ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE II INVESTIGATION

Tow Path Road Landfill Site No. 546013
Town of Halfmoon Saratoga County

DATE: December 1993

Addendum Report

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Thomas C. Jorling, Commissioner

Division of Hazarous Waste Remediation
Michael J. O'Toole, Jr., P.E., *Director*

By:

Lawler, Matusky & Skelly Engineers

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE II INVESTIGATIONS

Tow Path Road Landfill Site
Town of Halfmoon, Saratoga County
NYSDEC I.D. No. 546013

Addendum Report

Prepared for:

DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road
Albany, New York 12233-7010

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December 1993

File No. 576-067

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CHAPTER 1

SUMMARY

At the request of the New York State Department of Environmental Conservation (NYSDEC), Lawler, Matusky & Skelly Engineers (LMS) conducted an additional investigation at the Old Halfmoon Landfill or the Tow Path Road site. This report summarizes the results of this investigation and is an addendum report to our previous Phase II report on the site (LMS 1993).

This investigation was divided into three tasks: resampling of the surface waters and sediment in the Mohawk River, a soil gas study near the residential homes adjacent to the landfill, and a hydrogeological study using newly installed triple piezometers at two locations.

The surface waters did not contain any significant levels of contaminants. Some of the samples did have relatively high metals concentrations, but most of these metals are those typically associated with landfills (e.g., iron, aluminum). The sediment data did indicate the presence of PCBs near the area where PCBs were found in one of the test trenches into the landfill. The PCB levels were not hazardous: the maximum concentration was approximately 0.5 mg/kg. However, the presence of PCB at one location in the river and not at another does indicate a possible connection to a section of the landfill as the source. The depth profile of the sediment samples indicates that the higher PCBs may be 6-12 in. below the bottom surface of the sediment.

The soil gas study found no volatile organic contaminants in the samples and did not identify a pathway from the landfill to the homes.

The hydrogeological study indicates that the predominant shallow overburden groundwater flow (the groundwater in the landfill) is toward the river. However, because the head difference between the shallow overburden groundwater and the bedrock groundwater is slight, it is possible that supply wells pumping from the bedrock groundwater could alter the flow patterns and draw water down from the shallow groundwater. The results of groundwater samples from

homeowner wells, collected by the New York State Department of Health (NYSDOH) in February through July 1993 and reviewed by LMS, do not indicate contamination from the adjacent landfill. NYSDOH plans to continue monitoring the water quality of homeowner wells adjacent to the landfill, as outlined in the March 1993 Fact Sheet.

CHAPTER 2

OBJECTIVES

LMS, under contract to NYSDEC, conducted additional field work following a Phase II investigation at the Tow Path Road Landfill site located in the Town of Halfmoon, Saratoga County, New York. The additional work tasks were targeted to:

- Address specific concerns identified in the Phase II investigation regarding the groundwater regime in and below the landfill.
- Address the concerns of the New York State Department of Health with reference to a possible migration route from the landfill to adjacent houses.
- Collect and analyze surface water and sediment samples from three locations in the bay area between Beach Road and Clam Steam Road.
- Prepare a site map showing the site boundaries, the Mohawk River shoreline, the location of adjacent houses, and the location and elevation of the test trenches excavated in 1991 and 1992.

The objectives of the additional work are to:

- Characterize the site hydrogeologically, noting depths, thicknesses, and vertical movement of underlying water-bearing units.
- Measure contaminants in soil gas near houses adjacent to the landfill.
- Determine the potential impact of the landfill on the river.
- Prepare an updated cross section of the landfill using surveyed elevations and measured groundwater elevations.
- Prepare a site map and a report documenting findings and conclusions.

CHAPTER 3

DESCRIPTION OF THE FIELD INVESTIGATION

3.1 GROUNDWATER INVESTIGATION

3.1.1 General Piezometer/Boring Details

Six piezometers were installed at the Tow Path Road Landfill site to determine the vertical movement of groundwater. Each piezometer was labeled TPP (*T*ow *P*ath *P*iezometer), followed by a number corresponding to the order of its installation. The piezometer construction, boring logs, and health and safety monitoring were performed by an LMS geologist.

American Auger & Ditching of Constantia, New York, began drilling operations on 10 May 1993. A two-man crew and a single, truck-mounted drilling rig were used. Drilling was initiated through unconsolidated material using 4.25-in. hollow-stem augers. Soil samples were removed continuously from two piezometers (TPP-1 and -4) using a 1.375-in. I.D. split spoon driven ahead of the augers into the undisturbed material. Each sample was examined and described for the log (Ref. 1, Appendix A).

Immediately after the spoon was opened, the soil was scanned for organic and inorganic vapors. Instruments used included a photoionization detector (PID) HNU and a Photovac (PID), a flame ionization detector (FID) organic vapor analyzer (OVA), and a combustible gas indicator (CGI). The open hole was also scanned intermittently as a safety precaution during the drilling operation.

The hollow-stem auger could not be advanced at three piezometers (TPP-1, -4, and -5) because of consolidated bedrock; accordingly, an HQ-sized (3.75-in. O.D.) rock-coring system was used. The rock cores were approximately 2.5-in. in diameter and were cut in 5-ft sections. Following the removal of each core section, fractures, bedding, and water-bearing zones were

examined to determine the availability of water at that depth as well as the final depth at which the piezometer was to be set.

Six piezometers were installed through clean material outside the canal boundary in two locations at the site (three piezometers in each location). These piezometers were installed to monitor the overburden, an upper bedrock zone (the upper 10 ft), and a lower bedrock zone (from 45 to 55 ft). The overburden and the upper bedrock piezometers were screened using a 5-ft and a 10-ft section of 2-in. I.D. PVC screen, respectively. The lower bedrock piezometers were installed using a 10-ft section of 1.25-in. I.D. PVC screen. The typical construction consisted of a No. 0.0 grain-size silica sand pack that extended 2 ft above the screened interval. Following this, a bentonite slurry seal that ranged from 2 ft in the shallow overburden piezometer to 10 ft in the lower bedrock piezometer was pumped above the sand pack. Above the bentonite seal a mixture of portland cement (Type I) and bentonite was also pumped into the annulus to a depth of 3 ft below grade. A portland cement and sand mixture was then installed to the ground surface.

The first group of piezometers (TPP-1, -2, and -3) was installed southeast of the site, opposite Clam Steam Tavern, approximately 15 ft west of the Mohawk River shoreline (Figure 3-1A); the second group (TPP-4, -5, and -6) was installed east of test trench OHT-4 in the middle of the site, opposite 55 Canal Road, approximately 10 ft west of the Mohawk River shoreline (Figure 3-1G).

3.1.1.1 ***TPP-1 (Lower Bedrock).*** Piezometer TPP-1, installed on 10 May 1993, is located on the southeast side of the driveway opposite Clam Steam Tavern, approximately 10 ft north of the shoreline. TPP-1 was sampled continuously from the surface to 37 ft below grade. The soil encountered from 0 to 19 ft consisted of silty fine sand interbedded with gray silty clay. Gray fine to medium sand and some silty clay followed and extended to 34 ft below grade. The boring was further advanced 3 ft through highly weathered shale; groundwater was encountered initially at approximately 6 ft below grade. The boring was slowly augered through bedrock to 41 ft below grade, then cored continuously to 100 ft below grade using the HQ-sized system. With approval from the NYSDEC representative, drill water was pumped from the river. A

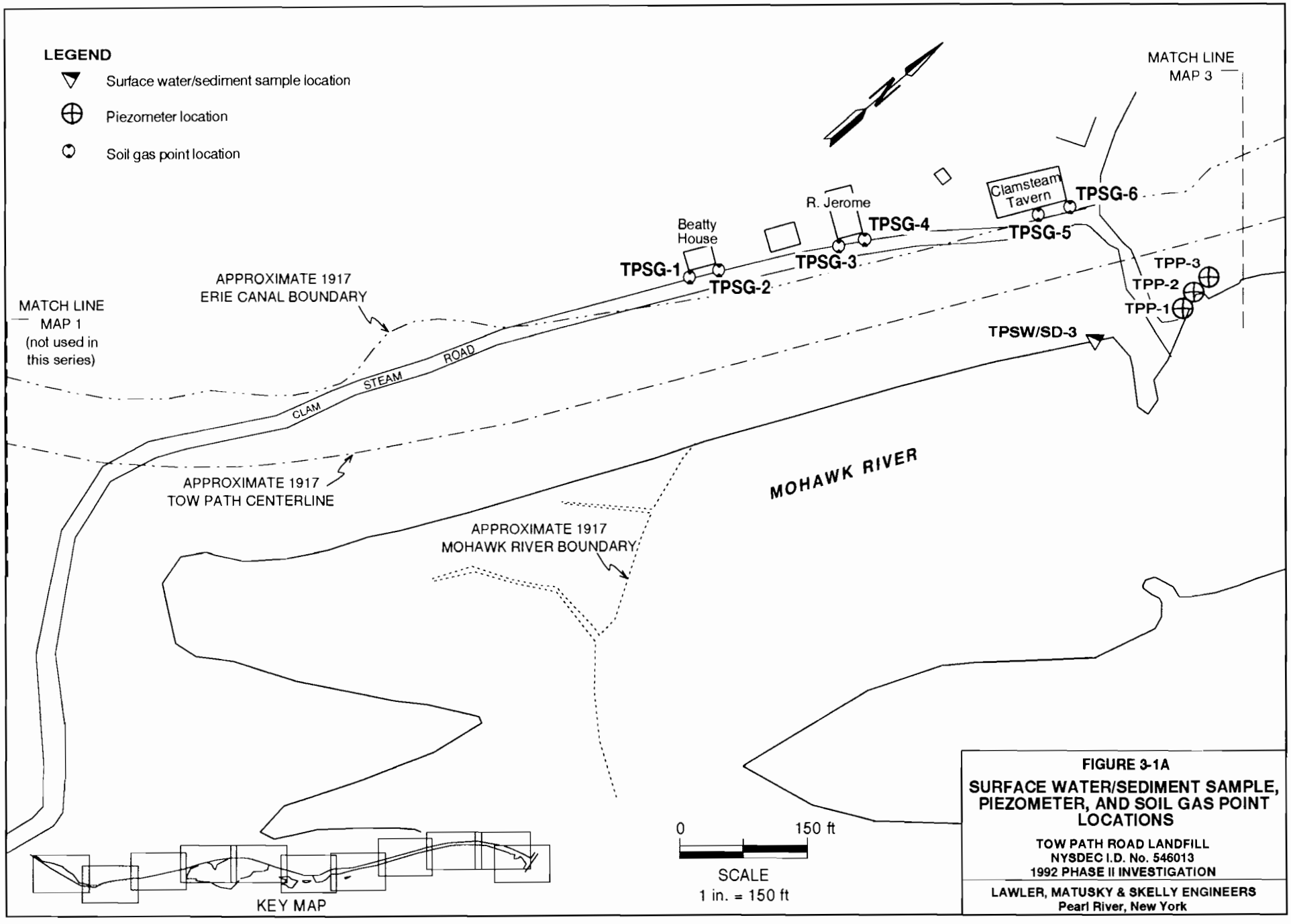

FIGURE 3-1A

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

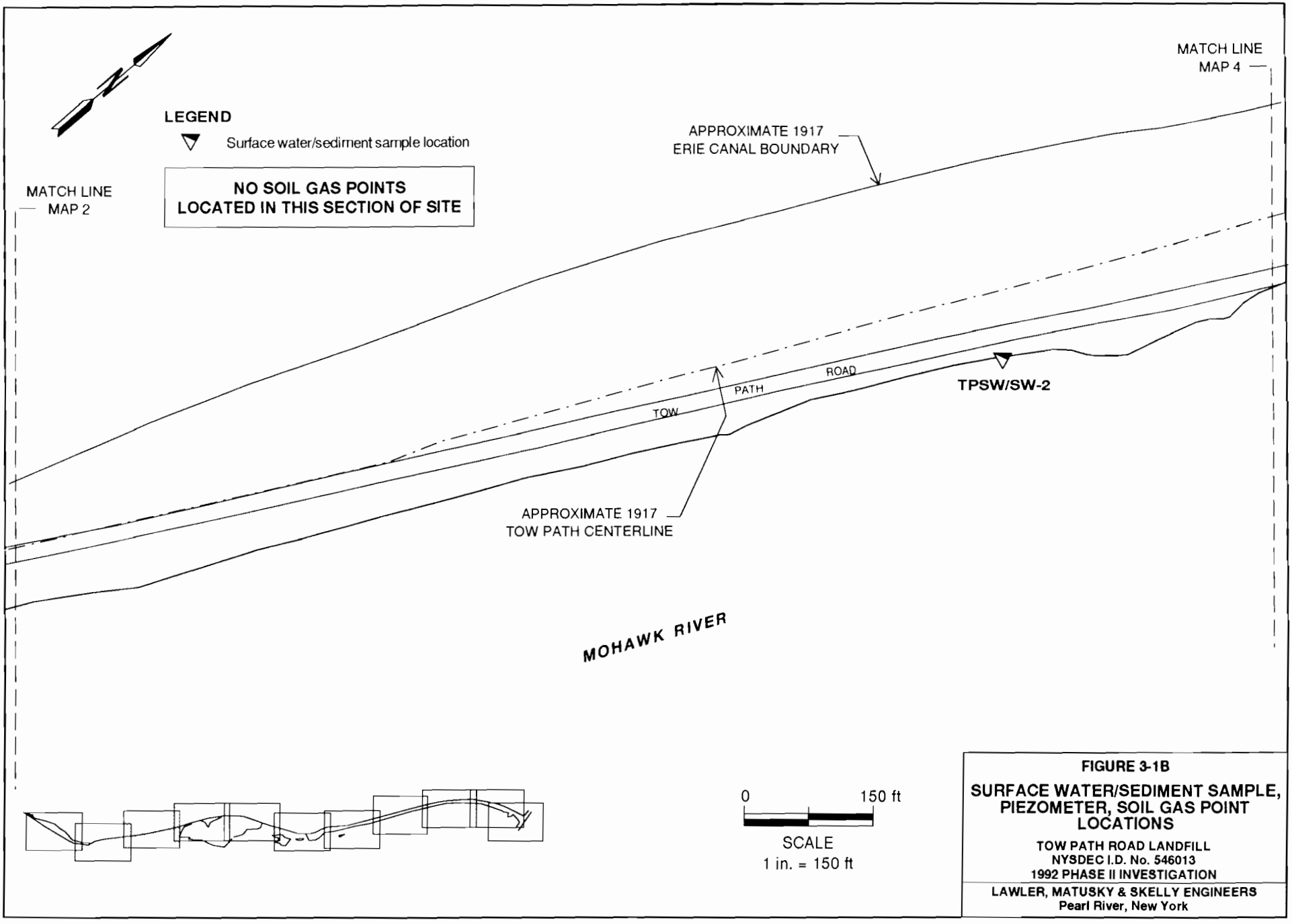

FIGURE 3-1B

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

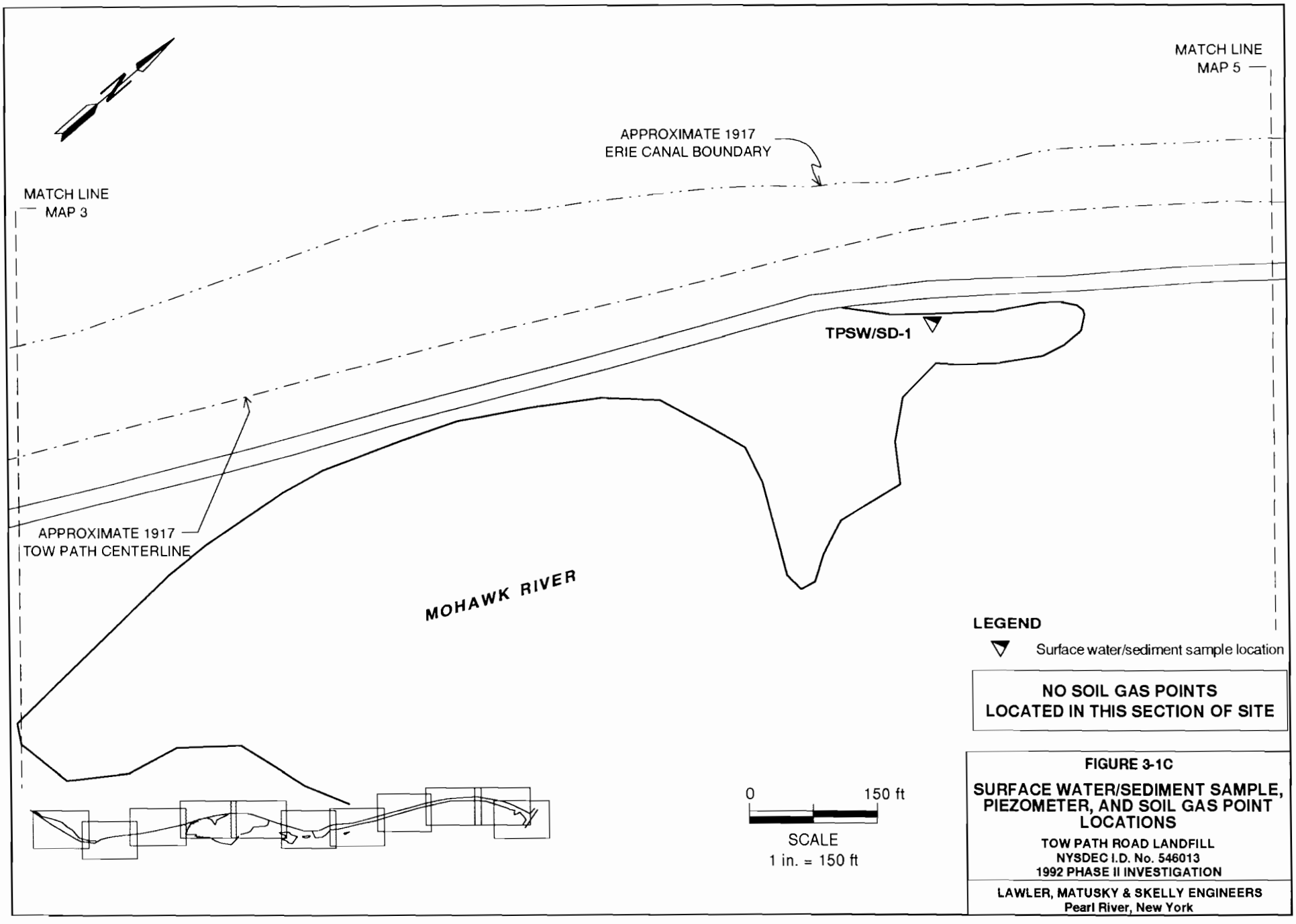

FIGURE 3-1C

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

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Pearl River, New York

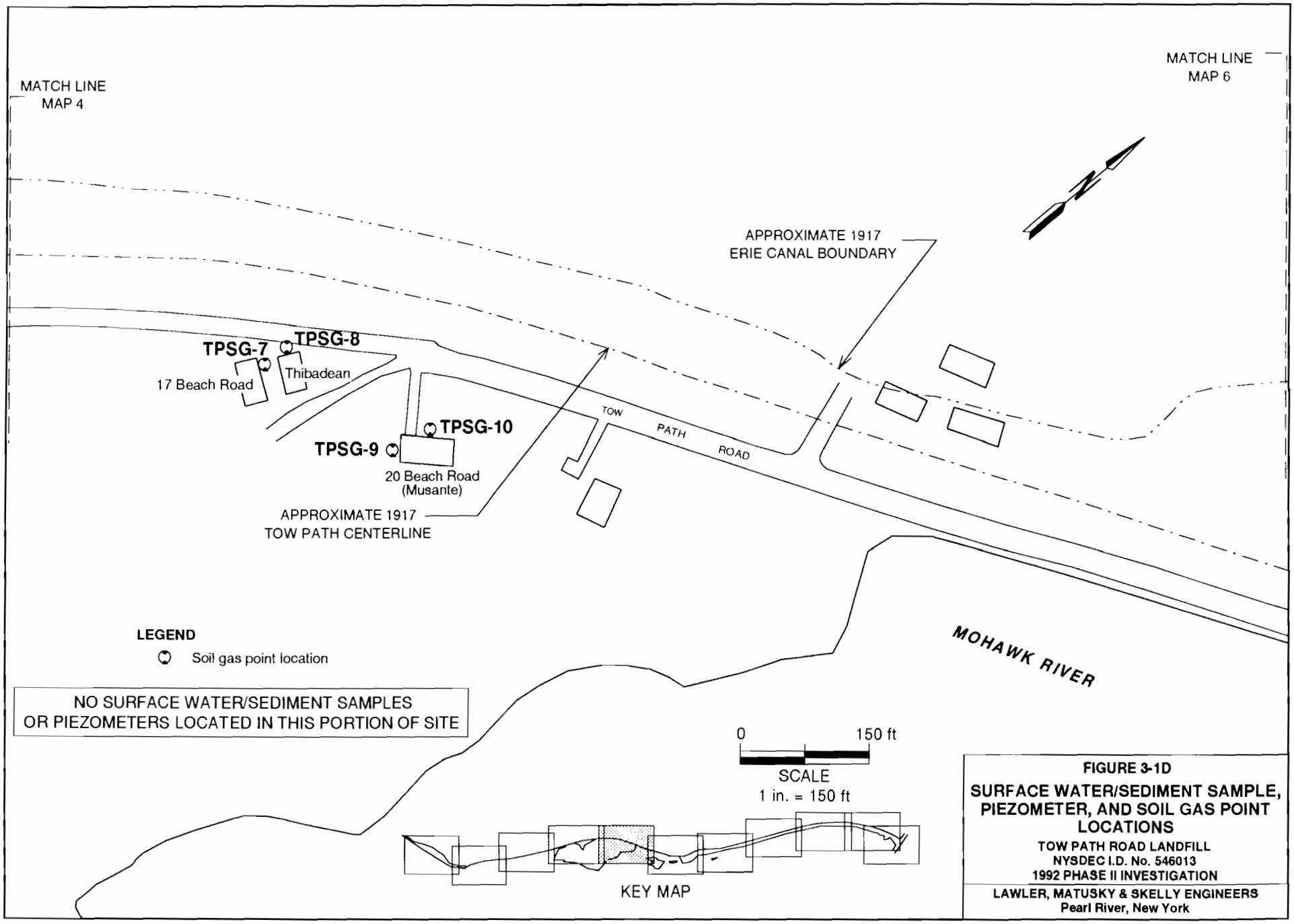

FIGURE 3-1D

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

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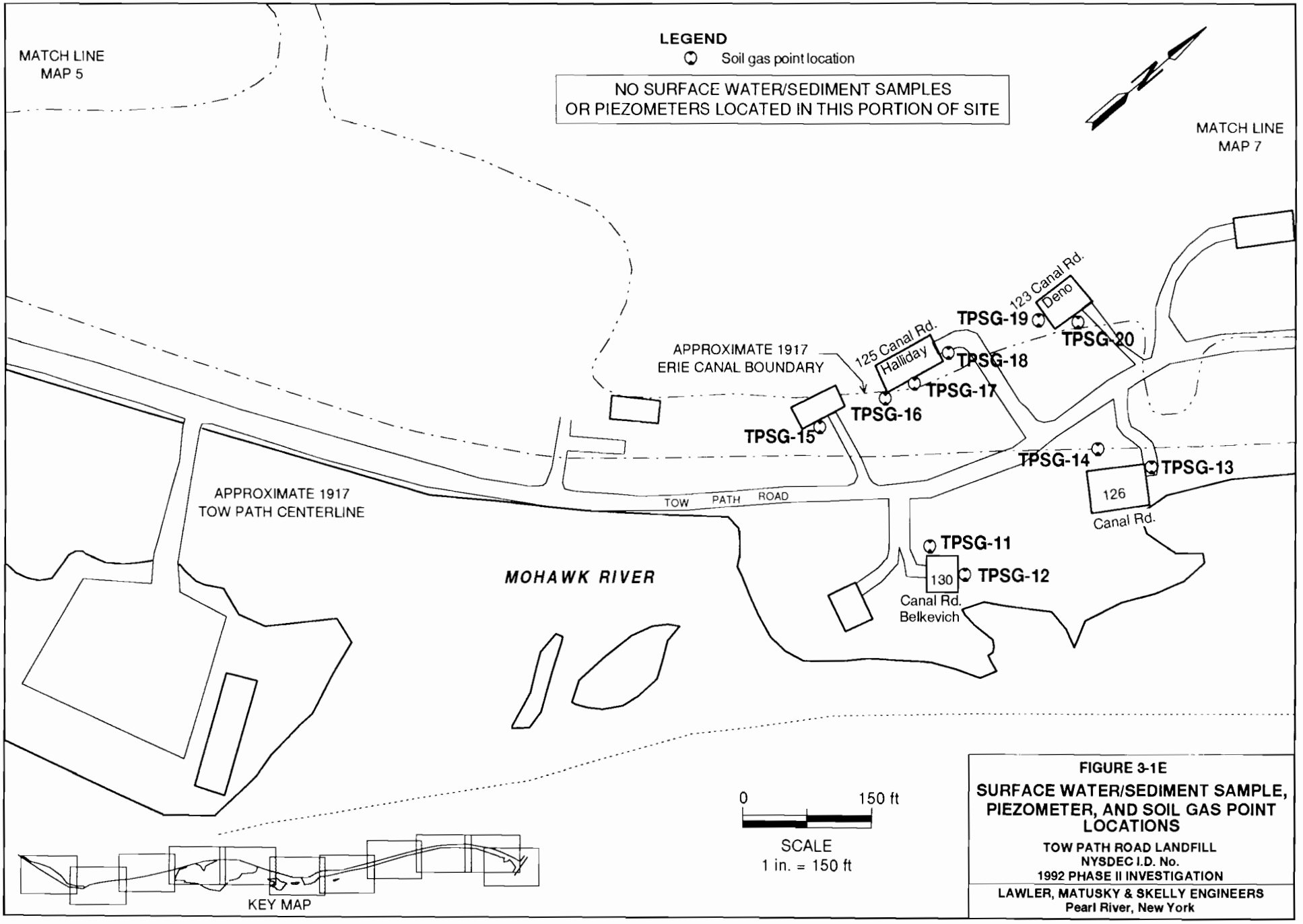

FIGURE 3-1E

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
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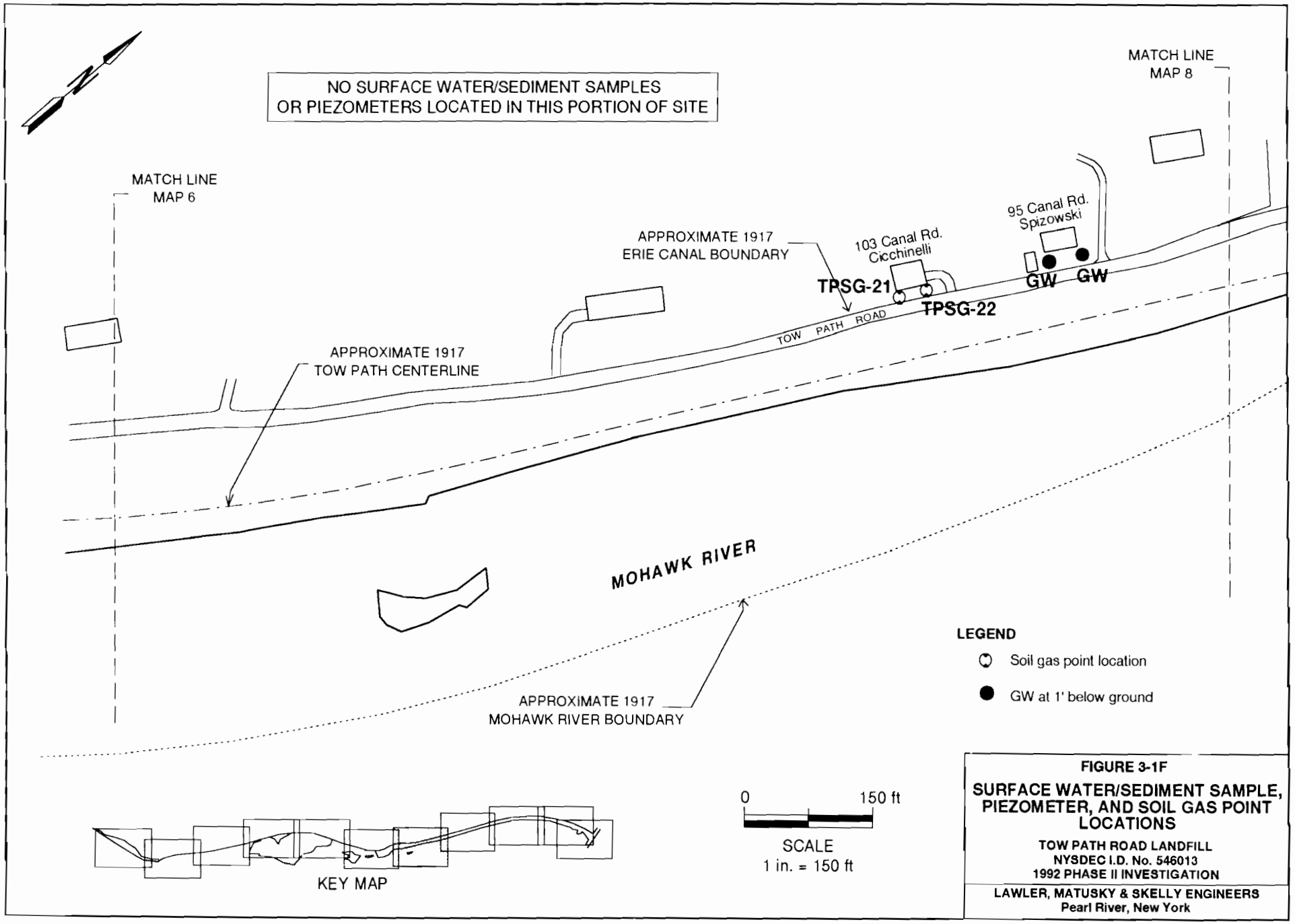

FIGURE 3-1F

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

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Pearl River, New York

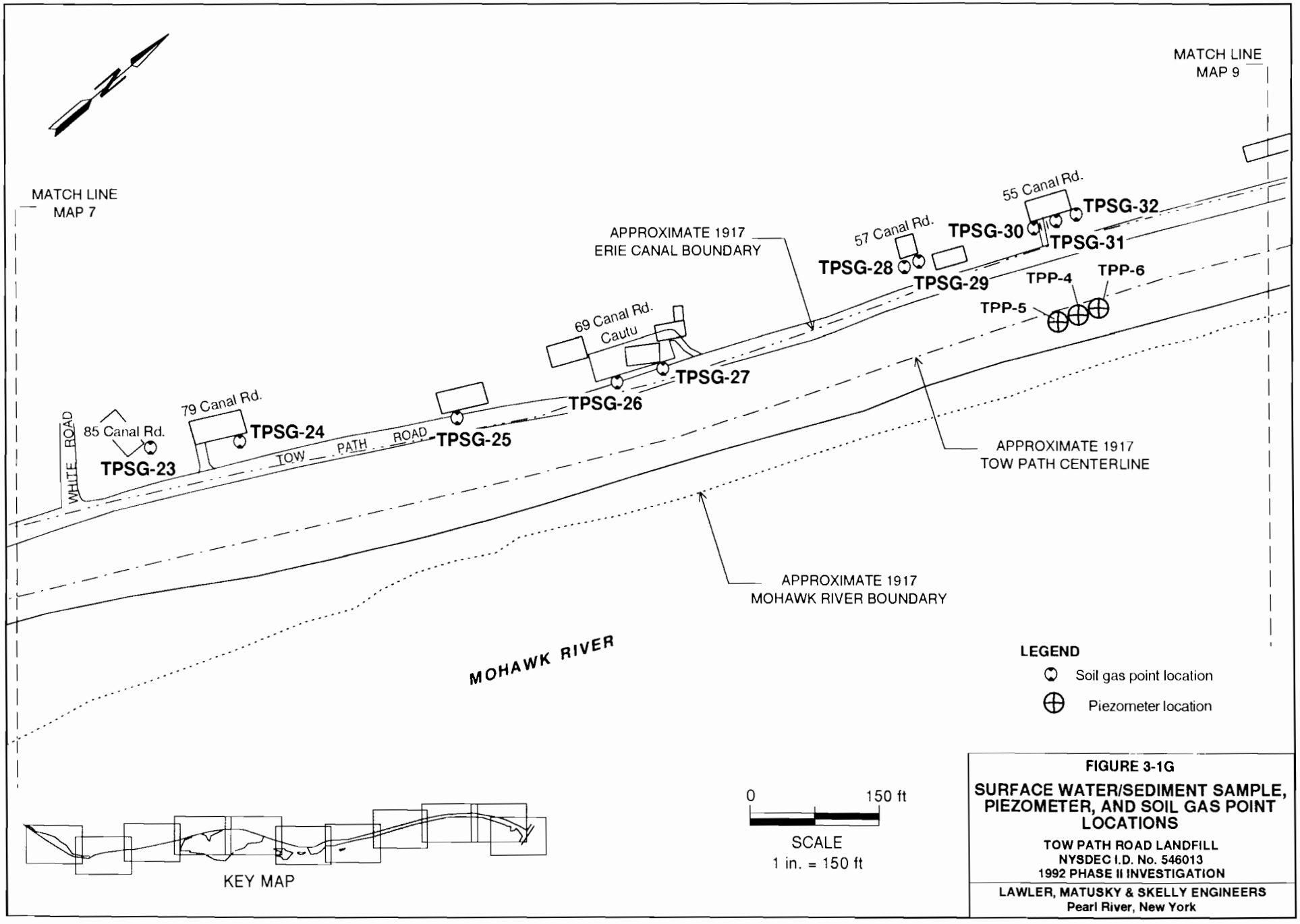

FIGURE 3-1G

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

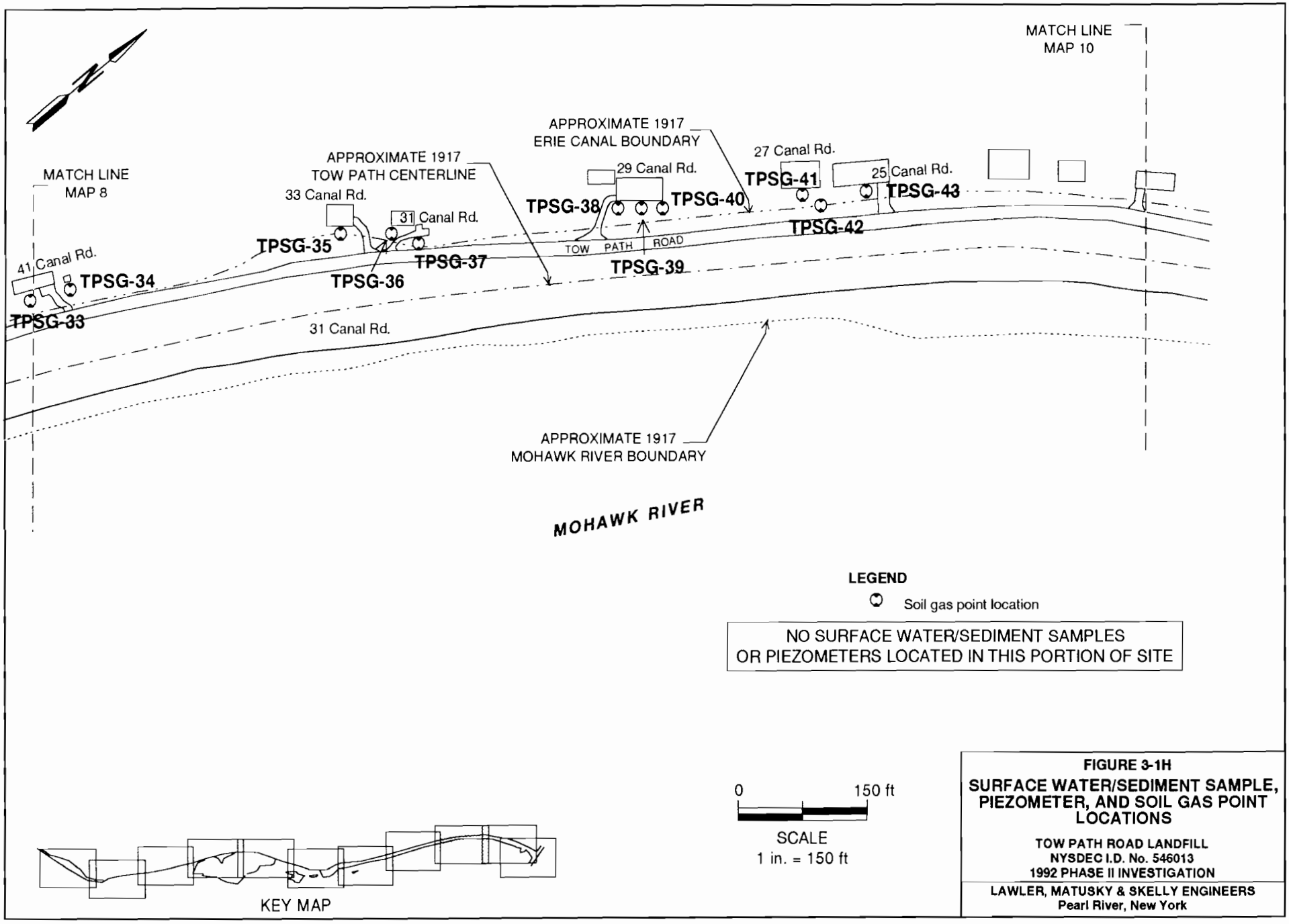

FIGURE 3-1H

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

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Pearl River, New York

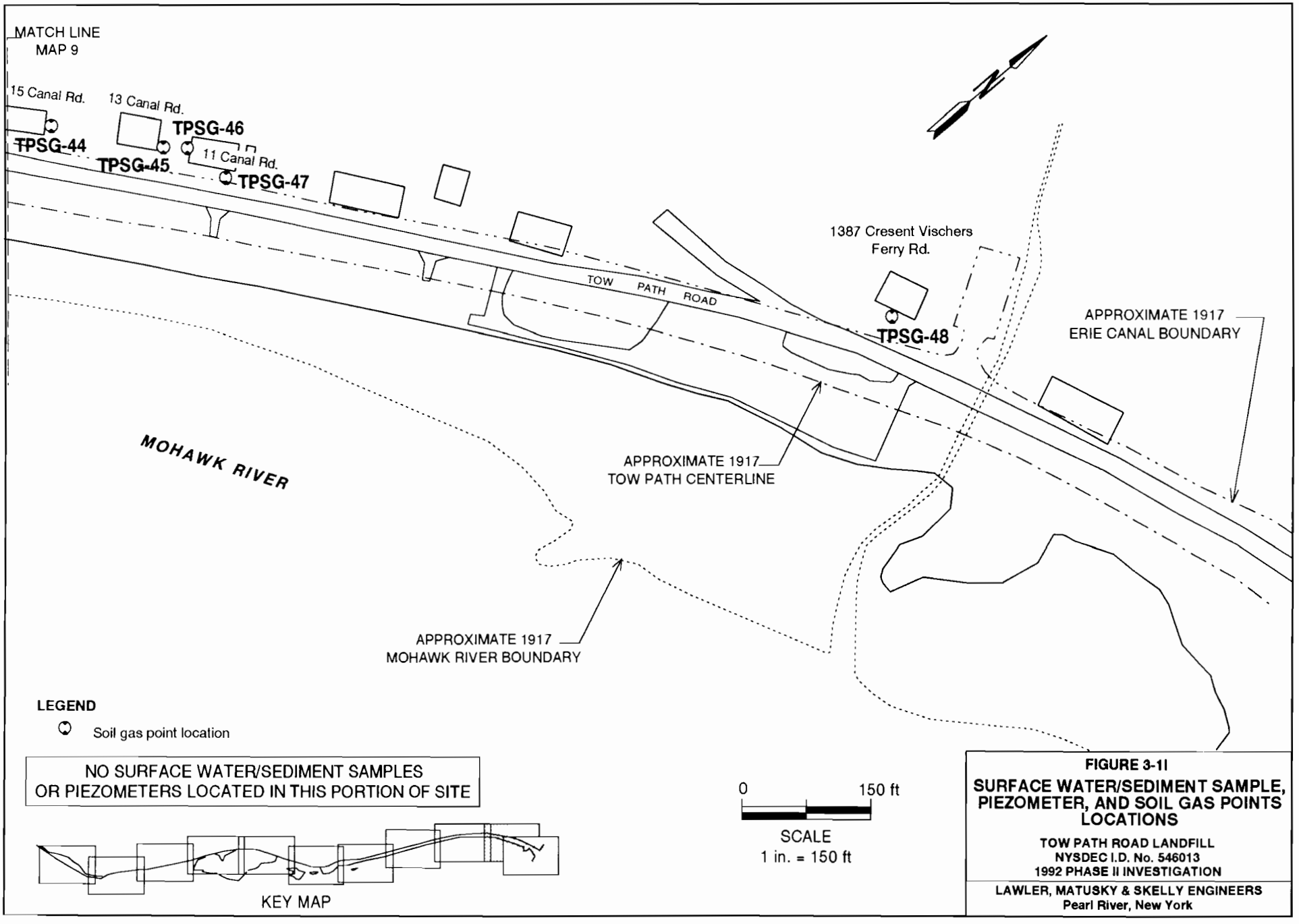

FIGURE 3-1I

SURFACE WATER/SEDIMENT SAMPLE, PIEZOMETER, AND SOIL GAS POINTS LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

10-ft long 1.25-in. well screen was set from 85 to 95 ft. No. 0.0 Morie sand, used as a filter pack, extended from 100 ft (5 ft below the screen bottom) to 83 ft below grade. Bentonite Benseal was pumped into the annular space above the sand pack using tremmie pipes to 75 ft below grade. The remaining annular space was then filled with portland cement/bentonite grout to the ground elevation. A protective steel casing with padlock was installed over the PVC casing.

3.1.1.2 ***TPP-2 (Shallow Overburden)***. Following steam cleaning of all equipment and tools, the crew moved the rig 5 ft west of TPP-1 to the location of TPP-2, the second vertical point, to measure groundwater movement at the southeast edge of the site. It was decided to install TPP-2 as an overburden shallow piezometer. Because of the proximity of TPP-1 and -2, the stratigraphy of the subsurface material at TPP-2 was expected to be the same as at TPP-1. Also, the water table was expected to be at approximately 6 ft below grade. The boring was advanced using a 4.25-in. I.D. hollow-stem auger to a depth of 11 ft below grade. Material encountered within this interval consisted of silty fine sand and silty clay (the drilling cuttings). Groundwater was encountered at approximately 6.4 ft below grade. During the drilling process no abnormally high readings or readings above background were recorded from the meters.

A 2-in. I.D. PVC piezometer was inserted at 12 ft, using 5 ft of 0.010-in. slot screen and 7 ft of solid riser.

A sand pack was installed from 12.5 to 5 ft below grade. A bentonite seal (Benseal) was set from 5 to 3 ft. A portland cement/bentonite mix was used to fill the remaining 3 ft of annular space to ground surface. A protective steel casing was installed over the PVC casing for security.

3.1.1.3 ***TPP-3 (Mid-Overburden)***. On 12 May 1993, after decontamination was completed, including steam cleaning of all equipment and tools, the rig was moved approximately 5 ft southeast of TPP-2 (about 10 ft southeast of TPP-1), approximately 5 ft northeast of the driveway end opposite Clam Steam Tavern. The NYSDEC representative decided that the mid-

level piezometers should be installed in the fine to medium sand layer below the silty sand from 20 to 30 ft below grade.

The boring was advanced using the 4.25-in. hollow-stem augers through approximately 20 ft of silty fine sand and clay above the medium gray sand. No split-spoon samples were collected during the installation of TPP-3, and the cuttings were used for the subsurface stratigraphic description. Groundwater was initially encountered at 7.05 ft below grade.

Organic vapors were monitored during installation of the boring; no measurements over background were recorded for cuttings or in the breathing zone. No evidence of gross contamination was noted during the boring or the piezometer installation. The piezometer was installed at 30 ft below grade using a sand pack that extended from 30.5 to 18 ft below grade.

Bentonite Benseal was pumped into the annular space above the sand pack to a depth of 16 ft below grade; the remaining annular space was then filled with bentonite/cement grout into which the steel casing was set.

3.1.1.4 ***TPP-4 (Lower Bedrock).*** On 13 May 1993 the drilling operation was moved to the middle of the site, where three piezometers were installed (Figure 3-1). TPP-4, the first of the three, was located approximately 30 ft south of test trench OHT-4. Material encountered during continuous split-spoon sampling in the top 6 ft below the grassy cover consisted mainly of brown silty fine sand and some silty clay with a little fill material followed by a mixture of gray fine sand and silt intermixed with clay to a depth of 22 ft below grade. Gray silty clay material found at a depth of 22 ft below grade extended to 40 ft below grade, where the top of bedrock shale was encountered (40 ft below grade). The boring was cored to a depth of 100 ft through interbedded light gray to grayish black shales, graywacke, and light layers of sandstones. Calcite fill fractures were noted through the cored interval (40-100 ft below grade).

Meters scanning the split-spoon samples did not detect any volatile organics above background values. Groundwater was initially encountered at approximately 4 ft below grade. TPP-4 was

installed at a depth of 95 ft, with 10 ft of 1.25-in. screen and 5 ft of sand pack below the screen to extend the intake interval to 15 ft (85 to 100 ft below grade).

The sand pack was brought to 2 ft above the screen interval, and 10 ft of Benseal was installed above it to a depth of 73 ft below grade. The remaining annular space was filled with a mixture of portland cement and bentonite grout. Because the area is used for picnicking and is covered with lawns, the top of the PVC riser was set 4 in. below the grade and covered with a curb box protective casing installed at ground level.

3.1.1.5 ***TPP-5 (Upper Bedrock)***. Drilling for TPP-5, located approximately 5 ft northeast of TPP-4, the deep bedrock piezometer, was initiated on 17 May 1993. The boring was advanced using a 4.25-in. I.D. hollow-stem auger through silty fine sand and silty clay to a depth of 40 ft. No split-spoon soil samples were collected because no change in the stratigraphy of the subsurface material was expected over the short distance (5 ft) from TPP-4. Bedrock was encountered at 40 ft below grade. The boring was slowly advanced into the bedrock to 43 ft below grade. An HQ bedrock core taken at this depth consisted of a light-gray sandstone and graywacke interbedded with a thin black layer of shale. Coring was continued to a depth of 55 ft. Groundwater was encountered at 3.9 ft below grade. A 10-ft section of 2-in. PVC screen was installed at 45 to 55 ft. A No. 0.0 silica sand pack was installed around the screen interval to a depth of 2 ft above the top of the screen. Above the sand pack a 3-ft layer of Benseal was pumped into the annular space. The remaining annulus was filled with portland cement mixture, and a manhole protective casing was installed.

3.1.1.6 ***TPP-6 (Shallow Overburden)***. The shallow overburden piezometer was installed on 17 May 1993 in a grassy area 5 ft northeast of TPP-5. The boring was initiated using 4.25-in. hollow-stem augers to a depth of 10 ft. Fine-grained silty sand was encountered in the top 5 ft. A 5-ft layer of silty fine sand and gravel was identified in the saturated area between 5 and 10 ft. Soils below 10 ft were finer grained in composition. Groundwater was encountered at 3.2 ft below grade. A 2-in. PVC piezometer was installed at a depth of 10 ft below grade using 5 ft of 0.010-in. slotted screen. A No. 0.0 silica sand pack was installed to a depth of 1 ft above the screened interval. A 1-ft bentonite slurry seal was installed above the sand pack.

The remaining annulus was backfilled with portland cement mixture to the surface. A flush-mount curb box protective steel casing was set on top of the PVC casing.

3.2 SURFACE WATER/SEDIMENT SAMPLING

Surface water and sediment sampling was conducted by an LMS crew at three locations in the Mohawk River (Figure 3-1) between 6 and 7 May 1993. All sample locations and methods were discussed with and approved by on-site NYSDEC personnel before sampling proceeded (Figure 3-1). Surface water/sediment samples TPSW/TPSD-1, -2, and -3 were collected 10 ft from the shoreline, where the river borders the landfill area, according to NYSDEC protocols and were submitted to Aquatec, Inc., of Colchester, Vermont, for analysis. Analysis of the surface water and sediment samples included TCL volatile organic compounds (VOCs), metals, cyanide, and pesticides/PCBs. Pesticides and PCBs were analyzed only at low levels in surface water samples. The surface water was also analyzed for chemical oxygen demand (COD), total suspended solids (TSS), total dissolved solids (TDS), pH, specific conductance, and filtered low levels of pesticides/PCBs.

The surface water samples (TPSW-1, -2, and -3) were collected directly into the sample containers or with dedicated Teflon dip buckets. One surface water sample was collected from each location and filtered using a 0.45 μ membrane. These filtered samples were submitted for analysis for dissolved low-level pesticides/PCBs. Temperature, pH, specific conductance, and turbidity were measured at the site at each surface water location (Table 3-1). Surface water samples collected on 6 May were analyzed for TCL VOCs and pesticides/PCBs. The samples collected on 7 May 1993 for TSS, TDS, COD, cyanide, and metals analyses were collected from the same location as the organic samples.

Sediment samples TPSD-1, -2, and -3 were collected from the same locations as the surface water samples. Each sediment sample was collected from the river bottom to 2 ft below the bottom using a gravity corer (Balchek model). This 2-ft sample was divided into four segments, A (0-6 in.), B (6-12 in.), C (12-18 in.), and D (18-24 in.), to determine the vertical distribution of any contaminant present in the top 2 ft of the bottom river. Because the amount of sediment

TABLE 3-1

SURFACE WATER CHEMISTRY

Tow Path Road Landfill

SURFACE WATER I.D.	TEMPERATURE (°C)	pH (Units)	SPECIFIC CONDUCTANCE (μmhos/cm @ 25°C)	TURBIDITY (NTU)
TPSW-1	22.5	7.6	365	51.6
TPSW-2	24.0	7.7	432	85
TPSW-3	18.0	7.9	277	54.0

needed for the analysis was more than the amount recovered from each core sample, several core samples were collected at each location. These core samples were also divided into four segments and the segments collected from the same interval were composited in dedicated stainless steel pans. Samples collected for TCL VOCs were not composited, but were collected from one core sample.

Samples were placed in precleaned bottles/vials provided by Aquatec. All sample containers were labeled with the site name, job number, sample I.D., date/time, and parameters for analysis. Appropriate preservatives were added in the field. Sample containers were then packed in iced coolers to maintain a temperature of 4°C and shipped under chain-of-custody protocol via overnight courier to Aquatec for analysis.

Sediment samples were mislabeled on the chain-of-custody as *TPSW*, whereas the correct label, *TPSD*, was used on the sample container (sediment samples are referenced in the text as *TPSD*). Surface water/sediment sampling logs are contained in Appendix A (Ref. 2).

3.3 SOIL GAS SURVEY

A soil gas survey was conducted at the Tow Path Road Landfill site during 24-27 May 1993. Forty-eight points were installed at the site using equipment manufactured by KV Associates. Points TPSG-1 through -48 were installed in the area of 27 homes along the landfill, as identified by NYSDEC (Figures 3-2A through 3-2I).

Soil gas points were installed by LMS personnel. A test hole was installed to a depth of 4 ft using a slam bar (a long steel rod with a movable weight attached to the top). The rod was then removed and inspected to ascertain whether the saturated zone had been encountered. At each location a stainless steel soil gas point with attached Teflon tubing was driven to the desired depth using hollow drive rods and a slide hammer. After the installation, the rod and hammer assembly was removed from the hole, leaving the point and attached Teflon in place.

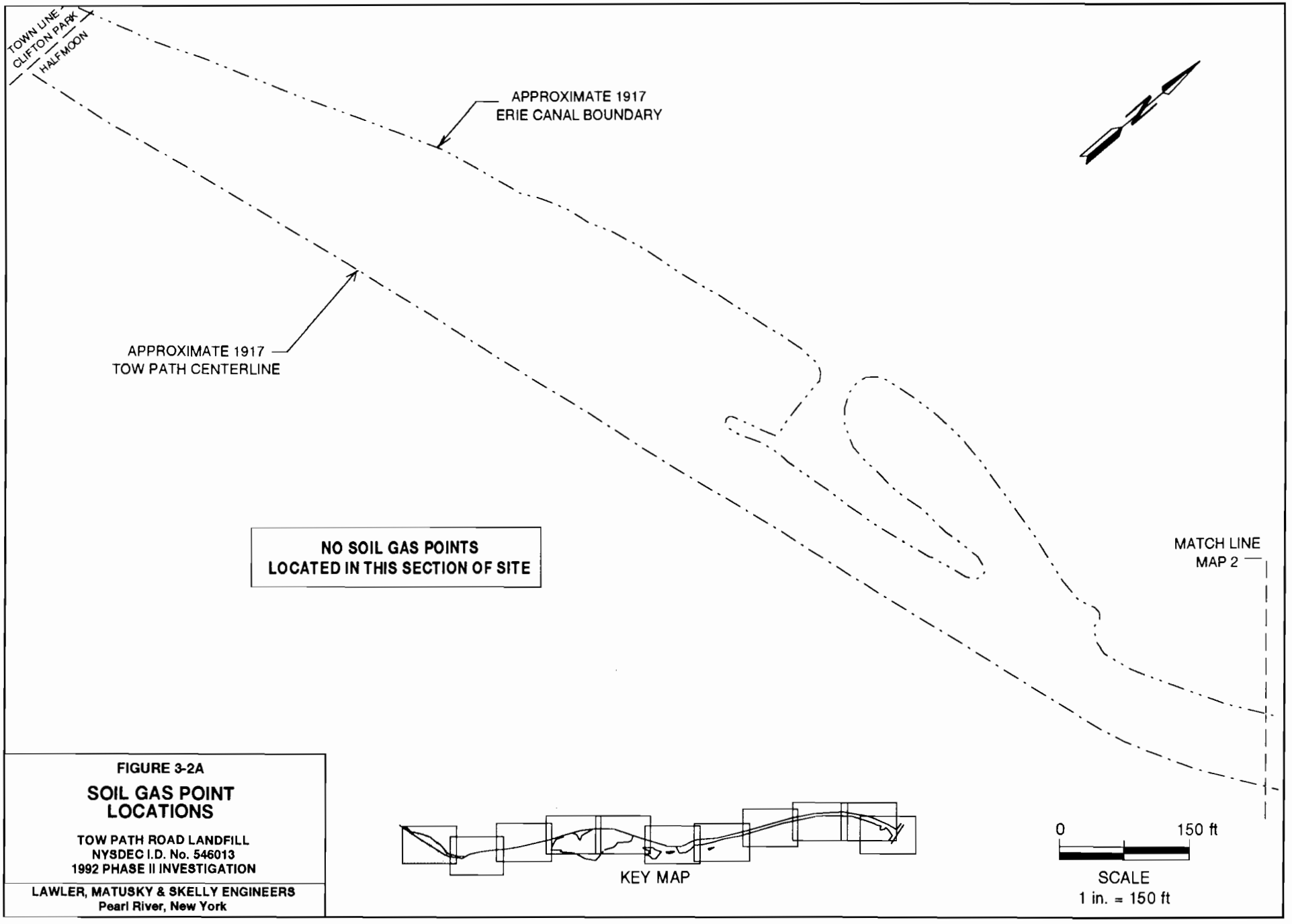

FIGURE 3-2A

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

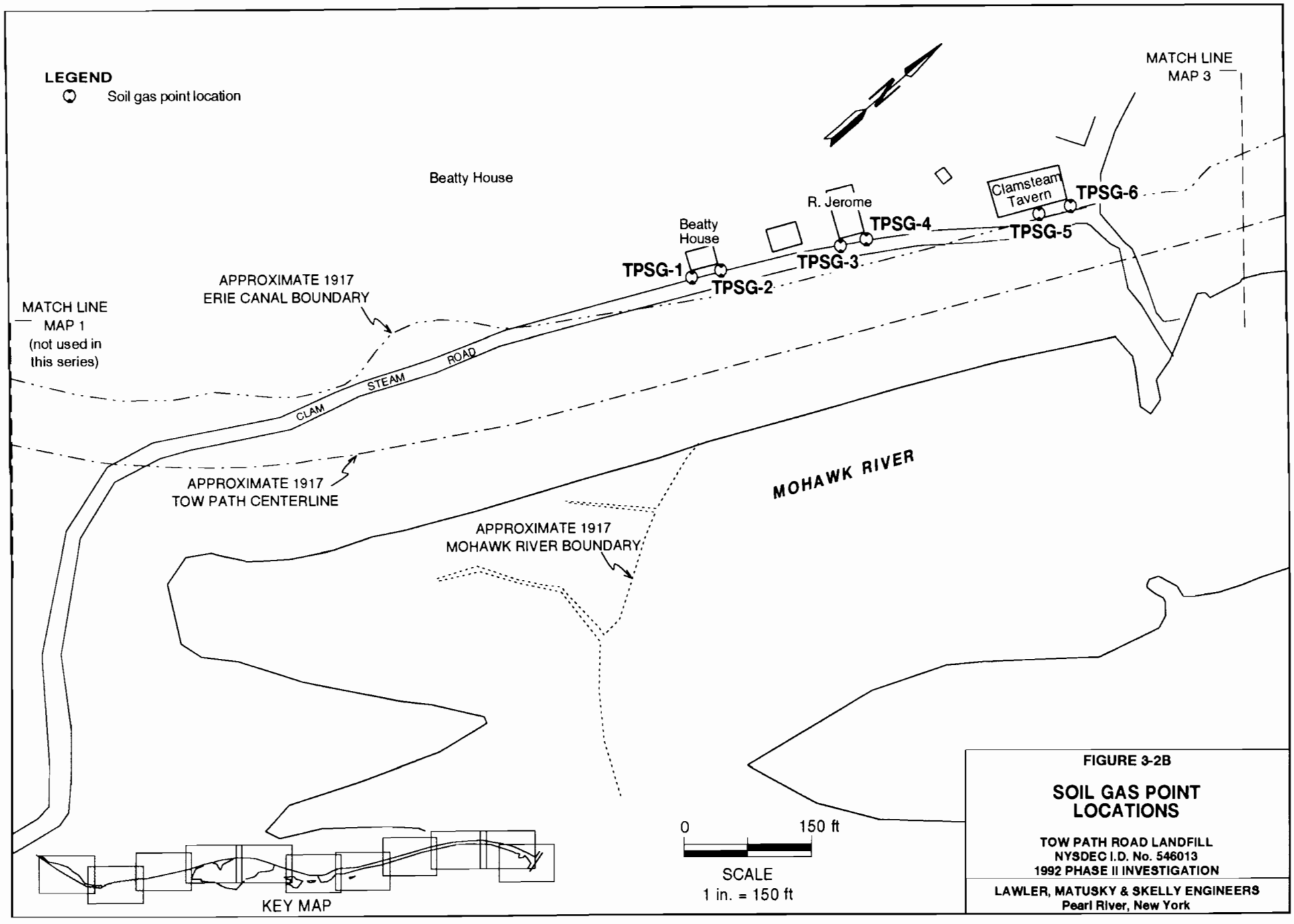

FIGURE 3-2B

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

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Pearl River, New York

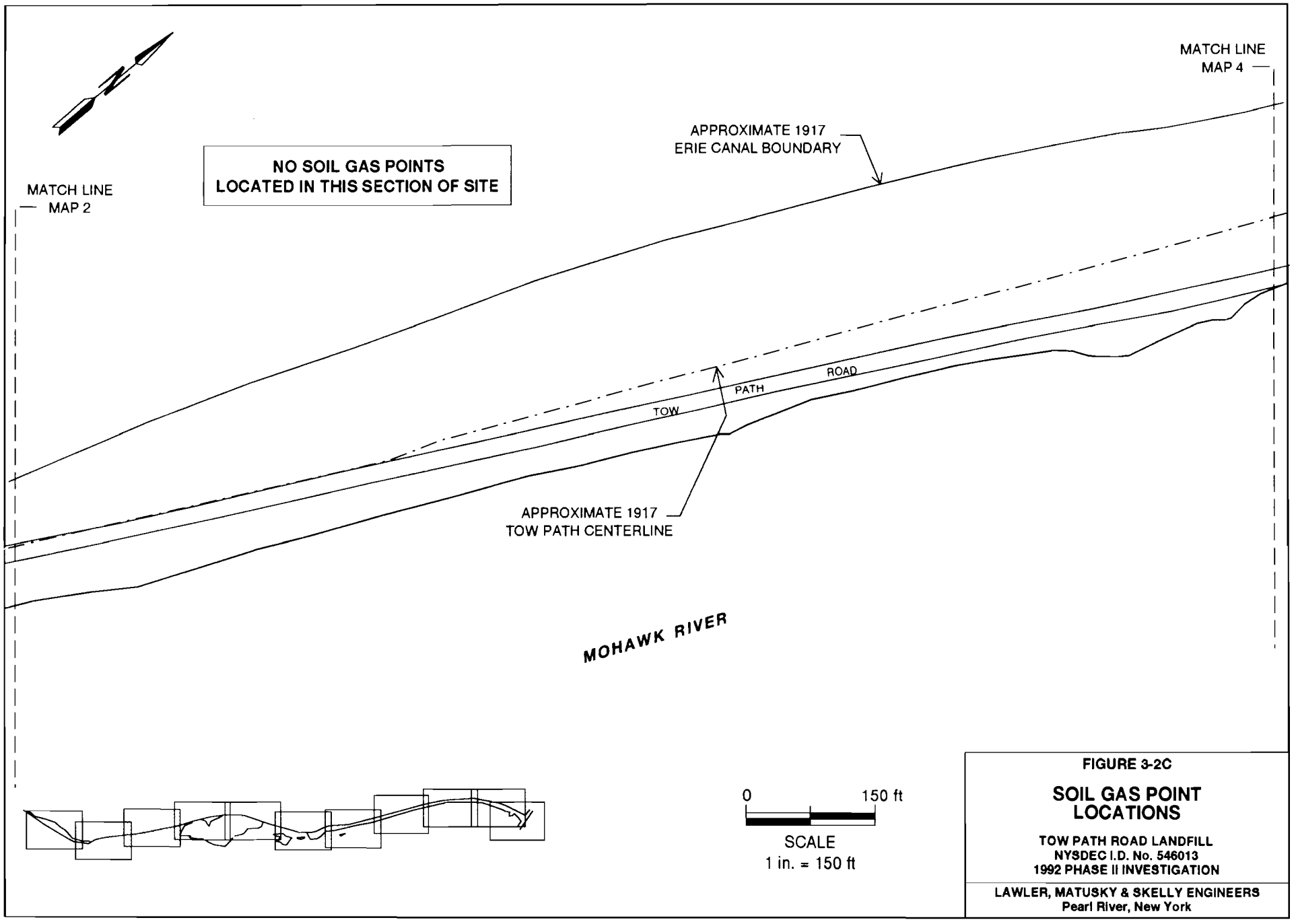


FIGURE 3-2C

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

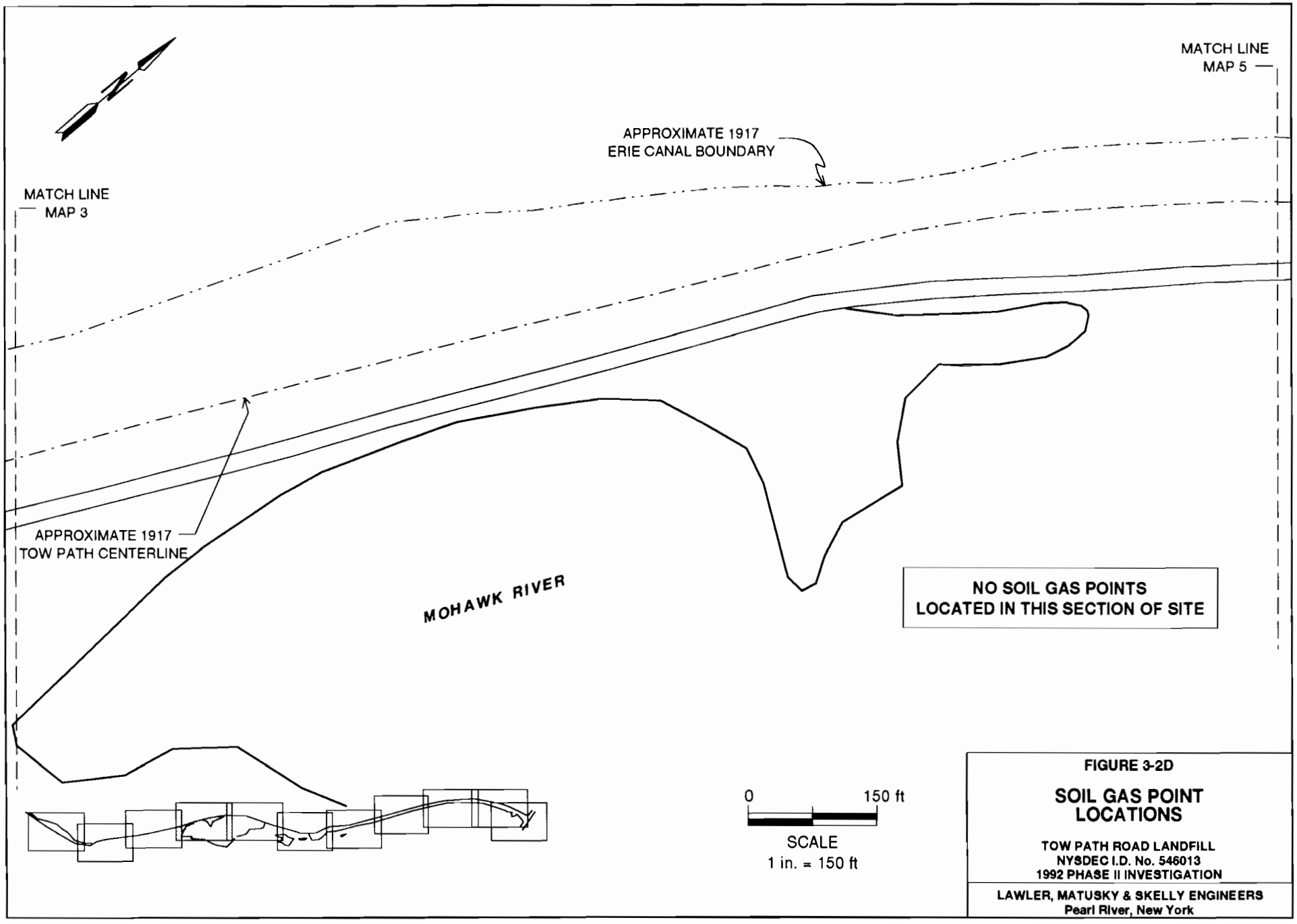


FIGURE 3-2D

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

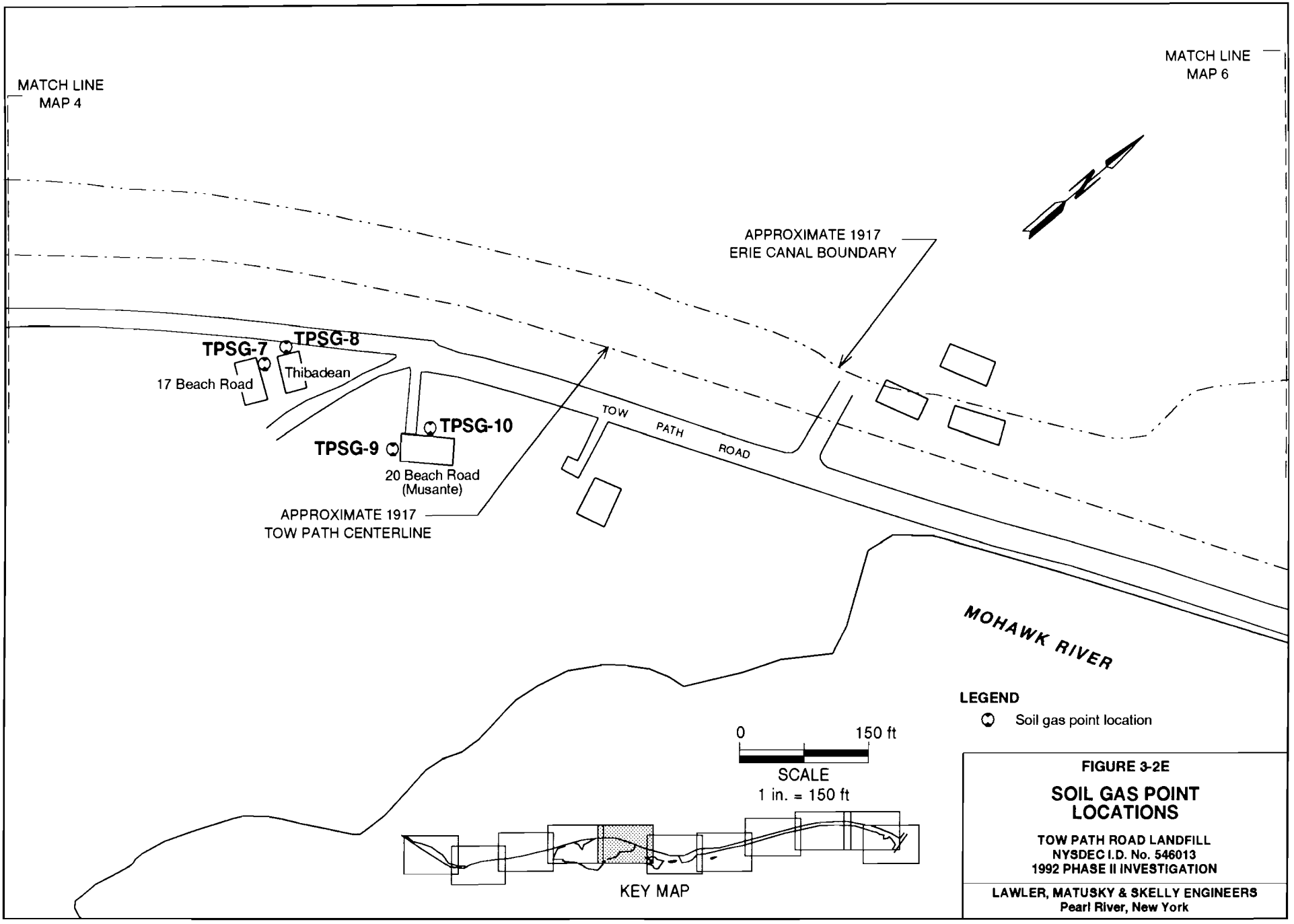


FIGURE 3-2E

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

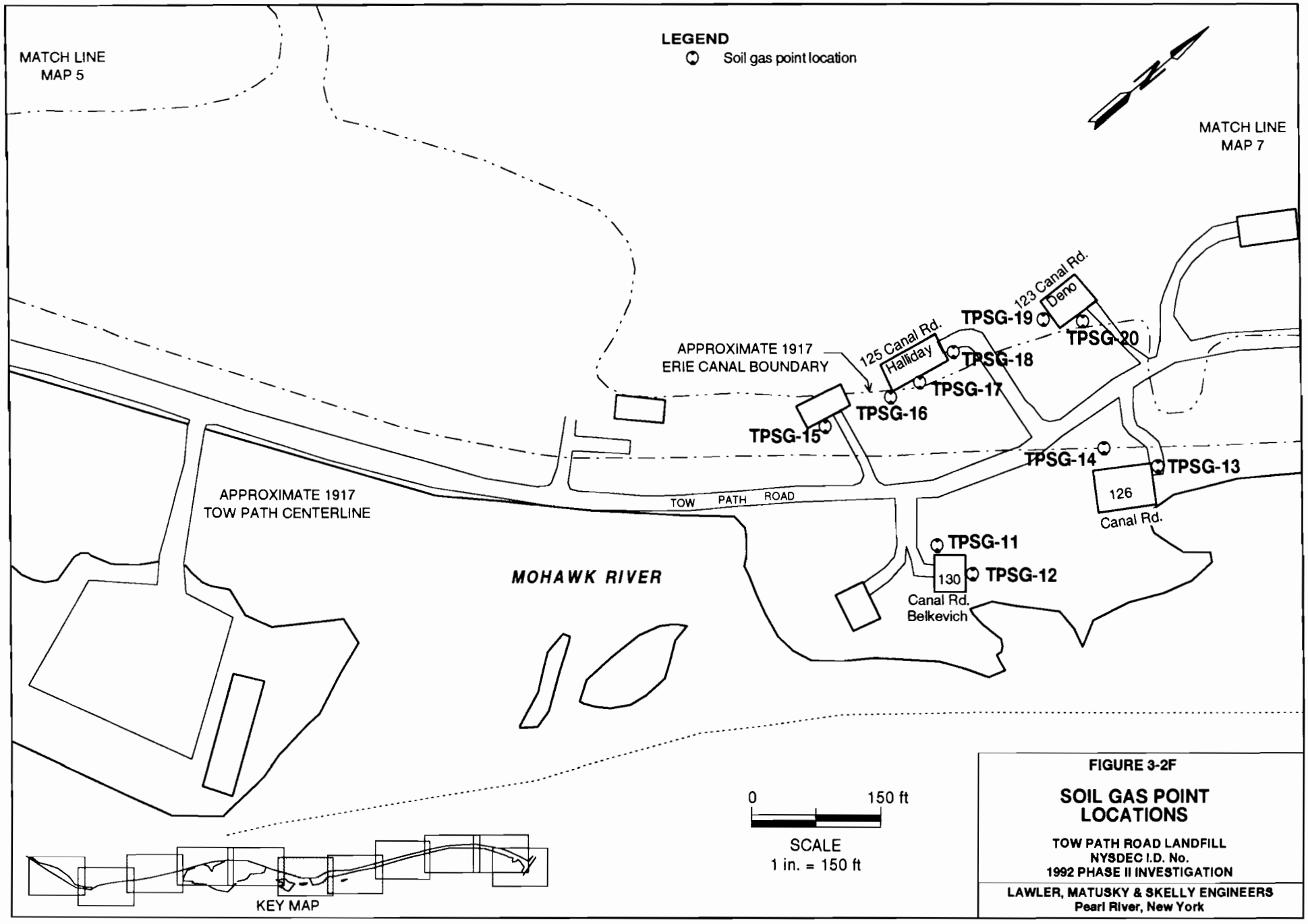


FIGURE 3-2F

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No.
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

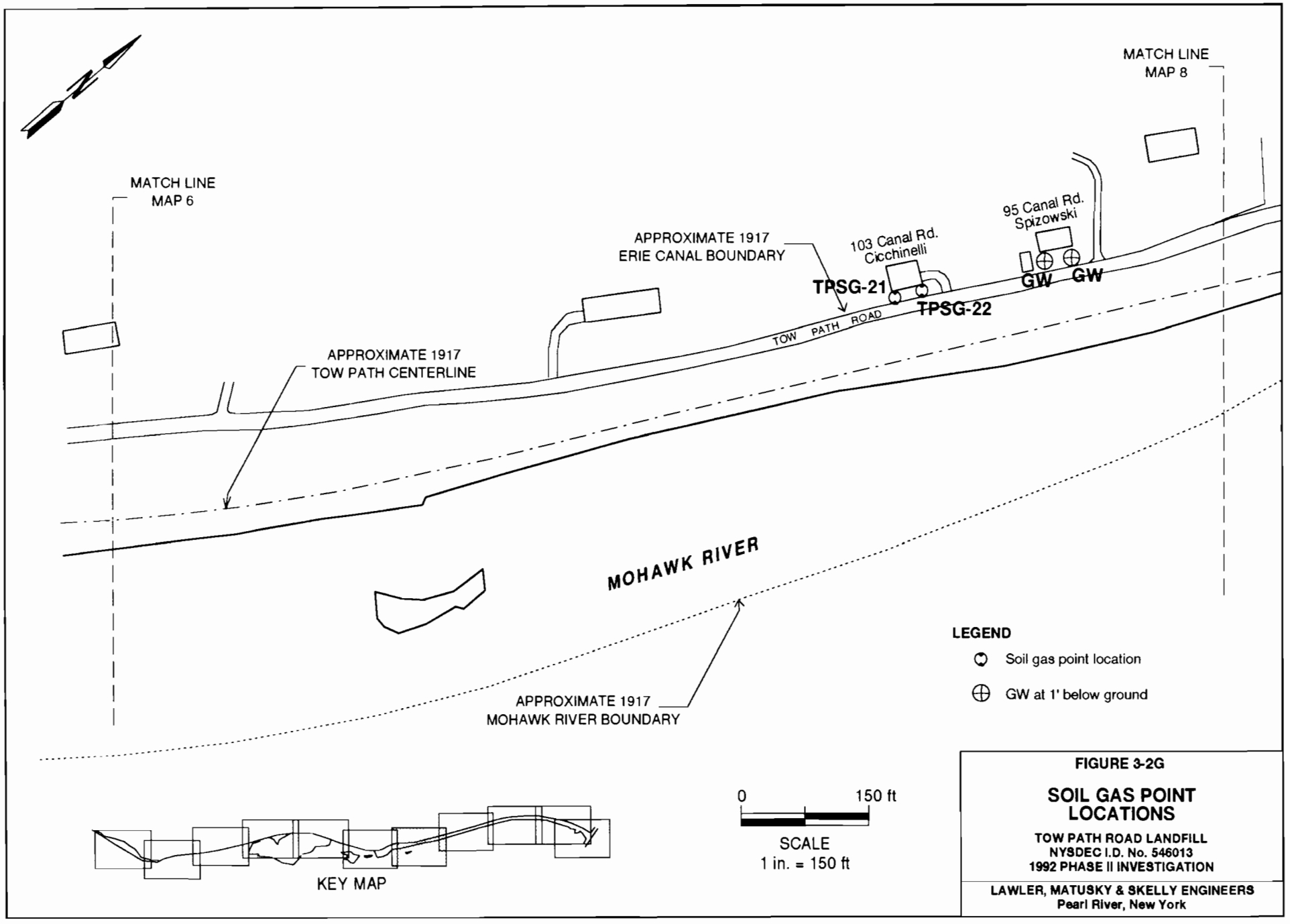


FIGURE 3-2G

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

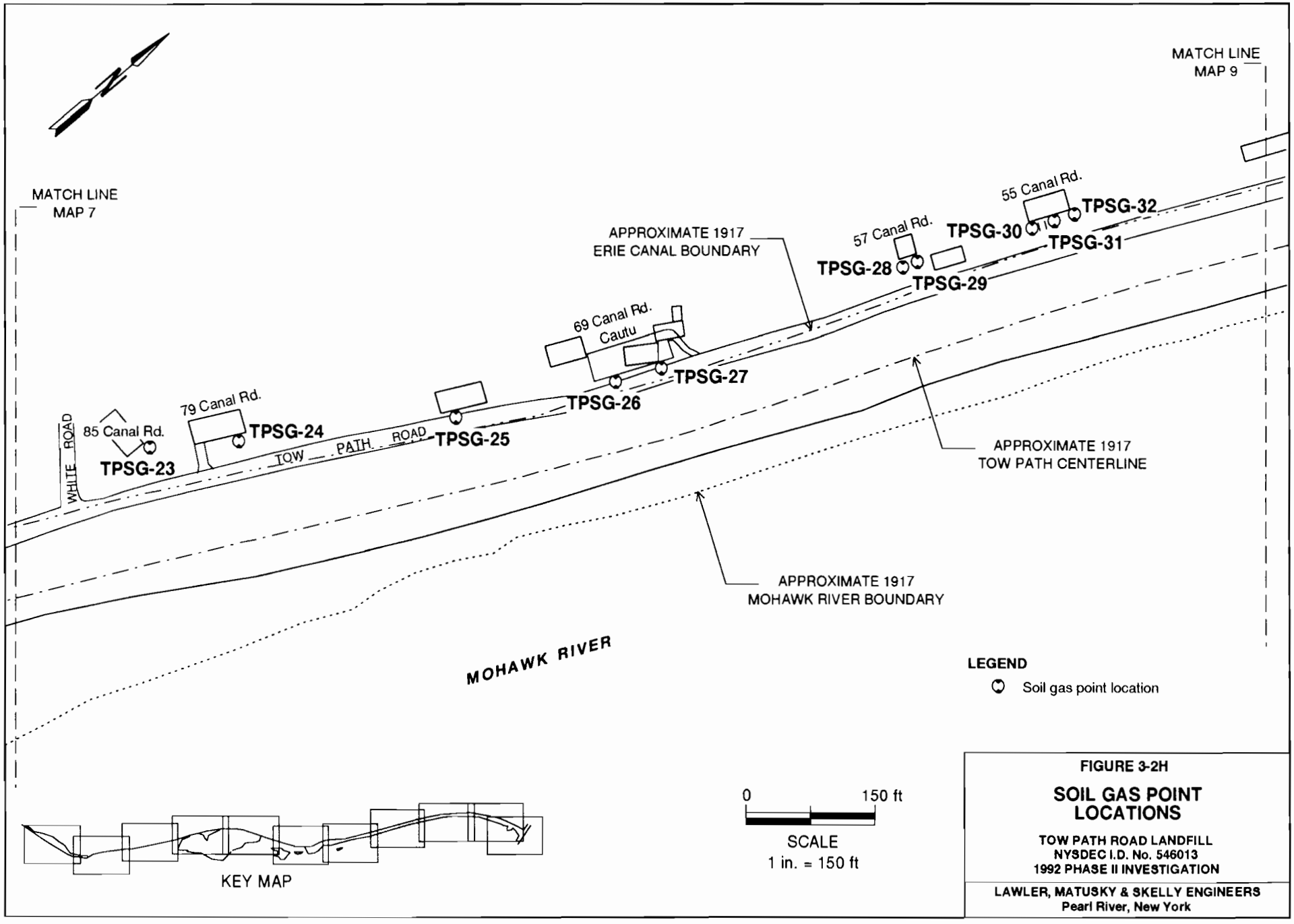


FIGURE 3-2H

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

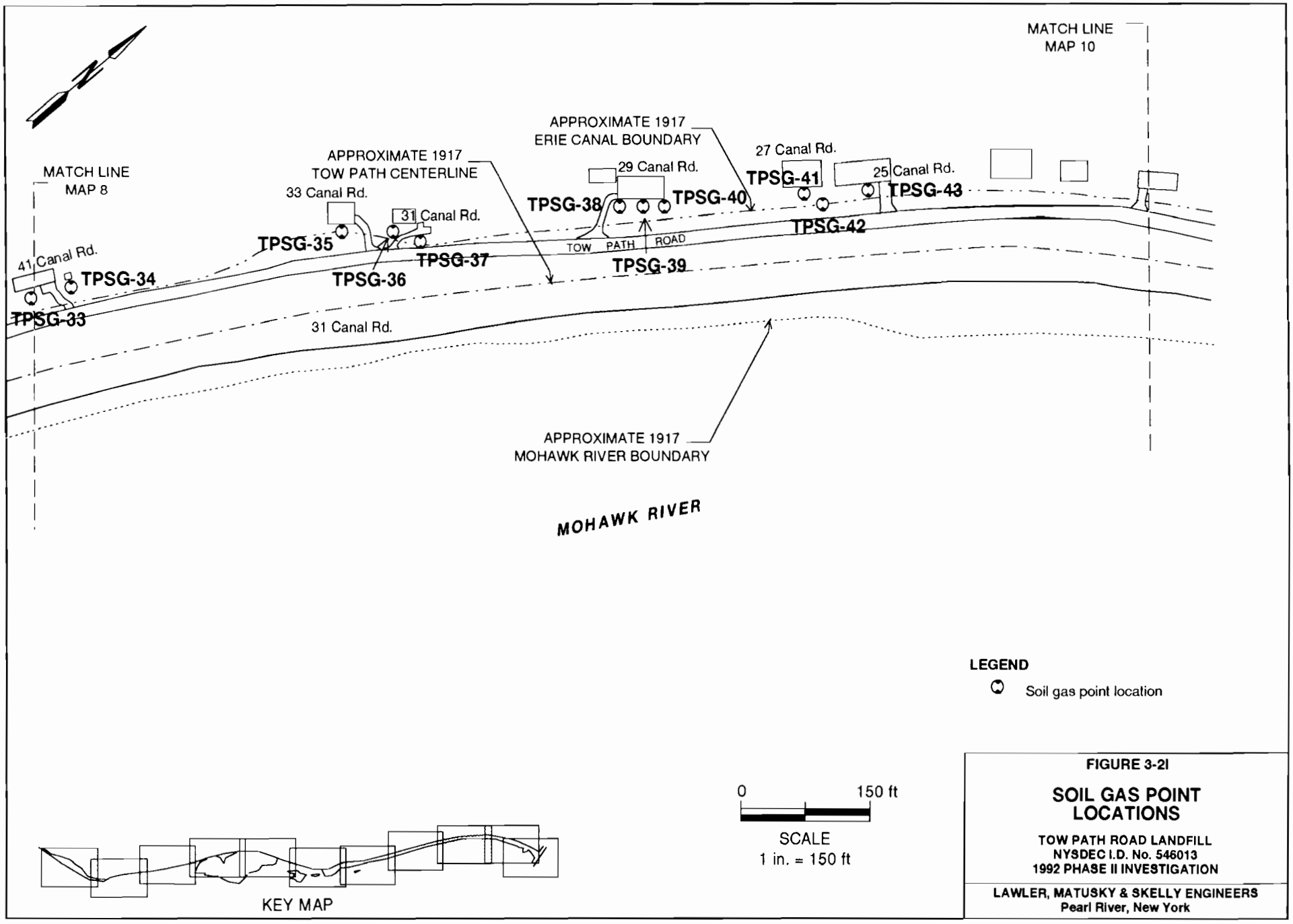


FIGURE 3-2I

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

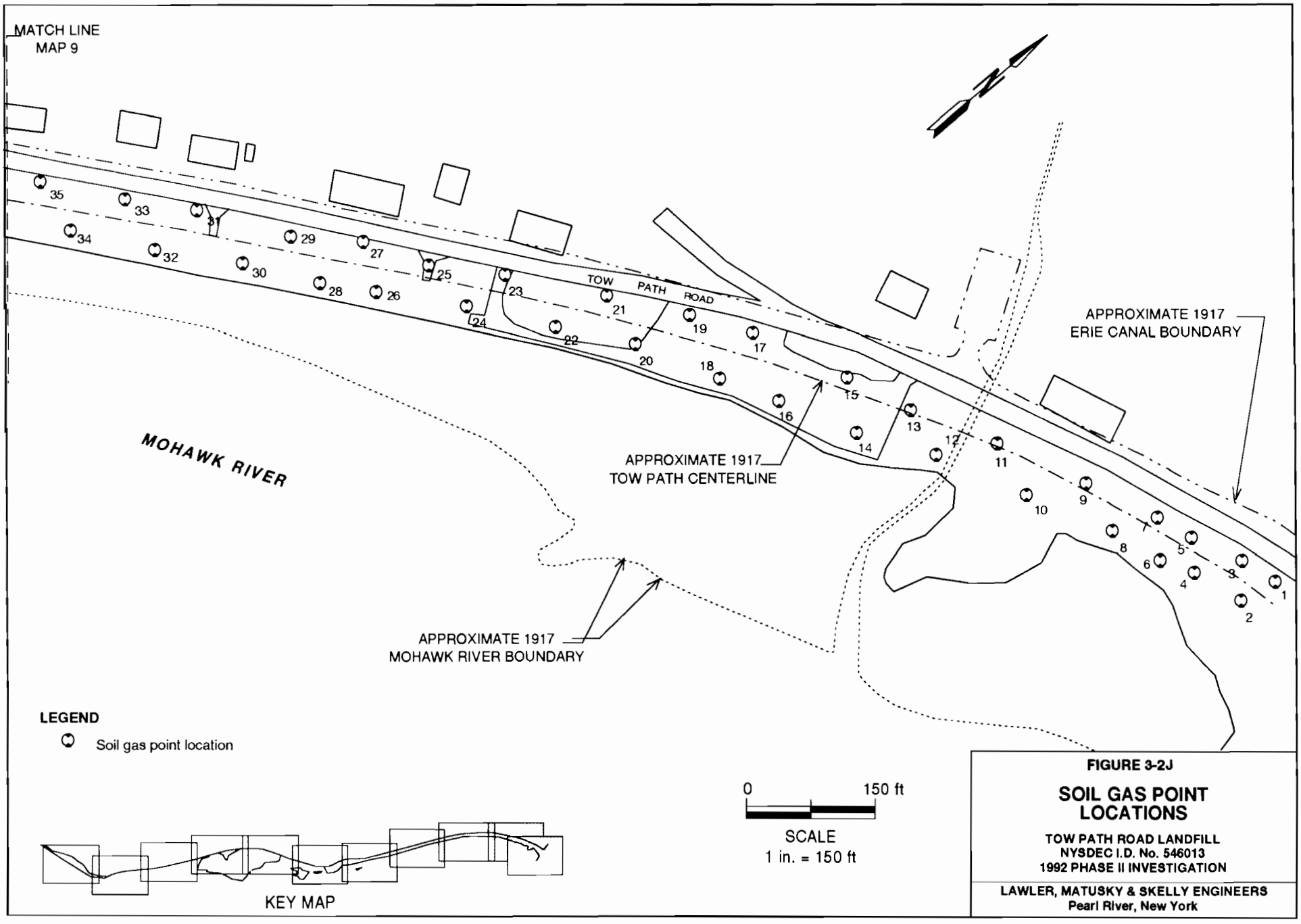


FIGURE 3-2J

SOIL GAS POINT LOCATIONS

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

A layer of dry sand was poured into the hole to a depth of approximately 0.5 ft above the stainless steel point to allow an area for gas capture. Bentonite powder and small volumes of water was then added alternately to seal the remaining annular space of the hole. At the surface a 1-ft section of 2-in. PVC was installed around the top part of the Teflon tube to protect the point for future sampling. A clay plug was placed over the end of the Teflon tubing to prevent debris from entering the tube prior to sampling. Finally, each point was labeled and flagged for identification in the field. After each point was installed, the equipment was decontaminated using a potable water/Alconox mix and deionized water rinse.

The soil gas points were sampled shortly after installation. The points were purged using a battery-powered vacuum pump for approximately 2 to 3 min at a flow rate of 2 l/min. During purging, a Foxboro OVA FID, HNU PID, MSA 361 (CGI), and Photovac were used to monitor the effluent from the points for total organics (Ref. 3, Appendix A). The samples were immediately transported to the mobile laboratory provided by Tetra·K Testing of Westfield, Massachusetts, to be injected into an HNU Model 421 gas chromatograph (GC).

3.4 SITE SURVEY

YEC, Inc., was subcontracted by LMS to conduct a site survey of the Tow Path Landfill area. The field survey was conducted from 21 to 25 June 1993. The survey effort included the site boundaries, the river elevation at several locations along the site, the locations and elevations of existing groundwater piezometers TPP-1 through -6, the locations and elevations of 25 test trenches excavated at the site, and the locations of three surface water/sediment samples collected from the Mohawk River on 7 May 1993. The site boundaries appear on the site map (site plate).

The final map scale will appear on the base maps created during the Phase II site investigation. In addition, a copy of the final map will be sent to NYSDEC on a disk in Auto Cad format.

CHAPTER 4

SITE INVESTIGATION

4.1 GROUNDWATER INVESTIGATION

Information describing the geologic deposits at the site was obtained from the borings drilled during this study and from test pits dug during previous studies. The site is underlain by a water table aquifer at depths of approximately 4 to 7 ft and by the bedrock aquifer at depths of approximately 40 ft below ground surface. The water table aquifer, or "shallow aquifer," is generally composed of fine to medium sand and occasional silty clay.

During the installation of piezometer TPP-4 and -5, the silty clay layers were observed to be resting on the bedrock surface, which is found at depths of 40 ft (Figure 4-1A). Silty clay layers were also found above the sand, which overlays the bedrock at the location of piezometers TPP-1, -2, and -3 (Figure 4-1B).

The bedrock found at piezometers TPP-1, -3, -4, and -5 is a black shale interbedded with graywacke that is slightly to moderately fractured. Fractures occur along thin layers or horizontal laminae at steep angles ranging 50 to 70° from the horizontal. Fracture faces occasionally have deposits of pyrite and calcite and are slightly weathered. Rock core data are present in Appendix A (Ref. 1).

Piezometers TPP-1 through -6 were installed parallel to the Mohawk River shoreline and downgradient of the landfill to determine the vertical movement of the groundwater (Figures 4-1A and 4-1B).

A comparison of the heads in the TPP-4, -5, and -6 cluster with the surface water stage in the Mohawk River indicates that the strongest gradients are toward the river; it is believed that most of the shallow groundwater is directed toward the river (Figures 4-2A and 4-2B). There is a downward gradient between the overburden and deep bedrock systems, but it is believed that

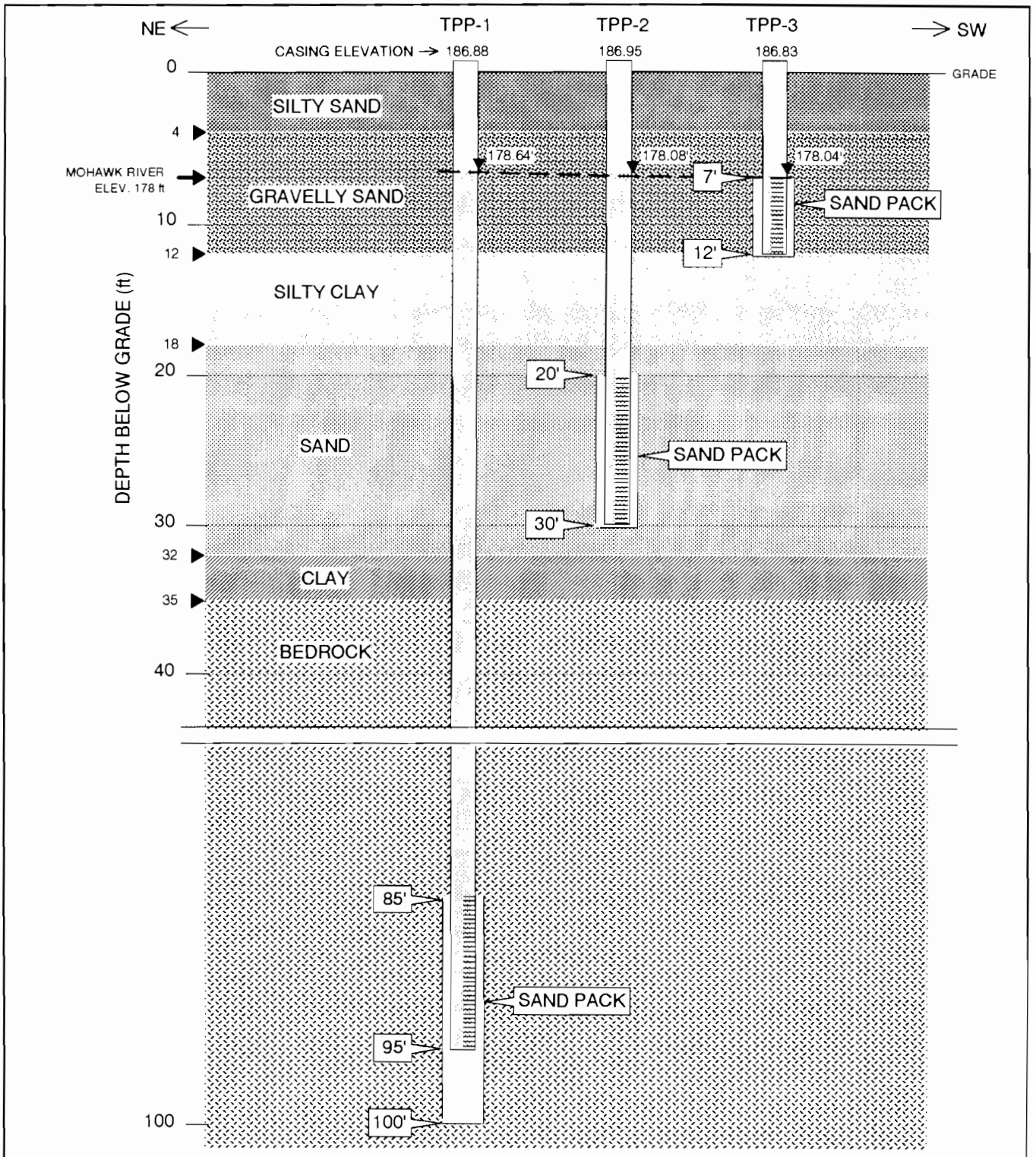


FIGURE 4-1A

PROFILE OF PIEZOMETER CLUSTER TPP-1, -2, AND -3

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

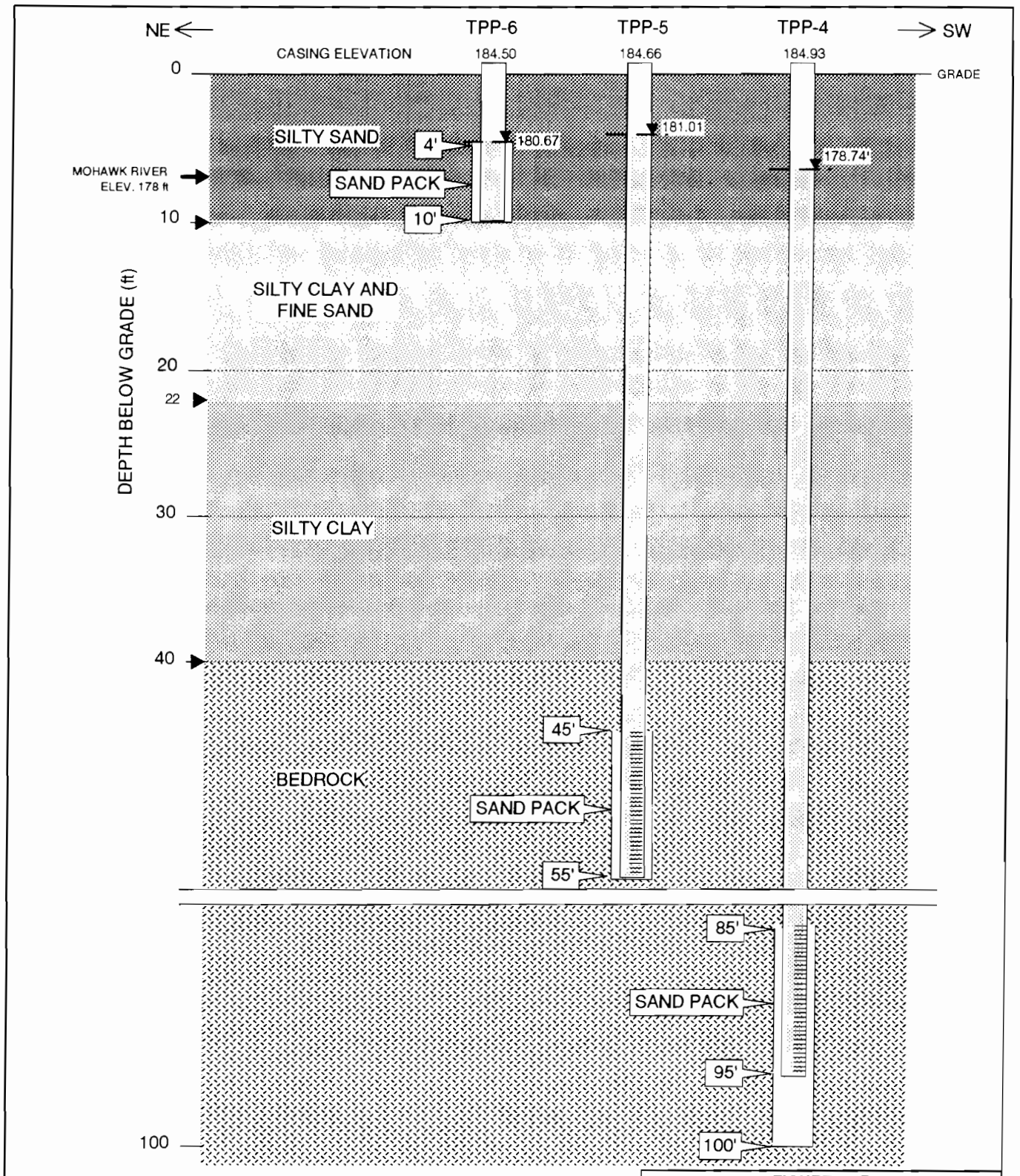


FIGURE 4-1B

PROFILE OF PIEZOMETER CLUSTER TPP-4, -5, AND -6

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

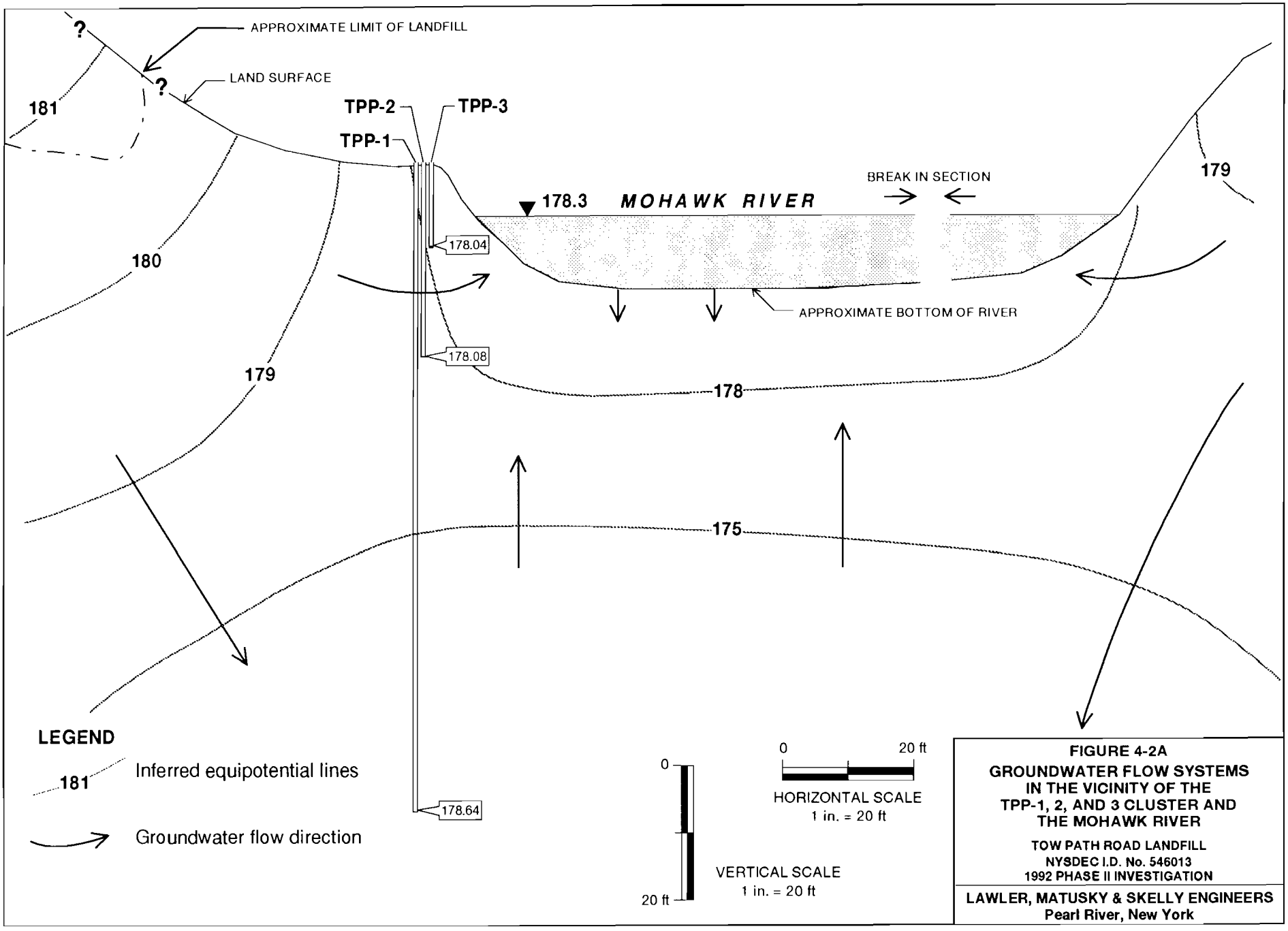


FIGURE 4-2A
GROUNDWATER FLOW SYSTEMS IN THE VICINITY OF THE TPP-1, 2, AND 3 CLUSTER AND THE MOHAWK RIVER

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

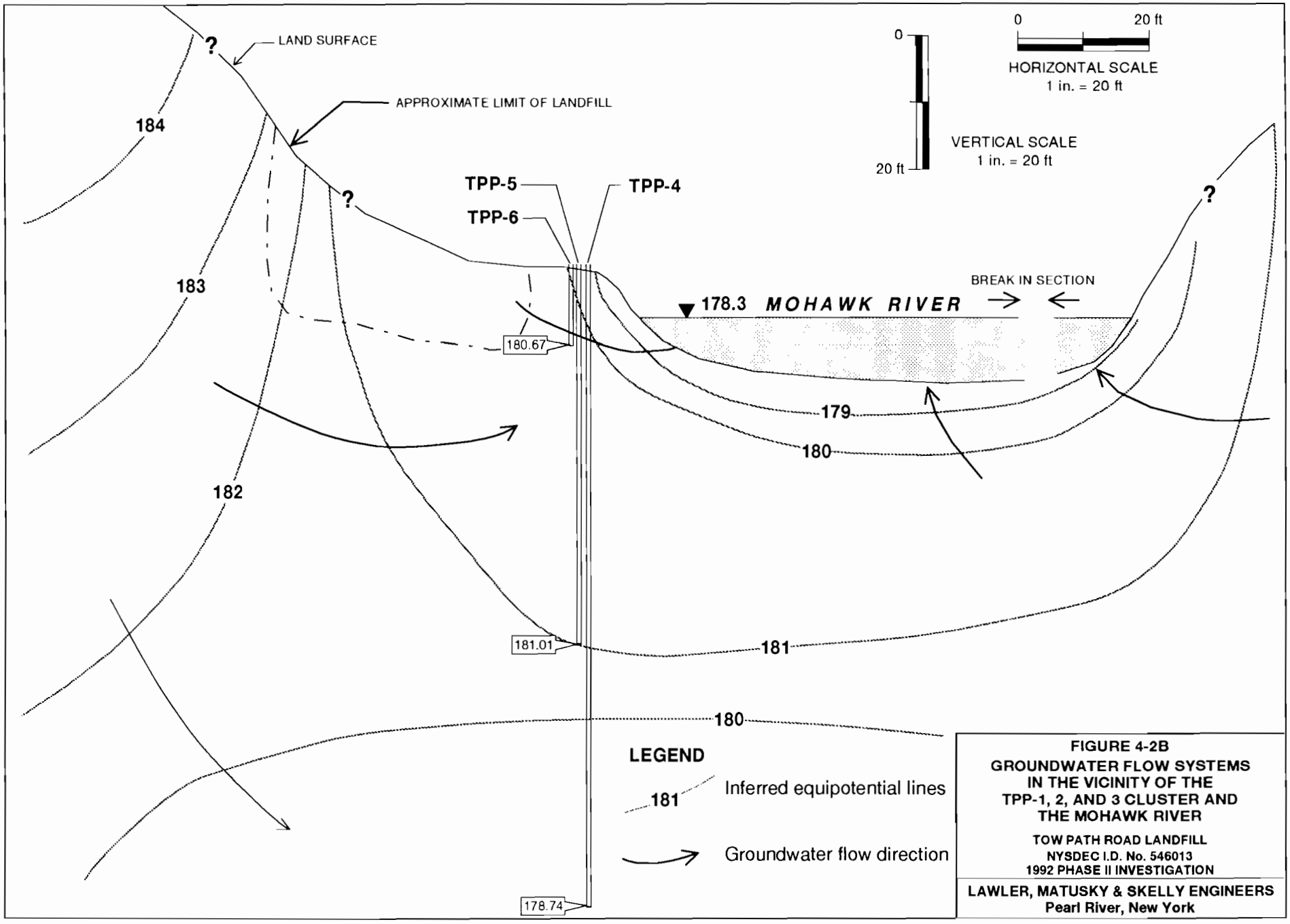


FIGURE 4-2B
GROUNDWATER FLOW SYSTEMS IN THE VICINITY OF THE TPP-1, 2, AND 3 CLUSTER AND THE MOHAWK RIVER

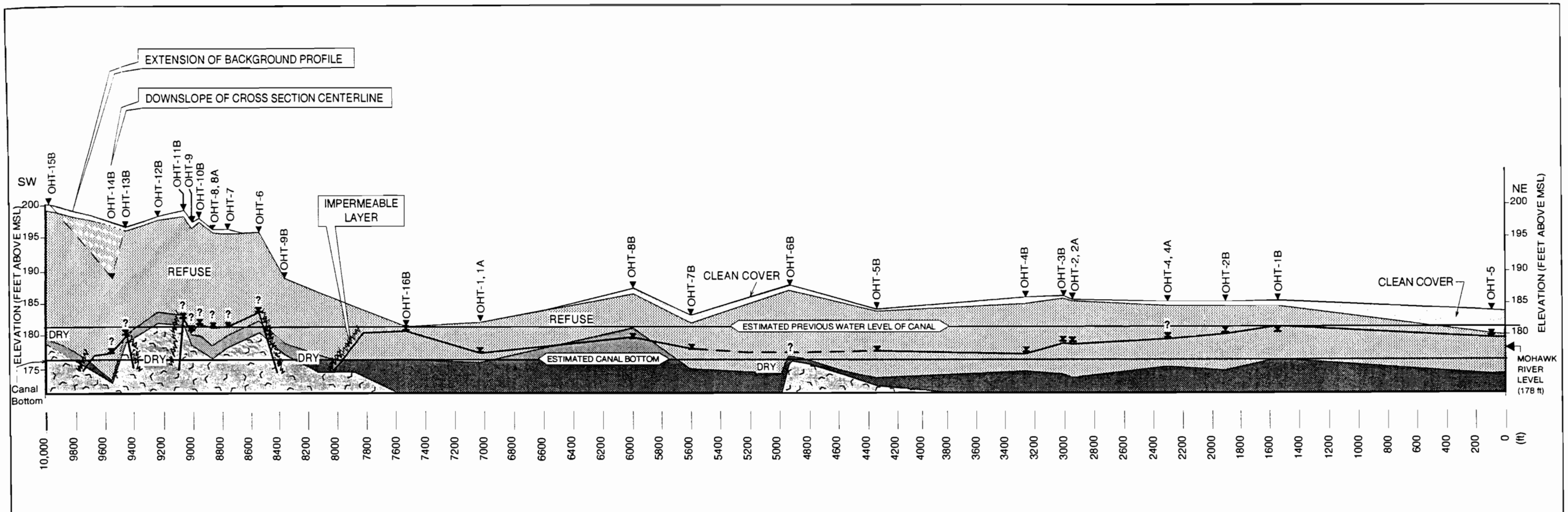
TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

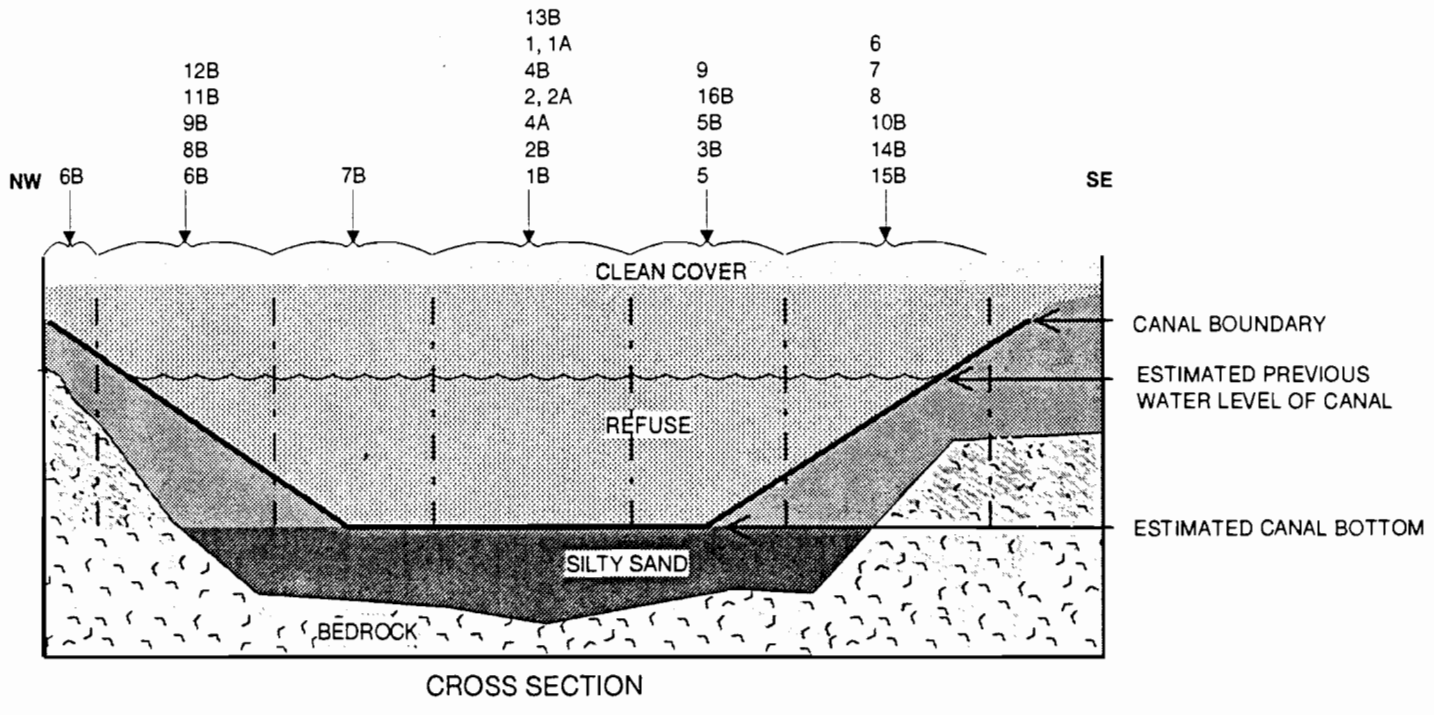
these two piezometers are screened within two separate flow systems that are isolated from each other. TPP-6 is completed in the shallow local flow system that discharges to the Mohawk River while TPP-4 is completed within a deeper regional flow system. It is possible that a supply well completed within the deeper regional flow system could cause sufficient drawdown to break down the overall flow system and allow downward flow of groundwater. A complete evaluation of the possibility would require extensive testing of the various groundwater flow systems. Such testing should include installation of monitoring wells and additional piezometers, pumping the wells, and monitoring the water levels in the piezometers to determine the impact of variable usage on the aquifers and their flow patterns. This information could then be used to more accurately predict the potential for a homeowner well to affect the groundwater flow patterns near the landfill.

Comparison of the heads in the TPP-1, -2, and -3 cluster suggests a flow system similar to the TPP-4, -5, and -6 cluster except for the area immediately adjacent to the river. The river appears to discharge to the shallow groundwater. This may be an artifact of the data since the differences between the river stage, TPP-3, and TPP-2 are very small.

Elevation data collected from test trenches during the 1992 Phase II site investigation were updated following the site survey. The results of the excavations, measured water levels, subsurface material, trench locations and elevation, and river water elevations were used to update the site cross section (Figure 4-3). Based on the collected data from the site topographic map and the site survey, the general slope and the site topography were found to be toward the river (southeast) and also to slope gently to the northeast. A comparison between the water levels in the canal and the Mohawk River water level indicated that the estimated previous water level of the canal (182 ft) was higher (approximately 4 ft) than the river water level (178 ft) measured during the site survey. The areas between test trenches OHT-16B and -9B and OHT-11B and -13B, together with the site of OHT-15B, were dry at the canal bottom, indicating the presence of leakage through the thin silty sand canal bottom and the existence of impermeable fill along the length of the canal. Some impermeable fill must exist; otherwise, water in the wet areas of the canal would drain out.



TRENCH LOCATIONS WITHIN THE CANAL



CROSS SECTION

LEGEND

- Clean cover
- Refuse/debris
- (Above level of canal bottom) / (Below level of canal bottom) — Silty sand
- (Above level of canal bottom) / (Below level of canal bottom) — Bedrock
- ▼ Test trench location
- ⧗ Static water table
- ? Bottom of canal not encountered

0 400 ft

HORIZONTAL SCALE
400 ft

VERTICAL SCALE
10 ft

0
10 ft

FIGURE 4-3

SITE CROSS SECTION

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

Although test trench OHT-6B was located at the area between test trenches OHT-5B and -7B, there is no information on the water condition at this area because OHT-6B was excavated on the far (northwest) edge of the canal.

The test trench relative locations within the canal boundary were identified based on the collected data, including the depth of the natural bottom material and the surface of the bedrock (Figure 4-4). Water levels measured at test trenches OHT-14B and -4 (approximately 177 ft), excavated near the location of piezometer clusters TPP-1, -2, and -3 and -4, -5, and -6, respectively, were found to be about the same at the shallow piezometers (approximately 178 ft), which indicates that the water inside and outside the canal boundary are most likely connected.

4.2 SURFACE WATER AND BOTTOM SEDIMENT DATA

On 6 and 7 May 1993 LMS personnel collected surface water and bottom sediment samples from three locations in the bay area between Beach Road and Clam Steam Road. The purpose of the sample collection was to gather additional information on the potential impact of the landfill to the river. Samples were collected approximately 10 ft from the Mohawk River shoreline. Each of the sediment sample locations was sampled from four depths, A from 0 to 6 in., B from 6 to 12 in., C from 12 to 18 in., and D from 18 to 24 in. The usability report on the analyses conducted by Aquatec, which were reviewed and validated by Data Validation Services (DVS), is presented in Appendix B (Ref. 1). DVS determined that all analyses were in compliance with NYSDEC 1991 Analytical Services Protocol (ASP). Data limitations and specific usability issues addressed in Appendix B have been incorporated in the summarized surface water data presented in Table 4-1. The table also gives the NYSDEC surface water standards for both aquatic and human protection. All samples were analyzed for TCL VOCs, low levels of TCL pesticides/PCBs (filtered and unfiltered), conventional parameters, and target analyte list (TAL) metals (Tables 4-1 and 4-2).

20 Jul 93

SURFACE WATER DATA SUMMARY (MAY 1993)

Tow Path Road Landfill (Add'l Work) NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSW1	FILTRATE TPSW1F	TPSW2	FILTRATE TPSW2F	MS TPSW2	MSD TPSW2	NYSDEC SW CLASS A STANDARDS (h) AQUATIC	NYSDEC SW CLASS A STANDARDS (h) HUMAN
TCL VOLATILE ORGANICS (µg/l)	ND	♦	ND	ND	ND	ND	-	-
Tentatively Identified Compounds	ND	♦	ND	ND	ND	ND	-	-
TCL PESTICIDES/PCBs (µg/l)								
beta-BHC	ND	ND	ND	0.007 p²	ND	ND	NC	0.002 GV
gamma-BHC (lindane)	0.02	NU	0.026	ND	*	*	NC	0.002 GV
Heptachlor	ND	ND	ND	0.077 p²	*	*	NC	0.009
Aldrin	ND	ND	ND	0.008 p²	*	*	NC	0.002 GV
gamma-Chlordane	NU	ND	NU	ND	NU	NU	NC	0.02 GV
CONVENTIONALS								
Total dissolved solids (mg/l)	200	♦	230	♦	♦	♦	NC	500
Total suspended solids (mg/l)	77	♦	35	♦	♦	♦	NC	NARR
Chemical oxygen demand (mg/l)	30	♦	22	♦	♦	♦	NC	NC

♦ - Not analyzed.
* - Spiking compound; data not representative of actual sample concentration.
2 - Pesticide compounds are possibly the result of interferences; identification and concentration are tentative.
j - Estimated concentration; compound present below quantitation limit.
p - Pesticide/Aroclor target analyte has >25% difference for the detected concentrations between the two GC columns.
GV - Guidance value.
MS - Matrix spike.
NC - No criteria.
ND - Not detected at analytical detection limit.
NU - Low level pesticide concentration did not exceed five times the field blank concentration and is therefore unreliable and unusable.
MSD - Matrix spike duplicate.
NARR - Narrative standard.

20 Jul 93

SURFACE WATER DATA SUMMARY (MAY 1993)

Tow Path Road Landfill (Add'l Work) NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSW3	FILTRATE TPSW3F	FIELD BLANK (5/6/93)	TRIP BLANK (5/6/93)	NYSDEC SW CLASS A STANDARDS (h) AQUATIC	HUMAN
TCL VOLATILE ORGANICS (µg/l)	ND	♦	ND	ND	-	-
Tentatively Identified Compounds						
Boric acid (H3BO3), trimethy	ND	♦	5 j b	ND	-	-
TCL PESTICIDES/PCBs (µg/kg)						
delta-BHC	ND	0.023 p²	ND	♦	NC	0.002 GV
gamma-BHC (Lindane)	ND	NU	0.004 j p	♦	NC	0.002 GV
Heptachlor	ND	0.22 p y²	ND	♦	NC	0.009
Aldrin	ND	0.008 p²	ND	♦	NC	0.002 GV
gamma-Chlordane	ND	ND	0.006	♦	NC	0.02 GV
CONVENTIONALS						
Total dissolved solids (mg/l)	150	♦	♦	♦	NC	500
Total suspended solids (mg/l)	39	♦	♦	♦	NC	NARR
Chemical oxygen demand (mg/l)	10	♦	♦	♦	NC	NC

* - Spiking compound; data not representative of actual sample concentration.
. - Not analyzed.
2 - Pesticide compounds are possibly the result of interferences; identification and concentration are tentative.
b - Found in associated blanks.
j - Estimated concentration; compound present below quantitation limit.
p - Pesticide/Aroclor target analyte has >25% difference for the detected concentrations between the two GC columns.
y - Compound response quantitated from peak response exceeding calibration range.
GV - Guidance value.
NC - No criteria.
ND - Not detected at analytical detection limit.
NU - Low level pesticide concentration did not exceed five times the field blank concentration and is therefore unreliable and unusable.
NARR - Narrative standard.

19 Jul 93

SURFACE WATER DATA SUMMARY (MAY 1993)

Tow Path Road Landfill (Add'l Work) NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSW1	TPSW2	DUP TPSW2	TPSW3	FIELD BLANK (5/6/93)	NYSDEC SW CLASS A STANDARDS (h) AQUATIC	HUMAN
TAL METALS (µg/l)							
Aluminum	1,550	127 B	181 B	339	ND	100 (i)	NC
Antimony	ND	ND	ND	ND	ND	NC	3.0 GV
Arsenic	2.4 B	ND	1.7 B	ND	ND	190	50
Barium	121 B	64.9 B	67.1 B	38.1 B	ND	NC	1,000
Beryllium	ND	ND	ND	ND	ND	1,100	3.0 GV
Cadmium	ND	ND	ND	ND	ND	1.5	10
Calcium	49,100	55,800	56,300	33,600	ND	NC	NC
Chromium	6.2 B	ND	ND	ND	ND	273	50
Cobalt	ND	ND	ND	ND	ND	5.0	NC
Copper	7.9 B	ND	ND	ND	ND	15.8	200
Iron	17,900	2,910	2,990	1,470	49.1 B	300	300
Lead	14.6	ND	ND	1.7 B	ND	4.9	25
Magnesium	6,660	7,570	7,680	5,290	ND	NC	35,000
Manganese	547	219	220	285	ND	NC	300
Mercury	ND	ND	ND	ND	ND	0.2 GV	2.0
Nickel	ND	ND	ND	ND	ND	123	NC
Potassium	2,180 B	3,360 B	2,960 B	1,320 B	ND	NC	NC
Selenium	ND	ND	ND	ND	ND	1.0	10
Silver	ND	ND	ND	ND	ND	0.1 (i)	50
Sodium	13,400	14,000	13,930	10,700	ND	NC	NC
Thallium	ND	ND	ND	ND	ND	8.0	4.0 GV
Vanadium	ND	ND	ND	ND	ND	14	NC
Zinc	43.5	4.3 B	4.7 B	7.3 B	4.4 B	30	300
Cyanide	ND	ND	ND	ND	ND	5.2 (f)	100

(f) - Free cyanide, sum of HCN + CN^-.
(h) - Hardness: 140 mg equivalent CaCO3/l.
(i) - Ionic.
B - Value is less than the contract-required detection limit but greater than the instrument detection limit.
GV - Guidance value.
NC - No criteria.
ND - Not detected at analytical detection limit.
DUP - Duplicate analysis.

20 Jul 93

SEDIMENT DATA SUMMARY (MAY 1993)

Tow Path Road Landfill NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSD1A	TPSD1B	TPSD1C	TPSD1D	TPSD2A	MS TPSD2A	MSD TPSD2A
TCL VOLATILE ORGANICS (µg/kg)							
Acetone	100 b	21 b	40 b	27 b	140 b	140 b	110 b
2-Butanone	26 j	ND	ND	ND	31	*	*
Chlorobenzene	ND	ND	ND	ND	8 j	*	*
Tentatively Identified Compounds	ND	ND	ND	ND	ND	ND	ND
Formic acid, methyl ester	ND	ND	ND	ND	37 j	ND	ND
Methane, thiobis-	ND	ND	ND	ND	20 j	ND	ND

* - Spiking compound; data not representative of actual sample concentration.
b - Found in associated blanks.
j - Estimated concentration; compound present below quantitation limit.
ND - Not detected at analytical detection limit.
MS - Matrix spike.
MSD - Matrix spike duplicate.

20 Jul 93

SEDIMENT DATA SUMMARY (MAY 1993)

Tow Path Road Landfill NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSD2B	TPSD2C	TPSD2D	TPSD3A	TPSD3B	TPSD3C	TPSD3D
TCL VOLATILE ORGANICS (µg/kg)							
Acetone	28 b	74 b	55 b	14 j b	10 j b	15 b	12 j b
2-Butanone	ND	16 j	12 j	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	3 j	ND	ND	ND
Tentatively Identified Compounds							
Boric Acid (H3Bo3), trimethy	ND	ND	ND	ND	ND	ND	ND
Unknown cycloalkane	ND	11 j	ND	ND	ND	ND	ND

b - Found in associated blanks.
j - Estimated concentration; compound present below quantitation limit.
ND - Not detected at analytical detection limit.

20 Jul 93

SEDIMENT DATA SUMMARY (MAY 1993)

Tow Path Road Landfill NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSD1A	TPSD1B	TPSD1C	TPSD1D	TPSD2A	MS TPSD2A	MSD TPSD2A
TCL PESTICIDES/PCBs (µg/kg)							
Heptachlor	ND	ND	ND	ND	ND	*	*
Dieldrin	ND	ND	ND	ND	ND	*	*
4,4'-DDE	6.9 j x	5.3 j p x	4.3 j p x	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	*	*
4,4'-DDD	6.0 j p x	5.9 j x	3.7 j p x	ND	ND	ND	ND
4,4'-DDT	5.3 j x	4.1 j p x	5.0 j x	ND	ND	*	*
Aroclor 1242	ND	48 j	ND	ND	ND	ND	ND
Aroclor 1254	100	79 p	85	ND	58 j p	44 j p	ND

* - Spiking compound; data not representative of actual sample concentration.
j - Estimated concentration; compound present below quantitation limit.
p - Pesticide/Aroclor target analyte has >25% difference for the detected concentrations between the two GC columns.
x - Pesticide compound reported is also an Aroclor peak on one or both columns, therefore, the reported concentration is estimated; see Ref. No.
MS - Matrix spike.
MSD - Matrix spike duplicate.

20 Jul 93

SEDIMENT DATA SUMMARY (MAY 1993)

Tow Path Road Landfill NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSD2B	TPSD2C	TPSD2D	TPSD3A	TPSD3B	TPSD3C	TPSD3D
TCL PESTICIDES/PCBs (µg/kg)							
Heptachlor	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	3.4 j p x	6.6 p x	ND	ND	ND	ND
4,4'-DDE	9.8 p x	17 p x	3.7 j p x	ND	ND	ND	ND
Endrin	ND	4.5 j p x	ND	ND	ND	ND	ND
4,4'-DDD	ND	13 p x	ND	ND	ND	ND	ND
4,4'-DDT	8.7 p x	12 p x	5.3 j x	ND	ND	ND	ND
alpha-Chlordane	4.6	ND	ND	ND	5.4	ND	ND
gamma-Chlordane	ND	1.7 j p x	ND	ND	4.8	ND	ND
Aroclor 1242	120 p	150 p	71 p	ND	ND	ND	ND
Aroclor 1254	180 p	260 p	160	ND	ND	ND	ND
Aroclor 1260	41 j	56 j	30 j p	ND	ND	ND	ND

j - Estimated concentration; compound present below quantitation limit.
p - Pesticide/Aroclor target analyte has >25% difference for the detected concentrations between the two GC columns.
x - Pesticide compound reported is also an Aroclor peak on one or both columns, therefore, the reported concentration is estimated; see Ref. No.

20 Jul 93

SEDIMENT DATA SUMMARY (MAY 1993)

Tow Path Road Landfill NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSD1A	TPSD1B	TPSD1C	TPSD1D	TPSD2A	TPSD2A DUP	TPSD2B	EASTERN USA BACKGROUND SEDIMENT CONCENTRATIONS (b)
TAL METALS (µg/kg)								
Aluminum	4,340	6,400	6,120	5,450	9,110	10,530	10,800	33,000
Antimony	ND N	ND N	ND N	ND N	ND N	ND	ND N	N/A
Arsenic	3.0 B	4.6	5.3	4.2	9.4	7.3	9.9	3.0 - 12.0 æ
Barium	50.5 B	56.7 B	46.5	36.9 B	76.8 B	87.6	82.4	150 - 600
Beryllium	0.34 B	0.34 B	0.32 B	0.27 B	0.52 B	0.58 B	0.66 B	0 - 1.75
Cadmium	1.4 B	ND	ND	ND	0.87 B	ND	0.52 B	0.1 - 1.0
Calcium	3,790	3,620	2,360	2,030	6,830	6,850	10,700	130 - 35,000 æ
Chromium	15.2	17.3	11.9	8.6	29.7	31.1	116	1.5 - 40.0 æ
Cobalt	5.0 B	6.3 B	5.0 B	5.1 B	6.7 B	7.7 B	10 B	2.5 - 60.0 æ
Copper	15.6	19.7	15.5	9.1	25.5	27.7	67.1	1.0 - 50.0
Iron	25,400	23,900	13,300	12,100	34,800	34,670	32,100	2,000 - 550,000
Lead[1]	28.2 NR	40.6 N R	12.2 N R	9.0 N R	23.4 N R	18.3 N R	104 N R	4.0 - 61
Magnesium	1,530 B	2,090	1,810	1,770	3,760	3,800	5,810	100 - 5,000
Manganese	433 N	390 N	156 N	175 N	471 N	438 N	546 N	50 - 5,000
Mercury	0.08 B	0.08 B	0.06 B	ND	0.10 B	0.09 B	0.14 B	0.001 - 0.2
Nickel	10.5 B	13.3 B	9.7	8.6 B	18.1	17.5	28.7	0.5 - 25
Potassium	443 B	902 B	814 B	744 B	1,210 B	1,635	1,180 B	8,500 - 43,000 æ
Selenium	ND	ND W	ND	NDW	ND W	ND	ND W	0.1 - 3.9
Silver	ND	ND	ND	ND	ND	ND	ND	N/A
Sodium	ND	ND	111 B	ND	ND	192 B	161 B	6,000 - 8,000
Thallium	ND	ND	ND	ND	ND	ND	ND	N/A
Vanadium	10.2 B	14.1 B	13.4	11.6	19.1 B	22.5	24.8	1.0 - 300
Zinc	95.0	99.2	49.9	28.7	80.6	82.1	172	9.0 - 50
Cyanide	ND	ND	ND	ND	ND	ND	ND	N/A
Total Solids (%W/W)	43.1	47.3	51.9	55.3	42.2	41.1	47.0	-

1 - Due to low matrix spike recovery, reported concentrations are likely biased low; see Ref. No.

(b) - NYSDEC Division of Hazardous Waste Remediation Memorandum (HWR-92-4046) 16 November 1992, Determination of Soil Cleanup Objectives and Cleanup Levels.

æ - New York State background concentration.

B - Value is less than the contract-required detection limit but greater than the instrument detection limit.

N - Spiked sample recovery is not within control limits.

R - Duplicate analysis not within control limits.

W - Post-digestion spike out of control limits; sample absorba is less than 50% of spike absorbance.

N/A - Not available.

ND - Not detected at analytical detection limit.

DUP - Duplicate analysis.

20 Jul 93

SEDIMENT DATA SUMMARY (MAY 1993)

Tow Path Road Landfill NYSDEC I.D. No. 546013

DRAFT

PARAMETER	TPSD2C	TPSD2D	TPSD3A	TPSD3B	TPSD3C	TPSD3D	EASTERN USA BACKGROUND SEDIMENT CONCENTRATIONS (b)
TAL METALS (µg/kg)							
Aluminum	12,600	13,600	3,560	3,380	3,250	3,810	33,000
Antimony	ND N	ND N	ND N	ND N	ND N	ND N	N/A
Arsenic	9.4	12.3	2.3	2.0 B	1.5	1.1 B	3.0 - 12.0 æ
Barium	98.0	99.8	28.6 B	20.1 B	18.7 B	23.8 B	150 - 600
Beryllium	0.71 B	0.78 B	0.20 B	0.18 B	0.17 B	0.21 B	0 - 1.75
Cadmium	1.2 B	1.7 B	ND	ND	ND	ND	0.1 - 1.0
Calcium	9,440	14,600	4,510	4,670	7,310	4,560	130 - 35,000 æ
Chromium	98.7	89	8.0	7.8	8.5	7.2	1.5 - 40.0 æ
Cobalt	11.3 B	11.7 B	2.5 B	2.8 B	2.8 B	2.9 B	2.5 - 60.0 æ
Copper	97	97.4	11.4	18.4	8.7	8.1	1.0 - 50.0
Iron	26,900	27,300	10,900	8,730	8,020	9,530	2,000 - 550,000
Lead	45.5 N R	40.3 N R	18.0 N R	7.3 N R	6.4 N R	4.7 N R	4.0 - 61
Magnesium	6,050	7,090	1,830	1,700	2,330	1,820	100 - 5,000
Manganese	428 N	411 N	120 N	91.6 N	111 N	94.1 N	50 - 5,000
Mercury	0.21	0.28	ND	ND	ND	ND	0.001 - 0.2
Nickel	29.5	31.1	7.0	6.0 B	5.7 B	6.8 B	0.5 - 25
Potassium	1,590	1,770	405 B	401 B	380 B	419 B	8,500 - 43,000 æ
Selenium	ND W	ND W	NDW	ND W	ND W	ND W	0.1 - 3.9
Silver	ND	ND	ND	ND	ND	ND	N/A
Sodium	184 B	200 B	109 B	125 B	103 B	121 B	6,000 - 8,000
Thallium	ND	ND	ND	ND	ND	ND	N/A
Vanadium	26	27.3	7.8 B	8.3 B	7.4 B	8.1 B	1.0 - 300
Zinc	167	160	40	33	26.8	28.1	9.0 - 50
Cyanide	ND	ND	ND	ND	ND	ND	N/A
Total Solids (%W/W)	53.9	53.5	70.5	69.8	78.4	75.9	

(b) - NYSDEC Division of Hazardous Waste Remediation Memorandum (HWR-92-4046) 16 November 1992, Determination of Soil Cleanup Objectives and Cleanup Levels.
æ - New York State background concentration.
B - Value is less than the contract-required detection limit but greater than the instrument detection limit.
N - Spiked sample recovery is not within control limits.
R - Duplicate analysis not within control limits.
W - Post-digestion spike out of control limits; sample absorba is less than 50% of spike absorbance.
N/A - Not available.
ND - Not detected at analytical detection limit.

4.2.1 Surface Water Data

No VOCs were detected above analytical detection limits in the collected surface water samples.

A tentatively identified compound (TIC) (boric acid) detected in the field blank at 5 μg/l was also detected in the associated method blank and is likely a laboratory contaminant.

4.2.1.1 ***TCL Pesticides/PCBs***. Several pesticides that were not detected in surface water samples TPSW-1 and -3 were detected in the filtrates of these samples (beta- or delta-BHC, heptachlor, aldrin, and gamma-chlordane). With the exception of gamma-BHC and gamma-chlordane, all pesticides detected in surface water samples were qualified with a "p." The pesticides reported with the "p" qualifier were detected in the filtered samples, and as pesticides generally show an affinity for organic matter (i.e., unfiltered sample), higher concentrations of pesticides would have been expected in the unfiltered samples. Since the opposite was reported, there is most likely a systematic interferant introduced during the filtering of the samples (Ref. 1, Appendix B). Low concentrations of gamma-BHC were detected in surface water samples TPSW-1 and -2 at concentrations of 0.02 and 0.026 μg/l, respectively, which also exceeded the NYSDEC guidance value. The field blank collected with the surface water samples contained low levels of gamma-BHC (0.004 μg/l) and gamma-chlordane (0.006 μg/l). These two pesticides were likely a result of cross-contamination during the field sampling.

Splits of the surface water samples were taken by a NYSDEC representative and analyzed by NYSDOH laboratories for PCBs. No PCBs were detected at a nano g/l level (Ref. 3. Appendix B).

4.2.1.2 ***TAL Metals***. Surface water sample TPSW-1, taken from a downstream location at the northwest end of the bay area (Figure 3-1), had the highest concentrations of metals found in any of the samples, with aluminum about 15 times the aquatic standards (100 μg/l) and iron about 60 times the aquatic and human standards (300 μg/l). Lead and zinc detected at concentrations of 14.6 and 43.5 μg/l, respectively, exceeded the aquatic standards. Magnesium was detected only at TPSW-1, at a concentration of 547 μg/l, which exceeded the human

standard (300 μg/l). TPSW-1, which contained the highest TSS (77 mg/l), likely correlates with the higher level of metals detected in this sample.

TPSW-2 was located at the middle of the bay area near the location of the previous sample, OHSW-2, where PCBs were detected at 0.058 μg/l during the 1992 Phase II site investigation. Only two metals, aluminum and iron, were detected at concentrations of 127 and 2910 μg/l.

TPSW-3 was taken from the bay area opposite Clam Steam Tavern, approximately 10 ft off the shoreline. Concentrations were similar to those at TPSW-2; however, aluminum (339 μg/l) was about three times the aquatic standard and iron (1470 μg/l) was about five times the aquatic and human standards (300 μg/l).

Although all surface water samples were analyzed for cyanide, none was found above analytical detection limits.

4.2.1.3 ***Conventional Characteristics***. Surface water samples were analyzed for total dissolved solids (TDS), total suspended solids (TSS), and chemical oxygen demand (COD). The results showed low values of these parameters, reflecting the low concentrations of TCL pesticides/PCBs and metals (dissolved ions and suspended particles) detected in the samples.

4.2.2 Bottom Sediment Data

The VOCs data from the Mohawk River indicate very little contamination in the sediment. The major contaminant found, acetone, was also found in the blank and may have been due to laboratory contamination (Table 4-2).

The result of the TIC analyses showed estimated low concentrations of formic acid and methane (37 and 20 μg/kg, respectively) in sediment sample TPSD-2A (0-6 in.). Also, an estimated concentration of unknown cycloalkane (11 μg/kg) was detected in TPSD-2C (12-18 in.) at a concentration below the quantitation limit.

4.2.2.1 ***TCL Pesticides/PCBs***. Concentrations of several pesticides (dieldrin, 4,4'-DDE, endrin, 4,4'-DDD, 4,4'-DDT, and gamma-chlordane) were qualified with an "x." These compounds were determined to have significant aroclor interference (Ref. 1, Appendix B). Most of these pesticides were also qualified with a "p" as a result of a resolution difference greater than 25% between the initial and confirmatory CG columns. Therefore, identification and concentration of these pesticides is highly estimated.

Low concentrations of alpha-chlordane were detected at TPSD-2B (4.61 μg/kg) and at TPSD-3B (5.4 μg/kg). Low concentrations of gamma-chlordane were also detected at TPSD-3B (4.8 μg/kg).

Sediment sample TPSD-1 contained a small quantity (100 μg/kg) of Aroclor 1254 in the top 6 in. (TPSD-1A), which decreased at lower intervals; 79 μg/kg of Aroclor 1254 was detected at TPSD-1B (5-12 in.) and 85 μg/kg at TPSD-1C (12-18 in.). In addition, low estimated concentrations of Aroclor 1242 (48 μg/kg) were found at TPSD-1B (6-12 in.) (Figure 4-4A).

At the second location, TPSD-2, PCBs were detected in all four intervals of the sample. Sediment samples TPSD-2A contained an estimated low quantity (58 μg/kg) of Aroclor 1254 (58 μg/kg total). The second interval, TPSD-2B (6-12 in.), showed low estimated concentrations of Aroclor 1242 (120 μg/kg), Aroclor 1254 (180 μg/kg), and Aroclor 1260 (41 μg/kg) (341 μg/kg total). The third interval, TPSD-2C (12-18 in.), detected low estimated concentrations of Aroclor 1242 (150 μg/kg), Aroclor 1252 (260 μg/kg), and Aroclor 1260 (56 μg/kg) (total of 466 μg/kg). The bottom interval, TPSD-2D, also detected Aroclor 1242 (71 μg/kg), Aroclor 1254 (160 μg/kg), and Aroclor 1260 (30 μg/kg) (total PCBs 261 μg/kg) (Figure 4-4B).

No PCBs were detected in sediment sample TPSD-3, located at the upgradient location of the Mohawk River.

4.2.2.2 ***Metals and Cyanide***. The TAL metals results from sample TPSD-1 at 0-6 in. showed low concentrations of cadmium (1.4 μg/kg) that exceeded the background soil concentration for

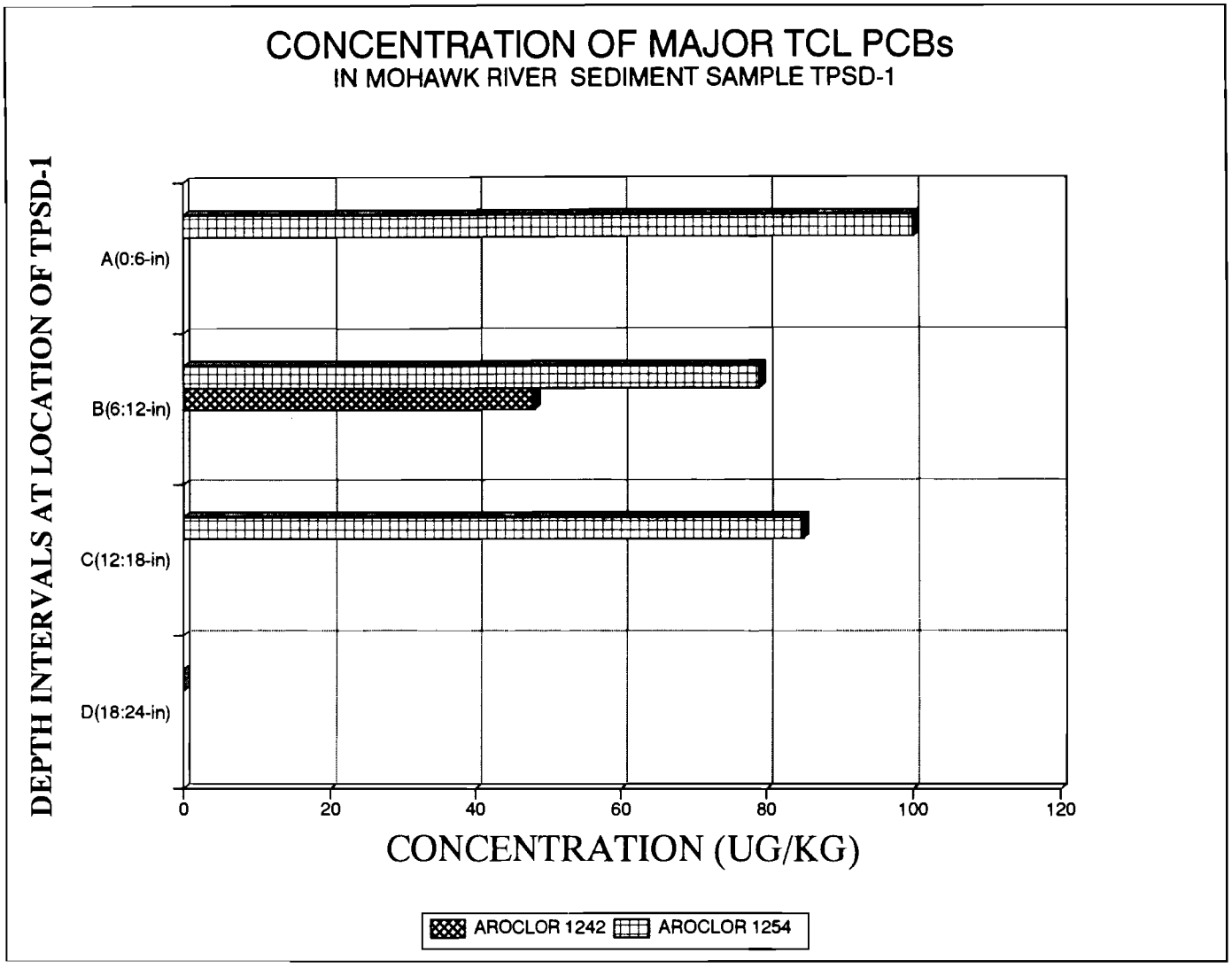


FIGURE 4-4A

PCBs RESULTS AT SEDIMENT SAMPLE TPSD-1

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

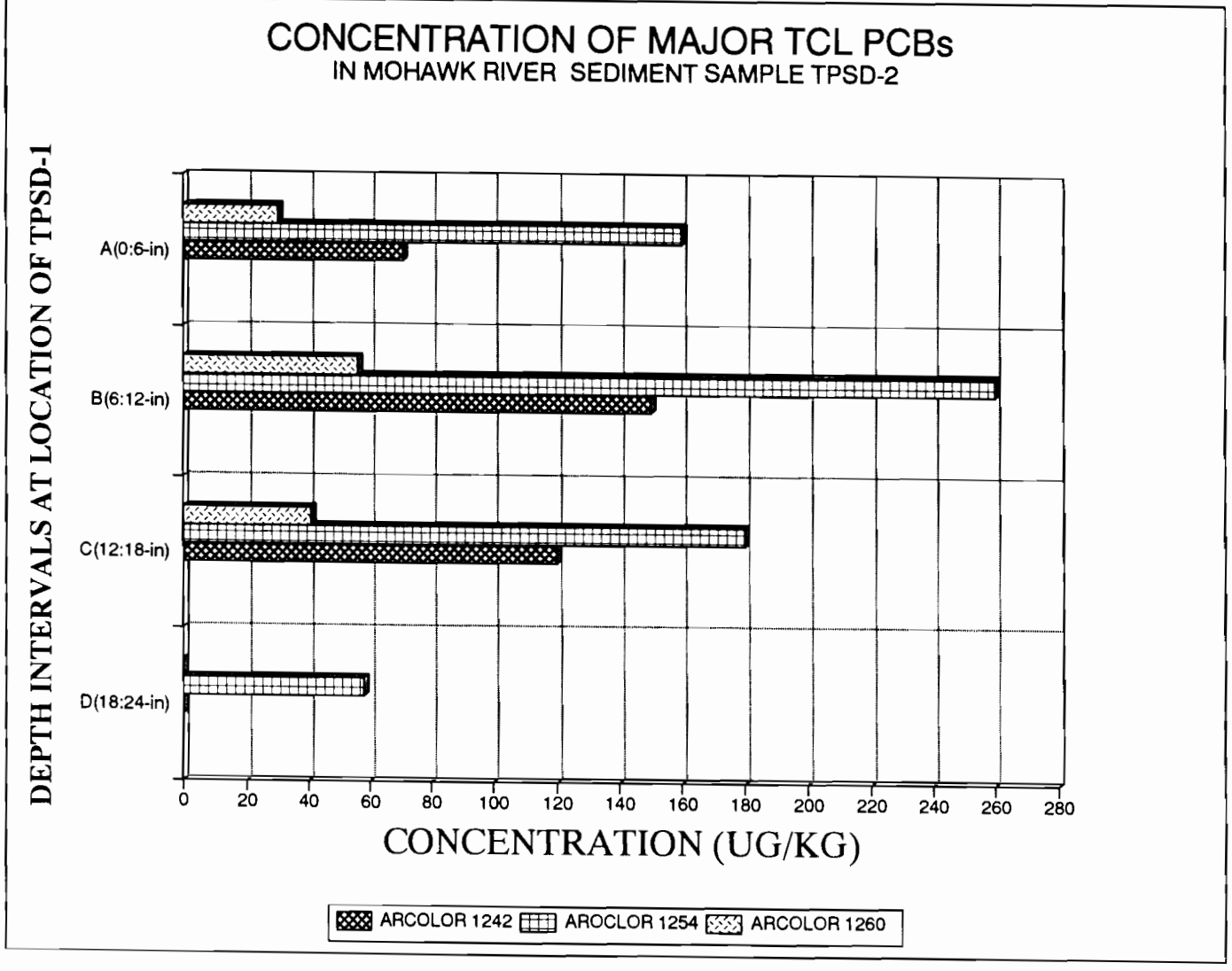


FIGURE 4-4B

PCBs RESULTS AT SEDIMENT SAMPLE TPSD-2

TOW PATH ROAD LANDFILL
NYSDEC I.D. No. 546013
1992 PHASE II INVESTIGATION

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

the eastern United States (1.0 μg/kg), but was less than the contract-required detection limit. Zinc was detected at TPSD-1A (0-6 in.) and TPSD-1B (6-12 in.) at concentrations of 95.0 and 99.2 μg/kg, respectively, exceeding the background soil concentration of zinc (50 μg/kg) for the eastern U.S.

Several metals were detected in sample TPSD-2 at concentrations above the soil background of the eastern U.S. These metals were found mainly at depths below the top 6 in. Chromium was detected at elevated concentrations of 116 μg/kg (6-12 in.), 98.7 μg/kg (12-18 in.), and 89 μg/kg (18-24 in.); copper was detected at concentrations of 67.7 μg/kg (6-12 in.), 97 μg/kg (12-18 in.), and 97.4 μg/kg (18-24 in.); magnesium was detected at concentrations of 5810 μg/kg (6-12 in.), 6050 μg/kg (12-18 in.), and 7090 μg/kg (18-24 in.), increasing with depth. Following the same pattern, nickel was also detected at concentrations that increased with depth: 28.7 μg/kg (6-12 in.), 29.5 μg/kg (12-18 in.), and 31.1 μg/kg (18-24 in.). Zinc was detected in all segments of sediment sample TPSD-2 at concentrations of 80.6 μg/kg (0-6 in.), 172 μg/kg (6-12 in.), 167 μg/kg μg/kg (12-18 in.), and 160 μg/kg (18-24 in.). Low concentrations of arsenic that just exceeded the soil background concentration (12.3 μg/kg) were detected in the bottom 6-in. segment (18-24 in.).

TPSD-3 was taken from the upgradient location opposite Clam Steam Tavern. No TAL metals above the soil background sediment concentration of the eastern U.S. were found in the sediment taken from this location.

4.3 SOIL GAS DATA

Forty-eight soil gas points were permanently installed and sampled as part of this additional work. The survey showed no evidence that any contaminated soil gas generated at the landfill had migrated or accumulated below the adjacent homes. The collected samples did not detect any concentrations of VOCs above the detection limit. As samples were collected, each point was monitored using an OVA FID, HNU PID, MSA CGI, and a Photovac. The results showed only low concentrations of VOCs (8.8 OVA unit) at soil gas point TPSG-31 (Ref. 3, Appendix A).

No soil gas points were installed at the proposed location adjacent to the residence at 95 Canal Road where groundwater was encountered at the shallow depth of 1.0 ft below grade. Also, no samples were collected from soil gas points TPSG-36 and -37, installed at 33 Canal Road (Figure 3-2I), where groundwater was encountered at less than 2 ft below grade. The results of the soil gas survey are presented in Ref. 3, Appendix A.

4.4 HOMEOWNERS WELL SAMPLING

As per the March 1993 Fact Sheet by NYSDEC (Ref. 4, Appendix A), NYSDOH sampled homeowner wells near the landfill from February through July 1993. LMS reviewed the results of the analyses of these samples. A majority of the samples contained high concentrations of sodium, which is probably naturally present in the bedrock in this area. Some samples contained elevated levels of iron and copper, which may also occur naturally in the bedrock or a result of the piping in the homes. These results do not indicate contamination from the adjacent landfill.

REFERENCE No. 1

APPENDIX A

TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

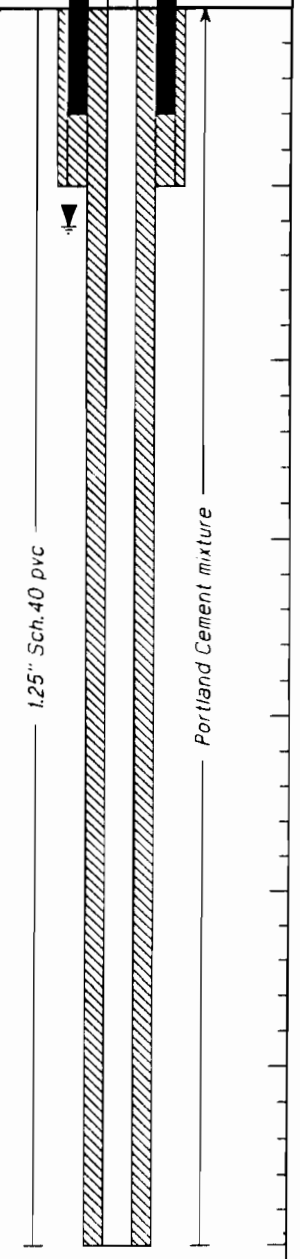
Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-1

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-10-93/5-12-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: SE of site, 200 FT E of Clam Steam Tavern
Total Depth (ft): 100.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 6.15

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY
	SS-1	9-9				Brown silty fine sand, little gravel and roots, leaves (dry).	
		9-20	1.5	BG			
	SS-2	12-50					
		23-15	1.0	BG		Fragments of weathered shale mixed with brown silty fine sand,	
5	SS-3	9-9				trace of roots (dry).	
		8-7	0.2	BG		Poor recovery of gravel size weathered shale (dry).	
	SS-4	13-5					
		15-18	0.2	BG		Poor recovery of gravel size shall (water encountered about 7 ft below grade).	
	SS-5	9-2					
10		4-6	0.1	BG		Same as above (little cobbles, wet).	
	SS-6	8-4					
		3-8	1.0	BG		Gray silty clay, little gravel (shale, wet).	
	SS-7	3-2					
		3-6	1.3	BG		Same as above.	
15	SS-8	16-11					
		10-6	1.0	BG		Gray silty clay, some gravel (wet).	
	SS-9	5-7				Gray clay, little silt and gravel (compacted).	
		15-26	1.7	BG			
	SS-10	11-24				Same as above	
20		25-25	1.3	BG		Fine to medium gray sand, little silt (loose, wet).	
	SS-11	2-2	1.0				
		1-1	1.6	BG		Fine to medium gray sand interbedded with thin layers of silty clay (wet).	
	SS-12	5-5					
		5-4	1.1	BG		Medium gray sand, some fine sand, little coarse sand.	
25	SS-13	10-10					
		8-6	1.0	BG		Same as above.	
	SS-14	11-15					
		8-5	.9	BG			
	SS-15	8-12					
30		9-13	1.4	BG		Same as above.	
	SS-16	5-7					
		9-11	1.5	BG			
	SS-17	6-8				Same as above (more Finner).	
		12-9	1.2				
	SS-18	11-18					
35						Highly weathered gray shale, some gray clay.	

WELL DIAGRAM



Lawler Matusky & Skelly Engineers

TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-1

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-10-93/5-12-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: SE of site, 200 FT E of Clam Steam Tavern
Total Depth (ft): 100.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 6.15

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
	SS-18	13-10	1.4	BG				
	SS-19	27-13	0.5	BG		weathered gray shale fragments.		
						Augered through bedrock.		
40						Started coring into bedrock using HQ 3.79 in. O.D. (2-ft run).		
						Gray shale with calcite filling fractures. Bedding plane with 45 degree angle .Few fractures as a result of coring.		
45						Shale interbedded with gray sandstone .		
						Highly calcite filling bedding plans fractures (angled fractures) .Few fractures at the shale/sandstone boundaries.		
50						Same as above (trace of pyrite found within the shale beds).		
55						4 ft of a solid piece of sandstone (no fractures).		
						Shale interbedded with sandstone (few bedding plane fractures).		
60						Shale interbedded with graywacke sandstone, calcite filling fractures.		
65						Graywacke sandstone with few bedding plane fractures.		
						Thin layer of black shale.		
						Sandstone layer with a thickness of 2 ft.		
70								

1.25" Sch.40 pvc

Portland Cement mixture

TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-1

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-10-93/5-12-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: SE of site, 200 FT E of Clam Steam Tavern
Total Depth (ft): 100.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 6.15

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
75						5 ft of Graywacke sandstone, 2 calcite filling fractures were noticed at 72 and 73.5 ft.		
						4 ft of solid sandstone (no fractures).		
80						Black shale interbedded with sandstone.		
						Gray sandstone.		
						Black shale (no fractures).		
85						A bedding plane fracture.		
						Graywacke sandstone		
						Fine gray sandstone interbedded with thin layers. (4-6 in.) of black shale (some fractures).		
90						Same as above.		
95						Same as above.		
100						Well was installed at 95 ft (85-95 ft screen interval). E.O.B		
105								

WELL DIAGRAM: 1.25" Sch.40 pvc; 0.010 PVC Screen; Bentonite seal; # 0.00 Morie Sand

Lawler Matusky & Skelly Engineers

TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

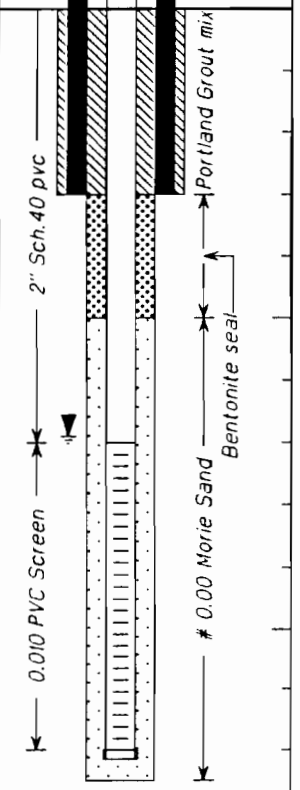
Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-2

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-12-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA

Surface Elevation (ft):
Location Description: SE of site, 200 FT E of Clam Steam Tavern
Total Depth (ft): 12.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 6.9

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY
0						Brown silty fine sand, little gravel and roots, leaves (dry). Fragments of weathered shale mixed with brown silty fine sand, trace of roots (dry).	
5						Gravel size weathered shale (dry). Gravel size shale (water encountered about 7 ft below grade).	
10						Same as above (little cobbles, wet). Gray silty clay, little gravel (shale,wet). Well was installed at 12 ft (7-12 ft screen interval). E.O.B	
15							
20							

WELL DIAGRAM



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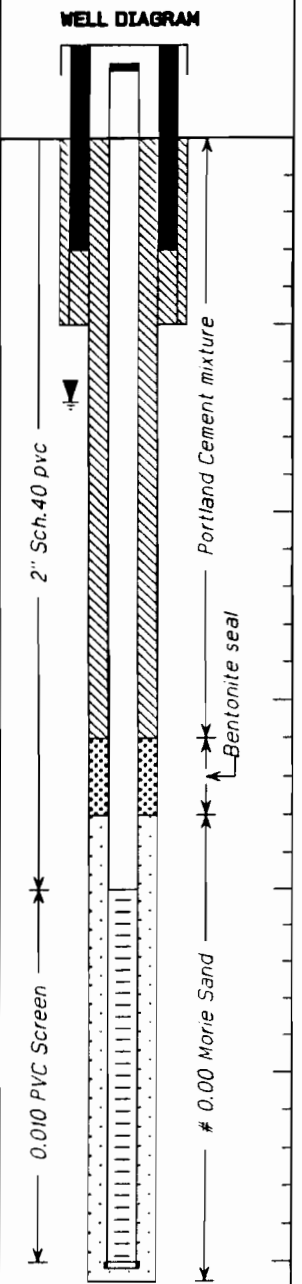
TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-3

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-12-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA

Surface Elevation (ft):
Location Description: SE of site,200 FT E of Clam Steam Tavern
Total Depth (ft): 30.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 7.05

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY
0						Brown silty fine sand, little gravel and roots, leaves (dry).	
						Fragments of weathered shale mixed with brown silty fine sand,	
5						trace of roots (dry).	
						Gravel size weathered shale (dry).	
						Gravel size shale (water encountered about 7 ft below grade).	
10						Same as above (little cobbles, wet).	
						Gray silty clay, little gravel (shale,wet).	
						Same as above.	
15						Gray silty clay, some gravel (wet).	
						Gray clay , little silt and gravel (compacted).	
						Same as above	
20						Fine to medium gray sand, little silt (loose, wet).	
						Fine to medium gray sand interbedded with thin layers of silty clay (wet).	
						Medium gray sand, some fine sand, little coarse sand.	
25						Same as above.	
30						Well was installed at 30 ft (20-30 ft screen interval).	
						E.O.B	



Lawler Matusky & Skelly Engineers

TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

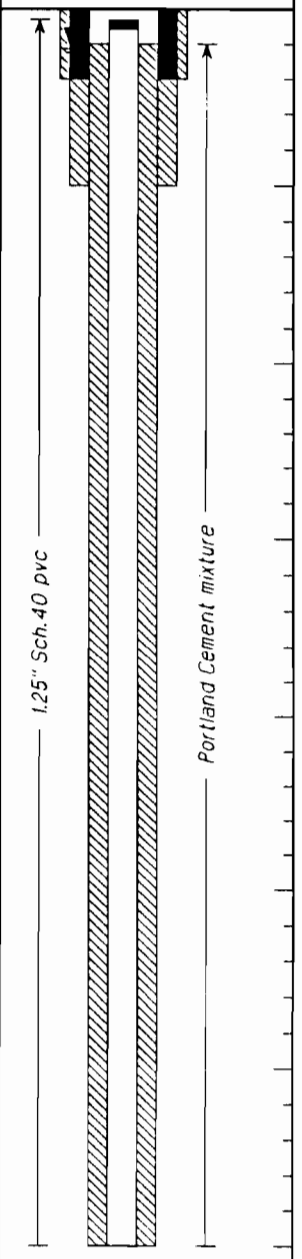
Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-4

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-13-93/5-14-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: Middle of the site, 25 ft E of TEST PIT # 4
Total Depth (ft): 100.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 1.15

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY
	SS-1	3-2				Grassy covered surface, top soil of grayish brown silty sand (dry).	
		2-3	0.9	BG			
	SS-2	2-3				Same as above (some gravel and construction debris, dry).	
		2-6	0.5	15			
5	SS-3	6-28				Brown silty fine sand, little gravel of rock fragments (wet).	
		19-8	0.6	12			
	SS-4	5-5				Gray silty fine sand, some weathered gravel, little clay, trace of roots (wet).	
		9-15	0.5	2			
	SS-5	6-2				Gray silty clay , little fine sand, trace gravel (wet).	
10		2-4	1.3	15			
	SS-6	3-1				Gray silty clay interbedded with silty fine sand, little gravel (wet).	
		3-8	1.6	2			
	SS-7	2-1				Gray fine to very fine sand, little silty clay, trace gravel.	
		1-1	1.3	2			
15	SS-8	2-11					
		1-2	1.4	1		Gray sandy clay, little silt, (wet).	
	SS-9	2-2				Gray silty fine sand interbedded with thin layers of silty clay.	
		2-2	1.3	BG			
	SS-10	1-1					
		1-1	1.0	BG		Gray fine sand, little silty clay (very loose).	
20	SS-11	2-1					
		4-3	1.0	BG		Same as above.	
	SS-12	3-4				Gray silty clay, little fine sand (compacted).	
		8-8	1.3	4			
	SS-13	7-4				Gray clay, trace fine sand and gravel	
25		6-5	1.8	BG			
	SS-14	7-75				Same as above (little silt).	
		13-14	1.3	1			
	SS-15	16-8				Same as above (more coarse grains).	
		7-8	1.7	BG			
30	SS-16	4-6				Gray silty clay, some fine sand, little gravel.	
		6-7	1.0	BG			
	SS-17	10-9				Same as above.	
		5-4	1.9	BG			
	SS-18	11-5					
35							

WELL DIAGRAM



Lawler Matusky & Skelly Engineers

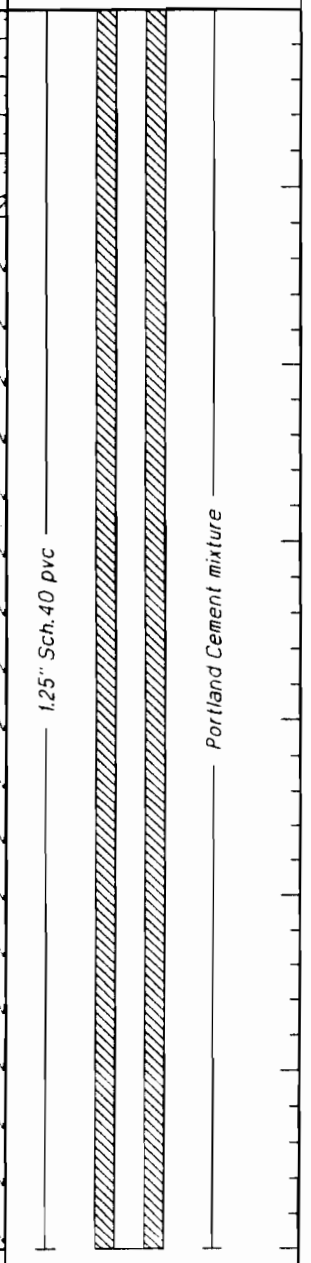
TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-4

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-087
Date Started/Completed: 5-13-93/5-14-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: Middle of the site, 25 ft E of TEST PIT # 4
Total Depth (ft): 100.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 1.15

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
	SS-18	5-5	1.7	BG		Same as above.		
	SS-19	5-3				Gray silty clay, little gravel interbedded with thin layers of silty sand.		
		4-6	1.9	BG		Same as above (more gravel).		
	SS-20	23-47						
40		25-27	1.0	7		Highly weathered gray shale, some gray clay.		
						Augered slowly through bedrock.		
45						Started coring into bedrock using HQ 3.79 in. O.D. (2.5-ft run).		
						Gray shale with some calcite filling fractures. 45 degree bedding plane angle.		
						Fine sandstone layers (2-ft thick) interbedded with 8 in. black shale		
50						Very fine sandstone and graywake , thin layers of shale. .Few fractures at the shale/sandstone boundaries.		
55						Same as above (few fractures at 57:57.5 ft zone).		
60						4 ft of a solid piece of sandstone (no fractures).		
65						Shale interbedded with sandstone (few bedding plane fractures).		
						5-ft section ofgraywacke sandstone with a single fracture at 88 -ft.		
70								



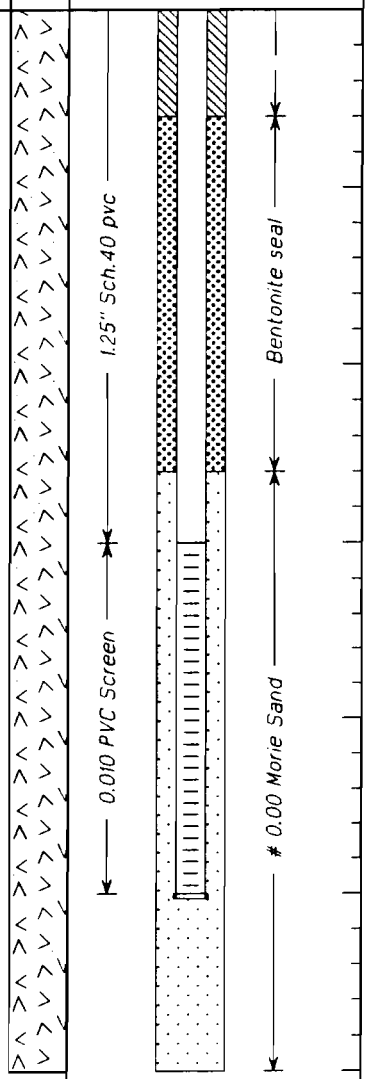
TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-4

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-13-93/5-14-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: Middle of the site, 25 ft E of TEST PIT # 4
Total Depth (ft): 100.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 1.15

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
						6 in. layer of black shale.		
						4.5 ft layer graywacke sandstone with calcite filling fractures		
75						fine grain sandstone with few calcite filling fractures.		
80						Sandstone layer with fine to coarse grain size transition . Mud clastics were found into the sandstone layer. (only 2 fractures at 80:85 ft zone		
85						Graywacke sandstone interbedded with thin layers (6 in.) of black shale, a fracture was noticed at 87.5 ft. Some shale layers were pushed into the sandstone below.		
90						Graywake sandstone interbedded with shale (shale layer were fractured at the bottom).		
95						More graywake sandstone with thin layers of shale , few fractures noticed at the bedding planes (sandstone/shale boudaries).		
100						Well was installed at 95 ft (85-95 ft screen interval). E.O.B		
105								



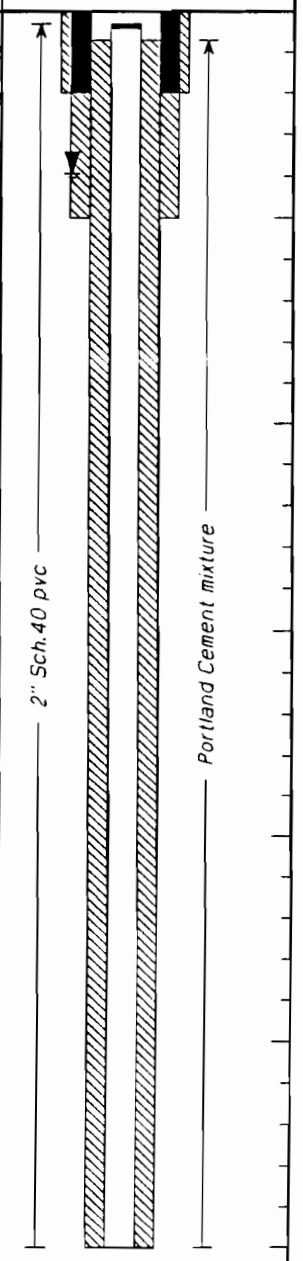
TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-5

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-087
Date Started/Completed: 5-17-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: Middle of the site, 25 ft E of TEST PIT # 4
Total Depth (ft): 55.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 3.93

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
						Grassy covered surface, top soil of grayish brown silty sand (dry).		
						Same as above (some gravel and construction debris, dry).		
5						Brown silty fine sand, little gravel of rock fragments (wet).		
						Gray silty fine sand, some weathered gravel, little clay, trace of roots (wet).		
						Gray silty clay , little fine sand, trace gravel (wet).		
10						Gray silty clay interbedded with silty fine sand, little gravel (wet).		
						Gray fine to very fine sand, little silty clay, trace gravel.		
						Gray sandy clay, little silt, (wet).		
15						Gray silty fine sand interbedded with thin layers of silty clay.		
						Gray fine sand, little silty clay (very loose).		
20						Same as above.		
						Gray silty clay, little fine sand (compacted).		
						Gray clay, trace fine sand and gravel		
25						Same as above (little silt).		
						Same as above (more coarse grains).		
30								



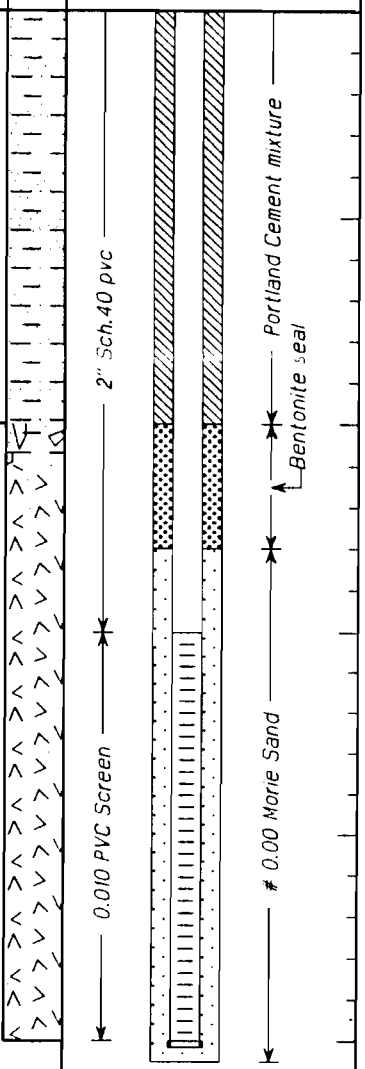
TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site | Boring/Well I.D. TPP-5

Project Location: Town of Halfmoon, Saratoga Co, N.Y.
LMS Project #: 576-067
Date Started/Completed: 5-17-93
Drilling Company: American Auger & Ditching Co., Inc.
Drilling Method: 4.25 in HSA/HQ 3.79 in. Coring

Surface Elevation (ft):
Location Description: Middle of the site, 25 ft E of TEST PIT # 4
Total Depth (ft): 55.00
Geologist: Tarik Zarrouk
Initial Water Level (ft): 3.93

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
35						Gray silty clay, some fine sand, little gravel.		
						Same as above.		
						Same as above.		
						Gray silty clay, little gravel interbedded with thin layers of silty sand.		
						Same as above (more gravel).		
40						Highly weathered gray shale, some gray clay. (possible bedrock).		
						Augered slowly through bedrock.		
						Started coring into bedrock using HQ 3.79 in. O.D. (2.5-ft run).		
45						Gray shale with some calcite filling fractures. 45 degree bedding plane angle.		
						Fine sandstone layers (2-ft thick) interbedded with 8 in. black shale (calcite filling fractures).		
50						Very fine to coarse sandstone and graywake, thin layers of shale. Few fractures at the shale/sandstone boundaries.		
55						Well was installed at 55 ft (45-55 ft screen interval). E.O.B		
60								



Lawler Matusky & Skelly Engineers

TEST BORING LOG/PEIZOMETER CONSTRUCTION DIAGRAM

Project Name: Tow Path Road Landfill Site

Boring/Well I.D. TPP-6

Project Location: Town of Halfmoon, Saratoga Co, N.Y.

LMS Project #: 576-067

Date Started/Completed: 5-17-93/5-18-93

Drilling Company: American Auger & Ditching Co., Inc.

Drilling Method: 4.25 in HSA

Surface Elevation (ft):

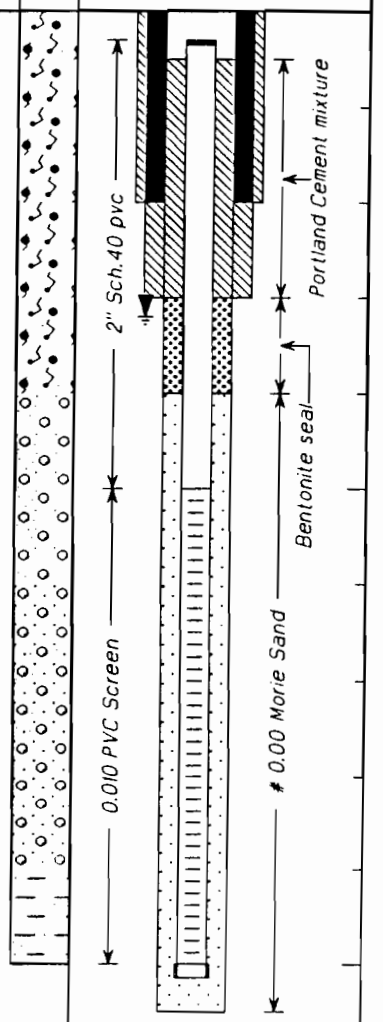
Location Description: Middle of the site, 25 ft E of TEST PIT # 4

Total Depth (ft): 10.00

Geologist: Tarik Zarrouk

Initial Water Level (ft): 3.2

DEPTH FT.	SAMPLE NUMBER	BLOWS/.5ft.	RECOVERY	PID/FID (ppm) VALUES	PID/FID (ppm) PROFILE	GEOLOGIC DESCRIPTION	LITHOLOGY	WELL DIAGRAM
						Grassy covered surface, top soil of grayish brown silty sand (dry).		
						Same as above (some gravel and construction debris, dry).		
5						Brown silty fine sand, little gravel of rock fragments (wet).		
						Gray silty fine sand, some weathered gravel, little clay, trace of roots (wet).		
						Gray silty clay , little fine sand, trace gravel (wet).		
10						Well was installed at 10 ft (5-10 ft screen interval). E.O.B		



REFERENCE No. 2

APPENDIX A

LAWLER, MATUSKY & SKELLY ENGINEERS
CREW CHIEF REPORT

Crew Chief: T. Condello	Job No./Project: 376-067 / Old Halfmoon
Crew Member(s): T. Zarnoch	Survey: Tow Path Rd Surface Water + Sed
Vehicle(s)/Boat(s) Used: White Van / 14' Jon	Project Manager: E. Mokrish

Crew Chief Report (complete after survey):

Survey Start/End Date: 5/6/93 / 5/7/93	Survey Start/End Time: 0800 - 1800 / 0800 - 1930

Describe Details Below:	Y	N		Y	N
Sampling gear working properly	Y		Field meters calibrated:		
Field calibration must be attached to original CC report and sent to QA/QC			• Air Monitoring (HNu, OVA, CGI)		N
• Was downtime incurred (no. hrs____)		N	• Water Quality	Y	
• Any incidents, accidents or pertinent observations	Y		Were the following reports completed and submitted:		
Boat usage	TO		• Weather conditions listed on field data sheets	Y	
• Engine hours	1400	1600	• Radio logs	—	
• Radio logs	—		• Equipment usage	Y	
• Boat location	Mohawk 12		• Boat/Vehicle logs	Y	
Chain-of-custody completed	Y		Samples signed over	Y	

Comments/Observations 5/6/93 Met at 0800 in Nyack. Finished prepping car loaded up. Drove up to Halfmoon site. Met Don Ecton of NYSDEC. Agreed to do the 3 surface water sites first, then the sediments. Collected the three sites (TPSW-01, TPSW-02, TPSW-03) with SS buckets. Per TZ's list we collected samples for VOC's, metals, COD, TSS, TDS, Sp. Cond, pH, PCB's + Diss PCB's. The Diss. PCB's were filtered through a 0.45 µ filter at the site. Unfortunately I forgot to prep my preservatives for the samples. Also collected temp, pH, cond, + turbidity readings in the field. Sent all samples with Trip Blank + Field Blank

NOTE: Send original Crew Chief Report to QA/QC within 5 days of survey completion; send yellow copy to warehouse; retain pink copy for C.C. file

Crew Chief Signature:	Date: 5/10/93

Use Additional Sheets if Necessary

REC'D QAS

MAY 19 1993

LAWLER, MATUSKY & SKELLY ENGINEERS INTER-OFFICE MEMO 2 of 3

TO: File	DATE 5/10/93	JOB. NO. 576-067
FROM: J. Condello	RE: Hallowell Surface Water + Sediment	

(cont) to Aquatech via Fed Ex. Had to run to K Mart to buy chest waders and a sledge hammer. It figured that we can wade in to collect the sediment Sup 5/7/93 left the hotel at 0800, drove to the site. Set up at TPSW-3 to do our first sediment. At this point Terrik informed me that we needed to do discrete 6" interval samples for the first 2 feet. My understanding from our previous discussions was that we needed to sample the top 2 feet, incurring a composite sample. We ended up using the Ekman tubes and it constructed a crude core extruder. We also had a problem with the number of sample bottles (we locked 2 bottles for the MS/MSD). Terrik called Chris O'Gorman to see what they wanted us to do. Chris said to fill as many bottles as we had (for the MS/MSD = 4 VOA + 1 250ml). He also told Terrik that we would have to resample some of water because of the preservative screw up. Don K was dispatched from Nyack with more bottles + preservatives. Chris O'G. also told us that we should have sampled for cyanide (we hadn't because Terrik did not have it on his list). We sampled the 3 sediment sites (TPSD-01A thru 01D, TPSD-02A thru TPSD-02D, TPSD-03A thru TPSD-03D) with no problems. DK arrived as we finished the sediment sampling and helped collect the extra water. All samples were preserved accordingly and shipped to Aquatech via Fed Ex. We then returned

LAWLER, MATUSKY & SKELLY ENGINEERS INTEROFFICE MEMO

TO	DATE	JOB NO
File	5/15/93	576-067

FROM J. Cordello RE Halfmoon Surface Water + Sediment

(cont) to Nyack and unloaded. While the preservative mixup was my fault the mixup and delay caused by the cyanide and discrete sampling could have been avoided if I had received some paperwork exploring the sampling plan (workplan or sampling protocol). I had asked Torrik for one but was told that nothing was written. Other than that the sampling went fine.

Date: 5/6/93
Crew: JAC TZ
Site: Old Hallmon
Operation: SW

LAWLER, MATUSKY & SKELLY ENGINEERS
FIELD DATA SHEET FOR SURFACE WATER/ EACHATE

Job No: 76-067

pH No: CP 203 / CP 206
Therm. No: 7706
Turbidity Meter No:
Velocity Meter No:
Cond. Meter No. OEC 560

STATION No.	SAMPLE DEPTH (ft)	TOTAL DEPTH (ft)	TIME (HHMM)	TEMP (°C)	pH	COND. (µmhos/cm)	TURB. (NTUs)	FLOW MEAS.	SAMPLE BOTTLES				COMMENTS
									SAMPLE PARAMETERS	BOT. Nos.	SAMPLE PARAMETERS	BOT. Nos.	
TP-SW-1	Surf	1.5'	1315-1320	18.7	7.6	359	45.7	—	VOC's LL PCB's Diss PCB's pH		Metals TDS, Sp Cond TSS COD		10' from shore 36.5' shore to road.
Field Blank	—	—	1410	—	—	—	—	—	VOC's Metals LL PCB's				
TPSW-02	Surf		1430-1445	20.9	7.3	386	61	—	VOC's Metals LL PCB's Diss PCB's		pH TDS, Spcnd COD TSS		MS/MSD
TPSW-03	Surf		1600 1615	20.8	7.8 7.8	282	54		VOC's LL PCB's Diss PCB's pH		Metals TDS, SpCnd TSS COD		

Date: 5/7/93
Crew: JAC, TZ, DK
Site: Hallamoon
Operation: Surface Water

LAWLER, MATUSKY & SKELLY ENGINEERS
FIELD DATA SHEET FOR SURFACE WATER/LEACHATE
Job No: 576 067

pH No: CP 206
Therm. No: 7706
Turbidity Meter No: DRT 15C
Velocity Meter No: —
Cond. Meter No. DEC 360

STATION No.	SAMPLE DEPTH (ft)	TOTAL DEPTH (ft)	TIME (HHMM)	TEMP (°C)	pH	COND. (µmhos/cm)	TURB. (NTUs)	FLOW MEAS.	SAMPLE BOTTLES				COMMENTS
									SAMPLE PARAMETERS	BOT. Nos.	SAMPLE PARAMETERS	BOT. Nos.	
TPSW 01	Surf	6"	1510	22.5	7.6	365	51.6		TDS, TSS	33926			
									COD	33937			
									CN	33941			
									Metals	33929			
TPSW 02	Surf	6"	1530	24.0	7.7	432	85		TDS, TSS	33927	Spike Dupe	33944	
									COD	33938			
									CN	33942			
									Metals	33893			
TPSW 03	Surface	6"	1525	18.0	7.9	277	54.0		TDS, TSS	33928			
									COD	33939			
									CN	33943			
									Metals	33933			

LAWLER, MATUSKY & SKELLY ENGINEERS
FIELD DATA SHEET FOR SOIL/SEDIMENT SAMPLES
Job No: 576-067

ate: 5/7/93
ew: JAC TZ
ite: Old Halfmoon

Oper: Bottom Sediments
Thermometer No:

TA. O.	TIME	SMPL DPTH	METHOD	TEXT.	CLR.	ODOR	SAMPLE BOTTLES: SAMPLE PARAMETERS	BOT. Nos.	SAMPLE PARAMETERS	BOT. Nos.	COMMENTS
SD-	0900 1130	0-24"	Modified Bolcheck				VOC's Metals Extractables				
SD	1245-1330	0-24"	Modified Bolcheck				VOC's Metals Extractables		MS/MSD VOC Metals Dupe/Spike		
SD 1	1400 1420	0-24"	Modified Bolcheck				VOC's Metals Extractables				

Crew: JAC TC
Date: 5/16,93 & 5/17/93
Job No: 576-067

LAWLER, MATUSKY & SKELLY ENGINEERS
FIELD METER CALIBRATION AND/OR CHECK
DATA SHEET

Date: 5/16 and
Oper: SW/SC
Calib. By: JAC

METER NO./ PROBE NO.	TIME	THERM NO./ TEMP. (°C)	EXPECTED VALUE		OBSERVED VALUE		ADJ TO[a]		% DIFF.[b]	COMMENTS
3/6	1220		100		100.1		100.0			
MSDEC			10		6.9		—			
RT-15C 5/17	1500		100		106		100			
			10		7.2		—			
	1225		7.0		7.3		7.0			
CP 203	↓		4.0	10.0	4.1	10.1	4.0	—		
5/6	1230		7.0		7.0		—			
	↓		4.0	10.0	3.9		4.0	—		
CP 206	1500		7.0		7.1		7.0			
3/17	↓		4.0	10.0	4.0	9.8	—	—		

r dissolved oxygen and pH meter calibrations, record adjustments (include % and ppm readings for dissolved ygen meter calibration).

clude % Diff. calculation for conductivity calibration checks: % Diff = $\frac{Ex - Ob}{\quad}$ X 100

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 1 of

Client: LMS Eng.
Address: 1 Blue Hill Plaza
Pearl River N.Y
Comments:

Project Name: Tar Pit Road Landfill
Project No.: 576-067
Quote No.:
Collection Date: 5/7/93

Sampler(s): (Signature) T. Janicek

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
	0900-1130	X		Sed.	TPSW-3A 0-6"	2	40ml	TCL VOC
	↓	↓	↓	↓	↓	1	250ml	LL PCB / Extractable
	↓	↓	↓	↓	↓	1	250ml	Metals
	↓	↓	↓	↓	TPSW-3B 6-12"	2	40ml	TCL VOC
	↓	↓	↓	↓	↓	1	250ml	LL PCB / Extractable
	↓	↓	↓	↓	↓	1	250ml	TCL Metals
	↓	↓	↓	↓	TPSW-3C 12-18"	2	40ml	TCL VOC
	↓	↓	↓	↓	↓	1	250ml	LL PCB / Extractable
	↓	↓	↓	↓	↓	1	250ml	TCL Metals
	↓	↓	↓	↓	TPSW-3D 18-24"	2	40ml	TCL VOC
	↓	↓	↓	↓	↓	1	250ml	LL PCB / Extractable
	↓	↓	↓	↓	↓	1	250ml	TCL Metals

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
Tarik Janicek	LMS	5/7/93 1545			

Created July '88, Revised 9/92

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 3 of ____

Client: LMS Engr.

Address: 1 Blue Hill Plaza
Pearl River NY

Comments:

Project Name: Tow Path Road Landfill

Project No.: 376 - 067

Quote No.:

Collection Date: 5/7/92

Sampler(s): (Signature) T. Barrett

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
	1245 - 1330	Y		Sed.	TPSW - 2D 18-24"	1	250 ml	TCL Metals
	1100 - 1120	Y		Sed	TPSW - 1A 0-6"	2	40 ml	TCL VOC
	↓	↓		↓	↓	1	250 ml	LL PCB / Extractables
					↓	1	250 ml	TCL Metals
					TPSW - 1B 6-12"	2	40 ml	TCL VOC
					↓	1	250 ml	LL PCB / Extractables
					↓	1	250 ml	TCL Metals
					TPSW - 1C 12-18"	2	40 ml	TCL VOC
					↓	1	250 ml	LL PCB / Extractables
					↓	1	250 ml	TCL Metals
					TPSW - 1D 18-21"	2	40 ml	TCL VOC
					↓	1	250 ml	LL PCB / Extractables
	↓	↓		↓	↓	1	250 ml	TCL Metals

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
Tarik Barrett	LMS	5/7/92 1545			

Created July '88, Revised 9/92

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 2 of ____

Client: LMS Engr.
Address: 1 Blue Hill Plaza
Pearl River NY
Comments:

Project Name: Tom Path Road Landfill
Project No.: 376-067
Quote No.:
Collection Date: 5/7/93

Sampler(s): (Signature) [signature]

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
	1245-1320	X		Sed	TPSD - 2A 0-6"	2	40ml	TCL VOC
						1	250ml	LL PCB / Extractables
						1	250ml	TCL Metals
					Duplicate	4	40ml	TCL VOC
						1	250ml	~~LL PCB / Extractables~~ TCL Metals
					TPSD - 2B 6-12"	2	40ml	TCL VOC
						1	250ml	LL PCB / Extractables
						1	250ml	TCL Metals
					TPSD - 2C 12-18"	2	40ml	TCL VOC
						1	250ml	LL PCB / Extractables
						1	250ml	TCL Metals
					TPSD - 2D 18-24"	2	40ml	TCL VOC
						1	250ml	LL PCB / Extractables

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
Tarik Jerrick	LMS	5/7/93 / 15:45			

Created July '88, Revised 9/92

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 1 of 1

Client: Luis Eng.
Address: 1 Blue Hill Plaza
Pearl River N.Y.
Comments:

Project Name: Tow Path Road Landfill
Project No.: 576-067
Quote No.:
Collection Date: 5/7/93

Sampler(s): (Signature)

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
3926	1510		Y	Water	TPSW - 01	1	2L Plastic	TSS, TDS
3937						1	500ml	COD
3941						1	1L	CN
3974						1	1L	TCL Metals
3927	1530				TPSW - 02	1	2L	TSS TDS
3938						1	500ml	COD
33942						1	1L	CN
33893						1	1L	TCL Metals
33944					Strike/Dupe	1	1L	TCL Metals
3928	1525				TPSW - 03	1	2L.	TSS TDS
3934						1	500ml	COD
3943						1	1L	CN
3933			V	V	V	1	1L	TCL Metals

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
Tarik Zaccak	LMS	5/7/93 1545			

Created July '88, Revised 9/92

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 1 of 2

Client: LMS Eng.
Address: 1 Blue Hill Plaza
Pearl River NY
Comments: Received to VOC only.
No acids added.

Project Name: Tuthill Road
Project No.: 576-067
Quote No.:
Collection Date: 5/6/93

Sampler(s): (Signature)

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
			X	A	Trip Blank	2	40 ml	TCL VOC
	1110				Field Blank	2	40 ml	TCL VOC
	↓				↓	1	2L Amber	Low Level PCB
	↓				↓	1	1L Plastic	~~Metals~~ TCL Metals
	1115				TPSW-01	2	40 ml	TCL VOC
	1120					1	2L Amber	Low Level PCB
	↓					1	2L Amber	Low Level Diss. PCB
						1	500ml Amber	Oil
						1	1L Plastic	TCL Metals
						1	1L Plastic	TDS Specific Cond.
						1	1L Plastic	TSS
	↓		↓	↓	↓	1	1L Plastic	COD

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
	LMS	5/6/93 1700			

Created July '88, Revised 9/92

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 2 of 2

Client: LMS Eng.
Address: 1 Blue Hill Place
Pearl River NY
Comments: Only preserved samples to 4°C. No tests deleted!

Project Name: Tonetta Road Landfill
Project No.: 576-067
Quote No.:
Collection Date: 5/6/93

Sampler(s): (Signature)

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
	1430-1445		X	A	TPSW-02	2	40ml	TCL VOC
						1	2L Amber	Low Level PCB
						1	↓	Low Level Diss. PCB
						1	500ml Amber	pH
						1	1L Plastic	TCL Metals
						1		TDS, Specific Cond.
						1		TSS
						1	↓	COD
					MS/MSD/MSB	4	40ml	TCL VOC
						2	2L Amber	Low Level PCB's
					Dupe/Spikes	2	1L Plastic	TCL Metals

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
	LMS	5/6/93 1700			

Created July '88, Revised 9/92

Aquatec, Inc.
55 South Park Drive
Colchester, VT 05446
(802) 655-1203

CHAIN OF CUSTODY RECORD

F - 0058

Page 3 of 3

Client: LMS Eng.
Address: 1 Blue Hill Plaza
Pearl River NY
Comments: Samples preserved to pH<2 only. NO acid added.

Project Name: Town Hill Road Landfill
Project No.: 576-067
Quote No.:
Collection Date: 5/6/93

Sampler(s): (Signature)

Sample Number	Collection Time	Comp.	Grab	Matrix	Sample Description	Containers No.	Type/Size	Analysis/Remarks
	1600 - 1615		X	A	TPSW-03	2	40 ml	TCL VOC
	↓		↓	↓	↓	1	2L Amber	Low Level PCB's
						1	2L Amber	Low Level Diss PCB's
						1	500ml HT	HH
						1	1L Plastic	TCL Metals
						↓	↓	TDS, Specific Cond.
								TSS
	↓		↓	↓	↓	↓	↓	COD

Signature	Company	Date/Time Relinquished	Signature	Company	Date/Time Relinquished
[signature]	LMS	5/6/93 1700			

Created July '88, Revised 9/92

REFERENCE No. 3

APPENDIX A

Facility:
Date: 5/24
Calib. By:
Calib. Gas:

LAWLER, MATUSKY & SKELLY ENGINEERS
H.NU METER FIELD CALIBRATION
DATA SHEET

Job No: 576-067
Site: HALFMOON
Crew:
Oper:

DATE/TIME	METER No.	BATT. CHECK	EXPECTED ZERO	EXPECTED CALIB. GAS (ppm)	OBSERVED ZERO	OBSERVED CALIB. GAS (ppm)	SPAN ADJ. (from -- -- to)	COMMENTS
5/24 1350	NYSDEC 801446	✓	0	54		54 → 8.8	10.2 → 8.8	
5/25 0900	↓	✓	.2	54		54 → 8.10	8.8 → 8.10	
525 0840	Micro Tip	✓		54		55.7		MICROTIP PA 920162
5/26 0936	HNU 801446	✓	2	54		66	2 → 8.10 → 9.3	
5/27 1005	↓	✓	.2	54		53		

On-Site Health & Safety Officer and/or Crew Chief:

(Signature):

(Date):

Facility: _____
Date: 5/24
Calib. By: _____
Calib. Gas: _____

LAWLER, MATUSKY & SKELLY ENGINEERS
OVA METER FIELD CALIBRATION
DATA SHEET

Job No: 576-067
Site: HALFMOON
Crew: T2, DIT
Oper: SOIL GAS

			EXPECTED		OBSERVED			
DATE/TIME	METER No.	BATT. CHECK	ZERO	CALIB. GAS (ppm)	ZERO	CALIB. GAS (ppm)	SPAN ADJ. (from -- -- to)	COMMENTS
24	NYSDEC 40857	OK	0	95	1	100	9.5 3.3	
5/25 0832	↓	OK	0	95	2	100	95 3.2	
5/26 0935		OK	0	95	1	96		
5/27 1015	↓	OK	0	95	1	97		

On-Site Health & Safety Officer and/or Crew Chief:

(Signature): _____

(Date): _____

Facility: NYSEG
Date: 5/24-27/91
Calib. By: _____
Calib. Gas: _____

LAWLER, MATUSKY & SKELLY ENGINEERS
EXPLOSIMETER FIELD CALIBRATION
DATA SHEET

Job No.: 576-067
Site: HALFMOON
Crew: TZ, MM
Oper: 50:1 GAS

DATE/TIME		METER No.	BATT. CHECK	EXPECTED		OBSERVED		AJD.		COMMENTS AND/OR MAINTENANCE
				ZERO	CALIB. GAS (ppm)	ZERO	CALIB. GAS (ppm)	COMB	02	
5/24	1400	2365	✓		LEL 50%		50%			O2 14.9
↓	↓	↓			H2S 10		7			
5/25	0805		✓		LEL 50%		49%			O2 14.5
↓	↓				H2S 10		7			
5/26	0925		✓		LEL 50%		49%			O2 14.8
↓		↓			H2S 10		6			
5/27	1010		✓		LEL 50%		49%			
↓	↓	↓			H2S K		6			O2 14.4

On-Site Health & Safety Officer and/or Crew Chief:

(Signature)_____

(Date)_____

Job No: 576-067
Site: HALF MOON
Oper: SOIL GAS
Crew: T2, DIT
TOW PATH RD

LAWLER, MATUSKY & SKELLY ENGINEERS
DAILY HEALTH & SAFETY REPORT
DATA SHEET

MICROTIP PA 920167
H.Nu Meter: 801446
OVA Meter: 40857
Explosimeter: 22365
Date: 5/24-25/97

TIME	SAMPLE LOCATION	H.NU READING	EXPLOSIMETER READING LFL	H2S	O2	OVA READING	COMMENTS
5/24/97 1419	002	0	0	0	-	0	0
1427	001	0	1	0	-	—	5.6-5.8
1446	003	0	2%	0	19.3	—	0
1514	004	0	3%	0	19.3	—	0
1542	005	.4	5%	0	58	—	0
1615	006	1.4	4%	0	7.7	—	N/A
1652	008	3.2	0	0	19.8	—	
1725	007	.8	0	0	19.3	—	
1800	009	.1	0	0	19.1	—	
1834	010	.2	0	0	192	—	
5/25/97 0931	011	0	—	—	-	0	1.1
1004	012	2.1	0	0	19.4	0	0
1036	013	2.0	0	0	19.2	0	N/A
1144	014	1.8	0	0	18.3	0	
1229	015	Neg. Der.	1%	0	18.5	0	
1302	016	0	1%	0	17.4	0	
1358	017	0	10%	0	17.2	000	
1452	018	0	0	0	16.5	0	
1523	019	0	0	0	19.0	—	
1554	020	.2	0	0	17.1	—	

On-Site Health & Safety Officer and/or Crew Chief:

(Signature) _____

(Date) _____

2 OF

Job No: 576-067
Site: HALFMOON
Oper: SOIL GAS - TOWPATH RD
Crew: T2, DM

LAWLER, MATUSKY & SKELLY ENGINEERS
DAILY HEALTH & SAFETY REPORT
DATA SHEET

H.Nu Meter: 80/446
OVA Meter: 40853
Explosimeter: 22765
Date: 5/25-26

LEL 1.25 O2 AT

	TIME	SAMPLE LOCATION	H.NU READING	EXPLOSIMETER READING			OVA READING	COMMENTS
5/25/97	1655	023	0-2	0	0	19.5	0	
	1742	022	0	0	0	-	0	
	1758	021	0	1%	0	18.5	3.2	
	1855	024	0	0	0	19.6	0	
5/26/97	1030	025	3.2	0	0	19.2	0	
	1057	028	3.2	0	0	19.7	0	
	1130	029	3.6	0	0	18.8	0	
	1202	030	1.4	0	0	19.1	0	
	1232	031	0.6	0	0	9.4	8.8	
	1303	032	1.5	0	0	19.6	0	
	1411	033	0	0	0	19.3	NEG DEF	
	1441	034	0.2	0	0	19.5	0	
	1518	026	0	0	0	17.4	0	OVA
	1549	027	0	0	0	19.4	N/A	ON CHARGE
	1737	039	.4	0	0	18.7	0	
	1740	038	.4	0	0	19.4	0	
	1826	040	.2	0	0	19.6	0	
5/27/97	1056	045	0	0	0	19.0	0	
	1057	046	0.5	0	0	19.7	0	
	1100	047	0.4	0	0	19.6	0	

On-Site Health & Safety Officer and/or Crew Chief:

(Signature) _____

(Date) _____

Job No: 576-067
Site: HALFMOON
Oper: SOIL GAS TOW PATH RD
Crew: TJ, DK

LAWLER, MATUSKY & SKELLY ENGINEERS
DAILY HEALTH & SAFETY REPORT
DATA SHEET

H.Nu Meter: 801446
OVA Meter: 40533
Explosimeter: 22365
Date: 5/27

TIME	SAMPLE LOCATION	H.NU READING	EXPLOSIMETER READING LEL	EXPLOSIMETER READING H2S	EXPLOSIMETER READING O2	OVA READING	COMMENTS
1126	044	4.1	0	0	19.7	0	
1154	043	2.0	0	0	18.5	.2	
1226	042	.2	0	0	17.7	0	
1300	041	4.4	0	0	19.4	0	
1410	048	5	0	0	17.4	NEG DPF	

On-Site Health & Safety Officer and/or Crew Chief:

(Signature) _____

(Date) _____

TETRA · K TESTING

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTN: ED MAIKISH

WORK ID: NYSDEC/TOWPATH ROAD LANDFILL

WORK ORDER: 93-06-287

Authorized Signature:

Stephen L. Knollmeyer 6/23
Stephen L. Knollmeyer
Mobile Laboratory Supervisor

WESTFIELD EXECUTIVE PARK
53 SOUTHAMPTON ROAD
WESTFIELD, MA 01085
TEL. 413-562-9193
FAX. 413-562-5317

Received: 06/11/93 06/23/93 13:56:16

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTEN: ED MAIKISH

CLIENT: LMS H693 SAMPLES: 14
COMPANY: LMS ENGINEERS
FACILITY:
PEARL RIVER, NY

WORK ID: NYSDEC/TOWPATH ROAD LANDFILL
TAKEN: 05/26/93
TRANS: CLIENT
TYPE: AIR
P.O. #:
INVOICE: under separate cover

PREPARED BY: Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085

ATTEN: Peter A. Law
PHONE: (413) 572-3200

SLK 6/23
CERTIFIED BY

CONTACT: CLIENT

	SAMPLE IDENTIFICATION
01	TPSG-25
02	TPSG-28
03	TPSG-29
04	TPSG-30
05	TPSG-31
06	TPSG-32
07	TPSG-33
08	TPSG-34
09	TPSG-26
10	TPSG-27
11	TPSG-35
12	TPSG-38
13	TPSG-39
14	TPSG-40

TEST CODES and NAMES used on this workorder

SOILGS SOIL GAS BY GC - TETRA K

Received: 06/11/93 Results by Sample

SAMPLE ID TPSG-25 FRACTION 01A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 10:24:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-26 FRACTION 09A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 15:20:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

Received: 06/11/93 Results by Sample

SAMPLE ID TPSG-27 FRACTION 10A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 15:51:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-28 FRACTION 02A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 10:59:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

Received: 06/11/93 Results by Sample

SAMPLE ID TPSG-29 FRACTION 03A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 11:32:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-30 FRACTION 04A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 12:05:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-31 FRACTION 05A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 12:34:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-32 FRACTION 06A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 13:05:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

ceived: 06/11/93 Results by Sample

SAMPLE ID IPSG-33 FRACTION 07A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 14:13:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-34 FRACTION 08A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 14:43:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-35 FRACTION 11A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 16:25:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-38 FRACTION 12A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 17:02:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

ceived: 06/11/93 Results by Sample

SAMPLE ID TPSG-39 FRACTION 13A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 17:38:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID IPSG-40 FRACTION 14A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/26/93 18:12:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/26/93 FILE # 052693 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K

TETRA · K TESTING

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTN: ED MAIKISH

WORK ID: NYSDEC/TOWPATH ROAD LANDFILL

WORK ORDER: 93-06-288

Authorized Signature:

Stephen L. Knollmeyer 6/23
Stephen L. Knollmeyer
Mobile Laboratory Supervisor

A DIVISION OF TIGHE & BOND, INC.

WESTFIELD EXECUTIVE PARK
53 SOUTHAMPTON ROAD
WESTFIELD, MA 01085
TEL. 413-562-9193
FAX. 413-562-5317

 Tighe & Bond REPORT Work Order # 93-06-288

Received: 06/11/93 06/23/93 13:56:01

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTEN: ED MAIKISH

CLIENT: LMS H693 SAMPLES: 8
COMPANY: LMS ENGINEERS
FACILITY:
PEARL RIVER, NY

WORK ID: NYSDEC/TOWPATH ROAD LANDFILL
TAKEN: 05/27/93
TRANS: CLIENT
TYPE: AIR
P.O. #:
INVOICE: under separate cover

PREPARED BY: Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085

ATTEN: Peter A. Law
PHONE: (413) 572-3200

SAL 6/23
CERTIFIED BY

CONTACT: CLIENT

SAMPLE IDENTIFICATION

01 TPSG-47
02 TPSG-46
03 TPSG-45
04 TPSG-44
05 TPSG-43
06 TPSG-42
07 TPSG-41
08 TPSG-48

TEST CODES and NAMES used on this workorder

SOILGS SOIL GAS BY GC - TETRA K

SAMPLE ID TPSG-41 FRACTION 07A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 13:00:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-42 FRACTION 06A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 12:27:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

Received: 06/11/93 Results by Sample

SAMPLE ID TPSG-43 FRACTION 05A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 11:54:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-44 FRACTION 04A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 11:23:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

Received: 06/11/93 Results by Sample

SAMPLE ID TPSG-45 FRACTION 03A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 10:51:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID IPSG-46 FRACTION 02A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 10:21:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

Received: 06/11/93 Results by Sample

SAMPLE ID TPSG-47 FRACTION 01A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 09:48:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS

Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-48 FRACTION 08A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/27/93 14:10:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/27/93 FILE # 052793 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K

TETRA · K TESTING

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTN: ED MAIKISH

WORK ID: NYSDEC/TOWPATH ROAD LF

WORK ORDER: 93-06-271

Authorized Signature:

Stephen L. Knollmeyer 6/18
Stephen L. Knollmeyer
Mobile Laboratory Supervisor

WESTFIELD EXECUTIVE PARK
53 SOUTHAMPTON ROAD
WESTFIELD, MA 01085
TEL. 413-562-9193
FAX. 413-562-5317

Received: 06/10/93 06/11/93 15:02:54

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTEN: ED MAIKISH

CLIENT: LMS H693 SAMPLES: 14
COMPANY: LMS ENGINEERS
FACILITY:
PEARL RIVER, NY

WORK ID: NYSDEC/TOWPATH ROAD LF
TAKEN: 05/25/93
TRANS: CLIENT
TYPE: AIR
P.O. #:
INVOICE: under separate cover

PREPARED BY: Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085

ATTEN: Peter A. Law
PHONE: (413) 572-3200

CERTIFIED BY

CONTACT: MAIKISH

SAMPLE IDENTIFICATION

01 TPSG-11
02 TPSG-12
03 TPSG-13
04 TPSG-14
05 TPSG-15
06 TPSG-16
07 TPSG-17
08 TPSG-18
09 TPSG-19
10 TPSG-20
11 TPSG-23
12 TPSG-22
13 TPSG-21
14 TPSG-24

TEST CODES and NAMES used on this workorder

SOILGS SOIL GAS BY GC - TETRA K

SAMPLE ID TPSG-11 FRACTION 01A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 09:36:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-12 FRACTION 02A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 10:06:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-13 FRACTION 03A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 10:38:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-14 FRACTION 04A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 11:46:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-15 FRACTION 05A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 12:31:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-16 FRACTION 06A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 13:04:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-17 FRACTION 07A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 13:40:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-18 FRACTION 08A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA
Date & Time Collected 05/25/93 14:54:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-19 FRACTION 09A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 15:25:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-20 FRACTION 10A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 15:56:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-23 FRACTION 11A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 16:57:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-22 FRACTION 12A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 17:44:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-21 FRACTION 13A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 18:00:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-24 FRACTION 14A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/25/93 18:56:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/25/93 FILE # 052593 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K

TETRA · K TESTING

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTN: ED MAIKISH

WORK ID: NYSDEC/TOWPATH ROAD LF

WORK ORDER: 93-06-270

Authorized Signature:

6/18

Stephen L. Knollmeyer
Mobile Laboratory Supervisor

WESTFIELD EXECUTIVE PARK
53 SOUTHAMPTON ROAD
WESTFIELD, MA 01085
TEL. 413-562-9193
FAX. 413-562-5317

Received: 06/10/93 06/11/93 15:02:27

REPORT TO: LMS ENGINEERS
ONE BLUE HILL PLAZA
PEARL RIVER, NY 10965 H693

ATTEN: ED MAIKISH

CLIENT: LMS H693 SAMPLES 10
COMPANY: LMS ENGINEERS
FACILITY:
PEARL RIVER, NY

WORK ID: NYSDEC/TOWPATH ROAD LF
TAKEN: 05/24/93
TRANS: CLIENT
TYPE: AIR
P.O. #:
INVOICE: under separate cover

PREPARED BY: Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085

ATTEN: Peter A. Law
PHONE: (413) 572-3200

CERTIFIED BY

CONTACT: MAIKISH

SAMPLE IDENTIFICATION

01 TPSG-01
02 TPSG-02
03 TPSG-03
04 TPSG-04
05 PTSG-05
06 TPSG-06
07 TPSG-08
08 TPSG-07
09 TPSG-09
10 TPSG-10

TEST CODES and NAMES used on this workorder

SOILGS SOIL GAS BY GC - TETRA K

SAMPLE ID TPSG-01 FRACTION 01A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 13:41:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-02 FRACTION 02A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA
Date & Time Collected 05/24/93 14:19:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-03 FRACTION 03A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 14:48:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-04 FRACTION 04A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 15:16:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TC
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID PTSG-05 FRACTION 05A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 15:46:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-06 FRACTION 06A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA
Date & Time Collected 05/24/93 16:18:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TC
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

Received: 06/10/93 Results by Sample

SAMPLE ID TPSG-08 FRACTION 07A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 16:53:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-07 FRACTION 08A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 17:26:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

ND = Not detected
NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
* = o-Xylene, m-Xylene, and p-Xylene are reported as total Xylenes

SAMPLE ID TPSG-09 FRACTION 09A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 18:02:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

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B = Analyte detected in the laboratory blank
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SAMPLE ID TPSG-10 FRACTION 10A TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K
Date & Time Collected 05/24/93 18:35:00 Category AIR

TETRA K DIVISION

ANALYST TJS DATE ANALYZED 05/24/93 FILE # 052493 VERIFIED BY TCF
INSTRUMENT MOBILE LABORATORY INJ VOL 5

SOIL GAS
Gas Chromatography for Volatile Organics

CAS #	COMPOUND	RESULT	DETECTION LIMIT
67-64-1	Acetone	ND	200
71-43-2	Benzene	ND	200
78-93-3	2-Butanone	ND	200
56-23-5	Carbon tetrachloride	ND	10
108-90-7	Chlorobenzene	ND	200
67-66-3	Chloroform	ND	10
75-34-3	1,1-Dichloroethane	ND	50
107-06-2	1,2-Dichloroethane	ND	50
75-35-4	1,1-Dichloroethene	ND	50
	1,2-Dichloroethene c/t	ND	50
100-41-4	Ethylbenzene	ND	200
591-78-6	2-Hexanone	ND	200
75-09-2	Methylene chloride	ND	50
108-10-1	4-Methyl-2-pentanone	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	50
127-18-4	Tetrachloroethene	ND	10
108-88-3	Toluene	ND	200
71-55-6	1,1,1-Trichloroethane	ND	10
79-00-5	1,1,2-Trichloroethane	ND	10
79-01-6	Trichloroethene	ND	10
75-01-4	Vinyl Chloride	ND	50
1330-20-7	Total Xylenes	ND	200

All results reported in micrograms per cubic meter (ug/m3).

NOTES AND DEFINITIONS FOR THIS REPORT

Analyses were conducted in a mobile laboratory using an HNU Model 421 Gas Chromatograph with FID, PID and ECD detectors. Soil gas samples collected in the field were injected into the GC using a gas-tight syringe. The results were calculated using the external standard method.

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NA = Not analyzed
BQL = Compound detected below minimum quantitation limit
B = Analyte detected in the laboratory blank
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TEST CODE SOILGS NAME SOIL GAS BY GC - TETRA K

REFERENCE No. 4

APPENDIX A

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

Dear Interested Party:

Enclosed is an information package on the Tow Path Road Landfill prepared by the Departments of Health and Environmental Conservation. The package provides an overview of the completed Phase II investigation. As you may have seen in the newspaper recently. additional work at the landfill has been scheduled. The enclosed information package will give you an idea of what work is planned at the landfill. We encourage you to read through the package and hope that the information will answer many of your questions.

An availability session to discuss the landfill has been scheduled for April 7, 1993 at the Town Hall from 6:00 to 9:00. DEC and DOH staff will be available to meet with you individually or in small groups. There will be no presentation. This session is being held to provide an opportunity for members of the community, and others, to discuss concerns, ask questions, and learn more about the landfill and the ongoing investigation. Please feel free to stop in any time between 6:00 and 9:00. We hope that not everyone will stop in at the same time so that we may provide you with more individual discussion and response. We have found that availability sessions often provide an opportunity for individual and small group discussions, this allows everyone who attends to get involved.

We look forward to seeing you at the Town Hall on April 7, however if you are unable to attend and would like to discuss the information presented in the enclosed package or have any questions regarding the Tow Path Road Landfill, please feel free to call me or one of the other contact people listed in the package.

Sincerely,

Daniel J. Eaton

Daniel J. Eaton
Engineering Geologist
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation

TOW PATH ROAD LANDFILL, 546013

MARCH 1993 INFO PACKAGE

The Phase II Investigation Report is printed and is available for review at the Halfmoon Town Hall, the Shenendowa Public Library, and at the 50 Wolf Road offices of the Department of Environmental Conservation. The findings in the report are as follows:

Work done to date:

- Review of Town, DEC, and DOH documents, and information was gathered from residents and former employees of the landfill. Sampling of: the surface water and sediment in the Mohawk River, leachate discharging from the canal to the river, wastes from within the landfill, soil vapor in the landfill, soil along the surface of the landfill, residential water supplies in the area. All of these samples were tested for compounds and properties associated with hazardous waste disposal.

What we know so far:

- Hazardous wastes were disposed of in the landfill.
  The predominant hazardous waste found in the landfill was Toluene. Low levels of various contaminants were found but have not been confirmed to be the result of the disposal of hazardous waste.

- None of the homeowner water wells tested have been impacted.
  To date the results for a number of homeowner wells along the landfill have been completed. In addition, since February 10 more homes in the area have been sampled by the Department of Health. These analyses are not completed yet. Once the results are in, the individual homeowners will be notified.

- The measured impacts to the river due to hazardous waste are small.
  The levels of contaminants in the leachate, surface water, and sediments in the Mohawk River have been low.

- More information is needed to reach a final determination on the status of the landfill on the Registry of Inactive Hazardous Waste Sites (in relation to the State Superfund).

TOW PATH ROAD LANDFILL, 546013

MARCH 1993 INFO PACKAGE

In order to obtain the information needed, the Departments of Health and Environmental Conservation are planning to do additional work. The work planned includes the following:

The Department of Environmental Conservation will assign Lawler, Matusky, & Skelly Engineers to conduct the following work:

- Install piezometers to determine the horizontal and vertical direction of movement in the groundwater. Piezometers are small diameter wells used to measure the depth to groundwater at any given location.

- Conduct topographic and boundary surveys of the landfill and river area.

- Conduct an additional soil gas survey in the area of a few homes identified by the Department of Health. DOH requested this additional survey because there was insufficient information to determine if there is a route of migration to the houses from the landfill. Individual homeowners will be contacted before any work begins.

  A soil gas survey tests for compounds present in the air spaces in the soil. The test involves insertion of a tube into the ground, then pumping air out to be tested. Most of the soil gas testing conducted during the completed investigation was within the boundaries of the canal.

- Sample the sediments and the surface water in the bay area between Beach Road and Clam Steam Road to gather additional information on the potential impact to the river and the aquatic organisms that live there.

- Investigate and possibly sample recently identified areas, such as the drums identified by residents at the February 10, 1993 public meeting.

- Remove and dispose of the four drums of hazardous wastes discovered during the completed test pit operations.

TOW PATH ROAD LANDFILL, 546013

MARCH 1993 INFO PACKAGE

The Department of Health will be conducting the following work:

Private Well Testing; the New York State Department of Health (NYSDOH) is conducting a private water supply survey and sampling program in the vicinity of the Tow Path Road landfill.

- o The NYSDOH expects to have sampled all the interested permanent residences in the area by April 15, 1993.
- o Seasonal residences will be sampled in June and July of this year.
- o All the homes initially sampled by July 31, 1993, will be resampled to adequately evaluate the groundwater quality in the area.
- o A private water supply data questionnaire is enclosed. If you have NOT already submitted a questionnaire, please complete the enclosed questionnaire and return it to Susan VanPatten, NYSDOH, 2 University Place, Room 240, Albany, NY 12203. If you have any questions, please call Ms. VanPatten at 458-6402.

Indoor Air Sampling; During the Phase II investigation several environmental tests were done to look for contaminants that may have been dumped in the landfill. This testing included a soil gas survey. Elevated soil gas levels were found at several locations. To determine if contaminants from the landfill are impacting the indoor air quality of homes within the boundaries of the landfill, the following steps will be taken:

- o The NYSDOH will conduct indoor air sampling in homes along Tow Path Road that are built on the landfill and one home located adjacent to the landfill. The NYSDOH will sample the air in the basements, living space and outside these homes. These homes are called study homes. The individual homeowners will be contacted before any indoor air sampling is conducted.
- o Samples will also be collected from control homes. Control homes are homes that are similar to the study homes but are located outside the Tow Path Toad neighborhood. Results from the study homes will be compared to the results from the control homes to determine if the landfill is impacting the study homes.
- o The information collected during the soil gas survey will also be used to evaluate the potential for indoor air quality to be impacted in the homes from the landfill. Based on the results of the additional soil gas testing, the NYSDOH will sample homes where significant soil gas contamination is found between the landfill and the home.

TOW PATH ROAD LANDFILL, 546013

MARCH 1993 INFO PACKAGE

A number of health questions were raised at the February 10, 1993 public meeting. All meeting attendees were given the opportunity to speak directly with a NYSDOH epidemiologist or write their questions or concerns on a NYSDOH form provided at the meeting.

- Eleven people contacted NYSDOH directly or in writing. Most of the people with concerns have been contacted by phone.

- If anyone has a health concern he/she feels is related to the landfill and would like to discuss their concern with NYSDOH staff, please contact Mary Fox of the NYSDOH at 458-6212.

- At the request of the local citizens, the NYSDOH is conducting a cancer cluster investigation in the vicinity of the Tow Path Road landfill. The first step of the cancer cluster investigation involves getting information from family and friends about cancer cases in the Tow Path Road landfill area. To make this investigation as complete as possible, anyone with information about area residents who have or had cancer should contact Mary Fox at 458-6212. By law, all cases of cancer diagnosed in residents of New York State must be reported to the New York State Cancer Registry. The NYSDOH will verify the cancer diagnoses with the Cancer Registry and determine if any unusual patterns are present.

- **All health related information will be kept confidential.**

Contacts:

DEC, Daniel Eaton, 50 Wolf Road, Albany, NY (518) 457-0639

DOH, Greg Rys, 2 University Place, Albany, NY (518) 458-6306
Susan VanPatten, 2 University Place, Albany NY (518) 458-6402

PRIVATE WATER SUPPLY QUESTIONNAIRE
Old Halfmoon Landfill
Halfmoon, Saratoga County

IDENTIFICATION

Name:_____

Street Address:_____

Mailing Address:_____

_____

Owner Occupied_____ Rental Property_____ Seasonal_____

Telephone (Home) (_____)_____ (Work) (_____)_____

WATER SUPPLY INFORMATION

Well Type: Drilled_____ Driven_____ Dug_____
(Please indicate well depth)

Type of Pump: Submersible_____ Jet_____

Age of (Well)_____ (Pump)_____

Water Quality Comments: (taste, odor, color, previous sampling)_____

_____

_____

_____

PROPERTY USE

Are any of the following on the property?

Fuel Oil Tank_____ Gasoline Tank_____

Fertilizer/Pesticide/Herbicide Storage_____

Private Business; type?_____

_____

_____

PLEASE INDICATE APPROXIMATE LOCATION OF YOUR HOME ON THE MAP ON REVERSE SIDE

(30390144) 2/93

REFERENCE No. 1

APPENDIX B

PART ii.III

DATA VALIDATION REPORT

The following data validation report details the analyses conducted on surface water and sediment samples collected from the Tow Path Road site (NYSDEC I.D. No. 546013). The samples were analyzed by Aquatec Inc. (Aquatec) for full target compound list (TCL), target analyte list (TAL) metals and cyanide. The case narratives submitted with the data packages prepared by Aquatec discuss sample handling, any analytical problems that were encountered, and corrective actions that were taken.

Data Validation Services determined that all the analyses were in compliance with NYSDEC December 1991 Analytical Services Protocol (ASP). The validator noted that the data package did not include internal chain-of-custody documents. This minor data package noncompliance did not affect the reported results because all the necessary support documentation was provided. Other issues affecting data usability were addressed and affected data have been appropriately qualified.

LMS reviewed Data Validation Service's report, laboratory case narratives, field notes, and any other pertinent information in determining whether the reported data met the data quality objectives for this investigation. The results of that review are presented in the Data Usability Summary (Appendix B).

DATA USABILITY SUMMARY

TOW PATH ROAD

The report from Data Validation Services concluded that all the analyses performed on the surface water and sediment samples were in compliance with NYSDEC ASP (December 1991). The validator noted that internal chain-of-custody forms were not included in the data package. This minor noncompliance does not affect the reported results as all the support documentation (sample handling forms, sample preparation logs, extraction logs, etc.) were included. Issues not related with compliance but affecting data usability are discussed and summarized below.

All the acetone detections reported in the medium-level volatile sediment analyses were also reported at similar levels in the associated method blank; the reported concentrations should not be regarded as sample components as they are likely laboratory contaminants.

The volatile surrogate recovery for 1,2-dichloroethane-d4 recovered just above the required limit (121%) at 143%, and the matrix spike compound 1,1-dichloroethene recovered near the upper recommended limit (172%) at 154% and 164% in the sediment MS and MSD, respectively, possibly due to the depressed recovery (48%) of the internal standard bromochloromethane. However, there was only one volatile compound reported in the sediment samples that have GC retention times near the surrogate and spiking compounds, 2-butanone (methyl ethyl ketone), which was reported in TPSD1A, TPSD2A, TPSD2C, and TPSD2D. These results are likely biased high due to the elevated surrogate and spike recoveries. However, the low-level concentrations ranged from 12 ug/kg to 31 ug/kg, and were generally qualified as "estimated below the quantitation limit", and therefore the reported detections will not require further qualification and are usable as reported.

All the aqueous volatile matrix spike compounds recovered within the recommended limit. However, the difference between the MS and MSD produced relative percent difference (RPD) values for benzene (14 RPD), toluene (14 RPD), and chlorobenzene (16 RPD) outside the recommended limits of 11, 13, and 13, respectively. The MS/MSD for 1,1-dichloroethene and

trichloroethene produced RPD values at the recommended limit of 14 for each. As the RPDs were just above the recommended limit, and as the matrix spike recoveries were generally in the 90% range, no significant interferences are apparent that may have obscured target analyte identification or quantitation. Since no target VOCs were reported in any of the aqueous samples, no qualification of the data will be required.

A TIC (trimethyl borate) was reported in the field blank at 5 ug/l, but was qualified by the laboratory as also being detected in the associated method blank, and therefore should not be considered an environmental contaminant.

Several sediment samples had pesticides reported that were qualified by the laboratory with an "x", indicating that Aroclors were contributing to the pesticide chromatogram peaks. Therefore, the pesticides were likely reported with a higher concentration than actually present. Most of the pesticides that have been qualified with an "x" also had a resolution difference greater than 25% between the initial and confirmatory GC columns; these results have been qualified by the laboratory with a "p" qualification. As a result of the resolution and Aroclor co-elution difficulties, pesticide results with an "x" qualifier have been expanded to emphasize that the reported concentrations are highly estimated.

The majority of the sediment pesticide surrogates recovered within the advisory limits. However, four recoveries of tetrachloro-m-xylene (TCX), ranging between 38% to 59%, and two recoveries of decachlorobiphenyl (DCB), ranging between 44% and 46%, were reported just below the lower advisory limit of 60%. All the MS recoveries were within the recommended limits. The MSD recoveries were lower than the MS recoveries, and two recoveries, gamma-BHC (recovered at 37%) and aldrin (recovered at 33%), were recovered below the lower recommended limit (46% and 34%, respectively). The MS/MSD RPDs therefore resulted in 5 of 6 spikes being outside the recommended limit. The poor precision may indicate the presence of matrix interferences, and substantiates the expansion of the "x" qualifier indicating that the reported pesticide concentrations should be interpreted as highly estimated.

The field blank collected with the surface water samples contained low levels of two pesticides, gamma-BHC (0.004 ug/l) and gamma-Chlordane (0.006 ug/l). Concentrations that do not exceed the field blank concentration by at least five times are unusable as cross-contamination is possible, i.e. gamma-BHC concentrations in TPSW1 Filtrate (0.008 ug/l), TPSW3 Filtrate (0.004 ug/l), and gamma-Chlordane concentrations in TPSW1 (0.004 ug/l), TPSW2 (0.004 ug/l), and the MS/MSD (0.011 ug/l and 0.004 ug/l).

Several pesticides that were not detected in surface water samples TPSW2 and TPSW3 were detected in the filtrates of these samples. The reported concentrations were all reported with a "p" qualifier, indicating there was greater than 25% difference in concentrations between the initial and confirmatory GC columns. The validator reported that the differences, in most instances, were greater than 1000%. The pesticides reported with the "p" qualifier were all detected on the filtered samples, and as pesticides generally show an affinity for organic matter (i.e. suspended solids), higher concentrations of pesticides would have been expected in the unfiltered samples. Since the opposite was reported, there may have been a systematic interferant introduced during the filtering of the samples. (However, the aqueous MS/MSD produced only one outlier, gamma-BHC which recovered at 53%, below the lower recommended limit of 56%. Since the MSD recovered well, the MS/MSD produced an RPD of 54, above the recommended limit of 15. Therefore, with the exception of gamma-BHC, no aqueous interferences were apparent.) The reported pesticides in the filtered samples that are qualified with a "p" will be qualified as apparent interferences; their identification is tentative and quantitation is highly speculative.

Reported lead concentrations in the sediment are likely biased low due to a spike recovery of 21%; reported data will be qualified to indicate the concentrations are estimated, biased low. In addition, antimony and manganese spike recoveries were low at 55% and 63%. Reported values for these elements will not require qualification.

Overall, the results of the LMS usability review concluded that, with the exception of the highly estimated pesticide concentrations, the data submitted for the Tow Path Road site are usable with the appropriate qualifications discussed in this usability report.

REFERENCE No. 2

APPENDIX B

Sample Data Summary Package

Lab Code: AQUAI

Case #: 36681

SDG #: 183644

Contract #: _____

aquatec INC.
A Member of the Inchcape Environmental Group
55 SOUTH PARK DRIVE, COLCHESTER, VERMONT 05446
(802) 655-1203, FAX (802) 655-1248

aquatec INC.
Inchcape Environmental

CORPORATE OFFICES
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COLCHESTER, VT 05446

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SOUTH BURLINGTON, VT 05403

150 HERMAN MELVILLE BOULEVARD
NEW BEDFORD, MA 02740

June 14, 1993

Mr. Chris O'Gorman
Lawler, Matusky and
Skelly Engineers
One Blue Hill Plaza
Pearl River, NY 10965

Re: Project No. 93000; ETR No. 36681, and 36702
Case No. 36681, SDG No. 183644/Tow Path Road

Dear Mr. O'Gorman:

Enclosed are the Pesticide/PCB analytical results for the samples received on May 07 and 08, 1993. Laboratory numbers were assigned to the field samples as follows:

Client Sample ID	Aquatec Lab No.	Sample Matrix	VOA PH
Samples received on May 07, 1993 ETR No. 36681			
FB	183644	Aqueous	4
TB	183645	Aqueous	4
TPSW1	183646	Aqueous	7
TPSW1F	183647	Filtrate	
TPSW2	183648	Aqueous	7
TPSW2MS	183648MS	Aqueous	7
TPSW2MSD	183648MD	Aqueous	7
MSB	183649	Liquid	
TPSW2F	183650	Filtrate	
TPSW3	183651	Aqueous	7
TPSW3F	183652	Filtrate	
Samples Received on May 08, 1993 ETR No. 36702			
TPSD1A	183762	Soil	
TPSD1B	183763	Soil	
TPSD1C	183764	Soil	
TPSD1D	183765	Soil	
TPSD2A	183766	Soil	
TPSD2AMS	183766MS	Soil	
TPSD2AMSD	183766MD	Soil	
TPSD2AREP	183766DP	Soil	
MSB	183767	Solid	

000001

000001

Client Sample ID	Aquatec Lab No.	Sample Matrix
	Samples Received on May 08, 1993 ETR No. 36702 (continued)	
TPSD2B	183768	Soil
TPSD2C	183769	Soil
TPSD2D	183770	Soil
TPSD3A	183771	Soil
TPSD3B	183772	Soil
TPSD3C	183773	Soil
TPSD3D	183774	Soil
TPSW1	183775	Water
TPSW2	183776	Water
TPSW2MS	183776MS	Water
TPSW2REP	183776DP	Water
TPSW3	183777	Water

Please note that the following qualifiers have been used in reporting the pesticide/PCB data:

X= Pesticide compound reported is also an Aroclor peak on one or both analytical columns.

Y= Compound response quantitated from peak response exceeding calibration range.

Peak height was used for calibration and quantitation of all compounds except for tetrachloro-meta-xylene on all columns and all analytical sequences.

Aroclors 1260 and 1254 were detected and quantitated in many of the soil samples. An additional Aroclor eluting in the 1248/1242 region was quantitated and reported as Aroclor 1242.

A dilution analysis of the sample TPSW3F was not performed due to lack of sufficient sample extract volume. The result for heptachlor in this sample was quantitated and reported above the calibration range of the instrument. This result has been flagged with a "Y" qualifier. During the time period when these samples were being analyzed, the laboratory was experiencing technical difficulties in achieving the 4,4'-DDT breakdown quality control criteria of OLM01 method. Because of these difficulties, the samples were analyzed several times before a compliant analytical sequence was obtained. The problem has been corrected, but the volume of sample extract available for analysis was insufficient to conduct the dilution analysis necessary. Due to holding time considerations, the laboratory was instructed by Lawler, Matusky, and Skelly Engineers not to re-extract the sample.

The surrogate and matrix spike recoveries were low for sample TPSD2AMSD. The surrogate recoveries of the related samples TPSD2A and TPSD2AMS were within quality control limits as were the matrix spike recoveries for sample TPSD2AMS. Additionally, Aroclor 1254 was reported in the sample TPSD2A and TPSD2AMS at 58 ppb and 44 ppb, respectively. Aroclor 1254 was not detected or quantitated in the sample TPSD2AMSD.

A peak eluting at the retention time for endrin aldehyde was reported in the instrument blank PIBLKMD (6/5/93). Endrin aldehyde was not detected in the corresponding instrument blank from the second column, PIBLKM4. Endrin aldehyde was not detected in any of the associated samples.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package." A colored sheet of paper entitled "Sample Preparation Package" and "Sample Handling" have been used to explicitly mark the location of these documents.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations Director

Enclosure

aquatec INC.
Inchcape Environmental

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NEW BEDFORD, MA 02740

July 8, 1993

Lawler, Matusky and
Skelly Engineers
One Blue Hill Plaza
Pearl River, NY 10965

Re: Project No. 93000; ETR No. 36681, and 36702
Case No. 36681, SDG No. 183644/Tow Path Road

Dear Sir or Madam:

Please note the revisions to case documentation for case number 36681, SDG No. 183644/Tow Path Road, shipped on July 11, 1993. The revised pages for forms 1 and 10 should replace the old pages in your sample data package. If you should have any questions, please feel free to call.

Sincerely,

Scot P. Swanborn
Project Director

SPS/llr

Enclosure

93000B8JUL93

aquatec INC.
An Inchcape Company

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ANALYTICAL REPORT

Lawler, Matusky and
Skelly Engineers
One Blue Hill Plaza
Pearl River, NY 10965

Attention : Chris O'Gorman

Date : 05/14/93
ETR Number : 36702
Project No.: 93000
No. Samples: 21
Arrived : 05/08/93
P.O. Number: *

Case:36681 SDG:183644 Tow Path Rd.

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
183762	TPSD1A:05/07/93 (Soil)	
IN623	Solids, Total	43.1 c
183763	TPSD1B:05/07/93 (Soil)	
IN623	Solids, Total	47.3 c
183764	TPSD1C:05/07/93 (Soil)	
IN623	Solids, Total	51.9 c
183765	TPSD1D:05/07/93 (Soil)	
IN623	Solids, Total	55.3 c
183766	TPSD2A:05/07/93 (Soil)	
IN623	Solids, Total	42.2 c
183766MS	TPSD2A:[MS]05/07/93 (Soil)	
IN623	Solids, Total	40.8 c
183766MD	TPSD2A:[MSD]05/07/93 (Soil)	
IN623	Solids, Total	41.6 c
183766DP	TPSD2A:[REP]05/07/93 (Soil)	
IN623	Solids, Total	41.1 c

Comments/Notes

c = %W/W as received

< Cont. Next Page >

aquatec INC.
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ANALYTICAL REPORT

Lawler, Matusky and
Skelly Engineers
One Blue Hill Plaza
Pearl River, NY 10965

Attention : Chris O'Gorman

Date : 05/14/93
ETR Number : 36702
Project No.: 93000
No. Samples: 21
Arrived : 05/08/93
P.O. Number: *

Case:36681 SDG:183644 Tow Path Rd.

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
183768	TPSD2B:05/07/93 (Soil)	
IN623	Solids, Total	47.0 c
183769	TPSD2C:05/07/93 (Soil)	
IN623	Solids, Total	53.9 c
183770	TPSD2D:05/07/93 (Soil)	
IN623	Solids, Total	53.5 c
183771	TPSD3A:05/07/93 (Soil)	
IN623	Solids, Total	70.5 c
183772	TPSD3B:05/07/93 (Soil)	
IN623	Solids, Total	69.8 c
183773	TPSD3C:05/07/93 (Soil)	
IN623	Solids, Total	78.4 c
183774	TPSD3D:05/07/93 (Soil)	
IN623	Solids, Total	75.9 c
183775	TPSW1:05/07/93 (Water)	
160.1	Total Dissolved Solids	200
160.2	Total Suspended Solids	77
410.1	Chemical Oxygen Demand	30

Comments/Notes

c = %W/W as received

< Cont. Next Page >

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ANALYTICAL REPORT

Lawler, Matusky and
Skelly Engineers
One Blue Hill Plaza
Pearl River, NY 10965

Attention : Chris O'Gorman

Date : 05/14/93
ETR Number : 36702
Project No.: 93000
No. Samples: 21
Arrived : 05/08/93
P.O. Number: *

Case:36681 SDG:183644 Tow Path Rd.

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
183776	TPSW2:05/07/93 (Water)	
160.1	Total Dissolved Solids	230
160.2	Total Suspended Solids	35
410.1	Chemical Oxygen Demand	22
183777	TPSW3:05/07/93 (Water)	
160.1	Total Dissolved Solids	150
160.2	Total Suspended Solids	39
410.1	Chemical Oxygen Demand	10

< Last Page > Submitted By : Aquatec Inc.

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.:183644

SOW No.: 3/90

EPA Sample No.	Lab Sample ID
FB	183644
TPSD1A	183762
TPSD1B	183763
TPSD1C	183764
TPSD1D	183765
TPSD2A	183766
TPSD2AD	183766DP
TPSD2AS	183766MS
TPSD2B	183768
TPSD2C	183769
TPSD2D	183770
TPSD3A	183771
TPSD3B	183772
TPSD3C	183773
TPSD3D	183774
TPSW1	183775
TPSW2	183776
TPSW2D	183776DP
TPSW2S	183776MS
TPSW3	183777

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments:

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

Signature: Name:

Date: Title:

QUALIFIERS FOR METALS ANALYSIS

E (Fur) - Analytical cup spike recovery is less than 40%. An explanatory note is included on the specific form to which this applies.

E (ICP) - The reported value is estimated because of the presence of interference.

M - Duplicate injection precision not met.

N - Matrix spiked sample recovery not within control limits.

S - The reported value was determined by the Method of Standard Additions.

\+ - Correlation coefficient for the MSA is less than 0.995.

W - Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample concentration is less than 50% of spike concentration.

* - Duplicate analysis not within control limits.

Concentration Qualifiers

B - Entered if the reported value is less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL).

U - Entered if the analyte was analyzed for but not detected, less than ILD.

Method Qualifiers

P - for ICP
A - for Flame AA
F - for Furnace AA
CV - for Manual Cold Vapor AA
C - for Manual Spectrophotometric
NR - if the analyte is not required to be analyzed

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): WATER Lab Sample ID: 183644

Level (low/med): LOW Date Received: 05/07/93

% 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	81.8	U		P
7440-36-0	Antimony	27.2	U		P
7440-38-2	Arsenic	1.6	U		F
7440-39-3	Barium	19.0	U		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	359	U		P
7440-47-3	Chromium	2.4	U		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	3.7	U		P
7439-89-6	Iron	49.1	B		P
7439-92-1	Lead	0.60	U		F
7439-95-4	Magnesium	385	U		P
7439-96-5	Manganese	1.2	U		P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	4.5	U		P
7440-09-7	Potassium	650	U		P
7782-49-2	Selenium	1.3	U		F
7440-22-4	Silver	4.3	U		P
7440-23-5	Sodium	509	U		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	4.4	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD1A

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183762

Level (low/med): LOW Date Received: 05/08/93

% Solids: 43.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4340			P
7440-36-0	Antimony	11.3	U	N	P
7440-38-2	Arsenic	3.0	B		F
7440-39-3	Barium	50.5	B		P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	1.4	B		P
7440-70-2	Calcium	3790			P
7440-47-3	Chromium	15.2			P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	15.6			P
7439-89-6	Iron	25400			P
7439-92-1	Lead	28.2		N*	F
7439-95-4	Magnesium	1530	B		P
7439-96-5	Manganese	433		N	P
7439-97-6	Mercury	0.08	B		CV
7440-02-0	Nickel	10.5	B		P
7440-09-7	Potassium	443	B		P
7782-49-2	Selenium	0.56	U		F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	212	U		P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	10.2	B		P
7440-66-6	Zinc	95.0			P
	Cyanide	1.4	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD1B

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183763

Level (low/med): LOW Date Received: 05/08/93

% Solids: 47.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6400			P
7440-36-0	Antimony	10.3	U	N	P
7440-38-2	Arsenic	4.6			F
7440-39-3	Barium	56.7	B		P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	3620			P
7440-47-3	Chromium	17.3			P
7440-48-4	Cobalt	6.3	B		P
7440-50-8	Copper	19.7			P
7439-89-6	Iron	23900			P
7439-92-1	Lead	40.6		N*	F
7439-95-4	Magnesium	2090			P
7439-96-5	Manganese	390		N	P
7439-97-6	Mercury	0.08	B		CV
7440-02-0	Nickel	13.3	B		P
7440-09-7	Potassium	902	B		P
7782-49-2	Selenium	0.36	U	W	F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	193	U		P
7440-28-0	Thallium	0.84	U		F
7440-62-2	Vanadium	14.1	B		P
7440-66-6	Zinc	99.2			P
	Cyanide	1.2	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD1C

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183764

Level (low/med): LOW Date Received: 05/08/93

% Solids: 51.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6120			P
7440-36-0	Antimony	5.3	U	N	P
7440-38-2	Arsenic	5.3			F
7440-39-3	Barium	46.5			P
7440-41-7	Beryllium	0.32	B		P
7440-43-9	Cadmium	0.39	U		P
7440-70-2	Calcium	2360			P
7440-47-3	Chromium	11.9			P
7440-48-4	Cobalt	5.0	B		P
7440-50-8	Copper	15.5			P
7439-89-6	Iron	13300			P
7439-92-1	Lead	12.2		N*	F
7439-95-4	Magnesium	1810			P
7439-96-5	Manganese	156		N	P
7439-97-6	Mercury	0.06	B		CV
7440-02-0	Nickel	9.7			P
7440-09-7	Potassium	814	B		P
7782-49-2	Selenium	0.34	U		F
7440-22-4	Silver	0.84	U		P
7440-23-5	Sodium	111	B		P
7440-28-0	Thallium	0.79	U		F
7440-62-2	Vanadium	13.4			P
7440-66-6	Zinc	49.9			P
	Cyanide	1.1	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD1D

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183765

Level (low/med): LOW Date Received: 05/08/93

% Solids: 55.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5450			P
7440-36-0	Antimony	5.9	U	N	P
7440-38-2	Arsenic	4.2			F
7440-39-3	Barium	36.9	B		P
7440-41-7	Beryllium	0.27	B		P
7440-43-9	Cadmium	0.43	U		P
7440-70-2	Calcium	2030			P
7440-47-3	Chromium	8.6			P
7440-48-4	Cobalt	5.1	B		P
7440-50-8	Copper	9.1			P
7439-89-6	Iron	12100			P
7439-92-1	Lead	9.0		N*	F
7439-95-4	Magnesium	1770			P
7439-96-5	Manganese	175		N	P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	8.6	B		P
7440-09-7	Potassium	744	B		P
7782-49-2	Selenium	0.26	U	W	F
7440-22-4	Silver	0.93	U		P
7440-23-5	Sodium	110	U		P
7440-28-0	Thallium	0.60	U		F
7440-62-2	Vanadium	11.6			P
7440-66-6	Zinc	28.7			P
	Cyanide	0.97	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

LEAVES_WERE_PRESENT

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD2A

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183766

Level (low/med): LOW Date Received: 05/08/93

% Solids: 42.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9110			P
7440-36-0	Antimony	11.6	U	N	P
7440-38-2	Arsenic	9.4			F
7440-39-3	Barium	76.8	B		P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	0.87	B		P
7440-70-2	Calcium	6830			P
7440-47-3	Chromium	29.7			P
7440-48-4	Cobalt	6.7	B		P
7440-50-8	Copper	25.5			P
7439-89-6	Iron	34800			P
7439-92-1	Lead	23.4		N*	F
7439-95-4	Magnesium	3760			P
7439-96-5	Manganese	471		N	P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	18.1			P
7440-09-7	Potassium	1210	B		P
7782-49-2	Selenium	0.31	U	W	F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	217	U		P
7440-28-0	Thallium	0.71	U		F
7440-62-2	Vanadium	19.1	B		P
7440-66-6	Zinc	80.6			P
	Cyanide	1.2	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

LEAVES WERE PRESENT

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD2B

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183768

Level (low/med): LOW Date Received: 05/08/93

% Solids: 47.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10800			P
7440-36-0	Antimony	6.6	U	N	P
7440-38-2	Arsenic	9.9			F
7440-39-3	Barium	82.4			P
7440-41-7	Beryllium	0.66	B		P
7440-43-9	Cadmium	0.52	B		P
7440-70-2	Calcium	10700			P
7440-47-3	Chromium	116			P
7440-48-4	Cobalt	10	B		P
7440-50-8	Copper	67.1			P
7439-89-6	Iron	32100			P
7439-92-1	Lead	104		N*	F
7439-95-4	Magnesium	5810			P
7439-96-5	Manganese	546		N	P
7439-97-6	Mercury	0.14	B		CV
7440-02-0	Nickel	28.7			P
7440-09-7	Potassium	1180	B		P
7782-49-2	Selenium	0.55	U	W	F
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	161	B		P
7440-28-0	Thallium	1.3	U		F
7440-62-2	Vanadium	24.8			P
7440-66-6	Zinc	172			P
	Cyanide	0.99	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD2C

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183769

Level (low/med): LOW Date Received: 05/08/93

% Solids: 53.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12600			P
7440-36-0	Antimony	7.7	U	N	P
7440-38-2	Arsenic	9.4			F
7440-39-3	Barium	98.0			P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	1.2	B		P
7440-70-2	Calcium	9440			P
7440-47-3	Chromium	98.7			P
7440-48-4	Cobalt	11.3	B		P
7440-50-8	Copper	97.0			P
7439-89-6	Iron	26900			P
7439-92-1	Lead	45.5		N*	F
7439-95-4	Magnesium	6050			P
7439-96-5	Manganese	428		N	P
7439-97-6	Mercury	0.21			CV
7440-02-0	Nickel	29.5			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.36	U	W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	184	B		P
7440-28-0	Thallium	0.83	U		F
7440-62-2	Vanadium	26.0			P
7440-66-6	Zinc	167			P
	Cyanide	0.92	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD2D

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183770

Level (low/med): LOW Date Received: 05/08/93

% Solids: 53.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600			P
7440-36-0	Antimony	9.0	U	N	P
7440-38-2	Arsenic	12.3			F
7440-39-3	Barium	99.8			P
7440-41-7	Beryllium	0.78	B		P
7440-43-9	Cadmium	1.7	B		P
7440-70-2	Calcium	14600			P
7440-47-3	Chromium	89.0			P
7440-48-4	Cobalt	11.7	B		P
7440-50-8	Copper	97.4			P
7439-89-6	Iron	27300			P
7439-92-1	Lead	40.3		N*	F
7439-95-4	Magnesium	7090			P
7439-96-5	Manganese	411		N	P
7439-97-6	Mercury	0.28			CV
7440-02-0	Nickel	31.1			P
7440-09-7	Potassium	1770			P
7782-49-2	Selenium	0.41	U	W	F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	200	B		P
7440-28-0	Thallium	0.95	U		F
7440-62-2	Vanadium	27.3			P
7440-66-6	Zinc	160			P
	Cyanide	0.99	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

ILM02.1

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD3A

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183771

Level (low/med): LOW Date Received: 05/08/93

% Solids: 70.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3560			P
7440-36-0	Antimony	6.0	B	N	P
7440-38-2	Arsenic	2.3			F
7440-39-3	Barium	28.6	B		P
7440-41-7	Beryllium	0.20	B		P
7440-43-9	Cadmium	0.31	U		P
7440-70-2	Calcium	4510			P
7440-47-3	Chromium	8.0			P
7440-48-4	Cobalt	2.5	B		P
7440-50-8	Copper	11.4			P
7439-89-6	Iron	10900			P
7439-92-1	Lead	18.0		N*	F
7439-95-4	Magnesium	1830			P
7439-96-5	Manganese	120		N	P
7439-97-6	Mercury	0.03	U		CV
7440-02-0	Nickel	7.0			P
7440-09-7	Potassium	405	B		P
7782-49-2	Selenium	0.23	U	W	F
7440-22-4	Silver	0.67	U		P
7440-23-5	Sodium	109	B		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	7.8	B		P
7440-66-6	Zinc	39.6			P
	Cyanide	0.84	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

LEAVES AND GRASS WERE PRESENT

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD3B

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183772

Level (low/med): LOW Date Received: 05/08/93

% Solids: 69.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3380			P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium	20.1	B		P
7440-41-7	Beryllium	0.18	B		P
7440-43-9	Cadmium	0.42	U		P
7440-70-2	Calcium	4670			P
7440-47-3	Chromium	7.8			P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	18.4			P
7439-89-6	Iron	8730			P
7439-92-1	Lead	7.3		N*	F
7439-95-4	Magnesium	1700			P
7439-96-5	Manganese	91.6		N	P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	6.0	B		P
7440-09-7	Potassium	401	B		P
7782-49-2	Selenium	0.27	U	W	F
7440-22-4	Silver	0.91	U		P
7440-23-5	Sodium	125	B		P
7440-28-0	Thallium	0.61	U		F
7440-62-2	Vanadium	8.3	B		P
7440-66-6	Zinc	33.0			P
	Cyanide	0.84	U		C

Color Before: BROWN Clarity Before: Texture: MEDIU

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:

LEAVES_AND_GRASS_PRESENT

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD3C

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183773

Level (low/med): LOW Date Received: 05/08/93

% Solids: 78.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3250			P
7440-36-0	Antimony	4.8	U	N	P
7440-38-2	Arsenic	1.5			F
7440-39-3	Barium	18.7	B		P
7440-41-7	Beryllium	0.17	B		P
7440-43-9	Cadmium	0.35	U		P
7440-70-2	Calcium	7310			P
7440-47-3	Chromium	8.5			P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	8.7			P
7439-89-6	Iron	8020			P
7439-92-1	Lead	6.4		N*	F
7439-95-4	Magnesium	2330			P
7439-96-5	Manganese	111		N	P
7439-97-6	Mercury	0.02	U		CV
7440-02-0	Nickel	5.7	B		P
7440-09-7	Potassium	380	B		P
7782-49-2	Selenium	0.19	U	W	F
7440-22-4	Silver	0.75	U		P
7440-23-5	Sodium	103	B		P
7440-28-0	Thallium	0.44	U		F
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	26.8			P
	Cyanide	0.76	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSD3D

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Lab Sample ID: 183774

Level (low/med): LOW Date Received: 05/08/93

% Solids: 75.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3810			P
7440-36-0	Antimony	5.2	U	N	P
7440-38-2	Arsenic	1.1	B		F
7440-39-3	Barium	23.8	B		P
7440-41-7	Beryllium	0.21	B		P
7440-43-9	Cadmium	0.38	U		P
7440-70-2	Calcium	4560			P
7440-47-3	Chromium	7.2			P
7440-48-4	Cobalt	2.9	B		P
7440-50-8	Copper	8.1			P
7439-89-6	Iron	9530			P
7439-92-1	Lead	4.7		N*	F
7439-95-4	Magnesium	1820			P
7439-96-5	Manganese	94.1		N	P
7439-97-6	Mercury	0.02	U		CV
7440-02-0	Nickel	6.8	B		P
7440-09-7	Potassium	419	B		P
7782-49-2	Selenium	0.21	U	W	F
7440-22-4	Silver	0.82	U		P
7440-23-5	Sodium	121	B		P
7440-28-0	Thallium	0.47	U		F
7440-62-2	Vanadium	8.1	B		P
7440-66-6	Zinc	28.1			P
	Cyanide	0.79	U		C

Color Before: BROWN Clarity Before: Texture: MEDIU

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSW1

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): WATER Lab Sample ID: 183775

Level (low/med): LOW Date Received: 05/08/93

% 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	1550			P
7440-36-0	Antimony	27.0	U		P
7440-38-2	Arsenic	2.4	B		F
7440-39-3	Barium	121	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	6.2	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	7.9	B		P
7439-89-6	Iron	17900			P
7439-92-1	Lead	14.6			F
7439-95-4	Magnesium	6660			P
7439-96-5	Manganese	547			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	4.5	U		P
7440-09-7	Potassium	2180	B		P
7782-49-2	Selenium	1.3	U		F
7440-22-4	Silver	4.3	U		P
7440-23-5	Sodium	13400			P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	43.5			P
	Cyanide	10.0	U		C

Color Before: BROWN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSW2

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): WATER Lab Sample ID: 183776

Level (low/med): LOW Date Received: 05/08/93

% 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	127	B		P
7440-36-0	Antimony	27.3	U		P
7440-38-2	Arsenic	1.6	U		F
7440-39-3	Barium	64.9	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	55800			P
7440-47-3	Chromium	2.4	U		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	3.7	U		P
7439-89-6	Iron	2910			P
7439-92-1	Lead	0.60	U		F
7439-95-4	Magnesium	7570			P
7439-96-5	Manganese	219			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	4.5	U		P
7440-09-7	Potassium	3360	B		P
7782-49-2	Selenium	1.3	U		F
7440-22-4	Silver	4.3	U		P
7440-23-5	Sodium	14000			P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	4.3	B		P
	Cyanide	10.0	U		C

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TPSW3

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): WATER Lab Sample ID: 183777

Level (low/med): LOW Date Received: 05/08/93

% 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	339			P
7440-36-0	Antimony	27.2	U		P
7440-38-2	Arsenic	1.6	U		F
7440-39-3	Barium	38.1	B		P
7440-41-7	Beryllium	0.50	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	33600			P
7440-47-3	Chromium	2.4	U		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	3.7	U		P
7439-89-6	Iron	1470			P
7439-92-1	Lead	1.7	B		F
7439-95-4	Magnesium	5290			P
7439-96-5	Manganese	285			P
7439-97-6	Mercury	0.09	U		CV
7440-02-0	Nickel	4.5	U		P
7440-09-7	Potassium	1320	B		P
7782-49-2	Selenium	1.3	U		F
7440-22-4	Silver	4.3	U		P
7440-23-5	Sodium	10700			P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	7.3	B		P
	Cyanide	10.0	U		C

Color Before: COLORLESS Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

3
BLANKS

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 18364

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	
Aluminum	82.2	U	82.2	U	82.2	U	82.2	U	82.200	U	P
Antimony	27.3	U	27.3	U	27.3	U	-30.7	B	27.300	U	P
Arsenic	1.6	U	1.6	U	1.6	U	1.6	U	1.600	U	F
Barium	19.1	U	19.1	U	19.1	U	19.1	U	19.100	U	P
Beryllium	0.5	U	0.6	B	0.6	B	0.6	B	0.500	U	P
Cadmium	2.0	U	2.0	U	2.0	U	2.0	U	2.333	B	P
Calcium	360.6	U	360.6	U	360.6	U	360.6	U	360.600	U	P
Chromium	2.4	U	2.4	U	2.4	U	2.4	U	2.400	U	P
Cobalt	4.8	U	4.8	U	4.8	U	4.8	U	4.800	U	P
Copper	3.7	U	3.7	U	3.7	U	3.7	U	3.700	U	P
Iron	42.8	B	52.7	B	60.3	B	51.2	B	49.680	B	P
Lead	0.6	U	0.6	U	0.6	U	0.6	U	0.600	U	F
Magnesium	386.9	U	386.9	U	386.9	U	386.9	U	386.900	U	P
Manganese	1.2	U	1.2	U	1.2	U	1.2	U	1.200	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.090	U	C
Nickel	4.5	U	4.5	U	4.5	U	4.5	U	4.500	U	P
Potassium	652.8	U	652.8	U	652.8	U	652.8	U	652.800	U	P
Selenium	1.3	U	1.3	U	1.3	U	1.3	U	1.300	U	P
Silver	4.3	U	4.3	U	4.3	U	4.3	U	4.300	U	P
Sodium	511.8	U	511.8	U	511.8	U	511.8	U	511.800	U	P
Thallium	3.0	U	3.0	U	3.0	U	3.7	B	3.000	U	P
Vanadium	4.2	U	4.2	U	4.2	U	4.2	U	4.200	U	P
Zinc	2.2	U	2.2	U	2.2	U	2.2	U	2.200	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	C

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3
BLANKS

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 183644

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			82.2	U					12.550	U	P
Antimony			27.3	U					4.168	U	P
Arsenic			1.6	U	1.6	U	1.6	U	0.219	U	F
Barium			19.1	U					2.916	U	P
Beryllium			0.5	B					0.076	U	P
Cadmium			2.0	U					0.305	U	P
Calcium			360.6	U					55.053	U	P
Chromium			2.4	U					0.366	U	P
Cobalt			4.8	U					0.733	U	P
Copper			3.7	U					0.565	U	P
Iron			54.1	B					5.511	U	P
Lead	0.6	U	0.6	U	0.6	U			0.082	U	F
Magnesium			386.9	U					59.069	U	P
Manganese			1.2	U					0.183	U	P
Mercury									0.085	B	CV
Nickel			4.5	U					0.687	U	P
Potassium			652.8	U					99.664	U	P
Selenium	1.3	U	1.3	U	1.3	U	1.3	U	0.178	U	F
Silver			4.3	U					0.656	U	P
Sodium			511.8	U					78.137	U	P
Thallium			4.1	B	3.7	B			0.411	U	F
Vanadium			4.2	U					0.641	U	P
Zinc			2.2	U					0.336	U	P
Cyanide			10.0	U							C

3
BLANKS

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 18364

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	
Aluminum											NR
Antimony											NR
Arsenic											N
Barium											
Beryllium											NR
Cadmium											
Calcium											
Chromium											NR
Cobalt											NR
Copper											
Iron											
Lead	0.6	U	0.6	U	0.6	U	0.6	U			F
Magnesium											NR
Manganese											
Mercury											
Nickel											NR
Potassium											
Selenium			1.3	U							
Silver											NR
Sodium											NR
Thallium											
Vanadium											
Zinc											NR
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	C

3
BLANKS

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 183644

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide			10.0	U					0.010	U	C

3
BLANKS

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 18364

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide	10.0	U	10.0	U	10.0	U			0.010	U	C

3
BLANKS

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 183644

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prep. Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide									0.010	U	C

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

TPSD2AS

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 42.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									N
Antimony	75-125	136.4842		11.5521	U	217.40	62.8	N	P
Arsenic	75-125	23.2021		9.4168		16.48	83.6		F
Barium	75-125	764.3811		76.7603	B	869.60	79.1		P
Beryllium	75-125	21.7879		0.5201	B	21.74	97.8		P
Cadmium	75-125	20.4487		0.8734	B	21.74	90.0		P
Calcium									NR
Chromium	75-125	112.5701		29.7478		86.96	95.2		P
Cobalt	75-125	213.7919		6.6816	B	217.40	95.3		P
Copper	75-125	128.5708		25.4866		108.70	94.8		P
Iron									NR
Lead	75-125	25.1432		23.3990		8.24	21.2	N	P
Magnesium									M
Manganese	75-125	591.3301		471.3947		217.40	55.2	N	P
Mercury	75-125	0.6182		0.1043	B	0.52	98.8		CV
Nickel	75-125	223.1401		18.1153		217.40	94.3		P
Potassium									NR
Selenium	75-125	3.6472		0.3096	U	4.12	88.5		F
Silver	75-125	17.0486		1.8196	U	21.74	78.4		P
Sodium									NR
Thallium	75-125	21.1168		0.7145	U	20.61	102.5		P
Vanadium	75-125	232.0101		19.0801	B	217.40	97.9		P
Zinc	75-125	286.1864		80.6110		217.40	94.6		P
Cyanide	75-125	53.1834		1.2342	U	59.24	89.8		

Comments:

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

TPSW2S

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2053.2962		127.4873	B	1988.66	96.8		P
Antimony	75-125	470.0209		27.2973	U	497.17	94.5		P
Arsenic	75-125	41.9093		1.5954	U	39.61	105.8		F
Barium	75-125	1638.6596		64.8635	B	1988.66	79.1		P
Beryllium	75-125	48.5334		0.5000	U	49.72	97.6		P
Cadmium	75-125	45.2222		1.9998	U	49.72	91.0		P
Calcium									NR
Chromium	75-125	191.7073		2.3998	U	198.87	96.4		P
Cobalt	75-125	474.9925		4.7995	U	497.17	95.5		P
Copper	75-125	237.7449		3.6996	U	248.58	95.6		P
Iron	75-125	3858.0093		2911.7088		994.33	95.2		P
Lead	75-125	18.6572		0.5983	U	19.81	94.2		F
Magnesium									NR
Manganese	75-125	687.6802		218.5781		497.17	94.4		P
Mercury	75-125	1.1700		0.0900	U	1.00	117.0		CV
Nickel	75-125	469.6231		4.4996	U	497.17	94.5		P
Potassium									NR
Selenium	75-125	9.2296		1.2962	U	9.90	93.2		F
Silver	75-125	39.9523		4.2996	U	49.72	80.4		P
Sodium									NR
Thallium	75-125	49.9703		2.9913	U	49.51	100.9		F
Vanadium	75-125	497.0667		4.1996	U	497.17	100.0		P
Zinc	75-125	490.2058		4.3406	B	497.17	97.7		P
Cyanide	75-125	98.8100		10.0000	U	100.00	98.8		C

Comments:

U.S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

TPSD2AA

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water) : SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum		21210.00		21540.00		2000.0	-16.5		P
Antimony		415.00		27.30	U	500.0	83.0		P
Arsenic									NR
Barium		1689.00		181.40	B	2000.0	75.4		P
Beryllium		50.36		1.23	B	50.0	98.3		P
Cadmium		45.85		2.06	B	50.0	87.6		P
Calcium									NR
Chromium		266.40		70.30		200.0	98.0		P
Cobalt		492.80		15.79	B	500.0	95.4		P
Copper		302.30		60.23		250.0	96.8		P
Iron		81000.00		82310.00		1000.0	-131.0		P
Lead									NR
Magnesium									NR
Manganese		1573.00		1114.00		500.0	91.8		P
Mercury									NR
Nickel		521.30		42.81		500.0	95.7		P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium		543.80		45.09	B	500.0	99.7		P
Zinc		678.60		190.50		500.0	97.6		P
Cyanide									NR

Comments:

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5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.
TPSW2A

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water) : WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum		2058.00		127.50	B	2000.0	96.5		P
Antimony		467.40		27.30	U	500.0	93.5		P
Arsenic									NR
Barium		1639.00		64.87	B	2000.0	78.7		P
Beryllium		48.74		0.50	U	50.0	97.5		P
Cadmium		45.88		2.00	U	50.0	91.8		P
Calcium									NR
Chromium		192.20		2.40	U	200.0	96.1		P
Cobalt		477.40		4.80	U	500.0	95.5		P
Copper		236.70		3.70	U	250.0	94.7		P
Iron		3807.00		2912.00		1000.0	89.5		P
Lead									NR
Magnesium									NR
Manganese		685.00		218.60		500.0	93.3		P
Mercury									NR
Nickel		471.00		4.50	U	500.0	94.2		P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium		497.70		4.20	U	500.0	99.5		P
Zinc		486.20		4.34	B	500.0	96.4		P
Cyanide									NR

Comments:

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6
DUPLICATES

EPA SAMPLE NO.

TPSD2AD

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 42.2 % Solids for Duplicate: 41.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		9114.7596		10534.4010		14.4		P
Antimony		11.5521	U	8.9230	U			P
Arsenic	2.4	9.4168		7.2758		25.7		F
Barium	84.6	76.7603	B	87.5960		13.2		P
Beryllium		0.5201	B	0.5824	B	11.3		P
Cadmium		0.8734	B	0.6537	U	200.0		P
Calcium	2115.8	6829.7224		6847.5241		0.3		P
Chromium		29.7478		31.1097		4.5		P
Cobalt		6.6816	B	7.6941	B	14.1		P
Copper	10.6	25.4866		27.7006		8.3		P
Iron		34829.8917		34678.8691		0.4		P
Lead		23.3990		18.3052		24.4	*	F
Magnesium	2115.8	3757.1936		3801.2747		1.2		P
Manganese		471.3947		438.3069		7.3		P
Mercury	0.1	0.1043	B	0.0863	B	18.9		CV
Nickel	16.9	18.1153		17.5159		3.4		P
Potassium		1212.3392	B	1635.2345		29.7		P
Selenium		0.3096	U	0.4929	U			F
Silver		1.8196	U	1.4055	U			P
Sodium		216.5708	U	192.7439	B	200.0		P
Thallium		0.7145	U	1.1374	U			F
Vanadium	21.2	19.0801	B	22.5004		16.5		P
Zinc		80.6110		82.1703		1.9		P
Cyanide		1.2342	U	1.2090	U			C

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6
DUPLICATES

EPA SAMPLE NO.

TPSW2D

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		127.4873	B	181.3672	B	34.9		P
Antimony		27.2973	U	27.0860	U			P
Arsenic		1.5954	U	1.6963	B	200.0		F
Barium		64.8635	B	67.0801	B	3.4		P
Beryllium		0.5000	U	0.4961	U			P
Cadmium		1.9998	U	1.9843	U			P
Calcium		55824.4176		56315.1106		0.9		P
Chromium		2.3998	U	2.3812	U			P
Cobalt		4.7995	U	4.7624	U			P
Copper		3.6996	U	3.6710	U			P
Iron		2911.7088		2986.4074		2.5		P
Lead		0.5983	U	0.5987	U			F
Magnesium	4999.5	7571.2429		7678.3411		1.4		P
Manganese		218.5781		220.3592		0.8		P
Mercury		0.0900	U	0.0900	U			CV
Nickel		4.4996	U	4.4647	U			P
Potassium		3361.6638	B	2957.6347	B	12.8		P
Selenium		1.2962	U	1.2971	U			F
Silver		4.2996	U	4.2663	U			P
Sodium	4999.5	14008.5991		13929.9534		0.6		P
Thallium		2.9913	U	2.9934	U			F
Vanadium		4.1996	U	4.1671	U			P
Zinc		4.3406	B	4.7753	B	9.5		P
Cyanide		10.0000	U	10.0000	U			C

7

LABORATORY CONTROL SAMPLE

Lab Name: AQUATEC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Solid LCS Source: CLP#215

Aqueous LCS Source: VENTURES

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	51000.0	50700.00	99.4	5110.0	6543.1		2040.0	7150.0	128.0
Antimony	2000.0	1872.00	93.6	21.3	34.2		9.0	130.0	160.
Arsenic	50.0	46.83	93.7	34.2	28.8		13.0	51.0	84
Barium	500.0	494.00	98.8	97.4	106.2		68.0	127.0	109.0
Beryllium	500.0	500.00	100.0	58.1	62.4		35.0	87.0	107.4
Cadmium	500.0	501.40	100.3	70.3	82.0		35.0	112.0	116.
Calcium	50000.0	49240.00	98.5	2330.0	2466.7		1630.0	3260.0	105
Chromium	500.0	491.90	98.4	182.0	187.2		82.0	255.0	102.9
Cobalt	500.0	469.30	93.9	120.0	128.4		66.0	180.0	107 0
Copper	500.0	470.90	94.2	92.7	96.6		46.0	139.0	104
Iron	50500.0	49380.00	97.8	8620.0	10205.9		5170.0	12100.0	118
Lead	15.0	13.62	90.8						
Magnesium	50000.0	48730.00	97.5	1530.0	1769.6		842.0	2300.0	115
Manganese	500.0	476.50	95.3	145.0	157.1		101.0	203.0	108
Mercury				13.7	16.4		7.5	21.0	119.7
Nickel	500.0	466.90	93.4	137.0	144.8		68.0	212.0	105.7
Potassium	50000.0	49110.00	98.2	2560.0	2647.1		1530.0	3330.0	103
Selenium	25.0	24.86	99.4						
Silver	500.0	493.00	98.6	64.4	80.7		26.0	113.0	125.3
Sodium	50000.0	48680.00	97.4	306.0	450.2	B	168.0	459.0	147
Thallium	50.0	54.14	108.3	140.0	136.4		70.0	210.0	97
Vanadium	500.0	503.90	100.8	40.1	42.3		28.0	54.0	105
Zinc	500.0	476.00	95.2	78.2	89.3		39.1	121.0	114.2
Cyanide				147.0	165.2		36.0	198.0	112

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 183644

Solid LCS Source: CLP#215_____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide				147.0	70.8		36.0	198.0	48.2

7

LABORATORY CONTROL SAMPLE

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 18364

Solid LCS Source: CLP#215_____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide				147.0	157.8		36.0	198.0	10 3

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: AQUATEC_____ Contract: 93000_____

Lab Code: AQUAI_ Case No.: 36681_ SAS No.: _____ SDG No.: 183644

Solid LCS Source: CLP#215_____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead				44.5	45.8		20.0	65.0	102.9
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium				33.1	40.2		17.0	53.0	121.5
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183644

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183644V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183644

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183644V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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.	121-43-7	Boric acid (H3BO3), trimethy	8.896	5	NJB
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183645

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183645V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TB

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183645

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183645V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1A

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183762

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183762V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 62 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	26	U
74-83-9	Bromomethane	26	U
75-01-4	Vinyl Chloride	26	U
75-00-3	Chloroethane	26	U
75-09-2	Methylene Chloride	26	U
67-64-1	Acetone	100	B
75-15-0	Carbon Disulfide	26	U
75-35-4	1,1-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
540-59-0	1,2-Dichloroethene (total)	26	U
67-66-3	Chloroform	26	U
107-06-2	1,2-Dichloroethane	26	U
78-93-3	2-Butanone	26	J
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon Tetrachloride	26	U
75-27-4	Bromodichloromethane	26	U
78-87-5	1,2-Dichloropropane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
79-01-6	Trichloroethene	26	U
124-48-1	Dibromochloromethane	26	U
79-00-5	1,1,2-Trichloroethane	26	U
71-43-2	Benzene	26	U
10061-02-6	trans-1,3-Dichloropropene	26	U
75-25-2	Bromoform	26	U
108-10-1	4-Methyl-2-Pentanone	26	U
591-78-6	2-Hexanone	26	U
127-18-4	Tetrachloroethene	26	U
79-34-5	1,1,2,2-Tetrachloroethane	26	U
108-88-3	Toluene	26	U
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	26	U
100-42-5	Styrene	26	U
1330-20-7	Xylene (total)	26	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD1B

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183763

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183763I2V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 52 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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17.					
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27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1C

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183764

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183764V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 21 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	13	U
67-64-1	Acetone	40	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD1C

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183764

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183764V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 21 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
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10.					
11.					
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27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1D

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183765

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183765V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 17 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	27	B
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD1D

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183765

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183765V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 17 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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7.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2A

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183766

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183766V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 55 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	22	U
67-64-1	Acetone	140	B
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	22	U
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	31	
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	22	U
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	22	U
10061-02-6	trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	22	U
108-90-7	Chlorobenzene	8	J
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Xylene (total)	22	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TPSD2A

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183766

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183766V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 55 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	107-31-3	Formic acid, methyl ester	3.342	37	NJ
2.	75-18-3	Methane, thiobis-	4.976	20	NJ
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2B

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183768

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183768V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 41 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17	U
67-64-1	Acetone	28	B
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (total)	17	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD2B

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183768

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183768V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 41 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKS8	99	95	100		0
02	FB	99	93	102		0
03	TB	96	95	98		0
04	TPSW1	99	92	99		0
05	TPSW3	96	87	99		0
06	TPSW2	97	92	99		0
07	TPSW2MS	97	95	100		0
08	TPSW2MSD	97	93	101		0
09	MSB1	106	102	110		0
10						
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	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKT5	101	98	99		0
02	TPSD1A	106	90	108		0
03	TPSD1C	104	93	99		0
04	TPSD1D	107	95	101		0
05	TPSD2A	111	82	143*		1
06	TPSD2AMS	113	83	159*		1
07	TPSD2AMSD	111	86	156*		1
08	MSB2	101	97	99		0
09	VBLKT9	100	100	102		0
10	TPSD1B	107	90	107		0
11	TPSD2B	104	94	107		0
12	TPSD2C	103	94	104		0
13	TPSD2D	101	93	102		0
14	TPSD3A	105	89	104		0
15	TPSD3B	108	93	104		0
16	VBLKU6	99	95	100		0
17	TPSD3C	104	94	101		0
18	TPSD3D	103	94	102		0
19						
20						
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22						
23						
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27						
28						
29						
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	QC LIMITS
SMC1 (TOL) = Toluene-d8	(84-138)
SMC2 (BFB) = Bromofluorobenzene	(59-113)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Report Date: 28-May-1993 08:55

Aquatec, Inc.

RECOVERY REPORT

Case Number: 36681
Client Name: LAWMAT
Sample Matrix: LIQUID
Client ID: MSB1

Client SDG: 183644
Fraction: VOA
Level LOW

COMPOUND	SPIKE ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
6 1,1-Dichloroethene	50	43	86.40	61-145
22 Trichloroethene	50	51	101.71	71-120
20 Benzene	50	52	103.59	76-127
28 Toluene	50	52	103.39	76-125
35 Chlorobenzene	50	52	104.18	75-130

* - Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Report Date: 28-May-1993 12:14

Aquatec, Inc.

RECOVERY REPORT

Case Number: 36681
Client Name: LAWMAT
Sample Matrix: SOLID
Client ID: MSB2

Client SDG: 183644
Fraction: VOA
Level LOW

COMPOUND	SPIKE ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
6 1,1-Dichloroethene	50	42	83.17	59-172
22 Trichloroethene	50	48	96.15	62-137
20 Benzene	50	48	97.07	66-142
28 Toluene	50	48	96.94	59-139
35 Chlorobenzene	50	49	98.57	60-133

* - Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix Spike - EPA Sample No.: TPSW2

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	39	78	61-145
Trichloroethene	50	0	46	92	71-120
Benzene	50	0	47	94	76-127
Toluene	50	0	47	94	76-125
Chlorobenzene	50	0	48	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	34	68	14	14	61-145
Trichloroethene	50	40	80	14	14	71-120
Benzene	50	41	82	14*	11	76-127
Toluene	50	41	82	14*	13	76-125
Chlorobenzene	50	41	82	16*	13	75-130

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

* Values outside of QC limits

RPD: 3 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix Spike - EPA Sample No.: TPSD2A Level (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	110	0	180	164	59-172
Trichloroethene	110	0	97	88	62-137
Benzene	110	0	110	100	66-142
Toluene	110	0	120	109	59-139
Chlorobenzene	110	8	110	93	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	110	170	154	6	22	59-172
Trichloroethene	110	98	89	1	24	62-137
Benzene	110	110	100	0	21	66-142
Toluene	110	120	109	0	21	59-139
Chlorobenzene	110	110	93	0	21	60-133

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

* Values outside of QC limits

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

COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKS8

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID: MAVB001BV.D Lab Sample ID: VBLKS8

Date Analyzed: 05/10/93 Time Analyzed: 1635

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: M

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	FB	183644	M183644V.D	2039
02	TB	183645	M183645V.D	2113
03	TPSW1	183646	M183646V.D	2154
04	TPSW3	183651	M183651V.D	2235
05	TPSW2	183648	M183648V.D	2316
06	TPSW2MS	183648MS	M183648MSV.D	2357
07	TPSW2MSD	183648MD	M183648MDV.D	0037
08	MSB1	183649	M183649V.D	0118
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKT5

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID: OBFB001LV.D Lab Sample ID: VBLKT5

Date Analyzed: 05/12/93 Time Analyzed: 1955

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: O

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TPSD1A	183762	O183762V.D	0035
02	TPSD1C	183764	O183764V.D	0203
03	TPSD1D	183765	O183765V.D	0247
04	TPSD2A	183766	O183766V.D	0330
05	TPSD2AMS	183766MS	O183766MSV.D	0414
06	TPSD2AMSD	183766MD	O183766MDV.D	0456
07	MSB2	183767	O183767V.D	0539
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKT9

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID: OBFB001MV.D Lab Sample ID: VBLKT9

Date Analyzed: 05/13/93 Time Analyzed: 1340

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: O

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TPSD1B	183763	O183763I2V.D	1908
02	TPSD2B	183768	O183768V.D	2006
03	TPSD2C	183769	O183769V.D	2100
04	TPSD2D	183770	O183770V.D	2150
05	TPSD3A	183771	O183771V.D	2235
06	TPSD3B	183772	O183772V.D	2323
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COMMENTS:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2C

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183769

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183769V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 55 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	22	U
67-64-1	Acetone	74	B
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	22	U
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	16	J
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	22	U
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	22	U
10061-02-6	trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	22	U
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Xylene (total)	22	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD2C

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183769

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183769V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 55 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown cycloalkane	28.462	11	J
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2D

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183770

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183770V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 50 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	20	U
74-83-9	Bromomethane	20	U
75-01-4	Vinyl Chloride	20	U
75-00-3	Chloroethane	20	U
75-09-2	Methylene Chloride	20	U
67-64-1	Acetone	55	B
75-15-0	Carbon Disulfide	20	U
75-35-4	1,1-Dichloroethene	20	U
75-34-3	1,1-Dichloroethane	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
78-93-3	2-Butanone	12	J
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
75-27-4	Bromodichloromethane	20	U
78-87-5	1,2-Dichloropropane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
79-01-6	Trichloroethene	20	U
124-48-1	Dibromochloromethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
71-43-2	Benzene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-Pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
1330-20-7	Xylene (total)	20	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD2D

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183770

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183770V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 50 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3A

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183771

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183771V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 35 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD3A

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183771

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183771V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 35 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3B

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183772

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183772V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 31 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD3B

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183772

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183772V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 31 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3C

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183773

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183773V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 27 Data Analyzed: 05/14/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD3C

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183773

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183773V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 27 Data Analyzed: 05/14/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3D

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183774

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183774V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 27 Data Analyzed: 05/14/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	14	U
67-64-1	Acetone	12	JB
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (total)	14	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSD3D

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183774

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183774V.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 27 Data Analyzed: 05/14/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW1

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183646

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183646V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSW1

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183646

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183646V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183648

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183648V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSW2

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183648

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183648V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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
1.					
2.					
3.					
4.					
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9.					
10.					
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12.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW3

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183651

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183651V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TPSW3

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183651

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183651V.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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
1.					
2.					
3.					
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKS8

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: VBLKS8

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: MAVB001BV.D

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

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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.	121-43-7	Boric acid (H3BO3), trimethy	8.861	6	NJ
2.					
3.					
4.					
5.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKT5

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: VBLKT5

Sample wt/vol: 5.0 (g/mL) G Lab File ID: OBFB001LV.D

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

% Moisture: not dec. 0 Data Analyzed: 05/12/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKT5

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: VBLKT5

Sample wt/vol: 5.0 (g/mL) G Lab File ID: OBFB001LV.D

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

% Moisture: not dec. 0 Data Analyzed: 05/12/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKT9

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: VBLKT9

Sample wt/vol: 5.0 (g/mL) G Lab File ID: OBFB001MV.D

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

% Moisture: not dec. 0 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	3	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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKT9

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: VBLKT9

Sample wt/vol: 5.0 (g/mL) G Lab File ID: OBFB001MV.D

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

% Moisture: not dec. 0 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKU6

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: VBLKU6

Sample wt/vol: 5.0 (g/mL) G Lab File ID: OBFB001NV.D

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

% Moisture: not dec. 0 Data Analyzed: 05/14/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	1	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

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKU6

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: VBLKU6

Sample wt/vol: 5.0 (g/mL) G Lab File ID: OBFB001NV.D

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

% Moisture: not dec. 0 Data Analyzed: 05/14/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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9.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2MS

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183648MS

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183648MSV.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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	39	
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	46	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	47	
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	47	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2AMS

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183766MS

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183766MSV.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 55 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	22	U
67-64-1	Acetone	140	B
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	180	
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	27	
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	97	
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	110	
10061-02-6	trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	120	
108-90-7	Chlorobenzene	110	
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Xylene (total)	22	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2MSD

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183648MD

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183648MDV.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. _____ Data Analyzed: 05/11/93

GC Column:CAP 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	34	
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	40	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	41	
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	41	
108-90-7	Chlorobenzene	41	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2AMSD

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183766MD

Sample wt/vol: 5.0 (g/mL) G Lab File ID: O183766MDV.D

Level: (low/med) LOW Date Received: 05/08/93

% Moisture: not dec. 55 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	22	U
67-64-1	Acetone	110	B
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	170	
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	26	
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	98	
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	110	
10061-02-6	trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	120	
108-90-7	Chlorobenzene	110	
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Xylene (total)	22	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSB1

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: 183649

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M183649V.D

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

% Moisture: not dec. _____ Data Analyzed: 05/11/93

GC Column:CAP 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	43	
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	51	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	52	
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	52	
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSB2

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) SOIL Lab Sample ID: 183767

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 0183767V.D

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

% Moisture: not dec. 0 Data Analyzed: 05/13/93

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	42	
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	48	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	48	
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	48	
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID (Standard): MAV050BHV.D Date Analyzed: 05/10/93

Instrument ID: M Time Analyzed: 1356

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	842273	9.94	3305445	12.15	2856927	19.97
	UPPER LIMIT	1684546	10.44	6610890	12.65	5713854	20.47
	LOWER LIMIT	421136	9.44	1652722	11.65	1428464	19.47
	EPA SAMPLE No.						
01	VBLKS8	797528	9.93	3069494	12.14	2695779	19.95
02	FB	862845	9.91	3342487	12.12	2937029	19.95
03	TB	887590	9.93	3430437	12.14	3019434	19.96
04	TPSW1	879713	9.93	3415065	12.14	2956743	19.96
05	TPSW3	862161	9.95	3357421	12.15	2934382	19.96
06	TPSW2	871919	9.93	3368633	12.14	2959843	19.96
07	TPSW2MS	862186	9.93	3356289	12.14	2963341	19.97
08	TPSW2MSD	820057	9.93	3190843	12.14	2819309	19.95
09	MSB1	786888	9.93	3081818	12.14	2707443	19.97
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID (Standard): OBF050LHV.D Date Analyzed: 05/12/93

Instrument ID: O Time Analyzed: 1852

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	479507	9.42	1861422	11.68	1548116	19.33
	UPPER LIMIT	959014	9.92	3722844	12.18	3096232	19.83
	LOWER LIMIT	239754	8.92	930711	11.18	774058	18.83
	EPA SAMPLE No.						
01	VBLKT5	496055	9.40	1898663	11.65	1573755	19.31
02	TPSD1A	361955	9.40	1488361	11.65	1106557	19.31
03	TPSD1C	414314	9.40	1610296	11.65	1240716	19.31
04	TPSD1D	413430	9.40	1583277	11.65	1231529	19.31
05	TPSD2A	230570*	9.42	1275339	11.65	824331	19.31
06	TPSD2AMS	214731*	9.40	1266234	11.65	833785	19.31
07	TPSD2AMSD	257521	9.40	1557061	11.65	1074637	19.31
08	MSB2	451362	9.40	1706037	11.65	1385358	19.31
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID (Standard): OBF050MHV.D Date Analyzed: 05/13/93

Instrument ID: O Time Analyzed: 1203

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1 (BCM) AREA #	IS1 (BCM) RT #	IS2 (DFB) AREA #	IS2 (DFB) RT #	IS3 (CBZ) AREA #	IS3 (CBZ) RT #
	12 HOUR STD	504733	9.41	1959302	11.66	1600291	19.31
	UPPER LIMIT	1009466	9.91	3918604	12.16	3200582	19.81
	LOWER LIMIT	252366	8.91	979651	11.16	800146	18.81
	EPA SAMPLE No.						
01	VBLKT9	477082	9.40	1861746	11.65	1517412	19.31
02	TPSD1B	426200	9.40	1663316	11.65	1201474	19.31
03	TPSD2B	450863	9.42	1831779	11.67	1378131	19.31
04	TPSD2C	435259	9.42	1736131	11.65	1340935	19.31
05	TPSD2D	450247	9.42	1773980	11.65	1407028	19.31
06	TPSD3A	474487	9.42	1880188	11.65	1381080	19.32
07	TPSD3B	487323	9.40	1901929	11.65	1432628	19.31
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID (Standard): OBF050NHV.D Date Analyzed: 05/14/93

Instrument ID: O Time Analyzed: 1242

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	486348	9.41	1869307	11.66	1545335	19.31
	UPPER LIMIT	972696	9.91	3738614	12.16	3090670	19.81
	LOWER LIMIT	243174	8.91	934654	11.16	772668	18.81
	EPA SAMPLE No.						
01	VBLKU6	479518	9.40	1872650	11.65	1534808	19.33
02	TPSD3C	471894	9.44	1825612	11.67	1451529	19.32
03	TPSD3D	462046	9.42	1785983	11.67	1420756	19.32
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183644

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.0041	JP
76-44-8	Heptachlor	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0059	
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

jtm revised 7/8/93

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1A

ab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

atrix: (soil/water) SOIL Lab Sample ID: 183762

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

Moisture: 57 decanted: (Y/N) N Date Received: 05/08/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.9	U
319-85-7	beta-BHC	3.9	U
319-86-8	delta-BHC	3.9	U
58-89-9	gamma-BHC (Lindane)	3.9	U
76-44-8	Heptachlor	3.9	U
309-00-2	Aldrin	3.9	U
1024-57-3	Heptachlor epoxide	3.9	U
959-98-8	Endosulfan I	3.9	U
60-57-1	Dieldrin	7.7	U
72-55-9	4,4'-DDE	6.9	JX
72-20-8	Endrin	7.7	U
33213-65-9	Endosulfan II	7.7	U
72-54-8	4,4'-DDD	6.0	JPX
1031-07-8	Endosulfan sulfate	7.7	U
50-29-3	4,4'-DDT	5.3	JX
72-43-5	Methoxychlor	39	U
53494-70-5	Endrin ketone	7.7	U
7421-93-4	Endrin aldehyde	7.7	U
5103-71-9	alpha-Chlordane	3.9	U
5103-74-2	gamma-Chlordane	3.9	U
8001-35-2	Toxaphene	390	U
12674-11-2	Aroclor-1016	77	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	77	U
53469-21-9	Aroclor-1242	77	U
12672-29-6	Aroclor-1248	77	U
11097-69-1	Aroclor-1254	100	
11096-82-5	Aroclor-1260	77	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1B

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183763

Sample wt/vol: 30.9 (g/mL) G Lab File ID:

% Moisture: 53 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.5	U
319-85-7	beta-BHC	3.5	U
319-86-8	delta-BHC	3.5	U
58-89-9	gamma-BHC (Lindane)	3.5	U
76-44-8	Heptachlor	3.5	U
309-00-2	Aldrin	3.5	U
1024-57-3	Heptachlor epoxide	3.5	U
959-98-8	Endosulfan I	3.5	U
60-57-1	Dieldrin	6.8	U
72-55-9	4,4'-DDE	5.3	JPX
72-20-8	Endrin	6.8	U
33213-65-9	Endosulfan II	6.8	U
72-54-8	4,4'-DDD	5.9	JX
1031-07-8	Endosulfan sulfate	6.8	U
50-29-3	4,4'-DDT	4.1	JPX
72-43-5	Methoxychlor	35	U
53494-70-5	Endrin ketone	6.8	U
7421-93-4	Endrin aldehyde	6.8	U
5103-71-9	alpha-Chlordane	3.5	U
5103-74-2	gamma-Chlordane	3.5	U
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	68	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	68	U
53469-21-9	Aroclor-1242	48	J
12672-29-6	Aroclor-1248	68	U
11097-69-1	Aroclor-1254	79	P
11096-82-5	Aroclor-1260	68	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1C

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183764

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 48 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.2	U
319-85-7	beta-BHC	3.2	U
319-86-8	delta-BHC	3.2	U
58-89-9	gamma-BHC (Lindane)	3.2	U
76-44-8	Heptachlor	3.2	U
309-00-2	Aldrin	3.2	U
1024-57-3	Heptachlor epoxide	3.2	U
959-98-8	Endosulfan I	3.2	U
60-57-1	Dieldrin	6.3	U
72-55-9	4,4'-DDE	4.3	JPX
72-20-8	Endrin	6.3	U
33213-65-9	Endosulfan II	6.3	U
72-54-8	4,4'-DDD	3.7	JPX
1031-07-8	Endosulfan sulfate	6.3	U
50-29-3	4,4'-DDT	5.0	JX
72-43-5	Methoxychlor	32	U
53494-70-5	Endrin ketone	6.3	U
7421-93-4	Endrin aldehyde	6.3	U
5103-71-9	alpha-Chlordane	3.2	U
5103-74-2	gamma-Chlordane	3.2	U
8001-35-2	Toxaphene	320	U
12674-11-2	Aroclor-1016	63	U
11104-28-2	Aroclor-1221	130	U
11141-16-5	Aroclor-1232	63	U
53469-21-9	Aroclor-1242	63	U
12672-29-6	Aroclor-1248	63	U
11097-69-1	Aroclor-1254	85	
11096-82-5	Aroclor-1260	63	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD1D

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183765

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

% Moisture: 45 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.1	U
319-85-7	beta-BHC	3.1	U
319-86-8	delta-BHC	3.1	U
58-89-9	gamma-BHC (Lindane)	3.1	U
76-44-8	Heptachlor	3.1	U
309-00-2	Aldrin	3.1	U
1024-57-3	Heptachlor epoxide	3.1	U
959-98-8	Endosulfan I	3.1	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.0	U
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	6.0	U
72-54-8	4,4'-DDD	6.0	U
1031-07-8	Endosulfan sulfate	6.0	U
50-29-3	4,4'-DDT	6.0	U
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6.0	U
7421-93-4	Endrin aldehyde	6.0	U
5103-71-9	alpha-Chlordane	3.1	U
5103-74-2	gamma-Chlordane	3.1	U
8001-35-2	Toxaphene	310	U
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	60	U
11096-82-5	Aroclor-1260	60	U

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKU6

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Lab File ID: OBFB001NV.D Lab Sample ID: VBLKU6

Date Analyzed: 05/14/93 Time Analyzed: 1357

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: O

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TPSD3C	183773	O183773V.D	1455
02	TPSD3D	183774	O183774V.D	1545
03				
04				
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30				

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKS8

Lab Name: AQUATEC, INC. Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 18364

Matrix: (soil/water) WATER Lab Sample ID: VBLKS8

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: MAVB001BV.D

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

% Moisture: not dec. _____ Data Analyzed: 05/10/93

GC Column:CAP 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

1D

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

TPSD2A

ab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

atrix: (soil/water) SOIL Lab Sample ID: 183766

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

Moisture: 58 decanted: (Y/N) N Date Received: 05/08/93

xtraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.0	U
319-85-7	beta-BHC	4.0	U
319-86-8	delta-BHC	4.0	U
58-89-9	gamma-BHC (Lindane)	4.0	U
76-44-8	Heptachlor	4.0	U
309-00-2	Aldrin	4.0	U
1024-57-3	Heptachlor epoxide	4.0	U
959-98-8	Endosulfan I	4.0	U
60-57-1	Dieldrin	7.8	U
72-55-9	4,4'-DDE	7.8	U
72-20-8	Endrin	7.8	U
33213-65-9	Endosulfan II	7.8	U
72-54-8	4,4'-DDD	7.8	U
1031-07-8	Endosulfan sulfate	7.8	U
50-29-3	4,4'-DDT	7.8	U
72-43-5	Methoxychlor	40	U
53494-70-5	Endrin ketone	7.8	U
7421-93-4	Endrin aldehyde	7.8	U
5103-71-9	alpha-Chlordane	4.0	U
5103-74-2	gamma-Chlordane	4.0	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	78	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	58	JP
11096-82-5	Aroclor-1260	78	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2B

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183768

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 53 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.6	U
319-85-7	beta-BHC	3.6	U
319-86-8	delta-BHC	3.6	U
58-89-9	gamma-BHC (Lindane)	3.6	U
76-44-8	Heptachlor	3.6	U
309-00-2	Aldrin	3.6	U
1024-57-3	Heptachlor epoxide	3.6	U
959-98-8	Endosulfan I	3.6	U
60-57-1	Dieldrin	6.9	U
72-55-9	4,4'-DDE	9.8	PX
72-20-8	Endrin	6.9	U
33213-65-9	Endosulfan II	6.9	U
72-54-8	4,4'-DDD	6.9	U
1031-07-8	Endosulfan sulfate	6.9	U
50-29-3	4,4'-DDT	8.7	PX
72-43-5	Methoxychlor	36	U
53494-70-5	Endrin ketone	6.9	U
7421-93-4	Endrin aldehyde	6.9	U
5103-71-9	alpha-Chlordane	4.6	X
5103-74-2	gamma-Chlordane	3.6	U
8001-35-2	Toxaphene	360	U
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	120	P
12672-29-6	Aroclor-1248	69	U
11097-69-1	Aroclor-1254	180	P
11096-82-5	Aroclor-1260	41	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2C

ab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

atrix: (soil/water) SOIL Lab Sample ID: 183769

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

Moisture: 46 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.1	U
319-85-7	beta-BHC	3.1	U
319-86-8	delta-BHC	3.1	U
58-89-9	gamma-BHC (Lindane)	3.1	U
76-44-8	Heptachlor	3.1	U
309-00-2	Aldrin	3.1	U
1024-57-3	Heptachlor epoxide	3.1	U
959-98-8	Endosulfan I	3.1	U
60-57-1	Dieldrin	3.4	JPX
72-55-9	4,4'-DDE	17	PX
72-20-8	Endrin	4.5	JPX
33213-65-9	Endosulfan II	6.0	U
72-54-8	4,4'-DDD	13	PX
1031-07-8	Endosulfan sulfate	6.0	U
50-29-3	4,4'-DDT	12	PX
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6.0	U
7421-93-4	Endrin aldehyde	6.0	U
5103-71-9	alpha-Chlordane	3.1	U
5103-74-2	gamma-Chlordane	1.7	JPX
8001-35-2	Toxaphene	310	U
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	150	P
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	260	P
11096-82-5	Aroclor-1260	56	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2D

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183770

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 46 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.1	U
319-85-7	beta-BHC	3.1	U
319-86-8	delta-BHC	3.1	U
58-89-9	gamma-BHC (Lindane)	3.1	U
76-44-8	Heptachlor	3.1	U
309-00-2	Aldrin	3.1	U
1024-57-3	Heptachlor epoxide	3.1	U
959-98-8	Endosulfan I	3.1	U
60-57-1	Dieldrin	6.0	U
72-55-9	4,4'-DDE	6.6	PX
72-20-8	Endrin	6.0	U
33213-65-9	Endosulfan II	6.0	U
72-54-8	4,4'-DDD	3.7	JPX
1031-07-8	Endosulfan sulfate	6.0	U
50-29-3	4,4'-DDT	5.3	JX
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6.0	U
7421-93-4	Endrin aldehyde	6.0	U
5103-71-9	alpha-Chlordane	3.1	U
5103-74-2	gamma-Chlordane	3.1	U
8001-35-2	Toxaphene	310	U
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	71	P
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	160	P
11096-82-5	Aroclor-1260	30	JP

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3A

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183771

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

% Moisture: 29 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin ketone	4.6	U
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	2.4	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3B

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183772

Sample wt/vol: 30.5 (g/mL) G Lab File ID:

% Moisture: 30 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin ketone	4.6	U
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	5.4	
5103-74-2	gamma-Chlordane	4.8	
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3C

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183773

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 22 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD3D

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183774

Sample wt/vol: 30.7 (g/mL) G Lab File ID:

% Moisture: 24 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	U
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	4.2	U
33213-65-9	Endosulfan II	4.2	U
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW1

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183646

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.020	
76-44-8	Heptachlor	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0041	J
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW1F

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183647

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.0077	
76-44-8	Heptachlor	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183648

Sample wt/vol: 922.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0054	U
319-85-7	beta-BHC	0.0054	U
319-86-8	delta-BHC	0.0054	U
58-89-9	gamma-BHC (Lindane)	0.026	
76-44-8	Heptachlor	0.0054	U
309-00-2	Aldrin	0.0054	U
1024-57-3	Heptachlor epoxide	0.0054	U
959-98-8	Endosulfan I	0.0054	U
60-57-1	Dieldrin	0.011	U
72-55-9	4,4'-DDE	0.011	U
72-20-8	Endrin	0.011	U
33213-65-9	Endosulfan II	0.011	U
72-54-8	4,4'-DDD	0.011	U
1031-07-8	Endosulfan sulfate	0.011	U
50-29-3	4,4'-DDT	0.011	U
72-43-5	Methoxychlor	0.054	U
53494-70-5	Endrin ketone	0.011	U
7421-93-4	Endrin aldehyde	0.011	U
5103-71-9	alpha-Chlordane	0.0054	U
5103-74-2	gamma-Chlordane	0.0035	J
8001-35-2	Toxaphene	0.54	U
12674-11-2	Aroclor-1016	0.11	U
11104-28-2	Aroclor-1221	0.22	U
11141-16-5	Aroclor-1232	0.11	U
53469-21-9	Aroclor-1242	0.11	U
12672-29-6	Aroclor-1248	0.11	U
11097-69-1	Aroclor-1254	0.11	U
11096-82-5	Aroclor-1260	0.11	U

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2F

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183650

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0067	P
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.0050	U
76-44-8	Heptachlor	0.077	P
309-00-2	Aldrin	0.0079	P
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW3

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183651

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.0050	U
76-44-8	Heptachlor	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW3F

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183652

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.023	P
58-89-9	gamma-BHC (Lindane)	0.0035	JP
76-44-8	Heptachlor	0.22	PY
309-00-2	Aldrin	0.0084	P
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

GC Column(1): RTX-35 ID: 0.53(mm) GC Column(2): SPB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKZ7	84	86	96	94			0
02	MSB-S	68	70	92	91			0
03	TPSD1A	80	91	93	92			0
04	TPSD1B	72	88	102	100			0
05	TPSD1C	64	81	88	85			0
06	TPSD1D	70	85	87	83			0
07	TPSD2A	62	85	76	77			0
08	TPSD2B	70	78	79	76			0
09	TPSD2C	56*	64	62	64			1
10	TPSD2D	59*	70	81	86			1
11	TPSD3A	72	83	84	84			0
12	TPSD3B	90	90	92	90			0
13	TPSD3C	64	75	82	81			0
14	TPSD3D	68	74	80	80			0
15	TPSD2AMS	64	83	70	74			0
16	TPSD2AMSD	38*	47*	46*	44*			4

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

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

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

GC Column(1): RTX-35 ID: 0.53(mm) GC Column(2): SPB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKB9	69	76	74	69			0
02	FB	68	77	71	70			0
03	MSB	72	72	82	72			0
04	TPSW1	78	80	72	71			0
05	TPSW1F	76	96	82	80			0
06	TPSW2	76	78	74	72			0
07	TPSW2F	95	57*	90	84			1
08	TPSW3	64	70	88	74			0
09	TPSW3F	86	81	102	69			0
10	TPSW2MS	68	82	80	68			0
11	TPSW2MSD	76	71	76	68			0

ADVISORY QC LIMITS

TCX = Tetrachloro-m-xylene (60-150)
DCB = Decachlorobiphenyl (60-150)

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

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix Spike - EPA Sample No.: TPSW2

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0.258	0.524	53 *	56-123
Heptachlor	0.500	0	0.402	80	40-131
Aldrin	0.500	0	0.317	63	40-120
Dieldrin	0.999	0	0.860	86	52-126
Endrin	0.999	0	0.983	98	56-121
4,4'-DDT	0.999	0	0.760	76	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0.720	92	54 *	15	56-123
Heptachlor	0.500	0.418	84	5	31	40-131
Aldrin	0.500	0.328	66	5	22	40-120
Dieldrin	0.999	0.870	87	1	18	52-126
Endrin	0.999	0.986	99	1	21	56-121
4,4'-DDT	0.999	0.775	78	3	27	38-127

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

* Values outside of QC limits

RPD: 1 out of 6 outside limits
Spike Recovery: 1 out of 12 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix Spike - EPA Sample No.: TPSD2A

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	39.400	0	27.7	70	46-127
Heptachlor	39.400	0	28.3	72	35-130
Aldrin	39.400	0	25.0	63	34-132
Dieldrin	78.800	0	52.9	67	31-134
Endrin	78.800	0	61.1	78	42-139
4,4'-DDT	78.800	0	58.0	74	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	39.200	14.4	37 *	62 *	50	46-127
Heptachlor	39.200	16.2	41	55 *	31	35-130
Aldrin	39.200	12.8	33 *	62 *	43	34-132
Dieldrin	78.300	30.6	39	53 *	38	31-134
Endrin	78.300	35.0	45	54 *	45	42-139
4,4'-DDT	78.300	36.0	46	47	50	23-134

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

* Values outside of QC limits

RPD: 5 out of 6 outside limits
Spike Recovery: 2 out of 12 outside limits

COMMENTS:

3E

WATER MATRIX SPIKE BLANK RECOVERY

LAB NAME:	Aquatec,Inc.	CLIENT:	LAWMAT
LAB CODE:	AQUAI	CONTRACT:	93000
EPA SAMPLE No. :	MSB	CASE:	36681
AQUATEC LAB ID:	183650	SDG:	183644

COMPOUND	SPIKE ADDED (ug/L)	MSB CONC (ug/L)	MSB % REC	#	QC LIMITS
LINDANE	.500	.423	85		56-123
HEPTACHLOR	.500	.431	86		40-131
ALDRIN	.500	.305	61		40-120
DIELDRIN	1.00	.825	82		52-126
ENDRIN	1.00	.978	98		56-121
4,4'-DDT	1.00	.828	83		38-127

COLUMN USED TO FLAG RECOVERIES OUTSIDE QC LIMITS

SPIKE RECOVERY: 0 OUT OF 6 OUTSIDE LIMITS

COMMENTS: _____

FORM III PEST-I

3F

SOIL MATRIX SPIKE BLANK RECOVERY

LAB NAME:	Aquatec,Inc.	CLIENT:	LAW/NAT
LAB CODE:	AQUAI	CONTRACT:	93000
EPA SAMPLE No. :	MSB-S	CASE:	31616 81
AQUATEC LAB ID:	153767	SDG:	153644

COMPOUND	SPIKE ADDED (ug/kg)	MSB CONC (ug/kg)	MSB % REC	#	QC LIMITS
LINDANE	16.7	12.8	77		46-127
HEPTACHLOR	16.7	13.7	82		35-130
ALDRIN	16.7	13.3	80		34-132
DIELDRIN	33.3	28.2	85		31-134
ENDRIN	33.3	31.0	93		42-139
4,4'-DDT	33.3	31.8	95		23-134

COLUMN USED TO FLAG RECOVERIES OUTSIDE QC LIMITS

SPIKE RECOVERY: 0 OUT OF 6 OUTSIDE LIMITS

COMMENTS:

FORM III PEST-I

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKB9

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Lab Sample ID: PBLKB9 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 05/11/93

Date Analyzed (1): 05/29/93 Date Analyzed (2): 05/29/93

Time Analyzed (1): 0935 Time Analyzed (2): 0935

Instrument ID (1): 1319-1 Instrument ID (2): 1319-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): SPB-1701 ID: 0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	FB	183644	05/29/93	05/29/93
02	MSB	183649	05/29/93	05/29/93
03	TPSW1	183646	05/29/93	05/29/93
04	TPSW1F	183647	05/29/93	05/29/93
05	TPSW2	183648	05/29/93	05/29/93
06	TPSW2F	183650	06/05/93	06/05/93
07	TPSW3	183651	06/05/93	06/05/93
08	TPSW3F	183652	06/05/93	06/05/93
09	TPSW2MS	183648MS	05/29/93	05/29/93
10	TPSW2MSD	183648MD	05/29/93	05/29/93

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKZ7

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Lab Sample ID: PBLKZ7 Lab File ID:

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 05/13/93

Date Analyzed (1): 06/04/93 Date Analyzed (2): 06/04/93

Time Analyzed (1): 2302 Time Analyzed (2): 2302

Instrument ID (1): 1319-1 Instrument ID (2): 1319-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): SPB-1701 ID: 0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	MSB-S	183767	06/05/93	06/05/93
02	TPSD1A	183762	06/05/93	06/05/93
03	TPSD1B	183763	06/05/93	06/05/93
04	TPSD1C	183764	06/05/93	06/05/93
05	TPSD1D	183765	06/05/93	06/05/93
06	TPSD2A	183766	06/05/93	06/05/93
07	TPSD2B	183768	06/05/93	06/05/93
08	TPSD2C	183769	06/05/93	06/05/93
09	TPSD2D	183770	06/05/93	06/05/93
10	TPSD3A	183771	06/05/93	06/05/93
11	TPSD3B	183772	06/05/93	06/05/93
12	TPSD3C	183773	06/05/93	06/05/93
13	TPSD3D	183774	06/05/93	06/05/93
14	TPSD2AMS	183766MS	06/05/93	06/05/93
15	TPSD2AMSD	183766MD	06/05/93	06/05/93

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKB9

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: PBLKB9

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

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.0050	U
76-44-8	Heptachlor	0.0050	U
309-00-2	Aldrin	0.0050	U
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.010	U
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.010	U
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.010	U
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKZ7

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: PBLKZ7

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

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/04/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2AMS

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183766MS

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

% Moisture: 58 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.0	U
319-85-7	beta-BHC	4.0	U
319-86-8	delta-BHC	4.0	U
58-89-9	gamma-BHC (Lindane)	28	
76-44-8	Heptachlor	28	
309-00-2	Aldrin	25	X
1024-57-3	Heptachlor epoxide	4.0	U
959-98-8	Endosulfan I	4.0	U
60-57-1	Dieldrin	53	X
72-55-9	4,4'-DDE	7.8	U
72-20-8	Endrin	61	X
33213-65-9	Endosulfan II	7.8	U
72-54-8	4,4'-DDD	7.8	U
1031-07-8	Endosulfan sulfate	7.8	U
50-29-3	4,4'-DDT	58	PX
72-43-5	Methoxychlor	40	U
53494-70-5	Endrin ketone	7.8	U
7421-93-4	Endrin aldehyde	7.8	U
5103-71-9	alpha-Chlordane	4.0	U
5103-74-2	gamma-Chlordane	4.0	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	78	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	44	JP
11096-82-5	Aroclor-1260	78	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSD2AMSD

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183766MD

Sample wt/vol: 30.4 (g/mL) G Lab File ID:

% Moisture: 58 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.0	U
319-85-7	beta-BHC	4.0	U
319-86-8	delta-BHC	4.0	U
58-89-9	gamma-BHC (Lindane)	14	
76-44-8	Heptachlor	16	
309-00-2	Aldrin	13	
1024-57-3	Heptachlor epoxide	4.0	U
959-98-8	Endosulfan I	4.0	U
60-57-1	Dieldrin	31	
72-55-9	4,4'-DDE	7.8	U
72-20-8	Endrin	35	
33213-65-9	Endosulfan II	7.8	U
72-54-8	4,4'-DDD	7.8	U
1031-07-8	Endosulfan sulfate	7.8	U
50-29-3	4,4'-DDT	36	
72-43-5	Methoxychlor	40	U
53494-70-5	Endrin ketone	7.8	U
7421-93-4	Endrin aldehyde	7.8	U
5103-71-9	alpha-Chlordane	4.0	U
5103-74-2	gamma-Chlordane	4.0	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	78	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	78	U
11096-82-5	Aroclor-1260	78	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2MS

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183648MS

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.052	
76-44-8	Heptachlor	0.040	
309-00-2	Aldrin	0.032	
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.086	
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.098	
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.076	P
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.011	
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TPSW2MSD

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183648MD

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.072	
76-44-8	Heptachlor	0.042	
309-00-2	Aldrin	0.033	
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.087	
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.099	
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.078	
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0036	J
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

Revised 3/18

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSB

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) WATER Lab Sample ID: 183649

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

% Moisture: decanted: (Y/N) Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/29/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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	0.0050	U
319-85-7	beta-BHC	0.0050	U
319-86-8	delta-BHC	0.0050	U
58-89-9	gamma-BHC (Lindane)	0.042	
76-44-8	Heptachlor	0.043	
309-00-2	Aldrin	0.031	
1024-57-3	Heptachlor epoxide	0.0050	U
959-98-8	Endosulfan I	0.0050	U
60-57-1	Dieldrin	0.082	
72-55-9	4,4'-DDE	0.010	U
72-20-8	Endrin	0.098	
33213-65-9	Endosulfan II	0.010	U
72-54-8	4,4'-DDD	0.010	U
1031-07-8	Endosulfan sulfate	0.010	U
50-29-3	4,4'-DDT	0.083	
72-43-5	Methoxychlor	0.050	U
53494-70-5	Endrin ketone	0.010	U
7421-93-4	Endrin aldehyde	0.010	U
5103-71-9	alpha-Chlordane	0.0050	U
5103-74-2	gamma-Chlordane	0.0050	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.10	U
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MSB-S

Lab Name: AQUATEC INC Contract: 93000

Lab Code: AQUAI Case No.: 36681 SAS No.: SDG No.: 183644

Matrix: (soil/water) SOIL Lab Sample ID: 183767

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

% Moisture: 0 decanted: (Y/N) N Date Received: 05/08/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/13/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 06/05/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 9.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	13	
76-44-8	Heptachlor	14	
309-00-2	Aldrin	13	
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	28	
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	31	
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	32	
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

REFERENCE No. 3

APPENDIX B

NYSDOH SURFACE WATER
PCB DATA

0959 NEW YORK STATE DEPARTMENT OF HEALTH 040
WADSWORTH CENTER FOR LABORATORIES AND RESEARCH

PAGE 1 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931078 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
PROGRAM: 7000:BUREAU OF TECHNICAL SERVICES AND RESEARCH - GENERAL
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE:0102
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LATITUDE: . LONGITUDE: . Z DIRECTION:
LOCATION: MOHAWK RIVER
DESCRIPTION:A268-01
REPORTING LAB: TOX:LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: PCBCONGW:PCB CONGENER SPECIFIC ANALYSIS
SAMPLE TYPE: 210:SURFACE WATER
TIME OF SAMPLING: 93/05/06 13:30 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

ANALYSIS: PCBCONGW PCB CONGENER ANALYSIS
DATE PRINTED: 93/06/18 FINAL REPORT

----------PARAMETER----------	----------RESULT----------
BZ-1 (2-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-2 (3-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-3 (4-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-10, BZ-4	< 1. NANOGM/L
|---> 2,2'-DICHLOROBIPHENYL	
|---> 2,6-DICHLOROBIPHENYL	
BZ-7, BZ-9	< 1. NANOGM/L
|---> 2,4-DICHLOROBIPHENYL	
|---> 2,5-DICHLOROBIPHENYL	
BZ-6 (2,3'-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-8, BZ-5	< 1. NANOGM/L
|---> 2,3-DICHLOROBIPHENYL	
|---> 2,4'-DICHLOROBIPHENYL	
HEXACHLOROBENZENE	< 1. NANOGM/L
BZ-19 (2,2',6-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-12 (3,4-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-18 (2,2',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-15, BZ-17	< 1. NANOGM/L
|---> 4,4'-DICHLOROBIPHENYL	
|---> 2,2',4-TRICHLOROBIPHENYL	
BZ-24, BZ-27	< 1. NANOGM/L
|---> 2,3,6-TRICHLOROBIPHENYL	
|---> 2,3',6-TRICHLOROBIPHENYL	
BZ-16, BZ-32	< 1. NANOGM/L
|---> 2,4',6-TRICHLOROBIPHENYL	
|---> 2,2',3-TRICHLOROBIPHENYL	
BZ-29 (2,4,5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-26 (2,3',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-25 (2,3',4-TRICHLOROBIPHENYL)	< 1. NANOGM/L

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JACK RYAN
NYS DEPT. OF ENVIRONMENTAL CONSERVATION
BUREAU OF TECH. SERVICES AND RESEARCH SUBMITTED BY:NYSDEC
50 WOLF RD. ROOM 301
ALBANY ***INTERAGENCY MAIL***

SAMPLE ID: 931078 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 13:30 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

PARAMETER	RESULT
BZ-110, BZ-77, BZ-136	< 1. NANOGM/L
|---> 2,2',3,3',6,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4',6-PENTACHLOROBIPHENYL	
|---> 3,3',4,4'-TETRACHLOROBIPHENYL	
BZ-82, BZ-151	< 1. NANOGM/L
|---> 2,2',3,5,5',6-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',4-PENTACHLOROBIPHENYL	
BZ-135	< 1. NANOGM/L
|---> 2,2',3,3',5,6'-HEXACHLOROBIPHENYL	
BZ-107 (2,3,3',4',5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-123, BZ-149, BZ-118	< 1. NANOGM/L
|---> 2,3',4,4',5-PENTACHLOROBIPHENYL	
|---> 2',3,4,4',5-PENTACHLOROBIPHENYL	
|---> 2,2',3,4',5',6-HEXACHLOROBIPHENYL	
BZ-134	< 1. NANOGM/L
|---> 2,2',3,3',5,6-HEXACHLOROBIPHENYL	
BZ-146	< 1. NANOGM/L
|---> 2,2',3,4',5,5'-HEXACHLOROBIPHENYL	
BZ-122 (2',3,3',4,5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-153	< 1. NANOGM/L
|---> 2,2',4,4',5,5'-HEXACHLOROBIPHENYL	
BZ-132, BZ-105	< 1. NANOGM/L
|---> 2,2',3,3',4,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4,4'-PENTACHLOROBIPHENYL	
BZ-141, BZ-179	< 1. NANOGM/L
|---> 2,2',3,4,5,5'-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL	
BZ-130	< 1. NANOGM/L
|---> 2,2',3,3',4,5'-HEXACHLOROBIPHENYL	
BZ-137	< 1. NANOGM/L
|---> 2,2',3,4,4',5-HEXACHLOROBIPHENYL	
BZ-176	< 1. NANOGM/L
|---> 2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL	
BZ-138	< 1. NANOGM/L
|---> 2,2',3,4,4',5'-HEXACHLOROBIPHENYL	
BZ-158	< 1. NANOGM/L
|---> 2,3,3',4,4',6-HEXACHLOROBIPHENYL	
BZ-129, BZ-178	< 1. NANOGM/L
|---> 2,2',3,3',4,5-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL	
BZ-175	< 1. NANOGM/L
|---> 2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL	
BZ-187	< 1. NANOGM/L
|---> 2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	
BZ-183	< 1. NANOGM/L
|---> 2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL	

**** CONTINUED ON NEXT PAGE ****

PAGE 5 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931078 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 13:30 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

FOLLOWING PARAMETERS NOT PART OF TEST PATTERN

----------PARAMETER----------	----------RESULT----------
TEMPERATURE, WATER, FIELD	18.7 DEG. C

**** END OF REPORT ****

PAGE 1 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931079 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
PROGRAM: 7000:BUREAU OF TECHNICAL SERVICES AND RESEARCH - GENERAL
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE:0102
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LATITUDE: . LONGITUDE: . Z DIRECTION:
LOCATION: MOHAWK RIVER
DESCRIPTION:A268-02
REPORTING LAB: TOX:LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: PCBCONGW:PCB CONGENER SPECIFIC ANALYSIS
SAMPLE TYPE: 210:SURFACE WATER
TIME OF SAMPLING: 93/05/06 14:30 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

ANALYSIS: PCBCONGW PCB CONGENER ANALYSIS
DATE PRINTED: 93/06/18 FINAL REPORT

PARAMETER	RESULT
BZ-1 (2-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-2 (3-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-3 (4-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-10, BZ-4	< 1. NANOGM/L
|---> 2,2'-DICHLOROBIPHENYL	
|---> 2,6-DICHLOROBIPHENYL	
BZ-7, BZ-9	< 1. NANOGM/L
|---> 2,4-DICHLOROBIPHENYL	
|---> 2,5-DICHLOROBIPHENYL	
BZ-6 (2,3'-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-8, BZ-5	< 1. NANOGM/L
|---> 2,3-DICHLOROBIPHENYL	
|---> 2,4'-DICHLOROBIPHENYL	
HEXACHLOROBENZENE	< 1. NANOGM/L
BZ-19 (2,2',6-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-12 (3,4-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-18 (2,2',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-15, BZ-17	< 1. NANOGM/L
|---> 4,4'-DICHLOROBIPHENYL	
|---> 2,2',4-TRICHLOROBIPHENYL	
BZ-24, BZ-27	< 1. NANOGM/L
|---> 2,3,6-TRICHLOROBIPHENYL	
|---> 2,3',6-TRICHLOROBIPHENYL	
BZ-16, BZ-32	< 1. NANOGM/L
|---> 2,4',6-TRICHLOROBIPHENYL	
|---> 2,2',3-TRICHLOROBIPHENYL	
BZ-29 (2,4,5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-26 (2,3',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-25 (2,3',4-TRICHLOROBIPHENYL)	< 1. NANOGM/L

**** CONTINUED ON NEXT PAGE ****

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50 WOLF RD. ROOM 301
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PAGE 3 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931079 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 14:30 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

PARAMETER	RESULT
BZ-110, BZ-77, BZ-136	< 1. NANOGM/L
|---> 2,2',3,3',6,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4',6-PENTACHLOROBIPHENYL	
|---> 3,3',4,4'-TETRACHLOROBIPHENYL	
BZ-82, BZ-151	< 1. NANOGM/L
|---> 2,2',3,5,5',6-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',4-PENTACHLOROBIPHENYL	
BZ-135	< 1. NANOGM/L
|---> 2,2',3,3',5,6'-HEXACHLOROBIPHENYL	
BZ-107 (2,3,3',4',5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-123, BZ-149, BZ-118	< 1. NANOGM/L
|---> 2,3',4,4',5-PENTACHLOROBIPHENYL	
|---> 2',3,4,4',5-PENTACHLOROBIPHENYL	
|---> 2,2',3,4',5',6-HEXACHLOROBIPHENYL	
BZ-134	< 1. NANOGM/L
|---> 2,2',3,3',5,6-HEXACHLOROBIPHENYL	
BZ-146	< 1. NANOGM/L
|---> 2,2',3,4',5,5'-HEXACHLOROBIPHENYL	
BZ-122 (2',3,3',4,5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-153	< 1. NANOGM/L
|---> 2,2',4,4',5,5'-HEXACHLOROBIPHENYL	
BZ-132, BZ-105	< 1. NANOGM/L
|---> 2,2',3,3',4,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4,4'-PENTACHLOROBIPHENYL	
BZ-141, BZ-179	< 1. NANOGM/L
|---> 2,2',3,4,5,5'-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL	
BZ-130	< 1. NANOGM/L
|---> 2,2',3,3',4,5'-HEXACHLOROBIPHENYL	
BZ-137	< 1. NANOGM/L
|---> 2,2',3,4,4',5-HEXACHLOROBIPHENYL	
BZ-176	< 1. NANOGM/L
|---> 2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL	
BZ-138	< 1. NANOGM/L
|---> 2,2',3,4,4',5'-HEXACHLOROBIPHENYL	
BZ-158	< 1. NANOGM/L
|---> 2,3,3',4,4',6-HEXACHLOROBIPHENYL	
BZ-129, BZ-178	< 1. NANOGM/L
|---> 2,2',3,3',4,5-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL	
BZ-175	< 1. NANOGM/L
|---> 2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL	
BZ-187	< 1. NANOGM/L
|---> 2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	
BZ-183	< 1. NANOGM/L
|---> 2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL	

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SAMPLE ID: 931079 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 14:30 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

FOLLOWING PARAMETERS NOT PART OF TEST PATTERN

----------PARAMETER----------	----------RESULT----------
TEMPERATURE, WATER, FIELD	20.9 DEG. C

**** END OF REPORT ****

0995 NEW YORK STATE DEPARTMENT OF HEALTH 040
WADSWORTH CENTER FOR LABORATORIES AND RESEARCH

PAGE 1 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931081 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
PROGRAM: 7000:BUREAU OF TECHNICAL SERVICES AND RESEARCH - GENERAL
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE:0102
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LATITUDE: . LONGITUDE: . Z DIRECTION:
LOCATION: MOHAWK RIVER
DESCRIPTION:A268-04
REPORTING LAB: TOX:LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: PCBCONGW:PCB CONGENER SPECIFIC ANALYSIS
SAMPLE TYPE: 210:SURFACE WATER
TIME OF SAMPLING: 93/05/06 15:40 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

ANALYSIS: PCBCONGW PCB CONGENER ANALYSIS
DATE PRINTED: 93/06/18 FINAL REPORT

PARAMETER	RESULT
BZ-1 (2-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-2 (3-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-3 (4-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-10, BZ-4	< 1. NANOGM/L
|---> 2,2'-DICHLOROBIPHENYL	
|---> 2,6-DICHLOROBIPHENYL	
BZ-7, BZ-9	< 1. NANOGM/L
|---> 2,4-DICHLOROBIPHENYL	
|---> 2,5-DICHLOROBIPHENYL	
BZ-6 (2,3'-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-8, BZ-5	< 1. NANOGM/L
|---> 2,3-DICHLOROBIPHENYL	
|---> 2,4'-DICHLOROBIPHENYL	
HEXACHLOROBENZENE	< 1. NANOGM/L
BZ-19 (2,2',6-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-12 (3,4-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-18 (2,2',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-15, BZ-17	< 1. NANOGM/L
|---> 4,4'-DICHLOROBIPHENYL	
|---> 2,2',4-TRICHLOROBIPHENYL	
BZ-24, BZ-27	< 1. NANOGM/L
|---> 2,3,6-TRICHLOROBIPHENYL	
|---> 2,3',6-TRICHLOROBIPHENYL	
BZ-16, BZ-32	< 1. NANOGM/L
|---> 2,4',6-TRICHLOROBIPHENYL	
|---> 2,2',3-TRICHLOROBIPHENYL	
BZ-29 (2,4,5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-26 (2,3',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-25 (2,3',4-TRICHLOROBIPHENYL)	< 1. NANOGM/L

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BUREAU OF TECH. SERVICES AND RESEARCH SUBMITTED BY:NYSDEC
50 WOLF RD. ROOM 301
ALBANY ***INTERAGENCY MAIL***

SAMPLE ID: 931081 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 15:40 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

PARAMETER	RESULT
BZ-110, BZ-77, BZ-136	< 1. NANOGM/L
|---> 2,2',3,3',6,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4',6-PENTACHLOROBIPHENYL	
|---> 3,3',4,4'-TETRACHLOROBIPHENYL	
BZ-82, BZ-151	< 1. NANOGM/L
|---> 2,2',3,5,5',6-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',4-PENTACHLOROBIPHENYL	
BZ-135	< 1. NANOGM/L
|---> 2,2',3,3',5,6'-HEXACHLOROBIPHENYL	
BZ-107 (2,3,3',4',5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-123, BZ-149, BZ-118	< 1. NANOGM/L
|---> 2,3',4,4',5-PENTACHLOROBIPHENYL	
|---> 2',3,4,4',5-PENTACHLOROBIPHENYL	
|---> 2,2',3,4',5',6-HEXACHLOROBIPHENYL	
BZ-134	< 1. NANOGM/L
|---> 2,2',3,3',5,6-HEXACHLOROBIPHENYL	
BZ-146	< 1. NANOGM/L
|---> 2,2',3,4',5,5'-HEXACHLOROBIPHENYL	
BZ-122 (2',3,3',4,5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-153	< 1. NANOGM/L
|---> 2,2',4,4',5,5'-HEXACHLOROBIPHENYL	
BZ-132, BZ-105	< 1. NANOGM/L
|---> 2,2',3,3',4,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4,4'-PENTACHLOROBIPHENYL	
BZ-141, BZ-179	< 1. NANOGM/L
|---> 2,2',3,4,5,5'-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL	
BZ-130	< 1. NANOGM/L
|---> 2,2',3,3',4,5'-HEXACHLOROBIPHENYL	
BZ-137	< 1. NANOGM/L
|---> 2,2',3,4,4',5-HEXACHLOROBIPHENYL	
BZ-176	< 1. NANOGM/L
|---> 2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL	
BZ-138	< 1. NANOGM/L
|---> 2,2',3,4,4',5'-HEXACHLOROBIPHENYL	
BZ-158	< 1. NANOGM/L
|---> 2,3,3',4,4',6-HEXACHLOROBIPHENYL	
BZ-129, BZ-178	< 1. NANOGM/L
|---> 2,2',3,3',4,5-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL	
BZ-175	< 1. NANOGM/L
|---> 2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL	
BZ-187	< 1. NANOGM/L
|---> 2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	
BZ-183	< 1. NANOGM/L
|---> 2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL	

**** CONTINUED ON NEXT PAGE ****

0983 NEW YORK STATE DEPARTMENT OF HEALTH 040
WADSWORTH CENTER FOR LABORATORIES AND RESEARCH

PAGE 1 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931080 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
PROGRAM: 7000:BUREAU OF TECHNICAL SERVICES AND RESEARCH - GENERAL
SOURCE ID: DRAINAGE BASIN: GAZETTEER CODE:0102
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LATITUDE: . LONGITUDE: . Z DIRECTION:
LOCATION: MOHAWK RIVER
DESCRIPTION:A268-03
REPORTING LAB: TOX:LAB FOR ORGANIC ANALYTICAL CHEMISTRY
TEST PATTERN: PCBCONGW:PCB CONGENER SPECIFIC ANALYSIS
SAMPLE TYPE: 210:SURFACE WATER
TIME OF SAMPLING: 93/05/06 15:00 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

ANALYSIS: PCBCONGW PCB CONGENER ANALYSIS
DATE PRINTED: 93/06/18 FINAL REPORT

----------PARAMETER----------	----------RESULT----------
BZ-1 (2-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-2 (3-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-3 (4-CHLOROBIPHENYL)	< 5. NANOGM/L
BZ-10, BZ-4	< 1. NANOGM/L
|---> 2,2'-DICHLOROBIPHENYL	
|---> 2,6-DICHLOROBIPHENYL	
BZ-7, BZ-9	< 1. NANOGM/L
|---> 2,4-DICHLOROBIPHENYL	
|---> 2,5-DICHLOROBIPHENYL	
BZ-6 (2,3'-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-8, BZ-5	< 1. NANOGM/L
|---> 2,3-DICHLOROBIPHENYL	
|---> 2,4'-DICHLOROBIPHENYL	
HEXACHLOROBENZENE	< 1. NANOGM/L
BZ-19 (2,2',6-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-12 (3,4-DICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-18 (2,2',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-15, BZ-17	< 1. NANOGM/L
|---> 4,4'-DICHLOROBIPHENYL	
|---> 2,2',4-TRICHLOROBIPHENYL	
BZ-24, BZ-27	< 1. NANOGM/L
|---> 2,3,6-TRICHLOROBIPHENYL	
|---> 2,3',6-TRICHLOROBIPHENYL	
BZ-16, BZ-32	< 1. NANOGM/L
|---> 2,4',6-TRICHLOROBIPHENYL	
|---> 2,2',3-TRICHLOROBIPHENYL	
BZ-29 (2,4,5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-26 (2,3',5-TRICHLOROBIPHENYL)	< 1. NANOGM/L
BZ-25 (2,3',4-TRICHLOROBIPHENYL)	< 1. NANOGM/L

**** CONTINUED ON NEXT PAGE ****

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NYS DEPT. OF ENVIRONMENTAL CONSERVATION
BUREAU OF TECH. SERVICES AND RESEARCH SUBMITTED BY:NYSDEC
50 WOLF RD. ROOM 301
ALBANY ***INTERAGENCY MAIL***

SAMPLE ID: 931080 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 15:00 DATE PRINTED:93/06/21
CASE:SHO93 SDG:0506 CUST.NO.:6300

PARAMETER	RESULT
BZ-110, BZ-77, BZ-136	< 1. NANOGM/L
|---> 2,2',3,3',6,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4',6-PENTACHLOROBIPHENYL	
|---> 3,3',4,4'-TETRACHLOROBIPHENYL	
BZ-82, BZ-151	< 1. NANOGM/L
|---> 2,2',3,5,5',6-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',4-PENTACHLOROBIPHENYL	
BZ-135	< 1. NANOGM/L
|---> 2,2',3,3',5,6'-HEXACHLOROBIPHENYL	
BZ-107 (2,3,3',4',5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-123, BZ-149, BZ-118	< 1. NANOGM/L
|---> 2,3',4,4',5-PENTACHLOROBIPHENYL	
|---> 2',3,4,4',5-PENTACHLOROBIPHENYL	
|---> 2,2',3,4',5',6-HEXACHLOROBIPHENYL	
BZ-134	< 1. NANOGM/L
|---> 2,2',3,3',5,6-HEXACHLOROBIPHENYL	
BZ-146	< 1. NANOGM/L
|---> 2,2',3,4',5,5'-HEXACHLOROBIPHENYL	
BZ-122 (2',3,3',4,5-PENTACHLOROBIPHENYL)	< 1. NANOGM/L
BZ-153	< 1. NANOGM/L
|---> 2,2',4,4',5,5'-HEXACHLOROBIPHENYL	
BZ-132, BZ-105	< 1. NANOGM/L
|---> 2,2',3,3',4,6'-HEXACHLOROBIPHENYL	
|---> 2,3,3',4,4'-PENTACHLOROBIPHENYL	
BZ-141, BZ-179	< 1. NANOGM/L
|---> 2,2',3,4,5,5'-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL	
BZ-130	< 1. NANOGM/L
|---> 2,2',3,3',4,5'-HEXACHLOROBIPHENYL	
BZ-137	< 1. NANOGM/L
|---> 2,2',3,4,4',5-HEXACHLOROBIPHENYL	
BZ-176	< 1. NANOGM/L
|---> 2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL	
BZ-138	< 1. NANOGM/L
|---> 2,2',3,4,4',5'-HEXACHLOROBIPHENYL	
BZ-158	< 1. NANOGM/L
|---> 2,3,3',4,4',6-HEXACHLOROBIPHENYL	
BZ-129, BZ-178	< 1. NANOGM/L
|---> 2,2',3,3',4,5-HEXACHLOROBIPHENYL	
|---> 2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL	
BZ-175	< 1. NANOGM/L
|---> 2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL	
BZ-187	< 1. NANOGM/L
|---> 2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	
BZ-183	< 1. NANOGM/L
|---> 2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL	

**** CONTINUED ON NEXT PAGE ****

PAGE 5 RESULTS OF EXAMINATION FINAL REPORT

SAMPLE ID: 931080 SAMPLE RECEIVED:93/05/07/ CHARGE: 8.00
POLITICAL SUBDIVISION:COHOES C. COUNTY:ALBANY
LOCATION: MOHAWK RIVER
TIME OF SAMPLING: 93/05/06 15:00 DATE PRINTED:93/06/21
CASE:SH093 SDG:0506 CUST.NO.:6300

FOLLOWING PARAMETERS NOT PART OF TEST PATTERN

----------PARAMETER----------	----------RESULT----------
TEMPERATURE, WATER, FIELD	20.8 DEG. C

**** END OF REPORT ****