST-3	89.13556	127184	< 2.		UG/L	8/04/89	>W7506::D5	Tetrachloroethylene
85UST-3	89.13556	108883	< 2.		UG/L	8/04/89	>W7506::D5	Toluene
85UST-3	89.13556	75252	< 10.		UG/L	8/04/89	>W7506::D5	Tribromomethane
85UST-3	89.13556	120821	< 2.		UG/L	8/04/89	>W7506::D5	1,2,4-Trichlorobenzene
85UST-3	89.13556	79005	< 2.		UG/L	8/04/89	>W7506::D5	1,1,2-Trichloroethane
85UST-3	89.13556	71556	106.1	31.83	UG/L	8/04/89	>W7506::D5	1,1,1-Trichloroethane

85UST-3	89.13556	79016	< 2.	UG/L	8/04/89	>W7506::D5	Trichloroethene
85UST-3	89.13556	79016	< 2.	UG/L	8/04/89	>W7506::D5	Trichloroethylene
85UST-3	89.13556	75694	< 2.	UG/L	8/04/89	>W7506::D5	Trichlorofluoromethane
85UST-3	89.13556	96184	< 10.	UG/L	8/04/89	>W7506::D5	1,2,3-Trichloropropane
85UST-3	89.13556	108678	< 2.	UG/L	8/04/89	>W7506::D5	1,3,5-Trimethylbenzene
85UST-3	89.13556	95636	< 2.	UG/L	8/04/89	>W7506::D5	1,2,4-Trimethylbenzene
85UST-3	89.13556	108054	< 2.	UG/L	8/04/89	>W7506::D5	Vinyl acetate
85UST-3	89.13556	75014	< 2.	UG/L	8/04/89	>W7506::D5	Vinyl chloride
85UST-3	89.13556	75354	< 2.	UG/L	8/04/89	>W7506::D5	Vinylidene chloride
85UST-3	89.13556	95476	< 2.	UG/L	8/04/89	>W7506::D5	o-Xylene
85UST-3	89.13556	108383	< 2.	UG/L	8/04/89	>W7506::D5	m-Xylene

Tentative I.D.

1,1,2-Trichloro, 1,2,2-Trifluoroethane CAS# 76131

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 4-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Chuck Rzeszutko

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
85UST-4	89.13557	67641	< 2.		UG/L	8/04/89	>W6T07::D8	Acetone
85UST-4	89.13557	71432	< 2.		UG/L	8/04/89	>W6T07::D8	Benzene
85UST-4	89.13557	108861	< 2.		UG/L	8/04/89	>W6T07::D8	Bromobenzene
85UST-4	89.13557	74975	< 10.		UG/L	8/04/89	>W6T07::D8	Bromochloromethane
85UST-4	89.13557	75274	< 2.		UG/L	8/04/89	>W6T07::D8	Bromodichloromethane
85UST-4	89.13557	75252	< 10.		UG/L	8/04/89	>W6T07::D8	Bromoform
85UST-4	89.13557	74839	< 2.		UG/L	8/04/89	>W6T07::D8	Bromomethane
85UST-4	89.13557	78933	< 10.		UG/L	8/04/89	>W6T07::D8	2-Butanone
85UST-4	89.13557	98066	< 2.		UG/L	8/04/89	>W6T07::D8	tert-Butylbenzene
85UST-4	89.13557	104518	< 2.		UG/L	8/04/89	>W6T07::D8	n-Butylbenzene
85UST-4	89.13557	135988	2.5	0.75	UG/L	8/04/89	>W6T07::D8	sec-Butylbenzene
85UST-4	89.13557	75150	< 10.		UG/L	8/04/89	>W6T07::D8	Carbon disulfide
85UST-4	89.13557	56235	298.1	89.43	UG/L	8/04/89	>W6T07::D8	Carbon tetrachloride
85UST-4	89.13557	108907	< 2.		UG/L	8/04/89	>W6T07::D8	Chlorobenzene
85UST-4	89.13557	124481	< 2.		UG/L	8/04/89	>W6T07::D8	Chlorodibromomethane
85UST-4	89.13557	75003	< 2.		UG/L	8/04/89	>W6T07::D8	Chloroethane
85UST-4	89.13557	67663	3.2	0.96	UG/L	8/04/89	>W6T07::D8	Chloroform
85UST-4	89.13557	74873	20.3	6.09	UG/L	8/04/89	>W6T07::D8	Chloromethane
85UST-4	89.13557	106434	< 10.		UG/L	8/04/89	>W6T07::D8	p-Chlorotoluene
85UST-4	89.13557	95498	< 2.		UG/L	8/04/89	>W6T07::D8	o-Chlorotoluene
85UST-4	89.13557	98828	< 10.		UG/L	8/04/89	>W6T07::D8	Cumene
85UST-4	89.13557	99876	2.1	0.63	UG/L	8/04/89	>W6T07::D8	p-Cymene
85UST-4	89.13557	96128	< 10.		UG/L	8/04/89	>W6T07::D8	1,2-Dibromo-3-chloropropane
85UST-4	89.13557	124481	< 2.		UG/L	8/04/89	>W6T07::D8	Dibromochloromethane
85UST-4	89.13557	106934	< 2.		UG/L	8/04/89	>W6T07::D8	1,2-Dibromoethane

85UST-4	89.13557	74953	< 2.		UG/L	8/04/89	>W6T07::D8	Dibromomethane
85UST-4	89.13557	563586	< 10.		UG/L	8/04/89	>W6T07::D8	1,1-Dichloro-1-propene
85UST-4	89.13557	95501	< 2.		UG/L	8/04/89	>W6T07::D8	o-Dichlorobenzene (1,2)
85UST-4	89.13557	541731	< 2.		UG/L	8/04/89	>W6T07::D8	m-Dichlorobenzene (1,3)
85UST-4	89.13557	106467	< 10.		UG/L	8/04/89	>W6T07::D8	p-Dichlorobenzene (1,4)
85UST-4	89.13557	75274	< 2.		UG/L	8/04/89	>W6T07::D8	Dichlorobromomethane
85UST-4	89.13557	107062	< 2.		UG/L	8/04/89	>W6T07::D8	1,2-Dichloroethane
85UST-4	89.13557	75343	< 2.		UG/L	8/04/89	>W6T07::D8	1,1-Dichloroethane
85UST-4	89.13557	75354	< 2.		UG/L	8/04/89	>W6T07::D8	1,1-Dichloroethene
85UST-4	89.13557	156605	< 2.		UG/L	8/04/89	>W6T07::D8	trans-1,2-Dichloroethene
85UST-4	89.13557	75354	< 2.		UG/L	8/04/89	>W6T07::D8	1,1-Dichloroethylene
85UST-4	89.13557	156592	< 2.		UG/L	8/04/89	>W6T07::D8	cis-1,2-Dichloroethylene
85UST-4	89.13557	156605	< 2.		UG/L	8/04/89	>W6T07::D8	trans-1,2-Dichloroethylene
85UST-4	89.13557	75092	128.2	38.46	UG/L	8/04/89	>W6T07::D8	Dichloromethane
85UST-4	89.13557	594207	< 2.		UG/L	8/04/89	>W6T07::D8	2,2-Dichloropropane
85UST-4	89.13557	142289	< 2.		UG/L	8/04/89	>W6T07::D8	1,3-Dichloropropane
85UST-4	89.13557	78875	< 2.		UG/L	8/04/89	>W6T07::D8	1,2-Dichloropropane
85UST-4	89.13557	563586	< 10.		UG/L	8/04/89	>W6T07::D8	1,1-Dichloropropene
85UST-4	89.13557	100414	< 2.		UG/L	8/04/89	>W6T07::D8	Ethylbenzene
85UST-4	89.13557	106934	< 2.		UG/L	8/04/89	>W6T07::D8	Ethylene bromide
85UST-4	89.13557	107062	< 2.		UG/L	8/04/89	>W6T07::D8	Ethylene chloride
85UST-4	89.13557	106934	< 2.		UG/L	8/04/89	>W6T07::D8	Ethylene dibromide
85UST-4	89.13557	75354	< 2.		UG/L	8/04/89	>W6T07::D8	Ethylidene chloride
85UST-4	89.13557	75694	< 2.		UG/L	8/04/89	>W6T07::D8	Fluorotrichloromethane
85UST-4	89.13557	98828	< 10.		UG/L	8/04/89	>W6T07::D8	Isopropylbenzene
85UST-4	89.13557	99876	2.1	0.63	UG/L	8/04/89	>W6T07::D8	4-Isopropyltoluene
85UST-4	89.13557	108678	< 2.		UG/L	8/04/89	>W6T07::D8	Mesitylene
85UST-4	89.13557	74839	< 2.		UG/L	8/04/89	>W6T07::D8	Methyl bromide
85UST-4	89.13557	74873	20.3	6.09	UG/L	8/04/89	>W6T07::D8	Methyl chloride
85UST-4	89.13557	71556	< 2.		UG/L	8/04/89	>W6T07::D8	Methylchloroform
85UST-4	89.13557	75092	128.2	38.46	UG/L	8/04/89	>W6T07::D8	Methylene chloride
85UST-4	89.13557	78933	< 10.		UG/L	8/04/89	>W6T07::D8	Methylethyl ketone
85UST-4	89.13557	91203	< 2.		UG/L	8/04/89	>W6T07::D8	Naphthalene
85UST-4	89.13557	104518	< 2.		UG/L	8/04/89	>W6T07::D8	1-Phenylbutane
85UST-4	89.13557	135988	2.5	0.75	UG/L	8/04/89	>W6T07::D8	2-Phenylbutane
85UST-4	89.13557	103651	< 2.		UG/L	8/04/89	>W6T07::D8	Propylbenzene
85UST-4	89.13557	100425	< 2.		UG/L	8/04/89	>W6T07::D8	Styrene
85UST-4	89.13557	630206	< 2.		UG/L	8/04/89	>W6T07::D8	1,1,1,2-Tetrachloroethane
85UST-4	89.13557	79345	< 10.		UG/L	8/04/89	>W6T07::D8	1,1,2,2-Tetrachloroethane
85UST-4	89.13557	127184	< 2.		UG/L	8/04/89	>W6T07::D8	Tetrachloroethylene
85UST-4	89.13557	108883	< 2.		UG/L	8/04/89	>W6T07::D8	Toluene
85UST-4	89.13557	75252	< 10.		UG/L	8/04/89	>W6T07::D8	Tribromomethane
85UST-4	89.13557	120821	< 2.		UG/L	8/04/89	>W6T07::D8	1,2,4-Trichlorobenzene
85UST-4	89.13557	79005	< 2.		UG/L	8/04/89	>W6T07::D8	1,1,2-Trichloroethane
85UST-4	89.13557	71556	< 2.		UG/L	8/04/89	>W6T07::D8	1,1,1-Trichloroethane

85UST-4	89.13557	79016	9.	2.7	UG/L	8/04/89	>W6T07::D8	Trichloroethene
85UST-4	89.13557	79016	9.	2.7	UG/L	8/04/89	>W6T07::D8	Trichloroethylene
85UST-4	89.13557	75694	< 2.		UG/L	8/04/89	>W6T07::D8	Trichlorofluoromethane
85UST-4	89.13557	96184	< 10.		UG/L	8/04/89	>W6T07::D8	1,2,3-Trichloropropane
85UST-4	89.13557	108678	< 2.		UG/L	8/04/89	>W6T07::D8	1,3,5-Trimethylbenzene
85UST-4	89.13557	95636	< 2.		UG/L	8/04/89	>W6T07::D8	1,2,4-Trimethylbenzene
85UST-4	89.13557	108054	< 2.		UG/L	8/04/89	>W6T07::D8	Vinyl acetate
85UST-4	89.13557	75014	< 2.		UG/L	8/04/89	>W6T07::D8	Vinyl chloride
85UST-4	89.13557	75354	< 2.		UG/L	8/04/89	>W6T07::D8	Vinylidene chloride
85UST-4	89.13557	95476	< 2.		UG/L	8/04/89	>W6T07::D8	o-Xylene
85UST-4	89.13557	108383	< 2.		UG/L	8/04/89	>W6T07::D8	m-Xylene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 4-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Chuck Rzeszutko

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
85UST-5	89.13558	67641	< 2.		UG/L	8/04/89	>W6T08::D8	Acetone
85UST-5	89.13558	71432	< 2.		UG/L	8/04/89	>W6T08::D8	Benzene
85UST-5	89.13558	108861	< 2.		UG/L	8/04/89	>W6T08::D8	Bromobenzene
85UST-5	89.13558	74975	< 10.		UG/L	8/04/89	>W6T08::D8	Bromochloromethane
85UST-5	89.13558	75274	< 2.		UG/L	8/04/89	>W6T08::D8	Bromodichloromethane
85UST-5	89.13558	75252	< 10.		UG/L	8/04/89	>W6T08::D8	Bromoform
85UST-5	89.13558	74839	< 2.		UG/L	8/04/89	>W6T08::D8	Bromomethane
85UST-5	89.13558	78933	< 10.		UG/L	8/04/89	>W6T08::D8	2-Butanone
85UST-5	89.13558	135988	< 2.		UG/L	8/04/89	>W6T08::D8	sec-Butylbenzene
85UST-5	89.13558	104518	< 2.		UG/L	8/04/89	>W6T08::D8	n-Butylbenzene
85UST-5	89.13558	98066	< 2.		UG/L	8/04/89	>W6T08::D8	tert-Butylbenzene
85UST-5	89.13558	75150	< 10.		UG/L	8/04/89	>W6T08::D8	Carbon disulfide
85UST-5	89.13558	56235	< 2.		UG/L	8/04/89	>W6T08::D8	Carbon tetrachloride
85UST-5	89.13558	108907	< 2.		UG/L	8/04/89	>W6T08::D8	Chlorobenzene
85UST-5	89.13558	124481	< 2.		UG/L	8/04/89	>W6T08::D8	Chlorodibromomethane
85UST-5	89.13558	75003	< 2.		UG/L	8/04/89	>W6T08::D8	Chloroethane
85UST-5	89.13558	67663	< 2.		UG/L	8/04/89	>W6T08::D8	Chloroform
85UST-5	89.13558	74873	< 2.		UG/L	8/04/89	>W6T08::D8	Chloromethane
85UST-5	89.13558	95498	< 2.		UG/L	8/04/89	>W6T08::D8	o-Chlorotoluene
85UST-5	89.13558	106434	< 10.		UG/L	8/04/89	>W6T08::D8	p-Chlorotoluene
85UST-5	89.13558	98828	< 10.		UG/L	8/04/89	>W6T08::D8	Cumene
85UST-5	89.13558	99876	< 2.		UG/L	8/04/89	>W6T08::D8	p-Cymene
85UST-5	89.13558	96128	< 10.		UG/L	8/04/89	>W6T08::D8	1,2-Dibromo-3-chloropropane
85UST-5	89.13558	124481	< 2.		UG/L	8/04/89	>W6T08::D8	Dibromochloromethane
85UST-5	89.13558	106934	< 2.		UG/L	8/04/89	>W6T08::D8	1,2-Dibromoethane

85UST-5	89.13558	74953	< 2.	UG/L	8/04/89	>W6T08::D8	Dibromomethane
85UST-5	89.13558	563586	< 10.	UG/L	8/04/89	>W6T08::D8	1,1-Dichloro-1-propene
85UST-5	89.13558	95501	< 2.	UG/L	8/04/89	>W6T08::D8	o-Dichlorobenzene (1,2)
85UST-5	89.13558	541731	< 2.	UG/L	8/04/89	>W6T08::D8	m-Dichlorobenzene (1,3)
85UST-5	89.13558	106467	< 10.	UG/L	8/04/89	>W6T08::D8	p-Dichlorobenzene (1,4)
85UST-5	89.13558	75274	< 2.	UG/L	8/04/89	>W6T08::D8	Dichlorobromomethane
85UST-5	89.13558	75343	< 2.	UG/L	8/04/89	>W6T08::D8	1,1-Dichloroethane
85UST-5	89.13558	107062	< 2.	UG/L	8/04/89	>W6T08::D8	1,2-Dichloroethane
85UST-5	89.13558	156605	< 2.	UG/L	8/04/89	>W6T08::D8	trans-1,2-Dichloroethene
85UST-5	89.13558	75354	< 2.	UG/L	8/04/89	>W6T08::D8	1,1-Dichloroethene
85UST-5	89.13558	156605	< 2.	UG/L	8/04/89	>W6T08::D8	trans-1,2-Dichloroethylene
85UST-5	89.13558	75354	< 2.	UG/L	8/04/89	>W6T08::D8	1,1-Dichloroethylene
85UST-5	89.13558	156592	< 2.	UG/L	8/04/89	>W6T08::D8	cis-1,2-Dichloroethylene
85UST-5	89.13558	75092	< 2.	UG/L	8/04/89	>W6T08::D8	Dichloromethane
85UST-5	89.13558	142289	< 2.	UG/L	8/04/89	>W6T08::D8	1,3-Dichloropropane
85UST-5	89.13558	78875	< 2.	UG/L	8/04/89	>W6T08::D8	1,2-Dichloropropane
85UST-5	89.13558	594207	< 2.	UG/L	8/04/89	>W6T08::D8	2,2-Dichloropropane
85UST-5	89.13558	563586	< 10.	UG/L	8/04/89	>W6T08::D8	1,1-Dichloropropene
85UST-5	89.13558	100414	< 2.	UG/L	8/04/89	>W6T08::D8	Ethylbenzene
85UST-5	89.13558	106934	< 2.	UG/L	8/04/89	>W6T08::D8	Ethylene bromide
85UST-5	89.13558	107062	< 2.	UG/L	8/04/89	>W6T08::D8	Ethylene chloride
85UST-5	89.13558	106934	< 2.	UG/L	8/04/89	>W6T08::D8	Ethylene dibromide
85UST-5	89.13558	75354	< 2.	UG/L	8/04/89	>W6T08::D8	Ethylidene chloride
85UST-5	89.13558	75694	< 2.	UG/L	8/04/89	>W6T08::D8	Fluorotrichloromethane
85UST-5	89.13558	98828	< 10.	UG/L	8/04/89	>W6T08::D8	Isopropylbenzene
85UST-5	89.13558	99876	< 2.	UG/L	8/04/89	>W6T08::D8	4-Isopropyltoluene
85UST-5	89.13558	108678	< 2.	UG/L	8/04/89	>W6T08::D8	Mesitylene
85UST-5	89.13558	74839	< 2.	UG/L	8/04/89	>W6T08::D8	Methyl bromide
85UST-5	89.13558	74873	< 2.	UG/L	8/04/89	>W6T08::D8	Methyl chloride
85UST-5	89.13558	71556	< 2.	UG/L	8/04/89	>W6T08::D8	Methylchloroform
85UST-5	89.13558	75092	< 2.	UG/L	8/04/89	>W6T08::D8	Methylene chloride
85UST-5	89.13558	78933	< 10.	UG/L	8/04/89	>W6T08::D8	Methylethyl ketone
85UST-5	89.13558	91203	< 2.	UG/L	8/04/89	>W6T08::D8	Naphthalene
85UST-5	89.13558	135988	< 2.	UG/L	8/04/89	>W6T08::D8	2-Phenylbutane
85UST-5	89.13558	104518	< 2.	UG/L	8/04/89	>W6T08::D8	1-Phenylbutane
85UST-5	89.13558	103651	< 2.	UG/L	8/04/89	>W6T08::D8	Propylbenzene
85UST-5	89.13558	100425	< 2.	UG/L	8/04/89	>W6T08::D8	Styrene
85UST-5	89.13558	79345	< 10.	UG/L	8/04/89	>W6T08::D8	1,1,2,2-Tetrachloroethane
85UST-5	89.13558	630206	< 2.	UG/L	8/04/89	>W6T08::D8	1,1,1,2-Tetrachloroethane
85UST-5	89.13558	127184	< 2.	UG/L	8/04/89	>W6T08::D8	Tetrachloroethylene
85UST-5	89.13558	108883	< 2.	UG/L	8/04/89	>W6T08::D8	Toluene
85UST-5	89.13558	75252	< 10.	UG/L	8/04/89	>W6T08::D8	Tribromomethane
85UST-5	89.13558	120821	< 2.	UG/L	8/04/89	>W6T08::D8	1,2,4-Trichlorobenzene
85UST-5	89.13558	71556	< 2.	UG/L	8/04/89	>W6T08::D8	1,1,1-Trichloroethane
85UST-5	89.13558	79005	< 2.	UG/L	8/04/89	>W6T08::D8	1,1,2-Trichloroethane

85UST-5	89.13558	79016	< 2.	UG/L	8/04/89	>W6T08::D8	Trichloroethene
85UST-5	89.13558	79016	< 2.	UG/L	8/04/89	>W6T08::D8	Trichloroethylene
85UST-5	89.13558	75694	< 2.	UG/L	8/04/89	>W6T08::D8	Trichlorofluoromethane
85UST-5	89.13558	96184	< 10.	UG/L	8/04/89	>W6T08::D8	1,2,3-Trichloropropane
85UST-5	89.13558	95636	< 2.	UG/L	8/04/89	>W6T08::D8	1,2,4-Trimethylbenzene
85UST-5	89.13558	108678	< 2.	UG/L	8/04/89	>W6T08::D8	1,3,5-Trimethylbenzene
85UST-5	89.13558	108054	< 2.	UG/L	8/04/89	>W6T08::D8	Vinyl acetate
85UST-5	89.13558	75014	< 2.	UG/L	8/04/89	>W6T08::D8	Vinyl chloride
85UST-5	89.13558	75354	< 2.	UG/L	8/04/89	>W6T08::D8	Vinylidene chloride
85UST-5	89.13558	108383	< 2.	UG/L	8/04/89	>W6T08::D8	m-Xylene
85UST-5	89.13558	95476	< 2.	UG/L	8/04/89	>W6T08::D8	o-Xylene

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

Prepared by: CPR on 4-Aug-1989

EPA VOLATILES

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Chuck Rzeszutko
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		COMPOUND-NAME
					DATE	COMMENT	
89.13561	67641	< 2.		UG/L	8/04/89	UNDER CONTROL	Acetone
89.13561	71432	< 2.		UG/L	8/04/89	UNDER CONTROL	Benzene
89.13561	108861	< 2.		UG/L	8/04/89	UNDER CONTROL	Bromobenzene
89.13561	74975	67.4	20.22	UG/L	8/04/89	UNDER CONTROL	Bromochloromethane

89.13561	75274	< 2.		UG/L	8/04/89	UNDER CONTROL	Bromodichloromethane
89.13561	75252	53.5	16.05	UG/L	8/04/89	UNDER CONTROL	Bromoform
89.13561	74839	< 2.		UG/L	8/04/89	UNDER CONTROL	Bromomethane
89.13561	78933	< 10.		UG/L	8/04/89	UNDER CONTROL	2-Butanone
89.13561	98066	< 2.		UG/L	8/04/89	UNDER CONTROL	tert-Butylbenzene
89.13561	104518	< 2.		UG/L	8/04/89	UNDER CONTROL	n-Butylbenzene
89.13561	135988	< 2.		UG/L	8/04/89	UNDER CONTROL	sec-Butylbenzene
89.13561	75150	< 10.		UG/L	8/04/89	UNDER CONTROL	Carbon disulfide
89.13561	56235	36.8	11.04	UG/L	8/04/89	WARNING 2-3 SIG	Carbon tetrachloride
89.13561	108907	< 2.		UG/L	8/04/89	UNDER CONTROL	Chlorobenzene
89.13561	124481	47.5	14.25	UG/L	8/04/89	UNDER CONTROL	Chlorodibromomethane
89.13561	75003	< 2.		UG/L	8/04/89	UNDER CONTROL	Chloroethane
89.13561	67663	< 2.		UG/L	8/04/89	UNDER CONTROL	Chloroform
89.13561	74873	< 2.		UG/L	8/04/89	UNDER CONTROL	Chloromethane
89.13561	95498	< 2.		UG/L	8/04/89	UNDER CONTROL	o-Chlorotoluene
89.13561	106434	< 10.		UG/L	8/04/89	OUT OF CONTROL	p-Chlorotoluene
89.13561	98828	< 10.		UG/L	8/04/89	UNDER CONTROL	Cumene
89.13561	99876	< 2.		UG/L	8/04/89	UNDER CONTROL	p-Cymene
89.13561	96128	< 10.		UG/L	8/04/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.13561	124481	47.5	14.25	UG/L	8/04/89	UNDER CONTROL	Dibromochloromethane
89.13561	106934	< 2.		UG/L	8/04/89	UNDER CONTROL	1,2-Dibromoethane
89.13561	74953	< 2.		UG/L	8/04/89	UNDER CONTROL	Dibromomethane
89.13561	563586	< 10.		UG/L	8/04/89	UNDER CONTROL	1,1-Dichloro-1-propene
89.13561	95501	< 2.		UG/L	8/04/89	OUT OF CONTROL	o-Dichlorobenzene (1,2)
89.13561	541731	< 2.		UG/L	8/04/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.13561	106467	< 10.		UG/L	8/04/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.13561	75274	< 2.		UG/L	8/04/89	UNDER CONTROL	Dichlorobromomethane
89.13561	107062	< 2.		UG/L	8/04/89	UNDER CONTROL	1,2-Dichloroethane
89.13561	75343	< 2.		UG/L	8/04/89	UNDER CONTROL	1,1-Dichloroethane
89.13561	75354	< 2.		UG/L	8/04/89	UNDER CONTROL	1,1-Dichloroethene
89.13561	156605	< 2.		UG/L	8/04/89	UNDER CONTROL	trans-1,2-Dichloroethene
89.13561	75354	< 2.		UG/L	8/04/89	UNDER CONTROL	1,1-Dichloroethylene
89.13561	156592	< 2.		UG/L	8/04/89	UNDER CONTROL	cis-1,2-Dichloroethylene
89.13561	156605	< 2.		UG/L	8/04/89	UNDER CONTROL	trans-1,2-Dichloroethylene
89.13561	75092	< 2.		UG/L	8/04/89	UNDER CONTROL	Dichloromethane
89.13561	78875	< 2.		UG/L	8/04/89	UNDER CONTROL	1,2-Dichloropropane
89.13561	594207	< 2.		UG/L	8/04/89	UNDER CONTROL	2,2-Dichloropropane
89.13561	142289	54.3	16.29	UG/L	8/04/89	UNDER CONTROL	1,3-Dichloropropane
89.13561	563586	< 10.		UG/L	8/04/89	UNDER CONTROL	1,1-Dichloropropene
89.13561	100414	< 2.		UG/L	8/04/89	OUT OF CONTROL	Ethylbenzene
89.13561	106934	< 2.		UG/L	8/04/89	UNDER CONTROL	Ethylene bromide
89.13561	107062	< 2.		UG/L	8/04/89	UNDER CONTROL	Ethylene chloride
89.13561	106934	< 2.		UG/L	8/04/89	UNDER CONTROL	Ethylene dibromide
89.13561	75354	< 2.		UG/L	8/04/89	UNDER CONTROL	Ethylidene chloride
89.13561	75694	< 2.		UG/L	8/04/89	UNDER CONTROL	Fluorotrichloromethane

89.13561	98828	< 10.		UG/L	8/04/89	UNDER CONTROL	Isopropylbenzene
89.13561	99876	< 2.		UG/L	8/04/89	UNDER CONTROL	4-Isopropyltoluene
89.13561	108678	< 2.		UG/L	8/04/89	UNDER CONTROL	Mesitylene
89.13561	74839	< 2.		UG/L	8/04/89	UNDER CONTROL	Methyl bromide
89.13561	74873	< 2.		UG/L	8/04/89	UNDER CONTROL	Methyl chloride
89.13561	71556	20.	6.	UG/L	8/04/89	OUT OF CONTROL	Methylchloroform
89.13561	75092	< 2.		UG/L	8/04/89	UNDER CONTROL	Methylene chloride
89.13561	78933	< 10.		UG/L	8/04/89	UNDER CONTROL	Methylethyl ketone
89.13561	91203	< 2.		UG/L	8/04/89	UNDER CONTROL	Naphthalene
89.13561	135988	< 2.		UG/L	8/04/89	UNDER CONTROL	2-Phenylbutane
89.13561	104518	< 2.		UG/L	8/04/89	UNDER CONTROL	1-Phenylbutane
89.13561	103651	< 2.		UG/L	8/04/89	UNDER CONTROL	Propylbenzene
89.13561	100425	< 2.		UG/L	8/04/89	UNDER CONTROL	Styrene
89.13561	79345	< 10.		UG/L	8/04/89	OUT OF CONTROL	1,1,2,2-Tetrachloroethane
89.13561	630206	< 2.		UG/L	8/04/89	UNDER CONTROL	1,1,1,2-Tetrachloroethane
89.13561	127184	36.3	10.89	UG/L	8/04/89	WARNING 2-3 SIG	Tetrachloroethylene
89.13561	108883	53.5	16.05	UG/L	8/04/89	UNDER CONTROL	Toluene
89.13561	75252	53.5	16.05	UG/L	8/04/89	UNDER CONTROL	Tribromomethane
89.13561	120821	< 2.		UG/L	8/04/89	UNDER CONTROL	1,2,4-Trichlorobenzene
89.13561	71556	20.	6.	UG/L	8/04/89	OUT OF CONTROL	1,1,1-Trichloroethane
89.13561	79005	< 2.		UG/L	8/04/89	UNDER CONTROL	1,1,2-Trichloroethane
89.13561	79016	< 2.		UG/L	8/04/89	UNDER CONTROL	Trichloroethene
89.13561	79016	< 2.		UG/L	8/04/89	UNDER CONTROL	Trichloroethylene
89.13561	75694	< 2.		UG/L	8/04/89	UNDER CONTROL	Trichlorofluoromethane
89.13561	96184	< 10.		UG/L	8/04/89	UNDER CONTROL	1,2,3-Trichloropropane
89.13561	95636	< 2.		UG/L	8/04/89	UNDER CONTROL	1,2,4-Trimethylbenzene
89.13561	108678	< 2.		UG/L	8/04/89	UNDER CONTROL	1,3,5-Trimethylbenzene
89.13561	108054	67.7	20.31	UG/L	8/04/89	UNDER CONTROL	Vinyl acetate
89.13561	75014	< 2.		UG/L	8/04/89	UNDER CONTROL	Vinyl chloride
89.13561	75354	< 2.		UG/L	8/04/89	UNDER CONTROL	Vinylidene chloride
89.13561	108383	< 2.		UG/L	8/04/89	UNDER CONTROL	m-Xylene
89.13561	95476	< 2.		UG/L	8/04/89	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
89.13554	101.2	UG/L	7/27/89	
89.13555	109.5	%	8/04/89	>W7504::D5
89.13556	115.8	%	8/04/89	>W7506::D5
89.13557	155.9	%	8/04/89	>W6T07::D8
89.13558		%	8/04/89	>W6T08::D8

89.13561 112.4 % 8/04/89 >W7510::D5

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13554	100.	UG/L	7/27/89	
89.13555	103.6	%	8/04/89	>W7504::D5
89.13556	106.2	%	8/04/89	>W7506::D5
89.13557	0.2	%	8/04/89	>W6T07::D8
89.13558		%	8/04/89	>W6T08::D8
89.13561	108.8	%	8/04/89	>W7510::D5

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

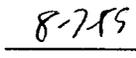
SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13554	100.9	UG/L	7/27/89	
89.13555	104.4	%	8/04/89	>W7504::D5
89.13556	113.3	%	8/04/89	>W7506::D5
89.13557		%	8/04/89	>W6T07::D8
89.13558		%	8/04/89	>W6T08::D8
89.13561	106.9	%	8/04/89	>W7510::D5

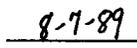

Analyst


8-7-89
Section Leader


QA Officer


8-7-89
Date


8-7-89
Date


8-9-89
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.

POLYCHLORINATED BIPHENYL ANALYSES

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7809

I. PRESAMPLING CONFERENCE

Program Code W57R

No. Samples Expected Sea water } VOA }
SVOA }
PCB }
EP tox metals }

Submission Date 6-26-89

Completion Date Whenever - in the

Chain of Custody? Yes

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 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
Customer Phone 5-1721 MS K490

[Signature]
Organic
Inorganic
Radiochem

Date 6/26/89

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

III. SAMPLE RECEIPT

Signature Elizabeth Jones Date 6/26/89 Total No. Samples Received 5+40C

HSE-9 Sample No. Range 89.13554 to 89.13562

Customer Sample No. Range 85UST-1 to 85UST-5

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

Prepared by: ESG on 7-Jul-1989

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Dee Seitz

OWNER: Steve McIn GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85UST-1	89.13554	1336363	< 0.5		UG/L	7/07/89	Mixed-Aroclor
85UST-1	89.13554	53469219	< 0.5		UG/L	7/07/89	Aroclor 1242
85UST-1	89.13554	11097691	< 0.5		UG/L	7/07/89	Aroclor 1254
85UST-1	89.13554	11096825	< 0.5		UG/L	7/07/89	Aroclor 1260
85UST-2	89.13555	1336363	< 0.5		UG/L	7/07/89	Mixed-Aroclor
85UST-2	89.13555	53469219	< 0.5		UG/L	7/07/89	Aroclor 1242
85UST-2	89.13555	11097691	< 0.5		UG/L	7/07/89	Aroclor 1254
85UST-2	89.13555	11096825	< 0.5		UG/L	7/07/89	Aroclor 1260
85UST-3	89.13556	1336363	< 0.5		UG/L	7/07/89	Mixed-Aroclor
85UST-3	89.13556	53469219	< 0.5		UG/L	7/07/89	Aroclor 1242
85UST-3	89.13556	11097691	< 0.5		UG/L	7/07/89	Aroclor 1254
85UST-3	89.13556	11096825	< 0.5		UG/L	7/07/89	Aroclor 1260
85UST-4	89.13557	1336363	< 0.5		UG/L	7/07/89	Mixed-Aroclor
85UST-4	89.13557	53469219	< 0.5		UG/L	7/07/89	Aroclor 1242
85UST-4	89.13557	11097691	< 0.5		UG/L	7/07/89	Aroclor 1254
85UST-4	89.13557	11096825	< 0.5		UG/L	7/07/89	Aroclor 1260
85UST-5	89.13558	1336363	< 0.5		UG/L	7/07/89	Mixed-Aroclor
85UST-5	89.13558	53469219	< 0.5		UG/L	7/07/89	Aroclor 1242
85UST-5	89.13558	11097691	< 0.5		UG/L	7/07/89	Aroclor 1254
85UST-5	89.13558	11096825	< 0.5		UG/L	7/07/89	Aroclor 1260

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

Prepared by: ESG on 7-Jul-1989

REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Dee Seitz

OWNER: Steve McIn 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
00.01359	00.01359	1336363	8.8	1.8	UG/L	7.2	1.7	7/07/89	UNDER CONTROL	Mixed-Aroclor
00.01359	00.01359	11104282	8.8	1.8	UG/L	7.2	1.73	7/07/89	UNDER CONTROL	Aroclor 1221
00.01359	00.01359	53469219	< 0.5		UG/L			7/07/89	UNDER CONTROL	Aroclor 1242
00.01359	00.01359	11097691	< 0.5		UG/L			7/07/89	UNDER CONTROL	Aroclor 1254
00.01359	00.01359	11096825	< 0.5		UG/L			7/07/89	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
89.13560	1336363	1.36	0.3	UG/L	7/07/89	UNDER CONTROL	Mixed-Aroclor
89.13560	11104282	1.36	0.3	UG/L	7/07/89	UNDER CONTROL	Aroclor 1221
89.13560	53469219	< 0.5		UG/L	7/07/89	UNDER CONTROL	Aroclor 1242
89.13560	11097691	< 0.5		UG/L	7/07/89	UNDER CONTROL	Aroclor 1254
89.13560	11096825	< 0.5		UG/L	7/07/89	UNDER CONTROL	Aroclor 1260

Analyst

Section Leader

QA Officer

Luett

[Signature]

mag

Date

Date

Date

7/9/89

7/7/89

7/7/89

The control status of the preceding 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: 3253

Handwritten notes:
3
11/1/89

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: AG REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
85UST-1	89.13554	< 20.		UG/L	7/06/89	
85UST-2	89.13555	< 20.		UG/L	7/06/89	
85UST-3	89.13556	< 20.		UG/L	7/06/89	
85UST-4	89.13557	< 20.		UG/L	7/06/89	
85UST-5	89.13558	< 20.		UG/L	7/06/89	

REPORT NUMBER: 3253 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: AG REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
00.01100	00.01100	5.3	0.3	MG/L	5.	0.28	7/06/89	UNDER CONTROL
00.01100	00.01100	5.3	0.5	MG/L	5.	0.28	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	500.	50.	UG/L	7/06/89	UNDER CONTROL

J. Montoya
Analyst

MLB
Section Leader

mag
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
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: 3254

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: AS REQUEST NUMBER: 7869 MATRIX: WN 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
85UST-1	89.13554	< 0.2		MG/L	7/06/89	
85UST-2	89.13555	< 0.2		MG/L	7/06/89	
85UST-3	89.13556	< 0.2		MG/L	7/06/89	
85UST-4	89.13557	< 0.2		MG/L	7/06/89	
85UST-5	89.13558	< 0.2		MG/L	7/06/89	

REPORT NUMBER: 3254 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: AS REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
00.01101	00.01101	5.5	0.6	MG/L	5.	0.7	7/06/89	UNDER CONTROL
00.01101	00.01101	5.5	0.6	MG/L	5.	0.7	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	23.	2.3	MG/L	7/06/89	UNDER CONTROL

Janet Montoya
Analyst

CMKB
Section Leader

mag
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
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: 3255

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

Prepared by: JD MCNTOYA on 6-Jul-1989

ANALYSIS: BA REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
85UST-1	89.13554	30.	6.	UG/L	7/06/89	
85UST-2	89.13555	25.	6.	UG/L	7/06/89	
85UST-3	89.13556	30.	6.	UG/L	7/06/89	
85UST-4	89.13557	17.	6.	UG/L	7/06/89	
85UST-5	89.13558	30.	6.	UG/L	7/06/89	

REPORT NUMBER: 3255 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: BA REQUEST NUMBER: 7869 MATRIX: WN 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
00.01100	00.01100	107.	11.	MG/L	100.	10.2	7/06/89	UNDER CONTROL
00.01100	00.01100	108.	11.	MG/L	100.	10.2	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	2.	0.2	MG/L	7/06/89	UNDER CONTROL

Janet Montoya
Analyst

CMWB
Section Leader

mag
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
Date

The control status of the preceding 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: 3256

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: CD REQUEST NUMBER: 7869 MATRIX: WN 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
85UST-1	89.13554	< 90.		UG/L	7/06/89	
85UST-2	89.13555	< 90.		UG/L	7/06/89	
85UST-3	89.13556	< 90.		UG/L	7/06/89	
85UST-4	89.13557	< 90.		UG/L	7/06/89	
85UST-5	89.13558	< 90.		UG/L	7/06/89	

REPORT NUMBER: 3256 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: CD REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
00.01100	00.01100	1.2	0.1	MG/L	1.	0.03	7/06/89	UNDER CONTROL
00.01100	00.01100	0.9	0.09	MG/L	1.	0.03	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	2.	0.2	MG/L	7/06/89	UNDER CONTROL

JD Montoya
Analyst

CMYB
Section Leader

mag
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
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: 3257

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: CR REQUEST NUMBER: 7869 MATRIX: WN 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
85UST-1	89.13554	< 20.		UG/L	7/06/89	
85UST-2	89.13555	< 20.		UG/L	7/06/89	
85UST-3	89.13556	< 20.		UG/L	7/06/89	
85UST-4	89.13557	50.	20.	UG/L	7/06/89	
85UST-5	89.13558	40.	20.	UG/L	7/06/89	

REPORT NUMBER: 3257 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: CR REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
00.01100	00.01100	5.6	0.6	MG/L	5.	0.42	7/06/89	UNDER CONTROL
00.01100	00.01100	5.2	0.5	MG/L	5.	0.42	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	2.	0.2	MG/L	7/06/89	UNDER CONTROL

JD Montoya
Analyst

MSLB
Section Leader

WAB
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
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: 3602

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

Prepared by: ESG on 8-Aug-1989

ANALYSIS: HG REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 245.2

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85UST-1	89.13554	0.48	0.2	UG/L	7/31/89	
85UST-1	89.13554	0.48	0.2	UG/L	7/31/89	
85UST-2	89.13555	< 0.2		UG/L	7/31/89	
85UST-3	89.13556	< 0.2		UG/L	7/31/89	
85UST-4	89.13557	< 0.2		UG/L	7/31/89	
85UST-5	89.13558	< 0.2		UG/L	7/31/89	

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

Prepared by: ESG on 8-Aug-1989

ANALYSIS: HG REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 245.2

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.99929	00.99929	2.05	0.4	UG/L	2.5	0.3	7/31/89	UNDER CONTROL
00.99929	00.99929	1.98	0.4	UG/L	2.5	0.3	7/31/89	UNDER CONTROL
00.99929	00.99929	2.06	0.4	UG/L	2.5	0.3	7/31/89	UNDER CONTROL

mcw
Analyst

Steve McLin
Section Leader

mag
QA Officer

8-9-89
Date

8/9/89
Date

8-1-89
Date

The control status of the preceding 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: 3258

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: PB REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
85UST-1	89.13554	< 40.		UG/L	7/06/89	
85UST-2	89.13555	< 40.		UG/L	7/06/89	
85UST-3	89.13556	< 40.		UG/L	7/06/89	
85UST-4	89.13557	< 40.		UG/L	7/06/89	
85UST-5	89.13558	< 40.		UG/L	7/06/89	

REPORT NUMBER: 3258 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: PB REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
00.01100	00.01100	4.3	0.4	MG/L	5.	0.44	7/06/89	UNDER CONTROL
00.01100	00.01100	4.7	0.5	MG/L	5.	0.44	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	2.	0.2	MG/L	7/06/89	UNDER CONTROL

Janet Montoya
Analyst

SMCB
Section Leader

nan
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
Date

The control status of the preceding 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: 3259

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: SE REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
85UST-1	89.13554	< 0.2		MG/L	7/06/89	
85UST-2	89.13555	< 0.2		MG/L	7/06/89	
85UST-3	89.13556	< 0.2		MG/L	7/06/89	
85UST-4	89.13557	< 0.2		MG/L	7/06/89	
85UST-5	89.13558	< 0.2		MG/L	7/06/89	

REPORT NUMBER: 3259 (continued)

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

Prepared by: JD MONTOYA on 6-Jul-1989

ANALYSIS: SE REQUEST NUMBER: 7869 MATRIX: WN ANALYST: Janet Montoya

OWNER: Steve McIn 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
00.01101	00.01101	0.84	0.2	MG/L	0.99	0.15	7/06/89	UNDER CONTROL
00.01101	00.01101	0.86	0.2	MG/L	0.99	0.15	7/06/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.13562	57.	5.7	MG/L	7/06/89	UNDER CONTROL

JD Montoya
Analyst

MLB
Section Leader

mag
QA Officer

7-7-89
Date

7-7-89
Date

7-7-89
Date

The control status of the preceding 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-C

**LINER DECONTAMINATION VERIFICATION: SOIL SAMPLES IMMEDIATELY
BELOW IMPOUNDMENT LINER**

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7759

I. PRESAMPLING CONFERENCE

Program Code 5708 ; W57R

No. Samples Expected 14 ea

} VOA's & SVOA's
PCB
EP TOXIC Metals

Submission Date 5-25-89

Completion Date 6/10/89

Chain of Custody? No

Special Protocol? (EPA etc.) NO

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA-
SVOA
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. MCL

Customer Phone 5-17-11 HSE-9 Section Leader MS K490

Date 5/24/89

Mike Bell Organic
Mike Bell Inorganic
Radiochem

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

III. SAMPLE RECEIPT

Signature Peggy Mauter Date 5-25-89 Total No. Samples Received 16

HSE-9 Sample No. Range 89.12601 to 89.12620

Customer Sample No. Range 85-1 to 85-16

NOTE: Sample Analysis required by 6/10/89 3-8-89
LSMehin

VOLATILE ORGANIC ANALYSES

bell below letter at
TH-35 TSL-85 improment
Rec'd 6/12/89

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7759

I. PRESAMPLING CONFERENCE

Program Code 5708 ; W57R

No. Samples Expected 14ea

} VOA's & SVOA's
PCB
EP TOXIC Metals

Submission Date 5-25-89

Completion Date 6/10/89

Chain of Custody? No

Special Protocol? (EPA etc.) NO

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA
SVOA
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 HSE-9 Section Leader
Customer Phone 5-17-21 MS K490

Sam Bell Organic
Mike Bell Inorganic
Radiochem

Date 5/24/89

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

III. SAMPLE RECEIPT

Signature Peggy Martin Date 5-25-89 Total No. Samples Received 16

HSE-9 Sample No. Range 89.12601 to 89.12620

Customer Sample No. Range 85-1 to 85-16

NOTE: Sample Analyses required by 6/10/89 3-8-89
SMartin

Summary for Request 89.7759

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:

89.12601
89.12602
89.12603
89.12604
89.12605
89.12606
89.12607
89.12608
89.12609
89.12610
89.12611
89.12612
89.12613
89.12614
89.12615
89.12616
89.12619

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:

VOC's were detected and quantified in the following samples:

Sample #	Compound	Concentration ug/Kg (LOQ)
89.12604	Acetone	156 (2)
	2-Butanone (MEK)	517 (10)
	4-Methyl-2-Pentanone (MIK)	20 (10)
	2-Hexanone	95 (20)
89.12607	Tetrachloroethene	3.0 (2)
89.12608	Tetrachloroethene	53 (2)
89.12610	Tetrachloroethene	1040 (2)
89.12614	Toluene	9.4 (2)

Additional Notes:

(1) Sample 89.12604 was also determined to contain additional non-target VOC's. These identifications were based upon library searching techniques and NOT on spectral comparisons to known compositional standards. These identifications are only of a qualitative nature and tentative, at best. Those VOC's identified include:

- 2-Pentanone
- 2-Heptanone
- 6-Methyl-2-Heptanone

The major components detected in this sample appear to be ketones.

(2) All reported values are based upon a dry weight basis. Due to the non-homogeneous nature of the samples, large variations in the reported concentration values for the above samples is to be expected.

QC Summary:

See summary next page

Sample #89.12619 was received from Marybeth Phillips and analyzed with the soil samples in this request group. In addition, an aliquot of sample #89.12602 was overspiked and analyzed with this request group. The results are as follows:

Component *****	Conc. Added,ug/kg *****	Recovery,ug/kg (%) *****	
		#89.12619	#89.12602 OS
1 Bromochloromethane	172	28.9 (16.8%)	ND
2 Vinyl Acetate	198	ND	ND
3 Carbon Tetrachloride	173	ND	ND
4 Chlorodibromomethane	155	9.0 (5.8%)	9.5 (6.1%)
5 2-Hexanone	160	26.2 (16.4%)	44.2 (27.6%)
6 Tetrachloroethene	172	ND	ND
7 Ethylbenzene	195	ND	8.8 (4.5%)
8 1,1,2,2-Tetrachloroethane	174	36.0 (20.7%)	24.6 (14.1%)
9 4-Chlorotoluene	192	8.8 (4.6%)	37.6 (19.5%)
10 1,2-Dichlorobenzene	147	24.8 (16.9%)	47.4 (32.2%)

Sample #89.12615 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 as follows:

Component *****	Conc. Added, ug/L *****	Recovered, ug/L (%)	
		MS *****	MSD *****
1,1-Dichloroethene	50.0	63.9 (128%)	-----
Benzene	50.0	51.9 (104%)	-----
Trichloroethene	50.0	45.9 (91.9%)	-----
Toluene	50.0	57.2 (114%)	-----
Chlorobenzene	50.0	54.5 (109%)	-----

Although the sample matrix spike was prepared in duplicate, only the matrix spike successfully purged. The matrix spike duplicate developed a plug/leak during the purge cycle, thus invalidating the data generated for that sample.

Observations:

There is a very large discrepancy in the results between the QC samples generated by the QA/QC group and those prepared along with the sample in the form of a matrix spike. This may be due to all or none of the following:

- (1) Incomplete/improper purging of sample from the matrix
- (2) Incomplete absorption of components into the matrix. Since the matrix spikes are prepared in water and then added to the soil matrix, whereas the QA/QC section directly deposits the components of interest onto the soil matrix, absorption/adsorption of the components of interest might not occur with direct deposition onto the soil. Thereby, the QA/QC section generated blinds may very well volatilize the components of interest from the soil matrix prior to analysis. Thereby the low per cent recoveries that are being observed
- (3) Improper spiking techniques

These issues need to be addressed in the short term.

June 9, 1989

[Handwritten signature] John Del Gaudio

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: 89.12616 HEATED *CORRECTED WEIGHT 5.065 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.3426G/5MLS WATER+ISM/PSS 05-31-89
 DATA FILE NAME: >V5U07::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 14:06
 QUANTITATION DATE/TIME: 890606 09:38
 CALIBRATION DATE/TIME: 890602 14:49

=====

* CORRECTED FOR PERCENT MOISTURE

=====

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	121.3	242.5	70-121
TOLUENE d-8	50.0	50.9	101.7	81-117
4-BROMOFLUOROBENZENE	50.0	39.9	79.8	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
<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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12616 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.3426G/5MLS WATER+ISM/PSS 05-31-89
 DATA FILE NAME: >V5U07::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12601 HEATED *CORRECTED WEIGHT 3.755 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 4.5175G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T04::D2
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890530 12:11
 QUANTITATION DATE/TIME: 890602 13:33
 CALIBRATION DATE/TIME: 890531 12:56

=====

* CORRECTED FOR PERCENT MOISTURE

=====

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	139.7	279.5	70-121
TOLUENE d-8	50.0	66.6	133.3	81-117
4-BROMOFLUOROBENZENE	50.0	61.4	122.9	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12601 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 4.5175G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T04::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12602 HEATED *CORRECTED WEIGHT 4.495 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 4.9627G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T05::D2
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890530 13:08
 QUANTITATION DATE/TIME: 890530 14:46
 CALIBRATION DATE/TIME: 890530 14:46

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	65.2	130.4	70-121
TOLUENE d-8	50.0	55.7	111.4	81-117
4-BROMOFLUOROBENZENE	50.0	44.0	87.9	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12602 HEATED
REQUEST SHEET: RS 7759 CPR SOIL 4.9627G/5MLS WATER+ISM/PSS 05-30-89
DATA FILE NAME: >V5T05::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12603 HEATED *CORRECTED WEIGHT 5.299 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.5383G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T06::D2
 ID FILE USED: ID524S::AO
 INJECTION DATE/TIME: 890530 14:07
 QUANTITATION DATE/TIME: 890602 13:42
 CALIBRATION DATE/TIME: 890531 12:56

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	128.3	256.6	70-121
TOLUENE d-8	50.0	66.5	133.0	81-117
4-BROMOFLUOROBENZENE	50.0	67.7	135.4	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12603 HEATED
REQUEST SHEET: RS 7759 CPR SOIL 5.5383G/5MLS WATER+ISM/PSS 05-30-89
DATA FILE NAME: >V5T06::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12604 HEATED *CORRECTED WEIGHT 4.668 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 4.8910G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T07::D2
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890530 15:07
 QUANTITATION DATE/TIME: 890602 13:45
 CALIBRATION DATE/TIME: 890531 12:56

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* CORRECTED FOR PERCENT MOISTURE

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SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	139.9	279.8	70-121
TOLUENE d-8	50.0	49.9	99.8	81-117
4-BROMOFLUOROBENZENE	50.0	38.9	77.8	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
156.3	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
516.8	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12604 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 4.8910G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T07::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
20.4	4-Methyl-2-Pentanone (MIK)	10-81-1	10
<LOQ	Toluene	108-88-3	2
95.4	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	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:

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: 89.12605 HEATED *CORRECTED WEIGHT 4.741 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.0252G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T08::D2
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890530 16:07
 QUANTITATION DATE/TIME: 890602 13:52
 CALIBRATION DATE/TIME: 890531 12:56

=====

* CORRECTED FOR PERCENT MOISTURE

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SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	118.9	237.8	70-121
TOLUENE d-8	50.0	60.4	120.9	81-117
4-BROMOFLUOROBENZENE	50.0	47.0	94.0	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12605 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.0252G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T08::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12606 HEATED *CORRECTED WEIGHT 4.974 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.3476G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T09::D2
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890530 17:07
 QUANTITATION DATE/TIME: 890602 13:55
 CALIBRATION DATE/TIME: 890531 12:56

=====

* CORRECTED FOR PERCENT MOISTURE

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SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	113.0	225.9	70-121
TOLUENE d-8	50.0	58.6	117.1	81-117
4-BROMOFLUOROBENZENE	50.0	49.2	98.3	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12606 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.3476G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T09::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12607 HEATED *CORRECTED WEIGHT 4.713 GMS
REQUEST SHEET: RS 7759 CPR SOIL 5.1226G/5MLS WATER+ISM/PSS 05-30-89
DATA FILE NAME: >V5T10::D2
ID FILE USED: ID524S::AQ
INJECTION DATE/TIME: 890530 18:06
QUANTITATION DATE/TIME: 890602 14:00
CALIBRATION DATE/TIME: 890531 12:56
=====
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* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	117.7	235.5	70-121
TOLUENE d-8	50.0	60.0	120.0	81-117
4-BROMOFLUOROBENZENE	50.0	50.3	100.6	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12607 HEATED
REQUEST SHEET: RS 7759 CPR SOIL 5.1226G/5MLS WATER+ISM/PSS 05-30-89
DATA FILE NAME: >V5T10::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
3.0	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	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:

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: 89.12608 HEATED *CORRECTED WEIGHT 4.500 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 4.5606G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T14::D2
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 00:10
 QUANTITATION DATE/TIME: 890531 01:10
 CALIBRATION DATE/TIME: 890530 14:46

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	72.1	144.2	70-121
TOLUENE d-8	50.0	60.4	120.9	81-117
4-BROMOFLUOROBENZENE	50.0	52.7	105.5	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12608 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 4.5606G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T14::D2

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
52.5	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	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:

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: 89.12609 HEATED *CORRECTED WEIGHT 4.813 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.4157G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T15::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 01:10
 QUANTITATION DATE/TIME: 890531 02:10
 CALIBRATION DATE/TIME: 890530 14:46

=====

* CORRECTED FOR PERCENT MOISTURE

=====

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	34.7	69.3	70-121
TOLUENE d-8	50.0	54.1	108.2	81-117
4-BROMOFLUOROBENZENE	50.0	45.1	90.2	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12609 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.4157G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T15::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12610 HEATED *CORRECTED WEIGHT 1.450 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 1.6389G/5MLS WATER+ISM/PSS 05-31-89
 DATA FILE NAME: >V5U10::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 17:06
 QUANTITATION DATE/TIME: 890606 09:48
 CALIBRATION DATE/TIME: 890602 14:49

=====

* CORRECTED FOR PERCENT MOISTURE

=====

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	103.3	206.5	70-121
TOLUENE d-8	50.0	54.6	109.2	81-117
4-BROMOFLUOROBENZENE	50.0	47.3	94.6	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12610 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 1.6389G/5MLS WATER+ISM/PSS 05-31-89
 DATA FILE NAME: >V5U10::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10
<LOQ	Toluene	108-88-3	2
<LOQ	2-Hexanone	59-17-86	20
<LOQ	1,2-Dibromomethane	74-95-3	2
1045.0	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	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:

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: 89.12611 HEATED *CORRECTED WEIGHT 4.941 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.6575G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T17::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 03:10
 QUANTITATION DATE/TIME: 890531 04:09
 CALIBRATION DATE/TIME: 890530 14:46

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	74.6	149.1	70-121
TOLUENE d-8	50.0	59.9	119.8	81-117
4-BROMOFLUOROBENZENE	50.0	46.9	93.9	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12611 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.6575G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T17::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12612 HEATED *CORRECTED WEIGHT 5.098 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.8634G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T18::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 04:10
 QUANTITATION DATE/TIME: 890531 05:09
 CALIBRATION DATE/TIME: 890530 14:46

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	68.2	136.4	70-121
TOLUENE d-8	50.0	53.8	107.6	81-117
4-BROMOFLUOROBENZENE	50.0	50.3	100.7	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12612 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.8634G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T18::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12613 HEATED *CORRECTED WEIGHT 4.191 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.0722G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T19::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 05:10
 QUANTITATION DATE/TIME: 890605 16:45
 CALIBRATION DATE/TIME: 890602 14:49

=====

* CORRECTED FOR PERCENT MOISTURE

=====

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	87.9	175.8	70-121
TOLUENE d-8	50.0	59.7	119.3	81-117
4-BROMOFLUOROBENZENE	50.0	56.0	111.9	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12613 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.0722G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T19::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

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: 89.12614 HEATED *CORRECTED WEIGHT 4.243 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 5.1798G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T20::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 06:09
 QUANTITATION DATE/TIME: 890531 07:09
 CALIBRATION DATE/TIME: 890530 14:46

=====

* CORRECTED FOR PERCENT MOISTURE

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SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	35.2	70.4	70-121
TOLUENE d-8	50.0	55.6	111.1	81-117
4-BROMOFLUOROBENZENE	50.0	53.1	106.1	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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12614 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 5.1798G/5MLS WATER+ISM/PSS 05-30-89
 DATA FILE NAME: >V5T20::D3

=====

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	10
9.4	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	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:

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: 89.12615 HEATED *CORRECTED WEIGHT 3.820 GMS
 REQUEST SHEET: RS 7759 CPR SOIL 4.3288G/5MLS WATER+ISM/PSS 05-31-89
 DATA FILE NAME: >V5U06::D3
 ID FILE USED: ID524S::AQ
 INJECTION DATE/TIME: 890531 13:06
 QUANTITATION DATE/TIME: 890606 09:41
 CALIBRATION DATE/TIME: 890602 14:49

* CORRECTED FOR PERCENT MOISTURE

SURROGATE STANDARD RECOVERIES

SURROGATE	ADDED	RECOVERED	% RECOVERY	LIMITS (%)
1,2-DICHLOROETHANE d4	50.0	121.8	243.5	70-121
TOLUENE d-8	50.0	50.8	101.7	81-117
4-BROMOFLUOROBENZENE	50.0	31.9	63.8	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
<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	156-59-4	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
<LOQ	2-Butanone (MEK)	78-93-3	10
<LOQ	2,2-Dichloropropane	590-20-7	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: 89.12615 HEATED
 REQUEST SHEET: RS 7759 CPR SOIL 4.3288G/5MLS WATER+ISM/PSS 05-31-89
 DATA FILE NAME: >V5U06::D3

TARGET COMPOUNDS

RESULTS (ug/kg)	COMPOUND	CAS #	LOQ*
<LOQ	Bromoform	75-25-2	2
<LOQ	4-Methyl-2-Pentanone (MIK)	10-81-1	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	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:

SEMIVOLATILE ORGANIC ANALYSES

SEMIVOLATILE ORGANIC ANALYSIS

REQUEST: 7759
 MATRIX: Soil
 DATE COMPLETED: 7/24/89
 ANALYST: Martin Koby

7/27/89

HSE-9 SAMPLE ID	RESULT(ug/Kg)	LOQ (ug/Kg)
89.12601	<LOQ	400
89.12602	(J) 1050 Di-n-Butylphthalate	3600
	(J) 800 Bis(2-Ethylhexyl)Phthalate	
89.12603	<LOQ	350
89.12604	<LOQ	13900
89.12605	<LOQ	17500
89.12606	<LOQ	1800
89.12607	<LOQ	7100
89.12608	<LOQ	330
89.12609	(J) 860 Bis(2-Ethylhexyl)Phthalate	3700
89.12610	(J) 860 Bis(2-Ethylhexyl)Phthalate	7400
89.12611	5200 Bis(2-Ethylhexyl)Phthalate	3800
89.12612	(J) 3200 Di-n-Butylphthalate	7500
89.12613	2100 Di-n-Butylphthalate	400
89.12614	1600 Di-n-Butylphthalate	400
	1300 Bis(2-Ethylhexyl)Phthalate	
89.12615	(J) 56700 Bis(2-Ethylhexyl)Phthalate	187000
89.12616	(J) 1200 Diethylphthalate	6900
	(J) 1100 Di-n-butylphthalate	
	(J) 4400 Bis(2-Ethylhexyl)Phthalate	

LOQ = Limit of quantitation, normally 330 for 30.0g extraction. Value is changing as a result of amount extracted, final volume of extract, and dilution made prior to analysis.

(J) = Indicates an estimated value. Target compound was present below LOQ but quantitation was greater than zero.

Phthalates are a common contaminant of sampling and laboratory equipment, sample containers, reagents, and practically anything made of or contacting plastic. The amounts reported reflect corrections made for dilution and should not be misinterpreted as indicating highly contaminated samples.

Request: 7759
page 2

Sample extraction was performed by high energy sonic disruption of aliquots weighing approximately 30 grams. This was repeated three times using 60 ml of 1:1 acetone in methylene chloride as extraction solvent. Extracts were dried and concentrated to a volume of one ml when possible. Several extracts could not be concentrated below 5.0 ml due to significant amounts of nontarget coextracted hydrocarbon. The majority of extracts were highly colored, again indicating coextracted interferences.

Analysis was performed by capillary column GC/MS methods consistent with EPA methods 625 and 8270. Preliminary results were obtained from analysis of undiluted extracts. These were reported to S. McLin and indicated only high levels of hydrocarbon, probably from oil waste. With the exception of phthalates, analysis of dilutions did not indicate the presence of any target compounds. If target compounds were present they were diluted below detection. This is a commonly encountered limitation of semivolatile analysis when complex matrices are involved.

Blank and duplicate blank spike samples were analyzed concurrently with this project. Surrogate recoveries were generally within limits with the exception being 2,4,6-Tribromophenol. Recoveries for this compound were consistently greater than the upper control limit. Spike recoveries were acceptable with 10 of 11 within control limits. Surrogate recoveries for samples were inconclusive as the majority were diluted below detection limits due to nontarget interferences.

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7759

I. PRESAMPLING CONFERENCE

Program Code 5708 ; W57R

No. Samples Expected 14ea.

} VOA's & SVOA's
PCB
EP TOXIC Metals

Submission Date 5-25-89

Completion Date 6/10/89

Chain of Custody? No

Special Protocol? (EPA etc.) No

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA
SVOA
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 Refrigerat 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. MCLIV

HSE-9 Section Leader

Customer Phone 5-17-21

MS K490

[Signature]
[Signature]

Organic
Inorganic
Radiochem

Date 5/24/89

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____

HSE-9 Group Leader _____

Date _____

III. SAMPLE RECEIPT

Signature Peggy Hunter

Date 5-25-89

Total No. Samples Received 16

HSE-9 Sample No. Range 89.12601

to 89.12620

Customer Sample No. Range 85-1

to 85-16

NOTE: Sample Analyses required by 6/10/89 3-8-89
[Signature]

Requestor	Program Code	Sample Owner	Date	Total No. Samples
HSE-8	W579.	SGM	5/24/89	14 sites

Sample Numbers	Matrix	Analysis	Tech	Analyst	Priority	Remarks	
89.12601-616	SS	VOA	EPTGC	CPR	2		
		SVOA	GCM	MWK	2		
		1336363	GCEC	DMS	2		
		PCB					
		S	As	ICPSS	JDM		EPTOX Due 6-10-89
			Ag				
			Ba				
			Cd				
			Cr				
			Se	ETVA/TMF			
	Pb	ICPES	JDM				
	Hg	CVAA	TMF				
89.12617	S	AS					
		AG					
		BA					
		CD					
		CR					
		PB					
89.12618	S	SE					
		HG					
89.12619	S	VOA					
89.12620	S	1336363					

POLYCHLORINATED BIPHENYL ANALYSES

-4 TEL-75

5-1721

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7759

I. PRESAMPLING CONFERENCE

Program Code 5708 ; W57R

No. Samples Expected 14 ea

VOA's & SVOA's
PCB
EP TOXIC Metals

Submission Date 5-25-89

Completion Date 6/10/89

Chain of Custody? No

Special Protocol? (EPA etc.) NO

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA
SVOA
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 Refrigerat 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
Customer Phone 5-1721 MSK490

Mike Bell Organic
Mike Bell Inorganic
Radiochem

Date 5/24/89

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

III. SAMPLE RECEIPT

Signature Peggy Hantler Date 5-25-89 Total No. Samples Received 16

HSE-9 Sample No. Range 89.12601 to 89.12620

Customer Sample No. Range 85-1 to 85-16

NOTE: Sample Analyses required by 6/10/89 3-8-89
LSMehin

Requestor	Program Code	Sample Owner	Date	Total No. Samples
HSE-8	WS79.	SGM	5/24/89	14 sites

Sample Numbers	Matrix	Analysis	Tech	Analyst	Priority	Remarks	
89.12601-616	SS	VOA	SP16C	CPR	2		
		SVOA	GCM	MWK	2		
		1336363 PCB	GCEC	DMS	2	Set "C"	
		S	As	ICPES	JDM		EPTOX Due 6-10-89
			Ag				
			Ba				
			Cd				
			Cr				
			Se	ETVA/TMF			
	Pb	KPES	JDM				
	Hg	CVAA	TMF				
89.12617	S	AS					
		AG					
		BA					
		CD					
		CR					
		PB					
89.12618	S	SE					
		HG					
89.12619	S	VOA					
89.12620	S	1336363				←	

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

Prepared by: DMS on 7-Jun-1989

REQUEST NUMBER: 7759 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
85.1	89.12601	1336363	< 0.07		UG/G	6/06/89	Mixed-Aroclor
85.1	89.12601	53469219	< 0.07		UG/G	6/06/89	Aroclor 1242
85.1	89.12601	11097691	< 0.07		UG/G	6/06/89	Aroclor 1254
85.1	89.12601	11096825	< 0.07		UG/G	6/06/89	Aroclor 1260
85.2	89.12602	1336363	< 0.07		UG/G	6/06/89	Mixed-Aroclor
85.2	89.12602	53469219	< 0.07		UG/G	6/06/89	Aroclor 1242
85.2	89.12602	11097691	< 0.07		UG/G	6/06/89	Aroclor 1254
85.2	89.12602	11096825	< 0.07		UG/G	6/06/89	Aroclor 1260
85.3	89.12603	1336363	< 0.07		UG/G	6/06/89	Mixed-Aroclor
85.3	89.12603	53469219	< 0.07		UG/G	6/06/89	Aroclor 1242
85.3	89.12603	11097691	< 0.07		UG/G	6/06/89	Aroclor 1254
85.3	89.12603	11096825	< 0.07		UG/G	6/06/89	Aroclor 1260
85.4	89.12604	1336363	< 0.07		UG/G	6/06/89	Mixed-Aroclor
85.4	89.12604	53469219	< 0.07		UG/G	6/06/89	Aroclor 1242
85.4	89.12604	11097691	< 0.07		UG/G	6/06/89	Aroclor 1254
85.4	89.12604	11096825	< 0.07		UG/G	6/06/89	Aroclor 1260
85.5	89.12605	1336363	0.37	0.06	UG/G	6/06/89	Mixed-Aroclor
85.5	89.12605	53469219	< 0.07		UG/G	6/06/89	Aroclor 1242
85.5	89.12605	11097691	< 0.07		UG/G	6/06/89	Aroclor 1254
85.5	89.12605	11096825	0.37	0.06	UG/G	6/06/89	Aroclor 1260
85.6	89.12606	1336363	0.09	0.02	UG/G	6/06/89	Mixed-Aroclor
85.6	89.12606	53469219	< 0.07		UG/G	6/06/89	Aroclor 1242
85.6	89.12606	11097691	< 0.07		UG/G	6/06/89	Aroclor 1254
85.6	89.12606	11096825	0.09	0.02	UG/G	6/06/89	Aroclor 1260
85.7	89.12607	1336363	< 0.07		UG/G	6/06/89	Mixed-Aroclor

85.7	89.12607	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.7	89.12607	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.7	89.12607	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.8	89.12608	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.8	89.12608	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.8	89.12608	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.8	89.12608	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.9	89.12609	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.9	89.12609	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.9	89.12609	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.9	89.12609	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.10	89.12610	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.10	89.12610	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.10	89.12610	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.10	89.12610	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.11	89.12611	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.11	89.12611	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.11	89.12611	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.11	89.12611	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.12	89.12612	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.12	89.12612	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.12	89.12612	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.12	89.12612	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.13	89.12613	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.13	89.12613	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.13	89.12613	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.13	89.12613	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.14	89.12614	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.14	89.12614	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.14	89.12614	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.14	89.12614	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.15	89.12615	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.15	89.12615	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.15	89.12615	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.15	89.12615	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260
85.16	89.12616	1336363	< 0.07	UG/G	6/06/89	Mixed-Aroclor
85.16	89.12616	53469219	< 0.07	UG/G	6/06/89	Aroclor 1242
85.16	89.12616	11097691	< 0.07	UG/G	6/06/89	Aroclor 1254
85.16	89.12616	11096825	< 0.07	UG/G	6/06/89	Aroclor 1260

REPORT NUMBER: 2906 (continued)

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

Prepared by: DMS on 7-Jun-1989

REQUEST NUMBER: 7759 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	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.01492	00.01492	53469219	6.8	1.4	UG/G	8.16	0.28	6/07/89	UNDER CONTROL	Aroclor 1242
00.01492	00.01492	11097691	9.	1.8	UG/G	6.81	0.14	6/07/89	UNDER CONTROL	Aroclor 1254

The following analyst QA's have no CV data for comparison

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.12620	1336363	1.	0.02	UG/G	6/06/89	NO DATA AVAIL.	Mixed-Aroclor
89.12620	53469219	< 0.07		UG/G	6/06/89	NO DATA AVAIL.	Aroclor 1242
89.12620	11097691	1.	0.02	UG/G	6/06/89	UNDER CONTROL	Aroclor 1254
89.12620	11096825	< 0.07		UG/G	6/06/89	NO DATA AVAIL.	Aroclor 1260

Dee Sent
Analyst

[Signature]
Section Leader

mag
QA Officer

6/7/89
Date

6/8/89
Date

6-9-89
Date

The control status of the preceding 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: 2926

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

Prepared by: J.D.MONTOYA on 8-Jun-1989

REQUEST NUMBER: 7759 MATRIX: S ANALYST: Janet Montoya

OWNER: Steve McIn GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85.1	89.12601	AG	<	0.02	MG/L	6/08/89	
85.1	89.12601	AS	<	0.2	MG/L	6/08/89	
85.1	89.12601	BA	0.4	0.04	MG/L	6/08/89	
85.1	89.12601	CD	<	0.09	MG/L	6/08/89	
85.1	89.12601	CR	0.08	0.02	MG/L	6/08/89	
85.1	89.12601	PB	<	0.04	MG/L	6/08/89	
85.1	89.12601	SE	<	0.2	MG/L	6/08/89	
85.2	89.12602	AG	<	0.02	MG/L	6/08/89	
85.2	89.12602	AS	<	0.2	MG/L	6/08/89	
85.2	89.12602	BA	0.37	0.04	MG/L	6/08/89	
85.2	89.12602	CD	<	0.1	MG/L	6/08/89	
85.2	89.12602	CR	0.07	0.02	MG/L	6/08/89	
85.2	89.12602	PB	<	0.04	MG/L	6/08/89	
85.2	89.12602	SE	<	0.2	MG/L	6/08/89	
85.3	89.12603	AG	<	0.02	MG/L	6/08/89	
85.3	89.12603	AS	<	0.2	MG/L	6/08/89	
85.3	89.12603	BA	0.75	0.07	MG/L	6/08/89	
85.3	89.12603	CD	<	0.1	MG/L	6/08/89	
85.3	89.12603	CR	0.7	0.07	MG/L	6/08/89	
85.3	89.12603	PB	<	0.04	MG/L	6/08/89	
85.3	89.12603	SE	<	0.2	MG/L	6/08/89	
85.4	89.12604	AG	<	0.02	MG/L	6/08/89	
85.4	89.12604	AS	<	0.2	MG/L	6/08/89	
85.4	89.12604	BA	0.61	0.06	MG/L	6/08/89	
85.4	89.12604	CD	<	0.1	MG/L	6/08/89	
85.4	89.12604	CR	0.34	0.03	MG/L	6/08/89	
85.4	89.12604	PB	<	0.04	MG/L	6/08/89	
85.4	89.12604	SE	<	0.2	MG/L	6/08/89	
85.5	89.12605	AG	<	0.02	MG/L	6/08/89	
85.5	89.12605	AS	<	0.2	MG/L	6/08/89	
85.5	89.12605	BA	0.55	0.05	MG/L	6/08/89	
85.5	89.12605	CD	<	0.1	MG/L	6/08/89	
85.5	89.12605	CR	0.57	0.06	MG/L	6/08/89	
85.5	89.12605	PB	<	0.04	MG/L	6/08/89	
85.5	89.12605	SE	<	0.2	MG/L	6/08/89	
85.6	89.12606	AG	<	0.02	MG/L	6/08/89	
85.6	89.12606	AS	<	0.2	MG/L	6/08/89	
85.6	89.12606	BA	0.45	0.05	MG/L	6/08/89	
85.6	89.12606	CD	<	0.1	MG/L	6/08/89	
85.6	89.12606	CR	0.31	0.03	MG/L	6/08/89	

85.6	89.12606 PB	<	0.04	MG/L	6/08/89
85.6	89.12606 SE	<	0.2	MG/L	6/08/89
85.7	89.12607 AG	<	0.02	MG/L	6/08/89
85.7	89.12607 AS	<	0.2	MG/L	6/08/89
85.7	89.12607 BA	0.6	0.06	MG/L	6/08/89
85.7	89.12607 CD	<	0.1	MG/L	6/08/89
85.7	89.12607 CR	0.49	0.05	MG/L	6/08/89
85.7	89.12607 PB	<	0.04	MG/L	6/08/89
85.7	89.12607 SE	<	0.2	MG/L	6/08/89
85.8	89.12608 AG	<	0.02	MG/L	6/08/89
85.8	89.12608 AS	<	0.2	MG/L	6/08/89
85.8	89.12608 BA	0.53	0.05	MG/L	6/08/89
85.8	89.12608 CD	<	0.1	MG/L	6/08/89
85.8	89.12608 CR	0.15	0.02	MG/L	6/08/89
85.8	89.12608 PB	<	0.04	MG/L	6/08/89
85.8	89.12608 SE	<	0.2	MG/L	6/08/89
85.9	89.12609 AG	<	0.02	MG/L	6/08/89
85.9	89.12609 AS	<	0.2	MG/L	6/08/89
85.9	89.12609 BA	0.27	0.03	MG/L	6/08/89
85.9	89.12609 CD	<	0.1	MG/L	6/08/89
85.9	89.12609 CR	0.1	0.02	MG/L	6/08/89
85.9	89.12609 PB	<	0.04	MG/L	6/08/89
85.9	89.12609 SE	<	0.2	MG/L	6/08/89
85.10	89.12610 AG	<	0.02	MG/L	6/08/89
85.10	89.12610 AS	<	0.2	MG/L	6/08/89
85.10	89.12610 BA	0.34	0.03	MG/L	6/08/89
85.10	89.12610 CD	<	0.1	MG/L	6/08/89
85.10	89.12610 CR	<	0.02	MG/L	6/08/89
85.10	89.12610 PB	<	0.04	MG/L	6/08/89
85.10	89.12610 SE	<	0.2	MG/L	6/08/89
85.11	89.12611 AG	<	0.02	MG/L	6/08/89
85.11	89.12611 AS	<	0.2	MG/L	6/08/89
85.11	89.12611 BA	0.31	0.03	MG/L	6/08/89
85.11	89.12611 CD	<	0.1	MG/L	6/08/89
85.11	89.12611 CR	0.5	0.05	MG/L	6/08/89
85.11	89.12611 PB	<	0.04	MG/L	6/08/89
85.11	89.12611 SE	<	0.2	MG/L	6/08/89
85.12	89.12612 AG	<	0.02	MG/L	6/08/89
85.12	89.12612 AS	<	0.2	MG/L	6/08/89
85.12	89.12612 BA	0.53	0.05	MG/L	6/08/89
85.12	89.12612 CD	<	0.1	MG/L	6/08/89
85.12	89.12612 CR	0.07	0.02	MG/L	6/08/89
85.12	89.12612 PB	<	0.04	MG/L	6/08/89
85.13	89.12613 AG	<	0.02	MG/L	6/08/89
85.13	89.12613 AS	<	0.2	MG/L	6/08/89
85.13	89.12613 BA	0.64	0.06	MG/L	6/08/89
85.13	89.12613 CD	<	0.1	MG/L	6/08/89
85.13	89.12613 CR	0.11	0.02	MG/L	6/08/89
85.13	89.12613 PB	<	0.04	MG/L	6/08/89
85.13	89.12613 SE	<	0.2	MG/L	6/08/89
85.14	89.12614 AG	<	0.02	MG/L	6/08/89
85.14	89.12614 AS	<	0.2	MG/L	6/08/89
85.14	89.12614 BA	0.48	0.05	MG/L	6/08/89
85.14	89.12614 CD	<	0.1	MG/L	6/08/89
85.14	89.12614 CR	0.31	0.03	MG/L	6/08/89
85.14	89.12614 PB	<	0.04	MG/L	6/08/89
85.14	89.12614 SE	<	0.2	MG/L	6/08/89
85.15	89.12615 AG	<	0.02	MG/L	6/08/89
85.15	89.12615 AS	<	0.2	MG/L	6/08/89
85.15	89.12615 BA	0.61	0.06	MG/L	6/08/89

85.15	89.12615 CD	<	0.1	MG/L	6/08/89
85.15	89.12615 CR	<	0.02	MG/L	6/08/89
85.15	89.12615 PB	<	0.04	MG/L	6/08/89
85.15	89.12615 SE	<	0.2	MG/L	6/08/89
85.16	89.12616 AG	<	0.02	MG/L	6/08/89
85.16	89.12616 AS	<	0.2	MG/L	6/08/89
85.16	89.12616 BA	0.7	0.07	MG/L	6/08/89
85.16	89.12616 CD	<	0.1	MG/L	6/08/89
85.16	89.12616 CR	<	0.02	MG/L	6/08/89
85.16	89.12616 PB	<	0.04	MG/L	6/08/89
85.16	89.12616 SE	<	0.2	MG/L	6/08/89

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	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	SAMPLE NAME
00.01100	00.01100	4.5	0.45	MG/L	6/08/89	EPA EP Extract Metals in Water #1 (WP1085)

Under Control
mag

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

Prepared by: J.D.MONTOYA on 8-Jun-1989

REQUEST NUMBER: 7759 MATRIX: S ANALYST: Janet Montoya

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
00.01100	00.01100	AG	4.9	0.5	MG/L	5.	0.28	6/08/89
							UNDER CONTROL	
00.01100	00.01100	AG	4.5	0.45	MG/L	5.	0.28	6/08/89
							UNDER CONTROL	
00.01100	00.01100	BA	101.	10.	MG/L	100.	10.2	6/08/89
							UNDER CONTROL	
00.01100	00.01100	BA	100.	10.	MG/L	100.	10.2	6/08/89
							UNDER CONTROL	
00.01100	00.01100	CD	0.95	0.09	MG/L	1.	0.03	6/08/89
							UNDER CONTROL	
00.01100	00.01100	CD	0.9	0.09	MG/L	1.	0.03	6/08/89
							UNDER CONTROL	
00.01100	00.01100	CR	4.6	0.46	MG/L	5.	0.42	6/08/89
							UNDER CONTROL	
00.01100	00.01100	CR	4.5	0.45	MG/L	5.	0.42	6/08/89
							UNDER CONTROL	
00.01100	00.01100	PB	4.7	0.47	MG/L	5.	0.44	6/08/89
							UNDER CONTROL	
00.01100	00.01100	PB	4.4	0.44	MG/L	5.	0.44	6/08/89
							UNDER CONTROL	
00.98625	00.98625	AG	93.	9.3	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	AG	101.	10.	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	AS	90.	9.	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	AS	103.	10.	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	BA	105.	10.	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	BA	96.	9.6	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	CD	93.	9.3	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	CD	102.	10.	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	CR	93.	9.3	UG/L	100.	10.	6/08/89
							UNDER CONTROL	
00.98625	00.98625	CR	100.	10.	UG/L	100.	10.	6/08/89

00.98625	00.98625 PB	99.	9.9	UG/L	100.	UNDER CONTROL
						10. 6/08/89
00.98625	00.98625 PB	88.	8.8	UG/L	100.	UNDER CONTROL
						10. 6/08/89
						UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.12617	AG	<	0.02	MG/L	6/08/89	NO DATA AVAIL.
89.12617	AS	<	0.2	MG/L	6/08/89	NO DATA AVAIL.
89.12617	BA	0.15	0.02	MG/L	6/08/89	NO DATA AVAIL.
89.12617	CD	<	0.1	MG/L	6/08/89	NO DATA AVAIL.
89.12617	CR	<	0.02	MG/L	6/08/89	NO DATA AVAIL.
89.12617	PB	<	0.04	MG/L	6/08/89	NO DATA AVAIL.
89.12618	SE	< 0.2	0.2	MG/L	6/08/89	NO DATA AVAIL.

*Spike below
detection limits
mag*

J.D. Montoya
Analyst

M.G.B.
Section Leader

mag
QA Officer

June 09, 1989
Date

6-9-89
Date

6-9-89
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: 3484

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

Prepared by: M. C. WILLIAMS on 21-Jul-1989

ANALYSIS: HG REQUEST NUMBER: 7759 MATRIX: WE ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 245.2

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85.1	89.12601	< 0.2		UG/L	7/21/89	
85.1	89.12601	< 0.2		UG/L	7/21/89	
85.2	89.12602	< 0.2		UG/L	7/21/89	
85.2	89.12602	< 0.2		UG/L	7/21/89	
85.3	89.12603	< 0.2		UG/L	7/21/89	
85.3	89.12603	< 0.2		UG/L	7/21/89	
85.4	89.12604	< 0.2		UG/L	7/21/89	
85.4	89.12604	< 0.2		UG/L	7/21/89	
85.5	89.12605	< 0.2		UG/L	7/21/89	
85.5	89.12605	< 0.2		UG/L	7/21/89	
85.6	89.12606	< 0.2		UG/L	7/21/89	
85.6	89.12606	< 0.2		UG/L	7/21/89	
85.7	89.12607	< 0.2		UG/L	7/21/89	
85.7	89.12607	< 0.2		UG/L	7/21/89	
85.8	89.12608	< 0.2		UG/L	7/21/89	
85.8	89.12608	< 0.2		UG/L	7/21/89	
85.9	89.12609	< 0.2		UG/L	7/21/89	
85.9	89.12609	< 0.2		UG/L	7/21/89	
85.10	89.12610	< 0.2		UG/L	7/21/89	
85.10	89.12610	< 0.2		UG/L	7/21/89	
85.11	89.12611	< 0.2		UG/L	7/21/89	
85.11	89.12611	< 0.2		UG/L	7/21/89	
85.12	89.12612	< 0.2		UG/L	7/21/89	
85.12	89.12612	< 0.2		UG/L	7/21/89	
85.13	89.12613	< 0.2		UG/L	7/21/89	
85.13	89.12613	< 0.2		UG/L	7/21/89	
85.14	89.12614	< 0.2		UG/L	7/21/89	
85.14	89.12614	< 0.2		UG/L	7/21/89	
85.15	89.12615	< 0.2		UG/L	7/21/89	
85.15	89.12615	< 0.2		UG/L	7/21/89	
85.16	89.12616	< 0.2		UG/L	7/21/89	
85.16	89.12616	< 0.2		UG/L	7/21/89	

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

Prepared by: M. C. WILLIAMS on 21-Jul-1989

ANALYSIS: HG REQUEST NUMBER: 7759 MATRIX: WE ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 245.2

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED		COMPLETION DATE	COMMENT
					CERTIFIED VALUE	UNCERTAINTY		
00.99497	00.99497	2.98	0.6	UG/L	3.	0.3	7/21/89	UNDER CONTROL
00.99497	00.99497	2.94	0.6	UG/L	3.	0.3	7/21/89	UNDER CONTROL
00.99497	00.99497	2.95	0.6	UG/L	3.	0.3	7/21/89	UNDER CONTROL
00.99497	00.99497	2.89	0.6	UG/L	3.	0.3	7/21/89	UNDER CONTROL
00.99497	00.99497	3.02	0.6	UG/L	3.	0.3	7/21/89	UNDER CONTROL
00.99497	00.99497	2.92	0.6	UG/L	3.	0.3	7/21/89	UNDER CONTROL
00.99506	00.99506	1.8	0.2	MG/L	2.	0.2	6/08/89	UNDER CONTROL
00.99506	00.99506	1.6	0.16	MG/L	2.	0.2	6/08/89	UNDER CONTROL
00.99506	00.99506	1.5	0.15	MG/L	2.	0.2	6/08/89	UNDER CONTROL
00.99506	00.99506	1.7	0.17	MG/L	2.	0.2	6/08/89	UNDER CONTROL

mcw
Analyst

[Signature]
Section Leader

[Signature]
QA Officer

7-21-89
Date

7/24/89
Date

7/24/89
Date

The control status of the preceding 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: 3684

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

Prepared by: ESG on 16-Aug-1989

ANALYSIS: SE REQUEST NUMBER: 7759 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7740

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85.12	89.12612	3.1	1.	UG/L	8/15/89	

REPORT NUMBER: 3684 (continued)

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

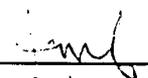
Prepared by: ESG on 16-Aug-1989

ANALYSIS: SE REQUEST NUMBER: 7759 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7740

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010	00.01010	10.6	2.2	UG/L	11.	2.	8/15/89	UNDER CONTROL
00.01010	00.01010	10.6	2.2	UG/L	11.	2.	8/15/89	UNDER CONTROL



Analyst



Section Leader



QA Officer

8-16-89
Date

8/16/89
Date

8-16-89
Date

The control status of the preceding 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: 3559

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

Prepared by: J D MONTOYA on 2-Aug-1989

ANALYSIS: SE REQUEST NUMBER: 7759 MATRIX: S 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
85.12	89.12612	< 0.2		MG/L	8/02/89	

REPORT NUMBER: 3559 (continued)

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

Prepared by: J D MONTOYA on 2-Aug-1989

ANALYSIS: SE REQUEST NUMBER: 7759 MATRIX: S ANALYST: Janet Montoya

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

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

JDMontoya
Analyst

Richard Robinson
Section Leader

maq
QA Officer

8-3-89
Date

8/3/89
Date

8-4-89
Date

The control status of the preceding 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

**PHASE ONE CLEAN CLOSURE VERIFICATION SAMPLES: SOIL SAMPLES
AT TWO FOOT DEPTH**

T4-35
TEL-75
Send file

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7968

I. PRESAMPLING CONFERENCE

Program Code W57R

No. Samples Expected 24 ea soil } VOC
SVOC
PCB
metals - see below

Submission Date 7-18-89

Completion Date TBA

Chain of Custody? Yes

Special Protocol? (EPA etc.) EPA-EPTOY

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOA^T Semimetals
PCB^T metals

Container Type Glass/Teflon Preservative None - Chill 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 only if no RCRA compounds
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S.G. McLIN HSE-9 Section Leader
Customer Phone 7-1721 MS K490

[Signature]
Robert Robinson
Organic
Inorganic
Radiochem

Date 7/18/89

Metals:
1.) EP tox metals
2.) Total metals for 12 ea (see below)

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

Set A = metals
Set B = VOA
Set C = SVOA
Set D = PCB

III. SAMPLE RECEIPT

Signature [Signature] Date 9/13/89 Total No. Samples Received 24 + 2QC

HSE-9 Sample No. Range 89.15474 to 89.15407

Customer Sample No. Range 85FS-1 to 85FS-24

STAL

1. Antimony
2. Arsenic
3. Barium
4. Beryllium

6. Chromium
7. Lead
8. Mercury
9. Nickel

11. Silver
12. Thallium

3-8-89

VOLATILE ORGANIC ANALYSES

January 4, 1990

Steve,

TA-35 TSL-85 SI
Final soils verification
after soil excavation

Attached you will find the **final** report for the soil samples you submitted for VOA analysis under the request #7968. If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office (TA-59, OH-1, Room 115). Thank you for your continued support of our VOA analysis program.



Chuck Rzeszutko
Organic Section Leader
HSE-9

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-1	89.15879	67641	132.	39.6	UG/KG	12/06/89		Acetone
85FS-1	89.15879	71432	< 10.		UG/KG	12/06/89		Benzene
85FS-1	89.15879	108861	< 10.		UG/KG	12/06/89		Bromobenzene
85FS-1	89.15879	74975	< 10.		UG/KG	12/06/89		Bromochloromethane
85FS-1	89.15879	75274	< 10.		UG/KG	12/06/89		Bromodichloromethane
85FS-1	89.15879	75252	< 10.		UG/KG	12/06/89		Bromoform
85FS-1	89.15879	74839	< 20.		UG/KG	12/06/89		Bromomethane
85FS-1	89.15879	78933	< 20.		UG/KG	12/06/89		2-Butanone
85FS-1	89.15879	104518	< 10.		UG/KG	12/06/89		n-Butylbenzene
85FS-1	89.15879	98066	< 10.		UG/KG	12/06/89		tert-Butylbenzene
85FS-1	89.15879	135988	< 10.		UG/KG	12/06/89		sec-Butylbenzene
85FS-1	89.15879	75150	< 10.		UG/KG	12/06/89		Carbon disulfide
85FS-1	89.15879	56235	< 10.		UG/KG	12/06/89		Carbon tetrachloride
85FS-1	89.15879	108907	< 10.		UG/KG	12/06/89		Chlorobenzene
85FS-1	89.15879	124481	< 10.		UG/KG	12/06/89		Chlorodibromomethane
85FS-1	89.15879	75003	< 20.		UG/KG	12/06/89		Chloroethane
85FS-1	89.15879	67663	< 10.		UG/KG	12/06/89		Chloroform
85FS-1	89.15879	74873	< 20.		UG/KG	12/06/89		Chloromethane
85FS-1	89.15879	95498	< 10.		UG/KG	12/06/89		o-Chlorotoluene
85FS-1	89.15879	106434	< 10.		UG/KG	12/06/89		p-Chlorotoluene
85FS-1	89.15879	96128	< 10.		UG/KG	12/06/89		1,2-Dibromo-3-chloropropane
85FS-1	89.15879	106934	< 10.		UG/KG	12/06/89		1,2-Dibromoethane
85FS-1	89.15879	74953	< 10.		UG/KG	12/06/89		Dibromomethane
85FS-1	89.15879	95501	< 10.		UG/KG	12/06/89		o-Dichlorobenzene (1,2)
85FS-1	89.15879	541731	< 10.		UG/KG	12/06/89		m-Dichlorobenzene (1,3)

85FS-1	89.15879	106467	< 10.		UG/KG	12/06/89	p-Dichlorobenzene (1,4)
85FS-1	89.15879	75343	< 10.		UG/KG	12/06/89	1,1-Dichloroethane
85FS-1	89.15879	107062	< 10.		UG/KG	12/06/89	1,2-Dichloroethane
85FS-1	89.15879	156605	< 10.		UG/KG	12/06/89	trans-1,2-Dichloroethene
85FS-1	89.15879	75354	< 10.		UG/KG	12/06/89	1,1-Dichloroethene
85FS-1	89.15879	156592	< 10.		UG/KG	12/06/89	cis-1,2-Dichloroethylene
85FS-1	89.15879	594207	< 10.		UG/KG	12/06/89	2,2-Dichloropropane
85FS-1	89.15879	142289	< 10.		UG/KG	12/06/89	1,3-Dichloropropane
85FS-1	89.15879	78875	< 10.		UG/KG	12/06/89	1,2-Dichloropropane
85FS-1	89.15879	10061026	< 10.		UG/KG	12/06/89	trans-1,3-Dichloropropene
85FS-1	89.15879	563586	< 10.		UG/KG	12/06/89	1,1-Dichloropropene
85FS-1	89.15879	10061015	< 10.		UG/KG	12/06/89	cis-1,3-Dichloropropene
85FS-1	89.15879	100414	< 10.		UG/KG	12/06/89	Ethylbenzene
85FS-1	89.15879	107062	< 10.		UG/KG	12/06/89	Ethylene chloride
85FS-1	89.15879	87683	< 10.		UG/KG	12/06/89	Hexachlorobutadiene
85FS-1	89.15879	591786	< 20.		UG/KG	12/06/89	2-Hexanone
85FS-1	89.15879	98828	< 10.		UG/KG	12/06/89	Isopropylbenzene
85FS-1	89.15879	99876	< 10.		UG/KG	12/06/89	4-Isopropyltoluene
85FS-1	89.15879	108101	< 20.		UG/KG	12/06/89	4-Methyl-2-pentanone
85FS-1	89.15879	75092	< 10.		UG/KG	12/06/89	Methylene chloride
85FS-1	89.15879	91203	< 10.		UG/KG	12/06/89	Naphthalene
85FS-1	89.15879	103651	< 10.		UG/KG	12/06/89	Propylbenzene
85FS-1	89.15879	100425	< 10.		UG/KG	12/06/89	Styrene
85FS-1	89.15879	79345	< 10.		UG/KG	12/06/89	1,1,2,2-Tetrachloroethane
85FS-1	89.15879	630206	< 10.		UG/KG	12/06/89	1,1,1,2-Tetrachloroethane
85FS-1	89.15879	127184	< 10.		UG/KG	12/06/89	Tetrachloroethylene
85FS-1	89.15879	108883	< 10.		UG/KG	12/06/89	Toluene
85FS-1	89.15879	120821	< 10.		UG/KG	12/06/89	1,2,4-Trichlorobenzene
85FS-1	89.15879	87616	< 10.		UG/KG	12/06/89	1,2,3-Trichlorobenzene
85FS-1	89.15879	71556	19.4	5.8	UG/KG	12/06/89	1,1,1-Trichloroethane
85FS-1	89.15879	79005	< 10.		UG/KG	12/06/89	1,1,2-Trichloroethane
85FS-1	89.15879	79016	< 10.		UG/KG	12/06/89	Trichloroethene
85FS-1	89.15879	75694	< 10.		UG/KG	12/06/89	Trichlorofluoromethane
85FS-1	89.15879	96184	< 10.		UG/KG	12/06/89	1,2,3-Trichloropropane
85FS-1	89.15879	108678	< 10.		UG/KG	12/06/89	1,3,5-Trimethylbenzene
85FS-1	89.15879	95636	< 10.		UG/KG	12/06/89	1,2,4-Trimethylbenzene
85FS-1	89.15879	108054	< 10.		UG/KG	12/06/89	Vinyl acetate
85FS-1	89.15879	75014	< 20.		UG/KG	12/06/89	Vinyl chloride
85FS-1	89.15879	95476	104.	31.2	UG/KG	12/06/89	o-Xylene
85FS-1	89.15879	1330207	87.	26.1	UG/KG	12/06/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-2	89.15880	67641	171.	51.3	UG/KG	12/06/89		Acetone
85FS-2	89.15880	71432	< 10.		UG/KG	12/06/89		Benzene
85FS-2	89.15880	697405	TI		UG/KG	12/07/89		Bicyclo[2.2.2]octane, 1-Bromo-4-methyl
85FS-2	89.15880	108861	< 10.		UG/KG	12/06/89		Bromobenzene
85FS-2	89.15880	74975	< 10.		UG/KG	12/06/89		Bromochloromethane
85FS-2	89.15880	75274	< 10.		UG/KG	12/06/89		Bromodichloromethane
85FS-2	89.15880	75252	< 10.		UG/KG	12/06/89		Bromoform
85FS-2	89.15880	74839	< 20.		UG/KG	12/06/89		Bromomethane
85FS-2	89.15880	78933	21.8	6.5	UG/KG	12/06/89		2-Butanone
85FS-2	89.15880	98066	< 10.		UG/KG	12/06/89		tert-Butylbenzene
85FS-2	89.15880	104518	< 10.		UG/KG	12/06/89		n-Butylbenzene
85FS-2	89.15880	135988	< 10.		UG/KG	12/06/89		sec-Butylbenzene
85FS-2	89.15880	75150	< 10.		UG/KG	12/06/89		Carbon disulfide
85FS-2	89.15880	56235	< 10.		UG/KG	12/06/89		Carbon tetrachloride
85FS-2	89.15880	108907	< 10.		UG/KG	12/06/89		Chlorobenzene
85FS-2	89.15880	124481	< 10.		UG/KG	12/06/89		Chlorodibromomethane
85FS-2	89.15880	75003	< 20.		UG/KG	12/06/89		Chloroethane
85FS-2	89.15880	67663	< 10.		UG/KG	12/06/89		Chloroform
85FS-2	89.15880	74873	< 20.		UG/KG	12/06/89		Chloromethane
85FS-2	89.15880	95498	< 10.		UG/KG	12/06/89		o-Chlorotoluene
85FS-2	89.15880	106434	< 10.		UG/KG	12/06/89		p-Chlorotoluene
85FS-2	89.15880	96128	< 10.		UG/KG	12/06/89		1,2-Dibromo-3-chloropropane
85FS-2	89.15880	106934	< 10.		UG/KG	12/06/89		1,2-Dibromoethane
85FS-2	89.15880	74953	< 10.		UG/KG	12/06/89		Dibromomethane
85FS-2	89.15880	95501	< 10.		UG/KG	12/06/89		o-Dichlorobenzene (1,2)

85FS-2	89.15880	541731	< 10.		UG/KG	12/06/89	m-Dichlorobenzene (1,3)
85FS-2	89.15880	106467	< 10.		UG/KG	12/06/89	p-Dichlorobenzene (1,4)
85FS-2	89.15880	107062	< 10.		UG/KG	12/06/89	1,2-Dichloroethane
85FS-2	89.15880	75343	< 10.		UG/KG	12/06/89	1,1-Dichloroethane
85FS-2	89.15880	75354	< 10.		UG/KG	12/06/89	1,1-Dichloroethene
85FS-2	89.15880	156605	< 10.		UG/KG	12/06/89	trans-1,2-Dichloroethene
85FS-2	89.15880	156592	< 10.		UG/KG	12/06/89	cis-1,2-Dichloroethylene
85FS-2	89.15880	142289	< 10.		UG/KG	12/06/89	1,3-Dichloropropane
85FS-2	89.15880	594207	< 10.		UG/KG	12/06/89	2,2-Dichloropropane
85FS-2	89.15880	78875	< 10.		UG/KG	12/06/89	1,2-Dichloropropane
85FS-2	89.15880	563586	< 10.		UG/KG	12/06/89	1,1-Dichloropropene
85FS-2	89.15880	10061026	< 10.		UG/KG	12/06/89	trans-1,3-Dichloropropene
85FS-2	89.15880	10061015	< 10.		UG/KG	12/06/89	cis-1,3-Dichloropropene
85FS-2	89.15880	100414	< 10.		UG/KG	12/06/89	Ethylbenzene
85FS-2	89.15880	107062	< 10.		UG/KG	12/06/89	Ethylene chloride
85FS-2	89.15880	87683	< 10.		UG/KG	12/06/89	Hexachlorobutadiene
85FS-2	89.15880	591786	< 20.		UG/KG	12/06/89	2-Hexanone
85FS-2	89.15880	98828	12.6	3.8	UG/KG	12/06/89	Isopropylbenzene
85FS-2	89.15880	99876	< 10.		UG/KG	12/06/89	4-Isopropyltoluene
85FS-2	89.15880	108101	< 20.		UG/KG	12/06/89	4-Methyl-2-pentanone
85FS-2	89.15880	75092	< 10.		UG/KG	12/06/89	Methylene chloride
85FS-2	89.15880	91203	< 10.		UG/KG	12/06/89	Naphthalene
85FS-2	89.15880	103651	< 10.		UG/KG	12/06/89	Propylbenzene
85FS-2	89.15880	100425	< 10.		UG/KG	12/06/89	Styrene
85FS-2	89.15880	630206	< 10.		UG/KG	12/06/89	1,1,1,2-Tetrachloroethane
85FS-2	89.15880	79345	< 10.		UG/KG	12/06/89	1,1,2,2-Tetrachloroethane
85FS-2	89.15880	127184	< 10.		UG/KG	12/06/89	Tetrachloroethylene
85FS-2	89.15880	108883	< 10.		UG/KG	12/06/89	Toluene
85FS-2	89.15880	120821	< 10.		UG/KG	12/06/89	1,2,4-Trichlorobenzene
85FS-2	89.15880	87616	< 10.		UG/KG	12/06/89	1,2,3-Trichlorobenzene
85FS-2	89.15880	71556	16.4	4.9	UG/KG	12/06/89	1,1,1-Trichloroethane
85FS-2	89.15880	79005	< 10.		UG/KG	12/06/89	1,1,2-Trichloroethane
85FS-2	89.15880	79016	< 10.		UG/KG	12/06/89	Trichloroethene
85FS-2	89.15880	75694	< 10.		UG/KG	12/06/89	Trichlorofluoromethane
85FS-2	89.15880	96184	< 10.		UG/KG	12/06/89	1,2,3-Trichloropropane
85FS-2	89.15880	95636	< 10.		UG/KG	12/06/89	1,2,4-Trimethylbenzene
85FS-2	89.15880	108678	< 10.		UG/KG	12/06/89	1,3,5-Trimethylbenzene
85FS-2	89.15880	108054	< 10.		UG/KG	12/06/89	Vinyl acetate
85FS-2	89.15880	75014	< 20.		UG/KG	12/06/89	Vinyl chloride
85FS-2	89.15880	95476	50.1	15.	UG/KG	12/06/89	o-Xylene
85FS-2	89.15880	1330207	44.4	13.3	UG/KG	12/06/89	Mixed-Xylenes (m ± p)

REPORT NUMBER: 5135

HSE-9 ANALYTICAL REPORT

Prepared by: DLN

on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968

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
85FS-3	89.15881	67641	316.	94.8	UG/KG	12/06/89		Acetone
85FS-3	89.15881	71432	< 10.		UG/KG	12/06/89		Benzene
85FS-3	89.15881	108861	< 10.		UG/KG	12/06/89		Bromobenzene
85FS-3	89.15881	74975	< 10.		UG/KG	12/06/89		Bromochloromethane
85FS-3	89.15881	75274	< 10.		UG/KG	12/06/89		Bromodichloromethane
85FS-3	89.15881	75252	< 10.		UG/KG	12/06/89		Bromoform
85FS-3	89.15881	74839	< 20.		UG/KG	12/06/89		Bromomethane
85FS-3	89.15881	78933	< 20.		UG/KG	12/06/89		2-Butanone
85FS-3	89.15881	135988	< 10.		UG/KG	12/06/89		sec-Butylbenzene
85FS-3	89.15881	98066	< 10.		UG/KG	12/06/89		tert-Butylbenzene
85FS-3	89.15881	104518	< 10.		UG/KG	12/06/89		n-Butylbenzene
85FS-3	89.15881	75150	< 10.		UG/KG	12/06/89		Carbon disulfide
85FS-3	89.15881	56235	< 10.		UG/KG	12/06/89		Carbon tetrachloride
85FS-3	89.15881	108907	< 10.		UG/KG	12/06/89		Chlorobenzene
85FS-3	89.15881	124481	< 10.		UG/KG	12/06/89		Chlorodibromomethane
85FS-3	89.15881	75003	< 20.		UG/KG	12/06/89		Chloroethane
85FS-3	89.15881	67663	< 10.		UG/KG	12/06/89		Chloroform
85FS-3	89.15881	74873	< 20.		UG/KG	12/06/89		Chloromethane
85FS-3	89.15881	95498	< 10.		UG/KG	12/06/89		o-Chlorotoluene
85FS-3	89.15881	106434	< 10.		UG/KG	12/06/89		p-Chlorotoluene
85FS-3	89.15881	96128	< 10.		UG/KG	12/06/89		1,2-Dibromo-3-chloropropane
85FS-3	89.15881	106934	< 10.		UG/KG	12/06/89		1,2-Dibromoethane
85FS-3	89.15881	74953	< 10.		UG/KG	12/06/89		Dibromomethane
85FS-3	89.15881	95501	< 10.		UG/KG	12/06/89		o-Dichlorobenzene (1,2)
85FS-3	89.15881	541731	< 10.		UG/KG	12/06/89		m-Dichlorobenzene (1,3)

85FS-3	89.15881	106467	< 10.		UG/KG	12/06/89	p-Dichlorobenzene (1,4)
85FS-3	89.15881	107062	< 10.		UG/KG	12/06/89	1,2-Dichloroethane
85FS-3	89.15881	75343	< 10.		UG/KG	12/06/89	1,1-Dichloroethane
85FS-3	89.15881	156605	< 10.		UG/KG	12/06/89	trans-1,2-Dichloroethene
85FS-3	89.15881	75354	< 10.		UG/KG	12/06/89	1,1-Dichloroethene
85FS-3	89.15881	156592	< 10.		UG/KG	12/06/89	cis-1,2-Dichloroethylene
85FS-3	89.15881	78875	< 10.		UG/KG	12/06/89	1,2-Dichloropropane
85FS-3	89.15881	142289	< 10.		UG/KG	12/06/89	1,3-Dichloropropane
85FS-3	89.15881	594207	< 10.		UG/KG	12/06/89	2,2-Dichloropropane
85FS-3	89.15881	10061015	< 10.		UG/KG	12/06/89	cis-1,3-Dichloropropene
85FS-3	89.15881	10061026	< 10.		UG/KG	12/06/89	trans-1,3-Dichloropropene
85FS-3	89.15881	563586	< 10.		UG/KG	12/06/89	1,1-Dichloropropene
85FS-3	89.15881	100414	< 10.		UG/KG	12/06/89	Ethylbenzene
85FS-3	89.15881	107062	< 10.		UG/KG	12/06/89	Ethylene chloride
85FS-3	89.15881	87683	< 10.		UG/KG	12/06/89	Hexachlorobutadiene
85FS-3	89.15881	591786	< 20.		UG/KG	12/06/89	2-Hexanone
85FS-3	89.15881	98828	< 10.		UG/KG	12/06/89	Isopropylbenzene
85FS-3	89.15881	99876	< 10.		UG/KG	12/06/89	4-Isopropyltoluene
85FS-3	89.15881	108101	< 20.		UG/KG	12/06/89	4-Methyl-2-pentanone
85FS-3	89.15881	75092	< 10.		UG/KG	12/06/89	Methylene chloride
85FS-3	89.15881	91203	< 10.		UG/KG	12/06/89	Naphthalene
85FS-3	89.15881	103651	< 10.		UG/KG	12/06/89	Propylbenzene
85FS-3	89.15881	100425	< 10.		UG/KG	12/06/89	Styrene
85FS-3	89.15881	79345	< 10.		UG/KG	12/06/89	1,1,2,2-Tetrachloroethane
85FS-3	89.15881	630206	< 10.		UG/KG	12/06/89	1,1,1,2-Tetrachloroethane
85FS-3	89.15881	127184	< 10.		UG/KG	12/06/89	Tetrachloroethylene
85FS-3	89.15881	108883	< 10.		UG/KG	12/06/89	Toluene
85FS-3	89.15881	120821	< 10.		UG/KG	12/06/89	1,2,4-Trichlorobenzene
85FS-3	89.15881	87616	< 10.		UG/KG	12/06/89	1,2,3-Trichlorobenzene
85FS-3	89.15881	79005	< 10.		UG/KG	12/06/89	1,1,2-Trichloroethane
85FS-3	89.15881	71556	11.8	3.5	UG/KG	12/06/89	1,1,1-Trichloroethane
85FS-3	89.15881	79016	< 10.		UG/KG	12/06/89	Trichloroethene
85FS-3	89.15881	75694	< 10.		UG/KG	12/06/89	Trichlorofluoromethane
85FS-3	89.15881	96184	< 10.		UG/KG	12/06/89	1,2,3-Trichloropropane
85FS-3	89.15881	95636	< 10.		UG/KG	12/06/89	1,2,4-Trimethylbenzene
85FS-3	89.15881	108678	< 10.		UG/KG	12/06/89	1,3,5-Trimethylbenzene
85FS-3	89.15881	108054	< 10.		UG/KG	12/06/89	Vinyl acetate
85FS-3	89.15881	75014	< 20.		UG/KG	12/06/89	Vinyl chloride
85FS-3	89.15881	95476	123.	36.9	UG/KG	12/06/89	o-Xylene
85FS-3	89.15881	1330207	111.	33.3	UG/KG	12/06/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-4	89.15882	67641	576.	172.8	UG/KG	12/06/89		Acetone
85FS-4	89.15882	71432	< 10.		UG/KG	12/06/89		Benzene
85FS-4	89.15882	108861	< 10.		UG/KG	12/06/89		Bromobenzene
85FS-4	89.15882	74975	< 10.		UG/KG	12/06/89		Bromochloromethane
85FS-4	89.15882	75274	< 10.		UG/KG	12/06/89		Bromodichloromethane
85FS-4	89.15882	75252	< 10.		UG/KG	12/06/89		Bromoform
85FS-4	89.15882	74839	< 20.		UG/KG	12/06/89		Bromomethane
85FS-4	89.15882	78933	< 20.		UG/KG	12/06/89		2-Butanone
85FS-4	89.15882	98066	< 10.		UG/KG	12/06/89		tert-Butylbenzene
85FS-4	89.15882	135988	< 10.		UG/KG	12/06/89		sec-Butylbenzene
85FS-4	89.15882	104518	< 10.		UG/KG	12/06/89		n-Butylbenzene
85FS-4	89.15882	75150	22.2	6.7	UG/KG	12/06/89		Carbon disulfide
85FS-4	89.15882	56235	< 10.		UG/KG	12/06/89		Carbon tetrachloride
85FS-4	89.15882	108907	< 10.		UG/KG	12/06/89		Chlorobenzene
85FS-4	89.15882	124481	< 10.		UG/KG	12/06/89		Chlorodibromomethane
85FS-4	89.15882	75003	< 20.		UG/KG	12/06/89		Chloroethane
85FS-4	89.15882	67663	26.8	8.	UG/KG	12/06/89		Chloroform
85FS-4	89.15882	74873	< 20.		UG/KG	12/06/89		Chloromethane
85FS-4	89.15882	106434	< 10.		UG/KG	12/06/89		p-Chlorotoluene
85FS-4	89.15882	95498	< 10.		UG/KG	12/06/89		o-Chlorotoluene
85FS-4	89.15882	96128	< 10.		UG/KG	12/06/89		1,2-Dibromo-3-chloropropane
85FS-4	89.15882	106934	< 10.		UG/KG	12/06/89		1,2-Dibromoethane
85FS-4	89.15882	74953	< 10.		UG/KG	12/06/89		Dibromomethane
85FS-4	89.15882	95501	< 10.		UG/KG	12/06/89		o-Dichlorobenzene (1,2)
85FS-4	89.15882	541731	< 10.		UG/KG	12/06/89		m-Dichlorobenzene (1,3)

85FS-4	89.15882	106467	< 10.		UG/KG	12/06/89	p-Dichlorobenzene (1,4)
85FS-4	89.15882	107062	< 10.		UG/KG	12/06/89	1,2-Dichloroethane
85FS-4	89.15882	75343	< 10.		UG/KG	12/06/89	1,1-Dichloroethane
85FS-4	89.15882	75354	< 10.		UG/KG	12/06/89	1,1-Dichloroethene
85FS-4	89.15882	156605	< 10.		UG/KG	12/06/89	trans-1,2-Dichloroethene
85FS-4	89.15882	156592	< 10.		UG/KG	12/06/89	cis-1,2-Dichloroethylene
85FS-4	89.15882	78875	< 10.		UG/KG	12/06/89	1,2-Dichloropropane
85FS-4	89.15882	594207	< 10.		UG/KG	12/06/89	2,2-Dichloropropane
85FS-4	89.15882	142289	< 10.		UG/KG	12/06/89	1,3-Dichloropropane
85FS-4	89.15882	10061015	< 10.		UG/KG	12/06/89	cis-1,3-Dichloropropene
85FS-4	89.15882	10061026	< 10.		UG/KG	12/06/89	trans-1,3-Dichloropropene
85FS-4	89.15882	563586	< 10.		UG/KG	12/06/89	1,1-Dichloropropene
85FS-4	89.15882	100414	< 10.		UG/KG	12/06/89	Ethylbenzene
85FS-4	89.15882	107062	< 10.		UG/KG	12/06/89	Ethylene chloride
85FS-4	89.15882	87683	< 10.		UG/KG	12/06/89	Hexachlorobutadiene
85FS-4	89.15882	591786	< 20.		UG/KG	12/06/89	2-Hexanone
85FS-4	89.15882	98828	< 10.		UG/KG	12/06/89	Isopropylbenzene
85FS-4	89.15882	99876	< 10.		UG/KG	12/06/89	4-Isopropyltoluene
85FS-4	89.15882	108101	< 20.		UG/KG	12/06/89	4-Methyl-2-pentanone
85FS-4	89.15882	75092	< 10.		UG/KG	12/06/89	Methylene chloride
85FS-4	89.15882	91203	< 10.		UG/KG	12/06/89	Naphthalene
85FS-4	89.15882	103651	< 10.		UG/KG	12/06/89	Propylbenzene
85FS-4	89.15882	100425	< 10.		UG/KG	12/06/89	Styrene
85FS-4	89.15882	79345	< 10.		UG/KG	12/06/89	1,1,2,2-Tetrachloroethane
85FS-4	89.15882	630206	< 10.		UG/KG	12/06/89	1,1,1,2-Tetrachloroethane
85FS-4	89.15882	127184	< 10.		UG/KG	12/06/89	Tetrachloroethylene
85FS-4	89.15882	108883	< 10.		UG/KG	12/06/89	Toluene
85FS-4	89.15882	87616	< 10.		UG/KG	12/06/89	1,2,3-Trichlorobenzene
85FS-4	89.15882	120821	< 10.		UG/KG	12/06/89	1,2,4-Trichlorobenzene
85FS-4	89.15882	79005	< 10.		UG/KG	12/06/89	1,1,2-Trichloroethane
85FS-4	89.15882	71556	18.3	5.5	UG/KG	12/06/89	1,1,1-Trichloroethane
85FS-4	89.15882	79016	< 10.		UG/KG	12/06/89	Trichloroethene
85FS-4	89.15882	75694	< 10.		UG/KG	12/06/89	Trichlorofluoromethane
85FS-4	89.15882	96184	< 10.		UG/KG	12/06/89	1,2,3-Trichloropropane
85FS-4	89.15882	95636	< 10.		UG/KG	12/06/89	1,2,4-Trimethylbenzene
85FS-4	89.15882	108678	< 10.		UG/KG	12/06/89	1,3,5-Trimethylbenzene
85FS-4	89.15882	108054	< 10.		UG/KG	12/06/89	Vinyl acetate
85FS-4	89.15882	75014	< 20.		UG/KG	12/06/89	Vinyl chloride
85FS-4	89.15882	95476	55.6	16.7	UG/KG	12/06/89	o-Xylene
85FS-4	89.15882	1330207	48.3	14.5	UG/KG	12/06/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-5	89.15883	67641	282.	84.6	UG/KG	12/06/89		Acetone
85FS-5	89.15883	71432	< 10.		UG/KG	12/06/89		Benzene
85FS-5	89.15883	108861	< 10.		UG/KG	12/06/89		Bromobenzene
85FS-5	89.15883	74975	< 10.		UG/KG	12/06/89		Bromochloromethane
85FS-5	89.15883	75274	< 10.		UG/KG	12/06/89		Bromodichloromethane
85FS-5	89.15883	75252	< 10.		UG/KG	12/06/89		Bromoform
85FS-5	89.15883	74839	< 20.		UG/KG	12/06/89		Bromomethane
85FS-5	89.15883	78933	< 20.		UG/KG	12/06/89		2-Butanone
85FS-5	89.15883	98066	< 10.		UG/KG	12/06/89		tert-Butylbenzene
85FS-5	89.15883	104518	< 10.		UG/KG	12/06/89		n-Butylbenzene
85FS-5	89.15883	135988	< 10.		UG/KG	12/06/89		sec-Butylbenzene
85FS-5	89.15883	75150	< 10.		UG/KG	12/06/89		Carbon disulfide
85FS-5	89.15883	56235	< 10.		UG/KG	12/06/89		Carbon tetrachloride
85FS-5	89.15883	108907	< 10.		UG/KG	12/06/89		Chlorobenzene
85FS-5	89.15883	124481	< 10.		UG/KG	12/06/89		Chlorodibromomethane
85FS-5	89.15883	75003	< 20.		UG/KG	12/06/89		Chloroethane
85FS-5	89.15883	67663	27.9	8.4	UG/KG	12/06/89		Chloroform
85FS-5	89.15883	74873	< 20.		UG/KG	12/06/89		Chloromethane
85FS-5	89.15883	106434	< 10.		UG/KG	12/06/89		p-Chlorotoluene
85FS-5	89.15883	95498	< 10.		UG/KG	12/06/89		o-Chlorotoluene
85FS-5	89.15883	96128	< 10.		UG/KG	12/06/89		1,2-Dibromo-3-chloropropane
85FS-5	89.15883	106934	< 10.		UG/KG	12/06/89		1,2-Dibromoethane
85FS-5	89.15883	74953	< 10.		UG/KG	12/06/89		Dibromomethane
85FS-5	89.15883	95501	< 10.		UG/KG	12/06/89		o-Dichlorobenzene (1,2)
85FS-5	89.15883	541731	< 10.		UG/KG	12/06/89		m-Dichlorobenzene (1,3)

85FS-5	89.15883	106467	< 10.		UG/KG	12/06/89	p-Dichlorobenzene (1,4)
85FS-5	89.15883	75343	< 10.		UG/KG	12/06/89	1,1-Dichloroethane
85FS-5	89.15883	107062	< 10.		UG/KG	12/06/89	1,2-Dichloroethane
85FS-5	89.15883	156605	< 10.		UG/KG	12/06/89	trans-1,2-Dichloroethene
85FS-5	89.15883	75354	< 10.		UG/KG	12/06/89	1,1-Dichloroethene
85FS-5	89.15883	156592	< 10.		UG/KG	12/06/89	cis-1,2-Dichloroethylene
85FS-5	89.15883	142289	< 10.		UG/KG	12/06/89	1,3-Dichloropropane
85FS-5	89.15883	78875	< 10.		UG/KG	12/06/89	1,2-Dichloropropane
85FS-5	89.15883	594207	< 10.		UG/KG	12/06/89	2,2-Dichloropropane
85FS-5	89.15883	10061015	< 10.		UG/KG	12/06/89	cis-1,3-Dichloropropene
85FS-5	89.15883	10061026	< 10.		UG/KG	12/06/89	trans-1,3-Dichloropropene
85FS-5	89.15883	563586	< 10.		UG/KG	12/06/89	1,1-Dichloropropene
85FS-5	89.15883	100414	< 10.		UG/KG	12/06/89	Ethylbenzene
85FS-5	89.15883	107062	< 10.		UG/KG	12/06/89	Ethylene chloride
85FS-5	89.15883	87683	< 10.		UG/KG	12/06/89	Hexachlorobutadiene
85FS-5	89.15883	591786	< 20.		UG/KG	12/06/89	2-Hexanone
85FS-5	89.15883	98828	< 10.		UG/KG	12/06/89	Isopropylbenzene
85FS-5	89.15883	99876	< 10.		UG/KG	12/06/89	4-Isopropyltoluene
85FS-5	89.15883	108101	< 20.		UG/KG	12/06/89	4-Methyl-2-pentanone
85FS-5	89.15883	75092	< 10.		UG/KG	12/06/89	Methylene chloride
85FS-5	89.15883	91203	< 10.		UG/KG	12/06/89	Naphthalene
85FS-5	89.15883	103651	< 10.		UG/KG	12/06/89	Propylbenzene
85FS-5	89.15883	100425	< 10.		UG/KG	12/06/89	Styrene
85FS-5	89.15883	79345	< 10.		UG/KG	12/06/89	1,1,2,2-Tetrachloroethane
85FS-5	89.15883	630206	< 10.		UG/KG	12/06/89	1,1,1,2-Tetrachloroethane
85FS-5	89.15883	127184	< 10.		UG/KG	12/06/89	Tetrachloroethylene
85FS-5	89.15883	108883	< 10.		UG/KG	12/06/89	Toluene
85FS-5	89.15883	120821	< 10.		UG/KG	12/06/89	1,2,4-Trichlorobenzene
85FS-5	89.15883	87616	< 10.		UG/KG	12/06/89	1,2,3-Trichlorobenzene
85FS-5	89.15883	79005	< 10.		UG/KG	12/06/89	1,1,2-Trichloroethane
85FS-5	89.15883	71556	< 10.		UG/KG	12/06/89	1,1,1-Trichloroethane
85FS-5	89.15883	79016	< 10.		UG/KG	12/06/89	Trichloroethene
85FS-5	89.15883	75694	< 10.		UG/KG	12/06/89	Trichlorofluoromethane
85FS-5	89.15883	96184	< 10.		UG/KG	12/06/89	1,2,3-Trichloropropane
85FS-5	89.15883	95636	< 10.		UG/KG	12/06/89	1,2,4-Trimethylbenzene
85FS-5	89.15883	108678	< 10.		UG/KG	12/06/89	1,3,5-Trimethylbenzene
85FS-5	89.15883	108054	< 10.		UG/KG	12/06/89	Vinyl acetate
85FS-5	89.15883	75014	< 20.		UG/KG	12/06/89	Vinyl chloride
85FS-5	89.15883	95476	30.7	9.2	UG/KG	12/06/89	o-Xylene
85FS-5	89.15883	1330207	25.4	7.6	UG/KG	12/06/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-6	89.15884	67641	300.	90.	UG/KG	12/06/89		Acetone
85FS-6	89.15884	71432	< 10.		UG/KG	12/06/89		Benzene
85FS-6	89.15884	108861	< 10.		UG/KG	12/06/89		Bromobenzene
85FS-6	89.15884	74975	< 10.		UG/KG	12/06/89		Bromochloromethane
85FS-6	89.15884	75274	< 10.		UG/KG	12/06/89		Bromodichloromethane
85FS-6	89.15884	75252	< 10.		UG/KG	12/06/89		Bromoform
85FS-6	89.15884	74839	< 20.		UG/KG	12/06/89		Bromomethane
85FS-6	89.15884	78933	< 20.		UG/KG	12/06/89		2-Butanone
85FS-6	89.15884	135988	< 10.		UG/KG	12/06/89		sec-Butylbenzene
85FS-6	89.15884	98066	< 10.		UG/KG	12/06/89		tert-Butylbenzene
85FS-6	89.15884	104518	< 10.		UG/KG	12/06/89		n-Butylbenzene
85FS-6	89.15884	75150	< 10.		UG/KG	12/06/89		Carbon disulfide
85FS-6	89.15884	56235	< 10.		UG/KG	12/06/89		Carbon tetrachloride
85FS-6	89.15884	108907	< 10.		UG/KG	12/06/89		Chlorobenzene
85FS-6	89.15884	124481	< 10.		UG/KG	12/06/89		Chlorodibromomethane
85FS-6	89.15884	75003	< 20.		UG/KG	12/06/89		Chloroethane
85FS-6	89.15884	67663	< 10.		UG/KG	12/06/89		Chloroform
85FS-6	89.15884	74873	< 20.		UG/KG	12/06/89		Chloromethane
85FS-6	89.15884	106434	< 10.		UG/KG	12/06/89		p-Chlorotoluene
85FS-6	89.15884	95498	< 10.		UG/KG	12/06/89		o-Chlorotoluene
85FS-6	89.15884	96128	< 10.		UG/KG	12/06/89		1,2-Dibromo-3-chloropropane
85FS-6	89.15884	106934	< 10.		UG/KG	12/06/89		1,2-Dibromoethane
85FS-6	89.15884	74953	< 10.		UG/KG	12/06/89		Dibromomethane
85FS-6	89.15884	95501	< 10.		UG/KG	12/06/89		o-Dichlorobenzene (1,2)
85FS-6	89.15884	541731	< 10.		UG/KG	12/06/89		m-Dichlorobenzene (1,3)

85FS-6	89.15884	106467	< 10.		UG/KG	12/06/89	p-Dichlorobenzene (1,4)
85FS-6	89.15884	107062	< 10.		UG/KG	12/06/89	1,2-Dichloroethane
85FS-6	89.15884	75343	< 10.		UG/KG	12/06/89	1,1-Dichloroethane
85FS-6	89.15884	156605	< 10.		UG/KG	12/06/89	trans-1,2-Dichloroethene
85FS-6	89.15884	75354	< 10.		UG/KG	12/06/89	1,1-Dichloroethene
85FS-6	89.15884	156592	< 10.		UG/KG	12/06/89	cis-1,2-Dichloroethylene
85FS-6	89.15884	78875	< 10.		UG/KG	12/06/89	1,2-Dichloropropane
85FS-6	89.15884	594207	< 10.		UG/KG	12/06/89	2,2-Dichloropropane
85FS-6	89.15884	142289	< 10.		UG/KG	12/06/89	1,3-Dichloropropane
85FS-6	89.15884	563586	< 10.		UG/KG	12/06/89	1,1-Dichloropropene
85FS-6	89.15884	10061026	< 10.		UG/KG	12/06/89	trans-1,3-Dichloropropene
85FS-6	89.15884	10061015	< 10.		UG/KG	12/06/89	cis-1,3-Dichloropropene
85FS-6	89.15884	100414	< 10.		UG/KG	12/06/89	Ethylbenzene
85FS-6	89.15884	107062	< 10.		UG/KG	12/06/89	Ethylene chloride
85FS-6	89.15884	87683	< 10.		UG/KG	12/06/89	Hexachlorobutadiene
85FS-6	89.15884	591786	< 20.		UG/KG	12/06/89	2-Hexanone
85FS-6	89.15884	98828	< 10.		UG/KG	12/06/89	Isopropylbenzene
85FS-6	89.15884	99876	< 10.		UG/KG	12/06/89	4-Isopropyltoluene
85FS-6	89.15884	108101	< 20.		UG/KG	12/06/89	4-Methyl-2-pentanone
85FS-6	89.15884	75092	< 10.		UG/KG	12/06/89	Methylene chloride
85FS-6	89.15884	91203	< 10.		UG/KG	12/06/89	Naphthalene
85FS-6	89.15884	103651	< 10.		UG/KG	12/06/89	Propylbenzene
85FS-6	89.15884	100425	< 10.		UG/KG	12/06/89	Styrene
85FS-6	89.15884	630206	< 10.		UG/KG	12/06/89	1,1,1,2-Tetrachloroethane
85FS-6	89.15884	79345	< 10.		UG/KG	12/06/89	1,1,2,2-Tetrachloroethane
85FS-6	89.15884	127184	< 10.		UG/KG	12/06/89	Tetrachloroethylene
85FS-6	89.15884	108883	< 10.		UG/KG	12/06/89	Toluene
85FS-6	89.15884	120821	< 10.		UG/KG	12/06/89	1,2,4-Trichlorobenzene
85FS-6	89.15884	87616	< 10.		UG/KG	12/06/89	1,2,3-Trichlorobenzene
85FS-6	89.15884	71556	11.2	3.4	UG/KG	12/06/89	1,1,1-Trichloroethane
85FS-6	89.15884	79005	< 10.		UG/KG	12/06/89	1,1,2-Trichloroethane
85FS-6	89.15884	79016	< 10.		UG/KG	12/06/89	Trichloroethene
85FS-6	89.15884	75694	< 10.		UG/KG	12/06/89	Trichlorofluoromethane
85FS-6	89.15884	96184	< 10.		UG/KG	12/06/89	1,2,3-Trichloropropane
85FS-6	89.15884	95636	< 10.		UG/KG	12/06/89	1,2,4-Trimethylbenzene
85FS-6	89.15884	108678	< 10.		UG/KG	12/06/89	1,3,5-Trimethylbenzene
85FS-6	89.15884	108054	< 10.		UG/KG	12/06/89	Vinyl acetate
85FS-6	89.15884	75014	< 20.		UG/KG	12/06/89	Vinyl chloride
85FS-6	89.15884	95476	26.9	8.1	UG/KG	12/06/89	o-Xylene
85FS-6	89.15884	1330207	57.2	17.2	UG/KG	12/06/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-7	89.15885	67641	102.	30.6	UG/KG	12/07/89		Acetone
85FS-7	89.15885	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-7	89.15885	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-7	89.15885	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-7	89.15885	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-7	89.15885	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-7	89.15885	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-7	89.15885	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-7	89.15885	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-7	89.15885	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-7	89.15885	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-7	89.15885	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-7	89.15885	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-7	89.15885	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-7	89.15885	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-7	89.15885	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-7	89.15885	67663	26.7	8.	UG/KG	12/07/89		Chloroform
85FS-7	89.15885	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-7	89.15885	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-7	89.15885	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-7	89.15885	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-7	89.15885	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-7	89.15885	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-7	89.15885	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-7	89.15885	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-8	89.15886	67641	1010.	303.	UG/KG	12/07/89		Acetone
85FS-8	89.15886	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-8	89.15886	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-8	89.15886	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-8	89.15886	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-8	89.15886	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-8	89.15886	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-8	89.15886	78933	57.7	17.3	UG/KG	12/07/89		2-Butanone
85FS-8	89.15886	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-8	89.15886	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-8	89.15886	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-8	89.15886	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-8	89.15886	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-8	89.15886	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-8	89.15886	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-8	89.15886	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-8	89.15886	67663	29.2	8.8	UG/KG	12/07/89		Chloroform
85FS-8	89.15886	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-8	89.15886	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-8	89.15886	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-8	89.15886	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-8	89.15886	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-8	89.15886	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-8	89.15886	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-8	89.15886	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-8	89.15886	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-8	89.15886	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-8	89.15886	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-8	89.15886	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-8	89.15886	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-8	89.15886	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-8	89.15886	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-8	89.15886	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-8	89.15886	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-8	89.15886	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-8	89.15886	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-8	89.15886	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-8	89.15886	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-8	89.15886	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-8	89.15886	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-8	89.15886	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-8	89.15886	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-8	89.15886	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-8	89.15886	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-8	89.15886	75092	< 10.		UG/KG	12/07/89	Methylene chloride
85FS-8	89.15886	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-8	89.15886	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-8	89.15886	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-8	89.15886	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-8	89.15886	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-8	89.15886	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-8	89.15886	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-8	89.15886	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-8	89.15886	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-8	89.15886	71556	19.4	5.8	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-8	89.15886	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-8	89.15886	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-8	89.15886	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-8	89.15886	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-8	89.15886	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-8	89.15886	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-8	89.15886	108054	94.7	28.41	UG/KG	12/07/89	Vinyl acetate
85FS-8	89.15886	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-8	89.15886	95476	26.9	8.1	UG/KG	12/07/89	o-Xylene
85FS-8	89.15886	1330207	< 10.		UG/KG	12/07/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-9	89.15887	67641	1660.	498.	UG/KG	12/07/89		Acetone
85FS-9	89.15887	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-9	89.15887	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-9	89.15887	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-9	89.15887	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-9	89.15887	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-9	89.15887	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-9	89.15887	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-9	89.15887	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-9	89.15887	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-9	89.15887	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-9	89.15887	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-9	89.15887	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-9	89.15887	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-9	89.15887	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-9	89.15887	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-9	89.15887	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-9	89.15887	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-9	89.15887	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-9	89.15887	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-9	89.15887	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-9	89.15887	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-9	89.15887	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-9	89.15887	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-9	89.15887	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-9	89.15887	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-9	89.15887	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-9	89.15887	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-9	89.15887	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-9	89.15887	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-9	89.15887	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-9	89.15887	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-9	89.15887	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-9	89.15887	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-9	89.15887	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-9	89.15887	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-9	89.15887	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-9	89.15887	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-9	89.15887	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-9	89.15887	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-9	89.15887	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-9	89.15887	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-9	89.15887	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-9	89.15887	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-9	89.15887	75092	< 10.		UG/KG	12/07/89	Methylene chloride
85FS-9	89.15887	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-9	89.15887	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-9	89.15887	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-9	89.15887	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-9	89.15887	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-9	89.15887	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-9	89.15887	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-9	89.15887	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-9	89.15887	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-9	89.15887	71556	17.4	5.22	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-9	89.15887	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-9	89.15887	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-9	89.15887	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-9	89.15887	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-9	89.15887	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-9	89.15887	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-9	89.15887	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-9	89.15887	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-9	89.15887	95476	58.3	17.5	UG/KG	12/07/89	o-Xylene
85FS-9	89.15887	1330207	44.8	13.4	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-10	89.15888	67641	110.	33.	UG/KG	12/07/89		Acetone
85FS-10	89.15888	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-10	89.15888	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-10	89.15888	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-10	89.15888	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-10	89.15888	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-10	89.15888	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-10	89.15888	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-10	89.15888	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-10	89.15888	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-10	89.15888	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-10	89.15888	75150	31.5	9.5	UG/KG	12/07/89		Carbon disulfide
85FS-10	89.15888	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-10	89.15888	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-10	89.15888	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-10	89.15888	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-10	89.15888	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-10	89.15888	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-10	89.15888	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-10	89.15888	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-10	89.15888	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-10	89.15888	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-10	89.15888	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-10	89.15888	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-10	89.15888	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-10	89.15888	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-10	89.15888	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-10	89.15888	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-10	89.15888	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-10	89.15888	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-10	89.15888	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-10	89.15888	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-10	89.15888	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-10	89.15888	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-10	89.15888	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-10	89.15888	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-10	89.15888	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-10	89.15888	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-10	89.15888	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-10	89.15888	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-10	89.15888	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-10	89.15888	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-10	89.15888	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-10	89.15888	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-10	89.15888	75092	< 10.		UG/KG	12/07/89	Methylene chloride
85FS-10	89.15888	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-10	89.15888	608935		TI	UG/KG	12/07/89	Pentachlorobenzene
85FS-10	89.15888	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-10	89.15888	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-10	89.15888	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-10	89.15888	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-10	89.15888	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-10	89.15888	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-10	89.15888	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-10	89.15888	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-10	89.15888	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-10	89.15888	71556	< 10.		UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-10	89.15888	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-10	89.15888	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-10	89.15888	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-10	89.15888	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-10	89.15888	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-10	89.15888	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-10	89.15888	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-10	89.15888	95476	25.8	7.7	UG/KG	12/07/89	o-Xylene
85FS-10	89.15888	1330207	26.9	8.1	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-11	89.15889	67641	94.5	28.4	UG/KG	12/07/89		Acetone
85FS-11	89.15889	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-11	89.15889	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-11	89.15889	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-11	89.15889	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-11	89.15889	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-11	89.15889	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-11	89.15889	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-11	89.15889	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-11	89.15889	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-11	89.15889	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-11	89.15889	75150	33.4	10.	UG/KG	12/07/89		Carbon disulfide
85FS-11	89.15889	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-11	89.15889	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-11	89.15889	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-11	89.15889	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-11	89.15889	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-11	89.15889	74873	64.1	19.2	UG/KG	12/07/89		Chloromethane
85FS-11	89.15889	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-11	89.15889	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-11	89.15889	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-11	89.15889	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-11	89.15889	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-11	89.15889	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-11	89.15889	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-11	89.15889	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-11	89.15889	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-11	89.15889	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-11	89.15889	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-11	89.15889	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-11	89.15889	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-11	89.15889	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-11	89.15889	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-11	89.15889	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-11	89.15889	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-11	89.15889	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-11	89.15889	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-11	89.15889	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-11	89.15889	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-11	89.15889	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-11	89.15889	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-11	89.15889	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-11	89.15889	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-11	89.15889	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-11	89.15889	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-11	89.15889	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-11	89.15889	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-11	89.15889	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-11	89.15889	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-11	89.15889	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-11	89.15889	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-11	89.15889	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-11	89.15889	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-11	89.15889	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-11	89.15889	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-11	89.15889	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-11	89.15889	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-11	89.15889	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-11	89.15889	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-11	89.15889	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-11	89.15889	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-11	89.15889	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-11	89.15889	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-11	89.15889	95476	23.9	7.2 UG/KG	12/07/89	o-Xylene
85FS-11	89.15889	1330207	25.5	7.7 UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-12	89.15890	67641	147.	44.1	UG/KG	12/07/89		Acetone
85FS-12	89.15890	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-12	89.15890	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-12	89.15890	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-12	89.15890	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-12	89.15890	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-12	89.15890	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-12	89.15890	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-12	89.15890	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-12	89.15890	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-12	89.15890	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-12	89.15890	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-12	89.15890	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-12	89.15890	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-12	89.15890	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-12	89.15890	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-12	89.15890	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-12	89.15890	74873	64.3	19.3	UG/KG	12/07/89		Chloromethane
85FS-12	89.15890	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-12	89.15890	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-12	89.15890	112312	TI		UG/KG	12/07/89		Decanal
85FS-12	89.15890	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-12	89.15890	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-12	89.15890	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-12	89.15890	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)

85FS-12	89.15890	541731	< 10.	UG/KG	12/07/89	m-Dichlorobenzene (1,3)
85FS-12	89.15890	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-12	89.15890	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-12	89.15890	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-12	89.15890	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-12	89.15890	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-12	89.15890	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-12	89.15890	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-12	89.15890	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-12	89.15890	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-12	89.15890	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-12	89.15890	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-12	89.15890	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-12	89.15890	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-12	89.15890	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-12	89.15890	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-12	89.15890	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-12	89.15890	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-12	89.15890	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-12	89.15890	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-12	89.15890	74630527	TI	ug/Kg	12/07/89	6-Methyl-3-undecene
85FS-12	89.15890	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-12	89.15890	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-12	89.15890	124196	TI	UG/KG	12/07/89	Nonanal
85FS-12	89.15890	124130	TI	UG/KG	12/07/89	Octanal
85FS-12	89.15890	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-12	89.15890	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-12	89.15890	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-12	89.15890	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-12	89.15890	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-12	89.15890	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-12	89.15890	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-12	89.15890	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-12	89.15890	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-12	89.15890	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-12	89.15890	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-12	89.15890	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-12	89.15890	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-12	89.15890	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-12	89.15890	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-12	89.15890	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-12	89.15890	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-12	89.15890	95476	< 10.	UG/KG	12/07/89	o-Xylene
85FS-12	89.15890	1330207	< 10.	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-13	89.15891	67641	< 20.		UG/KG	12/07/89		Acetone
85FS-13	89.15891	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-13	89.15891	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-13	89.15891	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-13	89.15891	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-13	89.15891	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-13	89.15891	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-13	89.15891	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-13	89.15891	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-13	89.15891	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-13	89.15891	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-13	89.15891	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-13	89.15891	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-13	89.15891	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-13	89.15891	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-13	89.15891	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-13	89.15891	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-13	89.15891	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-13	89.15891	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-13	89.15891	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-13	89.15891	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-13	89.15891	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-13	89.15891	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-13	89.15891	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-13	89.15891	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-13	89.15891	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-13	89.15891	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-13	89.15891	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-13	89.15891	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-13	89.15891	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-13	89.15891	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-13	89.15891	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-13	89.15891	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-13	89.15891	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-13	89.15891	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-13	89.15891	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-13	89.15891	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-13	89.15891	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-13	89.15891	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-13	89.15891	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-13	89.15891	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-13	89.15891	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-13	89.15891	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-13	89.15891	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-13	89.15891	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-13	89.15891	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-13	89.15891	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-13	89.15891	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-13	89.15891	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-13	89.15891	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-13	89.15891	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-13	89.15891	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-13	89.15891	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-13	89.15891	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-13	89.15891	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-13	89.15891	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-13	89.15891	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-13	89.15891	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-13	89.15891	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-13	89.15891	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-13	89.15891	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-13	89.15891	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-13.	89.15891	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-13	89.15891	95476	< 10.	UG/KG	12/07/89	o-Xylene
85FS-13	89.15891	1330207	< 10.	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-14	89.15892	67641	< 20.		UG/KG	12/07/89		Acetone
85FS-14	89.15892	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-14	89.15892	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-14	89.15892	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-14	89.15892	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-14	89.15892	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-14	89.15892	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-14	89.15892	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-14	89.15892	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-14	89.15892	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-14	89.15892	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-14	89.15892	75150	10.5	3.2	UG/KG	12/07/89		Carbon disulfide
85FS-14	89.15892	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-14	89.15892	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-14	89.15892	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-14	89.15892	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-14	89.15892	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-14	89.15892	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-14	89.15892	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-14	89.15892	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-14	89.15892	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-14	89.15892	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-14	89.15892	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-14	89.15892	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-14	89.15892	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-14	89.15892	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-14	89.15892	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-14	89.15892	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-14	89.15892	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-14	89.15892	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-14	89.15892	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-14	89.15892	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-14	89.15892	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-14	89.15892	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-14	89.15892	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-14	89.15892	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-14	89.15892	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-14	89.15892	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-14	89.15892	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-14	89.15892	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-14	89.15892	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-14	89.15892	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-14	89.15892	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-14	89.15892	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-14	89.15892	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-14	89.15892	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-14	89.15892	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-14	89.15892	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-14	89.15892	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-14	89.15892	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-14	89.15892	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-14	89.15892	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-14	89.15892	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-14	89.15892	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-14	89.15892	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-14	89.15892	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-14	89.15892	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-14	89.15892	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-14	89.15892	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-14	89.15892	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-14	89.15892	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-14	89.15892	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-14	89.15892	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-14	89.15892	95476	19.3	5.8	UG/KG	o-Xylene
85FS-14	89.15892	1330207	13.8	4.1	UG/KG	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-15	89.15893	67641	< 20.		UG/KG	12/07/89		Acetone
85FS-15	89.15893	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-15	89.15893	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-15	89.15893	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-15	89.15893	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-15	89.15893	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-15	89.15893	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-15	89.15893	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-15	89.15893	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-15	89.15893	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-15	89.15893	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-15	89.15893	75150	11.1	3.3	UG/KG	12/07/89		Carbon disulfide
85FS-15	89.15893	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-15	89.15893	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-15	89.15893	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-15	89.15893	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-15	89.15893	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-15	89.15893	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-15	89.15893	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-15	89.15893	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-15	89.15893	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-15	89.15893	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-15	89.15893	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-15	89.15893	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-15	89.15893	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-15	89.15893	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-15	89.15893	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-15	89.15893	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-15	89.15893	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-15	89.15893	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-15	89.15893	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-15	89.15893	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-15	89.15893	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-15	89.15893	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-15	89.15893	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-15	89.15893	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-15	89.15893	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-15	89.15893	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-15	89.15893	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-15	89.15893	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-15	89.15893	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-15	89.15893	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-15	89.15893	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-15	89.15893	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-15	89.15893	75092	< 10.		UG/KG	12/07/89	Methylene chloride
85FS-15	89.15893	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-15	89.15893	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-15	89.15893	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-15	89.15893	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-15	89.15893	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-15	89.15893	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-15	89.15893	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-15	89.15893	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-15	89.15893	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-15	89.15893	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-15	89.15893	71556	< 10.		UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-15	89.15893	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-15	89.15893	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-15	89.15893	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-15	89.15893	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-15	89.15893	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-15	89.15893	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-15	89.15893	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-15	89.15893	95476	18.1	5.4	UG/KG	12/07/89	o-Xylene
85FS-15	89.15893	1330207	11.6	3.5	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-16	89.15894	67641	400.	120.	UG/KG	12/07/89		Acetone
85FS-16	89.15894	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-16	89.15894	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-16	89.15894	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-16	89.15894	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-16	89.15894	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-16	89.15894	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-16	89.15894	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-16	89.15894	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-16	89.15894	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-16	89.15894	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-16	89.15894	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-16	89.15894	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-16	89.15894	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-16	89.15894	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-16	89.15894	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-16	89.15894	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-16	89.15894	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-16	89.15894	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-16	89.15894	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-16	89.15894	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-16	89.15894	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-16	89.15894	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-16	89.15894	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-16	89.15894	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-16	89.15894	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-16	89.15894	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-16	89.15894	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-16	89.15894	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-16	89.15894	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-16	89.15894	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-16	89.15894	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-16	89.15894	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-16	89.15894	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-16	89.15894	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-16	89.15894	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-16	89.15894	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-16	89.15894	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-16	89.15894	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-16	89.15894	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-16	89.15894	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-16	89.15894	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-16	89.15894	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-16	89.15894	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-16	89.15894	75092	< 10.		UG/KG	12/07/89	Methylene chloride
85FS-16	89.15894	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-16	89.15894	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-16	89.15894	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-16	89.15894	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-16	89.15894	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-16	89.15894	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-16	89.15894	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-16	89.15894	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-16	89.15894	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-16	89.15894	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-16	89.15894	71556	< 10.		UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-16	89.15894	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-16	89.15894	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-16	89.15894	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-16	89.15894	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-16	89.15894	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-16	89.15894	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-16	89.15894	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-16	89.15894	95476	55.4	16.6	UG/KG	12/07/89	o-Xylene
85FS-16	89.15894	1330207	74.7	22.4	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: DLN

on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-17	89.15895	67641	371.	111.3	UG/KG	12/07/89		Acetone
85FS-17	89.15895	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-17	89.15895	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-17	89.15895	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-17	89.15895	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-17	89.15895	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-17	89.15895	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-17	89.15895	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-17	89.15895	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-17	89.15895	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-17	89.15895	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-17	89.15895	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-17	89.15895	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-17	89.15895	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-17	89.15895	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-17	89.15895	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-17	89.15895	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-17	89.15895	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-17	89.15895	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-17	89.15895	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-17	89.15895	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-17	89.15895	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-17	89.15895	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-17	89.15895	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-17	89.15895	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-17	89.15895	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-17	89.15895	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-17	89.15895	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-17	89.15895	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-17	89.15895	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-17	89.15895	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-17	89.15895	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-17	89.15895	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-17	89.15895	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-17	89.15895	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-17	89.15895	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-17	89.15895	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-17	89.15895	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-17	89.15895	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-17	89.15895	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-17	89.15895	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-17	89.15895	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-17	89.15895	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-17	89.15895	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-17	89.15895	75092	28.8	8.6	UG/KG	12/07/89	Methylene chloride
85FS-17	89.15895	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-17	89.15895	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-17	89.15895	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-17	89.15895	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-17	89.15895	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-17	89.15895	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-17	89.15895	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-17	89.15895	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-17	89.15895	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-17	89.15895	71556	< 10.		UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-17	89.15895	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-17	89.15895	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-17	89.15895	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-17	89.15895	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-17	89.15895	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-17	89.15895	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-17	89.15895	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-17	89.15895	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-17	89.15895	95476	< 10.		UG/KG	12/07/89	o-Xylene
85FS-17	89.15895	1330207	< 10.		UG/KG	12/07/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-18	89.15896	67641	339.	101.7	UG/KG	12/07/89		Acetone
85FS-18	89.15896	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-18	89.15896	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-18	89.15896	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-18	89.15896	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-18	89.15896	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-18	89.15896	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-18	89.15896	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-18	89.15896	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-18	89.15896	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-18	89.15896	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-18	89.15896	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-18	89.15896	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-18	89.15896	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-18	89.15896	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-18	89.15896	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-18	89.15896	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-18	89.15896	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-18	89.15896	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-18	89.15896	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-18	89.15896	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-18	89.15896	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-18	89.15896	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-18	89.15896	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-18	89.15896	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-18	89.15896	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-18	89.15896	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-18	89.15896	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-18	89.15896	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-18	89.15896	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-18	89.15896	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-18	89.15896	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-18	89.15896	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-18	89.15896	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-18	89.15896	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-18	89.15896	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-18	89.15896	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-18	89.15896	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-18	89.15896	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-18	89.15896	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-18	89.15896	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-18	89.15896	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-18	89.15896	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-18	89.15896	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-18	89.15896	75092	< 10.		UG/KG	12/07/89	Methylene chloride
85FS-18	89.15896	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-18	89.15896	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-18	89.15896	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-18	89.15896	630206	< 10.		UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-18	89.15896	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-18	89.15896	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-18	89.15896	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-18	89.15896	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-18	89.15896	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-18	89.15896	71556	< 10.		UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-18	89.15896	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-18	89.15896	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-18	89.15896	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-18	89.15896	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-18	89.15896	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-18	89.15896	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-18	89.15896	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-18	89.15896	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-18	89.15896	95476	41.1	12.3	UG/KG	12/07/89	o-Xylene
85FS-18	89.15896	1330207	65.1	19.5	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-19	89.15897	67641	324.	97.2	UG/KG	12/07/89		Acetone
85FS-19	89.15897	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-19	89.15897	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-19	89.15897	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-19	89.15897	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-19	89.15897	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-19	89.15897	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-19	89.15897	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-19	89.15897	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-19	89.15897	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-19	89.15897	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-19	89.15897	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-19	89.15897	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-19	89.15897	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-19	89.15897	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-19	89.15897	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-19	89.15897	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-19	89.15897	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-19	89.15897	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-19	89.15897	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-19	89.15897	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-19	89.15897	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-19	89.15897	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-19	89.15897	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-19	89.15897	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-19	89.15897	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-19	89.15897	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-19	89.15897	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-19	89.15897	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-19	89.15897	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-19	89.15897	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-19	89.15897	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-19	89.15897	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-19	89.15897	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-19	89.15897	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-19	89.15897	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-19	89.15897	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-19	89.15897	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-19	89.15897	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-19	89.15897	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-19	89.15897	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-19	89.15897	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-19	89.15897	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-19	89.15897	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-19	89.15897	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-19	89.15897	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-19	89.15897	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-19	89.15897	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-19	89.15897	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-19	89.15897	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-19	89.15897	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-19	89.15897	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-19	89.15897	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-19	89.15897	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-19	89.15897	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-19	89.15897	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-19	89.15897	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-19	89.15897	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-19	89.15897	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-19	89.15897	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-19	89.15897	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-19	89.15897	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-19	89.15897	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-19	89.15897	95476	< 10.	UG/KG	12/07/89	o-Xylene
85FS-19	89.15897	1330207	< 10.	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-20	89.15898	67641	2680.	804.	UG/KG	12/07/89		Acetone
85FS-20	89.15898	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-20	89.15898	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-20	89.15898	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-20	89.15898	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-20	89.15898	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-20	89.15898	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-20	89.15898	78933	67.6	20.3	UG/KG	12/07/89		2-Butanone
85FS-20	89.15898	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-20	89.15898	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-20	89.15898	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-20	89.15898	75150	59.8	17.9	UG/KG	12/07/89		Carbon disulfide
85FS-20	89.15898	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-20	89.15898	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-20	89.15898	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-20	89.15898	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-20	89.15898	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-20	89.15898	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-20	89.15898	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-20	89.15898	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-20	89.15898	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-20	89.15898	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-20	89.15898	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-20	89.15898	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-20	89.15898	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-20	89.15898	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-20	89.15898	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-20	89.15898	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-20	89.15898	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-20	89.15898	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-20	89.15898	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-20	89.15898	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-20	89.15898	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-20	89.15898	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-20	89.15898	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-20	89.15898	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-20	89.15898	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-20	89.15898	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-20	89.15898	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-20	89.15898	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-20	89.15898	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-20	89.15898	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-20	89.15898	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-20	89.15898	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-20	89.15898	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-20	89.15898	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-20	89.15898	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-20	89.15898	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-20	89.15898	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-20	89.15898	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-20	89.15898	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-20	89.15898	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-20	89.15898	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-20	89.15898	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-20	89.15898	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-20	89.15898	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-20	89.15898	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-20	89.15898	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-20	89.15898	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-20	89.15898	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-20	89.15898	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-20	89.15898	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-20	89.15898	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-20	89.15898	95476	62.9	18.9	UG/KG	o-Xylene
85FS-20	89.15898	1330207	81.	24.3	UG/KG	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: DLN

on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968

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
85FS-21	89.15899	67641	855.	256.5	UG/KG	12/07/89		Acetone
85FS-21	89.15899	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-21	89.15899	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-21	89.15899	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-21	89.15899	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-21	89.15899	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-21	89.15899	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-21	89.15899	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-21	89.15899	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-21	89.15899	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-21	89.15899	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-21	89.15899	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-21	89.15899	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-21	89.15899	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-21	89.15899	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-21	89.15899	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-21	89.15899	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-21	89.15899	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-21	89.15899	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-21	89.15899	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-21	89.15899	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-21	89.15899	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-21	89.15899	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-21	89.15899	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-21	89.15899	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-21	89.15899	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-21	89.15899	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-21	89.15899	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-21	89.15899	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-21	89.15899	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-21	89.15899	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-21	89.15899	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-21	89.15899	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-21	89.15899	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-21	89.15899	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-21	89.15899	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-21	89.15899	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-21	89.15899	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-21	89.15899	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-21	89.15899	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-21	89.15899	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-21	89.15899	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-21	89.15899	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-21	89.15899	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-21	89.15899	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-21	89.15899	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-21	89.15899	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-21	89.15899	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-21	89.15899	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-21	89.15899	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-21	89.15899	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-21	89.15899	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-21	89.15899	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-21	89.15899	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-21	89.15899	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-21	89.15899	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-21	89.15899	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-21	89.15899	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-21	89.15899	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-21	89.15899	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-21	89.15899	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-21	89.15899	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-21	89.15899	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-21	89.15899	95476	< 10.	UG/KG	12/07/89	o-Xylene
85FS-21	89.15899	1330207	< 10.	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-22	89.15900	67641	232.	69.6	UG/KG	12/07/89		Acetone
85FS-22	89.15900	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-22	89.15900	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-22	89.15900	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-22	89.15900	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-22	89.15900	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-22	89.15900	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-22	89.15900	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-22	89.15900	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-22	89.15900	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-22	89.15900	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-22	89.15900	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-22	89.15900	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-22	89.15900	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-22	89.15900	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-22	89.15900	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-22	89.15900	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-22	89.15900	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-22	89.15900	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-22	89.15900	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-22	89.15900	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-22	89.15900	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-22	89.15900	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-22	89.15900	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-22	89.15900	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-22	89.15900	106467	< 10.		UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-22	89.15900	107062	< 10.		UG/KG	12/07/89	1,2-Dichloroethane
85FS-22	89.15900	75343	< 10.		UG/KG	12/07/89	1,1-Dichloroethane
85FS-22	89.15900	75354	< 10.		UG/KG	12/07/89	1,1-Dichloroethene
85FS-22	89.15900	156605	< 10.		UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-22	89.15900	156592	< 10.		UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-22	89.15900	78875	< 10.		UG/KG	12/07/89	1,2-Dichloropropane
85FS-22	89.15900	594207	< 10.		UG/KG	12/07/89	2,2-Dichloropropane
85FS-22	89.15900	142289	< 10.		UG/KG	12/07/89	1,3-Dichloropropane
85FS-22	89.15900	10061015	< 10.		UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-22	89.15900	563586	< 10.		UG/KG	12/07/89	1,1-Dichloropropene
85FS-22	89.15900	10061026	< 10.		UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-22	89.15900	100414	< 10.		UG/KG	12/07/89	Ethylbenzene
85FS-22	89.15900	107062	< 10.		UG/KG	12/07/89	Ethylene chloride
85FS-22	89.15900	87683	< 10.		UG/KG	12/07/89	Hexachlorobutadiene
85FS-22	89.15900	591786	< 20.		UG/KG	12/07/89	2-Hexanone
85FS-22	89.15900	98828	< 10.		UG/KG	12/07/89	Isopropylbenzene
85FS-22	89.15900	99876	< 10.		UG/KG	12/07/89	4-Isopropyltoluene
85FS-22	89.15900	108101	< 20.		UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-22	89.15900	75092	28.7	8.6	UG/KG	12/07/89	Methylene chloride
85FS-22	89.15900	91203	< 10.		UG/KG	12/07/89	Naphthalene
85FS-22	89.15900	103651	< 10.		UG/KG	12/07/89	Propylbenzene
85FS-22	89.15900	100425	< 10.		UG/KG	12/07/89	Styrene
85FS-22	89.15900	630206	77.5	23.3	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-22	89.15900	79345	< 10.		UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-22	89.15900	127184	< 10.		UG/KG	12/07/89	Tetrachloroethylene
85FS-22	89.15900	108883	< 10.		UG/KG	12/07/89	Toluene
85FS-22	89.15900	87616	< 10.		UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-22	89.15900	120821	< 10.		UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-22	89.15900	79005	< 10.		UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-22	89.15900	71556	< 10.		UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-22	89.15900	79016	< 10.		UG/KG	12/07/89	Trichloroethene
85FS-22	89.15900	75694	< 10.		UG/KG	12/07/89	Trichlorofluoromethane
85FS-22	89.15900	96184	< 10.		UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-22	89.15900	95636	< 10.		UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-22	89.15900	108678	< 10.		UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-22	89.15900	108054	< 10.		UG/KG	12/07/89	Vinyl acetate
85FS-22	89.15900	75014	< 20.		UG/KG	12/07/89	Vinyl chloride
85FS-22	89.15900	95476	< 10.		UG/KG	12/07/89	o-Xylene
85FS-22	89.15900	1330207	< 10.		UG/KG	12/07/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: DLN

on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-23	89.15901	67641	83.2	25.	UG/KG	12/07/89		Acetone
85FS-23	89.15901	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-23	89.15901	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-23	89.15901	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-23	89.15901	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-23	89.15901	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-23	89.15901	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-23	89.15901	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-23	89.15901	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-23	89.15901	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-23	89.15901	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-23	89.15901	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-23	89.15901	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-23	89.15901	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-23	89.15901	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-23	89.15901	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-23	89.15901	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-23	89.15901	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-23	89.15901	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-23	89.15901	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-23	89.15901	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-23	89.15901	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-23	89.15901	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-23	89.15901	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-23	89.15901	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-23	89.15901	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-23	89.15901	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-23	89.15901	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-23	89.15901	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-23	89.15901	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-23	89.15901	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-23	89.15901	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-23	89.15901	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-23	89.15901	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-23	89.15901	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-23	89.15901	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-23	89.15901	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-23	89.15901	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-23	89.15901	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-23	89.15901	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-23	89.15901	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-23	89.15901	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-23	89.15901	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-23	89.15901	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-23	89.15901	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-23	89.15901	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-23	89.15901	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-23	89.15901	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-23	89.15901	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-23	89.15901	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-23	89.15901	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-23	89.15901	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-23	89.15901	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-23	89.15901	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-23	89.15901	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-23	89.15901	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-23	89.15901	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-23	89.15901	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-23	89.15901	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-23	89.15901	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-23	89.15901	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-23	89.15901	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-23	89.15901	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-23	89.15901	95476	< 10.	UG/KG	12/07/89	o-Xylene
85FS-23	89.15901	1330207	< 10.	UG/KG	12/07/89	Mixed-Xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 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
85FS-24	89.15902	67641	108.	32.4	UG/KG	12/07/89		Acetone
85FS-24	89.15902	71432	< 10.		UG/KG	12/07/89		Benzene
85FS-24	89.15902	108861	< 10.		UG/KG	12/07/89		Bromobenzene
85FS-24	89.15902	74975	< 10.		UG/KG	12/07/89		Bromochloromethane
85FS-24	89.15902	75274	< 10.		UG/KG	12/07/89		Bromodichloromethane
85FS-24	89.15902	75252	< 10.		UG/KG	12/07/89		Bromoform
85FS-24	89.15902	74839	< 20.		UG/KG	12/07/89		Bromomethane
85FS-24	89.15902	78933	< 20.		UG/KG	12/07/89		2-Butanone
85FS-24	89.15902	135988	< 10.		UG/KG	12/07/89		sec-Butylbenzene
85FS-24	89.15902	104518	< 10.		UG/KG	12/07/89		n-Butylbenzene
85FS-24	89.15902	98066	< 10.		UG/KG	12/07/89		tert-Butylbenzene
85FS-24	89.15902	75150	< 10.		UG/KG	12/07/89		Carbon disulfide
85FS-24	89.15902	56235	< 10.		UG/KG	12/07/89		Carbon tetrachloride
85FS-24	89.15902	108907	< 10.		UG/KG	12/07/89		Chlorobenzene
85FS-24	89.15902	124481	< 10.		UG/KG	12/07/89		Chlorodibromomethane
85FS-24	89.15902	75003	< 20.		UG/KG	12/07/89		Chloroethane
85FS-24	89.15902	67663	< 10.		UG/KG	12/07/89		Chloroform
85FS-24	89.15902	74873	< 20.		UG/KG	12/07/89		Chloromethane
85FS-24	89.15902	106434	< 10.		UG/KG	12/07/89		p-Chlorotoluene
85FS-24	89.15902	95498	< 10.		UG/KG	12/07/89		o-Chlorotoluene
85FS-24	89.15902	96128	< 10.		UG/KG	12/07/89		1,2-Dibromo-3-chloropropane
85FS-24	89.15902	106934	< 10.		UG/KG	12/07/89		1,2-Dibromoethane
85FS-24	89.15902	74953	< 10.		UG/KG	12/07/89		Dibromomethane
85FS-24	89.15902	95501	< 10.		UG/KG	12/07/89		o-Dichlorobenzene (1,2)
85FS-24	89.15902	541731	< 10.		UG/KG	12/07/89		m-Dichlorobenzene (1,3)

85FS-24	89.15902	106467	< 10.	UG/KG	12/07/89	p-Dichlorobenzene (1,4)
85FS-24	89.15902	75343	< 10.	UG/KG	12/07/89	1,1-Dichloroethane
85FS-24	89.15902	107062	< 10.	UG/KG	12/07/89	1,2-Dichloroethane
85FS-24	89.15902	75354	< 10.	UG/KG	12/07/89	1,1-Dichloroethene
85FS-24	89.15902	156605	< 10.	UG/KG	12/07/89	trans-1,2-Dichloroethene
85FS-24	89.15902	156592	< 10.	UG/KG	12/07/89	cis-1,2-Dichloroethylene
85FS-24	89.15902	78875	< 10.	UG/KG	12/07/89	1,2-Dichloropropane
85FS-24	89.15902	594207	< 10.	UG/KG	12/07/89	2,2-Dichloropropane
85FS-24	89.15902	142289	< 10.	UG/KG	12/07/89	1,3-Dichloropropane
85FS-24	89.15902	10061015	< 10.	UG/KG	12/07/89	cis-1,3-Dichloropropene
85FS-24	89.15902	10061026	< 10.	UG/KG	12/07/89	trans-1,3-Dichloropropene
85FS-24	89.15902	563586	< 10.	UG/KG	12/07/89	1,1-Dichloropropene
85FS-24	89.15902	100414	< 10.	UG/KG	12/07/89	Ethylbenzene
85FS-24	89.15902	107062	< 10.	UG/KG	12/07/89	Ethylene chloride
85FS-24	89.15902	87683	< 10.	UG/KG	12/07/89	Hexachlorobutadiene
85FS-24	89.15902	591786	< 20.	UG/KG	12/07/89	2-Hexanone
85FS-24	89.15902	98828	< 10.	UG/KG	12/07/89	Isopropylbenzene
85FS-24	89.15902	99876	< 10.	UG/KG	12/07/89	4-Isopropyltoluene
85FS-24	89.15902	108101	< 20.	UG/KG	12/07/89	4-Methyl-2-pentanone
85FS-24	89.15902	75092	< 10.	UG/KG	12/07/89	Methylene chloride
85FS-24	89.15902	91203	< 10.	UG/KG	12/07/89	Naphthalene
85FS-24	89.15902	103651	< 10.	UG/KG	12/07/89	Propylbenzene
85FS-24	89.15902	100425	< 10.	UG/KG	12/07/89	Styrene
85FS-24	89.15902	79345	< 10.	UG/KG	12/07/89	1,1,2,2-Tetrachloroethane
85FS-24	89.15902	630206	< 10.	UG/KG	12/07/89	1,1,1,2-Tetrachloroethane
85FS-24	89.15902	127184	< 10.	UG/KG	12/07/89	Tetrachloroethylene
85FS-24	89.15902	108883	< 10.	UG/KG	12/07/89	Toluene
85FS-24	89.15902	120821	< 10.	UG/KG	12/07/89	1,2,4-Trichlorobenzene
85FS-24	89.15902	87616	< 10.	UG/KG	12/07/89	1,2,3-Trichlorobenzene
85FS-24	89.15902	71556	< 10.	UG/KG	12/07/89	1,1,1-Trichloroethane
85FS-24	89.15902	79005	< 10.	UG/KG	12/07/89	1,1,2-Trichloroethane
85FS-24	89.15902	79016	< 10.	UG/KG	12/07/89	Trichloroethene
85FS-24	89.15902	75694	< 10.	UG/KG	12/07/89	Trichlorofluoromethane
85FS-24	89.15902	96184	< 10.	UG/KG	12/07/89	1,2,3-Trichloropropane
85FS-24	89.15902	108678	< 10.	UG/KG	12/07/89	1,3,5-Trimethylbenzene
85FS-24	89.15902	95636	< 10.	UG/KG	12/07/89	1,2,4-Trimethylbenzene
85FS-24	89.15902	108054	< 10.	UG/KG	12/07/89	Vinyl acetate
85FS-24	89.15902	75014	< 20.	UG/KG	12/07/89	Vinyl chloride
85FS-24	89.15902	95476	< 10.	UG/KG	12/07/89	o-Xylene
85FS-24	89.15902	1330207	< 10.	UG/KG	12/07/89	Mixed xylenes (m ± p)

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

Prepared by: DLN on 18-Dec-1989

EPA VOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Laura Tsiagkouris

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
00.20060	00.20060	67641	727.	218.1	UG/KG			12/07/89	OUT OF CONTROL	Acetone
00.20060	00.20060	71432	19.9	6.	UG/KG	131.	13.	12/07/89	OUT OF CONTROL	Benzene
00.20060	00.20060	108861	< 10.		UG/KG			12/07/89	UNDER CONTROL	Bromobenzene
00.20060	00.20060	74975	< 10.		UG/KG			12/07/89	UNDER CONTROL	Bromochloromethane
00.20060	00.20060	75274	< 10.		UG/KG			12/07/89	UNDER CONTROL	Bromodichloromethane
00.20060	00.20060	75252	< 10.		UG/KG			12/07/89	UNDER CONTROL	Bromoform
00.20060	00.20060	74839	< 20.		UG/KG			12/07/89	UNDER CONTROL	Bromomethane
00.20060	00.20060	78933	55.2	16.6	UG/KG			12/07/89	OUT OF CONTROL	2-Butanone
00.20060	00.20060	135988	14.9	4.5	UG/KG			12/07/89	OUT OF CONTROL	sec-Butylbenzene
00.20060	00.20060	104518	49.3	14.8	UG/KG	156.	16.	12/07/89	OUT OF CONTROL	n-Butylbenzene
00.20060	00.20060	98066	17.2	5.2	UG/KG			12/07/89	OUT OF CONTROL	tert-Butylbenzene
00.20060	00.20060	75150	< 10.		UG/KG			12/07/89	UNDER CONTROL	Carbon disulfide
00.20060	00.20060	56235	< 10.		UG/KG			12/07/89	UNDER CONTROL	Carbon tetrachloride
00.20060	00.20060	108907	< 10.		UG/KG			12/07/89	UNDER CONTROL	Chlorobenzene
00.20060	00.20060	124481	< 10.		UG/KG			12/07/89	UNDER CONTROL	Chlorodibromomethane
00.20060	00.20060	75003	< 20.		UG/KG			12/07/89	UNDER CONTROL	Chloroethane
00.20060	00.20060	67663	< 10.		UG/KG			12/07/89	UNDER CONTROL	Chloroform
00.20060	00.20060	74873	< 20.		UG/KG			12/07/89	UNDER CONTROL	Chloromethane
00.20060	00.20060	106434	< 10.		UG/KG			12/07/89	UNDER CONTROL	p-Chlorotoluene
00.20060	00.20060	95498	< 10.		UG/KG			12/07/89	UNDER CONTROL	o-Chlorotoluene
00.20060	00.20060	96128	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane

00.20060	00.20060	106934	86.6	26.	UG/KG	156.	16.	12/07/89	WARNING 2-3 SIG	1,2-Dibromoethane
00.20060	00.20060	74953	< 10.		UG/KG			12/07/89	UNDER CONTROL	Dibromomethane
00.20060	00.20060	95501	< 10.		UG/KG			12/07/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20060	00.20060	541731	< 10.		UG/KG			12/07/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20060	00.20060	106467	< 10.		UG/KG			12/07/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20060	00.20060	107062	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,2-Dichloroethane
00.20060	00.20060	75343	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,1-Dichloroethane
00.20060	00.20060	156605	< 10.		UG/KG			12/07/89	UNDER CONTROL	trans-1,2-Dichloroethene
00.20060	00.20060	75354	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,1-Dichloroethene
00.20060	00.20060	156592	< 10.		UG/KG			12/07/89	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20060	00.20060	142289	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,3-Dichloropropane
00.20060	00.20060	594207	< 10.		UG/KG			12/07/89	UNDER CONTROL	2,2-Dichloropropane
00.20060	00.20060	78875	64.2	19.3	UG/KG	120.	12.	12/07/89	WARNING 2-3 SIG	1,2-Dichloropropane
00.20060	00.20060	563586	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,1-Dichloropropene
00.20060	00.20060	10061026	< 10.		UG/KG			12/07/89	UNDER CONTROL	trans-1,3-Dichloropropene
00.20060	00.20060	10061015	< 10.		UG/KG			12/07/89	UNDER CONTROL	cis-1,3-Dichloropropene
00.20060	00.20060	100414	< 10.		UG/KG			12/07/89	UNDER CONTROL	Ethylbenzene
00.20060	00.20060	107062	< 10.		UG/KG			12/07/89	UNDER CONTROL	Ethylene chloride
00.20060	00.20060	87683	83.3	25.	UG/KG	147.	15.	12/07/89	WARNING 2-3 SIG	Hexachlorobutadiene
00.20060	00.20060	591786	42.8	12.8	UG/KG			12/07/89	OUT OF CONTROL	2-Hexanone
00.20060	00.20060	98828	< 10.		UG/KG			12/07/89	UNDER CONTROL	Isopropylbenzene
00.20060	00.20060	99876	< 10.		UG/KG			12/07/89	UNDER CONTROL	4-Isopropyltoluene
00.20060	00.20060	108101	< 20.		UG/KG			12/07/89	UNDER CONTROL	4-Methyl-2-pentanone
00.20060	00.20060	75092	< 10.		UG/KG			12/07/89	UNDER CONTROL	Methylene chloride
00.20060	00.20060	91203	< 10.		UG/KG			12/07/89	UNDER CONTROL	Naphthalene
00.20060	00.20060	103651	43.8	13.1	UG/KG	122.	12.	12/07/89	OUT OF CONTROL	Propylbenzene
00.20060	00.20060	100425	70.3	21.1	UG/KG	123.	12.	12/07/89	WARNING 2-3 SIG	Styrene
00.20060	00.20060	630206	95.8	28.7	UG/KG	135.	14.	12/07/89	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20060	00.20060	79345	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20060	00.20060	127184	86.4	25.9	UG/KG	134.	13.	12/07/89	UNDER CONTROL	Tetrachloroethylene
00.20060	00.20060	108883	< 10.		UG/KG			12/07/89	UNDER CONTROL	Toluene
00.20060	00.20060	87616	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,2,3-Trichlorobenzene
00.20060	00.20060	120821	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,2,4-Trichlorobenzene
00.20060	00.20060	71556	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,1,1-Trichloroethane
00.20060	00.20060	79005	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,1,2-Trichloroethane
00.20060	00.20060	79016	< 10.		UG/KG			12/07/89	UNDER CONTROL	Trichloroethene
00.20060	00.20060	75694	< 10.		UG/KG			12/07/89	UNDER CONTROL	Trichlorofluoromethane
00.20060	00.20060	96184	< 10.		UG/KG			12/07/89	UNDER CONTROL	1,2,3-Trichloropropane
00.20060	00.20060	108678	10.7	3.2	UG/KG			12/07/89	OUT OF CONTROL	1,3,5-Trimethylbenzene
00.20060	00.20060	95636	53.7	16.1	UG/KG	128.	13.	12/07/89	OUT OF CONTROL	1,2,4-Trimethylbenzene
00.20060	00.20060	108054	96.6	29.	UG/KG			12/07/89	OUT OF CONTROL	Vinyl acetate
00.20060	00.20060	75014	< 20.		UG/KG			12/07/89	UNDER CONTROL	Vinyl chloride
00.20060	00.20060	95476	< 10.		UG/KG			12/07/89	UNDER CONTROL	o-Xylene
00.20060	00.20060	1330207	38.1	11.4	UG/KG	143.	14.	12/07/89	OUT OF CONTROL	Mixed-Xylenes (m ± p)

The following analyst QA's have no CV data for comparison

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.15905	67641	845.	253.5	UG/KG	12/07/89	OUT OF CONTROL	Acetone
89.15905	71432	107.	32.1	UG/KG	12/07/89	UNDER CONTROL	Benzene
89.15905	108861	< 10.		UG/KG	12/07/89	UNDER CONTROL	Bromobenzene
89.15905	74975	< 10.		UG/KG	12/07/89	UNDER CONTROL	Bromochloromethane
89.15905	75274	< 10.		UG/KG	12/07/89	UNDER CONTROL	Bromodichloromethane
89.15905	75252	< 10.		UG/KG	12/07/89	UNDER CONTROL	Bromoform
89.15905	74839	< 20.		UG/KG	12/07/89	UNDER CONTROL	Bromomethane
89.15905	78933	69.4	20.8	UG/KG	12/07/89	OUT OF CONTROL	2-Butanone
89.15905	98066	< 10.		UG/KG	12/07/89	UNDER CONTROL	tert-Butylbenzene
89.15905	135988	< 10.		UG/KG	12/07/89	UNDER CONTROL	sec-Butylbenzene
89.15905	104518	74.5	22.4	UG/KG	12/07/89	WARNING 2-3 SIG	n-Butylbenzene
89.15905	75150	< 10.		UG/KG	12/07/89	UNDER CONTROL	Carbon disulfide
89.15905	56235	< 10.		UG/KG	12/07/89	UNDER CONTROL	Carbon tetrachloride
89.15905	108907	< 10.		UG/KG	12/07/89	UNDER CONTROL	Chlorobenzene
89.15905	124481	< 10.		UG/KG	12/07/89	UNDER CONTROL	Chlorodibromomethane
89.15905	75003	< 20.		UG/KG	12/07/89	UNDER CONTROL	Chloroethane
89.15905	67663	< 10.		UG/KG	12/07/89	UNDER CONTROL	Chloroform
89.15905	74873	< 20.		UG/KG	12/07/89	UNDER CONTROL	Chloromethane
89.15905	106434	< 10.		UG/KG	12/07/89	UNDER CONTROL	p-Chlorotoluene
89.15905	95498	< 10.		UG/KG	12/07/89	UNDER CONTROL	o-Chlorotoluene
89.15905	96128	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.15905	106934	130.	39.	UG/KG	12/07/89	UNDER CONTROL	1,2-Dibromoethane
89.15905	74953	< 10.		UG/KG	12/07/89	UNDER CONTROL	Dibromomethane
89.15905	95501	< 10.		UG/KG	12/07/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.15905	541731	< 10.		UG/KG	12/07/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.15905	106467	< 10.		UG/KG	12/07/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.15905	75343	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,1-Dichloroethane
89.15905	107062	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,2-Dichloroethane
89.15905	75354	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,1-Dichloroethene
89.15905	156605	< 10.		UG/KG	12/07/89	UNDER CONTROL	trans-1,2-Dichloroethene
89.15905	156592	< 10.		UG/KG	12/07/89	UNDER CONTROL	cis-1,2-Dichloroethylene

89.15905	142289	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,3-Dichloropropane
89.15905	78875	93.3	28.	UG/KG	12/07/89	UNDER CONTROL	1,2-Dichloropropane
89.15905	594207	< 10.		UG/KG	12/07/89	UNDER CONTROL	2,2-Dichloropropane
89.15905	10061015	< 10.		UG/KG	12/07/89	UNDER CONTROL	cis-1,3-Dichloropropene
89.15905	10061026	< 10.		UG/KG	12/07/89	UNDER CONTROL	trans-1,3-Dichloropropene
89.15905	563586	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,1-Dichloropropene
89.15905	100414	< 10.		UG/KG	12/07/89	UNDER CONTROL	Ethylbenzene
89.15905	107062	< 10.		UG/KG	12/07/89	UNDER CONTROL	Ethylene chloride
89.15905	87683	61.9	18.6	UG/KG	12/07/89	OUT OF CONTROL	Hexachlorobutadiene
89.15905	591786	80.7	24.2	UG/KG	12/07/89	OUT OF CONTROL	2-Hexanone
89.15905	98828	< 10.		UG/KG	12/07/89	UNDER CONTROL	Isopropylbenzene
89.15905	99876	< 10.		UG/KG	12/07/89	UNDER CONTROL	4-Isopropyltoluene
89.15905	108101	< 20.		UG/KG	12/07/89	UNDER CONTROL	4-Methyl-2-pentanone
89.15905	75092	< 10.		UG/KG	12/07/89	UNDER CONTROL	Methylene chloride
89.15905	91203	< 10.		UG/KG	12/07/89	UNDER CONTROL	Naphthalene
89.15905	103651	60.9	18.3	UG/KG	12/07/89	WARNING 2-3 SIG	Propylbenzene
89.15905	100425	93.2	28.	UG/KG	12/07/89	UNDER CONTROL	Styrene
89.15905	630206	116.	34.8	UG/KG	12/07/89	UNDER CONTROL	1,1,1,2-Tetrachloroethane
89.15905	79345	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane
89.15905	127184	108.	32.4	UG/KG	12/07/89	UNDER CONTROL	Tetrachloroethylene
89.15905	108883	< 10.		UG/KG	12/07/89	UNDER CONTROL	Toluene
89.15905	120821	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,2,4-Trichlorobenzene
89.15905	87616	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,2,3-Trichlorobenzene
89.15905	71556	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,1,1-Trichloroethane
89.15905	79005	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,1,2-Trichloroethane
89.15905	79016	< 10.		UG/KG	12/07/89	UNDER CONTROL	Trichloroethene
89.15905	75694	< 10.		UG/KG	12/07/89	UNDER CONTROL	Trichlorofluoromethane
89.15905	96184	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,2,3-Trichloropropane
89.15905	95636	79.4	23.8	UG/KG	12/07/89	UNDER CONTROL	1,2,4-Trimethylbenzene
89.15905	108678	< 10.		UG/KG	12/07/89	UNDER CONTROL	1,3,5-Trimethylbenzene
89.15905	108054	101.	30.3	UG/KG	12/07/89	OUT OF CONTROL	Vinyl acetate
89.15905	75014	< 20.		UG/KG	12/07/89	UNDER CONTROL	Vinyl chloride
89.15905	95476	103.	30.9	UG/KG	12/07/89	OUT OF CONTROL	o-Xylene
89.15905	1330207	79.3	23.8	UG/KG	12/07/89	NO DATA AVAIL.	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
00.20060	80.	%	12/07/89	
89.15879	41.	%	12/06/89	
89.15880	40.	%	12/06/89	

89.15881	68.	%	12/06/89
89.15882	71.	%	12/06/89
89.15883	62.	%	12/06/89
89.15884	71.	%	12/06/89
89.15885	60.	%	12/07/89
89.15886	82.	%	12/07/89
89.15887	44.	%	12/07/89
89.15888	56.	%	12/07/89
89.15889	179.	%	12/07/89
89.15890	184.	%	12/07/89
89.15891	156.	%	12/07/89
89.15892	128.	%	12/07/89
89.15893	104.	%	12/07/89
89.15894	42.	%	12/07/89
89.15895	132.	%	12/07/89
89.15896	51.	%	12/07/89
89.15897	142.	%	12/07/89
89.15898	180.	%	12/07/89
89.15899	177.	%	12/07/89
89.15900	138.	%	12/07/89
89.15901	122.	%	12/07/89
89.15902	148.	%	12/07/89
89.15905	39.	%	12/07/89

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
00.20060	110.	%	12/07/89	
89.15879	54.	%	12/06/89	
89.15880	52.	%	12/06/89	
89.15881	56.	%	12/06/89	
89.15882	54.	%	12/06/89	
89.15883	54.	%	12/06/89	
89.15884	58.	%	12/06/89	
89.15885	51.	%	12/07/89	
89.15886	40.	%	12/07/89	
89.15887	51.	%	12/07/89	
89.15888	54.	%	12/07/89	
89.15889	110.	%	12/07/89	
89.15890	110.	%	12/07/89	
89.15891	115.	%	12/07/89	
89.15892	127.	%	12/07/89	
89.15893	119.	%	12/07/89	

89.15894	120.	%	12/07/89
89.15895	102.	%	12/07/89
89.15896	108.	%	12/07/89
89.15897	111.	%	12/07/89
89.15898	422.	%	12/07/89
89.15899	88.	%	12/07/89
89.15900	106.	%	12/07/89
89.15901	119.	%	12/07/89
89.15902	186.	%	12/07/89
89.15905	117.	%	12/07/89

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
00.20060	150.	%	12/07/89	
89.15879	60.	%	12/06/89	
89.15880	64.	%	12/06/89	
89.15881	43.	%	12/06/89	
89.15882	53.	%	12/06/89	
89.15883	54.	%	12/06/89	
89.15884	51.	%	12/06/89	
89.15885	53.	%	12/07/89	
89.15886	25.	%	12/07/89	
89.15887	48.	%	12/07/89	
89.15888	46.	%	12/07/89	
89.15889	98.	%	12/07/89	
89.15890	106.	%	12/07/89	
89.15891	198.	%	12/07/89	
89.15892	205.	%	12/07/89	
89.15893	251.	%	12/07/89	
89.15894	120.	%	12/07/89	
89.15895	77.	%	12/07/89	
89.15896	86.	%	12/07/89	
89.15897	86.	%	12/07/89	
89.15898	324.	%	12/07/89	
89.15899	54.	%	12/07/89	
89.15900	85.	%	12/07/89	
89.15901	127.	%	12/07/89	
89.15902	202.	%	12/07/89	
89.15905	130.	%	12/07/89	

Analyst

Section Leader

QA Officer

Date

Date

Date

The control status of the preceding 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.

SEMIVOLATILE ORGANIC ANALYSES

Rec'd
4-30-90 JGM
TA-35 TSL-85
Final Soil
Verification
Samples

HSE-9 SEMIVOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

To: Steve McLin
From: Martin Koby

Request Number: 7968
Matrix: Soil
Summary Date: 3/8/90

Sample ID	Target Compounds Found	Amount (ug/Kg)	LOQ (ug/Kg)
Blank 1	NONE	NA	330.0
Blank 2	Bis(2-ethylhexyl)phthalate	830.0	330.0
Blank 3	Bis(2-ethylhexyl)phthalate	420.0	330.0
89.15879	NONE	NA	330.0
89.15880	NONE	NA	330.0
89.15881	NONE	NA	1300.0
89.15882	NONE	NA	1600.0
89.15883	NONE	NA	330.0
89.15884	Bis(2-ethylhexyl)phthalate	800.0	330.0
89.15885	Bis(2-ethylhexyl)phthalate	1700.0	330.0
89.15886	NONE	NA	6600.0
89.15887	NONE	NA	6600.0
89.15888	NONE	NA	1300.0
89.15889	Bis(2-ethylhexyl)phthalate	380.0	330.0
89.15890	NONE	NA	1700.0
89.15891	NO DATA AVAILABLE - SAMPLE LOST DURING PREPARATION		
89.15892	Bis(2-ethylhexyl)phthalate	720.0	330.0
89.15893	NONE	NA	1300.0
89.15894	NONE	NA	1300.0
89.15895	NONE	NA	1300.0
89.15896	NONE	NA	1300.0
89.15897	Bis(2-ethylhexyl)phthalate	2800.0	330.0
89.15898	NONE	NA	1300.0
89.15899	NONE	NA	6600.0
89.15900	NONE	NA	1300.0
89.15901	NONE	NA	1300.0
89.15902	NONE	NA	1300.0

Request 7968
Semivolatile Organic Analysis Summary

The samples were prepped by mixing approximately 30 g of sample with 60 g sodium sulfate and soxhlet extracting with methylene chloride for 18 hours. Appropriate surrogate standards were added prior to extraction as a check of method efficiency. Initial extracts were concentrated to an appropriate final volume by Kuderna-Danish and nitrogen evaporation techniques. Analysis was performed by capillary column GC/MS methods. These methods are consistent with EPA SW-846 protocol.

Bis(2-ethylhexyl)phthalate was the only HSL target compound detected at reportable limits. This compound is a common plasticizer and is frequently found in environmental samples. Unfortunately, it is also the most commonly introduced laboratory contaminant. This is evidenced by it's presence in two of the three method blanks run concurrently with this project.

These results are somewhat inconclusive in that the vast majority of samples had very complex matrices. Three samples: 89.15880, 89.15894, and 89.15897 did not contain significant amounts of coextractable hydrocarbon interference. The remainder had moderate to severe amounts of extractable interference. This definitely had an affect on both qualitative and quantitaive analysis.

These sample were analyzed outside the 40 day holding time required by EPA protocol due to a malfunctioning instrument. It is the analysts opinion that this did not compromise the reliability of the data as surrogate recoveries are well within control limits. Steps have been taken to correct the problems and minimize instrument downtime.

HSE-9 ANALYTICAL REPORT

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-1	89.15879	83329	< 330.		UG/KG	3/23/90		Acenaphthene
85FS-1	89.15879	208968	< 330.		UG/KG	3/23/90		Acenaphthylene
85FS-1	89.15879	62533	< 330.		UG/KG	3/23/90		Aniline
85FS-1	89.15879	120127	< 330.		UG/KG	3/23/90		Anthracene
85FS-1	89.15879	103333	< 330.		UG/KG	3/23/90		Azobenzene
85FS-1	89.15879	56553	< 330.		UG/KG	3/23/90		Benz(a)anthracene
85FS-1	89.15879	92875	< 330.		UG/KG	3/23/90		m-Benzidine
85FS-1	89.15879	191242	< 330.		UG/KG	3/23/90		Benzo(g,h,i)perylene
85FS-1	89.15879	50328	< 330.		UG/KG	3/23/90		Benzo-a-pyrene
85FS-1	89.15879	205992	< 330.		UG/KG	3/23/90		Benzo-b-fluoranthene
85FS-1	89.15879	207089	< 330.		UG/KG	3/23/90		Benzo-k-fluoranthene
85FS-1	89.15879	65850	< 330.		UG/KG	3/23/90		Benzoic acid
85FS-1	89.15879	100516	< 330.		UG/KG	3/23/90		Benzyl alcohol
85FS-1	89.15879	111911	< 330.		UG/KG	3/23/90		Bis(2-chloroethoxy)methane
85FS-1	89.15879	111444	< 330.		UG/KG	3/23/90		Bis(2-chloroethyl)ether
85FS-1	89.15879	108601	< 330.		UG/KG	3/23/90		Bis(2-chloroisopropyl)ether
85FS-1	89.15879	117817	< 330.		UG/KG	3/23/90		Bis(2-ethylhexyl)phthalate
85FS-1	89.15879	101553	< 330.		UG/KG	3/23/90		4-Bromophenylphenyl ether
85FS-1	89.15879	85687	< 330.		UG/KG	3/23/90		Butylbenzyl phthalate
85FS-1	89.15879	59507	< 330.		UG/KG	3/23/90		4-Chloro-3-methylphenol
85FS-1	89.15879	106478	< 330.		UG/KG	3/23/90		4-Chloroaniline
85FS-1	89.15879	91587	< 330.		UG/KG	3/23/90		2-Chloronaphthalene
85FS-1	89.15879	95578	< 330.		UG/KG	3/23/90		o-Chlorophenol
85FS-1	89.15879	7005723	< 330.		UG/KG	3/23/90		4-Chlorophenylphenyl ether
85FS-1	89.15879	218019	< 330.		UG/KG	3/23/90		Chrysene

85FS-1	89.15879	106445	< 330.	UG/KG	3/23/90
85FS-1	89.15879	84742	< 330.	UG/KG	3/23/90
85FS-1	89.15879	117840	< 330.	UG/KG	3/23/90
85FS-1	89.15879	53703	< 330.	UG/KG	3/23/90
85FS-1	89.15879	132649	< 330.	UG/KG	3/23/90
85FS-1	89.15879	95501	< 330.	UG/KG	3/23/90
85FS-1	89.15879	541731	< 330.	UG/KG	3/23/90
85FS-1	89.15879	106467	< 330.	UG/KG	3/23/90
85FS-1	89.15879	91941	< 330.	UG/KG	3/23/90
85FS-1	89.15879	120832	< 330.	UG/KG	3/23/90
85FS-1	89.15879	84662	< 330.	UG/KG	3/23/90
85FS-1	89.15879	131113	< 330.	UG/KG	3/23/90
85FS-1	89.15879	105679	< 330.	UG/KG	3/23/90
85FS-1	89.15879	51285	< 330.	UG/KG	3/23/90
85FS-1	89.15879	121142	< 330.	UG/KG	3/23/90
85FS-1	89.15879	606202	< 330.	UG/KG	3/23/90
85FS-1	89.15879	206440	< 330.	UG/KG	3/23/90
85FS-1	89.15879	86737	< 330.	UG/KG	3/23/90
85FS-1	89.15879	118741	< 330.	UG/KG	3/23/90
85FS-1	89.15879	87683	< 330.	UG/KG	3/23/90
85FS-1	89.15879	77474	< 330.	UG/KG	3/23/90
85FS-1	89.15879	67721	< 330.	UG/KG	3/23/90
85FS-1	89.15879	193395	< 330.	UG/KG	3/23/90
85FS-1	89.15879	78591	< 330.	UG/KG	3/23/90
85FS-1	89.15879	534521	< 330.	UG/KG	3/23/90
85FS-1	89.15879	91576	< 330.	UG/KG	3/23/90
85FS-1	89.15879	95487	< 330.	UG/KG	3/23/90
85FS-1	89.15879	106445	< 330.	UG/KG	3/23/90
85FS-1	89.15879	91203	< 330.	UG/KG	3/23/90
85FS-1	89.15879	88744	< 330.	UG/KG	3/23/90
85FS-1	89.15879	99092	< 330.	UG/KG	3/23/90
85FS-1	89.15879	100016	< 330.	UG/KG	3/23/90
85FS-1	89.15879	98953	< 330.	UG/KG	3/23/90
85FS-1	89.15879	88755	< 330.	UG/KG	3/23/90
85FS-1	89.15879	100027	< 330.	UG/KG	3/23/90
85FS-1	89.15879	621647	< 330.	UG/KG	3/23/90
85FS-1	89.15879	62759	< 330.	UG/KG	3/23/90
85FS-1	89.15879	86306	< 330.	UG/KG	3/23/90
85FS-1	89.15879	87865	< 330.	UG/KG	3/23/90
85FS-1	89.15879	85018	< 330.	UG/KG	3/23/90
85FS-1	89.15879	108952	< 330.	UG/KG	3/23/90
85FS-1	89.15879	129000	< 330.	UG/KG	3/23/90
85FS-1	89.15879	120821	< 330.	UG/KG	3/23/90
85FS-1	89.15879	95954	< 330.	UG/KG	3/23/90
85FS-1	89.15879	88062	< 330.	UG/KG	3/23/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85FS-1

89.15879

105679

< 330.

UG/KG

3/23/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-2	89.15880	83329	< 330.		UG/KG	3/23/90		Acenaphthene
85FS-2	89.15880	208968	< 330.		UG/KG	3/23/90		Acenaphthylene
85FS-2	89.15880	62533	< 330.		UG/KG	3/23/90		Aniline
85FS-2	89.15880	120127	< 330.		UG/KG	3/23/90		Anthracene
85FS-2	89.15880	103333	< 330.		UG/KG	3/23/90		Azobenzene
85FS-2	89.15880	56553	< 330.		UG/KG	3/23/90		Benz(a)anthracene
85FS-2	89.15880	92875	< 330.		UG/KG	3/23/90		m-Benzidine
85FS-2	89.15880	191242	< 330.		UG/KG	3/23/90		Benzo(g,h,i)perylene
85FS-2	89.15880	50328	< 330.		UG/KG	3/23/90		Benzo-a-pyrene
85FS-2	89.15880	205992	< 330.		UG/KG	3/23/90		Benzo-b-fluoranthene
85FS-2	89.15880	207089	< 330.		UG/KG	3/23/90		Benzo-k-fluoranthene
85FS-2	89.15880	65850	< 330.		UG/KG	3/23/90		Benzoic acid
85FS-2	89.15880	100516	< 330.		UG/KG	3/23/90		Benzyl alcohol
85FS-2	89.15880	111911	< 330.		UG/KG	3/23/90		Bis(2-chloroethoxy)methane
85FS-2	89.15880	111444	< 330.		UG/KG	3/23/90		Bis(2-chloroethyl)ether
85FS-2	89.15880	108601	< 330.		UG/KG	3/23/90		Bis(2-chloroisopropyl)ether
85FS-2	89.15880	117817	< 330.		UG/KG	3/23/90		Bis(2-ethylhexyl)phthalate
85FS-2	89.15880	101553	< 330.		UG/KG	3/23/90		4-Bromophenylphenyl ether
85FS-2	89.15880	85687	< 330.		UG/KG	3/23/90		Butylbenzyl phthalate
85FS-2	89.15880	59507	< 330.		UG/KG	3/23/90		4-Chloro-3-methylphenol
85FS-2	89.15880	106478	< 330.		UG/KG	3/23/90		4-Chloroaniline
85FS-2	89.15880	91587	< 330.		UG/KG	3/23/90		2-Chloronaphthalene
85FS-2	89.15880	95578	< 330.		UG/KG	3/23/90		o-Chlorophenol
85FS-2	89.15880	7005723	< 330.		UG/KG	3/23/90		4-Chlorophenylphenyl ether
85FS-2	89.15880	218019	< 330.		UG/KG	3/23/90		Chrysene

85FS-2	89.15880	106445	< 330.	UG/KG	3/23/90	p-Cresol
85FS-2	89.15880	84742	< 330.	UG/KG	3/23/90	Di-n-butyl phthalate
85FS-2	89.15880	117840	< 330.	UG/KG	3/23/90	Di-n-octyl phthalate
85FS-2	89.15880	53703	< 330.	UG/KG	3/23/90	Dibenzo(a,h)anthracene
85FS-2	89.15880	132649	< 330.	UG/KG	3/23/90	Dibenzofuran
85FS-2	89.15880	95501	< 330.	UG/KG	3/23/90	o-Dichlorobenzene (1,2)
85FS-2	89.15880	541731	< 330.	UG/KG	3/23/90	m-Dichlorobenzene (1,3)
85FS-2	89.15880	106467	< 330.	UG/KG	3/23/90	p-Dichlorobenzene (1,4)
85FS-2	89.15880	91941	< 330.	UG/KG	3/23/90	3,3'-Dichlorobenzidine
85FS-2	89.15880	120832	< 330.	UG/KG	3/23/90	2,4-Dichlorophenol
85FS-2	89.15880	84662	< 330.	UG/KG	3/23/90	Diethyl phthalate
85FS-2	89.15880	131113	< 330.	UG/KG	3/23/90	Dimethyl phthalate
85FS-2	89.15880	105679	< 330.	UG/KG	3/23/90	2,4-Dimethylphenol
85FS-2	89.15880	51285	< 330.	UG/KG	3/23/90	2,4-Dinitrophenol
85FS-2	89.15880	121142	< 330.	UG/KG	3/23/90	2,4-Dinitrotoluene
85FS-2	89.15880	606202	< 330.	UG/KG	3/23/90	2,6-Dinitrotoluene
85FS-2	89.15880	206440	< 330.	UG/KG	3/23/90	Fluoranthene
85FS-2	89.15880	86737	< 330.	UG/KG	3/23/90	Fluorene
85FS-2	89.15880	118741	< 330.	UG/KG	3/23/90	Hexachlorobenzene
85FS-2	89.15880	87683	< 330.	UG/KG	3/23/90	Hexachlorobutadiene
85FS-2	89.15880	77474	< 330.	UG/KG	3/23/90	Hexachlorocyclopentadiene
85FS-2	89.15880	67721	< 330.	UG/KG	3/23/90	Hexachloroethane
85FS-2	89.15880	193395	< 330.	UG/KG	3/23/90	Indeno(1,2,3-cd)pyrene
85FS-2	89.15880	78591	< 330.	UG/KG	3/23/90	Isophorone
85FS-2	89.15880	534521	< 330.	UG/KG	3/23/90	2-Methyl-4,6-dinitrophenol
85FS-2	89.15880	91576	< 330.	UG/KG	3/23/90	2-Methylnaphthalene
85FS-2	89.15880	95487	< 330.	UG/KG	3/23/90	2-Methylphenol
85FS-2	89.15880	106445	< 330.	UG/KG	3/23/90	4-Methylphenol
85FS-2	89.15880	91203	< 330.	UG/KG	3/23/90	Naphthalene
85FS-2	89.15880	88744	< 330.	UG/KG	3/23/90	2-Nitroaniline
85FS-2	89.15880	99092	< 330.	UG/KG	3/23/90	3-Nitroaniline
85FS-2	89.15880	100016	< 330.	UG/KG	3/23/90	4-Nitroaniline
85FS-2	89.15880	98953	< 330.	UG/KG	3/23/90	Nitrobenzene
85FS-2	89.15880	88755	< 330.	UG/KG	3/23/90	2-Nitrophenol
85FS-2	89.15880	100027	< 330.	UG/KG	3/23/90	4-Nitrophenol
85FS-2	89.15880	621647	< 330.	UG/KG	3/23/90	N-Nitrosodi-n-propylamine
85FS-2	89.15880	62759	< 330.	UG/KG	3/23/90	N-Nitrosodimethylamine
85FS-2	89.15880	86306	< 330.	UG/KG	3/23/90	N-Nitrosodiphenylamine
85FS-2	89.15880	87865	< 330.	UG/KG	3/23/90	Pentachlorophenol
85FS-2	89.15880	85018	< 330.	UG/KG	3/23/90	Phenanthrene
85FS-2	89.15880	108952	< 330.	UG/KG	3/23/90	Phenol
85FS-2	89.15880	129000	< 330.	UG/KG	3/23/90	Pyrene
85FS-2	89.15880	120821	< 330.	UG/KG	3/23/90	1,2,4-Trichlorobenzene
85FS-2	89.15880	95954	< 330.	UG/KG	3/23/90	2,4,5-Trichlorophenol
85FS-2	89.15880	88062	< 330.	UG/KG	3/23/90	2,4,6-Trichlorophenol

85FS-2

89.15880

105679

< 330.

UG/KG

3/21/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-3	89.15881	83329	< 1287.		UG/KG	3/23/90		Acenaphthene
85FS-3	89.15881	208968	< 1287.		UG/KG	3/23/90		Acenaphthylene
85FS-3	89.15881	62533	< 1287.		UG/KG	3/23/90		Aniline
85FS-3	89.15881	120127	< 1287.		UG/KG	3/23/90		Anthracene
85FS-3	89.15881	103333	< 1287.		UG/KG	3/23/90		Azobenzene
85FS-3	89.15881	56553	< 1287.		UG/KG	3/23/90		Benz(a)anthracene
85FS-3	89.15881	92875	< 1287.		UG/KG	3/23/90		m-Benzidine
85FS-3	89.15881	191242	< 1287.		UG/KG	3/23/90		Benzo(g,h,i)perylene
85FS-3	89.15881	50328	< 1287.		UG/KG	3/23/90		Benzo-a-pyrene
85FS-3	89.15881	205992	< 1287.		UG/KG	3/23/90		Benzo-b-fluoranthene
85FS-3	89.15881	207089	< 1287.		UG/KG	3/23/90		Benzo-k-fluoranthene
85FS-3	89.15881	65850	< 1287.		UG/KG	3/23/90		Benzoic acid
85FS-3	89.15881	100516	< 1287.		UG/KG	3/23/90		Benzyl alcohol
85FS-3	89.15881	111911	< 1287.		UG/KG	3/23/90		Bis(2-chloroethoxy)methane
85FS-3	89.15881	111444	< 1287.		UG/KG	3/23/90		Bis(2-chloroethyl)ether
85FS-3	89.15881	108601	< 1287.		UG/KG	3/23/90		Bis(2-chloroisopropyl)ether
85FS-3	89.15881	117817	< 1287.		UG/KG	3/23/90		Bis(2-ethylhexyl)phthalate
85FS-3	89.15881	101553	< 1287.		UG/KG	3/23/90		4-Bromophenylphenyl ether
85FS-3	89.15881	85687	< 1287.		UG/KG	3/23/90		Butylbenzyl phthalate
85FS-3	89.15881	59507	< 1287.		UG/KG	3/23/90		4-Chloro-3-methylphenol
85FS-3	89.15881	106478	< 1287.		UG/KG	3/23/90		4-Chloroaniline
85FS-3	89.15881	91587	< 1287.		UG/KG	3/23/90		2-Chloronaphthalene
85FS-3	89.15881	95578	< 1287.		UG/KG	3/23/90		o-Chlorophenol
85FS-3	89.15881	7005723	< 1287.		UG/KG	3/23/90		4-Chlorophenylphenyl ether
85FS-3	89.15881	218019	< 1287.		UG/KG	3/23/90		Chrysene

85FS-3	89.15881	106445	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	84742	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	117840	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	53703	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	132649	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	95501	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	541731	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	106467	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	91941	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	120832	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	84662	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	131113	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	105679	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	51285	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	121142	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	606202	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	206440	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	86737	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	118741	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	87683	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	77474	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	67721	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	193395	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	78591	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	534521	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	91576	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	95487	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	106445	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	91203	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	88744	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	99092	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	100016	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	98953	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	88755	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	100027	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	621647	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	62759	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	86306	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	87865	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	85018	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	108952	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	129000	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	120821	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	95954	< 1287.	UG/KG	3/23/90
85FS-3	89.15881	88062	< 1287.	UG/KG	3/23/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85FS-3

89.15881

105679

< 1287.

UG/KG

3/23/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-4	89.15882	83329	< 1617.		UG/KG	3/23/90		Acenaphthene
85FS-4	89.15882	208968	< 1617.		UG/KG	3/23/90		Acenaphthylene
85FS-4	89.15882	62533	< 1617.		UG/KG	3/23/90		Aniline
85FS-4	89.15882	120127	< 1617.		UG/KG	3/23/90		Anthracene
85FS-4	89.15882	103333	< 1617.		UG/KG	3/23/90		Azobenzene
85FS-4	89.15882	56553	< 1617.		UG/KG	3/23/90		Benz(a)anthracene
85FS-4	89.15882	92875	< 1617.		UG/KG	3/23/90		m-Benzidine
85FS-4	89.15882	191242	< 1617.		UG/KG	3/23/90		Benzo(g,h,i)perylene
85FS-4	89.15882	50328	< 1617.		UG/KG	3/23/90		Benzo-a-pyrene
85FS-4	89.15882	205992	< 1617.		UG/KG	3/23/90		Benzo-b-fluoranthene
85FS-4	89.15882	207089	< 1617.		UG/KG	3/23/90		Benzo-k-fluoranthene
85FS-4	89.15882	65850	< 1617.		UG/KG	3/23/90		Benzoic acid
85FS-4	89.15882	100516	< 1617.		UG/KG	3/23/90		Benzyl alcohol
85FS-4	89.15882	111911	< 1617.		UG/KG	3/23/90		Bis(2-chloroethoxy)methane
85FS-4	89.15882	111444	< 1617.		UG/KG	3/23/90		Bis(2-chloroethyl)ether
85FS-4	89.15882	108601	< 1617.		UG/KG	3/23/90		Bis(2-chloroisopropyl)ether
85FS-4	89.15882	117817	< 1617.		UG/KG	3/23/90		Bis(2-ethylhexyl)phthalate
85FS-4	89.15882	101553	< 1617.		UG/KG	3/23/90		4-Bromophenylphenyl ether
85FS-4	89.15882	85687	< 1617.		UG/KG	3/23/90		Butylbenzyl phthalate
85FS-4	89.15882	59507	< 1617.		UG/KG	3/23/90		4-Chloro-3-methylphenol
85FS-4	89.15882	106478	< 1617.		UG/KG	3/23/90		4-Chloroaniline
85FS-4	89.15882	91587	< 1617.		UG/KG	3/23/90		2-Chloronaphthalene
85FS-4	89.15882	95578	< 1617.		UG/KG	3/23/90		o-Chlorophenol
85FS-4	89.15882	7005723	< 1617.		UG/KG	3/23/90		4-Chlorophenylphenyl ether
85FS-4	89.15882	218019	< 1617.		UG/KG	3/23/90		Chrysene

85FS-4	89.15882	106445	< 1617.	UG/KG	3/23/90	p-Cresol
85FS-4	89.15882	84742	< 1617.	UG/KG	3/23/90	Di-n-butyl phthalate
85FS-4	89.15882	117840	< 1617.	UG/KG	3/23/90	Di-n-octyl phthalate
85FS-4	89.15882	53703	< 1617.	UG/KG	3/23/90	Dibenzo(a,h)anthracene
85FS-4	89.15882	132649	< 1617.	UG/KG	3/23/90	Dibenzofuran
85FS-4	89.15882	95501	< 1617.	UG/KG	3/23/90	o-Dichlorobenzene (1,2)
85FS-4	89.15882	541731	< 1617.	UG/KG	3/23/90	m-Dichlorobenzene (1,3)
85FS-4	89.15882	106467	< 1617.	UG/KG	3/23/90	p-Dichlorobenzene (1,4)
85FS-4	89.15882	91941	< 1617.	UG/KG	3/23/90	3,3'-Dichlorobenzidine
85FS-4	89.15882	120832	< 1617.	UG/KG	3/23/90	2,4-Dichlorophenol
85FS-4	89.15882	84662	< 1617.	UG/KG	3/23/90	Diethyl phthalate
85FS-4	89.15882	131113	< 1617.	UG/KG	3/23/90	Dimethyl phthalate
85FS-4	89.15882	105679	< 1617.	UG/KG	3/23/90	2,4-Dimethylphenol
85FS-4	89.15882	51285	< 1617.	UG/KG	3/23/90	2,4-Dinitrophenol
85FS-4	89.15882	121142	< 1617.	UG/KG	3/23/90	2,4-Dinitrotoluene
85FS-4	89.15882	606202	< 1617.	UG/KG	3/23/90	2,6-Dinitrotoluene
85FS-4	89.15882	206440	< 1617.	UG/KG	3/23/90	Fluoranthene
85FS-4	89.15882	86737	< 1617.	UG/KG	3/23/90	Fluorene
85FS-4	89.15882	118741	< 1617.	UG/KG	3/23/90	Hexachlorobenzene
85FS-4	89.15882	87683	< 1617.	UG/KG	3/23/90	Hexachlorobutadiene
85FS-4	89.15882	77474	< 1617.	UG/KG	3/23/90	Hexachlorocyclopentadiene
85FS-4	89.15882	67721	< 1617.	UG/KG	3/23/90	Hexachloroethane
85FS-4	89.15882	193395	< 1617.	UG/KG	3/23/90	Indeno(1,2,3-cd)pyrene
85FS-4	89.15882	78591	< 1617.	UG/KG	3/23/90	Isophorone
85FS-4	89.15882	534521	< 1617.	UG/KG	3/23/90	2-Methyl-4,6-dinitrophenol
85FS-4	89.15882	91576	< 1617.	UG/KG	3/23/90	2-Methylnaphthalene
85FS-4	89.15882	95487	< 1617.	UG/KG	3/23/90	2-Methylphenol
85FS-4	89.15882	106445	< 1617.	UG/KG	3/23/90	4-Methylphenol
85FS-4	89.15882	91203	< 1617.	UG/KG	3/23/90	Naphthalene
85FS-4	89.15882	88744	< 1617.	UG/KG	3/23/90	2-Nitroaniline
85FS-4	89.15882	99092	< 1617.	UG/KG	3/23/90	3-Nitroaniline
85FS-4	89.15882	100016	< 1617.	UG/KG	3/23/90	4-Nitroaniline
85FS-4	89.15882	98953	< 1617.	UG/KG	3/23/90	Nitrobenzene
85FS-4	89.15882	88755	< 1617.	UG/KG	3/23/90	2-Nitrophenol
85FS-4	89.15882	100027	< 1617.	UG/KG	3/23/90	4-Nitrophenol
85FS-4	89.15882	621647	< 1617.	UG/KG	3/23/90	N-Nitrosodi-n-propylamine
85FS-4	89.15882	62759	< 1617.	UG/KG	3/23/90	N-Nitrosodimethylamine
85FS-4	89.15882	86306	< 1617.	UG/KG	3/23/90	N-Nitrosodiphenylamine
85FS-4	89.15882	87865	< 1617.	UG/KG	3/23/90	Pentachlorophenol
85FS-4	89.15882	85018	< 1617.	UG/KG	3/23/90	Phenanthrene
85FS-4	89.15882	108952	< 1617.	UG/KG	3/23/90	Phenol
85FS-4	89.15882	129000	< 1617.	UG/KG	3/23/90	Pyrene
85FS-4	89.15882	120821	< 1617.	UG/KG	3/23/90	1,2,4-Trichlorobenzene
85FS-4	89.15882	95954	< 1617.	UG/KG	3/23/90	2,4,5-Trichlorophenol
85FS-4	89.15882	88062	< 1617.	UG/KG	3/23/90	2,4,6-Trichlorophenol

85FS-4

89.15882

105679

< 1617.

UG/KG

3/23/90

2,4-Xylenol

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-5	89.15883	83329	< 330.		UG/KG	3/23/90		Acenaphthene
85FS-5	89.15883	208968	< 330.		UG/KG	3/23/90		Acenaphthylene
85FS-5	89.15883	62533	< 330.		UG/KG	3/23/90		Aniline
85FS-5	89.15883	120127	< 330.		UG/KG	3/23/90		Anthracene
85FS-5	89.15883	103333	< 330.		UG/KG	3/23/90		Azobenzene
85FS-5	89.15883	56553	< 330.		UG/KG	3/23/90		Benz(a)anthracene
85FS-5	89.15883	92875	< 330.		UG/KG	3/23/90		m-Benzidine
85FS-5	89.15883	191242	< 330.		UG/KG	3/23/90		Benzo(g,h,i)perylene
85FS-5	89.15883	50328	< 330.		UG/KG	3/23/90		Benzo-a-pyrene
85FS-5	89.15883	205992	< 330.		UG/KG	3/23/90		Benzo-b-fluoranthene
85FS-5	89.15883	207089	< 330.		UG/KG	3/23/90		Benzo-k-fluoranthene
85FS-5	89.15883	65850	< 330.		UG/KG	3/23/90		Benzoic acid
85FS-5	89.15883	100516	< 330.		UG/KG	3/23/90		Benzyl alcohol
85FS-5	89.15883	111911	< 330.		UG/KG	3/23/90		Bis(2-chloroethoxy)methane
85FS-5	89.15883	111444	< 330.		UG/KG	3/23/90		Bis(2-chloroethyl)ether
85FS-5	89.15883	108601	< 330.		UG/KG	3/23/90		Bis(2-chloroisopropyl)ether
85FS-5	89.15883	117817	< 330.		UG/KG	3/23/90		Bis(2-ethylhexyl)phthalate
85FS-5	89.15883	101553	< 330.		UG/KG	3/23/90		4-Bromophenylphenyl ether
85FS-5	89.15883	85687	< 330.		UG/KG	3/23/90		Butylbenzyl phthalate
85FS-5	89.15883	59507	< 330.		UG/KG	3/23/90		4-Chloro-3-methylphenol
85FS-5	89.15883	106478	< 330.		UG/KG	3/23/90		4-Chloroaniline
85FS-5	89.15883	91587	< 330.		UG/KG	3/23/90		2-Chloronaphthalene
85FS-5	89.15883	95578	< 330.		UG/KG	3/23/90		o-Chlorophenol
85FS-5	89.15883	7005723	< 330.		UG/KG	3/23/90		4-Chlorophenylphenyl ether
85FS-5	89.15883	218019	< 330.		UG/KG	3/23/90		Chrysene

85FS-5	89.15883	106445	< 330.	UG/KG	3/23/90	p-Cresol
85FS-5	89.15883	84742	< 330.	UG/KG	3/23/90	Di-n-butyl phthalate
85FS-5	89.15883	117840	< 330.	UG/KG	3/23/90	Di-n-octyl phthalate
85FS-5	89.15883	53703	< 330.	UG/KG	3/23/90	Dibenzo(a,h)anthracene
85FS-5	89.15883	132649	< 330.	UG/KG	3/23/90	Dibenzofuran
85FS-5	89.15883	95501	< 330.	UG/KG	3/23/90	o-Dichlorobenzene (1,2)
85FS-5	89.15883	541731	< 330.	UG/KG	3/23/90	m-Dichlorobenzene (1,3)
85FS-5	89.15883	106467	< 330.	UG/KG	3/23/90	p-Dichlorobenzene (1,4)
85FS-5	89.15883	91941	< 330.	UG/KG	3/23/90	3,3'-Dichlorobenzidine
85FS-5	89.15883	120832	< 330.	UG/KG	3/23/90	2,4-Dichlorophenol
85FS-5	89.15883	84662	< 330.	UG/KG	3/23/90	Diethyl phthalate
85FS-5	89.15883	131113	< 330.	UG/KG	3/23/90	Dimethyl phthalate
85FS-5	89.15883	105679	< 330.	UG/KG	3/23/90	2,4-Dimethylphenol
85FS-5	89.15883	51285	< 330.	UG/KG	3/23/90	2,4-Dinitrophenol
85FS-5	89.15883	121142	< 330.	UG/KG	3/23/90	2,4-Dinitrotoluene
85FS-5	89.15883	606202	< 330.	UG/KG	3/23/90	2,6-Dinitrotoluene
85FS-5	89.15883	206440	< 330.	UG/KG	3/23/90	Fluoranthene
85FS-5	89.15883	86737	< 330.	UG/KG	3/23/90	Fluorene
85FS-5	89.15883	118741	< 330.	UG/KG	3/23/90	Hexachlorobenzene
85FS-5	89.15883	87683	< 330.	UG/KG	3/23/90	Hexachlorobutadiene
85FS-5	89.15883	77474	< 330.	UG/KG	3/23/90	Hexachlorocyclopentadiene
85FS-5	89.15883	67721	< 330.	UG/KG	3/23/90	Hexachloroethane
85FS-5	89.15883	193395	< 330.	UG/KG	3/23/90	Indeno(1,2,3-cd)pyrene
85FS-5	89.15883	78591	< 330.	UG/KG	3/23/90	Isophorone
85FS-5	89.15883	534521	< 330.	UG/KG	3/23/90	2-Methyl-4,6-dinitrophenol
85FS-5	89.15883	91576	< 330.	UG/KG	3/23/90	2-Methylnaphthalene
85FS-5	89.15883	95487	< 330.	UG/KG	3/23/90	2-Methylphenol
85FS-5	89.15883	106445	< 330.	UG/KG	3/23/90	4-Methylphenol
85FS-5	89.15883	91203	< 330.	UG/KG	3/23/90	Naphthalene
85FS-5	89.15883	88744	< 330.	UG/KG	3/23/90	2-Nitroaniline
85FS-5	89.15883	99092	< 330.	UG/KG	3/23/90	3-Nitroaniline
85FS-5	89.15883	100016	< 330.	UG/KG	3/23/90	4-Nitroaniline
85FS-5	89.15883	98953	< 330.	UG/KG	3/23/90	Nitrobenzene
85FS-5	89.15883	88755	< 330.	UG/KG	3/23/90	2-Nitrophenol
85FS-5	89.15883	100027	< 330.	UG/KG	3/23/90	4-Nitrophenol
85FS-5	89.15883	621647	< 330.	UG/KG	3/23/90	N-Nitrosodi-n-propylamine
85FS-5	89.15883	62759	< 330.	UG/KG	3/23/90	N-Nitrosodimethylamine
85FS-5	89.15883	86306	< 330.	UG/KG	3/23/90	N-Nitrosodiphenylamine
85FS-5	89.15883	87865	< 330.	UG/KG	3/23/90	Pentachlorophenol
85FS-5	89.15883	85018	< 330.	UG/KG	3/23/90	Phenanthrene
85FS-5	89.15883	108952	< 330.	UG/KG	3/23/90	Phenol
85FS-5	89.15883	129000	< 330.	UG/KG	3/23/90	Pyrene
85FS-5	89.15883	120821	< 330.	UG/KG	3/23/90	1,2,4-Trichlorobenzene
85FS-5	89.15883	95954	< 330.	UG/KG	3/23/90	2,4,5-Trichlorophenol
85FS-5	89.15883	88062	< 330.	UG/KG	3/23/90	2,4,6-Trichlorophenol

85FS-5

89.15883

105679

< 330.

UG/KG

3/2/90

2,4-Xylenol

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-6	89.15884	83329	< 330.		UG/KG	3/27/90		Acenaphthene
85FS-6	89.15884	208968	< 330.		UG/KG	3/27/90		Acenaphthylene
85FS-6	89.15884	62533	< 330.		UG/KG	3/27/90		Aniline
85FS-6	89.15884	120127	< 330.		UG/KG	3/27/90		Anthracene
85FS-6	89.15884	103333	< 330.		UG/KG	3/27/90		Azobenzene
85FS-6	89.15884	56553	< 330.		UG/KG	3/27/90		Benzo(a)anthracene
85FS-6	89.15884	92875	< 330.		UG/KG	3/27/90		m-Benzidine
85FS-6	89.15884	191242	< 330.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-6	89.15884	50328	< 330.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-6	89.15884	205992	< 330.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-6	89.15884	207089	< 330.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-6	89.15884	65850	< 330.		UG/KG	3/27/90		Benzoic acid
85FS-6	89.15884	100516	< 330.		UG/KG	3/27/90		Benzyl alcohol
85FS-6	89.15884	111911	< 330.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-6	89.15884	111444	< 330.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-6	89.15884	108601	< 330.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-6	89.15884	117817	800.	160.	UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-6	89.15884	101553	< 330.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-6	89.15884	85687	< 330.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-6	89.15884	59507	< 330.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-6	89.15884	106478	< 330.		UG/KG	3/27/90		4-Chloroaniline
85FS-6	89.15884	91587	< 330.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-6	89.15884	95578	< 330.		UG/KG	3/27/90		o-Chlorophenol
85FS-6	89.15884	7005723	< 330.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-6	89.15884	218019	< 330.		UG/KG	3/27/90		Chrysene

85FS-6	89.15884	106445	< 330.	UG/KG	3/27/90	p-Cresol
85FS-6	89.15884	84742	< 330.	UG/KG	3/27/90	Di-n-butyl phthalate
85FS-6	89.15884	117840	< 330.	UG/KG	3/27/90	Di-n-octyl phthalate
85FS-6	89.15884	53703	< 330.	UG/KG	3/27/90	Dibenzo(a,h)anthracene
85FS-6	89.15884	132649	< 330.	UG/KG	3/27/90	Dibenzofuran
85FS-6	89.15884	95501	< 330.	UG/KG	3/27/90	o-Dichlorobenzene (1,2)
85FS-6	89.15884	541731	< 330.	UG/KG	3/27/90	m-Dichlorobenzene (1,3)
85FS-6	89.15884	106467	< 330.	UG/KG	3/27/90	p-Dichlorobenzene (1,4)
85FS-6	89.15884	91941	< 330.	UG/KG	3/27/90	3,3'-Dichlorobenzidine
85FS-6	89.15884	120832	< 330.	UG/KG	3/27/90	2,4-Dichlorophenol
85FS-6	89.15884	84662	< 330.	UG/KG	3/27/90	Diethyl phthalate
85FS-6	89.15884	131113	< 330.	UG/KG	3/27/90	Dimethyl phthalate
85FS-6	89.15884	105679	< 330.	UG/KG	3/27/90	2,4-Dimethylphenol
85FS-6	89.15884	51285	< 330.	UG/KG	3/27/90	2,4-Dinitrophenol
85FS-6	89.15884	121142	< 330.	UG/KG	3/27/90	2,4-Dinitrotoluene
85FS-6	89.15884	606202	< 330.	UG/KG	3/27/90	2,6-Dinitrotoluene
85FS-6	89.15884	206440	< 330.	UG/KG	3/27/90	Fluoranthene
85FS-6	89.15884	86737	< 330.	UG/KG	3/27/90	Fluorene
85FS-6	89.15884	118741	< 330.	UG/KG	3/27/90	Hexachlorobenzene
85FS-6	89.15884	87683	< 330.	UG/KG	3/27/90	Hexachlorobutadiene
85FS-6	89.15884	77474	< 330.	UG/KG	3/27/90	Hexachlorocyclopentadiene
85FS-6	89.15884	67721	< 330.	UG/KG	3/27/90	Hexachloroethane
85FS-6	89.15884	193395	< 330.	UG/KG	3/27/90	Indeno(1,2,3-cd)pyrene
85FS-6	89.15884	78591	< 330.	UG/KG	3/27/90	Isophorone
85FS-6	89.15884	534521	< 330.	UG/KG	3/27/90	2-Methyl-4,6-dinitrophenol
85FS-6	89.15884	91576	< 330.	UG/KG	3/27/90	2-Methylnaphthalene
85FS-6	89.15884	95487	< 330.	UG/KG	3/27/90	2-Methylphenol
85FS-6	89.15884	106445	< 330.	UG/KG	3/27/90	4-Methylphenol
85FS-6	89.15884	91203	< 330.	UG/KG	3/27/90	Naphthalene
85FS-6	89.15884	88744	< 330.	UG/KG	3/27/90	2-Nitroaniline
85FS-6	89.15884	99092	< 330.	UG/KG	3/27/90	3-Nitroaniline
85FS-6	89.15884	100016	< 330.	UG/KG	3/27/90	4-Nitroaniline
85FS-6	89.15884	98953	< 330.	UG/KG	3/27/90	Nitrobenzene
85FS-6	89.15884	88755	< 330.	UG/KG	3/27/90	2-Nitrophenol
85FS-6	89.15884	100027	< 330.	UG/KG	3/27/90	4-Nitrophenol
85FS-6	89.15884	621647	< 330.	UG/KG	3/27/90	N-Nitrosodi-n-propylamine
85FS-6	89.15884	62759	< 330.	UG/KG	3/27/90	N-Nitrosodimethylamine
85FS-6	89.15884	86306	< 330.	UG/KG	3/27/90	N-Nitrosodiphenylamine
85FS-6	89.15884	87865	< 330.	UG/KG	3/27/90	Pentachlorophenol
85FS-6	89.15884	85018	< 330.	UG/KG	3/27/90	Phenanthrene
85FS-6	89.15884	108952	< 330.	UG/KG	3/27/90	Phenol
85FS-6	89.15884	129000	< 330.	UG/KG	3/27/90	Pyrene
85FS-6	89.15884	120821	< 330.	UG/KG	3/27/90	1,2,4-Trichlorobenzene
85FS-6	89.15884	95954	< 330.	UG/KG	3/27/90	2,4,5-Trichlorophenol
85FS-6	89.15884	88062	< 330.	UG/KG	3/27/90	2,4,6-Trichlorophenol

85FS-6

89.15884

105679

< 330.

UG/KG

3/27/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-7	89.15885	83329	< 330.		UG/KG	3/27/90		Acenaphthene
85FS-7	89.15885	208968	< 330.		UG/KG	3/27/90		Acenaphthylene
85FS-7	89.15885	62533	< 330.		UG/KG	3/27/90		Aniline
85FS-7	89.15885	120127	< 330.		UG/KG	3/27/90		Anthracene
85FS-7	89.15885	103333	< 330.		UG/KG	3/27/90		Azobenzene
85FS-7	89.15885	56553	< 330.		UG/KG	3/27/90		Benz(a)anthracene
85FS-7	89.15885	92875	< 330.		UG/KG	3/27/90		m-Benzidine
85FS-7	89.15885	191242	< 330.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-7	89.15885	50328	< 330.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-7	89.15885	205992	< 330.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-7	89.15885	207089	< 330.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-7	89.15885	65850	< 330.		UG/KG	3/27/90		Benzoic acid
85FS-7	89.15885	100516	< 330.		UG/KG	3/27/90		Benzyl alcohol
85FS-7	89.15885	111911	< 330.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-7	89.15885	111444	< 330.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-7	89.15885	108601	< 330.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-7	89.15885	117817	1700.	340.	UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-7	89.15885	101553	< 330.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-7	89.15885	85687	< 330.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-7	89.15885	59507	< 330.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-7	89.15885	106478	< 330.		UG/KG	3/27/90		4-Chloroaniline
85FS-7	89.15885	91587	< 330.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-7	89.15885	95578	< 330.		UG/KG	3/27/90		o-Chlorophenol
85FS-7	89.15885	7005723	< 330.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-7	89.15885	218019	< 330.		UG/KG	3/27/90		Chrysene

85FS-7	89.15885	106445	< 330.	UG/KG	3/27/90	p-Cresol
85FS-7	89.15885	84742	< 330.	UG/KG	3/27/90	Di-n-butyl phthalate
85FS-7	89.15885	117840	< 330.	UG/KG	3/27/90	Di-n-octyl phthalate
85FS-7	89.15885	53703	< 330.	UG/KG	3/27/90	Dibenzo(a,h)anthracene
85FS-7	89.15885	132649	< 330.	UG/KG	3/27/90	Dibenzofuran
85FS-7	89.15885	95501	< 330.	UG/KG	3/27/90	o-Dichlorobenzene (1,2)
85FS-7	89.15885	541731	< 330.	UG/KG	3/27/90	m-Dichlorobenzene (1,3)
85FS-7	89.15885	106467	< 330.	UG/KG	3/27/90	p-Dichlorobenzene (1,4)
85FS-7	89.15885	91941	< 330.	UG/KG	3/27/90	3,3'-Dichlorobenzidine
85FS-7	89.15885	120832	< 330.	UG/KG	3/27/90	2,4-Dichlorophenol
85FS-7	89.15885	84662	< 330.	UG/KG	3/27/90	Diethyl phthalate
85FS-7	89.15885	131113	< 330.	UG/KG	3/27/90	Dimethyl phthalate
85FS-7	89.15885	105679	< 330.	UG/KG	3/27/90	2,4-Dimethylphenol
85FS-7	89.15885	51285	< 330.	UG/KG	3/27/90	2,4-Dinitrophenol
85FS-7	89.15885	121142	< 330.	UG/KG	3/27/90	2,4-Dinitrotoluene
85FS-7	89.15885	606202	< 330.	UG/KG	3/27/90	2,6-Dinitrotoluene
85FS-7	89.15885	206440	< 330.	UG/KG	3/27/90	Fluoranthene
85FS-7	89.15885	86737	< 330.	UG/KG	3/27/90	Fluorene
85FS-7	89.15885	118741	< 330.	UG/KG	3/27/90	Hexachlorobenzene
85FS-7	89.15885	87683	< 330.	UG/KG	3/27/90	Hexachlorobutadiene
85FS-7	89.15885	77474	< 330.	UG/KG	3/27/90	Hexachlorocyclopentadiene
85FS-7	89.15885	67721	< 330.	UG/KG	3/27/90	Hexachloroethane
85FS-7	89.15885	193395	< 330.	UG/KG	3/27/90	Indeno(1,2,3-cd)pyrene
85FS-7	89.15885	78591	< 330.	UG/KG	3/27/90	Isophorone
85FS-7	89.15885	534521	< 330.	UG/KG	3/27/90	2-Methyl-4,6-dinitrophenol
85FS-7	89.15885	91576	< 330.	UG/KG	3/27/90	2-Methylnaphthalene
85FS-7	89.15885	95487	< 330.	UG/KG	3/27/90	2-Methylphenol
85FS-7	89.15885	106445	< 330.	UG/KG	3/27/90	4-Methylphenol
85FS-7	89.15885	91203	< 330.	UG/KG	3/27/90	Naphthalene
85FS-7	89.15885	88744	< 330.	UG/KG	3/27/90	2-Nitroaniline
85FS-7	89.15885	99092	< 330.	UG/KG	3/27/90	3-Nitroaniline
85FS-7	89.15885	100016	< 330.	UG/KG	3/27/90	4-Nitroaniline
85FS-7	89.15885	98953	< 330.	UG/KG	3/27/90	Nitrobenzene
85FS-7	89.15885	88755	< 330.	UG/KG	3/27/90	2-Nitrophenol
85FS-7	89.15885	100027	< 330.	UG/KG	3/27/90	4-Nitrophenol
85FS-7	89.15885	621647	< 330.	UG/KG	3/27/90	N-Nitrosodi-n-propylamine
85FS-7	89.15885	62759	< 330.	UG/KG	3/27/90	N-Nitrosodimethylamine
85FS-7	89.15885	86306	< 330.	UG/KG	3/27/90	N-Nitrosodiphenylamine
85FS-7	89.15885	87865	< 330.	UG/KG	3/27/90	Pentachlorophenol
85FS-7	89.15885	85018	< 330.	UG/KG	3/27/90	Phenanthrene
85FS-7	89.15885	108952	< 330.	UG/KG	3/27/90	Phenol
85FS-7	89.15885	129000	< 330.	UG/KG	3/27/90	Pyrene
85FS-7	89.15885	120821	< 330.	UG/KG	3/27/90	1,2,4-Trichlorobenzene
85FS-7	89.15885	95954	< 330.	UG/KG	3/27/90	2,4,5-Trichlorophenol
85FS-7	89.15885	88062	< 330.	UG/KG	3/27/90	2,4,6-Trichlorophenol

85FS-7

89.15885

105679

< 330.

UG/KG

3/27/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-8	89.15886	83329	< 6600.		UG/KG	3/28/90		Acenaphthene
85FS-8	89.15886	208968	< 6600.		UG/KG	3/28/90		Acenaphthylene
85FS-8	89.15886	62533	< 6600.		UG/KG	3/28/90		Aniline
85FS-8	89.15886	120127	< 6600.		UG/KG	3/28/90		Anthracene
85FS-8	89.15886	103333	< 6600.		UG/KG	3/28/90		Azobenzene
85FS-8	89.15886	56553	< 6600.		UG/KG	3/28/90		Benz(a)anthracene
85FS-8	89.15886	92875	< 6600.		UG/KG	3/28/90		m-Benzidine
85FS-8	89.15886	191242	< 6600.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-8	89.15886	50328	< 6600.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-8	89.15886	205992	< 6600.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-8	89.15886	207089	< 6600.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-8	89.15886	65850	< 6600.		UG/KG	3/28/90		Benzoic acid
85FS-8	89.15886	100516	< 6600.		UG/KG	3/28/90		Benzyl alcohol
85FS-8	89.15886	111911	< 6600.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-8	89.15886	111444	< 6600.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-8	89.15886	108601	< 6600.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-8	89.15886	117817	< 6600.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-8	89.15886	101553	< 6600.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-8	89.15886	85687	< 6600.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-8	89.15886	59507	< 6600.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-8	89.15886	106478	< 6600.		UG/KG	3/28/90		4-Chloroaniline
85FS-8	89.15886	91587	< 6600.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-8	89.15886	95578	< 6600.		UG/KG	3/28/90		o-Chlorophenol
85FS-8	89.15886	7005723	< 6600.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-8	89.15886	218019	< 6600.		UG/KG	3/28/90		Chrysene

85FS-8	89.15886	106445	< 6600.	UG/KG	3/28/90	p-Cresol
85FS-8	89.15886	84742	< 6600.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-8	89.15886	117840	< 6600.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-8	89.15886	53703	< 6600.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-8	89.15886	132649	< 6600.	UG/KG	3/28/90	Dibenzofuran
85FS-8	89.15886	95501	< 6600.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-8	89.15886	541731	< 6600.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-8	89.15886	106467	< 6600.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-8	89.15886	91941	< 6600.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-8	89.15886	120832	< 6600.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-8	89.15886	84662	< 6600.	UG/KG	3/28/90	Diethyl phthalate
85FS-8	89.15886	131113	< 6600.	UG/KG	3/28/90	Dimethyl phthalate
85FS-8	89.15886	105679	< 6600.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-8	89.15886	51285	< 6600.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-8	89.15886	121142	< 6600.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-8	89.15886	606202	< 6600.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-8	89.15886	206440	< 6600.	UG/KG	3/28/90	Fluoranthene
85FS-8	89.15886	86737	< 6600.	UG/KG	3/28/90	Fluorene
85FS-8	89.15886	118741	< 6600.	UG/KG	3/28/90	Hexachlorobenzene
85FS-8	89.15886	87683	< 6600.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-8	89.15886	77474	< 6600.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-8	89.15886	67721	< 6600.	UG/KG	3/28/90	Hexachloroethane
85FS-8	89.15886	193395	< 6600.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-8	89.15886	78591	< 6600.	UG/KG	3/28/90	Isophorone
85FS-8	89.15886	534521	< 6600.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-8	89.15886	91576	< 6600.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-8	89.15886	95487	< 6600.	UG/KG	3/28/90	2-Methylphenol
85FS-8	89.15886	106445	< 6600.	UG/KG	3/28/90	4-Methylphenol
85FS-8	89.15886	91203	< 6600.	UG/KG	3/28/90	Naphthalene
85FS-8	89.15886	88744	< 6600.	UG/KG	3/28/90	2-Nitroaniline
85FS-8	89.15886	99092	< 6600.	UG/KG	3/28/90	3-Nitroaniline
85FS-8	89.15886	100016	< 6600.	UG/KG	3/28/90	4-Nitroaniline
85FS-8	89.15886	98953	< 6600.	UG/KG	3/28/90	Nitrobenzene
85FS-8	89.15886	88755	< 6600.	UG/KG	3/28/90	2-Nitrophenol
85FS-8	89.15886	100027	< 6600.	UG/KG	3/28/90	4-Nitrophenol
85FS-8	89.15886	621647	< 6600.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-8	89.15886	62759	< 6600.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-8	89.15886	86306	< 6600.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-8	89.15886	87865	< 6600.	UG/KG	3/28/90	Pentachlorophenol
85FS-8	89.15886	85018	< 6600.	UG/KG	3/28/90	Phenanthrene
85FS-8	89.15886	108952	< 6600.	UG/KG	3/28/90	Phenol
85FS-8	89.15886	129000	< 6600.	UG/KG	3/28/90	Pyrene
85FS-8	89.15886	120821	< 6600.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-8	89.15886	95954	< 6600.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-8	89.15886	88062	< 6600.	UG/KG	3/28/90	2,4,6-Trichlorophenol

85FS-8

89.15886

105679

< 6600.

UG/KG

3/23/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-9	89.15887	83329	< 6600.		UG/KG	3/27/90		Acenaphthene
85FS-9	89.15887	208968	< 6600.		UG/KG	3/27/90		Acenaphthylene
85FS-9	89.15887	62533	< 6600.		UG/KG	3/27/90		Aniline
85FS-9	89.15887	120127	< 6600.		UG/KG	3/27/90		Anthracene
85FS-9	89.15887	103333	< 6600.		UG/KG	3/27/90		Azobenzene
85FS-9	89.15887	56553	< 6600.		UG/KG	3/27/90		Benz(a)anthracene
85FS-9	89.15887	92875	< 6600.		UG/KG	3/27/90		m-Benzidine
85FS-9	89.15887	191242	< 6600.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-9	89.15887	50328	< 6600.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-9	89.15887	205992	< 6600.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-9	89.15887	207089	< 6600.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-9	89.15887	65850	< 6600.		UG/KG	3/27/90		Benzoic acid
85FS-9	89.15887	100516	< 6600.		UG/KG	3/27/90		Benzyl alcohol
85FS-9	89.15887	111911	< 6600.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-9	89.15887	111444	< 6600.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-9	89.15887	108601	< 6600.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-9	89.15887	117817	< 6600.		UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-9	89.15887	101553	< 6600.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-9	89.15887	85687	< 6600.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-9	89.15887	59507	< 6600.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-9	89.15887	106478	< 6600.		UG/KG	3/27/90		4-Chloroaniline
85FS-9	89.15887	91587	< 6600.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-9	89.15887	95578	< 6600.		UG/KG	3/27/90		o-Chlorophenol
85FS-9	89.15887	7005723	< 6600.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-9	89.15887	218019	< 6600.		UG/KG	3/27/90		Chrysene

85FS-9	89.15887	106445	< 6600.	UG/KG	3/27/90	p-Cresol
85FS-9	89.15887	84742	< 6600.	UG/KG	3/27/90	Di-n-butyl phthalate
85FS-9	89.15887	117840	< 6600.	UG/KG	3/27/90	Di-n-octyl phthalate
85FS-9	89.15887	53703	< 6600.	UG/KG	3/27/90	Dibenzo(a,h)anthracene
85FS-9	89.15887	132649	< 6600.	UG/KG	3/27/90	Dibenzofuran
85FS-9	89.15887	95501	< 6600.	UG/KG	3/27/90	o-Dichlorobenzene (1,2)
85FS-9	89.15887	541731	< 6600.	UG/KG	3/27/90	m-Dichlorobenzene (1,3)
85FS-9	89.15887	106467	< 6600.	UG/KG	3/27/90	p-Dichlorobenzene (1,4)
85FS-9	89.15887	91941	< 6600.	UG/KG	3/27/90	3,3'-Dichlorobenzidine
85FS-9	89.15887	120832	< 6600.	UG/KG	3/27/90	2,4-Dichlorophenol
85FS-9	89.15887	84662	< 6600.	UG/KG	3/27/90	Diethyl phthalate
85FS-9	89.15887	131113	< 6600.	UG/KG	3/27/90	Dimethyl phthalate
85FS-9	89.15887	105679	< 6600.	UG/KG	3/27/90	2,4-Dimethylphenol
85FS-9	89.15887	51285	< 6600.	UG/KG	3/27/90	2,4-Dinitrophenol
85FS-9	89.15887	121142	< 6600.	UG/KG	3/27/90	2,4-Dinitrotoluene
85FS-9	89.15887	606202	< 6600.	UG/KG	3/27/90	2,6-Dinitrotoluene
85FS-9	89.15887	206440	< 6600.	UG/KG	3/27/90	Fluoranthene
85FS-9	89.15887	86737	< 6600.	UG/KG	3/27/90	Fluorene
85FS-9	89.15887	118741	< 6600.	UG/KG	3/27/90	Hexachlorobenzene
85FS-9	89.15887	87683	< 6600.	UG/KG	3/27/90	Hexachlorobutadiene
85FS-9	89.15887	77474	< 6600.	UG/KG	3/27/90	Hexachlorocyclopentadiene
85FS-9	89.15887	67721	< 6600.	UG/KG	3/27/90	Hexachloroethane
85FS-9	89.15887	193395	< 6600.	UG/KG	3/27/90	Indeno(1,2,3-cd)pyrene
85FS-9	89.15887	78591	< 6600.	UG/KG	3/27/90	Isophorone
85FS-9	89.15887	534521	< 6600.	UG/KG	3/27/90	2-Methyl-4,6-dinitrophenol
85FS-9	89.15887	91576	< 6600.	UG/KG	3/27/90	2-Methylnaphthalene
85FS-9	89.15887	95487	< 6600.	UG/KG	3/27/90	2-Methylphenol
85FS-9	89.15887	106445	< 6600.	UG/KG	3/27/90	4-Methylphenol
85FS-9	89.15887	91203	< 6600.	UG/KG	3/27/90	Naphthalene
85FS-9	89.15887	88744	< 6600.	UG/KG	3/27/90	2-Nitroaniline
85FS-9	89.15887	99092	< 6600.	UG/KG	3/27/90	3-Nitroaniline
85FS-9	89.15887	100016	< 6600.	UG/KG	3/27/90	4-Nitroaniline
85FS-9	89.15887	98953	< 6600.	UG/KG	3/27/90	Nitrobenzene
85FS-9	89.15887	88755	< 6600.	UG/KG	3/27/90	2-Nitrophenol
85FS-9	89.15887	100027	< 6600.	UG/KG	3/27/90	4-Nitrophenol
85FS-9	89.15887	621647	< 6600.	UG/KG	3/27/90	N-Nitrosodi-n-propylamine
85FS-9	89.15887	62759	< 6600.	UG/KG	3/27/90	N-Nitrosodimethylamine
85FS-9	89.15887	86306	< 6600.	UG/KG	3/27/90	N-Nitrosodiphenylamine
85FS-9	89.15887	87865	< 6600.	UG/KG	3/27/90	Pentachlorophenol
85FS-9	89.15887	85018	< 6600.	UG/KG	3/27/90	Phenanthrene
85FS-9	89.15887	108952	< 6600.	UG/KG	3/27/90	Phenol
85FS-9	89.15887	129000	< 6600.	UG/KG	3/27/90	Pyrene
85FS-9	89.15887	120821	< 6600.	UG/KG	3/27/90	1,2,4-Trichlorobenzene
85FS-9	89.15887	95954	< 6600.	UG/KG	3/27/90	2,4,5-Trichlorophenol
85FS-9	89.15887	88062	< 6600.	UG/KG	3/27/90	2,4,6-Trichlorophenol

85FS-9

89.15887

105679

< 6600.

UG/KG

3/27/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-10	89.15888	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-10	89.15888	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-10	89.15888	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-10	89.15888	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-10	89.15888	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-10	89.15888	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-10	89.15888	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-10	89.15888	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-10	89.15888	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-10	89.15888	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-10	89.15888	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-10	89.15888	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-10	89.15888	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-10	89.15888	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-10	89.15888	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-10	89.15888	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-10	89.15888	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-10	89.15888	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-10	89.15888	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-10	89.15888	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-10	89.15888	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-10	89.15888	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-10	89.15888	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-10	89.15888	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-10	89.15888	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-10	89.15888	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-10	89.15888	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-10	89.15888	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-10	89.15888	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-10	89.15888	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-10	89.15888	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-10	89.15888	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-10	89.15888	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-10	89.15888	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-10	89.15888	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-10	89.15888	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-10	89.15888	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-10	89.15888	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-10	89.15888	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-10	89.15888	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-10	89.15888	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-10	89.15888	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-10	89.15888	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-10	89.15888	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-10	89.15888	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-10	89.15888	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-10	89.15888	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-10	89.15888	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-10	89.15888	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-10	89.15888	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-10	89.15888	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-10	89.15888	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-10	89.15888	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-10	89.15888	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-10	89.15888	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-10	89.15888	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-10	89.15888	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-10	89.15888	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-10	89.15888	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-10	89.15888	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-10	89.15888	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-10	89.15888	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-10	89.15888	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-10	89.15888	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-10	89.15888	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-10	89.15888	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-10	89.15888	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-10	89.15888	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-10	89.15888	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-10	89.15888	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

85FS-21	89.15899	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85FS-21	89.15899	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85FS-21	89.15899	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85FS-21	89.15899	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85FS-22	89.15900	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85FS-22	89.15900	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85FS-22	89.15900	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85FS-22	89.15900	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85FS-23	89.15901	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85FS-23	89.15901	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85FS-23	89.15901	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85FS-23	89.15901	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85FS-24	89.15902	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85FS-24	89.15902	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85FS-24	89.15902	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85FS-24	89.15902	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260

REPORT NUMBER: 4266 (continued)

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

Prepared by: DMS on 5-Oct-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 7968 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	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.20021	00.20021	1336363	9.5	1.9	UG/G	15.	2.	10/05/89	UNDER CONTROL	Mixed-Aroclor
00.20021	00.20021	53469219	9.5	1.9	UG/G	15.	2.	10/05/89	UNDER CONTROL	Aroclor 1242
00.20021	00.20021	11097691	< 0.1		UG/G			10/05/89	UNDER CONTROL	Aroclor 1254
00.20021	00.20021	11096825	< 0.1		UG/G			10/05/89	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
89.15903	1336363	18.4	3.7	UG/G	10/05/89	UNDER CONTROL	Mixed-Aroclor
89.15903	53469219	18.4	3.7	UG/G	10/05/89	UNDER CONTROL	Aroclor 1242
89.15903	11097691	< 0.1		UG/G	10/05/89	UNDER CONTROL	Aroclor 1254
89.15903	11096825	< 0.1		UG/G	10/05/89	UNDER CONTROL	Aroclor 1260

mag
10-11-89

Analyst

Dee Sig

Date

10/5/89

Section Leader

PM

Date

10-5-89

QA Officer

mag

Date

10-11-89

The control status of the preceding 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

TA-35 TSL-85
Final Soils Verification
EP tox metals

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7968

I. PRESAMPLING CONFERENCE

Program Code 7R

No. Samples Expected 24 ea soil

VOC
SVOC
PCB
metals - see below

Submission Date -18-89

Completion Date TBA

Chain of Custody yes

Special Protocol? (EPA etc.) EPA-EPTOX

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VOC
PCB
Semi metals

Container Type 250 ml Teflon

Preservative None - Chill to 4°C

(See Memo HSE-9-8-304. 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 only if no RCRA compounds
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S. J. NELSON HSE-9 Section Leader

Customer Phone 1721 MS K490

Robert Robinson
Organic
Inorganic
Radiochem

Date 9/1/89

Metals:
1.) EP tox metals
2.) Total metals for 12 ea (see below)

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

Set A = metals
Set B = VOC
Set C = SVOC
Set D = PCB

III. SAMPLE RECEIPT

Signature [Signature] Date 9/1/89 Total No. Samples Received 24 + 2QC

HSE-9 Sample No. Range 25F5-1 to 25F5-24

Customer Sample No. Range 25F5-1 to 25F5-24

- 9L METALS:**
1. Antimony
 2. Arsenic
 3. Barium
 4. Beryllium
 5. Cadmium

6. Chromium
7. Cobalt
8. Manganese
9. Nickel
10. Silver
11. Thallium

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

Prepared by: CB on 6-Nov-1989

REQUEST NUMBER: 7968 MATRIX: WE 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
85FS-1	89.15879	AG	0.005	0.003	MG/L	10/26/89	EPTOX
85FS-1	89.15879	AG	0.011	0.003	MG/L	10/26/89	EPTOX
85FS-1	89.15879	AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-1	89.15879	AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-1	89.15879	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-1	89.15879	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-1	89.15879	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-1	89.15879	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-2	89.15880	AG	0.004	0.003	MG/L	10/26/89	EPTOX
85FS-2	89.15880	AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-2	89.15880	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-2	89.15880	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-2	89.15880	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-3	89.15881	AG	0.003	0.003	MG/L	10/26/89	EPTOX
85FS-3	89.15881	AG	0.006	0.003	MG/L	10/26/89	EPTOX
85FS-3	89.15881	AS	2.2	2.	UG/L	10/26/89	EPTOX
85FS-3	89.15881	AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-3	89.15881	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-3	89.15881	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-3	89.15881	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-3	89.15881	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-4	89.15882	AG	0.01	0.003	MG/L	10/26/89	EPTOX
85FS-4	89.15882	AG	0.003	0.003	MG/L	10/26/89	EPTOX
85FS-4	89.15882	AS	< 2.		UG/L	10/26/89	EPTOX
85FS-4	89.15882	AS	< 2.		UG/L	10/26/89	EPTOX
85FS-4	89.15882	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-4	89.15882	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-4	89.15882	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-4	89.15882	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-5	89.15883	AG	0.004	0.003	MG/L	10/26/89	EPTOX
85FS-5	89.15883	AG	0.004	0.003	MG/L	10/26/89	EPTOX
85FS-5	89.15883	AS	2.8	2.	UG/L	10/26/89	EPTOX
85FS-5	89.15883	AS	2.4	2.	UG/L	10/26/89	EPTOX
85FS-5	89.15883	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-5	89.15883	PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-5	89.15883	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-5	89.15883	SE	< 1.		UG/L	10/26/89	EPTOX
85FS-6	89.15884	AG	0.005	0.003	MG/L	10/26/89	EPTOX
85FS-6	89.15884	AG	0.008	0.003	MG/L	10/26/89	EPTOX
85FS-6	89.15884	AS	< 2.		UG/L	10/26/89	EPTOX

85FS-6	89.15884 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-6	89.15884 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-6	89.15884 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-6	89.15884 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-6	89.15884 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-7	89.15885 AG	0.004	0.003	MG/L	10/26/89	EPTOX
85FS-7	89.15885 AG	0.003	0.003	MG/L	10/26/89	EPTOX
85FS-7	89.15885 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-7	89.15885 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-7	89.15885 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-7	89.15885 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-7	89.15885 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-7	89.15885 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-8	89.15886 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-8	89.15886 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-8	89.15886 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-8	89.15886 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-8	89.15886 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-8	89.15886 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-8	89.15886 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-8	89.15886 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-9	89.15887 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-9	89.15887 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-9	89.15887 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-9	89.15887 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-9	89.15887 PB	0.054	0.05	MG/L	10/26/89	EPTOX
85FS-9	89.15887 PB	0.061	0.05	MG/L	10/26/89	EPTOX
85FS-9	89.15887 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-9	89.15887 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-10	89.15888 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-10	89.15888 AG	0.009	0.003	MG/L	10/26/89	EPTOX
85FS-10	89.15888 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-10	89.15888 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-10	89.15888 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-10	89.15888 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-10	89.15888 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-10	89.15888 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-11	89.15889 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-11	89.15889 AG	0.006	0.003	MG/L	10/26/89	EPTOX
85FS-11	89.15889 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-11	89.15889 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-11	89.15889 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-11	89.15889 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-11	89.15889 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-11	89.15889 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-12	89.15890 AG	0.024	0.002	MG/L	10/26/89	EPTOX
85FS-12	89.15890 AG	0.018	0.003	MG/L	10/26/89	EPTOX
85FS-12	89.15890 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-12	89.15890 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-12	89.15890 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-12	89.15890 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-12	89.15890 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-12	89.15890 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-13	89.15891 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-13	89.15891 AG	0.003	0.003	MG/L	10/26/89	EPTOX
85FS-13	89.15891 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-13	89.15891 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-13	89.15891 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-13	89.15891 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-13	89.15891 SE	< 1.		UG/L	10/26/89	EPTOX

85FS-13	89.15891 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-14	89.15892 AG	0.008	0.003	MG/L	10/26/89	EPTOX
85FS-14	89.15892 AG	0.005	0.003	MG/L	10/26/89	EPTOX
85FS-14	89.15892 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-14	89.15892 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-14	89.15892 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-14	89.15892 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-14	89.15892 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-14	89.15892 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-15	89.15893 AG	0.006	0.003	MG/L	10/26/89	EPTOX
85FS-15	89.15893 AG	0.004	0.003	MG/L	10/26/89	EPTOX
85FS-15	89.15893 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-15	89.15893 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-15	89.15893 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-15	89.15893 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-15	89.15893 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-15	89.15893 SE	A 1.		UG/L	10/26/89	EPTOX
85FS-16	89.15894 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-16	89.15894 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-16	89.15894 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-16	89.15894 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-16	89.15894 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-16	89.15894 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-16	89.15894 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-16	89.15894 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-17	89.15895 AG	0.003	0.003	MG/L	10/26/89	EPTOX
85FS-17	89.15895 AG	0.004	0.003	MG/L	10/26/89	EPTOX
85FS-17	89.15895 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-17	89.15895 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-17	89.15895 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-17	89.15895 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-17	89.15895 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-17	89.15895 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-18	89.15896 AG	0.005	0.003	MG/L	10/26/89	EPTOX
85FS-18	89.15896 AG	0.006	0.003	MG/L	10/26/89	EPTOX
85FS-18	89.15896 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-18	89.15896 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-18	89.15896 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-18	89.15896 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-18	89.15896 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-18	89.15896 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-19	89.15897 AG	0.003	0.003	MG/L	10/26/89	EPTOX
85FS-19	89.15897 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-19	89.15897 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-19	89.15897 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-19	89.15897 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-19	89.15897 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-19	89.15897 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-19	89.15897 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-20	89.15898 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-20	89.15898 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-20	89.15898 AS	< 2.		UG/L	10/26/89	EPTOX
85FS-20	89.15898 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-20	89.15898 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-20	89.15898 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-20	89.15898 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-20	89.15898 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-21	89.15899 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-21	89.15899 AG	< 0.003		MG/L	10/26/89	EPTOX
85FS-21	89.15899 AS	2.	2.	UG/L	10/26/89	EPTOX

85FS-21	89.15899 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-21	89.15899 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-21	89.15899 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-21	89.15899 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-21	89.15899 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-22	89.15900 AG	0.006	0.003	MG/L	10/26/89	EPTOX
85FS-22	89.15900 AG	0.007	0.003	MG/L	10/26/89	EPTOX
85FS-22	89.15900 AS	3.9	2.	UG/L	10/26/89	EPTOX
85FS-22	89.15900 AS	3.4	2.	UG/L	10/26/89	EPTOX
85FS-22	89.15900 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-22	89.15900 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-22	89.15900 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-22	89.15900 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-23	89.15901 AG	0.012	0.003	MG/L	10/26/89	EPTOX
85FS-23	89.15901 AG	0.012	0.003	MG/L	10/26/89	EPTOX
85FS-23	89.15901 AS	2.	2.	UG/L	10/26/89	EPTOX
85FS-23	89.15901 AS	2.2	2.	UG/L	10/26/89	EPTOX
85FS-23	89.15901 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-23	89.15901 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-23	89.15901 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-23	89.15901 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-24	89.15902 AG	0.02	0.003	MG/L	10/26/89	EPTOX
85FS-24	89.15902 AG	0.016	0.003	MG/L	10/26/89	EPTOX
85FS-24	89.15902 AS	2.2	2.	UG/L	10/26/89	EPTOX
85FS-24	89.15902 AS	2.8	2.	UG/L	10/26/89	EPTOX
85FS-24	89.15902 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-24	89.15902 PB	< 0.05		MG/L	10/26/89	EPTOX
85FS-24	89.15902 SE	< 1.		UG/L	10/26/89	EPTOX
85FS-24	89.15902 SE	< 1.		UG/L	10/26/89	EPTOX

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

Prepared by: CB on 6-Nov-1989

REQUEST NUMBER: 7968 MATRIX: WE 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	27.5	2.8	UG/L	27.	3.	10/26/89
								UNDER CONTROL
00.01010	00.01010	AS	29.3	2.9	UG/L	27.	3.	10/26/89
								UNDER CONTROL
00.01010	00.01010	AS	30.	3.	UG/L	27.	3.	10/26/89
								UNDER CONTROL
00.01010	00.01010	AS	29.1	2.9	UG/L	27.	3.	10/26/89
								UNDER CONTROL
00.01010	00.01010	SE	9.6	1.	UG/L	11.	2.	10/26/89
								UNDER CONTROL
00.01010	00.01010	SE	10.9	1.1	UG/L	11.	2.	10/26/89
								UNDER CONTROL
00.01010	00.01010	SE	11.2	1.1	UG/L	11.	2.	10/26/89
								UNDER CONTROL
00.01010	00.01010	SE	10.7	1.1	UG/L	11.	2.	10/26/89
								UNDER CONTROL
00.01036	00.01036	PB	87.	8.7	UG/L	100.	8.	10/26/89
								UNDER CONTROL
00.01036	00.01036	PB	100.	10.	UG/L	100.	8.	10/26/89
								UNDER CONTROL
00.01036	00.01036	PB	99.	9.9	UG/L	100.	8.	10/26/89
								UNDER CONTROL
00.98805	00.98805	AG	0.51	0.051	MG/L	0.5	0.05	10/26/89
								UNDER CONTROL
00.98805	00.98805	AG	0.497	0.05	MG/L	0.5	0.05	10/26/89
								UNDER CONTROL
00.98805	00.98805	AG	0.512	0.051	MG/L	0.5	0.05	10/26/89
								UNDER CONTROL
00.98805	00.98805	AG	0.501	0.05	MG/L	0.5	0.05	10/26/89
								UNDER CONTROL
00.98805	00.98805	AG	0.49	0.049	MG/L	0.5	0.05	10/26/89
								UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE

COMPLETION

NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	DATE	COMMENT
89.16803	AG	1.8	0.18	MG/L	10/26/89	UNDER CONTROL
89.16803	AG	1.91	0.19	MG/L	10/26/89	UNDER CONTROL
89.16803	AS	82.6	8.3	UG/L	10/26/89	UNDER CONTROL
89.16803	PB	0.946	0.095	MG/L	10/26/89	WARNING 2-3 SIG
89.16803	PB	0.951	0.095	MG/L	10/26/89	WARNING 2-3 SIG
89.16803	SE	98.2	9.8	UG/L	10/26/89	UNDER CONTROL

Jwb
Analyst

UMSB
Section Leader

mag
QA Officer

11-8-89
Date

11-8-89
Date

11-13-89
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.

HSE-9 ANALYTICAL REPORT *****

Prepared by: J.D. MONTOYA on 16-Oct-1989

ANALYSIS: BA REQUEST NUMBER: 7968 MATRIX: WE 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
85FS-1	89.15879	0.23	0.02	MG/L	10/16/89	EPTOX
85FS-2	89.15880	0.24	0.02	MG/L	10/16/89	EPTOX
85FS-3	89.15881	0.39	0.04	MG/L	10/16/89	EPTOX
85FS-4	89.15882	0.18	0.02	MG/L	10/16/89	EPTOX
85FS-5	89.15883	0.33	0.03	MG/L	10/16/89	EPTOX
85FS-6	89.15884	0.31	0.03	MG/L	10/16/89	EPTOX
85FS-7	89.15885	0.24	0.02	MG/L	10/16/89	EPTOX
85FS-8	89.15886	0.1	0.02	MG/L	10/16/89	EPTOX
85FS-9	89.15887	0.38	0.04	MG/L	10/16/89	EPTOX
85FS-10	89.15888	0.36	0.04	MG/L	10/16/89	EPTOX
85FS-11	89.15889	0.24	0.02	MG/L	10/16/89	EPTOX
85FS-12	89.15890	0.27	0.03	MG/L	10/16/89	EPTOX
85FS-13	89.15891	0.31	0.03	MG/L	10/16/89	EPTOX
85FS-14	89.15892	0.25	0.03	MG/L	10/16/89	EPTOX
85FS-15	89.15893	0.52	0.05	MG/L	10/16/89	EPTOX
85FS-16	89.15894	0.36	0.04	MG/L	10/16/89	EPTOX
85FS-17	89.15895	0.46	0.05	MG/L	10/16/89	EPTOX
85FS-18	89.15896	0.33	0.03	MG/L	10/16/89	EPTOX
85FS-19	89.15897	0.47	0.05	MG/L	10/16/89	EPTOX
85FS-20	89.15898	0.57	0.06	MG/L	10/16/89	EPTOX
85FS-21	89.15899	0.44	0.04	MG/L	10/16/89	EPTOX
85FS-22	89.15900	0.25	0.03	MG/L	10/16/89	EPTOX
85FS-23	89.15901	0.19	0.02	MG/L	10/16/89	EPTOX
85FS-24	89.15902	0.23	0.02	MG/L	10/16/89	EPTOX

REPORT NUMBER: 4366 (continued)

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

Prepared by: J.D. MONTOYA on 16-Oct-1989

ANALYSIS: BA REQUEST NUMBER: 7968 MATRIX: WE 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
00.01100	00.01100	92.	9.2	MG/L	100.	10.2	10/13/89	UNDER CONTROL
00.01100	00.01100	92.	9.2	MG/L	100.	10.2	10/13/89	UNDER CONTROL
00.01100	00.01100	100.	10.	MG/L	100.	10.2	10/13/89	UNDER CONTROL

J.D. Montoya
Analyst

Robert Robinson
Section Leader

mag
QA Officer

10-16-89
Date

10/18/89
Date

10-18-89
Date

The control status of the preceding 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.

HSE-9 ANALYTICAL REPORT

Prepared by: J.D. MONTOYA on 16-Oct-1989

ANALYSIS: CD REQUEST NUMBER: 7968 MATRIX: WE 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
85FS-1	89.15879	< 0.1		MG/L	10/16/89	EPTOX
85FS-2	89.15880	< 0.1		MG/L	10/16/89	EPTOX
85FS-3	89.15881	< 0.1		MG/L	10/16/89	EPTOX
85FS-4	89.15882	< 0.1		MG/L	10/16/89	EPTOX
85FS-5	89.15883	< 0.1		MG/L	10/16/89	EPTOX
85FS-6	89.15884	< 0.1		MG/L	10/16/89	EPTOX
85FS-7	89.15885	< 0.1		MG/L	10/16/89	EPTOX
85FS-8	89.15886	< 0.1		MG/L	10/16/89	EPTOX
85FS-9	89.15887	< 0.1		MG/L	10/16/89	EPTOX
85FS-10	89.15888	< 0.1		MG/L	10/16/89	EPTOX
85FS-11	89.15889	< 0.1		MG/L	10/16/89	EPTOX
85FS-12	89.15890	< 0.1		MG/L	10/16/89	EPTOX
85FS-13	89.15891	< 0.1		MG/L	10/16/89	EPTOX
85FS-14	89.15892	< 0.1		MG/L	10/16/89	EPTOX
85FS-15	89.15893	< 0.1		MG/L	10/16/89	EPTOX
85FS-16	89.15894	< 0.1		MG/L	10/16/89	EPTOX
85FS-17	89.15895	< 0.1		MG/L	10/16/89	EPTOX
85FS-18	89.15896	< 0.1		MG/L	10/16/89	EPTOX
85FS-19	89.15897	< 0.1		MG/L	10/16/89	EPTOX
85FS-20	89.15898	< 0.1		MG/L	10/16/89	EPTOX
85FS-21	89.15899	< 0.1		MG/L	10/16/89	EPTOX
85FS-22	89.15900	< 0.1		MG/L	10/16/89	EPTOX
85FS-23	89.15901	< 0.1		MG/L	10/16/89	EPTOX
85FS-24	89.15902	< 0.1		MG/L	10/16/89	EPTOX

REPORT NUMBER: 4367 (continued)

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

Prepared by: J.D. MONTOYA on 16-Oct-1989

ANALYSIS: CD REQUEST NUMBER: 7968 MATRIX: WE 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
00.01100	00.01100	0.84	0.1	MG/L	1.	0.03	10/13/89	UNDER CONTROL
00.01100	00.01100	0.98	0.1	MG/L	1.	0.03	10/13/89	UNDER CONTROL
00.01100	00.01100	0.95	0.1	MG/L	1.	0.03	10/13/89	UNDER CONTROL

J.D. Montoya
Analyst

Richard B. ...
Section Leader

mag
QA Officer

10-16-89
Date

10/17/89
Date

10-18-89
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.

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

Prepared by: J.D. MONTOYA on 16-Oct-1989

ANALYSIS: CR REQUEST NUMBER: 7968 MATRIX: WE 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
85FS-1	89.15879	< 0.2		MG/L	10/13/89	EPTOX
85FS-2	89.15880	< 0.2		MG/L	10/13/89	EPTOX
85FS-3	89.15881	< 0.2		MG/L	10/13/89	EPTOX
85FS-4	89.15882	< 0.2		MG/L	10/16/89	EPTOX
85FS-5	89.15883	< 0.2		MG/L	10/16/89	EPTOX
85FS-6	89.15884	< 0.2		MG/L	10/16/89	EPTOX
85FS-7	89.15885	< 0.2		MG/L	10/16/89	EPTOX
85FS-8	89.15886	< 0.2		MG/L	10/16/89	EPTOX
85FS-9	89.15887	< 0.2		MG/L	10/16/89	EPTOX
85FS-10	89.15888	< 0.2		MG/L	10/16/89	EPTOX
85FS-11	89.15889	< 0.2		MG/L	10/16/89	EPTOX
85FS-12	89.15890	< 0.2		MG/L	10/16/89	EPTOX
85FS-13	89.15891	< 0.2		MG/L	10/16/89	EPTOX
85FS-14	89.15892	< 0.2		MG/L	10/16/89	EPTOX
85FS-15	89.15893	< 0.2		MG/L	10/16/89	EPTOX
85FS-16	89.15894	< 0.2		MG/L	10/16/89	EPTOX
85FS-17	89.15895	< 0.2		MG/L	10/16/89	EPTOX
85FS-18	89.15896	< 0.2		MG/L	10/16/89	EPTOX
85FS-19	89.15897	< 0.2		MG/L	10/16/89	EPTOX
85FS-20	89.15898	< 0.2		MG/L	10/16/89	EPTOX
85FS-21	89.15899	< 0.2		MG/L	10/16/89	EPTOX
85FS-22	89.15900	< 0.2		MG/L	10/16/89	EPTOX
85FS-23	89.15901	< 0.2		MG/L	10/16/89	EPTOX
85FS-24	89.15902	< 0.2		MG/L	10/16/89	EPTOX

REPORT NUMBER: 4368 (continued)

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

Prepared by: J.D. MONTOYA on 16-Oct-1989

ANALYSIS: CR REQUEST NUMBER: 7968 MATRIX: WE 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
00.01100	00.01100	4.5	0.5	MG/L	5.	0.42	10/13/89	UNDER CONTROL
00.01100	00.01100	5.	0.5	MG/L	5.	0.42	10/13/89	UNDER CONTROL
00.01100	00.01100	4.9	0.5	MG/L	5.	0.42	10/13/89	UNDER CONTROL

J.D. Montoya
Analyst

Richard Adams
Section Leader

mag
QA Officer

10-16-89
Date

10/17/89
Date

10-18-89
Date

The control status of the preceding 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.

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

Prepared by: M. C. WILLIAMS on 26-Oct-1989

ANALYSIS: HG REQUEST NUMBER: 7968 MATRIX: WE 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
85FS-1	89.15879	< 0.2		UG/L	10/19/89	
85FS-1	89.15879	< 0.2		UG/L	10/13/89	
85FS-2	89.15880	< 0.2		UG/L	10/19/89	
85FS-2	89.15880	< 0.2		UG/L	10/13/89	
85FS-3	89.15881	< 0.2		UG/L	10/13/89	
85FS-3	89.15881	< 0.2		UG/L	10/19/89	
85FS-4	89.15882	< 0.2		UG/L	10/19/89	
85FS-4	89.15882	< 0.2		UG/L	10/13/89	
85FS-5	89.15883	< 0.2		UG/L	10/19/89	
85FS-5	89.15883	< 0.2		UG/L	10/13/89	
85FS-6	89.15884	< 0.2		UG/L	10/19/89	
85FS-6	89.15884	< 0.2		UG/L	10/13/89	
85FS-7	89.15885	< 0.2		UG/L	10/13/89	
85FS-7	89.15885	< 0.2		UG/L	10/19/89	
85FS-8	89.15886	< 0.2		UG/L	10/19/89	
85FS-8	89.15886	< 0.2		UG/L	10/13/89	
85FS-9	89.15887	< 0.2		UG/L	10/13/89	
85FS-9	89.15887	< 0.2		UG/L	10/19/89	
85FS-10	89.15888	< 0.2		UG/L	10/13/89	
85FS-10	89.15888	< 0.2		UG/L	10/19/89	
85FS-11	89.15889	< 0.2		UG/L	10/13/89	
85FS-11	89.15889	< 0.2		UG/L	10/19/89	
85FS-12	89.15890	< 0.2		UG/L	10/13/89	
85FS-12	89.15890	< 0.2		UG/L	10/19/89	
85FS-13	89.15891	< 0.2		UG/L	10/19/89	
85FS-13	89.15891	< 0.2		UG/L	10/13/89	
85FS-14	89.15892	< 0.2		UG/L	10/13/89	
85FS-14	89.15892	< 0.2		UG/L	10/25/89	
85FS-15	89.15893	< 0.2		UG/L	10/13/89	
85FS-15	89.15893	< 0.2		UG/L	10/19/89	
85FS-16	89.15894	< 0.2		UG/L	10/19/89	
85FS-16	89.15894	< 0.2		UG/L	10/13/89	
85FS-17	89.15895	< 0.2		UG/L	10/13/89	
85FS-17	89.15895	< 0.2		UG/L	10/25/89	
85FS-18	89.15896	< 0.2		UG/L	10/19/89	
85FS-18	89.15896	< 0.2		UG/L	10/13/89	
85FS-19	89.15897	< 0.2		UG/L	10/13/89	
85FS-19	89.15897	< 0.2		UG/L	10/19/89	
85FS-20	89.15898	< 0.2		UG/L	10/19/89	

85FS-20	89.15898	< 0.2		UG/L	10/13/89
85FS-21	89.15899	< 0.2		UG/L	10/13/89
85FS-21	89.15899	< 0.2		UG/L	10/13/89
85FS-21	89.15899	< 0.2		UG/L	10/25/89
85FS-22	89.15900	< 0.2		UG/L	10/19/89
85FS-22	89.15900	< 0.2		UG/L	10/13/89
85FS-23	89.15901	0.32	0.2	UG/L	10/13/89
85FS-23	89.15901	0.32	0.2	UG/L	10/19/89
85FS-24	89.15902	< 0.2		UG/L	10/13/89
85FS-24	89.15902	< 0.2		UG/L	10/19/89

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

Prepared by: M. C. WILLIAMS on 26-Oct-1989

ANALYSIS: HG REQUEST NUMBER: 7968 MATRIX: WE 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 UNCERTAINTY	COMPLETION DATE	COMMENT
00.20086	00.20086	4.1	0.4	UG/L	4.	0.4	10/25/89	UNDER CONTROL
00.20086	00.20086	4.1	0.4	UG/L	4.	0.4	10/19/89	UNDER CONTROL
00.20087	00.20087	4.1	0.4	UG/L	4.	0.4	10/25/89	UNDER CONTROL
00.20087	00.20087	4.1	0.4	UG/L	4.	0.4	10/19/89	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.15907	< 0.2		UG/L	10/25/89	OUT OF CONTROL - <i>sample not preserved with dichromate mag</i>
89.16804	2.8	0.3	UG/L	10/25/89	UNDER CONTROL

MAB
Analyst

MSB
Section Leader

mag
QA Officer

10/26/89
Date

10-26-89
Date

10-27-89
Date

The control status of the preceding 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.

85FS-10

89.15888

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-11	89.15889	83329	< 330.		UG/KG	3/27/90		Acenaphthene
85FS-11	89.15889	208968	< 330.		UG/KG	3/27/90		Acenaphthylene
85FS-11	89.15889	62533	< 330.		UG/KG	3/27/90		Aniline
85FS-11	89.15889	120127	< 330.		UG/KG	3/27/90		Anthracene
85FS-11	89.15889	103333	< 330.		UG/KG	3/27/90		Azobenzene
85FS-11	89.15889	56553	< 330.		UG/KG	3/27/90		Benz(a)anthracene
85FS-11	89.15889	92875	< 330.		UG/KG	3/27/90		m-Benzidine
85FS-11	89.15889	191242	< 330.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-11	89.15889	50328	< 330.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-11	89.15889	205992	< 330.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-11	89.15889	207089	< 330.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-11	89.15889	65850	< 330.		UG/KG	3/27/90		Benzoic acid
85FS-11	89.15889	100516	< 330.		UG/KG	3/27/90		Benzyl alcohol
85FS-11	89.15889	111911	< 330.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-11	89.15889	111444	< 330.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-11	89.15889	108601	< 330.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-11	89.15889	117817	380.	76.	UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-11	89.15889	101553	< 330.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-11	89.15889	85687	< 330.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-11	89.15889	59507	< 330.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-11	89.15889	106478	< 330.		UG/KG	3/27/90		4-Chloroaniline
85FS-11	89.15889	91587	< 330.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-11	89.15889	95578	< 330.		UG/KG	3/27/90		o-Chlorophenol
85FS-11	89.15889	7005723	< 330.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-11	89.15889	218019	< 330.		UG/KG	3/27/90		Chrysene

85FS-11	89.15889	106445	< 330.	UG/KG	3/27/90	p-Cresol
85FS-11	89.15889	84742	< 330.	UG/KG	3/27/90	Di-n-butyl phthalate
85FS-11	89.15889	117840	< 330.	UG/KG	3/27/90	Di-n-octyl phthalate
85FS-11	89.15889	53703	< 330.	UG/KG	3/27/90	Dibenzo(a,h)anthracene
85FS-11	89.15889	132649	< 330.	UG/KG	3/27/90	Dibenzofuran
85FS-11	89.15889	95501	< 330.	UG/KG	3/27/90	o-Dichlorobenzene (1,2)
85FS-11	89.15889	541731	< 330.	UG/KG	3/27/90	m-Dichlorobenzene (1,3)
85FS-11	89.15889	106467	< 330.	UG/KG	3/27/90	p-Dichlorobenzene (1,4)
85FS-11	89.15889	91941	< 330.	UG/KG	3/27/90	3,3'-Dichlorobenzidine
85FS-11	89.15889	120832	< 330.	UG/KG	3/27/90	2,4-Dichlorophenol
85FS-11	89.15889	84662	< 330.	UG/KG	3/27/90	Diethyl phthalate
85FS-11	89.15889	131113	< 330.	UG/KG	3/27/90	Dimethyl phthalate
85FS-11	89.15889	105679	< 330.	UG/KG	3/27/90	2,4-Dimethylphenol
85FS-11	89.15889	51285	< 330.	UG/KG	3/27/90	2,4-Dinitrophenol
85FS-11	89.15889	121142	< 330.	UG/KG	3/27/90	2,4-Dinitrotoluene
85FS-11	89.15889	606202	< 330.	UG/KG	3/27/90	2,6-Dinitrotoluene
85FS-11	89.15889	206440	< 330.	UG/KG	3/27/90	Fluoranthene
85FS-11	89.15889	86737	< 330.	UG/KG	3/27/90	Fluorene
85FS-11	89.15889	118741	< 330.	UG/KG	3/27/90	Hexachlorobenzene
85FS-11	89.15889	87683	< 330.	UG/KG	3/27/90	Hexachlorobutadiene
85FS-11	89.15889	77474	< 330.	UG/KG	3/27/90	Hexachlorocyclopentadiene
85FS-11	89.15889	67721	< 330.	UG/KG	3/27/90	Hexachloroethane
85FS-11	89.15889	193395	< 330.	UG/KG	3/27/90	Indeno(1,2,3-cd)pyrene
85FS-11	89.15889	78591	< 330.	UG/KG	3/27/90	Isophorone
85FS-11	89.15889	534521	< 330.	UG/KG	3/27/90	2-Methyl-4,6-dinitrophenol
85FS-11	89.15889	91576	< 330.	UG/KG	3/27/90	2-Methylnaphthalene
85FS-11	89.15889	95487	< 330.	UG/KG	3/27/90	2-Methylphenol
85FS-11	89.15889	106445	< 330.	UG/KG	3/27/90	4-Methylphenol
85FS-11	89.15889	91203	< 330.	UG/KG	3/27/90	Naphthalene
85FS-11	89.15889	88744	< 330.	UG/KG	3/27/90	2-Nitroaniline
85FS-11	89.15889	99092	< 330.	UG/KG	3/27/90	3-Nitroaniline
85FS-11	89.15889	100016	< 330.	UG/KG	3/27/90	4-Nitroaniline
85FS-11	89.15889	98953	< 330.	UG/KG	3/27/90	Nitrobenzene
85FS-11	89.15889	88755	< 330.	UG/KG	3/27/90	2-Nitrophenol
85FS-11	89.15889	100027	< 330.	UG/KG	3/27/90	4-Nitrophenol
85FS-11	89.15889	621647	< 330.	UG/KG	3/27/90	N-Nitrosodi-n-propylamine
85FS-11	89.15889	62759	< 330.	UG/KG	3/27/90	N-Nitrosodimethylamine
85FS-11	89.15889	86306	< 330.	UG/KG	3/27/90	N-Nitrosodiphenylamine
85FS-11	89.15889	87865	< 330.	UG/KG	3/27/90	Pentachlorophenol
85FS-11	89.15889	85018	< 330.	UG/KG	3/27/90	Phenanthrene
85FS-11	89.15889	108952	< 330.	UG/KG	3/27/90	Phenol
85FS-11	89.15889	129000	< 330.	UG/KG	3/27/90	Pyrene
85FS-11	89.15889	120821	< 330.	UG/KG	3/27/90	1,2,4-Trichlorobenzene
85FS-11	89.15889	95954	< 330.	UG/KG	3/27/90	2,4,5-Trichlorophenol
85FS-11	89.15889	88062	< 330.	UG/KG	3/27/90	2,4,6-Trichlorophenol

85FS-11

89.15889

105679

< 330.

UG/KG

3/21/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-12	89.15890	83329	< 1716.		UG/KG	3/28/90		Acenaphthene
85FS-12	89.15890	208968	< 1716.		UG/KG	3/28/90		Acenaphthylene
85FS-12	89.15890	62533	< 1716.		UG/KG	3/28/90		Aniline
85FS-12	89.15890	120127	< 1716.		UG/KG	3/28/90		Anthracene
85FS-12	89.15890	103333	< 1716.		UG/KG	3/28/90		Azobenzene
85FS-12	89.15890	56553	< 1716.		UG/KG	3/28/90		Benz(a)anthracene
85FS-12	89.15890	92875	< 1716.		UG/KG	3/28/90		m-Benzidine
85FS-12	89.15890	191242	< 1716.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-12	89.15890	50328	< 1716.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-12	89.15890	205992	< 1716.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-12	89.15890	207089	< 1716.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-12	89.15890	65850	< 1716.		UG/KG	3/28/90		Benzoic acid
85FS-12	89.15890	100516	< 1716.		UG/KG	3/28/90		Benzyl alcohol
85FS-12	89.15890	111911	< 1716.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-12	89.15890	111444	< 1716.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-12	89.15890	108601	< 1716.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-12	89.15890	117817	< 1716.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-12	89.15890	101553	< 1716.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-12	89.15890	85687	< 1716.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-12	89.15890	59507	< 1716.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-12	89.15890	106478	< 1716.		UG/KG	3/28/90		4-Chloroaniline
85FS-12	89.15890	91587	< 1716.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-12	89.15890	95578	< 1716.		UG/KG	3/28/90		o-Chlorophenol
85FS-12	89.15890	7005723	< 1716.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-12	89.15890	218019	< 1716.		UG/KG	3/28/90		Chrysene

85FS-12	89.15890	106445	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	84742	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	117840	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	53703	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	132649	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	95501	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	541731	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	106467	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	91941	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	120832	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	84662	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	131113	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	105679	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	51285	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	121142	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	606202	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	206440	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	86737	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	118741	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	87683	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	77474	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	67721	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	193395	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	78591	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	534521	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	91576	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	95487	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	106445	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	91203	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	88744	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	99092	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	100016	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	98953	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	88755	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	100027	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	621647	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	62759	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	86306	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	87865	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	85018	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	108952	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	129000	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	120821	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	95954	< 1716.	UG/KG	3/28/90
85FS-12	89.15890	88062	< 1716.	UG/KG	3/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85FS-12

89.15890

105679

< 1716.

UG/KG

3/28/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-14	89.15892	83329	< 330.		UG/KG	3/27/90		Acenaphthene
85FS-14	89.15892	208968	< 330.		UG/KG	3/27/90		Acenaphthylene
85FS-14	89.15892	62533	< 330.		UG/KG	3/27/90		Aniline
85FS-14	89.15892	120127	< 330.		UG/KG	3/27/90		Anthracene
85FS-14	89.15892	103333	< 330.		UG/KG	3/27/90		Azobenzene
85FS-14	89.15892	56553	< 330.		UG/KG	3/27/90		Benz(a)anthracene
85FS-14	89.15892	92875	< 330.		UG/KG	3/27/90		m-Benzidine
85FS-14	89.15892	191242	< 330.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-14	89.15892	50328	< 330.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-14	89.15892	205992	< 330.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-14	89.15892	207089	< 330.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-14	89.15892	65850	< 330.		UG/KG	3/27/90		Benzoic acid
85FS-14	89.15892	100516	< 330.		UG/KG	3/27/90		Benzyl alcohol
85FS-14	89.15892	111911	< 330.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-14	89.15892	111444	< 330.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-14	89.15892	108601	< 330.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-14	89.15892	117817	720.	144.	UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-14	89.15892	101553	< 330.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-14	89.15892	85687	< 330.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-14	89.15892	59507	< 330.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-14	89.15892	106478	< 330.		UG/KG	3/27/90		4-Chloroaniline
85FS-14	89.15892	91587	< 330.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-14	89.15892	95578	< 330.		UG/KG	3/27/90		o-Chlorophenol
85FS-14	89.15892	7005723	< 330.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-14	89.15892	218019	< 330.		UG/KG	3/27/90		Chrysene

85FS-14	89.15892	106445	< 330.	UG/KG	3/27/90
85FS-14	89.15892	84742	< 330.	UG/KG	3/27/90
85FS-14	89.15892	117840	< 330.	UG/KG	3/27/90
85FS-14	89.15892	53703	< 330.	UG/KG	3/27/90
85FS-14	89.15892	132649	< 330.	UG/KG	3/27/90
85FS-14	89.15892	95501	< 330.	UG/KG	3/27/90
85FS-14	89.15892	541731	< 330.	UG/KG	3/27/90
85FS-14	89.15892	106467	< 330.	UG/KG	3/27/90
85FS-14	89.15892	91941	< 330.	UG/KG	3/27/90
85FS-14	89.15892	120832	< 330.	UG/KG	3/27/90
85FS-14	89.15892	84662	< 330.	UG/KG	3/27/90
85FS-14	89.15892	131113	< 330.	UG/KG	3/27/90
85FS-14	89.15892	105679	< 330.	UG/KG	3/27/90
85FS-14	89.15892	51285	< 330.	UG/KG	3/27/90
85FS-14	89.15892	121142	< 330.	UG/KG	3/27/90
85FS-14	89.15892	606202	< 330.	UG/KG	3/27/90
85FS-14	89.15892	206440	< 330.	UG/KG	3/27/90
85FS-14	89.15892	86737	< 330.	UG/KG	3/27/90
85FS-14	89.15892	118741	< 330.	UG/KG	3/27/90
85FS-14	89.15892	87683	< 330.	UG/KG	3/27/90
85FS-14	89.15892	77474	< 330.	UG/KG	3/27/90
85FS-14	89.15892	67721	< 330.	UG/KG	3/27/90
85FS-14	89.15892	193395	< 330.	UG/KG	3/27/90
85FS-14	89.15892	78591	< 330.	UG/KG	3/27/90
85FS-14	89.15892	534521	< 330.	UG/KG	3/27/90
85FS-14	89.15892	91576	< 330.	UG/KG	3/27/90
85FS-14	89.15892	95487	< 330.	UG/KG	3/27/90
85FS-14	89.15892	106445	< 330.	UG/KG	3/27/90
85FS-14	89.15892	91203	< 330.	UG/KG	3/27/90
85FS-14	89.15892	88744	< 330.	UG/KG	3/27/90
85FS-14	89.15892	99092	< 330.	UG/KG	3/27/90
85FS-14	89.15892	100016	< 330.	UG/KG	3/27/90
85FS-14	89.15892	98953	< 330.	UG/KG	3/27/90
85FS-14	89.15892	88755	< 330.	UG/KG	3/27/90
85FS-14	89.15892	100027	< 330.	UG/KG	3/27/90
85FS-14	89.15892	621647	< 330.	UG/KG	3/27/90
85FS-14	89.15892	62759	< 330.	UG/KG	3/27/90
85FS-14	89.15892	86306	< 330.	UG/KG	3/27/90
85FS-14	89.15892	87865	< 330.	UG/KG	3/27/90
85FS-14	89.15892	85018	< 330.	UG/KG	3/27/90
85FS-14	89.15892	108952	< 330.	UG/KG	3/27/90
85FS-14	89.15892	129000	< 330.	UG/KG	3/27/90
85FS-14	89.15892	120821	< 330.	UG/KG	3/27/90
85FS-14	89.15892	95954	< 330.	UG/KG	3/27/90
85FS-14	89.15892	88062	< 330.	UG/KG	3/27/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85FS-14

89.15892

105679

< 330.

UG/KG

3/27/90

2,4-Xylenol

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-15	89.15893	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-15	89.15893	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-15	89.15893	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-15	89.15893	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-15	89.15893	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-15	89.15893	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-15	89.15893	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-15	89.15893	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-15	89.15893	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-15	89.15893	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-15	89.15893	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-15	89.15893	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-15	89.15893	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-15	89.15893	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-15	89.15893	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-15	89.15893	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-15	89.15893	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-15	89.15893	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-15	89.15893	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-15	89.15893	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-15	89.15893	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-15	89.15893	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-15	89.15893	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-15	89.15893	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-15	89.15893	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-15	89.15893	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-15	89.15893	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-15	89.15893	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-15	89.15893	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-15	89.15893	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-15	89.15893	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-15	89.15893	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-15	89.15893	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-15	89.15893	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-15	89.15893	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-15	89.15893	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-15	89.15893	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-15	89.15893	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-15	89.15893	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-15	89.15893	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-15	89.15893	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-15	89.15893	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-15	89.15893	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-15	89.15893	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-15	89.15893	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-15	89.15893	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-15	89.15893	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-15	89.15893	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-15	89.15893	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-15	89.15893	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-15	89.15893	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-15	89.15893	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-15	89.15893	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-15	89.15893	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-15	89.15893	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-15	89.15893	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-15	89.15893	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-15	89.15893	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-15	89.15893	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-15	89.15893	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-15	89.15893	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-15	89.15893	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-15	89.15893	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-15	89.15893	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-15	89.15893	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-15	89.15893	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-15	89.15893	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-15	89.15893	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-15	89.15893	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-15	89.15893	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

85FS-15

89.15893

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-16	89.15894	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-16	89.15894	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-16	89.15894	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-16	89.15894	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-16	89.15894	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-16	89.15894	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-16	89.15894	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-16	89.15894	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-16	89.15894	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-16	89.15894	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-16	89.15894	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-16	89.15894	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-16	89.15894	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-16	89.15894	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-16	89.15894	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-16	89.15894	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-16	89.15894	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-16	89.15894	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-16	89.15894	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-16	89.15894	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-16	89.15894	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-16	89.15894	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-16	89.15894	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-16	89.15894	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-16	89.15894	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-16	89.15894	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-16	89.15894	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-16	89.15894	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-16	89.15894	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-16	89.15894	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-16	89.15894	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-16	89.15894	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-16	89.15894	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-16	89.15894	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-16	89.15894	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-16	89.15894	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-16	89.15894	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-16	89.15894	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-16	89.15894	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-16	89.15894	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-16	89.15894	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-16	89.15894	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-16	89.15894	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-16	89.15894	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-16	89.15894	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-16	89.15894	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-16	89.15894	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-16	89.15894	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-16	89.15894	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-16	89.15894	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-16	89.15894	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-16	89.15894	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-16	89.15894	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-16	89.15894	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-16	89.15894	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-16	89.15894	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-16	89.15894	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-16	89.15894	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-16	89.15894	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-16	89.15894	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-16	89.15894	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-16	89.15894	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-16	89.15894	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-16	89.15894	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-16	89.15894	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-16	89.15894	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-16	89.15894	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-16	89.15894	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-16	89.15894	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-16	89.15894	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

85FS-16

89.15894 105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-17	89.15895	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-17	89.15895	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-17	89.15895	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-17	89.15895	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-17	89.15895	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-17	89.15895	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-17	89.15895	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-17	89.15895	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-17	89.15895	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-17	89.15895	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-17	89.15895	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-17	89.15895	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-17	89.15895	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-17	89.15895	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-17	89.15895	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-17	89.15895	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-17	89.15895	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-17	89.15895	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-17	89.15895	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-17	89.15895	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-17	89.15895	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-17	89.15895	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-17	89.15895	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-17	89.15895	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-17	89.15895	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-17	89.15895	106445	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	84742	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	117840	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	53703	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	132649	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	95501	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	541731	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	106467	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	91941	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	120832	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	84662	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	131113	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	105679	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	51285	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	121142	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	606202	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	206440	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	86737	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	118741	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	87683	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	77474	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	67721	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	193395	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	78591	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	534521	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	91576	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	95487	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	106445	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	91203	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	88744	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	99092	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	100016	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	98953	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	88755	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	100027	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	621647	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	62759	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	86306	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	87865	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	85018	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	108952	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	129000	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	120821	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	95954	< 1287.	UG/KG	3/28/90
85FS-17	89.15895	88062	< 1287.	UG/KG	3/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85FS-17

89.15895

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-18	89.15896	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-18	89.15896	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-18	89.15896	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-18	89.15896	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-18	89.15896	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-18	89.15896	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-18	89.15896	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-18	89.15896	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-18	89.15896	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-18	89.15896	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-18	89.15896	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-18	89.15896	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-18	89.15896	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-18	89.15896	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-18	89.15896	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-18	89.15896	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-18	89.15896	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-18	89.15896	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-18	89.15896	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-18	89.15896	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-18	89.15896	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-18	89.15896	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-18	89.15896	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-18	89.15896	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-18	89.15896	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-18	89.15896	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-18	89.15896	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-18	89.15896	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-18	89.15896	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-18	89.15896	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-18	89.15896	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-18	89.15896	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-18	89.15896	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-18	89.15896	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-18	89.15896	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-18	89.15896	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-18	89.15896	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-18	89.15896	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-18	89.15896	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-18	89.15896	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-18	89.15896	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-18	89.15896	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-18	89.15896	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-18	89.15896	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-18	89.15896	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-18	89.15896	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-18	89.15896	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-18	89.15896	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-18	89.15896	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-18	89.15896	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-18	89.15896	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-18	89.15896	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-18	89.15896	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-18	89.15896	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-18	89.15896	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-18	89.15896	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-18	89.15896	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-18	89.15896	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-18	89.15896	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-18	89.15896	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-18	89.15896	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-18	89.15896	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-18	89.15896	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-18	89.15896	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-18	89.15896	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-18	89.15896	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-18	89.15896	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-18	89.15896	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-18	89.15896	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-18	89.15896	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

85FS-18

89.15896

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-19	89.15897	83329	< 330.		UG/KG	3/27/90		Acenaphthene
85FS-19	89.15897	208968	< 330.		UG/KG	3/27/90		Acenaphthylene
85FS-19	89.15897	62533	< 330.		UG/KG	3/27/90		Aniline
85FS-19	89.15897	120127	< 330.		UG/KG	3/27/90		Anthracene
85FS-19	89.15897	103333	< 330.		UG/KG	3/27/90		Azobenzene
85FS-19	89.15897	56553	< 330.		UG/KG	3/27/90		Benz(a)anthracene
85FS-19	89.15897	92875	< 330.		UG/KG	3/27/90		m-Benzidine
85FS-19	89.15897	191242	< 330.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-19	89.15897	50328	< 330.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-19	89.15897	205992	< 330.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-19	89.15897	207089	< 330.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-19	89.15897	65850	< 330.		UG/KG	3/27/90		Benzoic acid
85FS-19	89.15897	100516	< 330.		UG/KG	3/27/90		Benzyl alcohol
85FS-19	89.15897	111911	< 330.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-19	89.15897	111444	< 330.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-19	89.15897	108601	< 330.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-19	89.15897	117817	2800.	560.	UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-19	89.15897	101553	< 330.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-19	89.15897	85687	< 330.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-19	89.15897	59507	< 330.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-19	89.15897	106478	< 330.		UG/KG	3/27/90		4-Chloroaniline
85FS-19	89.15897	91587	< 330.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-19	89.15897	95578	< 330.		UG/KG	3/27/90		o-Chlorophenol
85FS-19	89.15897	7005723	< 330.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-19	89.15897	218019	< 330.		UG/KG	3/27/90		Chrysene

85FS-19	89.15897	106445	< 330.	UG/KG	3/27/90	p-Cresol
85FS-19	89.15897	84742	< 330.	UG/KG	3/27/90	Di-n-butyl phthalate
85FS-19	89.15897	117840	< 330.	UG/KG	3/27/90	Di-n-octyl phthalate
85FS-19	89.15897	53703	< 330.	UG/KG	3/27/90	Dibenzo(a,h)anthracene
85FS-19	89.15897	132649	< 330.	UG/KG	3/27/90	Dibenzofuran
85FS-19	89.15897	95501	< 330.	UG/KG	3/27/90	o-Dichlorobenzene (1,2)
85FS-19	89.15897	541731	< 330.	UG/KG	3/27/90	m-Dichlorobenzene (1,3)
85FS-19	89.15897	106467	< 330.	UG/KG	3/27/90	p-Dichlorobenzene (1,4)
85FS-19	89.15897	91941	< 330.	UG/KG	3/27/90	3,3'-Dichlorobenzidine
85FS-19	89.15897	120832	< 330.	UG/KG	3/27/90	2,4-Dichlorophenol
85FS-19	89.15897	84662	< 330.	UG/KG	3/27/90	Diethyl phthalate
85FS-19	89.15897	131113	< 330.	UG/KG	3/27/90	Dimethyl phthalate
85FS-19	89.15897	105679	< 330.	UG/KG	3/27/90	2,4-Dimethylphenol
85FS-19	89.15897	51285	< 330.	UG/KG	3/27/90	2,4-Dinitrophenol
85FS-19	89.15897	121142	< 330.	UG/KG	3/27/90	2,4-Dinitrotoluene
85FS-19	89.15897	606202	< 330.	UG/KG	3/27/90	2,6-Dinitrotoluene
85FS-19	89.15897	206440	< 330.	UG/KG	3/27/90	Fluoranthene
85FS-19	89.15897	86737	< 330.	UG/KG	3/27/90	Fluorene
85FS-19	89.15897	118741	< 330.	UG/KG	3/27/90	Hexachlorobenzene
85FS-19	89.15897	87683	< 330.	UG/KG	3/27/90	Hexachlorobutadiene
85FS-19	89.15897	77474	< 330.	UG/KG	3/27/90	Hexachlorocyclopentadiene
85FS-19	89.15897	67721	< 330.	UG/KG	3/27/90	Hexachloroethane
85FS-19	89.15897	193395	< 330.	UG/KG	3/27/90	Indeno(1,2,3-cd)pyrene
85FS-19	89.15897	78591	< 330.	UG/KG	3/27/90	Isophorone
85FS-19	89.15897	534521	< 330.	UG/KG	3/27/90	2-Methyl-4,6-dinitrophenol
85FS-19	89.15897	91576	< 330.	UG/KG	3/27/90	2-Methylnaphthalene
85FS-19	89.15897	95487	< 330.	UG/KG	3/27/90	2-Methylphenol
85FS-19	89.15897	106445	< 330.	UG/KG	3/27/90	4-Methylphenol
85FS-19	89.15897	91203	< 330.	UG/KG	3/27/90	Naphthalene
85FS-19	89.15897	88744	< 330.	UG/KG	3/27/90	2-Nitroaniline
85FS-19	89.15897	99092	< 330.	UG/KG	3/27/90	3-Nitroaniline
85FS-19	89.15897	100016	< 330.	UG/KG	3/27/90	4-Nitroaniline
85FS-19	89.15897	98953	< 330.	UG/KG	3/27/90	Nitrobenzene
85FS-19	89.15897	88755	< 330.	UG/KG	3/27/90	2-Nitrophenol
85FS-19	89.15897	100027	< 330.	UG/KG	3/27/90	4-Nitrophenol
85FS-19	89.15897	621647	< 330.	UG/KG	3/27/90	N-Nitrosodi-n-propylamine
85FS-19	89.15897	62759	< 330.	UG/KG	3/27/90	N-Nitrosodimethylamine
85FS-19	89.15897	86306	< 330.	UG/KG	3/27/90	N-Nitrosodiphenylamine
85FS-19	89.15897	87865	< 330.	UG/KG	3/27/90	Pentachlorophenol
85FS-19	89.15897	85018	< 330.	UG/KG	3/27/90	Phenanthrene
85FS-19	89.15897	108952	< 330.	UG/KG	3/27/90	Phenol
85FS-19	89.15897	129000	< 330.	UG/KG	3/27/90	Pyrene
85FS-19	89.15897	120821	< 330.	UG/KG	3/27/90	1,2,4-Trichlorobenzene
85FS-19	89.15897	95954	< 330.	UG/KG	3/27/90	2,4,5-Trichlorophenol
85FS-19	89.15897	88062	< 330.	UG/KG	3/27/90	2,4,6-Trichlorophenol

85FS-19

89-15897

105679

< 330.

UG/KG

3/2//90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-20	89.15898	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-20	89.15898	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-20	89.15898	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-20	89.15898	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-20	89.15898	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-20	89.15898	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-20	89.15898	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-20	89.15898	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-20	89.15898	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-20	89.15898	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-20	89.15898	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-20	89.15898	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-20	89.15898	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-20	89.15898	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-20	89.15898	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-20	89.15898	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-20	89.15898	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-20	89.15898	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-20	89.15898	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-20	89.15898	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-20	89.15898	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-20	89.15898	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-20	89.15898	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-20	89.15898	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-20	89.15898	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-20	89.15898	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-20	89.15898	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-20	89.15898	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-20	89.15898	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-20	89.15898	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-20	89.15898	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-20	89.15898	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-20	89.15898	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-20	89.15898	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-20	89.15898	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-20	89.15898	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-20	89.15898	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-20	89.15898	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-20	89.15898	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-20	89.15898	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-20	89.15898	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-20	89.15898	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-20	89.15898	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-20	89.15898	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-20	89.15898	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-20	89.15898	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-20	89.15898	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-20	89.15898	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-20	89.15898	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-20	89.15898	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-20	89.15898	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-20	89.15898	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-20	89.15898	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-20	89.15898	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-20	89.15898	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-20	89.15898	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-20	89.15898	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-20	89.15898	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-20	89.15898	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-20	89.15898	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-20	89.15898	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-20	89.15898	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-20	89.15898	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-20	89.15898	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-20	89.15898	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-20	89.15898	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-20	89.15898	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-20	89.15898	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-20	89.15898	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-20	89.15898	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

85FS-20

89.15898

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-21	89.15899	83329	< 6600.		UG/KG	3/27/90		Acenaphthene
85FS-21	89.15899	208968	< 6600.		UG/KG	3/27/90		Acenaphthylene
85FS-21	89.15899	62533	< 6600.		UG/KG	3/27/90		Aniline
85FS-21	89.15899	120127	< 6600.		UG/KG	3/27/90		Anthracene
85FS-21	89.15899	103333	< 6600.		UG/KG	3/27/90		Azobenzene
85FS-21	89.15899	56553	< 6600.		UG/KG	3/27/90		Benz(a)anthracene
85FS-21	89.15899	92875	< 6600.		UG/KG	3/27/90		m-Benzidine
85FS-21	89.15899	191242	< 6600.		UG/KG	3/27/90		Benzo(g,h,i)perylene
85FS-21	89.15899	50328	< 6600.		UG/KG	3/27/90		Benzo-a-pyrene
85FS-21	89.15899	205992	< 6600.		UG/KG	3/27/90		Benzo-b-fluoranthene
85FS-21	89.15899	207089	< 6600.		UG/KG	3/27/90		Benzo-k-fluoranthene
85FS-21	89.15899	65850	< 6600.		UG/KG	3/27/90		Benzoic acid
85FS-21	89.15899	100516	< 6600.		UG/KG	3/27/90		Benzyl alcohol
85FS-21	89.15899	111911	< 6600.		UG/KG	3/27/90		Bis(2-chloroethoxy)methane
85FS-21	89.15899	111444	< 6600.		UG/KG	3/27/90		Bis(2-chloroethyl)ether
85FS-21	89.15899	108601	< 6600.		UG/KG	3/27/90		Bis(2-chloroisopropyl)ether
85FS-21	89.15899	117817	< 6600.		UG/KG	3/27/90		Bis(2-ethylhexyl)phthalate
85FS-21	89.15899	101553	< 6600.		UG/KG	3/27/90		4-Bromophenylphenyl ether
85FS-21	89.15899	85687	< 6600.		UG/KG	3/27/90		Butylbenzyl phthalate
85FS-21	89.15899	59507	< 6600.		UG/KG	3/27/90		4-Chloro-3-methylphenol
85FS-21	89.15899	106478	< 6600.		UG/KG	3/27/90		4-Chloroaniline
85FS-21	89.15899	91587	< 6600.		UG/KG	3/27/90		2-Chloronaphthalene
85FS-21	89.15899	95578	< 6600.		UG/KG	3/27/90		o-Chlorophenol
85FS-21	89.15899	7005723	< 6600.		UG/KG	3/27/90		4-Chlorophenylphenyl ether
85FS-21	89.15899	218019	< 6600.		UG/KG	3/27/90		Chrysene

85FS-21

89-15899

105679

< 6600.

UG/KG

3/27/90

2,4-XyLenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-22	89.15900	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-22	89.15900	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-22	89.15900	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-22	89.15900	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-22	89.15900	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-22	89.15900	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-22	89.15900	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-22	89.15900	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-22	89.15900	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-22	89.15900	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-22	89.15900	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-22	89.15900	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-22	89.15900	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-22	89.15900	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-22	89.15900	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-22	89.15900	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-22	89.15900	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-22	89.15900	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-22	89.15900	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-22	89.15900	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-22	89.15900	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-22	89.15900	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-22	89.15900	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-22	89.15900	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-22	89.15900	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-22	89.15900	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85FS-23	89.15901	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85FS-24	89.15902	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85FS-1	89.15879	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-1	89.15879	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-1	89.15879	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-1	89.15879	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-2	89.15880	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-2	89.15880	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-2	89.15880	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-2	89.15880	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-3	89.15881	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-3	89.15881	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-3	89.15881	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-3	89.15881	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-4	89.15882	1336363	0.3	0.06	UG/G	10/05/89		Mixed-Aroclor
85FS-4	89.15882	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-4	89.15882	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-4	89.15882	11096825	0.3	0.06	UG/G	10/05/89		Aroclor 1260
85FS-5	89.15883	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-5	89.15883	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-5	89.15883	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-5	89.15883	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-6	89.15884	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-6	89.15884	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-6	89.15884	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-6	89.15884	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-7	89.15885	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-7	89.15885	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-7	89.15885	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-7	89.15885	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-8	89.15886	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-8	89.15886	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-8	89.15886	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254
85FS-8	89.15886	11096825	< 0.1		UG/G	10/05/89		Aroclor 1260
85FS-9	89.15887	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-9	89.15887	53469219	< 0.1		UG/G	10/05/89		Aroclor 1242
85FS-9	89.15887	11097691	< 0.1		UG/G	10/05/89		Aroclor 1254

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

Prepared by: DMS on 5-Oct-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 7968 MATRIX: SS 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
85FS-1	89.15879	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-2	89.15880	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-3	89.15881	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-4	89.15882	1336363	0.3	0.06	UG/G	10/05/89		Mixed-Aroclor
85FS-5	89.15883	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-6	89.15884	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-7	89.15885	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-8	89.15886	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-9	89.15887	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-10	89.15888	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-11	89.15889	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-12	89.15890	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-13	89.15891	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-14	89.15892	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-15	89.15893	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-16	89.15894	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-17	89.15895	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-18	89.15896	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-19	89.15897	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-20	89.15898	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor
85FS-21	89.15899	1336363	< 0.1		UG/G	10/05/89		Mixed-Aroclor

Analyst

Dee Seitz

Date

10/5/89

Section Leader

CPH

Date

10-5-89

QA Officer

mag

10-11-89

Date

The control status of the preceding 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.

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

Prepared by: DMS on 5-Oct-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 7969 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	CERTIFIED VALUE	CERTIFIED UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.20070	00.20070	1336363	19.	3.8	UG/G	25.	2.	10/05/89	UNDER CONTROL	Mixed-Aroclor
00.20070	00.20070	53469219	< 0.1		UG/G			10/05/89	UNDER CONTROL	Aroclor 1242
00.20070	00.20070	11097691	< 0.1		UG/G			10/05/89	UNDER CONTROL	Aroclor 1254
00.20070	00.20070	11096825	19.	3.8	UG/G	25.	2.	10/05/89	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
89.16148	1336363	6.75	1.4	UG/G	10/05/89	UNDER CONTROL	Mixed-Aroclor
89.16148	53469219	< 0.1		UG/G	10/05/89	UNDER CONTROL	Aroclor 1242
89.16148	11097691	< 0.1		UG/G	10/05/89	UNDER CONTROL	Aroclor 1254
89.16148	11096825	6.75	1.4	UG/G	10/05/89	UNDER CONTROL	Aroclor 1260

85C3-20	89.15974	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-20	89.15974	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-20	89.15974	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-21	89.15975	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-21	89.15975	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-21	89.15975	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-21	89.15975	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-22	89.15976	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-22	89.15976	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-22	89.15976	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-22	89.15976	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-23	89.15977	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-23	89.15977	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-23	89.15977	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-23	89.15977	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-24	89.15978	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-24	89.15978	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-24	89.15978	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-24	89.15978	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C4-2	89.16078	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-2	89.16078	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85C4-2	89.16078	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85C4-2	89.16078	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85C4-9	89.16079	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-9	89.16079	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85C4-9	89.16079	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85C4-9	89.16079	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85C4-10	89.16080	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-10	89.16080	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85C4-10	89.16080	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85C4-10	89.16080	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260

85-C-2-9	89.15963	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-9	89.15963	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-9	89.15963	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-9	89.15963	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85-C-2-10	89.15964	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-10	89.15964	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-10	89.15964	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-10	89.15964	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85-C-2-11	89.15965	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-11	89.15965	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-11	89.15965	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-11	89.15965	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85-C-2-12	89.15966	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-12	89.15966	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-12	89.15966	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-12	89.15966	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-13	89.15967	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-13	89.15967	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-13	89.15967	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-13	89.15967	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-14	89.15968	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-14	89.15968	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-14	89.15968	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-14	89.15968	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-15	89.15969	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-15	89.15969	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-15	89.15969	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-15	89.15969	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-16	89.15970	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-16	89.15970	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-16	89.15970	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-16	89.15970	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-17	89.15971	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-17	89.15971	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-17	89.15971	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-17	89.15971	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-18	89.15972	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-18	89.15972	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-18	89.15972	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-18	89.15972	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-19	89.15973	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-19	89.15973	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-19	89.15973	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-19	89.15973	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-20	89.15974	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor

85C3-22	89.15976	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-23	89.15977	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-24	89.15978	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C4-2	89.16078	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-9	89.16079	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-10	89.16080	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-1	89.15955	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-1	89.15955	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-1	89.15955	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-1	89.15955	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-2	89.15956	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-2	89.15956	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-2	89.15956	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-2	89.15956	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-3	89.15957	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-3	89.15957	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-3	89.15957	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-3	89.15957	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-4	89.15958	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-4	89.15958	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-4	89.15958	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-4	89.15958	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-5	89.15959	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-5	89.15959	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-5	89.15959	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-5	89.15959	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-6	89.15960	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-6	89.15960	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-6	89.15960	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-6	89.15960	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-7	89.15961	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-7	89.15961	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-7	89.15961	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-7	89.15961	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-8	89.15962	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-8	89.15962	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-8	89.15962	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-8	89.15962	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260

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

Prepared by: DMS on 5-Oct-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 7969 MATRIX: SS 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
85-C-1-1	89.15955	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-2	89.15956	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-3	89.15957	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-4	89.15958	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-5	89.15959	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-6	89.15960	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-7	89.15961	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-8	89.15962	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-9	89.15963	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-10	89.15964	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-11	89.15965	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-12	89.15966	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-13	89.15967	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-14	89.15968	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-15	89.15969	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-16	89.15970	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-17	89.15971	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-18	89.15972	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C3-19	89.15973	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C3-20	89.15974	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C3-21	89.15975	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor

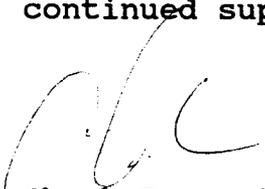
October 12, 1989

TA-35 TSL-85
Coic Samples &
Surrounding

Steve,

Attached you will find copies of the final reports for the soil samples that you submitted for [REDACTED]

[REDACTED] If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office (TA-59, OH-1, Room 115) at your convenience. Thank you for your continued support of our PCB analysis programs.



Chuck Rzeszutko

Organic Section Leader

HSE-9

POLYCHLORINATED BIPHENYL ANALYSES

M. Kelly
Analyst

C. D. R.
Section Leader

N/A
QA Officer

4/30/90
Date

4/30/90
Date

Date

The control status of the preceding 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.

89.15904 105679 1800. 360. UG/KG 100. 30. 3/28/90 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
00.01356	%	52.	59.	55.	63.	59.	103.	28-Mar-1990
89.15879	%	41.	48.	48.	66.	71.	95.	23-Mar-1990
89.15880	%	48.	54.	54.	66.	71.	96.	23-Mar-1990
89.15881	%	34.	47.	50.	80.	69.	94.	23-Mar-1990
89.15882	%	64.	66.	69.	83.	79.	95.	23-Mar-1990
89.15883	%	50.	59.	60.	75.	77.	87.	23-Mar-1990
89.15884	%	39.	51.	61.	85.	145.	39.	27-Mar-1990
89.15885	%	49.	56.	49.	66.	77.	94.	27-Mar-1990
89.15886	%	999.	40.	31.	72.	999.	999.	28-Mar-1990
89.15887	%	42.	54.	46.	74.	999.	999.	27-Mar-1990
89.15888	%	60.	67.	74.	92.	84.	111.	28-Mar-1990
89.15889	%	59.	67.	66.	84.	82.	100.	27-Mar-1990
89.15890	%	64.	67.	67.	82.	82.	93.	28-Mar-1990
89.15892	%	53.	63.	64.	80.	83.	105.	27-Mar-1990
89.15893	%	47.	57.	56.	77.	53.	104.	28-Mar-1990
89.15894	%	49.	59.	53.	76.	58.	114.	28-Mar-1990
89.15895	%	55.	65.	61.	87.	70.	111.	28-Mar-1990
89.15896	%	52.	62.	57.	84.	51.	99.	28-Mar-1990
89.15897	%	54.	62.	71.	83.	97.	83.	27-Mar-1990
89.15898	%	38.	54.	65.	88.	99.	90.	28-Mar-1990
89.15899	%	38.	54.	57.	90.	60.	123.	27-Mar-1990
89.15900	%	55.	63.	69.	86.	83.	87.	28-Mar-1990
89.15901	%	59.	72.	63.	77.	69.	106.	28-Mar-1990
89.15902	%	60.	67.	64.	81.	81.	108.	28-Mar-1990
89.15904	%	41.	50.	43.	56.	65.	103.	28-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

89.15904	106445	< 330.		UG/KG			3/28/90	UNDER CONTROL	p-Cresol
89.15904	84742	< 330.		UG/KG			3/28/90	UNDER CONTROL	Di-n-butyl phthalate
89.15904	117840	< 330.		UG/KG			3/28/90	UNDER CONTROL	Di-n-octyl phthalate
89.15904	53703	< 330.		UG/KG			3/28/90	UNDER CONTROL	Dibenzo(a,h)anthracene
89.15904	132649	< 330.		UG/KG			3/28/90	UNDER CONTROL	Dibenzofuran
89.15904	95501	< 330.		UG/KG			3/28/90	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.15904	541731	< 330.		UG/KG			3/28/90	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.15904	106467	< 330.		UG/KG			3/28/90	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.15904	91941	< 330.		UG/KG			3/28/90	UNDER CONTROL	3,3'-Dichlorobenzidine
89.15904	120832	1700.	340.	UG/KG	100.	30.	3/28/90	UNDER CONTROL	2,4-Dichlorophenol
89.15904	84662	< 330.		UG/KG			3/28/90	UNDER CONTROL	Diethyl phthalate
89.15904	131113	< 330.		UG/KG			3/28/90	UNDER CONTROL	Dimethyl phthalate
89.15904	105679	1800.	360.	UG/KG	100.	30.	3/28/90	UNDER CONTROL	2,4-Dimethylphenol
89.15904	51285	< 330.		UG/KG			3/28/90	UNDER CONTROL	2,4-Dinitrophenol
89.15904	121142	< 330.		UG/KG			3/28/90	UNDER CONTROL	2,4-Dinitrotoluene
89.15904	606202	< 330.		UG/KG			3/28/90	UNDER CONTROL	2,6-Dinitrotoluene
89.15904	206440	< 330.		UG/KG			3/28/90	UNDER CONTROL	Fluoranthene
89.15904	86737	< 330.		UG/KG			3/28/90	UNDER CONTROL	Fluorene
89.15904	118741	< 330.		UG/KG			3/28/90	UNDER CONTROL	Hexachlorobenzene
89.15904	87683	< 330.		UG/KG			3/28/90	UNDER CONTROL	Hexachlorobutadiene
89.15904	77474	< 330.		UG/KG			3/28/90	UNDER CONTROL	Hexachlorocyclopentadiene
89.15904	67721	< 330.		UG/KG			3/28/90	UNDER CONTROL	Hexachloroethane
89.15904	193395	< 330.		UG/KG			3/28/90	UNDER CONTROL	Indeno(1,2,3-cd)pyrene
89.15904	78591	< 330.		UG/KG			3/28/90	UNDER CONTROL	Isophorone
89.15904	534521	2100.	420.	UG/KG	100.	90.	3/28/90	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
89.15904	91576	< 330.		UG/KG			3/28/90	UNDER CONTROL	2-Methylnaphthalene
89.15904	95487	< 330.		UG/KG			3/28/90	UNDER CONTROL	2-Methylphenol
89.15904	106445	< 330.		UG/KG			3/28/90	UNDER CONTROL	4-Methylphenol
89.15904	91203	< 330.		UG/KG			3/28/90	UNDER CONTROL	Naphthalene
89.15904	88744	< 330.		UG/KG			3/28/90	UNDER CONTROL	2-Nitroaniline
89.15904	99092	< 330.		UG/KG			3/28/90	UNDER CONTROL	3-Nitroaniline
89.15904	100016	< 330.		UG/KG			3/28/90	UNDER CONTROL	4-Nitroaniline
89.15904	98953	< 330.		UG/KG			3/28/90	UNDER CONTROL	Nitrobenzene
89.15904	88755	1600.	320.	UG/KG	100.	40.	3/28/90	UNDER CONTROL	2-Nitrophenol
89.15904	100027	2500.	500.	UG/KG	100.	50.	3/28/90	UNDER CONTROL	4-Nitrophenol
89.15904	621647	< 330.		UG/KG			3/28/90	UNDER CONTROL	N-Nitrosodi-n-propylamine
89.15904	62759	< 330.		UG/KG			3/28/90	UNDER CONTROL	N-Nitrosodimethylamine
89.15904	86306	< 330.		UG/KG			3/28/90	UNDER CONTROL	N-Nitrosodiphenylamine
89.15904	87865	2400.	480.	UG/KG	100.	50.	3/28/90	UNDER CONTROL	Pentachlorophenol
89.15904	85018	< 330.		UG/KG			3/28/90	UNDER CONTROL	Phenanthrene
89.15904	108952	2000.	400.	UG/KG	100.	20.	3/28/90	UNDER CONTROL	Phenol
89.15904	129000	< 330.		UG/KG			3/28/90	UNDER CONTROL	Pyrene
89.15904	120821	< 330.		UG/KG			3/28/90	UNDER CONTROL	1,2,4-Trichlorobenzene
89.15904	95954	< 330.		UG/KG			3/28/90	UNDER CONTROL	2,4,5-Trichlorophenol
89.15904	88062	2200.	440.	UG/KG	100.	30.	3/28/90	UNDER CONTROL	2,4,6-Trichlorophenol

00.01356	00.01356 62759	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	N-Nitrosodimethylamine
00.01356	00.01356 86306	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	N-Nitrosodiphenylamine
00.01356	00.01356 87865	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	Pentachlorophenol
00.01356	00.01356 85018	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	Phenanthrene
00.01356	00.01356 108952	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	Phenol
00.01356	00.01356 129000	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	Pyrene
00.01356	00.01356 120821	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	1,2,4-Trichlorobenzene
00.01356	00.01356 95954	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	2,4,5-Trichlorophenol
00.01356	00.01356 88062	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	2,4,6-Trichlorophenol
00.01356	00.01356 105679	< 330.	UG/KG	3/28/90	NO DATA AVAIL.	2,4-Xylenol

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED		COMPLETION DATE	COMMENT	COMPOUND-NAME
					CERTIFIED VALUE	UNCERTAINTY			
89.15904	83329	< 330.		UG/KG			3/28/90	UNDER CONTROL	Acenaphthene
89.15904	208968	< 330.		UG/KG			3/28/90	UNDER CONTROL	Acenaphthylene
89.15904	62533	< 330.		UG/KG			3/28/90	UNDER CONTROL	Aniline
89.15904	120127	< 330.		UG/KG			3/28/90	UNDER CONTROL	Anthracene
89.15904	103333	< 330.		UG/KG			3/28/90	UNDER CONTROL	Azobenzene
89.15904	56553	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benz(a)anthracene
89.15904	92875	< 330.		UG/KG			3/28/90	UNDER CONTROL	m-Benzidine
89.15904	191242	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benzo(g,h,i)perylene
89.15904	50328	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benzo-a-pyrene
89.15904	205992	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benzo-b-fluoranthene
89.15904	207089	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benzo-k-fluoranthene
89.15904	65850	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benzoic acid
89.15904	100516	< 330.		UG/KG			3/28/90	UNDER CONTROL	Benzyl alcohol
89.15904	111911	< 330.		UG/KG			3/28/90	UNDER CONTROL	Bis(2-chloroethoxy)methane
89.15904	111444	< 330.		UG/KG			3/28/90	UNDER CONTROL	Bis(2-chloroethyl)ether
89.15904	108601	< 330.		UG/KG			3/28/90	UNDER CONTROL	Bis(2-chloroisopropyl)ether
89.15904	117817	850.	170.	UG/KG			3/28/90	OUT OF CONTROL	Bis(2-ethylhexyl)phthalate
89.15904	101553	< 330.		UG/KG			3/28/90	UNDER CONTROL	4-Bromophenylphenyl ether
89.15904	85687	< 330.		UG/KG			3/28/90	UNDER CONTROL	Butylbenzyl phthalate
89.15904	59507	2400.	480.	UG/KG	100.	40.	3/28/90	UNDER CONTROL	4-Chloro-3-methylphenol
89.15904	106478	< 330.		UG/KG			3/28/90	UNDER CONTROL	4-Chloroaniline
89.15904	91587	< 330.		UG/KG			3/28/90	UNDER CONTROL	2-Chloronaphthalene
89.15904	95578	1800.	360.	UG/KG	100.	30.	3/28/90	UNDER CONTROL	o-Chlorophenol
89.15904	7005723	< 330.		UG/KG			3/28/90	UNDER CONTROL	4-Chlorophenylphenyl ether
89.15904	218019	< 330.		UG/KG			3/28/90	UNDER CONTROL	Chrysene

00.01356	00.01356 117817	460.	92.	UG/KG	3/28/90	NO DATA AVAIL.	Bis(2-ethylhexyl)phthalate
00.01356	00.01356 101553	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Bromophenylphenyl ether
00.01356	00.01356 85687	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Butylbenzyl phthalate
00.01356	00.01356 59507	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Chloro-3-methylphenol
00.01356	00.01356 106478	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Chloroaniline
00.01356	00.01356 91587	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2-Chloronaphthalene
00.01356	00.01356 95578	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	o-Chlorophenol
00.01356	00.01356 7005723	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Chlorophenylphenyl ether
00.01356	00.01356 218019	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Chrysene
00.01356	00.01356 106445	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	p-Cresol
00.01356	00.01356 84742	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Di-n-butyl phthalate
00.01356	00.01356 117840	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Di-n-octyl phthalate
00.01356	00.01356 53703	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Dibenzo(a,h)anthracene
00.01356	00.01356 132649	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Dibenzofuran
00.01356	00.01356 95501	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	o-Dichlorobenzene (1,2)
00.01356	00.01356 541731	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	m-Dichlorobenzene (1,3)
00.01356	00.01356 106467	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	p-Dichlorobenzene (1,4)
00.01356	00.01356 91941	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	3,3'-Dichlorobenzidine
00.01356	00.01356 120832	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2,4-Dichlorophenol
00.01356	00.01356 84662	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Diethyl phthalate
00.01356	00.01356 131113	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Dimethyl phthalate
00.01356	00.01356 105679	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2,4-Dimethylphenol
00.01356	00.01356 51285	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2,4-Dinitrophenol
00.01356	00.01356 121142	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2,4-Dinitrotoluene
00.01356	00.01356 606202	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2,6-Dinitrotoluene
00.01356	00.01356 206440	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Fluoranthene
00.01356	00.01356 86737	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Fluorene
00.01356	00.01356 118741	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Hexachlorobenzene
00.01356	00.01356 87683	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Hexachlorobutadiene
00.01356	00.01356 77474	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Hexachlorocyclopentadiene
00.01356	00.01356 67721	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Hexachloroethane
00.01356	00.01356 193395	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Indeno(1,2,3-cd)pyrene
00.01356	00.01356 78591	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Isophorone
00.01356	00.01356 534521	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2-Methyl-4,6-dinitrophenol
00.01356	00.01356 91576	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2-Methylnaphthalene
00.01356	00.01356 95487	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2-Methylphenol
00.01356	00.01356 106445	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Methylphenol
00.01356	00.01356 91203	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Naphthalene
00.01356	00.01356 88744	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2-Nitroaniline
00.01356	00.01356 99092	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	3-Nitroaniline
00.01356	00.01356 100016	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Nitroaniline
00.01356	00.01356 98953	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	Nitrobenzene
00.01356	00.01356 88755	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	2-Nitrophenol
00.01356	00.01356 100027	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	4-Nitrophenol
00.01356	00.01356 621647	< 330.		UG/KG	3/28/90	NO DATA AVAIL.	N-Nitrosodi-n-propylamine

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
00.01356	00.01356	83329	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Acenaphthene
00.01356	00.01356	208968	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Acenaphthylene
00.01356	00.01356	62533	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Aniline
00.01356	00.01356	120127	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Anthracene
00.01356	00.01356	103333	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Azobenzene
00.01356	00.01356	56553	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benz(a)anthracene
00.01356	00.01356	92875	< 330.		UG/KG	3/28/90	NO DATA AVAIL. m-Benzidine
00.01356	00.01356	191242	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benzo(g,h,i)perylene
00.01356	00.01356	50328	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benzo-a-pyrene
00.01356	00.01356	205992	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benzo-b-fluoranthene
00.01356	00.01356	207089	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benzo-k-fluoranthene
00.01356	00.01356	65850	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benzoic acid
00.01356	00.01356	100516	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Benzyl alcohol
00.01356	00.01356	111911	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Bis(2-chloroethoxy)methane
00.01356	00.01356	111444	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Bis(2-chloroethyl)ether
00.01356	00.01356	108601	< 330.		UG/KG	3/28/90	NO DATA AVAIL. Bis(2-chloroisopropyl)ether

00.01356 00.01356 95954 < 330.
00.01356 00.01356 98953 < 330.
00.01356 00.01356 99092 < 330.

UG/KG 3/28/90 EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
UG/KG 3/28/90 EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
UG/KG 3/28/90 EPA GC/MS Base Neutrals in Water-III #2 (WP1082)

 HSE-9 ANALYTICAL REPORT

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

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
00.01356	00.01356	100016	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	100027	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	100516	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	101553	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	103333	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	105679	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	106445	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	106467	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	106478	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	108601	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	108952	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	111444	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	111911	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	117817	460.	92.	UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	117840	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	118741	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	120127	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	120821	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	120832	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	121142	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)
00.01356	00.01356	129000	< 330.		UG/KG	3/28/90	EPA GC/MS Base Neutrals in Water-III #2 (WP1082)

85FS-24

89.15902

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

85FS-24	89.15902	106445	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	84742	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	117840	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	53703	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	132649	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	95501	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	541731	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	106467	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	91941	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	120832	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	84662	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	131113	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	105679	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	51285	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	121142	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	606202	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	206440	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	86737	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	118741	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	87683	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	77474	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	67721	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	193395	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	78591	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	534521	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	91576	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	95487	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	106445	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	91203	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	88744	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	99092	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	100016	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	98953	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	88755	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	100027	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	621647	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	62759	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	86306	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	87865	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	85018	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	108952	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	129000	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	120821	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	95954	< 1287.	UG/KG	3/28/90
85FS-24	89.15902	88062	< 1287.	UG/KG	3/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85FS-24	89.15902	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-24	89.15902	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-24	89.15902	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-24	89.15902	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-24	89.15902	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-24	89.15902	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-24	89.15902	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-24	89.15902	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-24	89.15902	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-24	89.15902	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-24	89.15902	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-24	89.15902	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-24	89.15902	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-24	89.15902	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-24	89.15902	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-24	89.15902	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-24	89.15902	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-24	89.15902	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-24	89.15902	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-24	89.15902	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-24	89.15902	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-24	89.15902	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-24	89.15902	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-24	89.15902	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-24	89.15902	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-23

89.15901

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

85FS-23	89.15901	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-23	89.15901	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-23	89.15901	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-23	89.15901	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-23	89.15901	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-23	89.15901	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-23	89.15901	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-23	89.15901	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-23	89.15901	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-23	89.15901	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-23	89.15901	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-23	89.15901	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-23	89.15901	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-23	89.15901	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-23	89.15901	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-23	89.15901	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-23	89.15901	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-23	89.15901	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-23	89.15901	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-23	89.15901	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-23	89.15901	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-23	89.15901	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-23	89.15901	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-23	89.15901	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-23	89.15901	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-23	89.15901	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-23	89.15901	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-23	89.15901	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-23	89.15901	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-23	89.15901	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-23	89.15901	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-23	89.15901	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-23	89.15901	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-23	89.15901	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-23	89.15901	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-23	89.15901	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-23	89.15901	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-23	89.15901	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-23	89.15901	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-23	89.15901	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-23	89.15901	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-23	89.15901	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-23	89.15901	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-23	89.15901	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-23	89.15901	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

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

Prepared by: ESG on 29-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7968 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45

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
85FS-23	89.15901	83329	< 1287.		UG/KG	3/28/90		Acenaphthene
85FS-23	89.15901	208968	< 1287.		UG/KG	3/28/90		Acenaphthylene
85FS-23	89.15901	62533	< 1287.		UG/KG	3/28/90		Aniline
85FS-23	89.15901	120127	< 1287.		UG/KG	3/28/90		Anthracene
85FS-23	89.15901	103333	< 1287.		UG/KG	3/28/90		Azobenzene
85FS-23	89.15901	56553	< 1287.		UG/KG	3/28/90		Benz(a)anthracene
85FS-23	89.15901	92875	< 1287.		UG/KG	3/28/90		m-Benzidine
85FS-23	89.15901	191242	< 1287.		UG/KG	3/28/90		Benzo(g,h,i)perylene
85FS-23	89.15901	50328	< 1287.		UG/KG	3/28/90		Benzo-a-pyrene
85FS-23	89.15901	205992	< 1287.		UG/KG	3/28/90		Benzo-b-fluoranthene
85FS-23	89.15901	207089	< 1287.		UG/KG	3/28/90		Benzo-k-fluoranthene
85FS-23	89.15901	65850	< 1287.		UG/KG	3/28/90		Benzoic acid
85FS-23	89.15901	100516	< 1287.		UG/KG	3/28/90		Benzyl alcohol
85FS-23	89.15901	111911	< 1287.		UG/KG	3/28/90		Bis(2-chloroethoxy)methane
85FS-23	89.15901	111444	< 1287.		UG/KG	3/28/90		Bis(2-chloroethyl)ether
85FS-23	89.15901	108601	< 1287.		UG/KG	3/28/90		Bis(2-chloroisopropyl)ether
85FS-23	89.15901	117817	< 1287.		UG/KG	3/28/90		Bis(2-ethylhexyl)phthalate
85FS-23	89.15901	101553	< 1287.		UG/KG	3/28/90		4-Bromophenylphenyl ether
85FS-23	89.15901	85687	< 1287.		UG/KG	3/28/90		Butylbenzyl phthalate
85FS-23	89.15901	59507	< 1287.		UG/KG	3/28/90		4-Chloro-3-methylphenol
85FS-23	89.15901	106478	< 1287.		UG/KG	3/28/90		4-Chloroaniline
85FS-23	89.15901	91587	< 1287.		UG/KG	3/28/90		2-Chloronaphthalene
85FS-23	89.15901	95578	< 1287.		UG/KG	3/28/90		o-Chlorophenol
85FS-23	89.15901	7005723	< 1287.		UG/KG	3/28/90		4-Chlorophenylphenyl ether
85FS-23	89.15901	218019	< 1287.		UG/KG	3/28/90		Chrysene

85FS-22

89,15900

105679

< 1287.

UG/KG

3/28/90

2,4-Xylenol

85FS-22	89.15900	106445	< 1287.	UG/KG	3/28/90	p-Cresol
85FS-22	89.15900	84742	< 1287.	UG/KG	3/28/90	Di-n-butyl phthalate
85FS-22	89.15900	117840	< 1287.	UG/KG	3/28/90	Di-n-octyl phthalate
85FS-22	89.15900	53703	< 1287.	UG/KG	3/28/90	Dibenzo(a,h)anthracene
85FS-22	89.15900	132649	< 1287.	UG/KG	3/28/90	Dibenzofuran
85FS-22	89.15900	95501	< 1287.	UG/KG	3/28/90	o-Dichlorobenzene (1,2)
85FS-22	89.15900	541731	< 1287.	UG/KG	3/28/90	m-Dichlorobenzene (1,3)
85FS-22	89.15900	106467	< 1287.	UG/KG	3/28/90	p-Dichlorobenzene (1,4)
85FS-22	89.15900	91941	< 1287.	UG/KG	3/28/90	3,3'-Dichlorobenzidine
85FS-22	89.15900	120832	< 1287.	UG/KG	3/28/90	2,4-Dichlorophenol
85FS-22	89.15900	84662	< 1287.	UG/KG	3/28/90	Diethyl phthalate
85FS-22	89.15900	131113	< 1287.	UG/KG	3/28/90	Dimethyl phthalate
85FS-22	89.15900	105679	< 1287.	UG/KG	3/28/90	2,4-Dimethylphenol
85FS-22	89.15900	51285	< 1287.	UG/KG	3/28/90	2,4-Dinitrophenol
85FS-22	89.15900	121142	< 1287.	UG/KG	3/28/90	2,4-Dinitrotoluene
85FS-22	89.15900	606202	< 1287.	UG/KG	3/28/90	2,6-Dinitrotoluene
85FS-22	89.15900	206440	< 1287.	UG/KG	3/28/90	Fluoranthene
85FS-22	89.15900	86737	< 1287.	UG/KG	3/28/90	Fluorene
85FS-22	89.15900	118741	< 1287.	UG/KG	3/28/90	Hexachlorobenzene
85FS-22	89.15900	87683	< 1287.	UG/KG	3/28/90	Hexachlorobutadiene
85FS-22	89.15900	77474	< 1287.	UG/KG	3/28/90	Hexachlorocyclopentadiene
85FS-22	89.15900	67721	< 1287.	UG/KG	3/28/90	Hexachloroethane
85FS-22	89.15900	193395	< 1287.	UG/KG	3/28/90	Indeno(1,2,3-cd)pyrene
85FS-22	89.15900	78591	< 1287.	UG/KG	3/28/90	Isophorone
85FS-22	89.15900	534521	< 1287.	UG/KG	3/28/90	2-Methyl-4,6-dinitrophenol
85FS-22	89.15900	91576	< 1287.	UG/KG	3/28/90	2-Methylnaphthalene
85FS-22	89.15900	95487	< 1287.	UG/KG	3/28/90	2-Methylphenol
85FS-22	89.15900	106445	< 1287.	UG/KG	3/28/90	4-Methylphenol
85FS-22	89.15900	91203	< 1287.	UG/KG	3/28/90	Naphthalene
85FS-22	89.15900	88744	< 1287.	UG/KG	3/28/90	2-Nitroaniline
85FS-22	89.15900	99092	< 1287.	UG/KG	3/28/90	3-Nitroaniline
85FS-22	89.15900	100016	< 1287.	UG/KG	3/28/90	4-Nitroaniline
85FS-22	89.15900	98953	< 1287.	UG/KG	3/28/90	Nitrobenzene
85FS-22	89.15900	88755	< 1287.	UG/KG	3/28/90	2-Nitrophenol
85FS-22	89.15900	100027	< 1287.	UG/KG	3/28/90	4-Nitrophenol
85FS-22	89.15900	621647	< 1287.	UG/KG	3/28/90	N-Nitrosodi-n-propylamine
85FS-22	89.15900	62759	< 1287.	UG/KG	3/28/90	N-Nitrosodimethylamine
85FS-22	89.15900	86306	< 1287.	UG/KG	3/28/90	N-Nitrosodiphenylamine
85FS-22	89.15900	87865	< 1287.	UG/KG	3/28/90	Pentachlorophenol
85FS-22	89.15900	85018	< 1287.	UG/KG	3/28/90	Phenanthrene
85FS-22	89.15900	108952	< 1287.	UG/KG	3/28/90	Phenol
85FS-22	89.15900	129000	< 1287.	UG/KG	3/28/90	Pyrene
85FS-22	89.15900	120821	< 1287.	UG/KG	3/28/90	1,2,4-Trichlorobenzene
85FS-22	89.15900	95954	< 1287.	UG/KG	3/28/90	2,4,5-Trichlorophenol
85FS-22	89.15900	88062	< 1287.	UG/KG	3/28/90	2,4,6-Trichlorophenol

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CLOSURE CERTIFICATION REPORT
TA-35 TSL-85 Surface Impoundment

Volume II

Los Alamos National Laboratory
Los Alamos, New Mexico

December 5, 1991

ENCLOSURE 4-E

**PHASE TWO CLEAN CLOSURE VERIFICATION SAMPLES: COREHOLE
SAMPLES TO APPROXIMATELY 49 FEET**

VOLATILE ORGANIC ANALYSES

January 16, 1990

TA-35 TSL-BS S.I.
Core hole samples for
Final verification.

Steve,

Attached you will find the **final** report for the soil samples you submitted for **VOA analysis** under the request #7969. Please note that Acetone was detected in several of these samples in this request group. Acetone is a common laboratory solvent that is widely used at TA-59. It is highly probable that the acetone detected in these samples is due to laboratory contamination and not present in the samples themselves. If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office (TA-59, OH-1, Room 115).

Thank you for your continued support of our VOA analysis program.



Chuck Rzeszutko

Organic Section Leader

HSE-9

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45
 OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-1	89.15955	1	67641	< 20.		UG/KG	12/18/89		Acetone
85-C-1-1	89.15955	1	71432	< 10.		UG/KG	12/18/89		Benzene
85-C-1-1	89.15955	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-1	89.15955	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-1	89.15955	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-1	89.15955	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-1	89.15955	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-1	89.15955	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-1	89.15955	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-1	89.15955	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-1	89.15955	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-1	89.15955	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-1	89.15955	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-1	89.15955	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-1	89.15955	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-1	89.15955	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-1	89.15955	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-1	89.15955	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-1	89.15955	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-1	89.15955	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-1	89.15955	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-1	89.15955	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-1	89.15955	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-1	89.15955	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-1	89.15955	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-1	89.15955	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-1	89.15955	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-1	89.15955	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-1	89.15955	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-1	89.15955	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-1	89.15955	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-1	89.15955	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-1	89.15955	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-1	89.15955	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-1	89.15955	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-1	89.15955	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-1	89.15955	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-1	89.15955	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-1	89.15955	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-1	89.15955	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-1	89.15955	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-1	89.15955	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-1	89.15955	1	99876	25.2	7.6 UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-1	89.15955	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-1	89.15955	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-1	89.15955	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-1	89.15955	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-1	89.15955	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-1	89.15955	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-1	89.15955	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-1	89.15955	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-1	89.15955	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-1	89.15955	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-1	89.15955	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-1	89.15955	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-1	89.15955	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-1	89.15955	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-1	89.15955	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-1	89.15955	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-1	89.15955	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-1	89.15955	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-1	89.15955	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-1	89.15955	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-1	89.15955	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-1	89.15955	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-2	89.15956	1	67641	< 20.		UG/KG	12/18/89		Acetone
85-C-1-2	89.15956	1	71432	< 10.		UG/KG	12/18/89		Benzene
85-C-1-2	89.15956	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-2	89.15956	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-2	89.15956	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-2	89.15956	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-2	89.15956	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-2	89.15956	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-2	89.15956	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-2	89.15956	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-2	89.15956	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-2	89.15956	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-2	89.15956	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-2	89.15956	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-2	89.15956	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-2	89.15956	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-2	89.15956	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-2	89.15956	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-2	89.15956	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-2	89.15956	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-2	89.15956	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-2	89.15956	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-2	89.15956	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-2	89.15956	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-2	89.15956	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-2	89.15956	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-2	89.15956	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-2	89.15956	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-2	89.15956	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-2	89.15956	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-2	89.15956	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-2	89.15956	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-2	89.15956	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-2	89.15956	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-2	89.15956	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-2	89.15956	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-2	89.15956	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-2	89.15956	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-2	89.15956	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-2	89.15956	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-2	89.15956	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-2	89.15956	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-2	89.15956	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-2	89.15956	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-2	89.15956	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-2	89.15956	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-2	89.15956	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-2	89.15956	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-2	89.15956	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-2	89.15956	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-2	89.15956	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-2	89.15956	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-2	89.15956	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-2	89.15956	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-2	89.15956	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-2	89.15956	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-2	89.15956	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-2	89.15956	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-2	89.15956	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-2	89.15956	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-2	89.15956	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-2	89.15956	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-2	89.15956	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-2	89.15956	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-2	89.15956	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-3	89.15957	1	67641	< 20.		UG/KG	12/18/89		Acetone
85-C-1-3	89.15957	1	71432	< 10.		UG/KG	12/18/89		Benzene
85-C-1-3	89.15957	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-3	89.15957	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-3	89.15957	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-3	89.15957	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-3	89.15957	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-3	89.15957	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-3	89.15957	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-3	89.15957	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-3	89.15957	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-3	89.15957	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-3	89.15957	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-3	89.15957	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-3	89.15957	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-3	89.15957	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-3	89.15957	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-3	89.15957	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-3	89.15957	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-3	89.15957	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-3	89.15957	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-3	89.15957	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-3	89.15957	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-3	89.15957	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-3	89.15957	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-3	89.15957	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-3	89.15957	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-3	89.15957	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-3	89.15957	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-3	89.15957	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-3	89.15957	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-3	89.15957	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-3	89.15957	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-3	89.15957	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-3	89.15957	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-3	89.15957	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-3	89.15957	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-3	89.15957	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-3	89.15957	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-3	89.15957	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-3	89.15957	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-3	89.15957	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-3	89.15957	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-3	89.15957	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-3	89.15957	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-3	89.15957	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-3	89.15957	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-3	89.15957	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-3	89.15957	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-3	89.15957	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-3	89.15957	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-3	89.15957	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-3	89.15957	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-3	89.15957	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-3	89.15957	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-3	89.15957	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-3	89.15957	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-3	89.15957	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-3	89.15957	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-3	89.15957	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-3	89.15957	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-3	89.15957	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-3	89.15957	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-3	89.15957	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-3	89.15957	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-4	89.15958	1	67641	113.	33.9	UG/KG	12/18/89		Acetone
85-C-1-4	89.15958	1	71432	17.8	5.3	UG/KG	12/18/89		Benzene
85-C-1-4	89.15958	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-4	89.15958	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-4	89.15958	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-4	89.15958	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-4	89.15958	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-4	89.15958	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-4	89.15958	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-4	89.15958	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-4	89.15958	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-4	89.15958	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-4	89.15958	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-4	89.15958	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-4	89.15958	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-4	89.15958	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-4	89.15958	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-4	89.15958	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-4	89.15958	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-4	89.15958	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-4	89.15958	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-4	89.15958	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-4	89.15958	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-4	89.15958	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-4	89.15958	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-4	89.15958	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-4	89.15958	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-4	89.15958	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-4	89.15958	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-4	89.15958	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-4	89.15958	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-4	89.15958	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-4	89.15958	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-4	89.15958	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-4	89.15958	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-4	89.15958	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-4	89.15958	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-4	89.15958	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-4	89.15958	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-4	89.15958	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-4	89.15958	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-4	89.15958	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-4	89.15958	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-4	89.15958	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-4	89.15958	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-4	89.15958	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-4	89.15958	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-4	89.15958	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-4	89.15958	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-4	89.15958	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-4	89.15958	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-4	89.15958	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-4	89.15958	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-4	89.15958	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-4	89.15958	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-4	89.15958	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-4	89.15958	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-4	89.15958	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-4	89.15958	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-4	89.15958	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-4	89.15958	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-4	89.15958	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-4	89.15958	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-4	89.15958	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-4	89.15958	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-5	89.15959	1	67641	65.1	19.5	UG/KG	12/18/89		Acetone
85-C-1-5	89.15959	1	71432	< 10.		UG/KG	12/18/89		Benzene
85-C-1-5	89.15959	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-5	89.15959	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-5	89.15959	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-5	89.15959	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-5	89.15959	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-5	89.15959	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-5	89.15959	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-5	89.15959	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-5	89.15959	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-5	89.15959	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-5	89.15959	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-5	89.15959	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-5	89.15959	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-5	89.15959	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-5	89.15959	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-5	89.15959	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-5	89.15959	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-5	89.15959	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-5	89.15959	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-5	89.15959	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-5	89.15959	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-5	89.15959	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-5	89.15959	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-5	89.15959	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-5	89.15959	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-5	89.15959	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-5	89.15959	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-5	89.15959	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-5	89.15959	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-5	89.15959	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-5	89.15959	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-5	89.15959	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-5	89.15959	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-5	89.15959	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-5	89.15959	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-5	89.15959	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-5	89.15959	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-5	89.15959	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-5	89.15959	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-5	89.15959	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-5	89.15959	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-5	89.15959	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-5	89.15959	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-5	89.15959	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-5	89.15959	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-5	89.15959	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-5	89.15959	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-5	89.15959	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-5	89.15959	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-5	89.15959	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-5	89.15959	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-5	89.15959	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-5	89.15959	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-5	89.15959	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-5	89.15959	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-5	89.15959	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-5	89.15959	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-5	89.15959	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-5	89.15959	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-5	89.15959	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-5	89.15959	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-5	89.15959	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-5	89.15959	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45
 OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-6	89.15960	1	67641	70.2	21.1	UG/KG	12/18/89		Acetone
85-C-1-6	89.15960	1	71432	14.9	4.5	UG/KG	12/18/89		Benzene
85-C-1-6	89.15960	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-6	89.15960	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-6	89.15960	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-6	89.15960	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-6	89.15960	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-6	89.15960	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-6	89.15960	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-6	89.15960	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-6	89.15960	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-6	89.15960	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-6	89.15960	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-6	89.15960	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-6	89.15960	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-6	89.15960	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-6	89.15960	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-6	89.15960	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-6	89.15960	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-6	89.15960	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-6	89.15960	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-6	89.15960	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-6	89.15960	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-6	89.15960	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-6	89.15960	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-6	89.15960	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-6	89.15960	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-6	89.15960	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-6	89.15960	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-6	89.15960	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-6	89.15960	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-6	89.15960	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-6	89.15960	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-6	89.15960	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-6	89.15960	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-6	89.15960	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-6	89.15960	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-6	89.15960	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-6	89.15960	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-6	89.15960	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-6	89.15960	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-6	89.15960	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-6	89.15960	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-6	89.15960	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-6	89.15960	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-6	89.15960	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-6	89.15960	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-6	89.15960	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-6	89.15960	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-6	89.15960	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-6	89.15960	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-6	89.15960	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-6	89.15960	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-6	89.15960	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-6	89.15960	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-6	89.15960	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-6	89.15960	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-6	89.15960	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-6	89.15960	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-6	89.15960	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-6	89.15960	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-6	89.15960	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-6	89.15960	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-6	89.15960	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-6	89.15960	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

 HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45
 OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-7	89.15961	1	67641	80.8	24.2	UG/KG	12/18/89		Acetone
85-C-1-7	89.15961	1	71432	< 10.		UG/KG	12/18/89		Benzene
85-C-1-7	89.15961	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-7	89.15961	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-7	89.15961	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-7	89.15961	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-7	89.15961	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-7	89.15961	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-7	89.15961	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-7	89.15961	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-7	89.15961	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-7	89.15961	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-7	89.15961	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-7	89.15961	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-7	89.15961	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-7	89.15961	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-7	89.15961	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-7	89.15961	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-7	89.15961	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-7	89.15961	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-7	89.15961	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-7	89.15961	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-7	89.15961	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-7	89.15961	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-7	89.15961	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-7	89.15961	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-7	89.15961	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-7	89.15961	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-7	89.15961	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-7	89.15961	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-7	89.15961	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-7	89.15961	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-7	89.15961	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-7	89.15961	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-7	89.15961	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-7	89.15961	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-7	89.15961	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-7	89.15961	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-7	89.15961	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-7	89.15961	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-7	89.15961	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-7	89.15961	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-7	89.15961	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-7	89.15961	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-7	89.15961	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-7	89.15961	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-7	89.15961	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-7	89.15961	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-7	89.15961	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-7	89.15961	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-7	89.15961	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-7	89.15961	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-7	89.15961	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-7	89.15961	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-7	89.15961	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-7	89.15961	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-7	89.15961	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-7	89.15961	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-7	89.15961	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-7	89.15961	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-7	89.15961	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-7	89.15961	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-7	89.15961	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-7	89.15961	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-7	89.15961	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-8	89.15962	1	67641	124.	37.2	UG/KG	12/18/89		Acetone
85-C-1-8	89.15962	1	71432	14.9	4.5	UG/KG	12/18/89		Benzene
85-C-1-8	89.15962	1	108861	< 10.		UG/KG	12/18/89		Bromobenzene
85-C-1-8	89.15962	1	74975	< 10.		UG/KG	12/18/89		Bromochloromethane
85-C-1-8	89.15962	1	75274	< 10.		UG/KG	12/18/89		Bromodichloromethane
85-C-1-8	89.15962	1	75252	< 10.		UG/KG	12/18/89		Bromoform
85-C-1-8	89.15962	1	74839	< 20.		UG/KG	12/18/89		Bromomethane
85-C-1-8	89.15962	1	78933	< 20.		UG/KG	12/18/89		2-Butanone
85-C-1-8	89.15962	1	104518	< 10.		UG/KG	12/18/89		n-Butylbenzene
85-C-1-8	89.15962	1	135988	< 10.		UG/KG	12/18/89		sec-Butylbenzene
85-C-1-8	89.15962	1	98066	< 10.		UG/KG	12/18/89		tert-Butylbenzene
85-C-1-8	89.15962	1	75150	< 10.		UG/KG	12/18/89		Carbon disulfide
85-C-1-8	89.15962	1	56235	< 10.		UG/KG	12/18/89		Carbon tetrachloride
85-C-1-8	89.15962	1	108907	< 10.		UG/KG	12/18/89		Chlorobenzene
85-C-1-8	89.15962	1	124481	< 10.		UG/KG	12/18/89		Chlorodibromomethane
85-C-1-8	89.15962	1	75003	< 20.		UG/KG	12/18/89		Chloroethane
85-C-1-8	89.15962	1	67663	< 10.		UG/KG	12/18/89		Chloroform
85-C-1-8	89.15962	1	74873	< 20.		UG/KG	12/18/89		Chloromethane
85-C-1-8	89.15962	1	106434	< 10.		UG/KG	12/18/89		p-Chlorotoluene
85-C-1-8	89.15962	1	95498	< 10.		UG/KG	12/18/89		o-Chlorotoluene
85-C-1-8	89.15962	1	96128	< 10.		UG/KG	12/18/89		1,2-Dibromo-3-chloropropane
85-C-1-8	89.15962	1	106934	< 10.		UG/KG	12/18/89		1,2-Dibromoethane
85-C-1-8	89.15962	1	74953	< 10.		UG/KG	12/18/89		Dibromomethane
85-C-1-8	89.15962	1	95501	< 10.		UG/KG	12/18/89		o-Dichlorobenzene (1,2)
85-C-1-8	89.15962	1	541731	< 10.		UG/KG	12/18/89		m-Dichlorobenzene (1,3)

85-C-1-8	89.15962	1	106467	< 10.	UG/KG	12/18/89	p-Dichlorobenzene (1,4)
85-C-1-8	89.15962	1	107062	< 10.	UG/KG	12/18/89	1,2-Dichloroethane
85-C-1-8	89.15962	1	75343	< 10.	UG/KG	12/18/89	1,1-Dichloroethane
85-C-1-8	89.15962	1	75354	< 10.	UG/KG	12/18/89	1,1-Dichloroethene
85-C-1-8	89.15962	1	156605	< 10.	UG/KG	12/18/89	trans-1,2-Dichloroethene
85-C-1-8	89.15962	1	156592	< 10.	UG/KG	12/18/89	cis-1,2-Dichloroethylene
85-C-1-8	89.15962	1	78875	< 10.	UG/KG	12/18/89	1,2-Dichloropropane
85-C-1-8	89.15962	1	594207	< 10.	UG/KG	12/18/89	2,2-Dichloropropane
85-C-1-8	89.15962	1	142289	< 10.	UG/KG	12/18/89	1,3-Dichloropropane
85-C-1-8	89.15962	1	10061015	< 10.	UG/KG	12/18/89	cis-1,3-Dichloropropene
85-C-1-8	89.15962	1	10061026	< 20.	UG/KG	12/18/89	trans-1,3-Dichloropropene
85-C-1-8	89.15962	1	563586	< 10.	UG/KG	12/18/89	1,1-Dichloropropene
85-C-1-8	89.15962	1	100414	< 10.	UG/KG	12/18/89	Ethylbenzene
85-C-1-8	89.15962	1	107062	< 10.	UG/KG	12/18/89	Ethylene chloride
85-C-1-8	89.15962	1	87683	< 10.	UG/KG	12/18/89	Hexachlorobutadiene
85-C-1-8	89.15962	1	591786	< 20.	UG/KG	12/18/89	2-Hexanone
85-C-1-8	89.15962	1	98828	< 10.	UG/KG	12/18/89	Isopropylbenzene
85-C-1-8	89.15962	1	99876	< 10.	UG/KG	12/18/89	4-Isopropyltoluene
85-C-1-8	89.15962	1	108101	< 20.	UG/KG	12/18/89	4-Methyl-2-pentanone
85-C-1-8	89.15962	1	75092	< 10.	UG/KG	12/18/89	Methylene chloride
85-C-1-8	89.15962	1	91203	< 10.	UG/KG	12/18/89	Naphthalene
85-C-1-8	89.15962	1	103651	< 10.	UG/KG	12/18/89	Propylbenzene
85-C-1-8	89.15962	1	100425	< 10.	UG/KG	12/18/89	Styrene
85-C-1-8	89.15962	1	79345	< 10.	UG/KG	12/18/89	1,1,2,2-Tetrachloroethane
85-C-1-8	89.15962	1	630206	< 10.	UG/KG	12/18/89	1,1,1,2-Tetrachloroethane
85-C-1-8	89.15962	1	127184	< 10.	UG/KG	12/18/89	Tetrachloroethylene
85-C-1-8	89.15962	1	108883	< 10.	UG/KG	12/18/89	Toluene
85-C-1-8	89.15962	1	120821	< 10.	UG/KG	12/18/89	1,2,4-Trichlorobenzene
85-C-1-8	89.15962	1	87616	< 10.	UG/KG	12/18/89	1,2,3-Trichlorobenzene
85-C-1-8	89.15962	1	71556	< 10.	UG/KG	12/18/89	1,1,1-Trichloroethane
85-C-1-8	89.15962	1	79005	< 10.	UG/KG	12/18/89	1,1,2-Trichloroethane
85-C-1-8	89.15962	1	79016	< 10.	UG/KG	12/18/89	Trichloroethene
85-C-1-8	89.15962	1	75694	< 10.	UG/KG	12/18/89	Trichlorofluoromethane
85-C-1-8	89.15962	1	96184	< 10.	UG/KG	12/18/89	1,2,3-Trichloropropane
85-C-1-8	89.15962	1	95636	< 10.	UG/KG	12/18/89	1,2,4-Trimethylbenzene
85-C-1-8	89.15962	1	108678	< 10.	UG/KG	12/18/89	1,3,5-Trimethylbenzene
85-C-1-8	89.15962	1	108054	< 10.	UG/KG	12/18/89	Vinyl acetate
85-C-1-8	89.15962	1	75014	< 20.	UG/KG	12/18/89	Vinyl chloride
85-C-1-8	89.15962	1	95476	< 10.	UG/KG	12/18/89	o-Xylene
85-C-1-8	89.15962	1	1330207	< 10.	UG/KG	12/18/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-2-9	89.15963	1	67641	54.3	16.3	UG/KG	12/19/89		Acetone
85-C-2-9	89.15963	1	71432	< 10.		UG/KG	12/19/89		Benzene
85-C-2-9	89.15963	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85-C-2-9	89.15963	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85-C-2-9	89.15963	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85-C-2-9	89.15963	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85-C-2-9	89.15963	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85-C-2-9	89.15963	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85-C-2-9	89.15963	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85-C-2-9	89.15963	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85-C-2-9	89.15963	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85-C-2-9	89.15963	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85-C-2-9	89.15963	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85-C-2-9	89.15963	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85-C-2-9	89.15963	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85-C-2-9	89.15963	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85-C-2-9	89.15963	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85-C-2-9	89.15963	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85-C-2-9	89.15963	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85-C-2-9	89.15963	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85-C-2-9	89.15963	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85-C-2-9	89.15963	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85-C-2-9	89.15963	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85-C-2-9	89.15963	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85-C-2-9	89.15963	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85-C-2-9	89.15963	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-C-2-9	89.15963	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85-C-2-9	89.15963	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85-C-2-9	89.15963	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85-C-2-9	89.15963	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85-C-2-9	89.15963	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85-C-2-9	89.15963	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85-C-2-9	89.15963	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85-C-2-9	89.15963	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85-C-2-9	89.15963	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85-C-2-9	89.15963	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85-C-2-9	89.15963	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85-C-2-9	89.15963	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85-C-2-9	89.15963	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85-C-2-9	89.15963	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85-C-2-9	89.15963	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85-C-2-9	89.15963	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85-C-2-9	89.15963	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85-C-2-9	89.15963	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85-C-2-9	89.15963	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85-C-2-9	89.15963	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85-C-2-9	89.15963	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85-C-2-9	89.15963	1	100425	< 10.	UG/KG	12/19/89	Styrene
85-C-2-9	89.15963	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85-C-2-9	89.15963	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85-C-2-9	89.15963	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85-C-2-9	89.15963	1	108883	< 10.	UG/KG	12/19/89	Toluene
85-C-2-9	89.15963	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85-C-2-9	89.15963	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85-C-2-9	89.15963	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85-C-2-9	89.15963	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85-C-2-9	89.15963	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85-C-2-9	89.15963	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85-C-2-9	89.15963	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85-C-2-9	89.15963	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85-C-2-9	89.15963	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85-C-2-9	89.15963	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85-C-2-9	89.15963	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85-C-2-9	89.15963	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85-C-2-9	89.15963	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-2-10	89.15964	1	67641	29.1	8.7	UG/KG	12/19/89		Acetone
85-C-2-10	89.15964	1	71432	< 10.		UG/KG	12/19/89		Benzene
85-C-2-10	89.15964	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85-C-2-10	89.15964	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85-C-2-10	89.15964	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85-C-2-10	89.15964	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85-C-2-10	89.15964	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85-C-2-10	89.15964	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85-C-2-10	89.15964	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85-C-2-10	89.15964	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85-C-2-10	89.15964	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85-C-2-10	89.15964	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85-C-2-10	89.15964	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85-C-2-10	89.15964	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85-C-2-10	89.15964	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85-C-2-10	89.15964	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85-C-2-10	89.15964	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85-C-2-10	89.15964	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85-C-2-10	89.15964	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85-C-2-10	89.15964	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85-C-2-10	89.15964	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85-C-2-10	89.15964	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85-C-2-10	89.15964	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85-C-2-10	89.15964	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85-C-2-10	89.15964	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85-C-2-10	89.15964	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-C-2-10	89.15964	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85-C-2-10	89.15964	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85-C-2-10	89.15964	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85-C-2-10	89.15964	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85-C-2-10	89.15964	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85-C-2-10	89.15964	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85-C-2-10	89.15964	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85-C-2-10	89.15964	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85-C-2-10	89.15964	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85-C-2-10	89.15964	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85-C-2-10	89.15964	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85-C-2-10	89.15964	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85-C-2-10	89.15964	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85-C-2-10	89.15964	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85-C-2-10	89.15964	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85-C-2-10	89.15964	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85-C-2-10	89.15964	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85-C-2-10	89.15964	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85-C-2-10	89.15964	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85-C-2-10	89.15964	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85-C-2-10	89.15964	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85-C-2-10	89.15964	1	100425	< 10.	UG/KG	12/19/89	Styrene
85-C-2-10	89.15964	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85-C-2-10	89.15964	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85-C-2-10	89.15964	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85-C-2-10	89.15964	1	108883	< 10.	UG/KG	12/19/89	Toluene
85-C-2-10	89.15964	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85-C-2-10	89.15964	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85-C-2-10	89.15964	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85-C-2-10	89.15964	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85-C-2-10	89.15964	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85-C-2-10	89.15964	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85-C-2-10	89.15964	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85-C-2-10	89.15964	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85-C-2-10	89.15964	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85-C-2-10	89.15964	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85-C-2-10	89.15964	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85-C-2-10	89.15964	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85-C-2-10	89.15964	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-2-11	89.15965	1	67641	180.	54.	UG/KG	12/19/89		Acetone
85-C-2-11	89.15965	1	71432	16.2	4.9	UG/KG	12/19/89		Benzene
85-C-2-11	89.15965	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85-C-2-11	89.15965	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85-C-2-11	89.15965	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85-C-2-11	89.15965	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85-C-2-11	89.15965	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85-C-2-11	89.15965	1	78933	17.9	5.4	UG/KG	12/19/89		2-Butanone
85-C-2-11	89.15965	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85-C-2-11	89.15965	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85-C-2-11	89.15965	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85-C-2-11	89.15965	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85-C-2-11	89.15965	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85-C-2-11	89.15965	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85-C-2-11	89.15965	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85-C-2-11	89.15965	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85-C-2-11	89.15965	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85-C-2-11	89.15965	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85-C-2-11	89.15965	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85-C-2-11	89.15965	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85-C-2-11	89.15965	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85-C-2-11	89.15965	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85-C-2-11	89.15965	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85-C-2-11	89.15965	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85-C-2-11	89.15965	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85-C-2-11	89.15965	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-C-2-11	89.15965	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85-C-2-11	89.15965	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85-C-2-11	89.15965	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85-C-2-11	89.15965	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85-C-2-11	89.15965	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85-C-2-11	89.15965	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85-C-2-11	89.15965	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85-C-2-11	89.15965	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85-C-2-11	89.15965	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85-C-2-11	89.15965	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85-C-2-11	89.15965	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85-C-2-11	89.15965	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85-C-2-11	89.15965	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85-C-2-11	89.15965	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85-C-2-11	89.15965	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85-C-2-11	89.15965	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85-C-2-11	89.15965	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85-C-2-11	89.15965	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85-C-2-11	89.15965	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85-C-2-11	89.15965	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85-C-2-11	89.15965	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85-C-2-11	89.15965	1	100425	< 10.	UG/KG	12/19/89	Styrene
85-C-2-11	89.15965	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85-C-2-11	89.15965	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85-C-2-11	89.15965	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85-C-2-11	89.15965	1	109999	TI	UG/KG	12/19/89	Tetrahydrofuran
85-C-2-11	89.15965	1	108883	< 10.	UG/KG	12/19/89	Toluene
85-C-2-11	89.15965	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85-C-2-11	89.15965	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85-C-2-11	89.15965	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85-C-2-11	89.15965	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85-C-2-11	89.15965	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85-C-2-11	89.15965	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85-C-2-11	89.15965	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85-C-2-11	89.15965	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85-C-2-11	89.15965	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85-C-2-11	89.15965	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85-C-2-11	89.15965	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85-C-2-11	89.15965	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85-C-2-11	89.15965	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-2-12	89.15966	1	67641	175.	52.5	UG/KG	12/19/89		Acetone
85-C-2-12	89.15966	1	71432	< 10.		UG/KG	12/19/89		Benzene
85-C-2-12	89.15966	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85-C-2-12	89.15966	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85-C-2-12	89.15966	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85-C-2-12	89.15966	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85-C-2-12	89.15966	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85-C-2-12	89.15966	1	78933	29.7	8.9	UG/KG	12/19/89		2-Butanone
85-C-2-12	89.15966	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85-C-2-12	89.15966	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85-C-2-12	89.15966	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85-C-2-12	89.15966	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85-C-2-12	89.15966	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85-C-2-12	89.15966	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85-C-2-12	89.15966	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85-C-2-12	89.15966	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85-C-2-12	89.15966	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85-C-2-12	89.15966	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85-C-2-12	89.15966	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85-C-2-12	89.15966	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85-C-2-12	89.15966	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85-C-2-12	89.15966	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85-C-2-12	89.15966	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85-C-2-12	89.15966	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85-C-2-12	89.15966	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85-C-2-12	89.15966	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-C-2-12	89.15966	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85-C-2-12	89.15966	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85-C-2-12	89.15966	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85-C-2-12	89.15966	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85-C-2-12	89.15966	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85-C-2-12	89.15966	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85-C-2-12	89.15966	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85-C-2-12	89.15966	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85-C-2-12	89.15966	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85-C-2-12	89.15966	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85-C-2-12	89.15966	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85-C-2-12	89.15966	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85-C-2-12	89.15966	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85-C-2-12	89.15966	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85-C-2-12	89.15966	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85-C-2-12	89.15966	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85-C-2-12	89.15966	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85-C-2-12	89.15966	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85-C-2-12	89.15966	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85-C-2-12	89.15966	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85-C-2-12	89.15966	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85-C-2-12	89.15966	1	100425	< 10.	UG/KG	12/19/89	Styrene
85-C-2-12	89.15966	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85-C-2-12	89.15966	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85-C-2-12	89.15966	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85-C-2-12	89.15966	1	108883	< 10.	UG/KG	12/19/89	Toluene
85-C-2-12	89.15966	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85-C-2-12	89.15966	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85-C-2-12	89.15966	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85-C-2-12	89.15966	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85-C-2-12	89.15966	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85-C-2-12	89.15966	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85-C-2-12	89.15966	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85-C-2-12	89.15966	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85-C-2-12	89.15966	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85-C-2-12	89.15966	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85-C-2-12	89.15966	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85-C-2-12	89.15966	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85-C-2-12	89.15966	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C2-13	89.15967	1	67641	153.	45.9	UG/KG	12/19/89		Acetone
85C2-13	89.15967	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C2-13	89.15967	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C2-13	89.15967	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C2-13	89.15967	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C2-13	89.15967	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C2-13	89.15967	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C2-13	89.15967	1	78933	40.8	12.2	UG/KG	12/19/89		2-Butanone
85C2-13	89.15967	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C2-13	89.15967	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C2-13	89.15967	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C2-13	89.15967	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C2-13	89.15967	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C2-13	89.15967	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C2-13	89.15967	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C2-13	89.15967	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C2-13	89.15967	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C2-13	89.15967	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C2-13	89.15967	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C2-13	89.15967	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C2-13	89.15967	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C2-13	89.15967	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C2-13	89.15967	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C2-13	89.15967	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C2-13	89.15967	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C2-13	89.15967	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C2-13	89.15967	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C2-13	89.15967	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C2-13	89.15967	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C2-13	89.15967	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C2-13	89.15967	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C2-13	89.15967	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C2-13	89.15967	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C2-13	89.15967	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C2-13	89.15967	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C2-13	89.15967	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C2-13	89.15967	1	10061026	< 10.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C2-13	89.15967	1	762629	TI	UG/KG	12/19/89	4,4-Dimethyl-1-pentene
85C2-13	89.15967	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C2-13	89.15967	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C2-13	89.15967	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C2-13	89.15967	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C2-13	89.15967	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C2-13	89.15967	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C2-13	89.15967	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C2-13	89.15967	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C2-13	89.15967	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C2-13	89.15967	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C2-13	89.15967	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C2-13	89.15967	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C2-13	89.15967	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C2-13	89.15967	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C2-13	89.15967	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C2-13	89.15967	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C2-13	89.15967	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C2-13	89.15967	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C2-13	89.15967	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C2-13	89.15967	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C2-13	89.15967	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C2-13	89.15967	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C2-13	89.15967	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C2-13	89.15967	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C2-13	89.15967	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C2-13	89.15967	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C2-13	89.15967	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C2-13	89.15967	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C2-14	89.15968	1	67641	< 20.		UG/KG	12/19/89		Acetone
85C2-14	89.15968	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C2-14	89.15968	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C2-14	89.15968	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C2-14	89.15968	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C2-14	89.15968	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C2-14	89.15968	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C2-14	89.15968	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C2-14	89.15968	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C2-14	89.15968	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C2-14	89.15968	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C2-14	89.15968	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C2-14	89.15968	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C2-14	89.15968	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C2-14	89.15968	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C2-14	89.15968	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C2-14	89.15968	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C2-14	89.15968	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C2-14	89.15968	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C2-14	89.15968	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C2-14	89.15968	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C2-14	89.15968	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C2-14	89.15968	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C2-14	89.15968	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C2-14	89.15968	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C2-14	89.15968	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C2-14	89.15968	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C2-14	89.15968	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C2-14	89.15968	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C2-14	89.15968	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C2-14	89.15968	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C2-14	89.15968	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C2-14	89.15968	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C2-14	89.15968	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C2-14	89.15968	1	10061026	< 10.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C2-14	89.15968	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C2-14	89.15968	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C2-14	89.15968	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C2-14	89.15968	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C2-14	89.15968	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C2-14	89.15968	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C2-14	89.15968	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C2-14	89.15968	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C2-14	89.15968	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C2-14	89.15968	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C2-14	89.15968	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C2-14	89.15968	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C2-14	89.15968	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C2-14	89.15968	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C2-14	89.15968	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C2-14	89.15968	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C2-14	89.15968	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C2-14	89.15968	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C2-14	89.15968	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C2-14	89.15968	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C2-14	89.15968	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C2-14	89.15968	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C2-14	89.15968	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C2-14	89.15968	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C2-14	89.15968	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C2-14	89.15968	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C2-14	89.15968	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C2-14	89.15968	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C2-14	89.15968	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C2-14	89.15968	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C2-15	89.15969	1	67641	196.	59.	UG/KG	12/19/89		Acetone
85C2-15	89.15969	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C2-15	89.15969	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C2-15	89.15969	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C2-15	89.15969	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C2-15	89.15969	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C2-15	89.15969	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C2-15	89.15969	1	78933	27.8	8.3	UG/KG	12/19/89		2-Butanone
85C2-15	89.15969	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C2-15	89.15969	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C2-15	89.15969	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C2-15	89.15969	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C2-15	89.15969	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C2-15	89.15969	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C2-15	89.15969	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C2-15	89.15969	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C2-15	89.15969	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C2-15	89.15969	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C2-15	89.15969	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C2-15	89.15969	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C2-15	89.15969	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C2-15	89.15969	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C2-15	89.15969	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C2-15	89.15969	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C2-15	89.15969	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C2-15	89.15969	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C2-15	89.15969	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C2-15	89.15969	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C2-15	89.15969	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C2-15	89.15969	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C2-15	89.15969	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C2-15	89.15969	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C2-15	89.15969	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C2-15	89.15969	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C2-15	89.15969	1	10061026	< 10.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C2-15	89.15969	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C2-15	89.15969	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C2-15	89.15969	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C2-15	89.15969	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C2-15	89.15969	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C2-15	89.15969	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C2-15	89.15969	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C2-15	89.15969	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C2-15	89.15969	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C2-15	89.15969	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C2-15	89.15969	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C2-15	89.15969	1	10599754	TI	UG/KG	12/19/89	n-Pentylidene-methanamine
85C2-15	89.15969	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C2-15	89.15969	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C2-15	89.15969	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C2-15	89.15969	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C2-15	89.15969	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C2-15	89.15969	1	109999	TI	UG/KG	12/19/89	Tetrahydrofuran
85C2-15	89.15969	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C2-15	89.15969	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C2-15	89.15969	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C2-15	89.15969	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C2-15	89.15969	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C2-15	89.15969	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C2-15	89.15969	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C2-15	89.15969	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C2-15	89.15969	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C2-15	89.15969	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C2-15	89.15969	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C2-15	89.15969	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C2-15	89.15969	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C2-15	89.15969	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C2-16	89.15970	1	67641	107.	32.1	UG/KG	12/19/89		Acetone
85C2-16	89.15970	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C2-16	89.15970	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C2-16	89.15970	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C2-16	89.15970	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C2-16	89.15970	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C2-16	89.15970	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C2-16	89.15970	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C2-16	89.15970	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C2-16	89.15970	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C2-16	89.15970	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C2-16	89.15970	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C2-16	89.15970	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C2-16	89.15970	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C2-16	89.15970	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C2-16	89.15970	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C2-16	89.15970	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C2-16	89.15970	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C2-16	89.15970	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C2-16	89.15970	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C2-16	89.15970	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C2-16	89.15970	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C2-16	89.15970	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C2-16	89.15970	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C2-16	89.15970	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C2-16	89.15970	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C2-16	89.15970	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C2-16	89.15970	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C2-16	89.15970	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C2-16	89.15970	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C2-16	89.15970	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C2-16	89.15970	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C2-16	89.15970	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C2-16	89.15970	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C2-16	89.15970	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C2-16	89.15970	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C2-16	89.15970	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C2-16	89.15970	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C2-16	89.15970	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C2-16	89.15970	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C2-16	89.15970	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C2-16	89.15970	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C2-16	89.15970	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C2-16	89.15970	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C2-16	89.15970	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C2-16	89.15970	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C2-16	89.15970	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C2-16	89.15970	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C2-16	89.15970	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C2-16	89.15970	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C2-16	89.15970	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C2-16	89.15970	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C2-16	89.15970	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C2-16	89.15970	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C2-16	89.15970	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C2-16	89.15970	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C2-16	89.15970	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C2-16	89.15970	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C2-16	89.15970	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C2-16	89.15970	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C2-16	89.15970	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C2-16	89.15970	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C2-16	89.15970	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C2-16	89.15970	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C2-16	89.15970	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45
 OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C2-17	89.15971	1	67641	67.8	20.3	UG/KG	12/19/89		Acetone
85C2-17	89.15971	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C2-17	89.15971	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C2-17	89.15971	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C2-17	89.15971	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C2-17	89.15971	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C2-17	89.15971	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C2-17	89.15971	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C2-17	89.15971	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C2-17	89.15971	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C2-17	89.15971	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C2-17	89.15971	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C2-17	89.15971	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C2-17	89.15971	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C2-17	89.15971	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C2-17	89.15971	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C2-17	89.15971	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C2-17	89.15971	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C2-17	89.15971	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C2-17	89.15971	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C2-17	89.15971	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C2-17	89.15971	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C2-17	89.15971	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C2-17	89.15971	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C2-17	89.15971	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C2-17	89.15971	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C2-17	89.15971	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C2-17	89.15971	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C2-17	89.15971	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C2-17	89.15971	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C2-17	89.15971	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C2-17	89.15971	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C2-17	89.15971	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C2-17	89.15971	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C2-17	89.15971	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C2-17	89.15971	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C2-17	89.15971	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C2-17	89.15971	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C2-17	89.15971	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C2-17	89.15971	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C2-17	89.15971	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C2-17	89.15971	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C2-17	89.15971	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C2-17	89.15971	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C2-17	89.15971	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C2-17	89.15971	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C2-17	89.15971	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C2-17	89.15971	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C2-17	89.15971	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C2-17	89.15971	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C2-17	89.15971	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C2-17	89.15971	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C2-17	89.15971	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C2-17	89.15971	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C2-17	89.15971	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C2-17	89.15971	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C2-17	89.15971	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C2-17	89.15971	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C2-17	89.15971	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C2-17	89.15971	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C2-17	89.15971	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C2-17	89.15971	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C2-17	89.15971	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C2-17	89.15971	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C2-17	89.15971	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C2-18	89.15972	1	67641	< 20.		UG/KG	12/19/89		Acetone
85C2-18	89.15972	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C2-18	89.15972	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C2-18	89.15972	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C2-18	89.15972	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C2-18	89.15972	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C2-18	89.15972	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C2-18	89.15972	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C2-18	89.15972	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C2-18	89.15972	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C2-18	89.15972	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C2-18	89.15972	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C2-18	89.15972	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C2-18	89.15972	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C2-18	89.15972	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C2-18	89.15972	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C2-18	89.15972	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C2-18	89.15972	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C2-18	89.15972	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C2-18	89.15972	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C2-18	89.15972	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C2-18	89.15972	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C2-18	89.15972	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C2-18	89.15972	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C2-18	89.15972	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C2-18	89.15972	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C2-18	89.15972	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C2-18	89.15972	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C2-18	89.15972	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C2-18	89.15972	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C2-18	89.15972	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C2-18	89.15972	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C2-18	89.15972	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C2-18	89.15972	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C2-18	89.15972	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C2-18	89.15972	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C2-18	89.15972	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C2-18	89.15972	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C2-18	89.15972	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C2-18	89.15972	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C2-18	89.15972	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C2-18	89.15972	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C2-18	89.15972	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C2-18	89.15972	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C2-18	89.15972	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C2-18	89.15972	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C2-18	89.15972	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C2-18	89.15972	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C2-18	89.15972	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C2-18	89.15972	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C2-18	89.15972	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C2-18	89.15972	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C2-18	89.15972	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C2-18	89.15972	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C2-18	89.15972	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C2-18	89.15972	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C2-18	89.15972	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C2-18	89.15972	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C2-18	89.15972	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C2-18	89.15972	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C2-18	89.15972	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C2-18	89.15972	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C2-18	89.15972	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C2-18	89.15972	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C2-18	89.15972	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C3-19	89.15973	1	67641	248.	74.4	UG/KG	12/19/89		Acetone
85C3-19	89.15973	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C3-19	89.15973	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C3-19	89.15973	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C3-19	89.15973	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C3-19	89.15973	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C3-19	89.15973	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C3-19	89.15973	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C3-19	89.15973	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C3-19	89.15973	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C3-19	89.15973	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C3-19	89.15973	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C3-19	89.15973	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C3-19	89.15973	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C3-19	89.15973	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C3-19	89.15973	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C3-19	89.15973	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C3-19	89.15973	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C3-19	89.15973	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C3-19	89.15973	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C3-19	89.15973	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C3-19	89.15973	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C3-19	89.15973	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C3-19	89.15973	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C3-19	89.15973	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C3-19	89.15973	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C3-19	89.15973	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C3-19	89.15973	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C3-19	89.15973	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C3-19	89.15973	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C3-19	89.15973	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C3-19	89.15973	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C3-19	89.15973	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C3-19	89.15973	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C3-19	89.15973	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C3-19	89.15973	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C3-19	89.15973	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C3-19	89.15973	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C3-19	89.15973	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C3-19	89.15973	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C3-19	89.15973	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C3-19	89.15973	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C3-19	89.15973	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C3-19	89.15973	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C3-19	89.15973	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C3-19	89.15973	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C3-19	89.15973	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C3-19	89.15973	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C3-19	89.15973	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C3-19	89.15973	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C3-19	89.15973	1	127184	160.	48. UG/KG	12/19/89	Tetrachloroethylene
85C3-19	89.15973	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C3-19	89.15973	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C3-19	89.15973	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C3-19	89.15973	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C3-19	89.15973	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C3-19	89.15973	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C3-19	89.15973	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C3-19	89.15973	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C3-19	89.15973	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C3-19	89.15973	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C3-19	89.15973	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C3-19	89.15973	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C3-19	89.15973	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C3-19	89.15973	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C3-20	89.15974	1	67641	101.	30.3	UG/KG	12/19/89		Acetone
85C3-20	89.15974	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C3-20	89.15974	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C3-20	89.15974	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C3-20	89.15974	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C3-20	89.15974	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C3-20	89.15974	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C3-20	89.15974	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C3-20	89.15974	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C3-20	89.15974	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C3-20	89.15974	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C3-20	89.15974	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C3-20	89.15974	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C3-20	89.15974	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C3-20	89.15974	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C3-20	89.15974	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C3-20	89.15974	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C3-20	89.15974	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C3-20	89.15974	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C3-20	89.15974	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C3-20	89.15974	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C3-20	89.15974	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C3-20	89.15974	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C3-20	89.15974	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C3-20	89.15974	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C3-20	89.15974	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C3-20	89.15974	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C3-20	89.15974	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C3-20	89.15974	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C3-20	89.15974	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C3-20	89.15974	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C3-20	89.15974	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C3-20	89.15974	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C3-20	89.15974	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C3-20	89.15974	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C3-20	89.15974	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C3-20	89.15974	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C3-20	89.15974	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C3-20	89.15974	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C3-20	89.15974	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C3-20	89.15974	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C3-20	89.15974	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C3-20	89.15974	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C3-20	89.15974	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C3-20	89.15974	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C3-20	89.15974	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C3-20	89.15974	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C3-20	89.15974	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C3-20	89.15974	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C3-20	89.15974	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C3-20	89.15974	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C3-20	89.15974	1	109999	TI	UG/KG	12/19/89	Tetrahydrofuran
85C3-20	89.15974	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C3-20	89.15974	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C3-20	89.15974	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C3-20	89.15974	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C3-20	89.15974	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C3-20	89.15974	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C3-20	89.15974	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C3-20	89.15974	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C3-20	89.15974	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C3-20	89.15974	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C3-20	89.15974	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C3-20	89.15974	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C3-20	89.15974	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C3-20	89.15974	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C3-21	89.15975	1	67641	136.	40.8	UG/KG	1/04/90		Acetone
85C3-21	89.15975	1	71432	< 10.		UG/KG	1/04/90		Benzene
85C3-21	89.15975	1	108861	< 10.		UG/KG	1/04/90		Bromobenzene
85C3-21	89.15975	1	74975	< 10.		UG/KG	1/04/90		Bromochloromethane
85C3-21	89.15975	1	75274	< 10.		UG/KG	1/04/90		Bromodichloromethane
85C3-21	89.15975	1	75252	< 10.		UG/KG	1/04/90		Bromoform
85C3-21	89.15975	1	74839	< 20.		UG/KG	1/04/90		Bromomethane
85C3-21	89.15975	1	78933	< 20.		UG/KG	1/04/90		2-Butanone
85C3-21	89.15975	1	104518	< 10.		UG/KG	1/04/90		n-Butylbenzene
85C3-21	89.15975	1	135988	< 10.		UG/KG	1/04/90		sec-Butylbenzene
85C3-21	89.15975	1	98066	< 10.		UG/KG	1/04/90		tert-Butylbenzene
85C3-21	89.15975	1	75150	< 10.		UG/KG	1/04/90		Carbon disulfide
85C3-21	89.15975	1	56235	< 10.		UG/KG	1/04/90		Carbon tetrachloride
85C3-21	89.15975	1	108907	< 10.		UG/KG	1/04/90		Chlorobenzene
85C3-21	89.15975	1	124481	< 10.		UG/KG	1/04/90		Chlorodibromomethane
85C3-21	89.15975	1	75003	< 20.		UG/KG	1/04/90		Chloroethane
85C3-21	89.15975	1	67663	< 10.		UG/KG	1/04/90		Chloroform
85C3-21	89.15975	1	74873	< 20.		UG/KG	1/04/90		Chloromethane
85C3-21	89.15975	1	106434	< 10.		UG/KG	1/04/90		p-Chlorotoluene
85C3-21	89.15975	1	95498	< 10.		UG/KG	1/04/90		o-Chlorotoluene
85C3-21	89.15975	1	96128	< 10.		UG/KG	1/04/90		1,2-Dibromo-3-chloropropane
85C3-21	89.15975	1	106934	< 10.		UG/KG	1/04/90		1,2-Dibromoethane
85C3-21	89.15975	1	74953	< 10.		UG/KG	1/04/90		Dibromomethane
85C3-21	89.15975	1	95501	< 10.		UG/KG	1/04/90		o-Dichlorobenzene (1,2)
85C3-21	89.15975	1	541731	< 10.		UG/KG	1/04/90		m-Dichlorobenzene (1,3)

85C3-21	89.15975	1	106467	< 10.	UG/KG	1/04/90	p-Dichlorobenzene (1,4)
85C3-21	89.15975	1	75343	< 10.	UG/KG	1/04/90	1,1-Dichloroethane
85C3-21	89.15975	1	107062	< 10.	UG/KG	1/04/90	1,2-Dichloroethane
85C3-21	89.15975	1	75354	< 10.	UG/KG	1/04/90	1,1-Dichloroethene
85C3-21	89.15975	1	156605	< 10.	UG/KG	1/04/90	trans-1,2-Dichloroethene
85C3-21	89.15975	1	156592	< 10.	UG/KG	1/04/90	cis-1,2-Dichloroethylene
85C3-21	89.15975	1	78875	< 10.	UG/KG	1/04/90	1,2-Dichloropropane
85C3-21	89.15975	1	142289	< 10.	UG/KG	1/04/90	1,3-Dichloropropane
85C3-21	89.15975	1	594207	< 20.	UG/KG	1/04/90	2,2-Dichloropropane
85C3-21	89.15975	1	10061026	< 10.	UG/KG	1/04/90	trans-1,3-Dichloropropene
85C3-21	89.15975	1	563586	< 10.	UG/KG	1/04/90	1,1-Dichloropropene
85C3-21	89.15975	1	10061015	< 10.	UG/KG	1/04/90	cis-1,3-Dichloropropene
85C3-21	89.15975	1	100414	< 10.	UG/KG	1/04/90	Ethylbenzene
85C3-21	89.15975	1	107062	< 10.	UG/KG	1/04/90	Ethylene chloride
85C3-21	89.15975	1	87683	< 10.	UG/KG	1/04/90	Hexachlorobutadiene
85C3-21	89.15975	1	591786	< 20.	UG/KG	1/04/90	2-Hexanone
85C3-21	89.15975	1	98828	< 10.	UG/KG	1/04/90	Isopropylbenzene
85C3-21	89.15975	1	99876	< 10.	UG/KG	1/04/90	4-Isopropyltoluene
85C3-21	89.15975	1	108101	< 20.	UG/KG	1/04/90	4-Methyl-2-pentanone
85C3-21	89.15975	1	75092	< 10.	UG/KG	1/04/90	Methylene chloride
85C3-21	89.15975	1	91203	< 10.	UG/KG	1/04/90	Naphthalene
85C3-21	89.15975	1	103651	< 10.	UG/KG	1/04/90	Propylbenzene
85C3-21	89.15975	1	100425	< 10.	UG/KG	1/04/90	Styrene
85C3-21	89.15975	1	79345	< 10.	UG/KG	1/04/90	1,1,2,2-Tetrachloroethane
85C3-21	89.15975	1	630206	< 10.	UG/KG	1/04/90	1,1,1,2-Tetrachloroethane
85C3-21	89.15975	1	127184	< 10.	UG/KG	1/04/90	Tetrachloroethylene
85C3-21	89.15975	1	109999	TI	UG/KG	12/19/89	Tetrahydrofuran
85C3-21	89.15975	1	108883	< 10.	UG/KG	1/04/90	Toluene
85C3-21	89.15975	1	87616	< 10.	UG/KG	1/04/90	1,2,3-Trichlorobenzene
85C3-21	89.15975	1	120821	< 10.	UG/KG	1/04/90	1,2,4-Trichlorobenzene
85C3-21	89.15975	1	71556	< 10.	UG/KG	1/04/90	1,1,1-Trichloroethane
85C3-21	89.15975	1	79005	< 10.	UG/KG	1/04/90	1,1,2-Trichloroethane
85C3-21	89.15975	1	79016	< 10.	UG/KG	1/04/90	Trichloroethene
85C3-21	89.15975	1	75694	< 10.	UG/KG	1/04/90	Trichlorofluoromethane
85C3-21	89.15975	1	96184	< 10.	UG/KG	1/04/90	1,2,3-Trichloropropane
85C3-21	89.15975	1	95636	< 10.	UG/KG	1/04/90	1,2,4-Trimethylbenzene
85C3-21	89.15975	1	108678	< 10.	UG/KG	1/04/90	1,3,5-Trimethylbenzene
85C3-21	89.15975	1	108054	< 20.	UG/KG	1/04/90	Vinyl acetate
85C3-21	89.15975	1	75014	< 20.	UG/KG	1/04/90	Vinyl chloride
85C3-21	89.15975	1	95476	< 10.	UG/KG	1/04/90	o-Xylene
85C3-21	89.15975	1	1330207	< 10.	UG/KG	1/04/90	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: ESG on 9-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

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
85C3-22	89.15976	67641	270.	74.	UG/KG	12/19/89		Acetone
85C3-22	89.15976	71432	< 10.		UG/KG	12/19/89		Benzene
85C3-22	89.15976	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C3-22	89.15976	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C3-22	89.15976	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C3-22	89.15976	75252	< 10.		UG/KG	12/19/89		Bromoform
85C3-22	89.15976	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C3-22	89.15976	78933	81.	24.	UG/KG	12/19/89		2-Butanone
85C3-22	89.15976	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C3-22	89.15976	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C3-22	89.15976	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C3-22	89.15976	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C3-22	89.15976	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C3-22	89.15976	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C3-22	89.15976	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C3-22	89.15976	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C3-22	89.15976	67663	< 10.		UG/KG	12/19/89		Chloroform
85C3-22	89.15976	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C3-22	89.15976	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C3-22	89.15976	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C3-22	89.15976	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C3-22	89.15976	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C3-22	89.15976	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C3-22	89.15976	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C3-22	89.15976	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C3-22	89.15976	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C3-22	89.15976	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C3-22	89.15976	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C3-22	89.15976	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C3-22	89.15976	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C3-22	89.15976	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C3-22	89.15976	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C3-22	89.15976	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C3-22	89.15976	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C3-22	89.15976	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C3-22	89.15976	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C3-22	89.15976	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C3-22	89.15976	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C3-22	89.15976	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C3-22	89.15976	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C3-22	89.15976	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C3-22	89.15976	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C3-22	89.15976	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C3-22	89.15976	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C3-22	89.15976	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C3-22	89.15976	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C3-22	89.15976	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C3-22	89.15976	100425	< 10.	UG/KG	12/19/89	Styrene
85C3-22	89.15976	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C3-22	89.15976	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C3-22	89.15976	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C3-22	89.15976	108883	< 10.	UG/KG	12/19/89	Toluene
85C3-22	89.15976	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C3-22	89.15976	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C3-22	89.15976	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C3-22	89.15976	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C3-22	89.15976	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C3-22	89.15976	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C3-22	89.15976	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C3-22	89.15976	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C3-22	89.15976	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C3-22	89.15976	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C3-22	89.15976	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C3-22	89.15976	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C3-22	89.15976	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C3-23	89.15977	1	67641	94.7	28.4	UG/KG	12/19/89		Acetone
85C3-23	89.15977	1	71432	< 10.		UG/KG	12/19/89		Benzene
85C3-23	89.15977	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C3-23	89.15977	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C3-23	89.15977	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C3-23	89.15977	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C3-23	89.15977	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C3-23	89.15977	1	78933	< 20.		UG/KG	12/19/89		2-Butanone
85C3-23	89.15977	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C3-23	89.15977	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C3-23	89.15977	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C3-23	89.15977	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C3-23	89.15977	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C3-23	89.15977	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C3-23	89.15977	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C3-23	89.15977	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C3-23	89.15977	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C3-23	89.15977	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C3-23	89.15977	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C3-23	89.15977	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C3-23	89.15977	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C3-23	89.15977	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C3-23	89.15977	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C3-23	89.15977	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C3-23	89.15977	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C3-23	89.15977	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C3-23	89.15977	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C3-23	89.15977	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C3-23	89.15977	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C3-23	89.15977	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C3-23	89.15977	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C3-23	89.15977	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C3-23	89.15977	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C3-23	89.15977	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C3-23	89.15977	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C3-23	89.15977	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C3-23	89.15977	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C3-23	89.15977	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C3-23	89.15977	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C3-23	89.15977	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C3-23	89.15977	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C3-23	89.15977	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C3-23	89.15977	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C3-23	89.15977	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C3-23	89.15977	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C3-23	89.15977	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C3-23	89.15977	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C3-23	89.15977	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C3-23	89.15977	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C3-23	89.15977	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C3-23	89.15977	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C3-23	89.15977	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C3-23	89.15977	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C3-23	89.15977	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C3-23	89.15977	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C3-23	89.15977	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C3-23	89.15977	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C3-23	89.15977	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C3-23	89.15977	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C3-23	89.15977	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C3-23	89.15977	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C3-23	89.15977	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C3-23	89.15977	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C3-23	89.15977	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C3-23	89.15977	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT *****

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: WA45
 OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:

CUSTOMER NUMBER	SAMPLE NUMBER	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85C3-24	89.15978	1	67641	< 20.		UG/KG	12/19/89		Acetone
85C3-24	89.15978	1	71432	15.3	4.6	UG/KG	12/19/89		Benzene
85C3-24	89.15978	1	108861	< 10.		UG/KG	12/19/89		Bromobenzene
85C3-24	89.15978	1	74975	< 10.		UG/KG	12/19/89		Bromochloromethane
85C3-24	89.15978	1	75274	< 10.		UG/KG	12/19/89		Bromodichloromethane
85C3-24	89.15978	1	75252	< 10.		UG/KG	12/19/89		Bromoform
85C3-24	89.15978	1	74839	< 20.		UG/KG	12/19/89		Bromomethane
85C3-24	89.15978	1	78933	72.8	21.8	UG/KG	12/19/89		2-Butanone
85C3-24	89.15978	1	104518	< 10.		UG/KG	12/19/89		n-Butylbenzene
85C3-24	89.15978	1	135988	< 10.		UG/KG	12/19/89		sec-Butylbenzene
85C3-24	89.15978	1	98066	< 10.		UG/KG	12/19/89		tert-Butylbenzene
85C3-24	89.15978	1	75150	< 10.		UG/KG	12/19/89		Carbon disulfide
85C3-24	89.15978	1	56235	< 10.		UG/KG	12/19/89		Carbon tetrachloride
85C3-24	89.15978	1	108907	< 10.		UG/KG	12/19/89		Chlorobenzene
85C3-24	89.15978	1	124481	< 10.		UG/KG	12/19/89		Chlorodibromomethane
85C3-24	89.15978	1	75003	< 20.		UG/KG	12/19/89		Chloroethane
85C3-24	89.15978	1	67663	< 10.		UG/KG	12/19/89		Chloroform
85C3-24	89.15978	1	74873	< 20.		UG/KG	12/19/89		Chloromethane
85C3-24	89.15978	1	95498	< 10.		UG/KG	12/19/89		o-Chlorotoluene
85C3-24	89.15978	1	106434	< 10.		UG/KG	12/19/89		p-Chlorotoluene
85C3-24	89.15978	1	96128	< 10.		UG/KG	12/19/89		1,2-Dibromo-3-chloropropane
85C3-24	89.15978	1	106934	< 10.		UG/KG	12/19/89		1,2-Dibromoethane
85C3-24	89.15978	1	74953	< 10.		UG/KG	12/19/89		Dibromomethane
85C3-24	89.15978	1	95501	< 10.		UG/KG	12/19/89		o-Dichlorobenzene (1,2)
85C3-24	89.15978	1	541731	< 10.		UG/KG	12/19/89		m-Dichlorobenzene (1,3)

85C3-24	89.15978	1	106467	< 10.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85C3-24	89.15978	1	107062	< 10.	UG/KG	12/19/89	1,2-Dichloroethane
85C3-24	89.15978	1	75343	< 10.	UG/KG	12/19/89	1,1-Dichloroethane
85C3-24	89.15978	1	75354	< 10.	UG/KG	12/19/89	1,1-Dichloroethene
85C3-24	89.15978	1	156605	< 10.	UG/KG	12/19/89	trans-1,2-Dichloroethene
85C3-24	89.15978	1	156592	< 10.	UG/KG	12/19/89	cis-1,2-Dichloroethylene
85C3-24	89.15978	1	594207	< 10.	UG/KG	12/19/89	2,2-Dichloropropane
85C3-24	89.15978	1	78875	< 10.	UG/KG	12/19/89	1,2-Dichloropropane
85C3-24	89.15978	1	142289	< 10.	UG/KG	12/19/89	1,3-Dichloropropane
85C3-24	89.15978	1	10061015	< 10.	UG/KG	12/19/89	cis-1,3-Dichloropropene
85C3-24	89.15978	1	563586	< 10.	UG/KG	12/19/89	1,1-Dichloropropene
85C3-24	89.15978	1	10061026	< 20.	UG/KG	12/19/89	trans-1,3-Dichloropropene
85C3-24	89.15978	1	100414	< 10.	UG/KG	12/19/89	Ethylbenzene
85C3-24	89.15978	1	107062	< 10.	UG/KG	12/19/89	Ethylene chloride
85C3-24	89.15978	1	87683	< 10.	UG/KG	12/19/89	Hexachlorobutadiene
85C3-24	89.15978	1	591786	< 20.	UG/KG	12/19/89	2-Hexanone
85C3-24	89.15978	1	98828	< 10.	UG/KG	12/19/89	Isopropylbenzene
85C3-24	89.15978	1	99876	< 10.	UG/KG	12/19/89	4-Isopropyltoluene
85C3-24	89.15978	1	108101	< 20.	UG/KG	12/19/89	4-Methyl-2-pentanone
85C3-24	89.15978	1	75092	< 10.	UG/KG	12/19/89	Methylene chloride
85C3-24	89.15978	1	91203	< 10.	UG/KG	12/19/89	Naphthalene
85C3-24	89.15978	1	103651	< 10.	UG/KG	12/19/89	Propylbenzene
85C3-24	89.15978	1	100425	< 10.	UG/KG	12/19/89	Styrene
85C3-24	89.15978	1	630206	< 10.	UG/KG	12/19/89	1,1,1,2-Tetrachloroethane
85C3-24	89.15978	1	79345	< 10.	UG/KG	12/19/89	1,1,2,2-Tetrachloroethane
85C3-24	89.15978	1	127184	< 10.	UG/KG	12/19/89	Tetrachloroethylene
85C3-24	89.15978	1	108883	< 10.	UG/KG	12/19/89	Toluene
85C3-24	89.15978	1	120821	< 10.	UG/KG	12/19/89	1,2,4-Trichlorobenzene
85C3-24	89.15978	1	87616	< 10.	UG/KG	12/19/89	1,2,3-Trichlorobenzene
85C3-24	89.15978	1	79005	< 10.	UG/KG	12/19/89	1,1,2-Trichloroethane
85C3-24	89.15978	1	71556	< 10.	UG/KG	12/19/89	1,1,1-Trichloroethane
85C3-24	89.15978	1	79016	< 10.	UG/KG	12/19/89	Trichloroethene
85C3-24	89.15978	1	75694	< 10.	UG/KG	12/19/89	Trichlorofluoromethane
85C3-24	89.15978	1	96184	< 10.	UG/KG	12/19/89	1,2,3-Trichloropropane
85C3-24	89.15978	1	95636	< 10.	UG/KG	12/19/89	1,2,4-Trimethylbenzene
85C3-24	89.15978	1	108678	< 10.	UG/KG	12/19/89	1,3,5-Trimethylbenzene
85C3-24	89.15978	1	108054	< 10.	UG/KG	12/19/89	Vinyl acetate
85C3-24	89.15978	1	75014	< 20.	UG/KG	12/19/89	Vinyl chloride
85C3-24	89.15978	1	95476	< 10.	UG/KG	12/19/89	o-Xylene
85C3-24	89.15978	1	1330207	< 10.	UG/KG	12/19/89	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 5-Jan-1990

EPA VOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Laura Tsiagkouris

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 PROGRAM CODE: WA45 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			COMPLETION				COMMENT	COMPOUND-NAME
NUM	PHASE	ANALYSIS	RESULT	UNCERTAINTY	UNITS	DATE		
89.16091	1	67641	497.	149.1	UG/KG	12/19/89	OUT OF CONTROL	Acetone
89.16091	1	71432	149.	44.7	UG/KG	12/19/89	UNDER CONTROL	Benzene
89.16091	1	108861	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromobenzene
89.16091	1	74975	170.	51.	UG/KG	12/19/89	UNDER CONTROL	Bromochloromethane
89.16091	1	75274	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromodichloromethane
89.16091	1	75252	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromoform
89.16091	1	74839	< 20.		UG/KG	12/19/89	UNDER CONTROL	Bromomethane
89.16091	1	78933	470.	141.	UG/KG	12/19/89	WARNING 2-3 SIG	2-Butanone

89.16091	1	98066	< 10.		UG/KG	12/19/89	UNDER CONTROL	tert-Butylbenzene
89.16091	1	135988	< 10.		UG/KG	12/19/89	UNDER CONTROL	sec-Butylbenzene
89.16091	1	104518	< 10.		UG/KG	12/19/89	UNDER CONTROL	n-Butylbenzene
89.16091	1	75150	< 10.		UG/KG	12/19/89	UNDER CONTROL	Carbon disulfide
89.16091	1	56235	133.	39.9	UG/KG	12/19/89	UNDER CONTROL	Carbon tetrachloride
89.16091	1	108907	< 10.		UG/KG	12/19/89	UNDER CONTROL	Chlorobenzene
89.16091	1	124481	< 10.		UG/KG	12/19/89	UNDER CONTROL	Chlorodibromomethane
89.16091	1	75003	< 20.		UG/KG	12/19/89	UNDER CONTROL	Chloroethane
89.16091	1	67663	< 10.		UG/KG	12/19/89	UNDER CONTROL	Chloroform
89.16091	1	74873	< 20.		UG/KG	12/19/89	UNDER CONTROL	Chloromethane
89.16091	1	95498	58.9	17.7	UG/KG	12/19/89	OUT OF CONTROL	o-Chlorotoluene
89.16091	1	106434	< 10.		UG/KG	12/19/89	UNDER CONTROL	p-Chlorotoluene
89.16091	1	96128	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.16091	1	106934	116.	34.8	UG/KG	12/19/89	UNDER CONTROL	1,2-Dibromoethane
89.16091	1	74953	< 10.		UG/KG	12/19/89	UNDER CONTROL	Dibromomethane
89.16091	1	95501	< 10.		UG/KG	12/19/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.16091	1	541731	< 10.		UG/KG	12/19/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.16091	1	106467	< 10.		UG/KG	12/19/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.16091	1	75343	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1-Dichloroethane
89.16091	1	107062	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2-Dichloroethane
89.16091	1	75354	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1-Dichloroethene
89.16091	1	156605	< 10.		UG/KG	12/19/89	UNDER CONTROL	trans-1,2-Dichloroethene
89.16091	1	156592	< 10.		UG/KG	12/19/89	UNDER CONTROL	cis-1,2-Dichloroethylene
89.16091	1	78875	111.	33.3	UG/KG	12/19/89	UNDER CONTROL	1,2-Dichloropropane
89.16091	1	594207	< 10.		UG/KG	12/19/89	UNDER CONTROL	2,2-Dichloropropane
89.16091	1	142289	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,3-Dichloropropane
89.16091	1	563586	29.1	8.7	UG/KG	12/19/89	OUT OF CONTROL	1,1-Dichloropropene
89.16091	1	10061026	< 20.		UG/KG	12/19/89	UNDER CONTROL	trans-1,3-Dichloropropene
89.16091	1	10061015	< 10.		UG/KG	12/19/89	UNDER CONTROL	cis-1,3-Dichloropropene
89.16091	1	100414	< 10.		UG/KG	12/19/89	UNDER CONTROL	Ethylbenzene
89.16091	1	107062	< 10.		UG/KG	12/19/89	UNDER CONTROL	Ethylene chloride
89.16091	1	87683	116.	34.8	UG/KG	12/19/89	OUT OF CONTROL	Hexachlorobutadiene
89.16091	1	591786	82.1	24.6	UG/KG	12/19/89	OUT OF CONTROL	2-Hexanone
89.16091	1	98828	< 10.		UG/KG	12/19/89	UNDER CONTROL	Isopropylbenzene
89.16091	1	99876	< 10.		UG/KG	12/19/89	UNDER CONTROL	4-Isopropyltoluene
89.16091	1	108101	114.	34.2	UG/KG	12/19/89	UNDER CONTROL	4-Methyl-2-pentanone
89.16091	1	75092	< 10.		UG/KG	12/19/89	UNDER CONTROL	Methylene chloride
89.16091	1	91203	< 10.		UG/KG	12/19/89	UNDER CONTROL	Naphthalene
89.16091	1	103651	< 10.		UG/KG	12/19/89	UNDER CONTROL	Propylbenzene
89.16091	1	100425	100.	30.	UG/KG	12/19/89	UNDER CONTROL	Styrene
89.16091	1	79345	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane
89.16091	1	630206	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,1,2-Tetrachloroethane
89.16091	1	127184	86.9	26.1	UG/KG	12/19/89	UNDER CONTROL	Tetrachloroethylene
89.16091	1	108883	< 10.		UG/KG	12/19/89	UNDER CONTROL	Toluene
89.16091	1	120821	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,4-Trichlorobenzene

89.16091	:	87616	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,3-Trichlorobenzene
89.16091	1	71556	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,1-Trichloroethane
89.16091	1	79005	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,2-Trichloroethane
89.16091	1	79016	< 10.		UG/KG	12/19/89	UNDER CONTROL	Trichloroethene
89.16091	1	75694	< 10.		UG/KG	12/19/89	UNDER CONTROL	Trichlorofluoromethane
89.16091	1	96184	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,3-Trichloropropane
89.16091	1	95636	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,4-Trimethylbenzene
89.16091	1	108678	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,3,5-Trimethylbenzene
89.16091	1	108054	480.	144.	UG/KG	12/19/89	OUT OF CONTROL	Vinyl acetate
89.16091	1	75014	< 20.		UG/KG	12/19/89	UNDER CONTROL	Vinyl chloride
89.16091	1	95476	< 10.		UG/KG	12/19/89	UNDER CONTROL	o-Xylene
89.16091	1	1330207	124.	37.2	UG/KG	12/19/89	UNDER CONTROL	Mixed-Xylenes (m ± p)
89.16092	1	67641	24.6	7.4	UG/KG	12/19/89	OUT OF CONTROL	Acetone
89.16092	1	71432	61.5	18.5	UG/KG	12/19/89	OUT OF CONTROL	Benzene
89.16092	1	108861	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromobenzene
89.16092	1	74975	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromochloromethane
89.16092	1	75274	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromodichloromethane
89.16092	1	75252	< 10.		UG/KG	12/19/89	UNDER CONTROL	Bromoform
89.16092	1	74839	< 20.		UG/KG	12/19/89	UNDER CONTROL	Bromomethane
89.16092	1	78933	66.5	20.	UG/KG	12/19/89	OUT OF CONTROL	2-Butanone
89.16092	1	98066	< 10.		UG/KG	12/19/89	UNDER CONTROL	tert-Butylbenzene
89.16092	1	104518	67.1	20.1	UG/KG	12/19/89	WARNING 2-3 SIG	n-Butylbenzene
89.16092	1	135988	< 10.		UG/KG	12/19/89	UNDER CONTROL	sec-Butylbenzene
89.16092	1	75150	< 10.		UG/KG	12/19/89	UNDER CONTROL	Carbon disulfide
89.16092	1	56235	< 10.		UG/KG	12/19/89	UNDER CONTROL	Carbon tetrachloride
89.16092	1	108907	< 10.		UG/KG	12/19/89	UNDER CONTROL	Chlorobenzene
89.16092	1	124481	< 10.		UG/KG	12/19/89	UNDER CONTROL	Chlorodibromomethane
89.16092	1	75003	< 20.		UG/KG	12/19/89	UNDER CONTROL	Chloroethane
89.16092	1	67663	< 10.		UG/KG	12/19/89	UNDER CONTROL	Chloroform
89.16092	1	74873	< 20.		UG/KG	12/19/89	UNDER CONTROL	Chloromethane
89.16092	1	95498	< 10.		UG/KG	12/19/89	UNDER CONTROL	o-Chlorotoluene
89.16092	1	106434	< 10.		UG/KG	12/19/89	UNDER CONTROL	p-Chlorotoluene
89.16092	1	96128	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.16092	1	106934	56.	16.8	UG/KG	12/19/89	OUT OF CONTROL	1,2-Dibromoethane
89.16092	1	74953	< 10.		UG/KG	12/19/89	UNDER CONTROL	Dibromomethane
89.16092	1	95501	< 10.		UG/KG	12/19/89	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.16092	1	541731	< 10.		UG/KG	12/19/89	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.16092	1	106467	< 10.		UG/KG	12/19/89	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.16092	1	75343	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1-Dichloroethane
89.16092	1	107062	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2-Dichloroethane
89.16092	1	75354	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1-Dichloroethene
89.16092	1	156605	< 10.		UG/KG	12/19/89	UNDER CONTROL	trans-1,2-Dichloroethene
89.16092	1	156592	< 10.		UG/KG	12/19/89	UNDER CONTROL	cis-1,2-Dichloroethylene
89.16092	1	594207	< 10.		UG/KG	12/19/89	UNDER CONTROL	2,2-Dichloropropane
89.16092	1	78875	47.1	14.1	UG/KG	12/19/89	OUT OF CONTROL	1,2-Dichloropropane

89.16092	1	142289	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,3-Dichloropropane
89.16092	1	10061015	< 10.		UG/KG	12/19/89	UNDER CONTROL	cis-1,3-Dichloropropene
89.16092	1	10061026	< 20.		UG/KG	12/19/89	UNDER CONTROL	trans-1,3-Dichloropropene
89.16092	1	563586	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1-Dichloropropene
89.16092	1	100414	< 10.		UG/KG	12/19/89	UNDER CONTROL	Ethylbenzene
89.16092	1	107062	< 10.		UG/KG	12/19/89	UNDER CONTROL	Ethylene chloride
89.16092	1	87683	62.	18.6	UG/KG	12/19/89	OUT OF CONTROL	Hexachlorobutadiene
89.16092	1	591786	37.7	11.3	UG/KG	12/19/89	OUT OF CONTROL	2-Hexanone
89.16092	1	98828	< 10.		UG/KG	12/19/89	UNDER CONTROL	Isopropylbenzene
89.16092	1	99876	< 10.		UG/KG	12/19/89	UNDER CONTROL	4-Isopropyltoluene
89.16092	1	108101	< 20.		UG/KG	12/19/89	UNDER CONTROL	4-Methyl-2-pentanone
89.16092	1	75092	< 10.		UG/KG	12/19/89	UNDER CONTROL	Methylene chloride
89.16092	1	91203	< 10.		UG/KG	12/19/89	UNDER CONTROL	Naphthalene
89.16092	1	103651	37.8	11.3	UG/KG	12/19/89	OUT OF CONTROL	Propylbenzene
89.16092	1	100425	67.7	20.3	UG/KG	12/19/89	UNDER CONTROL	Styrene
89.16092	1	630206	77.3	23.2	UG/KG	12/19/89	WARNING 2-3 SIG	1,1,1,2-Tetrachloroethane
89.16092	1	79345	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,2,2-Tetrachloroethane
89.16092	1	127184	67.8	20.3	UG/KG	12/19/89	WARNING 2-3 SIG	Tetrachloroethylene
89.16092	1	108883	< 10.		UG/KG	12/19/89	UNDER CONTROL	Toluene
89.16092	1	87616	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,3-Trichlorobenzene
89.16092	1	120821	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,4-Trichlorobenzene
89.16092	1	71556	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,1-Trichloroethane
89.16092	1	79005	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,1,2-Trichloroethane
89.16092	1	79016	< 10.		UG/KG	12/19/89	UNDER CONTROL	Trichloroethene
89.16092	1	75694	< 10.		UG/KG	12/19/89	UNDER CONTROL	Trichlorofluoromethane
89.16092	1	96184	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,2,3-Trichloropropane
89.16092	1	108678	< 10.		UG/KG	12/19/89	UNDER CONTROL	1,3,5-Trimethylbenzene
89.16092	1	95636	67.	20.1	UG/KG	12/19/89	WARNING 2-3 SIG	1,2,4-Trimethylbenzene
89.16092	1	108054	< 10.		UG/KG	12/19/89	UNDER CONTROL	Vinyl acetate
89.16092	1	75014	< 20.		UG/KG	12/19/89	UNDER CONTROL	Vinyl chloride
89.16092	1	95476	< 10.		UG/KG	12/19/89	UNDER CONTROL	o-Xylene
89.16092	1	1330207	32.9	9.9	UG/KG	12/19/89	OUT OF 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	PHASE	RESULT	UNITS	COMPLETION DATE	COMMENT
89.15955	1	181.	%	12/18/89	
89.15956	1	129.	%	12/18/89	
89.15957	1	103.	%	12/18/89	
89.15958	1	108.	%	12/18/89	
89.15959	1	106.	%	12/18/89	

70-121

89.15960	1	107.	%	12/18/89
89.15961	1	153.	%	12/18/89
89.15962	1	106.	%	12/18/89
89.15963	1	209.	%	12/19/89
89.15964	1	151.	%	12/19/89
89.15965	1	122.	%	12/19/89
89.15966	1	132.	%	12/19/89
89.15967	1	124.	%	12/19/89
89.15968	1	168.	%	12/19/89
89.15969	1	133.	%	12/19/89
89.15970	1	110.	%	12/19/89
89.15971	1	170.	%	12/19/89
89.15972	1	142.	%	12/19/89
89.15973	1	151.	%	12/19/89
89.15974	1	124.	%	12/19/89
89.15975	1	128.	%	1/04/90
89.15976	1	343.	%	12/19/89
89.15977	1	125.	%	12/19/89
89.15978	1	221.	%	12/19/89
89.16091	1	112.	%	12/19/89
89.16092	1	86.5	%	12/19/89

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

81-117

SAMPLE NUMBER	PHASE	RESULT	UNITS	COMPLETION DATE	COMMENT
89.15955	1	64.7	%	12/18/89	
89.15956	1	144.	%	12/18/89	
89.15957	1	94.6	%	12/18/89	
89.15958	1	126.	%	12/18/89	
89.15959	1	123.	%	12/18/89	
89.15960	1	127.	%	12/18/89	
89.15961	1	113.	%	12/18/89	
89.15962	1	125.	%	12/18/89	
89.15963	1	124.	%	12/19/89	
89.15964	1	108.	%	12/19/89	
89.15965	1	111.	%	12/19/89	
89.15966	1	125.	%	12/19/89	
89.15967	1	128.	%	12/19/89	
89.15968	1	104.	%	12/19/89	
89.15969	1	130.	%	12/19/89	
89.15970	1	131.	%	12/19/89	
89.15971	1	166.	%	12/19/89	
89.15972	1	112.	%	12/19/89	

89.15973 1 117. % 12/19/89
 89.15974 1 129. % 12/19/89
 89.15975 1 127. % 1/04/90
 89.15976 1 449. % 12/19/89
 89.15977 1 129. % 12/19/89
 89.15978 1 131. % 12/19/89
 89.16091 1 123. % 12/19/89
 89.16092 1 92.5 % 12/19/89

4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	PHASE	RESULT	UNITS	COMPLETION DATE	COMMENT
89.15955	1	205.	%	12/18/89	
89.15956	1	136.	%	12/18/89	
89.15957	1	111.	%	12/18/89	
89.15958	1	134.	%	12/18/89	
89.15959	1	131.	%	12/18/89	
89.15960	1	137.	%	12/18/89	
89.15961	1	143.	%	12/18/89	
89.15962	1	133.	%	12/18/89	
89.15963	1	120.	%	12/19/89	
89.15964	1	128.	%	12/19/89	
89.15965	1	86.5	%	12/19/89	
89.15966	1	124.	%	12/19/89	
89.15967	1	127.	%	12/19/89	
89.15968	1	125.	%	12/19/89	
89.15969	1	127.	%	12/19/89	
89.15970	1	122.	%	12/19/89	
89.15971	1	146.	%	12/19/89	
89.15972	1	131.	%	12/19/89	
89.15973	1	86.4	%	12/19/89	
89.15974	1	123.	%	12/19/89	
89.15975	1	124.	%	1/04/90	
89.15976	1	446.	%	12/19/89	
89.15977	1	123.	%	12/19/89	
89.15978	1	142.	%	12/19/89	
89.16091	1	132.	%	12/19/89	
89.16092	1	115.	%	12/19/89	

Laura S. Harris
 Analyst

MA
 Section Leader

maq
 QA Officer

1/9/90
Date

1-9-90
Date

1-12-90
Date

The control status of the preceding 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.

SEMIVOLATILE ORGANIC ANALYSES

REC 4
4-30-90 #3001

TA-35 TSL-85
Final Soil
Verification
Samples

HSE-9 SEMIVOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

To: Steve McLin
From: Martin Koby

Request Number: 7968
Matrix: Soil
Summary Date: 3/8/90

Sample ID	Target Compounds Found	Amount (ug/Kg)	LOQ (ug/Kg)
Blank 1	NONE	NA	330.0
Blank 2	Bis(2-ethylhexyl)phthalate	830.0	330.0
Blank 3	Bis(2-ethylhexyl)phthalate	420.0	330.0
89.15879	NONE	NA	330.0
89.15880	NONE	NA	330.0
89.15881	NONE	NA	330.0
89.15882	NONE	NA	1300.0
89.15883	NONE	NA	1600.0
89.15884	Bis(2-ethylhexyl)phthalate	NA	330.0
89.15885	Bis(2-ethylhexyl)phthalate	800.0	330.0
89.15886	NONE	1700.0	330.0
89.15887	NONE	NA	6600.0
89.15888	NONE	NA	6600.0
89.15889	Bis(2-ethylhexyl)phthalate	NA	1300.0
89.15890	NONE	380.0	330.0
89.15891	NO DATA AVAILABLE - SAMPLE LOST DURING PREPARATION	NA	1700.0
89.15892	Bis(2-ethylhexyl)phthalate	720.0	330.0
89.15893	NONE	NA	1300.0
89.15894	NONE	NA	1300.0
89.15895	NONE	NA	1300.0
89.15896	NONE	NA	1300.0
89.15897	Bis(2-ethylhexyl)phthalate	NA	1300.0
89.15898	NONE	2800.0	330.0
89.15899	NONE	NA	1300.0
89.15900	NONE	NA	6600.0
89.15901	NONE	NA	1300.0
89.15902	NONE	NA	1300.0

24 (lost)
23 ANALYSED

8 330
10 1300
1 1600
1 1700
3 4200

May 3, 1990

To: Roger Ferenbaugh

From: Craig Leasure *CL*

Subject: Anomalies from Request Number 7969

The following samples were analyzed after the 40 day holding time for analysis had expired.

89.15962
89.15965-9
89.15971-8

The data for these samples are not legally defensible, therefore, resampling may be necessary. We apologize for any inconvenience that may cause.

TH-25 SL-75
Core samples
Semi-Volatiles

Rec'd
5-4-90

JWM

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-1-1	89.15955	83329	< 330.		UG/KG	4/27/90		Acenaphthene
85-C-1-1	89.15955	208968	< 330.		UG/KG	4/27/90		Acenaphthylene
85-C-1-1	89.15955	62533	< 330.		UG/KG	4/27/90		Aniline
85-C-1-1	89.15955	120127	< 330.		UG/KG	4/27/90		Anthracene
85-C-1-1	89.15955	103333	< 330.		UG/KG	4/27/90		Azobenzene
85-C-1-1	89.15955	56553	< 330.		UG/KG	4/27/90		Benz(a)anthracene
85-C-1-1	89.15955	92875	< 330.		UG/KG	4/27/90		m-Benzidine
85-C-1-1	89.15955	191242	< 330.		UG/KG	4/27/90		Benzo(g,h,i)perylene
85-C-1-1	89.15955	50328	< 330.		UG/KG	4/27/90		Benzo-a-pyrene
85-C-1-1	89.15955	205992	< 330.		UG/KG	4/27/90		Benzo-b-fluoranthene
85-C-1-1	89.15955	207089	< 330.		UG/KG	4/27/90		Benzo-k-fluoranthene
85-C-1-1	89.15955	65850	< 330.		UG/KG	4/27/90		Benzoic acid
85-C-1-1	89.15955	100516	< 330.		UG/KG	4/27/90		Benzyl alcohol
85-C-1-1	89.15955	111911	< 330.		UG/KG	4/27/90		Bis(2-chloroethoxy)methane
85-C-1-1	89.15955	111444	< 330.		UG/KG	4/27/90		Bis(2-chloroethyl)ether
85-C-1-1	89.15955	108601	< 330.		UG/KG	4/27/90		Bis(2-chloroisopropyl)ether
85-C-1-1	89.15955	117817	< 330.		UG/KG	4/27/90		Bis(2-ethylhexyl)phthalate
85-C-1-1	89.15955	101553	< 330.		UG/KG	4/27/90		4-Bromophenylphenyl ether
85-C-1-1	89.15955	85687	< 330.		UG/KG	4/27/90		Butylbenzyl phthalate
85-C-1-1	89.15955	59507	< 330.		UG/KG	4/27/90		4-Chloro-3-methylphenol
85-C-1-1	89.15955	106478	< 330.		UG/KG	4/27/90		4-Chloroaniline
85-C-1-1	89.15955	91587	< 330.		UG/KG	4/27/90		2-Chloronaphthalene
85-C-1-1	89.15955	95578	< 330.		UG/KG	4/27/90		o-Chlorophenol
85-C-1-1	89.15955	7005723	< 330.		UG/KG	4/27/90		4-Chlorophenylphenyl ether
85-C-1-1	89.15955	218019	< 330.		UG/KG	4/27/90		Chrysene

85-C-1-1	89.15955	106445	< 330.	UG/KG	4/27/90	p-Cresol
85-C-1-1	89.15955	84742	< 330.	UG/KG	4/27/90	Di-n-butyl phthalate
85-C-1-1	89.15955	117840	< 330.	UG/KG	4/27/90	Di-n-octyl phthalate
85-C-1-1	89.15955	53703	< 330.	UG/KG	4/27/90	Dibenzo(a,h)anthracene
85-C-1-1	89.15955	132649	< 330.	UG/KG	4/27/90	Dibenzofuran
85-C-1-1	89.15955	95501	< 330.	UG/KG	4/27/90	o-Dichlorobenzene (1,2)
85-C-1-1	89.15955	541731	< 330.	UG/KG	4/27/90	m-Dichlorobenzene (1,3)
85-C-1-1	89.15955	106467	< 330.	UG/KG	4/27/90	p-Dichlorobenzene (1,4)
85-C-1-1	89.15955	91941	< 330.	UG/KG	4/27/90	3,3'-Dichlorobenzidine
85-C-1-1	89.15955	120832	< 330.	UG/KG	4/27/90	2,4-Dichlorophenol
85-C-1-1	89.15955	84662	< 330.	UG/KG	4/27/90	Diethyl phthalate
85-C-1-1	89.15955	131113	< 330.	UG/KG	4/27/90	Dimethyl phthalate
85-C-1-1	89.15955	105679	< 330.	UG/KG	4/27/90	2,4-Dimethylphenol
85-C-1-1	89.15955	51285	< 330.	UG/KG	4/27/90	2,4-Dinitrophenol
85-C-1-1	89.15955	121142	< 330.	UG/KG	4/27/90	2,4-Dinitrotoluene
85-C-1-1	89.15955	606202	< 330.	UG/KG	4/27/90	2,6-Dinitrotoluene
85-C-1-1	89.15955	206440	< 330.	UG/KG	4/27/90	Fluoranthene
85-C-1-1	89.15955	86737	< 330.	UG/KG	4/27/90	Fluorene
85-C-1-1	89.15955	118741	< 330.	UG/KG	4/27/90	Hexachlorobenzene
85-C-1-1	89.15955	87683	< 330.	UG/KG	4/27/90	Hexachlorobutadiene
85-C-1-1	89.15955	77474	< 330.	UG/KG	4/27/90	Hexachlorocyclopentadiene
85-C-1-1	89.15955	67721	< 330.	UG/KG	4/27/90	Hexachloroethane
85-C-1-1	89.15955	193395	< 330.	UG/KG	4/27/90	Indeno(1,2,3-cd)pyrene
85-C-1-1	89.15955	78591	< 330.	UG/KG	4/27/90	Isophorone
85-C-1-1	89.15955	534521	< 330.	UG/KG	4/27/90	2-Methyl-4,6-dinitrophenol
85-C-1-1	89.15955	91576	< 330.	UG/KG	4/27/90	2-Methylnaphthalene
85-C-1-1	89.15955	95487	< 330.	UG/KG	4/27/90	2-Methylphenol
85-C-1-1	89.15955	106445	< 330.	UG/KG	4/27/90	4-Methylphenol
85-C-1-1	89.15955	91203	< 330.	UG/KG	4/27/90	Naphthalene
85-C-1-1	89.15955	88744	< 330.	UG/KG	4/27/90	2-Nitroaniline
85-C-1-1	89.15955	99092	< 330.	UG/KG	4/27/90	3-Nitroaniline
85-C-1-1	89.15955	100016	< 330.	UG/KG	4/27/90	4-Nitroaniline
85-C-1-1	89.15955	98953	< 330.	UG/KG	4/27/90	Nitrobenzene
85-C-1-1	89.15955	88755	< 330.	UG/KG	4/27/90	2-Nitrophenol
85-C-1-1	89.15955	100027	< 330.	UG/KG	4/27/90	4-Nitrophenol
85-C-1-1	89.15955	621647	< 330.	UG/KG	4/27/90	N-Nitrosodi-n-propylamine
85-C-1-1	89.15955	62759	< 330.	UG/KG	4/27/90	N-Nitrosodimethylamine
85-C-1-1	89.15955	86306	< 330.	UG/KG	4/27/90	N-Nitrosodiphenylamine
85-C-1-1	89.15955	87865	< 330.	UG/KG	4/27/90	Pentachlorophenol
85-C-1-1	89.15955	85018	< 330.	UG/KG	4/27/90	Phenanthrene
85-C-1-1	89.15955	108952	< 330.	UG/KG	4/27/90	Phenol
85-C-1-1	89.15955	129000	< 330.	UG/KG	4/27/90	Pyrene
85-C-1-1	89.15955	120821	< 330.	UG/KG	4/27/90	1,2,4-Trichlorobenzene
85-C-1-1	89.15955	95954	< 330.	UG/KG	4/27/90	2,4,5-Trichlorophenol
85-C-1-1	89.15955	88062	< 330.	UG/KG	4/27/90	2,4,6-Trichlorophenol

85-C-1-1

89.15955

105679

< 330.

UG/KG

4/27/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-1-2	89.15956	83329	< 330.		UG/KG	4/27/90		Acenaphthene
85-C-1-2	89.15956	208968	< 330.		UG/KG	4/27/90		Acenaphthylene
85-C-1-2	89.15956	62533	< 330.		UG/KG	4/27/90		Aniline
85-C-1-2	89.15956	120127	< 330.		UG/KG	4/27/90		Anthracene
85-C-1-2	89.15956	103333	< 330.		UG/KG	4/27/90		Azobenzene
85-C-1-2	89.15956	56553	< 330.		UG/KG	4/27/90		Benz(a)anthracene
85-C-1-2	89.15956	92875	< 330.		UG/KG	4/27/90		m-Benzidine
85-C-1-2	89.15956	191242	< 330.		UG/KG	4/27/90		Benzo(g,h,i)perylene
85-C-1-2	89.15956	50328	< 330.		UG/KG	4/27/90		Benzo-a-pyrene
85-C-1-2	89.15956	205992	< 330.		UG/KG	4/27/90		Benzo-b-fluoranthene
85-C-1-2	89.15956	207089	< 330.		UG/KG	4/27/90		Benzo-k-fluoranthene
85-C-1-2	89.15956	65850	< 330.		UG/KG	4/27/90		Benzoic acid
85-C-1-2	89.15956	100516	< 330.		UG/KG	4/27/90		Benzyl alcohol
85-C-1-2	89.15956	111911	< 330.		UG/KG	4/27/90		Bis(2-chloroethoxy)methane
85-C-1-2	89.15956	111444	< 330.		UG/KG	4/27/90		Bis(2-chloroethyl)ether
85-C-1-2	89.15956	108601	< 330.		UG/KG	4/27/90		Bis(2-chloroisopropyl)ether
85-C-1-2	89.15956	117817	< 330.		UG/KG	4/27/90		Bis(2-ethylhexyl)phthalate
85-C-1-2	89.15956	101553	< 330.		UG/KG	4/27/90		4-Bromophenylphenyl ether
85-C-1-2	89.15956	85687	< 330.		UG/KG	4/27/90		Butylbenzyl phthalate
85-C-1-2	89.15956	59507	< 330.		UG/KG	4/27/90		4-Chloro-3-methylphenol
85-C-1-2	89.15956	106478	< 330.		UG/KG	4/27/90		4-Chloroaniline
85-C-1-2	89.15956	91587	< 330.		UG/KG	4/27/90		2-Chloronaphthalene
85-C-1-2	89.15956	95578	< 330.		UG/KG	4/27/90		o-Chlorophenol
85-C-1-2	89.15956	7005723	< 330.		UG/KG	4/27/90		4-Chlorophenylphenyl ether
85-C-1-2	89.15956	218019	< 330.		UG/KG	4/27/90		Chrysene

85-C-1-2	89.15956	106445	< 330.	UG/KG	4/27/90	p-Cresol
85-C-1-2	89.15956	84742	< 330.	UG/KG	4/27/90	Di-n-butyl phthalate
85-C-1-2	89.15956	117840	< 330.	UG/KG	4/27/90	Di-n-octyl phthalate
85-C-1-2	89.15956	53703	< 330.	UG/KG	4/27/90	Dibenzo(a,h)anthracene
85-C-1-2	89.15956	132649	< 330.	UG/KG	4/27/90	Dibenzofuran
85-C-1-2	89.15956	95501	< 330.	UG/KG	4/27/90	o-Dichlorobenzene (1,2)
85-C-1-2	89.15956	541731	< 330.	UG/KG	4/27/90	m-Dichlorobenzene (1,3)
85-C-1-2	89.15956	106467	< 330.	UG/KG	4/27/90	p-Dichlorobenzene (1,4)
85-C-1-2	89.15956	91941	< 330.	UG/KG	4/27/90	3,3'-Dichlorobenzidine
85-C-1-2	89.15956	120832	< 330.	UG/KG	4/27/90	2,4-Dichlorophenol
85-C-1-2	89.15956	84662	< 330.	UG/KG	4/27/90	Diethyl phthalate
85-C-1-2	89.15956	131113	< 330.	UG/KG	4/27/90	Dimethyl phthalate
85-C-1-2	89.15956	105679	< 330.	UG/KG	4/27/90	2,4-Dimethylphenol
85-C-1-2	89.15956	51285	< 330.	UG/KG	4/27/90	2,4-Dinitrophenol
85-C-1-2	89.15956	121142	< 330.	UG/KG	4/27/90	2,4-Dinitrotoluene
85-C-1-2	89.15956	606202	< 330.	UG/KG	4/27/90	2,6-Dinitrotoluene
85-C-1-2	89.15956	206440	< 330.	UG/KG	4/27/90	Fluoranthene
85-C-1-2	89.15956	86737	< 330.	UG/KG	4/27/90	Fluorene
85-C-1-2	89.15956	118741	< 330.	UG/KG	4/27/90	Hexachlorobenzene
85-C-1-2	89.15956	87683	< 330.	UG/KG	4/27/90	Hexachlorobutadiene
85-C-1-2	89.15956	77474	< 330.	UG/KG	4/27/90	Hexachlorocyclopentadiene
85-C-1-2	89.15956	67721	< 330.	UG/KG	4/27/90	Hexachloroethane
85-C-1-2	89.15956	193395	< 330.	UG/KG	4/27/90	Indeno(1,2,3-cd)pyrene
85-C-1-2	89.15956	78591	< 330.	UG/KG	4/27/90	Isophorone
85-C-1-2	89.15956	534521	< 330.	UG/KG	4/27/90	2-Methyl-4,6-dinitrophenol
85-C-1-2	89.15956	91576	< 330.	UG/KG	4/27/90	2-Methylnaphthalene
85-C-1-2	89.15956	95487	< 330.	UG/KG	4/27/90	2-Methylphenol
85-C-1-2	89.15956	106445	< 330.	UG/KG	4/27/90	4-Methylphenol
85-C-1-2	89.15956	91203	< 330.	UG/KG	4/27/90	Naphthalene
85-C-1-2	89.15956	88744	< 330.	UG/KG	4/27/90	2-Nitroaniline
85-C-1-2	89.15956	99092	< 330.	UG/KG	4/27/90	3-Nitroaniline
85-C-1-2	89.15956	100016	< 330.	UG/KG	4/27/90	4-Nitroaniline
85-C-1-2	89.15956	98953	< 330.	UG/KG	4/27/90	Nitrobenzene
85-C-1-2	89.15956	88755	< 330.	UG/KG	4/27/90	2-Nitrophenol
85-C-1-2	89.15956	100027	< 330.	UG/KG	4/27/90	4-Nitrophenol
85-C-1-2	89.15956	621647	< 330.	UG/KG	4/27/90	N-Nitrosodi-n-propylamine
85-C-1-2	89.15956	62759	< 330.	UG/KG	4/27/90	N-Nitrosodimethylamine
85-C-1-2	89.15956	86306	< 330.	UG/KG	4/27/90	N-Nitrosodiphenylamine
85-C-1-2	89.15956	87865	< 330.	UG/KG	4/27/90	Pentachlorophenol
85-C-1-2	89.15956	85018	< 330.	UG/KG	4/27/90	Phenanthrene
85-C-1-2	89.15956	108952	< 330.	UG/KG	4/27/90	Phenol
85-C-1-2	89.15956	129000	< 330.	UG/KG	4/27/90	Pyrene
85-C-1-2	89.15956	120821	< 330.	UG/KG	4/27/90	1,2,4-Trichlorobenzene
85-C-1-2	89.15956	95954	< 330.	UG/KG	4/27/90	2,4,5-Trichlorophenol
85-C-1-2	89.15956	88062	< 330.	UG/KG	4/27/90	2,4,6-Trichlorophenol

85-C-1-2

89.15956

105679

< 330.

UG/KG

4/27/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-1-3	89.15957	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-1-3	89.15957	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-1-3	89.15957	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-1-3	89.15957	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-1-3	89.15957	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-1-3	89.15957	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-1-3	89.15957	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-1-3	89.15957	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-1-3	89.15957	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-1-3	89.15957	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-1-3	89.15957	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-1-3	89.15957	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-1-3	89.15957	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-1-3	89.15957	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-1-3	89.15957	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-1-3	89.15957	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-1-3	89.15957	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-1-3	89.15957	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-1-3	89.15957	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-1-3	89.15957	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-1-3	89.15957	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-1-3	89.15957	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-1-3	89.15957	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-1-3	89.15957	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-1-3	89.15957	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-1-3	89.15957	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-1-3	89.15957	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-1-3	89.15957	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-1-3	89.15957	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-1-3	89.15957	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-1-3	89.15957	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-1-3	89.15957	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-1-3	89.15957	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-1-3	89.15957	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-1-3	89.15957	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-1-3	89.15957	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-1-3	89.15957	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-1-3	89.15957	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-1-3	89.15957	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-1-3	89.15957	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-1-3	89.15957	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-1-3	89.15957	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-1-3	89.15957	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-1-3	89.15957	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-1-3	89.15957	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-1-3	89.15957	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-1-3	89.15957	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-1-3	89.15957	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-1-3	89.15957	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-1-3	89.15957	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-1-3	89.15957	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-1-3	89.15957	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-1-3	89.15957	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-1-3	89.15957	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-1-3	89.15957	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-1-3	89.15957	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-1-3	89.15957	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-1-3	89.15957	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-1-3	89.15957	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-1-3	89.15957	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-1-3	89.15957	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-1-3	89.15957	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-1-3	89.15957	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-1-3	89.15957	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-1-3	89.15957	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-1-3	89.15957	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-1-3	89.15957	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-1-3	89.15957	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-1-3	89.15957	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-1-3	89.15957	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-1-3

89.15957

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-1-4	89.15958	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-1-4	89.15958	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-1-4	89.15958	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-1-4	89.15958	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-1-4	89.15958	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-1-4	89.15958	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-1-4	89.15958	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-1-4	89.15958	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-1-4	89.15958	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-1-4	89.15958	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-1-4	89.15958	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-1-4	89.15958	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-1-4	89.15958	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-1-4	89.15958	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-1-4	89.15958	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-1-4	89.15958	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-1-4	89.15958	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-1-4	89.15958	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-1-4	89.15958	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-1-4	89.15958	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-1-4	89.15958	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-1-4	89.15958	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-1-4	89.15958	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-1-4	89.15958	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-1-4	89.15958	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-1-4	89.15958	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-1-4	89.15958	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-1-4	89.15958	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-1-4	89.15958	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-1-4	89.15958	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-1-4	89.15958	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-1-4	89.15958	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-1-4	89.15958	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-1-4	89.15958	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-1-4	89.15958	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-1-4	89.15958	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-1-4	89.15958	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-1-4	89.15958	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-1-4	89.15958	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-1-4	89.15958	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-1-4	89.15958	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-1-4	89.15958	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-1-4	89.15958	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-1-4	89.15958	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-1-4	89.15958	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-1-4	89.15958	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-1-4	89.15958	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-1-4	89.15958	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-1-4	89.15958	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-1-4	89.15958	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-1-4	89.15958	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-1-4	89.15958	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-1-4	89.15958	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-1-4	89.15958	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-1-4	89.15958	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-1-4	89.15958	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-1-4	89.15958	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-1-4	89.15958	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-1-4	89.15958	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-1-4	89.15958	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-1-4	89.15958	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-1-4	89.15958	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-1-4	89.15958	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-1-4	89.15958	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-1-4	89.15958	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-1-4	89.15958	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-1-4	89.15958	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-1-4	89.15958	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-1-4	89.15958	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-1-4	89.15958	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-1-4

89.15958

105679

< 330.

UG/KG

4/28/90

2,4-XyLenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-1-5	89.15959	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-1-5	89.15959	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-1-5	89.15959	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-1-5	89.15959	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-1-5	89.15959	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-1-5	89.15959	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-1-5	89.15959	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-1-5	89.15959	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-1-5	89.15959	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-1-5	89.15959	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-1-5	89.15959	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-1-5	89.15959	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-1-5	89.15959	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-1-5	89.15959	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-1-5	89.15959	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-1-5	89.15959	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-1-5	89.15959	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-1-5	89.15959	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-1-5	89.15959	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-1-5	89.15959	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-1-5	89.15959	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-1-5	89.15959	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-1-5	89.15959	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-1-5	89.15959	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-1-5	89.15959	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-1-5	89.15959	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-1-5	89.15959	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-1-5	89.15959	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-1-5	89.15959	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-1-5	89.15959	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-1-5	89.15959	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-1-5	89.15959	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-1-5	89.15959	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-1-5	89.15959	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-1-5	89.15959	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-1-5	89.15959	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-1-5	89.15959	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-1-5	89.15959	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-1-5	89.15959	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-1-5	89.15959	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-1-5	89.15959	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-1-5	89.15959	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-1-5	89.15959	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-1-5	89.15959	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-1-5	89.15959	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-1-5	89.15959	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-1-5	89.15959	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-1-5	89.15959	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-1-5	89.15959	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-1-5	89.15959	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-1-5	89.15959	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-1-5	89.15959	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-1-5	89.15959	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-1-5	89.15959	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-1-5	89.15959	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-1-5	89.15959	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-1-5	89.15959	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-1-5	89.15959	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-1-5	89.15959	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-1-5	89.15959	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-1-5	89.15959	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-1-5	89.15959	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-1-5	89.15959	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-1-5	89.15959	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-1-5	89.15959	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-1-5	89.15959	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-1-5	89.15959	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-1-5	89.15959	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-1-5	89.15959	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-1-5	89.15959	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-1-5

89.15959

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85-C-1-6	89.15960	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-1-6	89.15960	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-1-6	89.15960	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-1-6	89.15960	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-1-6	89.15960	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-1-6	89.15960	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-1-6	89.15960	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-1-6	89.15960	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-1-6	89.15960	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-1-6	89.15960	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-1-6	89.15960	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-1-6	89.15960	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-1-6	89.15960	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-1-6	89.15960	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-1-6	89.15960	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-1-6	89.15960	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-1-6	89.15960	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-1-6	89.15960	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-1-6	89.15960	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-1-6	89.15960	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-1-6	89.15960	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-1-6	89.15960	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-1-6	89.15960	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-1-6	89.15960	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-1-6	89.15960	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-1-6	89.15960	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-1-6	89.15960	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-1-6	89.15960	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-1-6	89.15960	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-1-6	89.15960	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-1-6	89.15960	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-1-6	89.15960	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-1-6	89.15960	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-1-6	89.15960	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-1-6	89.15960	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-1-6	89.15960	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-1-6	89.15960	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-1-6	89.15960	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-1-6	89.15960	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-1-6	89.15960	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-1-6	89.15960	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-1-6	89.15960	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-1-6	89.15960	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-1-6	89.15960	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-1-6	89.15960	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-1-6	89.15960	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-1-6	89.15960	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-1-6	89.15960	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-1-6	89.15960	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-1-6	89.15960	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-1-6	89.15960	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-1-6	89.15960	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-1-6	89.15960	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-1-6	89.15960	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-1-6	89.15960	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-1-6	89.15960	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-1-6	89.15960	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-1-6	89.15960	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-1-6	89.15960	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-1-6	89.15960	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-1-6	89.15960	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-1-6	89.15960	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-1-6	89.15960	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-1-6	89.15960	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-1-6	89.15960	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-1-6	89.15960	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-1-6	89.15960	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-1-6	89.15960	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-1-6	89.15960	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-1-6	89.15960	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-1-6

89.15960

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-1-7	89.15961	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-1-7	89.15961	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-1-7	89.15961	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-1-7	89.15961	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-1-7	89.15961	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-1-7	89.15961	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-1-7	89.15961	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-1-7	89.15961	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-1-7	89.15961	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-1-7	89.15961	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-1-7	89.15961	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-1-7	89.15961	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-1-7	89.15961	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-1-7	89.15961	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-1-7	89.15961	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-1-7	89.15961	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-1-7	89.15961	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-1-7	89.15961	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-1-7	89.15961	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-1-7	89.15961	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-1-7	89.15961	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-1-7	89.15961	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-1-7	89.15961	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-1-7	89.15961	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-1-7	89.15961	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-1-7	89.15961	106445	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	84742	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	117840	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	53703	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	132649	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	95501	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	541731	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	106467	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	91941	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	120832	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	84662	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	131113	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	105679	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	51285	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	121142	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	606202	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	206440	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	86737	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	118741	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	87683	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	77474	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	67721	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	193395	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	78591	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	534521	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	91576	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	95487	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	106445	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	91203	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	88744	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	99092	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	100016	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	98953	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	88755	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	100027	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	621647	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	62759	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	86306	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	87865	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	85018	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	108952	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	129000	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	120821	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	95954	< 330.	UG/KG	4/28/90
85-C-1-7	89.15961	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85-C-1-7

89.15961

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85-C-1-8	89.15962	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-1-8	89.15962	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-1-8	89.15962	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-1-8	89.15962	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-1-8	89.15962	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-1-8	89.15962	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-1-8	89.15962	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-1-8	89.15962	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-1-8	89.15962	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-1-8	89.15962	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-1-8	89.15962	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-1-8	89.15962	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-1-8	89.15962	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-1-8	89.15962	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-1-8	89.15962	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-1-8	89.15962	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-1-8	89.15962	117817	550.	165.	UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-1-8	89.15962	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-1-8	89.15962	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-1-8	89.15962	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-1-8	89.15962	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-1-8	89.15962	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-1-8	89.15962	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-1-8	89.15962	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-1-8	89.15962	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-1-8	89.15962	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-1-8	89.15962	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-1-8	89.15962	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-1-8	89.15962	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-1-8	89.15962	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-1-8	89.15962	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-1-8	89.15962	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-1-8	89.15962	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-1-8	89.15962	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-1-8	89.15962	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-1-8	89.15962	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-1-8	89.15962	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-1-8	89.15962	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-1-8	89.15962	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-1-8	89.15962	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-1-8	89.15962	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-1-8	89.15962	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-1-8	89.15962	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-1-8	89.15962	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-1-8	89.15962	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-1-8	89.15962	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-1-8	89.15962	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-1-8	89.15962	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-1-8	89.15962	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-1-8	89.15962	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-1-8	89.15962	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-1-8	89.15962	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-1-8	89.15962	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-1-8	89.15962	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-1-8	89.15962	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-1-8	89.15962	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-1-8	89.15962	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-1-8	89.15962	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-1-8	89.15962	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-1-8	89.15962	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-1-8	89.15962	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-1-8	89.15962	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-1-8	89.15962	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-1-8	89.15962	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-1-8	89.15962	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-1-8	89.15962	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-1-8	89.15962	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-1-8	89.15962	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-1-8	89.15962	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-1-8	89.15962	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-1-8

89.15962

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-2-9	89.15963	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-2-9	89.15963	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-2-9	89.15963	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-2-9	89.15963	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-2-9	89.15963	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-2-9	89.15963	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-2-9	89.15963	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-2-9	89.15963	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-2-9	89.15963	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-2-9	89.15963	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-2-9	89.15963	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-2-9	89.15963	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-2-9	89.15963	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-2-9	89.15963	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-2-9	89.15963	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-2-9	89.15963	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-2-9	89.15963	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-2-9	89.15963	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-2-9	89.15963	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-2-9	89.15963	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-2-9	89.15963	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-2-9	89.15963	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-2-9	89.15963	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-2-9	89.15963	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-2-9	89.15963	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-2-9	89.15963	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-2-9	89.15963	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-2-9	89.15963	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-2-9	89.15963	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-2-9	89.15963	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-2-9	89.15963	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-2-9	89.15963	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-2-9	89.15963	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-2-9	89.15963	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-2-9	89.15963	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-2-9	89.15963	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-2-9	89.15963	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-2-9	89.15963	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-2-9	89.15963	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-2-9	89.15963	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-2-9	89.15963	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-2-9	89.15963	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-2-9	89.15963	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-2-9	89.15963	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-2-9	89.15963	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-2-9	89.15963	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-2-9	89.15963	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-2-9	89.15963	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-2-9	89.15963	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-2-9	89.15963	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-2-9	89.15963	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-2-9	89.15963	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-2-9	89.15963	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-2-9	89.15963	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-2-9	89.15963	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-2-9	89.15963	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-2-9	89.15963	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-2-9	89.15963	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-2-9	89.15963	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-2-9	89.15963	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-2-9	89.15963	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-2-9	89.15963	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-2-9	89.15963	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-2-9	89.15963	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-2-9	89.15963	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-2-9	89.15963	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-2-9	89.15963	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-2-9	89.15963	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-2-9	89.15963	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-2-9	89.15963	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-2-9

89.15963

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85-C-2-10	89.15964	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-2-10	89.15964	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-2-10	89.15964	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-2-10	89.15964	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-2-10	89.15964	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-2-10	89.15964	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-2-10	89.15964	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-2-10	89.15964	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-2-10	89.15964	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-2-10	89.15964	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-2-10	89.15964	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-2-10	89.15964	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-2-10	89.15964	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-2-10	89.15964	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-2-10	89.15964	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-2-10	89.15964	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-2-10	89.15964	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-2-10	89.15964	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-2-10	89.15964	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-2-10	89.15964	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-2-10	89.15964	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-2-10	89.15964	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-2-10	89.15964	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-2-10	89.15964	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-2-10	89.15964	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-2-10	89.15964	106445	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	84742	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	117840	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	53703	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	132649	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	95501	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	541731	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	106467	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	91941	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	120832	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	84662	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	131113	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	105679	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	51285	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	121142	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	606202	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	206440	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	86737	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	118741	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	87683	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	77474	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	67721	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	193395	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	78591	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	534521	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	91576	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	95487	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	106445	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	91203	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	88744	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	99092	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	100016	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	98953	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	88755	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	100027	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	621647	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	62759	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	86306	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	87865	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	85018	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	108952	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	129000	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	120821	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	95954	< 330.	UG/KG	4/28/90
85-C-2-10	89.15964	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85-C-2-10

89.15964

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85-C-2-9	89.15963	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-2-9	89.15963	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-2-9	89.15963	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-2-9	89.15963	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-2-9	89.15963	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-2-9	89.15963	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-2-9	89.15963	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-2-9	89.15963	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-2-9	89.15963	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-2-9	89.15963	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-2-9	89.15963	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-2-9	89.15963	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-2-9	89.15963	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-2-9	89.15963	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-2-9	89.15963	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-2-9	89.15963	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-2-9	89.15963	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-2-9	89.15963	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-2-9	89.15963	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-2-9	89.15963	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-2-9	89.15963	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-2-9	89.15963	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-2-9	89.15963	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-2-9	89.15963	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-2-9	89.15963	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-2-9	89.15963	106445	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	84742	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	117840	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	53703	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	132649	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	95501	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	541731	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	106467	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	91941	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	120832	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	84662	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	131113	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	105679	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	51285	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	121142	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	606202	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	206440	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	86737	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	118741	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	87683	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	77474	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	67721	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	193395	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	78591	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	534521	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	91576	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	95487	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	106445	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	91203	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	88744	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	99092	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	100016	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	98953	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	88755	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	100027	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	621647	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	62759	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	86306	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	87865	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	85018	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	108952	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	129000	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	120821	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	95954	< 330.	UG/KG	4/28/90
85-C-2-9	89.15963	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85-C-2-9

89.15963

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-2-10	89.15964	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-2-10	89.15964	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-2-10	89.15964	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-2-10	89.15964	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-2-10	89.15964	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-2-10	89.15964	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-2-10	89.15964	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-2-10	89.15964	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-2-10	89.15964	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-2-10	89.15964	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-2-10	89.15964	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-2-10	89.15964	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-2-10	89.15964	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-2-10	89.15964	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-2-10	89.15964	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-2-10	89.15964	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-2-10	89.15964	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-2-10	89.15964	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-2-10	89.15964	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-2-10	89.15964	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-2-10	89.15964	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-2-10	89.15964	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-2-10	89.15964	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-2-10	89.15964	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-2-10	89.15964	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-2-10

89-15964

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85-C-2-11	89.15965	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-2-11	89.15965	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-2-11	89.15965	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-2-11	89.15965	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-2-11	89.15965	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-2-11	89.15965	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-2-11	89.15965	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-2-11	89.15965	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-2-11	89.15965	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-2-11	89.15965	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-2-11	89.15965	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-2-11	89.15965	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-2-11	89.15965	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-2-11	89.15965	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-2-11	89.15965	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-2-11	89.15965	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-2-11	89.15965	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-2-11	89.15965	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-2-11	89.15965	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-2-11	89.15965	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-2-11	89.15965	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-2-11	89.15965	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-2-11	89.15965	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-2-11	89.15965	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-2-11	89.15965	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-2-11	89.15965	106445	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	84742	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	117840	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	53703	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	132649	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	95501	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	541731	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	106467	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	91941	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	120832	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	84662	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	131113	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	105679	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	51285	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	121142	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	606202	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	206440	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	86737	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	118741	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	87683	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	77474	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	67721	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	193395	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	78591	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	534521	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	91576	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	95487	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	106445	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	91203	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	88744	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	99092	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	100016	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	98953	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	88755	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	100027	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	621647	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	62759	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	86306	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	87865	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	85018	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	108952	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	129000	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	120821	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	95954	< 330.	UG/KG	4/28/90
85-C-2-11	89.15965	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85-C-2-11

89.15965

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85-C-2-12	89.15966	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85-C-2-12	89.15966	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85-C-2-12	89.15966	62533	< 330.		UG/KG	4/28/90		Aniline
85-C-2-12	89.15966	120127	< 330.		UG/KG	4/28/90		Anthracene
85-C-2-12	89.15966	103333	< 330.		UG/KG	4/28/90		Azobenzene
85-C-2-12	89.15966	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85-C-2-12	89.15966	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85-C-2-12	89.15966	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85-C-2-12	89.15966	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85-C-2-12	89.15966	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85-C-2-12	89.15966	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85-C-2-12	89.15966	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85-C-2-12	89.15966	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85-C-2-12	89.15966	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85-C-2-12	89.15966	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85-C-2-12	89.15966	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85-C-2-12	89.15966	117817	660.	198.	UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85-C-2-12	89.15966	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85-C-2-12	89.15966	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85-C-2-12	89.15966	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85-C-2-12	89.15966	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85-C-2-12	89.15966	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85-C-2-12	89.15966	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85-C-2-12	89.15966	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85-C-2-12	89.15966	218019	< 330.		UG/KG	4/28/90		Chrysene

85-C-2-12	89.15966	106445	< 330.	UG/KG	4/28/90	p-Cresol
85-C-2-12	89.15966	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85-C-2-12	89.15966	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85-C-2-12	89.15966	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85-C-2-12	89.15966	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85-C-2-12	89.15966	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85-C-2-12	89.15966	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85-C-2-12	89.15966	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85-C-2-12	89.15966	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85-C-2-12	89.15966	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85-C-2-12	89.15966	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85-C-2-12	89.15966	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85-C-2-12	89.15966	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85-C-2-12	89.15966	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85-C-2-12	89.15966	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85-C-2-12	89.15966	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85-C-2-12	89.15966	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85-C-2-12	89.15966	86737	< 330.	UG/KG	4/28/90	Fluorene
85-C-2-12	89.15966	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85-C-2-12	89.15966	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85-C-2-12	89.15966	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85-C-2-12	89.15966	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85-C-2-12	89.15966	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85-C-2-12	89.15966	78591	< 330.	UG/KG	4/28/90	Isophorone
85-C-2-12	89.15966	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85-C-2-12	89.15966	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85-C-2-12	89.15966	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85-C-2-12	89.15966	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85-C-2-12	89.15966	91203	< 330.	UG/KG	4/28/90	Naphthalene
85-C-2-12	89.15966	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85-C-2-12	89.15966	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85-C-2-12	89.15966	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85-C-2-12	89.15966	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85-C-2-12	89.15966	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85-C-2-12	89.15966	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85-C-2-12	89.15966	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85-C-2-12	89.15966	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85-C-2-12	89.15966	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85-C-2-12	89.15966	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85-C-2-12	89.15966	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85-C-2-12	89.15966	108952	< 330.	UG/KG	4/28/90	Phenol
85-C-2-12	89.15966	129000	< 330.	UG/KG	4/28/90	Pyrene
85-C-2-12	89.15966	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85-C-2-12	89.15966	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85-C-2-12	89.15966	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85-C-2-12

89.15966

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C2-13	89.15967	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C2-13	89.15967	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C2-13	89.15967	62533	< 330.		UG/KG	4/28/90		Aniline
85C2-13	89.15967	120127	< 330.		UG/KG	4/28/90		Anthracene
85C2-13	89.15967	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C2-13	89.15967	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C2-13	89.15967	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C2-13	89.15967	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C2-13	89.15967	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C2-13	89.15967	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C2-13	89.15967	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C2-13	89.15967	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C2-13	89.15967	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C2-13	89.15967	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C2-13	89.15967	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C2-13	89.15967	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C2-13	89.15967	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C2-13	89.15967	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C2-13	89.15967	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C2-13	89.15967	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C2-13	89.15967	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C2-13	89.15967	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C2-13	89.15967	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C2-13	89.15967	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C2-13	89.15967	218019	< 330.		UG/KG	4/28/90		Chrysene

85C2-13	89.15967	106445	< 330.	UG/KG	4/28/90
85C2-13	89.15967	84742	< 330.	UG/KG	4/28/90
85C2-13	89.15967	117840	< 330.	UG/KG	4/28/90
85C2-13	89.15967	53703	< 330.	UG/KG	4/28/90
85C2-13	89.15967	132649	< 330.	UG/KG	4/28/90
85C2-13	89.15967	95501	< 330.	UG/KG	4/28/90
85C2-13	89.15967	541731	< 330.	UG/KG	4/28/90
85C2-13	89.15967	106467	< 330.	UG/KG	4/28/90
85C2-13	89.15967	91941	< 330.	UG/KG	4/28/90
85C2-13	89.15967	120832	< 330.	UG/KG	4/28/90
85C2-13	89.15967	84662	< 330.	UG/KG	4/28/90
85C2-13	89.15967	131113	< 330.	UG/KG	4/28/90
85C2-13	89.15967	105679	< 330.	UG/KG	4/28/90
85C2-13	89.15967	51285	< 330.	UG/KG	4/28/90
85C2-13	89.15967	121142	< 330.	UG/KG	4/28/90
85C2-13	89.15967	606202	< 330.	UG/KG	4/28/90
85C2-13	89.15967	206440	< 330.	UG/KG	4/28/90
85C2-13	89.15967	86737	< 330.	UG/KG	4/28/90
85C2-13	89.15967	118741	< 330.	UG/KG	4/28/90
85C2-13	89.15967	87683	< 330.	UG/KG	4/28/90
85C2-13	89.15967	77474	< 330.	UG/KG	4/28/90
85C2-13	89.15967	67721	< 330.	UG/KG	4/28/90
85C2-13	89.15967	193395	< 330.	UG/KG	4/28/90
85C2-13	89.15967	78591	< 330.	UG/KG	4/28/90
85C2-13	89.15967	534521	< 330.	UG/KG	4/28/90
85C2-13	89.15967	91576	< 330.	UG/KG	4/28/90
85C2-13	89.15967	95487	< 330.	UG/KG	4/28/90
85C2-13	89.15967	106445	< 330.	UG/KG	4/28/90
85C2-13	89.15967	91203	< 330.	UG/KG	4/28/90
85C2-13	89.15967	88744	< 330.	UG/KG	4/28/90
85C2-13	89.15967	99092	< 330.	UG/KG	4/28/90
85C2-13	89.15967	100016	< 330.	UG/KG	4/28/90
85C2-13	89.15967	98953	< 330.	UG/KG	4/28/90
85C2-13	89.15967	88755	< 330.	UG/KG	4/28/90
85C2-13	89.15967	100027	< 330.	UG/KG	4/28/90
85C2-13	89.15967	621647	< 330.	UG/KG	4/28/90
85C2-13	89.15967	62759	< 330.	UG/KG	4/28/90
85C2-13	89.15967	86306	< 330.	UG/KG	4/28/90
85C2-13	89.15967	87865	< 330.	UG/KG	4/28/90
85C2-13	89.15967	85018	< 330.	UG/KG	4/28/90
85C2-13	89.15967	108952	< 330.	UG/KG	4/28/90
85C2-13	89.15967	129000	< 330.	UG/KG	4/28/90
85C2-13	89.15967	120821	< 330.	UG/KG	4/28/90
85C2-13	89.15967	95954	< 330.	UG/KG	4/28/90
85C2-13	89.15967	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85C2-13

89.15967

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C3-24	89.15978	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C3-24	89.15978	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C3-24	89.15978	62533	< 330.		UG/KG	4/28/90		Aniline
85C3-24	89.15978	120127	< 330.		UG/KG	4/28/90		Anthracene
85C3-24	89.15978	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C3-24	89.15978	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C3-24	89.15978	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C3-24	89.15978	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C3-24	89.15978	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C3-24	89.15978	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C3-24	89.15978	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C3-24	89.15978	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C3-24	89.15978	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C3-24	89.15978	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C3-24	89.15978	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C3-24	89.15978	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C3-24	89.15978	117817	400.	120.	UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C3-24	89.15978	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C3-24	89.15978	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C3-24	89.15978	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C3-24	89.15978	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C3-24	89.15978	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C3-24	89.15978	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C3-24	89.15978	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C3-24	89.15978	218019	< 330.		UG/KG	4/28/90		Chrysene

85C3-24	89.15978	106445	< 330.	UG/KG	4/28/90
85C3-24	89.15978	84742	< 330.	UG/KG	4/28/90
85C3-24	89.15978	117840	< 330.	UG/KG	4/28/90
85C3-24	89.15978	53703	< 330.	UG/KG	4/28/90
85C3-24	89.15978	132649	< 330.	UG/KG	4/28/90
85C3-24	89.15978	95501	< 330.	UG/KG	4/28/90
85C3-24	89.15978	541731	< 330.	UG/KG	4/28/90
85C3-24	89.15978	106467	< 330.	UG/KG	4/28/90
85C3-24	89.15978	91941	< 330.	UG/KG	4/28/90
85C3-24	89.15978	120832	< 330.	UG/KG	4/28/90
85C3-24	89.15978	84662	< 330.	UG/KG	4/28/90
85C3-24	89.15978	131113	< 330.	UG/KG	4/28/90
85C3-24	89.15978	105679	< 330.	UG/KG	4/28/90
85C3-24	89.15978	51285	< 330.	UG/KG	4/28/90
85C3-24	89.15978	121142	< 330.	UG/KG	4/28/90
85C3-24	89.15978	606202	< 330.	UG/KG	4/28/90
85C3-24	89.15978	206440	< 330.	UG/KG	4/28/90
85C3-24	89.15978	86737	< 330.	UG/KG	4/28/90
85C3-24	89.15978	118741	< 330.	UG/KG	4/28/90
85C3-24	89.15978	87683	< 330.	UG/KG	4/28/90
85C3-24	89.15978	77474	< 330.	UG/KG	4/28/90
85C3-24	89.15978	67721	< 330.	UG/KG	4/28/90
85C3-24	89.15978	193395	< 330.	UG/KG	4/28/90
85C3-24	89.15978	78591	< 330.	UG/KG	4/28/90
85C3-24	89.15978	534521	< 330.	UG/KG	4/28/90
85C3-24	89.15978	91576	< 330.	UG/KG	4/28/90
85C3-24	89.15978	95487	< 330.	UG/KG	4/28/90
85C3-24	89.15978	106445	< 330.	UG/KG	4/28/90
85C3-24	89.15978	91203	< 330.	UG/KG	4/28/90
85C3-24	89.15978	88744	< 330.	UG/KG	4/28/90
85C3-24	89.15978	99092	< 330.	UG/KG	4/28/90
85C3-24	89.15978	100016	< 330.	UG/KG	4/28/90
85C3-24	89.15978	98953	< 330.	UG/KG	4/28/90
85C3-24	89.15978	88755	< 330.	UG/KG	4/28/90
85C3-24	89.15978	100027	< 330.	UG/KG	4/28/90
85C3-24	89.15978	621647	< 330.	UG/KG	4/28/90
85C3-24	89.15978	62759	< 330.	UG/KG	4/28/90
85C3-24	89.15978	86306	< 330.	UG/KG	4/28/90
85C3-24	89.15978	87865	< 330.	UG/KG	4/28/90
85C3-24	89.15978	85018	< 330.	UG/KG	4/28/90
85C3-24	89.15978	108952	< 330.	UG/KG	4/28/90
85C3-24	89.15978	129000	< 330.	UG/KG	4/28/90
85C3-24	89.15978	120821	< 330.	UG/KG	4/28/90
85C3-24	89.15978	95954	< 330.	UG/KG	4/28/90
85C3-24	89.15978	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85C3-23

89.15977

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

85C3-24

89.15978

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45
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
89.15955	%	32.	33.	41.	56.	67.	77.	27-Apr-1990
89.15956	%	30.	30.	38.	52.	63.	83.	27-Apr-1990
89.15957	%	42.	43.	53.	61.	68.	81.	28-Apr-1990
89.15958	%	23.	24.	30.	42.	69.	74.	28-Apr-1990

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C2-14	89.15968	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C2-14	89.15968	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C2-14	89.15968	62533	< 330.		UG/KG	4/28/90		Aniline
85C2-14	89.15968	120127	< 330.		UG/KG	4/28/90		Anthracene
85C2-14	89.15968	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C2-14	89.15968	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C2-14	89.15968	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C2-14	89.15968	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C2-14	89.15968	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C2-14	89.15968	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C2-14	89.15968	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C2-14	89.15968	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C2-14	89.15968	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C2-14	89.15968	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C2-14	89.15968	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C2-14	89.15968	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C2-14	89.15968	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C2-14	89.15968	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C2-14	89.15968	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C2-14	89.15968	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C2-14	89.15968	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C2-14	89.15968	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C2-14	89.15968	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C2-14	89.15968	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C2-14	89.15968	218019	< 330.		UG/KG	4/28/90		Chrysene

85C2-14	89.15968	106445	< 330.	UG/KG	4/28/90	p-Cresol
85C2-14	89.15968	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85C2-14	89.15968	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85C2-14	89.15968	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85C2-14	89.15968	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85C2-14	89.15968	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85C2-14	89.15968	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85C2-14	89.15968	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85C2-14	89.15968	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85C2-14	89.15968	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85C2-14	89.15968	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85C2-14	89.15968	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85C2-14	89.15968	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85C2-14	89.15968	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85C2-14	89.15968	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85C2-14	89.15968	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85C2-14	89.15968	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85C2-14	89.15968	86737	< 330.	UG/KG	4/28/90	Fluorene
85C2-14	89.15968	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85C2-14	89.15968	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85C2-14	89.15968	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85C2-14	89.15968	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85C2-14	89.15968	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85C2-14	89.15968	78591	< 330.	UG/KG	4/28/90	Isophorone
85C2-14	89.15968	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85C2-14	89.15968	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85C2-14	89.15968	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85C2-14	89.15968	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85C2-14	89.15968	91203	< 330.	UG/KG	4/28/90	Naphthalene
85C2-14	89.15968	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85C2-14	89.15968	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85C2-14	89.15968	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85C2-14	89.15968	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85C2-14	89.15968	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85C2-14	89.15968	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85C2-14	89.15968	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85C2-14	89.15968	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85C2-14	89.15968	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85C2-14	89.15968	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85C2-14	89.15968	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85C2-14	89.15968	108952	< 330.	UG/KG	4/28/90	Phenol
85C2-14	89.15968	129000	< 330.	UG/KG	4/28/90	Pyrene
85C2-14	89.15968	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85C2-14	89.15968	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85C2-14	89.15968	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85C2-14

89.15968

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85C2-15	89.15969	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C2-15	89.15969	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C2-15	89.15969	62533	< 330.		UG/KG	4/28/90		Aniline
85C2-15	89.15969	120127	< 330.		UG/KG	4/28/90		Anthracene
85C2-15	89.15969	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C2-15	89.15969	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C2-15	89.15969	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C2-15	89.15969	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C2-15	89.15969	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C2-15	89.15969	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C2-15	89.15969	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C2-15	89.15969	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C2-15	89.15969	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C2-15	89.15969	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C2-15	89.15969	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C2-15	89.15969	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C2-15	89.15969	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C2-15	89.15969	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C2-15	89.15969	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C2-15	89.15969	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C2-15	89.15969	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C2-15	89.15969	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C2-15	89.15969	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C2-15	89.15969	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C2-15	89.15969	218019	< 330.		UG/KG	4/28/90		Chrysene

85C2-15	89.15969	106445	< 330.	UG/KG	4/28/90	p-Cresol
85C2-15	89.15969	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85C2-15	89.15969	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85C2-15	89.15969	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85C2-15	89.15969	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85C2-15	89.15969	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85C2-15	89.15969	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85C2-15	89.15969	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85C2-15	89.15969	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85C2-15	89.15969	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85C2-15	89.15969	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85C2-15	89.15969	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85C2-15	89.15969	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85C2-15	89.15969	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85C2-15	89.15969	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85C2-15	89.15969	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85C2-15	89.15969	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85C2-15	89.15969	86737	< 330.	UG/KG	4/28/90	Fluorene
85C2-15	89.15969	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85C2-15	89.15969	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85C2-15	89.15969	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85C2-15	89.15969	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85C2-15	89.15969	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85C2-15	89.15969	78591	< 330.	UG/KG	4/28/90	Isophorone
85C2-15	89.15969	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85C2-15	89.15969	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85C2-15	89.15969	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85C2-15	89.15969	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85C2-15	89.15969	91203	< 330.	UG/KG	4/28/90	Naphthalene
85C2-15	89.15969	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85C2-15	89.15969	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85C2-15	89.15969	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85C2-15	89.15969	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85C2-15	89.15969	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85C2-15	89.15969	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85C2-15	89.15969	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85C2-15	89.15969	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85C2-15	89.15969	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85C2-15	89.15969	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85C2-15	89.15969	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85C2-15	89.15969	108952	< 330.	UG/KG	4/28/90	Phenol
85C2-15	89.15969	129000	< 330.	UG/KG	4/28/90	Pyrene
85C2-15	89.15969	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85C2-15	89.15969	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85C2-15	89.15969	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85C2-15

89-15969

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85C2-16	89.15970	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C2-16	89.15970	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C2-16	89.15970	62533	< 330.		UG/KG	4/28/90		Aniline
85C2-16	89.15970	120127	< 330.		UG/KG	4/28/90		Anthracene
85C2-16	89.15970	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C2-16	89.15970	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C2-16	89.15970	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C2-16	89.15970	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C2-16	89.15970	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C2-16	89.15970	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C2-16	89.15970	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C2-16	89.15970	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C2-16	89.15970	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C2-16	89.15970	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C2-16	89.15970	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C2-16	89.15970	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C2-16	89.15970	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C2-16	89.15970	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C2-16	89.15970	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C2-16	89.15970	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C2-16	89.15970	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C2-16	89.15970	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C2-16	89.15970	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C2-16	89.15970	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C2-16	89.15970	218019	< 330.		UG/KG	4/28/90		Chrysene

85C2-16

89.15970

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85C2-17	89.15971	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C2-17	89.15971	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C2-17	89.15971	62533	< 330.		UG/KG	4/28/90		Aniline
85C2-17	89.15971	120127	< 330.		UG/KG	4/28/90		Anthracene
85C2-17	89.15971	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C2-17	89.15971	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C2-17	89.15971	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C2-17	89.15971	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C2-17	89.15971	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C2-17	89.15971	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C2-17	89.15971	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C2-17	89.15971	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C2-17	89.15971	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C2-17	89.15971	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C2-17	89.15971	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C2-17	89.15971	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C2-17	89.15971	117817	880.	264.	UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C2-17	89.15971	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C2-17	89.15971	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C2-17	89.15971	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C2-17	89.15971	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C2-17	89.15971	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C2-17	89.15971	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C2-17	89.15971	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C2-17	89.15971	218019	< 330.		UG/KG	4/28/90		Chrysene

85C2-17	89.15971	106445	< 330.	UG/KG	4/28/90	p-Cresol
85C2-17	89.15971	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85C2-17	89.15971	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85C2-17	89.15971	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85C2-17	89.15971	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85C2-17	89.15971	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85C2-17	89.15971	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85C2-17	89.15971	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85C2-17	89.15971	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85C2-17	89.15971	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85C2-17	89.15971	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85C2-17	89.15971	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85C2-17	89.15971	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85C2-17	89.15971	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85C2-17	89.15971	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85C2-17	89.15971	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85C2-17	89.15971	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85C2-17	89.15971	86737	< 330.	UG/KG	4/28/90	Fluorene
85C2-17	89.15971	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85C2-17	89.15971	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85C2-17	89.15971	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85C2-17	89.15971	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85C2-17	89.15971	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85C2-17	89.15971	78591	< 330.	UG/KG	4/28/90	Isophorone
85C2-17	89.15971	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85C2-17	89.15971	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85C2-17	89.15971	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85C2-17	89.15971	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85C2-17	89.15971	91203	< 330.	UG/KG	4/28/90	Naphthalene
85C2-17	89.15971	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85C2-17	89.15971	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85C2-17	89.15971	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85C2-17	89.15971	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85C2-17	89.15971	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85C2-17	89.15971	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85C2-17	89.15971	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85C2-17	89.15971	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85C2-17	89.15971	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85C2-17	89.15971	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85C2-17	89.15971	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85C2-17	89.15971	108952	< 330.	UG/KG	4/28/90	Phenol
85C2-17	89.15971	129000	< 330.	UG/KG	4/28/90	Pyrene
85C2-17	89.15971	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85C2-17	89.15971	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85C2-17	89.15971	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85C2-17

89.15971

105679

< 330.

UG/KG

4/20/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C2-18	89.15972	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C2-18	89.15972	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C2-18	89.15972	62533	< 330.		UG/KG	4/28/90		Aniline
85C2-18	89.15972	120127	< 330.		UG/KG	4/28/90		Anthracene
85C2-18	89.15972	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C2-18	89.15972	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C2-18	89.15972	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C2-18	89.15972	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C2-18	89.15972	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C2-18	89.15972	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C2-18	89.15972	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C2-18	89.15972	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C2-18	89.15972	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C2-18	89.15972	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C2-18	89.15972	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C2-18	89.15972	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C2-18	89.15972	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C2-18	89.15972	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C2-18	89.15972	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C2-18	89.15972	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C2-18	89.15972	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C2-18	89.15972	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C2-18	89.15972	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C2-18	89.15972	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C2-18	89.15972	218019	< 330.		UG/KG	4/28/90		Chrysene

85C2-18	89.15972	106445	< 330.	UG/KG	4/20/90	p-Cresol
85C2-18	89.15972	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85C2-18	89.15972	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85C2-18	89.15972	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85C2-18	89.15972	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85C2-18	89.15972	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85C2-18	89.15972	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85C2-18	89.15972	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85C2-18	89.15972	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85C2-18	89.15972	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85C2-18	89.15972	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85C2-18	89.15972	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85C2-18	89.15972	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85C2-18	89.15972	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85C2-18	89.15972	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85C2-18	89.15972	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85C2-18	89.15972	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85C2-18	89.15972	86737	< 330.	UG/KG	4/28/90	Fluorene
85C2-18	89.15972	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85C2-18	89.15972	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85C2-18	89.15972	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85C2-18	89.15972	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85C2-18	89.15972	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85C2-18	89.15972	78591	< 330.	UG/KG	4/28/90	Isophorone
85C2-18	89.15972	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85C2-18	89.15972	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85C2-18	89.15972	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85C2-18	89.15972	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85C2-18	89.15972	91203	< 330.	UG/KG	4/28/90	Naphthalene
85C2-18	89.15972	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85C2-18	89.15972	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85C2-18	89.15972	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85C2-18	89.15972	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85C2-18	89.15972	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85C2-18	89.15972	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85C2-18	89.15972	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85C2-18	89.15972	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85C2-18	89.15972	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85C2-18	89.15972	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85C2-18	89.15972	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85C2-18	89.15972	108952	< 330.	UG/KG	4/28/90	Phenol
85C2-18	89.15972	129000	< 330.	UG/KG	4/28/90	Pyrene
85C2-18	89.15972	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85C2-18	89.15972	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85C2-18	89.15972	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85C2-18

89.15972

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C3-19	89.15973	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C3-19	89.15973	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C3-19	89.15973	62533	< 330.		UG/KG	4/28/90		Aniline
85C3-19	89.15973	120127	< 330.		UG/KG	4/28/90		Anthracene
85C3-19	89.15973	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C3-19	89.15973	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C3-19	89.15973	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C3-19	89.15973	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C3-19	89.15973	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C3-19	89.15973	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C3-19	89.15973	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C3-19	89.15973	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C3-19	89.15973	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C3-19	89.15973	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C3-19	89.15973	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C3-19	89.15973	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C3-19	89.15973	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C3-19	89.15973	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C3-19	89.15973	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C3-19	89.15973	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C3-19	89.15973	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C3-19	89.15973	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C3-19	89.15973	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C3-19	89.15973	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C3-19	89.15973	218019	< 330.		UG/KG	4/28/90		Chrysene

85C3-19	89.15973	106445	< 330.	UG/KG	4/28/90	p-Cresol
85C3-19	89.15973	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85C3-19	89.15973	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85C3-19	89.15973	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85C3-19	89.15973	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85C3-19	89.15973	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85C3-19	89.15973	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85C3-19	89.15973	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85C3-19	89.15973	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85C3-19	89.15973	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85C3-19	89.15973	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85C3-19	89.15973	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85C3-19	89.15973	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85C3-19	89.15973	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85C3-19	89.15973	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85C3-19	89.15973	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85C3-19	89.15973	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85C3-19	89.15973	86737	< 330.	UG/KG	4/28/90	Fluorene
85C3-19	89.15973	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85C3-19	89.15973	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85C3-19	89.15973	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85C3-19	89.15973	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85C3-19	89.15973	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85C3-19	89.15973	78591	< 330.	UG/KG	4/28/90	Isophorone
85C3-19	89.15973	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85C3-19	89.15973	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85C3-19	89.15973	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85C3-19	89.15973	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85C3-19	89.15973	91203	< 330.	UG/KG	4/28/90	Naphthalene
85C3-19	89.15973	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85C3-19	89.15973	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85C3-19	89.15973	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85C3-19	89.15973	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85C3-19	89.15973	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85C3-19	89.15973	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85C3-19	89.15973	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85C3-19	89.15973	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85C3-19	89.15973	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85C3-19	89.15973	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85C3-19	89.15973	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85C3-19	89.15973	108952	< 330.	UG/KG	4/28/90	Phenol
85C3-19	89.15973	129000	< 330.	UG/KG	4/28/90	Pyrene
85C3-19	89.15973	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85C3-19	89.15973	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85C3-19	89.15973	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85C3-19

89.15973

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C3-20	89.15974	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C3-20	89.15974	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C3-20	89.15974	62533	< 330.		UG/KG	4/28/90		Aniline
85C3-20	89.15974	120127	< 330.		UG/KG	4/28/90		Anthracene
85C3-20	89.15974	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C3-20	89.15974	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C3-20	89.15974	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C3-20	89.15974	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C3-20	89.15974	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C3-20	89.15974	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C3-20	89.15974	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C3-20	89.15974	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C3-20	89.15974	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C3-20	89.15974	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C3-20	89.15974	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C3-20	89.15974	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C3-20	89.15974	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C3-20	89.15974	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C3-20	89.15974	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C3-20	89.15974	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C3-20	89.15974	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C3-20	89.15974	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C3-20	89.15974	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C3-20	89.15974	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C3-20	89.15974	218019	< 330.		UG/KG	4/28/90		Chrysene

85C3-20	89.15974	106445	< 330.	UG/KG	4/28/90
85C3-20	89.15974	84742	< 330.	UG/KG	4/28/90
85C3-20	89.15974	117840	< 330.	UG/KG	4/28/90
85C3-20	89.15974	53703	< 330.	UG/KG	4/28/90
85C3-20	89.15974	132649	< 330.	UG/KG	4/28/90
85C3-20	89.15974	95501	< 330.	UG/KG	4/28/90
85C3-20	89.15974	541731	< 330.	UG/KG	4/28/90
85C3-20	89.15974	106467	< 330.	UG/KG	4/28/90
85C3-20	89.15974	91941	< 330.	UG/KG	4/28/90
85C3-20	89.15974	120832	< 330.	UG/KG	4/28/90
85C3-20	89.15974	84662	< 330.	UG/KG	4/28/90
85C3-20	89.15974	131113	< 330.	UG/KG	4/28/90
85C3-20	89.15974	105679	< 330.	UG/KG	4/28/90
85C3-20	89.15974	51285	< 330.	UG/KG	4/28/90
85C3-20	89.15974	121142	< 330.	UG/KG	4/28/90
85C3-20	89.15974	606202	< 330.	UG/KG	4/28/90
85C3-20	89.15974	206440	< 330.	UG/KG	4/28/90
85C3-20	89.15974	86737	< 330.	UG/KG	4/28/90
85C3-20	89.15974	118741	< 330.	UG/KG	4/28/90
85C3-20	89.15974	87683	< 330.	UG/KG	4/28/90
85C3-20	89.15974	77474	< 330.	UG/KG	4/28/90
85C3-20	89.15974	67721	< 330.	UG/KG	4/28/90
85C3-20	89.15974	193395	< 330.	UG/KG	4/28/90
85C3-20	89.15974	78591	< 330.	UG/KG	4/28/90
85C3-20	89.15974	534521	< 330.	UG/KG	4/28/90
85C3-20	89.15974	91576	< 330.	UG/KG	4/28/90
85C3-20	89.15974	95487	< 330.	UG/KG	4/28/90
85C3-20	89.15974	106445	< 330.	UG/KG	4/28/90
85C3-20	89.15974	91203	< 330.	UG/KG	4/28/90
85C3-20	89.15974	88744	< 330.	UG/KG	4/28/90
85C3-20	89.15974	99092	< 330.	UG/KG	4/28/90
85C3-20	89.15974	100016	< 330.	UG/KG	4/28/90
85C3-20	89.15974	98953	< 330.	UG/KG	4/28/90
85C3-20	89.15974	88755	< 330.	UG/KG	4/28/90
85C3-20	89.15974	100027	< 330.	UG/KG	4/28/90
85C3-20	89.15974	621647	< 330.	UG/KG	4/28/90
85C3-20	89.15974	62759	< 330.	UG/KG	4/28/90
85C3-20	89.15974	86306	< 330.	UG/KG	4/28/90
85C3-20	89.15974	87865	< 330.	UG/KG	4/28/90
85C3-20	89.15974	85018	< 330.	UG/KG	4/28/90
85C3-20	89.15974	108952	< 330.	UG/KG	4/28/90
85C3-20	89.15974	129000	< 330.	UG/KG	4/28/90
85C3-20	89.15974	120821	< 330.	UG/KG	4/28/90
85C3-20	89.15974	95954	< 330.	UG/KG	4/28/90
85C3-20	89.15974	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

85C3-20

89.15974

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85C3-21	89.15975	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C3-21	89.15975	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C3-21	89.15975	62533	< 330.		UG/KG	4/28/90		Aniline
85C3-21	89.15975	120127	< 330.		UG/KG	4/28/90		Anthracene
85C3-21	89.15975	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C3-21	89.15975	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C3-21	89.15975	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C3-21	89.15975	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C3-21	89.15975	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C3-21	89.15975	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C3-21	89.15975	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C3-21	89.15975	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C3-21	89.15975	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C3-21	89.15975	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C3-21	89.15975	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C3-21	89.15975	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C3-21	89.15975	117817	< 330.		UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C3-21	89.15975	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C3-21	89.15975	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C3-21	89.15975	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C3-21	89.15975	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C3-21	89.15975	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C3-21	89.15975	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C3-21	89.15975	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C3-21	89.15975	218019	< 330.		UG/KG	4/28/90		Chrysene

85C3-21	89.15975	106445	< 330.	UG/KG	4/28/90	p-Cresol
85C3-21	89.15975	84742	< 330.	UG/KG	4/28/90	Di-n-butyl phthalate
85C3-21	89.15975	117840	< 330.	UG/KG	4/28/90	Di-n-octyl phthalate
85C3-21	89.15975	53703	< 330.	UG/KG	4/28/90	Dibenzo(a,h)anthracene
85C3-21	89.15975	132649	< 330.	UG/KG	4/28/90	Dibenzofuran
85C3-21	89.15975	95501	< 330.	UG/KG	4/28/90	o-Dichlorobenzene (1,2)
85C3-21	89.15975	541731	< 330.	UG/KG	4/28/90	m-Dichlorobenzene (1,3)
85C3-21	89.15975	106467	< 330.	UG/KG	4/28/90	p-Dichlorobenzene (1,4)
85C3-21	89.15975	91941	< 330.	UG/KG	4/28/90	3,3'-Dichlorobenzidine
85C3-21	89.15975	120832	< 330.	UG/KG	4/28/90	2,4-Dichlorophenol
85C3-21	89.15975	84662	< 330.	UG/KG	4/28/90	Diethyl phthalate
85C3-21	89.15975	131113	< 330.	UG/KG	4/28/90	Dimethyl phthalate
85C3-21	89.15975	105679	< 330.	UG/KG	4/28/90	2,4-Dimethylphenol
85C3-21	89.15975	51285	< 330.	UG/KG	4/28/90	2,4-Dinitrophenol
85C3-21	89.15975	121142	< 330.	UG/KG	4/28/90	2,4-Dinitrotoluene
85C3-21	89.15975	606202	< 330.	UG/KG	4/28/90	2,6-Dinitrotoluene
85C3-21	89.15975	206440	< 330.	UG/KG	4/28/90	Fluoranthene
85C3-21	89.15975	86737	< 330.	UG/KG	4/28/90	Fluorene
85C3-21	89.15975	118741	< 330.	UG/KG	4/28/90	Hexachlorobenzene
85C3-21	89.15975	87683	< 330.	UG/KG	4/28/90	Hexachlorobutadiene
85C3-21	89.15975	77474	< 330.	UG/KG	4/28/90	Hexachlorocyclopentadiene
85C3-21	89.15975	67721	< 330.	UG/KG	4/28/90	Hexachloroethane
85C3-21	89.15975	193395	< 330.	UG/KG	4/28/90	Indeno(1,2,3-cd)pyrene
85C3-21	89.15975	78591	< 330.	UG/KG	4/28/90	Isophorone
85C3-21	89.15975	534521	< 330.	UG/KG	4/28/90	2-Methyl-4,6-dinitrophenol
85C3-21	89.15975	91576	< 330.	UG/KG	4/28/90	2-Methylnaphthalene
85C3-21	89.15975	95487	< 330.	UG/KG	4/28/90	2-Methylphenol
85C3-21	89.15975	106445	< 330.	UG/KG	4/28/90	4-Methylphenol
85C3-21	89.15975	91203	< 330.	UG/KG	4/28/90	Naphthalene
85C3-21	89.15975	88744	< 330.	UG/KG	4/28/90	2-Nitroaniline
85C3-21	89.15975	99092	< 330.	UG/KG	4/28/90	3-Nitroaniline
85C3-21	89.15975	100016	< 330.	UG/KG	4/28/90	4-Nitroaniline
85C3-21	89.15975	98953	< 330.	UG/KG	4/28/90	Nitrobenzene
85C3-21	89.15975	88755	< 330.	UG/KG	4/28/90	2-Nitrophenol
85C3-21	89.15975	100027	< 330.	UG/KG	4/28/90	4-Nitrophenol
85C3-21	89.15975	621647	< 330.	UG/KG	4/28/90	N-Nitrosodi-n-propylamine
85C3-21	89.15975	62759	< 330.	UG/KG	4/28/90	N-Nitrosodimethylamine
85C3-21	89.15975	86306	< 330.	UG/KG	4/28/90	N-Nitrosodiphenylamine
85C3-21	89.15975	87865	< 330.	UG/KG	4/28/90	Pentachlorophenol
85C3-21	89.15975	85018	< 330.	UG/KG	4/28/90	Phenanthrene
85C3-21	89.15975	108952	< 330.	UG/KG	4/28/90	Phenol
85C3-21	89.15975	129000	< 330.	UG/KG	4/28/90	Pyrene
85C3-21	89.15975	120821	< 330.	UG/KG	4/28/90	1,2,4-Trichlorobenzene
85C3-21	89.15975	95954	< 330.	UG/KG	4/28/90	2,4,5-Trichlorophenol
85C3-21	89.15975	88062	< 330.	UG/KG	4/28/90	2,4,6-Trichlorophenol

85C3-21

89.15975

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969

MATRIX: SS

ANALYST: Matthew Monagle

PROGRAM CODE: WA45

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
85C3-22	89.15976	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C3-22	89.15976	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C3-22	89.15976	62533	< 330.		UG/KG	4/28/90		Aniline
85C3-22	89.15976	120127	< 330.		UG/KG	4/28/90		Anthracene
85C3-22	89.15976	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C3-22	89.15976	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C3-22	89.15976	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C3-22	89.15976	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C3-22	89.15976	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C3-22	89.15976	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C3-22	89.15976	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C3-22	89.15976	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C3-22	89.15976	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C3-22	89.15976	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C3-22	89.15976	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C3-22	89.15976	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C3-22	89.15976	117817	790.	237.	UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C3-22	89.15976	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C3-22	89.15976	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C3-22	89.15976	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C3-22	89.15976	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C3-22	89.15976	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C3-22	89.15976	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C3-22	89.15976	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C3-22	89.15976	218019	< 330.		UG/KG	4/28/90		Chrysene

85C3-22

89.15976

105679

< 330.

UG/KG

4/28/90

2,4-Xylenol

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

Prepared by: ESG on 30-Apr-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Matthew Monagle PROGRAM CODE: WA45

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
85C3-23	89.15977	83329	< 330.		UG/KG	4/28/90		Acenaphthene
85C3-23	89.15977	208968	< 330.		UG/KG	4/28/90		Acenaphthylene
85C3-23	89.15977	62533	< 330.		UG/KG	4/28/90		Aniline
85C3-23	89.15977	120127	< 330.		UG/KG	4/28/90		Anthracene
85C3-23	89.15977	103333	< 330.		UG/KG	4/28/90		Azobenzene
85C3-23	89.15977	56553	< 330.		UG/KG	4/28/90		Benz(a)anthracene
85C3-23	89.15977	92875	< 330.		UG/KG	4/28/90		m-Benzidine
85C3-23	89.15977	191242	< 330.		UG/KG	4/28/90		Benzo(g,h,i)perylene
85C3-23	89.15977	50328	< 330.		UG/KG	4/28/90		Benzo-a-pyrene
85C3-23	89.15977	205992	< 330.		UG/KG	4/28/90		Benzo-b-fluoranthene
85C3-23	89.15977	207089	< 330.		UG/KG	4/28/90		Benzo-k-fluoranthene
85C3-23	89.15977	65850	< 330.		UG/KG	4/28/90		Benzoic acid
85C3-23	89.15977	100516	< 330.		UG/KG	4/28/90		Benzyl alcohol
85C3-23	89.15977	111911	< 330.		UG/KG	4/28/90		Bis(2-chloroethoxy)methane
85C3-23	89.15977	111444	< 330.		UG/KG	4/28/90		Bis(2-chloroethyl)ether
85C3-23	89.15977	108601	< 330.		UG/KG	4/28/90		Bis(2-chloroisopropyl)ether
85C3-23	89.15977	117817	2100.	630.	UG/KG	4/28/90		Bis(2-ethylhexyl)phthalate
85C3-23	89.15977	101553	< 330.		UG/KG	4/28/90		4-Bromophenylphenyl ether
85C3-23	89.15977	85687	< 330.		UG/KG	4/28/90		Butylbenzyl phthalate
85C3-23	89.15977	59507	< 330.		UG/KG	4/28/90		4-Chloro-3-methylphenol
85C3-23	89.15977	106478	< 330.		UG/KG	4/28/90		4-Chloroaniline
85C3-23	89.15977	91587	< 330.		UG/KG	4/28/90		2-Chloronaphthalene
85C3-23	89.15977	95578	< 330.		UG/KG	4/28/90		o-Chlorophenol
85C3-23	89.15977	7005723	< 330.		UG/KG	4/28/90		4-Chlorophenylphenyl ether
85C3-23	89.15977	218019	< 330.		UG/KG	4/28/90		Chrysene

85C3-23	89.15977	106445	< 330.	UG/KG	4/28/90
85C3-23	89.15977	84742	< 330.	UG/KG	4/28/90
85C3-23	89.15977	117840	< 330.	UG/KG	4/28/90
85C3-23	89.15977	53703	< 330.	UG/KG	4/28/90
85C3-23	89.15977	132649	< 330.	UG/KG	4/28/90
85C3-23	89.15977	95501	< 330.	UG/KG	4/28/90
85C3-23	89.15977	541731	< 330.	UG/KG	4/28/90
85C3-23	89.15977	106467	< 330.	UG/KG	4/28/90
85C3-23	89.15977	91941	< 330.	UG/KG	4/28/90
85C3-23	89.15977	120832	< 330.	UG/KG	4/28/90
85C3-23	89.15977	84662	< 330.	UG/KG	4/28/90
85C3-23	89.15977	131113	< 330.	UG/KG	4/28/90
85C3-23	89.15977	105679	< 330.	UG/KG	4/28/90
85C3-23	89.15977	51285	< 330.	UG/KG	4/28/90
85C3-23	89.15977	121142	< 330.	UG/KG	4/28/90
85C3-23	89.15977	606202	< 330.	UG/KG	4/28/90
85C3-23	89.15977	206440	< 330.	UG/KG	4/28/90
85C3-23	89.15977	86737	< 330.	UG/KG	4/28/90
85C3-23	89.15977	118741	< 330.	UG/KG	4/28/90
85C3-23	89.15977	87683	< 330.	UG/KG	4/28/90
85C3-23	89.15977	77474	< 330.	UG/KG	4/28/90
85C3-23	89.15977	67721	< 330.	UG/KG	4/28/90
85C3-23	89.15977	193395	< 330.	UG/KG	4/28/90
85C3-23	89.15977	78591	< 330.	UG/KG	4/28/90
85C3-23	89.15977	534521	< 330.	UG/KG	4/28/90
85C3-23	89.15977	91576	< 330.	UG/KG	4/28/90
85C3-23	89.15977	95487	< 330.	UG/KG	4/28/90
85C3-23	89.15977	106445	< 330.	UG/KG	4/28/90
85C3-23	89.15977	91203	< 330.	UG/KG	4/28/90
85C3-23	89.15977	88744	< 330.	UG/KG	4/28/90
85C3-23	89.15977	99092	< 330.	UG/KG	4/28/90
85C3-23	89.15977	100016	< 330.	UG/KG	4/28/90
85C3-23	89.15977	98953	< 330.	UG/KG	4/28/90
85C3-23	89.15977	88755	< 330.	UG/KG	4/28/90
85C3-23	89.15977	100027	< 330.	UG/KG	4/28/90
85C3-23	89.15977	621647	< 330.	UG/KG	4/28/90
85C3-23	89.15977	62759	< 330.	UG/KG	4/28/90
85C3-23	89.15977	86306	< 330.	UG/KG	4/28/90
85C3-23	89.15977	87865	< 330.	UG/KG	4/28/90
85C3-23	89.15977	85018	< 330.	UG/KG	4/28/90
85C3-23	89.15977	108952	< 330.	UG/KG	4/28/90
85C3-23	89.15977	129000	< 330.	UG/KG	4/28/90
85C3-23	89.15977	120821	< 330.	UG/KG	4/28/90
85C3-23	89.15977	95954	< 330.	UG/KG	4/28/90
85C3-23	89.15977	88062	< 330.	UG/KG	4/28/90

p-Cresol
 Di-n-butyl phthalate
 Di-n-octyl phthalate
 Dibenzo(a,h)anthracene
 Dibenzofuran
 o-Dichlorobenzene (1,2)
 m-Dichlorobenzene (1,3)
 p-Dichlorobenzene (1,4)
 3,3'-Dichlorobenzidine
 2,4-Dichlorophenol
 Diethyl phthalate
 Dimethyl phthalate
 2,4-Dimethylphenol
 2,4-Dinitrophenol
 2,4-Dinitrotoluene
 2,6-Dinitrotoluene
 Fluoranthene
 Fluorene
 Hexachlorobenzene
 Hexachlorobutadiene
 Hexachlorocyclopentadiene
 Hexachloroethane
 Indeno(1,2,3-cd)pyrene
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 Naphthalene
 2-Nitroaniline
 3-Nitroaniline
 4-Nitroaniline
 Nitrobenzene
 2-Nitrophenol
 4-Nitrophenol
 N-Nitrosodi-n-propylamine
 N-Nitrosodimethylamine
 N-Nitrosodiphenylamine
 Pentachlorophenol
 Phenanthrene
 Phenol
 Pyrene
 1,2,4-Trichlorobenzene
 2,4,5-Trichlorophenol
 2,4,6-Trichlorophenol

89.15959	%	31.	32.	42.	57.	76.	77.	28-Apr-1990
89.15960	%	40.	39.	48.	52.	64.	79.	28-Apr-1990
89.15961	%	35.	32.	41.	57.	71.	76.	28-Apr-1990
89.15962	%	13.	27.	24.	38.	51.	89.	28-Apr-1990
89.15963	%	39.	40.	50.	55.	69.	84.	28-Apr-1990
89.15964	%	39.	37.	48.	53.	72.	84.	28-Apr-1990
89.15965	%	51.	57.	61.	61.	51.	85.	28-Apr-1990
89.15966	%	36.	42.	44.	48.	39.	77.	28-Apr-1990
89.15967	%	37.	40.	42.	42.	47.	90.	28-Apr-1990
89.15968	%	52.	53.	52.	60.	51.	89.	28-Apr-1990
89.15969	%	47.	47.	45.	60.	46.	86.	28-Apr-1990
89.15970	%	35.	34.	41.	46.	75.	83.	28-Apr-1990
89.15971	%	52.	53.	52.	60.	51.	89.	28-Apr-1990
89.15972	%	49.	52.	56.	59.	57.	83.	28-Apr-1990
89.15973	%	56.	59.	62.	68.	72.	87.	28-Apr-1990
89.15974	%	47.	51.	54.	59.	62.	89.	28-Apr-1990
89.15975	%	42.	44.	48.	52.	61.	88.	28-Apr-1990
89.15976	%	39.	43.	42.	45.	60.	81.	28-Apr-1990
89.15977	%	40.	39.	38.	49.	44.	95.	28-Apr-1990
89.15978	%	47.	49.	53.	53.	51.	93.	28-Apr-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

5/1/90
Date

5/1/90
Date

5/3/90
Date

The control status of the preceding 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.

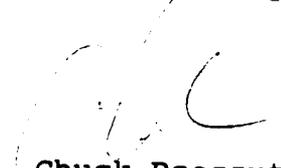
POLYCHLORINATED BIPHENYL ANALYSES

October 12, 1989

acc 3
4-80-90

Steve,

Attached you will find copies of the final reports for the soil samples that you submitted for PCB analysis under Requests 7968 & 7969. If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office (TA-59, OH-1, Room 115) at your convenience. Thank you for your continued support of our PCB analysis programs.


Chuck Rzeszutko
Organic Section Leader
HSE-9

#7968 ⇒ TSL-25
Final soil verification

#7969 ⇒ TSL-15
Soil samples

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

Prepared by: DMS on 5-Oct-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 7969 MATRIX: SS 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
85-C-1-1	89.15955	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-2	89.15956	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-3	89.15957	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-4	89.15958	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-5	89.15959	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-6	89.15960	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-7	89.15961	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-8	89.15962	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-9	89.15963	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-10	89.15964	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-11	89.15965	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-2-12	89.15966	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-13	89.15967	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-14	89.15968	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-15	89.15969	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-16	89.15970	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-17	89.15971	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C2-18	89.15972	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C3-19	89.15973	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C3-20	89.15974	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85C3-21	89.15975	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor

85C3-22	89.15976	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-23	89.15977	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-24	89.15978	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C4-2	89.16078	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-9	89.16079	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-10	89.16080	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor

DETAILED PCB DATA for customer samples on this report

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
85-C-1-1	89.15955	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-1	89.15955	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-1	89.15955	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-1	89.15955	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-2	89.15956	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-2	89.15956	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-2	89.15956	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-2	89.15956	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-3	89.15957	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-3	89.15957	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-3	89.15957	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-3	89.15957	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-4	89.15958	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-4	89.15958	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-4	89.15958	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-4	89.15958	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-5	89.15959	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-5	89.15959	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-5	89.15959	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-5	89.15959	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-6	89.15960	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-6	89.15960	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-6	89.15960	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-6	89.15960	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-7	89.15961	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-7	89.15961	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-7	89.15961	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-7	89.15961	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260
85-C-1-8	89.15962	1336363	< 0.1		UG/G	10/04/89		Mixed-Aroclor
85-C-1-8	89.15962	53469219	< 0.1		UG/G	10/04/89		Aroclor 1242
85-C-1-8	89.15962	11097691	< 0.1		UG/G	10/04/89		Aroclor 1254
85-C-1-8	89.15962	11096825	< 0.1		UG/G	10/04/89		Aroclor 1260

85-C-2-9	89.15963	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-9	89.15963	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-9	89.15963	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-9	89.15963	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85-C-2-10	89.15964	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-10	89.15964	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-10	89.15964	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-10	89.15964	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85-C-2-11	89.15965	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-11	89.15965	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-11	89.15965	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-11	89.15965	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85-C-2-12	89.15966	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85-C-2-12	89.15966	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85-C-2-12	89.15966	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85-C-2-12	89.15966	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-13	89.15967	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-13	89.15967	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-13	89.15967	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-13	89.15967	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-14	89.15968	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-14	89.15968	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-14	89.15968	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-14	89.15968	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-15	89.15969	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-15	89.15969	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-15	89.15969	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-15	89.15969	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-16	89.15970	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-16	89.15970	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-16	89.15970	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-16	89.15970	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-17	89.15971	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-17	89.15971	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-17	89.15971	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-17	89.15971	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C2-18	89.15972	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C2-18	89.15972	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C2-18	89.15972	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C2-18	89.15972	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-19	89.15973	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-19	89.15973	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-19	89.15973	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-19	89.15973	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-20	89.15974	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor

85C3-2	89.15974	53469219	< 0.1	UG/G	04/89	Aroclor 1242
85C3-20	89.15974	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-20	89.15974	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-21	89.15975	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-21	89.15975	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-21	89.15975	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-21	89.15975	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-22	89.15976	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-22	89.15976	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-22	89.15976	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-22	89.15976	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-23	89.15977	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-23	89.15977	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-23	89.15977	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-23	89.15977	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C3-24	89.15978	1336363	< 0.1	UG/G	10/04/89	Mixed-Aroclor
85C3-24	89.15978	53469219	< 0.1	UG/G	10/04/89	Aroclor 1242
85C3-24	89.15978	11097691	< 0.1	UG/G	10/04/89	Aroclor 1254
85C3-24	89.15978	11096825	< 0.1	UG/G	10/04/89	Aroclor 1260
85C4-2	89.16078	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-2	89.16078	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85C4-2	89.16078	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85C4-2	89.16078	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85C4-9	89.16079	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-9	89.16079	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85C4-9	89.16079	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85C4-9	89.16079	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260
85C4-10	89.16080	1336363	< 0.1	UG/G	10/05/89	Mixed-Aroclor
85C4-10	89.16080	53469219	< 0.1	UG/G	10/05/89	Aroclor 1242
85C4-10	89.16080	11097691	< 0.1	UG/G	10/05/89	Aroclor 1254
85C4-10	89.16080	11096825	< 0.1	UG/G	10/05/89	Aroclor 1260

REPORT NUMBER: 4267 (continued)

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

Prepared by: DMS on 5-Oct-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 7969 MATRIX: SS ANALYST: Dee Seitz
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-17z1

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.20070	00.20070	1336363	19.	3.8	UG/G	25.	2.	10/05/89	UNDER CONTROL	Mixed-Aroclor
00.20070	00.20070	53469219	< 0.1		UG/G			10/05/89	UNDER CONTROL	Aroclor 1242
00.20070	00.20070	11097691	< 0.1		UG/G			10/05/89	UNDER CONTROL	Aroclor 1254
00.20070	00.20070	11096825	19.	3.8	UG/G	25.	2.	10/05/89	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
89.16148	1336363	6.75	1.4	UG/G	10/05/89	UNDER CONTROL	Mixed-Aroclor
89.16148	53469219	< 0.1		UG/G	10/05/89	UNDER CONTROL	Aroclor 1242
89.16148	11097691	< 0.1		UG/G	10/05/89	UNDER CONTROL	Aroclor 1254
89.16148	11096825	6.75	1.4	UG/G	10/05/89	UNDER CONTROL	Aroclor 1260

METAL ANALYSES

HSE-9 ANALYTICAL SERVICE AGREEMENT

Low
TSC-88

Request No. 7969

I. PRESAMPLING CONFERENCE

Program Code W57R

No. Samples Expected 24 ea soil } VOC
SVOC
PCB
metals - see below

Submission Date 9-23-89

Completion Date _____

Chain of Custody? Yes

Special Protocol? (EPA etc.) EPA-EPTOX

Analyses Requested: List analyses on HSE-9 Analytical Chemistry Request Sheet.
(Indicate expected concentration range and required detection limits under remarks.)

VUA
Semi vol
PCB
metals

Container Type Glass/Teflon

Preservative None - chill 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 only if no RCRA compounds
(All hazardous samples or TRU wastes will be returned to the customer.)

Customer S.G. McLin

HSE-9 Section Leader

Customer Phone 5-1721

MS K490

[Signature]
[Signature]

Organic
Inorganic
Radiochem

Date 9/18/89

Metals:

II. EMERGENCY SAMPLES

1. EP Toxic metals
2. Total metals for 12 ea (see below)

Emergency Status requires the following signatures:

Customer Group Leader _____

HSE-9 Group Leader _____

Date _____

III. SAMPLE RECEIPT

Signature Elizabeth A. Jones Date 9/25/89 Total No. Samples Received 24 x 4 + 12 bla.

HSE-9 Sample No. Range 89.15955 to 89.15978

Customer Sample No. Range 85-C-1-1 to 85C4-12

TOTAL METALS:

- | | | |
|--------------|-------------|--------------|
| 1. Antimony | 5. Cadmium | 9. Nickel |
| 2. Arsenic | 6. Chromium | 10. Selenium |
| 3. Barium | 7. Lead | 11. Silver |
| 4. Beryllium | 8. Mercury | 12. Thallium |
- 3-8-89 Set A = Volatiles
Set B = SUOA
Set C = PCB
Set D = Metals

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

Prepared by: CB on 6-Nov-1989

REQUEST NUMBER: 7969 MATRIX: WE ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

Handwritten notes:
 T-12
 10/26/89
 EP tox metals

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-C-1-1	89.15955	AG	0.006	0.003	MG/L	10/27/89	EPTOX
85-C-1-1	89.15955	AG	0.009	0.003	MG/L	10/26/89	EPTOX
85-C-1-1	89.15955	AS	< 2.		UG/L	10/26/89	EPTOX
85-C-1-1	89.15955	AS	< 2.		UG/L	10/27/89	EPTOX
85-C-1-1	89.15955	PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-1-1	89.15955	PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-1-1	89.15955	SE	< 1.		UG/L	10/26/89	EPTOX
85-C-1-1	89.15955	SE	< 1.		UG/L	10/27/89	EPTOX
85-C-1-2	89.15956	AG	0.007	0.003	MG/L	10/26/89	EPTOX
85-C-1-2	89.15956	AG	< 0.003		MG/L	10/27/89	EPTOX
85-C-1-2	89.15956	AS	< 2.		UG/L	10/27/89	EPTOX
85-C-1-2	89.15956	AS	< 2.		UG/L	10/26/89	EPTOX
85-C-1-2	89.15956	PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-1-2	89.15956	PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-1-2	89.15956	SE	< 1.		UG/L	10/26/89	EPTOX
85-C-1-2	89.15956	SE	< 1.		UG/L	10/27/89	EPTOX
85-C-1-3	89.15957	AG	0.25	0.025	MG/L	10/26/89	EPTOX
85-C-1-3	89.15957	AG	0.26	0.03	MG/L	10/27/89	EPTOX
85-C-1-3	89.15957	AS	32.	3.2	UG/L	10/26/89	EPTOX
85-C-1-3	89.15957	AS	31.	3.1	UG/L	10/27/89	EPTOX
85-C-1-3	89.15957	PB	0.12	0.05	MG/L	10/26/89	EPTOX
85-C-1-3	89.15957	PB	0.095	0.05	MG/L	10/27/89	EPTOX
85-C-1-3	89.15957	SE	30.	3.	UG/L	10/27/89	EPTOX
85-C-1-3	89.15957	SE	34.	3.4	UG/L	10/26/89	EPTOX
85-C-1-4	89.15958	AG	0.22	0.02	MG/L	10/27/89	EPTOX
85-C-1-4	89.15958	AG	0.21	0.021	MG/L	10/26/89	EPTOX
85-C-1-4	89.15958	AS	38.	3.8	UG/L	10/27/89	EPTOX
85-C-1-4	89.15958	AS	34.	3.4	UG/L	10/26/89	EPTOX
85-C-1-4	89.15958	PB	0.13	0.05	MG/L	10/27/89	EPTOX
85-C-1-4	89.15958	PB	0.13	0.05	MG/L	10/26/89	EPTOX
85-C-1-4	89.15958	SE	29.	2.9	UG/L	10/26/89	EPTOX
85-C-1-4	89.15958	SE	29.	2.9	UG/L	10/27/89	EPTOX
85-C-1-5	89.15959	AG	0.038	0.004	MG/L	10/26/89	EPTOX
85-C-1-5	89.15959	AG	0.034	0.003	MG/L	10/27/89	EPTOX
85-C-1-5	89.15959	AS	5.	2.	UG/L	10/27/89	EPTOX
85-C-1-5	89.15959	AS	5.3	2.	UG/L	10/26/89	EPTOX
85-C-1-5	89.15959	PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-1-5	89.15959	PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-1-5	89.15959	SE	4.2	1.	UG/L	10/26/89	EPTOX
85-C-1-5	89.15959	SE	3.5	1.	UG/L	10/27/89	EPTOX

85-C-1-6	89.15960 AG	0.044	0.004	MG/L	10/26/89	EPTOX
85-C-1-6	89.15960 AS	4.9	2.	UG/L	10/26/89	EPTOX
85-C-1-6	89.15960 AS	4.7	2.	UG/L	10/27/89	EPTOX
85-C-1-6	89.15960 PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-1-6	89.15960 PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-1-6	89.15960 SE	3.1	1.	UG/L	10/26/89	EPTOX
85-C-1-6	89.15960 SE	3.7	1.	UG/L	10/27/89	EPTOX
85-C-1-7	89.15961 AG	0.24	0.024	MG/L	10/26/89	EPTOX
85-C-1-7	89.15961 AS	34.	3.4	UG/L	10/26/89	EPTOX
85-C-1-7	89.15961 PB	0.13	0.05	MG/L	10/26/89	EPTOX
85-C-1-7	89.15961 SE	34.	3.4	UG/L	10/26/89	EPTOX
85-C-1-8	89.15962 AG	0.25	0.025	MG/L	10/26/89	EPTOX
85-C-1-8	89.15962 AG	0.26	0.03	MG/L	10/27/89	EPTOX
85-C-1-8	89.15962 AS	33.	3.3	UG/L	10/26/89	EPTOX
85-C-1-8	89.15962 AS	35.	3.5	UG/L	10/27/89	EPTOX
85-C-1-8	89.15962 PB	0.15	0.05	MG/L	10/26/89	EPTOX
85-C-1-8	89.15962 PB	0.13	0.05	MG/L	10/27/89	EPTOX
85-C-1-8	89.15962 SE	29.	2.9	UG/L	10/27/89	EPTOX
85-C-1-8	89.15962 SE	32.	3.2	UG/L	10/26/89	EPTOX
85-C-2-9	89.15963 AG	0.035	0.003	MG/L	10/26/89	EPTOX
85-C-2-9	89.15963 AS	< 2.		UG/L	10/27/89	EPTOX
85-C-2-9	89.15963 AS	5.6	2.	UG/L	10/26/89	EPTOX
85-C-2-9	89.15963 PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-2-9	89.15963 PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-2-9	89.15963 SE	< 1.		UG/L	10/27/89	EPTOX
85-C-2-9	89.15963 SE	3.2	1.	UG/L	10/26/89	EPTOX
85-C-2-10	89.15964 AG	0.25	0.03	MG/L	10/27/89	EPTOX
85-C-2-10	89.15964 AG	0.26	0.026	MG/L	10/26/89	EPTOX
85-C-2-10	89.15964 AS	32.	3.2	UG/L	10/26/89	EPTOX
85-C-2-10	89.15964 AS	32.	3.2	UG/L	10/27/89	EPTOX
85-C-2-10	89.15964 PB	0.11	0.05	MG/L	10/27/89	EPTOX
85-C-2-10	89.15964 PB	0.12	0.05	MG/L	10/26/89	EPTOX
85-C-2-10	89.15964 SE	31.	3.1	UG/L	10/26/89	EPTOX
85-C-2-10	89.15964 SE	27.	2.7	UG/L	10/27/89	EPTOX
85-C-2-11	89.15965 AG	< 0.003		MG/L	10/27/89	EPTOX
85-C-2-11	89.15965 AG	< 0.003		MG/L	10/26/89	EPTOX
85-C-2-11	89.15965 AS	< 2.		UG/L	10/26/89	EPTOX
85-C-2-11	89.15965 AS	< 2.		UG/L	10/27/89	EPTOX
85-C-2-11	89.15965 PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-2-11	89.15965 PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-2-11	89.15965 SE	< 1.		UG/L	10/26/89	EPTOX
85-C-2-11	89.15965 SE	< 1.		UG/L	10/27/89	EPTOX
85-C-2-12	89.15966 AG	0.003	0.003	MG/L	10/26/89	EPTOX
85-C-2-12	89.15966 AG	< 0.003		MG/L	10/27/89	EPTOX
85-C-2-12	89.15966 AS	< 2.		UG/L	10/26/89	EPTOX
85-C-2-12	89.15966 AS	< 2.		UG/L	10/27/89	EPTOX
85-C-2-12	89.15966 PB	< 0.05		MG/L	10/27/89	EPTOX
85-C-2-12	89.15966 PB	< 0.05		MG/L	10/26/89	EPTOX
85-C-2-12	89.15966 SE	< 1.		UG/L	10/27/89	EPTOX
85-C-2-12	89.15966 SE	< 1.		UG/L	10/26/89	EPTOX
85C2-13	89.15967 AG	0.17	0.02	MG/L	10/26/89	EPTOX
85C2-13	89.15967 AG	0.18	0.02	MG/L	10/27/89	EPTOX
85C2-13	89.15967 AS	33.	3.3	UG/L	10/27/89	EPTOX
85C2-13	89.15967 AS	33.	3.3	UG/L	10/26/89	EPTOX
85C2-13	89.15967 PB	0.11	0.05	MG/L	10/27/89	EPTOX
85C2-13	89.15967 PB	0.12	0.05	MG/L	10/26/89	EPTOX
85C2-13	89.15967 SE	30.	3.	UG/L	10/27/89	EPTOX
85C2-13	89.15967 SE	30.	3.	UG/L	10/26/89	EPTOX
85C2-14	89.15968 AG	0.03	0.003	MG/L	10/26/89	EPTOX
85C2-14	89.15968 AG	0.02	0.003	MG/L	10/27/89	EPTOX

85C2-14	89.15968 AS	5.3	2.	UG/L	10/26/89	EPTOX
85C2-14	89.15968 AS	5.	2.	UG/L	10/27/89	EPTOX
85C2-14	89.15968 PB	< 0.05		MG/L	10/26/89	EPTOX
85C2-14	89.15968 PB	< 0.05		MG/L	10/27/89	EPTOX
85C2-14	89.15968 SE	3.5	1.	UG/L	10/27/89	EPTOX
85C2-14	89.15968 SE	3.9	1.	UG/L	10/26/89	EPTOX
85C2-15	89.15969 AG	0.005	0.003	MG/L	10/26/89	EPTOX
85C2-15	89.15969 AG	0.005	0.003	MG/L	10/27/89	EPTOX
85C2-15	89.15969 AS	< 2.		UG/L	10/27/89	EPTOX
85C2-15	89.15969 AS	2.	2.	UG/L	10/26/89	EPTOX
85C2-15	89.15969 PB	< 0.05		MG/L	10/26/89	EPTOX
85C2-15	89.15969 PB	< 0.05		MG/L	10/27/89	EPTOX
85C2-15	89.15969 SE	< 1.		UG/L	10/26/89	EPTOX
85C2-15	89.15969 SE	< 1.		UG/L	10/27/89	EPTOX
85C2-16	89.15970 AG	< 0.003		MG/L	10/27/89	EPTOX
85C2-16	89.15970 AG	< 0.003		MG/L	10/26/89	EPTOX
85C2-16	89.15970 AS	< 2.		UG/L	10/27/89	EPTOX
85C2-16	89.15970 AS	< 2.		UG/L	10/26/89	EPTOX
85C2-16	89.15970 PB	< 0.05		MG/L	10/26/89	EPTOX
85C2-16	89.15970 PB	< 0.05		MG/L	10/27/89	EPTOX
85C2-16	89.15970 SE	< 1.		UG/L	10/27/89	EPTOX
85C2-16	89.15970 SE	< 1.		UG/L	10/26/89	EPTOX
85C2-17	89.15971 AG	0.25	0.025	MG/L	10/26/89	EPTOX
85C2-17	89.15971 AS	30.	3.	UG/L	10/26/89	EPTOX
85C2-17	89.15971 PB	0.15	0.05	MG/L	10/26/89	EPTOX
85C2-17	89.15971 SE	29.	2.9	UG/L	10/26/89	EPTOX
85C2-18	89.15972 AG	0.024	0.003	MG/L	10/26/89	EPTOX
85C2-18	89.15972 AS	4.5	2.	UG/L	10/27/89	EPTOX
85C2-18	89.15972 AS	4.9	2.	UG/L	10/26/89	EPTOX
85C2-18	89.15972 PB	< 0.05		MG/L	10/27/89	EPTOX
85C2-18	89.15972 PB	0.05	0.05	MG/L	10/26/89	EPTOX
85C2-18	89.15972 SE	3.9	1.	UG/L	10/27/89	EPTOX
85C2-18	89.15972 SE	3.9	1.	UG/L	10/26/89	EPTOX
85C3-19	89.15973 AG	0.021	0.003	MG/L	10/26/89	EPTOX
85C3-19	89.15973 AS	< 2.		UG/L	10/26/89	EPTOX
85C3-19	89.15973 AS	< 2.		UG/L	10/27/89	EPTOX
85C3-19	89.15973 PB	< 0.05		MG/L	10/26/89	EPTOX
85C3-19	89.15973 PB	< 0.05		MG/L	10/27/89	EPTOX
85C3-19	89.15973 SE	< 1.		UG/L	10/27/89	EPTOX
85C3-19	89.15973 SE	< 1.		UG/L	10/26/89	EPTOX
85C3-20	89.15974 AG	0.005	0.003	MG/L	10/26/89	EPTOX
85C3-20	89.15974 AG	0.007	0.003	MG/L	10/27/89	EPTOX
85C3-20	89.15974 AS	< 2.		UG/L	10/27/89	EPTOX
85C3-20	89.15974 AS	< 2.		UG/L	10/26/89	EPTOX
85C3-20	89.15974 PB	< 0.05		MG/L	10/26/89	EPTOX
85C3-20	89.15974 PB	< 0.05		MG/L	10/27/89	EPTOX
85C3-20	89.15974 SE	< 1.		UG/L	10/26/89	EPTOX
85C3-20	89.15974 SE	< 1.		UG/L	10/27/89	EPTOX
85C3-21	89.15975 AG	0.011	0.003	MG/L	10/26/89	EPTOX
85C3-21	89.15975 AG	0.005	0.003	MG/L	10/27/89	EPTOX
85C3-21	89.15975 AS	< 2.		UG/L	10/27/89	EPTOX
85C3-21	89.15975 AS	< 2.		UG/L	10/26/89	EPTOX
85C3-21	89.15975 PB	< 0.05		MG/L	10/27/89	EPTOX
85C3-21	89.15975 PB	< 0.05		MG/L	10/26/89	EPTOX
85C3-21	89.15975 SE	< 1.		UG/L	10/27/89	EPTOX
85C3-21	89.15975 SE	< 1.		UG/L	10/26/89	EPTOX
85C3-22	89.15976 AG	0.21	0.021	MG/L	10/26/89	EPTOX
85C3-22	89.15976 AG	0.19	0.02	MG/L	10/27/89	EPTOX
85C3-22	89.15976 AS	38.	3.8	UG/L	10/26/89	EPTOX
85C3-22	89.15976 AS	37.	3.7	UG/L	10/27/89	EPTOX

85C3-22	89.15976 PB	0.12	0.05	MG/L	10/26/89	EPTOX
85C3-22	89.15976 PB	0.12	0.05	MG/L	10/27/89	EPTOX
85C3-22	89.15976 SE	30.	3.	UG/L	10/27/89	EPTOX
85C3-22	89.15976 SE	31.	3.1	UG/L	10/26/89	EPTOX
85C3-23	89.15977 AG	0.007	0.003	MG/L	10/26/89	EPTOX
85C3-23	89.15977 AG	0.008	0.003	MG/L	10/27/89	EPTOX
85C3-23	89.15977 AS	< 2.		UG/L	10/26/89	EPTOX
85C3-23	89.15977 AS	< 2.		UG/L	10/27/89	EPTOX
85C3-23	89.15977 PB	< 0.05		MG/L	10/26/89	EPTOX
85C3-23	89.15977 PB	< 0.05		MG/L	10/27/89	EPTOX
85C3-23	89.15977 SE	< 1.		UG/L	10/26/89	EPTOX
85C3-23	89.15977 SE	< 1.		UG/L	10/27/89	EPTOX
85C3-24	89.15978 AG	0.012	0.003	MG/L	10/27/89	EPTOX
85C3-24	89.15978 AG	0.019	0.003	MG/L	10/26/89	EPTOX
85C3-24	89.15978 AS	< 2.		UG/L	10/27/89	EPTOX
85C3-24	89.15978 AS	< 2.		UG/L	10/26/89	EPTOX
85C3-24	89.15978 PB	< 0.05		MG/L	10/26/89	EPTOX
85C3-24	89.15978 PB	< 0.05		MG/L	10/27/89	EPTOX
85C3-24	89.15978 SE	< 1.		UG/L	10/26/89	EPTOX
85C3-24	89.15978 SE	< 1.		UG/L	10/27/89	EPTOX
85C4-11	89.16082 CR	Bottle Blank		MG/L	10/18/89	

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

Prepared by: CB on 6-Nov-1989

REQUEST NUMBER: 7969 MATRIX: WE 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	28.9	2.9	UG/L	27.	3.	10/27/89 UNDER CONTROL
00.01010	00.01010	AS	26.7	2.7	UG/L	27.	3.	10/27/89 UNDER CONTROL
00.01010	00.01010	AS	29.7	3.	UG/L	27.	3.	10/27/89 UNDER CONTROL
00.01010	00.01010	AS	29.3	2.9	UG/L	27.	3.	10/27/89 UNDER CONTROL
00.01010	00.01010	SE	10.3	1.	UG/L	11.	2.	10/27/89 UNDER CONTROL
00.01010	00.01010	SE	10.4	1.	UG/L	11.	2.	10/27/89 UNDER CONTROL
00.01010	00.01010	SE	10.7	1.1	UG/L	11.	2.	10/27/89 UNDER CONTROL
00.01010	00.01010	SE	11.1	1.1	UG/L	11.	2.	10/27/89 UNDER CONTROL
00.01036	00.01036	PB	102.	10.2	UG/L	100.	8.	10/27/89 UNDER CONTROL
00.01036	00.01036	PB	105.	10.5	UG/L	100.	8.	10/27/89 UNDER CONTROL
00.01036	00.01036	PB	102.	10.2	UG/L	100.	8.	10/27/89 UNDER CONTROL
00.01036	00.01036	PB	94.	9.4	UG/L	100.	8.	10/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.506	0.051	MG/L	0.5	0.05	10/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.506	0.051	MG/L	0.5	0.05	10/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.521	0.052	MG/L	0.5	0.05	10/27/89 UNDER CONTROL
00.98805	00.98805	AG	0.496	0.05	MG/L	0.5	0.05	10/27/89 UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE

COMPLETION

NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	DATE	COMMENT
89.16803	AG	1.8	0.18	MG/L	10/26/89	UNDER CONTROL
89.16803	AG	1.9	0.02	MG/L	10/27/89	UNDER CONTROL
89.16803	AS	85.4	8.5	UG/L	10/26/89	UNDER CONTROL
89.16803	PB	0.95	0.095	MG/L	10/26/89	WARNING 2-3 SIG
89.16803	PB	0.95	0.095	MG/L	10/27/89	WARNING 2-3 SIG
89.16803	SE	98.6	9.9	UG/L	10/26/89	UNDER CONTROL

Jwf
Analyst

MLB
Section Leader

mag
QA Officer

11-13-89
Date

11-13-89
Date

11-13-89
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.

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

Prepared by: J.D. MONTOYA on 18-Oct-1989

ANALYSIS: BA REQUEST NUMBER: 7969 MATRIX: WE 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
85-C-1-1	89.15955	0.23	0.02	MG/L	10/18/89	EPTOX
85-C-1-2	89.15956	< 0.02		MG/L	10/18/89	EPTOX
85-C-1-3	89.15957	< 0.02		MG/L	10/18/89	EPTOX
85-C-1-4	89.15958	0.2	0.02	MG/L	10/18/89	EPTOX
85-C-1-5	89.15959	0.13	0.02	MG/L	10/18/89	EPTOX
85-C-1-6	89.15960	43.	20.	UG/L	10/18/89	EPTOX
85-C-1-7	89.15961	< 0.02		MG/L	10/18/89	EPTOX
85-C-1-8	89.15962	< 0.02		MG/L	10/18/89	EPTOX
85-C-2-9	89.15963	< 0.02		MG/L	10/18/89	EPTOX
85-C-2-10	89.15964	< 0.02		MG/L	10/18/89	EPTOX
85-C-2-11	89.15965	75.	20.	UG/L	10/18/89	EPTOX
85-C-2-12	89.15966	< 0.02		MG/L	10/18/89	EPTOX
85C2-13	89.15967	57.	20.	UG/L	10/18/89	EPTOX
85C2-14	89.15968	< 0.02		MG/L	10/18/89	EPTOX
85C2-15	89.15969	0.2	0.02	MG/L	10/18/89	EPTOX
85C2-16	89.15970	< 0.02		MG/L	10/18/89	EPTOX
85C2-17	89.15971	< 0.02		MG/L	10/18/89	EPTOX
85C2-18	89.15972	< 0.02		MG/L	10/18/89	EPTOX
85C3-19	89.15973	94.	20.	UG/L	10/18/89	EPTOX
85C3-20	89.15974	< 0.02		MG/L	10/18/89	EPTOX
85C3-21	89.15975	< 0.02		MG/L	10/18/89	EPTOX
85C3-22	89.15976	0.27	0.03	MG/L	10/18/89	EPTOX
85C3-23	89.15977	0.26	0.03	MG/L	10/18/89	EPTOX
85C3-24	89.15978	< 0.02		MG/L	10/18/89	EPTOX
85C4-3	89.16081	< 0.02		MG/L	10/18/89	EPTOX
89.16802	89.16802	4.6	0.5	MG/L	10/18/89	EPTOX

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

Prepared by: J.D. MONTOYA on 18-Oct-1989

ANALYSIS: BA REQUEST NUMBER: 7969 MATRIX: WE 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		COMPLETION DATE	COMMENT
					CERTIFIED VALUE	UNCERTAINTY		
00.98625	00.98625	96.	9.6	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	99.7	10.	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	102.	10.2	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	102.	10.2	UG/L	100.	10.	10/18/89	UNDER CONTROL

JDMontoya
Analyst

mcw
Section Leader

maq
QA Officer

10-19-89
Date

10-19-89
Date

10-19-89
Date

The control status of the preceding 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.

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

Prepared by: J.D. MONTOYA on 18-Oct-1989

ANALYSIS: CD REQUEST NUMBER: 7969 MATRIX: WE 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
85-C-1-1	89.15955	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-2	89.15956	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-3	89.15957	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-4	89.15958	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-5	89.15959	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-6	89.15960	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-7	89.15961	< 0.1		MG/L	10/18/89	EPTOX
85-C-1-8	89.15962	< 0.1		MG/L	10/18/89	EPTOX
85-C-2-9	89.15963	< 0.1		MG/L	10/18/89	EPTOX
85-C-2-10	89.15964	< 0.1		MG/L	10/18/89	EPTOX
85-C-2-11	89.15965	< 0.1		MG/L	10/18/89	EPTOX
85-C-2-12	89.15966	< 0.1		MG/L	10/18/89	EPTOX
85C2-13	89.15967	< 0.1		MG/L	10/18/89	EPTOX
85C2-14	89.15968	< 0.1		MG/L	10/18/89	EPTOX
85C2-15	89.15969	< 0.1		MG/L	10/18/89	EPTOX
85C2-16	89.15970	< 0.1		MG/L	10/18/89	EPTOX
85C2-17	89.15971	< 0.1		MG/L	10/18/89	EPTOX
85C2-18	89.15972	< 0.1		MG/L	10/18/89	EPTOX
85C3-19	89.15973	< 0.1		MG/L	10/18/89	EPTOX
85C3-20	89.15974	< 0.1		MG/L	10/18/89	EPTOX
85C3-21	89.15975	< 0.1		MG/L	10/18/89	EPTOX
85C3-22	89.15976	< 0.1		MG/L	10/18/89	EPTOX
85C3-23	89.15977	< 0.1		MG/L	10/18/89	EPTOX
85C3-24	89.15978	< 0.1		MG/L	10/18/89	EPTOX
85C4-3	89.16081	< 0.1		MG/L	10/18/89	EPTOX
89.16802	89.16802	1.3	0.1	MG/L	10/18/89	EPTOX

REPORT NUMBER: 4414 (continued)

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

Prepared by: J.D. MONTOYA on 18-Oct-1989

ANALYSIS: CD REQUEST NUMBER: 7969 MATRIX: WE 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
00.98625	00.98625	103.	10.	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	105.	10.5	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	101.	10.	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	105.	10.5	UG/L	100.	10.	10/18/89	UNDER CONTROL

J.D. Montoya
Analyst

MACW
Section Leader

mag
QA Officer

10-19-89
Date

10-19-89
Date

10-19-89
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.

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

Prepared by: J.D. MONTOYA on 18-Oct-1989

ANALYSIS: CR REQUEST NUMBER: 7969 MATRIX: WE 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
85-C-1-1	89.15955	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-2	89.15956	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-3	89.15957	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-4	89.15958	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-5	89.15959	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-6	89.15960	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-7	89.15961	< 0.2		MG/L	10/18/89	EPTOX
85-C-1-8	89.15962	< 0.2		MG/L	10/18/89	EPTOX
85-C-2-9	89.15963	< 0.2		MG/L	10/18/89	EPTOX
85-C-2-10	89.15964	< 0.2		MG/L	10/18/89	EPTOX
85-C-2-11	89.15965	< 0.2		MG/L	10/18/89	EPTOX
85-C-2-12	89.15966	< 0.2		MG/L	10/18/89	EPTOX
85C2-13	89.15967	< 0.2		MG/L	10/18/89	EPTOX
85C2-14	89.15968	< 0.2		MG/L	10/18/89	EPTOX
85C2-15	89.15969	< 0.2		MG/L	10/18/89	EPTOX
85C2-16	89.15970	< 0.2		MG/L	10/18/89	EPTOX
85C2-17	89.15971	< 0.2		MG/L	10/18/89	EPTOX
85C2-18	89.15972	< 0.2		MG/L	10/18/89	EPTOX
85C3-19	89.15973	< 0.2		MG/L	10/18/89	EPTOX
85C3-20	89.15974	< 0.2		MG/L	10/18/89	EPTOX
85C3-21	89.15975	< 0.2		MG/L	10/18/89	EPTOX
85C3-22	89.15976	< 0.2		MG/L	10/18/89	EPTOX
85C3-23	89.15977	< 0.2		MG/L	10/18/89	EPTOX
85C3-24	89.15978	< 0.2		MG/L	10/18/89	EPTOX
85C4-3	89.16081	< 0.2		MG/L	10/18/89	EPTOX
89.16802	89.16802	0.96	0.2	MG/L	10/18/89	EPTOX

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

Prepared by: J.D. MONTOYA on 18-Oct-1989

ANALYSIS: CR REQUEST NUMBER: 7969 MATRIX: WE 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		COMPLETION DATE	COMMENT
					VALUE	UNCERTAINTY		
00.98625	00.98625	100.	10.	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	106.	10.6	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	106.	10.6	UG/L	100.	10.	10/18/89	UNDER CONTROL
00.98625	00.98625	106.	10.6	UG/L	100.	10.	10/18/89	UNDER CONTROL

JDMontoya
Analyst

McLin
Section Leader

mag
QA Officer

10-19-89
Date

10-19-89
Date

10-19-89
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.

Rec'd 12/18/89

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

Prepared by: ESG on 11-Dec-1989

*TA-35
TBL-85 S.I.
Core holes in SI*

ANALYSIS: HG REQUEST NUMBER: 7969 MATRIX: NE 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
85-C-1-1	89.15955	< 0.2		UG/L	10/24/89	
85-C-1-1	89.15955	< 0.2		UG/L	12/08/89	
85-C-1-2	89.15956	< 0.2		UG/L	10/24/89	
85-C-1-2	89.15956	< 0.2		UG/L	12/08/89	
85-C-1-3	89.15957	< 0.2		UG/L	12/08/89	
85-C-1-3	89.15957	< 0.2		UG/L	10/24/89	
85-C-1-4	89.15958	< 0.2		UG/L	12/08/89	
85-C-1-4	89.15958	< 0.2		UG/L	10/24/89	
85-C-1-5	89.15959	< 0.2		UG/L	12/08/89	
85-C-1-5	89.15959	< 0.2		UG/L	10/24/89	
85-C-1-6	89.15960	< 0.2		UG/L	12/08/89	
85-C-1-6	89.15960	< 0.2		UG/L	10/24/89	
85-C-1-7	89.15961	< 0.2		UG/L	12/08/89	
85-C-1-7	89.15961	< 0.2		UG/L	10/24/89	
85-C-1-8	89.15962	< 0.2		UG/L	12/08/89	
85-C-1-8	89.15962	< 0.2		UG/L	10/24/89	
85-C-2-9	89.15963	< 0.2		UG/L	10/24/89	
85-C-2-9	89.15963	< 0.2		UG/L	12/08/89	
85-C-2-10	89.15964	< 0.2		UG/L	12/08/89	
85-C-2-10	89.15964	< 0.2		UG/L	10/24/89	
85-C-2-11	89.15965	< 0.2		UG/L	10/24/89	
85-C-2-11	89.15965	< 0.2		UG/L	12/08/89	
85-C-2-12	89.15966	< 0.2		UG/L	10/24/89	
85-C-2-12	89.15966	< 0.2		UG/L	12/08/89	
85C2-13	89.15967	< 0.2		UG/L	10/24/89	
85C2-13	89.15967	< 0.2		UG/L	12/08/89	
85C2-14	89.15968	< 0.2		UG/L	12/08/89	
85C2-14	89.15968	< 0.2		UG/L	10/24/89	
85C2-15	89.15969	< 0.2		UG/L	10/24/89	
85C2-15	89.15969	< 0.2		UG/L	12/08/89	
85C2-16	89.15970	< 0.2		UG/L	12/08/89	
85C2-16	89.15970	< 0.2		UG/L	10/24/89	
85C2-17	89.15971	< 0.2		UG/L	12/08/89	
85C2-17	89.15971	< 0.2		UG/L	10/24/89	
85C2-18	89.15972	< 0.2		UG/L	12/08/89	
85C2-18	89.15972	< 0.2		UG/L	10/24/89	
85C3-19	89.15973	< 0.2		UG/L	10/24/89	
85C3-19	89.15973	< 0.2		UG/L	12/08/89	
85C3-20	89.15974	< 0.2		UG/L	12/08/89	

85C3-20	89.15974	< 0.2	UG/L	10/24/89
85C3-21	89.15975	< 0.2	UG/L	12/08/89
85C3-21	89.15975	< 0.2	UG/L	10/24/89
85C3-22	89.15976	< 0.2	UG/L	12/08/89
85C3-22	89.15976	< 0.2	UG/L	10/24/89
85C3-23	89.15977	< 0.2	UG/L	12/08/89
85C3-23	89.15977	< 0.2	UG/L	10/24/89
85C3-24	89.15978	< 0.2	UG/L	12/08/89
85C3-24	89.15978	< 0.2	UG/L	10/24/89

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

Prepared by: ESG on 11-Dec-1989

ANALYSIS: HG REQUEST NUMBER: 7969 MATRIX: WE 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
00.20086	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
89.16804	2.8	0.3	UG/L	12/05/89	UNDER CONTROL

MAB
Analyst

MSB
Section Leader

maq
QA Officer

12/12/89
Date

12-12-89
Date

12-12-89
Date

The control status of the preceding 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

**PHASE THREE CLEAN CLOSURE VERIFICATION SAMPLES: SOIL SAMPLES
FROM BENEATH THE UNDERGROUND STORAGE GROUND TANK AND
LINES**

TSL-35
Soils below HST & PVC pipe

HSE-9 ANALYTICAL SERVICE AGREEMENT

8203
Request No. ~~8203~~ 8278

I. PRESAMPLING CONFERENCE

Program Code WH 45 No. Samples Expected 12 ea soil } VOC
SVOC
PCB
App. 8 met. see b. m.
Submission Date 11-28-89 Completion Date _____
Chain of Custody? Yes 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 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 [Signature] Organic
Customer Phone 5-1721 MS K490 [Signature] Inorganic
Date 11-28-89 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 11/28/89 Total No. Samples Received 12 x 4 sets
HSE-9 Sample No. Range 89.17942 to 89.17953
Customer Sample No. Range 85 PL-1 to 85 PL-12

Set A = VOA
Set B = SVOA
Set C = PCB
Set D = Metals

VOLATILE ORGANIC ANALYSES

March 2, 1990

Rec'd
3/5/90
ADM
in

Steve,

Attached you will find the **final** report for the soil samples you submitted for VOA analysis under the request #8298. Methylene Chloride was detected in several of the samples. Methylene Chloride was detected in the blank at a concentration of 5 ug/kg. The presence of Methylene Chloride in these samples is probably due to contamination from the laboratory environment as the laboratory facility ventilation is inadequate for proper volatile sample preparation. If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office (TA-59, OH-1, Room 115).

Thank you for your continued support of our VOA analysis program.



Chuck Rzeszutko

Organic Section Leader

HSE-9

TSL-75
Sails below VST &
PVC

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-1	89.17942	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-1	89.17942	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-1	89.17942	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-1	89.17942	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-1	89.17942	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-1	89.17942	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-1	89.17942	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-1	89.17942	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-1	89.17942	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-1	89.17942	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-1	89.17942	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-1	89.17942	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-1	89.17942	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-1	89.17942	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-1	89.17942	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-1	89.17942	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-1	89.17942	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-1	89.17942	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-1	89.17942	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-1	89.17942	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-1	89.17942	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-1	89.17942	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-1	89.17942	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-1	89.17942	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-1	89.17942	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-1	89.17942	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-1	89.17942	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-1	89.17942	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-1	89.17942	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-1	89.17942	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-1	89.17942	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-1	89.17942	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-1	89.17942	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-1	89.17942	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-1	89.17942	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-1	89.17942	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-1	89.17942	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-1	89.17942	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-1	89.17942	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-1	89.17942	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-1	89.17942	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-1	89.17942	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-1	89.17942	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-1	89.17942	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-1	89.17942	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-1	89.17942	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-1	89.17942	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-1	89.17942	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-1	89.17942	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-1	89.17942	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-1	89.17942	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-1	89.17942	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-1	89.17942	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-1	89.17942	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-1	89.17942	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-1	89.17942	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-1	89.17942	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-1	89.17942	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-1	89.17942	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-1	89.17942	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-1	89.17942	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-1	89.17942	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-1	89.17942	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-1	89.17942	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-2	89.17943	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-2	89.17943	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-2	89.17943	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-2	89.17943	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-2	89.17943	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-2	89.17943	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-2	89.17943	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-2	89.17943	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-2	89.17943	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-2	89.17943	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-2	89.17943	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-2	89.17943	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-2	89.17943	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-2	89.17943	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-2	89.17943	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-2	89.17943	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-2	89.17943	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-2	89.17943	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-2	89.17943	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-2	89.17943	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-2	89.17943	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-2	89.17943	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-2	89.17943	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-2	89.17943	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-2	89.17943	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-2	89.17943	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-2	89.17943	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-2	89.17943	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-2	89.17943	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-2	89.17943	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-2	89.17943	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-2	89.17943	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-2	89.17943	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-2	89.17943	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-2	89.17943	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-2	89.17943	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-2	89.17943	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-2	89.17943	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-2	89.17943	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-2	89.17943	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-2	89.17943	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-2	89.17943	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-2	89.17943	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-2	89.17943	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-2	89.17943	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-2	89.17943	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-2	89.17943	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-2	89.17943	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-2	89.17943	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-2	89.17943	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-2	89.17943	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-2	89.17943	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-2	89.17943	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-2	89.17943	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-2	89.17943	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-2	89.17943	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-2	89.17943	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-2	89.17943	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-2	89.17943	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-2	89.17943	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-2	89.17943	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-2	89.17943	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-2	89.17943	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-2	89.17943	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-3	89.17944	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-3	89.17944	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-3	89.17944	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-3	89.17944	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-3	89.17944	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-3	89.17944	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-3	89.17944	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-3	89.17944	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-3	89.17944	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-3	89.17944	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-3	89.17944	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-3	89.17944	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-3	89.17944	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-3	89.17944	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-3	89.17944	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-3	89.17944	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-3	89.17944	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-3	89.17944	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-3	89.17944	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-3	89.17944	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-3	89.17944	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-3	89.17944	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-3	89.17944	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-3	89.17944	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-3	89.17944	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-3	89.17944	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-3	89.17944	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-3	89.17944	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-3	89.17944	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-3	89.17944	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-3	89.17944	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-3	89.17944	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-3	89.17944	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-3	89.17944	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-3	89.17944	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-3	89.17944	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-3	89.17944	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-3	89.17944	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-3	89.17944	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-3	89.17944	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-3	89.17944	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-3	89.17944	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-3	89.17944	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-3	89.17944	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-3	89.17944	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-3	89.17944	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-3	89.17944	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-3	89.17944	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-3	89.17944	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-3	89.17944	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-3	89.17944	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-3	89.17944	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-3	89.17944	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-3	89.17944	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-3	89.17944	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-3	89.17944	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-3	89.17944	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-3	89.17944	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-3	89.17944	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-3	89.17944	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-3	89.17944	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-3	89.17944	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-3	89.17944	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-3	89.17944	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-4	89.17945	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-4	89.17945	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-4	89.17945	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-4	89.17945	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-4	89.17945	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-4	89.17945	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-4	89.17945	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-4	89.17945	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-4	89.17945	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-4	89.17945	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-4	89.17945	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-4	89.17945	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-4	89.17945	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-4	89.17945	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-4	89.17945	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-4	89.17945	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-4	89.17945	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-4	89.17945	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-4	89.17945	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-4	89.17945	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-4	89.17945	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-4	89.17945	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-4	89.17945	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-4	89.17945	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-4	89.17945	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-4	89.17945	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-4	89.17945	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-4	89.17945	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-4	89.17945	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-4	89.17945	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-4	89.17945	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-4	89.17945	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-4	89.17945	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-4	89.17945	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-4	89.17945	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-4	89.17945	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-4	89.17945	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-4	89.17945	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-4	89.17945	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-4	89.17945	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-4	89.17945	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-4	89.17945	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-4	89.17945	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-4	89.17945	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-4	89.17945	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-4	89.17945	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-4	89.17945	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-4	89.17945	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-4	89.17945	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-4	89.17945	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-4	89.17945	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-4	89.17945	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-4	89.17945	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-4	89.17945	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-4	89.17945	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-4	89.17945	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-4	89.17945	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-4	89.17945	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-4	89.17945	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-4	89.17945	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-4	89.17945	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-4	89.17945	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-4	89.17945	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-4	89.17945	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-5	89.17946	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-5	89.17946	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-5	89.17946	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-5	89.17946	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-5	89.17946	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-5	89.17946	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-5	89.17946	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-5	89.17946	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-5	89.17946	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-5	89.17946	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-5	89.17946	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-5	89.17946	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-5	89.17946	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-5	89.17946	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-5	89.17946	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-5	89.17946	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-5	89.17946	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-5	89.17946	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-5	89.17946	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-5	89.17946	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-5	89.17946	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-5	89.17946	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-5	89.17946	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-5	89.17946	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-5	89.17946	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-5	89.17946	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-5	89.17946	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-5	89.17946	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-5	89.17946	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-5	89.17946	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-5	89.17946	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-5	89.17946	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-5	89.17946	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-5	89.17946	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-5	89.17946	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-5	89.17946	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-5	89.17946	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-5	89.17946	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-5	89.17946	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-5	89.17946	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-5	89.17946	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-5	89.17946	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-5	89.17946	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-5	89.17946	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-5	89.17946	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-5	89.17946	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-5	89.17946	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-5	89.17946	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-5	89.17946	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-5	89.17946	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-5	89.17946	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-5	89.17946	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-5	89.17946	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-5	89.17946	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-5	89.17946	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-5	89.17946	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-5	89.17946	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-5	89.17946	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-5	89.17946	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-5	89.17946	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-5	89.17946	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-5	89.17946	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-5	89.17946	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-5	89.17946	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-6	89.17947	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-6	89.17947	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-6	89.17947	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-6	89.17947	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-6	89.17947	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-6	89.17947	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-6	89.17947	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-6	89.17947	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-6	89.17947	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-6	89.17947	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-6	89.17947	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-6	89.17947	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-6	89.17947	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-6	89.17947	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-6	89.17947	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-6	89.17947	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-6	89.17947	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-6	89.17947	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-6	89.17947	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-6	89.17947	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-6	89.17947	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-6	89.17947	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-6	89.17947	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-6	89.17947	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-6	89.17947	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-6	89.17947	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-6	89.17947	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-6	89.17947	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-6	89.17947	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-6	89.17947	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-6	89.17947	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-6	89.17947	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-6	89.17947	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-6	89.17947	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-6	89.17947	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-6	89.17947	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-6	89.17947	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-6	89.17947	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-6	89.17947	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-6	89.17947	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-6	89.17947	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-6	89.17947	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-6	89.17947	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-6	89.17947	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-6	89.17947	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-6	89.17947	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-6	89.17947	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-6	89.17947	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-6	89.17947	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-6	89.17947	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-6	89.17947	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-6	89.17947	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-6	89.17947	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-6	89.17947	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-6	89.17947	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-6	89.17947	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-6	89.17947	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-6	89.17947	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-6	89.17947	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-6	89.17947	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-6	89.17947	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-6	89.17947	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-6	89.17947	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-6	89.17947	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-7	89.17948	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-7	89.17948	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-7	89.17948	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-7	89.17948	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-7	89.17948	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-7	89.17948	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-7	89.17948	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-7	89.17948	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-7	89.17948	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-7	89.17948	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-7	89.17948	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-7	89.17948	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-7	89.17948	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-7	89.17948	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-7	89.17948	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-7	89.17948	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-7	89.17948	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-7	89.17948	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-7	89.17948	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-7	89.17948	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-7	89.17948	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-7	89.17948	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-7	89.17948	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-7	89.17948	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)
85PL-7	89.17948	106467	< 5.		UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)

85PL-7	89.17948	107062	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-7	89.17948	75343	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-7	89.17948	75354	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-7	89.17948	156605	< 5.		UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-7	89.17948	156592	< 5.		UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-7	89.17948	594207	< 5.		UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-7	89.17948	142289	< 5.		UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-7	89.17948	78875	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-7	89.17948	563586	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-7	89.17948	10061015	< 5.		UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-7	89.17948	10061026	< 5.		UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-7	89.17948	100414	< 5.		UG/KG	2/14/90	NONE	Ethylbenzene
85PL-7	89.17948	87683	< 5.		UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-7	89.17948	591786	< 10.		UG/KG	2/14/90	NONE	2-Hexanone
85PL-7	89.17948	98828	< 5.		UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-7	89.17948	99876	< 5.		UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-7	89.17948	108101	< 10.		UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-7	89.17948	75092	18.4	5.5	UG/KG	2/14/90	NONE	Methylene chloride
85PL-7	89.17948	91203	< 5.		UG/KG	2/14/90	NONE	Naphthalene
85PL-7	89.17948	103651	< 5.		UG/KG	2/14/90	NONE	Propylbenzene
85PL-7	89.17948	100425	< 5.		UG/KG	2/14/90	NONE	Styrene
85PL-7	89.17948	630206	< 5.		UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-7	89.17948	79345	< 5.		UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-7	89.17948	127184	< 5.		UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-7	89.17948	108883	< 5.		UG/KG	2/14/90	NONE	Toluene
85PL-7	89.17948	87616	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-7	89.17948	120821	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-7	89.17948	79005	< 5.		UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-7	89.17948	71556	< 5.		UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-7	89.17948	79016	< 5.		UG/KG	2/14/90	NONE	Trichloroethene
85PL-7	89.17948	75694	< 5.		UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-7	89.17948	96184	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-7	89.17948	108678	< 5.		UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-7	89.17948	95636	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-7	89.17948	108054	< 10.		UG/KG	2/14/90	NONE	Vinyl acetate
85PL-7	89.17948	75014	< 10.		UG/KG	2/14/90	NONE	Vinyl chloride
85PL-7	89.17948	95476	< 5.		UG/KG	2/14/90	NONE	o-Xylene
85PL-7	89.17948	1330207	< 5.		UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-8	89.17949	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-8	89.17949	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-8	89.17949	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-8	89.17949	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-8	89.17949	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-8	89.17949	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-8	89.17949	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-8	89.17949	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-8	89.17949	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-8	89.17949	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-8	89.17949	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-8	89.17949	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-8	89.17949	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-8	89.17949	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-8	89.17949	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-8	89.17949	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-8	89.17949	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-8	89.17949	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-8	89.17949	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-8	89.17949	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-8	89.17949	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-8	89.17949	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-8	89.17949	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-8	89.17949	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-8	89.17949	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-8	89.17949	106467	< 5.		UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-8	89.17949	75343	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-8	89.17949	107062	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-8	89.17949	75354	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-8	89.17949	156605	< 5.		UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-8	89.17949	156592	< 5.		UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-8	89.17949	594207	< 5.		UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-8	89.17949	142289	< 5.		UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-8	89.17949	78875	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-8	89.17949	10061026	< 5.		UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-8	89.17949	563586	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-8	89.17949	10061015	< 5.		UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-8	89.17949	100414	< 5.		UG/KG	2/14/90	NONE	Ethylbenzene
85PL-8	89.17949	87683	< 5.		UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-8	89.17949	591786	< 10.		UG/KG	2/14/90	NONE	2-Hexanone
85PL-8	89.17949	98828	< 5.		UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-8	89.17949	99876	< 5.		UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-8	89.17949	108101	< 10.		UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-8	89.17949	75092	13.33	4.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-8	89.17949	91203	< 5.		UG/KG	2/14/90	NONE	Naphthalene
85PL-8	89.17949	103651	< 5.		UG/KG	2/14/90	NONE	Propylbenzene
85PL-8	89.17949	100425	< 5.		UG/KG	2/14/90	NONE	Styrene
85PL-8	89.17949	630206	< 5.		UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-8	89.17949	79345	< 5.		UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-8	89.17949	127184	< 5.		UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-8	89.17949	108883	< 5.		UG/KG	2/14/90	NONE	Toluene
85PL-8	89.17949	120821	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-8	89.17949	87616	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-8	89.17949	79005	< 5.		UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-8	89.17949	71556	< 5.		UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-8	89.17949	79016	< 5.		UG/KG	2/14/90	NONE	Trichloroethene
85PL-8	89.17949	75694	< 5.		UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-8	89.17949	96184	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-8	89.17949	108678	< 5.		UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-8	89.17949	95636	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-8	89.17949	108054	< 10.		UG/KG	2/14/90	NONE	Vinyl acetate
85PL-8	89.17949	75014	< 10.		UG/KG	2/14/90	NONE	Vinyl chloride
85PL-8	89.17949	95476	< 5.		UG/KG	2/14/90	NONE	o-Xylene
85PL-8	89.17949	1330207	< 5.		UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-9	89.17950	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-9	89.17950	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-9	89.17950	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-9	89.17950	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-9	89.17950	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-9	89.17950	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-9	89.17950	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-9	89.17950	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-9	89.17950	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-9	89.17950	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-9	89.17950	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-9	89.17950	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-9	89.17950	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-9	89.17950	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-9	89.17950	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-9	89.17950	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-9	89.17950	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-9	89.17950	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-9	89.17950	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-9	89.17950	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-9	89.17950	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-9	89.17950	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-9	89.17950	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-9	89.17950	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-9	89.17950	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-9	89.17950	106467	< 5.		UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-9	89.17950	107062	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-9	89.17950	75343	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-9	89.17950	156605	< 5.		UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-9	89.17950	75354	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-9	89.17950	156592	< 5.		UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-9	89.17950	142289	< 5.		UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-9	89.17950	594207	< 5.		UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-9	89.17950	78875	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-9	89.17950	10061015	< 5.		UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-9	89.17950	10061026	< 5.		UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-9	89.17950	563586	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-9	89.17950	100414	< 5.		UG/KG	2/14/90	NONE	Ethylbenzene
85PL-9	89.17950	87683	< 5.		UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-9	89.17950	591786	< 10.		UG/KG	2/14/90	NONE	2-Hexanone
85PL-9	89.17950	98828	< 5.		UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-9	89.17950	99876	< 5.		UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-9	89.17950	108101	< 10.		UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-9	89.17950	75092	20.13	6.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-9	89.17950	91203	< 5.		UG/KG	2/14/90	NONE	Naphthalene
85PL-9	89.17950	103651	< 5.		UG/KG	2/14/90	NONE	Propylbenzene
85PL-9	89.17950	100425	< 5.		UG/KG	2/14/90	NONE	Styrene
85PL-9	89.17950	79345	< 5.		UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-9	89.17950	630206	< 5.		UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-9	89.17950	127184	< 5.		UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-9	89.17950	108883	< 5.		UG/KG	2/14/90	NONE	Toluene
85PL-9	89.17950	120821	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-9	89.17950	87616	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-9	89.17950	71556	< 5.		UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-9	89.17950	79005	< 5.		UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-9	89.17950	79016	< 5.		UG/KG	2/14/90	NONE	Trichloroethene
85PL-9	89.17950	75694	< 5.		UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-9	89.17950	96184	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-9	89.17950	108678	< 5.		UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-9	89.17950	95636	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-9	89.17950	108054	< 10.		UG/KG	2/14/90	NONE	Vinyl acetate
85PL-9	89.17950	75014	< 10.		UG/KG	2/14/90	NONE	Vinyl chloride
85PL-9	89.17950	95476	< 5.		UG/KG	2/14/90	NONE	o-Xylene
85PL-9	89.17950	1330207	< 5.		UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-10	89.17951	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-10	89.17951	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-10	89.17951	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-10	89.17951	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-10	89.17951	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-10	89.17951	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-10	89.17951	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-10	89.17951	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-10	89.17951	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-10	89.17951	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-10	89.17951	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-10	89.17951	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-10	89.17951	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-10	89.17951	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-10	89.17951	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-10	89.17951	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-10	89.17951	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-10	89.17951	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-10	89.17951	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-10	89.17951	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-10	89.17951	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-10	89.17951	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-10	89.17951	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-10	89.17951	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-10	89.17951	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-10	89.17951	106467	< 5.		UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-10	89.17951	107062	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-10	89.17951	75343	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-10	89.17951	75354	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-10	89.17951	156605	< 5.		UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-10	89.17951	156592	< 5.		UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-10	89.17951	594207	< 5.		UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-10	89.17951	78875	< 5.		UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-10	89.17951	142289	< 5.		UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-10	89.17951	10061026	< 5.		UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-10	89.17951	563586	< 5.		UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-10	89.17951	10061015	< 5.		UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-10	89.17951	100414	< 5.		UG/KG	2/14/90	NONE	Ethylbenzene
85PL-10	89.17951	87683	< 5.		UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-10	89.17951	591786	< 10.		UG/KG	2/14/90	NONE	2-Hexanone
85PL-10	89.17951	98828	< 5.		UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-10	89.17951	99876	< 5.		UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-10	89.17951	108101	< 10.		UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-10	89.17951	75092	14.61	4.4	UG/KG	2/14/90	NONE	Methylene chloride
85PL-10	89.17951	91203	< 5.		UG/KG	2/14/90	NONE	Naphthalene
85PL-10	89.17951	103651	< 5.		UG/KG	2/14/90	NONE	Propylbenzene
85PL-10	89.17951	100425	< 5.		UG/KG	2/14/90	NONE	Styrene
85PL-10	89.17951	79345	< 5.		UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-10	89.17951	630206	< 5.		UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-10	89.17951	127184	< 5.		UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-10	89.17951	108883	< 5.		UG/KG	2/14/90	NONE	Toluene
85PL-10	89.17951	120821	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-10	89.17951	87616	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-10	89.17951	79005	< 5.		UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-10	89.17951	71556	< 5.		UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-10	89.17951	79016	< 5.		UG/KG	2/14/90	NONE	Trichloroethene
85PL-10	89.17951	75694	< 5.		UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-10	89.17951	96184	< 5.		UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-10	89.17951	95636	< 5.		UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-10	89.17951	108678	< 5.		UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-10	89.17951	108054	< 10.		UG/KG	2/14/90	NONE	Vinyl acetate
85PL-10	89.17951	75014	< 10.		UG/KG	2/14/90	NONE	Vinyl chloride
85PL-10	89.17951	95476	< 5.		UG/KG	2/14/90	NONE	o-Xylene
85PL-10	89.17951	1330207	< 5.		UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-11	89.17952	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-11	89.17952	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-11	89.17952	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-11	89.17952	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-11	89.17952	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-11	89.17952	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-11	89.17952	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-11	89.17952	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-11	89.17952	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-11	89.17952	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-11	89.17952	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-11	89.17952	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-11	89.17952	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-11	89.17952	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-11	89.17952	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-11	89.17952	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-11	89.17952	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-11	89.17952	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-11	89.17952	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-11	89.17952	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-11	89.17952	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-11	89.17952	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-11	89.17952	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-11	89.17952	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-11	89.17952	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-11	89.17952	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-11	89.17952	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-11	89.17952	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-11	89.17952	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-11	89.17952	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-11	89.17952	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-11	89.17952	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-11	89.17952	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-11	89.17952	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-11	89.17952	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-11	89.17952	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-11	89.17952	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-11	89.17952	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-11	89.17952	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-11	89.17952	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-11	89.17952	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-11	89.17952	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-11	89.17952	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-11	89.17952	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-11	89.17952	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-11	89.17952	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-11	89.17952	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-11	89.17952	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-11	89.17952	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-11	89.17952	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-11	89.17952	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-11	89.17952	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-11	89.17952	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-11	89.17952	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-11	89.17952	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-11	89.17952	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-11	89.17952	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-11	89.17952	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-11	89.17952	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-11	89.17952	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-11	89.17952	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-11	89.17952	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-11	89.17952	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-11	89.17952	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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
85PL-12	89.17953	67641	< 10.		UG/KG	2/14/90	NONE	Acetone
85PL-12	89.17953	71432	< 5.		UG/KG	2/14/90	NONE	Benzene
85PL-12	89.17953	108861	< 5.		UG/KG	2/14/90	NONE	Bromobenzene
85PL-12	89.17953	74975	< 5.		UG/KG	2/14/90	NONE	Bromochloromethane
85PL-12	89.17953	75274	< 5.		UG/KG	2/14/90	NONE	Bromodichloromethane
85PL-12	89.17953	75252	< 5.		UG/KG	2/14/90	NONE	Bromoform
85PL-12	89.17953	74839	< 10.		UG/KG	2/14/90	NONE	Bromomethane
85PL-12	89.17953	78933	< 10.		UG/KG	2/14/90	NONE	2-Butanone
85PL-12	89.17953	98066	< 5.		UG/KG	2/14/90	NONE	tert-Butylbenzene
85PL-12	89.17953	104518	< 5.		UG/KG	2/14/90	NONE	n-Butylbenzene
85PL-12	89.17953	135988	< 5.		UG/KG	2/14/90	NONE	sec-Butylbenzene
85PL-12	89.17953	75150	< 5.		UG/KG	2/14/90	NONE	Carbon disulfide
85PL-12	89.17953	56235	< 5.		UG/KG	2/14/90	NONE	Carbon tetrachloride
85PL-12	89.17953	108907	< 5.		UG/KG	2/14/90	NONE	Chlorobenzene
85PL-12	89.17953	124481	< 5.		UG/KG	2/14/90	NONE	Chlorodibromomethane
85PL-12	89.17953	75003	< 10.		UG/KG	2/14/90	NONE	Chloroethane
85PL-12	89.17953	67663	< 5.		UG/KG	2/14/90	NONE	Chloroform
85PL-12	89.17953	74873	< 10.		UG/KG	2/14/90	NONE	Chloromethane
85PL-12	89.17953	95498	< 5.		UG/KG	2/14/90	NONE	o-Chlorotoluene
85PL-12	89.17953	106434	< 5.		UG/KG	2/14/90	NONE	p-Chlorotoluene
85PL-12	89.17953	96128	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromo-3-chloropropane
85PL-12	89.17953	106934	< 5.		UG/KG	2/14/90	NONE	1,2-Dibromoethane
85PL-12	89.17953	74953	< 5.		UG/KG	2/14/90	NONE	Dibromomethane
85PL-12	89.17953	95501	< 5.		UG/KG	2/14/90	NONE	o-Dichlorobenzene (1,2)
85PL-12	89.17953	541731	< 5.		UG/KG	2/14/90	NONE	m-Dichlorobenzene (1,3)

85PL-12	89.17953	106467	< 5.	UG/KG	2/14/90	NONE	p-Dichlorobenzene (1,4)
85PL-12	89.17953	107062	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloroethane
85PL-12	89.17953	75343	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethane
85PL-12	89.17953	75354	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloroethene
85PL-12	89.17953	156605	< 5.	UG/KG	2/14/90	NONE	trans-1,2-Dichloroethene
85PL-12	89.17953	156592	< 5.	UG/KG	2/14/90	NONE	cis-1,2-Dichloroethylene
85PL-12	89.17953	78875	< 5.	UG/KG	2/14/90	NONE	1,2-Dichloropropane
85PL-12	89.17953	142289	< 5.	UG/KG	2/14/90	NONE	1,3-Dichloropropane
85PL-12	89.17953	594207	< 5.	UG/KG	2/14/90	NONE	2,2-Dichloropropane
85PL-12	89.17953	563586	< 5.	UG/KG	2/14/90	NONE	1,1-Dichloropropene
85PL-12	89.17953	10061026	< 5.	UG/KG	2/14/90	NONE	trans-1,3-Dichloropropene
85PL-12	89.17953	10061015	< 5.	UG/KG	2/14/90	NONE	cis-1,3-Dichloropropene
85PL-12	89.17953	100414	< 5.	UG/KG	2/14/90	NONE	Ethylbenzene
85PL-12	89.17953	87683	< 5.	UG/KG	2/14/90	NONE	Hexachlorobutadiene
85PL-12	89.17953	591786	< 10.	UG/KG	2/14/90	NONE	2-Hexanone
85PL-12	89.17953	98828	< 5.	UG/KG	2/14/90	NONE	Isopropylbenzene
85PL-12	89.17953	99876	< 5.	UG/KG	2/14/90	NONE	4-Isopropyltoluene
85PL-12	89.17953	108101	< 10.	UG/KG	2/14/90	NONE	4-Methyl-2-pentanone
85PL-12	89.17953	75092	< 5.	UG/KG	2/14/90	NONE	Methylene chloride
85PL-12	89.17953	91203	< 5.	UG/KG	2/14/90	NONE	Naphthalene
85PL-12	89.17953	103651	< 5.	UG/KG	2/14/90	NONE	Propylbenzene
85PL-12	89.17953	100425	< 5.	UG/KG	2/14/90	NONE	Styrene
85PL-12	89.17953	79345	< 5.	UG/KG	2/14/90	NONE	1,1,2,2-Tetrachloroethane
85PL-12	89.17953	630206	< 5.	UG/KG	2/14/90	NONE	1,1,1,2-Tetrachloroethane
85PL-12	89.17953	127184	< 5.	UG/KG	2/14/90	NONE	Tetrachloroethylene
85PL-12	89.17953	108883	< 5.	UG/KG	2/14/90	NONE	Toluene
85PL-12	89.17953	87616	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichlorobenzene
85PL-12	89.17953	120821	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trichlorobenzene
85PL-12	89.17953	79005	< 5.	UG/KG	2/14/90	NONE	1,1,2-Trichloroethane
85PL-12	89.17953	71556	< 5.	UG/KG	2/14/90	NONE	1,1,1-Trichloroethane
85PL-12	89.17953	79016	< 5.	UG/KG	2/14/90	NONE	Trichloroethene
85PL-12	89.17953	75694	< 5.	UG/KG	2/14/90	NONE	Trichlorofluoromethane
85PL-12	89.17953	96184	< 5.	UG/KG	2/14/90	NONE	1,2,3-Trichloropropane
85PL-12	89.17953	108678	< 5.	UG/KG	2/14/90	NONE	1,3,5-Trimethylbenzene
85PL-12	89.17953	95636	< 5.	UG/KG	2/14/90	NONE	1,2,4-Trimethylbenzene
85PL-12	89.17953	108054	< 10.	UG/KG	2/14/90	NONE	Vinyl acetate
85PL-12	89.17953	75014	< 10.	UG/KG	2/14/90	NONE	Vinyl chloride
85PL-12	89.17953	95476	< 5.	UG/KG	2/14/90	NONE	o-Xylene
85PL-12	89.17953	1330207	< 5.	UG/KG	2/14/90	NONE	Mixed-Xylenes (m ± p)

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

Prepared by: CPR on 1-Mar-1990

EPA VOLATILES

REQUEST NUMBER: 8298 MATRIX: SS ANALYST: Chris Leibman 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		COMPLETION DATE	COMMENT	COMPOUND-NAME
					VALUE	UNCERTAINTY			
89.18185	67641	411.2	123.4	UG/KG			2/21/90	OUT OF CONTROL	Acetone
89.18185	71432	71.2	21.4	UG/KG	72.	7.	2/21/90	UNDER CONTROL	Benzene
89.18185	108861	< 5.		UG/KG			2/21/90	UNDER CONTROL	Bromobenzene
89.18185	74975	40.7	12.2	UG/KG	78.	8.	2/21/90	WARNING 2-3 SIG	Bromochloromethane
89.18185	75274	< 5.		UG/KG			2/21/90	UNDER CONTROL	Bromodichloromethane
89.18185	75252	< 5.		UG/KG			2/21/90	UNDER CONTROL	Bromoform
89.18185	74839	< 10.		UG/KG			2/21/90	UNDER CONTROL	Bromomethane

89.18185	78933	< 10.		UG/KG	64.	6.	2/21/90	OUT OF CONTROL	2-Butanone
89.18185	135988	< 5.		UG/KG			2/21/90	UNDER CONTROL	sec-Butylbenzene
89.18185	98066	< 5.		UG/KG			2/21/90	UNDER CONTROL	tert-Butylbenzene
89.18185	104518	21.1	6.3	UG/KG	86.	9.	2/21/90	OUT OF CONTROL	n-Butylbenzene
89.18185	75150	< 5.		UG/KG			2/21/90	UNDER CONTROL	Carbon disulfide
89.18185	56235	68.3	20.5	UG/KG	68.	7.	2/21/90	UNDER CONTROL	Carbon tetrachloride
89.18185	108907	< 5.		UG/KG			2/21/90	UNDER CONTROL	Chlorobenzene
89.18185	124481	< 5.		UG/KG			2/21/90	UNDER CONTROL	Chlorodibromomethane
89.18185	75003	< 10.		UG/KG			2/21/90	UNDER CONTROL	Chloroethane
89.18185	67663	< 5.		UG/KG			2/21/90	UNDER CONTROL	Chloroform
89.18185	74873	< 10.		UG/KG			2/21/90	UNDER CONTROL	Chloromethane
89.18185	106434	< 5.		UG/KG			2/21/90	UNDER CONTROL	p-Chlorotoluene
89.18185	95498	< 5.		UG/KG			2/21/90	UNDER CONTROL	o-Chlorotoluene
89.18185	96128	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,2-Dibromo-3-chloropropane
89.18185	106934	24.5	7.4	UG/KG	86.	9.	2/21/90	OUT OF CONTROL	1,2-Dibromoethane
89.18185	74953	< 5.		UG/KG			2/21/90	UNDER CONTROL	Dibromomethane
89.18185	95501	< 5.		UG/KG			2/21/90	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.18185	541731	< 5.		UG/KG			2/21/90	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.18185	106467	< 5.		UG/KG			2/21/90	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.18185	107062	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,2-Dichloroethane
89.18185	75343	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,1-Dichloroethane
89.18185	156605	< 5.		UG/KG			2/21/90	UNDER CONTROL	trans-1,2-Dichloroethene
89.18185	75354	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,1-Dichloroethene
89.18185	156592	< 5.		UG/KG			2/21/90	UNDER CONTROL	cis-1,2-Dichloroethylene
89.18185	142289	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,3-Dichloropropane
89.18185	594207	< 5.		UG/KG			2/21/90	UNDER CONTROL	2,2-Dichloropropane
89.18185	78875	50.8	15.2	UG/KG	66.	7.	2/21/90	UNDER CONTROL	1,2-Dichloropropane
89.18185	563586	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,1-Dichloropropene
89.18185	10061026	< 5.		UG/KG			2/21/90	UNDER CONTROL	trans-1,3-Dichloropropene
89.18185	10061015	< 5.		UG/KG			2/21/90	UNDER CONTROL	cis-1,3-Dichloropropene
89.18185	100414	< 5.		UG/KG			2/21/90	UNDER CONTROL	Ethylbenzene
89.18185	87683	13.5	4.1	UG/KG	81.	8.	2/21/90	OUT OF CONTROL	Hexachlorobutadiene
89.18185	591786	< 10.		UG/KG			2/21/90	UNDER CONTROL	2-Hexanone
89.18185	98828	< 5.		UG/KG			2/21/90	UNDER CONTROL	Isopropylbenzene
89.18185	99876	< 5.		UG/KG			2/21/90	UNDER CONTROL	4-Isopropyltoluene
89.18185	108101	< 10.		UG/KG	57.	6.	2/21/90	OUT OF CONTROL	4-Methyl-2-pentanone
89.18185	75092	11.9	3.6	UG/KG			2/21/90	OUT OF CONTROL	Methylene chloride
89.18185	91203	< 5.		UG/KG			2/21/90	UNDER CONTROL	Naphthalene
89.18185	103651	21.6	6.5	UG/KG	68.	7.	2/21/90	OUT OF CONTROL	Propylbenzene
89.18185	100425	25.8	7.7	UG/KG	64.	6.	2/21/90	OUT OF CONTROL	Styrene
89.18185	79345	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,1,2,2-Tetrachloroethane
89.18185	630206	42.5	12.8	UG/KG	74.	7.	2/21/90	WARNING 2-3 SIG	1,1,1,2-Tetrachloroethane
89.18185	127184	53.5	16.1	UG/KG	74.	7.	2/21/90	UNDER CONTROL	Tetrachloroethylene
89.18185	108883	10.7	3.2	UG/KG			2/21/90	OUT OF CONTROL	Toluene
89.18185	120821	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,2,4-Trichlorobenzene

89.18185	87616	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,2,3-Trichlorobenzene
89.18185	79005	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,1,2-Trichloroethane
89.18185	71556	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,1,1-Trichloroethane
89.18185	79016	< 5.		UG/KG			2/21/90	UNDER CONTROL	Trichloroethene
89.18185	75694	< 5.		UG/KG			2/21/90	UNDER CONTROL	Trichlorofluoromethane
89.18185	96184	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,2,3-Trichloropropane
89.18185	95636	27.8	8.3	UG/KG	71.	7.	2/21/90	OUT OF CONTROL	1,2,4-Trimethylbenzene
89.18185	108678	< 5.		UG/KG			2/21/90	UNDER CONTROL	1,3,5-Trimethylbenzene
89.18185	108054	< 10.		UG/KG			2/21/90	UNDER CONTROL	Vinyl acetate
89.18185	75014	< 10.		UG/KG			2/21/90	UNDER CONTROL	Vinyl chloride
89.18185	95476	< 5.		UG/KG			2/21/90	UNDER CONTROL	o-Xylene
89.18185	1330207	27.3	8.2	UG/KG	79.	8.	2/21/90	OUT OF CONTROL	Mixed-Xylenes (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	COMPLETION			DATE
		Surrogate 1	Surrogate 2	Surrogate 3	
89.17942	%	119. ✓	123. -	119. -	14-Feb-1990
89.17943	%	140. -	107.	131. -	14-Feb-1990
89.17944	%	135. -	138. -	132. -	14-Feb-1990
89.17945	%	140. -	123. -	106.	14-Feb-1990
89.17946	%	139. -	126. -	134. ✓	14-Feb-1990
89.17947	%	135. -	138. -	136. -	14-Feb-1990
89.17948	%	127. -	112. -	114.	14-Feb-1990
89.17949	%	133. -	108.	122. ✓	14-Feb-1990
89.17950	%	136. -	130. -	133. -	14-Feb-1990
89.17951	%	125. ✓	132. -	129. ✓	14-Feb-1990
89.17952	%	134. -	107.	111.	14-Feb-1990
89.17953	%	140. -	131. -	126. ✓	14-Feb-1990
89.18185	%		114. -	78. -	21-Feb-1990

EPA Limits:

Water	%	76 - 114	88 - 110	86 - 115
Soil	%	70 - 121	81 - 117	74 - 121



Analyst

Section Leader

QA Officer

Date

Date

Date

The control status of the preceding 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.

SEMIVOLATILE ORGANIC ANALYSES

March 9, 1990

Rec'd
3/12/90
JEM
m

Steve,

Attached you will find a copy of the **final** report for the soil samples that you submitted under Request #8298 for Semi-Volatiles analysis. Bis (2-ethylhexyl)phthalate was detected in several of the samples. Benzoic Acid was detected in only sample #89.17942. These components were not detected in the laboratory blank. The analysis of these samples also indicated the presence of hydrocarbons at a fairly high concentration level. If you have any questions regarding these results, please do not hesitate to contact me at 5-4792 or stop by my office at your convenience (TA-59, OH-1, Room 115). Thank you for your continued support and patience with our Semi-Volatile analytical program.

TSL-85
soils below VST & PVC



Chuck Rzeszutko

Organic Section Leader

HSE-9

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298

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
85PL-1	89.17942	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-1	89.17942	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-1	89.17942	62533	< 330.		UG/KG	3/05/90		* Aniline ✓
85PL-1	89.17942	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-1	89.17942	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-1	89.17942	56553	< 330.		UG/KG	3/05/90		* Benz(a)anthracene ✓
85PL-1	89.17942	92875	< 330.		UG/KG	3/05/90		* m-Benzidine ✓
85PL-1	89.17942	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-1	89.17942	50328	< 330.		UG/KG	3/05/90		* Benzo-a-pyrene ✓
85PL-1	89.17942	205992	< 330.		UG/KG	3/05/90		* Benzo-b-fluoranthene ✓
85PL-1	89.17942	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-1	89.17942	65850	480.	96.	UG/KG	3/05/90		Benzoic acid
85PL-1	89.17942	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-1	89.17942	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-1	89.17942	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-1	89.17942	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-1	89.17942	117817	< 330.		UG/KG	3/05/90		* Bis(2-ethylhexyl)phthalate ✓
85PL-1	89.17942	101553	< 330.		UG/KG	3/05/90		* 4-Bromophenylphenyl ether ✓
85PL-1	89.17942	85687	< 330.		UG/KG	3/05/90		* Butylbenzyl phthalate ✓
85PL-1	89.17942	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-1	89.17942	106478	< 330.		UG/KG	3/05/90		* 4-Chloroaniline ✓
85PL-1	89.17942	91587	< 330.		UG/KG	3/05/90		* 2-Chloronaphthalene ✓
85PL-1	89.17942	95578	< 330.		UG/KG	3/05/90		* o-Chlorophenol ✓
85PL-1	89.17942	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-1	89.17942	218019	< 330.		UG/KG	3/05/90		* Chrysene ✓

85PL-1	89.17942	106445	< 330.	UG/KG	3/05/90
85PL-1	89.17942	84742	< 330.	UG/KG	3/05/90
85PL-1	89.17942	117840	< 330.	UG/KG	3/05/90
85PL-1	89.17942	53703	< 330.	UG/KG	3/05/90
85PL-1	89.17942	132649	< 330.	UG/KG	3/05/90
85PL-1	89.17942	95501	< 330.	UG/KG	3/05/90
85PL-1	89.17942	541731	< 330.	UG/KG	3/05/90
85PL-1	89.17942	106467	< 330.	UG/KG	3/05/90
85PL-1	89.17942	91941	< 330.	UG/KG	3/05/90
85PL-1	89.17942	120832	< 330.	UG/KG	3/05/90
85PL-1	89.17942	84662	< 330.	UG/KG	3/05/90
85PL-1	89.17942	131113	< 330.	UG/KG	3/05/90
85PL-1	89.17942	105679	< 330.	UG/KG	3/05/90
85PL-1	89.17942	51285	< 330.	UG/KG	3/05/90
85PL-1	89.17942	606202	< 330.	UG/KG	3/05/90
85PL-1	89.17942	121142	< 330.	UG/KG	3/05/90
85PL-1	89.17942	206440	< 330.	UG/KG	3/05/90
85PL-1	89.17942	86737	< 330.	UG/KG	3/05/90
85PL-1	89.17942	118741	< 330.	UG/KG	3/05/90
85PL-1	89.17942	87683	< 330.	UG/KG	3/05/90
85PL-1	89.17942	77474	< 330.	UG/KG	3/05/90
85PL-1	89.17942	67721	< 330.	UG/KG	3/05/90
85PL-1	89.17942	193395	< 330.	UG/KG	3/05/90
85PL-1	89.17942	78591	< 330.	UG/KG	3/05/90
85PL-1	89.17942	534521	< 330.	UG/KG	3/05/90
85PL-1	89.17942	91576	< 330.	UG/KG	3/05/90
85PL-1	89.17942	106445	< 330.	UG/KG	3/05/90
85PL-1	89.17942	95487	< 330.	UG/KG	3/05/90
85PL-1	89.17942	91203	< 330.	UG/KG	3/05/90
85PL-1	89.17942	100016	< 330.	UG/KG	3/05/90
85PL-1	89.17942	88744	< 330.	UG/KG	3/05/90
85PL-1	89.17942	99092	< 330.	UG/KG	3/05/90
85PL-1	89.17942	98953	< 330.	UG/KG	3/05/90
85PL-1	89.17942	88755	< 330.	UG/KG	3/05/90
85PL-1	89.17942	100027	< 330.	UG/KG	3/05/90
85PL-1	89.17942	621647	< 330.	UG/KG	3/05/90
85PL-1	89.17942	62759	< 330.	UG/KG	3/05/90
85PL-1	89.17942	86306	< 330.	UG/KG	3/05/90
85PL-1	89.17942	87865	< 330.	UG/KG	3/05/90
85PL-1	89.17942	85018	< 330.	UG/KG	3/05/90
85PL-1	89.17942	108952	< 330.	UG/KG	3/05/90
85PL-1	89.17942	129000	< 330.	UG/KG	3/05/90
85PL-1	89.17942	120821	< 330.	UG/KG	3/05/90
85PL-1	89.17942	88062	< 330.	UG/KG	3/05/90
85PL-1	89.17942	95954	< 330.	UG/KG	3/05/90

~~✓~~ p-Cresol
~~✓~~ Di-n-butyl phthalate
~~✓~~ Di-n-octyl phthalate
~~✓~~ Dibenzo(a,h)anthracene
Dibenzofuran
~~✓~~ o-Dichlorobenzene (1,2)
~~✓~~ m-Dichlorobenzene (1,3)
~~✓~~ p-Dichlorobenzene (1,4)
~~✓~~ 3,3'-Dichlorobenzidine
~~✓~~ 2,4-Dichlorophenol
~~✓~~ Diethyl phthalate
~~✓~~ Dimethyl phthalate
~~✓~~ 2,4-Dimethylphenol
~~✓~~ 2,4-Dinitrophenol
~~✓~~ 2,6-Dinitrotoluene
~~✓~~ 2,4-Dinitrotoluene
~~✓~~ Fluoranthene
Fluorene
~~✓~~ Hexachlorobenzene
~~✓~~ Hexachlorobutadiene
~~✓~~ Hexachlorocyclopentadiene
~~✓~~ Hexachloroethane
~~✓~~ Indeno(1,2,3-cd)pyrene
Isophorone
2-Methyl-4,6-dinitrophenol
2-Methylnaphthalene
4-Methylphenol
2-Methylphenol
~~✓~~ Naphthalene
~~✓~~ 4-Nitroaniline
2-Nitroaniline
3-Nitroaniline
~~✓~~ Nitrobenzene
2-Nitrophenol
~~✓~~ 4-Nitrophenol
~~✓~~ N-Nitrosodi-n-propylamine
~~✓~~ N-Nitrosodimethylamine
~~✓~~ N-Nitrosodiphenylamine
~~✓~~ Pentachlorophenol
Phenanthrene
~~✓~~ Phenol
Pyrene
~~✓~~ 1,2,4-Trichlorobenzene
~~✓~~ 2,4,6-Trichlorophenol
~~✓~~ 2,4,5-Trichlorophenol

85PL-1

89.17942

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-2	89.17943	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-2	89.17943	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-2	89.17943	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-2	89.17943	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-2	89.17943	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-2	89.17943	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-2	89.17943	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-2	89.17943	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-2	89.17943	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-2	89.17943	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-2	89.17943	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-2	89.17943	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-2	89.17943	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-2	89.17943	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-2	89.17943	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-2	89.17943	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-2	89.17943	117817	640.	128.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-2	89.17943	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-2	89.17943	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-2	89.17943	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-2	89.17943	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-2	89.17943	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-2	89.17943	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-2	89.17943	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-2	89.17943	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-2	89.17943	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-2	89.17943	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-2	89.17943	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-2	89.17943	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-2	89.17943	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-2	89.17943	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-2	89.17943	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-2	89.17943	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-2	89.17943	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-2	89.17943	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-2	89.17943	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-2	89.17943	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-2	89.17943	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-2	89.17943	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-2	89.17943	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-2	89.17943	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-2	89.17943	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-2	89.17943	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-2	89.17943	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-2	89.17943	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-2	89.17943	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-2	89.17943	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-2	89.17943	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-2	89.17943	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-2	89.17943	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-2	89.17943	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-2	89.17943	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-2	89.17943	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-2	89.17943	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-2	89.17943	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-2	89.17943	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-2	89.17943	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-2	89.17943	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-2	89.17943	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-2	89.17943	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-2	89.17943	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-2	89.17943	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-2	89.17943	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-2	89.17943	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-2	89.17943	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-2	89.17943	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-2	89.17943	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-2	89.17943	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-2	89.17943	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-2	89.17943	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

85PL-2

89.17943

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-3	89.17944	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-3	89.17944	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-3	89.17944	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-3	89.17944	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-3	89.17944	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-3	89.17944	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-3	89.17944	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-3	89.17944	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-3	89.17944	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-3	89.17944	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-3	89.17944	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-3	89.17944	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-3	89.17944	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-3	89.17944	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-3	89.17944	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-3	89.17944	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-3	89.17944	117817	< 330.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-3	89.17944	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-3	89.17944	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-3	89.17944	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-3	89.17944	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-3	89.17944	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-3	89.17944	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-3	89.17944	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-3	89.17944	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-3	89.17944	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-3	89.17944	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-3	89.17944	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-3	89.17944	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-3	89.17944	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-3	89.17944	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-3	89.17944	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-3	89.17944	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-3	89.17944	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-3	89.17944	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-3	89.17944	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-3	89.17944	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-3	89.17944	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-3	89.17944	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-3	89.17944	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-3	89.17944	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-3	89.17944	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-3	89.17944	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-3	89.17944	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-3	89.17944	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-3	89.17944	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-3	89.17944	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-3	89.17944	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-3	89.17944	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-3	89.17944	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-3	89.17944	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-3	89.17944	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-3	89.17944	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-3	89.17944	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-3	89.17944	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-3	89.17944	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-3	89.17944	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-3	89.17944	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-3	89.17944	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-3	89.17944	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-3	89.17944	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-3	89.17944	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-3	89.17944	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-3	89.17944	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-3	89.17944	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-3	89.17944	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-3	89.17944	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-3	89.17944	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-3	89.17944	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-3	89.17944	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

85PL-3

89.17944

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-4	89.17945	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-4	89.17945	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-4	89.17945	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-4	89.17945	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-4	89.17945	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-4	89.17945	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-4	89.17945	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-4	89.17945	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-4	89.17945	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-4	89.17945	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-4	89.17945	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-4	89.17945	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-4	89.17945	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-4	89.17945	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-4	89.17945	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-4	89.17945	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-4	89.17945	117817	420.	84.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-4	89.17945	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-4	89.17945	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-4	89.17945	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-4	89.17945	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-4	89.17945	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-4	89.17945	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-4	89.17945	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-4	89.17945	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-4	89.17945	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-4	89.17945	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-4	89.17945	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-4	89.17945	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-4	89.17945	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-4	89.17945	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-4	89.17945	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-4	89.17945	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-4	89.17945	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-4	89.17945	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-4	89.17945	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-4	89.17945	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-4	89.17945	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-4	89.17945	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-4	89.17945	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-4	89.17945	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-4	89.17945	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-4	89.17945	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-4	89.17945	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-4	89.17945	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-4	89.17945	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-4	89.17945	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-4	89.17945	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-4	89.17945	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-4	89.17945	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-4	89.17945	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-4	89.17945	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-4	89.17945	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-4	89.17945	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-4	89.17945	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-4	89.17945	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-4	89.17945	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-4	89.17945	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-4	89.17945	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-4	89.17945	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-4	89.17945	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-4	89.17945	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-4	89.17945	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-4	89.17945	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-4	89.17945	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-4	89.17945	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-4	89.17945	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-4	89.17945	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-4	89.17945	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-4	89.17945	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

POLYCHLORINATED BIPHENYL ANALYSES

Date

Date

Date

The control status of the preceding 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.

89.18041	106445	< 0.33		MG/KG				3/05/90	UNDER CONTROL	4-Methylphenol
89.18041	91203	< 0.33		MG/KG				3/05/90	UNDER CONTROL	Naphthalene
89.18041	100016	< 0.33		MG/KG				3/05/90	UNDER CONTROL	4-Nitroaniline
89.18041	99092	< 0.33		MG/KG				3/05/90	UNDER CONTROL	3-Nitroaniline
89.18041	88744	< 0.33		MG/KG				3/05/90	UNDER CONTROL	2-Nitroaniline
89.18041	98953	1.5	0.3	MG/KG	2.9	0.3		3/05/90	OUT OF CONTROL	Nitrobenzene
89.18041	100027	< 0.33		MG/KG				3/05/90	UNDER CONTROL	4-Nitrophenol
89.18041	88755	< 0.33		MG/KG				3/05/90	UNDER CONTROL	2-Nitrophenol
89.18041	621647	< 0.33		MG/KG				3/05/90	UNDER CONTROL	N-Nitrosodi-n-propylamine
89.18041	62759	< 0.33		MG/KG				3/05/90	UNDER CONTROL	N-Nitrosodimethylamine
89.18041	86306	< 0.33		MG/KG				3/05/90	UNDER CONTROL	N-Nitrosodiphenylamine
89.18041	87865	< 0.33		MG/KG				3/05/90	UNDER CONTROL	Pentachlorophenol
89.18041	85018	2.5	0.5	MG/KG	2.8	0.3		3/05/90	UNDER CONTROL	Phenanthrene
89.18041	108952	< 0.33		MG/KG				3/05/90	UNDER CONTROL	Phenol
89.18041	129000	< 0.33		MG/KG				3/05/90	UNDER CONTROL	Pyrene
89.18041	120821	< 0.33		MG/KG				3/05/90	UNDER CONTROL	1,2,4-Trichlorobenzene
89.18041	95954	< 0.33		MG/KG				3/05/90	UNDER CONTROL	2,4,5-Trichlorophenol
89.18041	88062	< 0.33		MG/KG				3/05/90	UNDER CONTROL	2,4,6-Trichlorophenol
89.18041	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						COMPLETION DATE
		Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4	Surrogate 5	Surrogate 6	
89.18041	%	45.	60.	52.	69.	91.	81.	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

MW Kody
 3/9/90
 Analyst

GA
 3/9/90
 Section Leader

mag
 3/9/90
 QA Officer

89.18041	191242	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo(g,h,i)perylene
89.18041	50328	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo-a-pyrene
89.18041	205992	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo-b-fluoranthene
89.18041	207089	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzo-k-fluoranthene
89.18041	65850	0.79	0.158	MG/KG			3/05/90	OUT OF CONTROL	Benzoic acid
89.18041	100516	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benzyl alcohol
89.18041	111911	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-chloroethoxy)methane
89.18041	111444	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-chloroethyl)ether
89.18041	108601	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-chloroisopropyl)ether
89.18041	117817	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
89.18041	101553	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Bromophenylphenyl ether
89.18041	85687	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Butylbenzyl phthalate
89.18041	59507	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Chloro-3-methylphenol
89.18041	106478	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Chloroaniline
89.18041	91587	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Chloronaphthalene
89.18041	95578	< 0.33		MG/KG			3/05/90	UNDER CONTROL	o-Chlorophenol
89.18041	7005723	< 0.33		MG/KG			3/05/90	UNDER CONTROL	4-Chlorophenylphenyl ether
89.18041	218019	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Chrysene
89.18041	106445	< 0.33		MG/KG			3/05/90	UNDER CONTROL	p-Cresol
89.18041	84742	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Di-n-butyl phthalate
89.18041	117840	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Di-n-octyl phthalate
89.18041	53703	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Dibenzo(a,h)anthracene
89.18041	132649	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Dibenzofuran
89.18041	95501	< 0.33		MG/KG			3/05/90	UNDER CONTROL	o-Dichlorobenzene (1,2)
89.18041	541731	< 0.33		MG/KG			3/05/90	UNDER CONTROL	m-Dichlorobenzene (1,3)
89.18041	106467	< 0.33		MG/KG			3/05/90	UNDER CONTROL	p-Dichlorobenzene (1,4)
89.18041	91941	< 0.33		MG/KG			3/05/90	UNDER CONTROL	3,3'-Dichlorobenzidine
89.18041	120832	2.3	0.46	MG/KG	3.2	0.3	3/05/90	UNDER CONTROL	2,4-Dichlorophenol
89.18041	84662	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Diethyl phthalate
89.18041	131113	2.8	0.56	MG/KG	3.5	0.4	3/05/90	UNDER CONTROL	Dimethyl phthalate
89.18041	105679	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Dimethylphenol
89.18041	51285	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Dinitrophenol
89.18041	606202	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,6-Dinitrotoluene
89.18041	121142	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2,4-Dinitrotoluene
89.18041	206440	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Fluoranthene
89.18041	86737	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Fluorene
89.18041	118741	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachlorobenzene
89.18041	87683	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachlorobutadiene
89.18041	77474	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachlorocyclopentadiene
89.18041	67721	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Hexachloroethane
89.18041	193395	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Indeno(1,2,3-cd)pyrene
89.18041	78591	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Isophorone
89.18041	534521	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
89.18041	91576	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Methylnaphthalene
89.18041	95487	< 0.33		MG/KG			3/05/90	UNDER CONTROL	2-Methylphenol

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

Prepared by: MBP on 8-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 MATRIX: ANALYST: Martin Koby PROGRAM CODE:
 OWNER: GROUP: MAIL-STOP: PHONE: 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 UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND-NAME
89.18041	83329	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Acenaphthene
89.18041	208968	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Acenaphthylene
89.18041	62533	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Aniline
89.18041	120127	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Anthracene
89.18041	103333	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Azobenzene
89.18041	56553	< 0.33		MG/KG			3/05/90	UNDER CONTROL	Benz(a)anthracene
89.18041	92875	< 0.33		MG/KG			3/05/90	UNDER CONTROL	m-Benzidine

85PL-12

89.17953

105679

< 1386.

UG/KG

3/05/90

2,4-Xylenol

85PL-12	89.17953	106445	< 1386.	UG/KG	3/05/90	p-Cresol
85PL-12	89.17953	84742	< 1386.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-12	89.17953	117840	< 1386.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-12	89.17953	53703	< 1386.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-12	89.17953	132649	< 1386.	UG/KG	3/05/90	Dibenzofuran
85PL-12	89.17953	95501	< 1386.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-12	89.17953	541731	< 1386.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-12	89.17953	106467	< 1386.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-12	89.17953	91941	< 1386.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-12	89.17953	120832	< 1386.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-12	89.17953	84662	< 1386.	UG/KG	3/05/90	Diethyl phthalate
85PL-12	89.17953	131113	< 1386.	UG/KG	3/05/90	Dimethyl phthalate
85PL-12	89.17953	105679	< 1386.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-12	89.17953	51285	< 1386.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-12	89.17953	121142	< 1386.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-12	89.17953	606202	< 1386.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-12	89.17953	206440	< 1386.	UG/KG	3/05/90	Fluoranthene
85PL-12	89.17953	86737	< 1386.	UG/KG	3/05/90	Fluorene
85PL-12	89.17953	118741	< 1386.	UG/KG	3/05/90	Hexachlorobenzene
85PL-12	89.17953	87683	< 1386.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-12	89.17953	77474	< 1386.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-12	89.17953	67721	< 1386.	UG/KG	3/05/90	Hexachloroethane
85PL-12	89.17953	193395	< 1386.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-12	89.17953	78591	< 1386.	UG/KG	3/05/90	Isophorone
85PL-12	89.17953	534521	< 1386.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-12	89.17953	91576	< 1386.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-12	89.17953	95487	< 1386.	UG/KG	3/05/90	2-Methylphenol
85PL-12	89.17953	106445	< 1386.	UG/KG	3/05/90	4-Methylphenol
85PL-12	89.17953	91203	< 1386.	UG/KG	3/05/90	Naphthalene
85PL-12	89.17953	88744	< 1386.	UG/KG	3/05/90	2-Nitroaniline
85PL-12	89.17953	99092	< 1386.	UG/KG	3/05/90	3-Nitroaniline
85PL-12	89.17953	100016	< 1386.	UG/KG	3/05/90	4-Nitroaniline
85PL-12	89.17953	98953	< 1386.	UG/KG	3/05/90	Nitrobenzene
85PL-12	89.17953	100027	< 1386.	UG/KG	3/05/90	4-Nitrophenol
85PL-12	89.17953	88755	< 1386.	UG/KG	3/05/90	2-Nitrophenol
85PL-12	89.17953	621647	< 1386.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-12	89.17953	62759	< 1386.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-12	89.17953	86306	< 1386.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-12	89.17953	87865	< 1386.	UG/KG	3/05/90	Pentachlorophenol
85PL-12	89.17953	85018	< 1386.	UG/KG	3/05/90	Phenanthrene
85PL-12	89.17953	108952	< 1386.	UG/KG	3/05/90	Phenol
85PL-12	89.17953	129000	< 1386.	UG/KG	3/05/90	Pyrene
85PL-12	89.17953	120821	< 1386.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-12	89.17953	88062	< 1386.	UG/KG	3/05/90	2,4,6-Trichlorophenol
85PL-12	89.17953	95954	< 1386.	UG/KG	3/05/90	2,4,5-Trichlorophenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-12	89.17953	83329	< 1386.		UG/KG	3/05/90		Acenaphthene
85PL-12	89.17953	208968	< 1386.		UG/KG	3/05/90		Acenaphthylene
85PL-12	89.17953	62533	< 1386.		UG/KG	3/05/90		Aniline
85PL-12	89.17953	120127	< 1386.		UG/KG	3/05/90		Anthracene
85PL-12	89.17953	103333	< 1386.		UG/KG	3/05/90		Azobenzene
85PL-12	89.17953	56553	< 1386.		UG/KG	3/05/90		Benz(a)anthracene
85PL-12	89.17953	92875	< 1386.		UG/KG	3/05/90		m-Benzidine
85PL-12	89.17953	191242	< 1386.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-12	89.17953	50328	< 1386.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-12	89.17953	205992	< 1386.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-12	89.17953	207089	< 1386.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-12	89.17953	65850	< 1386.		UG/KG	3/05/90		Benzoic acid
85PL-12	89.17953	100516	< 1386.		UG/KG	3/05/90		Benzyl alcohol
85PL-12	89.17953	111911	< 1386.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-12	89.17953	111444	< 1386.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-12	89.17953	108601	< 1386.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-12	89.17953	117817	< 1386.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-12	89.17953	101553	< 1386.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-12	89.17953	85687	< 1386.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-12	89.17953	59507	< 1386.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-12	89.17953	106478	< 1386.		UG/KG	3/05/90		4-Chloroaniline
85PL-12	89.17953	91587	< 1386.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-12	89.17953	95578	< 1386.		UG/KG	3/05/90		o-Chlorophenol
85PL-12	89.17953	7005723	< 1386.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-12	89.17953	218019	< 1386.		UG/KG	3/05/90		Chrysene

85PL-11

89.17952

105679

< 1386.

UG/KG

3/05/90

2,4-Xylenol

85PL-11	89.17952	106445	< 1386.	UG/KG	3/05/90	p-Cresol
85PL-11	89.17952	84742	< 1386.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-11	89.17952	117840	< 1386.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-11	89.17952	53703	< 1386.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-11	89.17952	132649	< 1386.	UG/KG	3/05/90	Dibenzofuran
85PL-11	89.17952	95501	< 1386.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-11	89.17952	541731	< 1386.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-11	89.17952	106467	< 1386.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-11	89.17952	91941	< 1386.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-11	89.17952	120832	< 1386.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-11	89.17952	84662	< 1386.	UG/KG	3/05/90	Diethyl phthalate
85PL-11	89.17952	131113	< 1386.	UG/KG	3/05/90	Dimethyl phthalate
85PL-11	89.17952	105679	< 1386.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-11	89.17952	51285	< 1386.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-11	89.17952	121142	< 1386.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-11	89.17952	606202	< 1386.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-11	89.17952	206440	< 1386.	UG/KG	3/05/90	Fluoranthene
85PL-11	89.17952	86737	< 1386.	UG/KG	3/05/90	Fluorene
85PL-11	89.17952	118741	< 1386.	UG/KG	3/05/90	Hexachlorobenzene
85PL-11	89.17952	87683	< 1386.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-11	89.17952	77474	< 1386.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-11	89.17952	67721	< 1386.	UG/KG	3/05/90	Hexachloroethane
85PL-11	89.17952	193395	< 1386.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-11	89.17952	78591	< 1386.	UG/KG	3/05/90	Isophorone
85PL-11	89.17952	534521	< 1386.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-11	89.17952	91576	< 1386.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-11	89.17952	95487	< 1386.	UG/KG	3/05/90	2-Methylphenol
85PL-11	89.17952	106445	< 1386.	UG/KG	3/05/90	4-Methylphenol
85PL-11	89.17952	91203	< 1386.	UG/KG	3/05/90	Naphthalene
85PL-11	89.17952	99092	< 1386.	UG/KG	3/05/90	3-Nitroaniline
85PL-11	89.17952	88744	< 1386.	UG/KG	3/05/90	2-Nitroaniline
85PL-11	89.17952	100016	< 1386.	UG/KG	3/05/90	4-Nitroaniline
85PL-11	89.17952	98953	< 1386.	UG/KG	3/05/90	Nitrobenzene
85PL-11	89.17952	88755	< 1386.	UG/KG	3/05/90	2-Nitrophenol
85PL-11	89.17952	100027	< 1386.	UG/KG	3/05/90	4-Nitrophenol
85PL-11	89.17952	621647	< 1386.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-11	89.17952	62759	< 1386.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-11	89.17952	86306	< 1386.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-11	89.17952	87865	< 1386.	UG/KG	3/05/90	Pentachlorophenol
85PL-11	89.17952	85018	< 1386.	UG/KG	3/05/90	Phenanthrene
85PL-11	89.17952	108952	< 1386.	UG/KG	3/05/90	Phenol
85PL-11	89.17952	129000	< 1386.	UG/KG	3/05/90	Pyrene
85PL-11	89.17952	120821	< 1386.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-11	89.17952	95954	< 1386.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-11	89.17952	88062	< 1386.	UG/KG	3/05/90	2,4,6-Trichlorophenol

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298

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
85PL-11	89.17952	83329	< 1386.		UG/KG	3/05/90		Acenaphthene
85PL-11	89.17952	208968	< 1386.		UG/KG	3/05/90		Acenaphthylene
85PL-11	89.17952	62533	< 1386.		UG/KG	3/05/90		Aniline
85PL-11	89.17952	120127	< 1386.		UG/KG	3/05/90		Anthracene
85PL-11	89.17952	103333	< 1386.		UG/KG	3/05/90		Azobenzene
85PL-11	89.17952	56553	< 1386.		UG/KG	3/05/90		Benz(a)anthracene
85PL-11	89.17952	92875	< 1386.		UG/KG	3/05/90		m-Benzidine
85PL-11	89.17952	191242	< 1386.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-11	89.17952	50328	< 1386.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-11	89.17952	205992	< 1386.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-11	89.17952	207089	< 1386.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-11	89.17952	65850	< 1386.		UG/KG	3/05/90		Benzoic acid
85PL-11	89.17952	100516	< 1386.		UG/KG	3/05/90		Benzyl alcohol
85PL-11	89.17952	111911	< 1386.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-11	89.17952	111444	< 1386.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-11	89.17952	108601	< 1386.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-11	89.17952	117817	< 1386.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-11	89.17952	101553	< 1386.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-11	89.17952	85687	< 1386.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-11	89.17952	59507	< 1386.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-11	89.17952	106478	< 1386.		UG/KG	3/05/90		4-Chloroaniline
85PL-11	89.17952	91587	< 1386.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-11	89.17952	95578	< 1386.		UG/KG	3/05/90		o-Chlorophenol
85PL-11	89.17952	7005723	< 1386.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-11	89.17952	218019	< 1386.		UG/KG	3/05/90		Chrysene

85PL-10

89.17951

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

85PL-10	89.17951	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-10	89.17951	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-10	89.17951	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-10	89.17951	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-10	89.17951	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-10	89.17951	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-10	89.17951	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-10	89.17951	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-10	89.17951	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-10	89.17951	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-10	89.17951	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-10	89.17951	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-10	89.17951	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-10	89.17951	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-10	89.17951	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-10	89.17951	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-10	89.17951	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-10	89.17951	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-10	89.17951	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-10	89.17951	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-10	89.17951	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-10	89.17951	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-10	89.17951	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-10	89.17951	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-10	89.17951	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-10	89.17951	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-10	89.17951	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-10	89.17951	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-10	89.17951	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-10	89.17951	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-10	89.17951	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-10	89.17951	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-10	89.17951	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-10	89.17951	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-10	89.17951	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-10	89.17951	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-10	89.17951	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-10	89.17951	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-10	89.17951	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-10	89.17951	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-10	89.17951	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-10	89.17951	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-10	89.17951	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-10	89.17951	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-10	89.17951	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-10	89.17951	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-10	89.17951	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-10	89.17951	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-10	89.17951	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-10	89.17951	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-10	89.17951	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-10	89.17951	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-10	89.17951	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-10	89.17951	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-10	89.17951	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-10	89.17951	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-10	89.17951	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-10	89.17951	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-10	89.17951	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-10	89.17951	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-10	89.17951	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-10	89.17951	117817	< 330.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-10	89.17951	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-10	89.17951	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-10	89.17951	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-10	89.17951	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-10	89.17951	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-10	89.17951	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-10	89.17951	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-10	89.17951	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-9

89.17950

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

85PL-9	89.17950	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-9	89.17950	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-9	89.17950	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-9	89.17950	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-9	89.17950	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-9	89.17950	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-9	89.17950	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-9	89.17950	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-9	89.17950	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-9	89.17950	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-9	89.17950	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-9	89.17950	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-9	89.17950	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-9	89.17950	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-9	89.17950	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-9	89.17950	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-9	89.17950	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-9	89.17950	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-9	89.17950	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-9	89.17950	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-9	89.17950	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-9	89.17950	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-9	89.17950	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-9	89.17950	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-9	89.17950	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-9	89.17950	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-9	89.17950	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-9	89.17950	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-9	89.17950	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-9	89.17950	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-9	89.17950	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-9	89.17950	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-9	89.17950	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-9	89.17950	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-9	89.17950	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-9	89.17950	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-9	89.17950	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-9	89.17950	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-9	89.17950	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-9	89.17950	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-9	89.17950	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-9	89.17950	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-9	89.17950	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-9	89.17950	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol
85PL-9	89.17950	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298

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
85PL-9	89.17950	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-9	89.17950	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-9	89.17950	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-9	89.17950	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-9	89.17950	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-9	89.17950	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-9	89.17950	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-9	89.17950	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-9	89.17950	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-9	89.17950	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-9	89.17950	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-9	89.17950	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-9	89.17950	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-9	89.17950	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-9	89.17950	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-9	89.17950	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-9	89.17950	117817	< 330.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-9	89.17950	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-9	89.17950	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-9	89.17950	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-9	89.17950	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-9	89.17950	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-9	89.17950	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-9	89.17950	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-9	89.17950	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-8

89.17949

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

85PL-8	89.17949	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-8	89.17949	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-8	89.17949	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-8	89.17949	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-8	89.17949	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-8	89.17949	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-8	89.17949	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-8	89.17949	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-8	89.17949	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-8	89.17949	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-8	89.17949	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-8	89.17949	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-8	89.17949	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-8	89.17949	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-8	89.17949	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-8	89.17949	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-8	89.17949	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-8	89.17949	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-8	89.17949	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-8	89.17949	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-8	89.17949	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-8	89.17949	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-8	89.17949	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-8	89.17949	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-8	89.17949	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-8	89.17949	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-8	89.17949	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-8	89.17949	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-8	89.17949	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-8	89.17949	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-8	89.17949	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-8	89.17949	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-8	89.17949	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-8	89.17949	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-8	89.17949	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-8	89.17949	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-8	89.17949	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-8	89.17949	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-8	89.17949	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-8	89.17949	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-8	89.17949	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-8	89.17949	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-8	89.17949	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-8	89.17949	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-8	89.17949	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-8	89.17949	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-8	89.17949	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-8	89.17949	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-8	89.17949	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-8	89.17949	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-8	89.17949	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-8	89.17949	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-8	89.17949	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-8	89.17949	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-8	89.17949	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-8	89.17949	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-8	89.17949	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-8	89.17949	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-8	89.17949	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-8	89.17949	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-8	89.17949	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-8	89.17949	117817	< 330.		UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-8	89.17949	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-8	89.17949	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-8	89.17949	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-8	89.17949	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-8	89.17949	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-8	89.17949	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-8	89.17949	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-8	89.17949	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-7

89.17948

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

85PL-7	89.17948	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-7	89.17948	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-7	89.17948	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-7	89.17948	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-7	89.17948	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-7	89.17948	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-7	89.17948	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-7	89.17948	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-7	89.17948	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-7	89.17948	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-7	89.17948	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-7	89.17948	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-7	89.17948	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-7	89.17948	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-7	89.17948	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-7	89.17948	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-7	89.17948	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-7	89.17948	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-7	89.17948	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-7	89.17948	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-7	89.17948	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-7	89.17948	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-7	89.17948	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-7	89.17948	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-7	89.17948	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-7	89.17948	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-7	89.17948	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-7	89.17948	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-7	89.17948	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-7	89.17948	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-7	89.17948	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-7	89.17948	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-7	89.17948	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-7	89.17948	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-7	89.17948	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-7	89.17948	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-7	89.17948	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-7	89.17948	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-7	89.17948	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-7	89.17948	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-7	89.17948	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-7	89.17948	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-7	89.17948	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-7	89.17948	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-7	89.17948	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-7	89.17948	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-7	89.17948	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-7	89.17948	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-7	89.17948	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-7	89.17948	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-7	89.17948	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-7	89.17948	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-7	89.17948	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-7	89.17948	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-7	89.17948	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-7	89.17948	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-7	89.17948	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-7	89.17948	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-7	89.17948	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-7	89.17948	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-7	89.17948	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-7	89.17948	117817	590.	118.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-7	89.17948	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-7	89.17948	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-7	89.17948	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-7	89.17948	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-7	89.17948	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-7	89.17948	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-7	89.17948	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-7	89.17948	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-6

89.17947

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

85PL-6	89.17947	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-6	89.17947	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-6	89.17947	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-6	89.17947	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-6	89.17947	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-6	89.17947	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-6	89.17947	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-6	89.17947	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-6	89.17947	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-6	89.17947	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-6	89.17947	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-6	89.17947	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-6	89.17947	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-6	89.17947	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-6	89.17947	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-6	89.17947	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-6	89.17947	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-6	89.17947	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-6	89.17947	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-6	89.17947	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-6	89.17947	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-6	89.17947	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-6	89.17947	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-6	89.17947	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-6	89.17947	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-6	89.17947	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-6	89.17947	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-6	89.17947	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-6	89.17947	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-6	89.17947	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-6	89.17947	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-6	89.17947	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-6	89.17947	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-6	89.17947	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-6	89.17947	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-6	89.17947	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-6	89.17947	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-6	89.17947	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-6	89.17947	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-6	89.17947	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-6	89.17947	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-6	89.17947	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-6	89.17947	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-6	89.17947	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol
85PL-6	89.17947	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-6	89.17947	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-6	89.17947	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-6	89.17947	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-6	89.17947	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-6	89.17947	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-6	89.17947	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-6	89.17947	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-6	89.17947	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-6	89.17947	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-6	89.17947	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-6	89.17947	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-6	89.17947	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-6	89.17947	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-6	89.17947	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-6	89.17947	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-6	89.17947	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-6	89.17947	117817	340.	68.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-6	89.17947	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-6	89.17947	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-6	89.17947	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-6	89.17947	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-6	89.17947	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-6	89.17947	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-6	89.17947	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-6	89.17947	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-5

89.17946

105679

< 330.

UG/KG

3/05/90

2,4-Xylenol

85PL-5	89.17946	106445	< 330.	UG/KG	3/05/90	p-Cresol
85PL-5	89.17946	84742	< 330.	UG/KG	3/05/90	Di-n-butyl phthalate
85PL-5	89.17946	117840	< 330.	UG/KG	3/05/90	Di-n-octyl phthalate
85PL-5	89.17946	53703	< 330.	UG/KG	3/05/90	Dibenzo(a,h)anthracene
85PL-5	89.17946	132649	< 330.	UG/KG	3/05/90	Dibenzofuran
85PL-5	89.17946	95501	< 330.	UG/KG	3/05/90	o-Dichlorobenzene (1,2)
85PL-5	89.17946	541731	< 330.	UG/KG	3/05/90	m-Dichlorobenzene (1,3)
85PL-5	89.17946	106467	< 330.	UG/KG	3/05/90	p-Dichlorobenzene (1,4)
85PL-5	89.17946	91941	< 330.	UG/KG	3/05/90	3,3'-Dichlorobenzidine
85PL-5	89.17946	120832	< 330.	UG/KG	3/05/90	2,4-Dichlorophenol
85PL-5	89.17946	84662	< 330.	UG/KG	3/05/90	Diethyl phthalate
85PL-5	89.17946	131113	< 330.	UG/KG	3/05/90	Dimethyl phthalate
85PL-5	89.17946	105679	< 330.	UG/KG	3/05/90	2,4-Dimethylphenol
85PL-5	89.17946	51285	< 330.	UG/KG	3/05/90	2,4-Dinitrophenol
85PL-5	89.17946	121142	< 330.	UG/KG	3/05/90	2,4-Dinitrotoluene
85PL-5	89.17946	606202	< 330.	UG/KG	3/05/90	2,6-Dinitrotoluene
85PL-5	89.17946	206440	< 330.	UG/KG	3/05/90	Fluoranthene
85PL-5	89.17946	86737	< 330.	UG/KG	3/05/90	Fluorene
85PL-5	89.17946	118741	< 330.	UG/KG	3/05/90	Hexachlorobenzene
85PL-5	89.17946	87683	< 330.	UG/KG	3/05/90	Hexachlorobutadiene
85PL-5	89.17946	77474	< 330.	UG/KG	3/05/90	Hexachlorocyclopentadiene
85PL-5	89.17946	67721	< 330.	UG/KG	3/05/90	Hexachloroethane
85PL-5	89.17946	193395	< 330.	UG/KG	3/05/90	Indeno(1,2,3-cd)pyrene
85PL-5	89.17946	78591	< 330.	UG/KG	3/05/90	Isophorone
85PL-5	89.17946	534521	< 330.	UG/KG	3/05/90	2-Methyl-4,6-dinitrophenol
85PL-5	89.17946	91576	< 330.	UG/KG	3/05/90	2-Methylnaphthalene
85PL-5	89.17946	106445	< 330.	UG/KG	3/05/90	4-Methylphenol
85PL-5	89.17946	95487	< 330.	UG/KG	3/05/90	2-Methylphenol
85PL-5	89.17946	91203	< 330.	UG/KG	3/05/90	Naphthalene
85PL-5	89.17946	99092	< 330.	UG/KG	3/05/90	3-Nitroaniline
85PL-5	89.17946	100016	< 330.	UG/KG	3/05/90	4-Nitroaniline
85PL-5	89.17946	88744	< 330.	UG/KG	3/05/90	2-Nitroaniline
85PL-5	89.17946	98953	< 330.	UG/KG	3/05/90	Nitrobenzene
85PL-5	89.17946	88755	< 330.	UG/KG	3/05/90	2-Nitrophenol
85PL-5	89.17946	100027	< 330.	UG/KG	3/05/90	4-Nitrophenol
85PL-5	89.17946	621647	< 330.	UG/KG	3/05/90	N-Nitrosodi-n-propylamine
85PL-5	89.17946	62759	< 330.	UG/KG	3/05/90	N-Nitrosodimethylamine
85PL-5	89.17946	86306	< 330.	UG/KG	3/05/90	N-Nitrosodiphenylamine
85PL-5	89.17946	87865	< 330.	UG/KG	3/05/90	Pentachlorophenol
85PL-5	89.17946	85018	< 330.	UG/KG	3/05/90	Phenanthrene
85PL-5	89.17946	108952	< 330.	UG/KG	3/05/90	Phenol
85PL-5	89.17946	129000	< 330.	UG/KG	3/05/90	Pyrene
85PL-5	89.17946	120821	< 330.	UG/KG	3/05/90	1,2,4-Trichlorobenzene
85PL-5	89.17946	95954	< 330.	UG/KG	3/05/90	2,4,5-Trichlorophenol
85PL-5	89.17946	88062	< 330.	UG/KG	3/05/90	2,4,6-Trichlorophenol

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

Prepared by: CPR on 6-Mar-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 8298 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
85PL-5	89.17946	83329	< 330.		UG/KG	3/05/90		Acenaphthene
85PL-5	89.17946	208968	< 330.		UG/KG	3/05/90		Acenaphthylene
85PL-5	89.17946	62533	< 330.		UG/KG	3/05/90		Aniline
85PL-5	89.17946	120127	< 330.		UG/KG	3/05/90		Anthracene
85PL-5	89.17946	103333	< 330.		UG/KG	3/05/90		Azobenzene
85PL-5	89.17946	56553	< 330.		UG/KG	3/05/90		Benz(a)anthracene
85PL-5	89.17946	92875	< 330.		UG/KG	3/05/90		m-Benzidine
85PL-5	89.17946	191242	< 330.		UG/KG	3/05/90		Benzo(g,h,i)perylene
85PL-5	89.17946	50328	< 330.		UG/KG	3/05/90		Benzo-a-pyrene
85PL-5	89.17946	205992	< 330.		UG/KG	3/05/90		Benzo-b-fluoranthene
85PL-5	89.17946	207089	< 330.		UG/KG	3/05/90		Benzo-k-fluoranthene
85PL-5	89.17946	65850	< 330.		UG/KG	3/05/90		Benzoic acid
85PL-5	89.17946	100516	< 330.		UG/KG	3/05/90		Benzyl alcohol
85PL-5	89.17946	111911	< 330.		UG/KG	3/05/90		Bis(2-chloroethoxy)methane
85PL-5	89.17946	111444	< 330.		UG/KG	3/05/90		Bis(2-chloroethyl)ether
85PL-5	89.17946	108601	< 330.		UG/KG	3/05/90		Bis(2-chloroisopropyl)ether
85PL-5	89.17946	117817	390.	78.	UG/KG	3/05/90		Bis(2-ethylhexyl)phthalate
85PL-5	89.17946	101553	< 330.		UG/KG	3/05/90		4-Bromophenylphenyl ether
85PL-5	89.17946	85687	< 330.		UG/KG	3/05/90		Butylbenzyl phthalate
85PL-5	89.17946	59507	< 330.		UG/KG	3/05/90		4-Chloro-3-methylphenol
85PL-5	89.17946	106478	< 330.		UG/KG	3/05/90		4-Chloroaniline
85PL-5	89.17946	91587	< 330.		UG/KG	3/05/90		2-Chloronaphthalene
85PL-5	89.17946	95578	< 330.		UG/KG	3/05/90		o-Chlorophenol
85PL-5	89.17946	7005723	< 330.		UG/KG	3/05/90		4-Chlorophenylphenyl ether
85PL-5	89.17946	218019	< 330.		UG/KG	3/05/90		Chrysene

85PL-4

89.17945

105679

< 330.

UG/KG

3/05/90

2,4-XyLenol

December 20, 1989

TA-35 TSL-85 SI
Soils below UST pipeline

Steve,

Recorded 11/3/90

Attached you will find a copy of the **final** report for the soil samples that you submitted for PCB analysis under Request #8298. If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office (TA-59, OH-1, Room 115) at your convenience. Thank you for your continued support of our PCB analysis program.



Chuck Rzeszutko

Organic Section Leader

HSE-9

REPORT NUMBER: 5133

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

Prepared by: DMS on 15-Dec-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8298 MATRIX: SS 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
85PL-1	89.17942	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-2	89.17943	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-3	89.17944	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-4	89.17945	1336363	1.1	0.2	UG/G			Mixed-Aroclor
85PL-5	89.17946	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-6	89.17947	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-7	89.17948	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-8	89.17949	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-9	89.17950	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-10	89.17951	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-11	89.17952	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-12	89.17953	1336363	< 0.12		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
85PL-1	89.17942	1336363	< 0.12		UG/G			Mixed-Aroclor
85PL-1	89.17942	53469219	< 0.12		UG/G	12/15/89		Aroclor 1242

85PL-1	89.17942	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-1	89.17942	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-2	89.17943	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-2	89.17943	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-2	89.17943	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-2	89.17943	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-3	89.17944	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-3	89.17944	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-3	89.17944	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-3	89.17944	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-4	89.17945	1336363	1.1	0.2	UG/G		Mixed-Aroclor
85PL-4	89.17945	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-4	89.17945	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-4	89.17945	11096825	1.1	0.2	UG/G	12/15/89	Aroclor 1260
85PL-5	89.17946	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-5	89.17946	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-5	89.17946	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-5	89.17946	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-6	89.17947	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-6	89.17947	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-6	89.17947	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-6	89.17947	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-7	89.17948	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-7	89.17948	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-7	89.17948	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-7	89.17948	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-8	89.17949	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-8	89.17949	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-8	89.17949	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-8	89.17949	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-9	89.17950	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-9	89.17950	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-9	89.17950	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-9	89.17950	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-10	89.17951	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-10	89.17951	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-10	89.17951	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-10	89.17951	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-11	89.17952	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-11	89.17952	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-11	89.17952	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254
85PL-11	89.17952	11096825	< 0.12		UG/G	12/15/89	Aroclor 1260
85PL-12	89.17953	1336363	< 0.12		UG/G		Mixed-Aroclor
85PL-12	89.17953	53469219	< 0.12		UG/G	12/15/89	Aroclor 1242
85PL-12	89.17953	11097691	< 0.12		UG/G	12/15/89	Aroclor 1254

85PL-12

89.17953

11096825

< 0.12

UG/G

12/15/89

Aroclor 1260

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

Prepared by: DMS on 15-Dec-1989

POLYCHLORINATED BIPHENYLS

REQUEST NUMBER: 8298 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	CERTIFIED		COMPLETION DATE	COMMENT	COMPOUND
						VALUE	UNCERTAINTY			
00.20185	00.20185	1336363	18.5	4.	UG/G	16.	2.	12/15/89	UNDER CONTROL	Mixed-Aroclor
00.20185	00.20185	53469219	< 0.12		UG/G			12/15/89	UNDER CONTROL	Aroclor 1242
00.20185	00.20185	11097691	< 0.12		UG/G			12/15/89	UNDER CONTROL	Aroclor 1254
00.20185	00.20185	11096825	18.5	4.	UG/G	16.	2.	12/15/89	UNDER CONTROL	Aroclor 1260
00.20186	00.20186	1336363	28.6	6.	UG/G	19.	2.	12/15/89	UNDER CONTROL	Mixed-Aroclor
00.20186	00.20186	53469219	< 0.12		UG/G			12/15/89	UNDER CONTROL	Aroclor 1242
00.20186	00.20186	11097691	< 0.12		UG/G			12/15/89	UNDER CONTROL	Aroclor 1254
00.20186	00.20186	11096825	28.6	6.	UG/G	19.	2.	12/15/89	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
89.18042	1336363	51.	11.	UG/G	12/15/89	UNDER CONTROL	Mixed-Aroclor
89.18042	53469219	< 0.12		UG/G	12/15/89	UNDER CONTROL	Aroclor 1242
89.18042	11097691	< 0.12		UG/G	12/15/89	UNDER CONTROL	Aroclor 1254
89.18042	11096825	51.	11.	UG/G	12/15/89	UNDER CONTROL	Aroclor 1260

Le Seitz
Analyst

prk
Section Leader

maq
QA Officer

12/18/89
Date

12/18/89
Date

12-19-89
Date

The control status of the preceding 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

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

Prepared by: M. C. WILLIAMS on 7-Feb-1990

ANALYSIS: AG REQUEST NUMBER: 8203 MATRIX: SS 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
85PL-1	89.17942	< 1.5		UG/G	2/06/90	
85PL-1	89.17942	< 1.5		UG/G	2/06/90	
85PL-2	89.17943	< 1.5		UG/G	2/06/90	
85PL-2	89.17943	< 1.5		UG/G	2/06/90	
85PL-3	89.17944	< 1.5		UG/G	2/06/90	
85PL-3	89.17944	< 1.5		UG/G	2/06/90	
85PL-4	89.17945	< 1.5		UG/G	2/06/90	
85PL-4	89.17945	< 1.5		UG/G	2/06/90	
85PL-5	89.17946	< 1.5		UG/G	2/06/90	
85PL-5	89.17946	< 1.5		UG/G	2/06/90	
85PL-6	89.17947	< 1.5		UG/G	2/06/90	
85PL-6	89.17947	< 1.5		UG/G	2/06/90	
85PL-7	89.17948	< 1.5		UG/G	2/06/90	
85PL-7	89.17948	< 1.5		UG/G	2/06/90	
85PL-8	89.17949	< 1.5		UG/G	2/06/90	
85PL-8	89.17949	< 1.5		UG/G	2/06/90	
85PL-9	89.17950	< 1.5		UG/G	2/06/90	
85PL-9	89.17950	< 1.5		UG/G	2/06/90	
85PL-10	89.17951	< 1.5		UG/G	2/06/90	
85PL-10	89.17951	< 1.5		UG/G	2/06/90	
85PL-11	89.17952	< 1.5		UG/G	2/06/90	
85PL-11	89.17952	< 1.5		UG/G	2/06/90	
85PL-12	89.17953	< 1.5		UG/G	2/06/90	
85PL-12	89.17953	< 1.5		UG/G	2/06/90	

REPORT NUMBER: 5593 (continued)

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

Prepared by: M. C. WILLIAMS on 7-Feb-1990

REQUEST NUMBER: 8203 MATRIX: SS 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	0.499	0.05	MG/L	0.5	0.05	2/06/90	UNDER CONTROL
00.98805	00.98805	0.505	0.05	MG/L	0.5	0.05	2/06/90	UNDER CONTROL
00.98805	00.98805	0.502	0.05	MG/L	0.5	0.05	2/06/90	UNDER CONTROL

Trudi Foreman
Analyst

M. C. Williams
Section Leader

mag
QA Officer

2-8-90
Date

2-8-90
Date

2-8-90
Date

The control status of the preceding 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.

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

Prepared by: M. C. WILLIAMS on 7-Feb-1990

ANALYSIS: AS REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Trudi Foreman PROGRAM CODE: M292
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
ANALYTICAL TECHNIQUE: ETVA ANALYTICAL PROCEDURE : 7060

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	< 2.5		UG/G	2/06/90	
85PL-1	89.17942	< 2.5		UG/G	2/06/90	
85PL-2	89.17943	< 2.5		UG/G	2/06/90	
85PL-2	89.17943	< 2.5		UG/G	2/06/90	
85PL-3	89.17944	< 2.5		UG/G	2/06/90	
85PL-3	89.17944	< 2.5		UG/G	2/06/90	
85PL-4	89.17945	< 2.5		UG/G	2/06/90	
85PL-4	89.17945	< 2.5		UG/G	2/06/90	
85PL-5	89.17946	< 2.5		UG/G	2/06/90	
85PL-5	89.17946	< 2.5		UG/G	2/06/90	
85PL-6	89.17947	< 2.5		UG/G	2/06/90	
85PL-6	89.17947	< 2.5		UG/G	2/06/90	
85PL-7	89.17948	< 2.5		UG/G	2/06/90	
85PL-7	89.17948	< 2.5		UG/G	2/06/90	
85PL-8	89.17949	< 2.5		UG/G	2/06/90	
85PL-8	89.17949	< 2.5		UG/G	2/06/90	
85PL-9	89.17950	< 2.5		UG/G	2/06/90	
85PL-9	89.17950	< 2.5		UG/G	2/06/90	
85PL-10	89.17951	< 2.5		UG/G	2/06/90	
85PL-10	89.17951	< 2.5		UG/G	2/06/90	
85PL-11	89.17952	< 2.5		UG/G	2/06/90	
85PL-11	89.17952	< 2.5		UG/G	2/06/90	
85PL-12	89.17953	< 2.5		UG/G	2/06/90	
85PL-12	89.17953	< 2.5		UG/G	2/06/90	

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

Prepared by: M. C. WILLIAMS on 7-Feb-1990

REQUEST NUMBER: 8203 MATRIX: SS 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	31.6	6.4	UG/L	27.	3.	2/06/90	UNDER CONTROL
00.01010	00.01010	29.2	5.8	UG/L	27.	3.	2/06/90	UNDER CONTROL
00.01010	00.01010	28.8	5.8	UG/L	27.	3.	2/06/90	UNDER CONTROL

[Signature]
Analyst

[Signature]
Section Leader

[Signature]
QA Officer

[Signature]
Date

2-8-90
Date

2-8-90
Date

The control status of the preceding 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: 5594

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

Prepared by: M. C. WILLIAMS on 7-Feb-1990

ANALYSIS: SE REQUEST NUMBER: 8203 MATRIX: SS 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
85PL-1	89.17942	< 0.1		UG/G	2/06/90	
85PL-1	89.17942	< 0.1		UG/G	2/06/90	
85PL-2	89.17943	< 0.1		UG/G	2/06/90	
85PL-2	89.17943	< 0.1		UG/G	2/06/90	
85PL-3	89.17944	< 0.1		UG/G	2/06/90	
85PL-3	89.17944	< 0.1		UG/G	2/06/90	
85PL-4	89.17945	0.1	1.	UG/G	2/06/90	
85PL-4	89.17945	0.1	1.	UG/G	2/06/90	
85PL-5	89.17946	< 0.1		UG/G	2/06/90	
85PL-5	89.17946	< 0.1		UG/G	2/06/90	
85PL-6	89.17947	< 0.1		UG/G	2/06/90	
85PL-6	89.17947	< 0.1		UG/G	2/06/90	
85PL-7	89.17948	< 0.1		UG/G	2/06/90	
85PL-7	89.17948	< 0.1		UG/G	2/06/90	
85PL-8	89.17949	< 0.1		UG/G	2/06/90	
85PL-8	89.17949	< 0.1		UG/G	2/06/90	
85PL-9	89.17950	< 0.1		UG/G	2/06/90	
85PL-9	89.17950	< 0.1		UG/G	2/06/90	
85PL-10	89.17951	< 0.1		UG/G	2/06/90	
85PL-10	89.17951	< 0.1		UG/G	2/06/90	
85PL-11	89.17952	< 0.1		UG/G	2/06/90	
85PL-11	89.17952	< 0.1		UG/G	2/06/90	
85PL-12	89.17953	< 0.1		UG/G	2/06/90	
85PL-12	89.17953	< 0.1		UG/G	2/06/90	

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

Prepared by: M. C. WILLIAMS on 7-Feb-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Trudi Foreman 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

Trudi Foreman
Analyst

M. C. Williams
Section Leader

mag
QA Officer

2-8-90
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.

*7201 125/90
LHM*

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

Prepared by: ESG on 18-Jan-1990

ANALYSIS: HG REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Malti Bhatia PROGRAM CODE: M292
 OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
 ANALYTICAL TECHNIQUE: CVAA ANALYTICAL PROCEDURE : 7480

*TSL-85
Soils below HST &
PVC pipe line*

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	< 0.025		UG/G	1/12/90	
85PL-1	89.17942	< 0.025		UG/G	1/12/90	
85PL-2	89.17943	< 0.025		UG/G	1/12/90	
85PL-2	89.17943	< 0.025		UG/G	1/12/90	
85PL-3	89.17944	< 0.025		UG/G	1/12/90	
85PL-3	89.17944	< 0.025		UG/G	1/12/90	
85PL-4	89.17945	< 0.025		UG/G	1/12/90	
85PL-4	89.17945	0.052		UG/G	1/12/90	
85PL-5	89.17946	< 0.025		UG/G	1/12/90	
85PL-5	89.17946	< 0.025		UG/G	1/12/90	
85PL-6	89.17947	0.037		UG/G	1/12/90	
85PL-6	89.17947	0.037		UG/G	1/12/90	
85PL-7	89.17948	< 0.025		UG/G	1/12/90	
85PL-7	89.17948	< 0.025		UG/G	1/12/90	
85PL-8	89.17949	< 0.025		UG/G	1/12/90	
85PL-8	89.17949	< 0.025		UG/G	1/12/90	
85PL-9	89.17950	< 0.025		UG/G	1/12/90	
85PL-9	89.17950	< 0.025		UG/G	1/12/90	
85PL-10	89.17951	< 0.025		UG/G	1/12/90	
85PL-10	89.17951	< 0.025		UG/G	1/12/90	
85PL-11	89.17952	0.049		UG/G	1/12/90	
85PL-11	89.17952	0.048		UG/G	1/12/90	
85PL-12	89.17953	< 0.025		UG/G	1/12/90	
85PL-12	89.17953	< 0.025		UG/G	1/12/90	

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

Prepared by: ESG on 18-Jan-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Malti Bhatia 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
00.00608	00.00608	1.1	0.1	UG/G	1.1	0.5	1/17/90	UNDER CONTROL
00.20087	00.20087	3.64	0.4	UG/L	4.	0.4	1/17/90	UNDER CONTROL
00.20210	00.20210	1.93	0.2	UG/L	2.	0.2	1/17/90	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18012	4.69	0.4	PPM	1/12/90	UNDER CONTROL
89.18013	4.5	0.4	PPM	1/12/90	UNDER CONTROL

MAB
Analyst

MAB
Section Leader

mag
QA Officer

1/18/90
Date

1-18-90
Date

1-23-90
Date

The control status of the preceding 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.

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

ANALYSIS: BE REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya PROGRAM CODE: M292
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	0.35	0.03	UG/G	1/18/90	
85PL-2	89.17943	0.4	0.04	UG/G	1/18/90	
85PL-3	89.17944	0.5	0.05	UG/G	1/18/90	
85PL-4	89.17945	0.4	0.04	UG/G	1/18/90	
85PL-5	89.17946	0.35	0.04	UG/G	1/18/90	
85PL-6	89.17947	0.45	0.05	UG/G	1/18/90	
85PL-7	89.17948	0.5	0.05	UG/G	1/18/90	
85PL-8	89.17949	0.33	0.03	UG/G	1/18/90	
85PL-9	89.17950	0.3	0.03	UG/G	1/18/90	
85PL-10	89.17951	0.6	0.06	UG/G	1/18/90	
85PL-11	89.17952	0.6	0.06	UG/G	1/18/90	
85PL-12	89.17953	0.45	0.05	UG/G	1/18/90	

Rec'd 2/5/90 *lsm.*

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18012	1.	0.1	PPM	1/18/90	UNDER CONTROL
89.18013	0.9	0.09	PPM	1/18/90	UNDER CONTROL

J.D. Montoya
Analyst

MJB
Section Leader

mag
QA Officer

1-30-90
Date

1-30-90
Date

1-31-90
Date

The control status of the preceding 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.

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

ANALYSIS: BA REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya PROGRAM CODE: M292
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	75.	7.5	UG/G	1/18/90	
85PL-2	89.17943	90.	9.	UG/G	1/18/90	
85PL-3	89.17944	95.	9.5	UG/G	1/18/90	
85PL-4	89.17945	120.	12.	UG/G	1/18/90	
85PL-5	89.17946	65.	6.5	UG/G	1/18/90	
85PL-6	89.17947	85.	8.5	UG/G	1/18/90	
85PL-7	89.17948	80.	8.	UG/G	1/18/90	
85PL-8	89.17949	160.	16.	UG/G	1/18/90	
85PL-9	89.17950	50.	5.	UG/G	1/18/90	
85PL-10	89.17951	70.	0.7	UG/G	1/18/90	
85PL-11	89.17952	100.	10.	UG/G	1/18/90	
85PL-12	89.17953	70.	0.7	UG/G	1/18/90	

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
00.20193	00.20193	9.7	0.97	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	9.7	0.97	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	9.7	0.97	MG/L	10.	1.	1/18/90	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18012	500.	50.	PPM	1/18/90	UNDER CONTROL
89.18013	500.	50.	PPM	1/18/90	UNDER CONTROL

J.D. Montoya
Analyst

MJB
Section Leader

mag
QA Officer

1-30-90
Date

1-30-90
Date

1-31-90
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.

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

ANALYSIS: CR REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya PROGRAM CODE: M292
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
ANALYTICAL TECHNIQUE: ICPEs ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	8.7	0.9	UG/G	1/18/90	
85PL-2	89.17943	10.	1.	UG/G	1/18/90	
85PL-3	89.17944	12.	1.2	UG/G	1/18/90	
85PL-4	89.17945	9.5	0.95	UG/G	1/18/90	
85PL-5	89.17946	9.	0.9	UG/G	1/18/90	
85PL-6	89.17947	10.	1.	UG/G	1/18/90	
85PL-7	89.17948	11.	1.1	UG/G	1/18/90	
85PL-8	89.17949	13.	1.3	UG/G	1/18/90	
85PL-9	89.17950	8.5	0.9	UG/G	1/18/90	
85PL-10	89.17951	14.	1.4	UG/G	1/18/90	
85PL-11	89.17952	9.5	0.9	UG/G	1/18/90	
85PL-12	89.17953	8.5	0.9	UG/G	1/18/90	

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	10.5	1.	MG/L	10.	1.	1/18/90	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18012	8.	0.8	PPM	1/18/90	UNDER CONTROL
89.18013	10.	1.	PPM	1/18/90	UNDER CONTROL

J.D. Montoya
Analyst

JMB
Section Leader

mag
QA Officer

1-30-90
Date

1-30-90
Date

1-31-90
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.

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

ANALYSIS: PB REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya PROGRAM CODE: M292
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	< 15.		UG/G	1/18/90	
85PL-2	89.17943	< 15.		UG/G	1/18/90	
85PL-3	89.17944	< 15.		UG/G	1/18/90	
85PL-4	89.17945	< 15.		UG/G	1/18/90	
85PL-5	89.17946	< 15.		UG/G	1/18/90	
85PL-6	89.17947	< 15.		UG/G	1/18/90	
85PL-7	89.17948	< 15.		UG/G	1/18/90	
85PL-8	89.17949	< 15.		UG/G	1/18/90	
85PL-9	89.17950	< 15.		UG/G	1/18/90	
85PL-10	89.17951	< 15.		UG/G	1/18/90	
85PL-11	89.17952	< 15.		UG/G	1/18/90	
85PL-12	89.17953	< 15.		UG/G	1/18/90	

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
00.20193	00.20193	12.	1.2	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18012	690.	69.	PPM	1/18/90	UNDER CONTROL
89.18013	718.	72.	PPM	1/18/90	UNDER CONTROL

J.D. Montoya
Analyst

JMB
Section Leader

maq
QA Officer

1-30-90
Date

1-30-90
Date

1-31-90
Date

The control status of the preceding 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.

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

ANALYSIS: NI REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya PROGRAM CODE: M292
OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721 TASK-ID:
ANALYTICAL TECHNIQUE: ICPES ANALYTICAL PROCEDURE : 6010

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85PL-1	89.17942	5.	3.5	UG/G	1/18/90	
85PL-2	89.17943	8.	3.5	UG/G	1/18/90	
85PL-3	89.17944	7.5	3.5	UG/G	1/18/90	
85PL-4	89.17945	4.	3.5	UG/G	1/18/90	
85PL-5	89.17946	6.	3.5	UG/G	1/18/90	
85PL-6	89.17947	7.	3.5	UG/G	1/18/90	
85PL-7	89.17948	6.	3.5	UG/G	1/18/90	
85PL-8	89.17949	12.	3.5	UG/G	1/18/90	
85PL-9	89.17950	6.	3.5	UG/G	1/18/90	
85PL-10	89.17951	10.	3.5	UG/G	1/18/90	
85PL-11	89.17952	8.	3.5	UG/G	1/18/90	
85PL-12	89.17953	6.5	3.5	UG/G	1/18/90	

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

Prepared by: J.D. MONTOYA on 29-Jan-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	11.	1.1	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	1/18/90	UNDER CONTROL
00.20193	00.20193	10.	1.	MG/L	10.	1.	1/18/90	UNDER CONTROL

SUMMARY OF CONTROL STATUS OF BLIND QA SAMPLES RUN WITH THIS BATCH

SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
89.18012	37.	3.7	PPM	1/18/90	UNDER CONTROL
89.18013	32.	3.2	PPM	1/18/90	UNDER CONTROL

J.D. Montoya
 Analyst
1-30-90
 Date

J.M.B.
 Section Leader
1-30-90
 Date

maq
 QA Officer
1-31-90
 Date

The control status of the preceding 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: 5583

Rec'd 2/13/90 *lym*

TA-ST BL-75

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

Joins below - 11ST & PVC pipe

Prepared by: ESG on 7-Feb-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
85PL-1	89.17942	CD	2.	0.5	UG/G	1/18/90	
85PL-1	89.17942	SB	18.	10.	UG/G	2/05/90	
85PL-1	89.17942	TL	15.	10.	UG/G	1/18/90	
85PL-2	89.17943	CD	2.	0.5	UG/G	1/18/90	
85PL-2	89.17943	SB	20.	10.	UG/G	2/05/90	
85PL-2	89.17943	TL	25.	10.	UG/G	1/18/90	
85PL-3	89.17944	CD	3.	0.5	UG/G	1/18/90	
85PL-3	89.17944	SB	30.	10.	UG/G	2/05/90	
85PL-3	89.17944	TL	27.	10.	UG/G	1/18/90	
85PL-4	89.17945	CD	3.	0.5	UG/G	1/18/90	
85PL-4	89.17945	SB	25.	10.	UG/G	2/05/90	
85PL-4	89.17945	TL	18.	10.	UG/G	1/18/90	
85PL-5	89.17946	CD	3.	0.5	UG/G	1/18/90	
85PL-5	89.17946	SB	25.	10.	UG/G	2/05/90	
85PL-5	89.17946	TL	25.	10.	UG/G	1/18/90	
85PL-6	89.17947	CD	3.	0.5	UG/G	1/18/90	
85PL-6	89.17947	SB	35.	10.	UG/G	2/05/90	
85PL-6	89.17947	TL	30.	10.	UG/G	1/18/90	
85PL-7	89.17948	CD	4.	0.5	UG/G	1/18/90	
85PL-7	89.17948	SB	30.	10.	UG/G	2/05/90	
85PL-7	89.17948	TL	35.	10.	UG/G	1/18/90	
85PL-8	89.17949	CD	3.	0.5	UG/G	1/18/90	
85PL-8	89.17949	SB	30.	10.	UG/G	2/05/90	
85PL-8	89.17949	TL	23.	10.	UG/G	1/18/90	
85PL-9	89.17950	CD	2.5	0.5	UG/G	1/18/90	
85PL-9	89.17950	SB	30.	10.	UG/G	2/05/90	
85PL-9	89.17950	TL	20.	10.	UG/G	1/18/90	
85PL-10	89.17951	CD	3.	0.5	UG/G	1/18/90	
85PL-10	89.17951	SB	35.	10.	UG/G	2/05/90	
85PL-10	89.17951	TL	40.	10.	UG/G	1/18/90	
85PL-11	89.17952	CD	2.8	0.5	UG/G	1/18/90	
85PL-11	89.17952	SB	35.	10.	UG/G	2/05/90	
85PL-11	89.17952	TL	35.	10.	UG/G	1/18/90	
85PL-12	89.17953	CD	3.	0.5	UG/G	1/18/90	
85PL-12	89.17953	SB	20.	10.	UG/G	2/05/90	
85PL-12	89.17953	TL	20.	10.	UG/G	1/18/90	

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

Prepared by: ESG on 7-Feb-1990

REQUEST NUMBER: 8203 MATRIX: SS ANALYST: Janet Montoya 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
00.20193	00.20193	CD	10.	1.	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	CD	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	CD	10.	1.	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	CD	10.5	1.	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	SB	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	SB	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	SB	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	SB	11.	1.1	MG/L	10.	1.	2/05/90
								UNDER CONTROL
00.20193	00.20193	SB	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	TL	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	TL	12.	1.2	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	TL	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL
00.20193	00.20193	TL	11.	1.1	MG/L	10.	1.	1/18/90
								UNDER CONTROL

Janet Montoya
Analyst

MSB
Section Leader

mag
QA Officer

1-2-90
Date

2-8-90
Date

2-8-90
Date

85-S-1	89.13698	106445	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	84742	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	117840	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	53703	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	132649	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	95501	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	541731	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	106467	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	91941	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	120832	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	84662	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	131113	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	105679	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	51285	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	121142	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	606202	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	206440	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	86737	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	118741	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	118741	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	87683	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	77474	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	67721	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	193395	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	78591	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	534521	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	91576	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	95487	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	106445	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	91203	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	100016	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	88744	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	99092	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	98953	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	100027	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	100027	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	88755	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	621647	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	62759	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	86306	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	87865	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	85018	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	108952	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	129000	< 1650.	UG/KG	12/19/89
85-S-1	89.13698	120821	< 1650.	UG/KG	12/19/89

* p-Cresol
 * Di-n-butyl phthalate ✓
 * Di-n-octyl phthalate ✓
 * Dibenzo(a,h)anthracene ✓
 Dibenzofuran
 * o-Dichlorobenzene (1,2) ✓
 * m-Dichlorobenzene (1,3) ✓
 * p-Dichlorobenzene (1,4) ✓
 * 3,3'-Dichlorobenzidine ✓
 * 2,4-Dichlorophenol ✓
 * Diethyl phthalate ✓
 * Dimethyl phthalate ✓
 * 2,4-Dimethylphenol ✓
 * 2,4-Dinitrophenol ✓
 * 2,4-Dinitrotoluene ✓
 * 2,6-Dinitrotoluene ✓
 * Fluoranthene ✓
 Fluorene
 HCB
 * Hexachlorobenzene ✓
 * Hexachlorobutadiene ✓
 * Hexachlorocyclopentadiene ✓
 * Hexachloroethane ✓
 * Indeno(1,2,3-cd)pyrene ✓
 Isophorone
 2-Methyl-4,6-dinitrophenol
 2-Methylnaphthalene
 2-Methylphenol
 4-Methylphenol
 * Naphthalene ✓
 * 4-Nitroaniline ✓
 2-Nitroaniline
 3-Nitroaniline
 * Nitrobenzene ✓
 * 4-Nitrophenol ✓
 p-Nitrophenol
 2-Nitrophenol
 * N-Nitrosodi-n-propylamine ✓
 * N-Nitrosodimethylamine ✓
 * N-Nitrosodiphenylamine ✓
 * Pentachlorophenol ✓
 Phenanthrene
 * Phenol ✓
 Pyrene
 * 1,2,4-Trichlorobenzene ✓

HSE-9 ANALYTICAL REPORT

Prepared by: ESG

on 18-Jan-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

MATRIX: SS

ANALYST: Martin Koby

PROGRAM CODE: WA45

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
85-S-1	89.13698	83329	< 1650.		UG/KG	12/19/89		Acenaphthene
85-S-1	89.13698	208968	< 1650.		UG/KG	12/19/89		Acenaphthylene
85-S-1	89.13698	62533	< 1650.		UG/KG	12/19/89		* Aniline ✓
85-S-1	89.13698	120127	< 1650.		UG/KG	12/19/89		Anthracene
85-S-1	89.13698	103333	< 1650.		UG/KG	12/19/89		Azobenzene
85-S-1	89.13698	56553	< 1650.		UG/KG	12/19/89		* Benz(a)anthracene ✓
85-S-1	89.13698	92875	< 1650.		UG/KG	12/19/89		* m-Benzidine ✓
85-S-1	89.13698	191242	< 1650.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-1	89.13698	50328	< 1650.		UG/KG	12/19/89		* Benzo-a-pyrene ✓
85-S-1	89.13698	205992	< 1650.		UG/KG	12/19/89		* Benzo-b-fluoranthene ✓
85-S-1	89.13698	207089	< 1650.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-1	89.13698	65850	< 1650.		UG/KG	12/19/89		Benzoic acid
85-S-1	89.13698	100516	< 1650.		UG/KG	12/19/89		Benzyl alcohol
85-S-1	89.13698	111911	< 1650.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-1	89.13698	111444	< 1650.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-1	89.13698	108601	< 1650.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-1	89.13698	117817	< 1650.		UG/KG	12/19/89		* Bis(2-ethylhexyl)phthalate ✓
85-S-1	89.13698	101553	< 1650.		UG/KG	12/19/89		* 4-Bromophenylphenyl ether ✓
85-S-1	89.13698	85687	< 1650.		UG/KG	12/19/89		* Butylbenzyl phthalate ✓
85-S-1	89.13698	59507	< 1650.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-1	89.13698	106478	< 1650.		UG/KG	12/19/89		* 4-Chloroaniline ✓
85-S-1	89.13698	91587	< 1650.		UG/KG	12/19/89		* 2-Chloronaphthalene ✓
85-S-1	89.13698	95578	< 1650.		UG/KG	12/19/89		* o-Chlorophenol ✓
85-S-1	89.13698	7005723	< 1650.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-1	89.13698	218019	< 1650.		UG/KG	12/19/89		* Chrysene ✓

January 19, 1990

Rec'd
1/22/90

TSL-85 O.I. - Soils from
Canyon rim drainage
to canyon floor.

Steve,

Attached you will find a copy of the **final** report for the soil samples that you submitted under Request #7868 for Semi-Volatiles analysis. The final report will follow in the near future. If you have any questions regarding these results, please do not hesitate to contact me at 7-5889 or stop by my office at your convenience (TA-59, OH-1, Room 115). Thank you for your continued support and patience with our Semi-Volatile analytical program.



Chuck Rzeszutko

Organic Section Leader

HSE-9

SEMIVOLATILE ORGANIC ANALYSES

The control status of the preceding 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.

Toluene d8 (CAS # = 2037265); EPA Range Limits: Water = 88-110 %, Soil = 81-117 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	93.1	%	9/08/89	
89.13699	109.	%	9/08/89	
89.13700	104.	%	9/08/89	
89.13701	108.	%	9/08/89	
89.13702	104.	%	9/08/89	
89.13703	106.	%	9/08/89	
89.13704	102.	%	9/08/89	
89.13705	102.	%	9/08/99	
89.13706	98.	%	9/08/89	
89.13707	95.	%	9/08/89	
89.13708	103.	%	9/08/89	

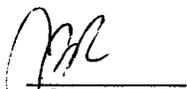
4-Bromofluorobenzene (CAS # = 460004); EPA Range Limits: Water = 86-115 %, Soil = 74-121 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	56.2	%	9/08/89	
89.13699	94.	%	9/08/89	
89.13700	72.	%	9/08/89	
89.13701	90.	%	9/08/89	
89.13702	87.	%	9/08/89	
89.13703	68.	%	9/08/89	
89.13704	73.	%	9/08/89	
89.13705	74.	%	9/08/99	
89.13706	58.	%	9/08/89	
89.13707	54.	%	9/08/89	
89.13708	77.	%	9/08/89	



Analyst

9-12-89
Date



Section Leader

9-12-89
Date



QA Officer

9-12-89
Date

REPORT NUMBER: 3821 (continued)

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko

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
89.13698	48.7	%	9/08/89	
89.13699	123.	%	9/08/89	
89.13700	44.	%	9/08/89	
89.13701	43.	%	9/08/89	
89.13702	118.	%	9/08/89	
89.13703	37.	%	9/08/89	
89.13704	46.	%	9/08/89	
89.13705	134.	%	9/08/99	
89.13706	131.	%	9/08/89	
89.13707	1522.	%	9/08/89	
89.13708	46.	%	9/08/89	

85-S-12	89.13708	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-12	89.13708	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-12	89.13708	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-12	89.13708	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-12	89.13708	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-12	89.13708	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-12	89.13708	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-12	89.13708	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-12	89.13708	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-12	89.13708	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-12	89.13708	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-12	89.13708	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-12	89.13708	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-12	89.13708	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-12	89.13708	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-12	89.13708	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-12	89.13708	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-12	89.13708	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-12	89.13708	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-12	89.13708	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-12	89.13708	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-12	89.13708	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-12	89.13708	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-12	89.13708	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-12	89.13708	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-12	89.13708	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-12	89.13708	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-12	89.13708	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-12	89.13708	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-12	89.13708	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-12	89.13708	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-12	89.13708	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-12	89.13708	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-12	89.13708	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-12	89.13708	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-12	89.13708	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-12	89.13708	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-12	89.13708	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-12	89.13708	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-12	89.13708	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-12	89.13708	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-12	89.13708	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-12	89.13708	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-12	89.13708	95476	< 10.	UG/KG	9/08/89	o-Xylene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko

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
85-S-12	89.13708	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-12	89.13708	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-12	89.13708	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-12	89.13708	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-12	89.13708	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-12	89.13708	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-12	89.13708	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-12	89.13708	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-12	89.13708	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-12	89.13708	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-12	89.13708	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-12	89.13708	75150	< 10.		UG/KG	9/08/89		Carbon disulfide
85-S-12	89.13708	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-12	89.13708	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-12	89.13708	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-12	89.13708	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-12	89.13708	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-12	89.13708	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-12	89.13708	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-12	89.13708	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-12	89.13708	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-12	89.13708	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-12	89.13708	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-12	89.13708	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-12	89.13708	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-11	89.13707	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-11	89.13707	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-11	89.13707	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-11	89.13707	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-11	89.13707	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-11	89.13707	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-11	89.13707	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-11	89.13707	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-11	89.13707	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-11	89.13707	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-11	89.13707	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-11	89.13707	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-11	89.13707	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-11	89.13707	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-11	89.13707	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-11	89.13707	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-11	89.13707	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-11	89.13707	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-11	89.13707	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-11	89.13707	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-11	89.13707	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-11	89.13707	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-11	89.13707	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-11	89.13707	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-11	89.13707	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-11	89.13707	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-11	89.13707	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-11	89.13707	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-11	89.13707	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-11	89.13707	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-11	89.13707	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-11	89.13707	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-11	89.13707	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-11	89.13707	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-11	89.13707	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-11	89.13707	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-11	89.13707	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-11	89.13707	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-11	89.13707	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-11	89.13707	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-11	89.13707	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-11	89.13707	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-11	89.13707	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-11	89.13707	95476	< 10.	UG/KG	9/08/89	o-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
 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
85-S-11	89.13707	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-11	89.13707	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-11	89.13707	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-11	89.13707	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-11	89.13707	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-11	89.13707	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-11	89.13707	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-11	89.13707	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-11	89.13707	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-11	89.13707	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-11	89.13707	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-11	89.13707	75150	130.	37.8	UG/KG	9/08/89		Carbon disulfide
85-S-11	89.13707	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-11	89.13707	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-11	89.13707	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-11	89.13707	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-11	89.13707	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-11	89.13707	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-11	89.13707	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-11	89.13707	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-11	89.13707	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-11	89.13707	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-11	89.13707	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-11	89.13707	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-11	89.13707	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-10	89.13706	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-10	89.13706	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-10	89.13706	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-10	89.13706	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-10	89.13706	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-10	89.13706	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-10	89.13706	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-10	89.13706	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-10	89.13706	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-10	89.13706	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-10	89.13706	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-10	89.13706	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-10	89.13706	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-10	89.13706	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-10	89.13706	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-10	89.13706	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-10	89.13706	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-10	89.13706	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-10	89.13706	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-10	89.13706	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-10	89.13706	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-10	89.13706	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-10	89.13706	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-10	89.13706	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-10	89.13706	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-10	89.13706	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-10	89.13706	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-10	89.13706	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-10	89.13706	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-10	89.13706	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-10	89.13706	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-10	89.13706	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-10	89.13706	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-10	89.13706	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-10	89.13706	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-10	89.13706	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-10	89.13706	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-10	89.13706	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-10	89.13706	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-10	89.13706	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-10	89.13706	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-10	89.13706	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-10	89.13706	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-10	89.13706	95476	< 10.	UG/KG	9/08/89	o-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
 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
85-S-10	89.13706	67641	244	44.2	UG/KG	9/08/89		Acetone
85-S-10	89.13706	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-10	89.13706	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-10	89.13706	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-10	89.13706	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-10	89.13706	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-10	89.13706	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-10	89.13706	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-10	89.13706	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-10	89.13706	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-10	89.13706	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-10	89.13706	75150	< 10.		UG/KG	9/08/89		Carbon disulfide
85-S-10	89.13706	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-10	89.13706	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-10	89.13706	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-10	89.13706	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-10	89.13706	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-10	89.13706	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-10	89.13706	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-10	89.13706	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-10	89.13706	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-10	89.13706	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-10	89.13706	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-10	89.13706	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-10	89.13706	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-9	89.13705	106467	< 10.	UG/KG	9/08/99	p-Dichlorobenzene (1,4)
85-S-9	89.13705	75343	< 10.	UG/KG	9/08/99	1,1-Dichloroethane
85-S-9	89.13705	107062	< 10.	UG/KG	9/08/99	1,2-Dichloroethane
85-S-9	89.13705	156605	< 10.	UG/KG	9/08/99	trans-1,2-Dichloroethene
85-S-9	89.13705	75354	< 10.	UG/KG	9/08/99	1,1-Dichloroethene
85-S-9	89.13705	156592	< 10.	UG/KG	9/08/99	cis-1,2-Dichloroethylene
85-S-9	89.13705	78875	< 10.	UG/KG	9/08/99	1,2-Dichloropropane
85-S-9	89.13705	594207	< 10.	UG/KG	9/08/99	2,2-Dichloropropane
85-S-9	89.13705	142289	< 10.	UG/KG	9/08/99	1,3-Dichloropropane
85-S-9	89.13705	563586	< 10.	UG/KG	9/08/99	1,1-Dichloropropene
85-S-9	89.13705	10061015	< 10.	UG/KG	9/08/99	cis-1,3-Dichloropropene
85-S-9	89.13705	10061026	< 10.	UG/KG	9/08/99	trans-1,3-Dichloropropene
85-S-9	89.13705	100414	< 10.	UG/KG	9/08/99	Ethylbenzene
85-S-9	89.13705	106934	< 10.	UG/KG	9/08/99	Ethylene bromide
85-S-9	89.13705	107062	< 10.	UG/KG	9/08/99	Ethylene chloride
85-S-9	89.13705	106934	< 10.	UG/KG	9/08/99	Ethylene dibromide
85-S-9	89.13705	87683	< 10.	UG/KG	9/08/99	Hexachlorobutadiene
85-S-9	89.13705	591786	< 20.	UG/KG	9/08/99	2-Hexanone
85-S-9	89.13705	98828	< 10.	UG/KG	9/08/99	Isopropylbenzene
85-S-9	89.13705	99876	< 10.	UG/KG	9/08/99	4-Isopropyltoluene
85-S-9	89.13705	108678	< 10.	UG/KG	9/08/99	Mesitylene
85-S-9	89.13705	108101	< 10.	UG/KG	9/08/99	Methyl isobutyl ketone
85-S-9	89.13705	75092	< 10.	UG/KG	9/08/99	Methylene chloride
85-S-9	89.13705	91203	< 10.	UG/KG	9/08/99	Naphthalene
85-S-9	89.13705	104518	< 10.	UG/KG	9/08/99	1-Phenylbutane
85-S-9	89.13705	103651	< 10.	UG/KG	9/08/99	Propylbenzene
85-S-9	89.13705	100425	< 10.	UG/KG	9/08/99	Styrene
85-S-9	89.13705	630206	< 10.	UG/KG	9/08/99	1,1,1,2-Tetrachloroethane
85-S-9	89.13705	79345	< 10.	UG/KG	9/08/99	1,1,2,2-Tetrachloroethane
85-S-9	89.13705	127184	< 10.	UG/KG	9/08/99	Tetrachloroethylene
85-S-9	89.13705	108883	< 10.	UG/KG	9/08/99	Toluene
85-S-9	89.13705	120821	< 10.	UG/KG	9/08/99	1,2,4-Trichlorobenzene
85-S-9	89.13705	87616	< 10.	UG/KG	9/08/99	1,2,3-Trichlorobenzene
85-S-9	89.13705	71556	< 10.	UG/KG	9/08/99	1,1,1-Trichloroethane
85-S-9	89.13705	79005	< 10.	UG/KG	9/08/99	1,1,2-Trichloroethane
85-S-9	89.13705	79016	< 10.	UG/KG	9/08/99	Trichloroethene
85-S-9	89.13705	75694	< 10.	UG/KG	9/08/99	Trichlorofluoromethane
85-S-9	89.13705	96184	< 10.	UG/KG	9/08/99	1,2,3-Trichloropropane
85-S-9	89.13705	108678	< 10.	UG/KG	9/08/99	1,3,5-Trimethylbenzene
85-S-9	89.13705	95636	131.	39.3 UG/KG	9/08/99	1,2,4-Trimethylbenzene
85-S-9	89.13705	108054	< 10.	UG/KG	9/08/99	Vinyl acetate
85-S-9	89.13705	75014	< 20.	UG/KG	9/08/99	Vinyl chloride
85-S-9	89.13705	108383	< 10.	UG/KG	9/08/99	m-Xylene
85-S-9	89.13705	95476	< 10.	UG/KG	9/08/99	o-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
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
85-S-9	89.13705	67641	< 20.		UG/KG	9/08/99		Acetone
85-S-9	89.13705	71432	< 10.		UG/KG	9/08/99		Benzene
85-S-9	89.13705	108861	< 10.		UG/KG	9/08/99		Bromobenzene
85-S-9	89.13705	74975	< 10.		UG/KG	9/08/99		Bromochloromethane
85-S-9	89.13705	75274	< 10.		UG/KG	9/08/99		Bromodichloromethane
85-S-9	89.13705	75252	< 10.		UG/KG	9/08/99		Bromoform
85-S-9	89.13705	74839	< 20.		UG/KG	9/08/99		Bromomethane
85-S-9	89.13705	78933	< 10.		UG/KG	9/08/99		2-Butanone
85-S-9	89.13705	104518	< 10.		UG/KG	9/08/99		n-Butylbenzene
85-S-9	89.13705	98066	< 10.		UG/KG	9/08/99		tert-Butylbenzene
85-S-9	89.13705	135988	< 10.		UG/KG	9/08/99		sec-Butylbenzene
85-S-9	89.13705	75150	< 10.		UG/KG	9/08/99		Carbon disulfide
85-S-9	89.13705	56235	< 10.		UG/KG	9/08/99		Carbon tetrachloride
85-S-9	89.13705	108907	< 10.		UG/KG	9/08/99		Chlorobenzene
85-S-9	89.13705	124481	< 10.		UG/KG	9/08/99		Chlorodibromomethane
85-S-9	89.13705	75003	< 20.		UG/KG	9/08/99		Chloroethane
85-S-9	89.13705	67663	< 10.		UG/KG	9/08/99		Chloroform
85-S-9	89.13705	74873	< 20.		UG/KG	9/08/99		Chloromethane
85-S-9	89.13705	95498	< 10.		UG/KG	9/08/99		o-Chlorotoluene
85-S-9	89.13705	106434	< 10.		UG/KG	9/08/99		p-Chlorotoluene
85-S-9	89.13705	96128	< 10.		UG/KG	9/08/99		1,2-Dibromo-3-chloropropane
85-S-9	89.13705	106934	< 10.		UG/KG	9/08/99		1,2-Dibromoethane
85-S-9	89.13705	74953	< 10.		UG/KG	9/08/99		Dibromomethane
85-S-9	89.13705	95501	< 10.		UG/KG	9/08/99		o-Dichlorobenzene (1,2)
85-S-9	89.13705	541731	< 10.		UG/KG	9/08/99		m-Dichlorobenzene (1,3)

85-S-8	89.13704	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-8	89.13704	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-8	89.13704	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-8	89.13704	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-8	89.13704	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-8	89.13704	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-8	89.13704	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-8	89.13704	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-8	89.13704	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-8	89.13704	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-8	89.13704	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-8	89.13704	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-8	89.13704	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-8	89.13704	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-8	89.13704	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-8	89.13704	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-8	89.13704	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-8	89.13704	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-8	89.13704	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-8	89.13704	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-8	89.13704	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-8	89.13704	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-8	89.13704	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-8	89.13704	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-8	89.13704	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-8	89.13704	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-8	89.13704	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-8	89.13704	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-8	89.13704	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-8	89.13704	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-8	89.13704	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-8	89.13704	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-8	89.13704	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-8	89.13704	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-8	89.13704	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-8	89.13704	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-8	89.13704	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-8	89.13704	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-8	89.13704	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-8	89.13704	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-8	89.13704	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-8	89.13704	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-8	89.13704	95476	< 10.	UG/KG	9/08/89	o-Xylene
85-S-8	89.13704	108383	< 10.	UG/KG	9/08/89	m-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
 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
85-S-8	89.13704	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-8	89.13704	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-8	89.13704	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-8	89.13704	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-8	89.13704	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-8	89.13704	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-8	89.13704	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-8	89.13704	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-8	89.13704	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-8	89.13704	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-8	89.13704	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-8	89.13704	75150	26.2	7.7	UG/KG	9/08/89		Carbon disulfide
85-S-8	89.13704	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-8	89.13704	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-8	89.13704	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-8	89.13704	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-8	89.13704	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-8	89.13704	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-8	89.13704	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-8	89.13704	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-8	89.13704	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-8	89.13704	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-8	89.13704	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-8	89.13704	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-8	89.13704	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-7	89.13703	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-7	89.13703	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-7	89.13703	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-7	89.13703	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-7	89.13703	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-7	89.13703	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-7	89.13703	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-7	89.13703	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-7	89.13703	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-7	89.13703	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-7	89.13703	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-7	89.13703	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-7	89.13703	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-7	89.13703	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-7	89.13703	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-7	89.13703	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-7	89.13703	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-7	89.13703	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-7	89.13703	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-7	89.13703	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-7	89.13703	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-7	89.13703	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-7	89.13703	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-7	89.13703	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-7	89.13703	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-7	89.13703	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-7	89.13703	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-7	89.13703	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-7	89.13703	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-7	89.13703	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-7	89.13703	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-7	89.13703	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-7	89.13703	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-7	89.13703	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-7	89.13703	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-7	89.13703	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-7	89.13703	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-7	89.13703	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-7	89.13703	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-7	89.13703	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-7	89.13703	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-7	89.13703	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-7	89.13703	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-7	89.13703	95476	< 10.	UG/KG	9/08/89	o-Xylene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko

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
85-S-7	89.13703	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-7	89.13703	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-7	89.13703	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-7	89.13703	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-7	89.13703	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-7	89.13703	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-7	89.13703	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-7	89.13703	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-7	89.13703	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-7	89.13703	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-7	89.13703	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-7	89.13703	75150	< 10.		UG/KG	9/08/89		Carbon disulfide
85-S-7	89.13703	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-7	89.13703	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-7	89.13703	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-7	89.13703	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-7	89.13703	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-7	89.13703	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-7	89.13703	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-7	89.13703	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-7	89.13703	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-7	89.13703	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-7	89.13703	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-7	89.13703	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-7	89.13703	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-5	89.13702	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-5	89.13702	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-5	89.13702	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-5	89.13702	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-5	89.13702	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-5	89.13702	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-5	89.13702	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-5	89.13702	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-5	89.13702	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-5	89.13702	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-5	89.13702	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-5	89.13702	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-5	89.13702	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-5	89.13702	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-5	89.13702	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-5	89.13702	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-5	89.13702	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-5	89.13702	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-5	89.13702	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-5	89.13702	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-5	89.13702	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-5	89.13702	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-5	89.13702	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-5	89.13702	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-5	89.13702	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-5	89.13702	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-5	89.13702	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-5	89.13702	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-5	89.13702	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-5	89.13702	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-5	89.13702	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-5	89.13702	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-5	89.13702	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-5	89.13702	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-5	89.13702	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-5	89.13702	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-5	89.13702	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-5	89.13702	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-5	89.13702	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-5	89.13702	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-5	89.13702	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-5	89.13702	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-5	89.13702	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-5	89.13702	95476	< 10.	UG/KG	9/08/89	o-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
 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
85-S-5	89.13702	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-5	89.13702	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-5	89.13702	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-5	89.13702	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-5	89.13702	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-5	89.13702	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-5	89.13702	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-5	89.13702	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-5	89.13702	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-5	89.13702	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-5	89.13702	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-5	89.13702	75150	20.5	6.2	UG/KG	9/08/89		Carbon disulfide
85-S-5	89.13702	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-5	89.13702	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-5	89.13702	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-5	89.13702	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-5	89.13702	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-5	89.13702	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-5	89.13702	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-5	89.13702	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-5	89.13702	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-5	89.13702	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-5	89.13702	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-5	89.13702	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-5	89.13702	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-4	89.13701	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-4	89.13701	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-4	89.13701	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-4	89.13701	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-4	89.13701	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-4	89.13701	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-4	89.13701	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-4	89.13701	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-4	89.13701	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-4	89.13701	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-4	89.13701	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-4	89.13701	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-4	89.13701	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-4	89.13701	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-4	89.13701	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-4	89.13701	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-4	89.13701	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-4	89.13701	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-4	89.13701	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-4	89.13701	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-4	89.13701	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-4	89.13701	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-4	89.13701	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-4	89.13701	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-4	89.13701	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-4	89.13701	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-4	89.13701	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-4	89.13701	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-4	89.13701	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-4	89.13701	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-4	89.13701	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-4	89.13701	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-4	89.13701	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-4	89.13701	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-4	89.13701	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-4	89.13701	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-4	89.13701	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-4	89.13701	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-4	89.13701	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-4	89.13701	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-4	89.13701	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-4	89.13701	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-4	89.13701	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-4	89.13701	95476	< 10.	UG/KG	9/08/89	o-Xylene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868

MATRIX: SS

ANALYST: Chuck Rzeszutko

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
85-S-4	89.13701	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-4	89.13701	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-4	89.13701	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-4	89.13701	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-4	89.13701	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-4	89.13701	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-4	89.13701	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-4	89.13701	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-4	89.13701	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-4	89.13701	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-4	89.13701	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-4	89.13701	75150	< 10.		UG/KG	9/08/89		Carbon disulfide
85-S-4	89.13701	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-4	89.13701	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-4	89.13701	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-4	89.13701	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-4	89.13701	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-4	89.13701	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-4	89.13701	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-4	89.13701	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-4	89.13701	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-4	89.13701	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-4	89.13701	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-4	89.13701	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-4	89.13701	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-3	89.13700	106467	< 10.		UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-3	89.13700	107062	< 10.		UG/KG	9/08/89	1,2-Dichloroethane
85-S-3	89.13700	75343	< 10.		UG/KG	9/08/89	1,1-Dichloroethane
85-S-3	89.13700	156605	< 10.		UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-3	89.13700	75354	< 10.		UG/KG	9/08/89	1,1-Dichloroethene
85-S-3	89.13700	156592	< 10.		UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-3	89.13700	594207	< 10.		UG/KG	9/08/89	2,2-Dichloropropane
85-S-3	89.13700	142289	< 10.		UG/KG	9/08/89	1,3-Dichloropropane
85-S-3	89.13700	78875	< 10.		UG/KG	9/08/89	1,2-Dichloropropane
85-S-3	89.13700	10061015	< 10.		UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-3	89.13700	563586	< 10.		UG/KG	9/08/89	1,1-Dichloropropene
85-S-3	89.13700	10061026	< 10.		UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-3	89.13700	100414	< 10.		UG/KG	9/08/89	Ethylbenzene
85-S-3	89.13700	106934	< 10.		UG/KG	9/08/89	Ethylene bromide
85-S-3	89.13700	107062	< 10.		UG/KG	9/08/89	Ethylene chloride
85-S-3	89.13700	106934	< 10.		UG/KG	9/08/89	Ethylene dibromide
85-S-3	89.13700	87683	< 10.		UG/KG	9/08/89	Hexachlorobutadiene
85-S-3	89.13700	591786	< 20.		UG/KG	9/08/89	2-Hexanone
85-S-3	89.13700	98828	< 10.		UG/KG	9/08/89	Isopropylbenzene
85-S-3	89.13700	99876	60.4	18.1	UG/KG	9/08/89	4-Isopropyltoluene
85-S-3	89.13700	108678	< 10.		UG/KG	9/08/89	Mesitylene
85-S-3	89.13700	108101	< 10.		UG/KG	9/08/89	Methyl isobutyl ketone
85-S-3	89.13700	75092	< 10.		UG/KG	9/08/89	Methylene chloride
85-S-3	89.13700	91203	< 10.		UG/KG	9/08/89	Naphthalene
85-S-3	89.13700	104518	< 10.		UG/KG	9/08/89	1-Phenylbutane
85-S-3	89.13700	103651	< 10.		UG/KG	9/08/89	Propylbenzene
85-S-3	89.13700	100425	< 10.		UG/KG	9/08/89	Styrene
85-S-3	89.13700	630206	< 10.		UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-3	89.13700	79345	< 10.		UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-3	89.13700	127184	< 10.		UG/KG	9/08/89	Tetrachloroethylene
85-S-3	89.13700	108883	< 10.		UG/KG	9/08/89	Toluene
85-S-3	89.13700	120821	< 10.		UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-3	89.13700	87616	< 10.		UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-3	89.13700	71556	< 10.		UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-3	89.13700	79005	< 10.		UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-3	89.13700	79016	< 10.		UG/KG	9/08/89	Trichloroethene
85-S-3	89.13700	75694	< 10.		UG/KG	9/08/89	Trichlorofluoromethane
85-S-3	89.13700	96184	< 10.		UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-3	89.13700	108678	< 10.		UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-3	89.13700	95636	< 10.		UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-3	89.13700	108054	< 10.		UG/KG	9/08/89	Vinyl acetate
85-S-3	89.13700	75014	< 20.		UG/KG	9/08/89	Vinyl chloride
85-S-3	89.13700	108383	< 10.		UG/KG	9/08/89	m-Xylene
85-S-3	89.13700	95476	< 10.		UG/KG	9/08/89	o-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko

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
85-S-3	89.13700	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-3	89.13700	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-3	89.13700	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-3	89.13700	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-3	89.13700	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-3	89.13700	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-3	89.13700	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-3	89.13700	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-3	89.13700	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-3	89.13700	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-3	89.13700	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-3	89.13700	75150	< 10.		UG/KG	9/08/89		Carbon disulfide
85-S-3	89.13700	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-3	89.13700	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-3	89.13700	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-3	89.13700	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-3	89.13700	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-3	89.13700	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-3	89.13700	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-3	89.13700	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-3	89.13700	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-3	89.13700	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-3	89.13700	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-3	89.13700	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-3	89.13700	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-2	89.13699	106467	< 10.	UG/KG	9/08/89	p-Dichlorobenzene (1,4)
85-S-2	89.13699	107062	< 10.	UG/KG	9/08/89	1,2-Dichloroethane
85-S-2	89.13699	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-2	89.13699	156605	< 10.	UG/KG	9/08/89	trans-1,2-Dichloroethene
85-S-2	89.13699	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-2	89.13699	156592	< 10.	UG/KG	9/08/89	cis-1,2-Dichloroethylene
85-S-2	89.13699	594207	< 10.	UG/KG	9/08/89	2,2-Dichloropropane
85-S-2	89.13699	142289	< 10.	UG/KG	9/08/89	1,3-Dichloropropane
85-S-2	89.13699	78875	< 10.	UG/KG	9/08/89	1,2-Dichloropropane
85-S-2	89.13699	10061015	< 10.	UG/KG	9/08/89	cis-1,3-Dichloropropene
85-S-2	89.13699	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-2	89.13699	563586	< 10.	UG/KG	9/08/89	1,1-Dichloropropene
85-S-2	89.13699	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-2	89.13699	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-2	89.13699	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-2	89.13699	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-2	89.13699	87683	< 10.	UG/KG	9/08/89	Hexachlorobutadiene
85-S-2	89.13699	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-2	89.13699	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-2	89.13699	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-2	89.13699	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-2	89.13699	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-2	89.13699	75092	< 10.	UG/KG	9/08/89	Methylene chloride
85-S-2	89.13699	91203	< 10.	UG/KG	9/08/89	Naphthalene
85-S-2	89.13699	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-2	89.13699	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-2	89.13699	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-2	89.13699	630206	< 10.	UG/KG	9/08/89	1,1,1,2-Tetrachloroethane
85-S-2	89.13699	79345	< 10.	UG/KG	9/08/89	1,1,2,2-Tetrachloroethane
85-S-2	89.13699	127184	< 10.	UG/KG	9/08/89	Tetrachloroethylene
85-S-2	89.13699	108883	< 10.	UG/KG	9/08/89	Toluene
85-S-2	89.13699	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-2	89.13699	120821	< 10.	UG/KG	9/08/89	1,2,4-Trichlorobenzene
85-S-2	89.13699	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-2	89.13699	79005	< 10.	UG/KG	9/08/89	1,1,2-Trichloroethane
85-S-2	89.13699	79016	< 10.	UG/KG	9/08/89	Trichloroethene
85-S-2	89.13699	75694	< 10.	UG/KG	9/08/89	Trichlorofluoromethane
85-S-2	89.13699	96184	< 10.	UG/KG	9/08/89	1,2,3-Trichloropropane
85-S-2	89.13699	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-2	89.13699	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-2	89.13699	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-2	89.13699	75014	< 20.	UG/KG	9/08/89	Vinyl chloride
85-S-2	89.13699	108383	< 10.	UG/KG	9/08/89	m-Xylene
85-S-2	89.13699	95476	< 10.	UG/KG	9/08/89	o-Xylene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
 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
85-S-2	89.13699	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-2	89.13699	71432	< 10.		UG/KG	9/08/89		Benzene
85-S-2	89.13699	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-2	89.13699	74975	< 10.		UG/KG	9/08/89		Bromochloromethane
85-S-2	89.13699	75274	< 10.		UG/KG	9/08/89		Bromodichloromethane
85-S-2	89.13699	75252	< 10.		UG/KG	9/08/89		Bromoform
85-S-2	89.13699	74839	< 20.		UG/KG	9/08/89		Bromomethane
85-S-2	89.13699	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-2	89.13699	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-2	89.13699	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-2	89.13699	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-2	89.13699	75150	< 10.		UG/KG	9/08/89		Carbon disulfide
85-S-2	89.13699	56235	< 10.		UG/KG	9/08/89		Carbon tetrachloride
85-S-2	89.13699	108907	< 10.		UG/KG	9/08/89		Chlorobenzene
85-S-2	89.13699	124481	< 10.		UG/KG	9/08/89		Chlorodibromomethane
85-S-2	89.13699	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-2	89.13699	67663	< 10.		UG/KG	9/08/89		Chloroform
85-S-2	89.13699	74873	< 20.		UG/KG	9/08/89		Chloromethane
85-S-2	89.13699	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-2	89.13699	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-2	89.13699	96128	< 10.		UG/KG	9/08/89		1,2-Dibromo-3-chloropropane
85-S-2	89.13699	106934	< 10.		UG/KG	9/08/89		1,2-Dibromoethane
85-S-2	89.13699	74953	< 10.		UG/KG	9/08/89		Dibromomethane
85-S-2	89.13699	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-2	89.13699	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

85-S-1	89.13698	106467	< 10.	UG/KG	9/08/89	4 p-Dichlorobenzene (1,4)
85-S-1	89.13698	107062	< 10.	UG/KG	9/08/89	4 1,2-Dichloroethane
85-S-1	89.13698	75343	< 10.	UG/KG	9/08/89	1,1-Dichloroethane
85-S-1	89.13698	156605	< 10.	UG/KG	9/08/89	4 trans-1,2-Dichloroethene
85-S-1	89.13698	75354	< 10.	UG/KG	9/08/89	1,1-Dichloroethene
85-S-1	89.13698	156592	< 10.	UG/KG	9/08/89	4 cis-1,2-Dichloroethylene
85-S-1	89.13698	142289	< 10.	UG/KG	9/08/89	4 1,3-Dichloropropane
85-S-1	89.13698	594207	< 10.	UG/KG	9/08/89	4 2,2-Dichloropropane
85-S-1	89.13698	78875	< 10.	UG/KG	9/08/89	4 1,2-Dichloropropane
85-S-1	89.13698	10061026	< 10.	UG/KG	9/08/89	trans-1,3-Dichloropropene
85-S-1	89.13698	563586	< 10.	UG/KG	9/08/89	4 1,1-Dichloropropene
85-S-1	89.13698	10061015	< 10.	UG/KG	9/08/89	4 cis-1,3-Dichloropropene
85-S-1	89.13698	100414	< 10.	UG/KG	9/08/89	Ethylbenzene
85-S-1	89.13698	106934	< 10.	UG/KG	9/08/89	Ethylene bromide
85-S-1	89.13698	107062	< 10.	UG/KG	9/08/89	Ethylene chloride
85-S-1	89.13698	106934	< 10.	UG/KG	9/08/89	Ethylene dibromide
85-S-1	89.13698	87683	< 10.	UG/KG	9/08/89	4 Hexachlorobutadiene
85-S-1	89.13698	591786	< 20.	UG/KG	9/08/89	2-Hexanone
85-S-1	89.13698	98828	< 10.	UG/KG	9/08/89	Isopropylbenzene
85-S-1	89.13698	99876	< 10.	UG/KG	9/08/89	4-Isopropyltoluene
85-S-1	89.13698	108678	< 10.	UG/KG	9/08/89	Mesitylene
85-S-1	89.13698	108101	< 10.	UG/KG	9/08/89	Methyl isobutyl ketone
85-S-1	89.13698	75092	< 10.	UG/KG	9/08/89	4 Methylene chloride
85-S-1	89.13698	91203	< 10.	UG/KG	9/08/89	4 Naphthalene
85-S-1	89.13698	104518	< 10.	UG/KG	9/08/89	1-Phenylbutane
85-S-1	89.13698	103651	< 10.	UG/KG	9/08/89	Propylbenzene
85-S-1	89.13698	100425	< 10.	UG/KG	9/08/89	Styrene
85-S-1	89.13698	79345	< 10.	UG/KG	9/08/89	4 1,1,2,2-Tetrachloroethane
85-S-1	89.13698	630206	< 10.	UG/KG	9/08/89	4 1,1,1,2-Tetrachloroethane
85-S-1	89.13698	127184	< 10.	UG/KG	9/08/89	4 Tetrachloroethylene
85-S-1	89.13698	108883	< 10.	UG/KG	9/08/89	4 Toluene
85-S-1	89.13698	87616	< 10.	UG/KG	9/08/89	1,2,3-Trichlorobenzene
85-S-1	89.13698	120821	< 10.	UG/KG	9/08/89	4 1,2,4-Trichlorobenzene
85-S-1	89.13698	79005	< 10.	UG/KG	9/08/89	4 1,1,2-Trichloroethane
85-S-1	89.13698	71556	< 10.	UG/KG	9/08/89	1,1,1-Trichloroethane
85-S-1	89.13698	79016	< 10.	UG/KG	9/08/89	4 Trichloroethene
85-S-1	89.13698	75694	< 10.	UG/KG	9/08/89	4 Trichlorofluoromethane
85-S-1	89.13698	96184	< 10.	UG/KG	9/08/89	4 1,2,3-Trichloropropane
85-S-1	89.13698	108678	< 10.	UG/KG	9/08/89	1,3,5-Trimethylbenzene
85-S-1	89.13698	95636	< 10.	UG/KG	9/08/89	1,2,4-Trimethylbenzene
85-S-1	89.13698	108054	< 10.	UG/KG	9/08/89	Vinyl acetate
85-S-1	89.13698	75014	< 20.	UG/KG	9/08/89	4 Vinyl chloride
85-S-1	89.13698	95476	< 10.	UG/KG	9/08/89	o-Xylene
85-S-1	89.13698	108383	< 10.	UG/KG	9/08/89	m-Xylene

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

Prepared by: CPR on 8-Sep-1989

EPA VOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Chuck Rzeszutko
 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
85-S-1	89.13698	67641	< 20.		UG/KG	9/08/89		Acetone
85-S-1	89.13698	71432	< 10.		UG/KG	9/08/89		~ Benzene
85-S-1	89.13698	108861	< 10.		UG/KG	9/08/89		Bromobenzene
85-S-1	89.13698	74975	< 10.		UG/KG	9/08/89		✓ Bromochloromethane
85-S-1	89.13698	75274	< 10.		UG/KG	9/08/89		✓ Bromodichloromethane
85-S-1	89.13698	75252	< 10.		UG/KG	9/08/89		✓ Bromoform
85-S-1	89.13698	74839	< 20.		UG/KG	9/08/89		✓ Bromomethane
85-S-1	89.13698	78933	< 10.		UG/KG	9/08/89		2-Butanone
85-S-1	89.13698	104518	< 10.		UG/KG	9/08/89		n-Butylbenzene
85-S-1	89.13698	135988	< 10.		UG/KG	9/08/89		sec-Butylbenzene
85-S-1	89.13698	98066	< 10.		UG/KG	9/08/89		tert-Butylbenzene
85-S-1	89.13698	75150	< 10.		UG/KG	9/08/89		✓ Carbon disulfide
85-S-1	89.13698	56235	< 10.		UG/KG	9/08/89		✓ Carbon tetrachloride
85-S-1	89.13698	108907	< 10.		UG/KG	9/08/89		✓ Chlorobenzene
85-S-1	89.13698	124481	< 10.		UG/KG	9/08/89		✓ Chlorodibromomethane
85-S-1	89.13698	75003	< 20.		UG/KG	9/08/89		Chloroethane
85-S-1	89.13698	67663	< 10.		UG/KG	9/08/89		✓ Chloroform
85-S-1	89.13698	74873	< 20.		UG/KG	9/08/89		✓ Chloromethane
85-S-1	89.13698	95498	< 10.		UG/KG	9/08/89		o-Chlorotoluene
85-S-1	89.13698	106434	< 10.		UG/KG	9/08/89		p-Chlorotoluene
85-S-1	89.13698	96128	< 10.		UG/KG	9/08/89		✓ 1,2-Dibromo-3-chloropropane
85-S-1	89.13698	106934	< 10.		UG/KG	9/08/89		† 1,2-Dibromoethane
85-S-1	89.13698	74953	< 10.		UG/KG	9/08/89		† Dibromomethane
85-S-1	89.13698	95501	< 10.		UG/KG	9/08/89		o-Dichlorobenzene (1,2)
85-S-1	89.13698	541731	< 10.		UG/KG	9/08/89		m-Dichlorobenzene (1,3)

September 14, 1989

Steve,

Attached you will find the final report for the soil samples that you submitted for Volatiles analysis under request #7868. If you have any questions regarding these results, please do not hesitate to contact me at your convenience at 7-5889 or stop by my office (TA-59, OH-1, Room 115). Thank you for your continued support of our Volatiles analysis program.



Chuck Rzeszutko

Organic Section Leader

HSE-9

Thurs
6/29

HSE-9 ANALYTICAL SERVICE AGREEMENT

Request No. 7868

I. PRESAMPLING CONFERENCE

Program Code W57R

No. Samples Expected 11 ea } Soils } VOA
12 ea } SVOA
12 ea } EPTOX metals

Submission Date 6/7/89

Completion Date In que

Chain of Custody? Yes

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/Tellur 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
Customer Phone 5-1721 MS K490

[Signature]
Organic
Inorganic
Radiochem

Date 6/29/89

II. EMERGENCY SAMPLES

Emergency Status requires the following signatures:

Customer Group Leader _____
HSE-9 Group Leader _____
Date _____

III. SAMPLE RECEIPT

Signature [Signature] Date 7/5/89 Total No. Samples Received 11 (7 on 7:5)

HSE-9 Sample No. Range 89.13698 to 89.13708

Customer Sample No. Range 85-S-1 to 85-S-5
85-S-7 to 85-S-8
85-S-9 to 85-S-12

Set A = VOA
Set B = SVOA
Set C = PCB
Set D = EPTOX

ENCLOSURE 4-G

**PHASE FOUR CLEAN CLOSURE VERIFICATION SAMPLES: SOIL SAMPLES
ALONG SPILL PATH ROUTE IN MORTANDAD CANYON**

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-12	89.13708	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-12	89.13708	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-12	89.13708	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-12	89.13708	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-12	89.13708	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-12	89.13708	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-12	89.13708	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-12	89.13708	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-12	89.13708	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-12	89.13708	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-12	89.13708	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-12	89.13708	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-12	89.13708	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-12	89.13708	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-12	89.13708	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-12	89.13708	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-12	89.13708	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-12	89.13708	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-12	89.13708	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-12	89.13708	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-12	89.13708	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-12	89.13708	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-12	89.13708	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-12	89.13708	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-12	89.13708	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-11	89.13707	95954	< 330.
85-S-11	89.13707	88062	< 330.
85-S-11	89.13707	105679	< 330.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Xylenol

85-S-11	89.13707	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-11	89.13707	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-11	89.13707	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-11	89.13707	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-11	89.13707	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-11	89.13707	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-11	89.13707	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-11	89.13707	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-11	89.13707	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-11	89.13707	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-11	89.13707	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-11	89.13707	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-11	89.13707	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-11	89.13707	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-11	89.13707	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-11	89.13707	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-11	89.13707	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-11	89.13707	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-11	89.13707	118741	< 330.	UG/KG	12/19/89	HCB
85-S-11	89.13707	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-11	89.13707	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-11	89.13707	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-11	89.13707	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-11	89.13707	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-11	89.13707	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-11	89.13707	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-11	89.13707	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-11	89.13707	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-11	89.13707	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-11	89.13707	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-11	89.13707	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-11	89.13707	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-11	89.13707	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-11	89.13707	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-11	89.13707	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-11	89.13707	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-11	89.13707	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-11	89.13707	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-11	89.13707	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-11	89.13707	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-11	89.13707	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-11	89.13707	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-11	89.13707	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-11	89.13707	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-11	89.13707	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-11	89.13707	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-11	89.13707	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-11	89.13707	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-11	89.13707	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-11	89.13707	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-11	89.13707	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-11	89.13707	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-11	89.13707	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-11	89.13707	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-11	89.13707	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-11	89.13707	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-11	89.13707	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-11	89.13707	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-11	89.13707	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-11	89.13707	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-11	89.13707	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-11	89.13707	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-11	89.13707	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-11	89.13707	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-11	89.13707	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-11	89.13707	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-11	89.13707	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-11	89.13707	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-11	89.13707	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-11	89.13707	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-10	89.13706	95954	< 330.
85-S-10	89.13706	88062	< 330.
85-S-10	89.13706	105679	< 330.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Xylenol

85-S-10	89.13706	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-10	89.13706	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-10	89.13706	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-10	89.13706	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-10	89.13706	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-10	89.13706	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-10	89.13706	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-10	89.13706	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-10	89.13706	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-10	89.13706	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-10	89.13706	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-10	89.13706	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-10	89.13706	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-10	89.13706	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-10	89.13706	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-10	89.13706	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-10	89.13706	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-10	89.13706	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-10	89.13706	118741	< 330.	UG/KG	12/19/89	HCB
85-S-10	89.13706	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-10	89.13706	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-10	89.13706	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-10	89.13706	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-10	89.13706	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-10	89.13706	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-10	89.13706	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-10	89.13706	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-10	89.13706	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-10	89.13706	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-10	89.13706	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-10	89.13706	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-10	89.13706	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-10	89.13706	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-10	89.13706	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-10	89.13706	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-10	89.13706	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-10	89.13706	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-10	89.13706	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-10	89.13706	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-10	89.13706	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-10	89.13706	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-10	89.13706	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-10	89.13706	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-10	89.13706	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-10	89.13706	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-10	89.13706	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-10	89.13706	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-10	89.13706	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-10	89.13706	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-10	89.13706	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-10	89.13706	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-10	89.13706	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-10	89.13706	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-10	89.13706	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-10	89.13706	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-10	89.13706	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-10	89.13706	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-10	89.13706	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-10	89.13706	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-10	89.13706	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-10	89.13706	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-10	89.13706	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-10	89.13706	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-10	89.13706	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-10	89.13706	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-10	89.13706	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-10	89.13706	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-10	89.13706	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-10	89.13706	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-10	89.13706	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-9	89.13705	95954	< 330.
85-S-9	89.13705	88062	< 330.
85-S-9	89.13705	105679	< 330.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Xylenol

85-S-9	89.13705	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-9	89.13705	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-9	89.13705	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-9	89.13705	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-9	89.13705	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-9	89.13705	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-9	89.13705	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-9	89.13705	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-9	89.13705	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-9	89.13705	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-9	89.13705	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-9	89.13705	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-9	89.13705	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-9	89.13705	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-9	89.13705	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-9	89.13705	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-9	89.13705	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-9	89.13705	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-9	89.13705	118741	< 330.	UG/KG	12/19/89	HCB
85-S-9	89.13705	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-9	89.13705	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-9	89.13705	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-9	89.13705	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-9	89.13705	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-9	89.13705	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-9	89.13705	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-9	89.13705	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-9	89.13705	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-9	89.13705	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-9	89.13705	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-9	89.13705	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-9	89.13705	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-9	89.13705	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-9	89.13705	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-9	89.13705	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-9	89.13705	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-9	89.13705	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-9	89.13705	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-9	89.13705	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-9	89.13705	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-9	89.13705	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-9	89.13705	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-9	89.13705	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-9	89.13705	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-9	89.13705	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-9	89.13705	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-9	89.13705	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-9	89.13705	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-9	89.13705	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-9	89.13705	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-9	89.13705	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-9	89.13705	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-9	89.13705	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-9	89.13705	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-9	89.13705	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-9	89.13705	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-9	89.13705	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-9	89.13705	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-9	89.13705	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-9	89.13705	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-9	89.13705	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-9	89.13705	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-9	89.13705	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-9	89.13705	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-9	89.13705	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-9	89.13705	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-9	89.13705	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-9	89.13705	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-9	89.13705	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-9	89.13705	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-8	89.13704	95954	< 330.
85-S-8	89.13704	88062	< 330.
85-S-8	89.13704	105679	< 330.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Xylenol

85-S-8	89.13704	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-8	89.13704	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-8	89.13704	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-8	89.13704	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-8	89.13704	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-8	89.13704	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-8	89.13704	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-8	89.13704	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-8	89.13704	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-8	89.13704	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-8	89.13704	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-8	89.13704	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-8	89.13704	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-8	89.13704	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-8	89.13704	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-8	89.13704	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-8	89.13704	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-8	89.13704	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-8	89.13704	118741	< 330.	UG/KG	12/19/89	HCB
85-S-8	89.13704	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-8	89.13704	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-8	89.13704	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-8	89.13704	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-8	89.13704	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-8	89.13704	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-8	89.13704	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-8	89.13704	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-8	89.13704	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-8	89.13704	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-8	89.13704	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-8	89.13704	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-8	89.13704	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-8	89.13704	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-8	89.13704	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-8	89.13704	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-8	89.13704	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-8	89.13704	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-8	89.13704	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-8	89.13704	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-8	89.13704	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-8	89.13704	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-8	89.13704	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-8	89.13704	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-8	89.13704	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-8	89.13704	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

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

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868 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
85-S-8	89.13704	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-8	89.13704	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-8	89.13704	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-8	89.13704	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-8	89.13704	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-8	89.13704	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-8	89.13704	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-8	89.13704	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-8	89.13704	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-8	89.13704	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-8	89.13704	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-8	89.13704	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-8	89.13704	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-8	89.13704	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-8	89.13704	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-8	89.13704	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-8	89.13704	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-8	89.13704	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-8	89.13704	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-8	89.13704	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-8	89.13704	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-8	89.13704	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-8	89.13704	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-8	89.13704	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-8	89.13704	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-7	89.13703	88062	< 330.
85-S-7	89.13703	95954	< 330.
85-S-7	89.13703	105679	< 330.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2,4-Xylenol

85-S-7	89.13703	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-7	89.13703	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-7	89.13703	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-7	89.13703	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-7	89.13703	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-7	89.13703	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-7	89.13703	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-7	89.13703	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-7	89.13703	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-7	89.13703	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-7	89.13703	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-7	89.13703	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-7	89.13703	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-7	89.13703	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-7	89.13703	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-7	89.13703	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-7	89.13703	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-7	89.13703	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-7	89.13703	118741	< 330.	UG/KG	12/19/89	HCB
85-S-7	89.13703	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-7	89.13703	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-7	89.13703	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-7	89.13703	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-7	89.13703	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-7	89.13703	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-7	89.13703	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-7	89.13703	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-7	89.13703	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-7	89.13703	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-7	89.13703	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-7	89.13703	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-7	89.13703	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-7	89.13703	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-7	89.13703	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-7	89.13703	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-7	89.13703	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-7	89.13703	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-7	89.13703	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-7	89.13703	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-7	89.13703	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-7	89.13703	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-7	89.13703	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-7	89.13703	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-7	89.13703	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-7	89.13703	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-7	89.13703	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-7	89.13703	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-7	89.13703	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-7	89.13703	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-7	89.13703	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-7	89.13703	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-7	89.13703	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-7	89.13703	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-7	89.13703	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-7	89.13703	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-7	89.13703	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-7	89.13703	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-7	89.13703	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-7	89.13703	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-7	89.13703	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-7	89.13703	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-7	89.13703	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-7	89.13703	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-7	89.13703	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-7	89.13703	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-7	89.13703	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-7	89.13703	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-7	89.13703	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-7	89.13703	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-7	89.13703	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-5	89.13702	95954	< 330.	UG/KG	12/19/89	2,4,5-Trichlorophenol
85-S-5	89.13702	88062	< 330.	UG/KG	12/19/89	2,4,6-Trichlorophenol
85-S-5	89.13702	105679	< 330.	UG/KG	12/19/89	2,4-Xylenol

85-S-5	89.13702	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-5	89.13702	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-5	89.13702	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-5	89.13702	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-5	89.13702	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-5	89.13702	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-5	89.13702	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-5	89.13702	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-5	89.13702	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-5	89.13702	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-5	89.13702	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-5	89.13702	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-5	89.13702	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-5	89.13702	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-5	89.13702	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-5	89.13702	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-5	89.13702	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-5	89.13702	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-5	89.13702	118741	< 330.	UG/KG	12/19/89	HCB
85-S-5	89.13702	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-5	89.13702	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-5	89.13702	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-5	89.13702	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-5	89.13702	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-5	89.13702	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-5	89.13702	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-5	89.13702	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-5	89.13702	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-5	89.13702	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-5	89.13702	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-5	89.13702	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-5	89.13702	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-5	89.13702	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-5	89.13702	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-5	89.13702	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-5	89.13702	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-5	89.13702	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-5	89.13702	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-5	89.13702	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-5	89.13702	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-5	89.13702	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-5	89.13702	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-5	89.13702	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-5	89.13702	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-5	89.13702	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-5	89.13702	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-5	89.13702	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-5	89.13702	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-5	89.13702	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-5	89.13702	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-5	89.13702	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-5	89.13702	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-5	89.13702	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-5	89.13702	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-5	89.13702	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-5	89.13702	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-5	89.13702	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-5	89.13702	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-5	89.13702	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-5	89.13702	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-5	89.13702	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-5	89.13702	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-5	89.13702	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-5	89.13702	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-5	89.13702	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-5	89.13702	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-5	89.13702	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-5	89.13702	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-5	89.13702	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-5	89.13702	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-4	89.13701	88062	< 330.
85-S-4	89.13701	95954	< 330.
85-S-4	89.13701	105679	< 330.

UG/KG	12/17/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2,4-Xylenol

85-S-4	89.13701	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-4	89.13701	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-4	89.13701	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-4	89.13701	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-4	89.13701	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-4	89.13701	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-4	89.13701	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-4	89.13701	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-4	89.13701	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-4	89.13701	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-4	89.13701	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-4	89.13701	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-4	89.13701	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-4	89.13701	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-4	89.13701	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-4	89.13701	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-4	89.13701	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-4	89.13701	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-4	89.13701	118741	< 330.	UG/KG	12/19/89	HCB
85-S-4	89.13701	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-4	89.13701	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-4	89.13701	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-4	89.13701	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-4	89.13701	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-4	89.13701	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-4	89.13701	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-4	89.13701	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-4	89.13701	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-4	89.13701	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-4	89.13701	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-4	89.13701	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-4	89.13701	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-4	89.13701	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-4	89.13701	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-4	89.13701	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-4	89.13701	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-4	89.13701	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-4	89.13701	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-4	89.13701	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-4	89.13701	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-4	89.13701	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-4	89.13701	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-4	89.13701	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-4	89.13701	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-4	89.13701	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

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

Prepared by: CPR on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868 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
85-S-4	89.13701	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-4	89.13701	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-4	89.13701	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-4	89.13701	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-4	89.13701	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-4	89.13701	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-4	89.13701	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-4	89.13701	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-4	89.13701	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-4	89.13701	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-4	89.13701	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-4	89.13701	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-4	89.13701	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-4	89.13701	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-4	89.13701	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-4	89.13701	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-4	89.13701	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-4	89.13701	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-4	89.13701	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-4	89.13701	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-4	89.13701	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-4	89.13701	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-4	89.13701	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-4	89.13701	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-4	89.13701	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-3	89.13700	88062	< 330.
85-S-3	89.13700	95954	< 330.
85-S-3	89.13700	105679	< 330.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2,4-Xylenol

85-S-3	89.13700	106445	< 330.	UG/KG	12/19/89	p-Cresol
85-S-3	89.13700	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-3	89.13700	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-3	89.13700	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-3	89.13700	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-3	89.13700	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-3	89.13700	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-3	89.13700	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-3	89.13700	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-3	89.13700	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-3	89.13700	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-3	89.13700	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-3	89.13700	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-3	89.13700	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-3	89.13700	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-3	89.13700	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-3	89.13700	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-3	89.13700	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-3	89.13700	118741	< 330.	UG/KG	12/19/89	HCB
85-S-3	89.13700	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-3	89.13700	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-3	89.13700	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-3	89.13700	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-3	89.13700	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-3	89.13700	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-3	89.13700	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-3	89.13700	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-3	89.13700	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-3	89.13700	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-3	89.13700	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-3	89.13700	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-3	89.13700	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-3	89.13700	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-3	89.13700	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-3	89.13700	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-3	89.13700	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-3	89.13700	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-3	89.13700	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-3	89.13700	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-3	89.13700	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-3	89.13700	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-3	89.13700	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-3	89.13700	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-3	89.13700	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-3	89.13700	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-3	89.13700	83329	< 330.		UG/KG	12/19/89		Acenaphthene
85-S-3	89.13700	208968	< 330.		UG/KG	12/19/89		Acenaphthylene
85-S-3	89.13700	62533	< 330.		UG/KG	12/19/89		Aniline
85-S-3	89.13700	120127	< 330.		UG/KG	12/19/89		Anthracene
85-S-3	89.13700	103333	< 330.		UG/KG	12/19/89		Azobenzene
85-S-3	89.13700	56553	< 330.		UG/KG	12/19/89		Benz(a)anthracene
85-S-3	89.13700	92875	< 330.		UG/KG	12/19/89		m-Benzidine
85-S-3	89.13700	191242	< 330.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-3	89.13700	50328	< 330.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-3	89.13700	205992	< 330.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-3	89.13700	207089	< 330.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-3	89.13700	65850	< 330.		UG/KG	12/19/89		Benzoic acid
85-S-3	89.13700	100516	< 330.		UG/KG	12/19/89		Benzyl alcohol
85-S-3	89.13700	111911	< 330.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-3	89.13700	111444	< 330.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-3	89.13700	108601	< 330.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-3	89.13700	117817	< 330.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-3	89.13700	101553	< 330.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-3	89.13700	85687	< 330.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-3	89.13700	59507	< 330.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-3	89.13700	106478	< 330.		UG/KG	12/19/89		4-Chloroaniline
85-S-3	89.13700	91587	< 330.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-3	89.13700	95578	< 330.		UG/KG	12/19/89		o-Chlorophenol
85-S-3	89.13700	7005723	< 330.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-3	89.13700	218019	< 330.		UG/KG	12/19/89		Chrysene

85-S-2	89.13699	88062	< 1650.
85-S-2	89.13699	95954	< 1650.
85-S-2	89.13699	105679	< 1650.

UG/KG	12/19/89
UG/KG	12/19/89
UG/KG	12/19/89

2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2,4-Xylenol

85-S-2	89.13699	106445	< 1650.	UG/KG	12/19/89	p-Cresol
85-S-2	89.13699	84742	< 1650.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-2	89.13699	117840	< 1650.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-2	89.13699	53703	< 1650.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-2	89.13699	132649	< 1650.	UG/KG	12/19/89	Dibenzofuran
85-S-2	89.13699	95501	< 1650.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-2	89.13699	541731	< 1650.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-2	89.13699	106467	< 1650.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-2	89.13699	91941	< 1650.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-2	89.13699	120832	< 1650.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-2	89.13699	84662	< 1650.	UG/KG	12/19/89	Diethyl phthalate
85-S-2	89.13699	131113	< 1650.	UG/KG	12/19/89	Dimethyl phthalate
85-S-2	89.13699	105679	< 1650.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-2	89.13699	51285	< 1650.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-2	89.13699	121142	< 1650.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-2	89.13699	606202	< 1650.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-2	89.13699	206440	< 1650.	UG/KG	12/19/89	Fluoranthene
85-S-2	89.13699	86737	< 1650.	UG/KG	12/19/89	Fluorene
85-S-2	89.13699	118741	< 1650.	UG/KG	12/19/89	HCB
85-S-2	89.13699	118741	< 1650.	UG/KG	12/19/89	Hexachlorobenzene
85-S-2	89.13699	87683	< 1650.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-2	89.13699	77474	< 1650.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-2	89.13699	67721	< 1650.	UG/KG	12/19/89	Hexachloroethane
85-S-2	89.13699	193395	< 1650.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-2	89.13699	78591	< 1650.	UG/KG	12/19/89	Isophorone
85-S-2	89.13699	534521	< 1650.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-2	89.13699	91576	< 1650.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-2	89.13699	106445	< 1650.	UG/KG	12/19/89	4-Methylphenol
85-S-2	89.13699	95487	< 1650.	UG/KG	12/19/89	2-Methylphenol
85-S-2	89.13699	91203	< 1650.	UG/KG	12/19/89	Naphthalene
85-S-2	89.13699	88744	< 1650.	UG/KG	12/19/89	2-Nitroaniline
85-S-2	89.13699	100016	< 1650.	UG/KG	12/19/89	4-Nitroaniline
85-S-2	89.13699	99092	< 1650.	UG/KG	12/19/89	3-Nitroaniline
85-S-2	89.13699	98953	< 1650.	UG/KG	12/19/89	Nitrobenzene
85-S-2	89.13699	100027	< 1650.	UG/KG	12/19/89	4-Nitrophenol
85-S-2	89.13699	100027	< 1650.	UG/KG	12/19/89	p-Nitrophenol
85-S-2	89.13699	88755	< 1650.	UG/KG	12/19/89	2-Nitrophenol
85-S-2	89.13699	621647	< 1650.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-2	89.13699	62759	< 1650.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-2	89.13699	86306	< 1650.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-2	89.13699	87865	< 1650.	UG/KG	12/19/89	Pentachlorophenol
85-S-2	89.13699	85018	< 1650.	UG/KG	12/19/89	Phenanthrene
85-S-2	89.13699	108952	< 1650.	UG/KG	12/19/89	Phenol
85-S-2	89.13699	129000	< 1650.	UG/KG	12/19/89	Pyrene
85-S-2	89.13699	120821	< 1650.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

HSE-9 ANALYTICAL REPORT

Prepared by: CPR

on 23-Dec-1989

EPA SEMIVOLATILES

REQUEST NUMBER: 7868

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
85-S-2	89.13699	83329	< 1650.		UG/KG	12/19/89		Acenaphthene
85-S-2	89.13699	208968	< 1650.		UG/KG	12/19/89		Acenaphthylene
85-S-2	89.13699	62533	< 1650.		UG/KG	12/19/89		Aniline
85-S-2	89.13699	120127	< 1650.		UG/KG	12/19/89		Anthracene
85-S-2	89.13699	103333	< 1650.		UG/KG	12/19/89		Azobenzene
85-S-2	89.13699	56553	< 1650.		UG/KG	12/19/89		Benz(a)anthracene
85-S-2	89.13699	92875	< 1650.		UG/KG	12/19/89		m-Benzidine
85-S-2	89.13699	191242	< 1650.		UG/KG	12/19/89		Benzo(g,h,i)perylene
85-S-2	89.13699	50328	< 1650.		UG/KG	12/19/89		Benzo-a-pyrene
85-S-2	89.13699	205992	< 1650.		UG/KG	12/19/89		Benzo-b-fluoranthene
85-S-2	89.13699	207089	< 1650.		UG/KG	12/19/89		Benzo-k-fluoranthene
85-S-2	89.13699	65850	< 1650.		UG/KG	12/19/89		Benzoic acid
85-S-2	89.13699	100516	< 1650.		UG/KG	12/19/89		Benzyl alcohol
85-S-2	89.13699	111911	< 1650.		UG/KG	12/19/89		Bis(2-chloroethoxy)methane
85-S-2	89.13699	111444	< 1650.		UG/KG	12/19/89		Bis(2-chloroethyl)ether
85-S-2	89.13699	108601	< 1650.		UG/KG	12/19/89		Bis(2-chloroisopropyl)ether
85-S-2	89.13699	117817	< 1650.		UG/KG	12/19/89		Bis(2-ethylhexyl)phthalate
85-S-2	89.13699	101553	< 1650.		UG/KG	12/19/89		4-Bromophenylphenyl ether
85-S-2	89.13699	85687	< 1650.		UG/KG	12/19/89		Butylbenzyl phthalate
85-S-2	89.13699	59507	< 1650.		UG/KG	12/19/89		4-Chloro-3-methylphenol
85-S-2	89.13699	106478	< 1650.		UG/KG	12/19/89		4-Chloroaniline
85-S-2	89.13699	91587	< 1650.		UG/KG	12/19/89		2-Chloronaphthalene
85-S-2	89.13699	95578	< 1650.		UG/KG	12/19/89		o-Chlorophenol
85-S-2	89.13699	7005723	< 1650.		UG/KG	12/19/89		4-Chlorophenylphenyl ether
85-S-2	89.13699	218019	< 1650.		UG/KG	12/19/89		Chrysene

85-S-1	89.13698	88062	< 1650.	UG/KG	12/19/89	✓ 2,4,6-Trichlorophenol
85-S-1	89.13698	95954	< 1650.	UG/KG	12/19/89	✓ 2,4,5-Trichlorophenol
85-S-1	89.13698	105679	< 1650.	UG/KG	12/19/89	2,4-Xylenol

85-S-12	89.13708	106445	< 330.	UG/KG	12/17/89	p-Cresol
85-S-12	89.13708	84742	< 330.	UG/KG	12/19/89	Di-n-butyl phthalate
85-S-12	89.13708	117840	< 330.	UG/KG	12/19/89	Di-n-octyl phthalate
85-S-12	89.13708	53703	< 330.	UG/KG	12/19/89	Dibenzo(a,h)anthracene
85-S-12	89.13708	132649	< 330.	UG/KG	12/19/89	Dibenzofuran
85-S-12	89.13708	95501	< 330.	UG/KG	12/19/89	o-Dichlorobenzene (1,2)
85-S-12	89.13708	541731	< 330.	UG/KG	12/19/89	m-Dichlorobenzene (1,3)
85-S-12	89.13708	106467	< 330.	UG/KG	12/19/89	p-Dichlorobenzene (1,4)
85-S-12	89.13708	91941	< 330.	UG/KG	12/19/89	3,3'-Dichlorobenzidine
85-S-12	89.13708	120832	< 330.	UG/KG	12/19/89	2,4-Dichlorophenol
85-S-12	89.13708	84662	< 330.	UG/KG	12/19/89	Diethyl phthalate
85-S-12	89.13708	131113	< 330.	UG/KG	12/19/89	Dimethyl phthalate
85-S-12	89.13708	105679	< 330.	UG/KG	12/19/89	2,4-Dimethylphenol
85-S-12	89.13708	51285	< 330.	UG/KG	12/19/89	2,4-Dinitrophenol
85-S-12	89.13708	121142	< 330.	UG/KG	12/19/89	2,4-Dinitrotoluene
85-S-12	89.13708	606202	< 330.	UG/KG	12/19/89	2,6-Dinitrotoluene
85-S-12	89.13708	206440	< 330.	UG/KG	12/19/89	Fluoranthene
85-S-12	89.13708	86737	< 330.	UG/KG	12/19/89	Fluorene
85-S-12	89.13708	118741	< 330.	UG/KG	12/19/89	HCB
85-S-12	89.13708	118741	< 330.	UG/KG	12/19/89	Hexachlorobenzene
85-S-12	89.13708	87683	< 330.	UG/KG	12/19/89	Hexachlorobutadiene
85-S-12	89.13708	77474	< 330.	UG/KG	12/19/89	Hexachlorocyclopentadiene
85-S-12	89.13708	67721	< 330.	UG/KG	12/19/89	Hexachloroethane
85-S-12	89.13708	193395	< 330.	UG/KG	12/19/89	Indeno(1,2,3-cd)pyrene
85-S-12	89.13708	78591	< 330.	UG/KG	12/19/89	Isophorone
85-S-12	89.13708	534521	< 330.	UG/KG	12/19/89	2-Methyl-4,6-dinitrophenol
85-S-12	89.13708	91576	< 330.	UG/KG	12/19/89	2-Methylnaphthalene
85-S-12	89.13708	106445	< 330.	UG/KG	12/19/89	4-Methylphenol
85-S-12	89.13708	95487	< 330.	UG/KG	12/19/89	2-Methylphenol
85-S-12	89.13708	91203	< 330.	UG/KG	12/19/89	Naphthalene
85-S-12	89.13708	100016	< 330.	UG/KG	12/19/89	4-Nitroaniline
85-S-12	89.13708	99092	< 330.	UG/KG	12/19/89	3-Nitroaniline
85-S-12	89.13708	88744	< 330.	UG/KG	12/19/89	2-Nitroaniline
85-S-12	89.13708	98953	< 330.	UG/KG	12/19/89	Nitrobenzene
85-S-12	89.13708	88755	< 330.	UG/KG	12/19/89	2-Nitrophenol
85-S-12	89.13708	100027	< 330.	UG/KG	12/19/89	4-Nitrophenol
85-S-12	89.13708	100027	< 330.	UG/KG	12/19/89	p-Nitrophenol
85-S-12	89.13708	621647	< 330.	UG/KG	12/19/89	N-Nitrosodi-n-propylamine
85-S-12	89.13708	62759	< 330.	UG/KG	12/19/89	N-Nitrosodimethylamine
85-S-12	89.13708	86306	< 330.	UG/KG	12/19/89	N-Nitrosodiphenylamine
85-S-12	89.13708	87865	< 330.	UG/KG	12/19/89	Pentachlorophenol
85-S-12	89.13708	85018	< 330.	UG/KG	12/19/89	Phenanthrene
85-S-12	89.13708	108952	< 330.	UG/KG	12/19/89	Phenol
85-S-12	89.13708	129000	< 330.	UG/KG	12/19/89	Pyrene
85-S-12	89.13708	120821	< 330.	UG/KG	12/19/89	1,2,4-Trichlorobenzene

85-S-12	89.13708	88062	< 330.	UG/KG	12/19/89	2,4,6-Trichlorophenol
85-S-12	89.13708	95954	< 330.	UG/KG	12/19/89	2,4,5-Trichlorophenol
85-S-12	89.13708	105679	< 330.	UG/KG	12/19/89	2,4-Xylenol

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

Prepared by: ESG on 18-Jan-1990

EPA SEMIVOLATILES

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Martin Koby PROGRAM CODE: WA45
 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
89.13698	%	64.	76.	81.	112.	82.	97.	19-Dec-1989

EPA Limits:

Water	%	21 - 100	10 - 94	35 - 114	43 - 116	10 - 123	33 - 141
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89.13707 85. % 12/19/89
 89.13708 80. % 12/19/89

Phenol-d5 (CAS # =); EPA Range Limits: Water = 10-94 %, Soil = 24-113 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	76.	%	12/19/89	
89.13699	69.	%	12/19/89	
89.13700	79.	%	12/19/89	
89.13701	79.	%	12/19/89	
89.13702	76.	%	12/19/89	
89.13703	76.	%	12/19/89	
89.13704	80.	%	12/19/89	
89.13705	75.	%	12/19/89	
89.13706	82.	%	12/19/89	
89.13707	91.	%	12/19/89	
89.13708	81.	%	12/19/89	

Nitrobenzene-d5 (CAS # =); EPA Range Limits: Water = 35-114 %, Soil = 23-120 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	81.	%	12/19/89	
89.13699	71.	%	12/19/89	
89.13700	92.	%	12/19/89	
89.13701	86.	%	12/19/89	
89.13702	90.	%	12/19/89	
89.13703	85.	%	12/19/89	
89.13704	90.	%	12/19/89	
89.13705	82.	%	12/19/89	
89.13706	87.	%	12/19/89	
89.13707	89.	%	12/19/89	
89.13708	83.	%	12/19/89	

2-Fluorobiphenyl (CAS # =); EPA Range Limits: Water = 43-116 %, Soil = 30-115 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	112.	%	12/19/89	
89.13699	104.	%	12/19/89	
89.13700	94.	%	12/19/89	

89.13701	103.	%	12/19/89
89.13702	103.	%	12/19/89
89.13703	93.	%	12/19/89
89.13704	95.	%	12/19/89
89.13705	95.	%	12/19/89
89.13706	97.	%	12/19/89
89.13707	96.	%	12/19/89
89.13708	96.	%	12/19/89

2,4,6-Tribromophenol (CAS # =); EPA Range Limits: Water = 10-123 %, Soil = 19-122 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	82.	%	12/19/89	
89.13699	82.	%	12/19/89	
89.13700	94.	%	12/19/89	
89.13701	109.	%	12/19/89	
89.13702	109.	%	12/19/89	
89.13703	104.	%	12/19/89	
89.13704	429.	%	12/19/89	
89.13705	131.	%	12/19/89	
89.13706	113.	%	12/19/89	
89.13707	111.	%	12/19/89	
89.13708	112.	%	12/19/89	

p-Terphenyl-d14 (CAS # =); EPA Range Limits: Water = 33-141 %, Soil = 18-137 %

SAMPLE NUMBER	RESULT	UNITS	COMPLETION DATE	COMMENT
89.13698	97.	%	12/19/89	
89.13699	99.	%	12/19/89	
89.13700	102.	%	12/19/89	
89.13701	110.	%	12/19/89	
89.13702	114.	%	12/19/89	
89.13703	106.	%	12/19/89	
89.13704	73.	%	12/19/89	
89.13705	92.	%	12/19/89	
89.13706	107.	%	12/19/89	
89.13707	149.	%	12/19/89	
89.13708	114.	%	12/19/89	

Mike Foley
Analyst

1/2/90
Date

CPA
Section Leader

1/18/90
Date

maey
QA Officer

1-18-90
Date

The control status of the preceding 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

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

Prepared by: DMS on 19-Jul-1989

REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Dee Seitz
 OWNER: Steve McIn GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

CUSTOMER NUM	SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-S-1	89.13698	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-1	89.13698	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-1	89.13698	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-1	89.13698	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260
85-S-2	89.13699	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-2	89.13699	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-2	89.13699	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-2	89.13699	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260
85-S-3	89.13700	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-3	89.13700	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-3	89.13700	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-3	89.13700	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260
85-S-4	89.13701	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-4	89.13701	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-4	89.13701	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-4	89.13701	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260
85-S-5	89.13702	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-5	89.13702	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-5	89.13702	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-5	89.13702	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260
85-S-7	89.13703	1336363	0.06	0.01	UG/G	7/18/89	Mixed-Aroclor
85-S-7	89.13703	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-7	89.13703	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-7	89.13703	11096825	0.06	0.01	UG/G	7/18/89	Aroclor 1260
85-S-8	89.13704	1336363	0.17	0.03	UG/G	7/18/89	Mixed-Aroclor

2-10-89

85-S-8	89.13704	53469219	< 0.02		UG/G	7/13/89	Aroclor 1242
85-S-8	89.13704	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-8	89.13704	11096825	0.17	0.03	UG/G	7/18/89	Aroclor 1260
85-S-9	89.13705	1336363	0.12	0.02	UG/G	7/18/89	Mixed-Aroclor
85-S-9	89.13705	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-9	89.13705	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-9	89.13705	11096825	0.12	0.02	UG/G	7/18/89	Aroclor 1260
85-S-10	89.13706	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-10	89.13706	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-10	89.13706	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-10	89.13706	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260
85-S-11	89.13707	1336363	0.11	0.02	UG/G	7/18/89	Mixed-Aroclor
85-S-11	89.13707	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-11	89.13707	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-11	89.13707	11096825	0.11	0.02	UG/G	7/18/89	Aroclor 1260
85-S-12	89.13708	1336363	< 0.02		UG/G	7/18/89	Mixed-Aroclor
85-S-12	89.13708	53469219	< 0.02		UG/G	7/18/89	Aroclor 1242
85-S-12	89.13708	11097691	< 0.02		UG/G	7/18/89	Aroclor 1254
85-S-12	89.13708	11096825	< 0.02		UG/G	7/18/89	Aroclor 1260

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

Prepared by: DMS on 19-Jul-1989

REQUEST NUMBER: 7868 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	CERTIFIED VALUE	CERTIFIED UNCERTAINTY	COMPLETION DATE	COMMENT	COMPOUND
00.99885	00.99885	1336363	28.8	5.8	UG/G	38.6	4.	7/18/89	UNDER CONTROL	Mixed-Aroclor
00.99885	00.99885	53469219	< 0.02		UG/G			7/18/89	UNDER CONTROL	Aroclor 1242
00.99885	00.99885	11097691	< 0.02		UG/G			7/18/89	UNDER CONTROL	Aroclor 1254
00.99885	00.99885	11096825	28.8	5.8	UG/G	38.6	4.	7/18/89	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
89.13712	1336363	20.7	4.1	UG/G	7/18/89	UNDER CONTROL	Mixed-Aroclor
89.13712	53469219	< 0.02		UG/G	7/18/89	UNDER CONTROL	Aroclor 1242
89.13712	11097691	< 0.02		UG/G	7/18/89	UNDER CONTROL	Aroclor 1254
89.13712	11096825	20.7	4.1	UG/G	7/18/89	UNDER CONTROL	Aroclor 1260

Dee Seitz
Analyst
7/19/89

[Signature]
Section Leader
7/19/89

magy
QA Officer
7/19/89

METAL ANALYSES

Requestor	Program Code	Sample Owner	Date	Total No. Samples
HSE-8	W579	SGM	6/29/89	12

Sample Numbers	Matrix	Analysis	Tech	Analyst	Priority	Remarks
89.13698 - 89.13708	SS	1336363	GC/EC	DMJ	2	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> 7/7/89 All samples are in B4 refrig </div>
		Volatiles	PTGC GC	CPR	2	
		Semi-volatiles	GC/MS	MWK	2	
		Ag	ICPES	JDM		
		As				
		Ba				
		Cd				
		Cr				
		Pb				
		Se	↓	↓		
Hg	CVA	TMF				
89.13710 - 89.13711		Volatiles	PTGC	CPR	2	
89.13712, 00.99385		1336363	GC/EC	DMS	2	
89.13713		Ag	ICPES	JDM		Set A = VOA Set B = SVOA Set C = PCB Set D = EPTOX Ery
		As				
		Ba				
		Cd				
		Cr				
		Pb				
		Se	↓	↓		
		Hg	CVA	TMF		

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: AS REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7060

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-S-1	89.13698	< 2.		UG/L	8/14/89	
85-S-1	89.13698	< 2.		UG/L	8/14/89	
85-S-2	89.13699	< 2.		UG/L	8/14/89	
85-S-2	89.13699	2.	2.	UG/L	8/14/89	
85-S-3	89.13700	< 2.		UG/L	8/14/89	
85-S-3	89.13700	< 2.		UG/L	8/14/89	
85-S-4	89.13701	< 2.		UG/L	8/14/89	
85-S-4	89.13701	< 2.		UG/L	8/14/89	
85-S-5	89.13702	< 2.		UG/L	8/14/89	
85-S-7	89.13703	< 2.		UG/L	8/14/89	
85-S-7	89.13703	< 2.		UG/L	8/14/89	
85-S-8	89.13704	2.	2.	UG/L	8/14/89	
85-S-8	89.13704	2.	2.	UG/L	8/14/89	
85-S-9	89.13705	< 2.		UG/L	8/14/89	
85-S-9	89.13705	< 2.		UG/L	8/14/89	
85-S-10	89.13706	< 2.		UG/L	8/14/89	
85-S-10	89.13706	< 2.		UG/L	8/14/89	
85-S-11	89.13707	< 2.		UG/L	8/14/89	
85-S-11	89.13707	< 2.		UG/L	8/14/89	
85-S-12	89.13708	< 2.		UG/L	8/14/89	
85-S-12	89.13708	< 2.		UG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: AS REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7060

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED		COMPLETION DATE	COMMENT
					VALUE	UNCERTAINTY		
00.01010	00.01010	27.2	2.7	UG/L	27.	3.	8/11/89	UNDER CONTROL
00.01010	00.01010	28.6	2.9	UG/L	27.	3.	8/11/89	UNDER CONTROL
00.01010	00.01010	28.9	2.9	UG/L	27.	3.	8/11/89	UNDER CONTROL
00.01010	00.01010	28.6	2.9	UG/L	27.	3.	8/11/89	UNDER CONTROL
00.01010	00.01010	29.7	3.	UG/L	27.	3.	8/11/89	UNDER CONTROL
00.01010	00.01010	25.8	2.6	UG/L	27.	3.	8/11/89	UNDER CONTROL
00.01010	00.01010	24.8	2.5	UG/L	27.	3.	8/11/89	UNDER CONTROL

Trudi Foreman
Analyst

Richard Robinson
Section Leader

mag
QA Officer

8-16-89
Date

8/16/89
Date

8-16-89
Date

The control status of the preceding 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: 3669

TH
201
10/1

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: AG REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7760

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-s-1	89.13698	< 3.		UG/L	8/14/89	
85-s-1	89.13698	< 3.		UG/L	8/14/89	
85-s-2	89.13699	< 3.		UG/L	8/14/89	
85-s-2	89.13699	< 3.		UG/L	8/14/89	
85-s-3	89.13700	7.	3.	UG/L	8/14/89	
85-s-3	89.13700	5.	3.	UG/L	8/14/89	
85-s-4	89.13701	< 3.		UG/L	8/14/89	
85-s-4	89.13701	< 3.		UG/L	8/14/89	
85-s-5	89.13702	< 3.		UG/L	8/14/89	
85-s-5	89.13702	< 3.		UG/L	8/14/89	
85-s-7	89.13703	< 3.		UG/L	8/14/89	
85-s-7	89.13703	< 3.		UG/L	8/14/89	
85-s-8	89.13704	< 3.		UG/L	8/14/89	
85-s-8	89.13704	< 3.		UG/L	8/14/89	
85-s-9	89.13705	6.	3.	UG/L	8/14/89	
85-s-9	89.13705	7.	3.	UG/L	8/14/89	
85-s-10	89.13706	< 3.		UG/L	8/14/89	
85-s-10	89.13706	< 3.		UG/L	8/14/89	
85-s-11	89.13707	5.	3.	UG/L	8/14/89	
85-s-11	89.13707	3.	3.	UG/L	8/14/89	
85-s-12	89.13708	3.	3.	UG/L	8/14/89	
85-s-12	89.13708	< 3.		UG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: AG REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7760

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.98625	00.98625	98.	9.8	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	96.	9.6	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	99.	9.9	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	100.	10.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	99.	9.9	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98805	00.98805	0.488	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL
00.98805	00.98805	0.498	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL
00.98805	00.98805	0.501	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL
00.98805	00.98805	0.491	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL
00.98805	00.98805	0.502	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL
00.98805	00.98805	0.504	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL
00.98805	00.98805	0.501	0.05	MG/L	0.5	0.05	8/11/89	UNDER CONTROL

mcw
Analyst

Robert Berlin
Section Leader

mag
QA Officer

8-15-89
Date

8/16/89
Date

8-16-89
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.

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: BA REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7080

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-s-1	89.13698	0.3	0.1	MG/L	8/14/89	
85-s-1	89.13698	0.25	0.1	MG/L	8/14/89	
85-s-2	89.13699	0.1	0.1	MG/L	8/14/89	
85-s-2	89.13699	0.1	0.1	MG/L	8/14/89	
85-s-3	89.13700	0.18	0.1	MG/L	8/14/89	
85-s-3	89.13700	0.15	0.1	MG/L	8/14/89	
85-s-4	89.13701	0.18	0.1	MG/L	8/14/89	
85-s-4	89.13701	0.2	0.1	MG/L	8/14/89	
85-s-5	89.13702	0.18	0.1	MG/L	8/14/89	
85-s-5	89.13702	0.15	0.1	MG/L	8/14/89	
85-s-7	89.13703	0.15	0.1	MG/L	8/14/89	
85-s-7	89.13703	0.16	0.1	MG/L	8/14/89	
85-s-8	89.13704	0.15	0.1	MG/L	8/14/89	
85-s-8	89.13704	0.15	0.1	MG/L	8/14/89	
85-s-9	89.13705	< 0.1		MG/L	8/14/89	
85-s-9	89.13705	0.1	0.1	MG/L	8/14/89	
85-s-10	89.13706	0.12	0.1	MG/L	8/14/89	
85-s-10	89.13706	0.19	0.1	MG/L	8/14/89	
85-s-11	89.13707	0.13	0.1	MG/L	8/14/89	
85-s-11	89.13707	0.13	0.1	MG/L	8/14/89	
85-s-12	89.13708	0.17	0.1	MG/L	8/14/89	
85-s-12	89.13708	0.12	0.1	MG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: BA REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7080

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01026	00.01026	1.17	0.12	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.25	0.12	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.22	0.12	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.23	0.12	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.28	0.13	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.2	0.12	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.3	0.13	MG/L	1.2	0.08	8/11/89	UNDER CONTROL
00.01026	00.01026	1.26	0.13	MG/L	1.2	0.08	8/11/89	UNDER CONTROL

MP
Analyst

Robert Williams
Section Leader

maq
QA Officer

8-15-89
Date

8/16/89
Date

8-16-89
Date

The control status of the preceding 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.

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: CD REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7130

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-S-1	89.13698	< 10.		UG/L	8/14/89	
85-S-1	89.13698	< 10.		UG/L	8/14/89	
85-S-2	89.13699	< 10.		UG/L	8/14/89	
85-S-2	89.13699	< 10.		UG/L	8/14/89	
85-S-3	89.13700	< 10.		UG/L	8/14/89	
85-S-3	89.13700	< 10.		UG/L	8/14/89	
85-S-4	89.13701	< 10.		UG/L	8/14/89	
85-S-4	89.13701	< 10.		UG/L	8/14/89	
85-S-5	89.13702	< 10.		UG/L	8/14/89	
85-S-5	89.13702	< 10.		UG/L	8/14/89	
85-S-7	89.13703	< 10.		UG/L	8/14/89	
85-S-7	89.13703	< 10.		UG/L	8/14/89	
85-S-8	89.13704	< 10.		UG/L	8/14/89	
85-S-8	89.13704	< 10.		UG/L	8/14/89	
85-S-9	89.13705	< 10.		UG/L	8/14/89	
85-S-9	89.13705	< 10.		UG/L	8/14/89	
85-S-10	89.13706	< 10.		UG/L	8/14/89	
85-S-10	89.13706	< 10.		UG/L	8/14/89	
85-S-11	89.13707	< 10.		UG/L	8/14/89	
85-S-11	89.13707	< 10.		UG/L	8/14/89	
85-S-12	89.13708	< 10.		UG/L	8/14/89	
85-S-12	89.13708	< 10.		UG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: CD REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7130

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.00895	00.00895	21.	2.1	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.00895	00.00895	22.	2.2	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.00895	00.00895	22.	2.2	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.00895	00.00895	24.	2.4	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.00895	00.00895	19.	1.9	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.00895	00.00895	20.	2.	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.00895	00.00895	21.	2.1	UG/L	20.	1.	8/11/89	UNDER CONTROL
00.01036	00.01036	26.	2.6	UG/L	25.	2.	8/11/89	UNDER CONTROL
00.01036	00.01036	25.	2.5	UG/L	25.	2.	8/11/89	UNDER CONTROL
00.01036	00.01036	26.	2.6	UG/L	25.	2.	8/11/89	UNDER CONTROL
00.01036	00.01036	24.	2.4	UG/L	25.	2.	8/11/89	UNDER CONTROL
00.01036	00.01036	25.	2.5	UG/L	25.	2.	8/11/89	UNDER CONTROL

mcw
Analyst

Richard Roberts
Section Leader

maq
QA Officer

8-15-89
Date

8/16/89
Date

8-16-89
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.

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: CR REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7190

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-S-1	89.13698	< 40.		UG/L	8/14/89	
85-S-1	89.13698	< 40.		UG/L	8/14/89	
85-S-2	89.13699	< 40.		UG/L	8/14/89	
85-S-2	89.13699	< 40.		UG/L	8/14/89	
85-S-3	89.13700	< 40.		UG/L	8/14/89	
85-S-3	89.13700	< 40.		UG/L	8/14/89	
85-S-4	89.13701	< 40.		UG/L	8/14/89	
85-S-4	89.13701	< 40.		UG/L	8/14/89	
85-S-5	89.13702	< 40.		UG/L	8/14/89	
85-S-5	89.13702	< 40.		UG/L	8/14/89	
85-S-7	89.13703	< 40.		UG/L	8/14/89	
85-S-7	89.13703	< 40.		UG/L	8/14/89	
85-S-8	89.13704	43.	40.	UG/L	8/14/89	
85-S-8	89.13704	< 40.		UG/L	8/14/89	
85-S-9	89.13705	< 40.		UG/L	8/14/89	
85-S-9	89.13705	< 40.		UG/L	8/14/89	
85-S-10	89.13706	< 40.		UG/L	8/14/89	
85-S-10	89.13706	< 40.		UG/L	8/14/89	
85-S-11	89.13707	66.	40.	UG/L	8/14/89	
85-S-11	89.13707	64.	40.	UG/L	8/14/89	
85-S-12	89.13708	60.	40.	UG/L	8/14/89	
85-S-12	89.13708	79.	40.	UG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: CR REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7190

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.00895	00.00895	23.	40.	UG/L	18.6	0.4	8/11/89	UNDER CONTROL
00.00895	00.00895	19.	40.	UG/L	18.6	0.4	8/11/89	UNDER CONTROL
00.00895	00.00895	22.	40.	UG/L	18.6	0.4	8/11/89	UNDER CONTROL
00.00895	00.00895	20.	40.	UG/L	18.6	0.4	8/11/89	UNDER CONTROL
00.98625	00.98625	105.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	105.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	96.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	94.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	101.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	89.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	117.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	95.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL
00.98625	00.98625	108.	40.	UG/L	100.	10.	8/11/89	UNDER CONTROL

MACW
Analyst

Richard Robinson
Section Leader

mag
QA Officer

8-15-89
Date

8/16/89
Date

8-16-89
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: 3674

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: HG REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

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
85-S-1	89.13698	< 0.2		UG/L	8/14/89	
85-S-1	89.13698	< 0.2		UG/L	8/14/89	
85-S-2	89.13699	< 0.2		UG/L	8/14/89	
85-S-2	89.13699	< 0.2		UG/L	8/14/89	
85-S-3	89.13700	< 0.2		UG/L	8/14/89	
85-S-3	89.13700	< 0.2		UG/L	8/14/89	
85-S-4	89.13701	< 0.2		UG/L	8/14/89	
85-S-4	89.13701	< 0.2		UG/L	8/14/89	
85-S-5	89.13702	0.5	0.2	UG/L	8/14/89	
85-S-5	89.13702	0.51	0.2	UG/L	8/14/89	
85-S-7	89.13703	< 0.2		UG/L	8/14/89	
85-S-7	89.13703	< 0.2		UG/L	8/14/89	
85-S-8	89.13704	< 0.2		UG/L	8/14/89	
85-S-8	89.13704	< 0.2		UG/L	8/14/89	
85-S-9	89.13705	< 0.2		UG/L	8/14/89	
85-S-9	89.13705	< 0.2		UG/L	8/14/89	
85-S-10	89.13706	0.2	0.2	UG/L	8/14/89	
85-S-10	89.13706	< 0.2		UG/L	8/14/89	
85-S-11	89.13707	0.22	0.2	UG/L	8/14/89	
85-S-11	89.13707	0.23	0.2	UG/L	8/14/89	
85-S-12	89.13708	0.21	0.2	UG/L	8/14/89	
85-S-12	89.13708	0.21	0.2	UG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: HG REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: CVAА ANALYTICAL PROCEDURE : 7470

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.99929	00.99929	2.06	0.4	UG/L	2.5	0.3	8/15/89	UNDER CONTROL
00.99929	00.99929	2.36	0.5	UG/L	2.5	0.3	8/15/89	UNDER CONTROL
00.99929	00.99929	2.06	0.4	UG/L	2.5	0.3	8/15/89	UNDER CONTROL
00.99929	00.99929	2.05	0.4	UG/L	2.5	0.3	8/15/89	UNDER CONTROL
00.99929	00.99929	2.39	0.5	UG/L	2.5	0.3	8/15/89	UNDER CONTROL

mcw
Analyst

Richard H. Hahn
Section Leader

mcw
QA Officer

8-15-89
Date

8/16/89
Date

8-16-89
Date

The control status of the preceding 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.

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: PB REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7420

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-S-1	89.13698	< 50.		UG/L	8/15/89	
85-S-1	89.13698	< 50.		UG/L	8/14/89	
85-S-2	89.13699	50.		UG/L	8/15/89	
85-S-2	89.13699	< 50.		UG/L	8/14/89	
85-S-3	89.13700	50.		UG/L	8/15/89	
85-S-3	89.13700	< 50.		UG/L	8/14/89	
85-S-4	89.13701	< 50.		UG/L	8/14/89	
85-S-4	89.13701	50.		UG/L	8/15/89	
85-S-5	89.13702	< 50.		UG/L	8/14/89	
85-S-5	89.13702	50.		UG/L	8/15/89	
85-S-7	89.13703	50.		UG/L	8/15/89	
85-S-7	89.13703	< 50.		UG/L	8/14/89	
85-S-8	89.13704	< 50.		UG/L	8/14/89	
85-S-8	89.13704	50.		UG/L	8/15/89	
85-S-9	89.13705	< 50.		UG/L	8/14/89	
85-S-9	89.13705	50.		UG/L	8/15/89	
85-S-10	89.13706	50.		UG/L	8/15/89	
85-S-10	89.13706	< 50.		UG/L	8/14/89	
85-S-11	89.13707	50.		UG/L	8/15/89	
85-S-11	89.13707	< 50.		UG/L	8/14/89	
85-S-12	89.13708	< 50.		UG/L	8/14/89	
85-S-12	89.13708	50.		UG/L	8/15/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: PB REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Mary Carol Williams

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: FAA ANALYTICAL PROCEDURE : 7420

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01036	00.01036	110.	50.	UG/L	100.	8.	8/11/89	UNDER CONTROL
00.01036	00.01036	113.	50.	UG/L	100.	8.	8/11/89	UNDER CONTROL
00.01036	00.01036	100.	50.	UG/L	100.	8.	8/11/89	UNDER CONTROL
00.01036	00.01036	111.	50.	UG/L	100.	8.	8/11/89	UNDER CONTROL
00.01036	00.01036	100.	50.	UG/L	100.	8.	8/11/89	UNDER CONTROL

MCCW
Analyst

Richard Adams
Section Leader

mag
QA Officer

8-15-89
Date

8/16/89
Date

8-16-89
Date

The control status of the preceding 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.

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: SE REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7760

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT
85-S-1	89.13698	< 1.		UG/L	8/14/89	
85-S-1	89.13698	< 1.		UG/L	8/15/89	
85-S-1	89.13698	< 1.		UG/L	8/15/89	
85-S-2	89.13699	< 1.		UG/L	8/15/89	
85-S-2	89.13699	< 1.		UG/L	8/14/89	
85-S-3	89.13700	< 1.		UG/L	8/15/89	
85-S-3	89.13700	< 1.		UG/L	8/14/89	
85-S-4	89.13701	< 1.		UG/L	8/14/89	
85-S-4	89.13701	< 1.		UG/L	8/15/89	
85-S-5	89.13702	< 1.		UG/L	8/15/89	
85-S-5	89.13702	< 1.		UG/L	8/14/89	
85-S-7	89.13703	< 1.		UG/L	8/14/89	
85-S-7	89.13703	< 1.		UG/L	8/15/89	
85-S-8	89.13704	< 1.		UG/L	8/14/89	
85-S-8	89.13704	< 1.		UG/L	8/15/89	
85-S-9	89.13705	< 1.		UG/L	8/14/89	
85-S-9	89.13705	< 1.		UG/L	8/15/89	
85-S-10	89.13706	< 1.		UG/L	8/15/89	
85-S-10	89.13706	< 1.		UG/L	8/14/89	
85-S-11	89.13707	< 1.		UG/L	8/14/89	
85-S-11	89.13707	< 1.		UG/L	8/15/89	
85-S-12	89.13708	< 1.		UG/L	8/15/89	
85-S-12	89.13708	< 1.		UG/L	8/14/89	

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

Prepared by: M. C. WILLIAMS on 15-Aug-1989

ANALYSIS: SE REQUEST NUMBER: 7868 MATRIX: SS ANALYST: Trudi Foreman

OWNER: Steve McLin GROUP: HSE-8 MAIL-STOP: K490 PHONE: 5-1721

ANALYTICAL TECHNIQUE: ETVAA ANALYTICAL PROCEDURE : 7760

CUSTOMER NUM	SAMPLE NUM	RESULT	UNCERTAINTY	UNITS	CERTIFIED VALUE	CERTIFIED VALUE UNCERTAINTY	COMPLETION DATE	COMMENT
00.01010	00.01010	10.9	1.1	UG/L	11.	2.	8/11/89	UNDER CONTROL
00.01010	00.01010	9.31	1.	UG/L	11.	2.	8/11/89	UNDER CONTROL
00.01010	00.01010	10.6	1.1	UG/L	11.	2.	8/11/89	UNDER CONTROL
00.01010	00.01010	10.4	1.	UG/L	11.	2.	8/11/89	UNDER CONTROL
00.01010	00.01010	10.5	1.	UG/L	11.	2.	8/11/89	UNDER CONTROL
00.01010	00.01010	9.19	1.	UG/L	11.	2.	8/11/89	UNDER CONTROL

Trudi Foreman
Analyst

Richard P. ...
Section Leader

mag
QA Officer

8-16-89
Date

8/16/89
Date

8-16-89
Date

The control status of the preceding 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-H
PHASE FIVE CLEAN CLOSURE VERIFICATION SAMPLES: ADDITIONAL
COREHOLE SAMPLES TO APPROXIMATELY 45 FEET

VOLATILE ORGANIC ANALYSES

MAY 14, 1991

TO: PHIL FRESQUEZ
THRU: CHRIS LEIBMAN
FROM: LAURA TSIAGKOURIS
REQUEST: 11448

JF
py
5/5/91

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:

91.03488	91.03489	91.03490	91.03491
91.03492	91.03493	91.03494	91.03495
91.03496	91.03497	91.03498	91.03499
91.03500	91.03501	91.03502	91.03503
91.03504	91.03505	91.03506	91.03507
91.03508			

A 4 - 6 gram sample aliquot was analyzed. Final results were calculated on a wet weight bases. Since the final results are not blank subtracted, the results from the associated method blanks (samples 91.03510, 91.03511 and 91.03528) have been included in the report. The 14 day holding time for soil samples was met.

RESULTS:

SAMPLE ID	TARGET COMPOUNDS DETECTED	AMOUNT (ug/kg)	LOQ (ug/kg)
91.03488	NONE	--	5.0
91.03489	NONE	--	5.0
91.03490	NONE	--	5.0
91.03491	NONE	--	5.0
91.03492	Chloroform	5.5	5.0
91.03493	NONE	--	5.0
91.03494	Chloroform	5.4	5.0
91.03495	NONE	--	5.0
91.03496	NONE	--	5.0
91.03497	NONE	--	5.0
91.03498	NONE	--	5.0
91.03499	NONE	--	5.0
91.03500	NONE	--	5.0
91.03501	NONE	--	5.0
91.03502	NONE	--	5.0
91.03503	NONE	--	5.0
91.03504	NONE	--	5.0
91.03505	NONE	--	5.0
91.03506	NONE	--	5.0
91.03507	NONE	--	5.0
91.03508	NONE	--	5.0

It should be noted that the limit of quantitation (LOQ) for the majority of the volatile organic compounds (VOC's) is 5.0 ug/kg. The limit of quantitation for VOC's ranges from 5 - 100 ug/kg as indicated on the final report.

Suzanne Bell
5-14-91

W

REQUEST: 11448

As indicated, the analysis of samples 91.03488 - 91.03508 did not detect any target and/or non-target volatile organic compounds at or above the limit of quantitation (LOQ) with the exception of samples 91.03492 and 91.03494. Samples 91.03492 and 91.03494 did contain low levels of chloroform.

QC Summary

4-Bromofluorobenzene was above the upper control limits for samples 91.03489 and 91.03492. The high 4-bromofluorobenzene is most likely due to matrix effect. 4-bromofluorobenzene was below the lower control limits for samples 91.03488, 91.03490, and 91.03500 - 91.03508. The lower 4-bromofluorobenzene is due to a higher the "normal" response factor and not the lack of sensitivity. Since the previously mention samples did not contain any target volatile organic compounds above the LOQ, the data was reported with the low surrogate recovery.

Samples 91.03488 and 91.03508 were 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 for both spiked aliquots with the exception of the precision for 1,1-dichloroethene.

Samples 91.03509 and 91.03527 were received from the Quality Assurance section to be analyzed with this request group as a "blind" Q.C. sample. The results are included in the final report.

Jones
5-14-91

SURROGATE RECOVERIES

REQUEST #: 11440

NUMBER OF SAMPLES: 15

MATRIX: 3

ANALYST: JAT

Date: 05/14/91

SURROGATE RECOVERIES

SURROGATE RECOVERIES IN PERCENT (%)

SAMPLE NUMBERS	TYPE	d4-1,2-dichloro-ethane	toluene-d8	4-bromo-fluorobenzene
1	X 891.03511 BLANK ✓	98	95	91 *
2	X 891.03498 MATRIX SPIK ✓	100	93	69 *
3	X 891.03488 SAMPLE ✓	107	91	71 *
4	X 891.03490 SAMPLE ✓	91	101	62 *
5	X 891.03501 SAMPLE ✓	87	102	56 *
6	X 891.03503 SAMPLE ✓	87	103	57 *
7	X 891.03503 SAMPLE ✓	89	95	54 *
8	X 891.03504 SAMPLE ✓	86	96	52 *
9	X 891.03505 SAMPLE ✓	87	99	52 *
10	X 891.03506 SAMPLE ✓	85	101	51 *
11	X 891.03507 SAMPLE ✓	86	96	53 *
12	X 891.03509 SAMPLE ✓	100	91	52 *
13	X 891.03528 BLANK ✓	89	93	71
14	X 891.03527 SAMPLE ✓	86	103	71
15	X 891.03508 MATRIX SP-D ✓	89	103	71 *
16	X 891.03508 SAMPLE ✓	91	94	62 *
17	X 891.03499 SAMPLE ✓	100	89	89
18	X 891.03500 SAMPLE ✓	88	101	71 *
19				
20				
21				
22				

Average % Surrogate Recovery...	93	97	57
Defined Lower QC Limits (%)....	70	81	71
Defined Upper QC limits (%)....	121	117	121
Observed Lower QC Limits (%)...	85	88	51
Observed Upper QC limits (%)...	108	103	71

* If % Surrogate Recovery is Followed by a "*", it is out of QC Limits.

Reviewed By:

John Bell
5-15-91

JAT
5/14/91

USE STATES NATIONAL LABORATORY
 HEALTH, SAFETY AND ENVIRONMENT DIVISION
 MSD-9
 SURROGATE RECOVERIES FOR VOLATILES
 01

REQUEST # 11-46
 NUMBER OF SAMPLES: 0
 MATRIX: 5
 WPT SET: 107
 Date: 05/14/91

SURROGATE RECOVERIES

SURROGATE RECOVERIES IN PERCENT (%)

SAMPLE NUMBERS	TYPE	1,1,1-trichloro-ethane	1,1,2-dichloro-ethane (d8)	1,1,1-trichloro-ethane
1	X 191.03510 BLANK ✓	99	94	100
2	X 191.03497 SAMPLE ✓	90	90	105
3	X 191.03494 SAMPLE ✓	90	95	104
4	X 191.03495 SAMPLE ✓	98	101	105
5	X 191.03498 SAMPLE ✓	97	106	107
6	X 191.03496 SAMPLE ✓	96	99	106
7	X 191.03493 SAMPLE ✓	98	94	108
8	X 191.03492 SAMPLE ✓	102	94	125 *
9	X 191.03491 SAMPLE ✓	93	95	108
10	X 191.03489 SAMPLE ✓	103	92	137 *
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Average % Surrogate Recovery...		95	97	110
Defined Lower QC Limits (%)....		70	81	74
Refined Naper QC Limits (%)....		121	117	121
Observed Lower QC Limits (%)....		90	99	100
Observed Upper QC Limits (%)...		103	106	137

* If % Surrogate Recovery is Followed by a "*", it is out of QC Limits

Reviewed By:

OB
5-15-91

UAT
3/14/91

LOS ALAMOS NATIONAL LABORATORY
 HEALTH, SAFETY AND ENVIRONMENT DIVISION
 HSE-9
 MATRIX SPIKE RECOVERIES FOR VOLATILES

REQUEST #: 11448 DRY WT/VOL 10.00
 NUMBER OF SAMPLES: 10 (G or ML) DILUTION FACTOR AMOUNT SPIRED (UG, MG OR UG)
 SPIKE ID: (STARTS M OR E) M91.03436 SPIKE 4.185 1 50 7
 SPIKE DUP ID: (STARTS D OR F) D91.03508 SPIKE-DUP 4.157 1 50 5
 RAW DATA WITH: 11448
 ANALYST: JAT

	SPIKE REC.	SPIKE-DUP REC.	SPIKE Y REC.	SPIKE-DUP Y REC.	RPD	LOW. REC. LIK.	UPP. REC. LIK.	RPD LIK.
Hydrocarbon	50	50	77	62%	42%	59	178	88
Acetone	5	5	106%	90%	16%	55	148	51
Diethyl ether	50	51	75%	75%	81	68	107	7
Chloroform	55	55	75%	75%	15%	55	135	51
Diethyl sulfide	50	50	50%	50%	5	10	25	10

5-15-91

WT
5/14/91

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03488

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-S	91.03488	67641	< 20.		UG/KG	5/16/91	8240 (ppb) 5 ug. PQL's	Acetone
PF-85-1-S	91.03488	107028	< 100.		UG/KG	5/16/91	5	Acrolein
PF-85-1-S	91.03488	107131	< 100.		UG/KG	5/16/91	5	Acrylonitrile
PF-85-1-S	91.03488	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-1-S	91.03488	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-1-S	91.03488	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-1-S	91.03488	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-1-S	91.03488	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-1-S	91.03488	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-1-S	91.03488	78933	< 20.		UG/KG	5/16/91	100	2-Butanone
PF-85-1-S	91.03488	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-1-S	91.03488	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-1-S	91.03488	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-1-S	91.03488	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-1-S	91.03488	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-1-S	91.03488	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-1-S	91.03488	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-1-S	91.03488	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-1-S	91.03488	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-1-S	91.03488	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85	91.03488	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-1-S	91.03488	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-1-S	91.03488	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-1-S	91.03488	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-1-S	91.03488	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-1-S	91.03488	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-1-S	91.03488	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-1-S	91.03488	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-1-S	91.03488	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-1-S	91.03488	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-1-S	91.03488	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-1-S	91.03488	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-1-S	91.03488	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-1-S	91.03488	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-1-S	91.03488	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-1-S	91.03488	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-1-S	91.03488	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-1-S	91.03488	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-1-S	91.03488	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-1-S	91.03488	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-1-S	91.03488	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-1-S	91.03488	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-1-S	91.03488	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-1-S	91.03488	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-1-S	91.03488	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-1-S	91.03488	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-1-S	91.03488	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-1-S	91.03488	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-1-S	91.03488	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-1-S	91.03488	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-1-S	91.03488	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-1-S	91.03488	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-1-S	91.03488	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-1-S	91.03488	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-1-S	91.03488	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-S	91.03488	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-1-S	91.03488	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-1-S	91.03488	79016	< 5.	UG/KG	5/16/91	Trichloroethene
PF-85-1-S	91.03488	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-1-S	91.03488	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-1-S	91.03488	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-1-S	91.03488	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-1-S	91.03488	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-1-S	91.03488	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-1-S	91.03488	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03488

none

Customer Sample Duplicate Results for Sample # 91.03488

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03488

none

Matrix Spike Results for Sample # 91.03488

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-S	91.03488	71432	59.1	62.	UG/KG	5/16/91		Benzene
PF-85-1-S	91.03488	108907	59.1	52.	UG/KG	5/16/91		Chlorobenzene
PF-85-1-S	91.03488	75343	59.1	56.	UG/KG	5/16/91		1,1-Dichloroethane
PF-85-1-S	91.03488	108883	59.1	55.	UG/KG	5/16/91		Toluene
PF-85-1-S	91.03488	79016	59.1	52.	UG/KG	5/16/91		Trichloroethene

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91,03489

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-S	QA 91.03489	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-S	QA 91.03489	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-S	QA 91.03489	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-S	QA 91.03489	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-S	QA 91.03489	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-S	QA 91.03489	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-S	QA 91.03489	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-S	QA 91.03489	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-S	QA 91.03489	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-S	QA 91.03489	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-S	QA 91.03489	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-S	QA 91.03489	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-S	QA 91.03489	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-S	QA 91.03489	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-S	QA 91.03489	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-S	QA 91.03489	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-S	QA 91.03489	67663	< 5.		UG/KG	5/21/91		Chloroform
PF-85-1-S	QA 91.03489	74873	< 10.		UG/KG	5/21/91		Chloromethane
PF-85-1-S	QA 91.03489	95498	< 5.		UG/KG	5/21/91		o-Chlorotoluene
PF-85-1-S	QA 91.03489	106434	< 5.		UG/KG	5/21/91		p-Chlorotoluene
PF-85-	QA 91.03489	106934	< 5.		UG/KG	5/21/91		1,2-Dibromoethane

PF-85-1-S QA 91.03489	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-S QA 91.03489	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-S QA 91.03489	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-S QA 91.03489	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-S QA 91.03489	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-S QA 91.03489	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-S QA 91.03489	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-S QA 91.03489	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-S QA 91.03489	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-S QA 91.03489	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-S QA 91.03489	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-S QA 91.03489	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-S QA 91.03489	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-S QA 91.03489	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-S QA 91.03489	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-S QA 91.03489	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-S QA 91.03489	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-S QA 91.03489	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-S QA 91.03489	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-S QA 91.03489	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-S QA 91.03489	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-S QA 91.03489	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-S QA 91.03489	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-S QA 91.03489	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-S QA 91.03489	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-S QA 91.03489	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-S QA 91.03489	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-S QA 91.03489	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-S QA 91.03489	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-S QA 91.03489	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-S QA 91.03489	79016	< 5.	UG/KG	5/21/91	Trichloroethene
PF-85-1-S QA 91.03489	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-S QA 91.03489	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-S QA 91.03489	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-S QA 91.03489	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-S QA 91.03489	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-S QA 91.03489	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-S QA 91.03489	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03489

none

Customer Sample Duplicate Results for Sample # 91.03489

none

tentatively identified compounds in customer sample duplicates for sample # 91.03489

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03490

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-5'	91.03490	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-1-5'	91.03490	107028	< 100.		UG/KG	5/16/91	5	Acrolein
PF-85-1-5'	91.03490	107131	< 100.		UG/KG	5/16/91	5	Acrylonitrile
PF-85-1-5'	91.03490	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-1-5'	91.03490	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-1-5'	91.03490	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-1-5'	91.03490	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-1-5'	91.03490	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-1-5'	91.03490	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-1-5'	91.03490	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-1-5'	91.03490	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-1-5'	91.03490	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-1-5'	91.03490	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-1-5'	91.03490	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-1-5'	91.03490	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-1-5'	91.03490	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-1-5'	91.03490	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-1-5'	91.03490	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-1-5'	91.03490	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-1-5'	91.03490	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-1-5'	91.03490	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-1-5'	91.03490	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-1-5'	91.03490	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-1-5'	91.03490	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-1-5'	91.03490	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-1-5'	91.03490	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-1-5'	91.03490	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-1-5'	91.03490	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-1-5'	91.03490	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-1-5'	91.03490	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-1-5'	91.03490	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-1-5'	91.03490	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-1-5'	91.03490	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-1-5'	91.03490	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-1-5'	91.03490	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-1-5'	91.03490	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-1-5'	91.03490	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-1-5'	91.03490	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-1-5'	91.03490	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-1-5'	91.03490	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-1-5'	91.03490	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-1-5'	91.03490	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-1-5'	91.03490	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-1-5'	91.03490	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-1-5'	91.03490	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-1-5'	91.03490	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-1-5'	91.03490	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-1-5'	91.03490	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-1-5'	91.03490	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-1-5'	91.03490	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-1-5'	91.03490	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-1-5'	91.03490	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-1-5'	91.03490	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-1-5'	91.03490	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-1-5'	91.03490	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-5'	91.03490	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-1-5'	91.03490	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-1-5'	91.03490	79016	< 5.	UG/KG	5/16/91	Trichloroethene
PF-85-1-5'	91.03490	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-1-5'	91.03490	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-1-5'	91.03490	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-1-5'	91.03490	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-1-5'	91.03490	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-1-5'	91.03490	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-1-5'	91.03490	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03490

none

Customer Sample Duplicate Results for Sample # 91.03490

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03490

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03491

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-10'	91.03491	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-10'	91.03491	107028	< 100.		UG/KG	5/21/91	5	Acrolein
PF-85-1-10'	91.03491	107131	< 100.		UG/KG	5/21/91	5	Acrylonitrile
PF-85-1-10'	91.03491	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-10'	91.03491	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-10'	91.03491	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-10'	91.03491	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-10'	91.03491	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-10'	91.03491	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-10'	91.03491	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-10'	91.03491	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-10'	91.03491	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-10'	91.03491	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-10'	91.03491	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-10'	91.03491	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-10'	91.03491	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-10'	91.03491	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-10'	91.03491	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-10'	91.03491	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-10'	91.03491	67663	< 5.		UG/KG	5/21/91		Chloroform
PF-85-1-10'	91.03491	74873	< 10.		UG/KG	5/21/91		Chloromethane

PF-85-1-10'	91.03491	95498	< 5.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-10'	91.03491	106434	< 5.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-10'	91.03491	96128	< 10.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-10'	91.03491	106934	< 5.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-10'	91.03491	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-10'	91.03491	95501	< 5.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-10'	91.03491	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-10'	91.03491	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-10'	91.03491	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-10'	91.03491	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-10'	91.03491	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-10'	91.03491	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-10'	91.03491	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-10'	91.03491	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-10'	91.03491	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-10'	91.03491	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-10'	91.03491	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-10'	91.03491	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-10'	91.03491	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-10'	91.03491	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-10'	91.03491	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-10'	91.03491	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-10'	91.03491	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-10'	91.03491	99876	< 5.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-10'	91.03491	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-10'	91.03491	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-10'	91.03491	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-10'	91.03491	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-10'	91.03491	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-10'	91.03491	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-10'	91.03491	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-10'	91.03491	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-10'	91.03491	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-10'	91.03491	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-10'	91.03491	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-10'	91.03491	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-10'	91.03491	79016	< 5.	UG/KG	5/21/91	Trichloroethane
PF-85-1-10'	91.03491	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-10'	91.03491	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-10'	91.03491	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-10'	91.03491	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-10'	91.03491	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-10'	91.03491	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-10'	91.03491	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03491

none

Customer Sample Duplicate Results for Sample # 91.03491

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03491

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03492

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-15'	91.03492	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-15'	91.03492	107028	< 100.		UG/KG	5/21/91		Acrolein
PF-85-1-15'	91.03492	107131	< 100.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-15'	91.03492	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-15'	91.03492	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-15'	91.03492	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-15'	91.03492	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-15'	91.03492	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-15'	91.03492	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-15'	91.03492	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-15'	91.03492	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-15'	91.03492	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-15'	91.03492	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-15'	91.03492	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-15'	91.03492	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-15'	91.03492	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-15'	91.03492	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-15'	91.03492	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-15'	91.03492	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-15'	91.03492	67663	5.5	1.65	UG/KG	5/21/91		Chloroform
PF-85-1-15'	91.03492	74873	< 10.		UG/KG	5/21/91		Chloromethane

PF-85-1-15'	91.03492	95498	< 5.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-15'	91.03492	106434	< 5.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-15'	91.03492	96128	< 10.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-15'	91.03492	106934	< 5.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-15'	91.03492	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-15'	91.03492	95501	< 5.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-15'	91.03492	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-15'	91.03492	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-15'	91.03492	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-15'	91.03492	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-15'	91.03492	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-15'	91.03492	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-15'	91.03492	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-15'	91.03492	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-15'	91.03492	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-15'	91.03492	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-15'	91.03492	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-15'	91.03492	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-15'	91.03492	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-15'	91.03492	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-15'	91.03492	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-15'	91.03492	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-15'	91.03492	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-15'	91.03492	99876	< 5.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-15'	91.03492	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-15'	91.03492	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-15'	91.03492	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-15'	91.03492	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-15'	91.03492	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-15'	91.03492	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-15'	91.03492	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-15'	91.03492	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-15'	91.03492	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-15'	91.03492	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-15'	91.03492	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-15'	91.03492	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-15'	91.03492	79016	< 5.	UG/KG	5/21/91	Trichloroethene
PF-85-1-15'	91.03492	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-15'	91.03492	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-15'	91.03492	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-15'	91.03492	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-15'	91.03492	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-15'	91.03492	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-15'	91.03492	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03492

none

Customer Sample Duplicate Results for Sample # 91.03492

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03492

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 MATRIX: SS ANALYST: Laura Tsiagkouris PROGRAM CODE: M236

OWNER: Philip R. Fresquez GROUP: MSE-8 MAIL-STOP: K490 PHONE: 7-0815

Customer Sample Results, Sample # 91.03493

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-20'	91.03493	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-20'	91.03493	107028	< 100.		UG/KG	5/21/91		Acrolein
PF-85-1-20'	91.03493	107131	< 100.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-20'	91.03493	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-20'	91.03493	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-20'	91.03493	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-20'	91.03493	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-20'	91.03493	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-20'	91.03493	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-20'	91.03493	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-20'	91.03493	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-20'	91.03493	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-20'	91.03493	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-20'	91.03493	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-20'	91.03493	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-20'	91.03493	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-20'	91.03493	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-20'	91.03493	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-20'	91.03493	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-20'	91.03493	67663	< 5.		UG/KG	5/21/91		Chloroform
PF-85	91.03493	74873	< 10.		UG/KG	1/91		Chloromethane

PF-85-1-20'	91.03493	95498	< 5.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-20'	91.03493	106434	< 5.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-20'	91.03493	96128	< 10.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-20'	91.03493	106934	< 5.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-20'	91.03493	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-20'	91.03493	95501	< 5.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-20'	91.03493	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-20'	91.03493	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-20'	91.03493	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-20'	91.03493	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-20'	91.03493	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-20'	91.03493	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-20'	91.03493	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-20'	91.03493	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-20'	91.03493	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-20'	91.03493	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-20'	91.03493	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-20'	91.03493	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-20'	91.03493	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-20'	91.03493	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-20'	91.03493	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-20'	91.03493	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-20'	91.03493	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-20'	91.03493	99876	< 5.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-20'	91.03493	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-20'	91.03493	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-20'	91.03493	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-20'	91.03493	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-20'	91.03493	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-20'	91.03493	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-20'	91.03493	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-20'	91.03493	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-20'	91.03493	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-20'	91.03493	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-20'	91.03493	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-20'	91.03493	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-20'	91.03493	79016	< 5.	UG/KG	5/21/91	Trichloroethene
PF-85-1-20'	91.03493	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-20'	91.03493	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-20'	91.03493	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-20'	91.03493	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-20'	91.03493	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-20'	91.03493	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-20'	91.03493	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03493

none

Customer Sample Duplicate Results for Sample # 91.03493

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03493

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03494

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-25'	91.03494	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-25'	91.03494	107028	< 100.		UG/KG	5/21/91		Acrolein
PF-85-1-25'	91.03494	107131	< 100.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-25'	91.03494	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-25'	91.03494	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-25'	91.03494	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-25'	91.03494	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-25'	91.03494	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-25'	91.03494	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-25'	91.03494	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-25'	91.03494	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-25'	91.03494	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-25'	91.03494	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-25'	91.03494	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-25'	91.03494	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-25'	91.03494	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-25'	91.03494	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-25'	91.03494	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-25'	91.03494	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-25'	91.03494	67663	5.4	1.62	UG/KG	5/21/91		Chloroform
PF-85-	91.03494	74873	< 10.		UG/KG	'91		Chloromethane

PF-85-1-25'	91.03494	95498	< 5.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-25'	91.03494	106434	< 5.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-25'	91.03494	96128	< 10.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-25'	91.03494	106934	< 5.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-25'	91.03494	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-25'	91.03494	95501	< 5.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-25'	91.03494	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-25'	91.03494	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-25'	91.03494	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-25'	91.03494	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-25'	91.03494	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-25'	91.03494	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-25'	91.03494	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-25'	91.03494	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-25'	91.03494	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-25'	91.03494	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-25'	91.03494	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-25'	91.03494	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-25'	91.03494	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-25'	91.03494	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-25'	91.03494	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-25'	91.03494	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-25'	91.03494	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-25'	91.03494	99876	< 5.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-25'	91.03494	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-25'	91.03494	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-25'	91.03494	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-25'	91.03494	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-25'	91.03494	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-25'	91.03494	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-25'	91.03494	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-25'	91.03494	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-25'	91.03494	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-25'	91.03494	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-25'	91.03494	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-25'	91.03494	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-25'	91.03494	79016	< 5.	UG/KG	5/21/91	Trichloroethene
PF-85-1-25'	91.03494	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-25'	91.03494	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-25'	91.03494	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-25'	91.03494	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-25'	91.03494	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-25'	91.03494	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-25'	91.03494	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03494

none

Customer Sample Duplicate Results for Sample # 91.03494

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03494

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03495

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-30'	91.03495	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-30'	91.03495	107028	< 100.		UG/KG	5/21/91		Acrolein
PF-85-1-30'	91.03495	107131	< 100.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-30'	91.03495	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-30'	91.03495	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-30'	91.03495	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-30'	91.03495	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-30'	91.03495	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-30'	91.03495	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-30'	91.03495	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-30'	91.03495	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-30'	91.03495	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-30'	91.03495	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-30'	91.03495	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-30'	91.03495	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-30'	91.03495	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-30'	91.03495	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-30'	91.03495	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-30'	91.03495	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-30'	91.03495	67663	< 5.		UG/KG	5/21/91		Chloroform
PF-85-	91.03495	74873	< 10.		UG/KG	'91		Chloromethane

PF-85-1-30'	91.03495	95498	< 5.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-30'	91.03495	106434	< 5.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-30'	91.03495	96128	< 10.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-30'	91.03495	106934	< 5.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-30'	91.03495	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-30'	91.03495	95501	< 5.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-30'	91.03495	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-30'	91.03495	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-30'	91.03495	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-30'	91.03495	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-30'	91.03495	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-30'	91.03495	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-30'	91.03495	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-30'	91.03495	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-30'	91.03495	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-30'	91.03495	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-30'	91.03495	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-30'	91.03495	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-30'	91.03495	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-30'	91.03495	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-30'	91.03495	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-30'	91.03495	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-30'	91.03495	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-30'	91.03495	99876	< 5.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-30'	91.03495	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-30'	91.03495	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-30'	91.03495	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-30'	91.03495	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-30'	91.03495	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-30'	91.03495	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-30'	91.03495	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-30'	91.03495	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-30'	91.03495	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-30'	91.03495	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-30'	91.03495	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-30'	91.03495	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-30'	91.03495	79016	< 5.	UG/KG	5/21/91	Trichloroethene
PF-85-1-30'	91.03495	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-30'	91.03495	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-30'	91.03495	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-30'	91.03495	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-30'	91.03495	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-30'	91.03495	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-30'	91.03495	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03495

none

Customer Sample Duplicate Results for Sample # 91.03495

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03495

none

HSE-9 ANALYTICAL REPORT

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03496

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-35'	91.03496	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-35'	91.03496	107028	< 100.		UG/KG	5/21/91		Acrolein
PF-85-1-35'	91.03496	107131	< 100.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-35'	91.03496	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-35'	91.03496	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-35'	91.03496	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-35'	91.03496	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-35'	91.03496	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-35'	91.03496	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-35'	91.03496	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-35'	91.03496	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-35'	91.03496	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-35'	91.03496	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-35'	91.03496	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-35'	91.03496	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-35'	91.03496	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-35'	91.03496	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-35'	91.03496	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-35'	91.03496	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-35'	91.03496	67663	< 5.		UG/KG	5/21/91		Chloroform
PF-85-'	91.03496	74873	< 10.		UG/KG	'91		Chloromethane

Tentatively Identified Compounds in Customer Sample # 91.03496

none

Customer Sample Duplicate Results for Sample # 91.03496

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03496

none

HSE-9 ANALYTICAL REPORT *****

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03497

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-40'	91.03497	67641	< 28.		UG/KG	5/21/91		Acetone
PF-85-1-40'	91.03497	107028	< 140.		UG/KG	5/21/91		Acrolein
PF-85-1-40'	91.03497	107131	< 140.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-40'	91.03497	71432	< 7.		UG/KG	5/21/91		Benzene
PF-85-1-40'	91.03497	108861	< 7.		UG/KG	5/21/91		Bromobenzene
PF-85-1-40'	91.03497	74975	< 7.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-40'	91.03497	75274	< 7.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-40'	91.03497	75252	< 7.		UG/KG	5/21/91		Bromoform
PF-85-1-40'	91.03497	74839	< 14.		UG/KG	5/21/91		Bromomethane
PF-85-1-40'	91.03497	78933	< 28.		UG/KG	5/21/91		2-Butanone
PF-85-1-40'	91.03497	104518	< 7.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-40'	91.03497	135988	< 7.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-40'	91.03497	98066	< 7.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-40'	91.03497	75150	< 7.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-40'	91.03497	56235	< 7.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-40'	91.03497	108907	< 7.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-40'	91.03497	124481	< 7.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-40'	91.03497	75003	< 14.		UG/KG	5/21/91		Chloroethane
PF-85-1-40'	91.03497	110758	< 70.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-40'	91.03497	67663	< 7.		UG/KG	5/21/91		Chloroform
PF-85-	91.03497	74873	< 14.		UG/KG	5/21/91		Chloromethane

PF-85-1-40'	91.03497	95498	< 7.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-40'	91.03497	106434	< 7.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-40'	91.03497	96128	< 14.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-40'	91.03497	106934	< 7.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-40'	91.03497	74953	< 7.	UG/KG	5/21/91	Dibromomethane
PF-85-1-40'	91.03497	95501	< 7.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-40'	91.03497	541731	< 7.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-40'	91.03497	106467	< 7.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-40'	91.03497	75718	< 14.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-40'	91.03497	75343	< 7.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-40'	91.03497	107062	< 7.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-40'	91.03497	75354	< 7.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-40'	91.03497	156605	< 7.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-40'	91.03497	156592	< 7.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-40'	91.03497	78875	< 7.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-40'	91.03497	142289	< 7.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-40'	91.03497	594207	< 7.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-40'	91.03497	563586	< 7.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-40'	91.03497	10061015	< 7.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-40'	91.03497	10061026	< 7.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-40'	91.03497	100414	< 7.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-40'	91.03497	591786	< 28.	UG/KG	5/21/91	2-Hexanone
PF-85-1-40'	91.03497	98828	< 7.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-40'	91.03497	99876	< 7.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-40'	91.03497	74884	< 7.	UG/KG	5/21/91	Methyl iodide
PF-85-1-40'	91.03497	108101	< 28.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-40'	91.03497	75092	< 7.	UG/KG	5/21/91	Methylene chloride
PF-85-1-40'	91.03497	103651	< 7.	UG/KG	5/21/91	Propylbenzene
PF-85-1-40'	91.03497	100425	< 7.	UG/KG	5/21/91	Styrene
PF-85-1-40'	91.03497	630206	< 7.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-40'	91.03497	79345	< 7.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-40'	91.03497	127184	< 7.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-40'	91.03497	108883	< 7.	UG/KG	5/21/91	Toluene
PF-85-1-40'	91.03497	76131	< 7.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-40'	91.03497	71556	< 7.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-40'	91.03497	79005	< 7.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-40'	91.03497	79016	< 7.	UG/KG	5/21/91	Trichloroethene
PF-85-1-40'	91.03497	75694	< 7.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-40'	91.03497	96184	< 7.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-40'	91.03497	95636	< 7.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-40'	91.03497	108678	< 7.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-40'	91.03497	108054	< 14.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-40'	91.03497	75014	< 14.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-40'	91.03497	1330207	< 7.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03497

none

Customer Sample Duplicate Results for Sample # 91.03497

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03497

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03498

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/02/91 Date Analyzed: 5/02/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-45'	91.03498	67641	< 20.		UG/KG	5/21/91		Acetone
PF-85-1-45'	91.03498	107028	< 100.		UG/KG	5/21/91		Acrolein
PF-85-1-45'	91.03498	107131	< 100.		UG/KG	5/21/91		Acrylonitrile
PF-85-1-45'	91.03498	71432	< 5.		UG/KG	5/21/91		Benzene
PF-85-1-45'	91.03498	108861	< 5.		UG/KG	5/21/91		Bromobenzene
PF-85-1-45'	91.03498	74975	< 5.		UG/KG	5/21/91		Bromochloromethane
PF-85-1-45'	91.03498	75274	< 5.		UG/KG	5/21/91		Bromodichloromethane
PF-85-1-45'	91.03498	75252	< 5.		UG/KG	5/21/91		Bromoform
PF-85-1-45'	91.03498	74839	< 10.		UG/KG	5/21/91		Bromomethane
PF-85-1-45'	91.03498	78933	< 20.		UG/KG	5/21/91		2-Butanone
PF-85-1-45'	91.03498	104518	< 5.		UG/KG	5/21/91		n-Butylbenzene
PF-85-1-45'	91.03498	135988	< 5.		UG/KG	5/21/91		sec-Butylbenzene
PF-85-1-45'	91.03498	98066	< 5.		UG/KG	5/21/91		tert-Butylbenzene
PF-85-1-45'	91.03498	75150	< 5.		UG/KG	5/21/91		Carbon disulfide
PF-85-1-45'	91.03498	56235	< 5.		UG/KG	5/21/91		Carbon tetrachloride
PF-85-1-45'	91.03498	108907	< 5.		UG/KG	5/21/91		Chlorobenzene
PF-85-1-45'	91.03498	124481	< 5.		UG/KG	5/21/91		Chlorodibromomethane
PF-85-1-45'	91.03498	75003	< 10.		UG/KG	5/21/91		Chloroethane
PF-85-1-45'	91.03498	110758	< 50.		UG/KG	5/21/91		2-Chloroethylvinyl ether
PF-85-1-45'	91.03498	67663	< 5.		UG/KG	5/21/91		Chloroform
PF-85-	91.03498	74873	< 10.		UG/KG	5/21/91		Chloromethane

PF-85-1-45'	91.03498	95498	< 5.	UG/KG	5/21/91	o-Chlorotoluene
PF-85-1-45'	91.03498	106434	< 5.	UG/KG	5/21/91	p-Chlorotoluene
PF-85-1-45'	91.03498	96128	< 10.	UG/KG	5/21/91	1,2-Dibromo-3-chloropropane
PF-85-1-45'	91.03498	106934	< 5.	UG/KG	5/21/91	1,2-Dibromoethane
PF-85-1-45'	91.03498	74953	< 5.	UG/KG	5/21/91	Dibromomethane
PF-85-1-45'	91.03498	95501	< 5.	UG/KG	5/21/91	o-Dichlorobenzene (1,2)
PF-85-1-45'	91.03498	541731	< 5.	UG/KG	5/21/91	m-Dichlorobenzene (1,3)
PF-85-1-45'	91.03498	106467	< 5.	UG/KG	5/21/91	p-Dichlorobenzene (1,4)
PF-85-1-45'	91.03498	75718	< 10.	UG/KG	5/21/91	Dichlorodifluoromethane
PF-85-1-45'	91.03498	75343	< 5.	UG/KG	5/21/91	1,1-Dichloroethane
PF-85-1-45'	91.03498	107062	< 5.	UG/KG	5/21/91	1,2-Dichloroethane
PF-85-1-45'	91.03498	75354	< 5.	UG/KG	5/21/91	1,1-Dichloroethene
PF-85-1-45'	91.03498	156605	< 5.	UG/KG	5/21/91	trans-1,2-Dichloroethene
PF-85-1-45'	91.03498	156592	< 5.	UG/KG	5/21/91	cis-1,2-Dichloroethylene
PF-85-1-45'	91.03498	78875	< 5.	UG/KG	5/21/91	1,2-Dichloropropane
PF-85-1-45'	91.03498	142289	< 5.	UG/KG	5/21/91	1,3-Dichloropropane
PF-85-1-45'	91.03498	594207	< 5.	UG/KG	5/21/91	2,2-Dichloropropane
PF-85-1-45'	91.03498	563586	< 5.	UG/KG	5/21/91	1,1-Dichloropropene
PF-85-1-45'	91.03498	10061015	< 5.	UG/KG	5/21/91	cis-1,3-Dichloropropene
PF-85-1-45'	91.03498	10061026	< 5.	UG/KG	5/21/91	trans-1,3-Dichloropropene
PF-85-1-45'	91.03498	100414	< 5.	UG/KG	5/21/91	Ethylbenzene
PF-85-1-45'	91.03498	591786	< 20.	UG/KG	5/21/91	2-Hexanone
PF-85-1-45'	91.03498	98828	< 5.	UG/KG	5/21/91	Isopropylbenzene
PF-85-1-45'	91.03498	99876	< 5.	UG/KG	5/21/91	4-Isopropyltoluene
PF-85-1-45'	91.03498	74884	< 5.	UG/KG	5/21/91	Methyl iodide
PF-85-1-45'	91.03498	108101	< 20.	UG/KG	5/21/91	4-Methyl-2-pentanone
PF-85-1-45'	91.03498	75092	< 5.	UG/KG	5/21/91	Methylene chloride
PF-85-1-45'	91.03498	103651	< 5.	UG/KG	5/21/91	Propylbenzene
PF-85-1-45'	91.03498	100425	< 5.	UG/KG	5/21/91	Styrene
PF-85-1-45'	91.03498	630206	< 5.	UG/KG	5/21/91	1,1,1,2-Tetrachloroethane
PF-85-1-45'	91.03498	79345	< 5.	UG/KG	5/21/91	1,1,2,2-Tetrachloroethane
PF-85-1-45'	91.03498	127184	< 5.	UG/KG	5/21/91	Tetrachloroethylene
PF-85-1-45'	91.03498	108883	< 5.	UG/KG	5/21/91	Toluene
PF-85-1-45'	91.03498	76131	< 5.	UG/KG	5/21/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-1-45'	91.03498	71556	< 5.	UG/KG	5/21/91	1,1,1-Trichloroethane
PF-85-1-45'	91.03498	79005	< 5.	UG/KG	5/21/91	1,1,2-Trichloroethane
PF-85-1-45'	91.03498	79016	< 5.	UG/KG	5/21/91	Trichloroethane
PF-85-1-45'	91.03498	75694	< 5.	UG/KG	5/21/91	Trichlorofluoromethane
PF-85-1-45'	91.03498	96184	< 5.	UG/KG	5/21/91	1,2,3-Trichloropropane
PF-85-1-45'	91.03498	95636	< 5.	UG/KG	5/21/91	1,2,4-Trimethylbenzene
PF-85-1-45'	91.03498	108678	< 5.	UG/KG	5/21/91	1,3,5-Trimethylbenzene
PF-85-1-45'	91.03498	108054	< 10.	UG/KG	5/21/91	Vinyl acetate
PF-85-1-45'	91.03498	75014	< 10.	UG/KG	5/21/91	Vinyl chloride
PF-85-1-45'	91.03498	1330207	< 5.	UG/KG	5/21/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03498

none

Customer Sample Duplicate Results for Sample # 91.03498

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03498

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03499

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/10/91 Date Analyzed: 5/10/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-S	91.03499	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-S	91.03499	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-S	91.03499	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-S	91.03499	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-S	91.03499	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-S	91.03499	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-S	91.03499	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-S	91.03499	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-S	91.03499	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-S	91.03499	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-S	91.03499	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-S	91.03499	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-S	91.03499	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-S	91.03499	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-S	91.03499	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-S	91.03499	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-S	91.03499	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-S	91.03499	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-S	91.03499	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-S	91.03499	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-2	91.03499	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-S	91.03499	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-S	91.03499	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-S	91.03499	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-S	91.03499	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-S	91.03499	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-S	91.03499	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-S	91.03499	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-S	91.03499	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-S	91.03499	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-S	91.03499	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-S	91.03499	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-S	91.03499	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-S	91.03499	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-S	91.03499	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-S	91.03499	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-S	91.03499	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-S	91.03499	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-S	91.03499	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-S	91.03499	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-S	91.03499	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-S	91.03499	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-S	91.03499	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-S	91.03499	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-S	91.03499	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-S	91.03499	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-S	91.03499	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-S	91.03499	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-S	91.03499	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-S	91.03499	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-S	91.03499	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-S	91.03499	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-S	91.03499	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-S	91.03499	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-S	91.03499	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-S	91.03499	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-S	91.03499	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-S	91.03499	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-S	91.03499	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-S	91.03499	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-S	91.03499	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-S	91.03499	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-S	91.03499	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-S	91.03499	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-S	91.03499	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03499

none

Customer Sample Duplicate Results for Sample # 91.03499

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03499

none

REPORT NUMBER: 10322

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03500

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/10/91 Date Analyzed: 5/10/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-5'	91.03500	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-5'	91.03500	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-5'	91.03500	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-5'	91.03500	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-5'	91.03500	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-5'	91.03500	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-5'	91.03500	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-5'	91.03500	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-5'	91.03500	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-5'	91.03500	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-5'	91.03500	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-5'	91.03500	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-5'	91.03500	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-5'	91.03500	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-5'	91.03500	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-5'	91.03500	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-5'	91.03500	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-5'	91.03500	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-5'	91.03500	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-5'	91.03500	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-	91.03500	74873	< 10.		UG/KG	/91		Chloromethane

PF-85-2	91.03500	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-5'	91.03500	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-5'	91.03500	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-5'	91.03500	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-5'	91.03500	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-5'	91.03500	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-5'	91.03500	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-5'	91.03500	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-5'	91.03500	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-5'	91.03500	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-5'	91.03500	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-5'	91.03500	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-5'	91.03500	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-5'	91.03500	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-5'	91.03500	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-5'	91.03500	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-5'	91.03500	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-5'	91.03500	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-5'	91.03500	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-5'	91.03500	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-5'	91.03500	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-5'	91.03500	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-5'	91.03500	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-5'	91.03500	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-5'	91.03500	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-5'	91.03500	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-5'	91.03500	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-5'	91.03500	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-5'	91.03500	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-5'	91.03500	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-5'	91.03500	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-5'	91.03500	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-5'	91.03500	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-5'	91.03500	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-5'	91.03500	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-5'	91.03500	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-5'	91.03500	79016	< 5.	UG/KG	5/16/91	Trichloroethene
PF-85-2-5'	91.03500	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-5'	91.03500	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-5'	91.03500	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-5'	91.03500	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-5'	91.03500	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-5'	91.03500	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-5'	91.03500	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03500

none

Customer Sample Duplicate Results for Sample # 91.03500

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03500

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03501

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-10'	91.03501	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-10'	91.03501	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-10'	91.03501	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-10'	91.03501	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-10'	91.03501	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-10'	91.03501	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-10'	91.03501	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-10'	91.03501	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-10'	91.03501	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-10'	91.03501	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-10'	91.03501	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-10'	91.03501	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-10'	91.03501	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-10'	91.03501	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-10'	91.03501	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-10'	91.03501	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-10'	91.03501	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-10'	91.03501	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-10'	91.03501	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-10'	91.03501	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85	91.03501	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-10'	91.03501	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-10'	91.03501	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-10'	91.03501	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-10'	91.03501	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-10'	91.03501	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-10'	91.03501	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-10'	91.03501	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-10'	91.03501	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-10'	91.03501	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-10'	91.03501	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-10'	91.03501	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-10'	91.03501	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-10'	91.03501	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-10'	91.03501	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-10'	91.03501	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-10'	91.03501	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-10'	91.03501	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-10'	91.03501	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-10'	91.03501	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-10'	91.03501	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-10'	91.03501	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-10'	91.03501	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-10'	91.03501	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-10'	91.03501	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-10'	91.03501	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-10'	91.03501	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-10'	91.03501	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-10'	91.03501	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-10'	91.03501	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-10'	91.03501	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-10'	91.03501	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-10'	91.03501	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-10'	91.03501	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-10'	91.03501	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-10'	91.03501	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-10'	91.03501	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-10'	91.03501	79016	< 5.	UG/KG	5/16/91	Trichloroethene
PF-85-2-10'	91.03501	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-10'	91.03501	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-10'	91.03501	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-10'	91.03501	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-10'	91.03501	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-10'	91.03501	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-10'	91.03501	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03501

none

Customer Sample Duplicate Results for Sample # 91.03501

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03501

none

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03502

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-15'	91.03502	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-15'	91.03502	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-15'	91.03502	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-15'	91.03502	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-15'	91.03502	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-15'	91.03502	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-15'	91.03502	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-15'	91.03502	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-15'	91.03502	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-15'	91.03502	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-15'	91.03502	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-15'	91.03502	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-15'	91.03502	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-15'	91.03502	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-15'	91.03502	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-15'	91.03502	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-15'	91.03502	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-15'	91.03502	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-15'	91.03502	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-15'	91.03502	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85	91.03502	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-15'	91.03502	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-15'	91.03502	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-15'	91.03502	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-15'	91.03502	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-15'	91.03502	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-15'	91.03502	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-15'	91.03502	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-15'	91.03502	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-15'	91.03502	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-15'	91.03502	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-15'	91.03502	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-15'	91.03502	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-15'	91.03502	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-15'	91.03502	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-15'	91.03502	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-15'	91.03502	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-15'	91.03502	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-15'	91.03502	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropane
PF-85-2-15'	91.03502	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropane
PF-85-2-15'	91.03502	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropane
PF-85-2-15'	91.03502	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-15'	91.03502	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-15'	91.03502	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-15'	91.03502	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-15'	91.03502	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-15'	91.03502	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-15'	91.03502	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-15'	91.03502	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-15'	91.03502	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-15'	91.03502	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-15'	91.03502	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-15'	91.03502	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-15'	91.03502	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-15'	91.03502	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-15'	91.03502	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-15'	91.03502	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-15'	91.03502	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-15'	91.03502	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-15'	91.03502	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-15'	91.03502	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-15'	91.03502	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-15'	91.03502	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-15'	91.03502	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-15'	91.03502	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03502

none

Customer Sample Duplicate Results for Sample # 91.03502

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03502

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03503

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-20'	91.03503	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-20'	91.03503	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-20'	91.03503	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-20'	91.03503	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-20'	91.03503	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-20'	91.03503	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-20'	91.03503	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-20'	91.03503	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-20'	91.03503	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-20'	91.03503	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-20'	91.03503	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-20'	91.03503	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-20'	91.03503	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-20'	91.03503	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-20'	91.03503	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-20'	91.03503	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-20'	91.03503	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-20'	91.03503	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-20'	91.03503	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-20'	91.03503	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85	91.03503	74873	< 10.		UG/KG	5/91		Chloromethane

PF-85-2-20'	91.03503	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-20'	91.03503	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-20'	91.03503	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-20'	91.03503	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-20'	91.03503	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-20'	91.03503	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-20'	91.03503	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-20'	91.03503	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-20'	91.03503	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-20'	91.03503	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-20'	91.03503	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-20'	91.03503	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-20'	91.03503	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-20'	91.03503	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-20'	91.03503	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-20'	91.03503	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-20'	91.03503	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-20'	91.03503	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-20'	91.03503	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-20'	91.03503	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-20'	91.03503	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-20'	91.03503	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-20'	91.03503	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-20'	91.03503	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-20'	91.03503	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-20'	91.03503	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-20'	91.03503	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-20'	91.03503	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-20'	91.03503	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-20'	91.03503	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-20'	91.03503	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-20'	91.03503	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-20'	91.03503	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-20'	91.03503	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-20'	91.03503	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-20'	91.03503	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-20'	91.03503	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-20'	91.03503	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-20'	91.03503	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-20'	91.03503	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-20'	91.03503	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-20'	91.03503	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-20'	91.03503	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-20'	91.03503	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03503

none

Customer Sample Duplicate Results for Sample # 91.03503

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03503

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03504

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-25'	91.03504	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-25'	91.03504	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-25'	91.03504	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-25'	91.03504	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-25'	91.03504	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-25'	91.03504	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-25'	91.03504	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-25'	91.03504	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-25'	91.03504	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-25'	91.03504	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-25'	91.03504	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-25'	91.03504	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-25'	91.03504	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-25'	91.03504	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-25'	91.03504	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-25'	91.03504	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-25'	91.03504	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-25'	91.03504	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-25'	91.03504	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-25'	91.03504	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-	91.03504	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-25'	91.03504	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-25'	91.03504	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-25'	91.03504	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-25'	91.03504	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-25'	91.03504	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-25'	91.03504	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-25'	91.03504	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-25'	91.03504	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-25'	91.03504	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-25'	91.03504	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-25'	91.03504	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-25'	91.03504	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-25'	91.03504	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-25'	91.03504	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-25'	91.03504	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-25'	91.03504	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-25'	91.03504	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-25'	91.03504	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-25'	91.03504	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-25'	91.03504	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-25'	91.03504	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-25'	91.03504	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-25'	91.03504	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-25'	91.03504	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-25'	91.03504	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-25'	91.03504	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-25'	91.03504	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-25'	91.03504	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-25'	91.03504	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-25'	91.03504	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-25'	91.03504	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-25'	91.03504	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-25'	91.03504	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-25'	91.03504	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-25'	91.03504	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-25'	91.03504	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-25'	91.03504	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-25'	91.03504	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-25'	91.03504	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-25'	91.03504	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-25'	91.03504	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-25'	91.03504	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-25'	91.03504	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-25'	91.03504	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03504

none

Customer Sample Duplicate Results for Sample # 91.03504

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03504

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03505

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-30'	91.03505	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-30'	91.03505	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-30'	91.03505	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-30'	91.03505	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-30'	91.03505	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-30'	91.03505	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-30'	91.03505	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-30'	91.03505	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-30'	91.03505	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-30'	91.03505	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-30'	91.03505	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-30'	91.03505	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-30'	91.03505	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-30'	91.03505	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-30'	91.03505	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-30'	91.03505	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-30'	91.03505	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-30'	91.03505	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-30'	91.03505	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-30'	91.03505	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-	91.03505	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-30'	91.03505	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-30'	91.03505	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-30'	91.03505	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-30'	91.03505	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-30'	91.03505	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-30'	91.03505	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-30'	91.03505	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-30'	91.03505	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-30'	91.03505	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-30'	91.03505	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-30'	91.03505	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-30'	91.03505	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-30'	91.03505	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-30'	91.03505	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-30'	91.03505	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-30'	91.03505	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-30'	91.03505	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-30'	91.03505	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-30'	91.03505	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-30'	91.03505	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-30'	91.03505	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-30'	91.03505	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-30'	91.03505	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-30'	91.03505	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-30'	91.03505	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-30'	91.03505	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-30'	91.03505	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-30'	91.03505	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-30'	91.03505	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-30'	91.03505	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-30'	91.03505	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-30'	91.03505	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-30'	91.03505	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-30'	91.03505	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-30'	91.03505	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-30'	91.03505	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-30'	91.03505	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-30'	91.03505	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-30'	91.03505	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-30'	91.03505	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-30'	91.03505	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-30'	91.03505	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-30'	91.03505	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-30'	91.03505	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03505

none

Customer Sample Duplicate Results for Sample # 91.03505

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03505

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03506

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-35'	91.03506	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-35'	91.03506	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-35'	91.03506	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-35'	91.03506	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-35'	91.03506	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-35'	91.03506	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-35'	91.03506	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-35'	91.03506	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-35'	91.03506	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-35'	91.03506	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-35'	91.03506	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-35'	91.03506	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-35'	91.03506	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-35'	91.03506	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-35'	91.03506	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-35'	91.03506	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-35'	91.03506	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-35'	91.03506	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-35'	91.03506	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-35'	91.03506	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-	91.03506	74873	< 10.		UG/KG	/91		Chloromethane

PF-85-2-35'	91.03506	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-35'	91.03506	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-35'	91.03506	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-35'	91.03506	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-35'	91.03506	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-35'	91.03506	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-35'	91.03506	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-35'	91.03506	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-35'	91.03506	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-35'	91.03506	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-35'	91.03506	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-35'	91.03506	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-35'	91.03506	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-35'	91.03506	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-35'	91.03506	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-35'	91.03506	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-35'	91.03506	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-35'	91.03506	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-35'	91.03506	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-35'	91.03506	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-35'	91.03506	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-35'	91.03506	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-35'	91.03506	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-35'	91.03506	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-35'	91.03506	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-35'	91.03506	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-35'	91.03506	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-35'	91.03506	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-35'	91.03506	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-35'	91.03506	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-35'	91.03506	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-35'	91.03506	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-35'	91.03506	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-35'	91.03506	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-35'	91.03506	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-35'	91.03506	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-35'	91.03506	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-35'	91.03506	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-35'	91.03506	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-35'	91.03506	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-35'	91.03506	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-35'	91.03506	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-35'	91.03506	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-35'	91.03506	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03506

none

Customer Sample Duplicate Results for Sample # 91.03506

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03506

none

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03507

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-40'	91.03507	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-40'	91.03507	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-40'	91.03507	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-40'	91.03507	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-40'	91.03507	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-40'	91.03507	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-40'	91.03507	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-40'	91.03507	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-40'	91.03507	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-40'	91.03507	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-40'	91.03507	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-40'	91.03507	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-40'	91.03507	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-40'	91.03507	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-40'	91.03507	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-40'	91.03507	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-40'	91.03507	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-40'	91.03507	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-40'	91.03507	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-40'	91.03507	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-2	91.03507	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-40'	91.03507	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-40'	91.03507	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-40'	91.03507	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-40'	91.03507	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-40'	91.03507	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-40'	91.03507	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-40'	91.03507	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-40'	91.03507	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-40'	91.03507	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-40'	91.03507	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-40'	91.03507	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-40'	91.03507	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-40'	91.03507	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-40'	91.03507	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-40'	91.03507	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-40'	91.03507	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-40'	91.03507	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-40'	91.03507	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-40'	91.03507	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-40'	91.03507	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-40'	91.03507	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-40'	91.03507	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-40'	91.03507	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-40'	91.03507	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-40'	91.03507	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-40'	91.03507	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-40'	91.03507	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-40'	91.03507	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-40'	91.03507	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-40'	91.03507	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-40'	91.03507	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-40'	91.03507	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-40'	91.03507	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-40'	91.03507	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-40'	91.03507	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-40'	91.03507	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-40'	91.03507	79016	< 5.	UG/KG	5/16/91	Trichloroethane
PF-85-2-40'	91.03507	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-40'	91.03507	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-40'	91.03507	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-40'	91.03507	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-40'	91.03507	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-40'	91.03507	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-40'	91.03507	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03507

none

Customer Sample Duplicate Results for Sample # 91.03507

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03507

none

 HSE-9 ANALYTICAL REPORT

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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 # 91.03508

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/10/91 Date Analyzed: 5/10/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-45'	91.03508	67641	< 20.		UG/KG	5/16/91		Acetone
PF-85-2-45'	91.03508	107028	< 100.		UG/KG	5/16/91		Acrolein
PF-85-2-45'	91.03508	107131	< 100.		UG/KG	5/16/91		Acrylonitrile
PF-85-2-45'	91.03508	71432	< 5.		UG/KG	5/16/91		Benzene
PF-85-2-45'	91.03508	108861	< 5.		UG/KG	5/16/91		Bromobenzene
PF-85-2-45'	91.03508	74975	< 5.		UG/KG	5/16/91		Bromochloromethane
PF-85-2-45'	91.03508	75274	< 5.		UG/KG	5/16/91		Bromodichloromethane
PF-85-2-45'	91.03508	75252	< 5.		UG/KG	5/16/91		Bromoform
PF-85-2-45'	91.03508	74839	< 10.		UG/KG	5/16/91		Bromomethane
PF-85-2-45'	91.03508	78933	< 20.		UG/KG	5/16/91		2-Butanone
PF-85-2-45'	91.03508	104518	< 5.		UG/KG	5/16/91		n-Butylbenzene
PF-85-2-45'	91.03508	135988	< 5.		UG/KG	5/16/91		sec-Butylbenzene
PF-85-2-45'	91.03508	98066	< 5.		UG/KG	5/16/91		tert-Butylbenzene
PF-85-2-45'	91.03508	75150	< 5.		UG/KG	5/16/91		Carbon disulfide
PF-85-2-45'	91.03508	56235	< 5.		UG/KG	5/16/91		Carbon tetrachloride
PF-85-2-45'	91.03508	108907	< 5.		UG/KG	5/16/91		Chlorobenzene
PF-85-2-45'	91.03508	124481	< 5.		UG/KG	5/16/91		Chlorodibromomethane
PF-85-2-45'	91.03508	75003	< 10.		UG/KG	5/16/91		Chloroethane
PF-85-2-45'	91.03508	110758	< 50.		UG/KG	5/16/91		2-Chloroethylvinyl ether
PF-85-2-45'	91.03508	67663	< 5.		UG/KG	5/16/91		Chloroform
PF-85-2-	91.03508	74873	< 10.		UG/KG	5/16/91		Chloromethane

PF-85-2-45'	91.03508	95498	< 5.	UG/KG	5/16/91	o-Chlorotoluene
PF-85-2-45'	91.03508	106434	< 5.	UG/KG	5/16/91	p-Chlorotoluene
PF-85-2-45'	91.03508	96128	< 10.	UG/KG	5/16/91	1,2-Dibromo-3-chloropropane
PF-85-2-45'	91.03508	106934	< 5.	UG/KG	5/16/91	1,2-Dibromoethane
PF-85-2-45'	91.03508	74953	< 5.	UG/KG	5/16/91	Dibromomethane
PF-85-2-45'	91.03508	95501	< 5.	UG/KG	5/16/91	o-Dichlorobenzene (1,2)
PF-85-2-45'	91.03508	541731	< 5.	UG/KG	5/16/91	m-Dichlorobenzene (1,3)
PF-85-2-45'	91.03508	106467	< 5.	UG/KG	5/16/91	p-Dichlorobenzene (1,4)
PF-85-2-45'	91.03508	75718	< 10.	UG/KG	5/16/91	Dichlorodifluoromethane
PF-85-2-45'	91.03508	75343	< 5.	UG/KG	5/16/91	1,1-Dichloroethane
PF-85-2-45'	91.03508	107062	< 5.	UG/KG	5/16/91	1,2-Dichloroethane
PF-85-2-45'	91.03508	75354	< 5.	UG/KG	5/16/91	1,1-Dichloroethene
PF-85-2-45'	91.03508	156605	< 5.	UG/KG	5/16/91	trans-1,2-Dichloroethene
PF-85-2-45'	91.03508	156592	< 5.	UG/KG	5/16/91	cis-1,2-Dichloroethylene
PF-85-2-45'	91.03508	78875	< 5.	UG/KG	5/16/91	1,2-Dichloropropane
PF-85-2-45'	91.03508	142289	< 5.	UG/KG	5/16/91	1,3-Dichloropropane
PF-85-2-45'	91.03508	594207	< 5.	UG/KG	5/16/91	2,2-Dichloropropane
PF-85-2-45'	91.03508	563586	< 5.	UG/KG	5/16/91	1,1-Dichloropropene
PF-85-2-45'	91.03508	10061015	< 5.	UG/KG	5/16/91	cis-1,3-Dichloropropene
PF-85-2-45'	91.03508	10061026	< 5.	UG/KG	5/16/91	trans-1,3-Dichloropropene
PF-85-2-45'	91.03508	100414	< 5.	UG/KG	5/16/91	Ethylbenzene
PF-85-2-45'	91.03508	591786	< 20.	UG/KG	5/16/91	2-Hexanone
PF-85-2-45'	91.03508	98828	< 5.	UG/KG	5/16/91	Isopropylbenzene
PF-85-2-45'	91.03508	99876	< 5.	UG/KG	5/16/91	4-Isopropyltoluene
PF-85-2-45'	91.03508	74884	< 5.	UG/KG	5/16/91	Methyl iodide
PF-85-2-45'	91.03508	108101	< 20.	UG/KG	5/16/91	4-Methyl-2-pentanone
PF-85-2-45'	91.03508	75092	< 5.	UG/KG	5/16/91	Methylene chloride
PF-85-2-45'	91.03508	103651	< 5.	UG/KG	5/16/91	Propylbenzene
PF-85-2-45'	91.03508	100425	< 5.	UG/KG	5/16/91	Styrene
PF-85-2-45'	91.03508	630206	< 5.	UG/KG	5/16/91	1,1,1,2-Tetrachloroethane
PF-85-2-45'	91.03508	79345	< 5.	UG/KG	5/16/91	1,1,2,2-Tetrachloroethane
PF-85-2-45'	91.03508	127184	< 5.	UG/KG	5/16/91	Tetrachloroethylene
PF-85-2-45'	91.03508	108883	< 5.	UG/KG	5/16/91	Toluene
PF-85-2-45'	91.03508	76131	< 5.	UG/KG	5/16/91	1,1,2-Trichloro-1,2,2-trifluoroethane
PF-85-2-45'	91.03508	71556	< 5.	UG/KG	5/16/91	1,1,1-Trichloroethane
PF-85-2-45'	91.03508	79005	< 5.	UG/KG	5/16/91	1,1,2-Trichloroethane
PF-85-2-45'	91.03508	79016	< 5.	UG/KG	5/16/91	Trichloroethene
PF-85-2-45'	91.03508	75694	< 5.	UG/KG	5/16/91	Trichlorofluoromethane
PF-85-2-45'	91.03508	96184	< 5.	UG/KG	5/16/91	1,2,3-Trichloropropane
PF-85-2-45'	91.03508	95636	< 5.	UG/KG	5/16/91	1,2,4-Trimethylbenzene
PF-85-2-45'	91.03508	108678	< 5.	UG/KG	5/16/91	1,3,5-Trimethylbenzene
PF-85-2-45'	91.03508	108054	< 10.	UG/KG	5/16/91	Vinyl acetate
PF-85-2-45'	91.03508	75014	< 10.	UG/KG	5/16/91	Vinyl chloride
PF-85-2-45'	91.03508	1330207	< 5.	UG/KG	5/16/91	Mixed-Xylenes (o ± m ± p)

Tentatively Identified Compounds in Customer Sample # 91.03508

none

Customer Sample Duplicate Results for Sample # 91.03508

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03508

none

Matrix Spike Duplicate Results for Sample # 91.03508

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	AMOUNT SPIKED	AMOUNT RECOVERED	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-45'	91.03508	71432	53.53	48.	UG/KG	5/16/91		Benzene
PF-85-2-45'	91.03508	108907	53.53	45.	UG/KG	5/16/91		Chlorobenzene
PF-85-2-45'	91.03508	75343	53.53	33.	UG/KG	5/16/91		1,1-Dichloroethane
PF-85-2-45'	91.03508	108883	53.53	44.	UG/KG	5/16/91		Toluene
PF-85-2-45'	91.03508	79016	53.53	51.	UG/KG	5/16/91		Trichloroethene

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

Prepared by: SCB on 21-May-1991

EPA VOLATILES

REQUEST NUMBER: 11448 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	91.03510	67641	< 20.		UG/KG	0.0		5/21/91	UNDER CONTROL	Acetone
00.20227	91.03510	107028	< 100.		UG/KG	0.0		5/21/91	UNDER CONTROL	Acrolein
00.20227	91.03510	107131	< 100.		UG/KG	0.0		5/21/91	UNDER CONTROL	Acrylonitrile
00.20227	91.03510	71432	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Benzene
00.20227	91.03510	108861	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Bromobenzene
00.20227	91.03510	74975	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Bromochloromethane
00.20227	91.03510	75274	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Bromodichloromethane
00.20227	91.03510	75252	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Bromoform
00.20227	91.03510	74839	< 10.		UG/KG	0.0		5/21/91	UNDER CONTROL	Bromomethane
00.20227	91.03510	78933	< 20.		UG/KG	0.0		5/21/91	UNDER CONTROL	2-Butanone
00.20227	91.03510	104518	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	n-Butylbenzene
00.20227	91.03510	135988	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	sec-Butylbenzene
00.20227	91.03510	98066	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	tert-Butylbenzene
00.20227	91.03510	75150	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Carbon disulfide
00.20227	91.03510	56235	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Carbon tetrachloride
00.20227	91.03510	108907	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Chlorobenzene
00.20227	91.03510	124481	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Chlorodibromomethane
00.20227	91.03510	75003	< 10.		UG/KG	0.0		5/21/91	UNDER CONTROL	Chloroethane
00.20227	91.03510	110758	< 50.		UG/KG	0.0		5/21/91	UNDER CONTROL	2-Chloroethylvinyl ether
00.20227	91.03510	67663	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Chloroform
00.20227	91.03510	74873	< 10.		UG/KG	0.0		5/21/91	UNDER CONTROL	Chloromethane
00.20227	91.03510	95498	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	o-Chlorotoluene
00.20227	91.03510	106434	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	p-Chlorotoluene
00.20227	91.03510	96128	< 10.		UG/KG	0.0		5/21/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.20227	91.03510	106934	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	1,2-Dibromoethane
00.20227	91.03510	74953	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	Dibromomethane
00.20227	91.03510	95501	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20227	91.03510	541731	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	91.03510	106467	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20227	91.03510	75718	< 10.		UG/KG	0.0		5/21/91	UNDER CONTROL	Dichlorodifluoromethane
00.20227	91.03510	75343	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	1,1-Dichloroethane
00.20227	91.03510	107062	< 5.		UG/KG	0.0		5/21/91	UNDER CONTROL	1,2-Dichloroethane

00.28	91.03510	75354	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1-Dichloroethene
00.20227	91.03510	156605	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	trans-1,2-Dichloroethene
00.20227	91.03510	156592	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20227	91.03510	78875	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,2-Dichloropropane
00.20227	91.03510	142289	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,3-Dichloropropane
00.20227	91.03510	594207	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	2,2-Dichloropropane
00.20227	91.03510	563586	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1-Dichloropropene
00.20227	91.03510	10061015	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	cis-1,3-Dichloropropene
00.20227	91.03510	10061026	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	trans-1,3-Dichloropropene
00.20227	91.03510	100414	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Ethylbenzene
00.20227	91.03510	591786	< 20.	UG/KG	0.0	5/21/91	UNDER CONTROL	2-Hexanone
00.20227	91.03510	98828	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Isopropylbenzene
00.20227	91.03510	99876	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	4-Isopropyltoluene
00.20227	91.03510	74884	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Methyl iodide
00.20227	91.03510	108101	< 20.	UG/KG	0.0	5/21/91	UNDER CONTROL	4-Methyl-2-pentanone
00.20227	91.03510	75092	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Methylene chloride
00.20227	91.03510	103651	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Propylbenzene
00.20227	91.03510	100425	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Styrene
00.20227	91.03510	630206	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20227	91.03510	79345	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20227	91.03510	127184	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Tetrachloroethylene
00.20227	91.03510	108883	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Toluene
00.20227	91.03510	76131	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroet
00.20227	91.03510	71556	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1,1-Trichloroethane
00.20227	91.03510	79005	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,1,2-Trichloroethane
00.20227	91.03510	79016	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Trichloroethene
00.20227	91.03510	75694	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Trichlorofluoromethane
00.20227	91.03510	96184	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,2,3-Trichloropropene
00.20227	91.03510	95636	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20227	91.03510	108678	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20227	91.03510	108054	< 10.	UG/KG	0.0	5/21/91	UNDER CONTROL	Vinyl acetate
00.20227	91.03510	75014	< 10.	UG/KG	0.0	5/21/91	UNDER CONTROL	Vinyl chloride
00.20227	91.03510	1330207	< 5.	UG/KG	0.0	5/21/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)
00.20227	91.03511	67641	< 20.	UG/KG	0.0	5/16/91	UNDER CONTROL	Acetone
00.20227	91.03511	107028	< 100.	UG/KG	0.0	5/16/91	UNDER CONTROL	Acrolein
00.20227	91.03511	107131	< 100.	UG/KG	0.0	5/16/91	UNDER CONTROL	Acrylonitrile
00.20227	91.03511	71432	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Benzene
00.20227	91.03511	108861	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromobenzene
00.20227	91.03511	74975	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromochloromethane
00.20227	91.03511	75274	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromodichloromethane
00.20227	91.03511	75252	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromoform
00.20227	91.03511	74839	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromomethane
00.20227	91.03511	78933	< 20.	UG/KG	0.0	5/16/91	UNDER CONTROL	2-Butanone
00.20227	91.03511	104518	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	n-Butylbenzene
00.202	91.03511	135988	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	sec-Butylbenzene

00.2022	91.03511	98066	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	tert-Butylbenzene
00.20227	91.03511	75150	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Carbon disulfide
00.20227	91.03511	56235	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Carbon tetrachloride
00.20227	91.03511	108907	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Chlorobenzene
00.20227	91.03511	124481	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Chlorodibromomethane
00.20227	91.03511	75003	< 10.		UG/KG	0.0	5/16/91	UNDER CONTROL	Chloroethane
00.20227	91.03511	110758	< 50.		UG/KG	0.0	5/16/91	UNDER CONTROL	2-Chloroethylvinyl ether
00.20227	91.03511	67663	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Chloroform
00.20227	91.03511	74873	< 10.		UG/KG	0.0	5/16/91	UNDER CONTROL	Chloromethane
00.20227	91.03511	95498	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	o-Chlorotoluene
00.20227	91.03511	106434	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	p-Chlorotoluene
00.20227	91.03511	96128	< 10.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.20227	91.03511	106934	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dibromoethane
00.20227	91.03511	74953	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Dibromomethane
00.20227	91.03511	95501	5.4	1.62	UG/KG	0.0	5/16/91	OUT OF CONTROL	o-Dichlorobenzene (1,2)
00.20227	91.03511	541731	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	91.03511	106467	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20227	91.03511	75718	< 10.		UG/KG	0.0	5/16/91	UNDER CONTROL	Dichlorodifluoromethane
00.20227	91.03511	75343	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1-Dichloroethane
00.20227	91.03511	107062	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dichloroethane
00.20227	91.03511	75354	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1-Dichloroethene
00.20227	91.03511	156605	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	trans-1,2-Dichloroethene
00.20227	91.03511	156592	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20227	91.03511	78875	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dichloropropene
00.20227	91.03511	142289	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,3-Dichloropropene
00.20227	91.03511	594207	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	2,2-Dichloropropene
00.20227	91.03511	563586	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1-Dichloropropene
00.20227	91.03511	10061015	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	cis-1,3-Dichloropropene
00.20227	91.03511	10061026	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	trans-1,3-Dichloropropene
00.20227	91.03511	100414	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Ethylbenzene
00.20227	91.03511	591786	< 20.		UG/KG	0.0	5/16/91	UNDER CONTROL	2-Hexanone
00.20227	91.03511	98828	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Isopropylbenzene
00.20227	91.03511	99876	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	4-Isopropyltoluene
00.20227	91.03511	74884	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Methyl iodide
00.20227	91.03511	108101	< 20.		UG/KG	0.0	5/16/91	UNDER CONTROL	4-Methyl-2-pentanone
00.20227	91.03511	75092	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Methylene chloride
00.20227	91.03511	103651	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Propylbenzene
00.20227	91.03511	100425	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Styrene
00.20227	91.03511	630206	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20227	91.03511	79345	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20227	91.03511	127184	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Tetrachloroethylene
00.20227	91.03511	108883	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	Toluene
00.20227	91.03511	76131	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroet
00.20227	91.03511	71556	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,1-Trichloroethane
00.202	91.03511	79005	< 5.		UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,2-Trichloroet

00.20227	91.03511	79016	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Trichloroethene
00.20227	91.03511	75694	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Trichlorofluoromethane
00.20227	91.03511	96184	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2,3-Trichloropropane
00.20227	91.03511	95636	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20227	91.03511	108678	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20227	91.03511	108054	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Vinyl acetate
00.20227	91.03511	75014	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Vinyl chloride
00.20227	91.03511	1330207	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)
00.20227	91.03528	67641	< 20.	UG/KG	0.0	5/16/91	UNDER CONTROL	Acetone
00.20227	91.03528	107028	< 100.	UG/KG	0.0	5/16/91	UNDER CONTROL	Acrolein
00.20227	91.03528	107131	< 100.	UG/KG	0.0	5/16/91	UNDER CONTROL	Acrylonitrile
00.20227	91.03528	71432	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Benzene
00.20227	91.03528	108861	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromobenzene
00.20227	91.03528	74975	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromochloromethane
00.20227	91.03528	75274	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromodichloromethane
00.20227	91.03528	75252	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromoform
00.20227	91.03528	74839	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Bromomethane
00.20227	91.03528	78933	< 20.	UG/KG	0.0	5/16/91	UNDER CONTROL	2-Butanone
00.20227	91.03528	104518	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	n-Butylbenzene
00.20227	91.03528	135988	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	sec-Butylbenzene
00.20227	91.03528	98066	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	tert-Butylbenzene
00.20227	91.03528	75150	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Carbon disulfide
00.20227	91.03528	56235	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Carbon tetrachloride
00.20227	91.03528	108907	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Chlorobenzene
00.20227	91.03528	124481	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Chlorodibromomethane
00.20227	91.03528	75003	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Chloroethane
00.20227	91.03528	110758	< 50.	UG/KG	0.0	5/16/91	UNDER CONTROL	2-Chloroethylvinyl ether
00.20227	91.03528	67663	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Chloroform
00.20227	91.03528	74873	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Chloromethane
00.20227	91.03528	95498	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	o-Chlorotoluene
00.20227	91.03528	106434	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	p-Chlorotoluene
00.20227	91.03528	96128	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
00.20227	91.03528	106934	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dibromoethane
00.20227	91.03528	74953	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Dibromomethane
00.20227	91.03528	95501	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20227	91.03528	541731	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	91.03528	106467	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
00.20227	91.03528	75718	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Dichlorodifluoromethane
00.20227	91.03528	75343	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1-Dichloroethane
00.20227	91.03528	107062	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dichloroethane
00.20227	91.03528	75354	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1-Dichloroethene
00.20227	91.03528	156605	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	trans-1,2-Dichloroethene
00.20227	91.03528	156592	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	cis-1,2-Dichloroethylene
00.20227	91.03528	78875	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2-Dichloropropane
00.20227	91.03528	142289	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,3-Dichloropropane

00.20227	91.03528	594207	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	2,2-Dichloropropane
00.20227	91.03528	563586	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1-Dichloropropene
00.20227	91.03528	10061015	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	cis-1,3-Dichloropropene
00.20227	91.03528	10061026	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	trans-1,3-Dichloropropene
00.20227	91.03528	100414	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Ethylbenzene
00.20227	91.03528	591786	< 20.	UG/KG	0.0	5/16/91	UNDER CONTROL	2-Hexanone
00.20227	91.03528	98828	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Isopropylbenzene
00.20227	91.03528	99876	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	4-Isopropyltoluene
00.20227	91.03528	74884	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Methyl iodide
00.20227	91.03528	108101	< 20.	UG/KG	0.0	5/16/91	UNDER CONTROL	4-Methyl-2-pentanone
00.20227	91.03528	75092	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Methylene chloride
00.20227	91.03528	103651	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Propylbenzene
00.20227	91.03528	100425	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Styrene
00.20227	91.03528	630206	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
00.20227	91.03528	79345	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
00.20227	91.03528	127184	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Tetrachloroethylene
00.20227	91.03528	108883	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Toluene
00.20227	91.03528	76131	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
00.20227	91.03528	71556	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,1-Trichloroethane
00.20227	91.03528	79005	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,1,2-Trichloroethane
00.20227	91.03528	79016	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Trichloroethene
00.20227	91.03528	75694	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	Trichlorofluoromethane
00.20227	91.03528	96184	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2,3-Trichloropropane
00.20227	91.03528	95636	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,2,4-Trimethylbenzene
00.20227	91.03528	108678	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,3,5-Trimethylbenzene
00.20227	91.03528	108054	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Vinyl acetate
00.20227	91.03528	75014	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Vinyl chloride
00.20227	91.03528	1330207	< 5.	UG/KG	0.0	5/16/91	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 # 91.03509

Date Collected: 4/29/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 5/09/91

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED	CERTIFIED	COMPLETION DATE	COMMENT	COMPOUND-NAME
					VALUE	UNCERTAINTY			
91.03509	67641	49.	14.7	UG/KG	130.	13.	5/16/91	OUT OF CONTROL	Acetone
91.03509	107028	< 100.		UG/KG	0.0		5/16/91	UNDER CONTROL	Acrolein
91.03509	107131	< 100.		UG/KG	0.0		5/16/91	UNDER CONTROL	Acrylonitrile
91.03509	71432	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Benzene
91.03509	108861	75.	22.5	UG/KG	130.	13.	5/16/91	WARNING 2-3 SIG	Bromobenzene
91.03509	74975	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromochloromethane
91.03509	75274	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromodichloromethane
91.03509	75252	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromoform
91.03509	74839	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromomethane
91.03509	78933	< 20.		UG/KG	0.0		5/16/91	UNDER CONTROL	2-Butanone
91.03509	104518	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	n-Butylbenzene
91.03509	135988	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	sec-Butylbenzene
91.03509	98066	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	tert-Butylbenzene
91.03509	75150	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Carbon disulfide
91.03509	56235	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Carbon tetrachloride
91.03509	108907	110.	33.	UG/KG	120.	12.	5/16/91	UNDER CONTROL	Chlorobenzene
91.03509	124481	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chlorodibromomethane
91.03509	75003	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chloroethane
91.03509	110758	< 50.		UG/KG	0.0		5/16/91	UNDER CONTROL	2-Chloroethylvinyl ether
91.03509	67663	160.	48.	UG/KG	140.	14.	5/16/91	UNDER CONTROL	Chloroform
91.03509	74873	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chloromethane
91.03509	95498	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	o-Chlorotoluene
91.03509	106434	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	p-Chlorotoluene
91.03509	96128	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
91.03509	106934	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dibromoethane
91.03509	74953	150.	45.	UG/KG	150.	15.	5/16/91	UNDER CONTROL	Dibromomethane
91.03509	95501	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
91.03509	541731	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
91.03509	106467	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
91.03509	75718	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Dichlorodifluoromethane
91.03509	75343	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1-Dichloroethane
91.03509	107062	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dichloroethane
91.03509	75354	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1-Dichloroethene
91.03509	156605	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	trans-1,2-Dichloroethene
91.03509	156592	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	cis-1,2-Dichloroethylene
91.03509	78875	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dichloropropane
91.03509	142289	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,3-Dichloropropane
91.03509	594207	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	2,2-Dichloropropane
91.03509	563586	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1-Dichloropropene
91.03509	10061015	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	cis-1,3-Dichloropropene

91.035	10061026	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	trans-1,3-Dichloropropane
91.03509	100414	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Ethylbenzene
91.03509	591786	< 20.		UG/KG	0.0		5/16/91	UNDER CONTROL	2-Hexanone
91.03509	98828	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Isopropylbenzene
91.03509	99876	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	4-Isopropyltoluene
91.03509	74884	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Methyl iodide
91.03509	108101	< 20.		UG/KG	0.0		5/16/91	UNDER CONTROL	4-Methyl-2-pentanone
91.03509	75092	8.5	2.55	UG/KG	130.	13.	5/16/91	OUT OF CONTROL	Methylene chloride
91.03509	103651	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Propylbenzene
91.03509	100425	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Styrene
91.03509	630206	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
91.03509	79345	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
91.03509	127184	130.	39.	UG/KG	130.	13.	5/16/91	UNDER CONTROL	Tetrachloroethylene
91.03509	108883	100.	30.	UG/KG	130.	13.	5/16/91	UNDER CONTROL	Toluene
91.03509	76131	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
91.03509	71556	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,1-Trichloroethane
91.03509	79005	110.	33.	UG/KG	120.	12.	5/16/91	UNDER CONTROL	1,1,2-Trichloroethane
91.03509	79016	140.	42.	UG/KG	150.	15.	5/16/91	UNDER CONTROL	Trichloroethene
91.03509	75694	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Trichlorofluoromethane
91.03509	96184	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2,3-Trichloropropane
91.03509	95636	88.	26.4	UG/KG	150.	15.	5/16/91	WARNING 2-3 SIG	1,2,4-Trimethylbenzene
91.03509	108678	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,3,5-Trimethylbenzene
91.03509	108054	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Vinyl acetate
91.03509	75014	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Vinyl chloride
91.03509	1330207	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Mixed-Xylenes (o ± m ± p)

Blind QC Results, Sample # 91.03527

Date Collected: 4/29/91 Date Received: 4/29/91 Date Extracted: 5/10/91 Date Analyzed: 5/10/91

91.03527	67641	41.	12.3	UG/KG	110.	11.	5/16/91	OUT OF CONTROL	Acetone
91.03527	107028	< 100.		UG/KG	0.0		5/16/91	UNDER CONTROL	Acrolein
91.03527	107131	< 100.		UG/KG	0.0		5/16/91	UNDER CONTROL	Acrylonitrile
91.03527	71432	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Benzene
91.03527	108861	81.	24.3	UG/KG	110.	11.	5/16/91	UNDER CONTROL	Bromobenzene
91.03527	74975	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromochloromethane
91.03527	75274	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromodichloromethane
91.03527	75252	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromoform
91.03527	74839	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Bromomethane
91.03527	78933	< 20.		UG/KG	0.0		5/16/91	UNDER CONTROL	2-Butanone
91.03527	104518	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	n-Butylbenzene
91.03527	135988	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	sec-Butylbenzene
91.03527	98066	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	tert-Butylbenzene
91.03527	75150	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Carbon disulfide
91.03527	56235	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Carbon tetrachloride
91.035	108907	86.	25.8	UG/KG	100.	10.	5/16/91	UNDER CONTROL	Chlorobenzene

91.03527	124481	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chlorodibromomethane
91.03527	75003	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chloroethane
91.03527	110758	< 50.		UG/KG	0.0		5/16/91	UNDER CONTROL	2-Chloroethylvinyl ether
91.03527	67663	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chloroform
91.03527	74873	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Chloromethane
91.03527	95498	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	o-Chlorotoluene
91.03527	106434	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	p-Chlorotoluene
91.03527	96128	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dibromo-3-chloropropane
91.03527	106934	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dibromoethane
91.03527	74953	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Dibromomethane
91.03527	95501	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
91.03527	541731	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
91.03527	106467	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
91.03527	75718	< 10.		UG/KG	0.0		5/16/91	UNDER CONTROL	Dichlorodifluoromethane
91.03527	75343	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1-Dichloroethane
91.03527	107062	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dichloroethane
91.03527	75354	28.	8.4	UG/KG	0.0		5/16/91	OUT OF CONTROL	1,1-Dichloroethene
91.03527	156605	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	trans-1,2-Dichloroethene
91.03527	156592	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	cis-1,2-Dichloroethylene
91.03527	78875	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2-Dichloropropane
91.03527	142289	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,3-Dichloropropane
91.03527	594207	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	2,2-Dichloropropane
91.03527	563586	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1-Dichloropropene
91.03527	10061015	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	cis-1,3-Dichloropropene
91.03527	10061026	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	trans-1,3-Dichloropropene
91.03527	100414	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Ethylbenzene
91.03527	591786	< 20.		UG/KG	0.0		5/16/91	UNDER CONTROL	2-Hexanone
91.03527	98828	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Isopropylbenzene
91.03527	99876	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	4-Isopropyltoluene
91.03527	74884	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Methyl iodide
91.03527	108101	< 20.		UG/KG	0.0		5/16/91	UNDER CONTROL	4-Methyl-2-pentanone
91.03527	75092	8.3	2.49	UG/KG	100.	10.	5/16/91	OUT OF CONTROL	Methylene chloride
91.03527	103651	57.	17.1	UG/KG	130.	13.	5/16/91	OUT OF CONTROL	Propylbenzene
91.03527	100425	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Styrene
91.03527	630206	100.	30.	UG/KG	120.	12.	5/16/91	UNDER CONTROL	1,1,1,2-Tetrachloroethane
91.03527	79345	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,2,2-Tetrachloroethane
91.03527	127184	100.	30.	UG/KG	110.	11.	5/16/91	UNDER CONTROL	Tetrachloroethylene
91.03527	108883	84.	25.2	UG/KG	110.	11.	5/16/91	UNDER CONTROL	Toluene
91.03527	76131	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,2-Trichloro-1,2,2-trifluoroethane
91.03527	71556	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,1,1-Trichloroethane
91.03527	79005	89.	26.7	UG/KG	99.	10.	5/16/91	UNDER CONTROL	1,1,2-Trichloroethane
91.03527	79016	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Trichloroethene
91.03527	75694	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	Trichlorofluoromethane
91.03527	96184	99.	29.7	UG/KG	120.	12.	5/16/91	UNDER CONTROL	1,2,3-Trichloropropane
91.035	95636	< 5.		UG/KG	0.0		5/16/91	UNDER CONTROL	1,2,4-Trimethylbenzene

91.03527	108678	< 5.	UG/KG	0.0	5/16/91	UNDER CONTROL	1,3,5-Trimethylbenzene
91.03527	108054	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Vinyl acetate
91.03527	75014	< 10.	UG/KG	0.0	5/16/91	UNDER CONTROL	Vinyl chloride
91.03527	1330207	110.	33. UG/KG	140.	14. 5/16/91	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
91.03488	X	107.98	87.64	68.64	16-May-1991
91.03488	X	106.88	91.4	71.3	16-May-1991
91.03489	X	102.92	92.34	136.7	21-May-1991
91.03490	X	91.28	101.24	62.32	16-May-1991
91.03491	X	93.42	95.28	107.82	21-May-1991
91.03492	X	101.94	94.32	124.62	21-May-1991
91.03493	X	98.14	94.4	107.62	21-May-1991
91.03494	X	90.34	95.64	103.52	21-May-1991
91.03495	X	91.5	100.86	105.2	21-May-1991
91.03496	X	95.62	98.38	106.02	21-May-1991
91.03497	X	89.78	95.58	104.52	21-May-1991
91.03498	X	97.32	105.68	107.48	21-May-1991
91.03499	X	100.44	89.2	89.08	16-May-1991
91.03500	X	87.64	101.18	71.44	16-May-1991
91.03501	X	86.82	102.44	53.54	16-May-1991
91.03502	X	87.44	103.14	56.6	16-May-1991
91.03503	X	88.94	95.34	54.38	16-May-1991
91.03504	X	86.	96.42	51.9	16-May-1991
91.03505	X	87.34	99.34	51.62	16-May-1991
91.03506	X	85.12	100.74	50.72	16-May-1991
91.03507	X	86.22	95.76	52.58	16-May-1991
91.03508	X	89.42	102.68	71.26	16-May-1991
91.03508	X	91.34	94.16	68.54	16-May-1991
91.03509	X	102.88	96.12	51.88	16-May-1991
91.03510	X	91.82	93.74	99.72	21-May-1991
91.03511	X	98.06	94.92	50.56	16-May-1991
91.03527	X	86.3	106.08	74.86	16-May-1991
91.03528	X	89.46	97.62	81.16	16-May-1991

64070

18
28

EPA Limits:

Water	%	76 - 114	88 - 110	86 - 115
Soil		70 - 121	81 - 117	74 - 121

Soil % 70 - 121 81 - 117 74 - 121

REPORT NUMBER: 10322

L. Bighowis
Analyst

5-22-91
Date

Jan Bell
Reviewer

5-21-91
Date

Chantal... *mag*
Section Leader QA Officer

5-31-91
Date

6/4/91
Date

The control status of the preceding 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.

SEMIVOLATILE ORGANIC ANALYSES

HSE-9 SEMIVOLATILE ORGANIC ANALYSIS
SUMMARY OF ANALYTICAL RESULTS

To: Phil Fresquez
From: Martin Koby

Request Number: 11448
Matrix: Soil
Summary Date: 7/1/91

Sample ID	Target Compounds Found	Amount (ug/Kg)	LOQ (ug/Kg)	TICs (Y/N)
91.03488	None	NA	1300	N
91.03489	None	NA	330	N
91.03490	None	NA	330	N
91.03491	None	NA	330	N
91.03492	None	NA	330	N
91.03493	None	NA	330	N
91.03494	None	NA	330	N
91.03495	None	NA	330	N
91.03496	None	NA	330	N
91.03497	None	NA	330	N
91.03498	None	NA	330	N
91.03499	None	NA	660	N
91.03500*	None	NA	330	N
91.03501*	None	NA	330	N
91.03502*	None	NA	330	N
91.03503*	None	NA	330	N
91.03504*	None	NA	330	N
91.03505*	None	NA	330	N
91.03506*	None	NA	330	N
91.03507*	None	NA	330	N
91.03508*	None	NA	330	N

(*) - GC/MS not calibrated to EPA specifications

The samples were extracted by mixing approximately 30 g of sample with 60 g sodium sulfate and sonicating with 100 ml of 1:1 acetone in methylene chloride. This was repeated two more times. Sample extracts were filtered, combined, and concentrated to a 1.0 ml final volume. 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.

LM
7/5/91

LM
7/3/91

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY AND ENVIRONMENT DIVISION
HSE-9
SURROGATE RECOVERIES FOR SEMI-VOLATILES
IN SOIL TYPE MATRICES

REQUEST #: 11448
NUMBER OF SAMPLES: 22
MATRIX: S
ANALYST: MWK
Date: 07/01/91

SURROGATE RECOVERIES

SURROGATE
RECOVERIES IN PERCENT (%)

SAMPLE NUMBERS	TYPE	2-FLUORO- PHENOL	PHENOL (D6)	NITRO- BENZENE (D5)	2-FLUORO- BIPHENYL	2,4,6- TRIBROMO- PHENOL	TERPHENYL (D14)
1	B91.03513 BLANK ✓	38	75	30	68	85	81
2	S91.03488 SAMPLE ✓	5 *	24	79	109	33	91
3	S91.03489 SAMPLE ✓	59	74	57	72	60	74
4	S91.03490 SAMPLE ✓	63	77	69	73	53	81
5	S91.03491 SAMPLE ✓	2 *	4 *	2 *	17 *	34	76
6	S91.03492 SAMPLE ✓	55	74	68	79	37	84
7	S91.03493 SAMPLE ✓	18 *	49	60	71	32	89
8	S91.03494 SAMPLE ✓	25	56	66	75	32	84
9	S91.03495 SAMPLE ✓	61	74	61	70	67	81
10	S91.03496 SAMPLE ✓	58	69	59	70	67	75
11	S91.03497 SAMPLE ✓	57	67	61	72	62	75
12	S91.03498 SAMPLE ✓	48	66	64	74	60	78
13	S91.03499 SAMPLE ✓	0 *	24 *	68	96	38	80
14	S91.03500 SAMPLE ✓	65	89	67	75	89	76
15	S91.03501 SAMPLE ✓	41	76	66	80	57	92
16	S91.03502 SAMPLE ✓	16 *	50	55	69	43	84
17	S91.03503 SAMPLE ✓	5 *	23 *	43	66	34	86
18	S91.03504 SAMPLE ✓	7 *	28	54	79	35	82
19	S91.03505 SAMPLE ✓	4 *	16 *	63	104	28	85
20	S91.03506 SAMPLE ✓	3 *	14 *	32	93	33	91
21	S91.03507 SAMPLE ✓	5 *	25	58	125 *	30	94
22	S91.03508 SAMPLE ✓	6 *	27	61	137 *	31	98
Average % Surrogate Recovery...		38	58	55	70	50	82
Defined Lower QC Limits (%)....		23	24	23	30	19	18
Defined Upper QC Limits (%)....		121	113	120	115	122	137
Observed Lower QC Limits (%)...		2	4	2	17	32	74
Observed Upper QC Limits (%)...		63	77	79	109	85	91

* If % Surrogate Recovery is Followed by a "*", it is out of QC Limits.

Reviewed By:

LM
7/2/91

LOS ALAMOS NATIONAL LABORATORY
 HEALTH, SAFETY AND ENVIRONMENT DIVISION
 HSE-9
 SURROGATE RECOVERIES FOR SEMI-VOLATILES
 IN SOIL TYPE MATRICES

REQUEST #: 11448
 NUMBER OF SAMPLES: 1
 MATRIX: S
 ANALYST: MWK
 Date: 07/01/91

SURROGATE RECOVERIES

SURROGATE
 RECOVERIES IN PERCENT (%)

SAMPLE NUMBERS	TYPE	2-FLUORO-		NITRO-	2-FLUORO-	2,4,6-	TERPHENYL (D14)
		PHENOL (D6)	PHENOL (D6)	BENZENE (D5)	BIPHENYL	TRIBROMO- PHENOL	
1	S91.03512 SAMPLE ✓	64	67	66	72	93	68
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
Average % Surrogate Recovery...		64	67	66	72	93	68
Defined Lower QC Limits (%)....		23	24	23	30	19	18
Defined Upper QC Limits (%)....		121	113	120	115	122	137
Observed Lower QC Limits (%)...		64	67	66	72	93	68
Observed Upper QC Limits (%)...		64	67	66	72	93	68

* If % Surrogate Recovery is Followed by a "*", it is out of QC Limits.

Reviewed By:

7/2/91

no spike compounds added

LOS ALAMOS NATIONAL LABORATORY
HEALTH, SAFETY AND ENVIRONMENT DIVISION
HSE-9
MATRIX SPIKE RECOVERIES FOR SEMI-VOLATILES

REQUEST #: 11448 DRY WT/VOL (G or L) AMOUNT SPIKED IN UG/KG
NUMBER OF SAMPLES: 22 ACIDS BASES LOG (UG/KG)
SPIKE ID: (STARTS M OR E) SPIKE ERR ERR
SPIKE DUP ID: (STARTS D OR F) SPIKE-DUP ERR ERR
RAW DATA WITH: 11448
ANALYST: MWK

	SPIKE REC.	SPIKE-DUP REC.	SPIKE % REC.	SPIKE-DUP % REC.	RPD	LOW. REC. LIM.	UPP. REC. LIM.	RPD LIM.
PHENOL	<LOQ	<LOQ			ERR	26	90	35
2-CHLOROPHENOL	<LOQ	<LOQ			ERR	25	102	50
1,4-DICHLOROBENZENE	<LOQ	<LOQ			ERR	28	104	27
N-NITROSO-DI-N-PROPYLAMINE	<LOQ	<LOQ			ERR	41	126	38
1,2,4-TRICHLOROBENZENE	<LOQ	<LOQ			ERR	38	107	23
4-CHLORO-3-METHYLPHENOL	<LOQ	<LOQ			ERR	26	103	33
ACENAPHTHENE	<LOQ	<LOQ			ERR	31	137	19
4-NITROPHENOL	<LOQ	<LOQ			ERR	11	114	50
2,4-DINITROTOLUENE	<LOQ	<LOQ			ERR	28	89	47
PENTACHLOROPHENOL	<LOQ	<LOQ			ERR	17	109	47
PYRENE	<LOQ	<LOQ			ERR	35	142	36

** If % Matrix Recovery is Followed by a "**, it is out of QC Limits.

Reviewed By: *spike not added - data not usable*

CA 7/2/91

HSE-9 ANALYTICAL REPORT *****

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03488

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-S	91.03488	83329	< 1300.		UG/KG	7/03/91		Acenaphthene
PF-85-1-S	91.03488	208968	< 1300.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-S	91.03488	62533	< 1300.		UG/KG	7/03/91		Aniline
PF-85-1-S	91.03488	120127	< 1300.		UG/KG	7/03/91		Anthracene
PF-85-1-S	91.03488	103333	< 1300.		UG/KG	7/03/91		Azobenzene
PF-85-1-S	91.03488	92875	< 1300.		UG/KG	7/03/91		m-Benzidine
PF-85-1-S	91.03488	56553	< 1300.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-S	91.03488	50328	< 1300.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-S	91.03488	205992	< 1300.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-S	91.03488	191242	< 1300.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-S	91.03488	207089	< 1300.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-S	91.03488	65850	< 1300.		UG/KG	7/03/91		Benzoic acid
PF-85-1-S	91.03488	100516	< 1300.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-S	91.03488	111911	< 1300.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-S	91.03488	111444	< 1300.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-S	91.03488	108601	< 1300.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-S	91.03488	117817	< 1300.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-S	91.03488	101553	< 1300.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-S	91.03488	85687	< 1300.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-S	91.03488	59507	< 1300.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-S	91.03488	106478	< 1300.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-S	91.03488	120821	< 1300.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-1-S	91.03488	95954	< 1300.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-1-S	91.03488	88062	< 1300.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03488

none

Customer Sample Duplicate Results for Sample # 91.03488

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03488

none

HSE-9 ANALYTICAL REPORT *****

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03489

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-S QA	91.03489	83329	< 330.		UG/KG	7/03/91	SLIGHT HC	Acenaphthene
PF-85-1-S QA	91.03489	208968	< 330.		UG/KG	7/03/91	SLIGHT HC	Acenaphthylene
PF-85-1-S QA	91.03489	62533	< 330.		UG/KG	7/03/91	SLIGHT HC	Aniline
PF-85-1-S QA	91.03489	120127	< 330.		UG/KG	7/03/91	SLIGHT HC	Anthracene
PF-85-1-S QA	91.03489	103333	< 330.		UG/KG	7/03/91	SLIGHT HC	Azobenzene
PF-85-1-S QA	91.03489	92875	< 330.		UG/KG	7/03/91	SLIGHT HC	m-Benzidine
PF-85-1-S QA	91.03489	56553	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzo[a]anthracene
PF-85-1-S QA	91.03489	50328	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzo[a]pyrene
PF-85-1-S QA	91.03489	205992	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzo[b]fluoranthene
PF-85-1-S QA	91.03489	191242	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzo[g,h,i]perylene
PF-85-1-S QA	91.03489	207089	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzo[k]fluoranthene
PF-85-1-S QA	91.03489	65850	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzoic acid
PF-85-1-S QA	91.03489	100516	< 330.		UG/KG	7/03/91	SLIGHT HC	Benzyl alcohol
PF-85-1-S QA	91.03489	111911	< 330.		UG/KG	7/03/91	SLIGHT HC	Bis(2-chloroethoxy)methane
PF-85-1-S QA	91.03489	111444	< 330.		UG/KG	7/03/91	SLIGHT HC	Bis(2-chloroethyl)ether
PF-85-1-S QA	91.03489	108601	< 330.		UG/KG	7/03/91	SLIGHT HC	Bis(2-chloroisopropyl)ether
PF-85-1-S QA	91.03489	117817	< 330.		UG/KG	7/03/91	SLIGHT HC	Bis(2-ethylhexyl)phthalate
PF-85-1-S QA	91.03489	101553	< 330.		UG/KG	7/03/91	SLIGHT HC	4-Bromophenylphenyl ether
PF-85-1-S QA	91.03489	85687	< 330.		UG/KG	7/03/91	SLIGHT HC	Butylbenzyl phthalate
PF-85-1-S QA	91.03489	59507	< 330.		UG/KG	7/03/91	SLIGHT HC	4-Chloro-3-methylphenol
PF-85-1-	91.03489	106478	< 330.		UG/KG	7/03/91	SLIGHT HC	4-Chloroaniline

PF-85-1 A 91.03489	91587	< 330.	UG/KG	7/03/91	SLIGHT HC	2-Chloronaphthalene
PF-85-1-S QA 91.03489	95578	< 330.	UG/KG	7/03/91	SLIGHT HC	o-Chlorophenol
PF-85-1-S QA 91.03489	7005723	< 330.	UG/KG	7/03/91	SLIGHT HC	4-Chlorophenylphenyl ether
PF-85-1-S QA 91.03489	218019	< 330.	UG/KG	7/03/91	SLIGHT HC	Chrysene
PF-85-1-S QA 91.03489	84742	< 330.	UG/KG	7/03/91	SLIGHT HC	Di-n-butyl phthalate
PF-85-1-S QA 91.03489	117840	< 330.	UG/KG	7/03/91	SLIGHT HC	Di-n-octyl phthalate
PF-85-1-S QA 91.03489	53703	< 330.	UG/KG	7/03/91	SLIGHT HC	Dibenzo[a,h]anthracene
PF-85-1-S QA 91.03489	132649	< 330.	UG/KG	7/03/91	SLIGHT HC	Dibenzofuran
PF-85-1-S QA 91.03489	95501	< 330.	UG/KG	7/03/91	SLIGHT HC	o-Dichlorobenzene (1,2)
PF-85-1-S QA 91.03489	541731	< 330.	UG/KG	7/03/91	SLIGHT HC	m-Dichlorobenzene (1,3)
PF-85-1-S QA 91.03489	106467	< 330.	UG/KG	7/03/91	SLIGHT HC	p-Dichlorobenzene (1,4)
PF-85-1-S QA 91.03489	91941	< 330.	UG/KG	7/03/91	SLIGHT HC	3,3'-Dichlorobenzidine
PF-85-1-S QA 91.03489	120832	< 330.	UG/KG	7/03/91	SLIGHT HC	2,4-Dichlorophenol
PF-85-1-S QA 91.03489	84662	< 330.	UG/KG	7/03/91	SLIGHT HC	Diethyl phthalate
PF-85-1-S QA 91.03489	131113	< 330.	UG/KG	7/03/91	SLIGHT HC	Dimethyl phthalate
PF-85-1-S QA 91.03489	105679	< 330.	UG/KG	7/03/91	SLIGHT HC	2,4-Dimethylphenol
PF-85-1-S QA 91.03489	51285	< 330.	UG/KG	7/03/91	SLIGHT HC	2,4-Dinitrophenol
PF-85-1-S QA 91.03489	121142	< 330.	UG/KG	7/03/91	SLIGHT HC	2,4-Dinitrotoluene
PF-85-1-S QA 91.03489	606202	< 330.	UG/KG	7/03/91	SLIGHT HC	2,6-Dinitrotoluene
PF-85-1-S QA 91.03489	206440	< 330.	UG/KG	7/03/91	SLIGHT HC	Fluoranthene
PF-85-1-S QA 91.03489	86737	< 330.	UG/KG	7/03/91	SLIGHT HC	Fluorene
PF-85-1-S QA 91.03489	118741	< 330.	UG/KG	7/03/91	SLIGHT HC	Hexachlorobenzene
PF-85-1-S QA 91.03489	87683	< 330.	UG/KG	7/03/91	SLIGHT HC	Hexachlorobutadiene
PF-85-1-S QA 91.03489	77474	< 330.	UG/KG	7/03/91	SLIGHT HC	Hexachlorocyclopentadiene
PF-85-1-S QA 91.03489	67721	< 330.	UG/KG	7/03/91	SLIGHT HC	Hexachloroethane
PF-85-1-S QA 91.03489	193395	< 330.	UG/KG	7/03/91	SLIGHT HC	Indeno[1,2,3-cd]pyrene
PF-85-1-S QA 91.03489	78591	< 330.	UG/KG	7/03/91	SLIGHT HC	Isophorone
PF-85-1-S QA 91.03489	534521	< 330.	UG/KG	7/03/91	SLIGHT HC	2-Methyl-4,6-dinitrophenol
PF-85-1-S QA 91.03489	91576	< 330.	UG/KG	7/03/91	SLIGHT HC	2-Methylnaphthalene
PF-85-1-S QA 91.03489	95487	< 330.	UG/KG	7/03/91	SLIGHT HC	2-Methylphenol
PF-85-1-S QA 91.03489	106445	< 330.	UG/KG	7/03/91	SLIGHT HC	4-Methylphenol
PF-85-1-S QA 91.03489	91203	< 330.	UG/KG	7/03/91	SLIGHT HC	Naphthalene
PF-85-1-S QA 91.03489	88744	< 330.	UG/KG	7/03/91	SLIGHT HC	2-Nitroaniline
PF-85-1-S QA 91.03489	99092	< 330.	UG/KG	7/03/91	SLIGHT HC	3-Nitroaniline
PF-85-1-S QA 91.03489	100016	< 330.	UG/KG	7/03/91	SLIGHT HC	4-Nitroaniline
PF-85-1-S QA 91.03489	98953	< 330.	UG/KG	7/03/91	SLIGHT HC	Nitrobenzene
PF-85-1-S QA 91.03489	88755	< 330.	UG/KG	7/03/91	SLIGHT HC	2-Nitrophenol
PF-85-1-S QA 91.03489	100027	< 330.	UG/KG	7/03/91	SLIGHT HC	4-Nitrophenol
PF-85-1-S QA 91.03489	621647	< 330.	UG/KG	7/03/91	SLIGHT HC	N-Nitrosodi-n-propylamine
PF-85-1-S QA 91.03489	62759	< 330.	UG/KG	7/03/91	SLIGHT HC	N-Nitrosodimethylamine
PF-85-1-S QA 91.03489	86306	< 330.	UG/KG	7/03/91	SLIGHT HC	N-Nitrosodiphenylamine
PF-85-1-S QA 91.03489	87865	< 330.	UG/KG	7/03/91	SLIGHT HC	Pentachlorophenol
PF-85-1-S QA 91.03489	85018	< 330.	UG/KG	7/03/91	SLIGHT HC	Phenanthrene
PF-85-1-S QA 91.03489	108952	< 330.	UG/KG	7/03/91	SLIGHT HC	Phenol
PF-85-1- 91.03489	129000	< 330.	UG/KG	7/03/91	SLIGHT HC	Pyrene

PF-85-1-S QA 91.03489 120821 < 330.
PF-85-1-S QA 91.03489 95954 < 330.
PF-85-1-S QA 91.03489 88062 < 330.

UG/KG
UG/KG
UG/KG

7/03/91
7/03/91
7/03/91

SLIGHT HC
SLIGHT HC
SLIGHT HC

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03489

none

Customer Sample Duplicate Results for Sample # 91.03489

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03489

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03490

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-5'	91.03490	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-5'	91.03490	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-5'	91.03490	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-5'	91.03490	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-5'	91.03490	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-5'	91.03490	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-5'	91.03490	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-5'	91.03490	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-5'	91.03490	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-5'	91.03490	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-5'	91.03490	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-5'	91.03490	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-5'	91.03490	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-5'	91.03490	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-5'	91.03490	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-5'	91.03490	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-5'	91.03490	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-5'	91.03490	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-5'	91.03490	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-5'	91.03490	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1	91.03490	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-5'	91.03490	91587	< 330.	UG/KG	7/03/91	2-Chloronaphthalene
PF-85-1-5'	91.03490	95578	< 330.	UG/KG	7/03/91	o-Chlorophenol
PF-85-1-5'	91.03490	7005723	< 330.	UG/KG	7/03/91	4-Chlorophenylphenyl ether
PF-85-1-5'	91.03490	218019	< 330.	UG/KG	7/03/91	Chrysene
PF-85-1-5'	91.03490	84742	< 330.	UG/KG	7/03/91	Di-n-butyl phthalate
PF-85-1-5'	91.03490	117840	< 330.	UG/KG	7/03/91	Di-n-octyl phthalate
PF-85-1-5'	91.03490	53703	< 330.	UG/KG	7/03/91	Dibenzo[a,h]anthracene
PF-85-1-5'	91.03490	132649	< 330.	UG/KG	7/03/91	Dibenzofuran
PF-85-1-5'	91.03490	95501	< 330.	UG/KG	7/03/91	o-Dichlorobenzene (1,2)
PF-85-1-5'	91.03490	541731	< 330.	UG/KG	7/03/91	m-Dichlorobenzene (1,3)
PF-85-1-5'	91.03490	106467	< 330.	UG/KG	7/03/91	p-Dichlorobenzene (1,4)
PF-85-1-5'	91.03490	91941	< 330.	UG/KG	7/03/91	3,3'-Dichlorobenzidine
PF-85-1-5'	91.03490	120832	< 330.	UG/KG	7/03/91	2,4-Dichlorophenol
PF-85-1-5'	91.03490	84662	< 330.	UG/KG	7/03/91	Diethyl phthalate
PF-85-1-5'	91.03490	131113	< 330.	UG/KG	7/03/91	Dimethyl phthalate
PF-85-1-5'	91.03490	105679	< 330.	UG/KG	7/03/91	2,4-Dimethylphenol
PF-85-1-5'	91.03490	51285	< 330.	UG/KG	7/03/91	2,4-Dinitrophenol
PF-85-1-5'	91.03490	121142	< 330.	UG/KG	7/03/91	2,4-Dinitrotoluene
PF-85-1-5'	91.03490	606202	< 330.	UG/KG	7/03/91	2,6-Dinitrotoluene
PF-85-1-5'	91.03490	206440	< 330.	UG/KG	7/03/91	Fluoranthene
PF-85-1-5'	91.03490	86737	< 330.	UG/KG	7/03/91	Fluorene
PF-85-1-5'	91.03490	118741	< 330.	UG/KG	7/03/91	Hexachlorobenzene
PF-85-1-5'	91.03490	87683	< 330.	UG/KG	7/03/91	Hexachlorobutadiene
PF-85-1-5'	91.03490	77474	< 330.	UG/KG	7/03/91	Hexachlorocyclopentadiene
PF-85-1-5'	91.03490	67721	< 330.	UG/KG	7/03/91	Hexachloroethane
PF-85-1-5'	91.03490	193395	< 330.	UG/KG	7/03/91	Indeno[1,2,3-cd]pyrene
PF-85-1-5'	91.03490	78591	< 330.	UG/KG	7/03/91	Isophorone
PF-85-1-5'	91.03490	534521	< 330.	UG/KG	7/03/91	2-Methyl-4,6-dinitrophenol
PF-85-1-5'	91.03490	91576	< 330.	UG/KG	7/03/91	2-Methylnaphthalene
PF-85-1-5'	91.03490	95487	< 330.	UG/KG	7/03/91	2-Methylphenol
PF-85-1-5'	91.03490	106445	< 330.	UG/KG	7/03/91	4-Methylphenol
PF-85-1-5'	91.03490	91203	< 330.	UG/KG	7/03/91	Naphthalene
PF-85-1-5'	91.03490	88744	< 330.	UG/KG	7/03/91	2-Nitroaniline
PF-85-1-5'	91.03490	99092	< 330.	UG/KG	7/03/91	3-Nitroaniline
PF-85-1-5'	91.03490	100016	< 330.	UG/KG	7/03/91	4-Nitroaniline
PF-85-1-5'	91.03490	98953	< 330.	UG/KG	7/03/91	Nitrobenzene
PF-85-1-5'	91.03490	88755	< 330.	UG/KG	7/03/91	2-Nitrophenol
PF-85-1-5'	91.03490	100027	< 330.	UG/KG	7/03/91	4-Nitrophenol
PF-85-1-5'	91.03490	621647	< 330.	UG/KG	7/03/91	N-Nitrosodi-n-propylamine
PF-85-1-5'	91.03490	62759	< 330.	UG/KG	7/03/91	N-Nitrosodimethylamine
PF-85-1-5'	91.03490	86306	< 330.	UG/KG	7/03/91	N-Nitrosodiphenylamine
PF-85-1-5'	91.03490	87865	< 330.	UG/KG	7/03/91	Pentachlorophenol
PF-85-1-5'	91.03490	85018	< 330.	UG/KG	7/03/91	Phenanthrene
PF-85-1-5'	91.03490	108952	< 330.	UG/KG	7/03/91	Phenol
PF-85-1-	91.03490	129000	< 330.	UG/KG	7/03/91	Pyrene

PF-85-1- 91.03490 120821 < 330.
PF-85-1-5' 91.03490 95954 < 330.
PF-85-1-5' 91.03490 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03490

none

Customer Sample Duplicate Results for Sample # 91.03490

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03490

none

HSE-9 ANALYTICAL REPORT

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03491

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-10'	91.03491	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-10'	91.03491	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-10'	91.03491	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-10'	91.03491	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-10'	91.03491	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-10'	91.03491	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-10'	91.03491	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-10'	91.03491	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-10'	91.03491	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-10'	91.03491	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-10'	91.03491	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-10'	91.03491	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-10'	91.03491	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-10'	91.03491	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-10'	91.03491	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-10'	91.03491	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-10'	91.03491	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-10'	91.03491	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-10'	91.03491	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-10'	91.03491	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1	91.03491	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1	91.03491	120821	< 330.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-1-10'	91.03491	95954	< 330.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-1-10'	91.03491	88062	< 330.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03491

none

Customer Sample Duplicate Results for Sample # 91.03491

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03491

none

HSE-9 ANALYTICAL REPORT

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03492

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-15'	91.03492	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-15'	91.03492	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-15'	91.03492	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-15'	91.03492	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-15'	91.03492	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-15'	91.03492	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-15'	91.03492	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-15'	91.03492	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-15'	91.03492	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-15'	91.03492	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-15'	91.03492	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-15'	91.03492	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-15'	91.03492	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-15'	91.03492	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-15'	91.03492	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-15'	91.03492	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-15'	91.03492	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-15'	91.03492	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-15'	91.03492	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-15'	91.03492	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-15'	91.03492	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-15' 91.03492 120821 < 330.
PF-85-1-15' 91.03492 95954 < 330.
PF-85-1-15' 91.03492 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03492

none

Customer Sample Duplicate Results for Sample # 91.03492

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03492

none

HSE-9 ANALYTICAL REPORT *****

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03493

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-20'	91.03493	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-20'	91.03493	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-20'	91.03493	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-20'	91.03493	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-20'	91.03493	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-20'	91.03493	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-20'	91.03493	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-20'	91.03493	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-20'	91.03493	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-20'	91.03493	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-20'	91.03493	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-20'	91.03493	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-20'	91.03493	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-20'	91.03493	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-20'	91.03493	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-20'	91.03493	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-20'	91.03493	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-20'	91.03493	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-20'	91.03493	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-20'	91.03493	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-20'	91.03493	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-20 91.03493 120821 < 330.
PF-85-1-20' 91.03493 95954 < 330.
PF-85-1-20' 91.03493 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03493

none

Customer Sample Duplicate Results for Sample # 91.03493

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03493

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03494

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/12/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-25'	91.03494	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-25'	91.03494	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-25'	91.03494	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-25'	91.03494	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-25'	91.03494	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-25'	91.03494	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-25'	91.03494	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-25'	91.03494	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-25'	91.03494	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-25'	91.03494	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-25'	91.03494	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-25'	91.03494	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-25'	91.03494	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-25'	91.03494	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-25'	91.03494	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-25'	91.03494	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-25'	91.03494	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-25'	91.03494	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-25'	91.03494	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-25'	91.03494	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-	91.03494	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-25' 91.03494 120821 < 330.
PF-85-1-25' 91.03494 95954 < 330.
PF-85-1-25' 91.03494 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03494

none

Customer Sample Duplicate Results for Sample # 91.03494

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03494

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03495

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/13/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-30'	91.03495	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-30'	91.03495	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-30'	91.03495	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-30'	91.03495	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-30'	91.03495	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-30'	91.03495	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-30'	91.03495	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-30'	91.03495	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-30'	91.03495	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-30'	91.03495	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-30'	91.03495	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-30'	91.03495	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-30'	91.03495	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-30'	91.03495	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-30'	91.03495	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-30'	91.03495	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-30'	91.03495	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-30'	91.03495	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-30'	91.03495	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-30'	91.03495	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-30'	91.03495	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-30' 91.03495 120821 < 330.
PF-85-1-30' 91.03495 95954 < 330.
PF-85-1-30' 91.03495 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03495

none

Customer Sample Duplicate Results for Sample # 91.03495

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03495

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03496

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/13/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-35'	91.03496	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-35'	91.03496	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-35'	91.03496	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-35'	91.03496	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-35'	91.03496	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-35'	91.03496	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-35'	91.03496	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-35'	91.03496	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-35'	91.03496	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-35'	91.03496	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-35'	91.03496	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-35'	91.03496	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-35'	91.03496	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-35'	91.03496	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-35'	91.03496	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-35'	91.03496	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-35'	91.03496	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-35'	91.03496	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-35'	91.03496	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-35'	91.03496	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-35'	91.03496	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-33' 91.03496 120821 < 330.
PF-85-1-35' 91.03496 95954 < 330.
PF-85-1-35' 91.03496 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03496

none

Customer Sample Duplicate Results for Sample # 91.03496

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03496

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03497

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/13/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-40'	91.03497	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-40'	91.03497	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-40'	91.03497	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-40'	91.03497	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-40'	91.03497	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-40'	91.03497	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-40'	91.03497	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-40'	91.03497	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-40'	91.03497	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-40'	91.03497	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-40'	91.03497	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-40'	91.03497	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-40'	91.03497	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-40'	91.03497	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-40'	91.03497	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-40'	91.03497	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-40'	91.03497	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-40'	91.03497	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-40'	91.03497	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-40'	91.03497	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-	91.03497	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-40' 91.03497 120821 < 330.
PF-85-1-40' 91.03497 95954 < 330.
PF-85-1-40' 91.03497 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91,03497

none

Customer Sample Duplicate Results for Sample # 91,03497

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91,03497

none

HSE-9 ANALYTICAL REPORT *****

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03498

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/13/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-45'	91.03498	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-1-45'	91.03498	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-1-45'	91.03498	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-1-45'	91.03498	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-1-45'	91.03498	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-1-45'	91.03498	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-1-45'	91.03498	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-1-45'	91.03498	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-1-45'	91.03498	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-1-45'	91.03498	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-1-45'	91.03498	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-1-45'	91.03498	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-1-45'	91.03498	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-1-45'	91.03498	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-1-45'	91.03498	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-1-45'	91.03498	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-1-45'	91.03498	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-1-45'	91.03498	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-1-45'	91.03498	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-1-45'	91.03498	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-1-	91.03498	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-1-45' 91.03498 120821 < 330.
PF-85-1-45' 91.03498 95954 < 330.
PF-85-1-45' 91.03498 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03498

none

Customer Sample Duplicate Results for Sample # 91.03498

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03498

none

HSE-9 ANALYTICAL REPORT

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03499

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/13/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-S	91.03499	83329	< 660.		UG/KG	7/03/91		Acenaphthene
PF-85-2-S	91.03499	208968	< 660.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-S	91.03499	62533	< 660.		UG/KG	7/03/91		Aniline
PF-85-2-S	91.03499	120127	< 660.		UG/KG	7/03/91		Anthracene
PF-85-2-S	91.03499	103333	< 660.		UG/KG	7/03/91		Azobenzene
PF-85-2-S	91.03499	92875	< 660.		UG/KG	7/03/91		m-Benzidine
PF-85-2-S	91.03499	56553	< 660.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-S	91.03499	50328	< 660.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-S	91.03499	205992	< 660.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-S	91.03499	191242	< 660.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-S	91.03499	207089	< 660.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-S	91.03499	65850	< 660.		UG/KG	7/03/91		Benzoic acid
PF-85-2-S	91.03499	100516	< 660.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-S	91.03499	111911	< 660.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-S	91.03499	111444	< 660.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-S	91.03499	108601	< 660.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-S	91.03499	117817	< 660.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-S	91.03499	101553	< 660.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-S	91.03499	85687	< 660.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-S	91.03499	59507	< 660.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2-S	91.03499	106478	< 660.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-S	91.03499	91587	< 660.	UG/KG	7/03/91	2-Chloronaphthalene
PF-85-2-S	91.03499	95578	< 660.	UG/KG	7/03/91	o-Chlorophenol
PF-85-2-S	91.03499	7005723	< 660.	UG/KG	7/03/91	4-Chlorophenylphenyl ether
PF-85-2-S	91.03499	218019	< 660.	UG/KG	7/03/91	Chrysene
PF-85-2-S	91.03499	84742	< 660.	UG/KG	7/03/91	Di-n-butyl phthalate
PF-85-2-S	91.03499	117840	< 660.	UG/KG	7/03/91	Di-n-octyl phthalate
PF-85-2-S	91.03499	53703	< 660.	UG/KG	7/03/91	Dibenzo[a,h]anthracene
PF-85-2-S	91.03499	132649	< 660.	UG/KG	7/03/91	Dibenzofuran
PF-85-2-S	91.03499	95501	< 660.	UG/KG	7/03/91	o-Dichlorobenzene (1,2)
PF-85-2-S	91.03499	541731	< 660.	UG/KG	7/03/91	m-Dichlorobenzene (1,3)
PF-85-2-S	91.03499	106467	< 660.	UG/KG	7/03/91	p-Dichlorobenzene (1,4)
PF-85-2-S	91.03499	91941	< 660.	UG/KG	7/03/91	3,3'-Dichlorobenzidine
PF-85-2-S	91.03499	120832	< 660.	UG/KG	7/03/91	2,4-Dichlorophenol
PF-85-2-S	91.03499	84662	< 660.	UG/KG	7/03/91	Diethyl phthalate
PF-85-2-S	91.03499	131113	< 660.	UG/KG	7/03/91	Dimethyl phthalate
PF-85-2-S	91.03499	105679	< 660.	UG/KG	7/03/91	2,4-Dimethylphenol
PF-85-2-S	91.03499	51285	< 660.	UG/KG	7/03/91	2,4-Dinitrophenol
PF-85-2-S	91.03499	121142	< 660.	UG/KG	7/03/91	2,4-Dinitrotoluene
PF-85-2-S	91.03499	606202	< 660.	UG/KG	7/03/91	2,6-Dinitrotoluene
PF-85-2-S	91.03499	206440	< 660.	UG/KG	7/03/91	Fluoranthene
PF-85-2-S	91.03499	86737	< 660.	UG/KG	7/03/91	Fluorene
PF-85-2-S	91.03499	118741	< 660.	UG/KG	7/03/91	Hexachlorobenzene
PF-85-2-S	91.03499	87683	< 660.	UG/KG	7/03/91	Hexachlorobutadiene
PF-85-2-S	91.03499	77474	< 660.	UG/KG	7/03/91	Hexachlorocyclopentadiene
PF-85-2-S	91.03499	67721	< 660.	UG/KG	7/03/91	Hexachloroethane
PF-85-2-S	91.03499	193395	< 660.	UG/KG	7/03/91	Indeno[1,2,3-cd]pyrene
PF-85-2-S	91.03499	78591	< 660.	UG/KG	7/03/91	Isophorone
PF-85-2-S	91.03499	534521	< 660.	UG/KG	7/03/91	2-Methyl-4,6-dinitrophenol
PF-85-2-S	91.03499	91576	< 660.	UG/KG	7/03/91	2-Methylnaphthalene
PF-85-2-S	91.03499	95487	< 660.	UG/KG	7/03/91	2-Methylphenol
PF-85-2-S	91.03499	106445	< 660.	UG/KG	7/03/91	4-Methylphenol
PF-85-2-S	91.03499	91203	< 660.	UG/KG	7/03/91	Naphthalene
PF-85-2-S	91.03499	88744	< 660.	UG/KG	7/03/91	2-Nitroaniline
PF-85-2-S	91.03499	99092	< 660.	UG/KG	7/03/91	3-Nitroaniline
PF-85-2-S	91.03499	100016	< 660.	UG/KG	7/03/91	4-Nitroaniline
PF-85-2-S	91.03499	98953	< 660.	UG/KG	7/03/91	Nitrobenzene
PF-85-2-S	91.03499	88755	< 660.	UG/KG	7/03/91	2-Nitrophenol
PF-85-2-S	91.03499	100027	< 660.	UG/KG	7/03/91	4-Nitrophenol
PF-85-2-S	91.03499	621647	< 660.	UG/KG	7/03/91	N-Nitrosodi-n-propylamine
PF-85-2-S	91.03499	62759	< 660.	UG/KG	7/03/91	N-Nitrosodimethylamine
PF-85-2-S	91.03499	86306	< 660.	UG/KG	7/03/91	N-Nitrosodiphenylamine
PF-85-2-S	91.03499	87865	< 660.	UG/KG	7/03/91	Pentachlorophenol
PF-85-2-S	91.03499	85018	< 660.	UG/KG	7/03/91	Phenanthrene
PF-85-2-S	91.03499	108952	< 660.	UG/KG	7/03/91	Phenol
PF-85-7	91.03499	129000	< 660.	UG/KG	7/03/91	Pyrene

PF-85-2-S 91.03499 120821 < 660.
PF-85-2-S 91.03499 95954 < 660.
PF-85-2-S 91.03499 88062 < 660.

UG/KG 11/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03499

none

Customer Sample Duplicate Results for Sample # 91.03499

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03499

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03500

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/14/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-5'	91.03500	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-5'	91.03500	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-5'	91.03500	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-5'	91.03500	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-5'	91.03500	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-5'	91.03500	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-5'	91.03500	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-5'	91.03500	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-5'	91.03500	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-5'	91.03500	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-5'	91.03500	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-5'	91.03500	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-5'	91.03500	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-5'	91.03500	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-5'	91.03500	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-5'	91.03500	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-5'	91.03500	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-5'	91.03500	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-5'	91.03500	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-5'	91.03500	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2	91.03500	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-5'	91.03500	120821	< 330.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-2-5'	91.03500	95954	< 330.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-2-5'	91.03500	88062	< 330.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03500

none

Customer Sample Duplicate Results for Sample # 91.03500

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03500

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03501

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-10'	91.03501	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-10'	91.03501	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-10'	91.03501	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-10'	91.03501	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-10'	91.03501	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-10'	91.03501	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-10'	91.03501	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-10'	91.03501	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-10'	91.03501	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-10'	91.03501	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-10'	91.03501	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-10'	91.03501	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-10'	91.03501	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-10'	91.03501	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-10'	91.03501	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-10'	91.03501	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-10'	91.03501	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-10'	91.03501	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-10'	91.03501	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-10'	91.03501	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2-	91.03501	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-10'	91.03501	120821	< 330.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-2-10'	91.03501	95954	< 330.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-2-10'	91.03501	88062	< 330.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91,03501

none

Customer Sample Duplicate Results for Sample # 91,03501

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91,03501

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03502

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-15'	91.03502	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-15'	91.03502	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-15'	91.03502	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-15'	91.03502	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-15'	91.03502	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-15'	91.03502	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-15'	91.03502	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-15'	91.03502	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-15'	91.03502	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-15'	91.03502	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-15'	91.03502	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-15'	91.03502	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-15'	91.03502	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-15'	91.03502	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-15'	91.03502	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-15'	91.03502	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-15'	91.03502	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-15'	91.03502	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-15'	91.03502	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-15'	91.03502	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2-	91.03502	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-10' 91.03502 120821 < 330.
PF-85-2-15' 91.03502 95954 < 330.
PF-85-2-15' 91.03502 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03502

none

Customer Sample Duplicate Results for Sample # 91.03502

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03502

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03503

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-20'	91.03503	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-20'	91.03503	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-20'	91.03503	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-20'	91.03503	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-20'	91.03503	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-20'	91.03503	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-20'	91.03503	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-20'	91.03503	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-20'	91.03503	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-20'	91.03503	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-20'	91.03503	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-20'	91.03503	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-20'	91.03503	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-20'	91.03503	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-20'	91.03503	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-20'	91.03503	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-20'	91.03503	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-20'	91.03503	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-20'	91.03503	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-20'	91.03503	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2-20'	91.03503	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-20' 91.03503 120821 < 330.
PF-85-2-20' 91.03503 95954 < 330.
PF-85-2-20' 91.03503 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03503

none

Customer Sample Duplicate Results for Sample # 91.03503

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03503

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03504

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-25'	91.03504	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-25'	91.03504	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-25'	91.03504	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-25'	91.03504	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-25'	91.03504	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-25'	91.03504	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-25'	91.03504	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-25'	91.03504	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-25'	91.03504	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-25'	91.03504	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-25'	91.03504	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-25'	91.03504	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-25'	91.03504	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-25'	91.03504	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-25'	91.03504	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-25'	91.03504	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-25'	91.03504	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-25'	91.03504	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-25'	91.03504	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-25'	91.03504	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2-25'	91.03504	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-25'	91.03504	120821	< 330.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-2-25'	91.03504	95954	< 330.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-2-25'	91.03504	88062	< 330.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03504

none

Customer Sample Duplicate Results for Sample # 91.03504

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03504

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03505

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-30'	91.03505	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-30'	91.03505	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-30'	91.03505	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-30'	91.03505	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-30'	91.03505	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-30'	91.03505	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-30'	91.03505	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-30'	91.03505	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-30'	91.03505	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-30'	91.03505	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-30'	91.03505	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-30'	91.03505	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-30'	91.03505	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-30'	91.03505	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-30'	91.03505	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-30'	91.03505	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-30'	91.03505	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-30'	91.03505	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-30'	91.03505	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-30'	91.03505	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2	91.03505	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-30' 91.03505 120821 < 330.
PF-85-2-30' 91.03505 95954 < 330.
PF-85-2-30' 91.03505 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03505

none

Customer Sample Duplicate Results for Sample # 91.03505

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03505

none

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03506

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-35'	91.03506	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-35'	91.03506	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-35'	91.03506	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-35'	91.03506	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-35'	91.03506	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-35'	91.03506	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-35'	91.03506	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-35'	91.03506	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-35'	91.03506	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-35'	91.03506	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-35'	91.03506	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-35'	91.03506	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-35'	91.03506	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-35'	91.03506	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-35'	91.03506	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-35'	91.03506	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-35'	91.03506	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-35'	91.03506	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-35'	91.03506	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-35'	91.03506	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2	91.03506	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-35'	91.03506	91587	< 330.	UG/KG	7/03/91	2-Chloronaphthalene
PF-85-2-35'	91.03506	95578	< 330.	UG/KG	7/03/91	o-Chlorophenol
PF-85-2-35'	91.03506	7005723	< 330.	UG/KG	7/03/91	4-Chlorophenylphenyl ether
PF-85-2-35'	91.03506	218019	< 330.	UG/KG	7/03/91	Chrysene
PF-85-2-35'	91.03506	84742	< 330.	UG/KG	7/03/91	Di-n-butyl phthalate
PF-85-2-35'	91.03506	117840	< 330.	UG/KG	7/03/91	Di-n-octyl phthalate
PF-85-2-35'	91.03506	53703	< 330.	UG/KG	7/03/91	Dibenzo[a,h]anthracene
PF-85-2-35'	91.03506	132649	< 330.	UG/KG	7/03/91	Dibenzofuran
PF-85-2-35'	91.03506	95501	< 330.	UG/KG	7/03/91	o-Dichlorobenzene (1,2)
PF-85-2-35'	91.03506	541731	< 330.	UG/KG	7/03/91	m-Dichlorobenzene (1,3)
PF-85-2-35'	91.03506	106467	< 330.	UG/KG	7/03/91	p-Dichlorobenzene (1,4)
PF-85-2-35'	91.03506	91941	< 330.	UG/KG	7/03/91	3,3'-Dichlorobenzidine
PF-85-2-35'	91.03506	120832	< 330.	UG/KG	7/03/91	2,4-Dichlorophenol
PF-85-2-35'	91.03506	84662	< 330.	UG/KG	7/03/91	Diethyl phthalate
PF-85-2-35'	91.03506	131113	< 330.	UG/KG	7/03/91	Dimethyl phthalate
PF-85-2-35'	91.03506	105679	< 330.	UG/KG	7/03/91	2,4-Dimethylphenol
PF-85-2-35'	91.03506	51285	< 330.	UG/KG	7/03/91	2,4-Dinitrophenol
PF-85-2-35'	91.03506	121142	< 330.	UG/KG	7/03/91	2,4-Dinitrotoluene
PF-85-2-35'	91.03506	606202	< 330.	UG/KG	7/03/91	2,6-Dinitrotoluene
PF-85-2-35'	91.03506	206440	< 330.	UG/KG	7/03/91	Fluoranthene
PF-85-2-35'	91.03506	86737	< 330.	UG/KG	7/03/91	Fluorene
PF-85-2-35'	91.03506	118741	< 330.	UG/KG	7/03/91	Hexachlorobenzene
PF-85-2-35'	91.03506	87683	< 330.	UG/KG	7/03/91	Hexachlorobutadiene
PF-85-2-35'	91.03506	77474	< 330.	UG/KG	7/03/91	Hexachlorocyclopentadiene
PF-85-2-35'	91.03506	67721	< 330.	UG/KG	7/03/91	Hexachloroethane
PF-85-2-35'	91.03506	193395	< 330.	UG/KG	7/03/91	Indeno[1,2,3-cd]pyrene
PF-85-2-35'	91.03506	78591	< 330.	UG/KG	7/03/91	Isophorone
PF-85-2-35'	91.03506	534521	< 330.	UG/KG	7/03/91	2-Methyl-4,6-dinitrophenol
PF-85-2-35'	91.03506	91576	< 330.	UG/KG	7/03/91	2-Methylnaphthalene
PF-85-2-35'	91.03506	95487	< 330.	UG/KG	7/03/91	2-Methylphenol
PF-85-2-35'	91.03506	106445	< 330.	UG/KG	7/03/91	4-Methylphenol
PF-85-2-35'	91.03506	91203	< 330.	UG/KG	7/03/91	Naphthalene
PF-85-2-35'	91.03506	88744	< 330.	UG/KG	7/03/91	2-Nitroaniline
PF-85-2-35'	91.03506	99092	< 330.	UG/KG	7/03/91	3-Nitroaniline
PF-85-2-35'	91.03506	100016	< 330.	UG/KG	7/03/91	4-Nitroaniline
PF-85-2-35'	91.03506	98953	< 330.	UG/KG	7/03/91	Nitrobenzene
PF-85-2-35'	91.03506	88755	< 330.	UG/KG	7/03/91	2-Nitrophenol
PF-85-2-35'	91.03506	100027	< 330.	UG/KG	7/03/91	4-Nitrophenol
PF-85-2-35'	91.03506	621647	< 330.	UG/KG	7/03/91	N-Nitrosodi-n-propylamine
PF-85-2-35'	91.03506	62759	< 330.	UG/KG	7/03/91	N-Nitrosodimethylamine
PF-85-2-35'	91.03506	86306	< 330.	UG/KG	7/03/91	N-Nitrosodiphenylamine
PF-85-2-35'	91.03506	87865	< 330.	UG/KG	7/03/91	Pentachlorophenol
PF-85-2-35'	91.03506	85018	< 330.	UG/KG	7/03/91	Phenanthrene
PF-85-2-35'	91.03506	108952	< 330.	UG/KG	7/03/91	Phenol
PF-85-2-35'	91.03506	129000	< 330.	UG/KG	7/03/91	Pyrene

PF-85-2-3>'	91.03506	120821	< 330.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-2-35'	91.03506	95954	< 330.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-2-35'	91.03506	88062	< 330.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03506

none

Customer Sample Duplicate Results for Sample # 91.03506

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03506

none

HSE-9 ANALYTICAL REPORT

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03507

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-40'	91.03507	83329	< 330.		UG/KG	7/03/91		Acenaphthene
PF-85-2-40'	91.03507	208968	< 330.		UG/KG	7/03/91		Acenaphthylene
PF-85-2-40'	91.03507	62533	< 330.		UG/KG	7/03/91		Aniline
PF-85-2-40'	91.03507	120127	< 330.		UG/KG	7/03/91		Anthracene
PF-85-2-40'	91.03507	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-40'	91.03507	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-40'	91.03507	56553	< 330.		UG/KG	7/03/91		Benzo[a]anthracene
PF-85-2-40'	91.03507	50328	< 330.		UG/KG	7/03/91		Benzo[a]pyrene
PF-85-2-40'	91.03507	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-40'	91.03507	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-40'	91.03507	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-40'	91.03507	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-40'	91.03507	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-40'	91.03507	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-40'	91.03507	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-40'	91.03507	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-40'	91.03507	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-40'	91.03507	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-40'	91.03507	85687	< 330.		UG/KG	7/03/91		Butylbenzyl phthalate
PF-85-2-40'	91.03507	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-2	91.03507	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-40'	91.03507	120821	< 330.	UG/KG	7/03/91	1,2,4-Trichlorobenzene
PF-85-2-40'	91.03507	95954	< 330.	UG/KG	7/03/91	2,4,5-Trichlorophenol
PF-85-2-40'	91.03507	88062	< 330.	UG/KG	7/03/91	2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03507

none

Customer Sample Duplicate Results for Sample # 91.03507

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03507

none

REPORT NUMBER: 10729

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 # 91.03508

Date Collected: 4/27/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/15/91

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-2-45'	91.03508	83329	< 330.		UG/KG	7/03/91	10	Acenaphthene
PF-85-2-45'	91.03508	208968	< 330.		UG/KG	7/03/91	10	Acenaphthylene
PF-85-2-45'	91.03508	62533	< 330.		UG/KG	7/03/91	10	Aniline
PF-85-2-45'	91.03508	120127	< 330.		UG/KG	7/03/91	10	Anthracene
PF-85-2-45'	91.03508	103333	< 330.		UG/KG	7/03/91		Azobenzene
PF-85-2-45'	91.03508	92875	< 330.		UG/KG	7/03/91		m-Benzidine
PF-85-2-45'	91.03508	56553	< 330.		UG/KG	7/03/91	10	Benzo[a]anthracene
PF-85-2-45'	91.03508	50328	< 330.		UG/KG	7/03/91	10	Benzo[a]pyrene
PF-85-2-45'	91.03508	205992	< 330.		UG/KG	7/03/91		Benzo[b]fluoranthene
PF-85-2-45'	91.03508	191242	< 330.		UG/KG	7/03/91		Benzo[g,h,i]perylene
PF-85-2-45'	91.03508	207089	< 330.		UG/KG	7/03/91		Benzo[k]fluoranthene
PF-85-2-45'	91.03508	65850	< 330.		UG/KG	7/03/91		Benzoic acid
PF-85-2-45'	91.03508	100516	< 330.		UG/KG	7/03/91		Benzyl alcohol
PF-85-2-45'	91.03508	111911	< 330.		UG/KG	7/03/91		Bis(2-chloroethoxy)methane
PF-85-2-45'	91.03508	111444	< 330.		UG/KG	7/03/91		Bis(2-chloroethyl)ether
PF-85-2-45'	91.03508	108601	< 330.		UG/KG	7/03/91		Bis(2-chloroisopropyl)ether
PF-85-2-45'	91.03508	117817	< 330.		UG/KG	7/03/91		Bis(2-ethylhexyl)phthalate
PF-85-2-45'	91.03508	101553	< 330.		UG/KG	7/03/91		4-Bromophenylphenyl ether
PF-85-2-45'	91.03508	85687	< 330.		UG/KG	7/03/91	10	Butylbenzyl phthalate
PF-85-2-45'	91.03508	59507	< 330.		UG/KG	7/03/91		4-Chloro-3-methylphenol
PF-85-?	91.03508	106478	< 330.		UG/KG	7/03/91		4-Chloroaniline

PF-85-2-45' 91.03508 120821 < 330.
PF-85-2-45' 91.03508 95954 < 330.
PF-85-2-45' 91.03508 88062 < 330.

UG/KG 7/03/91
UG/KG 7/03/91
UG/KG 7/03/91

1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Tentatively Identified Compounds in Customer Sample # 91.03508

none

Customer Sample Duplicate Results for Sample # 91.03508

none

Tentatively Identified Compounds in Customer Sample Duplicates for Sample # 91.03508

none

REPORT NUMBER: 10729 (continued)

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

Prepared by: LAT on 3-Jul-1991

EPA SEMIVOLATILES

REQUEST NUMBER: 11448 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 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	91.03513	83329	< 330.		UG/KG	0.0				
00.20227	91.03513	208968	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Acenaphthene
00.20227	91.03513	62533	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Acenaphthylene
00.20227	91.03513	120127	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Aniline
00.20227	91.03513	103333	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Anthracene
00.20227	91.03513	92875	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Azobenzene
00.20227	91.03513	56553	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	m-Benzidine
00.20227	91.03513	50328	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[a]anthracene
00.20227	91.03513	205992	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[a]pyrene
00.20227	91.03513	191242	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[b]fluoranthene
00.20227	91.03513	207089	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[g,h,i]perylene
00.20227	91.03513	65850	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[k]fluoranthene
00.20227	91.03513	100516	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzoic acid
00.20227	91.03513	111911	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Benzyl alcohol
00.20227	91.03513	111444	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-chloroethoxy)methane
00.20227	91.03513	108601	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-chloroethyl)ether
00.20227	91.03513	117817	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-chloroisopropyl)ether
00.20227	91.03513	101553	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
00.20227	91.03513	85687	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	4-Bromophenylphenyl ether
00.20227	91.03513	59507	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Butylbenzyl phthalate
00.20227	91.03513	106478	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	4-Chloro-3-methylphenol
00.20227	91.03513	91587	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	4-Chloroaniline
00.20227	91.03513	95578	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	2-Chloronaphthalene
00.20227	91.03513	7005723	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	o-Chlorophenol
00.20227	91.03513	218019	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	4-Chlorophenylphenyl ether
00.20227	91.03513	84742	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Chrysene
00.20227	91.03513	117840	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Di-n-butyl phthalate
00.20227	91.03513	53703	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Di-n-octyl phthalate
00.20227	91.03513	132649	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Dibenzo[a,h]anthracene
00.20227	91.03513	95501	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	Dibenzofuran
00.20227	91.03513	541731	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
00.20227	91.03513	106467	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	m-Dichlorobenzene (1,3)
00.20227	91.03513	106467	< 330.		UG/KG	0.0		7/03/91	UNDER CONTROL	p-Dichlorobenzene

00.20227	91.03513	91941	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	3,3'-Dichlorobenzidine
00.20227	91.03513	120832	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,4-Dichlorophenol
00.20227	91.03513	84662	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Diethyl phthalate
00.20227	91.03513	131113	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Dimethyl phthalate
00.20227	91.03513	105679	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,4-Dimethylphenol
00.20227	91.03513	51285	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,4-Dinitrophenol
00.20227	91.03513	121142	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,4-Dinitrotoluene
00.20227	91.03513	606202	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,6-Dinitrotoluene
00.20227	91.03513	206440	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Fluoranthene
00.20227	91.03513	86737	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Fluorene
00.20227	91.03513	118741	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Hexachlorobenzene
00.20227	91.03513	87683	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Hexachlorobutadiene
00.20227	91.03513	77474	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Hexachlorocyclopentadiene
00.20227	91.03513	67721	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Hexachloroethane
00.20227	91.03513	193395	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Indeno[1,2,3-cd]pyrene
00.20227	91.03513	78591	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Isophorone
00.20227	91.03513	534521	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
00.20227	91.03513	91576	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2-Methylnaphthalene
00.20227	91.03513	95487	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2-Methylphenol
00.20227	91.03513	106445	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	4-Methylphenol
00.20227	91.03513	91203	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Naphthalene
00.20227	91.03513	88744	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2-Nitroaniline
00.20227	91.03513	99092	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	3-Nitroaniline
00.20227	91.03513	100016	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	4-Nitroaniline
00.20227	91.03513	98953	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Nitrobenzene
00.20227	91.03513	88755	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2-Nitrophenol
00.20227	91.03513	100027	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	4-Nitrophenol
00.20227	91.03513	621647	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	N-Nitrosodi-n-propylamine
00.20227	91.03513	62759	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	N-Nitrosodimethylamine
00.20227	91.03513	86306	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	N-Nitrosodiphenylamine
00.20227	91.03513	87865	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Pentachlorophenol
00.20227	91.03513	85018	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Phenanthrene
00.20227	91.03513	108952	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Phenol
00.20227	91.03513	129000	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	Pyrene
00.20227	91.03513	120821	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	1,2,4-Trichlorobenzene
00.20227	91.03513	95954	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,4,5-Trichlorophenol
00.20227	91.03513	88062	< 330.	UG/KG	0.0	7/03/91	UNDER CONTROL	2,4,6-Trichlorophenol

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 # 91.03512

Date Collected: 4/29/91 Date Received: 4/29/91 Date Extracted: 5/09/91 Date Analyzed: 6/14/91

SAMPLE NUM	ANALYSIS	RESULT	UNCERTAINTY	UNITS	CERTIFIED	CERTIFIED	COMPLETION DATE	COMMENT	COMPOUND-NAME
					VALUE	UNCERTAINTY			
91.03512	83329	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Acenaphthene
91.03512	208968	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Acenaphthylene
91.03512	62533	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Aniline
91.03512	120127	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Anthracene
91.03512	103333	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Azobenzene
91.03512	92875	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	m-Benzidine
91.03512	56553	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[a]anthracene
91.03512	50328	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[a]pyrene
91.03512	205992	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[b]fluoranthene
91.03512	191242	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[g,h,i]perylene
91.03512	207089	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Benzo[k]fluoranthene
91.03512	65850	0.72	0.216	MG/KG	3.6	0.4	7/03/91	OUT OF CONTROL	Benzoic acid
91.03512	100516	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Benzyl alcohol
91.03512	111911	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-chloroethoxy)methane
91.03512	111444	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-chloroethyl)ether
91.03512	108601	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-chloroisopropyl)ether
91.03512	117817	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Bis(2-ethylhexyl)phthalate
91.03512	101553	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Bromophenylphenyl ether
91.03512	85687	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Butylbenzyl phthalate
91.03512	59507	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Chloro-3-methylphenol
91.03512	106478	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Chloroaniline
91.03512	91587	2.	0.6	MG/KG	3.6	0.4	7/03/91	WARNING 2-3 SIG	2-Chloronaphthalene
91.03512	95578	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	o-Chlorophenol
91.03512	7005723	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Chlorophenylphenyl ether
91.03512	218019	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Chrysene
91.03512	84742	2.6	0.78	MG/KG	4.	0.4	7/03/91	UNDER CONTROL	Di-n-butyl phthalate
91.03512	117840	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Di-n-octyl phthalate
91.03512	53703	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Dibenzo[a,h]anthracene
91.03512	132649	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Dibenzofuran
91.03512	95501	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	o-Dichlorobenzene (1,2)
91.03512	741731	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	m-Dichlorobenzene (1,3)

91.03512	106467	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	p-Dichlorobenzene (1,4)
91.03512	91941	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	3,3'-Dichlorobenzidine
91.03512	120832	2.4	0.72	MG/KG	4.1	0.4	7/03/91	WARNING 2-3 SIG	2,4-Dichlorophenol
91.03512	84662	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Diethyl phthalate
91.03512	131113	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Dimethyl phthalate
91.03512	105679	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2,4-Dimethylphenol
91.03512	51285	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2,4-Dinitrophenol
91.03512	121142	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2,4-Dinitrotoluene
91.03512	606202	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2,6-Dinitrotoluene
91.03512	206440	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Fluoranthene
91.03512	86737	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Fluorene
91.03512	118741	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Hexachlorobenzene
91.03512	87683	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Hexachlorobutadiene
91.03512	77474	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Hexachlorocyclopentadiene
91.03512	67721	1.7	0.51	MG/KG	3.7	0.4	7/03/91	OUT OF CONTROL	Hexachloroethane
91.03512	193395	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Indeno[1,2,3-cd]pyrene
91.03512	78591	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Isophorone
91.03512	534521	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2-Methyl-4,6-dinitrophenol
91.03512	91576	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2-Methylnaphthalene
91.03512	95487	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2-Methylphenol
91.03512	106445	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Methylphenol
91.03512	91203	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Naphthalene
91.03512	88744	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2-Nitroaniline
91.03512	99092	0.74	0.222	MG/KG	3.4	0.3	7/03/91	OUT OF CONTROL	3-Nitroaniline
91.03512	100016	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Nitroaniline
91.03512	98953	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Nitrobenzene
91.03512	88755	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2-Nitrophenol
91.03512	100027	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	4-Nitrophenol
91.03512	621647	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	N-Nitrosodi-n-propylamine
91.03512	62759	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	N-Nitrosodimethylamine
91.03512	86306	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	N-Nitrosodiphenylamine
91.03512	87865	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Pentachlorophenol
91.03512	85018	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Phenanthrene
91.03512	108952	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Phenol
91.03512	129000	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	Pyrene
91.03512	120821	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	1,2,4-Trichlorobenzene
91.03512	95954	< 0.33		MG/KG	0.0		7/03/91	UNDER CONTROL	2,4,5-Trichlorophenol
91.03512	88062	< 0.33		MG/KG	0.0		7/03/91	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 = 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
91.03488	%	4.8	24.48	78.64	109.36	33.24	91.28	3-Jul-1991
91.03489	%	58.69	73.77	56.78	71.5	59.61	73.82	3-Jul-1991
91.03490	%	63.19	76.7	68.78	72.96	52.61	80.78	3-Jul-1991
91.03491	%	2.24	3.83	2.26	16.9	34.04	76.2	3-Jul-1991
91.03492	%	55.13	73.8	68.44	79.26	37.01	84.48	3-Jul-1991
91.03493	%	18.28	48.95	59.84	70.98	32.2	89.04	3-Jul-1991
91.03494	%	24.65	56.17	65.94	75.32	31.61	83.5	3-Jul-1991
91.03495	%	60.89	74.24	61.08	69.82	67.07	80.86	3-Jul-1991
91.03496	%	57.79	69.24	58.62	70.18	66.63	75.06	3-Jul-1991
91.03497	%	56.58	66.9	61.24	71.56	62.1	75.1	3-Jul-1991
91.03498	%	48.06	66.22	63.6	73.78	60.19	77.5	3-Jul-1991
91.03499	%	0.0	23.56	68.16	95.88	37.7	79.68	3-Jul-1991
91.03500	%	64.53	88.67	66.92	74.5	88.5	76.36	3-Jul-1991
91.03501	%	40.67	75.63	65.82	80.22	57.39	91.92	3-Jul-1991
91.03502	%	16.26	49.66	55.22	69.42	43.03	84.04	3-Jul-1991
91.03503	%	5.09	22.98	43.36	66.26	33.91	85.66	3-Jul-1991
91.03504	%	6.83	28.1	54.14	79.48	35.3	82.12	3-Jul-1991
91.03505	%	4.37	16.05	62.76	104.12	28.36	84.58	3-Jul-1991
91.03506	%	2.8	14.46	31.84	93.14	32.65	90.76	3-Jul-1991
91.03507	%	5.09	25.48	58.18	124.7	30.1	93.7	3-Jul-1991
91.03508	%	5.52	27.09	60.72	136.64	31.37	98.46	3-Jul-1991
91.03512	%	63.51	66.76	65.54	72.08	92.74	67.98	3-Jul-1991
91.03513	%	37.99	75.49	30.2	68.06	84.87	80.5	3-Jul-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: 10729

M. Kelly
Analyst

7-3-91
Date

L. Bigheris
Reviewer

7-3-91
Date

Chris Bous
Section Leader

7/5/91
Date

mag
QA Officer

7/8/91
Date

The control status of the preceding 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.

TOTAL PETROLEUM HYDROCARBON ANALYSES

To : Philip R. Fresquez, HSE-8, MS K-490
Thru : Chris Leibman, Section Leader, Organic Analysis
From : Stuart Nielsen
Date : 1 July 1991
Subject: Analytical Results for Request Number 11448

Samples 91.03488 through 91.03508 received under request number 11448 were soil samples. The request was for the determination of total recoverable petroleum hydrocarbons.

The determinations were carried out using EPA Method 418.1 as modified for soil extraction rather than water extraction. Light mineral oil was used as a standard. The results obtained are given in the attached tables.

These results are recorded in notebook A10098 on pages 127 through 137. If you have any questions concerning these results please contact me (76934) or Chris (56789).

Analytical Results for Request Number 11448

Sample Number		Total Recoverable Petroleum Hydrocarbons, µg/g of soil
91.03488	PF-85-1-5	314 ± 62
91.03489	PF-85-1-5(QR)	220 ± 44
91.03490	PF-85-1-5'	<MDL
91.03491	PF-85-1-10'	<MDL
91.03492	PF-85-1-15'	<MDL
91.03493	PF-85-1-20'	<MDL
91.03494	PF-85-1-25'	<MDL
91.03495	PF-85-1-30'	<MDL
91.03496	PF-85-1-35'	<MDL
91.03497	PF-85-1-40'	<MDL
91.03498	PF-85-1-45'	<MDL
91.03499	PF-85-2-5	97 ± 19
91.03500	PF-85-2-5'	<MDL
91.03501	PF-85-2-10'	<MDL
91.03502	PF-85-2-15'	<MDL
91.03503	PF-85-2-20'	<MDL
91.03504	PF-85-2-25'	<MDL
91.03505	PF-85-2-30'	<MDL
91.03506	PF-85-2-35'	<MDL
91.03507	PF-85-2-40'	<MDL
91.03508	PF-85-2-45'	<MDL

MDL = 2

REPOK: NUMBER: 10710

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

Prepared by: NIELSEN on 1-Jul-1991

REQUEST NUMBER: 11448 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 # 91.03488~~

CUSTOMER NUMBER	SAMPLE NUMBER	ANALYSIS	RESULT	UNCERTAINTY	UNITS	COMPLETION DATE	COMMENT	COMPOUND NAME
PF-85-1-S	91.03488	177	314.	62.	UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-S QA	91.03489	177	220.	44.	UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-5'	91.03490	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-10'	91.03491	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-15'	91.03492	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-20'	91.03493	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-25'	91.03494	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-30'	91.03495	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-35'	91.03496	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-40'	91.03497	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-1-45'	91.03498	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-S	91.03499	177	97.	19.	UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-5'	91.03500	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-10'	91.03501	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-15'	91.03502	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-20'	91.03503	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-25'	91.03504	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-30'	91.03505	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-35'	91.03506	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-40'	91.03507	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable
PF-85-2-45'	91.03508	177	< 2.		UG/G SOIL	7/01/91		Petroleum Hydrocarbons, Total Recoverable

REPORT NUMBER: 10710 (continued)

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

Prepared by: NIELSEN on 1-Jul-1991

REQUEST NUMBER: 11448 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: 10710

S.D. Nelson
Analyst

7/4/91
Date

L. Biaphorus
Reviewer

7/5/91
Date

Chris Calton mag
Section Leader QA Officer

7/5/91
Date

7/5/91
Date

The control status of the preceding 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.

GROSS ALPHA, BETA, AND GAMMA RADIOACTIVITY SCREEN

TA-35 (52-85)

HSE-8 SOIL COUNT LABORATORY

Probe No.	Surface Subsurface	Sample ID	Counts/5'/100"	pCi/g	Date	Requestor	Analyst
②	Surface	PF-85-1-Surface	40	0.72	04/29/81	PRF	AR-CH
③	Subsurface	PF-85-1-Surface	56	0.67			
④	Surface	PF-85-1-5'	40	0.56			
⑤	Subsurface	PF-85-1-10'	37	0.61			
⑥	Surface	PF-85-1-15'	41	0.67			
⑦	Subsurface	PF-85-1-20'	38	0.55			
⑧	Surface	PF-85-1-25'	28	0.61			
⑨	Subsurface	PF-85-1-30'	27	0.66			
⑩	Surface	PF-85-1-35'	30	0.53			
⑪	Subsurface	PF-85-1-40'	31	0.14			
⑫	Surface	PF-85-1-45'	45	0.67			
⑬	Subsurface	PF-85-1-50'					

ENCLOSURE 5

RISK ASSESSMENT CALCULATION RESULTS AND METHODOLOGY

Explanation for Risk Calculation Tables

Clean closure verification of the TSL-85 surface impoundment and its associated structures was performed through five investigative phases. First, contaminated soil at and near the surface was excavated to a depth of two feet, and 24 soil samples were taken and chemically analyzed from the two-foot surface level. Second, three coreholes were drilled to a depth of approximately 49 feet, and five to ten soil samples from each corehole were taken at selected depth intervals (creating a total of 23 corehole samples) for chemical analysis. Two additional coreholes were drilled within the surface impoundment boundaries to a depth of 45 feet. Samples were collected at five-foot intervals (creating a total of 20 additional corehole samples), and analyzed for volatile and semivolatile organic constituents, and total petroleum hydrocarbons. These three sets of samples were grouped together for the purposes of risk analysis and are referred to as corehole/final soil verification samples. Third, a total of 12 soil samples were taken from underneath the underground storage tank and line for chemical analysis. These samples were referred to as UST/lines verification samples. Fourth, 11 soil samples were taken along the spill path route from the TSL-85 surface impoundment into Mortandad Canyon. These samples are referred to as canyon verification samples.

Action levels in soil are presented in three separate risk calculation tables using analytical results from soil sampled from the TSL-85 surface impoundment site (soil removal/corehole verification samples), beneath the underground storage tank and lines (UST/lines verification samples), and along the spill path route from the TSL-85 surface impoundment into Mortandad Canyon (canyon verification samples). Each set of samples was chemically analyzed for volatile organic and semivolatile organic constituents, PCBs, and metals. Unless otherwise indicated, the highest concentration of each 40 CFR Part 261 Appendix VIII constituent identified above the level of quantitation was used in the risk analysis to provide the most conservative risk assessment results.

*Calculation for Action Levels in Soil = $(RFD \times W \times R)/(CSF \times I \times AF)$

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 and 30865-73, July 27, 1990. Hereinafter, these three sources will be referred to as regulatory guidance. For calculating an action level for a systemic toxicant (non-carcinogen), a child soil ingestion scenario is used based on regulatory guidance.

Class = EPA category based on the weight of evidence that a constituent is a potential carcinogen.

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)
- 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 based on regulatory guidance. Reference for classifications is EPA's Integrated Risk Information System (IRIS) data base (4/91 edition)].

CSF = carcinogenic slope factor for a carcinogen [$1/(mg/kg\text{-day})$]; 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 ($mg/kg\text{-day}$); 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.

① 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 30815-20 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 30815-20 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 30815-20 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 30815-20 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 30815-20 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 30815-20.
- TSL-85 =** constituent levels found in analyses of soil from TSL-85. A "<" sign if front of these numbers indicates that the actual constituent concentration in soil from TSL-85 is less than the limit of quantitation.

The TSL-85 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 (specific footnotes are explained separately for each risk analysis).

SOIL REMOVAL/COREHOLE VERIFICATION SAMPLES

Core Analysis

Appendix VIII Constituent	Class	ORAL CSF	ORAL RFD	Risk	Weight	LT	Intake	AF	ED	Action Level*	TSL-85	Footnotes/
	(units)	1/(mg/kg-day)	(mg/kg-day)		(kg)	(yrs)	(kg/day)		(yrs)	(mg/kg)	(mg/kg)	Bkgd
VOAs												(mg/kg)
												1
Carbon disulfide	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	6.00E-02	8E+3
Chloroform	B2	6.10E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.15E+02	2.90E-02	1E+2
Methylene Chloride	B2	7.53E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	9.30E+01	2.90E-02	9E+1
Methyl ethyl ketone	D	1.00E+00	5.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.50E+03	8.10E-02	4E+3
1,1,1,2-Tetrachloroethane	C	2.60E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	2.69E+02	7.80E-02	3E+2
1,1,1-Trichloroethane	D	1.00E+00	9.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.50E+03	1.90E-02	7E+3
Trichloroethene	ND										1.60E-01	4E+1
Semi-VOAs												2,3
Aniline	B2	5.70E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.23E+02	< 1.30E+00	1E+2
Benzidine	A	2.30E+02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	3.04E-03	< 1.30E+00	3E-3
Benzo(a)anthracene	B2-ND										< 1.30E+00	
Benzo(b)fluoranthene	B2-ND										< 1.30E+00	
Benzo(a)pyrene	B2-ND										< 1.30E+00	
Bis (2-ethylhexyl) phthalate	B2	1.40E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.00E+01	< 1.30E+00	5E+1
4-Bromophenyl phenyl ether	D-ND										< 1.30E+00	
Butylbenzyl phthalate	C/D	1.00E+00	2.00E-01	1.00E+00	10	1	2.00E-04	1	1	1.00E+04	< 1.30E+00	2E+4
4-Chloroaniline	D	1.00E+00	4.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.00E+02	< 1.30E+00	
2-Chloronaphthalene	D	1.00E+00	8.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.00E+03	< 1.30E+00	
o-Chlorophenol	D	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	< 1.30E+00	4E+2
Chrysene	B2-ND										< 1.30E+00	
p-Cresol	C	1.00E+00	5.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.50E+03	< 1.30E+00	4E+3
Dibenzo(a,h)anthracene	B2-ND										< 1.30E+00	
o-Dichlorobenzene	D	1.00E+00	9.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.50E+03	< 1.30E+00	
m-Dichlorobenzene	D-ND										< 1.30E+00	
p-Dichlorobenzene	ND										< 1.30E+00	
3,3'-Dichlorobenzidine	B2	4.50E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.56E+00	< 1.30E+00	2E-0
2,4-Dichlorophenol	D	1.00E+00	3.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.50E+02	< 1.30E+00	2E+2
Diethyl phthalate	D	1.00E+00	8.00E-01	1.00E+00	10	1	2.00E-04	1	1	4.00E+04	< 1.30E+00	6E+4
Dimethyl phthalate	D-ND										< 1.30E+00	
2,4-Dimethylphenol	D	1.00E+00	2.00E-02	1.00E+00	10	1	2.00E-04	1	1	1.00E+03	< 1.30E+00	
Di-n-butylphthalate	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	< 1.30E+00	8E+3
Di-n-octylphthalate	ND										< 1.30E+00	
2,4-Dinitrophenol	D	1.00E+00	2.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.00E+02	< 1.30E+00	2E+2
2,4-Dinitrotoluene and												1E-0
2,6-Dinitrotoluene (mixture)	B2	6.80E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.03E+00	< 2.60E+00	4
Fluoranthene	D	1.00E+00	4.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.00E+03	< 1.30E+00	

SOIL REMOVAL/COREHOLE VERIFICATION SAMPLES

Hexachlorobenzene	B2	1.60E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	4.38E-01	< 1.30E+00		
Hexachlorobutadiene	C	7.80E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	8.97E+01	< 1.30E+00	9E+1	
Hexachlorocyclopentadiene	D	1.00E+00	7.00E-03	1.00E+00	10	1	2.00E-04	1	1	3.50E+02	< 1.30E+00	6E+2	
Hexachloroethane	C	1.40E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	5.00E+02	< 1.30E+00	8E+1	
Indeno(1,2,3-cd)pyrene	B2-ND										< 1.30E+00		
Naphthalene	D-ND										< 1.30E+00		
4-Nitroaniline	ND										< 1.30E+00		
Nitrobenzene	D	1.00E+00	5.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.50E+01	< 1.30E+00		
4-Nitrophenol	ND										< 1.30E+00		
n-Nitrosodimethylamine	B2	5.10E+01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.37E-02	< 1.30E+00		
n-Nitrosodi-n-propylamine	B2	7.00E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.00E-01	< 1.30E+00		
n-Nitrosodiphenylamine	B2	4.90E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.43E+02	< 1.30E+00	1E+2	
Pentachlorophenol	B2	1.21E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.79E+00	< 1.30E+00	2E+3	
Phenol	D	1.00E+00	6.00E-01	1.00E+00	10	1	2.00E-04	1	1	3.00E+04	< 1.30E+00	5E+4	
1,2,4-Trichlorobenzene	D-ND										< 1.30E+00	2E+3	
2,4,5-Trichlorophenol	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	< 1.30E+00	8E+3	
2,4,6-Trichlorophenol	B2	1.10E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	6.36E+01	< 1.30E+00	4E+1	
PCBS (Mixed Aroclors)	B2	7.70E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	9.09E-02	3.00E-01	1.00E+01	
												5	
												9E-2	
METALS												6,7	
										TOTAL	EPTOX	TOTAL	
Arsenic	A-ND										3.80E-02	3.90E+00	8E+1
Barium	D	1.00E+00	7.00E-02	1.00E+00	10	1	2.00E-04	1	1	3.50E+03	5.70E-01	4.10E+02	4E+3
Cadmium	B1/D	1.00E+00	5.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.50E+01	< 1.00E-01	1.70E-01	4E+1
Chromium	A/D	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	< 2.00E-01	2.70E+01	4E+2
Lead	B2-ND										1.50E-01	2.40E+01	5E+2
Mercury	D-ND										3.20E-04	1.80E-02	2E+1
Selenium	D-ND	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	3.40E-02		
Silver	D	1.00E+00	3.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.50E+02	2.60E-01	2E+2	

COREHOLE/FINAL SOIL VERIFICATION SAMPLE FOOTNOTES

40 CFR Part 261 Appendix VIII constituent concentrations used for this risk analysis were taken from results of chemical analyses performed on TSL-85 soil samples taken from a two-foot depth surface after excavation, and from three coreholes drilled to approximately 49 feet.

1. Volatile organic compounds were identified using SW 846 purge-and-trap (P/T) GC/MS method 8260. See Enclosure 4 for analytical results.
2. Semivolatile organic compounds were identified using SW 846 extraction and GC/MS method 8270. Phase 5 semivolatile analytical results were utilized in the risk analysis, because all of the soil samples taken at the two-foot depth (Phase 1) and some of the samples from the first set of coreholes (Phase 2) were analyzed outside of the EPA-allowable 40-day holding time, and because the Phase 5 samples were able to be analyzed with a lower semivolatile analytical LOQ than the Phase 1 and 2 samples. For these reasons, they are considered to more accurately reflect the constituent present in the samples. See Enclosure 4 for analytical results.
3. Limits of quantitation (LOQ) for the semivolatile organic compound analyses ranged from 0.330 mg/kg to 1.300 mg/kg. High levels of total petroleum hydrocarbons (waste oil) interfered with the analyses and resulted in the elevated LOQs. The heightened LOQs do not imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ. The actual concentration of the analytes of interest can be inferred only to be less than the 1.300 mg/kg LOQ, and may be as low as 0.000 mg/kg, unless a specific concentration above the LOQ has been detected. However, to employ the most conservative scenario in the risk assessment, the 1.300 mg/kg LOQ will be used in comparing action levels.
4. Because the IRIS data base provides a CSF for the mixture of both 2,4-dinitrotoluene and 2,6-dinitrotoluene compounds, the action level was calculated (1.03 mg/kg) and compared to the sum total of both compounds using the 1.300 mg/kg LOQ ($1.300 \text{ mg/kg} + 1.300 \text{ mg/kg} = 2.600 \text{ mg/kg}$).
5. NMED clean closure requires a cleanup level of 10 mg/kg PCBs (Sides, M., 1991).

6. EPTOX metal analyses were performed on the corehole/final soil verification samples taken from the TSL-85 site. These analytical results are compared to action levels derived for total metals and background total metal concentrations. 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).

7. Reference for background concentrations of metals is Ferenbaugh, et.al.(1990) (Enclosure 6).

UST/LINES VERIFICATION SAMPLES

Appendix VIII Constituent	Class	ORAL CSF	ORAL RFD	Risk	Weight	LT	Intake	AF	ED	Action Level*	TSL-85	Footnotes/
	(units)	1/(mg/kg-day)	(mg/kg-day)		(kg)	(yrs)	(kg/day)		(yrs)	(mg/kg)	(mg/kg)	Bkgd
VOAs												(mg/kg)
Methylene Chloride	B2	7.53E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	9.30E+01	2.00E-02	1
Semi-VOAs												2,3
Aniline	B2	5.70E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.23E+02	< 1.39E+00	
Benzidine	A	2.30E+02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	3.04E-03	< 1.39E+00	
Benzo(a)anthracene	B2-ND										< 1.39E+00	
Benzo(b)fluoranthene	B2-ND										< 1.39E+00	
Benzo(a)pyrene	B2-ND										< 1.39E+00	
Bis (2-ethylhexyl) phthalate	B2	1.40E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.00E+01	< 1.39E+00	
4-Bromophenyl phenyl ether	D-ND										< 1.39E+00	
Butylbenzyl phthalate	C/D	1.00E+00	2.00E-01	1.00E+00	10	1	2.00E-04	1	1	1.00E+04	< 1.39E+00	
4-Chloroaniline	D	1.00E+00	4.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.00E+02	< 1.39E+00	
2-Chloronaphthalene	D	1.00E+00	8.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.00E+03	< 1.39E+00	
o-Chlorophenol	D	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	< 1.39E+00	
Chrysene	B2-ND										< 1.39E+00	
p-Cresol	C	1.00E+00	5.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.50E+03	< 1.39E+00	
Dibenzo(a,h)anthracene	B2-ND										< 1.39E+00	
o-Dichlorobenzene	D	1.00E+00	9.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.50E+03	< 1.39E+00	
m-Dichlorobenzene	D-ND										< 1.39E+00	
p-Dichlorobenzene	ND										< 1.39E+00	
3,3'-Dichlorobenzidine	B2	4.50E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.56E+00	< 1.39E+00	
2,4-Dichlorophenol	D	1.00E+00	3.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.50E+02	< 1.39E+00	
Diethyl phthalate	D	1.00E+00	8.00E-01	1.00E+00	10	1	2.00E-04	1	1	4.00E+04	< 1.39E+00	
Dimethyl phthalate	D-ND										< 1.39E+00	
2,4-Dimethylphenol	D	1.00E+00	2.00E-02	1.00E+00	10	1	2.00E-04	1	1	1.00E+03	< 1.39E+00	
Di-n-butylphthalate	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	< 1.39E+00	
Di-n-octylphthalate	ND										< 1.39E+00	
2,4-Dinitrophenol	D	1.00E+00	2.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.00E+02	< 1.39E+00	
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	< 2.77E+00	4
Fluoranthene	D	1.00E+00	4.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.00E+03	< 1.39E+00	
Hexachlorobenzene	B2	1.60E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	4.38E-01	< 1.39E+00	
Hexachlorobutadiene	C	7.80E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	8.97E+01	< 1.39E+00	
Hexachlorocyclopentadiene	D	1.00E+00	7.00E-03	1.00E+00	10	1	2.00E-04	1	1	3.50E+02	< 1.39E+00	
Hexachloroethane	C	1.40E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	5.00E+02	< 1.39E+00	
Indeno(1,2,3-cd)pyrene	B2-ND										< 1.39E+00	
Naphthalene	D-ND										< 1.39E+00	
4-Nitroaniline	ND										< 1.39E+00	
Nitrobenzene	D	1.00E+00	5.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.50E+01	< 1.39E+00	

UST/LINES VERIFICATION SAMPLE FOOTNOTES

40 CFR Part 261 Appendix VIII constituent concentrations used for this risk analysis were taken from results of chemical analyses performed on twelve soil samples taken from underneath the underground storage tank and lines connecting it to the TSL-85 surface impoundment.

1. Volatile organic compounds were identified using SW 846 purge-and-trap (P/T) GC/MS method 8260. See Enclosure 4 for analytical results.
2. Semivolatile organic compounds were identified using SW 846 extraction and GC/MS method 8270. The UST/lines verification samples were analyzed outside of the EPA-allowable 40-day holding time. For this reason, semivolatile organic analytical results are not considered valid. However, the most elevated limit of quantitation (LOQ) is presented in this risk analysis to provide a "worst case" (most conservative) scenario. See Enclosure 4 for analytical results.
3. The LOQs for the semivolatile organic compound analyses ranged from 0.330 mg/kg to 1.386 mg/kg. Elevated levels of total petroleum hydrocarbons (waste oil) interfered with the analyses and resulted in the elevated LOQs. The heightened LOQs do not imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ. The actual concentration of the analytes of interest can be inferred only to be less than the 1.386 mg/kg LOQ, and may be as low as 0.000 mg/kg, unless a specific concentration above the LOQ has been detected. However, to employ the most conservative scenario in the risk assessment, the 1.386 mg/kg LOQ will be used in comparing action levels.
4. Because the IRIS data base provides a CSF for the mixture of both 2,4-dinitrotoluene and 2,6-dinitrotoluene compounds, the action level was calculated (1.03 mg/kg) and compared to the sum total of both compounds using the 1.386 mg/kg LOQ ($1.386 \text{ mg/kg} + 1.386 \text{ mg/kg} = 2.772 \text{ mg/kg}$).
5. NMED clean closure requires a cleanup level of 10 mg/kg PCBs (Sides, 1991).
6. Total metal analyses were performed on the UST/lines verification samples. These analytical results are compared to action levels derived for total metals and background total metal concentrations. 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).

7. Reference for background concentrations of metals is Ferenbaugh, et.al.(1990) (Enclosure 6).

CANYON VERIFICATION SAMPLES

Appendix VIII Constituent	Class	ORAL CSF	ORAL RFD	Risk	Weight	LT	Intake	AF	ED	Action Level *	TSL-85	Footnotes/
	(units)	1/(mg/kg-day)	(mg/kg-day)		(kg)	(yrs)	(kg/day)		(yrs)	(mg/kg)	(mg/kg)	Bkgd
VOAs												(mg/kg)
Carbon disulfide	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	1.26E-01	1
Semi-VOAs												2,3
Aniline	B2	5.70E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.23E+02	< 1.65E+00	
Benzidine	A	2.30E+02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	3.04E-03	< 1.65E+00	
Benzo(a)anthracene	B2-ND										< 1.65E+00	
Benzo(b)fluoranthene	B2-ND										< 1.65E+00	
Benzo(a)pyrene	B2-ND										< 1.65E+00	
Bis (2-ethylhexyl) phthalate	B2	1.40E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.00E+01	< 1.65E+00	
4-Bromophenyl phenyl ether	D-ND										< 1.65E+00	
Butylbenzyl phthalate	C/D	1.00E+00	2.00E-01	1.00E+00	10	1	2.00E-04	1	1	1.00E+04	< 1.65E+00	
4-Chloroaniline	D	1.00E+00	4.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.00E+02	< 1.65E+00	
2-Chloronaphthalene	D	1.00E+00	8.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.00E+03	< 1.65E+00	
o-Chlorophenol	D	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	< 1.65E+00	
Chrysene	B2-ND										< 1.65E+00	
p-Cresol	C	1.00E+00	5.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.50E+03	< 1.65E+00	
Dibenz(a,h)anthracene	B2-ND										< 1.65E+00	
o-Dichlorobenzene	D	1.00E+00	9.00E-02	1.00E+00	10	1	2.00E-04	1	1	4.50E+03	< 1.65E+00	
m-Dichlorobenzene	D-ND										< 1.65E+00	
p-Dichlorobenzene	ND										< 1.65E+00	
3,3'-Dichlorobenzidine	B2	4.50E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.56E+00	< 1.65E+00	
2,4-Dichlorophenol	D	1.00E+00	3.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.50E+02	< 1.65E+00	
Diethyl phthalate	D	1.00E+00	8.00E-01	1.00E+00	10	1	2.00E-04	1	1	4.00E+04	< 1.65E+00	
Dimethyl phthalate	D-ND										< 1.65E+00	
2,4-Dimethylphenol	D	1.00E+00	2.00E-02	1.00E+00	10	1	2.00E-04	1	1	1.00E+03	< 1.65E+00	
Di-n-butylphthalate	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	< 1.65E+00	
Di-n-octylphthalate	ND										< 1.65E+00	
2,4-Dinitrophenol	D	1.00E+00	2.00E-03	1.00E+00	10	1	2.00E-04	1	1	1.00E+02	< 1.65E+00	
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	< 1.65E+00	4
Fluoranthene	D	1.00E+00	4.00E-02	1.00E+00	10	1	2.00E-04	1	1	2.00E+03	< 1.65E+00	
Hexachlorobenzene	B2	1.60E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	4.38E-01	< 1.65E+00	
Hexachlorobutadiene	C	7.80E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	8.97E+01	< 1.65E+00	
Hexachlorocyclopentadiene	D	1.00E+00	7.00E-03	1.00E+00	10	1	2.00E-04	1	1	3.50E+02	< 1.65E+00	
Hexachloroethane	C	1.40E-02	1.00E+00	1.00E-05	70	70	1.00E-04	1	70	5.00E+02	< 1.65E+00	
Indeno(1,2,3-cd)pyrene	B2-ND										< 1.65E+00	
Naphthalene	D-ND										< 1.65E+00	
4-Nitroaniline	ND										< 1.65E+00	

CANYON VERIFICATION SAMPLES

Nitrobenzene	D	1.00E+00	5.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.50E+01	<	1.65E+00	
4-Nitrophenol	ND										<	1.65E+00	
n-Nitrosodimethylamine	B2	5.10E+01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.37E-02	<	1.65E+00	
n-Nitrosodi-n-propylamine	B2	7.00E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.00E-01	<	1.65E+00	
n-Nitrosodiphenylamine	B2	4.90E-03	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	1.43E+02	<	1.65E+00	
Pentachlorophenol	B2	1.21E-01	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	5.79E+00	<	1.65E+00	
Phenol	D	1.00E+00	6.00E-01	1.00E+00	10	1	2.00E-04	1	1	3.00E+04	<	1.65E+00	
1,2,4-Trichlorobenzene	D-ND										<	1.65E+00	
2,4,5-Trichlorophenol	D	1.00E+00	1.00E-01	1.00E+00	10	1	2.00E-04	1	1	5.00E+03	<	1.65E+00	
2,4,6-Trichlorophenol	B2	1.10E-02	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	6.36E+01	<	1.65E+00	
													5
PCBS (Mixed Aroclors)	B2	7.70E+00	1.00E+00	1.00E-06	70	70	1.00E-04	1	70	9.09E-02		1.70E-01	1.00E+01
METALS													6,7
										TOTAL		EPTOX	TOTAL
Arsenic	A-ND											2.00E-03	3.90E+00
Barium	D	1.00E+00	7.00E-02	1.00E+00	10	1	2.00E-04	1	1	3.50E+03		3.00E-01	4.10E+02
Cadmium	B1/D	1.00E+00	5.00E-04	1.00E+00	10	1	2.00E-04	1	1	2.50E+01	<	1.00E-02	1.70E-01
Chromium	A/D	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02		7.90E-02	2.70E+01
Lead	B2-ND											5.00E-04	2.40E+01
Mercury	D-ND											5.10E-04	1.80E-02
Selenium	D-ND	1.00E+00	5.00E-03	1.00E+00	10	1	2.00E-04	1	1	2.50E+02	<	1.00E-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	

CANYON VERIFICATION SAMPLE FOOTNOTES

40 CFR Part 261 Appendix VIII constituent concentrations used for this risk analysis were taken from results of chemical analyses performed on eleven soil samples taken from the spill path route from the TSL-85 surface impoundment into Mortandad Canyon.

1. Volatile organic compounds were identified using SW 846 purge-and-trap (P/T) GC/MS method 8260. See Enclosure 4 for analytical results.
2. Semivolatile organic compounds were identified using SW 846 extraction and GC/MS method 8270. The canyon verification samples were analyzed outside of the EPA-allowable 40-day holding time. For this reason, semivolatile organic analytical results are not considered valid. However, the most elevated limit of quantitation (LOQ) is presented in this risk analysis to provide a "worst case" (most conservative) scenario. See Enclosure 4 for analytical results.
3. The LOQs for the semivolatile organic compound analyses ranged from 0.330 mg/kg to 1.650 mg/kg. Elevated levels of total petroleum hydrocarbons (waste oil) interfered with the analyses and resulted in the elevated LOQs. The heightened LOQs do not imply that the concentration of the analytes of interest were also elevated, just that the interference prevented the establishment of a lower LOQ. The actual concentration of the analytes of interest can be inferred only to be less than the 1.650 mg/kg LOQ, and may be as low as 0.000 mg/kg, unless a specific concentration above the LOQ has been detected. However, to employ the most conservative scenario in the risk assessment, the 1.650 mg/kg LOQ will be used in comparing action levels.
4. Because the IRIS data base provides a CSF for the mixture of both 2,4-dinitrotoluene and 2,6-dinitrotoluene compounds, the action level was calculated (1.03 mg/kg) and compared to the sum total of both compounds using the 1.650 mg/kg LOQ ($1.650 \text{ mg/kg} + 1.650 \text{ mg/kg} = 3.300 \text{ mg/kg}$).
5. NMED requires a cleanup level of 10 mg/kg PCBs (Sides, 1991).
6. EPTOX metal analyses were performed on the canyon verification samples. These analytical results are compared to action levels derived for total metals and background total metal concentrations. 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).

7. Reference for background concentrations of metals is Ferenbaugh, et.al.(1990) (Enclosure 6).

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

^aData 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

^aData 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

^aData are reported in parts per million (ppm) unless otherwise noted.

^bNo 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

^aData 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

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

^aCrustal concentrations (Mason 1966).

^bSedimentary rocks, shales, and clays (Vinogradov 1959).

^cSoil concentrations (Vinogradov 1959).

^dCrustal 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 ³)	Pb (ppm)	PO ₄ (ppm ⁴)	Rb (ppm)	SO ₄ (ppm ⁴)	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

*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		

*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		

*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		

^aInsufficient 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		

^aInsufficient sample for analysis where no data are reported. Uncertainties represent analytical uncertainties.

ENCLOSURE 6

**SIGMA MESA: BACKGROUND ELEMENTAL
CONCENTRATIONS IN SOIL AND VEGETATION, 1979**

*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		Type of Sample Collected				
Designation	Location	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	

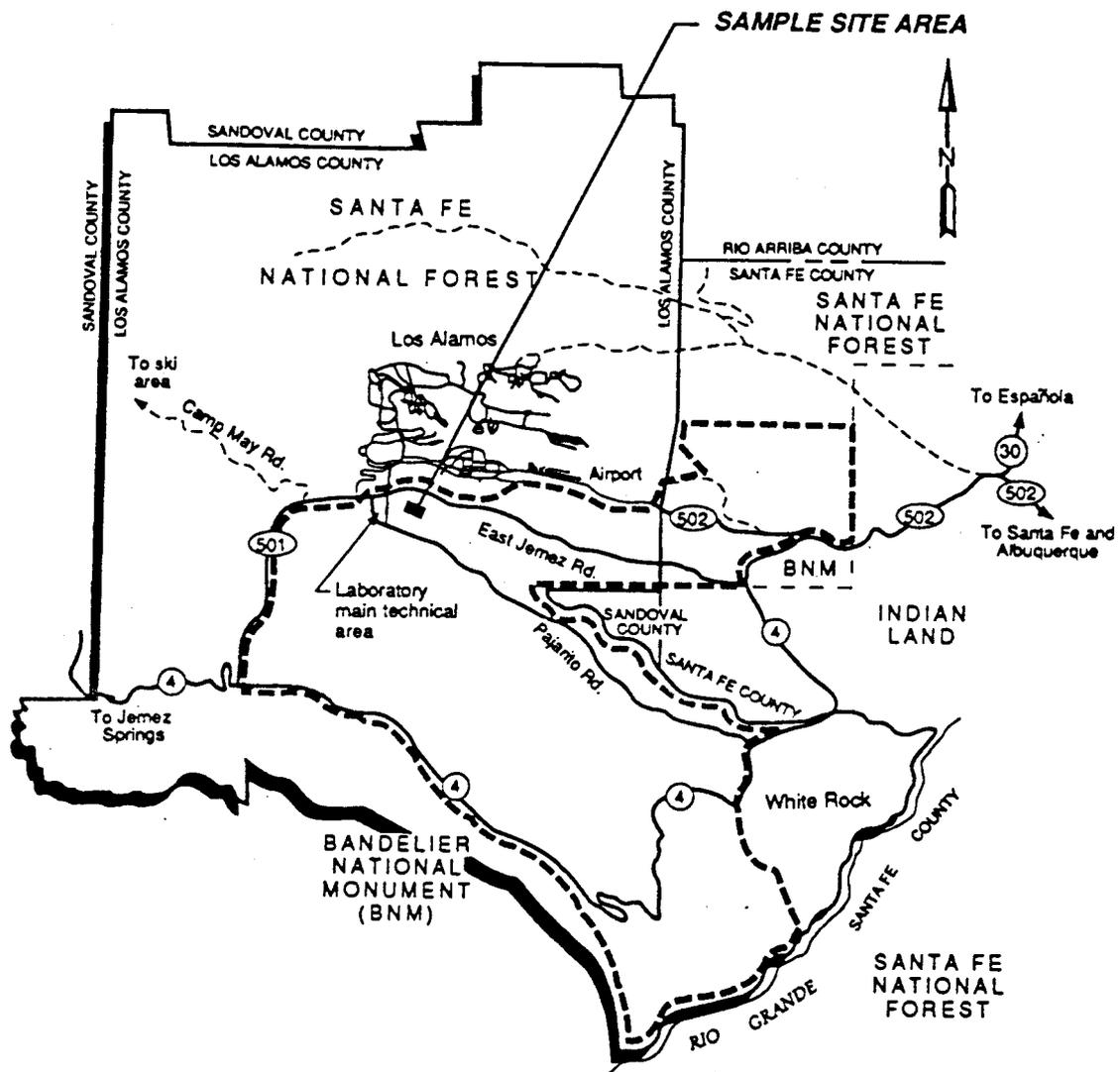


Fig. 1. Location of sampling area.

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

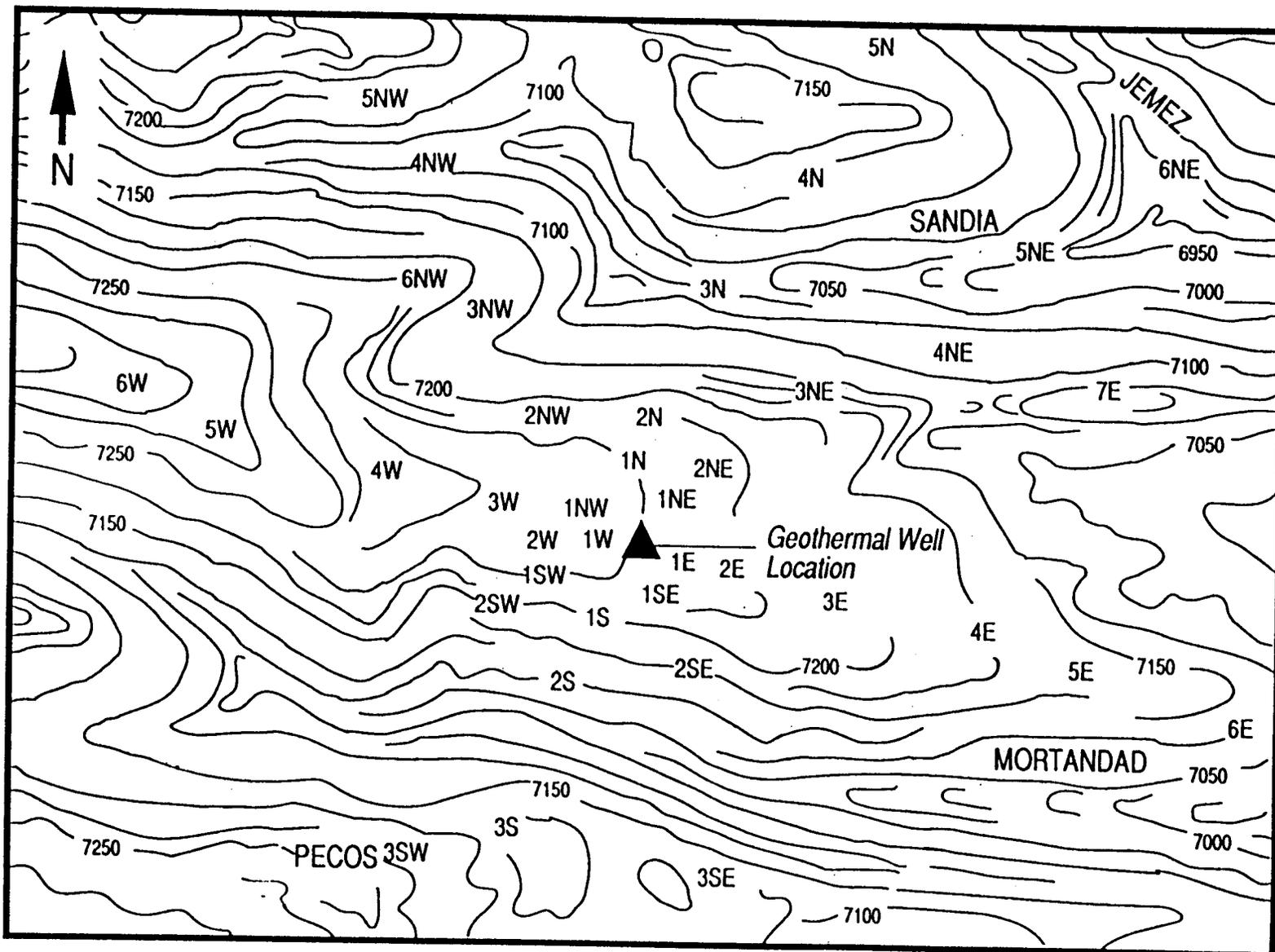


Fig. 2. Locations of sampling sites.

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

^aData 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 characteris-

tics 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.