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TECHNICAL MEMORANDUM
WETLAND INVESTIGATION

AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

VOLUME I OF II

PREPARED FOR:

ACS RD/RA EXECUTIVE COMMITTEE

•••

PREPARED BY:

MONTGOMERY WATSON

ADDISON, ILLINOIS

MAY 1997

MONTGOMERY WATSON

MONTGOMERY WATSON

May 21, 1997

Ms. Sheri Bianchin, RPM
Mail Code SR-J6
U.S. EPA, Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

Re: Transmittal
Revised Phase I Wetland Investigation Technical Memorandum
American Chemical Service NPL Site

Dear Ms. Bianchin:

We have revised the Wetland Investigation Technical Memorandum in accordance with the U.S. EPA review comments dated April 29, 1997. We received a complete copy of the comments on May 1, 1997. The revised Technical Memorandum is being submitted to you on May 21, 1997, within the 21 day response period.

Five copies of the revised technical memorandum are enclosed and we are sending five copies to Chris Brown at IDEM and two copies to Steve Mrkvika at Black and Veatch. In addition, we are providing one copy each of: 1) our direct responses to U.S. EPA comments and 2) a cross referenced redline copy of the tech memo text to facilitate your review.

Please call if I can provide additional copies or further information regarding this submittal.

Sincerely,

MONTGOMERY WATSON INC.

For

Joseph D. Adams Jr., P.E,
Project Coordinator

cc: C. Brown, IDEM (5 copies of enclosures)
S. Mrkvika, B&V (2 copies of enclosures)
ACS Technical Committee (1 copy each of enclosures)

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Response to U.S. EPA Comments Regarding the July 1996 Wetlands Investigations Technical Memorandum
American Chemical Services, Inc., NPL Superfund Site, Griffith, Indiana

General Comments

1. The word "impact" was used throughout the report when discussing the contamination in the wetland. U.S. EPA recommends that this wording be changed to "contaminated" or a similar term. Impact indicates that an evaluation of the wetland function and value has been conducted and the wetland function and value has been conducted and the contamination is effecting that function and value. The report text should be modified to indicate that areas are contaminated, but comparison to screening levels or any type of habitat impacts have not yet been identified to determine if the area has been negatively impacted.

   Response: Wherever possible the word "impact" has been substituted with "contamination" or another appropriate word or phrase. In some instances, contamination could not be used, because the word was used to indicate an effect, not necessarily definable as contamination.

2. **Introduction.** One of the purposes stated in the approved Work Plan for the Wetland Investigation was to "determine if elevated contaminant levels are widespread in order to decide whether toxicity testing and/or bioaccumulation studies should be performed." State this in the text.

   Response: This was an objective stated within the Phase II wetland investigation, but had been included within this document as well.

3. **Introduction.** Page 26 of the Record of Decision (ROD) for the American Chemical Services, Inc. NPL Site states "continued wetland evaluation is required based on the conclusions of the U.S. EPA produced ecological assessment. Wetland remediation will be implemented as a part of the remedy, if necessary, to avoid the long- and short-term impacts associated with the destruction or modifications of the wetlands." State this in the text.

   Response: The revision has been made as requested.

Response: No comparison to Ontario Ministry of the Environment (MOE) sediment criteria had been included in the original Technical Memorandum. The information requested was incorporated into the document, and in addition, a general discussion of the sediment inorganic chemical concentrations to MOE sediment criteria has been included, so that this information does not look out of place.

8. **Page 5, Soil/Sediments.** Revise the text to indicate that cadmium exceeds the SEL at SD21.

   Response: The revision has been made as requested.

9. **Page 5, Soil/Sediments.** Revise the text to indicate that cadmium and lead greatly exceed the lowest effect levels (LEL), and nearly equal the SELs at SD26.

   Response: The revision has been made as requested.

10. **Page 5, Soil/Sediments.** Revise the text to indicate that the exceedances in the wetlands are not randomly located, but are in samples in the known runoff pathways from the site. The statement that "contaminant distributions and concentrations appear randomly distributed in the wetland" should be deleted.

    Response: The text has been revised to include other samples that appear to contain concentrations of chemicals that are elevated, and where appropriate have defined these samples as occurring in known runoff pathways from the site. However, it is not known whether each of the samples that contain elevated concentrations of chemicals reside in known runoff pathways from the site.

11. **Page 5, Soil/Sediments.** Revise the text to indicate that the PCBs are also high in SD21 and SD35, which appear to be along the same drainage pathway that leads to SD33.

    Response: The revision has been made as requested.

12. **Page 5, Soil/Sediment Samples.** An explanation for the metals results of the sediment samples was not included. Clarify.

    Response: A results section for metals has been included in the revised Technical Memorandum.

16. **Page 8; Conclusions and Recommendations, Sediments with High PCB Levels.** Indicate that the sampling plan was approved on U.S. EPA on October 11, 1996.

Response: The revision has been made as requested.

17. **Page 8; Conclusions and Recommendations, Sediments with High PCB Levels; paragraph 2.** As was determined during the approval of the sampling plan, it is not appropriate to limit the scope of additional investigatory work to areas which have shown exceedances of 10 ppm. Revise the text to indicate that PCB delineation to 1 ppm instead of 10 ppm as proposed level for soils and sediments. Note that the remediation level of 10 ppm is not necessarily applicable to the remediation of sediments. Please revise accordingly.

Response: The revisions have been made as requested.

18. **Table 2.** Several surface water samples contained low levels of bis(2-ethylhexyl)phthalate (BEHP) that were not included in Table 2. Given that BEHP was identified as a contaminant of concern as stated on page 4-9 of the Pre-Design Work Plan, explain the significance of the presence of BEHP.

Response: Bis(2-ethylhexyl)phthalate (BEHP) results in surface water samples were qualified during the data validation as nondetects at the sample quantitation limit (10 ug/L), because of blank contamination. For this reason, these results do not have significance to the wetland investigation. Therefore, no change has been made to the text, tables or figures of the Technical Memorandum.

19. **Table 4.** The value for zinc in Table 4 for sample SW16 should be J qualified.

Response: The revision has been made in Table 4.

20. **Table 6.** Methylene chloride was detected in SD25 at 14 J ug/kg. Acetone was detected in SD24 at 20 J ug/kg.

Response: The revision has been made in Table 6.

21. **Appendix A.** All of the surface water samples contained numerous volatile and semivolatile tentatively identified compounds. Explain their significance in comparison with 8 of the Record of Decision. U.S. EPA understands that Table

TECHNICAL MEMORANDUM
WETLAND INVESTIGATION
ACS NPL SITE PRE-DESIGN

This Technical Memorandum presents the results, conclusions, and recommendations from the wetland investigation conducted at the ACS NPL site in Griffith, Indiana on May 21 and 22, 1996.

The U.S. EPA identified potential risks to the wetland in its ecological assessment of the ACS site (Final Ecological Risk Assessment for American Chemical Services, Griffith, Indiana, March 1992), which was based upon RI data. Continued wetland evaluation is required based on the conclusions of the U.S. EPA produced ecological assessment. Wetland remediation will be implemented as part of the remedy, if necessary, to avoid the long and short term impacts associated with the destruction or modifications of the wetlands. Consistent with this requirement for additional wetlands evaluation the objective of this wetland investigation is two fold :

- to further define the potential for chemical releases to the wetland from the ACS site due to groundwater discharge to surface water and due to direct runoff from ACS plant site process areas, and

- to determine if elevated contaminant levels are widespread such that toxicity and/or bioaccumulation studies should be performed.

Surface water and soil/sediment sampling locations for the wetland investigation were determined in the field with concurrence from U.S. EPA on May 14, 1996. The selected sampling locations are shown on Figure 1. Sediment/soil sampling points are shown on Figure 2 and surface water sampling points are shown on Figure 3. Table 1 contains the sample location coordinates which were established by a surveyor on site during and immediately following sampling. The wetland investigation was conducted in accordance with the U.S. EPA approved scope of work for the Pre-Design Work Plan and specific operating procedures (SOPs) for the wetland investigation.

DESCRIPTION OF WETLAND AREA

Wetland areas are located west and northwest of the ACS facility. These areas consist of marsh communities overlapping somewhat with wet meadow communities and scrub-shrub communities. Marsh communities, which entail the majority of the wetland, are distinguishable by thick stands of cattail, the predominant marsh vegetation. Wet meadow

communities are located in small pockets, primarily in the north and east portions of the site. The wet meadows are distinguishable by low growing sedges and grasses. The scrub-shrub communities are located in wetland transitional areas, primarily along the north and west side of the ACS facility, between the facility and the main wetland areas.

Topographic maps show that the ground surface at the ACS facility is between 635 and 640 feet above mean sea level (amsl). The large wetland area, located west of the facility has a surface elevation of approximately 630 to 632 feet amsl. The source of the water in the wetland includes direct precipitation, runoff from higher ground, and discharging groundwater from the upper aquifer. Surface water in the wetland is highly variable depending on the time of the growing season and the rainfall. Typically, in the spring and fall, prolonged periods of inundation or saturation occur. Water levels may approach a depth of three feet towards the center of the wetland during these seasons. During the dryer summer and winter months, the water table in the wetland fluctuates as the wetland is inundated for several days to several weeks, depending on frequency and duration of rainfall events in the local area.

Groundwater seepage areas can be found to the west of the ACS facility, in areas where the water table intersects the ground surface. Different seep areas are active at different times, depending upon the water table elevation and the local topography. There is a small drainage channel extending west from sediment sampling location SD22 (Figure 1) into the wetland. Water is often flowing in the bottom of the channel, indicating groundwater may be discharging to it, and that it may collect surface water. Aerial photographs show that before 1970, this channel extended from inside the facility, west across the wetland, to the drainage ditch running north to south through the center o the wetland. In 1995, Mr. Tarpo of ACS indicated to Mr. William Bolen of the U.S. EPA that historically, there had been direct runoff to the north of the site. Sediment sampling locations SD28, SD29, and SD30 (Figure 1) were selected on the basis of Mr. Tarpo's recommendations.

At the present time, storm water runoff at the ACS facility is routed to several surface impoundment basins within the facility fence. The primary impoundment basin is the fire pond; two others are located along the fence line on the north and west side of the facility. After a precipitation event, the stored water from these impoundments slowly dissipates, as it seeps into the ground.

A channelized drainage ditch exists along the north and west side of the site. The ditch enters the site from the north, passing beneath the Grand Trunk Railroad via a culvert, near sediment sample location SD38. After passing beneath the railroad tracks, the ditch extends approximately 1,000 feet to the west along the railroad tracks. Old aerial photographs indicate that the ditch was also channelized south through the center of the large wetland. The depression in the topography was identify during the site visit to mark the sampling locations.

SAMPLING LOCATIONS AND OBJECTIVES

The sampling locations were marked in the field on May 14, 1996 by representatives of U.S. EPA and Montgomery Watson. The sample locations were selected to confirm and refine findings from wetland sampling conducted during the RI. The objectives in selecting the sampling locations were to collect surface water and sediment samples on the north and west side of the ACS facility, where sediments may have accumulated, and along preferential surface water run-off routes. The following describes the locations and objectives of the sampling points.

SOIL/SEDIMENT SAMPLES

Three soil/sediment samples (SD28, SD29, and SD30) were collected to determine the presence or absence of contamination in the area north of the On-Site Containment Area identified by Mr. Tarpo as historic surface water runoff areas. Another series of samples was collected along the drainage channel to the west of the site (SD23, SD22, SD21, and SD35), due to surface water runoff from the ACS plant site. Other areas of surface water runoff from the ACS plant site were also sampled, including locations in the vicinity of RI, SD11 (SD26 and SD27), SD12 (SD24 and SD25) and SD16 (SD31, SD33, and SD34). Sample locations SD17 and SD32 were collected near the RI sample SD7C. Three sediment samples (SD18, SD19, and SD20) were collected at the planned location of the groundwater treatment effluent discharge diffusers for the Perimeter Containment System. Two samples (SD36 and SD37) were collected in the wetland area northwest of sample locations SD24 and SD25. These sampling locations were selected to coincide with the extent of upper aquifer groundwater contamination detected during the upper aquifer investigation conducted in February 1996. Sediment sample SD38 was collected near the surface water seep sample that was found to contain benzene during the upper aquifer investigation. Sample locations SD17 through SD38 are depicted in Figures 1 and 2.

SURFACE WATER SAMPLES

Six samples were collected along the perimeter drainage ditch, upstream and downstream of the ACS facility and one sample (SW9) was collected adjacent to the drainage ditch. Five samples were collected at locations interior to the site wetlands, where the upper aquifer investigation indicated groundwater may be discharging to the surface.

Drainage Ditch Samples - One surface water sample was collected at an upstream location (SW14) and six in downstream locations (SW9, SW15, SW10, SW11, SW12, and SW13) of the ACS facility. The upstream sample location was chosen to provide an indication of the quality of the surface water entering the ditch from off-site. Downstream surface water samples were chosen to provide an indication of the quality of the groundwater discharging to the wetland, although such samples will also include potential effects from upstream influences and groundwater discharge from areas on the opposite side of the ditch from ACS.

Interior Wetland Samples - Five surface water samples were collected to evaluate the potential for the contamination of the groundwater discharging to the wetlands. Two surface water samples (SW15 and SW16) were collected at the sediment sampling locations SD37 and SD36, respectively. Surface water samples SW18, SW19, and SW20 were collected from three locations in the wetland near the area where the groundwater treatment effluent will be discharged. (These surface water sampling locations correspond with sediment sampling locations SD18, SD19, and SD20.) Surface water sample SW17 was collected from the ditch where the RI sample SD7C was collected. (This sample location corresponds with sediment sample SD17.) Sample SW9 was collected to confirm the results of the surface water seep sample that was collected during the upper aquifer investigation in February 1996. (This sample location corresponds to sediment sample SD38). Surface water samples SW9 through SW20 are shown on Figures 1 and 3.

SAMPLING PROCEDURES

Soil/sediment sampling and water sampling was conducted in accordance with the approved SOPs for Sediment Sampling and Surface Water Sampling with the following exception: sediment/soil grab samples were collected rather than composite samples at each location with concurrence by Holly Grejda of IDEM, and Jim Chapman of U.S. EPA, for consistency between sampling teams.

ANALYTICAL PARAMETERS

The approved Work Plan Statement of Work, FSP, QAPP, and SOPs for the wetland investigation required that soil/sediment samples be analyzed for VOCs, SVOCs, PCBs, arsenic, cadmium, chromium, copper, lead, mercury and zinc; and that surface water samples be analyzed for VOCs, SVOCs, PCBs, cadmium, iron, lead, mercury, zinc, and cyanide. Due to a logistical error, sediment samples were not analyzed for mercury. Montgomery Watson is prepared to re-sample the sediment locations if necessary to collect sample volume for mercury analysis.

RESULTS

Table 1 presents the map coordinates for soil/sediment and surface water sample locations. Tables 2 through 9 present a summary of detected analytes. Table 10 presents surface water sample field parameters. Data quality presented in the summary tables represents laboratory data validated in accordance with the project FSP and QAPP. Laboratory analytical reports are included in Appendix A.

SURFACE WATER SAMPLES

Field Parameters - Field parameters were measured for collected surface water samples, and are presented in Table 10. Field parameters included pH, conductivity, temperature, dissolved oxygen, and redox potential. Parameters were all within typical ranges for surface water samples (Cole, Gerald A., 1979. Textbook of Limnology, 2nd edition. The C.V. Mosby Company. St. Louis, MO, pp 426.)

VOCs - Chloroethane and benzene were the only VOCs detected in the twelve surface water samples (Table 3). Acetone was detected at low concentrations in some surface water samples, but based on the data validation they were qualified as undetected based on the level of blank contamination

Chloroethane and benzene were found only in a groundwater seep sample and two samples collected along the drainage ditch that runs between the Grand Trunk Railroad and the wetland west of the ACS facility. The highest concentrations of these two VOCs were found at the groundwater seep, SW9. A sample from this seep was collected and analyzed with the on-site field GC during the upper aquifer investigation in March 1996 and found to contain benzene. The seep is in a flat area, approximately ten feet from the drainage ditch culvert where the drainage ditch comes under the railroad tracks. The seep area is approximately 2 feet in diameter and marked by discolored (rust colored) soil and water.

The highest benzene and chloroethane concentrations were found in the water collected directly from the seep. Lower concentrations were found in the ditch 200 feet to the west. Even lower concentrations were found at surface water sampling location SW10, located 700 feet further west along the ditch. Concentrations sharply decreased down stream from that seep. Benzene and chloroethane concentrations at these three locations are tabulated below.

Location	Vicinity to Seep	Benzene	Chloroethane
SW9	from the seep	1,800 ug/L	440 ug/L
SW15	200 ft down stream	150 ug/L	81 ug/L
SW10	700 ft down stream	54 ug/L	49 ug/L

No VOCs were detected down stream of the ditch where it cuts through the center of the wetland or in surface water samples collected approximately 200 feet south of the ditch in the wetland (SW16 and SW20). Benzene concentrations are shown on Figure 6.

Semi-volatile Organic Compounds (SVOCs)

2,2'-oxybis(1-chloropropane) was the only SVOC detected at a concentrations above the quantitation limit of 10 ug/L. The compound was indicated at a concentration of 19 ug/L in the water from SW10 and at a concentration of 27 ug/L in SW16. Lower levels (below the quantitation level) of bis(2-chloroethyl) and 2,2'-oxybis(1-chloropropane) were found in seven of the twelve surface water samples (Table 2). Bis(2-ethylhexyl)phthalate was detected at low concentrations in some surface water samples, but based on the data validation they were qualified as undetected based on the level of blank contamination.

PCBs
Analytical results showed no detectable levels of PCBs in surface water samples collected along the ditch or in the wetland.

Metals
Filtered and unfiltered samples were analyzed for metals from each of the 12 surface water sampling locations. Iron was the major metal constituent in all collected unfiltered surface water samples analyzed (Table 4). The concentrations of other metals were detected less frequently. Each of the metals detected in surface water was above its respective chronic Ambient Water Quality Criterion (AWQC), with the exception of mercury. Unfiltered surface water samples may contain sediment that could contribute to the total metal concentration during laboratory analysis. Based on U.S. EPA guidance (U.S. EPA 1991), AWQC should be compared to filtered surface water samples, because the dissolved concentration of metals represent the biologically active fraction within the water column. Therefore, a second surface water sample was collected at each location, filtered, and analyzed for metals. The analysis of a filtered sample gives a better representation of dissolved metals in water by minimizing potential interference from sediment. Iron was the only dissolved metal present in the filtered surface water samples (Table 5). The iron concentrations were detected at reduced levels relative to the unfiltered samples. Dissolved iron concentrations found in the surface water samples ranged from 323 ug/L at SW20 to 3,060 at SW9. Within the filtered surface water samples, only iron was detected. Iron was detected above its AWQC (1000 ug/L by a factor or two or three).

SOIL/SEDIMENT SAMPLES
VOCs - Soil and sediment samples contained detectable concentrations of VOCs (Table 6). Most detections were at relatively low levels and below the quantitation limit. Acetone and benzene were the compounds detected at concentrations above the quantitation limit. These findings were consistent with the field screening conducted in the upper aquifer investigation, which identified a plume of contamination in the upper aquifer containing acetone and benzene. Quantified concentrations of acetone range between 25 and 80 ug/kg. The acetone presence indicates that groundwater containing the acetone is discharging to the wetland. Benzene was detected in two sediment samples at high concentrations. The concentration of benzene in the sediment from SD38, adjacent to the surface water seep (SW9), was 11,000 ug/kg. The seep is located approximately ten feet east of the drainage ditch, and a few inches above standing water level in the ditch. Sediment sample SD37 contained 480 ug/kg benzene. That sample was collected from the bottom of the ditch, approximately 200 feet down stream (west) of the seep area. Benzene was undetected or not detected in significant concentrations in other soil and sediment samples.

PCBs - PCBs were detected in a number of the soil and sediment samples at concentrations below 10 ppm (Table 8). Total PCB concentrations in the range of 1 to 3 ppm were detected in historic runoff areas to the north of the ACS facility. SD30 and SD28, located near the discharge points north of the facility, have total PCB concentrations of 1,034 ug/kg and 2,390 ug/kg, respectively. These areas have recently been covered by the access road being constructed for the Perimeter Groundwater Containment System (PGCS).

	Location	Total PCBs
North Runoff Area	SD30	1,034 ug/kg
	SD28	2,390 ug/kg

The highest PCB levels at the site were found along the historic drainage channel from the ACS facility west into the wetland. Total PCB concentrations, tabulated below, ranged from less than 1 ppm to 125 ppm.

	Location	Total PCBs
West Channel Runoff	SD23	6,670 ug/kg
	SD22	5,860 ug/kg
	SD21	13,100 ug/kg
	SD35	17,000 ug/kg
	SD31	901 ug/kg
	SD33	125,000 ug/kg

Figure 4 shows total PCB concentrations by sampling location. These locations appear to correspond to the historic surface water drainage path from the ACS Site out into the wetland.

SVOCs - Soil and sediment samples have detectable SVOC concentrations and distributions that also appear random (Table 7). Total SVOC concentrations range from below detectable limits in three samples, to a high of 14,990 ug/kg at SD22, located in the drainage ditch located west of the ACS facility. However, the duplicate sample at location SD22 (SD22-91), had total SVOCs concentrations of 2,626 ug/kg. This level would be comparable to SVOC concentrations found in other parts of the wetland, which are at levels ranging from less than 1 to about 8 parts per million (ppm). Figure 5 shows the total SVOCs concentrations by sampling location.

Metals - The inorganic data for soils and sediments is presented in Table 9. Soil and sediment samples had detectable concentrations of each analyte analyzed (i.e., arsenic, cadmium, chromium, copper, lead, mercury, and zinc). It should be noted that mercury was inadvertently not analyzed for at the laboratory in the samples collected in June. This was not determined until after the holding times for these samples had been exceeded. For this reason, sediment samples were recollected in August 1996 and analyzed for mercury.

The concentration of metals within soils and sediment did not vary greatly among most sample locations, with the exception of select sample locations. Chromium, copper, lead and zinc concentrations were elevated in sediments at sampling locations SD21, SD33, and SD35, which is in an apparent channel flowing through the wetland. In addition, a group of samples (SD25, SD26, SD27, and SD28) contained elevated concentrations of metals when comparing the analytical results among all sample results. Sediment sample SD20 also had elevated concentrations of metals.

The concentrations of each analyte were above sediment quality criteria developed for freshwater by the Ontario Ministry of the Environment at specific sampling points (refer to Table 9). For example, cadmium was detected above the severe effects level (SEL) at SD21. In addition, at SD33 where elevated PCB concentrations were detected, chromium, copper, and lead were elevated above their SELs. In addition, a number of the cadmium and lead results exceed the lowest effect levels (LEL), and nearly equal the SEL at SD26.

CONCLUSIONS AND RECOMMENDATIONS

SURFACE WATER

The sampling results show that the overall surface water has only minimal or localized contamination. With the exception of the water in the seep at SW9 and nearby along the ditch, no VOCs were detected in surface water. Low levels of several SVOCs were detected in several of the samples; no PCBs were detected in surface water samples.

A number of metals were detected in the unfiltered surface water samples, but only iron was detected in the filtered samples. For this reason, iron was considered the only metal of potential concern within the wetlands. Dissolved iron concentrations were found in the surface water samples ranging from 323 ug/L to 3,060 ug/L. Iron concentrations in this range are common in wetland environments where prolonged anaerobic soil conditions (due to inundation or saturation) cause a chemical reduction of iron oxides in the soil. Prolonged saturation of soil converts iron from its oxidized (ferric) form where it is bound to soil, to its reduced (ferrous) state where it becomes mobile and moves into solution. During the wetland investigation, soil/sediment sampling locations were saturated or inundated, leading to reducing conditions where the high iron content of the soil (as evident from the unfiltered samples) moved into surface water. For this reason, this finding was considered to represent natural conditions for a wetland environment.

SOIL/SEDIMENTS

Soil and sediments in the surrounding area appear to have been chemically affected by runoff from the ACS site. Soil and sediment samples have detectable concentrations of VOCs, SVOCs, PCBs, and metals. However, with the exception of benzene from the seep area, and PCBs and metals in specific runoff areas and groupings, as discussed below, contaminant distributions and concentrations appear to be distributed fairly uniformly in the wetland. As expected, the number and concentration of VOCs in the sediments was fairly low, due to their volatility.

Because the SVOCs, PCBs, and metals are absorbed in sediments, these compounds are found in areas of sediment accumulation resulting from historic preferential flowpaths from the ACS facility. Three primary areas of contamination within the wetland were documented from the sampling event conducted for this Technical Memorandum: the high benzene concentrations found in sediment and groundwater samples at the seep location, the high PCB and metal concentrations in sediments at sampling locations SD21, SD33,

and SD35 within an apparent channel flowing through the wetland, and the elevated metals concentrations within sediment samples SD25, SD26, SD27, and SD28 .

GROUNDWATER SEEP

The seep discharge consists of a small area that causes localized impact to soil and surface water. The source of the seep is the groundwater plume in the upper aquifer that extends north and west from the ACS facility. The contamination is limited to the sediments in the immediate seep area and surface water in the drainage ditch. Benzene concentrations in surface water decrease downstream from the seep and do not extend into the main wetland area.

The seep does not represent a long term impact, because a groundwater interceptor trench will soon be constructed in the vicinity of the seep. The trench will collect the contaminated groundwater from the plume before it reaches the seep or drainage ditch. The area of the seep, along the Grand Trunk Railroad, is posted "No Trespassing." Nonetheless, the immediate concern is that of direct contact by a trespasser.

As an interim remedy to limit the potential for direct contact, the Respondents propose to place approximately one foot of low permeability soil over the seep, covering the discharge point and extending to the edge of the ditch into which it is draining. The seep area would be monitored weekly until the PGCS is operational and the extraction trench has lowered the water table in the vicinity. Any reappearance of the seep would be re-covered. Once the extraction is trench operational, the water table will be lowered in the area of the seep. When the seep is cut off, the source of VOCs will be cutoff and any residual benzene will volatilize or be biodegraded over time within the wetland environment. The seep area will continue to be monitored, although it is expected to cease to exist as the water table is lowered.

SEDIMENTS WITH HIGH PCB LEVELS

High levels of PCBs appear to be associated with an old surface water runoff route from the ACS Site. Because PCBs are absorbed in sediments, they are found in areas of sediment accumulation resulting from historic preferential flowpaths. The detection of elevated concentrations of PCBs at sediment sampling locations SD21 (13.1 mg/kg), SD33 (125 mg/kg), and SD35 (17.0 mg/kg) is a potential concern. The magnitude of the impact depends upon the horizontal and vertical extent of the high PCB concentrations. The extent has not been defined by this sampling. In addition, nearby sampling location SD18 is in a sensitive area because it is the planned location for one of the three surface water discharge points for the PGCS treatment plant.

The Respondents propose to develop a sampling plan to determine the horizontal and vertical extent of the PCB concentration above 1.0 ppm in the vicinity of SD33 and SD18. The 10 ppm PCB soil remediation level presented in the ROD was developed for the protection of human health and not ecological health. The 1.0 ppm value was selected for additional investigations, because the 10 ppm human health value may not be protective of ecological health. Sampling will be planned for early to mid November 1996 when the

wetland sediments will be most accessible because of low water levels and lack of vegetation. The results of the sampling will be used 1) to define the impact to the wetland, 2) to determine whether to re-locate the proposed surface water discharge structure for the PGCS, and 3), to decide whether toxicity testing and/or bioaccumulation studies should be performed.

The Respondents developed a sampling plan and submitted it to the U.S. EPA for review on September 13, 1996. The U.S. EPA approved the plan on October 11, 1996. A second phase of wetland sampling was conducted in November 1996 and reported in February 1997.

Attachments:

Table 1 Soil/Sediment and Surface Water Location Coordinates
Table 2 Semi-Volatile Organics Summary - Surface Water Samples
Table 3 Volatile Organics Summary - Surface Water Samples
Table 4 Total Metals Summary - Surface Water Samples
Table 5 Dissolved Metals Summary - Surface Water Samples
Table 6 Volatile Organics Summary - Soil/Sediment Samples
Table 7 Semi-Volatile Organics Summary - Soil/Sediment Samples
Table 8 PCB Organics Analysis Summary - Soil/Sediment Samples
Table 9 Total Metals Summary - Soil/Sediment Samples
Table 10 Field Parameters - Surface Water Samples

Figure 1. Sampling Points
Figure 2. Sediment/Soil Sampling Points
Figure 3. Surface Water Sampling Points
Figure 4. Sediment/Soil PCB Concentrations
Figure 5. Sediment/Soil SVOC Concentrations
Figure 6. Surface Water Benzene Concentrations

Appendix A. Laboratory Analytical Results

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TABLES

Table 1
Soil/Sediment and Surface Water Location Coordinates
Wetland Investigation
American Chemical Service, Inc.
Griffith, Indiana

Soil/Sediment Sample No.	Surface Water Sample No.	Easting	Northing
SD17	SW17	6892.79	4684.76
SD18	SW18	7299.58	4594.24
SD19	SW19	7577.34	4543.10
SD20	SW20	7732.78	4763.72
SD21	--	7113.43	4954.20
SD22	--	6984.67	5056.86
SD23	--	7020.84	5088.00
SD24	--	7446.14	5084.97
SD25	--	7444.64	5185.36
SD26	--	7498.66	5386.20
SD27	--	7654.99	5383.53
SD28	--	7408.66	5403.03
SD29	--	7304.52	5885.49
SD30	--	7306.52	6005.46
SD31	--	7135.09	4682.43
SD32	--	6992.67	4455.50
SD33	--	7220.84	4546.57
SD34	--	7296.86	4721.56
SD35	--	7186.96	4900.03
SD36	SW16	7639.70	5031.04
SD37	SW15	7767.30	5268.95
SD38	SW9	7714.03	5481.94
--	SW10	7941.20	4808.90
--	SW11	7609.10	4323.09
--	SW12	7362.77	4213.61
--	SW13	7324.53	4315.30
--	SW14	8075.57	5755.52

notes:

1. "--" = no corresponding sample

CCH/cch/PG

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Combination

7/4/96

TABLE 2
SEMI-VOLATILE ORGANICS SUMMARY
Surface Water Samples
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

Sample ID	Detected SVOCs			
	bis(2-chloroethyl) ether	2,2'-oxybis(1-chloropropane)	4-methylphenol	isophorone
SW9	8 J	6 J	--	2 J
SW10	5 J	19	--	--
SW11	2 J	8 J	--	--
SW12	2 J	5 J	--	--
SW13	--	--	--	--
SW14	--	--	--	--
SW15	5 J	7 J	--	--
SW15 - 91	6 J	8 J	--	--
SW16	--	27	--	--
SW17	--	--	--	--
SW18	--	--	1 J	--
SW19	--	--	--	--
SW20	--	--	--	--
SW20 - 91	--	--	--	--
SWFB01	--	--	--	--

Notes:

1. All results expressed in micrograms per liter (ug/l).
2. "--" = compound was not detected above the quantitation limit
3. "J" = indicates an estimated concentration between the quantitation limit and the method detection limit

CCH/cch/ACC
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SVOCs - Water

TABLE 3

VOLATILE ORGANICS SUMMARY

Surface Water Samples

WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

Sample ID	Detected VOCs	
	chloroethane	benzene
SW9	440 J	1800
SW10	49 J	54
SW11	2 J	--
SW12	--	--
SW13	--	--
SW14	--	--
SW15	81 J	150
SW15 - 91	72 J	150
SW16	--	--
SW17	--	--
SW18	--	--
SW19	--	--
SW20	--	--
SW20 - 91	--	--
SWFB01	--	--
SWTB01	--	--

Notes:

1. All results expressed in micrograms per liter (ug/l).
2. "--" = compound was not detected above the quantitation limit
3. "J" = indicates an estimated concentration between the quantitation limit and the method detection limit

CCH/cch/ACC
j:\1252\042\techmemo\wetland\lab-data.xlw
VOCs - Water

TABLE 4
TOTAL METALS SUMMARY
Surface Water Samples
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

SAMPLE ID	Cadmium	Iron	Lead	Mercury	Zinc	Cyanide
SW09	31.5	219000	91.8	--	463 J	5.6 B
SW10	--	3480	--	--	--	--
SW11	--	4590	--	--	--	--
SW12	--	2600	--	--	--	--
SW13	--	2890	--	--	--	--
SW14	--	16100	11.4	--	71.0	--
SW15	--	4660	--	--	--	--
SW15-91	--	4860	--	--	--	--
SW16	5.0	30800	131	--	389 J	--
SW17	--	1660	--	--	--	--
SW18	8.0	20200	184	0.28	365 J	--
SW19	--	3720	--	--	179 J	--
SW20	--	1440	--	--	--	--
SW20-91	--	1490	--	--	--	--
SWFB01	--	224	--	--	--	--

Notes:

1. All results expressed in micrograms per liter (ug/l).
2. "--" = compound was not detected above the quantitation limit
3. "B" = compound present in associated extraction blank

CCH/cch/SCI

J:\1252\042\techmemo\wetland\lab-data.xlw

Total Metals - Water

TABLE 5
DISSOLVED METALS SUMMARY
Surface Water Samples
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

SAMPLE ID	Cadmium	Iron	Lead	Mercury	Zinc
SW09	--	3060	--	--	--
SW10	--	1350	--	--	--
SW11	--	1580	--	--	--
SW12	--	1930	--	--	--
SW13	--	1560	--	--	--
SW14	--	452	--	--	--
SW15	--	1290	--	--	--
SW15-91	--	1330	--	--	--
SW16	--	1890	--	--	--
SW17	--	726	--	--	--
SW18	--	2030	--	--	--
SW19	--	1930	--	--	--
SW20	--	323	--	--	--
SW20-91	--	488	--	--	--
SWFB01	--	--	--	--	--

Notes:

1. All results expressed in micrograms per liter (ug/l).
2. "--" = compound was not detected above the quantitation limit
3. "B" = compound present in associated extraction blank

SCI/acl/CCH
j:\1252\042\techmemo\wetland\lab-data.xlw
Dissolved Metals - Water

TABLE 6
VOLATILE ORGANICS SUMMARY
Soil/Sediment Samples
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

Sample ID	Detected VOCs						
	chloro-ethane	methylene chloride	acetone	1,2 - dichloroethene	2 - butanone	benzene	toluene
SD17	--	--	63 J	--	--	--	--
SD18	--	--	--	--	--	--	--
SD18-91	--	--	--	--	--	--	--
SD19	--	--	--	--	--	--	--
SD20	--	--	180 J	--	43 J	--	5 J
SD21	--	--	55 J	--	--	--	--
SD22	--	--	120 J	--	27 J	--	--
SD22-91	--	--	67	--	14 J	--	--
SD23	--	--	21 J	--	--	--	--
SD24	--	--	20 J	--	--	25 J	--
SD25	--	14 J	--	--	--	--	--
SD26	--	--	--	--	--	--	--
SD27	--	--	22 J	--	--	--	--
SD28	--	--	--	--	--	--	--
SD29	--	--	--	--	--	--	--
SD29-91	--	--	--	--	--	--	--
SD30	--	--	25	12 J	--	--	--
SD31	--	--	37	--	--	--	--
SD32	--	--	80	--	5 J	--	--
SD33	--	--	220 J	--	74 J	--	39 J
SD34	--	--	--	--	--	--	--
SD35	--	--	75 J	--	35 J	--	--
SD36	--	--	74 J	--	17 J	8 J	--
SD37	24 J	--	75	--	18 J	480	--
SD38	--	--	--	--	--	11,000	--

Notes:

1. All results are expressed in micrograms per kilogram (ug/kg).
2. "--" = compound was not detected above the quantitation limit
3. "J" = indicates an estimated concentration between the quantitation limit and the method detection limit

CCH/cch/ACC/SCI

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VOCs - Soil

TABLE 7

SEMI-VOLATILE ORGANICS SUMMARY

Soil/Sediment Samples

WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

Sample ID	Detected SVOCs																				TOTAL SVOCS
	bis(2-chloroethyl) ether	2,2'oxybis (1-chloro propane)	4-Methyl phenol	Isophorone	diethyl phthalate	acenaph-thylene	fluoran-threne	anthracene	di-n-butyl phthalate	fluoran-thene	pyrene	benzo(a) anthracene	chrysene	bis (2-Ethylhexyl) phthalate	benzo(b) fluoranthene	benzo(k) fluor anthene	benzo(a) pyrene	indeno (1,2,3-cd) pyrene	dibenz(a,h) anthracene	benzo (g,h,i) perylene	
SD17	--	--	--	--	--	--	110 J	--	--	360 J	310 J	210 J	260 J	190 J	310 J	240J	210 J	130 J	--	--	2350 J
SD18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SD18-91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SD19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SD20	--	--	--	--	--	--	--	--	320 J	690 J	590 J	310 J	470 J	--	500 J	440 J	460 J	240 J	--	200 J	4210 J
SD21	--	--	--	--	--	--	--	--	1000 J	280 J	280 J	140 J	230 J	560 J	350 J	270 J	220 J	190 J	--	120 J	3530 J
SD22	--	--	--	--	--	630 J	130 J	460 J	--	820	1400	1600	1900	240 J	2400	1300	2000	970	640 J	500 J	14990 J
SD22-91	--	--	--	--	--	110 J	--	80 J	--	170 J	220 J	240 J	320 J	170 J	370 J	320 J	320 J	140 J	90 J	76 J	2626 J
SD23	--	--	--	--	--	--	66 J	--	--	130 J	110 J	71 J	95 J	720	93 J	--	73 J	46 J	--	--	1404 J
SD24	--	--	--	--	--	--	--	--	3200 J	--	--	--	--	--	--	--	--	--	--	--	--
SD25	--	--	--	--	--	--	--	--	7400 J	140 J	180 J	--	160 J	--	--	--	--	--	--	--	7880 J
SD26	--	--	--	42 J	--	--	110 J	--	--	190 J	210 J	100 J	160 J	1400	200 J	--	130 J	98 J	--	--	2630 J
SD27	--	--	--	--	--	--	--	--	--	96 J	--	--	--	240 J	--	--	--	--	--	--	336 J
SD28	--	--	--	--	--	--	--	--	--	150 J	160 J	92 J	120 J	1100	190 J	--	120 J	100 J	--	--	2032 J
SD29	--	--	--	--	--	--	--	--	--	--	--	--	--	280 J	--	--	--	--	--	--	280 J
SD29-91	--	--	--	--	--	120 J	--	70 J	--	350 J	330 J	280 J	340 J	690	440 J	380 J	360 J	240 J	140 J	150 J	3890 J
SD30	--	--	--	--	--	--	77 J	--	--	130 J	100 J	--	85 J	670	120 J	--	--	--	--	--	1362 J
SD31	--	--	--	--	--	--	--	--	--	98 J	--	--	--	--	--	--	--	--	--	--	98 J
SD32	--	54 J	--	--	--	--	76 J	--	--	96 J	63 J	--	64 J	--	94 J	--	--	--	--	--	446 J
SD33	--	--	--	--	--	--	--	--	--	--	--	--	--	4600 J	--	--	--	--	--	--	4600 J
SD34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SD35	--	--	110 J	--	--	--	--	69 J	--	140 J	140 J	--	150 J	540 J	220 J	--	130 J	100 J	--	--	1599 J
SD36	--	140 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	140 J
SD37	--	1000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1000 J
SD38	200 J	180 J	--	--	1900	110 J	280 J	--	--	600 J	410 J	380 J	360 J	--	400 J	380 J	300 J	200 J	--	--	5650 J

Notes:

1. All results expressed in micrograms per kilogram (ug/kg).
2. "--" = compound was not detected above the quantitation limit
3. "J" = estimated concentration between the quantitation limit and the method detection limit
4. "B" = compound present in associated extraction blank

CCH/cch/ACC/SCI
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SVOCs - Soil

TABLE 8
PCB ORGANICS ANALYSIS SUMMARY
Soil/Sediment Samples
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

SAMPLE ID	Detected PCBs			Total PCBs
	aroclor-1248	aroclor-1254	aroclor-1260	
SD17	58 JP	150 P	140	348
SD18	--	--	--	--
SD18-91	--	--	--	--
SD19	13 JP	36 JP	16 JP	65
SD20	--	79 J	180 P	259
SD21	1,300 JP	8,700	3,100 P	13,100
SD22	580 JP	3,600	1,700	5,880
SD22-91	270 JP	1,800	830	2,900
SD23	770 JP	4,000	1,900	6,670
SD24	--	--	--	--
SD25	--	46 J	--	46
SD26	320 JP	1,700	1,900	3,920
SD27	48 J	190 P	270 P	508
SD28	220 J	1,200	970 P	2,390
SD29	180	380 P	330 P	890
SD29-91	84 P	450 P	570 P	1,104
SD30	74 P	570 P	390	1,034
SD31	61 JP	600	240 P	901
SD32	35 JP	79 P	73	187
SD33	27,000 P	63,000 P	35,000 P	125,000
SD34	--	14 JP	13 JP	27
SD35	2,700 JP	8,100 P	6,200 P	17,000
SD36	--	37 JP	--	37
SD37	--	--	--	--
SD38	30 JP	99 JP	100 P	229

Notes:

1. All results expressed in micrograms per kilogram (ug/kg).
2. "--" = compound was not detected above the quantitation limit
3. "J" = indicates an estimated concentration between the quantitation limit and the method detection limit
4. "P" = This flag is used for pesticide/arochlor target analyte when there is a greater than 25 percent difference for detected concentrations between the two GC columns.

CCH/cch/SCI
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PEST - soil

TABLE 9
METALS SUMMARY
Soil/Sediment Samples
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

SAMPLE ID	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Zinc
SD17	6.8	6	31.8	38.8	75	0.09	164
SD18	11.3	4.8	6.4	7.3	5.6	0.42	13.9
SD18-91	12.6	6.1	8.3	13.1	24	0.35	62.6
SD19	1.3 B	1.1	8.3	3.7	5.3	0.4	20.2
SD20	13.2	6.1	17.1	29.8	184	0.46	300
SD21	28.8	11	36.2	64.2	161	0.05	394
SD22	2.8 B	2.8	11.5	19.6	62	0.06	107
SD22-91	3.4	2.5	11.5	21.5	48.5	0.1	106
SD23	2.1 B	2.4	12.3	13.9	95	0.23	126
SD24	4.1	1.6	7.2	6.8	10.8	0.15	16.6
SD25	28.1	3.3	9.3	8.8	22.4	0.08	56
SD26	13.1	9.2	43.4	55.2	225	1	465
SD26-91	NA	NA	NA	NA	NA	0.91	NA
SD27	16.7	5.6	18.8	24.2	82.1	0.3	241
SD28	7.6	5.9	32.9	37	144	0.45	299
SD29	3.6	2.1	9	9.4	62.8	0.2	80.1
SD29-91	2.9	1.9	10.8	9.4	32.4	NA	77.3
SD30	4.9	2.8	19.6	22.2	135	0.11	134
SD31	3.1 B	2.4	16	22.8	91.8	0.41	103
SD32	4.4	4.3	17.4	22.1	36.9	0.09	123
SD33	7.5	6.1	289	214	324	8.9	241
SD34	4.4	1.6	9.7	13.6	20	0.46	58.4
SD35	8.8	6	45.9	53.6	133	0.58	352
SD36	4.8	3.7	10.8	12.9	25.2	0.21	66.2
SD37	1.4 B	0.93	4.6	6.8	14.8	0.7	48.3
SD38	3.3 B	2.5	12.3	55.3	58.3	0.17	74.3

Notes:

1. All results expressed in milligrams per kilograms (mg/kg)
2. "B" = compound present in associated extraction blank
3. "NA" = not applicable, because duplicate sample not collected at this location for analysis of mercury.

CCH/cch/PB

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Metals - Soil

TABLE 10

FIELD PARAMETERS
SURFACE WATER SAMPLES
WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICES, INC.
GRIFFITH, INDIANA

Sample ID	pH	Conductivity (micromhos/cm)	Conductivity (@ 25°C)	Temperature (°C)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
SW9	7.22	520	578	20.0	3.8	177
SW10	7.84	480	514	21.7	4.0	146
SW11	7.91	500	581	18.0	4.8	154
SW12	7.63	500	588	17.5	4.0	165
SW13	7.46	250	294	17.5	6.2	153
SW14	7.62	600	609	24.3	3.6	179
SW15	7.66	480	500	23.0	3.8	158
SW15 - 91	7.66	480	500	23.0	3.8	158
SW16	7.77	580	604	23.0	4.8	171
SW17	7.72	425	483	19.0	3.0	125
SW18	7.33	200	217	21.0	3.5	150
SW19	7.29	320	366	18.7	2.8	139
SW20	8.03	300	298	25.3	3.8	163
SW20 - 91	8.03	300	298	25.3	3.8	163

Notes:
Conductivity values normalized to 25°C using the following equation:

$C_{25} = C_t \backslash (1 + 0.02 * (t-25))$

where: C_{25} - Conductivity at 25°C

t - field temperature in deg. C

C_t - Field Conductivity measured at temperature t

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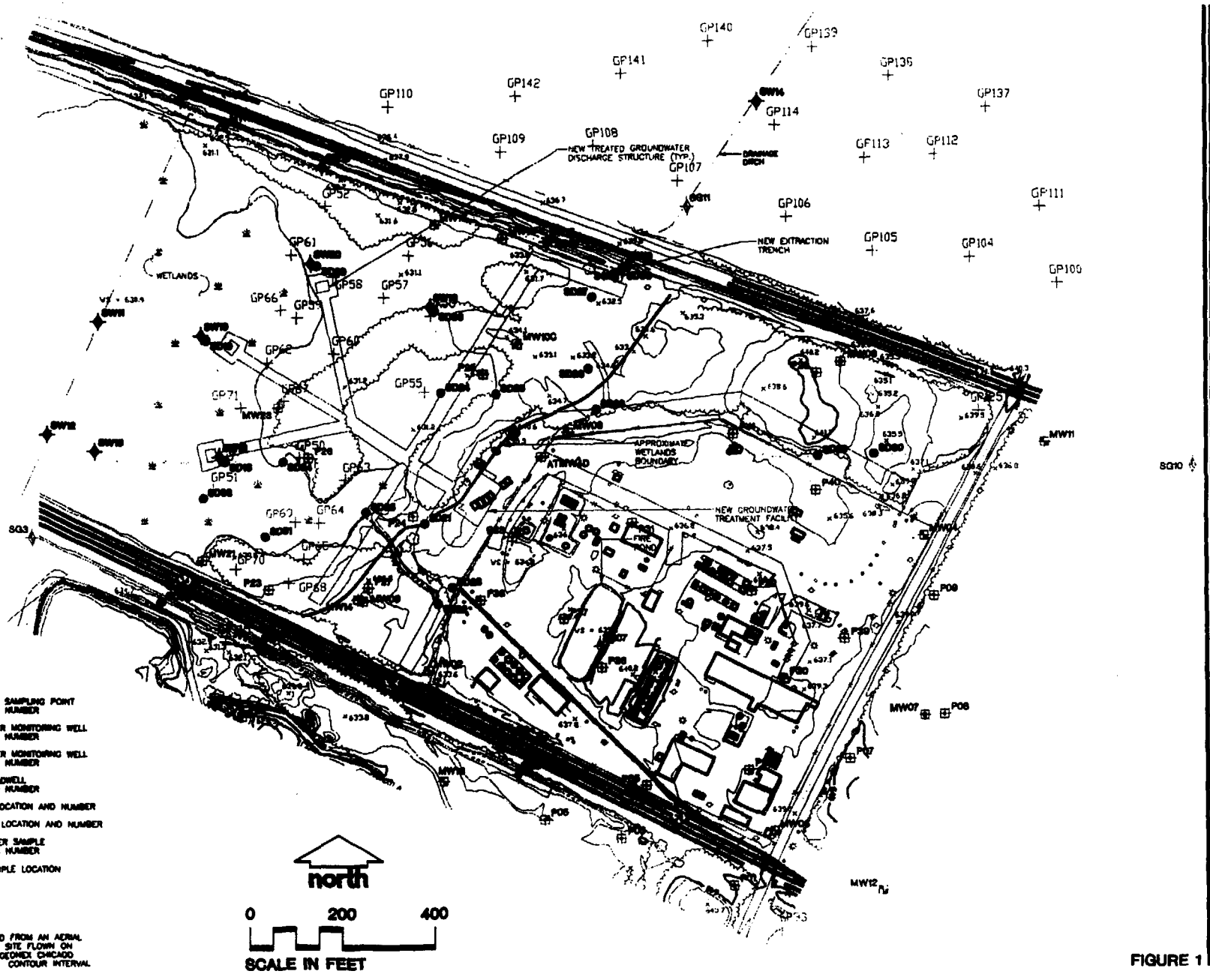
FieldParameters-Water
SA\sa\PMS

FIGURES



LEGEND

- GP108 GROUNDWATER SAMPLING POINT LOCATION AND NUMBER
- MW01 UPPER AQUIFER MONITORING WELL LOCATION AND NUMBER
- MW10 LOWER AQUIFER MONITORING WELL LOCATION AND NUMBER
- LW01 LEACHATE HEADWELL LOCATION AND NUMBER
- P01 PIEZOMETER LOCATION AND NUMBER
- SG08 STAFF GAUGE LOCATION AND NUMBER
- SW7A SURFACE WATER SAMPLE LOCATION AND NUMBER
- SD01 SEDIMENT SAMPLE LOCATION AND NUMBER

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL SURVEY MAP OF THE SITE FLOWN ON MARCH 8, 1994 BY GEONEX CHICAGO AERIAL SURVEY, INC. CONTOUR INTERVAL TWO FEET.

FIGURE 1

SAMPLING POINTS

WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number 4077.0072B23

MONTGOMERY WATSON

Developed By CCH | Drawn By CCM
Approved By CCH/PJV | Date 7/26/96
Reference
Revisions

QUALITY CONTROL | Graphic Standards CCM 5-10-96 | Technical Review | Management Review
Lead Professional | Project Manager | Other

LEGEND

SW7A SURFACE WATER SAMPLE LOCATION AND NUMBER

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL SURVEY MAP OF THE SITE FLOWN ON MARCH 8, 1984 BY GEOMEX CHICAGO AERIAL SURVEY, INC. CONTOUR INTERVAL TWO FEET.

FIGURE 2

SURFACE WATER SAMPLING POINTS

WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number
4077.007B24

MONTGOMERY WATSON

Developed By CCH
Drawn By CCM
Approved By CJH/PJV
Date 7/26/96
Reference
Revisions

Graphic Standards CCM 7-3-96
Lead Professional
Technical Review
Project Manager
Management Review
Other

QUALITY CONTROL

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LEGEND

● SD01 SEDIMENT/SOIL SAMPLE LOCATION AND NUMBER

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL SURVEY MAP OF THE SITE FLOWN ON MARCH 8, 1984 BY GEONEX CHICAGO AERIAL SURVEY, INC. CONTOUR INTERVAL TWO FEET.

FIGURE 2

SEDIMENT/SOIL SAMPLING POINTS

WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Developed By CCH Drawn By CCM
Approved By CCH/PJV Date 7/26/96
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4077.007B25

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QUALITY CONTROL
Graphic Standards CCM 7-3-96 Technical Review Management Review
Lead Professional Project Manager Other

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LEGEND

● SD01 SEDIMENT/SOIL SAMPLE LOCATION AND NUMBER

(SDL) BELOW DETECTION LIMITS

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL SURVEY MAP OF THE SITE FLOWN ON MARCH 8, 1994 BY GEONEX CHICAGO AERIAL SURVEY, INC. CONTOUR INTERVAL TWO FEET.

FIGURE 4

Developed By CCH Drawn By CCM

Approved By CCH/PJV Date 7/26/96

Reference

Revisions

SEDIMENT/SOIL PCB CONCENTRATIONS (mg/kg)

AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number
4077.007B26

MONTGOMERY WATSON

QUALITY CONTROL

Graphic Standards CCM 7-24-96

Land Professional

Technical Review

Project Manager

Management Review

Other

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LEGEND

- ● SD01 SEDIMENT/SOIL SAMPLE LOCATION AND NUMBER
- (BDL) BELOW DETECTION LIMITS

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL SURVEY MAP OF THE SITE FLOWN ON MARCH 8, 1984 BY GEONEX CHICAGO AERIAL SURVEY, INC. CONTOUR INTERVAL TWO FEET.

FIGURE 5

SEDIMENT/SOIL SVOC CONCENTRATIONS (ug/kg)

AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Developed By CCH Drawn By CCM
Approved By CLH/PJV Date 7/26/96
Reference
Revisions

Drawing Number
4077.0072B27

MONTGOMERY WATSON

QUALITY CONTROL
Graphic Standards CCM 7-26-96
Lead Professional
Technical Review
Project Manager
Management Review
Other

LEGEND

SWTA SURFACE WATER SAMPLE LOCATION AND NUMBER

(BDL) BELOW DETECTION LIMITS

NOTES

1. BASE MAP DEVELOPED FROM AN AERIAL SURVEY MAP OF THE SITE FLOWN ON MARCH 8, 1994 BY GEONEX CHICAGO AERIAL SURVEY, INC. CONTOUR INTERVAL TWO FEET.

FIGURE 8

SURFACE WATER BENZENE CONCENTRATIONS (ug/L)

WETLAND INVESTIGATION
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number
4077.007B28

MONTGOMERY WATSON

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Drawn By CCM
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Lead Professional
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Project Manager
Management Review
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APPENDICES

A

IEA SDG NARRATIVE VOLATILE FRACTION

PROJECT: 1589-162 BATCH: 05556 METHOD: 1/91 SOW

SAMPLES: Five (5) Soil Samples

These samples were received at Industrial and Environmental Analysts, Inc. (IEA) on May 23, 1996. Each sample was assigned a 9-character "IEA" lab identification number (lab ID) and an abbreviated client ID for simplicity in forms generation. This package makes reference to these ID's as listed on the IEA Assigned Number Index. In addition the pH for the water samples are listed on this index. All analyses were performed according to the EPA 1/91 SOW and meet the requirements of the IEA Quality Assurance Program. Please see the enclosed data package for your results and Chain of Custody (COC) documentation.

There is an air peak that is common to all of the volatile analyses and a solvent peak that is common to some volatile analyses. These peaks are present at the beginning of the Reconstructed Ion Chromatograms (RIC) and are labeled. These peaks are not searched as Tentatively Identified Compounds (TIC's).

The chromatographic separation of the analytes is performed using a J & W Scientific 75 m X 0.53 mm DB-624 fused silica capillary column with a 3.0 μm film thickness.

The trap used in the purge-and-trap apparatus is a Supelco trap K (VOCARB 3000) consisting of 10 cm of Carbopack B, 6 cm of Carboxen 1000, and 1 cm of Carboxen 1001. This trap meets the criteria in the SOW for contract OLM03.1 for an equivalent trap. Documentation is maintained within the QA department for on-site review.

The "J" flag used on the Form I VOA indicates an estimated concentration between the Contract Required Quantitation Limit (CRQL) and the Method Detection Limit (MDL), not accounting for dilution of the sample prior to analysis. This flag is also used on the Form I VOA-TIC to indicate an estimated amount for all non-target concentrations.

The "N" flag used on the Form I VOA-TIC indicates that there is the presumptive evidence of a compound based on the mass spectral library search and the interpretation of the mass spectral interpretation specialist.

The "Y" flag is used as a qualifier on the Form I VOA-TIC to indicate a siloxane contaminant attributed to trap breakdown.

The "M" flag used on the data system report form designates that a manual integration was required to provide an accurate quantification of that analyte. Manual integrations have been initialled and dated by the analyst.

IEA SDG NARRATIVE VOLATILE FRACTION

The following nonconformances associated with the analysis of the samples in this case are as follows:

The following samples were analyzed and reported twice to confirm low internal standard recoveries. This is due to matrix interference. The reanalysis sample ID's and client ID's are designated with the suffix "RE".

IEA Sample ID	Client ID
9605556-01	APD-SD24-01
9605556-02	APD-SD25-01
9605556-03	APD-SD36-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his designee, as verified by the following signature.

Brian D. Neptune 06/12/96

Brian D. Neptune
Lead Analyst, GC/MS Final Review
IEA, Inc.

IEA SDG NARRATIVE SEMIVOLATILE FRACTION

PROJECT: 1589-162 BATCH: 05556 METHOD: SOW 1/91

Samples: Five (5) Soil Samples

The samples were received at Industrial and Environmental Analysts, Inc. (IEA) on 05/23/96. Each sample was assigned a 9-character "IEA" lab identification number (lab ID) and an abbreviated client ID which is referenced on the IEA Assigned Number Index. All analyses are performed in accordance with EPA approved methodologies and meet the requirements of the IEA Quality Assurance Program. Please see the enclosed data package for your results and Chain of Custody documentation.

The chromatographic separation of the analytes was performed using a Restek 30 X 0.32 XTI-5 fused silica capillary column with a 0.5 μm bonded phase film thickness.

Gel Permeation Cleanup (GPC) was performed using a column series; a 19 X 300 mm Waters UltraStyragel column paired with a 19 X 150 mm Waters UltraStyragel column. The additional column provides the additional resolution needed to achieve the criteria for pesticide analysis. This column combination meets the equivalency criteria stated in paragraph 10.3.2.on page D-34/SVOA of the SOW. A 2 mL injection loop is utilized by the GPC system.

All soil samples underwent GPC as required by the SOW.

The "J" flag used on the Form I SV indicates an estimated concentration between the CRQL and the Method Detection Limit (MDL). This flag also identifies the estimated concentration of the non-target compounds reported on the Form I SV-TIC.

The "N" flag used on the Form I SV-TIC indicates that there is the presumptive evidence of a compound based on the mass spectral library search and the interpretation of the mass spectral interpretation specialist.

The "B" flag used on the Form I SV indicates that this compound was present in the associated extraction blank.

The "M" flag used on the data system report form designates that a manual integration was required to provide an accurate quantification of that analyte. Manual integrations have been initialed and dated by the analyst.

The "X" flag is used to designate a non-target which can be attributed to laboratory contamination on the Form I SV-TIC.

IEA SDG NARRATIVE SEMIVOLATILE FRACTION

Instrument data printouts identify the compound 2,2'-oxybis(1-Chloropropane) with CAS number 108-60-1. Alternative nomenclature for this compound is bis(2-Chloroisopropyl)ether which is included on report forms submitted.

Any nonconformances associated with the analysis of the samples in this project are as follows:

Samples SD24 and SD25 required re-extraction due to poor surrogate recoveries. The re-extraction was performed outside of the method specified holding time. The re-extracts (designated "RE") did not confirm the failing surrogates of the original analyses. Matrix Spike (SED38MS) also exhibited low surrogate recoveries, however no corrective action was taken.

Matrix Spike (SD38MS) percent recovery for the following compounds exceeded the limits specified for this method due to poor extraction efficiency: 2-Chlorophenol, 1,4-Dichlorobenzene, N-Nitroso-di-n-propylamine, and 1,2,4-Trichlorobenzene. Due to the relatively poor matrix spike recovery, the percent relative percent difference (%RPD) for these compounds as well as for Phenol and Acenaphthene exceeded the method specified limits.

I certify that this data package is in compliance with the procedures and methods defined for this project, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data (if applicable) as submitted has been authorized by the laboratory manager or his designee, as verified by the following signature.

06/27/96

David F. Morse
GC/MS SV Lead Analyst
IEA, Inc.

IEA
An Aquarion Company

200 Monroe Turnpike
Monroe, Connecticut 06468

Phone 203-261-4458
Fax 203-268-5346

7096-0969A
IEA/NC

SDG Narrative

Polychlorinated Biphenyls (PCB's) - Pesticide/PCB samples were extracted and analyzed by GC/ECD using USEPA CLP Protocols, OLM01.9. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni^{63}).

All samples were extracted and concentrated at IEA/NC.

All samples were florisil and GPC cleaned up prior to analysis at IEA/NC.

Interpretation of GPC analysis was done at IEA/NC.

The percent recoveries for the surrogate, decachlorobiphenyl was outside of advisory QC limits in sequence B1005CLP for samples APD-SD36-01, APD-SD37-01, APD-SD38-01, APD-SD38-01 MS and APD-SD38-01 MSD due to sample matrix.

I certify that this data package is in compliance with the terms of this contract, both technically and for completeness, for other than the conditions detailed above. Release of this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jeffrey C. Curran
Laboratory Manager

June 24, 1996
Date

IEA
An Aquarion Company

200 Monroe Turnpike
Monroe, Connecticut 06468

Phone 203-261-4458
Fax 203-268-5346

June 24, 1996

Mr. Rodney Raimonde
IEA/NC
3000 Weston Parkway
Cary, NC 27513

Dear Mr. Raimonde:

Please find enclosed the analytical results of five samples received at our laboratory on May 23, 1996. This report contains sections addressing the following information at a minimum:

- sample summary
- analytical methodology
- state certifications
- definitions of data qualifiers and terminology
- analytical results
- chain-of-custody

IEA Report #7096-0969A	Project ID: 1589-162D

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,

Jeffrey C. Curran
Laboratory Manager

JCC/ab

7096-0969A
IEA/NC
PROJECT SUMMARY

The samples were analyzed for the parameters listed in the Analytical Summary Table.

METHODOLOGY/DISCUSSION

Polychlorinated Biphenyls (PCB's) - Pesticide/PCB samples were extracted and analyzed by GC/ECD using USEPA CLP Protocols, OLM01.9. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni^{63}).

All samples were extracted and concentrated at IEA/NC.

All samples were florisil and GPC cleaned up prior to analysis at IEA/NC.

Interpretation of GPC analysis was done at IEA/NC.

The percent recoveries for the surrogate, decachlorobiphenyl was outside of advisory QC limits in sequence B1005CLP for samples APD-SD36-01, APD-SD37-01, APD-SD38-01, APD-SD38-01 MS and APD-SD38-01 MSD due to sample matrix.

RESULTS

The results are presented in the following Tables. Also enclosed are the data packages containing all relevant data.

MONTGOMERY WATSON

CHAIN OF CUSTODY RECORD

SPECIAL INSTRUCTIONS:
- [ ] PECFA
- [ ] WI LUST
- [ ] ACT 307
- [ ] REPORT DRY WT
- [ ] OTHER:

TURNAROUND
- [ ] 2 WEEKS (standard)
- [ ] 1 WEEK
- [ ] 3 DAYS
- [ ] 1 DAY

PROJECT NAME: AKS

PROJECT #: 4677.0090

CITY: Gary

STATE: INDIANA

SAMPLER(S): [illegible]

COLLECTION DATE	COLLECTION TIME	GRAB / COMP	SAMPLE ID	NO. OF CONTAINERS	VOCs	SVOCs	PAHs							REMARKS	LAB USE ONLY: MATRIX	LAB USE ONLY: LAB NO.
5.22.96	0850	X	APD-SD24-01	2	1	1								G-32136,37		
↑	0840	X	APD-SD25-01	2	1	1								G-32141,42		
	0840	X	APD SD25-01 MS/MSD	3	2	1								G-0974,75,76		
	0900	X	APD-SD26-01	2	1	1								G-32174,75,76		
	1005	X	APD SD27-01	2	1	1								G-32177,78		
↓	0950	X	APD-SD28-01	2	1	1								G-32180,81		
5.22.96	0950	X	APD-SD28-01 MS/MSD	3	2	1								G-32192,93		

SPECIAL INSTRUCTIONS:

TAMPER EVIDENT SEAL INTACT? ✓ YES ___ NO ___ NOT PRESENT

SEAL NO.: ___

SAMPLES RECEIVED ON ICE? ___ YES ___ NO TEMP: 4 °C

PROJ. MGR.: [illegible]

1505 - 1627

	SIGNATURE	DATE	TIME		SIGNATURE	DATE	TIME
RELINQUISHED BY:	[illegible]	5.22.96	1600	RECEIVED BY:	[illegible]	[illegible]	0515
RELINQUISHED BY				RECEIVED BY:			
RELINQUISHED BY:				RECEIVED BY:			
RELINQUISHED BY				RECEIVED FOR LABORATORY BY:			

C-O-C No. 01 [illegible]

NAME OF COURIER: ___

AIRBILL NUMBER: ___

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD24-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V14.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 53 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	21	U
74-83-9	Bromomethane	21	U
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	21	U
67-64-1	Acetone	21	U
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	21	U
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Butanone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	21	U
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	21	U
10061-02-6	Trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
108-88-3	Toluene	21	U
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-90-7	Chlorobenzene	21	U
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (total)	21	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD24-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V14.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 53 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD24-01RE

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601RE

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K04.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 53 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	21	U
74-83-9	Bromomethane	21	U
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	21	U
67-64-1	Acetone	20	J
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	21	U
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Bu'anone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	21	U
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	25	
10061-02-6	Trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
108-88-3	Toluene	21	U
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-90-7	Chlorobenzene	21	U
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (total)	21	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD24-01RE

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601RE

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K04.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 53 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD25-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V15.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 74 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	38	U
74-83-9	Bromomethane	38	U
75-01-4	Vinyl Chloride	38	U
75-00-3	Chloroethane	38	U
75-09-2	Methylene Chloride	14	J
67-64-1	Acetone	38	U
75-15-0	Carbon Disulfide	38	U
75-35-4	1,1-Dichloroethene	38	U
75-34-3	1,1-Dichloroethane	38	U
540-59-0	1,2-Dichloroethene (total)	38	U
67-66-3	Chloroform	38	U
107-06-2	1,2-Dichloroethane	38	U
78-93-3	2-Butanone	38	U
71-55-6	1,1,1-Trichloroethane	38	U
56-23-5	Carbon Tetrachloride	38	U
75-27-4	Bromodichloromethane	38	U
78-87-5	1,2-Dichloropropane	38	U
10061-01-5	cis-1,3-Dichloropropene	38	U
79-01-6	Trichloroethene	38	U
124-48-1	Dibromochloromethane	38	U
79-00-5	1,1,2-Trichloroethane	38	U
71-43-2	Benzene	38	U
10061-02-6	Trans-1,3-Dichloropropene	38	U
75-25-2	Bromoform	38	U
108-10-1	4-Methyl-2-Pentanone	38	U
591-78-6	2-Hexanone	38	U
127-18-4	Tetrachloroethene	38	U
108-88-3	Toluene	38	U
79-34-5	1,1,2,2-Tetrachloroethane	38	U
108-90-7	Chlorobenzene	38	U
100-41-4	Ethylbenzene	38	U
100-42-5	Styrene	38	U
1330-20-7	Xylene (total)	38	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD25-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V15.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 74 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
541-05-9	CYCLOTRISILOXANE HEXAMETHYL	14.24	- 21	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD25-01RE

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602RE

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K05.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 74 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	38	U
74-83-9	Bromomethane	38	U
75-01-4	Vinyl Chloride	38	U
75-00-3	Chloroethane	38	U
75-09-2	Methylene Chloride	38	U
67-64-1	Acetone	38	U
75-15-0	Carbon Disulfide	38	U
75-35-4	1,1-Dichloroethene	38	U
75-34-3	1,1-Dichloroethane	38	U
540-59-0	1,2-Dichloroethene (total)	38	U
67-66-3	Chloroform	38	U
107-06-2	1,2-Dichloroethane	38	U
78-93-3	2-Butanone	38	U
71-55-6	1,1,1-Trichloroethane	38	U
56-23-5	Carbon Tetrachloride	38	U
75-27-4	Bromodichloromethane	38	U
78-87-5	1,2-Dichloropropane	38	U
10061-01-5	cis-1,3-Dichloropropene	38	U
79-01-6	Trichloroethene	38	U
124-48-1	Dibromochloromethane	38	U
79-00-5	1,1,2-Trichloroethane	38	U
71-43-2	Benzene	38	U
10061-02-6	Trans-1,3-Dichloropropene	38	U
75-25-2	Bromoform	38	U
108-10-1	4-Methyl-2-Pentanone	38	U
591-78-6	2-Hexanone	38	U
127-18-4	Tetrachloroethene	38	U
108-88-3	Toluene	38	U
79-34-5	1,1,2,2-Tetrachloroethane	38	U
108-90-7	Chlorobenzene	38	U
100-41-4	Ethylbenzene	38	U
100-42-5	Styrene	38	U
1330-20-7	Xylene (total)	38	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD25-01RE

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602RE

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K05.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 74 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD36-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V16.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 63 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	27	U
74-83-9	Bromomethane	27	U
75-01-4	Vinyl Chloride	27	U
75-00-3	Chloroethane	27	U
75-09-2	Methylene Chloride	27	U
67-64-1	Acetone	74	
75-15-0	Carbon Disulfide	27	U
75-35-4	1,1-Dichloroethene	27	U
75-34-3	1,1-Dichloroethane	27	U
540-59-0	1,2-Dichloroethene (total)	27	U
67-66-3	Chloroform	27	U
107-06-2	1,2-Dichloroethane	27	U
78-93-3	2-Butanone	17	J
71-55-6	1,1,1-Trichloroethane	27	U
56-23-5	Carbon Tetrachloride	27	U
75-27-4	Bromodichloromethane	27	U
78-87-5	1,2-Dichloropropane	27	U
10061-01-5	cis-1,3-Dichloropropene	27	U
79-01-6	Trichloroethene	27	U
124-48-1	Dibromochloromethane	27	U
79-00-5	1,1,2-Trichloroethane	27	U
71-43-2	Benzene	8	J
10061-02-6	Trans-1,3-Dichloropropene	27	U
75-25-2	Bromoform	27	U
108-10-1	4-Methyl-2-Pentanone	27	U
591-78-6	2-Hexanone	27	U
127-18-4	Tetrachloroethene	27	U
108-88-3	Toluene	27	U
79-34-5	1,1,2,2-Tetrachloroethane	27	U
108-90-7	Chlorobenzene	27	U
100-41-4	Ethylbenzene	27	U
100-42-5	Styrene	27	U
1330-20-7	Xylene (total)	27	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD36-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V16.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 63 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD36-01RE

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603RE

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K06.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 63 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	27	U
74-83-9	Bromomethane	27	U
75-01-4	Vinyl Chloride	27	U
75-00-3	Chloroethane	27	U
75-09-2	Methylene Chloride	27	U
67-64-1	Acetone	31	
75-15-0	Carbon Disulfide	27	U
75-35-4	1,1-Dichloroethene	27	U
75-34-3	1,1-Dichloroethane	27	U
540-59-0	1,2-Dichloroethene (total)	27	U
67-66-3	Chloroform	27	U
107-06-2	1,2-Dichloroethane	27	U
78-93-3	2-Butanone	27	U
71-55-6	1,1,1-Trichloroethane	27	U
56-23-5	Carbon Tetrachloride	27	U
75-27-4	Bromodichloromethane	27	U
78-87-5	1,2-Dichloropropane	27	U
10061-01-5	cis-1,3-Dichloropropene	27	U
79-01-6	Trichloroethene	27	U
124-48-1	Dibromochloromethane	27	U
79-00-5	1,1,2-Trichloroethane	27	U
71-43-2	Benzene	6	J
10061-02-6	Trans-1,3-Dichloropropene	27	U
75-25-2	Bromoform	27	U
108-10-1	4-Methyl-2-Pentanone	27	U
591-78-6	2-Hexanone	27	U
127-18-4	Tetrachloroethene	27	U
108-88-3	Toluene	27	U
79-34-5	1,1,2,2-Tetrachloroethane	27	U
108-90-7	Chlorobenzene	27	U
100-41-4	Ethylbenzene	27	U
100-42-5	Styrene	27	U
1330-20-7	Xylene (total)	27	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD36-01RE

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603RE

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K06.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 63 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD37-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555604

Sample wt/vol: 2.5 (g/mL) g Lab File ID: 0601K10.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 40 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	33	U
74-83-9	Bromomethane	33	U
75-01-4	Vinyl Chloride	33	U
75-00-3	Chloroethane	24	J
75-09-2	Methylene Chloride	33	U
67-64-1	Acetone	75	
75-15-0	Carbon Disulfide	33	U
75-35-4	1,1-Dichloroethene	33	U
75-34-3	1,1-Dichloroethane	33	U
540-59-0	1,2-Dichloroethene (total)	33	U
67-66-3	Chloroform	33	U
107-06-2	1,2-Dichloroethane	33	U
78-93-3	2-Butanone	18	J
71-55-6	1,1,1-Trichloroethane	33	U
56-23-5	Carbon Tetrachloride	33	U
75-27-4	Bromodichloromethane	33	U
78-87-5	1,2-Dichloropropane	33	U
10061-01-5	cis-1,3-Dichloropropene	33	U
79-01-6	Trichloroethene	33	U
124-48-1	Dibromochloromethane	33	U
79-00-5	1,1,2-Trichloroethane	33	U
71-43-2	Benzene	480	
10061-02-6	Trans-1,3-Dichloropropene	33	U
75-25-2	Bromoform	33	U
108-10-1	4-Methyl-2-Pentanone	33	U
591-78-6	2-Hexanone	33	U
127-18-4	Tetrachloroethene	33	U
108-88-3	Toluene	33	U
79-34-5	1,1,2,2-Tetrachloroethane	33	U
108-90-7	Chlorobenzene	33	U
100-41-4	Ethylbenzene	33	U
100-42-5	Styrene	33	U
1330-20-7	Xylene (total)	33	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD37-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555604

Sample wt/vol: 2.5 (g/mL) g Lab File ID: 0601K10.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 40 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000108-60-1	PROPANE, 2,2'-OXYBIS[1-CHLOR	22.99	- 470	JN

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD38-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605

Sample wt/vol: 4 (g/mL) g Lab File ID: 0531E08.D

Level: (low/med) MED Date Received: 05/23/96

% Moisture: not dec. 68 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	3800	U
74-83-9	Bromomethane	3800	U
75-01-4	Vinyl Chloride	3800	U
75-00-3	Chloroethane	3800	U
75-09-2	Methylene Chloride	3800	U
67-64-1	Acetone	3800	U
75-15-0	Carbon Disulfide	3800	U
75-35-4	1,1-Dichloroethene	3800	U
75-34-3	1,1-Dichloroethane	3800	U
540-59-0	1,2-Dichloroethene (total)	3800	U
67-66-3	Chloroform	3800	U
107-06-2	1,2-Dichloroethane	3800	U
78-93-3	2-Butanone	3800	U
71-55-6	1,1,1-Trichloroethane	3800	U
56-23-5	Carbon Tetrachloride	3800	U
75-27-4	Bromodichloromethane	3800	U
78-87-5	1,2-Dichloropropane	3800	U
10061-01-5	cis-1,3-Dichloropropene	3800	U
79-01-6	Trichloroethene	3800	U
124-48-1	Dibromochloromethane	3800	U
79-00-5	1,1,2-Trichloroethane	3800	U
71-43-2	Benzene	11000	
10061-02-6	Trans-1,3-Dichloropropene	3800	U
75-25-2	Bromoform	3800	U
108-10-1	4-Methyl-2-Pentanone	3800	U
591-78-6	2-Hexanone	3800	U
127-18-4	Tetrachloroethene	3800	U
108-88-3	Toluene	3800	U
79-34-5	1,1,2,2-Tetrachloroethane	3800	U
108-90-7	Chlorobenzene	3800	U
100-41-4	Ethylbenzene	3800	U
100-42-5	Styrene	3800	U
1330-20-7	Xylene (total)	3800	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SD38-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605

Sample wt/vol: 4 (g/mL) g Lab File ID: 0531E08.D

Level: (low/med) MED Date Received: 05/23/96

% Moisture: not dec. 68 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLK55

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: VBLK55

Sample wt/vol: 4 (g/mL) g Lab File ID: 0531E04.D

Level: (low/med) MED Date Received:

% Moisture: not dec. 0 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	1200	U
74-83-9	Bromomethane	1200	U
75-01-4	Vinyl Chloride	1200	U
75-00-3	Chloroethane	1200	U
75-09-2	Methylene Chloride	1200	U
67-64-1	Acetone	1200	U
75-15-0	Carbon Disulfide	1200	U
75-35-4	1,1-Dichloroethene	1200	U
75-34-3	1,1-Dichloroethane	1200	U
540-59-0	1,2-Dichloroethene (total)	1200	U
67-66-3	Chloroform	1200	U
107-06-2	1,2-Dichloroethane	1200	U
78-93-3	2-Butanone	1200	U
71-55-6	1,1,1-Trichloroethane	1200	U
56-23-5	Carbon Tetrachloride	1200	U
75-27-4	Bromodichloromethane	1200	U
78-87-5	1,2-Dichloropropane	1200	U
10061-01-5	cis-1,3-Dichloropropene	1200	U
79-01-6	Trichloroethene	1200	U
124-48-1	Dibromochloromethane	1200	U
79-00-5	1,1,2-Trichloroethane	1200	U
71-43-2	Benzene	1200	U
10061-02-6	Trans-1,3-Dichloropropene	1200	U
75-25-2	Bromoform	1200	U
108-10-1	4-Methyl-2-Pentanone	1200	U
591-78-6	2-Hexanone	1200	U
127-18-4	Tetrachloroethene	1200	U
108-88-3	Toluene	1200	U
79-34-5	1,1,2,2-Tetrachloroethane	1200	U
108-90-7	Chlorobenzene	1200	U
100-41-4	Ethylbenzene	1200	U
100-42-5	Styrene	1200	U
1330-20-7	Xylene (total)	1200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLK55

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: VBLK55

Sample wt/vol: 4 (g/mL) g Lab File ID: 0531E04.D

Level: (low/med) MED Date Received:

% Moisture: not dec. 0 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLKKF

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: VBLKKF

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V02.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. 0 Date Analyzed: 05/31/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLKKF

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: VBLKKF

Sample wt/vol: 5 (g/mL) g Lab File ID: 0531V02.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. 0 Date Analyzed: 05/31/96

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLKKG

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: VBLKKG

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K02.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. 0 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLKKG

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: VBLKKG

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K02.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. 0 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD24-01MS

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601MS

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K08.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 53 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	21	U
74-83-9	Bromomethane	21	U
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	21	U
67-64-1	Acetone	37	
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	120	
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Butanone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	98	
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	110	
10061-02-6	Trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
108-88-3	Toluene	120	
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-90-7	Chlorobenzene	110	
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (total)	21	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD24-01MSD

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601MSD

Sample wt/vol: 5 (g/mL) g Lab File ID: 0601K09.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: not dec. 53 Date Analyzed: 06/01/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	21	U
74-83-9	Bromomethane	21	U
75-01-4	Vinyl Chloride	21	U
75-00-3	Chloroethane	21	U
75-09-2	Methylene Chloride	21	U
67-64-1	Acetone	32	
75-15-0	Carbon Disulfide	21	U
75-35-4	1,1-Dichloroethene	110	
75-34-3	1,1-Dichloroethane	21	U
540-59-0	1,2-Dichloroethene (total)	21	U
67-66-3	Chloroform	21	U
107-06-2	1,2-Dichloroethane	21	U
78-93-3	2-Butanone	21	U
71-55-6	1,1,1-Trichloroethane	21	U
56-23-5	Carbon Tetrachloride	21	U
75-27-4	Bromodichloromethane	21	U
78-87-5	1,2-Dichloropropane	21	U
10061-01-5	cis-1,3-Dichloropropene	21	U
79-01-6	Trichloroethene	86	
124-48-1	Dibromochloromethane	21	U
79-00-5	1,1,2-Trichloroethane	21	U
71-43-2	Benzene	130	
10061-02-6	Trans-1,3-Dichloropropene	21	U
75-25-2	Bromoform	21	U
108-10-1	4-Methyl-2-Pentanone	21	U
591-78-6	2-Hexanone	21	U
127-18-4	Tetrachloroethene	21	U
108-88-3	Toluene	120	
79-34-5	1,1,2,2-Tetrachloroethane	21	U
108-90-7	Chlorobenzene	97	
100-41-4	Ethylbenzene	21	U
100-42-5	Styrene	21	U
1330-20-7	Xylene (total)	21	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD38-01MS

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605MS

Sample wt/vol: 4 (g/mL) g Lab File ID: 0531E09.D

Level: (low/med) MED Date Received: 05/23/96

% Moisture: not dec. 68 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	3800	U
74-83-9	Bromomethane	3800	U
75-01-4	Vinyl Chloride	3800	U
75-00-3	Chloroethane	3800	U
75-09-2	Methylene Chloride	3800	U
67-64-1	Acetone	3800	U
75-15-0	Carbon Disulfide	3800	U
75-35-4	1,1-Dichloroethene	17000	
75-34-3	1,1-Dichloroethane	3800	U
540-59-0	1,2-Dichloroethene (total)	3800	U
67-66-3	Chloroform	3800	U
107-06-2	1,2-Dichloroethane	3800	U
78-93-3	2-Butanone	3800	U
71-55-6	1,1,1-Trichloroethane	3800	U
56-23-5	Carbon Tetrachloride	3800	U
75-27-4	Bromodichloromethane	3800	U
78-87-5	1,2-Dichloropropane	3800	U
10061-01-5	cis-1,3-Dichloropropene	3800	U
79-01-6	Trichloroethene	15000	
124-48-1	Dibromochloromethane	3800	U
79-00-5	1,1,2-Trichloroethane	3800	U
71-43-2	Benzene	31000	
10061-02-6	Trans-1,3-Dichloropropene	3800	U
75-25-2	Bromoform	3800	U
108-10-1	4-Methyl-2-Pentanone	3800	U
591-78-6	2-Hexanone	3800	U
127-18-4	Tetrachloroethene	3800	U
108-88-3	Toluene	15000	
79-34-5	1,1,2,2-Tetrachloroethane	3800	U
108-90-7	Chlorobenzene	15000	
100-41-4	Ethylbenzene	3800	U
100-42-5	Styrene	3800	U
1330-20-7	Xylene (total)	3800	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SD38-01MSD

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605MSD

Sample wt/vol: 4 (g/mL) g Lab File ID: 0531E10.D

Level: (low/med) MED Date Received: 05/23/96

% Moisture: not dec. 68 Date Analyzed: 06/01/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
74-87-3	Chloromethane	3800	U
74-83-9	Bromomethane	3800	U
75-01-4	Vinyl Chloride	3800	U
75-00-3	Chloroethane	3800	U
75-09-2	Methylene Chloride	3800	U
67-64-1	Acetone	3800	U
75-15-0	Carbon Disulfide	3800	U
75-35-4	1,1-Dichloroethene	17000	
75-34-3	1,1-Dichloroethane	3800	U
540-59-0	1,2-Dichloroethene (total)	3800	U
67-66-3	Chloroform	3800	U
107-06-2	1,2-Dichloroethane	3800	U
78-93-3	2-Butanone	3800	U
71-55-6	1,1,1-Trichloroethane	3800	U
56-23-5	Carbon Tetrachloride	3800	U
75-27-4	Bromodichloromethane	3800	U
78-87-5	1,2-Dichloropropane	3800	U
10061-01-5	cis-1,3-Dichloropropene	3800	U
79-01-6	Trichloroethene	15000	
124-48-1	Dibromochloromethane	3800	U
79-00-5	1,1,2-Trichloroethane	3800	U
71-43-2	Benzene	32000	
10061-02-6	Trans-1,3-Dichloropropene	3800	U
75-25-2	Bromoform	3800	U
108-10-1	4-Methyl-2-Pentanone	3800	U
591-78-6	2-Hexanone	3800	U
127-18-4	Tetrachloroethene	3800	U
108-88-3	Toluene	16000	
79-34-5	1,1,2,2-Tetrachloroethane	3800	U
108-90-7	Chlorobenzene	15000	
100-41-4	Ethylbenzene	3800	U
100-42-5	Styrene	3800	U
1330-20-7	Xylene (total)	3800	U

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Level:(low/med) LOW

	CLIENT SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKKF	100	94	90		0
02	APD-SD24-01	89	78	92		0
03	APD-SD25-01	109	70	94		0
04	APD-SD36-01	134	59	93		0
05	VBLKKG	99	95	91		0
06	APD-SD24-01RE	116	75	93		0
07	APD-SD25-01RE	121	70	92		0
08	APD-SD36-01RE	111	63	81		0
09	APD-SD24-01MS	112	74	90		0
10	APD-SD24-01MSD	122	68	91		0
11	APD-SD37-01	112	82	89		0
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of QC limits.

D System Monitoring Compound diluted out

FORM II VOA-2

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Level:(low/med) MED

	CLIENT SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	VBLK55	99	95	105		0
02	APD-SD38-01	101	98	106		0
03	APD-SD38-01MS	100	96	107		0
04	APD-SD38-01MSD	99	96	106		0
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of QC limits.

D System Monitoring Compound diluted out

FORM II VOA-2

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix Spike - Client Sample No.: APD-SD24-01 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	110	0	120	109	59-172
Trichloroethene	110	0	98	89	62-137
Benzene	110	25	110	77	66-142
Toluene	110	0	120	109	59-139
Chlorobenzene	110	0	110	100	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	110	110	100	9	22	59-172
Trichloroethene	110	86	78	13	24	62-137
Benzene	110	130	95	21	21	66-142
Toluene	110	120	109	0	21	59-139
Chlorobenzene	110	97	88	13	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits.

D Spike compound diluted out.

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix Spike - Client Sample No.: APD-SD38-01 Level:(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	20000	0	17000	85	59-172
Trichloroethene	20000	0	15000	75	62-137
Benzene	20000	11000	31000	100	66-142
Toluene	20000	0	15000	75	59-139
Chlorobenzene	20000	0	15000	75	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	20000	17000	85	0	22	59-172
Trichloroethene	20000	15000	75	0	24	62-137
Benzene	20000	32000	105	5	21	66-142
Toluene	20000	16000	80	6	21	59-139
Chlorobenzene	20000	15000	75	0	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits.

D Spike compound diluted out.

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

4A
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLK55

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID: 0531E04.D Lab Sample ID: VBLK55

Date Analyzed: 06/01/96 Time Analyzed: 00:47

GC Column: DB-624 ID: .53(mm) Heated Purge: (Y/N) N

Instrument ID: MSD5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	APD-SD38-01	960555605	0531E08.D	03:15
02	APD-SD38-01MS	960555605MS	0531E09.D	03:51
03	APD-SD38-01MSD	960555605MSD	0531E10.D	04:28
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COMMENTS:

FORM IV VOA

4A

VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKKF

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID: 0531V02.D Lab Sample ID: VBLKKF

Date Analyzed: 05/31/96 Time Analyzed: 17:51

GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: MSD11

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	APD-8024-01	960555601	0531V14.D	02:17
02	APD-8025-01	960555602	0531V15.D	02:54
03	APD-8036-01	960555603	0531V16.D	03:31
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COMMENTS:

FORM IV VOA

4A
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKKG

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID: 0601K02.D Lab Sample ID: VBLKKG

Date Analyzed: 06/01/96 Time Analyzed: 09:47

GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) Y

Instrument ID: MSD11

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	APD-SD24-01RE	960555601RE	0601K04.D	11:08
02	APD-SD25-01RE	960555602RE	0601K05.D	11:47
03	APD-SD36-01RE	960555603RE	0601K06.D	12:24
04	APD-SD24-01MS	960555601MS	0601K08.D	13:37
05	APD-SD24-01MSD	960555601MSD	0601K09.D	14:15
06	APD-SD37-01	960555604	0601K10.D	14:51
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COMMENTS:

FORM IV VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0531E01.D Date Analyzed: 05/31/96

Instrument ID: MSD5 Time Analyzed: 22:45

GC Column: DB-624 ID: .53(mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	408926	8.85	1461478	11.05	[illegible]	17.35
	UPPER LIMIT	817852	9.35	[illegible]	11.55	[illegible]	17.85
	LOWER LIMIT	204463	8.35	[illegible]	10.55	[illegible]	16.85
	EPA SAMPLE NO.						
01	[illegible]55	391416	8.83	1498374	11.04	[illegible]	17.37
02	[illegible]038-01	392027	8.82	[illegible]	[illegible]	[illegible]	17.33
03	[illegible]-SD38-01[illegible]	389471	8.83	1458339	11.04	[illegible]	17.37
04	APD-SD38-01MSD	391719	8.81	1476344	11.02	1230742	17.34
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0531V01.D Date Analyzed: 05/31/96

Instrument ID: MSD11 Time Analyzed: 16:56

GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	617053	7.50	3411704	9.71	2806425	15.99
	UPPER LIMIT	1234106	8.00	6823408	10.21	5612850	16.49
	LOWER LIMIT	308526	7.00	1705852	9.21	1403212	15.49
	EPA SAMPLE NO.						
01	VBLKKF	640215	7.51	3489072	9.71	2830564	15.97
02	APD-SD24-01	385003	7.49	1466082*	9.68	795339*	15.97
03	APD-SD25-01	251761*	7.48	774739*	9.67	358178*	15.98
04	APD-SD36-01	315522	7.50	1259240*	9.72	670396*	16.01
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0601K01.D Date Analyzed: 06/01/96

Instrument ID: MSD11 Time Analyzed: 09:04

GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	593689	7.48	3269320	9.70	2665241	15.98
	UPPER LIMIT	1187378	7.98	6538640	10.20	[illegible]	16.48
	LOWER LIMIT	296844	6.98	1634660	9.20	1332620	15.48
	EPA SAMPLE NO.						
01	VBLKKG	626115	7.44	3438039	9.65	2775796	15.93
02	APD-SD24-01RE	404724	7.43	[illegible]	[illegible]	[illegible]*	15.91
03	APD-SD25-01RE	386408	7.45	[illegible]	[illegible]	[illegible]*	15.94
04	APD-SD36-01RE	440675	7.44	[illegible]	[illegible]	[illegible]*	15.92
05	APD-SD24-01MS	422626	7.46	2030356	[illegible]	[illegible]	15.96
06	APD-SD24-01MSD	422927	7.43	1870497	9.64	1110602*	15.91
07	APD-SD37-01	507010	7.45	2600698	9.66	1768566	15.95
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD24

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0611806.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 53 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	700	U
111-44-4	bis(2-Chloroethyl)ether	700	U
95-57-8	2-Chlorophenol	700	U
541-73-1	1,3-Dichlorobenzene	700	U
106-46-7	1,4-Dichlorobenzene	700	U
95-50-1	1,2-Dichlorobenzene	700	U
95-48-7	2-Methylphenol	700	U
108-60-1	2,2'-oxybis(1-Chloropropane)	700	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitroso-di-n-propylamine	700	U
67-72-1	Hexachloroethane	700	U
98-95-3	Nitrobenzene	700	U
78-59-1	Isophorone	700	U
88-75-5	2-Nitrophenol	700	U
105-67-9	2,4-Dimethylphenol	700	U
111-91-1	bis(2-Chloroethoxy)methane	700	U
120-83-2	2,4-Dichlorophenol	700	U
120-82-1	1,2,4-Trichlorobenzene	700	U
91-20-3	Naphthalene	700	U
106-47-8	4-Chloroaniline	700	U
87-68-3	Hexachlorobutadiene	700	U
59-50-7	4-Chloro-3-methylphenol	700	U
91-57-6	2-Methylnaphthalene	700	U
77-47-4	Hexachlorocyclopentadiene	700	U
88-06-2	2,4,6-Trichlorophenol	700	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	700	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	700	U
208-96-8	Acenaphthylene	700	U
606-20-2	2,6-Dinitrotoluene	700	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	700	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD24

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0611806.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 53 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	700	U
121-14-2	2,4-Dinitrotoluene	700	U
84-66-2	Diethylphthalate	700	U
7005-72-3	4-Chlorophenyl-phenylether	700	U
86-73-7	Fluorene	700	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	700	U
101-55-3	4-Bromophenyl-phenylether	700	U
118-74-1	Hexachlorobenzene	700	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	700	U
120-12-7	Anthracene	700	U
86-74-8	Carbazole	700	U
84-74-2	Di-n-butylphthalate	700	U
206-44-0	Fluoranthene	700	U
129-00-0	Pyrene	700	U
85-68-7	Butylbenzylphthalate	700	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)anthracene	700	U
218-01-9	Chrysene	700	U
117-81-7	bis(2-Ethylhexyl)phthalate	700	U
117-84-0	Di-n-octylphthalate	700	U
205-99-2	Benzo(b)fluoranthene	700	U
207-08-9	Benzo(k)fluoranthene	700	U
50-32-8	Benzo(a)pyrene	700	U
193-39-5	Indeno(1,2,3-cd)pyrene	700	U
53-70-3	Dibenz(a,h)anthracene	700	U
191-24-2	Benzo(g,h,i)perylene	700	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD24

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0611806.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 53 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1074891	1H-Purine, 6-methoxy-	19.560	200	NJ
2.	Unknown	27.030	200	J
3.	Unknown alkane	28.570	200	J
4.	Unknown	28.630	990	J
5.	Unknown	29.390	220	J
6.	Unknown	29.670	270	J
7.	Unknown alkane	30.130	310	J
8.	Unknown	30.210	300	J
9.	Unknown	30.360	250	J
10.	Unknown	31.550	890	J
11.	Unknown alkane	32.110	230	J
12.	Unknown	32.650	430	J
13. 14021239	D-Friedoolean-14-ene, 3-meth	35.220	5400	NJ
14.	Unknown	35.590	1400	J
15.	Unknown	36.020	310	J
16.	Unknown	36.520	1400	J
17.	Unknown	36.920	280	J
18.	Unknown	37.310	180	J
19.	Unknown	38.770	710	J
20. 1058613	Stigmast-4-en-3-one	39.092	370	NJ
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22.				
23.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD24RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601RE

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0618807.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 53 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/19/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	700	U
111-44-4	bis(2-Chloroethyl)ether	700	U
95-57-8	2-Chlorophenol	700	U
541-73-1	1,3-Dichlorobenzene	700	U
106-46-7	1,4-Dichlorobenzene	700	U
95-50-1	1,2-Dichlorobenzene	700	U
95-48-7	2-Methylphenol	700	U
108-60-1	2,2'-oxybis(1-Chloropropane)	700	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitroso-di-n-propylamine	700	U
67-72-1	Hexachloroethane	700	U
98-95-3	Nitrobenzene	700	U
78-59-1	Isophorone	700	U
88-75-5	2-Nitrophenol	700	U
105-67-9	2,4-Dimethylphenol	700	U
111-91-1	bis(2-Chloroethoxy)methane	700	U
120-83-2	2,4-Dichlorophenol	700	U
120-82-1	1,2,4-Trichlorobenzene	700	U
91-20-3	Naphthalene	700	U
106-47-8	4-Chloroaniline	700	U
87-68-3	Hexachlorobutadiene	700	U
59-50-7	4-Chloro-3-methylphenol	700	U
91-57-6	2-Methylnaphthalene	700	U
77-47-4	Hexachlorocyclopentadiene	700	U
88-06-2	2,4,6-Trichlorophenol	700	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	700	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	700	U
208-96-8	Acenaphthylene	700	U
606-20-2	2,6-Dinitrotoluene	700	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	700	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD36

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611808.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 63 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	9.140	1100	J
2.		Unknown	23.760	1700	J
3.		Unknown	25.910	520	J
4.		Unknown	26.020	350	J
5.		Unknown alkane	26.140	230	J
6.		Unknown alkane	26.980	380	J
7.		Unknown alkane	28.570	430	J
8.		Unknown	28.620	310	J
9.		Unknown	29.130	240	J
10.		Unknown alkane	29.320	590	J
11.		Unknown	29.670	390	J
12.		Unknown alkane	30.130	530	J
13.		Unknown	31.540	470	J
14.		Unknown alkane	32.090	420	J
15.		Unknown	32.640	330	J
16.		Unknown	36.400	650	J
17.		Unknown	36.510	280	J
18.		Unknown	36.910	360	J
19.		Unknown	38.190	220	J
20.	1058613	Stigmast-4-en-3-one	39.070	780	NJ
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD37

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555604

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 0611809.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	550	U
111-44-4	bis(2-Chloroethyl)ether	550	U
95-57-8	2-Chlorophenol	550	U
541-73-1	1,3-Dichlorobenzene	550	U
106-46-7	1,4-Dichlorobenzene	550	U
95-50-1	1,2-Dichlorobenzene	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1000	
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitroso-di-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	bis(2-Chloroethoxy)methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
120-82-1	1,2,4-Trichlorobenzene	550	U
91-20-3	Naphthalene	550	U
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
59-50-7	4-Chloro-3-methylphenol	550	U
91-57-6	2-Methylnaphthalene	550	U
77-47-4	Hexachlorocyclopentadiene	550	U
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	550	U
208-96-8	Acenaphthylene	550	U
606-20-2	2,6-Dinitrotoluene	550	U
99-09-2	3-Nitroaniline	1300	U
83-32-9	Acenaphthene	550	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD37

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555604

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 0611809.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	U
132-64-9	Dibenzofuran	550	U
121-14-2	2,4-Dinitrotoluene	550	U
84-66-2	Diethylphthalate	550	U
7005-72-3	4-Chlorophenyl-phenylether	550	U
86-73-7	Fluorene	550	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamine (1)	550	U
101-55-3	4-Bromophenyl-phenylether	550	U
118-74-1	Hexachlorobenzene	550	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	550	U
120-12-7	Anthracene	550	U
86-74-8	Carbazole	550	U
84-74-2	Di-n-butylphthalate	550	U
206-44-0	Fluoranthene	550	U
129-00-0	Pyrene	550	U
85-68-7	Butylbenzylphthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(a)anthracene	550	U
218-01-9	Chrysene	550	U
117-81-7	bis(2-Ethylhexyl)phthalate	550	U
117-84-0	Di-n-octylphthalate	550	U
205-99-2	Benzo(b)fluoranthene	550	U
207-08-9	Benzo(k)fluoranthene	550	U
50-32-8	Benzo(a)pyrene	550	U
193-39-5	Indeno(1,2,3-cd)pyrene	550	U
53-70-3	Dibenz(a,h)anthracene	550	U
191-24-2	Benzo(g,h,i)perylene	550	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD37

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555604

Sample wt/vol: 30.2 (g/mL) G Lab File ID: 0611809.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 40 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 134623	Diethyltoluamide	17.930	530	NJ
2. 57103	Hexadecanoic acid	22.090	150	XNJ
3.	Unknown	23.250	350	J
4.	Unknown alkane	26.990	180	J
5.	Unknown alkane	28.580	210	J
6.	Unknown	29.700	500	J
7.	Unknown alkane	30.140	360	J
8.	Unknown aldehyde	31.560	300	J
9.	Unknown alkane	32.110	230	J
10.	Unknown	32.660	160	J
11.	Unknown	32.990	190	J
12.	Unknown alkane	34.800	130	J
13.	Unknown	35.340	130	J
14.	Unknown	36.040	150	J
15.	Unknown	36.370	340	J
16.	Unknown	37.220	140	J
17.	Unknown	37.360	240	J
18.	Unknown	37.700	140	J
19.	Unknown	37.810	200	J
20. 1058613	Stigmast-4-en-3-one	39.130	600	NJ
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD38

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611810.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1000	U
111-44-4	bis(2-Chloroethyl)ether	200	J
95-57-8	2-Chlorophenol	1000	U
541-73-1	1,3-Dichlorobenzene	1000	U
106-46-7	1,4-Dichlorobenzene	1000	U
95-50-1	1,2-Dichlorobenzene	1000	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	180	J
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	1000	U
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	bis(2-Chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
120-82-1	1,2,4-Trichlorobenzene	1000	U
91-20-3	Naphthalene	1000	U
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
59-50-7	4-Chloro-3-methylphenol	1000	U
91-57-6	2-Methylnaphthalene	1000	U
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	1000	U
208-96-8	Acenaphthylene	110	J
606-20-2	2,6-Dinitrotoluene	1000	U
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	1000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD38

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611810.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	2500	U
132-64-9	Dibenzofuran	1000	U
121-14-2	2,4-Dinitrotoluene	1000	U
84-66-2	Diethylphthalate	1900	
7005-72-3	4-Chlorophenyl-phenylether	1000	U
86-73-7	Fluorene	1000	U
100-01-6	4-Nitroaniline	2500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	1000	U
101-55-3	4-Bromophenyl-phenylether	1000	U
118-74-1	Hexachlorobenzene	1000	U
87-86-5	Pentachlorophenol	2500	U
85-01-8	Phenanthrene	280	J
120-12-7	Anthracene	1000	U
86-74-8	Carbazole	1000	U
84-74-2	Di-n-butylphthalate	1000	U
206-44-0	Fluoranthene	600	J
129-00-0	Pyrene	410	J
85-68-7	Butylbenzylphthalate	1000	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)anthracene	330	J
218-01-9	Chrysene	350	J
117-81-7	bis(2-Ethylhexyl)phthalate	1000	U
117-84-0	Di-n-octylphthalate	1000	U
205-99-2	Benzo(b)fluoranthene	400	J
207-08-9	Benzo(k)fluoranthene	390	J
50-32-8	Benzo(a)pyrene	300	J
193-39-5	Indeno(1,2,3-cd)pyrene	200	J
53-70-3	Dibenz(a,h)anthracene	1000	U
191-24-2	Benzo(g,h,i)perylene	1000	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD38

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611810.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 873949	Cyclohexanone, 3,3,5-trimeth	9.740	790	NJ
2.	Unknown	17.110	2200	J
3.	Unknown	20.770	540	J
4. 57103	Hexadecanoic acid	22.100	920	XNJ
5.	Unknown	26.390	610	J
6.	Unknown alkane	26.990	630	J
7.	Unknown alkane	28.580	980	J
8.	Unknown alkane	29.330	690	J
9.	Unknown alkane	30.150	2200	J
10.	Unknown	31.800	490	J
11.	Unknown alkane	32.110	520	J
12.	Unknown	32.670	680	J
13. 59029	Vitamin E	33.020	860	NJ
14.	Unknown	36.530	430	[illegible]
15.	Unknown	36.800	490	[illegible]
16.	Unknown	37.350	920	J
17.	Unknown	37.720	1400	J
18.	Unknown	38.250	520	J
19.	Unknown	38.490	580	J
20. 1058613	Stigmast-4-en-3-one	39.160	2000	NJ
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD38MS

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605MS

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611811.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2100	
111-44-4	bis(2-Chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	1200	
541-73-1	1,3-Dichlorobenzene	1000	U
106-46-7	1,4-Dichlorobenzene	1000	U
95-50-1	1,2-Dichlorobenzene	1000	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1000	U
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	760	J
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	bis(2-Chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
120-82-1	1,2,4-Trichlorobenzene	390	J
91-20-3	Naphthalene	1000	U
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
59-50-7	4-Chloro-3-methylphenol	5400	
91-57-6	2-Methylnaphthalene	1000	U
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	1000	U
208-96-8	Acenaphthylene	1000	U
606-20-2	2,6-Dinitrotoluene	1000	U
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	2500	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD38MS

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605MS

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611811.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	6700	
132-64-9	Dibenzofuran	1000	U
121-14-2	2,4-Dinitrotoluene	3400	
84-66-2	Diethylphthalate	1000	U
7005-72-3	4-Chlorophenyl-phenylether	1000	U
86-73-7	Fluorene	1000	U
100-01-6	4-Nitroaniline	2500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	1000	U
101-55-3	4-Bromophenyl-phenylether	1000	U
118-74-1	Hexachlorobenzene	1000	U
87-86-5	Pentachlorophenol	6200	
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	1000	U
86-74-8	Carbazole	1000	U
84-74-2	Di-n-butylphthalate	1000	U
206-44-0	Fluoranthene	270	J
129-00-0	Pyrene	3400	
85-68-7	Butylbenzylphthalate	1000	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)anthracene	140	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	1000	U
117-84-0	Di-n-octylphthalate	1000	U
205-99-2	Benzo(b)fluoranthene	180	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	170	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenz(a,h)anthracene	1000	U
191-24-2	Benzo(g,h,i)perylene	1000	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD38MSD

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605MSD

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611812.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	6700	
111-44-4	bis(2-Chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	6400	
541-73-1	1,3-Dichlorobenzene	1000	U
106-46-7	1,4-Dichlorobenzene	2800	
95-50-1	1,2-Dichlorobenzene	1000	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-oxybis(1-Chloropropane)	190	J
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	3800	
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	bis(2-Chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
120-82-1	1,2,4-Trichlorobenzene	3300	
91-20-3	Naphthalene	1000	U
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
59-50-7	4-Chloro-3-methylphenol	6500	
91-57-6	2-Methylnaphthalene	1000	U
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	2500	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	1000	U
208-96-8	Acenaphthylene	120	J
606-20-2	2,6-Dinitrotoluene	1000	U
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	3600	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD38MSD

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555605MSD

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611812.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 68 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/12/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2500	U
100-02-7	4-Nitrophenol	7000	
132-64-9	Dibenzofuran	1000	U
121-14-2	2,4-Dinitrotoluene	3800	
84-66-2	Diethylphthalate	1000	U
7005-72-3	4-Chlorophenyl-phenylether	1000	U
86-73-7	Fluorene	1000	U
100-01-6	4-Nitroaniline	2500	U
534-52-1	4,6-Dinitro-2-methylphenol	2500	U
86-30-6	N-Nitrosodiphenylamine (1)	1000	U
101-55-3	4-Bromophenyl-phenylether	1000	U
118-74-1	Hexachlorobenzene	1000	U
87-86-5	Pentachlorophenol	6100	
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	130	J
86-74-8	Carbazole	1000	U
84-74-2	Di-n-butylphthalate	1000	U
206-44-0	Fluoranthene	970	J
129-00-0	Pyrene	3400	
85-68-7	Butylbenzylphthalate	1000	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
56-55-3	Benzo(a)anthracene	480	J
218-01-9	Chrysene	520	J
117-81-7	bis(2-Ethylhexyl)phthalate	1000	U
117-84-0	Di-n-octylphthalate	1000	U
205-99-2	Benzo(b)fluoranthene	550	J
207-08-9	Benzo(k)fluoranthene	540	J
50-32-8	Benzo(a)pyrene	450	J
193-39-5	Indeno(1,2,3-cd)pyrene	260	J
53-70-3	Dibenz(a,h)anthracene	160	J
191-24-2	Benzo(g,h,i)perylene	1000	U

(1) - Cannot be separated from Diphenylamine

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Level:(low/med) LOW

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 (FPB)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	SBLK09	77	72	67	81	83	73	78	74	0
02	SD24	2*	10*	63	8*	4*	67	5*	1*	6
03	SD25	8*	34	58	31	15*	67	18*	4*	4
04	SD36	69	65	61	80	78	70	76	68	0
05	SD37	78	73	65	91	91	76	85	79	0
06	SD38	77	71	66	90	88	74	84	72	0
07	SD38MS	7*	32	63	27	12*	70	15*	2*	4
08	SD38MSD	75	67	61	88	86	69	81	62	0
09	SBLK29	83	79	65	99	98	75	93	80	0
10	SD24RE	69	70	60	76	78	65	76	68	0
11	SD25RE	71	71	61	77	79	66	77	67	0
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FPB)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD24RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601RE

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0618807.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 53 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/19/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	700	U
121-14-2	2,4-Dinitrotoluene	700	U
84-66-2	Diethylphthalate	700	U
7005-72-3	4-Chlorophenyl-phenylether	700	U
86-73-7	Fluorene	700	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	700	U
101-55-3	4-Bromophenyl-phenylether	700	U
118-74-1	Hexachlorobenzene	700	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	700	U
120-12-7	Anthracene	700	U
86-74-8	Carbazole	700	U
84-74-2	Di-n-butylphthalate	3200	B
206-44-0	Fluoranthene	700	U
129-00-0	Pyrene	700	U
85-68-7	Butylbenzylphthalate	700	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)anthracene	700	U
218-01-9	Chrysene	700	U
117-81-7	bis(2-Ethylhexyl)phthalate	700	U
117-84-0	Di-n-octylphthalate	700	U
205-99-2	Benzo(b)fluoranthene	700	U
207-08-9	Benzo(k)fluoranthene	700	U
50-32-8	Benzo(a)pyrene	700	U
193-39-5	Indeno(1,2,3-cd)pyrene	700	U
53-70-3	Dibenz(a,h)anthracene	700	U
191-24-2	Benzo(g,h,i)perylene	700	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD24RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555601RE

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0618807.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 53 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/19/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	11.580	650	J
2. 57103	Hexadecanoic acid	21.890	470	NXJ
3.	Unknown	25.490	320	J
4.	Unknown	26.410	370	J
5.	Unknown	28.410	1500	J
6.	Unknown	29.430	380	J
7.	Unknown alkane	29.870	370	J
8.	Unknown	29.960	350	J
9.	Unknown	31.200	840	J
10.	Unknown	32.250	620	J
11.	Unknown	32.630	390	J
12. 14021239	D-Friedoolean-14-ene, 3-meth	34.690	6200	NJ
13. 56588251	D:A-Friedoolean-6-ene	34.850	360	NJ
14.	Unknown	35.040	1500	J
15.	Unknown	35.900	1200	J
16.	Unknown	36.000	360	J
17.	Unknown	36.290	360	J
18.	Unknown	37.730	430	J
19.	Unknown	38.030	590	J
20. 1058613	Stigmast-4-en-3-one	38.350	360	NJ
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD25

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611807.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 74 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1300	U
111-44-4	bis(2-Chloroethyl)ether	1300	U
95-57-8	2-Chlorophenol	1300	U
541-73-1	1,3-Dichlorobenzene	1300	U
106-46-7	1,4-Dichlorobenzene	1300	U
95-50-1	1,2-Dichlorobenzene	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-di-n-propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
111-91-1	bis(2-Chloroethoxy)methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
120-82-1	1,2,4-Trichlorobenzene	1300	U
91-20-3	Naphthalene	1300	U
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
59-50-7	4-Chloro-3-methylphenol	1300	U
91-57-6	2-Methylnaphthalene	1300	U
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	3100	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	3100	U
131-11-3	Dimethylphthalate	1300	U
208-96-8	Acenaphthylene	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U
99-09-2	3-Nitroaniline	3100	U
83-32-9	Acenaphthene	1300	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

SD25

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611807.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 74 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	3100	U
100-02-7	4-Nitrophenol	3100	U
132-64-9	Dibenzofuran	1300	U
121-14-2	2,4-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	2600	
7005-72-3	4-Chlorophenyl-phenylether	1300	U
86-73-7	Fluorene	1300	U
100-01-6	4-Nitroaniline	3100	U
534-52-1	4,6-Dinitro-2-methylphenol	3100	U
86-30-6	N-Nitrosodiphenylamine (1)	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
87-86-5	Pentachlorophenol	3100	U
85-01-8	Phenanthrene	1300	U
120-12-7	Anthracene	1300	U
86-74-8	Carbazole	1300	U
84-74-2	Di-n-butylphthalate	1300	U
206-44-0	Fluoranthene	1300	U
129-00-0	Pyrene	1300	U
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)anthracene	1300	U
218-01-9	Chrysene	1300	U
117-81-7	bis(2-Ethylhexyl)phthalate	1300	U
117-84-0	Di-n-octylphthalate	1300	U
205-99-2	Benzo(b)fluoranthene	1300	U
207-08-9	Benzo(k)fluoranthene	1300	U
50-32-8	Benzo(a)pyrene	1300	U
193-39-5	Indeno(1,2,3-cd)pyrene	1300	U
53-70-3	Dibenz(a,h)anthracene	1300	U
191-24-2	Benzo(g,h,i)perylene	1300	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD25

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611807.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 74 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	9.140	680	J
2. 57103	Hexadecanoic acid	22.080	380	XNJ
3.	Unknown	25.760	340	J
4.	Unknown	25.920	880	J
5.	Unknown	26.030	440	J
6.	Unknown alkane	26.990	490	J
7.	Unknown alkane	28.570	710	J
8.	Unknown alkane	29.320	350	J
9.	Unknown	29.670	520	J
10.	Unknown alkane	30.140	1400	J
11.	Unknown	30.370	310	J
12.	Unknown	31.550	880	J
13.	Unknown alkane	32.110	1100	J
14.	Unknown	32.660	640	
15.	Unknown alkane	34.810	400	J
16. 14021239	D-Friedoolean-14-ene, 3-meth	35.200	5800	NJ
17.	Unknown	35.600	1300	J
18.	Unknown	36.510	1600	J
19.	Unknown	38.760	570	J
20. 1058613	Stigmast-4-en-3-one	39.090	820	NJ
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD25RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602RE

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0618808.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 74 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/19/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1300	U
111-44-4	bis(2-Chloroethyl)ether	1300	U
95-57-8	2-Chlorophenol	1300	U
541-73-1	1,3-Dichlorobenzene	1300	U
106-46-7	1,4-Dichlorobenzene	1300	U
95-50-1	1,2-Dichlorobenzene	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-di-n-propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
111-91-1	bis(2-Chloroethoxy)methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
120-82-1	1,2,4-Trichlorobenzene	1300	U
91-20-3	Naphthalene	1300	U
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
59-50-7	4-Chloro-3-methylphenol	1300	U
91-57-6	2-Methylnaphthalene	1300	U
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	3100	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	3100	U
131-11-3	Dimethylphthalate	1300	U
208-96-8	Acenaphthylene	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U
99-09-2	3-Nitroaniline	3100	U
83-32-9	Acenaphthene	1300	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD25RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602RE

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0618808.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 74 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/19/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	3100	U
100-02-7	4-Nitrophenol	3100	U
132-64-9	Dibenzofuran	1300	U
121-14-2	2,4-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	1300	U
7005-72-3	4-Chlorophenyl-phenylether	1300	U
86-73-7	Fluorene	1300	U
100-01-6	4-Nitroaniline	3100	U
534-52-1	4,6-Dinitro-2-methylphenol	3100	U
86-30-6	N-Nitrosodiphenylamine (1)	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
87-86-5	Pentachlorophenol	3100	U
85-01-8	Phenanthrene	1300	U
120-12-7	Anthracene	1300	U
86-74-8	Carbazole	1300	U
84-74-2	Di-n-butylphthalate	7400	B
206-44-0	Fluoranthene	140	J
129-00-0	Pyrene	180	J
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)anthracene	1300	U
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	1300	U
117-84-0	Di-n-octylphthalate	1300	U
205-99-2	Benzo(b)fluoranthene	1300	U
207-08-9	Benzo(k)fluoranthene	1300	U
50-32-8	Benzo(a)pyrene	1300	U
193-39-5	Indeno(1,2,3-cd)pyrene	1300	U
53-70-3	Dibenz(a,h)anthracene	1300	U
191-24-2	Benzo(g,h,i)perylene	1300	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SD25RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555602RE

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0618808.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 74 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/19/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	10.030	650	J
2.	Unknown	10.910	670	J
3.	Unknown	11.580	1400	J
4. 57103	Hexadecanoic acid	21.890	870	XNJ
5.	Unknown alkane	25.070	580	J
6.	Unknown	25.490	640	J
7.	Unknown alkane	26.780	850	J
8.	Unknown alkane	28.350	1000	J
9.	Unknown	29.430	900	J
10.	Unknown alkane	29.880	2200	J
11.	Unknown	31.210	1200	J
12.	Unknown alkane	31.760	1900	J
13.	Unknown	32.250	910	J
14.	Unknown alkane	34.310	720	J
15. 14021239	D-Friedoolean-14-ene, 3-meth	34.650	6300	NJ
16. 56588251	D:A-Friedoolean-6-ene	34.830	940	NJ
17.	Unknown	35.030	1400	J
18.	Unknown	35.890	1000	J
19.	Unknown	38.030	710	J
20. 1058613	Stigmast-4-en-3-one	38.330	710	NJ
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SD36

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611808.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 63 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	890	U
111-44-4	bis(2-Chloroethyl)ether	890	U
95-57-8	2-Chlorophenol	890	U
541-73-1	1,3-Dichlorobenzene	890	U
106-46-7	1,4-Dichlorobenzene	890	U
95-50-1	1,2-Dichlorobenzene	890	U
95-48-7	2-Methylphenol	890	U
108-60-1	2,2'-oxybis(1-Chloropropane)	140	J
106-44-5	4-Methylphenol	890	U
621-64-7	N-Nitroso-di-n-propylamine	890	U
67-72-1	Hexachloroethane	890	U
98-95-3	Nitrobenzene	890	U
78-59-1	Isophorone	890	U
88-75-5	2-Nitrophenol	890	U
105-67-9	2,4-Dimethylphenol	890	U
111-91-1	bis(2-Chloroethoxy)methane	890	U
120-83-2	2,4-Dichlorophenol	890	U
120-82-1	1,2,4-Trichlorobenzene	890	U
91-20-3	Naphthalene	890	U
106-47-8	4-Chloroaniline	890	U
87-68-3	Hexachlorobutadiene	890	U
59-50-7	4-Chloro-3-methylphenol	890	U
91-57-6	2-Methylnaphthalene	890	U
77-47-4	Hexachlorocyclopentadiene	890	U
88-06-2	2,4,6-Trichlorophenol	890	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	890	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethylphthalate	890	U
208-96-8	Acenaphthylene	890	U
606-20-2	2,6-Dinitrotoluene	890	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	890	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

SD36

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: 960555603

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 0611808.D

Level: (low/med) LOW Date Received: 05/23/96

% Moisture: 63 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	890	U
121-14-2	2,4-Dinitrotoluene	890	U
84-66-2	Diethylphthalate	890	U
7005-72-3	4-Chlorophenyl-phenylether	890	U
86-73-7	Fluorene	890	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	890	U
101-55-3	4-Bromophenyl-phenylether	890	U
118-74-1	Hexachlorobenzene	890	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	890	U
120-12-7	Anthracene	890	U
86-74-8	Carbazole	890	U
84-74-2	Di-n-butylphthalate	890	U
206-44-0	Fluoranthene	890	U
129-00-0	Pyrene	890	U
85-68-7	Butylbenzylphthalate	890	U
91-94-1	3,3'-Dichlorobenzidine	890	U
56-55-3	Benzo(a)anthracene	890	U
218-01-9	Chrysene	890	U
117-81-7	bis(2-Ethylhexyl)phthalate	890	U
117-84-0	Di-n-octylphthalate	890	U
205-99-2	Benzo(b)fluoranthene	890	U
207-08-9	Benzo(k)fluoranthene	890	U
50-32-8	Benzo(a)pyrene	890	U
193-39-5	Indeno(1,2,3-cd)pyrene	890	U
53-70-3	Dibenz(a,h)anthracene	890	U
191-24-2	Benzo(g,h,i)perylene	890	U

(1) - Cannot be separated from Diphenylamine

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix Spike - CLIENT Sample No.: SD38 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	7800	0	2100	27	26- 90
2-Chlorophenol	7800	0	1200	15*	25-102
1,4-Dichlorobenzene	5200	0	0	0*	28-104
N-Nitroso-di-n-prop.(1)	5200	0	760	15*	41-126
1,2,4-Trichlorobenzene	5200	0	390	8*	38-107
4-Chloro-3-methylphenol	7800	0	5400	69	26-103
Acenaphthene	5200	0	2500	48	31-137
4-Nitrophenol	7800	0	6700	86	11-114
2,4-Dinitrotoluene	5200	0	3400	65	28-[illegible]
Pentachlorophenol	7800	0	6200	79	17-109
Pyrene	5200	410	3400	58	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	7800	6700	86	104*	35	26- 90
2-Chlorophenol	7800	6400	82	138*	50	25-102
1,4-Dichlorobenzene	5200	2800	54	200*	27	28-104
N-Nitroso-di-n-prop.(1)	5200	3800	73	132*	38	41-126
1,2,4-Trichlorobenzene	5200	3300	63	155*	23	38-107
4-Chloro-3-methylphenol	7800	6500	83	18	33	26-103
Acenaphthene	5200	3600	69	36*	19	31-137
4-Nitrophenol	7800	7000	90	4	50	11-[illegible]
2,4-Dinitrotoluene	5200	3800	73	12	47	28-[illegible]
Pentachlorophenol	7800	6100	78	1	47	17-109
Pyrene	5200	3400	58	0	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 6 out of 11 outside limits
Spike Recovery: 4 out of 22 outside limits

COMMENTS: _____

4B
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

SBLK09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID: 0611802.D Lab Sample ID: SBLK09

Instrument ID: MSD8 Date Extracted: 05/29/96

Matrix: (soil/water) SOIL Date Analyzed: 06/11/96

Level:(low/med) LOW Time Analyzed: 1904

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SD24	960555601	0611806.D	06/11/96
02	SD25	960555602	0611807.D	06/11/96
03	SD36	960555603	0611808.D	06/11/96
04	SD37	960555604	0611809.D	06/12/96
05	SD38	960555605	0611810.D	06/12/96
06	SD38MS	960555605MS	0611811.D	06/12/96
07	SD38MSD	960555605MSD	0611812.D	06/12/96
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COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: SBLK09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0611802.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	330	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: SBLK09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0611802.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	800	U
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-methylphenol	800	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	800	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLK09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: SBLK09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0611802.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/29/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/11/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:_____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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4B
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

SBLK29

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID: 0618802.D Lab Sample ID: SBLK29

Instrument ID: MSD8 Date Extracted: 06/14/96

Matrix: (soil/water) SOIL Date Analyzed: 06/18/96

Level:(low/med) LOW Time Analyzed: 2121

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SD24RE	960555601RE	0618807.D	06/19/96
02	SD25RE	960555602RE	0618808.D	06/19/96
03				
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COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK29

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: SBLK29

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0618802.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/18/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK29

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: SBLK29

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0618802.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/18/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	800	U
100-02-7	4-Nitrophenol	800	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	800	U
534-52-1	4,6-Dinitro-2-methylphenol	800	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	800	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	420	
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLK29

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Matrix: (soil/water) SOIL Lab Sample ID: SBLK29

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0618802.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 06/14/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 06/18/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:_____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0611801.D Date Analyzed: 06/11/96

Instrument ID: MSD8 Time Analyzed: 1752

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	393945	9.20	1916735	12.29	1425670	16.77
UPPER LIMIT	787890	9.70	3833470	12.79	2851340	17.27
LOWER LIMIT	196972	8.70	958368	11.79	712835	16.27
CLIENT SAMPLE No.						
01 SBLK09	364856	9.22	1644752	12.29	1239072	16.77
02 SD24	314519	9.19	1603670	12.28	1233207	16.75
03 SD25	334548	9.20	1704461	12.28	1276154	16.76
04 SD36	309943	9.20	1523352	12.27	1189279	16.75
05 SD37	296017	9.20	1506150	12.28	1163629	16.76
06 SD38	307623	9.20	1532266	12.28	1198881	16.76
07 SD38MS	304975	9.19	1526651	12.28	1188887	16.76
08 SD38MSD	310399	9.20	1512341	12.29	1198344	16.76
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0611801.D Date Analyzed: 06/11/96

Instrument ID: MSD8 Time Analyzed: 1752

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	3029863	20.51	2507407	27.33	3174961	30.99
UPPER LIMIT	6059726	21.01	5014814	27.83	6349922	31.49
LOWER LIMIT	1514932	20.01	1253704	26.83	1587480	30.49
CLIENT SAMPLE No.						
01 SBLK09	2619167	20.51	2649422	27.32	2852791	30.98
02 SD24	2586843	20.50	2476964	27.30	2714306	30.97
03 SD25	2769378	20.50	2654880	27.31	2960464	30.97
04 SD36	2521502	20.49	2430468	27.30	2672433	30.96
05 SD37	2468802	20.50	2363026	27.31	2624356	30.97
06 SD38	2557265	20.50	2324842	27.31	2509576	30.98
07 SD38MS	2500164	20.51	2366750	27.31	2564007	30.99
08 SD38MSD	2547265	20.51	2325850	27.32	2528883	30.99
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0618801.D Date Analyzed: 06/18/96

Instrument ID: MSD8 Time Analyzed: 2009

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	345147	9.00	1872215	12.08	1502634	16.54
UPPER LIMIT	690294	9.50	3744430	12.58	3005268	17.04
LOWER LIMIT	172574	8.50	936108	11.58	751317	16.04
CLIENT SAMPLE No.						
01 SBLK29	327872	9.00	1656071	12.08	1324047	16.53
02 SD24RE	409912	9.00	2072511	12.07	1478995	16.53
03 SD25RE	398984	9.00	1958973	12.08	1421630	16.54
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-162 SDG No.: 05556

Lab File ID (Standard): 0618801.D Date Analyzed: 06/18/96

Instrument ID: MSD8 Time Analyzed: 2009

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	3343555	20.27	2672125	27.07	3595126	30.64
	UPPER LIMIT	6687110	20.77	5344250	27.57	7190252	31.14
	LOWER LIMIT	1671778	19.77	1336062	26.57	1797563	30.14
	CLIENT SAMPLE No.						
01	SBLK29	2897915	20.26	2811374	27.04	3114711	30.61
02	SD24RE	3014531	20.26	2723033	27.05	2728624	30.63
03	SD25RE	2935644	20.26	2572610	27.06	2515450	30.63
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APD-SD24-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix: (soil/water): SOIL Lab Sample ID: 960969A-01

Sample wt/vol: 30 (g/ml) G Lab File ID: B1005CLP499

% Moisture: 53 decanted: (Y/N) N Date Received: 05/23/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/29/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/07/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	70	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	70	U
53469-21-9	Aroclor-1242	70	U
12672-29-6	Aroclor-1248	70	U
11097-69-1	Aroclor-1254	70	U
11096-82-5	Aroclor-1260	70	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SD25-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix: (soil/water): SOIL Lab Sample ID: 960969A-02

Sample wt/vol: 30 (g/ml) G Lab File ID: B1005CLP500

% Moisture: 74 decanted: (Y/N) N Date Received: 05/23/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/29/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/07/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	130	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	130	U
53469-21-9	Aroclor-1242	130	U
12672-29-6	Aroclor-1248	130	U
11097-69-1	Aroclor-1254	46.	J
11096-82-5	Aroclor-1260	130	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SD36-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix: (soil/water): SOIL Lab Sample ID: 960969A-03

Sample wt/vol: 30 (g/ml) G Lab File ID: B1005CLP501

% Moisture: 63 decanted: (Y/N) N Date Received: 05/23/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/29/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/07/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	89	U
11104-28-2	Aroclor-1221	180	U
11141-16-5	Aroclor-1232	89	U
53469-21-9	Aroclor-1242	89	U
12672-29-6	Aroclor-1248	89	U
11097-69-1	Aroclor-1254	37.	JP
11096-82-5	Aroclor-1260	89	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SD37-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix: (soil/water): SOIL Lab Sample ID: 960969A-04

Sample wt/vol: 30 (g/ml) G Lab File ID: B1005CLP502

% Moisture: 40 decanted: (Y/N) N Date Received: 05/23/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/29/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/07/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	55	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SD38-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix: (soil/water): SOIL Lab Sample ID: 960969A-05

Sample wt/vol: 30 (g/ml) G Lab File ID: B1005CLP503

% Moisture: 68 decanted: (Y/N) N Date Received: 05/23/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/29/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/07/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	30.	JP
11097-69-1	Aroclor-1254	99.	JP
11096-82-5	Aroclor-1260	100	P

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

GC Column(1): RTX-35 ID: 0.53 (mm) GC Column(2): DB-1701 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK92	102	86	119	95			0
02	APD-SD24-01	92	81	110	81			0
03	APD-SD25-01	93	94	128	105			0
04	APD-SD36-01	84	75	196*	87			1
05	APD-SD37-01	79	93	346*	100			1
06	APD-SD38-01	105	112	217*	126			1
07	APD-SD38-01MS	87	90	182*	106			1
08	APD-SD38-01MSD	85	94	412*	100			1
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM II PEST-1

3/90

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix Spike - EPA Sample No.: APD-SD38-01

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aroclor-1260	1000	100	880	68	10-177

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Aroclor-1260	1000	850	72	6	50	10-177

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK92

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Lab sample ID: 052996-B11 Lab File ID: B1005CLP498

Matrix: (soil/water) SOIL Extraction: (SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 05/29/96

Date Analyzed (1): 06/07/96 Date Analyzed (2): 06/12/96

Time Analyzed (1): 1931 Time Analyzed (2): 0147

Instrument ID (1): HP58901B Instrument ID (2): HP58905B

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	APD-SD24-01	960969A-01	06/07/96	06/12/96
02	APD-SD25-01	960969A-02	06/07/96	06/12/96
03	APD-SD36-01	960969A-03	06/07/96	06/12/96
04	APD-SD37-01	960969A-04	06/07/96	06/12/96
05	APD-SD38-01	960969A-05	06/07/96	06/12/96
06	APD-SD38-01MS	960969A-05MS	06/07/96	06/12/96
07	APD-SD38-01MSD	960969A-05MSD	06/07/96	06/12/96

COMMENTS: _____

FORM IV PEST

3/90

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PBLK92

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0969A SAS No.: _____ SDG No.: A0969

Matrix: (soil/water): SOIL Lab Sample ID: 052996-B11

Sample wt/vol: 30 (g/ml) G Lab File ID: B1005CLP498

% Moisture: 0 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/29/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/07/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

Soil

TABLE GC-1.0
7096-0969A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	APD-SD24-01	APD-SD25-01	Quant. Limits with no Dilution
Lab Sample I.D.	052996-B11	960969A-01	960969A-02	
Method Blank I.D.	PBLK92	PBLK92	PBLK92	
Dilution Factor	1.00	2.13	3.85	
Aroclor-1016	U	U	U	33
Aroclor-1221	U	U	U	67
Aroclor-1232	U	U	U	33
Aroclor-1242	U	U	U	33
Aroclor-1248	U	U	U	33
Aroclor-1254	U	U	46 J	33
Aroclor-1260	U	U	U	33
Date Received		05/23/96	05/23/96	
Date Extracted	05/29/96	05/29/96	05/29/96	
Date Analyzed	06/07/96	06/07/96	06/07/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Soil

TABLE GC-1.1
7096-0969A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/Kg dry weight basis.

Client Sample I.D.	APD-SD36-01	APD-SD37-01	APD-SD38-01	Quant. Limits with no Dilution
Lab Sample I.D.	960969A-03	960969A-04	960969A-05	
Method Blank I.D.	PBLK92	PBLK92	PBLK92	
Dilution Factor	2.70	1.67	3.12	
Aroclor-1016	U	U	U	33
Aroclor-1221	U	U	U	67
Aroclor-1232	U	U	U	33
Aroclor-1242	U	U	U	33
Aroclor-1248	U	U	30.JP	33
Aroclor-1254	37.JP	U	99.JP	33
Aroclor-1260	U	U	100P	33
Date Received	05/23/96	05/23/96	05/23/96	
Date Extracted	05/29/96	05/29/96	05/29/96	
Date Analyzed	06/07/96	06/07/96	06/07/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Soil

TABLE GC-1.2
7096-0969A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/Kg dry weight basis.

Client Sample I.D.	APD-SD38-01 MS	APD-SD38-01 MSD		Quant. Limits with no Dilution
Lab Sample I.D.	960969A-05MS	960969A-05 MSD		
Method Blank I.D.	PBLK92	PBLK92		
Dilution Factor	3.12	3.12		
Aroclor-1016	U	U		33
Aroclor-1221	U	U		67
Aroclor-1232	U	U		33
Aroclor-1242	U	U		33
Aroclor-1248	29.JP	27.JP		33
Aroclor-1254	190P	210P		33
Aroclor-1260	880X	850X		33
Date Received	05/23/96	05/23/96		
Date Extracted	05/29/96	05/29/96		
Date Analyzed	06/07/96	06/07/96		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

ORGANICS APPENDIX

U - Indicates that the compound was analyzed for but not detected.

J - Indicates that the compound was analyzed for and determined to be present in the sample. The mass spectrum of the compound meets the identification criteria of the method. The concentration listed is an estimated value, which is less than the specified minimum detection limit but is greater than zero.

B - This flag is used when the analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.

N - Indicates that the compound was analyzed for but not requested as an analyte. Value will not be listed on tabular result sheet.

S - Estimated due to surrogate outliers.

X - Matrix spike compound.

(1) - Cannot be separated.

(2) - Decomposes to azobenzene. Measured and calibrated as azobenzene.

A - This flag indicates that a TIC is a suspected aldol condensation product.

E - Indicates that it exceeds calibration curve range.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

C - Confirmed by GC/MS.

T - Compound present in TCLP blank.

P - This flag is used for a pesticide/aroclor target analyte when there is a greater than 25 percent difference for detected concentrations between the two GC columns (see Form X).

STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the IEA-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

IEA-Connecticut
Certification Summary (as of February 1996)

State	Department/Agency	Certification	Lab Number
California	Department of Health Services	Hazardous Waste	1778
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Kansas	Department of Health and Environmental Services	Drinking Water, Wastewater/Solid, Hazardous Waste	E-210/E-1185
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	252891
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/ Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater	388
North Dakota	Department of Health and Consolidated Laboratories	Non-Potable/Potable Hazardous Waste	R-138
Rhode Island	Department of Health	Chemistry...Non-Potable Water and Wastewater	A43
Washington	Department of Ecology	Wastewater/ Hazardous Waste	C231

7096-0969A
IEA/NC
SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
APD-SD24-01	960969A-01	SOIL	05/22/96	05/23/96
APD-SD25-01	960969A-02	SOIL	05/22/96	05/23/96
APD-SD36-01	960969A-03	SOIL	05/22/96	05/23/96
APD-SD37-01	960969A-04	SOIL	05/22/96	05/23/96
APD-SD38-01	960969A-05	SOIL	05/22/96	05/23/96
APD-SD38-01	960969A-05MS	SOIL	05/22/96	05/23/96
APD-SD38-01	960969A-05MSD	SOIL	05/22/96	05/23/96

IEA-CT ANALYTICAL SUMMARY

Client ID: APD-SD24-01, APD-SD25-01, APD-SD36-01, APD-SD37-01, APD-SD38-01, APD-SD38-01, APD-SD38-01
Job Number: 7096-0969A

Qty	Matrix	Analysis	Description	Unit Price	Total Price
1	None	DISK	Diskette Prep.		
7	SOIL	PPC-CLP1.9-TCL	TCL Pesticides/PCB's		

IEA SDG NARRATIVE VOLATILE FRACTION

PROJECT: 1589-160 BATCH: 05477 METHOD: 1/91 SOW

SAMPLES: Sixteen (16) Water Samples

These samples were received at Industrial and Environmental Analysts, Inc. (IEA) on May 22, 1996. Each sample was assigned a 9-character "IEA" lab identification number (lab ID) and an abbreviated client ID for simplicity in forms generation. This package makes reference to these ID's as listed on the IEA Assigned Number Index. In addition the pH for the water samples are listed on this index. All analyses were performed according to the EPA 1/91 SOW and meet the requirements of the IEA Quality Assurance Program. Please see the enclosed data package for your results and Chain of Custody (COC) documentation.

There is an air peak that is common to all of the volatile analyses and a solvent peak that is common to some volatile analyses. These peaks are present at the beginning of the Reconstructed Ion Chromatograms (RIC) and are labeled. These peaks are not searched as Tentatively Identified Compounds (TIC's).

The chromatographic separation of the analytes is performed using a J & W Scientific 75 m X 0.53 mm DB-624 fused silica capillary column with a 3.0 μm film thickness.

The trap used in the purge-and-trap apparatus is a Supelco trap K (VOCARB 3000) consisting of 10 cm of Carbopack B, 6 cm of Carboxen 1000, and 1 cm of Carboxen 1001. This trap meets the criteria in the SOW for contract OLM03.1 for an equivalent trap. Documentation is maintained within the QA department for on-site review.

The "J" flag used on the Form I VOA indicates an estimated concentration between the Contract Required Quantitation Limit (CRQL) and the Method Detection Limit (MDL), not accounting for dilution of the sample prior to analysis. This flag is also used on the Form I VOA-TIC to indicate an estimated amount for all non-target concentrations.

The "N" flag used on the Form I VOA-TIC indicates that there is the presumptive evidence of a compound based on the mass spectral library search and the interpretation of the mass spectral interpretation specialist.

The "E" flag used on the Form I VOA denotes that the concentration for a target compound exceeded the calibration range set in the SOW OLM03.1.

The "Y" flag is used as a qualifier on the Form I VOA-TIC to indicate a siloxane contaminant attributed to trap breakdown.

IEA

SDG NARRATIVE VOLATILE FRACTION

The "M" flag used on the data system report form designates that a manual integration was required to provide an accurate quantification of that analyte. Manual integrations have been initialled and dated by the analyst.

The following nonconformances associated with the analysis of the samples in this case are as follows:

Sample number 13 (client ID APD-SW09-01) was used for the water matrix spike and matrix spike duplicate (MS/MSD). Due to inconsistent recoveries between the original analysis and the MS and MSD Benzene has a relative percent difference above the method set limit. This is caused by inconsistent matrix. In addition the MS and MSD have Benzene at a concentration which exceeds the calibration range. This is designated with the "E" flag.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his designee, as verified by the following signature.

Brian D. Neptune 06/12/96

Brian D. Neptune
Lead Analyst, GC/MS Final Review
IEA, Inc.

IEA SDG NARRATIVE SEMIVOLATILE FRACTION

PROJECT: 1589-160 BATCH: 05477 METHOD: SOW 1/91

Samples: Fifteen (15) Water Samples

The samples were received at Industrial and Environmental Analysts, Inc. (IEA) on 05/22/96. Each sample was assigned a 9-character "IEA" lab identification number (lab ID) and an abbreviated client ID which is referenced on the IEA Assigned Number Index. All analyses are performed in accordance with EPA approved methodologies and meet the requirements of the IEA Quality Assurance Program. Please see the enclosed data package for your results and Chain of Custody documentation.

The chromatographic separation of the analytes was performed using a Restek 30 X 0.32 XTI-5 fused silica capillary column with a 0.5 μm bonded phase film thickness.

The "J" flag used on the Form I SV indicates an estimated concentration between the CRQL and the Method Detection Limit (MDL). This flag also identifies the estimated concentration of the non-target compounds reported on the Form I SV-TIC.

The "N" flag used on the Form I SV-TIC indicates that there is the presumptive evidence of a compound based on the mass spectral library search and the interpretation of the mass spectral interpretation specialist.

The "B" flag used on the Form I SV-TIC indicates that this compound was present in the associated extraction blank.

The "M" flag used on the data system report form designates that a manual integration was required to provide an accurate quantification of that analyte. Manual integrations have been initialed and dated by the analyst.

The "X" flag is used to designate a non-target which can be attributed to laboratory contamination on the Form I SV-TIC.

Instrument data printouts identify the compound 2,2'-oxybis(1-Chloropropane) with CAS number 108-60-21. Alternative nomenclature for this compound is bis(2-Chloroisopropyl)ether which is included on report forms submitted.

Any nonconformances associated with the analysis of the samples in this project are as follows:

Sample SWFB01 required re-extraction due to poor surrogate recovery. The re-extraction was performed outside of the method specified holding time. The re-extract (designated "RE") did not confirm the failing surrogates of the original analysis.

The surrogate Terphenyl-d14 did not recover within contract specified limits in samples SW09, SW09MS, SW09MSD, SW15, SW16, SW18, SW19, SW20, and SW2091. No corrective action was necessary.

I certify that this data package is in compliance with the procedures and methods defined for this project, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data (if applicable) as submitted has been authorized by the laboratory manager or his designee, as verified by the following signature.

06/27/96

David F. Morse
GC/MS SV Lead Analyst
IEA, Inc.

IEA
An Aquarion Company

200 Monroe Turnpike
Monroe, Connecticut 06468

Phone 203-261-4458
Fax 203-268-5346

7096-0961A
IEA/NC

SDG Narrative

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using USEPA CLP Protocols, OLM01.9. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni^{63}).

All samples were extracted and concentrated at IEA/NC; the samples were cleaned up using florisil.

Surrogate percent recoveries for samples APD-SW11-01, APD-SW12-01, APD-SW13-01, APD-SW18-01, APD-SW-15-01, APD-SW09-01, APD-SW09-01 MS, APD-SW09-01 MSD and APD-SW-16-01 were outside advisory QC limits.

Surrogate percent recoveries for samples APD-SW19-01 and APD-SWFB01-01 were above advisory QC limits due to carryover from previous samples on column RTX-35.

Surrogate percent recoveries on column DB-1701 were within advisory QC limits.

I certify that this data package is in compliance with the terms of this contract, both technically and for completeness, for other than the conditions detailed above. Release of this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jeffrey C. Curran
Laboratory Manager

June 21, 1996
Date

IEA
An Aquarion Company

200 Monroe Turnpike
Monroe, Connecticut 06468

Phone 203-261-4458
Fax 203-268-5346

June 20, 1996

Mr. Bill Scott
IEA/NC
3000 Weston Parkway
Cary, NC 27513

Dear Mr. Scott:

Please find enclosed the analytical results of 15 samples received at our laboratory on May 22, 1996. This report contains sections addressing the following information at a minimum:

- sample summary
- analytical methodology
- state certifications
- definitions of data qualifiers and terminology
- analytical results
- chain-of-custody

IEA Report #7096-0961A	Project ID: 1589-160D

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,

Jeffrey C. Curran

Jeffrey C. Curran
Laboratory Manager

JCC/ab

7096-0961A
IEA/NC
PROJECT SUMMARY

The samples were analyzed for the parameters listed in the Analytical Summary Table.

METHODOLOGY/DISCUSSION

Polychlorinated Biphenyls (PCB's) - PCB samples were extracted and analyzed by GC/ECD using USEPA CLP Protocols, OLM01.9. The instrumentation used was a Hewlett-Packard Gas Chromatograph equipped with an Electron Capture Detector (Ni^{63}).

All samples were extracted and concentrated at IEA/NC; the samples were cleaned up using florisil.

Surrogate percent recoveries for samples APD-SW11-01, APD-SW12-01, APD-SW13-01, APD-SW18-01, APD-SW-15-01, APD-SW09-01, APD-SW09-01 MS, APD-SW09-01 MSD and APD-SW-16-01 were outside advisory QC limits.

Surrogate percent recoveries for samples APD-SW19-01 and APD-SWFB01-01 were above advisory QC limits due to carryover from previous samples on column RTX-35.

Surrogate percent recoveries on column DB-1701 were within advisory QC limits.

RESULTS

The results are presented in the following Tables. Also enclosed is the data package containing all relevant data.

MONTGOMERY WATSON

CHAIN OF CUSTODY RECORD

SPECIAL INSTRUCTIONS:
- ☐ PECFA
- ☐ WI LUST
- ☐ ACT 307
- ☐ REPORT DRY WT
- ☐ OTHER:

TURNAROUND
- ☐ 2 WEEKS (standard)
- ☐ 1 WEEK
- ☐ 3 DAYS
- ☐ 1 DAY

PROJECT NAME: ACS

PROJECT #: 4077.0090

CITY: Griffith

STATE: IN

SAMPLER(S): [illegible]

COLLECTION DATE	COLLECTION TIME	GRAB / COMP	SAMPLE ID	NO. OF CONTAINERS	VOCS								REMARKS	LAB USE ONLY MATRIX	LAB USE ONLY LAB NO.
5-21-96	15:35		APD-SW15-01	2	X								9-32077, 78		
5-21-96	15:45		APD-SW09-01	6	X								9-32206, 01, 9-32209, 10, 11, 12		
5-21-96	17:45		APD-EB SWFB01-01	2	X								9-32100, 01		
5-21-96	17:05		APD-SW16-01	2	X								9-32263, 65		
			APD-SWTB01-01	2	X								9-29849, 50		

SPECIAL INSTRUCTIONS:

SEAL #s 9200206
9200207

TAMPER EVIDENT SEAL INTACT? ___YES ___NO ___NOT PRESENT

SEAL NO.: ___

SAMPLES RECEIVED ON ICE? ✓ YES ___NO TEMP: 4 °C

PROJ. MGR.: Peter Nagy

1589-1601

	SIGNATURE	DATE	TIME		SIGNATURE	DATE	TIME
RELINQUISHED BY:	[illegible]	5-21-96	1900	RECEIVED BY:			
RELINQUISHED BY:	[illegible] 5-21-96	~~5-21-96~~	~~1400~~	RECEIVED BY:			
RELINQUISHED BY:				RECEIVED BY:			
RELINQUISHED BY				RECEIVED FOR LABORATORY BY:	[illegible]	5/22/96	0911

C-O-C No. 013793

NAME OF COURIER: ___

AIRBILL NUMBER: ___

MONTGOMERY WATSON

CHAIN OF CUSTODY RECORD

SPECIAL INSTRUCTIONS:
- [ ] PECFA
- [ ] WI LUST
- [ ] ACT 307
- [ ] REPORT DRY WT
- [ ] OTHER:

TURNAROUND
- [ ] 2 WEEKS (standard)
- [ ] 1 WEEK
- [ ] 3 DAYS
- [ ] 1 DAY

PROJECT NAME: ACS

PROJECT #: 4077.0090

CITY: Griffith

STATE: Indiana

SAMPLER(S): [signature] Arnelle Capulong, Nicole O. Rowe

COLLECTION DATE	COLLECTION TIME	GRAB / COMP	SAMPLE ID	NO. OF CONTAINERS	VOCs							REMARKS	LAB USE ONLY MATRIX	LAB USE ONLY LAB NO.
5-21-96	0900		APD-SW11-01	2	X							9-32219, 18		
5-21-96	0845		APD-SW12-01	2	X							9-32245, 46		
5-21-96	0900		APD-SW13-01	2	X							9-32227, 28		
5-21-96	10:25		APD-SW18-01	2	X							9-32281, 82		
5-21-96	10:30		APD-SW19-01	2	X							9-32290, 91		
5-21-96	1200		APD-SW17-01	2	X							9-32272, 73		
5-21-96	14:45		APD-SW20-01	2	X							7-03053, 54		
5-21-96	14:45		APD-SW20-91	2	X							9-32090, 91		
5-21-96	14:30		APD-SW10-01	2	X							9-32209, 10		
5-21-96	16:30		APD-SW14-01	2	X							9-32236, 37		
5-21-96	15:35		APD-SW15-01	2	X							9-32254, 55		

SPECIAL INSTRUCTIONS:
COC SEALPIPS 9200206
9200207

TAMPER EVIDENT SEAL INTACT? ___YES ___NO ___NOT PRESENT

SEAL NO.: _____

SAMPLES RECEIVED ON ICE? ✓ YES ___NO TEMP: 4 °C

PROJ. MGR.: Pete Vagt

1589-1601

SIGNATURE	DATE	TIME	SIGNATURE	DATE	TIME
RELINQUISHED BY: [signature]	1900	5-21-96	RECEIVED BY:		
RELINQUISHED BY			RECEIVED BY:		
RELINQUISHED BY:			RECEIVED BY:		
RELINQUISHED BY			RECEIVED FOR LABORATORY BY: [signature]	5/22/96	0941

C-O-C No. 013734

NAME OF COURIER: _____

AIRBILL NUMBER: _____

MONTGOMERY WATSON

CHAIN OF CUSTODY RECORD

SPECIAL INSTRUCTIONS:
- [ ] PECFA
- [ ] WI LUST
- [ ] ACT 307
- [ ] REPORT DRY WT
- [ ] OTHER:

TURNAROUND
- [ ] 2 WEEKS (standard)
- [ ] 1 WEEK
- [ ] 3 DAYS
- [ ] 1 DAY

PROJECT NAME: ACS

PROJECT #: 4077.0090

CITY: Griffith

STATE: IN

SAMPLER(S): [signature] [signature] [signature] Michael C. [signature]

COLLECTION DATE	COLLECTION TIME	GRAB / COMP	SAMPLE ID	NO. OF CONTAINERS	SVOCs	PCBs							REMARKS	LAB USE ONLY MATRIX	LAB USE ONLY LAB NO.
5-21-96	15:35		APD-SW15-91	4	x	x							9-32079,80,81,82		
5-21-96	15:45		APD-SW09-01	8	x	x							9-32202,03,04,05 9-32213,14,15,16		
5-21-96	17:45		APD-SWFB01-01	4	x	x							9-32102,03,04,05		
5-21-96	17:05		APD-SW16-01	4	x	x							9-32266,67,68,67		

SPECIAL INSTRUCTIONS:

Seal #s - 92 00210, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21

TAMPER EVIDENT SEAL INTACT? ___YES ___NO ___NOT PRESENT

SEAL NO.: _____

SAMPLES RECEIVED ON ICE? ___YES ___NO TEMP: 4 °C

PROJ. MGR.: PEEVAST

1589-1601

	SIGNATURE	DATE	TIME		SIGNATURE	DATE	TIME
RELINQUISHED BY:	[signature]	5-21-96	1900	RECEIVED BY:	[signature]	5/22/96	0945
RELINQUISHED BY				RECEIVED BY:			
RELINQUISHED BY:				RECEIVED BY:			
RELINQUISHED BY				RECEIVED FOR LABORATORY BY:			

C-O-C No. 013604

NAME OF COURIER: FED EX

AIRBILL NUMBER: 3692437033

MONTGOMERY WATSON

CHAIN OF CUSTODY RECORD

SPECIAL INSTRUCTIONS:
- [ ] PECFA
- [ ] WI LUST
- [ ] ACT 307
- [ ] REPORT DRY WT
- [ ] OTHER:

TURNAROUND
- [ ] 2 WEEKS (standard)
- [ ] 1 WEEK
- [ ] 3 DAYS
- [ ] 1 DAY

PROJECT NAME: ACS

PROJECT #: 4077.0090

CITY: GRIFFITH

STATE: INDIANA

SAMPLER(S): [signature] Michael O. Rowe

COLLECTION DATE	COLLECTION TIME	GRAB / COMP	SAMPLE ID	NO. OF CONTAINERS	SVOCs	PCBs							REMARKS	LAB USE ONLY MATRIX	LAB USE ONLY LAB NO.
5-21-96	0900	X	APD-SW11-01	4	X	X							9-32220, 21, 22, 23		
5-21-96	0845	X	APD-SW12-01	4	X	X							9-32247, 48, 49, 50		
5-21-96	0900	X	APD-SW13-01	4	X	X							9-32229, 30, 31, 32		
5-21-96	10:25	X	APD-SW18-01	4	X	X							9-32283, 84, 85, 86		
5-21-96	10:30	X	APD-SW19-01	4	X	X							9-32292, 93, 94, 95		
5-21-96	12:00	X	APD-SW17-01	4	X	X							9-32274, 75, 76, 77		
5-21-96	14:45	X	APD-SW20-01	4	X	X							703055, 56, 57, 58		
5-21-96	14:45	X	APD-SW20-91	4	X	X							9-32092, 93, 94, 95		
5-21-96	14:30		APD-SW10-01	4	X	X							9-32211, 12, 13, 14		
5-21-96	16:30		APD-SW14-01	4	X	X		1 liter	broken				9-32238, 39, 40, 41		
5-21-96	15:35		APD-SW15-01	4	X	X		1 liter	broken				9-32256, 57, 58, 59		

SPECIAL INSTRUCTIONS:

SEAL #S- 9200210, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21

TAMPER EVIDENT SEAL INTACT? ___YES ___NO ___NOT PRESENT

SEAL NO.: _____

SAMPLES RECEIVED ON ICE? ___YES ___NO TEMP: 4 °C

PROJ. MGR.: Pete Vast

1584-1601

	SIGNATURE	DATE	TIME		SIGNATURE	DATE	TIME
RELINQUISHED BY:	[signature]	5/21/96	1900	RECEIVED BY:	[signature]	5/22/96	0941
RELINQUISHED BY				RECEIVED BY:			
RELINQUISHED BY:				RECEIVED BY:			
RELINQUISHED BY				RECEIVED FOR LABORATORY BY:			

C-O-C No. 013788

NAME OF COURIER: FED EX

AIRBILL NUMBER: 3692437033

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW11-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547701

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529503.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	2	J
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW11-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547701

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529503.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000128-37-0	BUTYLATED HYDROXYTOLUENE	26.89	- 38	JNY

FORM I VOA-TIC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW12-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547702

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529504.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW12-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547702

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529504.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW13-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547703

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529505.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	11	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW13-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547703

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529505.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW18-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547704

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529506.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/l	Q
74-87-3	Chloromethane	-	10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		10	
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	Trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-88-3	Toluene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW18-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547704

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529506.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW19-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547705

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529507.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW19-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547705

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529507.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW17-01

Lab Name: IEA-NC Method: SCW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547706

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529508.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/l	Q
74-87-3	Chloromethane	-	10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		10	U
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	Trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-88-3	Toluene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW17-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547706

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529508.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW20-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547707

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529509.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW20-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547707

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529509.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW20-91

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547708

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529510.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW20-91

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547708

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529510.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW10-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547809

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529511.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	49	
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	54	
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW10-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547809

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529511.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
			-	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW14-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547810

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529512.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW14-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547810

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529512.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW15-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547811

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529513.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	81	
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	150	
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW15-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547811

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529513.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW15-91

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547812

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529514.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	72	
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	150	
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW15-91

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547812

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529514.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW09-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E03.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl Chloride	100	U
75-00-3	Chloroethane	440	
75-09-2	Methylene Chloride	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-35-4	1,1-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
540-59-0	1,2-Dichloroethene (total)	100	U
67-66-3	Chloroform	100	U
107-06-2	1,2-Dichloroethane	100	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
75-27-4	Bromodichloromethane	100	U
78-87-5	1,2-Dichloropropane	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	100	U
124-48-1	Dibromochloromethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
71-43-2	Benzene	1800	
10061-02-6	Trans-1,3-Dichloropropene	100	U
75-25-2	Bromoform	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	100	U
108-88-3	Toluene	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U
100-42-5	Styrene	100	U
1330-20-7	Xylene (total)	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW09-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E03.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000128-37-0	BUTYLATED HYDROXYTOLUENE	26.86	180	JNY

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SWFB01-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E06.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/30/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SWFB01-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E06.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/30/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW16-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547815

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529517.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	13	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SW16-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547815

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529517.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	UNKNOWN HYDROCARBON	24.39	5	J

FORM I VOA-TIC

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SWTB01-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547816

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E07.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/30/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/l	Q
74-87-3	Chloromethane	-	10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		10	U
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	Trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-88-3	Toluene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

APD-SWTB01-01

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547816

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E07.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/30/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLK51

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: VBLK51

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E02.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/l	Q
74-87-3	Chloromethane	-	10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		10	U
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	Trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-88-3	Toluene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLK51

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: VBLK51

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E02.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000128-37-0	BUTYLATED HYDROXYTOLUENE	26.86	- 21	JNY

FORM I VOA-TIC

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

VBLK5Z

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: VBLK5Z

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529502.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/l	Q
74-87-3	Chloromethane	-	10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		10	U
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	Trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-88-3	Toluene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

VBLK5Z

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: VBLK5Z

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529502.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW09-01MS

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813MS

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E04.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53(mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/l	Q
74-87-3	Chloromethane	-	100	U
74-83-9	Bromomethane		100	U
75-01-4	Vinyl Chloride		100	U
75-00-3	Chloroethane		300	
75-09-2	Methylene Chloride		100	U
67-64-1	Acetone		100	U
75-15-0	Carbon Disulfide		100	U
75-35-4	1,1-Dichloroethene		610	
75-34-3	1,1-Dichloroethane		100	U
540-59-0	1,2-Dichloroethene (total)		100	U
67-66-3	Chloroform		100	U
107-06-2	1,2-Dichloroethane		100	U
78-93-3	2-Butanone		100	U
71-55-6	1,1.1-Trichloroethane		100	U
56-23-5	Carbon Tetrachloride		100	U
75-27-4	Bromodichloromethane		100	U
78-87-5	1,2-Dichloropropane		100	U
10061-01-5	cis-1,3-Dichloropropene		100	U
79-01-6	Trichloroethene		500	
124-48-1	Dibromochloromethane		100	U
79-00-5	1,1,2-Trichloroethane		100	U
71-43-2	Benzene		2300	E
10061-02-6	Trans-1,3-Dichloropropene		100	U
75-25-2	Bromoform		100	U
108-10-1	4-Methyl-2-Pentanone		100	U
591-78-6	2-Hexanone		100	U
127-18-4	Tetrachloroethene		100	U
108-88-3	Toluene		510	
79-34-5	1,1,2,2-Tetrachloroethane		100	U
108-90-7	Chlorobenzene		500	
100-41-4	Ethylbenzene		100	U
100-42-5	Styrene		100	U
1330-20-7	Xylene (total)		100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

APD-SW09-01MSD

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813MSD

Sample wt/vol: 5 (g/mL) ml Lab File ID: 0529E05.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: not dec. Date Analyzed: 05/29/96

GC Column: DB-624 ID: .53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl Chloride	100	U
75-00-3	Chloroethane	270	
75-09-2	Methylene Chloride	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-35-4	1,1-Dichloroethene	590	
75-34-3	1,1-Dichloroethane	100	U
540-59-0	1,2-Dichloroethene (total)	100	U
67-66-3	Chloroform	100	U
107-06-2	1,2-Dichloroethane	100	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
75-27-4	Bromodichloromethane	100	U
78-87-5	1,2-Dichloropropane	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	470	
124-48-1	Dibromochloromethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
71-43-2	Benzene	2200	E
10061-02-6	Trans-1,3-Dichloropropene	100	U
75-25-2	Bromoform	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	100	U
108-88-3	Toluene	510	
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-90-7	Chlorobenzene	490	
100-41-4	Ethylbenzene	100	U
100-42-5	Styrene	100	U
1330-20-7	Xylene (total)	100	U

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

	CLIENT SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK5Z	99	98	99		0
02	APD-SW11-01	97	97	97		0
03	APD-SW12-01	100	99	102		0
04	APD-SW13-01	98	99	102		0
05	APD-SW18-01	98	94	102		0
06	APD-SW19-01	98	98	103		0
07	APD-SW17-01	103	101	104		0
08	APD-SW20-01	100	95	102		0
09	APD-SW20-91	98	97	102		0
10	APD-SW10-01	98	96	102		0
11	APD-SW14-01	97	92	103		0
12	APD-SW15-01	94	101	104		0
13	APD-SW15-91	98	98	104		0
14	APD-SW16-01	95	99	102		0
15	VBLK51	101	94	101		0
16	APD-SW09-01	100	95	104		0
17	APD-SW09-01MS	99	95	106		0
18	APD-SW09-01MSD	101	97	106		0
19	APD-SWFB01-01	101	95	108		0
20	APD-SWTB01-01	100	95	105		0
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of QC limits.

D System Monitoring Compound diluted out

FORM II VOA-1

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix Spike - Client Sample No.: APD-SW09-01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	500	0	610	122	61-145
Trichloroethene	500	0	500	100	71-120
Benzene	500	1800	2300	100	76-127
Toluene	500	0	510	102	76-125
Chlorobenzene	500	0	500	100	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	500	590	118	3	14	61-145
Trichloroethene	500	470	94	6	14	71-120
Benzene	500	2200	80	22*	11	76-127
Toluene	500	510	102	0	13	76-125
Chlorobenzene	500	490	98	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits.

D Spike compound diluted out.

RPD: 1 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

4A
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLK51

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID: 0529E02.D Lab Sample ID: VBLK51

Date Analyzed: 05/29/96 Time Analyzed: 21:46

GC Column: DB-624 ID: .53(mm) Heated Purge: (Y/N) N

Instrument ID: MSD5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	APD-SW09-01	960547813	0529E03.D	22:32
02	APD-SW09-01MS	960547813MS	0529E04.D	23:09
03	APD-SW09-01MSD	960547813MSD	0529E05.D	23:45
04	APD-SWFB01-01	960547814	0529E06.D	00:22
05	APD-SWTB01-01	960547816	0529E07.D	00:59
06				
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COMMENTS:

FORM IV VOA

4A
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLK5Z

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID: 0529502.D Lab Sample ID: VBLK5Z

Date Analyzed: 05/29/96 Time Analyzed: 09:30

GC Column: DB-624 ID: .53(mm) Heated Purge: (Y/N) N

Instrument ID: MSD5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	APD-SW11-01	960547701	0529503.D	10:15
02	APD-SW12-01	960547702	0529504.D	10:52
03	APD-SW13-01	960547703	0529505.D	11:29
04	APD-SW18-01	960547704	0529506.D	12:06
05	APD-SW19-01	960547705	0529507.D	12:43
06	APD-SW17-01	960547706	0529508.D	13:20
07	APD-SW20-01	960547707	0529509.D	13:57
08	APD-SW20-91	960547708	0529510.D	14:34
09	APD-SW10-01	960547809	0529511.D	15:11
10	APD-SW14-01	960547810	0529512.D	15:48
11	APD-SW15-01	960547811	0529513.D	16:25
12	APD-SW15-91	960547812	0529514.D	17:02
13	APD-SW16-01	960547815	0529517.D	18:54
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COMMENTS:

FORM IV VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0529501.D Date Analyzed: 05/29/96

Instrument ID: MSD5 Time Analyzed: 08:45

GC Column: DB-624 ID: .53(mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	472928	8.83	1790346	11.04	1521642	17.36
	UPPER LIMIT	945856	9.33	3580692	11.54	3043284	17.86
	LOWER LIMIT	236464	8.33	895173	10.54	760821	16.86
	EPA SAMPLE NO.						
01	VBLK5Z	520901	8.85	2039702	11.05	1748368	17.36
02	APD-SW11-01	540193	8.85	2084306	11.06	1805653	17.39
03	APD-SW12-01	542136	8.81	2083439	11.02	1801135	17.35
04	APD-SW13-01	490552	8.81	1895045	11.02	1634583	17.35
05	APD-SW18-01	513057	8.83	2011607	11.04	1737766	17.38
06	APD-SW19-01	525742	8.82	2052388	11.04	1788160	17.35
07	APD-SW17-01	498739	8.83	1964457	11.06	1630752	17.38
08	APD-SW20-01	484059	8.83	1897404	11.04	1623175	17.39
09	APD-SW20-91	491741	8.83	1895297	11.03	1643780	17.37
10	APD-SW10-01	485427	8.82	1890800	11.03	1607560	17.38
11	APD-SW14-01	461741	8.82	1796890	11.04	1546994	17.36
12	APD-SW15-01	320161	8.82	1493397	11.04	1411413	17.36
13	APD-SW15-91	417300	8.84	1649280	11.05	1406120	17.40
14	APD-SW16-01	426152	8.85	1610528	11.06	1422217	17.37
15							
16							
17							
18							
19							
20							
21							
22							

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: IEA-NC Method: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0529E01.D Date Analyzed: 05/29/96

Instrument ID: MSD5 Time Analyzed: 20:53

GC Column: DB-624 ID: .53(mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	506962	8.84	1902010	11.06	1628040	17.37
	UPPER LIMIT	1013924	9.34	3804020	11.56	3256080	17.87
	LOWER LIMIT	253481	8.34	951005	10.56	814020	16.87
	EPA SAMPLE NO.						
01	VBLK51	509996	8.85	1949379	11.06	1654556	17.35
02	APD-SW09-01	485663	8.83	1845257	11.04	1589997	17.36
03	APD-SW09-01MS	468154	8.82	1818368	11.02	1539476	17.34
04	APD-SW09-01MSD	464976	8.80	1779582	11.01	1506999	17.33
05	APD-SWFB01-01	474467	8.81	1825300	11.01	1555583	17.34
06	APD-SWTB01-01	462657	8.79	1776311	11.01	1490505	17.35
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530407.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	8	J
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	6	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	2	J
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530407.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW09

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530407.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 873949	Cyclohexanone, 3,3,5-trimeth	9.180	78	NJ
2. 112367	Ethane, 1,1'-oxybis[2-ethoxy	9.880	17	NJ
3.	Unknown	10.340	14	J
4.	Unknown	20.300	14	J
5. 57103	Hexadecanoic acid	20.830	29	XNJ
6. 112801	Oleic acid	22.480	42	NJ
7.	Unknown	23.930	21	J
8.	Unknown	24.770	31	J
9.	Unknown	25.700	120	J
10.	Unknown	25.970	160	J
11.	Unknown	26.100	19	J
12.	Unknown	26.540	39	J
13.	Unknown	26.720	120	J
14.	Unknown	26.810	180	
15.	Unknown alkane	26.870	24	J
16.	Unknown	27.190	43	J
17.	Unknown	27.830	27	J
18.	Unknown alkane	28.270	34	J
19.	Unknown alkane	29.590	17	J
20.	Unknown	29.960	18	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW09MS

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813MS

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530410.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	64	
111-44-4	bis(2-Chloroethyl)ether	8	J
95-57-8	2-Chlorophenol	57	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	33	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	6	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	34	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	2	J
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	33	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	56	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	31	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW09MS

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813MS

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530410.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	45	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	38	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	60	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	20	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW09MSD

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813MSD

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530411.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	68	
111-44-4	bis(2-Chloroethyl)ether	7	J
95-57-8	2-Chlorophenol	59	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	35	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	6	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	37	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	1	J
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	34	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	59	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	31	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW09MSD

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547813MSD

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530411.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	40	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	38	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	56	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	17	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW10

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547809

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530403.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	5	J
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	19	
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW10

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547809

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530403.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	6	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW10

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547809

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530403.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.250	9	NJB
2. 873949	Cyclohexanone, 3,3,5-trimeth	9.160	3	NJ
3. 112367	Ethane, 1,1'-oxybis[2-ethoxy	9.870	6	NJ
4.	Sub benzene	16.040	8	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW11

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547701

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529409.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	2	J
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	8	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW11

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547701

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529409.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	5	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW11

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547701

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529409.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 112367	Ethane, 1,1'-oxybis[2-ethoxy	9.930	3	NJ
2.	Sub benzene	16.090	3	J
3. 134623	Diethyltoluamide	16.890	5	NJ
4.	Hexanedioic acid isomer	24.700	16	J
5.	Unknown	24.780	2	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW12

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547702

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530402.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	2	J
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW1591

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547812

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530406.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	6	J
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	8	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW1591

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547812

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530406.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW1591

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547812

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530406.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.250	11	NJB
2. 873949	Cyclohexanone, 3,3,5-trimeth	9.160	4	NJ
3. 112367	Ethane, 1,1'-oxybis[2-ethoxy	9.870	6	NJ
4.	Sub benzene	16.040	10	J
5. 57103	Hexadecanoic acid	20.770	4	NJ
6.	Unknown	22.460	3	J
7.				
8.				
9.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW16

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547815

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530409.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	27	
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW16

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547815

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530409.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW16

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547815

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530409.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 18

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.250	8	NJB
2.	1,2-Cyclohexanediol isomer	9.600	3	J
3. 65850	Benzoic Acid	11.360	4	NJ
4.	Unknown	13.500	2	J
5. 134623	Diethyltoluamide	16.840	15	NJ
6.	Unknown	19.960	2	J
7.	Unknown	20.600	3	J
8. 57103	Hexadecanoic acid	20.770	6	NJ
9.	Unknown	21.890	2	J
10. 112801	Oleic Acid	22.450	20	NJ
11. 57114	Octadecanoic acid	22.630	2	NJ
12.	Unknown	23.760	4	J
13.	Unknown alkane	25.370	6	J
14.	Unknown alkane	26.870	11	J
15.	Unknown aldehyde	27.880	4	J
16.	Unknown alkane	28.260	6	J
17.	Unknown aldehyde	29.240	7	J
18.	Unknown	29.950	4	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547706

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529414.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547706

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529414.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547706

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529414.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.340	11	NJB
2. 134623	Diethyltoluamide	16.900	3	NJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW18

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547704

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529412.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	1	J
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW18

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547704

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529412.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	3	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW18

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547704

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529412.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.350	13	NJB
2.	Unknown	9.730	4	J
3.	Unknown	9.850	7	J
4. 134623	Diethyltoluamide	16.890	11	NJ
5. 544638	Tetradecanoic acid	18.780	2	NJ
6.	Unknown	20.660	3	J
7. 57103	Hexadecanoic acid	20.840	7	NJ
8.	Unknown	22.550	6	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW19

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547705

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529413.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW19

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547705

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529413.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW19

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547705

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529413.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 11

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.330	12	NJB
2.	Unknown	13.400	4	J
3. 134623	Diethyltoluamide	16.900	34	NJ
4.	Unknown	18.320	4	J
5. 544638	Tetradecanoic acid	18.790	2	NJ
6. 112390	Hexadecanoic acid, methyl es	20.450	3	NJ
7.	Unknown	20.650	2	J
8. 57103	Hexadecanoic acid	20.830	10	NJ
9.	Unknown	22.240	4	J
10.	Unknown	22.550	6	J
11.	Unknown	24.090	3	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW20

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547707

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529415.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW20

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547707

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529415.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW20

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547707

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529415.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.330	9	NJB
2. 57103	Hexadecanoic acid	20.820	3	NJ
3. 314409	Bromacil	21.040	4	NJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW2091

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547708

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529416.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW2091

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547708

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529416.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW2091

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547708

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529416.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 314409	Bromacil	21.040	5	NJ
2.	Unknown	34.460	3	J
3.	Unknown	35.870	9	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SWFB01

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530408.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW12

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547702

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530402.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW12

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547702

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530402.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	8.110	3	J
2. 112367	Ethane, 1,1'-oxybis[2-ethoxy	9.870	4	NJ
3.	Sub benzene	16.030	2	J
4. 134623	Diethyltoluamide	16.840	9	NJ
5.	Unknown	19.370	2	J
6. 57103	Hexadecanoic acid	20.760	2	NJ
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW13

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547703

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529411.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW13

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547703

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529411.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	8	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW13

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547703

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529411.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 11

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 503742	Butanoic acid, 3-methyl-	5.960	15	NJ
2. 116530	Butanoic acid, 2-methyl-	6.100	3	NJ
3. 108930	Cyclohexanol	6.340	16	NJB
4.	Unknown	12.640	3	J
5.	Unknown	15.650	2	J
6. 134623	Diethyltoluamide	16.910	12	NJ
7.	Unknown	20.660	4	J
8. 57103	Hexadecanoic acid	20.820	3	NJ
9.	Unknown	22.530	3	J
10.	Unknown	24.880	2	J
11.	Unknown	28.610	3	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW14

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547810

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530404.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW14

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547810

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530404.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW15

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547811

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530405.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SW15

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547811

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530405.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	5	J
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	7	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW14

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547810

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530404.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 11

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108930	Cyclohexanol	6.250	6	NJB
2.	1,2-Cyclohexanediol isomer	9.590	2	J
3. 134623	Diethyltoluamide	16.820	5	NJ
4.	Unknown	20.590	4	J
5. 57103	Hexadecanoic acid	20.770	4	NJ
6.	Unknown	21.900	2	J
7.	Unknown	22.470	6	J
8.	Unknown alkane	26.860	6	J
9.	Unknown alkane	27.560	3	J
10.	Unknown aldehyde	27.880	2	J
11.	Unknown alkane	28.250	9	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SW15

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547811

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530405.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 8

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 873949	Cyclohexanone, 3,3,5-trimeth	9.160	4	NJ
2. 112367	Ethane, 1,1'-oxybis[2-ethoxy	9.870	6	NJ
3.	Sub benzene	16.040	10	J
4. 544638	Tetradecanoic acid	18.720	2	NJ
5. 57103	Hexadecanoic acid	20.760	5	NJ
6.	Unknown	22.450	2	J
7.	Unknown	24.710	4	J
8.	Unknown	25.880	2	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SWFB01

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530408.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SWFB01

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0530408.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/30/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 80057	Phenol, 4,4'-(1-methylethyli	22.970	3	NJ
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SWFB01RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814RE

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0610H04.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/05/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SWFB01RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814RE

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0610H04.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/05/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SWFB01RE

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: 960547814RE

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0610H04.D

Level: (low/med) LOW Date Received: 05/22/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/05/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	14.140	2	J
2.	Unknown	16.150	5	J
3. 80057	Phenol, 4,4'-(1-methylethyli	24.600	15	NJ
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2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 (FPB)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	SBLK03	85	83	86	74	77	89	79	70	0
02	SW11	78	81	37	75	74	89	79	73	0
03	SW13	81	82	37	72	77	96	82	75	0
04	SW18	80	74	28*	25	72	89	78	71	1
05	SW19	84	82	27*	14	74	93	79	80	1
06	SW17	84	83	40	75	75	91	81	75	0
07	SW20	84	84	30*	49	63	67	71	78	1
08	SW2091	83	82	31*	53	61	64	68	74	1
09	SW12	89	88	38	38	81	99	88	80	0
10	SW10	82	79	33	75	74	89	80	72	0
11	SW14	83	83	38	82	76	92	82	76	0
12	SW15	73	71	32*	54	66	83	72	62	1
13	SW1591	83	83	35	74	77	93	83	75	0
14	SW09	81	44	22*	76	75	69	83	70	1
15	SWFB01	24*	24*	21*	16	20*	26	23*	21	5
16	SW16	82	74	29*	85	78	92	85	74	1
17	SW09MS	78	66	28*	77	73	88	79	70	1
18	SW09MSD	82	64	24*	82	74	82	81	71	1
19	SBLK17	91	81	72	82	77	78	83	84	0
20	SWFB01RE	91	80	68	84	78	76	84	87	0
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22										
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FPB)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-110)	
S5 (2FP)	= 2-Fluorophenol	(21-110)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix Spike - CLIENT Sample No.: SW09

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol	75	0	64	85	12-110
2-Chlorophenol	75	0	57	76	27-123
1,4-Dichlorobenzene	50	0	33	66	36- 97
N-Nitroso-di-n-prop.(1)	50	0	34	68	41-116
1,2,4-Trichlorobenzene	50	0	33	66	39- 98
4-Chloro-3-methylphenol	75	0	56	75	23- 97
Acenaphthene	50	0	31	62	46-118
4-Nitrophenol	75	0	45	60	10- 80
2,4-Dinitrotoluene	50	0	38	76	24- 96
Pentachlorophenol	75	0	60	80	9-103
Pyrene	50	0	20	40	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75	68	91	7	42	12-110
2-Chlorophenol	75	59	79	4	40	27-123
1,4-Dichlorobenzene	50	35	70	6	28	36- 97
N-Nitroso-di-n-prop.(1)	50	37	74	8	38	41-116
1,2,4-Trichlorobenzene	50	34	68	3	28	39- 98
4-Chloro-3-methylphenol	75	59	79	5	42	23- 97
Acenaphthene	50	31	62	0	31	46-118
4-Nitrophenol	75	40	53	12	50	10- 80
2,4-Dinitrotoluene	50	38	76	0	38	24- 96
Pentachlorophenol	75	56	75	6	50	9-103
Pyrene	50	17	34	16	31	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS: _____

4B
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

SBLK03

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID: 0529402.D Lab Sample ID: SBLK03

Instrument ID: MSD4 Date Extracted: 05/23/96

Matrix: (soil/water) WATER Date Analyzed: 05/29/96

Level:(low/med) LOW Time Analyzed: 1855

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SW11	960547701	0529409.D	05/29/96
02	SW13	960547703	0529411.D	05/30/96
03	SW18	960547704	0529412.D	05/30/96
04	SW19	960547705	0529413.D	05/30/96
05	SW17	960547706	0529414.D	05/30/96
06	SW20	960547707	0529415.D	05/30/96
07	SW2091	960547708	0529416.D	05/30/96
08	SW12	960547702	0530402.D	05/30/96
09	SW10	960547809	0530403.D	05/30/96
10	SW14	960547810	0530404.D	05/30/96
11	SW15	960547811	0530405.D	05/30/96
12	SW1591	960547812	0530406.D	05/30/96
13	SW09	960547813	0530407.D	05/30/96
14	SWFB01	960547814	0530408.D	05/30/96
15	SW16	960547815	0530409.D	05/30/96
16	SW09MS	960547813MS	0530410.D	05/30/96
17	SW09MSD	960547813MSD	0530411.D	05/30/96
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COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK03

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: SBLK03

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529402.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK03

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: SBLK03

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0529402.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 05/23/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 05/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

4B
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

SBLK17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID: 0610H02.D Lab Sample ID: SBLK17

Instrument ID: MSD8 Date Extracted: 06/05/96

Matrix: (soil/water) WATER Date Analyzed: 06/10/96

Level:(low/med) LOW Time Analyzed: 1948

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SWFB01RE	960547814RE	0610H04.D	06/10/96
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COMMENTS:

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: SBLK17

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0610H02.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/05/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: SBLK17

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0610H02.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 06/05/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLK17

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Matrix: (soil/water) WATER Lab Sample ID: SBLK17

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 0610H02.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:06/05/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 06/10/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:_____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0529401.D Date Analyzed: 05/29/96

Instrument ID: MSD4 Time Analyzed: 1734

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	529864	8.76	2122482	11.64	1320056	15.80
	UPPER LIMIT	1059728	9.26	4244964	12.14	2640112	16.30
	LOWER LIMIT	264932	8.26	1061241	11.14	660028	15.30
	CLIENT SAMPLE No.						
01	SBLK03	501223	8.74	1918401	11.61	1148794	15.76
02	SW11	499373	8.72	1979933	11.59	1152740	15.75
03	SW13	526307	8.72	2101229	11.60	1199159	15.75
04	SW18	551871	8.72	2199115	11.59	1290853	15.75
05	SW19	490097	8.72	1971196	11.59	1169371	15.75
06	SW17	532086	8.72	2131594	11.60	1270933	15.75
07	SW20	533765	8.72	2146876	11.59	1276797	15.74
08	SW2091	518809	8.72	2098232	11.59	1228114	15.74
09							
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21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0530401.D Date Analyzed: 05/30/96

Instrument ID: MSD4 Time Analyzed: 1203

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	447131	8.67	1797701	11.56	1173487	15.72
	UPPER LIMIT	894262	9.17	3595402	12.06	2346974	16.22
	LOWER LIMIT	223566	8.17	898850	11.06	586744	15.22
	CLIENT SAMPLE No.						
01	SW12	446677	8.65	1819321	11.53	1105612	15.68
02	SW10	406692	8.65	1693710	11.53	1077057	15.68
03	SW14	414372	8.65	1730520	11.53	1050474	15.67
04	SW15	402462	8.65	1634276	11.53	1013949	15.68
05	SW1591	411646	8.65	1697767	11.52	1048183	15.67
06	SW09	427989	8.65	1767829	11.52	1066591	15.68
07	SWFB01	381634	8.65	1575686	11.53	1030169	15.68
08	SW16	405848	8.66	1722742	11.53	1077486	15.68
09	SW09MS	425407	8.65	1736834	11.53	1035615	15.69
10	SW09MSD	431679	8.65	1736444	11.53	1083032	15.69
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0610H01.D Date Analyzed: 06/10/96

Instrument ID: MSD8 Time Analyzed: 1836

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	414904	9.25	1993744	12.36	1452964	16.84
UPPER LIMIT	829808	9.75	3987488	12.86	2905928	17.34
LOWER LIMIT	207452	8.75	996872	11.86	726482	16.34
CLIENT SAMPLE No.						
01 SBLK17	333487	9.26	1573492	12.36	1193441	16.85
02 SWFB01RE	345151	9.26	1683966	12.35	1268765	16.84
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0529401.D Date Analyzed: 05/29/96

Instrument ID: MSD4 Time Analyzed: 1734

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2501492	19.27	1707349	25.61	1836579	28.77
	UPPER LIMIT	5002984	19.77	3414698	26.11	3673158	29.27
	LOWER LIMIT	1250746	18.77	853674	25.11	918290	28.27
	CLIENT SAMPLE No.						
01	SBLK03	2270446	19.23	1699622	25.55	1835167	28.72
02	SW11	2097484	19.21	1484584	25.54	1448252	28.70
03	SW13	2237762	19.21	1496584	25.54	1316876	28.70
04	SW18	2409186	19.21	1633352	25.54	1568955	28.71
05	SW19	2170869	19.21	1461218	25.54	1308507	28.70
06	SW17	2356731	19.21	1602615	25.54	1565246	28.71
07	SW20	2402370	19.21	1630167	25.54	1646976	28.70
08	SW2091	2349498	19.20	1622161	25.53	1625624	28.70
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0530401.D Date Analyzed: 05/30/96

Instrument ID: MSD4 Time Analyzed: 1203

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2283802	19.19	1624019	25.52	1672580	28.68
	UPPER LIMIT	4567604	19.69	3248038	26.02	3345160	29.18
	LOWER LIMIT	1141901	18.69	812010	25.02	836290	28.18
	CLIENT SAMPLE No.						
01	SW12	2088749	19.15	1484156	25.48	926860	28.64
02	SW10	2010160	19.14	1411544	25.46	1337384	28.64
03	SW14	2031483	19.14	1364727	25.47	1340265	28.63
04	SW15	1930877	19.14	1386491	25.46	1442884	28.63
05	SW1591	2005643	19.14	1399974	25.47	1403119	28.63
06	SW09	2038811	19.15	1302799	25.48	1215022	28.66
07	SWFB01	2067323	19.15	1455477	25.47	1467695	28.63
08	SW16	2036006	19.14	1372056	25.47	1336268	28.64
09	SW09MS	2026543	19.16	1291861	25.48	1203569	28.65
10	SW09MSD	2068452	19.16	1306724	25.48	1308184	28.66
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: INDUSTRIAL & ENVIRONMENTA Contract: SOW 1/91

Lab Code: IEA Case No.: 1589-160 SDG No.: 05477

Lab File ID (Standard): 0610H01.D Date Analyzed: 06/10/96

Instrument ID: MSD8 Time Analyzed: 1836

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	3077280	20.60	2621483	27.44	3301241	31.15
UPPER LIMIT	6154560	21.10	5242966	27.94	6602482	31.65
LOWER LIMIT	1538640	20.10	1310742	26.94	1650620	30.65
CLIENT SAMPLE No.						
01 SBLK17	2495556	20.61	2586231	27.42	2874652	31.15
02 SWFB01RE	2627884	20.60	2778952	27.42	3048350	31.14
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22						

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW11-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP517

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW12-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP518

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW13-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP519

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW18-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-04

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP520

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW19-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-05

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP521

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW17-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-06

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP522

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APD-SW20-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-07

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP523

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW20-91

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-08

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP524

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW10-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-09

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP533

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW14-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-10

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP525

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APD-SW15-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-11

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP534

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW15-91

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-12

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP535

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/11/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SW09-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-13

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP536

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/11/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
APD-SWFB01-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-14

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP539

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/11/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

APD-SW16-01

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 960961A-15

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP540

% Moisture: _____ decanted: (Y/N)__ Date Received: 05/22/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/11/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

GC Column(1): RTX-35 ID:0.53(mm) GC Column(2): DB-1701 ID:0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK89	71	76	99	83			0
02	APD-SW11-01	43*	82	78	64			1
03	APD-SW12-01	54*	86	82	64			1
04	APD-SW13-01	43*	88	66	54*			2
05	APD-SW18-01	44*	74	82	71			1
06	APD-SW19-01	64	115	178*	75			1
07	APD-SW17-01	68	96	134	89			0
08	APD-SW20-01	71	84	108	80			0
09	APD-SW20-91	70	80	104	81			0
10	APD-SW14-01	68	118	136	96			0
11	APD-SW10-01	62	86	110	83			0
12	APD-SW15-01	59*	92	97	75			1
13	APD-SW15-91	68	96	98	73			0
14	APD-SW09-01	36*	54*	62	64			2
15	APD-SW09-01MS	34*	45*	79	119			2
16	APD-SW09-01MSD	41*	57*	100	76			2
17	APD-SWFB01-01	80	81	175*	95			1
18	APD-SW16-01	41*	60	120	54*			2
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM II PEST-1

3/90

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix Spike - EPA Sample No.: APD-SW09-01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1260	5.0	0.0	1.7	34	15-175

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Aroclor-1260	5.0	1.8	36	6	27	15-175

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM III PEST-1

3/90

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK89

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Lab sample ID: 052396-B11 Lab File ID: B1005CLP516

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 05/23/96

Date Analyzed (1): 06/10/96 Date Analyzed (2): 06/10/96

Time Analyzed (1): 1302 Time Analyzed (2): 2306

Instrument ID (1): HP58901B Instrument ID (2): HP58905B

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	APD-SW15-91	960961A-12	06/11/96	06/11/96
02	APD-SW09-01	960961A-13	06/11/96	06/11/96
03	APD-SW09-01MS	960961A-13MS	06/11/96	06/12/96
04	APD-SW09-01MSD	960961A-13MSD	06/11/96	06/12/96
05	APD-SWFB01-01	960961A-14	06/11/96	06/11/96
06	APD-SW16-01	960961A-15	06/11/96	06/11/96
07	APD-SW11-01	960961A-01	06/10/96	06/11/96
08	APD-SW12-01	960961A-02	06/10/96	06/11/96
09	APD-SW13-01	960961A-03	06/10/96	06/11/96
10	APD-SW18-01	960961A-04	06/10/96	06/11/96
11	APD-SW19-01	960961A-05	06/10/96	06/11/96
12	APD-SW17-01	960961A-06	06/10/96	06/11/96
13	APD-SW20-01	960961A-07	06/10/96	06/11/96
14	APD-SW20-91	960961A-08	06/10/96	06/11/96
15	APD-SW14-01	960961A-10	06/10/96	06/11/96
16	APD-SW10-01	960961A-09	06/10/96	06/11/96
17	APD-SW15-01	960961A-11	06/10/96	06/11/96

COMMENTS: _____

FORM IV PEST

3/90

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK89

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Lab sample ID: 052396-B11 Lab File ID: B1005CLP516

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 05/23/96

Date Analyzed (1): 06/10/96 Date Analyzed (2): 06/10/96

Time Analyzed (1): 1302 Time Analyzed (2): 2306

Instrument ID (1): HP58901B Instrument ID (2): HP58905B

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	APD-SW15-91	960961A-12	06/11/96	06/11/96
02	APD-SW09-01	960961A-13	06/11/96	06/11/96
03	APD-SW09-01MS	960961A-13MS	06/11/96	06/12/96
04	APD-SW09-01MSD	960961A-13MSD	06/11/96	06/12/96
05	APD-SWFB01-01	960961A-14	06/11/96	06/11/96
06	APD-SW16-01	960961A-15	06/11/96	06/11/96
07	APD-SW11-01	960961A-01	06/10/96	06/11/96
08	APD-SW12-01	960961A-02	06/10/96	06/11/96
09	APD-SW13-01	960961A-03	06/10/96	06/11/96
10	APD-SW18-01	960961A-04	06/10/96	06/11/96
11	APD-SW19-01	960961A-05	06/10/96	06/11/96
12	APD-SW17-01	960961A-06	06/10/96	06/11/96
13	APD-SW20-01	960961A-07	06/10/96	06/11/96
14	APD-SW20-91	960961A-08	06/10/96	06/11/96
15	APD-SW14-01	960961A-10	06/10/96	06/11/96
16	APD-SW10-01	960961A-09	06/10/96	06/11/96
17	APD-SW15-01	960961A-11	06/10/96	06/11/96

COMMENTS: _____

FORM IV PEST

3/90

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PBLK89

Lab Name: IEA-CT Contract: _____

Lab Code: IEACT Case No.: 0961A SAS No.: _____ SDG No.: A0961

Matrix: (soil/water): WATER Lab Sample ID: 052396-B11

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B1005CLP516

% Moisture: _____ decanted: (Y/N)__ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/23/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/10/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Aqueous

TABLE GC-1.0
7096-0961A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/L.

Client Sample I.D.	Method Blank	APD-SW11-01	APD-SW12-01	Quant. Limits with no Dilution
Lab Sample I.D.	052396-B11	960961A-01	960961A-02	
Method Blank I.D.	PBLK89	PBLK89	PBLK89	
Dilution Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	U	1.0
Date Received		05/22/96	05/22/96	
Date Extracted	05/23/96	05/23/96	05/23/96	
Date Analyzed	06/10/96	06/10/96	06/10/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Aqueous

TABLE GC-1.1
7096-0961A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/L.

Client Sample I.D.	APD-SW13-01	APD-SW18-01	APD-SW19-01	Quant. Limits with no Dilution
Lab Sample I.D.	960961A-03	960961A-04	960961A-05	
Method Blank I.D.	PBLK89	PBLK89	PBLK89	
Dilution Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	U	1.0
Date Received	05/22/96	05/22/96	05/22/96	
Date Extracted	05/23/96	05/23/96	05/23/96	
Date Analyzed	06/10/96	06/10/96	06/10/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Aqueous

TABLE GC-1.2
7096-0961A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/L.

Client Sample I.D.	APD-SW17-01	APD-SW20-01	APD-SW20-91	Quant. Limits with no Dilution
Lab Sample I.D.	960961A-06	960961A-07	960961A-08	
Method Blank I.D.	PBLK89	PBLK89	PBLK89	
Dilution Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	U	1.0
Date Received	05/22/96	05/22/96	05/22/96	
Date Extracted	05/23/96	05/23/96	05/23/96	
Date Analyzed	06/10/96	06/10/96	06/10/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Aqueous

TABLE GC-1.3
7096-0961A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/L.

Client Sample I.D.	APD-SW10-01	APD-SW14-01	APD-SW15-01	Quant. Limits with no Dilution
Lab Sample I.D.	960961A-09	960961A-10	960961A-11	
Method Blank I.D.	PBLK89	PBLK89	PBLK89	
Dilution Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	U	1.0
Date Received	05/22/96	05/22/96	05/22/96	
Date Extracted	05/23/96	05/23/96	05/23/96	
Date Analyzed	06/10/96	06/10/96	06/10/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Aqueous

TABLE GC-1.4
7096-0961A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/L.

Client Sample I.D.	APD-SW15-91	APD-SW09-01	APD-SW09-01 MS	Quant. Limits with no Dilution
Lab Sample I.D.	960961A-12	960961A-13	960961A-13MS	
Method Blank I.D.	PBLK89	PBLK89	PBLK89	
Dilution Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	U	U	1.7X	1.0
Date Received	05/22/96	05/22/96	05/22/96	
Date Extracted	05/23/96	05/23/96	05/23/96	
Date Analyzed	06/11/96	06/11/96	06/11/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

Aqueous

TABLE GC-1.5
7096-0961A
IEA/NC
POLYCHLORINATED BIPHENYLS (PCB's)

All values are ug/L.

Client Sample I.D.	APD-SW09-01 MSD	APD-SW FB01-01	APD-SW16-01	Quant. Limits with no Dilution
Lab Sample I.D.	960961A-13 MSD	960961A-14	960961A-15	
Method Blank I.D.	PBLK89	PBLK89	PBLK89	
Dilution Factor	1.00	1.00	1.00	
Aroclor-1016	U	U	U	1.0
Aroclor-1221	U	U	U	2.0
Aroclor-1232	U	U	U	1.0
Aroclor-1242	U	U	U	1.0
Aroclor-1248	U	U	U	1.0
Aroclor-1254	U	U	U	1.0
Aroclor-1260	1.8PX	U	U	1.0
Date Received	05/22/96	05/22/96	05/22/96	
Date Extracted	05/23/96	05/23/96	05/23/96	
Date Analyzed	06/11/96	06/11/96	06/11/96	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x dilution factor

ORGANICS APPENDIX

U - Indicates that the compound was analyzed for but not detected.

J - Indicates that the compound was analyzed for and determined to be present in the sample. The mass spectrum of the compound meets the identification criteria of the method. The concentration listed is an estimated value, which is less than the specified minimum detection limit but is greater than zero.

B - This flag is used when the analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.

N - Indicates that the compound was analyzed for but not requested as an analyte. Value will not be listed on tabular result sheet.

S - Estimated due to surrogate outliers.

X - Matrix spike compound.

(1) - Cannot be separated.

(2) - Decomposes to azobenzene. Measured and calibrated as azobenzene.

A - This flag indicates that a TIC is a suspected aldol condensation product.

E - Indicates that it exceeds calibration curve range.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

C - Confirmed by GC/MS.

T - Compound present in TCLP blank.

P - This flag is used for a pesticide/aroclor target analyte when there is a greater than 25 percent difference for detected concentrations between the two GC columns (see Form X).

STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the IEA-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

IEA-Connecticut
Certification Summary (as of February 1996)

State	Responsible Agency	Certification	Lab Number
California	Department of Health Services	Hazardous Waste	1778
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Kansas	Department of Health and Environmental Services	Drinking Water, Wastewater/Solid, Hazardous Waste	E-210/E-1185
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	252891
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/ Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater	388
North Dakota	Department of Health and Consolidated Laboratories	Non-Potable/Potable Hazardous Waste	R-138
Rhode Island	Department of Health	Chemistry...Non-Potable Water and Wastewater	A43
Washington	Department of Ecology	Wastewater/ Hazardous Waste	C231

7096-0961A
IEA/NC
SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
APD-SW11-01	960961A-01	WATER	05/21/96	05/22/96
APD-SW12-01	960961A-02	WATER	05/21/96	05/22/96
APD-SW13-01	960961A-03	WATER	05/21/96	05/22/96
APD-SW18-01	960961A-04	WATER	05/21/96	05/22/96
APD-SW19-01	960961A-05	WATER	05/21/96	05/22/96
APD-SW17-01	960961A-06	WATER	05/21/96	05/22/96
APD-SW20-01	960961A-07	WATER	05/21/96	05/22/96
APD-SW20-91	960961A-08	WATER	05/21/96	05/22/96
APD-SW10-01	960961A-09	WATER	05/21/96	05/22/96
APD-SW14-01	960961A-10	WATER	05/21/96	05/22/96
APD-SW15-01	960961A-11	WATER	05/21/96	05/22/96
APD-SW15-91	960961A-12	WATER	05/21/96	05/22/96
APD-SW09-01	960961A-13	WATER	05/21/96	05/22/96
APD-SW09-01	960961A-13MS	WATER	05/21/96	05/22/96
APD-SW09-01	960961A-13MSD	WATER	05/21/96	05/22/96
APD-SWFB01-01	960961A-14	WATER	05/21/96	05/22/96
APD-SW16-01	960961A-15	WATER	05/21/96	05/22/96

IEA-CT ANALYTICAL SUMMARY

Client ID: APD-SW11-01, APD-SW12-01, APD-SW13-01, APD-SW18-01, APD-SW19-01, APD-SW17-01, APD-SW20-01, APD-SW20-91, APD-SW10-01, APD-SW14-01, APD-SW15-01, APD-SW15-91, APD-SW09-01, APD-SWFB01-01 ...
Job Number: 7096-0961A

Date: 6/20/96

Qty	Matrix	Analysis	Description	Unit Price	Total Price
1	None	DISK	Diskette Prep.		
17	WATER	PPC-CLP1.9-TCL	TCL Pesticides/PCB's		

[redacted]