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TECHNICAL MEMORANDUM
1996 GROUNDWATER SAMPLING RESULTS REPORT

AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

PREPARED FOR:
ACS RD/RA EXECUTIVE COMMITTEE

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EXECUTIVE SUMMARY

This Technical Memorandum summarizes the investigation activities and baseline sampling results associated with the 1996 groundwater monitoring at the American Chemical Service, Inc. (ACS) NPL site in Griffith, Indiana. Sampling results from upper and lower aquifer investigations conducted on several dates were combined in this technical memorandum to constitute a single 1996 sampling event. In November and December 1996, six new lower aquifer wells and one upper aquifer piezometer were installed at the Site. These were subsequently sampled and the data were combined with results from eariler sampling of the other monitoring network wells. All wells were sampled and analyzed for full scan Target Compound List (TCL) and Target Analyte List (TAL) analyses.

Water levels were measured in upper and lower aquifer wells and piezometers on August 27 and November 4, 1996. The direction of horizontal groundwater flow in the upper aquifer was consistent with previous investigations. Horizontal groundwater flow in the lower aquifer was northward under a hydraulic gradient of 0.00048. These data were consistent with previous lower aquifer data presented in the June 1991 Remedial Investigation Report, and subsequent technical memoranda. The range of vertical gradients measured in the: 1) wetland area (variable and low); 2) lower aquifer (0.0125 upward to 0.0005 downward); and 3) between the upper and lower aquifers (average of 0.7 downward) were also consistent with previous investigations.

The extent of VOC concentrations in the upper aquifer was defined by groundwater samples collected at monitoring wells which bound the limits of contamination to the north, east, southeast and west toward the wetland area. Highest VOC concentrations and isolated SVOC detections were reported in groundwater samples collected from monitoring wells within the known limits of the plume.

Acetone and toluene were detected in samples collected from lower aquifer monitoring wells MW52 and MW53. These VOCs are common laboratory contaminants, however they were not eliminated in the data validation process. Therefore, acetone and toluene will continue to be monitored in 1997 to verify or disprove their presence at these locations.

VOCs were not detected in the upper and lower portions of the lower aquifer at the MW54/MW55 well nest. The lack of VOC detections at this well nest indicates that VOCs have not migrated between the MW51 and MW8 lower aquifer well nests located along the northern downgradient boundary of the Site. VOCs were also not detected in samples collected from MW51 located north of the Site (which is screened across the interval where elevated PID readings were noted below the base of the upper confining clay layer) and MW50 located southeast of the Site (installed to evaluate VOC concentrations in the lower aquifer downgradient from residential well sample PW02).

Chloroethane and benzene were detected in groundwater from existing lower aquifer monitoring well MW9 and chloroethane was detected in existing well MW10C. Detected

concentrations of these compounds at MW9 have increased since sampling was initiated during the RI. The vertical extent of VOCs detected at MW9 was defined by the low level detection of chloroethane (2 ug/L) at MW29 and non-detection at MW34.

Bis(2-ethylhexyl)phthalate was detected in water samples collected from several lower aquifer wells. Detections were low and appeared to be randomly located. The compound is a common laboratory contaminant, however, there is a remediation level for it in the Record of Decision. Therefore, its significance at the Site will be further evaluated in the 1997 monitoring program.

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1

INTRODUCTION

This Technical Memorandum summarizes the investigation activities and monitoring associated with completion of the 1996 groundwater monitoring program at the American Chemical Service, Inc. (ACS) NPL Site in Griffith, Indiana. Results from both upper and lower aquifer investigations conducted in 1996 were combined in this Technical Memorandum to constitute the 1996 groundwater sampling event. Monitoring well locations and sampling parameters for upper aquifer monitoring activities were proposed in the October 1996 Phase II Upper Aquifer Investigation Technical Memorandum. Well locations and sampling parameters for lower aquifer monitoring activities were proposed in the September 1996 Lower Aquifer Investigation Report.

The 1996 sampling event consisted of the following activities:

- Sampling of groundwater from the new lower aquifer wells in March 1996 for full scan TCL organic and TAL inorganics.
- Sampling of groundwater from the new upper aquifer wells in August 1996 for full scan TCL organic and TAL inorganics.
- Sampling of groundwater from selected existing upper and lower aquifer wells in October 1996 for full scan TCL organic and TAL inorganics .
- Sampling of groundwater from four new lower aquifer wells in December 1996 for full scan TCL organic and TAL inorganics.

The locations of monitoring wells used in the first quarterly sampling event are shown on Figure 1. The 1996 sampling program for the upper aquifer and lower aquifer are summarized on Tables 1 and 2, respectively.

Investigation procedures and results from the March and August 1996 sampling activities were presented in the September 1996 Lower Aquifer Investigation Report and the October 1996 Phase II Upper Aquifer Investigation Technical Memorandum, respectively. Laboratory analytical detections from these two sampling activities are presented in Section 4 of this Technical Memorandum to provide continuity with the October and December 1996 sampling results.

In November and December 1996, six new lower aquifer monitoring wells and one upper aquifer piezometer were installed at the ACS Site in accordance with approved work plans. Also during these months, the remainder of the monitoring wells comprising the 1996 sampling event (i.e., new wells and selected existing wells) were sampled. Investigation procedures and results associated with monitoring well installation, development, and sampling in November and December 1996 are summarized in Section 2. Laboratory analytical results for the November and December sampling events are presented in Section 4 of this technical memorandum. All investigation activities were conducted in accordance with U.S. EPA-approved Specific Operating Procedures (SOPs), draft Quality Assurance Project Plan (QAPP) and U.S. EPA comments regarding the QAPP.

1.1 OBJECTIVES

1.1.1 Upper Aquifer

The specific objectives of the Upper Aquifer Monitoring Plan, as defined in the October 1996 Phase 2 Upper Aquifer Technical Memorandum, included the following:

1. Monitor groundwater quality at the boundaries of the known extent of contamination to determine whether the contaminant plume in the upper aquifer is remaining constant or expanding.

2. Measure water levels in the upper aquifer to determine how remedial actions are affecting groundwater flow patterns at the Site.

3. Monitor groundwater quality in the plume interior to determine how contaminant concentrations change with time and in response to remedial actions.

1.1.2 Lower Aquifer

Specific objectives for the Lower Aquifer Monitoring Plan were not established in the September 1996 Lower Aquifer Investigation Report. For purposes of this Technical Memorandum, objectives for conducting groundwater monitoring in the lower aquifer include the following:

1. Monitor groundwater quality in the lower aquifer to determine if upper aquifer contaminants have migrated into the lower aquifer.

2. Measure water levels in the lower aquifer to verify the consistent horizontal gradient to the north and monitor whether remedial actions will affect groundwater flow patterns in the lower aquifer at the Site.

1.2 SCOPE OF WORK

The following activities were completed to meet the objectives of the 1996 sampling:

- Six monitoring wells were installed in the lower aquifer in December 1996.
- Newly installed monitoring wells were developed and surveyed.
- One piezometer (P57) was installed in the upper aquifer in October 1996.
- Water levels were measured in upper and lower aquifer wells, piezometers and staff gauges in August and November 1996.
- Groundwater samples from newly installed monitoring wells and selected existing wells in the upper and lower aquifers were collected in November and December 1996 and analyzed for full scan TCL organic and TAL inorganics.
- Analytical results from the November and December 1996 sampling events were combined with the groundwater analytical results from the March and August sampling events to comprise the 1996 sampling results.

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FIELD ACTIVITIES

2.1 DRILLING AND WELL INSTALLATION

2.1.1 Monitoring Well and Piezometer Borings

Six lower aquifer monitoring wells and one upper aquifer piezometer were installed in October and December 1996 to complete the network of monitoring wells and piezometers required by U.S. EPA at the ACS Site for 1996 sampling purposes. Monitoring well and piezometer construction information is summarized on Table 3. Boring logs for the new monitoring wells and piezometer are included in Appendix A.

Prior to initiating drilling activities, the locations of monitoring wells and piezometer were staked by Montgomery Watson and a U.S. EPA representative. The borings completed for installation of the monitoring wells and piezometers were logged in accordance with the Unified Soil Classification System (USCS).

October 1996 Monitoring Well Borings. Two monitoring wells (MW50, MW51) were installed in October 1996. MW50 was installed in the southeast area, southeast of the intersection of Reder Road and Colfax Avenue (Figure 1). This monitoring well was to evaluate groundwater quality in the lower aquifer downgradient of the residential well sample PW02. MW51 was installed at the MW10 monitoring well location north of the ACS Site (Figure 1). At this location, elevated PID readings were observed immediately below the confining clay during vertical profiling activities. Monitoring well MW51 was installed to screen across the portion of the aquifer where elevated PID readings were observed.

All drilling was conducted in accordance with the approved Hollow Stem Auger Drilling and Sampling SOP for the Lower Aquifer Investigation (revision: October 15, 1996) with the following approved exceptions:

- Because of saturated ground conditions in the wetland area near MW51, a low ground pressure track-mounted drill rig was utilized for drilling activities.

- Surface casing was advanced approximately two-feet into the confining clay, rather than the minimum of 12-inches, to assure that the casing was properly seated into the clay layer.

- The ten-inch surface casing was installed by filling the 10.25-inch HSAs with cement-bentonite grout, then slowly retracting the HSAs while maintaining the grout level in the HSAs at ground level. Immediately after removing the HSAs from the borehole, the casing was placed in the borehole and advanced approximately two-feet into the confining clay. This method was utilized because the ten-inch casing could not be installed through the 10.25-inch HSAs utilized with the track drill rig.

- Due to the thickness of the upper confining clay encountered at MW50, the borehole for this well was extended to a depth of 62 feet to allow for the installation of the well screen within the lower aquifer. The depth to the top and bottom of the upper confining clay at MW50 was 29 feet and 50 feet, respectively (Appendix A).

October 1996 Piezometer Boring. One piezometer (P57) was installed in October 1996. P57 was installed in the northeast area of the ACS Site to confirm shallow groundwater flow patterns in this area of the Site (Figure 1). Drilling for the upper aquifer piezometer was conducted in accordance with the approved Monitoring Well Sampling SOP for the Upper Aquifer Investigation (revision: July 25, 1996).

December 1996 Monitoring Well Borings. Two monitoring well nests (MW52/MW53 and MW54/MW55) were installed in December 1996. Monitoring wells MW52/MW53 were installed between MW24 and the MW10 location, and the MW54/MW55 well nest was installed between the MW10 location and the MW8 cluster (Figure 1). Both new well nests were installed along the northern boundary of the ACS Site.

The purpose of these well nests was to evaluate groundwater quality in the lower aquifer downgradient of the Site at the top and bottom of the lower aquifer. The lower numbered well at each location (MW52 and MW54) was installed immediately below the upper confining clay in the upper portion of the lower aquifer. The higher numbered wells at each location (MW53 and MW55) were installed at the base of the lower aquifer.

Drilling was conducted in accordance with the U.S. EPA approved Wash Rotary Drilling and Sampling SOP for the Lower Aquifer Investigation (revision: December 20, 1996) with the following approved exceptions.

- At the shallow well locations (MW52, MW54), the drilling fluid consisted solely of potable water obtained from the City of Griffith water main. At the deep well locations, (MW53, MW55) bentonite was added to the drilling fluid to maintain the integrity of the borehole during drilling. Without the addition of mud, sands of the lower aquifer flowed upwards inside the casing and prevented advancement of the casing. After the borehole and casing were advanced into the lower confining clay, the borehole was flushed out with potable water to remove the drilling fluid

from the borehole. These field modifications were approved by the U.S. EPA before implementation.

2.1.2 Monitoring Well and Piezometer Installation

October 1996 Well and Piezometer Installation. Two monitoring wells (MW50, MW51) and one piezometer (P57) were installed in accordance with the approved Hollow Stem Auger Drilling and Sampling SOP for the Lower Aquifer Investigation (revision: October 15, 1996).

December 1996 Well Installation. The four monitoring wells (MW52 through MW55) were installed in accordance with the U.S. EPA approved Wash Rotary Drilling and Sampling SOP for the Lower Aquifer Investigation (revision: December 20, 1996) with the following exceptions:

- Because of the limited annular space between the temporary drill casing and the permanent well casing, installation of a bentonite seal using chipped or pelletized bentonite may have caused bridging between the two casings. Therefore, a minimum of 3 feet of fine sand was placed above the filter pack to provide an annular seal and block the bentonite slurry from migrating down into the screened zone. This change was approved by the EPA prior to its initiation.

- The 6 inch surface casing installed into the top of the upper confining unit was extended above ground surface to provide surface protection for the well. This was done rather than installing a surface protection pipe into the 6 in surface casing. The annular space seal was installed to approximately 5 ft below ground surface and the remaining annular space to the ground surface was completed using chipped bentonite and filter sand. The surface casing was completed by installing a locking cap and drilling a weep hole for condensation.

2.2 MONITORING WELL DEVELOPMENT AND SURVEYING

2.2.1 October 1996 Well Development

Monitoring wells MW50 and MW51 were developed in October 1996 in accordance with the U.S. EPA-approved Monitoring Well and Sampling SOP (Revised: May 3, 1996). Monitoring well development information is presented in Appendix C.

2.2.2 December 1996 Well Development

Shallow lower aquifer monitoring wells MW52 and MW54 were developed in December 1996 in accordance with the U.S. EPA-approved Monitoring Well and Sampling SOP (Revised: May 3, 1996). A minimum of three times the volume of potable water lost during drilling of the shallow lower aquifer wells was removed during development. Development water was contained in drums and stored in the Off-Site Containment Area pending startup of the groundwater treatment system. Monitoring well development information is presented in Appendix C.

Deep lower aquifer monitoring wells, MW53 and MW55, were developed in December 1996 in accordance with the U.S. EPA-approved Monitoring Well and Sampling SOP (Revised: May 3, 1996) with the following exception:

- Because light drilling mud, rather than potable water, was used to drill the deep lower aquifer boreholes, including the bottom 20 ft of borehole, there was limited loss of drilling fluid to the formation. Therefore, simply removing three times the volume of drilling fluid lost to the formation would have resulted in insufficient development of the monitoring wells. (It should be noted that three times the volume lost during drilling was removed during development - see Appendix C.)

  The objective of well development was to remove any mud cake which had formed on the sides of the borehole. The two deep wells were developed using a submersible pump which was operating at a high flow rate (greater than 3 gallons per minute). While pumping, the pump was surged through the well screen in an up and down motion to provide development to all portions of the well screen. Development continued until the turbidity measurements of the purged water indicated that the mud cake in the screened interval was removed. This was indicated by observing limited increase in turbidity in the development water immediately after the well screen was incrementally surged.

Monitoring well development information for monitoring wells MW53 and MW55 is presented in Appendix C.

The new monitoring wells and piezometer were later surveyed by Area Survey of Orland Park, Illinois. Survey information, ground surface and casing elevations, and local coordinates (northing and easting) for the new lower aquifer wells and upper aquifer piezometer are presented in Appendix D and included on relevant tables.

2.3 WATER LEVELS

To determine the groundwater flow directions in the upper and lower aquifers and vertical gradients both within and between the aquifers, water level measurements were made at new and existing upper aquifer wells and piezometers on August 27, 1996 and November 4, 1996.

2.4 MONITORING WELL SAMPLING

Prior to sampling, monitoring wells were purged using low-flow methods in accordance with the approved Monitoring Well Sampling SOP for the Upper Aquifer Investigation (revision: July 25, 1996). Field parameters for pH, specific conductivity, temperature, and turbidity were measured and recorded during well purging activities. A summary of groundwater sampling field parameter data is presented on Table 4.

New and selected existing upper and lower aquifer monitoring wells were sampled between November 5 and 7, 1996 and analyzed for full scan TCL volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and TAL inorganic parameters. During the period of December 26 to 27, 1996, six new lower aquifer monitoring wells were sampled for the same list of parameters. All monitoring well sampling activities were performed in accordance with the approved Monitoring Well Sampling SOP for the Upper Aquifer Investigation (revision: July 25, 1996).

3

SITE HYDROGEOLOGY

3.1 GEOLOGY

Boring logs generated during the October and December 1996 well and piezometer installation activities are included in Appendix A. A complete description of Site geology and stratigraphy is presented in the September 1996 Lower Aquifer Technical Memorandum. New information collected from the lower aquifer drilling activities conducted in October and December 1996 is discussed below.

The top of the upper clay confining layer was confirmed at each of the lower aquifer monitoring well locations. The depths and elevations of the top of the upper clay confining layer are summarized in Table 3. The upper surface of the upper clay confining layer was encountered at an elevation of 617.7 ft above mean sea level (amsl) in MW50, installed southeast of the intersection of Colfax Avenue and Reder Road (Figure 1). In monitoring wells drilled north of the Site (MW51 to MW55), the top of the upper clay confining layer was encountered between elevations of 618.4 amsl (MW53) and 621.3 amsl (MW55). The elevations of the top of the upper clay confining layer determined with this investigation are consistent with findings of previous investigations, and expand the data base regarding the upper clay surface elevations at the Site.

The thickness of the upper clay confining layer was determined at all lower aquifer drilling locations. At MW50, located southeast of the intersection of Colfax Avenue and Reder Road (Figure 1), the thickness of the upper clay confining layer was 20.5 feet (Appendix A). The upper clay confining layer thickness measured in borings drilled north of the Site (MW51 through MW55) ranged from 2.6 ft at the MW52/MW53 location to 11 ft at the MW54/MW55 location (Appendix A). The measured thickness of the upper clay confining layer determined with this investigation are consistent with findings of previous investigations, and expand the data base regarding the thickness of the upper clay confining layer at the Site.

The bottom of the lower aquifer was encountered during drilling at MW53 and MW55 (Appendix A). At these two locations, the upper surface of the lower confining clay was encountered at depths of 86 feet and 97 feet, respectively. The elevations of the top of the lower clay confining layer are 545 feet amsl and 538 feet amsl at MW53 and MW55, respectively (Appendix A).

3.2 HYDROGEOLOGY

3.2.1 Water Levels

Water levels were measured at existing and newly-installed upper and lower aquifer monitoring wells and piezometers, and staff gauges on August 27, 1996 and November 4, 1996. The recorded water levels and calculated elevations are presented in Table 5 (August 27, 1996 elevations) and Table 6 (November 4, 1996 elevations).

August 1996. On August 27, 1996, depth to water in the upper aquifer monitoring wells ranged between 3.3 feet below top of casing (toc) in MW19 to 21.4 feet below toc in MW6 (Table 5). The groundwater elevation in the upper aquifer ranged from 637 feet amsl at MW18 to 625 feet amsl at M-3S located at the Griffith landfill.

Two staff gauges installed in the ditch north of the Grand Trunk Railroad and the ACS facility were dry when visited on August 27, 1996.

November 1996. On November 4, 1996, depth to groundwater in the upper aquifer monitoring wells ranged between 3.38 feet below toc in MW46 to 22.92 feet below toc in MW6 (Table 6). The groundwater elevations in the upper aquifer ranged from 635 feet amsl at MW18 to 624 feet amsl at MW41.

Staff gauges installed in the ditch north of the Grand Trunk railroad and the ACS facility (SG11) and in the ditch along the north side of the off-site containment area (SG3 and SG4) were dry when visited on November 4, 1996. The staff gauge installed in the drainage ditch which runs between the Griffith Landfill and the Off-Site Containment Area (SG1) was also dry when visited during the November water level monitoring event.

3.2.2 Groundwater Flow Direction

3.2.2.1 Upper Aquifer. The water levels measured on August 27, 1996 and November 4, 1996 are shown on Figures 2 and 3, respectively. Based on both rounds of groundwater elevation data, the direction of shallow groundwater flow in the upper aquifer is generally to the west in the area west of Colfax Avenue, and southeast in the area southeast of the intersection of Colfax Avenue and Reder Road.

The westward orientation of shallow groundwater flow lines at the ACS plant is directed towards the dewatering activities at the Griffith landfill. Southeast of the intersection of Colfax Avenue and Reder Road, the direction of groundwater flow in the upper aquifer follows the slope of the land surface to the southeast (Figures 2 and 3).

Based on the November 4, 1996 water table map, which includes the new P57 water level measurement, a groundwater flow divide appears to exist in the northeast portion of the Site near Colfax Avenue. Shallow groundwater flow on November 4 was directed both west and east from the area between MW11 and SG10, and between P9 and P58 (Figure 3).

Water level data collected during subsequent quarterly sampling events will be used to verify this apparent groundwater flow condition.

The direction of horizontal groundwater flow in the upper aquifer measured on August 27, 1996 and November 4, 1996 is consistent with upper aquifer data presented in the June 1991 RI and recent water level data collected on October 30, 1995 and June 5, 1996. Water table maps generated from these two measurement periods were presented in the November 8, 1995 Technical Memorandum and the July 16, 1996 Water Level Memorandum, respectively.

3.2.2.2 Lower Aquifer. The potentiometric surface in the lower aquifer as measured on August 27 and November 4, 1996 is presented on Figures 4 and 5, respectively. The direction of horizontal groundwater flow in the lower aquifer is generally northward. This information is based on water levels measured in lower aquifer wells installed at the top of the aquifer. The northward direction of groundwater flow in the lower aquifer is consistent with lower aquifer data presented in June 1991 RI, October 30, 1995 Technical Memorandum and September 1996 Lower Aquifer Investigation Technical Memorandum.

The horizontal hydraulic gradient in the lower aquifer, based on both rounds of groundwater elevation data, was determined to be 0.00047 (August 27, 1996 data) and 0.00049 (November 4, 1996 data), with an average hydraulic gradient of 0.00048. The hydraulic gradient was determined by measuring from MW22 located in the southern portion of the Site, to MW10 located at the northern site boundary. The gradient was determined by dividing the difference in head between the two wells (1.35 feet on August 27, 1996; 1.41 feet on November 4, 1996) by the lateral distance (2,850 feet). The average hydraulic gradient (0.00048) is generally consistent with lower aquifer gradients presented in the RI report (gradient = 0.0006), October 30, 1995 Technical Memorandum (gradient = 0.00041) and the September 1996 Lower Aquifer Investigation Technical Memorandum (gradient = 0.00047).

3.2.3 Vertical Gradients

Vertical gradients were determined across three aquifer horizons (vertical gradients in the upper aquifer in the wetland area; vertical gradients in the lower aquifer; vertical gradients between the upper and lower aquifers). The vertical gradients were calculated using the groundwater elevation data collected on August 27, 1996 and November 4, 1996.

3.2.3.1 Vertical Gradients in Wetlands

August 1996. A summary of vertical hydraulic gradients measured in nested piezometers in the wetland area on August 27, 1996 is presented on Table 7. Vertical gradients were calculated by dividing the difference in head between nested piezometers by the distance between the screen midpoints for the piezometers. Vertical gradients in the wetland area were generally very low showing little difference in hydraulic head between the upper and lower portions of the upper aquifer. Vertical gradients were upward at P64/P65 (0.009) and P66/P67 (0.005), downward at P70/P71 (-0.020) and non-existent at P68/P69 (0.000) (Table 5). Upward gradients were observed at the two southern piezometer nests. This

may indicate that groundwater is discharging to the wetland in this area of the site. The downward gradient measured at P70/P71 may indicate that surface water is ponded in the vicinity. No vertical gradients were measured at piezometer nest P68/P69 located approximately 150 feet west of the P70/P71 piezometer nest.

November 1996. A summary of vertical gradients measured in nested piezometers is the wetland area on November 4, 1996 is presented on Table 8. Vertical gradients were upward at piezometer nests P66/P67 (0.005) and P70/P71 (0.006), and were non-existent (0.000) at piezometer nests P64/P65 and P68/P69. The presence of upward gradients at the eastern piezometer nests may indicate that groundwater is discharging to the wetland in this portion of the site. At the western piezometer nests, no vertical gradients were observed.

The vertical gradients calculated from data collected during the August and November water level monitoring events are consistent with a typical wetland area where shallow groundwater is in close contact with surface water, and shallow groundwater recharge and discharge to the wetlands fluctuates throughout the year as the water table periodically rises and falls in the area. This is shown by vertical gradients changing from downward to upward orientations at P70/P71 while other locations exhibited little or no change.

3.2.3.2 Vertical Gradients in the Lower Aquifer. Vertical gradients measured between nested wells screened within the lower aquifer during the August and November 1996 water level monitoring events are presented in Tables 9 and 10, respectively. Vertical gradients were calculated by dividing the difference in head between nested wells by the distance between the screen midpoints for the wells.

August 1996. Vertical gradients between nested wells ranged from 0.003 upward between the upper and middle zones at MW28 and M4/MW35, to -0.005 (downward) between MW10 and MW30 (Table 9). The greatest difference in groundwater elevation between nested wells was 0.11 feet at M4 and MW35.

Other lower aquifer well nests exhibited head differences less than 0.11 feet (Table 9). The final column on Table 9 shows the calculated vertical gradients from the top to the bottom of the lower aquifer. Well nest MW7/MW36 did not exhibit a vertical gradient between wells installed at the top and bottom of the lower aquifer. Upward vertical gradients were measured between upper and lower wells at MW8/MW32, MW28/PZ43 and M4/MW35, whereas downward vertical gradients were observed at MW9/MW34 (-0.0002) and MW10/MW33 (-0.002).

November 1996. With the exception of the vertical gradient calculated between wells MW51 and MW10, vertical gradients between nested wells ranged from 0.006 (upward) between the middle and lower zones at MW28, to -0.005 (downward) between MW10 and MW30 (Table 8). Although the upward vertical gradient between MW51 and MW10 (0.0125) was slightly larger than other vertical gradients, the gradient data was based on a small vertical separation between the two wells (six feet) and a head difference of only 0.08

feet. The greatest difference in groundwater elevations between nested wells was 0.15 feet at M4 and MW35.

Other lower aquifer well nests exhibited head differences less than 0.15 feet (Table 10). Upward vertical gradients were measured between upper and lower wells in each of the lower aquifer well nests, with the exception of MW51/MW33 (-0.0004).

3.2.3.3 Vertical Gradients Between the Upper and Lower Aquifers. Vertical gradients measured between wells screened in the upper aquifer and lower aquifer during the August and November 1996 water level monitoring episodes are presented in Tables 11 and 12, respectively. Vertical gradients were calculated by dividing the difference in head between the upper and lower aquifer wells by the thickness of the clay confining layer between the two wells.

August 1996. Strong downward vertical gradients were calculated at each of the nested locations as presented on Table 11. Downward vertical gradients ranged from -0.3954 (measured between MW17 and MW28) to -0.9591 (measured between P28 and MW8). The greatest distance between groundwater elevations was -11.48 ft measured between P8 and MW7.

November 1996. Strong downward vertical gradients also calculated at each of the nested locations in November 1996 (Table 12). Downward vertical gradients ranged from -0.3539 (measured between MW17 and MW28) to -1.000 (measured between P28 and MW8). The greatest distance between groundwater elevations was -11.5 ft measured between P8 and MW7.

The consistent calculation of strong downward vertical gradients suggests that the low permeability of the upper confining clay layer (2×10^{-8} cm/s) provides a substantial barrier to vertical groundwater flow between the two aquifers. The permeability of the upper confining layer was presented in the March 1996 Dewatering/Barrier Wall Investigation Report.

4

1996 SAMPLING ANALYTICAL RESULTS

This report combines analytical results from March, August, November and December 1996 sampling periods for the 1996 sampling.

4.1 UPPER AQUIFER

New upper aquifer monitoring wells were sampled at the Site during August 5 to 8, 1996 and selected existing upper aquifer wells were sampled between November 5 to 7, 1996. All groundwater samples were analyzed for VOCs, SVOCs, PCBs and inorganic parameters. The combined results from both sampling events comprise the 1996 sampling event for the upper aquifer.

Laboratory analytical reports for the August sampling event were included in the October 1996 Phase II Technical Memorandum. Appendix E of the Phase II Tech Memo contained the results for VOCs, SVOCs, and PCBs; Appendix F included the analytical results for inorganic constituents. VOC, SVOC, PCB and inorganic detections during the October 1996 sampling event are summarized in Table 13 of this Technical Memorandum.

Laboratory analytical reports for the November 1996 sampling event are reported in this Technical Memorandum. Laboratory analytical reports for VOCs, SVOCs, and PCBs are presented in Appendix E. Laboratory analytical reports for inorganics are included in Appendix F.

4.1.1 VOCs

A summary of all VOC detections in upper aquifer monitoring wells sampled in 1996 is presented in Table 13. Figure 6 summarizes the VOC detections in Site monitoring wells. Sampling results for monitoring wells MW37 through MW49 were discussed in detail in the October 1996 Phase II Technical Memorandum. The following discussion focuses on the results of the November 1996 sampling event and the overall extent of the VOC detections at the Site.

4.1.1.1 North Side. Monitoring wells north of the ACS Site were not sampled in November 1996. Therefore, the conclusions of the Phase II Tech Memo are unchanged. Installation of the new piezometer P57 confirmed the westward orientation of shallow groundwater flow in this area of the Site (Figure 6). Based on this orientation of groundwater flow, monitoring wells MW38 and MW39 continue to bound the limits of VOC contamination north of the Site. Although benzene was detected at 12 ug/L in MW38 during the August 1996 sampling event, the concentration was low compared to concentrations of VOC within the plume (MW48 and MW49), located just 500 to 600 feet southwest, and indicated that the edge of the VOC plume is identified by MW38.

4.1.1.2 East Side. East of the Site, chloroethane was detected at MW12 at 5 ug/L and VOCs were not detected at MW11 and MW19. The lack of VOC detections at MW11 and MW19 is consistent with the absence of VOC contamination measured at MW40 in August 1996. The detection of chloroethane at MW12 was within the limits of the VOC plume delineated by MW11, MW40 and MW19 and the Geoprobe investigation.

4.1.1.3 Southeast Area. Southeast of the site, VOCs were detected at MW6 and MW45 in the interior of the plume (Figure 6). The primary VOCs are benzene and chloroethane with the following concentrations in the 1996 sampling.

Compound	MW6	MW45
Benzene	320 ug/L	530 ug/L
Chloroethane	720 ug/L	82/J ug/L

MW6 is located approximately 100 feet south of the Kapica-Pazmey Area, while MW45 is located approximately 1,200 feet further downgradient. The estimated benzene concentration of 3/J ug/L at MW15 and the detected concentration of 20 ug/L of chloroethane at MW19 indicate that these monitoring wells are at the outer edge of the contamination area. VOCs were not detected at monitoring wells MW41, MW42, MW43, MW44, and MW47 indicating that the zone of contamination is confined within this array of wells.

Historically, the primary VOC constituents of the groundwater contamination at MW6 have been benzene, chloroethane, and xylenes. The following tabulation shows how concentrations of these compounds have varied since the first Remedial Investigation sampling event in 1989.

Sampling Date	Chloroethane	Benzene	Total Xylenes
August 1989	140 ug/L	780/J ug/L	170 ug/L
May 1990	240 ug/L	1,500/J ug/L	210 ug/L
January 1995	530 ug/L	3000 ug/L	3,900 ug/L
November 1996	720 ug/L	320 ug/L	40 ug/L

These sampling results appear to indicate that benzene concentrations have decreased by an order of magnitude in the upper aquifer at this location over the past two years. The next

sampling event is scheduled for February 1997 and the result of that sampling will be useful in further evaluating internal plume concentrations.

4.1.1.4 Wetland Area to the West. West of the Site, VOCs were detected at MW13 and MW14 (Figure 6). Both MW13 and MW14 are located within the limits of the VOC plume delineated by MW46 and the Geoprobe investigation. Concentrations of chloroethane and benzene were detected in both well samples, and methylene chloride was also detected in MW14.

4.1.2 SVOCs and PCBs Results

A summary of the SVOC detections in upper aquifer wells in August and November 1996 is presented in Table 13. Laboratory analytical reports for November 1996 SVOC and PCB results are presented in Appendix E.

SVOC compounds were detected in water samples collected from four monitoring wells in November 1996 (MW6, MW12, MW14, and MW19; Table 13). Bis(2-chloroethyl)ether was detected in samples from the wells at a maximum concentrations of 56 ug/L (MW6). Other detected SVOCs included isophorone, diethyphthalate and 2,2'-oxybis(1-chloropropane) at maximum concentrations of 15 ug/L (MW6), 2 ug/L (MW6) and 120 ug/L (MW12), respectively (Table 13). Tentatively identified compounds (TICs) were detected in some wells and are reported in Appendix E.

Similar to the August 1996 sampling data, SVOCs were detected during the November 1996 sampling event in monitoring wells exhibiting VOC concentrations. Detections of SVOCs are highly correlated to the groundwater plume defined by the VOC detections. PCBs were not detected in any of the groundwater samples collected during either the November or August 1996 sampling events.

4.1.3 Inorganic Parameters

A summary of the upper aquifer inorganics results is presented in Table 13. Complete validated analytical reports for the November 1996 sampling event are presented in Appendix F. Analytical reports for the August sampling event were included in Appendix F of the September 1996 Phase II Technical Memorandum.

Groundwater samples from upper aquifer wells were analyzed for both total and dissolved inorganics in November 1996 (Table 13). Major groundwater constituents, calcium, magnesium, and sodium were generally detected at the highest concentrations in the upper aquifer, followed by detections of minor inorganic constituents, manganese, potassium and aluminum (Table 13).

Other inorganic compounds apparently randomly detected in upper aquifer monitoring wells during November 1996 included arsenic, barium, cobalt, copper, lead, nickel, selenium, thallium and vanadium (Table 13). Dissolved arsenic was found in three November upper aquifer samples. Highest arsenic concentrations were found at MW6 and MW15 where arsenic was detected at 67.9 ug/L and 63.6 ug/L, respectively. Barium

concentrations were detected in all unfiltered upper aquifer wells sampled in November 1996, ranging from 1,470 ug/L at MW15 to 24.2 ug/L at MW11. Cobalt concentrations ranged from 1.2 ug/L (MW18) to 9.1 ug/L (MW14). Copper was found in several unfiltered samples, although dissolved copper was detected at 9.4 ug/L in one monitoring well (MW14). Lead was found in five wells ranging from 1.5 ug/L to 14.1 ug/L in unfiltered samples (Table 13). Selenium, thallium and vanadium were infrequently detected at the site at maximum concentrations (unfiltered) of 3 ug/L (MW18), 2.4 ug/L (MW19) and 18.9 ug/L (MW12). Vanadium concentrations in MW12 were considerably lower in the dissolved inorganics sample (3.1 ug/L).

Concentrations of arsenic detected in samples from MW6, MW15, and MW19, and dissolved thallium in the sample from MW19 exceeded the remediation levels for these constituents listed in Appendix B of the SOW. These wells are located in the southeast area within the limits of the VOC plume delineated in the area. Infrequent detections of other inorganics at various monitoring wells at the Site suggest that these inorganic detections are naturally occurring background concentrations.

Due to the low turbidity achieved with the low flow sampling, most inorganic analyses are directly comparable to dissolved analyses (Table 13). Aluminum and iron (abundant clay mineral constituents) appear to be most variable between dissolved and total groundwater samples.

Concentrations of total and dissolved inorganic constituents detected in upper aquifer wells sampled in November 1996 are generally consistent with concentrations measured in monitoring wells sampled in August 1996.

4.2 LOWER AQUIFER

New lower aquifer wells were sampled at the site on March 12 to 14, 1996, and selected existing upper aquifer wells were sampled at the site between November 5 to 7, 1996. Four new lower aquifer wells were sampled on December 26 to 27, 1996. All groundwater samples were analyzed for VOCs, SVOCs, PCBs and inorganics. The combined results from the three sampling events comprise the 1996 sampling results.

Laboratory analytical results for the March sampling event were reported in the September 1996 Lower Aquifer Investigation Report. Laboratory analytical reports for VOCs, SVOCs and PCBs were contained in Appendix H of that report; Appendix I contained the laboratory analytical results for inorganics. Detections of VOCs, SVOCs, PCBs and inorganic constituents during the March 1996 sampling event are included in Table 14 of this report along with the November and December sampling results.

Laboratory analytical reports for the November and December lower aquifer sampling events are included in this Technical Memorandum. Laboratory analytical reports for

VOCs, SVOCs, and PCBs are presented in Appendix G. Laboratory analytical reports for inorganics are included in Appendix H.

4.2.1 VOCs

A summary of VOC detections in lower aquifer monitoring wells sampled for the 1996 sampling is presented in Table 14. Figure 7 summarizes the VOC detections in groundwater samples collected from lower aquifer monitoring wells.

Acetone and toluene were detected in samples collected from two lower aquifer wells sampled in November and December, 1996 (MW52, MW53, Table 14). These VOCs are common laboratory contaminants, however, they were not eliminated in the validation process. Therefore, acetone and toluene will continue to be monitored in 1997 to verify or disprove their existence in these locations.

At monitoring well MW10 location (replaced in the monitoring program by MW51), where elevated PID readings were previously observed below the confining clay, VOCs were not detected in MW51. Monitoring well MW51 screens across the portion of the aquifer where elevated PID readings were found.

At the MW54/MW55 well nest, VOCs were not detected in the upper and lower portions of the lower aquifer. The lack of VOC detections at this well nest indicates that VOCs have not migrated between the MW51 and MW8 lower aquifer well nests located along the northern downgradient boundary of the ACS Site.

In existing lower aquifer wells, VOCs were found in MW9 and MW10C (see below). The vertical extent of VOCs detected at MW9 was defined by the low level detection of chloroethane (2 ug/L) at MW29 and non-detection at MW34 in March 1996.

Well ID	Well Screen Elevation in Lower Aquifer	Chloroethane (ug/L)	Benzene (ug/L)
MW9	605.9 to 600.9	2,200	310
MW29	575.9 to 580.9	2	ND
MW34	542.8 to 547.8	ND	ND
MW10C	614.7 to 609.7	120	ND

Concentrations of benzene and chloroethane at MW9 have increased in the well since sampling was initiated during the RI. The increasing concentrations at MW9, particularly since January 1995, suggest that VOCs are migrating in the lower aquifer.

Compound (ug/L)	RI Round 1 May 1990	RI Round 2 July 1990	RI Round 3 Jan 1991	Pre-Design Jan 1995	Pre-Design Nov 1996
Chloroethane	440	200	350	650	2,200
Benzene	NA	<5	<5	40	310

These sampling results appear to indicate an order of magnitude increase in VOC concentrations at the MW9 location. Even though these compounds have not been detected at the downgradient site boundary, an increase such as this internal to the site, warrants further consideration. On the basis of the above data and the results of the next sampling event (currently scheduled for February 1997) we will propose a response action for U.S. EPA consideration and approval.

Southeast of the site, VOCs were not detected in the lower aquifer at monitoring wells MW22, MW28 and MW50 (Figure 7). MW50 was installed to specifically evaluate VOC concentrations in the lower aquifer downgradient from residential well sample PW02. (PW02 is not used as a drinking water well). The lack of VOC detections in samples collected at MW50 and other lower aquifer wells in the southeast area (MW22, MW28) indicate that the VOCs found in the residential well water sample were not attributable to lower aquifer contamination. It is probable that the VOCs detected in the residential water well are the result of minor migration along the well annulus when the well is pumped.

TICs were detected in samples collected from several lower aquifer wells and are listed in Appendix G.

4.2.2 SVOCs and PCBs

SVOCs were detected in samples collected at monitoring wells MW9, MW22, MW52 and MW53 in November and December 1996 (Table 14). Bis(2-chloroethyl)ether was found in the MW9 sample at 44 ug/L and isophorone was detected in both MW9 and MW53 samples at an estimated concentrations of 0.8 ug/L. Phenol was detected at concentrations of 10 ug/L in the MW53 sample and at an estimated concentration of 3 ug/L in a sample collected from MW52. This concentration of phenol is similar to the concentration detected in the MW33 sample in March 1996 (6 J ug/L). Both MW33 and MW53 monitoring wells screen the base of the lower aquifer.

Bis(2-ethylhexyl)phthalate was detected in several lower aquifer samples at concentrations ranging from estimated concentrations to 48 ug/L at MW22 (Table 14). In March 1996, this compound was found in lower aquifer samples ranging from 11 ug/L (MW35) to 68 ug/L (MW30). Bis(2-ethylhexyl)phthalate is a probable laboratory contaminant that is commonly used as a plasticizer for producing plastics such as polyvinyl chloride (*Handbook of Environmental Data on Organic Chemicals, Second Edition*, Verschueren, 1983). Therefore, the low level detections of phthalates in water samples are not likely to represent actual groundwater conditions at the site. However, since phthalates were

included in the compounds with listed remediation levels in the SOW of the ROD they will be further evaluated in the 1997 monitoring program.

No other SVOCs or PCBs were detected in monitoring well samples (Appendix G). TICs were detected in several wells and are listed in Appendix G.

4.2.3 Inorganic Parameters

Groundwater samples from lower aquifer wells sampled in November and December 1996 were analyzed for total and dissolved inorganics (Table 14). Major groundwater constituents, calcium, magnesium and sodium were detected at the highest concentrations in the lower aquifer, followed by detections of minor inorganic constituents, iron, potassium, manganese, and aluminum (Table 14). Other inorganics were generally not detected or were found below quantitation limits ("B" designation on Table 14).

Most total inorganic compound analyses are directly comparable to dissolved analyses (Table 14). Aluminum and iron (abundant clay mineral constituents) appear to be most variable between dissolved and total analyses.

Concentrations of total inorganic constituents detected in the lower aquifer wells sampled in November and December 1996 are generally consistent with concentrations measured in monitoring wells sampled in March 1996.

5

SUMMARY AND CONCLUSIONS

This Technical Memorandum was prepared to summarize the investigation activities and 1996 sampling results associated with completion of the 1996 groundwater monitoring program at the ACS Site.

5.1 SCOPE OF WORK

The 1996 sampling event consisted of the following combined activities:

- Sampling of new lower aquifer wells in March 1996 for full scan TCL organics and TAL inorganics.
- Sampling of new upper aquifer wells in August 1996 for full scan TCL organics and TAL inorganics.
- Sampling of selected existing upper and lower aquifer wells in October 1996 for full scan TCL organics and TAL inorganics .
- Sampling of four new lower aquifer wells in December 1996 for full scan TCL organics and TAL inorganics.

The following activities were completed to meet the objectives of the 1996 sampling:

- Two lower aquifer monitoring wells were installed in October 1996. MW50 was installed southeast of the intersection of Reder Road and Colfax Avenue to evaluate groundwater quality in the lower aquifer downgradient of the residential well sample PW02. MW51 was installed north of the ACS Site to screen across the portion of the lower aquifer where elevated PID readings were found during vertical profiling at the MW10 monitoring well location.
- One piezometer (P57) was installed in the upper aquifer in October 1996 to confirm shallow groundwater flow patterns in the northeastern area of the Site.

- Two monitoring well nests (MW52/MW53 and MW54/MW55) were installed in December 1996. Both new well nests were installed along the northern boundary of the ACS Site. The purpose of the well nests was to evaluate groundwater quality in the lower aquifer downgradient of the Site at both the top and bottom of the lower aquifer. The shallow well at each nest was installed immediately below the upper confining clay in the upper portion of the lower aquifer. A second deep well was installed at the base of the lower aquifer to monitor groundwater conditions where potential DNAPL constituents would be found.

- Water levels were measured in upper and lower aquifer wells, piezometers and staff gauges in August and November 1996.

- Groundwater samples from newly installed monitoring wells and selected existing wells in the upper and lower aquifers were collected in November and December 1996 and analyzed for full scan TCL organics and TAL inorganics.

- Analytical results from the November and December 1996 sampling events were combined with the groundwater analytical results from the March and August sampling events to comprise the 1996 sampling results.

Based on data gathered from these activities, the following conclusions were developed:

5.2 HYDROGEOLOGY

- The top of the clay confining layer was encountered at an elevation of 617.7 ft amsl at MW50, located in southeast portion of the site. In monitoring wells drilled north of the Site (MW51 to MW55), the top of the upper clay confining layer was encountered between elevations of 618.4 amsl (MW52) and 621.3 amsl (MW55). The elevations of the top of the upper clay confining layer are consistent with findings of previous investigations, and expand the data base regarding the upper clay surface elevations at the Site.

- The bottom of the lower aquifer was encountered during drilling at MW53 and MW55. At these two locations, the upper surface of the lower confining clay was encountered at elevations of 545 feet and 538 feet (amsl), respectively.

- The direction of horizontal groundwater flow in the upper aquifer measured on August 27, 1996 and November 4, 1996 is consistent with upper aquifer data presented in the June 1991 RI and recent water level data collected on October 30, 1995 and June 5, 1996.

- The northward direction of horizontal groundwater flow and horizontal hydraulic gradient in the lower aquifer measured on August 27 and November 4, 1996 is

consistent with lower aquifer data presented in the June 1991 RI, October 30, 1995 Technical Memorandum and September 1996 Lower Aquifer Investigation Technical Memorandum.

- Vertical gradients measured on August 27 and November 4, 1996 were determined for three aquifer horizons: 1) vertical gradients in the wetland area; 2) vertical gradients in the lower aquifer; and 3) vertical gradients between the upper and lower aquifers. Vertical gradients in the wetland area were very low and variable, consistent with a typical wetland area. In the lower aquifer, vertical gradients were very low, ranging from 0.006 upward (0.0125 upward between MW51 and MW10) to 0.005 downward. A strong downward gradient between the upper and lower aquifers was observed at all nested locations, ranging from -0.3539 to -1.00. All vertical gradients were consistent with data presented in the June 1991 RI, September 1996 Lower Aquifer Investigation Technical Memorandum, and October 1996 Phase 2 Technical Memorandum.

5.3 1996 ANALYTICAL RESULTS

5.3.1 Upper Aquifer

- The extent of VOC concentrations in the upper aquifer was defined at the ACS site by samples collected at monitoring wells to the north (MW38, MW39), to the east (MW11, MW18 and MW40), to the southeast (MW41 through MW44; MW47) and to the wetland area to the west (MW46). Highest VOC concentrations were detected in monitoring well samples collected within the known limits of the plume.

- Low concentrations of SVOCs were detected in monitoring wells sampled in November 1996. Similar to the August 1996 sampling data, SVOCs were detected during the November 1996 sampling event in monitoring wells exhibiting VOC concentrations.

- Major and minor groundwater inorganic constituents were detected most frequently in the upper aquifer. Other inorganic compounds apparently randomly detected in upper aquifer monitoring wells included arsenic, barium, cobalt, copper, lead, nickel, selenium, thallium and vanadium.

5.3.2 Lower Aquifer

- Acetone and toluene were detected in samples collected from lower aquifer wells MW52, and MW53. These VOCs are common laboratory contaminants, however, they were not eliminated through the data validation process. Therefore acetone and toluene will continue to be monitored in 1997 to verify or disprove their existence in these locations

- VOCs were not detected in MW51. Monitoring well MW51 screens across the portion of the aquifer where elevated PID readings were found during the vertical profile field screening sampling in February 1996.

- At the MW54/MW55 well nest, VOCs were not detected in the upper and lower portions of the lower aquifer. This indicates that VOCs have not migrated downgradient in the lower aquifer between existing lower aquifer wells located at the MW51 and MW8 well clusters.

- In existing lower aquifer wells, chloroethane and benzene were found in MW9 and MW10C. The vertical extent of VOCs detected at MW9 was defined by the low level detection of chloroethane (2 ug/L) at MW29 and non-detection at MW34 in March 1996.

- Concentrations of benzene and chloroethane at MW9 have increased in the well since sampling was initiated during the RI. The increasing concentrations at MW9, particularly since January 1995, suggest that VOCs are migrating in the lower aquifer.

- Southeast of the site, VOCs were not detected in the lower aquifer at monitoring wells MW22, MW28 and MW50. MW50 was installed to specifically evaluate VOC concentrations in the lower aquifer downgradient from residential well sample PW02. The lack of VOC detections in samples collected at MW50 and other lower aquifer wells in the southeast area (MW22, MW28) indicate that the VOCs found in the residential well water sample were not attributable to lower aquifer contamination.

- Bis(2-ethylhexyl)phthalate was detected in water samples collected from several lower aquifer wells. This compound is a suspected laboratory contaminant. Its significance at the Site will be further evaluated in the 1997 monitoring program.

- Major and minor groundwater constituents were detected at in the lower aquifer. Other trace inorganics were generally not detected or were found below quantitation limits.

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TABLES

Table 1
1996 Upper Aquifer Sampling Program
American Chemical Service, Inc. NPL Site
Griffith, Indiana

	Area of Site	Well Identification	Site Location	1996 August	1996 October 4th
1	North	MW37	Downgradient	TAL/TCL	
2		MW38	Downgradient	TAL/TCL	
3		MW39	Side-gradient	TAL/TCL	
4	East	MW11	Side-gradient		TAL/TCL
5		MW40	East of site	TAL/TCL	
6		MW12			TAL/TCL
7		MW18			TAL/TCL
8	Southeast	MW47	Downgradient	TAL/TCL	
9		MW41	southeast of landfill	TAL/TCL	
10		MW42		TAL/TCL	
11		MW43		TAL/TCL	
12		MW44		TAL/TCL	
13		MW19			TAL/TCL
14	Southwest	MW15	Southwest of landfill		TAL/TCL
15		M1S	Griffith Landfill	not sampled	
16		M2S	Griffith Landfill	not sampled	
17	Wetlands	MW14	Downgradient		TAL/TCL
18		MW46	in wetland area	TAL/TCL	
19		MW13			TAL/TCL
20	Plume Interior	MW48	North side of site	TAL/TCL	
21		MW49	North side of site	TAL/TCL	
22		MW6	southeast of landfill		TAL/TCL
23		MW45	southeast of landfill	TAL/TCL	
24		M4S	Griffith Landfill	not sampled	

Notes:

TCL Target Compound List (VOCs, SVOCs, pesticides & PCBs)

TAL Target Analyte List (Metals)

TIL Target Indicator List (benzene, chloroethane, ethylbenzene, toluene, xylene, chlorobenzene, 1,2-dichloroethene and 1,1-dichloroethene

Table 2
1996 Lower Aquifer Sampling Program
American Chemical Service, Inc. NPL Site
Griffith, Indiana

	Well Identification	Piezometers	Well Screen Depth in Lower Aquifer	Site Location	1996 March 1st	July 3rd	Nov/Dec 4th
1	MW24		Upper	Downgradient			TAL/TCL
2	MW52		Upper	Downgradient			TAL/TCL
3	MW53		Lower	north of site			TAL/TCL
4	MW51		Upper	Downgradient			TAL/TCL
5	MW30		Middle	north of site	TAL/TCL		
6	MW33		Lower		TAL/TCL		
7	MW54		Upper	Downgradient			TAL/TCL
8	MW55		Lower	north of site			TAL/TCL
9	MW8		Upper	Downgradient			TAL/TCL
10	MW31		Middle	North	TAL/TCL		
11	MW32		Lower		TAL/TCL		
12	MW10C		Upper	Downgradient			TAL/TCL
13	MW23		Upper	Downgradient			TAL/TCL
14	MW9		Upper	Downgradient			TAL/TCL
15	MW29		Middle	west of site	TAL/TCL		
16	MW34		Lower		TAL/TCL		
17	M4		Upper	Griffith Landfill	not sampled		
18	MW35		Lower		TAL/TCL		
19	MW21		Upper	Side-gradient			TAL/TCL
20	MW7		Upper	Site-gradient			TCL
		PZ44	Middle	east of site			
	MW36		Lower		TAL/TCL		
21	MW28		Upper	Upgradient	TAL/TCL		
		PZ42	Middle	east of site			
		PZ43	Lower				
22	MW22		Upper	Upgradient	TAL/TCL		
23	MW50		Upper	south of site			TAL/TCL
Residential Drinking Water Wells							
	PW01					TAL/TCL	
	PW-A	To be determined				TAL/TCL	
	PW-B	To be determined				TAL/TCL	
	PW04					TAL/TCL	

Notes:

TCL Target Compound List (VOCs, SVOCs, pesticides & PCBs)
TAL Target Analyte List
TIL Target Indicator List (benzene, chloroethane, ethylbenzene, toluene, xylene, chlorobenzene, 1,2-dichloroethene and 1,1-dichloroethene

Table 3
Monitoring Well Construction Information
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Well ID	Coordinates		Ground Elevation[1]	Top of Casing Elevation[1]	Screened Interval		Screen Length[2]	Depth to Clay (ft)	Clay Elevation	Well Material	Year Installed
	Northing	Easting			Top[1]	Bottom[1]					
MW50	5383	5270	647.2	649.43	596.20	586.2	9.65	29.5	617.7	2" SS	1996
MW51	7767	5198	631.9	634.16	611.90	601.9	9.65	12.5	619.4	2" SS	1996
MW52	7814	4996	631.4	632.74	615.6	605.6	9.8	12.5	618.9	2" SS	1996
MW53	7833	4977	631.9	632.87	555.7	545.7	9.8	13.5	618.4	2" SS	1996
MW54	7592	5590	634.6	636.05	608.1	598.1	9.8	14.0	620.6	2" SS	1996
MW55	7604	5595	635.3	636.63	547.6	537.6	9.8	14.0	621.3	2" SS	1996
P57	7573	6783	638.6	638.05	631.60	626.6	4.7	ne	ne	2" PVC	1996

Notes:

2" PVC = 2" Schedule 40 Poly vinyl chloride well screen and casing.

2" SS = 2" Stainless steel well screen and casing.

ne - Clay not encountered in P57

Footnotes:

(1) Elevations are referenced to Mean Sea Level.

(2) Screen length is the slotted interval. See Appendix B for well/piezometer construction details.

Table 4
Summary of Field Parameter Results
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Well ID	Field Parameters				
	pH (std. units)	Conductivity[1] (field measurement)	Conductivity[1] (adjusted to 25°C)	Temperature (°C)	Turbidity (NTU)
MW6	6.55	1820	2230	15.8	22.0
MW11	6.7	413	548	12.7	72.0
MW12	6.87	566	720	14.3	99.0
MW13	7.17	796	1067	12.3	38.0
MW21	7.29	926	1196	13.7	11.9
MW22	10.57	1530	2013	13.0	21.8
MW23	7.23	842	1063	14.6	160.0
MW24	7.15	1159	1438	15.3	346.0
MW50	4.89	1870	2286	15.9	370.0
MW51	8.41	1600	2198	11.4	34.0
MW52	7.29	821	1069	13.4	307.0
MW53	6.86	2250	3233	9.8	62.4
MW54	7.56	1140	1496	13.1	87.4
MW55	7.67	868	1176	11.9	261.0

Notes:
NTU = nephelometric tubidity units

Footnotes:
(1) Conductivity shown in units of umhos/cm.

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Table 5
Groundwater Elevations - August 27, 1996
American Chemical Service, Inc. NPL Site

Lower Aquifer Wells

Location	Reference Points East	Reference Points North	Reference Points TOC	8/27/96 Depth	8/27/96 Elev	Well Status
MW-7	6113	6732	641.46	18.61	622.85	Good Condition
PZ44	6170	6766	638.47	15.63	622.84	New Piezometer
MW36	6164	6768	637.85	15.00	622.85	New
MW-8	5934	7506	640.43	17.92	622.51	Good Condition
MW31	5907	7505	641.64	19.13	622.51	New
MW32	5902	7507	641.84	19.32	622.52	New
MW-9	4893	6990	639.05	16.18	622.87	Good Condition
MW29	4886	7012	638.06	15.22	622.84	New
MW34	4880	7002	638.14	15.28	622.86	New
MW-10	5200	7784	635.49	13.08	622.41	Good Condition
MW30	5194	7774	634.25	11.94	622.31	New
MW33	5189	7774	634.13	11.82	622.31	New
MW-10C	5229	7554	637.45	14.78	622.67	In Sand Seam in Confining L
MW-21	4546	7067	633.76	10.98	622.78	Good Condition
MW-22	5208	4898	636.48	12.84	623.64	Good Condition
MW-23	4717	7404	633.31	10.63	622.68	Good Condition
MW-24	4596	8033	635.22	12.92	622.30	Good Condition
MW28	5657	5696	648.77	25.38	623.39	New
PZ42	5662	5696	648.44	25.00	623.44	New Piezometer
PZ43	5662	5702	648.69	25.28	623.41	New Piezometer
ATMW-4D	5297	7311	637.99	15.26	622.73	ACS facility Well - LA
W-2	5292	7307	638.46	14.63	623.83	Lower Aquifer Well
M-1D	4359	5747	638.32	15.05	623.27	Griffith Landfill LA Well
M-2D	3997	6495	637.11			Hornet Infested
M-3D	4144	6821	632.19			Hornet Infested
M-4D	4949	6538	633.32	10.39	622.93	Griffith Landfill LA Well
MW35	4934	6542	634.50	11.46	623.04	New
M-5D	4171	7094	634.18	11.30	622.88	Griffith Landfill LA Well

Upper Aquifer Wells

Location	Reference Points East	Reference Points North	Reference Points TOC	8/27/96 Depth	8/27/96 Elev	Well Status
MW-2	5033	6839	638.05	7.43	630.62	Needs Repair - Still functional
MW-3	5299	7314	636.62	6.37	630.25	Moved
MW-4	6112	7126	641.05	6.97	634.08	Good Condition
MW-5	5788	6482	642.13	7.49	634.64	Good Condition
MW-6	5298	5520	655.28	21.39	633.89	Good Condition
MW-11	6377	7329	640.47	6.70	633.77	Good Condition
MW-12	6019	6352	642.74	8.10	634.64	Good Condition
MW-13	5050	7814	634.08	4.56	629.52	Good Condition
MW-14	4882	6995	638.56	9.32	629.24	Good Condition
MW-15	4721	5003	637.89	5.14	632.75	Good Condition
MW-16	5065	6596	638.52	7.81	630.71	Good Condition
MW-17	5656	5677	647.14	12.68	634.46	Good Condition
MW-18	5836	5746	644.89	7.85	637.04	Good Condition
MW-19	5231	4943	635.78	3.31	632.47	Good Condition
MW-20	5095	5028	642.98	10.31	632.67	Good Condition
AM-05	5224	6360	637.28	4.44	632.84	(Test Well)
Red Well	5204	6466	639.01	6.76	632.25	Good Condition
W-1	5305	7323	637.33	7.08	630.25	Good Condition

Table 5 (continued)
Groundwater Elevations - August 27, 1996
American Chemical Service, Inc. NPL Site

NEW UPPER AQUIFER MONITORING WELLS

Location	Reference Points			8/27/96		Well Status
	East	North	TOC	Depth	Elev	
MW37	5395	7976	636.78	6.38	630.40	Installed Week of 7/15/96
MW38	5903	8216	636.51	6.15	630.36	Installed Week of 7/15/96
MW39	6253	7947	637.77	6.40	631.37	Installed Week of 7/15/96
MW40	6349	6831	639.46	5.05	634.41	Installed Week of 7/15/96
MW41	6242	4517	632.74	7.03	625.71	Installed Week of 7/15/96
MW42	6264	3808	632.32	6.22	626.10	Installed Week of 7/15/96
MW43	5880	3719	633.56	6.66	626.90	Installed Week of 7/15/96
MW44	5390	4303	633.04	4.37	628.67	Installed Week of 7/15/96
MW45	5830	4388	635.35	6.87	628.48	Installed Week of 7/15/96
MW46	4526	7424	633.32	3.83	629.49	Installed Week of 7/15/96
MW47	5958	5084	640.54	7.09	633.45	Installed Week of 7/15/96
MW48	5669	7814	636.36	5.80	630.56	Installed Week of 7/15/96
MW49	5551	7650	637.00	6.15	630.85	Installed Week of 7/15/96

Leachate/Upper Aquifer Landfill Wells

Location	Reference Points			8/27/96		Well Status
	East	North	TOC	Depth	Elev	
LW-1	4807	5070	644.57	11.60	632.97	Good Condition
LW-2	4662	5465	649.70	16.44	633.26	Good Condition
M-1S	4362	5743	639.09	7.04	632.05	Good Condition
M-2S	3999	6491	637.12	9.05	628.07	Good Condition
M-3S	4142	6819	631.88	6.46	625.42	Good Condition
M-4S	4953	6537	633.42	4.56	628.86	Good Condition
M-5S	4170	7089	634.17	7.41	626.76	Good Condition

Staff Gauges

Location	Reference Points			8/27/96		Status
	East	North	TOC	Depth	Elev	
SG-1	5023	6196	633.96	Dry	Dry	New Gauge Installed 10-2-95
SG-2	4423	6864	633.82	2.05	631.77	New Gauge Installed 10-2-95
SG-3	4180	7123	631.58	Dry	Dry	New Gauge Installed 10-2-95
SG-4	5228	6611	636.14	Gone		Ran over during barrier wall drill
SG-5	5464	7713	632.47	3.55	628.92	New Gauge Installed 10-2-95
SG-6	4495	8075	630.73	2.44	628.29	New Gauge Installed 10-25-95
SG-7	5403	6889	637.21	2.17	635.04	New Gauge Installed 10-2-95
SG-8	5405	5202				Replaced by SG8R
SG-9	3846	6336	632.59	Gone		Gauge has never been found
SG-10	6748	7238	636.47	2.48	633.99	New Gauge Installed 10-2-95
SG-8R	5409	5252	635.03	2.11	632.92	Pond Stafff Gauge
SG-11	5859	8245	634.64	Dry	Dry	Installed 7/19/96
SG-12	5596	7867	634.50	Dry	Dry	Installed 7/19/96

Table 5 (continued)
Groundwater Elevations - August 27, 1996
American Chemical Service, Inc. NPL Site

Piezometers	Reference Points			8/27/96		
Location	East	North	TOC	Depth	Elev	Status
P-1	5700	6365	642.84	8.26	634.58	Good Condition
P-2	5577	6165	645.57	11.10	634.47	Good Condition
P-3	5453	6470	639.87	5.77	634.10	Good Condition
P-4	5432	6228	639.25	4.89	634.36	Good Condition
P-5	5285	6510	636.70	NM	NM	Buried in Brush
P-6	5150	6551	638.75	7.10	631.65	Good Condition
P-7	5950	6630	643.63	9.00	634.63	Good Condition
P-8	6156	6734	639.27	4.94	634.33	Good Condition
P-9	6134	6994	638.88	4.72	634.16	Good Condition
P-10	5413	5852	649.32	15.06	634.26	Good Condition
P-11	5199	5900	649.14	14.90	634.24	Good Condition
P-12	5076	5723	650.08	16.09	--	Product Level
P-13	4878	5735	651.20	17.18	634.02	Good Condition
P-14	5014	5914	645.33	11.43	633.90	New
P-15	5003	6187	639.93	7.64	632.29	New
P-16	4673	5749	648.80	14.44	634.36	New
P-17	4584	6006	654.64	20.50	634.14	New
P-18	4623	6224	649.84	4.90	644.94	New
P-19	4977	5043	639.71	6.92	632.79	Good Condition
P-20	5104	6233	643.10	8.83	634.27	Good Condition
P-21	4569	6537	632.82	6.84	625.98	New
P-22	4636	6732	634.30	7.88	626.42	Good Condition
P-23	4689	7018	636.18	8.14	628.04	Good Condition
P-24	5002	7178	636.06	6.40	629.66	Good Condition
P-25	5131	7510	635.01	5.76	629.25	Re-Installed 10-25-95
P-26	4764	7309	634.23	6.09	628.14	Good Condition
P-27	4904	7020	639.70	10.04	629.66	Good Condition
P-28	5883	7486	644.53	11.47	633.06	Good Condition
P-29	5738	6619	642.37	7.67	634.70	Good Condition
P-30	5626	6793	642.42	7.72	--	Product Level
P-31	5480	7159	641.03	7.69	633.34	Good Condition
P-32	5746	7026	642.32	8.28	634.04	Re-Installed 10-27-95
P-33	5226	7129	640.20	7.77	632.43	Re-Installed 10-27-95
P-34	5279	6692	639.46	6.22	633.24	Good Condition
P-35	5515	6572	641.44	6.94	634.50	Re-Installed 10-27-95
P-36	5410	6851	645.89	11.16	634.73	Re-Installed 10-27-95
P-37	5330	6949	641.37	--	--	Damaged-Former Product Well
P-38	5149	6992	639.87	--	--	Eliminated
P-39	5940	6902	642.00	7.73	634.27	New
P-40	5880	7229	640.10	6.46	633.64	Good Condition
P-41	5702	7353	638.82	5.73	633.09	Good Condition
P-49	5119	6951	638.96	7.08	631.88	Old P-51
P-50	5129	6964	639.59	8.10	631.49	Good Condition
P-51	3876	6859	635.07	7.39	627.68	Installed 10-25-95
P-52	4100	7845	636.66	7.73	628.93	Revised 2-15-96)
P-53	4597	8015	636.18	6.49	629.69	Installed 10-24-95
P-54	4936	8081	638.28	7.80	630.48	Installed 10-2-95
P-55	5628	7979	636.08	6.13	629.95	Installed 10-25-95
P-56	6405	7665	639.46	6.30	633.16	Installed 10-23-95
P-57						Not Yet Installed
P-58	6454	6932	638.30	4.00	634.30	Installed 10-24-95
P-59	6389	6590	639.22	5.05	634.17	Installed 10-24-95
P-60	6111	6051	640.23	5.47	634.76	Installed 10-26-95
P-61	5533	5284	638.58	5.74	632.84	Installed 10-24-95
P-62	5665	4945	637.06	5.65	631.41	Installed 10-24-95
P-63	5483	7689	637.70	7.31	630.39	Installed 10-23-95
EW-1	5113	6942	639.50	7.85	631.65	Good Condition

Table 5 (continued)
Groundwater Elevations - August 27, 1996
American Chemical Service, Inc. NPL Site

NEW PIEZOMETERS - WETLANDS

Piezometers	Reference Points			8/27/96		
Location	East	North	TOC	Depth	Elev	Status
P-64	4617	7065	634.87	7.25	627.62	Screen @ top of upper aquifer
P-65	4615	7063	634.77	7.10	627.67	Screen @ base of upper aquifer
P-66	4729	7034	636.02	7.82	628.20	Screen @ top of upper aquifer
P-67	4732	7034	636.06	7.82	628.24	Screen @ base of upper aquifer
P-68	4743	7752	634.48	5.68	628.80	Screen @ top of upper aquifer
P-69	4741	7751	634.66	5.86	628.80	Screen @ base of upper aquifer
P-70	4880	7680	635.38	6.70	628.68	Screen @ top of upper aquifer
P-71	4876	7682	635.32	6.77	628.55	Screen @ base of upper aquifer

Notes
Shading indicates that water elevation was not used in developing contour map
NM - Not measured

Table 6
Groundwater Elevations - November 4, 1996
American Chemical Service, Inc. NPL Site

Lower Aquifer Wells

Location	Reference Points			11/4/96		Well Status
	East	North	TOC	Depth	Elev	
MW-7	6113	6732	641.46	19.36	622.10	Good Condition
PZ44	6170	6766	638.47	16.38	622.09	New Piezometer
MW36	6164	6768	637.85	15.73	622.12	New
MW-8	5934	7506	640.43	18.72	621.71	Good Condition
MW31	5907	7505	641.64	19.91	621.73	New
MW32	5902	7507	641.84	20.12	621.72	New
MW-9	4893	6990	639.05	16.99	622.06	Good Condition
MW29	4886	7012	638.06	16.02	622.04	New
MW34	4880	7002	638.14	16.07	622.07	New
MW-10	5200	7784	635.49	13.89	621.60	Good Condition
MW30	5194	7774	634.25	12.76	621.49	New
MW33	5189	7774	634.13	12.63	621.50	New
MW51	5198	7767	634.16	12.64	621.52	Installed October 16, 1996
MW-10C	5229	7554	637.45	15.57	621.88	In Sand Seam in Confining L
MW-21	4546	7067	633.76	11.71	622.05	Good Condition
MW-22	5208	4898	636.48	13.47	623.01	Good Condition
MW-23	4717	7404	633.31	11.32	621.99	Good Condition
MW-24	4596	8033	635.22	13.67	621.55	Good Condition
MW28	5657	5696	648.77	25.90	622.87	New
PZ42	5662	5696	648.44	25.57	622.87	New Piezometer
PZ43	5662	5702	648.69	25.73	622.96	New Piezometer
MW50	5269	5383	649.43	26.69	622.74	Installed October 17, 1996
ATMW-4D	5297	7311	637.99	16.02	621.97	ACS facility Well - LA
W-2	5292	7307	638.46	15.38	623.08	Lower Aquifer Well
M-1D	4359	5747	638.32	15.75	622.57	Griffith Landfill LA Well
M-2D	3997	6495	637.11	14.85	622.26	Griffith Landfill LA Well
M-3D	4144	6821	632.19	--	--	Griffith Landfill LA Well
M-4D	4949	6538	633.32	11.15	622.17	Griffith Landfill LA Well
MW35	4934	6542	634.50	12.18	622.32	New
M-5D	4171	7094	634.18	12.07	622.11	Griffith Landfill LA Well

Upper Aquifer Wells

Location	Reference Points			11/4/96		Well Status
	East	North	TOC	Depth	Elev	
MW-2	5033	6839	638.05	7.40	630.65	Needs Repair - Still functional
MW-3	5299	7314	636.62	5.74	630.88	Moved
MW-4	6112	7126	641.05	7.61	633.44	Good Condition
MW-5	5788	6482	642.13	8.70	633.43	Good Condition
MW-6	5298	5520	655.28	22.92	632.36	Good Condition
MW-11	6377	7329	640.47	7.28	633.19	Good Condition
MW-12	6019	6352	642.74	9.27	633.47	Good Condition
MW-13	5050	7814	634.08	3.56	630.52	Good Condition
MW-14	4882	6995	638.56	9.38	629.18	Good Condition
MW-15	4721	5003	637.89	6.19	631.70	Good Condition
MW-16	5065	6596	638.52	7.81	630.71	Good Condition
MW-17	5656	5677	647.14	14.36	632.78	Good Condition
MW-18	5836	5746	644.89	9.30	635.59	Good Condition
MW-19	5231	4943	635.78	4.16	631.62	Good Condition
MW-20	5095	5028	642.98	11.29	631.69	Good Condition
AM-05	5224	6360	637.28	4.80	632.48	(Test Well)
Red Well	5204	6466	639.01	6.84	632.17	Good Condition
W-1	5305	7323	637.33	6.50	630.83	Good Condition

Table 6 (continued)
Groundwater Elevations - November 4, 1996
American Chemical Service, Inc. NPL Site

NEW UPPER AQUIFER MONITORING WELLS

	Reference Points			11/4/96		
Location	East	North	TOC	Depth	Elev	Well Status
MW37	5395	7976	636.78	5.92	630.86	Installed Week of 7/15/96
MW38	5903	8216	636.51	5.82	630.69	Installed Week of 7/15/96
MW39	6253	7947	637.77	5.53	632.24	Installed Week of 7/15/96
MW40	6349	6831	639.46	5.83	633.63	Installed Week of 7/15/96
MW41	6242	4517	632.74	7.87	624.87	Installed Week of 7/15/96
MW42	6264	3808	632.32	6.20	626.12	Installed Week of 7/15/96
MW43	5880	3719	633.56	6.64	626.92	Installed Week of 7/15/96
MW44	5390	4303	633.04	3.76	629.28	Installed Week of 7/15/96
MW45	5830	4388	635.35	6.72	628.63	Installed Week of 7/15/96
MW46	4526	7424	633.32	3.38	629.94	Installed Week of 7/15/96
MW47	5958	5084	640.54	7.22	633.32	Installed Week of 7/15/96
MW48	5669	7814	636.36	4.91	631.45	Installed Week of 7/15/96
MW49	5551	7650	637.00	5.45	631.55	Installed Week of 7/15/96

Leachate/Upper Aquifer Landfill Wells

	Reference Points			11/4/96		
Location	East	North	TOC	Depth	Elev	Well Status
LW-1	4807	5070	644.57	12.80	631.77	Good Condition
LW-2	4662	5465	649.70	17.67	632.03	Good Condition
M-1S	4362	5743	639.09	7.50	631.59	Good Condition
M-2S	3999	6491	637.12	7.67	629.45	Good Condition
M-3S	4142	6819	631.88	4.67	627.21	Good Condition
M-4S	4953	6537	633.42	6.25	627.17	Good Condition
M-5S	4170	7089	634.17	5.47	628.70	Good Condition

Staff Gauges

	Reference Points			11/4/96		
Location	East	North	TOC	Depth	Elev	Status
SG-1	5023	6196	633.98	Dry	Dry	New Gauge Installed 10-2-95
SG-2	4423	6864	633.82	4.02	629.80	Gauge is bent
SG-3	4180	7123	631.58	Dry	Dry	New Gauge Installed 10-2-95
SG-4	5228	6611	636.14	Dry	Dry	Ran over during barrier wall drill
SG-5	5464	7713	632.47	3.28	629.19	New Gauge Installed 10-2-95
SG-6	4495	8075	630.73	--	--	New Gauge Installed 10-25-95
SG-7	5403	6889	637.21	2.30	634.91	New Gauge Installed 10-2-95
SG-9	3846	6336	632.59	--	--	Gauge has never been found
SG-10	6748	7238	636.47	3.60	632.87	New Gauge Installed 10-2-95
SG-8R	5409	5252	635.03	3.14	631.89	Pond Stafff Gauge
SG-11	5859	8245	634.64	Dry	Dry	Installed 7/19/96
SG-12	5596	7867	634.50	4.40	630.10	Installed 7/19/96

Table 6 (continued)
Groundwater Elevations - November 4, 1996
American Chemical Service, Inc. NPL Site

Piezometers	Reference Points			11/4/96		
Location	East	North	TOC	Depth	Elev	Status
P-1	5700	6365	642.84	9.41	633.43	Good Condition
P-2	5577	6165	645.57	--	--	Eliminated
P-3	5453	6470	639.87	6.50	633.37	Good Condition
P-4	5432	6228	639.25	5.91	633.34	Good Condition
P-5	5285	6510	636.70	3.96	632.74	Buried in Brush
P-6	5150	6551	638.75	6.89	631.86	Good Condition
P-7	5950	6630	643.63	10.08	633.55	Good Condition
P-8	6156	6734	639.27	5.67	633.60	Good Condition
P-9	6134	6994	638.88	5.41	633.47	Good Condition
P-10	5413	5852	649.32	16.62	632.70	Good Condition
P-11	5199	5900	649.14	16.39	632.75	Good Condition
P-12	5076	5723	650.08	--	--	Product in Piezometer
P-13	4878	5735	651.20	18.95	632.25	Good Condition
P-14	5014	5914	645.33	12.83	632.50	New
P-15	5003	6187	639.93	8.45	631.48	New
P-16	4673	5749	648.80	16.26	632.54	New
P-17	4584	6006	654.64	22.64	632.00	New - Inside Griffith Landfill
P-18	4623	6224	649.84	5.68	644.16	New - Inside Griffith Landfill
P-19	4977	5043	639.71	7.92	631.79	Good Condition
P-20	5104	6233	643.10	10.71	632.39	Good Condition
P-21	4569	6537	632.82	nm		Destroyed by Town of Griffith
P-22	4636	6732	634.30	7.80	626.50	Good Condition
P-23	4689	7018	636.18	7.52	628.66	Good Condition
P-24	5002	7178	636.06	5.45	630.61	Good Condition
P-25	5131	7510	635.01	4.01	631.00	Re-Installed 10-25-95
P-26	4764	7309	634.23	4.46	629.77	Good Condition
P-27	4904	7020	639.70	10.40	629.30	Good Condition
P-28	5883	7486	644.53	11.82	632.71	Good Condition
P-29	5738	6619	642.37	--	--	Product in piezometer
P-30	5626	6793	642.42	--	--	Product in piezometer
P-31	5480	7159	641.03	8.17	632.86	Good Condition
P-32	5746	7026	642.32	8.97	633.35	Re-Installed 10-27-95
P-33	5226	7129	640.20	7.77	632.43	Re-Installed 10-27-95
P-34	5279	6692	639.46	6.65	632.81	Good Condition
P-35	5515	6572	641.44	8.05	633.39	Re-Installed 10-27-95
P-36	5410	6851	645.89	11.73	634.16	Re-Installed 10-27-95
P-37	5330	6949	641.37	--	--	Destroyed
P-38	5149	6992	639.87	--	--	Eliminated
P-39	5940	6902	642.00	8.55	633.45	New
P-40	5880	7229	640.10	7.02	633.08	Good Condition
P-41	5702	7353	638.82	6.05	632.77	Good Condition
P-49	5119	6951	638.96	6.70	632.26	Old P-51
P-50	5129	6964	639.59	7.95	631.64	Good Condition
P-51	3876	6859	635.07	5.79	629.28	Installed 10-25-95
P-52	4100	7845	636.66	6.88	629.78	Revised 2-15-96)
P-53	4597	8015	636.18	5.76	630.42	Installed 10-24-95
P-54	4936	8081	638.28	7.50	630.78	Installed 10-2-95
P-55	5628	7979	636.08	5.19	630.89	Installed 10-25-95
P-56	6405	7665	639.46	6.51	632.95	Installed 10-23-95
P-57	6783	7573	638.05	4.65	633.40	Installed October 16, 1996
P-58	6454	6932	638.30	5.73	632.57	Installed 10-24-95
P-59	6389	6590	639.22	5.56	633.66	Installed 10-24-95
P-60	6111	6051	640.23	6.48	633.75	Installed 10-26-95
P-61	5533	5284	638.58	6.75	631.83	Installed 10-24-95
P-62	5665	4945	637.06	6.03	631.03	Installed 10-24-95
P-63	5483	7689	637.70	6.68	631.02	Installed 10-23-95
EW-1	5113	6942	639.50	7.57	631.93	Good Condition

Table 6 (continued)
Groundwater Elevations - November 4, 1996
American Chemical Service, Inc. NPL Site

NEW PIEZOMETERS - WETLANDS

Piezometers	Reference Points			11/4/96		
Location	East	North	TOC	Depth	Elev	Status
P-64	4617	7065	634.87	5.99	628.88	Screen @ top of upper aquifer
P-65	4615	7063	634.77	5.89	628.88	Screen @ base of upper aquifer
P-66	4729	7034	636.02	7.25	628.77	Screen @ top of upper aquifer
P-67	4732	7034	636.06	7.25	628.81	Screen @ base of upper aquifer
P-68	4743	7752	634.48	4.03	630.45	Screen @ top of upper aquifer
P-69	4741	7751	634.66	4.21	630.45	Screen @ base of upper aquifer
P-70	4880	7680	635.38	4.80	630.58	Screen @ top of upper aquifer
P-71	4876	7682	635.32	4.70	630.62	Screen @ base of upper aquifer

Notes

Shading indicates that water elevation was not used in developing contour map

NM - Not measured

Table 7
Vertical Gradients in Wetlands - August 1996
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Piezometer Nest	Screen Interval		Screen Midpoint	Separation (feet)	Groundwater Elevation			Hydraulic Gradient
	Top	Bottom			Upper	Lower	delta	
P64	629.05	624.10	626.58	5	627.62			
P65	622.20	620.20	621.20			627.67	0.05	0.009
P66	629.45	625.10	627.28	8	628.2			
P67	620.50	618.50	619.50			628.24	0.04	0.005
P68	628.15	623.80	625.98	6	628.8			
P69	621.10	618.60	619.85			628.8	0	0.00
P70	628.55	624.20	626.38	6	628.68			
P71	621.00	619.00	620.00			628.55	-0.13	-0.02

Notes:
(-) = Downward Vertical Gradient
Positive number in final column indicates upward gradient
Water Levels Collected by Montgomery Watson on August 27, 1996

Table 8
Vertical Gradients in Wetlands - November 1996
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Piezometer	Screen Interval		Screen	Separation	Groundwater Elevation			Hydraulic
Nest	Top	Bottom	Midpoint	(feet)	Upper	Lower	delta	Gradient
P64	629.05	624.10	626.58	5	628.88			
P65	622.20	620.20	621.20			628.88	0	0.000
P66	629.45	625.10	627.28	8	628.77			
P67	620.50	618.50	619.50			628.81	0.04	0.005
P68	628.15	623.80	625.98	6	630.45			
P69	621.10	618.60	619.85			630.45	0	0.000
P70	628.55	624.20	626.38	6	630.58			
P71	621.00	619.00	620.00			630.62	0.04	0.006

Notes:
(-) = Downward Vertical Gradient
Positive number in final column indicates upward gradient
Water Levels Collected by Montgomery Watson on November 4, 1996

Table 9
Vertical Gradients in Lower Aquifer - August 1996
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Well	Screen Interval		Screen	Separation	Groundwater Elevation				Vertical Gradients In Lower Aquifer		
Nest	Top	Bottom	Midpoint	(feet)	Upper	Middle	Lower	delta	Upper/Middle	Middle/Lower	Upper/Lower
MW7	595.9	590.9	593.4		622.85						
PZ44	578.4	573.4	575.9	18		622.84		-0.01	-0.0006		
MW36	552.7	542.7	547.7	28			622.85	0.01		0.0004	0.0000
MW8	598.2	593.2	595.7		622.51						
MW31	574.6	564.6	569.6	26		622.51		0	0.0000		
MW32	547.3	537.3	542.3	27			622.52	0.01		0.0004	0.0002
MW9	605.9	600.9	603.4		622.87						
MW29	585.9	575.9	580.9	23		622.84		-0.03	-0.001		
MW34	552.8	542.8	547.8	33			622.86	0.02		0.0006	-0.0002
MW10	603.0	598.0	600.5		622.41						
MW30	585.0	575.0	580.0	21		622.31		-0.1	-0.005		
MW33	556.0	546.0	551.0	29			622.31	0		0.0000	-0.002
MW28	588.7	578.7	583.7		623.39						
PZ42	568.5	563.5	566.0	18		623.44		0.05	0.003		
PZ43	554.5	549.5	552.0	14			623.41	-0.03		-0.002	0.0006
M4D	586.42	581.42	583.92		622.93						
MW35	551.8	541.8	546.8	37			623.04	0.11			0.0030

Notes:
(-) = Downward Vertical Gradient
Postitive values for vertical gradient indicate upward vertical gradient
Water Levels Collected by Montgomery Watson on August 27, 1996

Table 10
Vertical Gradients in Lower Aquifer - November 1996
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Well	Screen Interval		Screen	Separation	Groundwater Elevation					Vertical Gradients			
Nest	Top	Bottom	Midpoint	(feet)	Upper (1)	Upper	Middle	Lower	delta	Upper(1)/Upper	Upper/Middle	Middle/Lower	Upper/Lower
MW7	595.9	590.9	593.4		NA	622.1				NA			
PZ44	578.4	573.4	575.9	18			622.09		-0.01		-0.001		
MW36	552.7	542.7	547.7	28				622.12	0.03			0.0011	0.0004
MW8	598.2	593.2	595.7		NA	621.71				NA			
MW31	574.6	564.6	569.6	26			621.73		0.02		0.0008		
MW32	547.3	537.3	542.3	27				621.72	-0.01			-0.0004	0.0002
MW9	605.9	600.9	603.4		NA	622.06				NA			
MW29	585.9	575.9	580.9	23			622.04		-0.02		-0.001		
MW34	552.8	542.8	547.8	33				622.07	0.03			0.0009	0.0002
MW51	611.9	601.9	606.9		621.52								
MW10	603.0	598.0	600.5	6		621.6			0.08	0.0125			
MW30	585.0	575.0	580.0	21			621.49		-0.11		-0.005		
MW33	556.0	546.0	551.0	29				621.5	0.01			0.0003	-0.0004 (2)
MW28	588.7	578.7	583.7		NA	622.87				NA			
PZ42	568.5	563.5	566.0	18			622.87		0		0.000		
PZ43	554.5	549.5	552.0	14				622.96	0.09			0.006	0.0028
M4	586.42	581.42	583.92		NA	622.17	NA			NA			
MW35	551.8	541.8	546.8	37				622.32	0.15		NA	NA	0.0040

Notes:
(-) = Downward Vertical Gradient
Postitive values for vertical gradient indicate upward vertical gradient
Water Levels Collected by Montgomery Watson on November 4, 1996
NA = Not Applicable. Calculating vertical gradient only for upper/lower interval at this location.
(1) Additional well (MW51) installed at MW10/MW30/MW33 nest on October 16, 1 996
(2) Vertical gradient calculated between uppermost well (MW51) and lowermost well (MW33)

Table 11
Vertical Gradients Between Upper and Lower Aquifers
August 1996
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Well Designation	Screen Interval		Screen Midpoint	Separation (feet)	Groundwater Elevation			Hydraulic Gradient
	Top	Bottom			Upper	Lower	delta	
P28	634.30	629.30	631.80	11	633.06			
MW8	598.20	593.20	595.70			622.51	-10.55	-0.9591
P27	631.02	626.02	628.52	8.5	629.66			
MW9	605.90	600.90	603.40			622.87	-6.79	-0.7988
P8	635.36	630.36	632.86	18	634.33			
MW7	595.90	590.90	593.40			622.85	-11.48	-0.6378
MW17	632.94	622.94	627.94	28	634.46			
MW28	588.70	578.70	583.70			623.39	-11.07	-0.3954

Notes:
(-) = Downward Vertical Gradient
(+) = Upward Vertical Gradient
Water levels collected by Montgomery Watson on August 27, 1996

Table 12
Vertical Gradients Between Upper and Lower Aquifers
November 1996
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Well Designation	Screen Interval		Screen Midpoint	Separation (feet)	Groundwater Elevation			Hydraulic Gradient
	Top	Bottom			Upper	Lower	delta	
P28	634.30	629.30	631.80	11	632.71			
MW8	598.20	593.20	595.70			621.71	-11	-1.0000
P27	631.02	626.02	628.52	8.5	629.3			
MW9	605.90	600.90	603.40			622.06	-7.24	-0.8518
P8	635.36	630.36	632.86	18	633.6			
MW7	595.90	590.90	593.40			622.1	-11.5	-0.6389
MW17	632.94	622.94	627.94	28	632.78			
MW28	588.70	578.70	583.70			622.87	-9.91	-0.3539

Notes:
(-) = Downward Vertical Gradient
(+) = Upward Vertical Gradient
Water levels collected by Montgomery Watson on November 4, 1996

Table 13
Summary of Detected Compounds - Upper Aquifer 1996 Sampling
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Volatile Organic Compound (ug/L)	MW-6	MW-11	MW-12	MW-13	MW-14	MW-15	MW-18	MW-19	MW-37	MW-38	MW-39	MW-40	MW-41	MW-42	MW-43	MW-44	MW-45	MW-46	MW-47	MW-48	MW-49
Sampling Date	11/96	11/96	11/96	11/96	11/96	11/96	11/96	11/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96
Month/Year Well Installed	7/89	3/90	3/90	4/90	4/90	4/90	6/90	12/90	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96
Vinyl chloride											0.9							0.2 J			
Chloroethane	720			97	1,000			20			5						82 J			1,000	480 J
Methylene chloride	17 J				14 J															70 J	70 J
1,1-Dichloroethane	21 J										0.3 J										
1,2-Dichloroethene (total)	26 J										4.1 J										
Benzene	320			6 J	41 J	3 J			0.1 J		12						530	0.8 J		9,100	5,000
4-Methyl-2-pentanone																		3 J			
Chlorobenzene			5 J														16 J				
Ethylbenzene	16 J																10 J				
Total Xylenes	40																60				
Semi-Volatile Org. Comp. (ug/L)																					
Phenol																	41			110	93
bis(2-Chloroethyl) ether	56				12			11									7 J	3 J			
bis(2-Chloroisopropyl)ether																					
4-Methylphenol																		3 J			
Isophorone	15				0.9 J																1 J
Naphthalene																	84				
2-Methylnaphthalene																	4 J				
2,6-Dinitrotoluene																				0.9 J	
Diethylphthalate	2 J																				
bis(2-Ethylhexyl)phthalate											4 J		8 J	4 J				3 J			
2,2'-oxybis(1-chloropropane)			120																		
Inorganic Parameters (ug/L)	Note: These values represent total concentrations.																				
Aluminum	150 B	1,460	361	232	780			283	1,410			406		808	2,920		776	821			
Arsenic	72		5.6 B			58.7		26.9		3.9 B	1.8 B	1.3 B		2.1 B	17.6 S	6.0 BS	21.5	3.7 B		11.3	24.5
Barium	281	24.2 B	85.5 B	66.5 B	122 B	1,470	34.7 B	673	23.5 B	36.5 B	81.0 B	26 B	19.0 B	90 B	63.0 B	106 B	84.5 B	132 B		160 B	96.5 B
Beryllium									0.26 B			0.21 J									
Cadmium									0.47 B										0.2 B		
Calcium	216,000	44,300	54,100	118,000	142,000	94,100	81,600	79,400	34,300	63,500	125,000	30,000	44,000	139,000	115,000	90,500	97,100	115,000	8,530	142,000	81,200
Chromium	24.1			3.4 B			16.9								36.0		29				
Cobalt	3.6 B	2.2 B		1.9 B	9.1 B	5.1 B	1.1 B	1.4 B							10.0						
Copper	7.6 B	11.3 B	9.0 B		10.9 B																
Iron	16,500	2,910	22,500	5,240	1,650	7,900	288	4,810		6,440 J	9,710 J				13,900 J		9,570 J	21700 J		30,800 J	20,100 J
Lead	7.6		14.1		9.8		1.6 B	1.5 B									38.5 S		23.0 S		
Magnesium	37,600	18,200	18,400	32,000	26,200	93,100	28,500	67,700	9,160	22,000	22,300	9,540	13,300	49,800	48,100	37,200	27,500	30,500	2,630 B	20,100	10,700
Manganese	2,900	145	1,310	674	831	534	609	268	273 J	511 J	1,060 J	852 J	414 J	928 J	374 J	38.5 J	641 J	1,510 J	27.0 J	688 J	1,950 J
Nickel	38.8 B	8.8 B	5.7 B	3.1 B	17.0 B	22.7 B		17.8 B			712 J										
Potassium	27,400	2,450	4,660 B	2,940 B	12,500	122,000	3,850 B	113,000	1,500 B	494 B	5,180	1,280 B	331 B	1,700 B	1,800 B	990 B	5,350	1,450 B	1,090 B	7560 B	3,760 B
Selenium			2.1 B				3.0 B														
Sodium	121,000	4,460	19,300	27,800	37,900	459,000	34,400	772,000	5,460	5,130	117,000	4,120 B	3,480 B	12,700	10,100	19,700	70,900	62,200	3,020 B	52,100	21,300
Thallium								2.4 B			1.0 B									1.1 B	
Vanadium	3.8 B	6.5 B	18.9 B	1.7 B	3.6 B	1.5 B	1.1 B														
Zinc		91.1																			

Table 13 (continued)
Summary of Detected Compounds - Upper Aquifer 1996 Sampling
American Chemical Service, Inc. NPL Site
Griffith, Indiana

	MW-6	MW-11	MW-12	MW-13	MW-14	MW-15	MW-18	MW-19	MW-37	MW-38	MW-39	MW-40	MW-41	MW-42	MW-43	MW-44	MW-45	MW-46	MW-47	MW-48	MW-49
Sampling Date	11/96	11/96	11/96	11/96	11/96	11/96	11/96	11/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96	8/96
Month/Year Well Installed	7/89	3/90	3/90	4/90	4/90	4/90	6/90	12/90	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96	7/96
Inorganic Parameters	These values represent dissolved concentrations																				
Aluminum																					
Arsenic	67.9					63.6		25.3		3.2	1.6			1.5	12.3	6.6	25.9	4.1		14.2	25.5
Barium	296	19.6	62.6	64.9	131	1,500	29	626	20	38.5	73.0	31.5	18.5	85	49.0	164	82.5	131		152	95.5
Beryllium									0.32			0.24 J									
Cadmium									0.24												
Calcium	222,000	50,400	56,100	114,000	161,000	89,300	80,400	72,000	34,000	64,000	120,000	31,000	43,300	136,000	108,000	98,000	93,200	115,000	8,760	138,000	84,100
Chromium																					
Cobalt	2.8	1.6		1.2	9.3	5.7															
Copper					9.4																
Iron	16,600	347	6,320	4,170	274	7,940	196	3,040		6450 J	7690 J				7280 J		8050 J	21900 J		30300 J	18600 J
Lead			6.7		2.1		1.3												20		
Magnesium	39,100	20,200	18,800	31,200	30,800	92,500	27,000	63,100	8,500	22,400	21,400	9,400	13,500	49,300	45,000	60,700	24,700	30,200	2,650	19,300	10,900
Manganese	3,020	145	1,320	642	846	445	543	199	256 J	516 J	802 J	877 J	395 J	932 J	262		612 J	1,510	19 J	566	1860 J
Nickel	37.1	5.3		1.4	15.3	23.5		13.2													
Potassium	28,900	2,020	4,630	2,860	13,600	123,000	3,470	105,000	1,230	499	5,160	1,410	308	1,450	491	982	5,070	1,180	1,100	7,390	3,690
Selenium							2.8														
Sodium	129,000	5,090	19,900	27,300	40,900	466,000	35,900	720,000	6,310	5,580	116,000	3,270	4,010	12,400	9,240	33,100	68,100	60,900	3,290	51,000	22,700
Thallium								3.6												1.2	
Vanadium	2.4		3.1		1.9	1.6															
Zinc																					

Notes:
1. Only analytical results over the detection limit are listed in the table. Only those upper aquifer wells sampled in 1996 are listed in the table.
2. J = Indicates an estimated value because value is below detection limit, or because quality control criteria and /or holding times were not met.
3. D = Indicated compounds quantitated in an analysis at a secondary dilution factor.
4. B = Indicates concentration detected is greater than or equal to the instrument detection limit, but less than the practical quantitation limit.

Laboratory Analytical reports are included in Appendices E and F

Table 14
Summary of Detected Compounds - Lower Aquifer 1996 Sampling
American Chemical Service, Inc. NPL Site
Griffith, Indiana

Volatile Organic Compound (ug/L)	MW7	MW8	MW9	MW10C	MW21	MW22	MW23	MW24	MW28	MW29	MW30	MW31	MW32	MW33	MW34	MW35	MW36	MW50	MW51	MW52	MW53	MW54	MW55
Sampling Date	11/96 *	11/96	11/96	11/96	11/96 *	11/96	11/96	11/96	3/96	3/96	3/96	3/96	3/96	3/96	3/96	3/96	3/96	11/96	11/96	12/96	12/96	12/96	12/96
Month/Year Well Installed	3/90	3/90	3/90	4/90	12/90	12/90	1/91	1/91	2/96	2/96	2/96	2/96	2/96	2/96	2/96	2/96	2/96	10/96	10/96	12/96	12/96	12/96	12/96
Chloroethane			2,200	120						2													
Acetone																				22	11		
Benzene			310																				
Toluene																				3 J	1 J		
Semi-Volatile Org. Comp. (ug/L)																							
Phenol														6J						3 J	10		
bis(2-Chloroethyl) ether			44																				
Isophorone			0.8 J																		0.8 J		
Anthracene											0.9J												
bis(2-Ethylhexyl)phthalate						48				27	68		30			11		2 J	5 J				
Inorganic Parameters (ug/L)	**Note: These values represent total concentrations.**																						
Aluminum				1,170			2,120	4,850		131 B			766					813	684	4,190	39,200	853	14,900
Antimony												2.7 B			2.1 B					6.8 B			
Arsenic		4.4 B	3.2 B	2.4 B			3.7 B	4.5 B										2.7 B	4.7 B	40.3	30.1	7.5 B	12.9
Barium		128 B	337	368		170 B	130 B	334	95.1 B	62.0 B	181 B	200	62.6 B	902	151 B	54.2 B	140 B	236	400	264	997	190 B	271
Beryllium																				1.2 B	6.2		2.5 B
Cadmium														1.4 B									
Calcium		58,300	159,000	118,000		84,700	73,100	162,000	79,400	65,200	99,100	80,900	49,100	248,000	78,500	32,300	70,600	126,000	147,000	135,000	160,000	132,000	74,200
Chromium				14.1			18.9	28.2		16.4	8.9 B	13.6	9.2 B	15.4	2.9 B	6.9 B			4.1 B	134	189	82.2	133
Cobalt			3.5 B	2.9 B		1.0 B	3.8 B	7.0 B		1.0 B	1.4 B	2.0 B		6.1 B	1.3 B	1.2 B	1.1 B	1.1 B	1.9 B	13.1 B	24.9 B	4.0 B	10.5 B
Copper						38.7	13.8 B	40.5								6.1 B			3.7 B	66.8	107	59.9	84.4
Iron		1,030	17,800	10,100		322	9,450	28,300	1,840	3,030	5,980	2,640	1,550	24,600	4,360	1,160	2,890	2,760	8,230	11,600	48,800	1,880	16,700
Lead				3.2		2.5 B	6.3	17.8										3.9	3.1	31.4	138		43.2
Magnesium		18,600	33,000	57,200		36,600	19,400	44,100	38,100	33,500	51,000	33,900	23,200	56,900	46,000	22,200	48,100	62,700	66,300	49,100	75,300	54,100	35,800
Manganese		108	231	107		15.0	295	546	119	218	223	122	219	686	138	87.8	145	76.9	193	673	1,630	202	546
Mercury																					0.24		0.24
Nickel				14.2 B		6.6 B	18.2 B	22.5 B		20.1 B	21.9 B	32.6 B	8.6 B	48.2		16.5 B	12.3 B	10.8 B	12.1 B	201	139	66	101
Potassium		1,540 B	10,800	6150.0		93,100	4,350 B	4,540 B	3,580 BE	7,040 E	4,980 BE	3,870 BE	5,560 E	13,900 E	5,810 E	7,130 E	6,990 E	17,500	4,290 B	7,770	24,400	4,540 B	10,700
Selenium																							
Sodium		12,700	110,000	193,000		301,000	65,000	90,400	14,100	50,700	40,900	17,500	55,000	188,000	26,600	16,000	25,900	353,000	102,000	87,900	252,000	20,600	122,000
Thallium														3.8 B				2.1 B		4.1 B	2.0 B		2.1 B
Vanadium			5.0 B	3.8 B			7.1 B	15.7 B						1.8 B	1.1 B			1.5 B	2.2 B	10.6 B	32.3 B	1.9 B	15.6 B
Zinc																	7.2 B			90.3	443		105

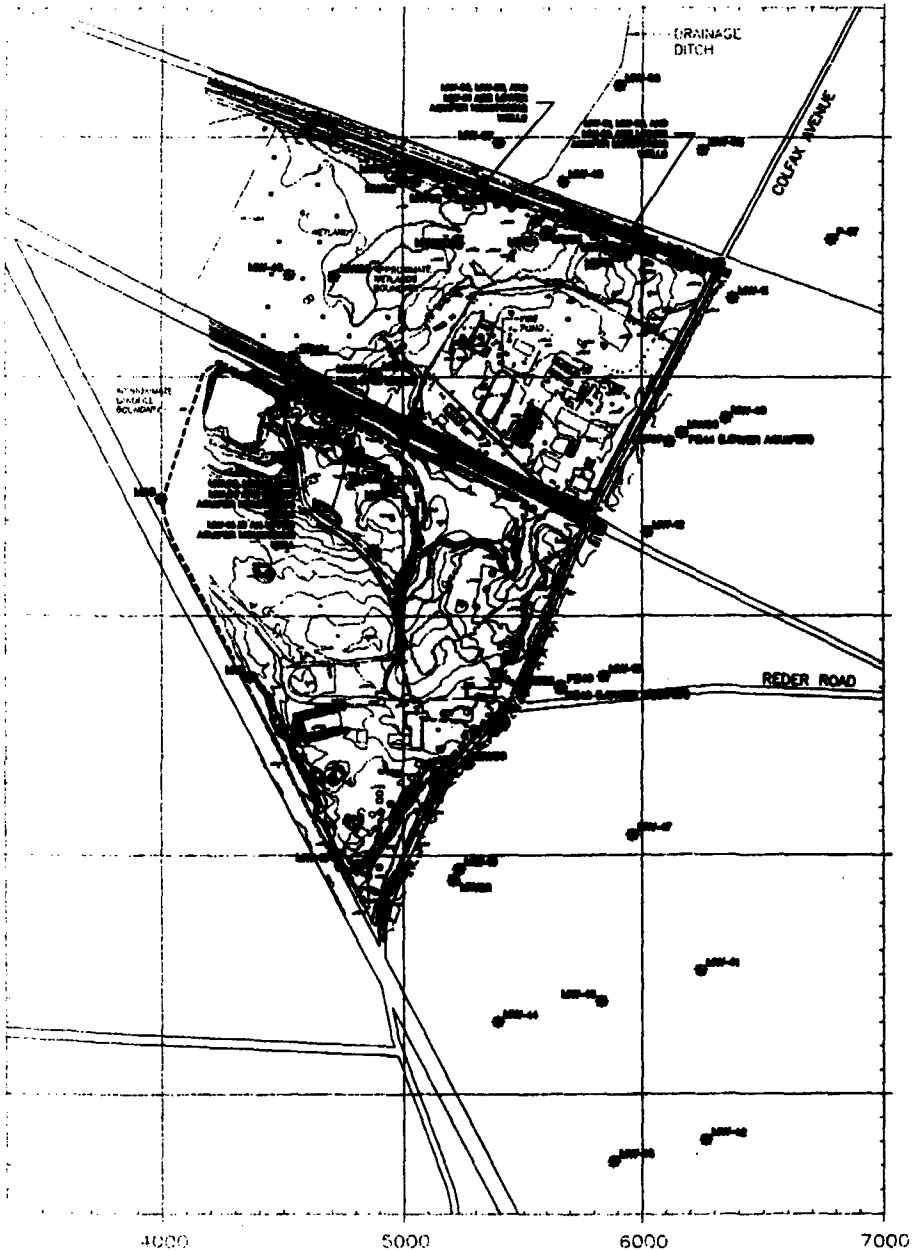
Table 14 (continued)
Summary of Detected Compounds - Lower Aquifer First Quarter Baseline Sampling (1996)
American Chemical Service
Griffith, Indiana

	MW7	MW8	MW9	MW10C	MW21	MW22	MW23	MW24	MW28	MW29	MW30	MW31	MW32	MW33	MW34	MW35	MW36	MW50	MW51	MW52	MW53	MW54	MW55
Sampling Date	11/96 *	11/96	11/96	11/96	11/96 *	11/96	11/96	11/96	3/96	3/96	3/96	3/96	3/96	3/96	3/96	3/96	3/96	11/96	11/96	12/96	12/96	12/96	12/96
Month/Year Well Installed	3/90	3/90	3/90	4/90	12/90	12/90	1/91	1/91	2/96	2/96	2/96	2/96	2/96	2/96	2/96	2/96	2/96	10/96	10/96	12/96	12/96	12/96	12/96
Inorganic Parameters (ug/L)	Note: These values represent dissolved concentrations.																						
Aluminum																			953				
Antimony										3.4		2.6			2.7	2.9				8.3 B			
Arsenic			4.2			2.5												2	5	33.8	2.4 B	7.3 B	3.7 B
Barium		132	378	407		692	148	231	95.7	69.7	162	195	54.2	991 E	126	50.6	141	302	403	315	583	183 B	120 B
Beryllium																							
Cadmium														1.3									
Calcium		58,800	177,000	127,000		325,000	80,700	143,000	79,700	75,800	92,200	79,800	52,600	259,000	73,700	30,100	72,000	154,000	157,000	108,000	122,000	126,000	46,400
Chromium															1.4								
Cobalt			4.4	1.5			1				1.0	1.1		5.5			1.3		2.3	5.6 B	5.1 B	2.1 B	
Copper																			7.4		8.1 B	18.5 B	5.9 B
Iron		970	19,700	8,990			5,100	3,390	1,740	2,390	3,820	1,770		26,300	890	8.0	2,830	2,320	9,760	337	147		
Lead			1.1																5.8				
Magnesium		19,100	37,400	61,700		14,000	20,600	36,200	37900	39,500	48,400	33,800	25,100	60,300	42,600	21,800	48,800	78,400	71,700	36,800	59,000	51,400	23,600
Manganese		108	260	70.9		15.1	263	268	117	229	203	117	212	711	126	65.8	151	71.7	263	288	499	157	72.6
Nickel				6		6.5						40.7		32.7				10.2	13.5	61.8	31.7 B	10.7 B	9.6 B
Potassium		1,580	12,400	6,240		35,800	4,420	2,170	3430	7,760	4,910	3,970	6,230	15,500	5,240	7,090	6,960	23,200	4,520	5,640	21,800	4,170 B	8,060
Selenium																							
Sodium		13,100	125,000	219,000		383,000	83,800	114,000	14,500	60,200	39,500	17,700	61,600	203,000	25,000	15,800	26,700	468,000	102,000	124,000	293,000	20,400	128,000
Thallium																		2.1					
Vanadium			5.5	1.2			2							1.7					3.3				
Zinc																							

Notes:
1. Only analytical results over the detection limit are listed in the table.
2. J = Indicates an estimated value because value is below detection limit, or because quality control criteria and /or holding times were not met.
3. D = Indicated compounds quantitated in an analysis at a secondary dilution factor.
4. B = Value is greater than or equal to the instrument detection limit (IDL) but less than the Practical Quantitation limit (PQL)
5. E = Interferences were encountered during analysis.
6. U = Analyte was analyzed for, but not detected above the Reported Detection Limit (RDL).
7. * Groundwater samples from MW7 and MW21 were only sampled for VOCs.
8. Sample results from MW52 through MW55 have not yet been validated as of January 15, 1997.

Laboratory analytical data presented in Appendices G and H

FIGURES



LEGEND

UPPER AQUIFER WELL LOCATION AND NUMBER

LOWER AQUIFER MONITORING WELL LOCATION AND NUMBER

north

0 500 1000

SCALE IN FEET

FIGURE 1

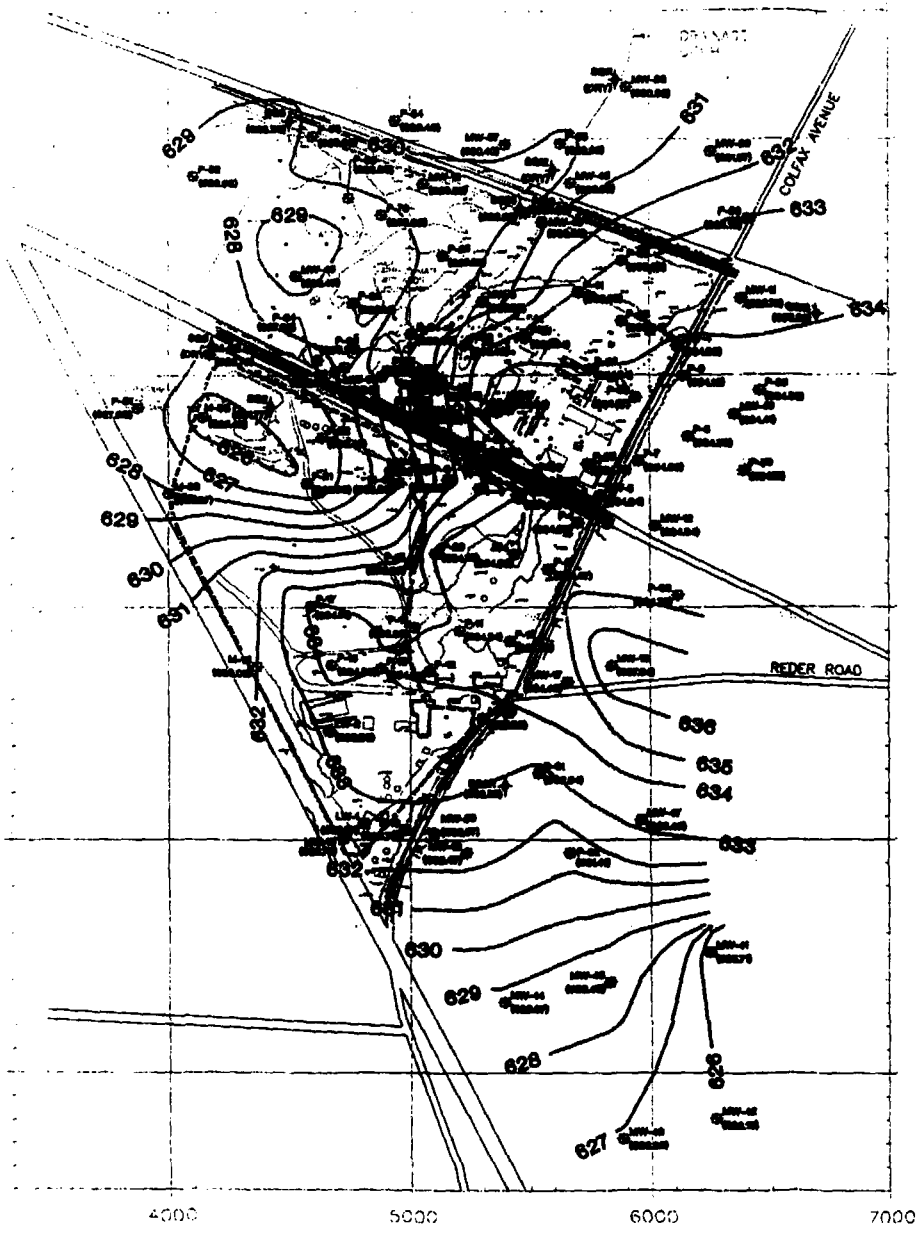
LOCATIONS OF MONITORING WELLS - 1st QUARTER SAMPLING

FIRST QUARTER GROUNDWATER MONITORING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Developed By PMS
Drawn By CCM
Approved By
Date
Reference
Revisions

Drawing Number
4077.0074B10

MONTGOMERY WATSON



LEGEND

- UPPER AQUIFER WELL LOCATION AND NUMBER
- LEACHATE/UPPER AQUIFER WELL LOCATION AND NUMBER
- PIEZOMETER LOCATION AND NUMBER
- STAFF GAUGE LOCATION AND NUMBER
- MEASURED WATER TABLE ELEVATION, IN FT. AMSL
- NOT MEASURED
- 635 GROUNDWATER ELEVATION CONTOUR

NOTES

1. GROUNDWATER LEVELS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON AUGUST 27, 1996.

north

0 500 1000

SCALE IN FEET

FIGURE 2

UPPER AQUIFER WATER TABLE ELEVATIONS
AUGUST 27, 1996

1996 BASELINE GROUNDWATER SAMPLING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Developed By DAP | Drawn By CCM
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QUALITY CONTROL | Graphic Standards CCM 9-10-96 | Technical Review | Management Review
Lead Professional | Project Manager | Other

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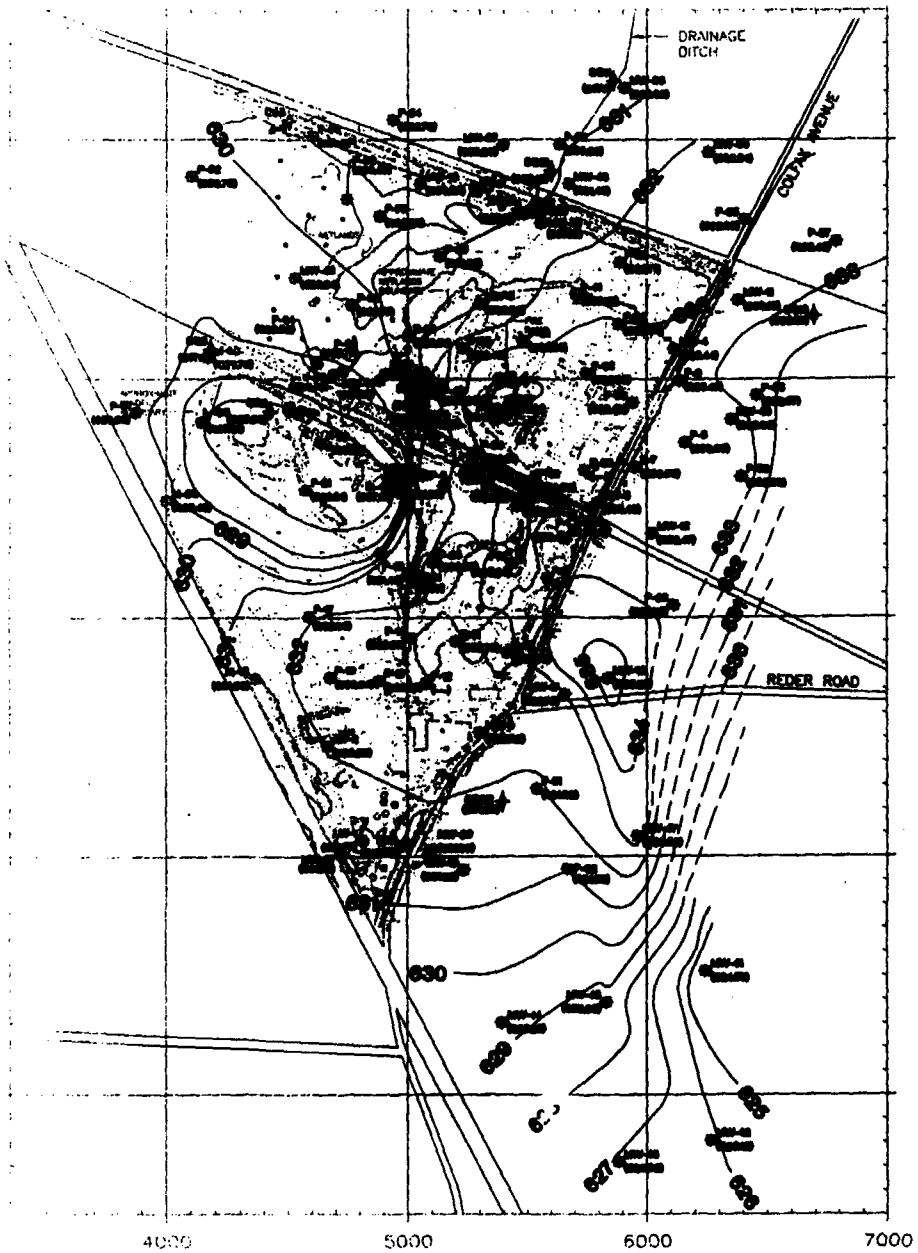

LEGEND

- UPPER AQUIFER WELL LOCATION AND NUMBER
- LEACHATE/UPPER AQUIFER WELL LOCATION AND NUMBER
- PIEZOMETER LOCATION AND NUMBER
- STAFF GAUGE LOCATION AND NUMBER
- MEASURED WATER TABLE ELEVATION, IN FT. AMSL
- NOT MEASURED
- 635 GROUNDWATER ELEVATION CONTOUR

NOTES

1. GROUNDWATER LEVELS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON NOVEMBER 4, 1996.

north

0 500 1000

SCALE IN FEET

FIGURE 3

UPPER AQUIFER WATER TABLE ELEVATIONS
NOVEMBER 4, 1996

FIRST QUARTER GROUNDWATER MONITORING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Developed By DAP
Drawn By CCM
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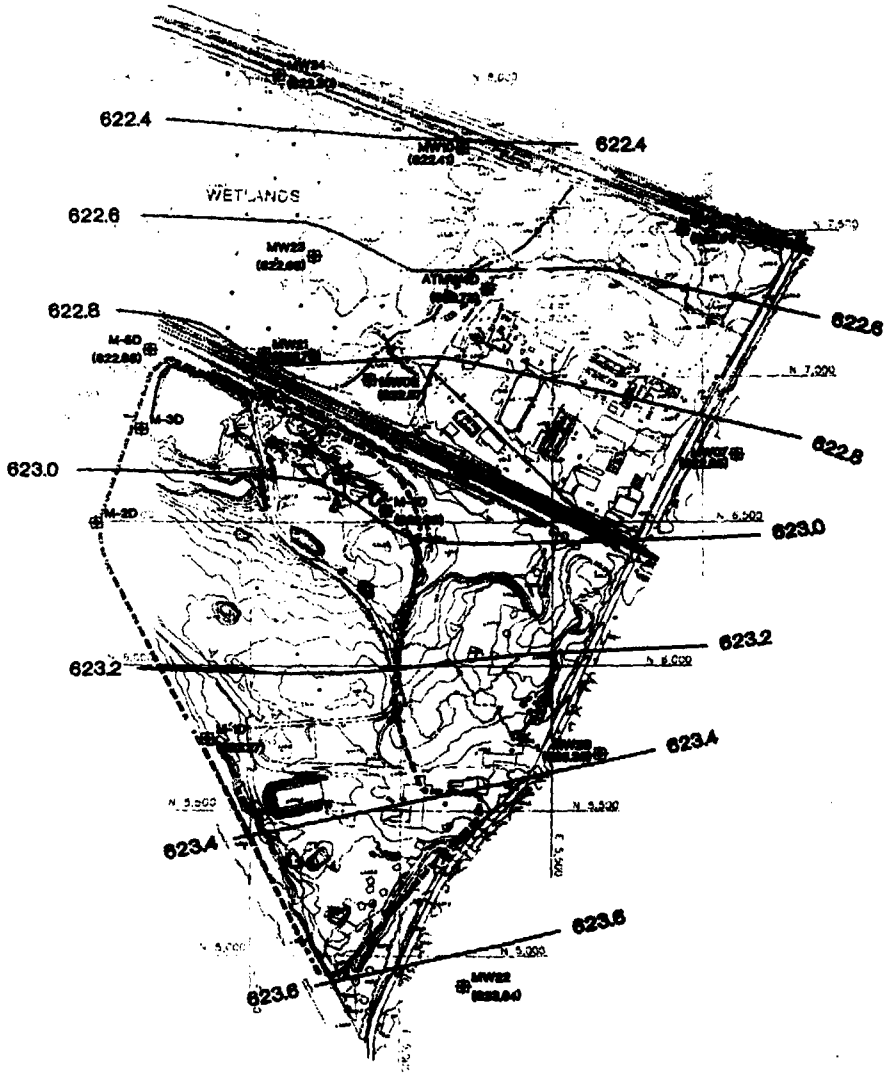

LEGEND

- MW18 — LOWER AQUIFER MONITORING WELL LOCATION AND NUMBER, SHOWING MEASURED GROUNDWATER ELEVATION
- PZ49 — PIEZOMETER LOCATION AND NUMBER
- (622.80) — MEASURED WATER TABLE ELEVATION, IN FT. AMSL
- 623.0 — GROUNDWATER ELEVATION CONTOUR

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 = 2 ft.
2. GROUNDWATER LEVELS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON AUGUST 27, 1996.

north

0 400 800

SCALE IN FEET

FIGURE 4

Developed By DAP | Drawn By CCM
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LOWER AQUIFER POTENTIOMETRIC SURFACE
AUGUST 27, 1996

1996 BASELINE GROUNDWATER SAMPLING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number
4077.0074B14

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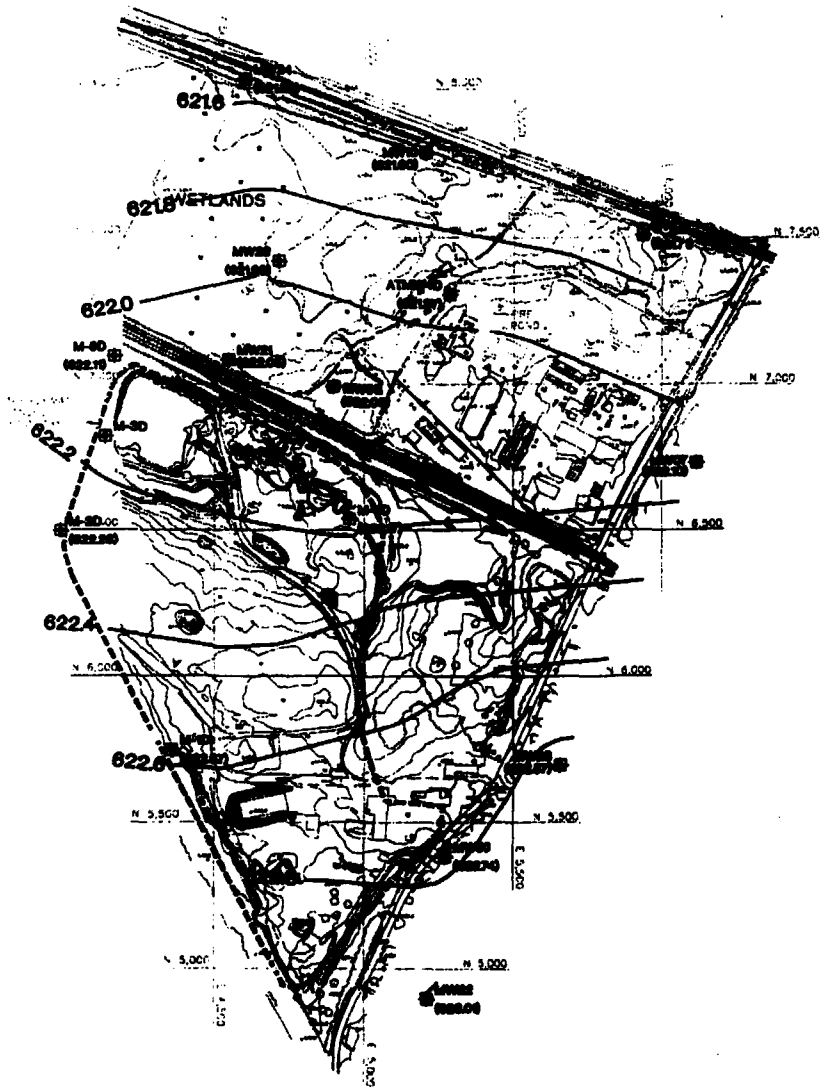

LEGEND

- MW08 — LOWER AQUIFER MONITORING WELL LOCATION AND NUMBER, SHOWING MEASURED GROUNDWATER ELEVATION
- PZ48 — PIEZOMETER LOCATION AND NUMBER
- (622.00) — MEASURED WATER TABLE ELEVATION, IN FT. AMSL
- 623.0 — GROUNDWATER ELEVATION CONTOUR

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 = 2 ft.
2. GROUNDWATER LEVELS FOR WATER TABLE CONTOURS WERE MEASURED AT THE SITE ON NOVEMBER 4, 1996.

north

0 400 800

SCALE IN FEET

FIGURE 5

LOWER AQUIFER POTENTIOMETRIC SURFACE
NOVEMBER 4, 1996

1996 BASELINE GROUNDWATER SAMPLING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number
4077.0074B16

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Drawn By CCM
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Management Review
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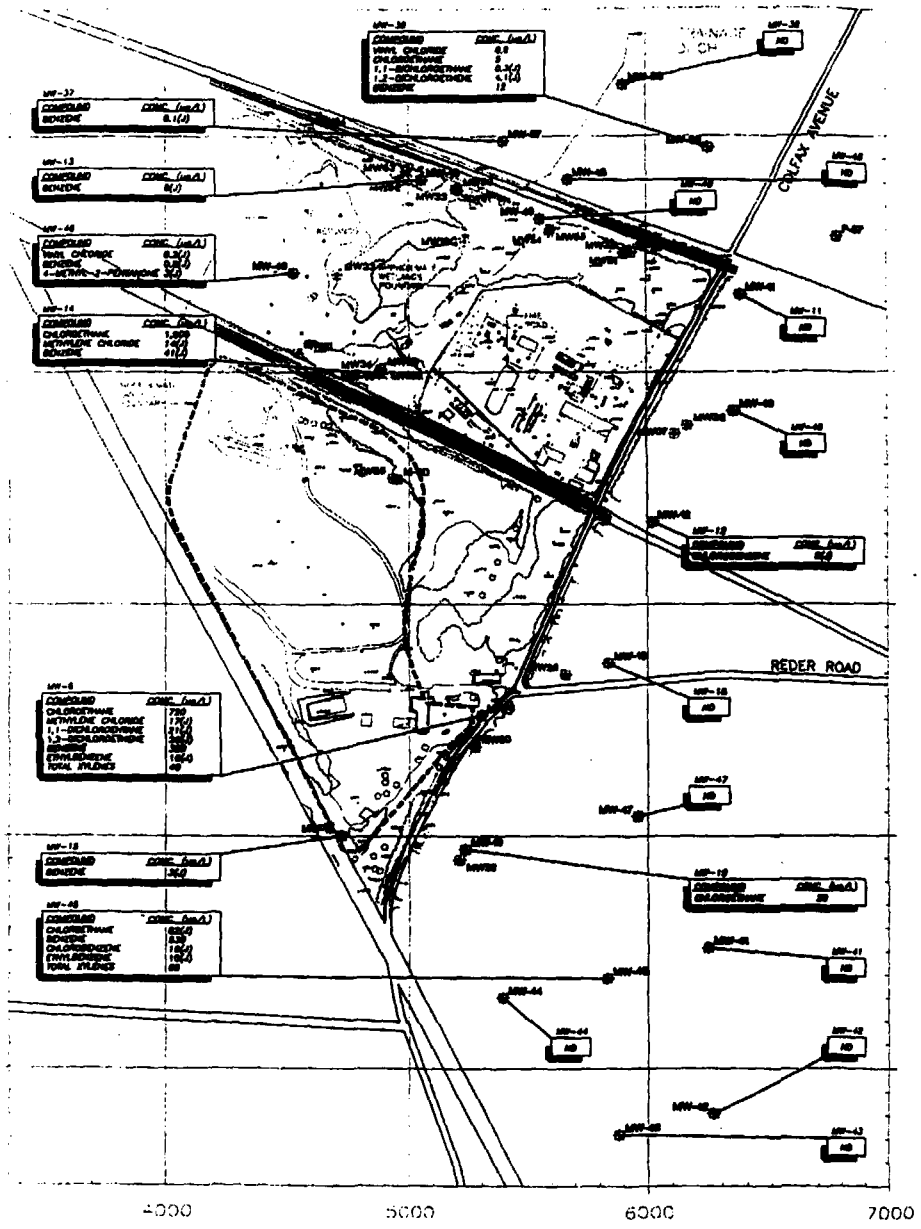

LEGEND

MW-45	UPPER AQUIFER WELL LOCATION AND NUMBER
MW08	LOWER AQUIFER MONITORING WELL LOCATION AND NUMBER
ug/L	MICROGRAMS PER LITER
(J)	INDICATES AN ESTIMATED VALUE

north

0 500 1000

SCALE IN FEET

FIGURE 6

VOCs DETECTED IN UPPER AQUIFER MONITORING WELLS

1996 BASELINE GROUNDWATER SAMPLING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Drawing Number 4077.0074 B11

MONTGOMERY WATSON

Developed By PMS
Drawn By CCM
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Date
Reference
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QUALITY CONTROL
Graphic Standards CCM 1/8/97
Lead Professional
Technical Review
Project Manager
Management Review
Other

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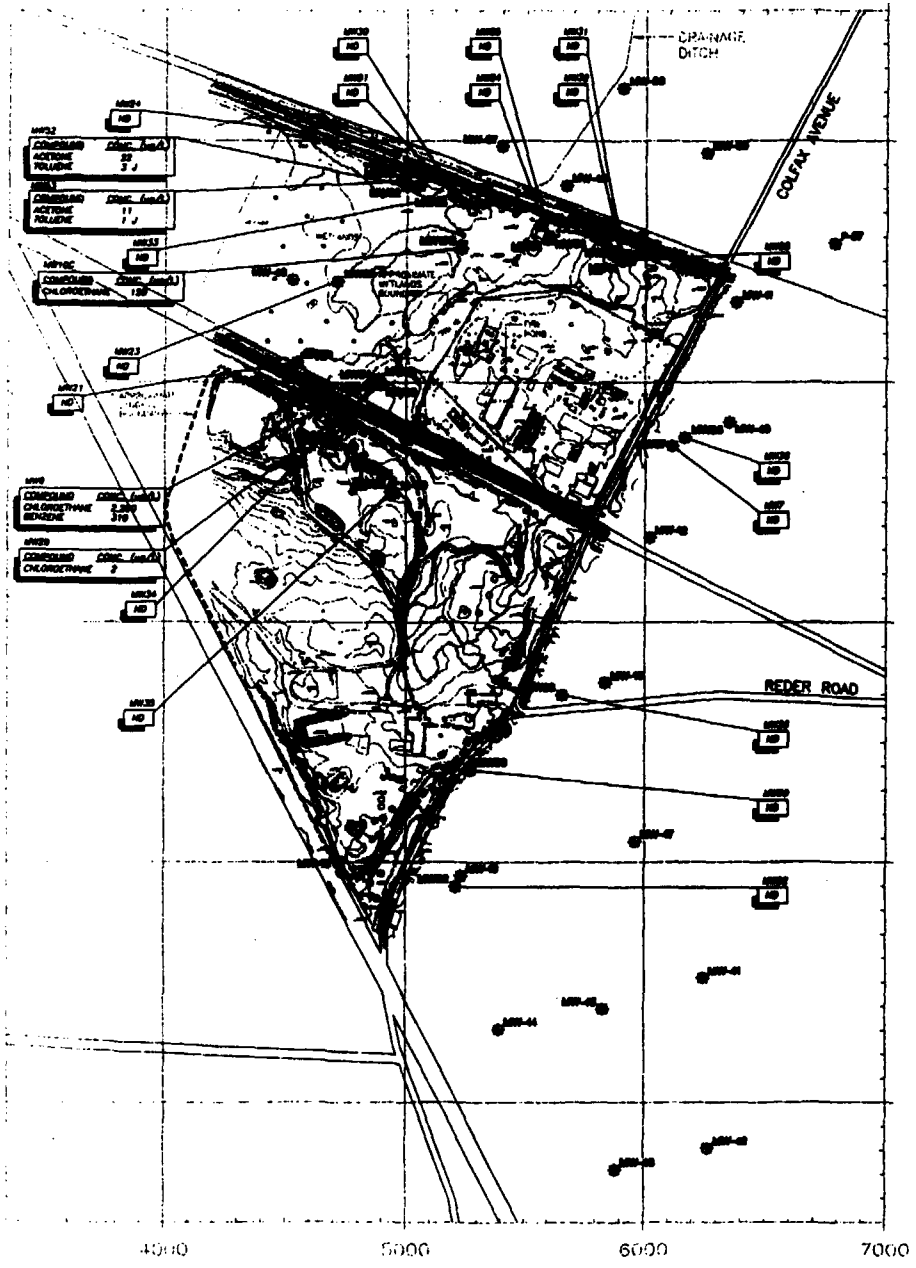

LEGEND

- UPPER AQUIFER WELL LOCATION AND NUMBER
- LOWER AQUIFER MONITORING WELL LOCATION AND NUMBER
- ug/L MICROGRAMS PER LITER

north

0 500 1000

SCALE IN FEET

FIGURE 7

VOCs DETECTED IN LOWER AQUIFER MONITORING WELLS

FIRST QUARTER GROUNDWATER MONITORING RESULTS REPORT
AMERICAN CHEMICAL SERVICE, INC.
NPL SITE
GRIFFITH, INDIANA

Developed By PMS Drawn By CCM
Approved By Date
Reference
Revisions

Drawing Number
4077.0074B12

MONTGOMERY WATSON

APPENDICES

A

A

SOIL BORING LOGS

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW50**
Job No. 1252042.08090072
Sheet 1 of 4
Surface Elevation 647.2
Northing: 5383.0
Easting: 5269.0

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)	Remarks
1	16	M	3		Very Loose, Dark Brown Clay, Fine to Medium Sandy TOPSOIL, Little Silt, Some Humus (TOPSOIL)		0.2	
					Very Loose, Yellow-Brown, Fine to Medium SAND, Trace to Little Silt (SP/SP-SM)			
2	18	M	5				0.0	
3	17	M/W	6	5			0.0	Pearched water on top of clay lense.
					Dark Brown, Fine to Medium SAND, Little Silt (SP-SM)			
					Stiff, Gray, Silty CLAY, Little Fine Sand, Brown Mottling (CL)			
4	18	M	7		Loose, Yellow-Brown to Tan, Fine to Medium SAND, Trace to Little Silt (SP/SP-SM)		0.0	
5	20	M	8	10			0.0	
6	22	M/W	7	▽			0.0	
7	20	W	12	15	Clay from 14.9 to 15.0 ft		0.0	
					Medium Dense, Greenish-Brown/Gray, Fine to Coarse SAND, Little to Trace Fine Gravel, Trace Silt (SP)			
8	20	W	12				0.2	
				20				

WATER LEVEL OBSERVATIONS

While Drilling ▽ 14.0 ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 10/17/96 End 10/19/96
Driller Stearns Chief CSY Rig CME
Logger CSY Editor DP 850
Drill Method 4 1/4 ID HSA

J:\1252\042\Gint\40770 ID: DETROIT2

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW50**
Job No. 1252042.08090072
Sheet 2 of 4
Surface Elevation 647.2
Northing: 5383.0
Easting: 5269.0

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	PID (ppm)	Remarks
9	16	W	12		Decreasing Gravel, Less Coarse Sand 3 in. Coarse Sand Seam at 21.0 ft		0.0	
10	15	W	6		Loose, Gray, Fine to Medium SAND, Trace Coarse Sand, Trace to Little Silt (SP/SP-SM)		0.0	
11	16	W	5	25	0.5 in. Silt Seams at 24.8 ft and 25.0 ft		2.0	
12	20	W	9				0.0	
13	24	M	19	30	Hard, Gray, Silty CLAY, Trace to Little Sand, Trace Fine Gravel (Till) (CL)	4.0+	1.0	
14	24	M	19			4.0+	1.0	
15	24	M	18	35		4.0+	1.0	
16	24	M	18			4.0+	1.0	
17	24	M	24	40	Becoming Siltier with Depth	4.0+	1.0	

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW50**
Job No. **1252042.08090072**
Sheet **3 of 4**
Surface Elevation **647.2**
Northing: **5383.0**
Easting: **5269.0**

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)	Remarks
18	24	M	20			4.0+	1.0	
19	24	M	18	45		4.0+	1.0	
20	24	M/W	18				1.0	
21	12	W	14	50	Medium Dense, Gray, Fine to Coarse SAND, Trace to Little, Fine to Coarse Gravel, Trace to Little Silt (SP/SP-SM)		0.5	
22	24	M	22		Hard, Gray, Silty CLAY, Little Sand, Trace Gravel (Till) (CL)	3.0-4.0+	0.0	
23	12	W	10	55	Medium Dense, Gray, Fine to Coarse Sand, Little Fine to Coarse Gravel, Trace Silt (SP)		0.0	
24	16	W	10				0.0	
25	10	W	9	60	Increasing Gravel Content		0.2	
					Medium Dense, Gray, Fine to Medium SAND, Trace Silt (SP)			
					End of Boring at 62.0 ft			
					Installed 10" Diam. Steel Casing to 32.0 ft.			
				65				

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW50**
Job No. 1252042.08090072
Sheet 4 of 4
Surface Elevation 647.2
Northing: 5383.0
Easting: 5269.0

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
						Installed Monitoring Well to 62.0 ft			
					70				
					75				
					80				
					85				

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW51**
Job No. **1252042.08090072**
Sheet **1 of 2**
Surface Elevation **631.9**
Northing: **7767.0**
Easting: **5198.0**

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	PID (ppm)	Remarks
1	24	M	2		Coarse Gravel (Limestone) (FILL)		0.0	
					Loose, Dark Brown, Silty, Fine to Medium, Sandy TOPSOIL, Abundant Roots and Humus, Trace to Little Gravel (TOPSOIL)			
2	15	M/W	5				0.0	
3	18	W	14	5	Light Gray, Fine to Coarse SAND, Little Silt (SM)		0.0	
					Medium Dense, Light Brown, Fine to Medium SAND, Trace to Little Silt (SP/SP-SM)			
					Light Gray, Silty, Fine to Medium SAND (SM)			
4	18	W	5		Loose, Light Gray/Brown, Fine to Medium SAND, Trace Coarse Sand, Trace to Little Silt (SP/SP-SM)		3.0	
5	20	W	5	10			11.0	
					Very Stiff to Hard, Medium Gray, Silty CLAY, Little Fine to Coarse Sand, Trace Fine Gravel (Till) (CL)			
6	18	W/M	21			4.0+	1.0	
7	24	M	19	15		4.0+	4.0	
					Medium Dense, Gray, Fine to Medium SAND, Trace to Little Silt (SP/SP-SM)			
8	20	W	10	20			2.0	

WATER LEVEL OBSERVATIONS

While Drilling ▽ 4.0 ft. Upon Completion of Drilling ▼ ____ ft.
Time After Drilling ____ ____ ____ ____
Depth to Water ____ ____ ____ ____
Depth to Cave in ____ ____ ____ ____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **10/16/96** End **10/18/96**
Driller **Stearns** Chief **CSY** Rig **CME 850**
Logger **CSY** Editor **DP**
Drill Method **4 1/4 ID HSA**

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW51**
Job No. 1252042.08090072
Sheet 2 of 2
Surface Elevation 631.9
Northing: 7767.0
Easting: 5198.0

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE No.	Type	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	PID (ppm)	Remarks
9		22	W	27				4.0	
10		18	W	23				6.0	
11		20	W	14	25	Little Coarse SAND (SP/SP-SM)	4.0+	5.0	
						Hard, Gray, Silty CLAY, Trace to Little, Fine Gravel, Little Fine to Coarse Sand (CL)			
12		24	W	35		Very Dense, Gray, Fine to Coarse SAND, Little to Some Silt, Trace Gravel (SM)		3.0	
					30	End of Boring at 30.0 ft Installed 10" Diam. Steel Casing to 14.5 ft. Installed Monitoring Well to 30.0 ft			
					35				
					40				

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW52**
Job No. 1252042.08090072
Sheet 1 of 2
Surface Elevation 631.4
Northing: 7814
Easting: 4996

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)	Remarks
					Soft, Dark Brown, Sandy SILT, Trace Clay (TOPSOIL)			
					Medium Dense, Light Brown to Buff, Fine to Medium SAND, Trace Silt and Gravel (SP)			
				5				
				10				
					Stiff, Gray, Lean CLAY, Trace Gravel (CL)			
				15	Medium Dense, Light Brown to Light Gray, Fine to Medium SAND, Trace Silt and Gravel (SP)			
				20				

WATER LEVEL OBSERVATIONS

While Drilling ▽ ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 12/21/96 End 12/22/96
Driller Layne Chief DAL Rig CME 75
Logger DAP Editor RJR
Drill Method 8 1/4" HSA 0-14'; 4" Casing
Adv. 14-27'

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW52**
Job No. 1252042.08090072
Sheet 2 of 2
Surface Elevation 631.4
Northing: 7814
Easting: 4996

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
					25				
						End of Boring at 27.0 ft 6" Surface Casing Grouted to 14.0 ft			
					30				
					35				
					40				

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW53**
Job No. **1252042.08090072**
Sheet **1 of 5**
Surface Elevation **631.9**
Northing: **7833**
Easting: **4977**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	PID (ppm)	Remarks
					Soft, Dark Brown, Sandy SILT, Trace Clay (TOPSOIL)			
					Medium Dense, Light Brown to Buff, Fine to Medium SAND, Trace Silt and Gravel (SP)			
				5				
				10				
1			7 8 12 14					
					Stiff, Gray, Lean CLAY, Trace Gravel (CL)			
				15				
					Medium Dense, Light Brown to Light Gray, Fine to Medium SAND, Trace Silt and Gravel (SP)		0.0	
				20				

WATER LEVEL OBSERVATIONS

While Drilling ▽ ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/17/96** End **12/22/96**
Driller **Layne** Chief **BOB** Rig **CME 75**
Logger **DAP** Editor **RJR**
Drill Method **8 1/4" HSA 0-14.5'; 4"**
Casing Adv. **14.5-86.5'**

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW53**
Job No. **1252042.08090072**
Sheet **2 of 5**
Surface Elevation **631.9**
Northing: **7833**
Easting: **4977**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	UVX mg	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
					25			0.0	
					30				
					35			0.0	
					40				

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW53**
Job No. **1252042.08090072**
Sheet **3 of 5**
Surface Elevation **631.9**
Northing: **7833**
Easting: **4977**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
								0.0	
					45				
					50				
					55			0.0	
					60				
					65				

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW53**
Job No. 1252042.08090072
Sheet 4 of 5
Surface Elevation 631.9
Northing: 7833
Easting: 4977

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	TYPE	Rec. (in.)	Moisture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
								0.0	
					70				
					75			0.0	
					80				
					85			0.0	
						Stiff, Dark Gray, Lean CLAY, Trace Gravel (CL)			

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW53**
Job No. **1252042.08090072**
Sheet **5 of 5**
Surface Elevation **631.9**
Northing: **7833**
Easting: **4977**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	U or D	Rec. (in.)	Moisture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
						End of Boring at 86.5 ft			
						6" Surface Casing Grouted to 14.5 ft			
					90				
					95				
					100				
					105				
					110				

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW54**
Job No. **1252042.08090072**
Sheet **1 of 2**
Surface Elevation **634.6**
Northing: **7592**
Easting: **5590**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
						Medium Dense, Light Brown to Buff, Fine to Medium SAND, Trace Silt and Gravel (SP)			
					5				
					10				
						Stiff, Dark Gray, Lean CLAY, Trace Fine Sand and Gravel (CL)			
					15				
					20				

WATER LEVEL OBSERVATIONS

While Drilling ▽ ____ ft. Upon Completion of Drilling ▼ ____ ft.
Time After Drilling ____ ____ ____ ____
Depth to Water ____ ____ ____ ____
Depth to Cave in ____ ____ ____ ____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/96** End **12/21/96**
Driller **Layne** Chief **DAL** Rig **CME 75**
Logger **KAS** Editor **RJR**
Drill Method **8 1/4" HSA 0-15'; 4" Casing Adv. 15-37'**

A1252\042\Gint040770 ID: CHICAGO

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW54**
Job No. **1252042.08090072**
Sheet **2 of 2**
Surface Elevation **634.6**
Northing: **7592**
Easting: **5590**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
					25	Medium Dense, Light Brown to Light Gray, Fine to Medium SAND, Trace Silt and Gravel (SP)			
					30				
					35				
						End of Boring at 37.0 ft 6" Surface Casing Grouted to 15.0 ft			
					40				

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW55**
Job No. **1252042.08090072**
Sheet **1 of 5**
Surface Elevation **635.3**
Northing: **7604**
Easting: **5595**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Moisture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
						Medium Dense, Light Brown to Buff, Fine to Medium SAND, Trace Silt and Gravel (SP)			
					5				
					10				
1			W/M	22					
						Stiff, Dark Gray, Lean CLAY, Trace Fine Sand and Gravel (CL)			
					15				
					20				

WATER LEVEL OBSERVATIONS

While Drilling ▽ _____ ft. Upon Completion of Drilling ▼ _____ ft.
Time After Drilling _____ _____ _____ _____
Depth to Water _____ _____ _____ _____
Depth to Cave in _____ _____ _____ _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/16/96** End **12/19/96**
Driller **Layne** Chief **DAL** Rig **CME 75**
Logger **DAP** Editor **RJR**
Drill Method **8 1/4" HSA 0-15'; 4" Casing Adv. 15-97.4'**

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW55**
Job No. **1252042.08090072**
Sheet **2 of 5**
Surface Elevation **635.3**
Northing: **7604**
Easting: **5595**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
					25	Medium Dense, Light Brown to Light Gray, Fine to Medium SAND, Trace Silt and Gravel (SP)		0.0	
					30				
					35			0.3	
					40				

MONTGOMERY WATSON

LOG OF TEST BORING

Project **American Chemical Service, Inc.**

Location **Griffith, Indiana**

Boring No. **MW55**
Job No. **1252042.08090072**
Sheet **3 of 5**
Surface Elevation **635.3**
Northing: **7604**
Easting: **5595**

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
							0.0	
				45				
				50			0.0	
				55				
				60				
							0.0	
				65				

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW55**
Job No. 1252042.08090072
Sheet 4 of 5
Surface Elevation 635.3
Northing: 7604
Easting: 5595

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Type	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
					70			0.0	
					75				
					80			0.0	
					85				

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. **MW55**
Job No. 1252042.08090072
Sheet 5 of 5
Surface Elevation 635.3
Northing: 7604
Easting: 5595

2100 Corporate Drive, Addison, Illinois 60101, TEL. (708) 691-5000

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES		
No.	Rec. (in.)	Mois-ture	N Value	Depth (ft.)		qu (qa) (tsf)	PID (ppm)	Remarks
				90			0.0	
				95				
					Medium Stiff, Gray, Lean CLAY, Trace Gravel (CL)			
					End of Boring at 97.4 ft			
				100	6" Surface Casing Grouted to 15.0 ft			
				105				
				110				

MONTGOMERY WATSON

LOG OF TEST BORING

Project American Chemical Service, Inc.

Location Griffith, Indiana

Boring No. P57
Job No. 1252042.08090072
Sheet 1 of 1
Surface Elevation 638.6
Northing: 7573.0
Easting: 6783.0

41551 Eleven Mile Road, P.O. Box 8012, Novi, MI 48376, TEL. (810) 344-0205

SAMPLE No.	Rec. (in.)	Moisture	N Value	Depth (ft.)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	PID (ppm)	Remarks
1	15	M	5		Dark Brown, Silty, Fine to Medium, Sandy TOPSOIL (TOPSOIL)		0.0	
					Loose, Tan/Yellow-Brown, Fine to Medium SAND, Little Silt (SP-SM)			
					Loose, Medium Brown, Fine to Medium SAND, Little Silt (SP-SM)			
2	20	M	6		Loose, Tan, Fine to Medium SAND, Trace to Little Silt (SP/SP-SM)		0.0	
3	21	M/W	5	5			0.0	
					Loose, Tan to Light Brown, Fine to Medium SAND, Trace to Little Silt (SP/SP-SM)			
					Loose, Blue and Greenish-Blue to Gray, Fine to Coarse SAND, Little Fine Gravel, Trace Silt (SP)			
4	20	W	4		Loose, Medium Brown, Fine to Coarse SAND, Trace to Little Silt, Trace to Little Fine Gravel (SP/SP-SM)		0.0	
5	18	W	5	10			0.0	
6	18	W/M	7			2.0	0.2	
					Stiff, Medium Gray, Silty SAND, Little to Some Clay (SM)			
				15	1" Sandier Seams Present			
					End of Boring at 15.0 ft			
					1" Diam. PVC Piezometer Installed at 12.0 ft			
				20				

WATER LEVEL OBSERVATIONS

While Drilling ▽ 6.0 ft. Upon Completion of Drilling ▼ ft.
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 10/16/96 End 10/16/96
Driller Stearns Chief CSY Rig CME 850
Logger CSY Editor DP
Drill Method 4 1/4 ID HSA

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WELL CONSTRUCTION DETAILS

MONTGOMERY WATSON

STICK-UP MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ft. ☐ E. ☐ W.	Well Name: MW50
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. ____ Long. ____ or St. Plane ____ ft. N. ____ ft. E.	Date Well Installed: 10/19/96
	Section Location of Waste/Source: ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm) CSY - Montgomery Watson
Distance Well Is From Waste/Source Boundary: NA ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	JV - Stearns Drilling Co.

Protective pipe, top elevation: 649.70 ft. MSL

Well casing top elevation: 649.43 ft. MSL

Land surface elevation: 647.2 ft. MSL

2.5 ft Stickup

Surface Seal, bottom: ____ ft. MSL or 0.0 ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ■ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ☐ Hollow Stem Auger ■ Other ☐

Drilling fluid used: Water ☐ Air ☐ Drilling Mud ☐ None ■

Drilling additives used? ☐ Yes ■ No

Describe ____

Source of water: Approx. 2 gals. of water added to help measuring tape to go down well (Griffith City Water)

	ELEVATION		DEPTH	
Bentonite seal, top	____	ft. MSL or	0.0	ft.
Fine sand, top	____	ft. MSL or	NA	ft.
Filter pack, top	597.6	ft. MSL or	49.6	ft.
Screen joint, top	596.2	ft. MSL or	51.0	ft.
Well bottom	586.2	ft. MSL or	61.0	ft.
Filter pack, bottom	585.2	ft. MSL or	62.0	ft.
Borehole, bottom	585.2	ft. MSL or	62.0	ft.
Borehole, diameter	8.0	in.		
O.D. well casing	2.3	in.		
I.D. well casing	2.0	in.		

Cap and lock? ■ Yes ☐ No

Protective cover pipe:
Inside diameter: 4.0 in.
Length: 5.0 ft.
Material: Steel ☐ Other ☐

Additional protection? ☐ Yes ■ No
If yes, describe: ____

Surface seal: Bentonite ■ Concrete ☐ Other ☐

Material between well casing and protective pipe: Bentonite ☐ Annular space seal ☐ Other ■

Filter Pack Material

Annular space seal: Granular Bentonite ☐
____ Lbs/gal mud weight... Bentonite-sand slurry ☐
____ Lbs/gal mud weight..... Bentonite slurry ☐
____ % Bentonite..... Bentonite-cement grout ☐
____ cu ft volume added for any of the above

How installed: Tremie ☐ Tremie pumped ☐ Gravity ☐

Bentonite seal: Bentonite granules ■ Bentonite pellets ☐ Other ☐
☐ 1/4 in. ■ 3/8 in. ☐ 1/2 in.

Fine sand material: Manufacturer, product name & mesh size
NA
Volume added ____ cu ft

Filter pack material: Manufacturer, product name & mesh size
Global Drilling Supplies / Global Filter Pack / #7
Volume added 3 cu ft

Well casing: Flush threaded PVC schedule 40 ☐ Flush threaded PVC schedule 80 ☐ Other ■
Stainless Steel

Screen material: Stainless Steel

Screen type: Factory cut ☐ Continuous slot ■ Other ☐

Manufacturer: Johnson Screen Co.
Slot size: 0.010 in.
Slotted length: 9.65 ft.

Backfill material (below filter pack): None ☐ Other ■
Filter Pack Material

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	MONTGOMERY WATSON

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MONTGOMERY WATSON

STICK-UP MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ft. ☐ E. ☐ W.	Well Name: MW51
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. ____ Long. ____ or St. Plane ____ ft. N, ____ ft. E.	Date Well Installed: 10/18/96
	Section Location of Waste/Source: ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm) CSY - Montgomery Watson
Distance Well Is From Waste/Source Boundary: NA ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	JV - Stearns Drilling Co.

Protective pipe, top elevation: 634.51 ft. MSL

Well casing top elevation: 634.16 ft. MSL

Land surface elevation: 631.9 ft. MSL

2.5 ft Stickup

Seal, bottom: ____ ft. MSL or 0.0 ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ■ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ☐ Hollow Stem Auger ■ Other ☐

Drilling fluid used: Water ☐ Air ☐ Drilling Mud ☐ None ■

Drilling additives used? ☐ Yes ■ No

Describe ____

Source of water: N/A

	ELEVATION		DEPTH	
Bentonite seal, top	____	ft. MSL or	0.0	ft.
Fine sand, top	____	ft. MSL or	NA	ft.
Filter pack, top	614.4	ft. MSL or	17.5	ft.
Screen joint, top	611.9	ft. MSL or	20.0	ft.
Well bottom	601.9	ft. MSL or	30.0	ft.
Filter pack, bottom	601.9	ft. MSL or	30.0	ft.
Borehole, bottom	601.9	ft. MSL or	30.0	ft.
Borehole, diameter	8.0	in.		
O.D. well casing	2.3	in.		
I.D. well casing	2.0	in.		

Cap and lock? ■ Yes ☐ No

Protective cover pipe:
Inside diameter: 4.0 in.
Length: 5.0 ft.
Material: Steel ■ Other ☐

Additional protection? ☐ Yes ■ No
If yes, describe: ____

Surface seal: Bentonite ■ Concrete ☐ Other ☐

Material between well casing and protective pipe: Bentonite ☐ Annular space seal ☐ Other ■

Filter Pack Material

Annular space seal: Granular Bentonite ☐
____ Lbs/gal mud weight... Bentonite-sand slurry ☐
____ Lbs/gal mud weight..... Bentonite slurry ☐
____ % Bentonite..... Bentonite-cement grout ☐
____ cu ft volume added for any of the above

How installed: Tremie ☐ Tremie pumped ☐ Gravity ☐

Bentonite seal: Bentonite granules ■ Bentonite pellets ☐ Other ☐
☐ 1/4 in. ■ 3/8 in. ☐ 1/2 in.

Fine sand material: Manufacturer, product name & mesh size
NA
Volume added ____ cu ft

Filter pack material: Manufacturer, product name & mesh size
Global Drilling Supplies / Global Filter Pack / #7
Volume added 2 cu ft

Well casing: Flush threaded PVC schedule 40 ☐ Flush threaded PVC schedule 80 ☐ Other ■ Stainless Steel

Screen material: Stainless Steel

Screen type: Factory cut ☐ Continuous slot ■ Other ☐

Manufacturer: Johnson Screen Co.
Slot size: 0.010
Slotted length: 9.65

Backfill material (below filter pack): None ■ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowlege.

Signature	Firm
	MONTGOMERY WATSON

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MONTGOMERY WATSON

STICK-UP MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name: MW52
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. ____ Long. ____ or St. Plane 7814 ft. N, 4996 ft. E.	Date Well Installed: 12/22/96
	Section Location of Waste/Source: ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm) RJR - Montgomery Watson
Distance Well Is From Waste/Source Boundary: NA ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	Layne

Protective pipe, top elevation: 633.47 ft. MSL

Well casing top elevation: 632.74 ft. MSL

Land surface elevation: 631.4 ft. MSL

Seal, bottom: 625.9 ft. MSL or 5.5 ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ■ Hollow Stem Auger ☐ Other ☐

Drilling fluid used: Water ■ Air ☐ Drilling Mud ☐ None ☐

Drilling additives used? ☐ Yes ■ No

Describe

Source of water: City of Griffith

	ELEVATION		DEPTH	
Bentonite seal, top	631.4	ft. MSL or	0.0	ft.
Fine sand, top	620.4	ft. MSL or	11.0	ft.
Filter pack, top	617.4	ft. MSL or	14.0	ft.
Screen joint, top	615.6	ft. MSL or	15.8	ft.
Well bottom	605.6	ft. MSL or	25.8	ft.
Filter pack, bottom	605.4	ft. MSL or	26.0	ft.
Borehole, bottom	604.4	ft. MSL or	27.0	ft.
Borehole, diameter	4.5	in.		
O.D. well casing	2.2	in.		
I.D. well casing	2.0	in.		

Cap and lock? ■ Yes ☐ No

Protective cover pipe:
Inside diameter: 6.0 in.
Length: Surface Casing ft.
Material: Steel ■ Other

Additional protection? ☐ Yes ■ No
If yes, describe:

Surface seal: Bentonite ■ Concrete ☐ Other ☐

Material between well casing and protective pipe: Bentonite ☐ Annular space seal ☐ Other ■

Filter Pack Material

Annular space seal: Granular Bentonite ☐
Lbs/gal mud weight... Bentonite-sand slurry ☐
Lbs/gal mud weight..... Bentonite slurry ■
% Bentonite..... Bentonite-cement grout ☐
0.9 cu ft volume added for any of the above

How installed: Tremie ☐ Tremie pumped ■ Gravity ☐

Bentonite seal: Bentonite granules ☐ Bentonite pellets ☐
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in.
Bentonite Slurry Other

Fine sand material: Manufacturer, product name & mesh size
Silica #100
Volume added 0.3 cu ft

Filter pack material: Manufacturer, product name & mesh size
Silica Sand #10/20
Volume added 3.3 cu ft

Well casing: Flush threaded PVC schedule 40 ☐ Flush threaded PVC schedule 80 ☐ Other ■
Stainless Steel

Screen material: Stainless Steel

Screen type: Factory cut ☐ Continuous slot ■ Other ☐

Manufacturer Johnson Screen Co.
Slot size: 0.010 in.
Slotted length: 9.8 ft.

Backfill material (below filter pack): None ☐ Other ■
Natural Cave

I hereby certify that the information on this form is true and correct to the best of my knowlege.

Signature	Firm
	MONTGOMERY WATSON

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MONTGOMERY WATSON

STICK-UP MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name: MW53
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. ____ Long. ____ or St. Plane 7833 ft. N, 4977 ft. E.	Date Well Installed: 12/22/96
	Section Location of Waste/Source: ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm) RJR - Montgomery Watson, Layne
Distance Well Is From Waste/Source Boundary: NA ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	

Protective pipe, top elevation: 633.30 ft. MSL

Well casing top elevation: 632.87 ft. MSL

Land surface elevation: 631.9 ft. MSL

Surface Seal, bottom: 626.9 ft. MSL or 5.0 ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ■ Hollow Stem Auger ■ Other ☐

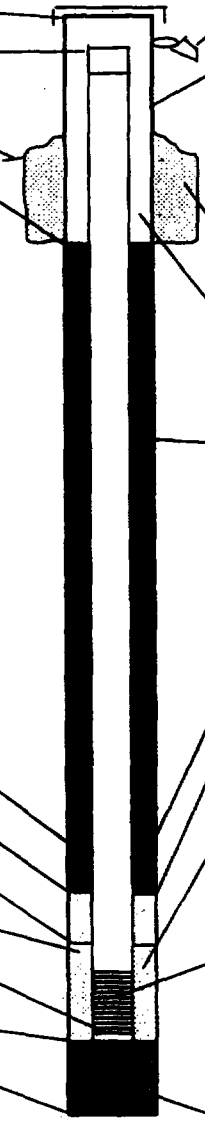
Drilling fluid used: Water ■ Air ☐ Drilling Mud ☐ None ☐

Drilling additives used? ☐ Yes ■ No

Describe ____

Source of water: City of Griffith

	ELEVATION		DEPTH	
Bentonite seal, top	631.9	ft. MSL or	0.0	ft.
Fine sand, top	560.9	ft. MSL or	71.0	ft.
Filter pack, top	557.9	ft. MSL or	74.0	ft.
Screen joint, top	555.7	ft. MSL or	76.2	ft.
Well bottom	545.7	ft. MSL or	86.2	ft.
Filter pack, bottom	545.4	ft. MSL or	86.5	ft.
Borehole, bottom	545.4	ft. MSL or	86.5	ft.
Borehole, diameter	4.5	in.		
O.D. well casing	2.2	in.		
I.D. well casing	2.0	in.		



Cap and lock? ■ Yes ☐ No

Protective cover pipe:
Inside diameter: 6.0 in.
Length: Surface Casing ft.
Material: Steel ■ Other ☐

Additional protection? ☐ Yes ■ No
If yes, describe: ____

Surface seal: Bentonite ■ Concrete ☐ Other ☐

Material between well casing and protective pipe: Bentonite ☐ Annular space seal ☐ Other ■

Filter Pack Material

Annular space seal: Granular Bentonite ☐
____ Lbs/gal mud weight... Bentonite-sand slurry ☐
____ Lbs/gal mud weight..... Bentonite slurry ■
____ % Bentonite..... Bentonite-cement grout ☐
6.0 cu ft volume added for any of the above

How installed: Tremie ☐ Tremie pumped ■ Gravity ☐

Bentonite seal: Bentonite granules ☐ Bentonite pellets ☐ Other ■
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in.

Fine sand material: Manufacturer, product name & mesh size
Silica #100
Volume added 0.3 cu ft

Filter pack material: Manufacturer, product name & mesh size
Silica Sand #10/20
Volume added 3.3 cu ft

Well casing: Flush threaded PVC schedule 40 ☐ Flush threaded PVC schedule 80 ☐ Other ■ Stainless Steel

Screen material: Stainless Steel #304

Screen type: Factory cut ☐ Continuous slot ■ Other ☐

Manufacturer Johnson Screen Co.
Slot size: 0.010 in.
Slotted length: 9.8 ft.

Backfill material (below filter pack): None ■ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowlege.

Signature ____ Firm MONTGOMERY WATSON

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MONTGOMERY WATSON

STICK-UP MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name: MW54
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. ____ Long. ____ or St. Plane 7592 ft. N, 5590 ft. E.	Date Well Installed: 12/19/96
	Section Location of Waste/Source: ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm) KAS - Montgomery Watson
Distance Well Is From Waste/Source Boundary: NA ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	Layne

Protective pipe, top elevation: 636.45 ft. MSL

Well casing top elevation: 636.05 ft. MSL

Land surface elevation: 634.6 ft. MSL

Surface Seal, bottom: 629.1 ft. MSL or 5.5 ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ■ Hollow Stem Auger ■ Other ☐

Drilling fluid used: Water ■ Air ☐ Drilling Mud ☐ None ☐

Drilling additives used? ☐ Yes ■ No

Describe ____

Source of water: City of Griffith

	ELEVATION		DEPTH	
Bentonite seal, top	634.6	ft. MSL or	0.0	ft.
Fine sand, top	612.6	ft. MSL or	22.0	ft.
Filter pack, top	609.5	ft. MSL or	25.1	ft.
Screen joint, top	608.1	ft. MSL or	26.5	ft.
Well bottom	598.1	ft. MSL or	36.5	ft.
Filter pack, bottom	597.6	ft. MSL or	37.0	ft.
Borehole, bottom	597.6	ft. MSL or	37.0	ft.
Borehole, diameter	4.5	in.		
O.D. well casing	2.2	in.		
I.D. well casing	2.0	in.		

Cap and lock? ■ Yes ☐ No

Protective cover pipe:
Inside diameter: 6.0 in.
Length: Surface Casing ft.
Material: Steel ■ Other ☐

Additional protection? ☐ Yes ■ No
If yes, describe: ____

Surface seal: Bentonite ■ Concrete ☐ Other ☐

Material between well casing and protective pipe: Bentonite ☐ Annular space seal ☐ Other ■

Filter Pack Material

Annular space seal: Granular Bentonite ☐ Bentonite-sand slurry ☐ Bentonite slurry ■ Bentonite-cement grout ☐
____ Lbs/gal mud weight...
____ Lbs/gal mud weight.....
____ % Bentonite.....
2.2 cu ft volume added for any of the above

How installed: Tremie ☐ Tremie pumped ■ Gravity ☐

Bentonite seal: Bentonite granules ☐ Bentonite pellets ☐ Other ☐
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in.
Bentonite Slurry

Fine sand material: Manufacturer, product name & mesh size
Silica #100
Volume added 0.3 cu ft

Filter pack material: Manufacturer, product name & mesh size
Silica Sand #10/20
Volume added 3.3 cu ft

Well casing: Flush threaded PVC schedule 40 ☐ Flush threaded PVC schedule 80 ☐ Other ■
Stainless Steel

Screen material: Stainless Steel #304

Screen type: Factory cut ☐ Continuous slot ■ Other ☐

Manufacturer Johnson Screen Co.
Slot size: 0.010 in.
Slotted length: 9.8 ft.

Backfill material (below filter pack): None ■ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowlege.

Signature	Firm
	MONTGOMERY WATSON

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MONTGOMERY WATSON

STICK-UP MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ☐ E. ft. ☐ W.	Well Name: MW55
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. ____ Long. ____ or St. Plane 7604 ft. N, 5595 ft. E.	Date Well Installed: 12/21/96
	Section Location of Waste/Source: ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm) CSY - Montgomery Watson
Distance Well Is From Waste/Source Boundary: NA ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	JV - Stearns Drilling Co.

Protective pipe, top elevation: 637.04 ft. MSL

Well casing top elevation: 636.63 ft. MSL

Land surface elevation: 635.3 ft. MSL

Seal, bottom: 630.3 ft. MSL or 5.0 ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ■ Hollow Stem Auger ■ Other ☐

Drilling fluid used: Water ■ Air ☐ Drilling Mud ☐ None ☐

Drilling additives used? ☐ Yes ■ No

Describe

Source of water: City of Griffith

	ELEVATION		DEPTH	
Bentonite seal, top	635.3	ft. MSL or	0.0	ft.
Fine sand, top	552.8	ft. MSL or	82.5	ft.
Filter pack, top	549.8	ft. MSL or	85.5	ft.
Screen joint, top	547.6	ft. MSL or	87.7	ft.
Well bottom	537.6	ft. MSL or	97.7	ft.
Filter pack, bottom	537.6	ft. MSL or	97.7	ft.
Borehole, bottom	537.6	ft. MSL or	97.7	ft.
Borehole, diameter	4.5	in.		
O.D. well casing	2.2	in.		
I.D. well casing	2.0	in.		

Cap and lock? ■ Yes ☐ No

Protective cover pipe:
Inside diameter: 6.0 in.
Length: Surface Casing ft.
Material: Steel ■ Other ☐

Additional protection? ☐ Yes ■ No
If yes, describe:

Surface seal: Bentonite ■ Concrete ☐ Other ☐

Material between well casing and protective pipe: Bentonite ☐ Annular space seal ☐ Other ■

Filter Pack Material

Annular space seal: Granular Bentonite ☐
____ Lbs/gal mud weight... Bentonite-sand slurry ☐
____ Lbs/gal mud weight..... Bentonite slurry ■
____ % Bentonite..... Bentonite-cement grout ☐
6.6 cu ft volume added for any of the above

How Installed: Tremie ☐ Tremie pumped ■ Gravity ☐

Bentonite seal: Bentonite granules ☐ Bentonite pellets ☐ Other ■
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in.
Bentonite Slurry

Fine sand material: Manufacturer, product name & mesh size
Silica #100
Volume added 0.3 cu ft

Filter pack material: Manufacturer, product name & mesh size
Silica Sand #10/20
Volume added 3.3 cu ft

Well casing: Flush threaded PVC schedule 40 ☐ Flush threaded PVC schedule 80 ☐ Other ■
Stainless Steel

Screen material: Stainless Steel #304

Screen type: Factory cut ☐ Continuous slot ■ Other ☐

Manufacturer Johnson Screen Co.

Slot size: 0.010 in

Slotted length: 9.8 ft.

Backfill material (below filter pack): None ■ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowlege.

Signature

Firm: MONTGOMERY WATSON

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MONTGOMERY WATSON

FLUSH MOUNT MONITORING WELL CONSTRUCTION SUMMARY

JOB NO. 1252042.08090072

Facility/Project Name: American Chemical Service, Inc.	Local Grid Location of Well: ☐ N. ft. ☐ S. ft. ☐ E. ☐ W.	Well Name: P57
Type of Well: Water Table Observation Well ☐ Piezometer ■	Grid Origin Location: Lat. _____ Long. _____ or St. Plane ft. N, ft. E.	Date Well Installed: 10/16/96
	Section Location of Waste/Source ☐ E. ☐ W.	Well Installed By: (Person's Name and Firm)
Distance Well Is From Waste/Source Boundary: ft.	Location of Well Relative to Waste/Source: ☐ Upgradient ☐ Sidegradient ☐ Downgradient ☐ Not Known	CSY - Montgomery Watson JEV - Stearns Drilling co.

Watertight Cover elevation 638.62 ft. MSL

Well casing top elevation 638.05 ft. MSL

Land surface elevation 638.6 ft. MSL

Surface Seal, bottom _____ ft. MSL or _____ ft.

USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ■
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

Sieve analysis attached? ☐ Yes ■ No

Drilling method used: Rotary ☐ Hollow Stem Auger ■ Other ☐

Drilling fluid used: Water ☐ Air ☐ Drilling Mud ☐ None ■

Drilling additives used? ☐ Yes ■ No

Describe _____

Source of water: N/A

	ELEVATION		DEPTH	
Bentonite seal, top	637.1	ft. MSL or	1.5	ft.
Fine sand, top		ft. MSL or	N/A	ft.
Filter pack, top	633.6	ft. MSL or	5.0	ft.
Screen joint, top	631.6	ft. MSL or	7.0	ft.
Well bottom	626.6	ft. MSL or	12.0	ft.
Filter pack, bottom	623.6	ft. MSL or	15.0	ft.
Borehole, bottom	623.6	ft. MSL or	15.0	ft.
Borehole, diameter	8.0	in.		
O.D. well casing	1.3	in.		
I.D. well casing	1.0	in.		

Bolt down water tight cover:
Inside Diameter: 9.0 (in.) Length _____ (in.)

Water tight well cap? Yes ☐ No ■
Lock? Yes ☐ No ■

Surficial Seal: Concrete ■ Bentonite ☐

Sand Drainage? Yes ■ No ☐

Material between well casing and protective pipe:
Bentonite ☐
Annular space seal ☐
Filter Pack Material Other ■

Annular space seal: Granular Bentonite ☐
_____ Lbs/gal mud weight... Bentonite-sand slurry ☐
_____ Lbs/gal mud weight..... Bentonite slurry ☐
_____ % Bentonite..... Bentonite-cement grout ☐
_____ cu ft volume added for any of the above

How installed: Tremie ☐ Tremie pumped ☐ Gravity ☐

Bentonite seal: Bentonite granules ■ Bentonite pellets ☐ Other ☐
☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in.

Fine sand material: Manufacturer, product name & mesh size
N/A
Volume added _____ cu ft

Filter pack material: Manufacturer, product name & mesh size
Global Filter Pack #7
Volume added 1.5 cu ft

Well casing: Flush threaded PVC schedule 40 ■ Flush threaded PVC schedule 80 ☐ Other ☐

Screen material: Sch. 40 PVC
Screen type: Factory cut ■ Continuous slot ☐ Other ☐
Manufacturer Big Foot
Slot size: 0.01 in.
Slotted length: 4.7 ft.

Backfill material (below filter pack): None ☐ Other ■
Filter Pack Material

I hereby certify that the information on this form is true and correct to the best of my knowlege.

Signature	Firm
	Montgomery Watson

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MONITORING WELL DEVELOPMENT DATA

MONTGOMERY WATSON

MONITORING WELL DEVELOPMENT SUMMARY

Project Name	American Chemical Service, Inc.	Well No.	MW50
Location	Griffith, Indiana	Project No.	4077.0072
Developed By	CSY/Stearns	Checked By	

1. Can this well be purged dry? ☐ Yes ■ No

2. Well development method

- surged with bailer and bailed ☐
- surged with bailer and pumped ☐
- surged with block and bailed ☐
- surged with block and pumped ■
- surged with block, bailed and pumped ☐
- compressed air ☐
- bailed only ☐
- pumped only ☐
- pumped slowly ☐
- Other _____ ☐

3. Time spent developing well 125 min.

4. Total well depth (TOC) 63.5 ft.
(From well construction summary)

Measured well depth (Before) 62.7 ft.

Measured well depth (After) 63.0 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 15.1 gal.

7. Volume of water removed from well 160.0 gal.

Relative recovery rate 3.0 gal. per 1 min.

8. Volume of water added (if any) 3.0 gal.

Source of water added City of Griffith, IN

	Before Development	After Development
10 Depth to Water (from top of well casing)	a. 28.50 ft.	27.65 ft.
Date:	b. 11 / 19 / 96 (mm dd yy)	11 / 17 / 96 (mm dd yy)
Time:	c. 1 : 15 ☐ a.m. ■ p.m.	3 : 5 ☐ a.m. ■ p.m.
11 Sediment in well bottom:	9.0 inches	0.0 inches
12 Water Observations:	Clear ☐ Turbid ■ (Describe)	Clear ☐ Turbid ■ (Describe)
Color	Gray	Lt. Gray
Odor	Musty	Musty
Turbidity	Very	Slight
HNu	–	–

Filter Pack Vol. (gallons) $0.057(R^2 - r^2)ls$ = 9.4

Well casing Vol. (gallons) $0.16r^2l$ = 5.7

Saturated length of sand pack (ft.) (ls) 11.0

Length of water column (ft.) (l) 35.0

R = Radius of borehole (in.) r = Well radius (in.)

Collect groundwater sample if drilling fluids were used and well is at solid waste facility:

	(BEFORE)	(AFTER)
13 Total suspended solids (500 ml Unfiltered)	mg/l	mg/l
14. COD (250 ml Unfiltered Sulfuric)	mg/l	mg/l

Time	Gallons Purged	pH	Spec. Cond.	T deg. C	Spec. Cond. at 25 deg. C	Color	Odor	Turb.	Comment
2:05	15	4.07	2.36	17.8		Gray	Musty	999	
2:10	30	4.68	2.17	15.9		Gray	Musty	762	
2:15	45	6.58	2.12	15.2		Gray	Musty	810	
2:20	60	4.52	2.05	14.8		Lt. Gray	Musty	740	
2:25	75	4.58	1.98	14.9		Lt. Gray	Musty	430	
2:30	90	4.72	1.97	15.2		Lt. Gray	Musty	530	
2:45	105	4.78	1.94	15.3		Lt. Gray	Musty	510	
2:50	120	4.84	1.9	15.5		Lt. Gray	Musty	366	
2:55	135	4.84	1.91	15.8		Lt. Gray	Musty	370	
3:00	150	4.89	1.87	15.9		Lt. Gray	Musty	442	

MONTGOMERY WATSON

MONITORING WELL DEVELOPMENT SUMMARY

Project Name	American Chemical Service, Inc.	Well No.	MW51
Location	Griffith, Indiana	Project No.	4077.0072
Developed By	CSY/Stearns	Checked By	

1. Can this well be purged dry? ☐ Yes ■ No

2. Well development method

- surged with bailer and bailed ☐
- surged with bailer and pumped ☐
- surged with block and bailed ☐
- surged with block and pumped ■
- surged with block, bailed and pumped ☐
- compressed air ☐
- bailed only ☐
- pumped only ☐
- pumped slowly ☐
- Other _____ ☐

3. Time spent developing well 55 min.

4. Total well depth (TOC) (From well construction summary) 32.5 ft.

Measured well depth (Before) 29.3 ft.

Measured well depth (After) 32.5 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 13.4 gal.

7. Volume of water removed from well 135.0 gal.

Relative recovery rate 5.4 gal. per 1 min.

8. Volume of water added (if any) NA gal.

Source of water added NA

	Before Development	After Development
10 Depth to Water (from top of well casing)	a. 10.90 ft.	10.90 ft.
Date:	b. 10 / 18 / 96 (mm dd yy)	10 / 18 / 96 (mm dd yy)
Time:	c. 12 : 35 ☐ a.m. ■ p.m.	2 : 35 ☐ a.m. ■ p.m.
11 Sediment in well bottom:	3.6 inches	0.0 inches
12 Water Observations:	Clear ☐ Turbid ■ (Describe)	Clear ■ Turbid ☐ (Describe)
Color	Gray	Clear
Odor	Musty	Musty
Turbidity	Very	None
HNu	–	–

Filter Pack Vol. (gallons) $0.057(R^2 - r^2)ls$ = 9.9

Well casing Vol. (gallons) $0.16r^2l$ = 3.5

Saturated length of sand pack (ft.) (ls) 12.5

Length of water column (ft.) (l) 21.6

R = Radius of borehole (in.) r = Well radius (in.)

Collect groundwater sample if drilling fluids were used and well is at solid waste facility:

13 Total suspended solids (500 ml Unfiltered)	_____ mg/l	_____ mg/l
14. COD (250 ml Unfiltered Sulfuric)	_____ mg/l (BEFORE)	_____ mg/l (AFTER)

Time	Gallons Purged	pH	Spec. Cond.	T deg. C	Spec. Cond. at 25 deg. C	Color	Odor	Turb.	Comment
2:07	15	7.74	1.31	12.6		Light Gray	Musty	999	
2:07	30	7.96	1.38	11.8		Light Gray	Musty	380	
2:07	45	8.11	1.42	11.7		Cloudy	Musty	190	
2:07	60	8.17	1.43	11.6		Cloudy	Musty	18	
2:07	75	8.23	1.46	11.5		Sl to Clear	Musty	34	
2:07	90	8.24	1.53	11.5		Clear	Musty	10	
2:07	105	8.36	1.57	11.4		Clear	Musty	0	
2:07	120	8.40	1.53	11.4		Clear	Musty	0	
2:07	135	8.41	1.6	11.4		Clear	Musty	0	

MONTGOMERY WATSON

MONITORING WELL DEVELOPMENT SUMMARY

Project Name	American Chemical Service, Inc.	Well No.	MW52
Location	Griffith, Indiana	Project No.	1252042.08090072
Developed By	RJR	Checked By	

1. Can this well be purged dry? ☐ Yes ■ No

2. Well development method

- surged with bailer and bailed ☐
- surged with bailer and pumped ☐
- surged with block and bailed ☐
- surged with block and pumped ☐
- surged with block, bailed and pumped ☐
- compressed air ☐
- bailed only ☐
- pumped only ☐
- pumped slowly ☐
- Other Surged w/pump & pumped ■

3. Time spent developing well 1 5 0 min.

4. Total well depth (TOC) 2 7 . 1 ft.
(From well construction summary)

Measured well depth (Before) 2 7 . 1 ft.

Measured well depth (After) 2 7 . 1 ft.

5. Inside diameter of well 2 . 0 0 in.

6. Volume of water in filter pack and well casing 4 . 0 gal.

7. Volume of water removed from well 5 8 0 . 0 gal.

8. Volume of water added (if any) 1 8 0 . 0 gal.

9. Source of water added City of Griffith

	Before Development	After Development
10 Depth to Water (from top of well casing)	a. 9 . 5 8 ft.	ft.
Date:	b. 12 / 23 / # (mm dd yy)	12 / 23 / # (mm dd yy)
Time:	c. 8 : # ■ a.m. ☐ p.m.	# : # ■ a.m. ☐ p.m.
11 Sediment in well bottom:	0 . 0 inches	0 . 0 inches
12 Water Observations:	Clear ☐ Turbid ■ (Describe)	Clear ■ Turbid ☐ (Describe)
Color	Brown	Clear
Odor	None	None
Turbidity	Heavy	Very Little
HNu	–	–

Filter Pack Vol. (gallons) $0.057(R^2 - r^2)ls$ = 2 . 1

Well casing Vol. (gallons) $0.16r^2 l$ = 1 . 9

Saturated length of sand pack (ft.) (ls) 1 2 . 0

Length of water column (ft.) (l) 1 7 . 5

R = Radius of borehole (in.) r = Well radius (in.)

Collect groundwater sample if drilling fluids were used and well is at solid waste facility:

13 Total suspended solids (500 ml Unfiltered)	mg/l	mg/l
14. COD (250 ml Unfiltered Sulfuric)	mg/l (BEFORE)	mg/l (AFTER)

Time	Gallons Purged	pH	Sp. Cond.	T deg. C	Spec. Cond. at 25 deg. C	Color	Odor	Turb.	Comment
10:08	300	7.89	554	9.8				320	
10:16	350	7.80	593	10.0				312	
10:21	380	7.80	638	9.9				270	
10:27	420	7.78	702	10.0				263	
10:40	460	7.69	1052	10.3				293	
11:00	500	7.68	964	10.2				287	
11:10	550	7.69	973	10.3				285	
11:20	580	7.71	1020	10.2				280	

MONTGOMERY WATSON

MONITORING WELL DEVELOPMENT SUMMARY

Project Name	American Chemical Service, Inc.	Well No.	MW53
Location	Griffith, Indiana	Project No.	1252042.08090072
Developed By	RJR	Checked By	

1. Can this well be purged dry? ☐ Yes ■ No

2. Well development method

- surged with bailer and bailed ☐
- surged with bailer and pumped ☐
- surged with block and bailed ☐
- surged with block and pumped ☐
- surged with block, bailed and pumped ☐
- compressed air ☐
- bailed only ☐
- pumped only ☐
- pumped slowly ☐
- Other Surge w/ pump & pumped ■

3. Time spent developing well 135 min.

4. Total well depth (TOC) 87.2 ft.
(From well construction summary)

Measured well depth (Before) 87.1 ft.

Measured well depth (After) 87.2 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 14.5 gal.

7. Volume of water removed from well 370.0 gal.

8. Volume of water added (if any) 0.0 gal.

9. Source of water added City of Griffith

	Before Development	After Development
10 Depth to Water (from top of well casing)	a. 9.84 ft.	. ft.
Date:	b. 12 / 23 / # (mm dd yy)	12 / 23 / # (mm dd yy)
Time:	c. 8 : # ■ a.m. ☐ p.m.	# : 00 ■ a.m. ☐ p.m.
11 Sediment in well bottom:	1.0 inches	0.0 inches
12 Water Observations:	Clear ☐ Turbid ■ (Describe)	Clear ■ Turbid ☐ (Describe)
Color	Brown	Clear
Odor	None	None
Turbidity	Heavy	Very Little
HNu	–	–

Filter Pack Vol. (gallons) $0.057(R^2 - r^2)ls$ = 2.1

Well casing Vol. (gallons) $0.16r^2 l$ = 12.4

Saturated length of sand pack (ft.) (ls) 12.5

Length of water column (ft.) (l) 77.4

R = Radius of borehole (in.) r = Well radius (in.)

Collect groundwater sample if drilling fluids were used and well is at solid waste facility:

13 Total suspended solids (500 ml Unfiltered)	mg/l	mg/l
14. COD (250 ml Unfiltered Sulfuric)	mg/l (BEFORE)	mg/l (AFTER)

Time	Gallons Purged	pH	Spec. Cond.	T deg. C	Spec. Cond. at 25 deg. C	Color	Odor	Turb.	Comment
10:15	210	6.80	>2000	10.8	170			74	
10:30	270	6.83	>2000	10.7	123			68	
10:45	310	6.85	>2000	10.9	112			65	
11:00	370	6.91	>2000	10.9	98			63	

MONTGOMERY WATSON

MONITORING WELL DEVELOPMENT SUMMARY

Project Name	American Chemical Service, Inc.	Well No.	MW54
Location	Griffith, Indiana	Project No.	1252042.08090072
Developed By	RJR	Checked By	

1. Can this well be purged dry? ☐ Yes ■ No
2. Well development method
   - surged with bailer and bailed ☐
   - surged with bailer and pumped ☐
   - surged with block and bailed ☐
   - surged with block and pumped ☐
   - surged with block, bailed and pumped ☐
   - compressed air ☐
   - bailed only ☐
   - pumped only ☐
   - pumped slowly ☐
   - Other Surge w/ pump & pumped ■
3. Time spent developing well 150 min.
4. Total well depth (TOC) 37.9 ft. (From well construction summary)
   - Measured well depth (Before) 37.9 ft.
   - Measured well depth (After) 37.9 ft.
5. Inside diameter of well 2.00 in.
6. Volume of water in filter pack and well casing 5.5 gal.
7. Volume of water removed from well 480.0 gal.
8. Volume of water added (if any) 175.0 gal.
9. Source of water added City of Griffith

	Before Development	After Development
10 Depth to Water (from top of well casing)	a. 15.98 ft.	. ft.
Date:	b. 12 / # / # (mm dd yy)	12 / # / # (mm dd yy)
Time:	c. 1 : 00 ☐ a.m. ■ p.m.	3 : # ☐ a.m. ■ p.m.
11 Sediment in well bottom:	0.0 inches	0.0 inches
12 Water Observations:	Clear ☐ Turbid ■ (Describe)	Clear ■ Turbid ☐ (Describe)
Color	Milky	Clear
Odor	None	None
Turbidity	Moderate	Very Little
HNu	–	–

Filter Pack Vol. (gallons)	$0.057(R^2 - r^2)ls$ =	2.0
Well casing Vol. (gallons)	$0.16r^2 l$ =	3.5
Saturated length of sand pack (ft.) (ls)		11.9
Length of water column (ft.) (l)		21.9

R = Radius of borehole (in.) r = Well radius (in.)

Collect groundwater sample if drilling fluids were used and well is at solid waste facility:

13 Total suspended solids (500 ml Unfiltered)	mg/l	mg/l
14. COD (250 ml Unfiltered Sulfuric)	mg/l (BEFORE)	mg/l (AFTER)

Time	Gallons Purged	pH	Spec. Cond.	T deg. C	Spec. Cond. at 25 deg. C	Color	Odor	Turb.	Comment
2:00	150	7.76	734	10.5				98	
2:20	210	7.83	902	10.2				68	
2:30	240	7.87	936	10.3				54	
2:45	285	7.86	962	10.1				26	
2:50	300	7.86	960	10.0				12	
3:10	360	7.84	968	10.4				15	
3:20	420	7.82	977	10.2				11	
3:30	480	7.83	974	10.2				12	

MONTGOMERY WATSON

MONITORING WELL DEVELOPMENT SUMMARY

Project Name	American Chemical Service, Inc.	Well No.	MW55
Location	Griffith, Indiana	Project No.	1252042.08090072
Developed By	RJR	Checked By	

1. Can this well be purged dry? ☐ Yes ■ No

2. Well development method

- surged with bailer and bailed ☐
- surged with bailer and pumped ☐
- surged with block and bailed ☐
- surged with block and pumped ☐
- surged with block, bailed and pumped ☐
- compressed air ☐
- bailed only ☐
- pumped only ☐
- pumped slowly ☐
- Other Surge w/ pump & pumped ■

3. Time spent developing well 140 min.

4. Total well depth (TOC) 99.0 ft.
From well construction summary)

Measured well depth (Before) 99.0 ft.

Measured well depth (After) 99.0 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 15.3 gal.

7. Volume of water removed from well 410.0 gal.

8. Volume of water added (if any) 35.0 gal.

9. Source of water added City of Griffith

	Before Development	After Development
10 Depth to Water (from top of well casing)	a. 16.61 ft.	. ft.
Date:	b. 12 / # / # (mm dd yy)	12 / # / # (mm dd yy)
Time:	c. 9 : # ■ a.m. ☐ p.m.	# : # ☐ a.m. ■ p.m.
11 Sediment in well bottom:	0.0 inches	0.0 inches
12 Water Observations:	Clear ☐ Turbid ■ (Describe)	Clear ■ Turbid ☐ (Describe)
Color	Brown	Clear
Odor	None	None
Turbidity	Moderate	Very Little
HNu	–	–

Filter Pack Vol. (gallons) $0.057(R^2 - r^2)ls$ = 2.1

Well casing Vol. (gallons) $0.16r^2 l$ = 13.2

Saturated length of sand pack (ft.) (ls) 12.2

Length of water column (ft.) (l) 82.4

R = Radius of borehole (in.) r = Well radius (in.)

Collect groundwater sample if drilling fluids were used and well is at solid waste facility:

13 Total suspended solids (500 ml Unfiltered)	mg/l	mg/l
14. COD (250 ml Unfiltered Sulfuric)	mg/l (BEFORE)	mg/l (AFTER)

Time	Gallons Purged	pH	Spec. Cond.	T deg. C	Spec. Cond. at 25 deg. C	Color	Odor	Turb.	Comment
10:10	150	7.66	871	11.1				55	
10:20	185	7.71	854	10.8				36	
10:27	205	7.69	848	10.9				32	
10:35	230	7.68	849	11.2				25	
11:35	245	7.81	855	9.9				22	
11:48	275	7.65	842	10.3				27	
11:55	320	7.63	839	11.3				21	
12:05	355	7.62	845	11.2				17	
12:20	410	7.61	850	11.3				16	

D

D

AREA SURVEY DATA

Area Survey Company

11340 West 159th Street Orland Park, Illinois 60462 • Phone (708) 349-7364 • FAX (708) 349-7372

TO: Phil Smith, Montgomery Watson

FROM: Dave Atwell

DATE: January 8, 1997

RE: ACS Site
Griffith, Indiana
Record Data for MW-50 and MW-51

****

This is the record data for monitoring wells 50 and 51 at ACS.

Well Number	North Coordinate	East Coordinate	Top of Casing Elevation	Top of PVC Elevation	Ground Elevation
MW-50	5383	5270	649.70	649.43	647.2
MW-51	7767	5198	634.51	634.16	631.9

Date of survey was November 19, 1996.

Please call if you have any questions.

Area Survey Company
11340 West 159th Street Orland Park, Illinois 60462 • Phone (708) 349-7364 • FAX (708) 349-7372

January 10, 1997

Mr. Phil Smith
Montgomery Watson
2100 Corporate Drive
Addison, Illinois 60101

RE: Record Data for Monitoring Wells
ACS Site
Griffith, Indiana

Dear Mr. Smith:

The following is the record data for the referenced wells at the ACS site in Griffith, Indiana:

Well Number	North Coordinate	East Coordinate	Top of Casing Elevation	Top of PVC Elevation	Ground Elevation
MW-52	7814	4996	633.47	632.74	631.4
MW-53	7833	4977	633.30	632.87	631.9
MW-54	7592	5590	636.45	636.05	634.6
MW-55	7604	5595	637.04	636.63	635.3
P-57	7573	6783	638.62	638.05	638.6

Date of survey was January 9, 1997.

Please call if you have any questions or need further information.

Sincerely,

Area Survey Company

Thomas J. Cesal

Thomas J. Cesal
President

E

E

LABORATORY ANALYTICAL DATA
UPPER AQUIFER
VOCs, SVOCs, PCBs

APD-GWM06-01
11/7/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V07.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	720	
75-09-2	Methylene Chloride	17	J
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	21	J
540-59-0	1,2-Dichloroethene (total)	26 * ~~29~~	J
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	50	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	320	
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	16	J
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	40 * ~~50~~	~~U~~ J JAH

* lab error
JAH

FORM I VOA 3/90

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V07.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	720	
75-09-2	Methylene Chloride	17	J
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	21	J
540-59-0	1,2-Dichloroethene (total)	KW 1/13/97 26 ~~29~~	J
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	50	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	320	
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	16	J
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	40 ~~50~~	J ~~U~~

FORM I VOA LAB REVISED Form I 3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V07.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Hydrocarbon	3.460	25	J
2. 60297	Ether	3.700	94	NJ
3.				
4.				
5.				
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122410.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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	56	
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	15	
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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122410.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	2	J
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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122410.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 9

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	11.420	10	J
2.	Unknown	12.070	20	J
3.	Unknown	15.810	500	J
4.	Unknown	16.894	20	J
5. 101100	Propanoic acid, 2-(3-chloroph	18.000	74	NJ
6.	Unknown	18.740	26	J
7. 80397	Benzenesulfonamide, N-ethyl-	19.430	20	NJ
8. 50066	Phenobarbital	22.350	15	NJ
9.	Unknown	25.020	20	J
10.				
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW06

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120505

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P1110796_175.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/08/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/13/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW11-01
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW11

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114V05.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/14/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW11

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114V05.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/14/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW11

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N10.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

FORM I SV-1 3/90

Phenol Surrogate recovery 2% — Flag acid fraction "J"

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW11

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N10.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/L		Q
51-28-5	2,4-Dinitrophenol	SV	25	U
100-02-7	4-Nitrophenol	SV	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	SV	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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW11

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N10.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW11RE

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202RE

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1129607.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/26/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

21 day hold-time use initial run

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

VALIDATED

Phenol Surrogate Rec = 79%

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW11RE

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202RE

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1129607.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/26/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/29/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW11RE

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202RE

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1129607.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/26/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/29/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	7.490	2	J
2. 80057	Phenol, 4,4'-(1-methylethyli	24.290	3	NJ
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW11

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111202

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_115.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW12-01
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW12

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111205

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X10.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	5	J
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW12

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111205

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X10.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~39638329~~	~~Bis(2-chloroisopropyl) ether~~	~~23.340~~	~~11~~	~~NJ~~
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5.	2,2-oxybis(1-chloropropane) = SVOC TCL			
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW12

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111205

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P03.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH:

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW12

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111205

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P03.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	20	U
121-14-2	2,4-Dinitrotoluene	20	U
84-66-2	Diethylphthalate	20	U
7005-72-3	4-Chlorophenyl-phenylether	20	U
86-73-7	Fluorene	20	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	20	U
101-55-3	4-Bromophenyl-phenylether	20	U
118-74-1	Hexachlorobenzene	20	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	20	U
120-12-7	Anthracene	20	U
86-74-8	Carbazole	20	U
84-74-2	Di-n-butylphthalate	20	U
206-44-0	Fluoranthene	20	U
129-00-0	Pyrene	20	U
85-68-7	Butylbenzylphthalate	20	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	20	U
218-01-9	Chrysene	20	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	U
117-84-0	Di-n-octylphthalate	20	U
205-99-2	Benzo(b)fluoranthene	20	U
207-08-9	Benzo(k)fluoranthene	20	U
50-32-8	Benzo(a)pyrene	20	U
193-39-5	Indeno(1,2,3-cd)pyrene	20	U
53-70-3	Dibenz(a,h)anthracene	20	U
191-24-2	Benzo(g,h,i)perylene	20	U

(1) - Cannot be separated from Diphenylamine

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW12

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111205

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P03.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y 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~~	~~7.090~~	~~27~~	~~NJ~~ B
~~2.~~	~~Unknown~~	~~7.210~~	~~6~~	~~J~~ B
3.	Unknown	16.910	48	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW12

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111205

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_118.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWM-12-71
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW129

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111206

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X11.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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	U	28	
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		1	J
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
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-88-3	Toluene		10	U
108-90-7	Chlorobenzene		5	J
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW129

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111206

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X11.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 39638329	Bis(2-chloroisopropyl) ether	23.340	11	NJ
2.			?	
3.			SVOC TCL	
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW129

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111206

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P04.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH:

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW129

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111206

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P04.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	20	U
121-14-2	2,4-Dinitrotoluene	20	U
84-66-2	Diethylphthalate	20	U
7005-72-3	4-Chlorophenyl-phenylether	20	U
86-73-7	Fluorene	20	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	20	U
101-55-3	4-Bromophenyl-phenylether	20	U
118-74-1	Hexachlorobenzene	20	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	20	U
120-12-7	Anthracene	20	U
86-74-8	Carbazole	20	U
84-74-2	Di-n-butylphthalate	20	U
206-44-0	Fluoranthene	20	U
129-00-0	Pyrene	20	U
85-68-7	Butylbenzylphthalate	20	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	20	U
218-01-9	Chrysene	20	U
117-81-7	bis(2-Ethylhexyl)phthalate	20	U
117-84-0	Di-n-octylphthalate	20	U
205-99-2	Benzo(b)fluoranthene	20	U
207-08-9	Benzo(k)fluoranthene	20	U
50-32-8	Benzo(a)pyrene	20	U
193-39-5	Indeno(1,2,3-cd)pyrene	20	U
53-70-3	Dibenz(a,h)anthracene	20	U
191-24-2	Benzo(g,h,i)perylene	20	U

(1) - Cannot be separated from Diphenylamine

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW129

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111206

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P04.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y 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~~	~~7.090~~	~~16~~	~~NJ~~
~~2.~~	~~Unknown~~	~~7.210~~	~~5~~	~~J~~
3.	Unknown	9.790	4	J
4.	Unknown	16.910	50	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW129

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111206

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_119.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

RPD-GWMW13-01
11/13/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW13

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120502

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V10.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/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	97	
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	6	J
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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW13

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120502

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V10.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60297	Ether	3.720	420	NJ
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW13

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120502

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122413.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW13

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120502

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122413.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW13

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120502

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122413.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 16

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1.~~	~~Unknown~~	~~7.050~~	~~6~~	~~J~~
~~2.~~	~~Unknown~~	~~7.150~~	~~3~~	~~J~~
~~3. 930687~~	~~2-Cyclohexen-1-one~~	~~7.920~~	~~7~~	~~NJ~~
4.	Unknown	9.250	4	J
5.	Unknown	9.670	2	J
6.	Unknown	10.490	2	J
7.	Unknown	10.540	3	J
8.	Unknown	10.990	7	J
9.	Unknown	12.420	2	J
10.	Unknown	13.790	2	J
11.	Unknown	14.070	2	J
12.	Unknown	15.610	2	J
13.	Unknown	17.580	6	J
14.	Unknown	18.070	3	J
15.	Unknown	19.470	4	J
16.	Unknown	21.340	3	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW13

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120502

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P1110796_178.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/08/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/13/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW14-01
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW14

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113516

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K10.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (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	1000	
75-09-2	Methylene Chloride	14	J
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	41	J
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
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	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

VALIDATED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW14

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113516

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K10.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

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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FORM I VOA-TIC

VALIDATED 3/90

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW14

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113516

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P09.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	12	
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	0.9	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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW14

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113516

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P09.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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 ~~2~~	~~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

FORM I SV-2

VALIDATED

3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW14

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113516

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P09.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
~~1. 687489~~	~~Carbamic acid, dimethyl-, et~~	~~7.150~~	~~9~~	~~NJ~~	B
2.	Unknown	9.800	14	J	
~~3. 931179~~	~~1,2 Cyclohexanediol isomer~~	~~10.440~~	~~28~~	~~NJ~~	B
~~4.~~	~~Unknown~~	~~11.150~~	~~38~~	~~J~~	B
5.	Unknown	11.730	8	J	
6.	Unknown	12.540	7	J	
7.	Unknown	14.100	11	J	
8.	Unknown	14.770	7	J	
~~9.~~	~~Unknown~~	~~15.070~~	~~16~~	~~J~~	B
10.	Unknown	15.760	16	J	
~~11.~~	~~Unknown~~	~~16.350~~	~~16~~	~~J~~	B
12. 98737	Benzoic acid, p-tert-butyl-	16.720	26	NJ	
13.	Unknown	16.920	9	J	
14.	Unknown	17.390	9	J	
15.	Unknown	18.060	8	J	
16.	Unknown	18.670	11	J	
17. 70553	Benzenesulfonamide, 4-methyl	18.830	11	NJ	
18.	Unknown	19.180	8	J	
19.	Unknown	21.190	30	J	
20.	Unknown	25.680	34	J	
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW14

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113516

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_040.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW15-01
11/15/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW15

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120503

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V11.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/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	3	J
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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW15

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120503

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V11.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW15

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120503

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122412.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW15

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120503

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122412.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW15

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120503

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122412.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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.~~	~~Unknown~~	~~7.050~~	~~4~~	~~J~~ B
~~2. 930687~~	~~2-Cyclohexen-1-one~~	~~7.920~~	~~4~~	~~NJ~~ B
3.	Unknown	10.550	8	J
4.	Unknown	11.020	16	J
5.	Unknown	11.570	3	J
6.	Unknown	12.380	3	J
7.	Unknown	12.420	2	J
8.	Unknown	12.470	6	J
9.	Unknown	14.990	3	J
10.	Unknown	15.970	2	J
11.	Unknown	16.080	3	J
12.	Unknown	16.540	4	J
13. 101100	Propanoic acid, 2-(3-chloroph	17.740	4	NJ
14.	Unknown	18.560	3	J
15.	Unknown	20.680	7	J
16.	Unknown	21.550	4	J
17. 50066	Phenobarbital	22.140	10	NJ
18.	Unknown	24.710	3	J
19.	Unknown	25.590	5	J
20.	Unknown	28.600	4	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW15

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120503

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P1110796_177.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/08/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/13/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW18-C 1
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW18

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111307

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X12.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

FORM I VOA VALIDATED 3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW18

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111307

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X12.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW18

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111307

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N15.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW18

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111307

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N15.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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 ~~2~~	~~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

FORM I SV-2

VALIDATED 3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW18

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111307

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N15.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 108930~~	~~Cyclohexanol~~	~~7.120~~	~~7~~	~~NJ~~
~~2.~~	~~Unknown~~	~~7.230~~	~~9~~	~~J~~
3.	Unknown	12.680	2	J
4.	Unknown	13.680	2	J
5.	Unknown	17.070	2	J
6. 1025156	1,3,5-Triazine-2,4,6(1H,3H,5	18.640	4	NJ
7. 57103	Hexadecanoic acid	21.590	2	NJ
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW18

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111307

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_127.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/23/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW19-01
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW19

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111203

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114V06.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/14/96

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/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	20	
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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW19

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111203

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114V06.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/14/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW19

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111203

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N11.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	11	
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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW19

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111203

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N11.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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 ~~2~~	~~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

FORM I SV-2 3/90

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW19

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111203

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N11.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
~~1.~~	~~Unknown~~	~~11.210~~	~~79~~	~~J~~	B
~~2.~~	~~Unknown~~	~~15.200~~	~~20~~	~~J~~	B
~~3. 98737~~	~~Benzoic acid, p-tert-butyl-~~	~~16.750~~	~~34~~	~~NJ~~	B
4. 50066	Phenobarbital	22.300	83	NJ	
5. 10544500	Sulfur, mol. (S8)	22.970	22	NJ	
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FORM I SV-TIC VALIDATED 3/90

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW19

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111203

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_116.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

TB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111311

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X16.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

TB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111311

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X16.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

APD-GW~~MW~~-TB02-C
11/6/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TB02

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961114001

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V15.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

TB02

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961114001

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V15.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
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VALIDATED

APD-GW(B03-01
11/7/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120506

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V09.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

TB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120506

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V09.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

APD-GWMT FB01-01
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111308

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X13.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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	9	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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

FORM I VOA 3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111308

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X13.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

FB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111308

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N16.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111308

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N16.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111308

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N16.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y 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	7.110	33	NJ
2.	Unknown	7.230	8	J
3. 931179	1,2-Cyclohexanediol isomer	10.430	8	NJ
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111308

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_128.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/23/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GW
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB02

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113513

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X18.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FB02

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113513

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X18.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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 VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB02

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113513

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P06.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB02

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113513

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P06.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FB02

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113513

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P06.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y 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	7.090	53	NJ
2.	Unknown	7.210	10	JB
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB02

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113513

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_038.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GW1-B03-01
11/7/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120504

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V12.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/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	14	
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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120504

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V12.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: not dec. _____ Date Analyzed: 11/16/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120504

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122411.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120504

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122411.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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	~~2~~	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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

FB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120504

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1122411.D

Level: (low/med) LOW Date Received: 11/08/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/12/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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	7.000	16	NJ
2.	Unknown	7.090	9	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB03

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

Lab Code: IEA Case No.: 2240-009 SDG No.: 11140

Matrix: (soil/water) WATER Lab Sample ID: 961120504

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P1110796_176.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/08/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/13/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

F

F

LABORATORY ANALYTICAL DATA
UPPER AQUIFER
METALS

APD GW MW06-01
11/7/96

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW06

t Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

t Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

trix (soil/water): WATER Lab Sample ID: 961120505

l (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	150	B		P_
7440-36-0	Antimony_	U 2.1	B		P_
7440-38-2	Arsenic__	72.0			P_
7440-39-3	Barium___	281			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	216000			P_
7440-47-3	Chromium_	24.1			P_
7440-48-4	Cobalt___	3.6	B		P_
7440-50-8	Copper___	7.6	B		P_
7439-89-6	Iron____	16500			P_
7439-92-1	Lead____	7.6			P_
7439-95-4	Magnesium	37600			P_
7439-96-5	Manganese	2900			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	38.8	B		P_
7440-09-7	Potassium	J 27400		E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	121000			P_
7440-28-0	Thallium_	U 3.6	B		P_
7440-62-2	Vanadium_	3.8	B		P_
7440-66-6	Zinc____	U 13.1	B		P_
	Cyanide__	10.0	U		CA

lor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

l r After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

mments:

FORM I - IN

VALIDATED

3/90

APD-GWMW06-01

11-7-96

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW06F

a Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

ab Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

atrix (soil/water): WATER Lab Sample ID: 961120505F

el (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0 DISSOLVED ~~Total~~ JAH 1-12-96

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	U 35.6	B		P_
7440-36-0	Antimony_	U 1.0	B		P_
7440-38-2	Arsenic__	67.9	_		P_
7440-39-3	Barium___	296			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	222000			P_
7440-47-3	Chromium_	U 2.6	B		P_
7440-48-4	Cobalt___	2.8	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	16600			P_
7439-92-1	Lead____	U 1.3	B		P_
7439-95-4	Magnesium	39100	_		P_
7439-96-5	Manganese	3020			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	37.1	B		P_
7440-09-7	Potassium	J 28900		E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	129000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	2.4	B		P_
7440-66-6	Zinc____	U 9.3	B		P_
_____	Cyanide__		_		NR

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

olor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:

FORM I - IN

VALIDATED

3/90

APD-GWMW11-01
11-5-96

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW11

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111202

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	1460	_		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	24.2	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	44300	_		P_
7440-47-3	Chromium_	u 4.8	B		P_
7440-48-4	Cobalt___	2.2	B		P_
7440-50-8	Copper___	11.3	B		P_
7439-89-6	Iron_____	2910	_		P_
7439-92-1	Lead_____	us 7.9	_		P_
7439-95-4	Magnesium	18200	_		P_
7439-96-5	Manganese	145	_		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	8.8	B		P_
7440-09-7	Potassium	2450	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	4460	B		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	6.5	B		P_
7440-66-6	Zinc_____	91.1	_		P_
_____	Cyanide__	10.0	U		CA
_____	_____	_____	_		_

Color Before: TAN_____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-5-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW11F

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111202F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	19.6	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	50400			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.6	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	347			P_
7439-92-1	Lead____	uJ 1.0	U	*	P_
7439-95-4	Magnesium	20200			P_
7439-96-5	Manganese	145			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	5.3	B		P_
7440-09-7	Potassium	2020	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	5090			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	u 11.6	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-5-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW12

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111205

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	361			P
7440-36-0	Antimony_	1.0	U		P
7440-38-2	Arsenic__	5.6	B		P
7440-39-3	Barium___	85.5	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	1.0	U		P
7440-70-2	Calcium__	54100			P
7440-47-3	Chromium_	u 7.6	B		P
7440-48-4	Cobalt___	1.0	U		P
7440-50-8	Copper___	J 9.0	B		P
7439-89-6	Iron_____	22500			P
7439-92-1	Lead_____	J 14.1			P
7439-95-4	Magnesium	18400			P
7439-96-5	Manganese	1310			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	J 5.7	B		P
7440-09-7	Potassium	4660	B		P
7782-49-2	Selenium_	2.1	B		P
7440-22-4	Silver___	1.0	U		P
7440-23-5	Sodium___	19300			P
7440-28-0	Thallium_	2.0	U		P
7440-62-2	Vanadium_	J 18.9	B		P
7440-66-6	Zinc_____	u 11.5	B		P
	Cyanide__	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW12F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111205F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	62.6	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	56100			P_
7440-47-3	Chromium_	u 1.3	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron_____	6320			P_
7439-92-1	Lead_____	J 6.7		*	P_
7439-95-4	Magnesium	18800			P_
7439-96-5	Manganese	1320			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	u 2.5	B		P_
7440-09-7	Potassium	4630	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	19900			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	3.1	B		P_
7440-66-6	Zinc_____	u 8.0	B		P_
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW129

a Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

ab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

a_rix (soil/water): WATER Lab Sample ID: 961111206

e~el (low/med): LOW__ Date Received: 11/06/96

Solids: __0.0

Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	261			P_
7440-36-0	Antimony_	1:0	U		P_
7440-38-2	Arsenic__	3.8	B		P_
7440-39-3	Barium___	75.5	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	57300			P_
7440-47-3	Chromium_	u 2.6	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	us 3.6	B		P_
7439-89-6	Iron____	14700			P_
7439-92-1	Lead____	J 10.5			P_
7439-95-4	Magnesium	19300			P_
7439-96-5	Manganese	1370			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	us 3.1	B		P_
7440-09-7	Potassium	4900	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	20700			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	J 9.6	B		P_
7440-66-6	Zinc____	u 7.5	B		P_
_____	Cyanide__	10.0	U		CA

c_or Before: YELLOW___ Clarity Before: CLEAR_ Texture: _____

c'or After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW129F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111206F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	61.1	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	54100			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	6110			P_
7439-92-1	Lead____	S 4.0		*	P_
7439-95-4	Magnesium	18100			P_
7439-96-5	Manganese	1270			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	U 2.2	B		P_
7440-09-7	Potassium	4470	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	19200			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	2.7	B		P_
7440-66-6	Zinc____	U 7.0	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW13

ıL Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

ıl Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

ıtrix (soil/water): WATER Lab Sample ID: 961120502

ı:l (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0

Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	232			P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	66.5	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	118000			P
7440-47-3	Chromium	U 3.4	B		P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	U 5.9	B		P
7439-89-6	Iron	5240			P
7439-92-1	Lead	U 2.0	B		P
7439-95-4	Magnesium	32000			P
7439-96-5	Manganese	674			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.1	B		P
7440-09-7	Potassium	J 2940	B	E	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	27800			P
7440-28-0	Thallium	U 2.0	B		P
7440-62-2	Vanadium	1.7	B		P
7440-66-6	Zinc	U 12.0	B		P
	Cyanide	10.0	U		CA

ɔror Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

ɔ: ɔr After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

ɔmments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW13F

a_ Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

a Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

atrix (soil/water): WATER Lab Sample ID: 961120502F

el (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	U 45.0	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	64.9	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	114000			P_
7440-47-3	Chromium_	U 1.2	B		P_
7440-48-4	Cobalt___	1.2	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	4170			P_
7439-92-1	Lead____	1.0	U		P_
7439-95-4	Magnesium	31200			P_
7439-96-5	Manganese	642			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.4	B		P_
7440-09-7	Potassium	J 2860	B	E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	27300			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 10.9	B		P_
	Cyanide__				NR

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

o or After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:

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11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW14

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113516

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	780			P
7440-36-0	Antimony_	1.0	U		P
7440-38-2	Arsenic__	2.0	U		P
7440-39-3	Barium___	122	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	1.0	U		P
7440-70-2	Calcium__	142000			P
7440-47-3	Chromium_	u 8.6	B		P
7440-48-4	Cobalt___	9.1	B		P
7440-50-8	Copper___	10.9	B		P
7439-89-6	Iron_____	1650			P
7439-92-1	Lead_____	3 9.8			P
7439-95-4	Magnesium	26200			P
7439-96-5	Manganese	831			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	17.0	B		P
7440-09-7	Potassium	12500			P
7782-49-2	Selenium_	2.0	U		P
7440-22-4	Silver___	1.0	U		P
7440-23-5	Sodium___	37900			P
7440-28-0	Thallium_	2.0	U		P
7440-62-2	Vanadium_	3.6	B		P
7440-66-6	Zinc_____	u 20.6			P
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW14F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113516F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	131	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	161000			P_
7440-47-3	Chromium_	u 4.6	B		P_
7440-48-4	Cobalt___	9.3	B		P_
7440-50-8	Copper___	9.4	B		P_
7439-89-6	Iron____	274			P_
7439-92-1	Lead____	J 2.1	B	*	P_
7439-95-4	Magnesium	30800			P_
7439-96-5	Manganese	846			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	15.3	B		P_
7440-09-7	Potassium	13600			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	40900			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.9	B		P_
7440-66-6	Zinc____	u 13.7	B		P_
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW15

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

atrix (soil/water): WATER Lab Sample ID: 961120503

el (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	U 135	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	58.7			P_
7440-39-3	Barium__	1470			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	94100			P_
7440-47-3	Chromium_	U 2.0	B		P_
7440-48-4	Cobalt___	5.1	B		P_
7440-50-8	Copper___	U 1.6	B		P_
7439-89-6	Iron_____	7900			P_
7439-92-1	Lead_____	U 2.4	B		P_
7439-95-4	Magnesium	93100			P_
7439-96-5	Manganese	534			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	22.7	B		P_
7440-09-7	Potassium	J 122000		E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	459000			P_
7440-28-0	Thallium_	U 3.1	B		P_
7440-62-2	Vanadium_	1.5	B		P_
7440-66-6	Zinc_____	U 13.4	B		P_
	Cyanide__	10.0	U		CA

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

olor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:

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APD-GWMW15-01

11-7-96

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW15F

a. Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

a Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

atrix (soil/water): WATER Lab Sample ID: 961120503F

e el (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	U 48.3	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	63.6			P_
7440-39-3	Barium___	1500			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	89300			P_
7440-47-3	Chromium_	U 2.8	B		P_
7440-48-4	Cobalt___	5.7	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	7940			P_
7439-92-1	Lead____	1.0	U		P_
7439-95-4	Magnesium	92500			P_
7439-96-5	Manganese	445			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	23.5	B		P_
7440-09-7	Potassium	I 123000		E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	466000			P_
7440-28-0	Thallium_	U 3.2	B		P_
7440-62-2	Vanadium_	1.6	B		P_
7440-66-6	Zinc____	U 20.6			P_
	Cyanide__				NR

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

olor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:

FORM I - IN

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APD-GWMW18-01

11-5-96

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW18

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111307

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	34.7	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	81600	_		P_
7440-47-3	Chromium_	16.9	_		P_
7440-48-4	Cobalt___	1.1	B		P_
7440-50-8	Copper___	u 1.2	B		P_
7439-89-6	Iron____	288			P_
7439-92-1	Lead____	J 1.6	B		P_
7439-95-4	Magnesium	28500	_		P_
7439-96-5	Manganese	609			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	u 3.0	B		P_
7440-09-7	Potassium	3850	B		P_
7782-49-2	Selenium_	3.0	B		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	34400			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.1	B		P_
7440-66-6	Zinc____	u 7.0	B		P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW18F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111307F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium__	29.0	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	80400			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	196			P_
7439-92-1	Lead____	J 1.3	B	*	P_
7439-95-4	Magnesium	27000			P_
7439-96-5	Manganese	543			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	U 1.8	B		P_
7440-09-7	Potassium	3470	B		P_
7782-49-2	Selenium_	2.8	B		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	35900			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 11.0	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW19

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111203

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	283	_		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	26.9	_		P_
7440-39-3	Barium___	673	_		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	79400			P_
7440-47-3	Chromium_	4 6.8	B		P_
7440-48-4	Cobalt___	1.4	B		P_
7440-50-8	Copper___	4 5.0	B		P_
7439-89-6	Iron____	4810			P_
7439-92-1	Lead____	3 1.5	B		P_
7439-95-4	Magnesium	67700	_		P_
7439-96-5	Manganese	268	_		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	17.8	B		P_
7440-09-7	Potassium	113000			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	772000			P_
7440-28-0	Thallium_	2.4	B		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	4 8.6	B		P_
_____	Cyanide__	10.0	U		CA
_____	_____	_____	_	_____	__

Color Before: YELLOW___ Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW19F

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111203F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	25.3			P_
7440-39-3	Barium___	626			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	72000			P_
7440-47-3	Chromium_	U 1.5	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	U 2.7	B		P_
7439-89-6	Iron____	3040			P_
7439-92-1	Lead____	UJ 1.0	U	*	P_
7439-95-4	Magnesium	63100			P_
7439-96-5	Manganese	199			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	13.2	B		P_
7440-09-7	Potassium	105000			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	720000			P_
7440-28-0	Thallium_	3.6	B		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 7.2	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB01

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111308

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	2.3	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	22.9	B		P_
7439-92-1	Lead____	UJ 1.0	U		P_
7439-95-4	Magnesium	U 12.0	B		P_
7439-96-5	Manganese	1.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	B		P_
7440-09-7	Potassium	U 30.9	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	98.0	U		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 4.5	B		P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-5-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB01F

ab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

a Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

atrix (soil/water): WATER Lab Sample ID: 961111308F

e el (low/med): LOW__ Date Received: 11/06/96

Solids: __0.0

Dissolved

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	23.0	B		P_
7439-92-1	Lead____	45 1.0	U	*	P_
7439-95-4	Magnesium	U 35.0	B		P_
7439-96-5	Manganese	1.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	16.0	U		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	98.0	U		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 4.7	B		P_
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

C lor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-6-96

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB02

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113513

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	1.6	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	U 1.5	B		P_
7439-89-6	Iron____	32.1	B		P_
7439-92-1	Lead____	UJ 1.0	U		P_
7439-95-4	Magnesium	U 21.8	B		P_
7439-96-5	Manganese	1.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	B		P_
7440-09-7	Potassium	16.0	U		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	98.0	U		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 6.6	B		P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWFB02-01
11-6-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB02F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113513F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

Dissolved

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	11.5	B		P_
7439-92-1	Lead____	us 1.0	U	*	P_
7439-95-4	Magnesium	u 26.3	B		P_
7439-96-5	Manganese	1.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	16.0	U		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	208	B		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	u 5.4	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB03

ab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

a Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

atrix (soil/water): WATER Lab Sample ID: 961120504

e el (low/med): LOW__ Date Received: 11/08/96

Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	27.1	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	1.5	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.3	B		P_
7439-89-6	Iron____	25.8	B		P_
7439-92-1	Lead____	1.0	B		P_
7439-95-4	Magnesium	37.5	B		P_
7439-96-5	Manganese	1.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	> 89.5	B	E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	182	B		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	7.1	B		P_
	Cyanide__	10.0	U		CA

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

o or After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB03F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_009___ SAS No.: _____ SDG No.: 11140_

Matrix (soil/water): WATER Lab Sample ID: 961120504F

Level (low/med): LOW__ Date Received: 11/08/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	34.7	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	87.4	B		P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	24.7	B		P_
7439-92-1	Lead____	1.0	U		P_
7439-95-4	Magnesium	63.4	B		P_
7439-96-5	Manganese	1.0	U		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	J 91.0	B	E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	98.0	U		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	10.7	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN 3/90

VALIDATED

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LABORATORY ANALYTICAL DATA
LOWER AQUIFER
VOCs, SVOCs, PCBs

HPD-GWM-007-07

11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW07

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111309

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X14.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW07

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111309

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X14.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

APD-GWMW08-C
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW08

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111201

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114V04.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/14/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW08

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111201

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114V04.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/14/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW08

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111201

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N09.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW08

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111201

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N09.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW08

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111201

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N09.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 108930~~	~~Cyclohexanol~~	~~7.140~~	~~5~~	~~NJB~~ B
~~2.~~	~~Unknown~~	~~7.230~~	~~10~~	~~J~~ B
3.	Unknown	9.800	6	J
4. 87412	1(3H)-Isobenzofuranone	14.850	3	NJ
5.	Unknown	17.060	2	J
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FORM I SV-TIC 3/90

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW08

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111201

Sample wt/vol: 500 (g/mL) ML Lab File ID: P2111196_114.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 5000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW01-01
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW09

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113515

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K09.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 20.0

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	200	U
74-83-9	Bromomethane	200	U
75-01-4	Vinyl Chloride	200	U
75-00-3	Chloroethane	2200	
75-09-2	Methylene Chloride	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-35-4	1,1-Dichloroethene	200	U
75-34-3	1,1-Dichloroethane	200	U
540-59-0	1,2-Dichloroethene (total)	200	U
67-66-3	Chloroform	200	U
107-06-2	1,2-Dichloroethane	200	U
78-93-3	2-Butanone	200	U
71-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
75-27-4	Bromodichloromethane	200	U
78-87-5	1,2-Dichloropropane	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
79-01-6	Trichloroethene	200	U
124-48-1	Dibromochloromethane	200	U
79-00-5	1,1,2-Trichloroethane	200	U
71-43-2	Benzene	310	
10061-02-6	trans-1,3-Dichloropropene	200	U
75-25-2	Bromoform	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
591-78-6	2-Hexanone	200	U
127-18-4	Tetrachloroethene	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
108-88-3	Toluene	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U
100-42-5	Styrene	200	U
1330-20-7	Xylene (total)	200	U

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW09

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113515

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K09.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 20.0

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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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW09

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113515

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P08.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	44	
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	0.8	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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW09

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113515

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P08.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW09

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113515

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P08.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
~~1.~~	~~Unknown~~	~~7.160~~	~~25~~	~~J~~	B
2. 930687	2-Cyclohexen-1-one	8.040	26	NJ	
3.	Unknown	8.190	18	J	
4.	Unknown	9.300	39	J	
5.	Unknown	9.370	24	J	
6.	Unknown	9.800	20	J	
7. 873949	Cyclohexanone, 3,3,5-trimeth	10.060	380	NJ	
~~8.~~	~~1,2-Cyclohexanediol isomer~~	~~10.460~~	~~22~~	~~J~~	B
9.	Unknown	10.740	19	J	
~~10.~~	~~Unknown~~	~~11.170~~	~~45~~	~~J~~	B
11.	Unknown	11.320	78	J	
12.	Unknown	12.530	34	J	
13.	Unknown	13.860	27	J	
14.	Unknown	13.940	49	J	
15.	Unknown	14.160	26	J	
16.	Unknown	20.830	31	J	
17.	Unknown	20.910	24	J	
18.	Unknown	23.470	72	J	
19.	Unknown	25.040	23	J	
20.	Unknown	25.790	23	J	
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW09

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113515

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_039.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW10C

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113517

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K11.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. Data Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

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

REVISED DATA

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	120	
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	100	U
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
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	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

VALIDATED

FORM I VOA

REVISED - VOC run @ 10x
Chet = 120 ug/L
JAM 1-10-97

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW10C

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113517

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K11.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. 0 Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

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

CONCENTRATION UNITS: REVISED DATA
(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60297	Ether	3.680	5000	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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28.				
29.				
30.				

VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW10C

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113917

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P10.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW10C

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113917

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P10.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW10C

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113917

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P10.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	7.830	14	J
2. 930687	2-Cyclohexen-1-one	8.040	35	NJ
3.	Unknown	8.220	40	J
4.	Unknown	9.250	11	J
5.	Unknown	9.340	29	J
6.	Unknown	9.400	31	J
7.	Unknown	9.570	11	J
8.	Unknown	9.730	22	J
9.	Unknown	9.800	25	J
10.	Unknown	9.990	9	J
11.	Unknown	10.750	10	J
12.	Unknown	11.070	18	J
13.	Unknown	11.170	27	J
14.	Unknown	11.680	13	J
15.	Unknown	11.980	9	J
16. 610720	Benzoic acid, 2,5-dimethyl-	14.780	9	NJ
17.	Unknown	15.130	18	J
18.	Unknown	20.820	11	J
19.	Unknown	21.870	15	J
20.	Unknown	23.170	15	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW10C

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113517

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_041.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW 11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW21

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111310

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X15.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW21

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111310

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X15.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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 VALIDATED

APD-GWMW22
11-5-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW22

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111204

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X09.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW22

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111204

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X09.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW22

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111204

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N12.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW22

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111204

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N12.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

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/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	48	
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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW22

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111204

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121N12.D

Level: (low/med) LOW Date Received: 11/06/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/21/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	6.560	5	J
~~2. 822673~~	~~2-Cyclohexen-1-ol~~	~~7.210~~	~~9~~	~~NJ~~
3.	Unknown	8.000	16	J
4. 930687	2-Cyclohexen-1-one	8.080	8	NJ
5.	Unknown	9.810	33	J
~~6.~~	~~Unknown~~	~~11.250~~	~~100~~	~~J~~
7.	Unknown	12.570	4	J
8.	Unknown	14.380	6	J
9. 87412	1(3H)-Isobenzofuranone	14.870	12	NJ
10. 1025156	1,3,5-Triazine-2,4,6(1H,3H,5	18.650	6	NJ
11. 57103	Hexadecanoic acid	21.600	3	NJ
12.	Unknown	23.290	5	J
13. 80057	Phenol, 4,4'-(1-methylethyli	23.890	28	NJ
14.	Unknown	27.140	5	J
15.	Unknown	29.100	5	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW22

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961111204

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_117.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/06/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/22/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GC/MS
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW23

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113512

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X17.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW23

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113512

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1114X17.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC VALIDATED 3/90

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW23

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113512

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P05.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW23

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113512

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P05.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED 3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW23

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113512

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P05.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 14

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 108930~~	~~Cyclohexanol~~	~~7.120~~	~~4~~	~~NJB~~
~~2.~~	~~Unknown~~	~~7.220~~	~~6~~	~~J~~
3. 930687	2-Cyclohexen-1-one	8.050	2	NJ
4.	Unknown	8.370	7	J
5.	Unknown	9.290	6	J
6.	Unknown	9.360	5	J
~~7.~~	~~1,2-Cyclohexanediol isomer~~	~~10.420~~	~~20~~	~~J~~
8.	Unknown	11.020	4	J
~~9.~~	~~Unknown~~	~~11.150~~	~~6~~	~~J~~
10.	Unknown	13.990	3	J
11.	Unknown	16.250	12	J
~~12.~~	~~Unknown~~	~~16.490~~	~~8~~	~~J~~
13.	Unknown	16.740	8	J
14.	Unknown	20.220	2	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW23

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113512

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_037.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW21
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW24

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113514

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K05.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW24

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113514

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K05.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW24

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113514

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P07.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW24

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113514

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P07.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

FORM I SV-2

VALIDATED

3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW24

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113514

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P07.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y 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~~	~~7.100~~	~~5~~	~~NJ~~
~~2.~~	~~Unknown~~	~~7.200~~	~~8~~	~~J~~
3. 930687	2-Cyclohexen-1-one	8.050	4	NJ
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW24

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113514

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P2111196_207.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/26/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWMW50
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW50

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113920

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V03.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

FORM I VOA

VALIDATED

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW50

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113920

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115V03.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW50

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113920

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P13.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted:11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW50

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113920

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P13.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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 ~~2~~	~~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

FORM I SV-2

VALIDATED

3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW50

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113920

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P13.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 822673~~	~~2-Cyclohexen-1-ol~~	~~7.170~~	~~6~~	~~NJ~~
2.	Unknown	8.030	33	J
3.	Unknown	9.800	17	J
~~4.~~	~~Unknown~~	~~11.210~~	~~93~~	~~J~~
5.	Unknown	12.550	3	J
~~6.~~	~~Unknown~~	~~15.060~~	~~9~~	~~J~~
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FORM I SV-TIC

VALIDATED

3/90

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW50

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113920

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_044.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW51

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113918

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K12.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (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	100	U
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	100	U
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
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	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

FORM I VOA

VALIDATED

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW51

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113918

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K12.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (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
1. 60297	Ether	3.700	20000	NJ
2.				
3.				
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW51

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113918

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P11.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW51

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113918

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P11.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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 ~~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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW51

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113918

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P11.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	7.370	10	J
2.	Unknown	8.080	34	J
3.	Unknown	8.150	25	J
4.	Unknown	8.210	14	J
5.	Unknown	8.290	28	J
6.	Unknown	9.340	12	J
7.	Unknown	9.400	15	J
8.	Unknown	9.770	41	J
9.	Unknown	9.990	10	J
10.	Unknown	11.070	14	J
~~11.~~	~~Unknown~~	~~11.170~~	~~20~~	~~J~~ B
12.	Unknown	11.220	16	J
13.	Unknown	11.380	75	J
14.	Unknown	13.530	23	J
15.	Unknown	13.610	18	J
16.	Unknown	14.300	47	J
~~17.~~	~~Unknown~~	~~15.140~~	~~41~~	~~J~~ B
18.	Unknown	15.810	32	J
19.	Unknown	18.190	15	J
20.	Unknown	18.860	14	J
21.				
22.				
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW51

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113918

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_042.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

APD-GWM...
11-6-96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW5191

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113919

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K13.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (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	100	U
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	100	U
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
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	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

FORM I VOA

VALIDATED

3/9(

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW5191

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113919

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 1115K13.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: not dec. _____ Date Analyzed: 11/15/96

GC Column:DB-624 ID: 0.53 (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
1. 60297	Ether	3.690	20000	NJ
2.				
3.				
4.				
5.				
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FORM I VOA-TIC

VALIDATED/90

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW5191

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113919

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P12.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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)	3	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	3	J
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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

MW5191

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113919

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P12.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

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/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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW5191

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113919

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1121P12.D

Level: (low/med) LOW Date Received: 11/07/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/11/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	7.360	9	J
2.	Unknown	8.060	28	J
3.	Unknown	8.220	33	J
4.	Unknown	8.880	8	J
5.	Unknown	9.330	13	J
6.	Unknown	9.400	14	J
7.	Unknown	9.730	18	J
8.	Unknown	9.760	25	J
9.	Unknown	9.990	11	J
10.	Unknown	10.610	7	J
11.	Unknown	10.770	11	J
12.	Unknown	11.070	8	J
13.	Unknown	11.170	29	J
14.	Unknown	11.230	14	J
15.	Unknown	13.500	15	J
16.	Unknown	13.610	9	J
17.	Unknown	14.290	34	J
18.	Unknown	15.130	37	J
19.	Unknown	15.800	26	J
20.	Unknown	16.120	8	J
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW5191

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

Lab Code: IEA Case No.: 2240-007 SDG No.: 11112

Matrix: (soil/water) WATER Lab Sample ID: 961113919

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P3111996_043.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 11/07/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/11/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 11/21/96

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
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE I
APD-6WMW52-01

MW52

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

DATE SAMPLED: 12/27/96
Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255005

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103108.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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

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

CRQL MULTIPLIER=1.00

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	22	
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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	3	J
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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW52

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255005

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103108.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 60297	Ether	4.340	NJ 970	NJ
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO
APO-GWMW52-01

MW52

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

DATE SAMPLED: 12/27/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255005

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031403.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: CRQL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	J 3	J
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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N

MW52

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255005

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031403.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

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/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	104 2	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

VALIDATED

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW52

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255005

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031403.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 108930~~	~~Cyclohexanol~~	~~7.870~~	~~B 19~~	~~XNJ~~
2.	Unknown	8.570	JN 16	J
3.	Unknown	8.640	16	J
4.	Unknown	8.860	38	J
5.	Unknown	8.920	18	J
6.	Unknown	9.520	5	J
7.	Unknown	10.070	9	J
8.	Unknown	10.140	13	J
9.	Unknown	10.480	10	J
10.	Substituted benzene	10.530	14	J
11.	Unknown	11.860	69	J
12.	Unknown	12.040	91	J
13.	Unknown	13.290	6	J
14.	Unknown	14.180	17	J
15. 632462	Benzoic acid, 2,6-dimethyl-	15.170	5	NJ
16.	Unknown	16.510	18	J
17. 57103	Hexadecanoic acid	22.470	5	XNJ
18.	Unknown	27.200	89	J
19.	Unknown	27.940	7	J
20.	Unknown	28.700	110	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
	Unknown (TITR)		JN 532	J

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
APD-GWMW52-01

MW52

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

DATE SAMPLED: 12/27/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P4010997_040.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/28/96 (7)

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/02/97 (6)

Concentrated Extract Volume: 10000(uL) Date Analyzed: 01/11/97 (9)

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CRQL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO
APO-GWMW53-01

MW53

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

DATE SAMPLED: 12/27/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255006

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103111.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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

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

CRQL MULTIPLIER = 1.00

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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	1	J
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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW53

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255006

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103111.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 109875	Methane, dimethoxy-	4.920	JN 9	NJ
2. 75650	3-Pentanol	6.210	13	NJ
3. 123911	1,4-Dioxane	12.550	22	NJ
4. 104767	1-Hexanol, 2-ethyl-	23.790	6	NJ
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N
APD-GWMW53-01

MW53

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

DATE SAMPLED: 12/27/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255306

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1061408.D

Level: (low/med) LOW Date Received: 12/28/96 ①

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97 ②

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/06/97 ④

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: CRQL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	
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	J 0.8	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

MW53

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255306

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1061408.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/06/97

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/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	214 21	
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

VALIDATED

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.
MW53

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255306

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1061408.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/06/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 13

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 108930~~	~~Cyclohexanol~~	~~7.870~~	~~B 16~~	~~XNJ~~
2.	Unknown	8.910	JN 75	J
3.	Unknown	10.130	16	J
4.	Unknown	10.470	22	J
5.	Unknown	11.550	16	J
6.	Unknown	11.850	78	J
7.	Unknown	12.310	410	J
8.	Unknown	13.360	19	J
9. 105602	Caprolactam	14.440	34	NJ
10.	Unknown	15.910	23	J
11.	Unknown	16.540	7	J
12.	Unknown	17.350	14	J
13.	Substituted benzene	17.780	9	J
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UNKNOWN (TOTAL) JN 680

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
APO-GWMW53-01

MW53

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

DATE SAMPLED: 12/17/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255306

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P4010997_041.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/28/96 (1)

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/02/97 (6)

Concentrated Extract Volume: 10000(uL) Date Analyzed: 01/11/97 (9)

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CRQL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N
APD-GWMW54-01

MW54

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255003

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103107.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: not dec. _____ Date Analyzed: 01/03/97 (8)

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

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

CRQL MULTIPLIER = 1.00

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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW54

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255003

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103107.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO
APO-6WMW54-01
MW54

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255003

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031406.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97 (1)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: CRQL MULTIPLER = 1.00

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N

MW54

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255003

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031406.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

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/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	104 2	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.

MW54

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255003

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031406.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

Number TICs found: 15

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
~~1. 108930~~	~~Cyclohexanol~~	~~7.860~~	~~21~~	~~XNJ~~
2.	Unknown	8.650	29	J
3.	Unknown	8.750	22	J
4.	Unknown	10.470	15	J
5.	Unknown	11.930	70	J
6.	Unknown	13.310	2	J
7.	Unknown	14.070	2	J
8.	Unknown	14.790	2	J
9.	Unknown	15.170	12	J
10.	Unknown	16.020	4	J
11.	Unknown	16.270	2	J
12.	Unknown	16.760	2	J
13.	Unknown	16.830	3	J
14.	Substituted benzene	17.780	16	J
15.	Unknown	17.890	3	J
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JN

unknown (form) JN 168

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
AP0-GWMW54-01

MW54

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255003

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P4010997_038.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/28/96 (2)

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 10000(uL) Date Analyzed: 01/11/97 (9)

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CRQL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO
APO-GWMW55-01

MW551

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255001

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103105.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: not dec. _____ Date Analyzed: 01/03/97 (8)

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

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

CRQL MULTIPLIER = 1.00

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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW551

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255001

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103105.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO
APD-GWMW55-01

MW551

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255001

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031404.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97 (1)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: CRQL MULTIPLIER = 1.00

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N

MW551

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255001

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031404.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

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/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	10M 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.

MW551

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255001

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031404.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y 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~~	~~7.870~~	~~34~~	~~XNJ~~
2.	Unknown	10.530	3	J
3.	Unknown	11.700	7	J
4. 0	Phenol, 2-fluoro-4-nitro-	15.330	4	NJ
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Unknown (total) JN 10

VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
APD-GWMW55-01

MW551

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P4010997_036.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/28/96 (2)

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 10000(uL) Date Analyzed: 01/11/97 (9)

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CRDL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO
APO-GWMW55-91

MW559

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255002

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103106.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: not dec. _____ Date Analyzed: 01/03/97 (8)

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

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

CRQL MULTIPLYER = 1.00

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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

MW559

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255002

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103106.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
APD-GWMW55-91
MW559

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255002

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031405.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97 (3)

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97 (1)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: CRQL MULTIPLIER = 1.00

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

VALIDATED

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MW559

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255002

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031405.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

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/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	10u 10	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

VALIDATED

CLIENT SAMPLE NO.

MW559

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255002

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031405.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y 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~~	~~7.860~~	~~24~~	~~XNJ~~
2.	Unknown	10.530	JN 2	J
3.	Unknown	11.710	10	J
4. 0	Phenol, 2-fluoro-4-nitro-	15.330	3	NJ
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unknown (total) JN 12

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

VALIDATED

CLIENT SAMPLE NO.
APD-GWMW55-91

MW559

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255002

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P4010997_037.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/28/96 (2)

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 10000(uL) Date Analyzed: 01/11/97 (9)

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CRQL multiplier = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N
APD-GWTRIPBLANK-01

TRIP

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

DATE SAMPLED: 12/27/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255307

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103104.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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

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

CRQL MULTIPLIER = 1.00

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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

TRIP

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255307

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103104.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VALIDATED

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE N
APO-GW EQUIPMENT BLANK-0
GWBLK

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255004

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103103.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: not dec. _____ Date Analyzed: 01/03/97 (8)

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

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

CRQL MULTIPLIER = 1.00

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
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	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

VALIDATED

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

GWBLK

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255004

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: 0103103.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: not dec. _____ Date Analyzed: 01/03/97

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 128370	Butylated Hydroxytoluene	27.230	NJ 14	YNJ
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VALIDATED

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
APD-GWEQUIPMENT BLANK-01
GWBLK

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255004

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031407.D

Level: (low/med) LOW Date Received: 12/28/96 (2)

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97 (1)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: CRQL MULTIPLIER = 1.00

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

VALIDATED

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

GWBLK

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255004

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031407.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

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/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	J 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

VALIDATED

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

GWBLK

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

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255004

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 1031407.D

Level: (low/med) LOW Date Received: 12/28/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 01/02/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 01/03/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y 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	7.860	66	XNJ
2. 872504	2-Pyrrolidinone, 1-methyl-	10.770	5	NJ
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VALIDATED

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
APD-6WEQUIPMENT BLANK-01

GWBLK

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

DATE SAMPLED: 12/26/96

Lab Code: IEA Case No.: 2240-015 SDG No.: 12550

Matrix: (soil/water) WATER Lab Sample ID: 961255004

Sample wt/vol: 1000 (g/mL) ML Lab File ID: P4010997_039.D

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/28/96 (2)

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/02/97 (7)

Concentrated Extract Volume: 10000(uL) Date Analyzed: 01/11/97 (9)

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CRQL MULTIPLIER = 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
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

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H

LABORATORY ANALYTICAL DATA
LOWER AQUIFER
METALS

APD-GWMW08-01

11-5-96

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW08

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111201

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	4.4	B		P_
7440-39-3	Barium___	128	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	58300			P_
7440-47-3	Chromium_	u 1.9	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron_____	1030			P_
7439-92-1	Lead_____	1.0	U		P_
7439-95-4	Magnesium	18600			P_
7439-96-5	Manganese	108			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	u 2.4	B		P_
7440-09-7	Potassium	1540	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	12700			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc_____	u 7.4	B		P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWMW08-01
11-5-96

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW08F

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111201F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	132	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	58800			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	970			P_
7439-92-1	Lead____	uJ 1.0	U	*	P_
7439-95-4	Magnesium	19100			P_
7439-96-5	Manganese	108			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	1580	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	13100			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	u 5.4	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWMW09-01
11-6-96

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW09

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113515

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_ Total

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	3.2	B		P_
7440-39-3	Barium___	337			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	159000			P_
7440-47-3	Chromium_	u 2.4	B		P_
7440-48-4	Cobalt___	3.5	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron_____	17800			P_
7439-92-1	Lead_____	uJ 1.0	U		P_
7439-95-4	Magnesium	33000			P_
7439-96-5	Manganese	231			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	u 4.6	B		P_
7440-09-7	Potassium	10800			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	110000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	5.0	B		P_
7440-66-6	Zinc_____	u 4.5	B		P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWMW09-01
11-6-96

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW09F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113515F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	4.2	B		P_
7440-39-3	Barium___	378			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	177000			P_
7440-47-3	Chromium_	u 1.1	B		P_
7440-48-4	Cobalt___	4.4	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	19700			P_
7439-92-1	Lead____	J 1.1	B	*	P_
7439-95-4	Magnesium	37400			P_
7439-96-5	Manganese	260			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	u 4.7	B		P_
7440-09-7	Potassium	12400			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	125000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	5.5	B		P_
7440-66-6	Zinc____	u 4.8	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWMW10C-01
11-6-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW10C

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113517

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	1170			P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.4	B		P_
7440-39-3	Barium___	368			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	118000			P_
7440-47-3	Chromium_	14.1			P_
7440-48-4	Cobalt___	2.9	B		P_
7440-50-8	Copper___	u 4.4	B		P_
7439-89-6	Iron____	10100			P_
7439-92-1	Lead____	J 3.2			P_
7439-95-4	Magnesium	57200			P_
7439-96-5	Manganese	107			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	14.2	B		P_
7440-09-7	Potassium	6150			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	193000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	3.8	B		P_
7440-66-6	Zinc____	u 26.7			P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW10CF

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113517F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	407			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	127000			P_
7440-47-3	Chromium_	u 2.5	B		P_
7440-48-4	Cobalt___	1.5	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron_____	8990			P_
7439-92-1	Lead_____	us 1.0	U	*	P_
7439-95-4	Magnesium	61700			P_
7439-96-5	Manganese	70.9			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	6.0	B		P_
7440-09-7	Potassium	6240			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	219000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.2	B		P_
7440-66-6	Zinc_____	u 6.4	B		P_
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWMW22-01
11-5-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW22

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

atrix (soil/water): WATER Lab Sample ID: 961111204

el (low/med): LOW__ Date Received: 11/06/96

Solids: __0.0 TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	U 35.6	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	170	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	84700			P_
7440-47-3	Chromium_	U 5.0	B		P_
7440-48-4	Cobalt___	1.0	B		P_
7440-50-8	Copper___	38.7			P_
7439-89-6	Iron____	322			P_
7439-92-1	Lead____	J 2.5	B		P_
7439-95-4	Magnesium	36600			P_
7439-96-5	Manganese	15.0			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	6.6	B		P_
7440-09-7	Potassium	93100			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	301000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 20.5			P_
_____	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW22F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961111204F

Level (low/med): LOW__ Date Received: 11/06/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.5	B		P_
7440-39-3	Barium___	692			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	325000			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	u 73.3	B		P_
7439-92-1	Lead____	ws 1.0	U	*	P_
7439-95-4	Magnesium	14000			P_
7439-96-5	Manganese	15.1			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	6.5	B		P_
7440-09-7	Potassium	35800			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	383000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	u 6.1	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-6-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW23

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113512

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0 TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2120			P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	3.7	B		P
7440-39-3	Barium	130	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	73100			P
7440-47-3	Chromium	18.9			P
7440-48-4	Cobalt	3.8	B		P
7440-50-8	Copper	13.8	B		P
7439-89-6	Iron	9450			P
7439-92-1	Lead	3 6.3			P
7439-95-4	Magnesium	19400			P
7439-96-5	Manganese	295			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	18.2	B		P
7440-09-7	Potassium	4350	B		P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	65000			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	4 29.7			P
	Cyanide	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-5-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW23F

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

atrix (soil/water): WATER Lab Sample ID: 961113512F

el (low/med): LOW__ Date Received: 11/07/96

Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	148	B		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	80700			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron_____	5100			P_
7439-92-1	Lead_____	US 1.0	U	*	P_
7439-95-4	Magnesium	20600			P_
7439-96-5	Manganese	263			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	U 3.2	B		P_
7440-09-7	Potassium	4420	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	83800			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	2.0	B		P_
7440-66-6	Zinc_____	U 6.8	B		P_
	Cyanide__				NR

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

lor After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

omments:

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11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW24

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113514

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	4850			P
7440-36-0	Antimony_	1.0	U		P
7440-38-2	Arsenic__	4.5	B		P
7440-39-3	Barium__	334			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	1.0	U		P
7440-70-2	Calcium__	162000			P
7440-47-3	Chromium_	28.2			P
7440-48-4	Cobalt___	7.0	B		P
7440-50-8	Copper___	40.5			P
7439-89-6	Iron____	28300			P
7439-92-1	Lead____	J 17.8			P
7439-95-4	Magnesium	44100			P
7439-96-5	Manganese	546			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	22.5	B		P
7440-09-7	Potassium	4540	B		P
7782-49-2	Selenium_	2.0	U		P
7440-22-4	Silver___	1.0	U		P
7440-23-5	Sodium___	90400			P
7440-28-0	Thallium_	2.0	U		P
7440-62-2	Vanadium_	15.7	B		P
7440-66-6	Zinc____	U 67.3			P
_____	Cyanide__	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-6-96

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW24F

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113514F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	u 37.9	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	231			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	143000			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	3390			P_
7439-92-1	Lead____	uJ 1.0	U	*	P_
7439-95-4	Magnesium	36200			P_
7439-96-5	Manganese	268			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	u 3.0	B		P_
7440-09-7	Potassium	2170	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	114000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	u 5.3	B		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWM050-01
11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW50

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113920

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_ Total

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	813	_		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.7	B		P_
7440-39-3	Barium___	236	_		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	126000	_		P_
7440-47-3	Chromium_	u 5.0	B		P_
7440-48-4	Cobalt___	1.1	B		P_
7440-50-8	Copper___	u 1.8	B		P_
7439-89-6	Iron_____	2760	_		P_
7439-92-1	Lead_____	J 3.9	_		P_
7439-95-4	Magnesium	62700	_		P_
7439-96-5	Manganese	76.9	_		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	10.8	B		P_
7440-09-7	Potassium	17500	_		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	353000	_		P_
7440-28-0	Thallium_	2.1	B		P_
7440-62-2	Vanadium_	1.5	B		P_
7440-66-6	Zinc_____	u 29.7	_		P_
_____	Cyanide__	10.0	U		CA
_____	_____	_____	_		__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW50F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113920F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16.0	U		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	B		P_
7440-39-3	Barium___	302			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	154000			P_
7440-47-3	Chromium_	u 1.5	B		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	2320			P_
7439-92-1	Lead____	u3 1.0	U	*	P_
7439-95-4	Magnesium	78400			P_
7439-96-5	Manganese	71.7			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	10.2	B		P_
7440-09-7	Potassium	23200			P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	468000			P_
7440-28-0	Thallium_	2.1	B		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	u 7.8	B		P_
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW51

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113918

Level (low/med): LOW__ Date Received: 11/07/96

Solids: __0.0

TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	684	_		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	4.7	B		P_
7440-39-3	Barium___	400	_		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	147000	_		P_
7440-47-3	Chromium_	UJ 4.1	B		P_
7440-48-4	Cobalt___	1.9	B		P_
7440-50-8	Copper___	U 3.7	B		P_
7439-89-6	Iron____	8230	_		P_
7439-92-1	Lead____	J 3.1	_		P_
7439-95-4	Magnesium	66300	_		P_
7439-96-5	Manganese	193	_		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	12.1	B		P_
7440-09-7	Potassium	4290	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	102000	_		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	J 2.2	B		P_
7440-66-6	Zinc____	UJ 23.8	_		P_
_____	Cyanide__	10.0	U		CA
_____	_____	_____	_		__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW51F

a Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

ab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

atrix (soil/water): WATER Lab Sample ID: 961113918F

evel (low/med): LOW__ Date Received: 11/07/96

Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	J 953	_		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	5.0	B		P_
7440-39-3	Barium___	403	_		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	157000	_		P_
7440-47-3	Chromium_	UJ 4.4	B		P_
7440-48-4	Cobalt___	2.3	B		P_
7440-50-8	Copper___	J 7.4	B		P_
7439-89-6	Iron_____	9760	_		P_
7439-92-1	Lead_____	J 5.8	_	*	P_
7439-95-4	Magnesium	71700	_		P_
7439-96-5	Manganese	263	_		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	13.5	B		P_
7440-09-7	Potassium	4520	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	102000	_		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	J 3.3	B		P_
7440-66-6	Zinc_____	U 36.6	_		P_
_____	Cyanide__		_		NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWMW 51-91
11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW5191

Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113919

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

TOTAL

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	551			P
7440-36-0	Antimony_	1.0	U		P
7440-38-2	Arsenic__	3.0	B		P
7440-39-3	Barium___	423			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium__	1.0	U		P
7440-70-2	Calcium__	147000			P
7440-47-3	Chromium_	UJ 2.1	B		P
7440-48-4	Cobalt___	1.3	B		P
7440-50-8	Copper___	1.0	U		P
7439-89-6	Iron____	7200			P
7439-92-1	Lead____	J 1.8	B		P
7439-95-4	Magnesium	67300			P
7439-96-5	Manganese	152			P
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	10.3	B		P
7440-09-7	Potassium	4700	B		P
7782-49-2	Selenium_	2.0	U		P
7440-22-4	Silver___	1.0	U		P
7440-23-5	Sodium___	107000			P
7440-28-0	Thallium_	2.0	U		P
7440-62-2	Vanadium_	J 1.3	B		P
7440-66-6	Zinc____	UJ 10	B		P
	Cyanide__	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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11-6-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW5191F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240_007___ SAS No.: _____ SDG No.: 11112_

Matrix (soil/water): WATER Lab Sample ID: 961113919F

Level (low/med): LOW__ Date Received: 11/07/96

% Solids: __0.0

DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	J 188	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	3.4	B		P_
7440-39-3	Barium___	431			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	155000			P_
7440-47-3	Chromium_	UJ 1.7	B		P_
7440-48-4	Cobalt___	1.2	B		P_
7440-50-8	Copper___	UJ 1.5	B		P_
7439-89-6	Iron____	7200			P_
7439-92-1	Lead____	J 5.2		*	P_
7439-95-4	Magnesium	70000			P_
7439-96-5	Manganese	164			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	10.8	B		P_
7440-09-7	Potassium	4390	B		P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	110000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	J 1.0	B		P_
7440-66-6	Zinc____	U 30.0			P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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APD-GWEQUIPBLK01

12-26-96

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GWBLK

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255004

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	IDL
7429-90-5	Aluminum	J 21.0	B	N*	P	16.0
7440-36-0	Antimony	1.0	U		P	
7440-38-2	Arsenic	2.0	U		P	
7440-39-3	Barium	1.0	U		P	
7440-41-7	Beryllium	1.0	U		P	
7440-43-9	Cadmium	1.0	U		P	
7440-70-2	Calcium	77.0	U		P	
7440-47-3	Chromium	2.5	B		P	1.0
7440-48-4	Cobalt	1.0	U		P	
7440-50-8	Copper	1.0	U		P	
7439-89-6	Iron	24.2	B		P	6.0
7439-92-1	Lead	2.0	B		P	1.0
7439-95-4	Magnesium	34.6	B		P	3.0
7439-96-5	Manganese	1.0	U		P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	1.2	B		P	1.0
7440-09-7	Potassium	J 105	B	E	P	16.0
7782-49-2	Selenium	2.0	U		P	
7440-22-4	Silver	1.0	U		P	
7440-23-5	Sodium	98.0	U		P	
7440-28-0	Thallium	2.0	U		P	
7440-62-2	Vanadium	1.0	U		P	
7440-66-6	Zinc	6.3	B		P	2.0
	Cyanide	10.0	U		CA	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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12-26-96

1

EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

GWBLKF

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255004F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	29.9	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron_____	16.9	B		P_
7439-92-1	Lead_____	1.5	B		P_
7439-95-4	Magnesium	56.5	B		P_
7439-96-5	Manganese	1.1	B		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	94.4	B	E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	98.0	U		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc_____	2.0	U		P_
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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12-27-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW52

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255005

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 4190		N*	P
7440-36-0	Antimony	6.8	B		P
7440-38-2	Arsenic	40.3			P
7440-39-3	Barium	264			P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	135000			P
7440-47-3	Chromium	134			P
7440-48-4	Cobalt	13.1	B		P
7440-50-8	Copper	66.8			P
7439-89-6	Iron	11600			P
7439-92-1	Lead	31.4			P
7439-95-4	Magnesium	49100			P
7439-96-5	Manganese	673			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	201			P
7440-09-7	Potassium	J 7770		E	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	87900			P
7440-28-0	Thallium	4.1	B		P
7440-62-2	Vanadium	10.6	B		P
7440-66-6	Zinc	90.3			P
	Cyanide	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW52F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255005F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	UJ 41.6	B		P_
7440-36-0	Antimony_	8.3	B		P_
7440-38-2	Arsenic__	33.8	_		P_
7440-39-3	Barium___	315	_		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	108000	_		P_
7440-47-3	Chromium_	U 4.3	B		P_
7440-48-4	Cobalt___	5.6	B		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	337	_		P_
7439-92-1	Lead____	U 1.4	B		P_
7439-95-4	Magnesium	36800	_		P_
7439-96-5	Manganese	288	_		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	61.8	_		P_
7440-09-7	Potassium	J 5640	_	E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	124000	_		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 2.5	B		P_
_____	Cyanide__		_		NR
_____	_____		_		_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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12-27-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW53

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255306

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 39200		N*	P
7440-36-0	Antimony	U 1.7	B		P
7440-38-2	Arsenic	30.1			P
7440-39-3	Barium	997			P
7440-41-7	Beryllium	6.2			P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	160000			P
7440-47-3	Chromium	189			P
7440-48-4	Cobalt	24.9	B		P
7440-50-8	Copper	107			P
7439-89-6	Iron	48800			P
7439-92-1	Lead	138			P
7439-95-4	Magnesium	75300			P
7439-96-5	Manganese	1630			P
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel	139			P
7440-09-7	Potassium	J 24400		E	P
7782-49-2	Selenium	U 5.1			P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	252000			P
7440-28-0	Thallium	2.0	B		P
7440-62-2	Vanadium	32.3	B		P
7440-66-6	Zinc	443			P
	Cyanide	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW53F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255306F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	UJ 40.9	B		P_
7440-36-0	Antimony_	U 3.4	B		P_
7440-38-2	Arsenic__	2.4	B		P_
7440-39-3	Barium___	583			P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	122000			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	5.1	B		P_
7440-50-8	Copper___	8.1	B		P_
7439-89-6	Iron____	147			P_
7439-92-1	Lead____	1.0	U		P_
7439-95-4	Magnesium	59000			P_
7439-96-5	Manganese	499			P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	31.7	B		P_
7440-09-7	Potassium	J 21800		E	P_
7782-49-2	Selenium_	U 2.1	B		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	293000			P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	U 18.8	B		P_
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW54

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255003

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 853		N*	P
7440-36-0	Antimony	U 3.2	B		P
7440-38-2	Arsenic	7.5	B		P
7440-39-3	Barium	190	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	132000			P
7440-47-3	Chromium	82.2			P
7440-48-4	Cobalt	4.0	B		P
7440-50-8	Copper	59.9			P
7439-89-6	Iron	1880			P
7439-92-1	Lead	U 6.3			P
7439-95-4	Magnesium	54100			P
7439-96-5	Manganese	202			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	66.0			P
7440-09-7	Potassium	J 4540	B	E	P
7782-49-2	Selenium	U 2.7	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	20600			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	1.9	B		P
7440-66-6	Zinc	U 13.6	B		P
	Cyanide	10.0	U		CA

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW54F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255003F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	UJ 72.5	B		P
7440-36-0	Antimony	U 2.8	B		P
7440-38-2	Arsenic	7.3	B		P
7440-39-3	Barium	183	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	126000			P
7440-47-3	Chromium	U 3.6	B		P
7440-48-4	Cobalt	2.1	B		P
7440-50-8	Copper	18.5	B		P
7439-89-6	Iron	U 96.7	B		P
7439-92-1	Lead	U 2.0	B		P
7439-95-4	Magnesium	51400			P
7439-96-5	Manganese	157			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	10.7	B		P
7440-09-7	Potassium	J 4170	B	E	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	20400			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	1.0	U		P
7440-66-6	Zinc	U 5.3	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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12-26-96

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW551

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255001

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 14900		N*	P
7440-36-0	Antimony	U 2.1	B		P
7440-38-2	Arsenic	12.9			P
7440-39-3	Barium	271			P
7440-41-7	Beryllium	2.5	B		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	74200			P
7440-47-3	Chromium	133			P
7440-48-4	Cobalt	10.5	B		P
7440-50-8	Copper	84.4			P
7439-89-6	Iron	16700			P
7439-92-1	Lead	43.2			P
7439-95-4	Magnesium	35800			P
7439-96-5	Manganese	546			P
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel	101			P
7440-09-7	Potassium	J 10700		E	P
7782-49-2	Selenium	U 4.5	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	122000			P
7440-28-0	Thallium	2.1	B		P
7440-62-2	Vanadium	15.6	B		P
7440-66-6	Zinc	105			P
	Cyanide	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW551F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255001F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	UJ 117	B		P
7440-36-0	Antimony	U 3.0	B		P
7440-38-2	Arsenic	3.7	B		P
7440-39-3	Barium	120	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	46400			P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	1.0	U		P
7440-50-8	Copper	5.9	B		P
7439-89-6	Iron	U 50.2	B		P
7439-92-1	Lead	U 1.3	B		P
7439-95-4	Magnesium	23600			P
7439-96-5	Manganese	72.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	9.6	B		P
7440-09-7	Potassium	J 8060		E	P
7782-49-2	Selenium	U 2.4	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	128000			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	1.0	U		P
7440-66-6	Zinc	2.0	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW559

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255002

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 17000		N*	P
7440-36-0	Antimony	U 2.3	B		P
7440-38-2	Arsenic	14.0			P
7440-39-3	Barium	300			P
7440-41-7	Beryllium	2.9	B		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	84000			P
7440-47-3	Chromium	157			P
7440-48-4	Cobalt	11.4	B		P
7440-50-8	Copper	106			P
7439-89-6	Iron	18700			P
7439-92-1	Lead	48.9			P
7439-95-4	Magnesium	40500			P
7439-96-5	Manganese	642			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	118			P
7440-09-7	Potassium	J 12000		E	P
7782-49-2	Selenium	U 4.9	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	134000			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	16.9	B		P
7440-66-6	Zinc	115			P
	Cyanide	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW559F

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255002F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 367			P
7440-36-0	Antimony	U 3.4	B		P
7440-38-2	Arsenic	4.1	B		P
7440-39-3	Barium	126	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	48300			P
7440-47-3	Chromium	U 1.2	B		P
7440-48-4	Cobalt	1.1	B		P
7440-50-8	Copper	7.1	B		P
7439-89-6	Iron	160			P
7439-92-1	Lead	U 1.7	B		P
7439-95-4	Magnesium	24700			P
7439-96-5	Manganese	77.7			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	10.3	B		P
7440-09-7	Potassium	J 8560		E	P
7782-49-2	Selenium	U 3.6	B		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	134000			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	1.0	U		P
7440-66-6	Zinc	U 3.9	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

GWBLK

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255004

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M	IDL
7429-90-5	Aluminum_	J 21.0	B	N*	P_	16.0
7440-36-0	Antimony_	1.0	U		P_	
7440-38-2	Arsenic__	2.0	U		P_	
7440-39-3	Barium___	1.0	U		P_	
7440-41-7	Beryllium	1.0	U		P_	
7440-43-9	Cadmium__	1.0	U		P_	
7440-70-2	Calcium__	77.0	U		P_	
7440-47-3	Chromium_	2.5	B		P_	1.0
7440-48-4	Cobalt___	1.0	U		P_	
7440-50-8	Copper___	1.0	U		P_	
7439-89-6	Iron____	24.2	B		P_	6.0
7439-92-1	Lead____	2.0	B		P_	1.0
7439-95-4	Magnesium	34.6	B		P_	3.0
7439-96-5	Manganese	1.0	U		P_	
7439-97-6	Mercury__	0.20	U		CV	
7440-02-0	Nickel___	1.2	B		P_	1.0
7440-09-7	Potassium	J 105	B	E	P_	16.0
7782-49-2	Selenium_	2.0	U		P_	
7440-22-4	Silver___	1.0	U		P_	
7440-23-5	Sodium___	98.0	U		P_	
7440-28-0	Thallium_	2.0	U		P_	
7440-62-2	Vanadium_	1.0	U		P_	
7440-66-6	Zinc____	6.3	B		P_	2.0
_____	Cyanide__	10.0	U		CA	

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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EPA SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

GWBLKF

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255004F

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 DISSOLVED

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	29.9	B		P_
7440-36-0	Antimony_	1.0	U		P_
7440-38-2	Arsenic__	2.0	U		P_
7440-39-3	Barium___	1.0	U		P_
7440-41-7	Beryllium	1.0	U		P_
7440-43-9	Cadmium__	1.0	U		P_
7440-70-2	Calcium__	77.0	U		P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	1.0	U		P_
7440-50-8	Copper___	1.0	U		P_
7439-89-6	Iron____	16.9	B		P_
7439-92-1	Lead____	1.5	B		P_
7439-95-4	Magnesium	56.5	B		P_
7439-96-5	Manganese	1.1	B		P_
7439-97-6	Mercury__	0.20	U		CV
7440-02-0	Nickel___	1.0	U		P_
7440-09-7	Potassium	94.4	B	E	P_
7782-49-2	Selenium_	2.0	U		P_
7440-22-4	Silver___	1.0	U		P_
7440-23-5	Sodium___	98.0	U		P_
7440-28-0	Thallium_	2.0	U		P_
7440-62-2	Vanadium_	1.0	U		P_
7440-66-6	Zinc____	2.0	U		P_
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW52

Lab Name: INDUSTRIAL_AND_ENVIRONMEN Contract: _____

Lab Code: IEA___ Case No:2240-015___ SAS No.: _____ SDG No.: 12550_

Matrix (soil/water): WATER Lab Sample ID: 961255005

Level (low/med): LOW__ Date Received: 12/28/96

% Solids: __0.0 Total

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	J 4190		N*	P
7440-36-0	Antimony	6.8	B		P
7440-38-2	Arsenic	40.3			P
7440-39-3	Barium	264			P
7440-41-7	Beryllium	1.2	B		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	135000			P
7440-47-3	Chromium	134			P
7440-48-4	Cobalt	13.1	B		P
7440-50-8	Copper	66.8			P
7439-89-6	Iron	11600			P
7439-92-1	Lead	31.4			P
7439-95-4	Magnesium	49100			P
7439-96-5	Manganese	673			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	201			P
7440-09-7	Potassium	J 7770		E	P
7782-49-2	Selenium	2.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	87900			P
7440-28-0	Thallium	4.1	B		P
7440-62-2	Vanadium	10.6	B		P
7440-66-6	Zinc	90.3			P
	Cyanide	10.0	U		CA

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

VALIDATED

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