

**FINAL
SITE CHARACTERIZATION REPORT
Solvent Finishers Site
(Site No.:1-30-172)
Westbury, New York**

Prepared for

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Section 1

Introduction

This Site Characterization Report for the Solvent Finishers located at 601-603 Cantiague Rock Road in Westbury, Nassau County, New York herein referred to as "the Site" was prepared by Camp Dresser and McKee (CDM) for the New York State Department of Environmental Conservation (NYSDEC) under the Engineering Services for Investigation and Design, Standby Contract No. D004437. This report details the results of the field investigation conducted in accordance with the Site Characterization Work Plan dated January 2008. This Site Characterization Report was developed in accordance with the "State Superfund Standby Contract Work Assignment D004437-10, Site Characterization, Solvent Finishers, Site No. 130172." The Work Plan and this Site Characterization Report also follows the guidelines set forth in the "*Draft Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation, dated December 2002*".

The Site Characterization performed under this Work Assignment consisted of a records search, geophysical survey, soil and groundwater screening using a membrane interface probe (MIP), the collection of direct push soil samples, the collection of soil vapor samples, and the collection of groundwater grab samples from the Geoprobe. The records search report was submitted as a standalone document simultaneously with the Work Plan. Results of the records report are also detailed in the operational history and previous investigations sections of this report.

This report is comprised of the following sections:

- **Section 1 - Introduction**

This section presents the Site background and history, location, operational and remedial history, potential sources, as well as the project objectives

- **Section 2 - Physical Setting**

This section presents the physical conditions of the Site and surroundings, including a general description of soils, geology, hydrogeology, and topography, as well as the groundwater level and flow direction

- **Section 3 - Site Investigation**

This section provides the investigation procedures and any variations which may have influenced sampling procedures or analytical results

- **Section 4 - Analytical Results**

This section presents and evaluates the analytical results of the soil and groundwater samples collected at the Site in comparison to acceptable New York State standards

- **Section 5 -Conclusions and Recommendations**

This section presents the conclusions based upon the analytical results of the Site investigation and presents recommendations for potential future work.

1.1 Site Description and Background

1.1.1 Site Description

The Solvent Finishers Site is a 3.8 acre tract located at 601-603 Cantiague Rock Road, Westbury, Nassau County, Long Island, New York. The property is comprised of Nassau County Section 11, Block B, Lots 42, 993 and 994. The property is improved with two adjoining buildings constructed in the 1960s. The structures are single story, of masonry construction, and equipped with three loading areas.

The property is surrounded by industrial, commercial, and residential properties (See Figure 1-1). More specifically, the Site is bordered by Cantiague Rock Road to the north and east, a movie theatre and BJs Wholesale club to the south, and a BMW distribution center and dealership to the west. Located southeast of the Site is Building 609 which is occupied by For Animals in the Hospital Inc., Hassal Inc., and Kraft Foods Inc. Shames Drive Industrial Park is located southwest of the Site.

The Site is currently occupied by Rubies Costume Company (Rubies), which operates as a fabric cutting facility for costumes. This site characterization was performed under the guidance of the NYSDEC and under the suspicion that the site, while operated by Solvent Finishers, may have contributed to the tetrachloroethene (PCE) contamination found in groundwater down gradient from the site.

1.1.2 Operational History

Historically the site operated as a manufacturer of artificial leather and plastics (Suval Fabrications), an industrial dry cleaner (Solvent Finishers), a manufacturer of imprinted and embroidered sportswear (College House Inc) and now as a fabric cutting facility (Rubies). The site has been developed and used for industrial operations since as early as 1960. Based on a 1968 Sanborn Fire Insurance map and Nassau County property cards, the site was occupied by Suval Fabrications Inc., a manufacturer of artificial leather and plastics in 1960 when the main building located at 601 Cantiague Rock Road was constructed. Suval Fabrications occupied the site until at least 1966 when the secondary building was constructed (603 Cantiague Rock Road). A site sketch provided by Solvent Finishers to the County Health Department identifies the occupant of 603 Cantiague Roack Road as International Laminations. No additional information on International Laminations was found. It is not known when operations of Suval Fabrications Inc. ceased or when Solvent Finishers Inc. operations began. The earliest documented date indicating Solvent Finishers operated on site is October 1977.

During the period that Solvent Finishers operated as an industrial dry cleaner at the site, they reportedly used up to 11,000 gallons of tetrachloroethylene (PCE) annually to clean large rolls of fabric on an automated system. Routine inspections by the Nassau County Department of Health (NCDOH) identified several violations pertaining to improper liquid waste discharge activities containing levels of PCE that exceed NYSDEC groundwater standards. Waste water was noted as being

discharged directly onto the ground surface and into onsite dry wells. A site survey from 1960 identified seven dry wells on the subject property.

On October 19, 1977, NCDOH sampled a discharge pipe at Solvent Finishers located in the rear of the facility under a grate (dry well). The result detected 20,000,000 ppb of PCE in the effluent.

In April of 1978, NCDOH notified Solvent Finishers of the exceeding levels of PCE. Meetings following this notification led to the installation of an underground holding tank. The tank was designed to hold liquid waste containing PCE for pickup and removal by a licensed waste management firm. In August of 1978, a draft New York State Pollutant Discharge Elimination System (SPDES) Permit was issued for this action. A final SPDES Permit however, was never issued.

In the summer of 1978, Solvent Finishers installed a pump and automatic controls on the holding tank. This system was installed to prevent tank overflow; liquid waste would be pumped to the facility cooling tower when tank capacity became alarmingly high. This system would treat the PCE via evaporation. Periodically, wastewater would be pumped out of the holding tank and transported off site by a licensed waste hauler.

NCDOH re-inspected the facility's liquid waste discharge operation from August through November 1978. Inspections indicated that the treatment system was ineffective and occasionally the holding tank and/or cooling tower would overflow onto the surface of the ground. Furthermore, a SPDES Permit for the circulation of waste water to the cooling tower was never submitted and therefore an official "Notice of Violation" was served to Solvent Finishers on December 1, 1978. Discharge of any liquid waste without a SPDES Permit is a direct violation of the New York State Environmental Law, Article 17 Title 8.

In January 1979, NCDOH returned to the site once again. NCDOH sampled the cooling tower and a puddle on the ground suspected to be boiler condensate and runoff. Analytical results detected 160.5 ppb of trichloroethylene (TCE) in the condensate runoff and 47.2 ppb of chloroform in the cooling tower.

On April 26, 1979, NCDOH issued a letter to the New York State Department of Environmental Conservation (NYSDEC) to inform them of Solvent Finishers past liquid waste discharge violations and investigative results. To explain the presence of PCE and TCE, NCDOH proposed that a residue was left from the discharge of contaminated liquid prior to the installation of the holding tank. The letter also stated that NCDOH was unaware of any provisions for containment of overflow from the cooling tower. NCDOH recommended monitoring for PCE regularly until Solvent Finishers demonstrated liquid discharge practices to a confined holding tank or cooling tower.

It is not known when occupancy by Solvent Finishers ceased, however it is known that from 1985 to 1995 The College House Inc. company operated at the subject

property. At that time the property owner was the Skodnek Company as indicated on a 1985 permit application to erect a display sign on the property. The College House Inc. conducted screen printing of college sportswear. No other information regarding the College House Inc. was found.

Following tenancy by The College House Inc. company, Rubies Costume Company (Rubies) took over occupancy at 601-603 Cantiague Rock Road. Rubies operates as a costume manufacturing company. At present, the facility is used only for storage and cutting of fabrics. The records search did not yield any results that indicated the use of solvents on site during the ownership by Rubies Costume Company. The records search did yield several NY Manifests identifying the waste generator as College House Incorporated. Wastes generated included non-listed ignitable wastes, non-listed corrosive wastes, silver, 1,1,1-trichloroethane, and tetrachloroethylene. The May 17, 2007 site visit further supported that solvents were not utilized at Rubies Costume Company, as none were observed while on site.

In 1998, while removing an abandoned cesspool and removing/replacing an onsite 8-foot diameter by 20-foot deep dry well, approximately 59 tons of PCE contaminated soil was excavated from the subject property. The excavated material was exported to the Horizon Landfill located in Quebec, Canada. Rubie's notification of intent to export allowed only 40 tons of PCE contaminated soil to be shipped. The United States Environmental Protection Agency (EPA) issued a "Notice of Violation" to Rubie's Costume Company for shipping 19 tons in exceedance of their notification to export. EPA's letter stated the following violations occurred: 1) Failure to submit a written notification of exceedance of the estimated quantity of hazardous waste specified in the original notification; 2) Failure to obtain consent of receiving country to changes in the notification of intent to export prior to shipment. This incident appears to be in conjunction with a previous investigation and clean up conducted at the site by Tyree Brothers Environmental Services, Inc., which is detailed in the next section.

It is believed that between 1978 and 1985 that the property was connected to the county sanitary sewer system. The Nassau County Health Department does not have record of the switch from septic system to sanitary sewer in their database dating back to 1985. An Industrial Chemical Survey, from the Bureau of Water Pollution Control of the Nassau County Health Department indicates that as of August 2, 1987 Solvent Finishers Inc. was not discharging liquid wastes to a municipally owned sanitary sewer system but rather to the cesspool. As indicated above, that excavation of the abandoned cesspool occurred during remedial activities in 1998, indicating that sometime between the survey and 1985 the property was tied into the sanitary sewer system and the cesspool was abandoned in place.

1.1.3 Previous Investigations

Tyree Brothers Environmental Services, Inc. (Tyree) conducted a Phase I Environmental Site Assessment (ESA) at the Site in 1997. Based on the findings of the Phase I ESA, Tyree conducted a site investigation in early 1998. The investigation

included the collection of soil samples from three drywells (DW-1 through DW-3) and the primary cesspool on the Site. Samples were analyzed for volatile organic compounds, semi-volatile organic compounds, and metals. Sampling data indicated that soils in the primary cesspool were impacted above NYSDEC TAGM #4046 soil cleanup guidelines for tetrachloroethene (PCE). Specifically, soil at 10-12 feet bgs in the cesspools had a concentration of 2.4 mg/kg of PCE. Drywells DW- 1, DW-2, and DW-3 were impacted by volatile and semi-volatile organics and metals above NYSDEC TAGM soil cleanup guidelines as well. The table below identifies the concentrations exceeding the TAGM guidelines in these three drywells.

Compound	Concentration (mg/kg)		
	DW-1	DW-2	DW-3
VOCs			
Tetrachloroethene			1.52
SVOCs			
Bis(2-ethyl-hexyl phthalate)	73	55	1180
D-n-butylphthalate			8.9
Benzo(b)fluoranthene			2.1
Benzo(a)pyrene			1.52
Acenaphthene			0.607
Benzo(a)anthracene	1.1		
Metals			
Cadmium	3.76	2.4	8.97
Chromium	21.8	29.4	38.3
Lead	135	123	222
Mercury		0.371	0.311
Copper		862	31.2
Zinc	121	434	164

Based on these results, in March 1998, NCDOH recommended that the owner remediate drywells DW-1, DW-2 and DW-3 and the primary cesspool. In addition they requested samples be collected from the bottoms of drywells DW-4, DW-5 and DW-6 and the overflow cesspool.

In response to NCDOH's request, Tyree conducted 'clean-outs' of storm water drywells one through six (DW-1through DW-6) by excavating visually impacted sludges and soils. The cleanouts were followed by confirmatory endpoint sampling. Four additional overflow drywells were discovered during the remediation phase; three of which were attached to DW-6 (DW 6 a-c) and one connected to DW-3 (DW - 3a). The four additional drywells were also remediated in the same manner. At the time of remediation, DW-6 could not be excavated to a visually clean state due to the concern of ring structure collapse. At that time, sludge and soil was removed from the dry well to approximately 20 feet below ground surface (bgs), and a soil boring was installed through the bottom of the drywell. Soil samples were collected at 30-32

and 40-42 feet bgs to determine the extent of contamination. Soil samples collected indicated that elevated levels of total petroleum hydrocarbons remained at 40-42 fbg.

'Clean-outs' were also performed at the primary and overflow cesspool locations. After excavation, endpoint samples indicated that soil remained impacted by volatile organic compounds above regulatory guidelines in the overflow cesspool. A soil boring was installed through the cesspool, and a soil sample was taken at 23-25 fbg, which remained impacted by volatile organics above regulatory guidelines. Based on the results of these remedial activities, NCDOH recommended that the overflow cesspool be excavated to a depth of approximately 23-25 feet bgs and DW-6 excavated to approximately 40-42 feet bgs

In October 1998 Tyree excavated soil from the on-site overflow cesspool to a depth of 22 feet bgs. One bottom sample was collected following excavation. The sample was analyzed for VOCs by EPA Method 8260. The results identified 0.281 mg/kg PCE, which is below the TAGM#4046 soil cleanup guidelines.

Contaminated soil was also excavated from drywell DW-6 to a depth of 40 feet bgs. A bottom sample was collected from this location following excavation. The sample results were within the soil cleanup guidelines. No groundwater samples were collected during the Tyree investigation or remedial activities.

1.2 Project Objectives

The objective of this site characterization is to determine if soil and groundwater at the Site have been contaminated by tetracholorethylene (PCE) from historic operations at the site. The investigation will focus on determining groundwater flow direction, the level of contamination, and the possible sources of contamination. The results of the investigation will be used to determine if the site should be listed as a New York State Hazardous Waste Site. In order to achieve this objective, the following activities were conducted:

- Task 1A - Site Visit and Work Plan Development
 - A site visit was conducted on May 17, 2007. A Work Plan was developed which included a site specific Health and Safety Plan (HASP) and a Citizen Participation Plan (CPP). The HASP described the site health and safety for the field activities that were performed and included the Community Air Monitoring Plan (CAMP).
- Task 1B – Records Search
 - A records search was performed to meet the requirements of NYSDEC's *Draft DER-10 Technical Guidance for Site Investigation and Remediation* dated December 2002. Data collected during the records/background search was summarized in a Record Search Report and utilized to develop and design the proposed sampling activities detailed in the Work Plan. The Record Search Report was provided to NYSDEC as a stand alone document, submitted simultaneously with the Work Plan.
- Task 2 - Site Characterization

Site Characterization was conducted at the site in order to determine if soil or groundwater contamination is present at the site, which would warrant further investigation. The investigation activities included a geophysical survey, soil and groundwater screening using a membrane interface probe (MIP), the collection of direct push soil samples and the collection of groundwater grab samples from the Geoprobe. The investigation also included the collection of soil vapor samples. The objective was to provide groundwater and soil analyses for comparison to NYS Class GA Groundwater Quality Standards and NYSDEC Soil Cleanup Objectives.

The field investigation section (Section 3) presents the field activities conducted on site in further detail.

- Task 3 – Field Documentation and Reporting
Field documentation and report development presenting the results of the field investigation.

Section 2

Physical Setting

2.1 Environmental Setting

The Site is relatively flat and lies at an approximate elevation of 160 feet above mean sea level (msl). The ground water table lies at an approximate elevation of 85 feet below ground surface.

The water table generally parallels land surface. The groundwater rises from the western part of Long Island to form an east-west trending mound in Nassau County and western Suffolk Counties that is dissected by a low region in west-central Suffolk County beneath the Nissequogue and Connetquot River drainage basins.

2.1.1 Geology

Long Island is comprised of Cretaceous and Pleistocene unconsolidated deposits underlain by Early Paleozoic to Precambrian bedrock. The hydrogeology of Long Island has been well documented over the years by the USGS (Doriski and Wilde-Katz, 1983; Smolensky et al, 1989). Three major aquifers are present on Long Island: the upper glacial aquifer, the Magothy aquifer and the Lloyd aquifer.

Basement

Basement is composed of Precambrian to Early Paleozoic igneous or metamorphic consolidated bedrock. Unconformably overlying the basement is a thick succession of Late Cretaceous deposits: the Raritan and overlying Magothy Formations, both of fluvio-deltaic depositional origin. The Upper Cretaceous deposits are unconformably overlain by a veneer of Pliocene and Pleistocene deposits, chiefly of glacial origin.

Cretaceous

Raritan Formation: The Raritan Formation is divided into the basal Lloyd Sand Member and the overlying Raritan Clay Member. The Lloyd Sand rests unconformably on bedrock and is about 150 feet thick in the vicinity of the Site. The top of the Lloyd Sand is found at approximately 200-250 feet below msl. It is composed of white and grey fine to coarse sand and gravel, commonly with a clayey matrix. The contact with the overlying clay member is gradational.

The Raritan Clay Member is composed chiefly of bedded variegated clay and silt, locally containing interbedded sands. Lignite fragments and iron and pyrite nodules are common. The clay member is approximately 100 feet thick in the vicinity of the Site (Smolensky, et al. 1989). The Raritan Clay is the most widespread hydrologic confining layer on Long Island. The Raritan's updip erosional pinchout generally is located subparallel to the northern coast of Nassau County. The clay unit dips gently to the south-southeast.

Matawan Group-Magothy Formation (Magothy): The Magothy unconformably overlies the Raritan; the contact is commonly marked by a change from the solid clays of the Raritan Clay Member to coarse sands and gravels of the basal unit of the

Magothy. The dominant Magothy lithology generally is fine to medium quartz sand, interbedded clayey sand with silt, clay, and gravel interbeds or lenses. Interbedded clay is more common towards the top of the formation. The thickness of the Magothy varies between 100 feet in the vicinity of the Site to over 800 feet beneath the barrier islands.

Cenozoic-Quaternary

After the Cretaceous, deep erosion of the land surface took place as a response to fluctuations in sea level. Sedimentological evidence indicates that sea level falls exposed the entire Atlantic continental margin during the Miocene epoch, which would have promoted rejuvenation and deep incision of rivers and streams across the Coastal Plain. Later deposition of abundant fluvial and glacial clastic deposits during the Pliocene and Quaternary filled these incised buried valleys. The top of the Cretaceous sequence is marked by a highly irregular erosion surface upon which rests deposits of Pleistocene and, in some places, Pliocene age.

Deposits of Pleistocene age mantle the Cretaceous formations. Within the study area, the Pleistocene deposits include three depositional sequences: the fluvial Jameco Gravel and marine Gardiners Clay; and the much more widespread Late Pleistocene glacial deposits of the Wisconsin glacial stage. Undifferentiated gravels and clays described in buried valleys within southern Long Island have been attributed to the Jameco Gravel and Gardiners Clay units. The Jameco Gravel and Gardiners Clay formations are well-defined, mapable stratigraphic units beneath the southern margin of Long Island where they are of hydrogeological significance. These stratigraphic units are not recognized in the vicinity of the Site. The remainder of the Pleistocene succession belongs to the Wisconsin glacial stage Upper Glacial Deposits.

The thickness of the Pleistocene Upper Glacial Deposits in the study area varies but averages 100 feet. The thickness and distribution of the Pleistocene Upper Glacial Deposits were controlled by the older, now buried paleotopography discussed above. The pattern of stream and river valleys that dissected the surface of Long Island during the Cenozoic likely was later modified by Pleistocene overriding ice sheets and meltwater erosion and deposition.

2.1.2 Hydrogeology

The hydrogeology of Long Island has been well documented over the years by the USGS and others. Three major aquifers are present on Long Island: the Upper Glacial aquifer, the Magothy aquifer and the Lloyd aquifer.

Lloyd Aquifer

The Lloyd Sand Member of the Raritan Formation of the Late Cretaceous Age overlies the saprolitic bedrock surface and is Long Island's deepest aquifer. The Lloyd sand was deposited as a series of braided streams and deltaic deposits consisting of white and pale yellow sand with interbedded lenses of gravel and white clay (Smolensky et al, 1989). The aquifer does not outcrop on Long Island and is believed to extend to the north beneath Long Island Sound in eastern Nassau County and in Suffolk County, and offshore to the south, beyond the barrier beaches. The Lloyd aquifer is confined

in most places, except where the overlying Raritan clay has been eroded away. The thickness of the Lloyd aquifer varies from 0 feet where it is not present along the north shore of Nassau County, to more than 500 feet in the southeastern areas of Nassau County. The average horizontal hydraulic conductivity is reported to be approximately 40 ft/day with a 10:1 vertical anisotropy.

Raritan Clay

Overlying the Lloyd aquifer is the Cretaceous Age clay member of the Raritan Formation, referred to as the Raritan clay. The Raritan clay is the major confining unit on Long Island, ranging between 150 and 250 feet in thickness. Like the Lloyd aquifer, the Raritan clay is absent from areas of northern Queens and northern Nassau County where it had been eroded. The Raritan clay outcrops in parts of Queens, and is believed to be present north of the island beneath Long Island Sound, and south of the island, beneath the barrier islands. This confining unit consists of solid, multicolored, compact clay (gray, white, red, or tan) with interbedded lenses of sand. The average vertical hydraulic conductivity is reported to be approximately 0.001 ft/day.

Magothy Aquifer

The Magothy aquifer is an upward fining sequence of the Cretaceous Age Matawan Group consisting of fine to medium grained quartz sand, silt, clay, and gravel and is up to 1,100 feet thick. The base of the Magothy is very coarse, having been deposited in a high-energy environment involving stream and deltaic deposition. This high-energy deposition abruptly ended as fine sands, silts and clays form the majority of the unit. The Magothy Aquifer is unconfined in the site area. The Magothy aquifer is the principal water supply aquifer in Nassau and Suffolk Counties, attributing to its thickness. Its average horizontal hydraulic conductivity is reported to be approximately 50 ft/day with a vertical anisotropy of 100:1 (Smolensky et al, 1989).

Upper Glacial Aquifer

The upper glacial aquifer is the surficial unit on Long Island and is therefore entirely unconfined. Along the Harbor Hill and Ronkonkoma terminal moraines and parts of the north shore, the unit is composed of till consisting of poorly sorted clay, sand, gravel, and boulders. The till is generally poorly permeable and may contain perched water. The outwash deposits that are found are mainly between, and south of, the moraines. The outwash deposits are moderately to highly permeable, consisting of gray, brown, and yellow fine to very coarse sand and gravel. The upper glacial aquifer ranges up to 600 feet thick, however the saturated thickness is often much lower. The estimated average horizontal hydraulic conductivity generally exceeds 225 ft/day.

Ground Water

Based on Nassau County regional groundwater information obtained in the *Nassau County Groundwater Monitoring Program, 2002-2003* (NCDPW, 2005) the water table lies at an elevation of 70 to 80 feet above mean sea level (MSL) (~80 ft bgs). Based on the field investigation, groundwater was encountered at 85 feet bgs throughout the

site. Flow in the water table aquifer (Upper Glacial) is complicated by a groundwater divide located approximately 1,000 feet northeast of the site. In general, it is expected that groundwater flow at the site will be to the west/southwest, however because of its proximity to the groundwater divide there is a potential for flow to the north and south from the site as well. In addition, groundwater extraction from local public supply wells can also influence groundwater flow at the site.

Flow in the Magothy Aquifer is more towards the south/southwest near the site. Groundwater flow in the deeper Lloyd Aquifer is expected to be to the southwest.

2.2 Fate and Transport

Tetrachloroethene is a manufactured chemical that is widely used in the dry-cleaning industry. It is also used for degreasing and is found in consumer products including some paint and spot removers, water repellents, brake and wood cleaners, glues, and suede protectors. Other names for tetrachloroethene include tetrachloroethylene, perchloroethylene, and PCE.

2.2.1 Fate of PCE

The fate of PCE is dominated by its volatility and degradation. PCE's presence in surface soils or surface water is usually short-lived, providing that a continuing source is not present.

In the atmosphere, PCE is expected to be present primarily in the vapor phase and not sorbed to particulates because of its high vapor pressure of 18 mm Hg. Vapor-phase PCE will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals. Direct photolysis is not expected to be an important environmental fate process since PCE only absorbs light weakly in the environmental ultraviolet (UV) spectrum.

The dominant fate of PCE in soils is volatilization. Based on its K_{oc} value of 265 milliliters per gram (mL/g), PCE is moderately mobile in soils. Consequently, PCE has the potential to migrate through the soil into groundwater. PCE has a specific gravity greater than water (1.62) indicating that pure liquid phase PCE will sink when dissolved in groundwater. The solubility of PCE in water is 150 milligrams per Liter (mg/L). Biodegradation under anaerobic conditions in soil and groundwater may occur at a relatively slow rate with half lives on the order of months or longer. PCE in groundwater can undergo reductive dechlorination catalyzed by anaerobic bacteria. The PCE will tend to degrade to TCE. Subsequent degradation to *cis*-1,2-dichloroethene (DCE) or *trans*-1,2-DCE and then to vinyl chloride can also occur via anaerobic mechanisms. Vinyl chloride can further degrade to ethylene.

Volatilization is also an important fate process of PCE in surface waters based on its Henry's Law constant of $1.73 \times 10^{-2} \text{ atm}\cdot\text{m}^3/\text{mol}$. PCE is also not expected to adsorb to suspended solids and sediment in water based upon its K_{oc} value. The half-lives in soil and groundwater were reported to be 180-360 days and 270 days respectively. A reported K_{ow} value of 351 in fish suggests that the potential for PCE to bioconcentrate in aquatic organisms is low.

2.2.2 Transport of PCE

Liquid phase PCE discharged directly to the ground surface would be expected to migrate downward through the unsaturated zone in a relatively linear pattern, with minimal dispersion from the discharge location. The unsaturated zone at the site is expected to be primarily sandy material; however the presence of lower permeability silt and clay layers may be encountered which could complicate the migration pathway. The depth to groundwater at the site is about 80 feet bgs, so any PCE entering the unsaturated zone has a significant distance to travel before groundwater is encountered.

Significant soil vapor contamination may be present in the unsaturated zone. The vapor phase PCE vaporizes upward while the liquid phase migrates downward. Chlorinated solvents in the vapor phase can cause significant indoor air contamination due to residual unsaturated soil contamination or vaporization directly from the groundwater table interface.

Once liquid phase PCE encounters the water table, some of the solvent will become dissolved in the groundwater and begin to move in the direction of groundwater flow. If the quantity of solvent reaching the water table is sufficient, some of the solvent will remain in an undissolved state as a dense non-aqueous phase liquid (DNAPL) and, since PCE is denser than water, the solvent will continue to move downward under the influence of gravity. DNAPL will continue to sink until it encounters a lower permeability zone, which would slow or stop the downward migration. DNAPL could pool or accumulate on top of a lower permeability zone and remain stationary or move in the down-slope direction of the lower permeability zone. If sufficient DNAPL is pooled or trapped in the aquifer, it will act as a continual source of dissolved groundwater contamination. Movement of DNAPL in the saturated zone can be very complex, with movement controlled by the permeability of subsurface stratigraphic units, the shape and configuration of lower permeability zones, and/or the dip of bedding planes.

At the site, groundwater generally flows toward the west/southwest. However, movement of PCE in the saturated zone at the site may be complicated by the groundwater extraction in the area from several public supply wells.

Section 3

Field Investigation

3.1 Sub-Surface Field Investigation

The following subsections describe the field investigation that was conducted from April 8th through May 2nd 2008 by CDM. The investigation was conducted in accordance with the January 2008 Site Characterization Work Plan. Tasks included a geophysical survey, MIP screening investigation, direct push soil sampling, groundwater sampling, and soil vapor sampling. The sample locations are presented on Figure 3-1. Direct push sub-surface soil and groundwater sample locations correspond with the MIP locations in Figure 3-1 and are discussed in further detail below.

The field investigation included the:

- Geophysical survey of proposed MIP/direct push locations for utility clearance
- Screening of subsurface soil and groundwater via MIP at 11 locations to preliminarily characterize the extent of groundwater contamination and identify potential source areas
- Collection of four (4) sub-surface soil samples at three (3) locations for VOC and SVOC analysis
- Collection of six (6) groundwater samples at six (6) locations for VOC and SVOC analysis
- Collection of nine (9) soil vapor samples and one (1) ambient air sample for VOC analysis
- Site survey and survey of all sampling points

These samples were collected in accordance with the CDM Generic Quality Assurance Project Plan (QAPP) dated February 2008 which has been provided to NYSDEC for Contract Number D-004437 and referenced within the Solvent Finishers Site Characterization Work Plan.

3.1.1 Geophysical Survey

A geophysical survey utilizing ground penetrating radar (GPR) and electromagnetic conductivity (EC) was conducted at the site by Naeva Geophysics to identify underground utilities, water lines, underground storage tanks and/or any large anomalies such as conduits. It was also used to try and identify the locations of former drywells on site.

The geophysical survey was also performed to clear boring locations prior to drilling, since the One-Call service does not mark out utilities beyond the street. Subsurface

utilities were marked within 15 feet of each proposed location, to allow for relocation of borings should refusal be encountered during drilling.

During the geophysical survey, a large anomaly was identified in the area of the former solvent holding tank (location MIP-8). Naeva was unable to confirm if the anomaly represented a buried tank in this area or whether the anomaly was being caused by ground disturbance or other buried material in the area. Based on this finding, there is a potential that a UST may still remain in this area.

3.1.2 Membrane Interface Probe Investigation

Subsurface soil and groundwater was screened at 11 locations (MIP-1 through MIP-11) to preliminarily characterize the extent of soil and groundwater contamination and identify potential source areas (See Figure 3-1). Sampling locations were selected based on previous and present locations of dry-wells, the former solvent holding tank and cooling tower, cesspools, and catch basins. A membrane interface probe (MIP) attached to a direct push drill rig was used to screen the subsurface soil and groundwater via direct push technology. The direct push rods were advanced to the maximum depth achievable by the unit at each location, which was between 88 and 99 feet below ground surface (bgs), with the exception of locations MIP-6 and MIP-11 where refusal was encountered at 23 and 28 feet bgs, respectively. In general, the MIP was able to screen the upper 20 feet of the water column.

As indicated above, the MIP was advanced using a direct push rig. The 1.5-inch diameter MIP was pushed into the subsurface at a penetration rate of approximately 1-foot per minute. The tip of the probe contains a thermister, which provides a heat source to volatilize VOCs. The gases that are produced pass into the probe through a permeable membrane and enter a sampling loop. The gases are transported to the surface and pass through various detection devices including a photoionization detector (PID), electronic capture detector (ECD), and a flame ionization detector (FID). These detectors allowed screening of the subsurface for chlorinated compounds (e.g PCE, TCE), aromatic hydrocarbons (e.g. BTEX compounds) and straight chained hydrocarbons (e.g. methane, butane). The detector information as well as soil conductivity was graphed by the field instrument allowing for real-time information at each location. The information was also provided electronically to CDM for more detailed analysis, and is included in Appendix C.

The results of the MIP investigation were used to select locations for the direct push soil and groundwater samples.

3.1.3 Direct Push Soil Sample Collection

Direct push soil sampling was conducted to characterize the highest levels of contamination observed during the screening investigation and to determine if contamination was present at the locations of the former solvent tank, cooling tower, and dry wells at the rear of the building. Soil samples were collected at 5 and 22 feet bgs at location MIP-7, corresponding to the depth of an ECD response and the bottom of the drywell, respectively. Samples were collected at 5 feet bgs at locations MIP-8 and MIP- 9, corresponding to the ECD response at this interval at MIP-8 and the

approximate depth of the solvent holding tank. A duplicate soil sample was collected at MIP-8.

Due to the tightness of formation encountered during sampling, soil samples could not be collected at a depth greater than 22 feet using the direct push rig, as the macro-core sleeves were jamming inside the rods. As such samples planned for the 35-40 and 48-50 foot intervals at MIP-8, the 45-50 foot interval at MIP-9 and immediately above the water table at MIP-3, MIP-7, MIP-8, and MIP-9 could not be collected. Relatively high MIP responses were observed at these locations.

The lithology of each subsurface soil sample was recorded and screened with a PID. A sample summary of the samples collected is provided in Table 3-1. The samples collected during the investigation were submitted to Mitkem Corporation and analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) and by EPA Methods 8260 and 8270, respectively. The soil sample results are provided in Table 4-1.

3.1.4 Direct Push Groundwater Sample Collection

Similar to the soil investigation, groundwater samples were collected to characterize the groundwater at the property. Groundwater sampling was conducted using direct push technology at the locations which exhibited the highest MIP responses. A groundwater sample was also taken at a point downgradient of the site, as can be seen on Figure 3-1. The tightness of formation encountered during the investigation did not compromise the ability to collect groundwater samples, and samples were taken at locations MIP-2 (former cesspools), MIP-7 (drywell), MIP-8 (former solvent holding tank), MIP-9 (former cooling tower) and MIP-10 (drywell). A duplicate groundwater sample was collected at MIP-9.

The water quality of each sample was recorded and is presented in Table 3-2. Samples were sent to Mitkem Corporation for VOC and SVOC analysis via EPA method 8260 and 8270, respectively in order characterize potential groundwater contamination at the site. The groundwater sample results are presented in Table 4-2.

3.1.5 Soil Vapor and Ambient Air Sample Collection

As requested by Nassau County Department of Health (NCDOH), a soil vapor investigation was also conducted at the Site in order to assess the potential exposure from contaminated soil vapor to humans or the environment. Four locations coinciding with the direct push sample locations MIP-3, MIP-7, MIP-9 and MIP-10 were collected at shallow and deeps depths. It should be noted, that the soil vapor sample collected at location MIP-9 was also chosen to represent location MIP-8, as both locations were close in proximity to one another. The shallow samples were located at approximately 8 feet bgs, where a typical building foundation would be located. The deep samples were collected at a depth of roughly 2 feet above the groundwater table. The subsurface soil vapor (SV) points were installed at the Site on April 25, 2008 in accordance with the New York State Department of Health (NYSDOH) *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, October 2006. A duplicate soil vapor sample was collected at the deep sample taken

at MIP-9. The sample identification and depth of each sampling point is summarized in Table 3-3.

Ambient air sample collection was also conducted in accordance with the NYSDOH guidance document. One ambient air sample was collected near the MIP-7 location. The ambient air sample was collected on April 25, 2008, in conjunction with the soil vapor samples.

Samples were collected using laboratory certified clean SUMMA canisters with regulators that allowed sample collection at two hours or less. Dedicated Teflon®-lined tubing with an inside diameter of ¼ inch was used at each sample location. The flow rate during sampling did not exceed 0.2 liters per minute to minimize outdoor air infiltration during sampling.

The soil vapor and ambient air samples were analyzed by NYSDOH-approved Environmental Laboratory Approval Program (ELAP) certified lab, Mitkem Corporation, for VOCs using EPA Method TO-15. A minimum reporting limit of 1 microgram per cubic meter ($\mu\text{g}/\text{m}^3$) was achieved for all analytes. Results were reported in $\mu\text{g}/\text{m}^3$. Table 4-3 presents the results of the soil vapor and ambient air sampling.

3.1.6 Site Restoration

Upon completion of all the sampling activities, the boreholes were backfilled with indigenous soil and/or clean sand and marked with a stake/spray paint so that a surveyor could identify the locations. Borings performed in paved or concrete areas were backfilled and refinished at the ground surface with concrete or cold patch.

3.1.7 Site Survey

A site plan depicting general site features (i.e., buildings, roadways, utility poles, fences, addresses, etc.) within the vicinity of the site was prepared by YEC Inc., a New York licensed surveyor. The locations of all sample points were also surveyed and depicted on the site survey. The horizontal and vertical positions were tied into the North American Datum 1983 and UTM Zone 18N coordinate system. The vertical positions were tied to the North American Vertical Datum 1988 (NAVD88).

3.1.8 Investigative Derived Waste

Investigation derived waste was not generated during the Site Characterization. Soil removed during direct push drilling was placed back in the hole upon completion of sample collection. Groundwater IDW was not generated since grab water samples were collected using the direct push rig.

3.1.9 Decontamination

All non-dedicated equipment and tools used to collect samples for chemical analysis were decontaminated prior to and between each sample interval using an Alconox rinse and potable water rinse prior to reuse. Decontamination fluids were discharged to the ground surface unless a visible sheen or odor was detected either on the

equipment or the fluids, at which point the decontamination water was staged in an appropriate container and disposed of appropriately.

3.2 Sample Identification, Laboratory Analysis and Validation

Each sample collected was designated by an alphanumeric code that identified the type of sampling location, matrix sampled, and the specific sample designation (identifier). Each sample began with the NYSDEC Site Number for the Solvent Finishers site (130172). The following terminology was used for the samples collected during the investigation:

Soil:	130172-Boring ID-S -Depth
Water:	130172-Boring ID-GW-Depth
Soil Vapor:	130172-SV-Location ID – S (shallow) or D (deep)
Field Blanks:	130172-FB-DATE
Trip Blanks:	130172-TB-DATE

All samples were analyzed by Mitkem Corporation, a NYSDOH approved ELAP certified laboratory. Groundwater samples were analyzed for VOCs by EPA method 8260 and SVOCs by EPA Method 8270. Subsurface soil samples were analyzed for SVOCs and VOCs by EPA methods 8270 and 8260. Soil vapor samples were analyzed by EPA Method TO-15. A NYSDEC ASP Category B data deliverable was provided for these analyses. A CD containing the laboratory analytical data is provided in Appendix B.

All samples collected were validated in accordance with NYSDEC Data Usability Summary Report (DUSR) guidance by a party that is independent of the laboratory which performed the analyses and CDM. A usability analysis was conducted by Nancy Potak, a qualified data validator. The DUSR is provided in Appendix C.

3.3 Field Documentation

Field notebooks were utilized during all on-site work. A dedicated field notebook was maintained by the field technician overseeing the site activities. In addition to the notebook, all original sampling forms, and purge forms used during the field activities are provided in Appendix D. Field and sampling procedures, including installation of the sample boreholes, existing monitoring wells, etc., were photo-documented. Site photographs are provided in Appendix E.

Section 4

Analytical Results

This section presents the analytical results for the MIP screening, the sub-surface soil sampling, sub-surface groundwater sampling and soil vapor sampling conducted as part of the site characterization investigation.

4.1 Summary of MIP Investigation Results

To provide a screening-level characterization of VOC contamination in both the vadose and saturated zones, the MIP was used to obtain qualitative, depth-continuous, relative instrument response data for VOCs and electrical conductivity data in the subsurface media. The following three detectors were utilized to screen for onsite concentration gradients:

- ECD (electron capture detector) was used to identify chlorinated compounds
- PID was used to detect aromatic hydrocarbons
- FID (flame ionization detector) was used to detect straight chained hydrocarbons

The MIP is a qualitative screening device that cannot be utilized to quantitatively determine the concentration of VOC contamination. The MIP response will vary with lithology, organic carbon content, soil water content, and volatility of the contaminant being detected. The MIP was utilized to determine VOC concentration gradients and to identify potential source(s) of contamination ("hot spots"). Electrical conductivity data was collected by the MIP to identify the relative clay and sand content of the probed interval. The MIP Data Logs presenting slices of ECD, FID and PID concentrations at all MIP borings, by the foot ,are provided in Appendix A.

MIP data were analyzed within each borehole by evaluating the magnitude of the detections above the baseline for each meter. This was performed to minimize the baseline variations between boreholes.

ECD responses above baseline were observed at MIP locations MIP-3, MIP-7, MIP-8, MIP-9 and MIP-10. Location MIP-3 exhibited a response 1.2 times greater than the baseline at the soil water interface, approximately 85 feet bgs. Location MIP-7 also exhibited responses 8.6 times above the baseline directly above the water table. A response 4.8 times greater than the baseline was exhibited between 82 and 84 feet bgs at MIP-7, while a response 8.6 times greater was exhibited between 84 and 86 feet, as the MIP encountered groundwater. Location MIP-8 exhibited a response between 3 and 5 feet bgs which was 1.8 times greater than the baseline values. MIP-8 also exhibited a response between 37 and 39 ft bgs 1.5 times greater than the baseline and a response 2.4 times greater than the baseline between 47 and 49 ft bgs. Location MIP-8 also exhibited a response 1.75 times greater than the baseline between 77 and 78.5 ft bgs. Location MIP-9 exhibited a response between 45.5 and 49.5 feet 2.3 times above the baseline and a response 2.6 times greater than the baseline between 77 and 79 feet bgs. As seen at previous locations, a high response, one 4.76 times greater than the

baseline, was exhibited at the soil water interface at location MIP-9. Location MIP-10 also exhibited a response 2.13 times greater than the baseline location between 3 and 7 feet bgs.

The fact that significant ECD responses were exhibited in the unsaturated zone, between 37-39 ft bgs and 47-49 ft bgs, at location MIP-8, as well as at the water table, suggest that the location of the former holding tank may be a source of the PCE groundwater contamination at the Site. Product may be present in the soil between 37 and 49 ft bgs that is continuing to migrate toward the water table. The significant ECD responses exhibited above the water table at locations MIP-3, MIP-7 and MIP-9 indicate the presence of chlorinated compounds present in the groundwater at these locations. Based on the MIP responses, it appears that there is a smear zone at the soil-water table interface.

The FID responses at each MIP location remained within the baseline with the exceptions of locations MIP-7, MIP-9 and MIP-10. Two low FID responses were exhibited at MIP-7. A response 1.4 times greater than the MIP-7 baseline was exhibited between 25 and 26 feet bgs, while a response 1.3 times greater than the baseline was exhibited between 63 and 66 feet bgs. A low response, 1.2 times greater than the baseline, was exhibited between 3 and 10 feet bgs at location MIP-9. Location MIP-10 also exhibited a response 1.27 times greater than the baseline between 26.5 and 32 feet bgs. These areas of low FID MIP response are not believed to be of significant relation to the PCE contamination present onsite.

The MIP PID and Conductivity responses exhibited at each location did not deviate significantly from the baseline readings during the entire length of each borehole.

4.2 Summary of Direct Push Soil Sampling Results

A total of five sub-surface soil samples, including a duplicate sample, were collected from three direct push locations which correlated to MIP locations MIP-7, MIP-8 and MIP-9 to determine if contamination was present at the locations of the former solvent tank, cooling tower, and one of the former on-site dry wells. Soil samples were collected at five feet bgs at each location, and at 22 feet bgs at location MIP-7, corresponding to the bottom depth of the drywell at this location. As mentioned in Section 3, the tightness of formation encountered during investigation did not allow for soil sample collection below a depth of 22 feet bgs. The duplicate sample was collected from five feet bgs at location MIP-8. Analytical results for direct push sub-surface soil sampling investigation are presented on Table 4-1.

Tetrachloroethene (PCE) and its degradation products were not detected above the site specific delineation criteria at any of the soil sample locations. However, several SVOCs were detected above the site-specific soil delineation criteria (the lower of NYCRR Part 375-6 and TAGM#4046 Criteria) at location MIP-7. Soil criteria standards are presented in Table 4-4. Benzo(a)anthracene and benzo(a)pyrene were detected above the soil criteria at 5 feet bgs in the sample collected at location MIP-7, at values of 320 µg/kg and 300 µg/kg respectively. The compound bis(2-ethylhexyl)phthalate was also detected above the site specific soil criteria at 5 feet bgs

at location MIP-7 with a detection of 120,000 µg/kg. The remainder of the analyzed compounds were not detected above the soil criteria at the sample locations.

4.3 Summary of Direct Push Groundwater Sampling Results

A total of seven groundwater samples, including a duplicate, were collected from six direct push locations to characterize the groundwater at the property. Groundwater samples were collected at approximately 85 feet bgs at locations MIP-2, MIP-7, MIP-8, MIP-9, MIP-10 and at a location downgradient of the site. Groundwater direct push borings were located based upon the results of the MIP investigation.

A rinsate blank and trip blank sample was collected each day sampling was conducted and are labeled with an "FB" and "TB" in accordance with the approved Work Plan. The duplicate sample was collected at location MIP-9. The analytical results for the rinsate blank and trip blank samples showed no detections. Analytical results for direct push groundwater investigation are presented in Table 4-2.

The results of the direct push groundwater grab sample analyses identified several compounds with concentrations above the site-specific groundwater delineation criteria (the lower of New York State Class GA and NYSDOH Drinking Water Quality Standards) at each location, as presented on Figure 4-1. Groundwater criteria standards are presented in Table 4-5.

PCE was detected at all six locations, while PCE's degradation products were detected at four of the six locations. The groundwater samples collected at each location contained concentrations of PCE at 430 µg/L at location MIP-2, 2,300 µg/L at location MIP-7, at 8,500 µg/L at location MIP-8, 4,000 and 4,200 µg/L at location MIP-9, 3,600 µg/L at location MIP-10 and 4,400 µg/L at the point downgradient of the site.

Groundwater samples collected at MIP-7, MIP-8, MIP-9 and downgradient of the site also contained concentrations of PCE's primary degradation product, trichloroethene (TCE), above the site specific groundwater delineation criteria. The samples detected values of TCE at 20 µg/kg, 870 µg/kg, 46 µg/kg (duplicate sample containing 49 µg/kg), and 44 µg/kg, respectively. These locations also had detections of PCE's secondary degradation product, cis-1,2-Dichloroethene (DCE), above the site specific groundwater criteria. The highest concentration of cis-1,2-DCE was detected in the sample taken at MIP-8 at 400 µg/L.

The presence of 1,1,1-trichloroethane (TCA), a tertiary degradation products of PCE, was also detected in the groundwater sample taken at MIP-8 at 6 µg/L. Xylene was also present in this sample above the site specific criteria at 8 µg/L.

The groundwater sample collected at MIP-9 also detected levels of 1,2,4-Trichlorobenzene, at 20 µg/L, above the site specific criteria of 5 µg/L.

4.4 Summary of Soil Vapor and Ambient Air Sampling Results

A total of nine soil vapor samples, including one duplicate, were collected from four locations to determine if VOC contamination in groundwater and soil in the subject area has resulted in the presence of soil vapor that may impact the quality of air in and around surrounding structures. Two vapor boreholes, one shallow and one deep, were co-located to collect the two vapor samples, approximately 8 feet below site grade and 2 feet above the water table interface, which was observed at approximately 85 feet bgs. An ambient air sample was also collected (labeled "AA") in accordance with the approved Work Plan.

Analytical results for the soil vapor investigation are presented in Table 4-3 and Figure 4-2. Since PCE and its degradation products represent the contaminants of concern at this site, Figure 4-2 focuses on these compounds as a means of correlating their occurrences to the known contamination in the area.

The soil vapor concentrations of PCE ranged from non detect to 507,891 micrograms per meters cubed ($\mu\text{g}/\text{m}^3$). The highest PCE concentration was detected in the deep vapor sample collected from location MIP-9. The soil vapor concentrations of trichloroethene (TCE) ranged from non-detect to 956 $\mu\text{g}/\text{m}^3$. The highest TCE concentration of 956 $\mu\text{g}/\text{m}^3$ was detected in the deep soil vapor duplicate sample collected from location MIP-9. Soil vapor concentrations of cis-1,2-dichloroethene (DCE) ranged from non-detect to 281 $\mu\text{g}/\text{m}^3$. The highest cis-1,2-DCE concentration was observed at location MIP-10. The analytical results for 1,1,1 trichloroethane (TCA) and vinyl chloride showed no detections.

The 2006 NYSDOH Vapor Intrusion guidance indicates that the State of New York does not have any standards, criteria or guidance values for subsurface vapors. However, outdoor and indoor air guide values as well as the sub-slab vapor/indoor air matrices in the 2006 NYSDOH Vapor Intrusion guidance can be utilized to assess if additional investigation is warranted.

The deep soil vapor samples contained significantly higher levels of PCE and TCE than the shallow vapor samples. The samples which contained the highest concentrations of PCE and TCE were the deep samples collected at locations MIP-7, MIP-9 and MIP-10. The shallow soil vapor sample collected at these same locations also exhibited high concentrations of PCE and TCE. All of the soil vapor samples, with the exception of MIP-3, exceeded the NYSDOH Air Guidelines for both PCE and TCE, of 100 $\mu\text{g}/\text{m}^3$ and 5 $\mu\text{g}/\text{m}^3$ respectively. Both the deep and shallow vapor points collected at MIP-3 exhibited TCE readings of non-detect, and were therefore below the NYSDOH Air Guidelines.

The deep soil vapor samples which contained significantly high levels of PCE and TCE are locations MIP-9 and MIP-10, in the location of the previous cooling tower and one of the former on-site dry wells. The shallow soil vapor samples which also contained significantly high levels of PCE and TCE are also located in this

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area. However, nearly all of the soil vapor locations collected during the investigation exhibited very high concentrations of PCE and TCE, as anticipated.

Section 5

Conclusions and Recommendations

This section presents the conclusions and recommendations which are based upon the analytical results of the sub-surface soil, groundwater, and soil vapor sampling.

5.1 Conclusions

The MIP investigation provided an approximate location of potential source(s) of soil and groundwater contamination in the area. The highest ECD responses were exhibited at the soil water interface at locations MIP-3, MIP-7, and MIP-9, indicating the presence of chlorinated compounds in the soil and groundwater at these locations. Groundwater sampling results confirmed the presence of PCE and its degradation products at levels above the site specific criteria, at locations MIP-7 and MIP-9.

Groundwater sampling was not conducted at location MIP-3, however, based on the presence of PCE above the site specific criteria at locations MIP-2 and the point down gradient (DG) of the site, it appears that the plume extends throughout the entire western portion of the building. The highest concentrations of PCE and its degradation products in the groundwater samples were present in locations MIP-7, MIP-8 and MIP-9, suggesting that the source area is in the southwestern portion of the building in the area of the former solvent holding tank and cooling tower. The groundwater results at MIP-8, located in the former location of the solvent holding tank, contained the highest levels of PCE and its degradation products.

ECD responses were also exhibited in the unsaturated zone at locations MIP-8 and MIP-9 between 30 and 50 feet bgs. Unfortunately, there is no soil data to confirm the presence of chlorinated compounds at these depths, as soil samples could not be collected beyond 22 feet bgs using the direct push rig, due to the tightness of formation encountered. Future sampling should with a larger drill rig would be necessary to determine the concentration of chlorinated volatile organic compounds (CVOCs) present in the unsaturated zone in this area. Based on the MIP responses and high groundwater concentrations observed at MIP-8 it is likely that the former solvent holding tank is the most significant source area at the site, and that product may be continuing to migrate towards the water table at this location.

Lower ECD responses were exhibited during the MIP investigation between 3.3 and 5 feet bgs at location MIP-8, and between 3 and 7 feet bgs at location MIP-10. The shallow soil sample and duplicate sample taken at 5 feet bgs at location MIP-8 did not confirm the presence of chlorinated solvents at these locations. Samples taken at this location were below all of the VOC and SVOC site specific soil criteria. Soil samples were not taken at MIP-10 to further confirm the soil contents at this location.

The soil vapor sample results yielded very high concentrations of PCE and its degradation products at locations MIP-3,-7,-9 and -10. The ambient air sample taken near the on-site dry well (MIP-7) did not yield high concentrations of the same compounds. However, despite the lack of NYSDOH standards, criteria or guidance values for subsurface vapors, the very high levels of contaminants and the presence of

PCE and its degradation products in the soil vapor samples taken, suggests the potential for soil vapor intrusion within the building. Indoor air and sub-slab sampling would be necessary to evaluate the impact to the indoor air quality in the building.

5.2 Recommendations

Based upon the results of this investigation, the source of chlorinated solvent contamination has been confirmed to exist in the area of the former solvent holding tank (MIP-8), cooling (MIP-9) tower and adjacent drywell (MIP-7). Soil sampling in the unsaturated zone within the source area (MIP 7, MIP-8, MIP-9) and surrounding areas (MIP-10) would be necessary to determine the presence of product beyond 22 feet bgs, particularly at the depths where high ECD responses were observed during the MIP investigation and tightness of formation did not allow soil sampling to occur. A more extensive soil investigation is suggested to further delineate potential source areas and future analysis should also include metals and PCB analysis.

The soil vapor data collected at the site suggests that there is the potential for vapor intrusion within the on-site building as well as off-site structures. Indoor air and sub-slab sampling is recommended onsite as well as at off-site, down gradient buildings, such as the movie theater and wholesale club, to further determine the potential for vapor intrusion.

It is further recommended that additional groundwater sampling (shallow and deep) be conducted at the site and downgradient to delineate the extent of the groundwater plume, which based on the data from this investigation, appears to be migrating offsite. Installation of permanent groundwater monitoring wells at the site for future monitoring is also recommended.

Thus, it is recommended that the property at 601-603 Cantiague Rock Road in Westbury, Nassau County, New York be listed on the New York State registry of hazardous waste sites. Also, to further delineate the source(s) of the CVOCs groundwater plume, soil and soil vapor contamination it is recommended to conduct a remedial investigation/feasibility study at this site.

Tables

Table 3-1
Soil & Groundwater Sample Summary

Location	Sample ID	Depth (ft bgs)	Sample Time	PID Reading
Soil Samples				
MIP-7	130172-MIP7-S-5	5.00	4/23/08 8:40	0
MIP-7	130172-MIP7-S-22	22.00	4/23/08 8:45	0
MIP-8	130172-MIP8-S-5	5.00	4/23/08 10:35	0
MIP-8	130172-MIP88-S-5	5.00	4/23/08 10:35	0
MIP-9	130172-MIP9-S-5	5.00	4/23/08 11:45	0
Groundwater Sampling				
Downgradient	130172-DG-GW-85	85.00	4/24/08 8:50	0
MIP-2	130172-MIP2-GW-85	85.00	4/24/08 15:00	0
MIP-7	130172-MIP7-GW-85	85.00	4/23/08 9:40	0
MIP-8	130172-MIP8-GW-85	85.00	4/23/08 11:10	0
MIP-9	130172-MIP9-GW-85	85.00	4/23/08 13:30	0
MIP-9	130172-MIP99-GW-85	85.00	4/23/08 13:30	0
MIP-10	130172-MIP10-GW-85	85.00	4/24/08 10:10	0

Table 3-2
Groundwater Field Sampling Parameters

Location	Sample ID	Turbidity (ntu)	Dissolved Oxygen (mg/l)	Temp. (°C)	ORP	pH	Conductivity (MS/OM)
Downgradient	130172-DG-GW-85	>1000	7.00	15.58	122	5.73	0.142
MIP-2	130172-MIP2-GW-85	>1000	8.50	18.17	83	5.54	1.52
MIP-7	130172-MIP7-GW-85	>1000	6.78	16.37	67	6.41	0.176
MIP-8	130172-MIP8-GW-85	>1000	2.49	18.07	-12	6.16	0.408
MIP-9	130172-MIP9-GW-85	>1000	6.92	18.84	111	5.87	0.327
MIP-9	130172-MIP99-GW-85	>1000	6.92	18.84	111	5.87	0.327
MIP-10	130172-MIP10-GW-85	>1000	8.3	16.32	135	5.68	0.28

Table 3-3
Soil Vapor & Ambient Air Sample Summary

Location	Sample ID	Depth of Sample (Ft bgs)	PID Reading (PPM)	Date	Start Time	Initial Pressure (in. Hg)	Time Collected	Final Pressure (in. Hg)	Can # / Reg #
Soil Vapor									
MIP-3	130172-SV-MIP3-S	8.0	0.0	4/25/2008	7:53	-30.0	9:39	-4.0	0233/56
MIP-3	130172-SV-MIP3-D	83.0	0.0	4/25/2008	7:50	-29.5	9:30	-5.0	7632/45
MIP-7	130172-SV-MIP7-S	8.0	2.0	4/25/2008	7:14	-29.0	8:50	-5.0	1386/02885
MIP-7	130172-SV-MIP7-D	83.0	3.0	4/25/2008	7:10	-28.5	8:19	-4.0	0214/02863
MIP-9	130172-SV-MIP9-S	8.0	0.0	4/25/2008	6:45	-29.5	8:27	-5.0	5581/57
MIP-9	130172-SV-MIP9-D	83.0	1395.0	4/25/2008	6:42	-29.5	8:03	-8.5	0646/1316
MIP-9	130172-SV-MIP99-D	83.0	1395.0	4/25/2008	6:42	-30.0	8:03	-4.0	1341/64
MIP-10	130172-SV-MIP10-S	8.0	47.0	4/25/2008	6:38	>-30	8:15	-5.0	10792/10253
MIP-10	130172-SV-MIP10-D	83.0	1606.0	4/25/2008	6:35	-29.5	7:35	-5.0	0222/02856
Ambient Air									
NA	130172-SV-AA	NA	0.0	4/25/2008	7:15	>-30	9:15	-9.0	7632/45

Table 4-1
Direct Push Soil Sampling Results

Sample ID	Site-Specific Soil Delineation Criteria (SSSDC)	130172-MIP7-S-5	130172-MIP7-S-22	130172-MIP8-S-5	130172-MIP88-S-5	130172-MIP9-S-5
Sample Location		MIP-7	MIP-7	MIP-8	MIP-8	MIP-9
Lab Sample Number		G0569-03B	G0569-04B	G0569-07B	G0569-08B	G0569-10B
Sampling Date		4/23/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
Unit		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Volatile Organic Compounds (SW 8260)						
1,1,1,2-Tetrachloroethane	600	5.4 U	5.2 U	5.8 U	6 U	6 U
1,1,1-Trichloroethane	680	5.4 U	5.2 U	5.8 U	6 U	6 U
1,1,2,2-Tetrachloroethane	600	5.4 U	5.2 U	5.8 U	6 U	6 U
1,1,2-Trichloroethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,1-Dichloroethane	200	5.4 U	5.2 U	5.8 U	6 U	6 U
1,1-Dichloroethene	330	5.4 U	5.2 U	5.8 U	6 U	6 U
1,1-Dichloropropene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2,3-Trichlorobenzene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2,4-Trichlorobenzene	3, 400	5.4 UJ	5.2 UJ	5.8 UJ	6 U	6 U
1,2,4-Trimethylbenzene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2-Dibromo-3-chloropropane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2-Dibromoethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2-Dichlorobenzene	1,100	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2-Dichloroethane	20	5.4 U	5.2 U	5.8 U	6 U	6 U
1,2-Dichloropropane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,3,5-Trimethylbenzene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
1,3-Dichlorobenzene	1,600	5.4 U	5.2 U	5.8 U	6 U	6 U
1,3-Dichloropropane	300	5.4 U	5.2 U	5.8 U	6 U	6 U
1,4-Dichlorobenzene	1,800	5.4 U	5.2 U	5.8 U	6 U	6 U
2,2-Dichloropropane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
2-Butanone	120	5.4 R	5.2 R	4 R	27 R	6 R
2-Chlorotoluene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
2-Hexanone	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
4-Chlorotoluene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
4-Isopropyltoluene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
4-Methyl-2-pentanone	1,000	5.4 U	5.2 U	5.8 U	6 U	6 U
Acetone	50	5.4 R	5.2 R	22,619 R	120 R	2 R
Benzene	60	5.4 U	5.2 U	5.8 U	6 U	6 U
Bromobenzene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Bromochloromethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Bromodichloromethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Bromoform	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Bromomethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Carbon disulfide	2,700	5.4 U	5.2 U	5.8 U	6 UJ	6 UJ
Carbon tetrachloride	600	5.4 U	5.2 U	5.8 U	6 U	6 U
Chlorobenzene	1,100	5.4 U	5.2 U	5.8 U	6 U	6 U
Chloroethane	1,900	5.4 R	5.2 R	5.8 R	6 R	6 R
Chloroform	300	5.4 U	5.2 U	5.8 U	6 U	6 U
Chloromethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
cis-1,2-Dichloroethene	250	5.4 U	5.2 U	9	42	6 U
cis-1,3-Dichloropropene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Dibromochloromethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Dibromomethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Dichlorodifluoromethane	None Established	5.4 UJ	5.2 UJ	5.8 U	6 U	6 U
Ethylbenzene	1,000	5.4 U	5.2 U	5.8 U	6 U	6 U
Hexachlorobutadiene	330	5.4 U	5.2 U	5.8 U	6 U	6 U
Iodomethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Isopropylbenzene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
m,p-Xylene	1,200	3 J	5.2 U	5.8 U	6 U	6 U
Methyl tert-butyl ether	930	5.4 U	5.2 U	5.8 U	6 U	6 U
Methylene chloride	50	3 UB	2 UB	2 UB	6 U	6 U
Naphthalene	13,000	5.4 U	5.2 U	5.8 U	6 U	6 U
n-Butylbenzene	12,000	5.4 U	5.2 U	5.8 U	6 U	6 U
n-Propylbenzene	3,900	5.4 U	5.2 U	5.8 U	6 U	6 U
o-Xylene	1,200	1 J	5.2 U	5.8 U	6 U	6 U
sec-Butylbenzene	11,000	5.4 U	5.2 U	5.8 U	6 U	6 U
Styrene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
tert-Butylbenzene	5,900	5.4 U	5.2 U	5.8 U	6 U	6 U
Tetrachloroethene	1,300	22	5.2 U	26	23	6 U
Toluene	700	5 J	5.2 U	1 J	1 J	6 U
trans-1,2-Dichloroethene	190	5.4 U	5.2 U	5.8 U	6 U	6 U
trans-1,3-Dichloropropene	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Trichloroethene	470	5.4 U	5.2 U	5.8 U	6 U	6 U
Trichlorofluoromethane	None Established	5.4 U	5.2 U	5.8 U	6 U	6 U
Vinyl acetate	None Established	5.4 UJ	5.2 UJ	5.8 UJ	6 U	6 U
Vinyl chloride	20	5.4 U	5.2 U	5.8 U	6 U	6 U
Xylene (Total)	260	5 J	5.2 U	5.8 U	6 U	6 U

Notes:

µg/m3 - micrograms per meter cubed

U - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-1
Direct Push Soil Sampling Results

Sample ID	Site-Specific Soil Delineation Criteria (SSSDC)	130172-MIP7-S-5	130172-MIP7-S-22	130172-MIP8-S-5	130172-MIP88-S-5	130172-MIP9-S-5
Sample Location		MIP-7	MIP-7	MIP-8	MIP-8	MIP-9
Lab Sample Number		G0569-03B	G0569-04B	G0569-07B	G0569-08B	G0569-10B
Sampling Date		4/23/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
Unit		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Semi-Volatile Organic Compounds (SW 8270)						
1,2,4-Trichlorobenzene	None Established	350 U	340 U	390 U	410 U	400 U
1,2-Dichlorobenzene	1100	350 U	340 U	390 U	410 U	400 U
1,3-Dichlorobenzene	2400	350 U	340 U	390 U	410 U	400 U
1,4-Dichlorobenzene	1800	350 U	340 U	390 U	410 U	400 U
2,2'-oxybis(1-Chloropropane)	None Established	350 UJ	340 UJ	390 UJ	410 UJ	400 UJ
2,4,5-Trichlorophenol	100	710 U	690 U	800 U	830 U	810 U
2,4,6-Trichlorophenol	None Established	350 U	340 U	390 U	410 U	400 U
2,4-Dichlorophenol	400	350 U	340 U	390 U	410 U	400 U
2,4-Dimethylphenol	None Established	350 UJ	340 UJ	390 UJ	410 UJ	400 UJ
2,4-Dinitrophenol	200 or MDL	710 UJ	690 UJ	800 UJ	830 UJ	810 UJ
2,4-Dinitrotoluene	None Established	350 U	340 U	390 U	410 U	400 U
2,6-Dinitrotoluene	1,000	350 U	340 U	390 U	410 U	400 U
2-Chloronaphthalene	None Established	350 U	340 U	390 U	410 U	400 U
2-Chlorophenol	800	350 U	340 U	390 U	410 U	400 U
2-Methylnaphthalene	36,400	350 U	340 U	390 U	410 U	400 U
2-Methylphenol	100 or MDL	350 U	340 U	390 U	410 U	400 U
2-Nitroaniline	430 or MDL	710 U	690 U	800 U	830 U	810 U
2-Nitrophenol	330 or MDL	350 U	340 U	390 U	410 U	400 U
3,3'-Dichlorobenzidine	None Established	350 U	340 U	390 U	410 U	400 U
3-Nitroaniline	500 or MDL	710 U	690 U	800 U	830 U	810 U
4,6-Dinitro-2-methylphenol	None Established	710 UJ	690 UJ	800 UJ	830 UJ	810 UJ
4-Bromophenyl-phenylether	None Established	350 U	340 U	390 U	410 U	400 U
4-Chloro-3-methylphenol	240 or MDL	350 U	340 U	390 U	410 U	400 U
4-Chloroaniline	220 or MDL	350 U	340 U	390 U	410 U	400 U
4-Chlorophenyl-phenylether	None Established	350 U	340 U	390 U	410 U	400 U
4-Methylphenol	900	350 U	340 U	390 U	410 U	400 U
4-Nitroaniline	None Established	710 U	690 U	800 U	830 U	810 U
4-Nitrophenol	100 or MDL	710 U	690 UJ	800 U	830 U	810 UJ
Acenaphthene	20000	350 U	340 U	390 U	410 U	400 U
Acenaphthylene	41,000	350 U	340 U	390 U	410 U	400 U
Anthracene	50,000	350 U	340 U	390 U	410 U	400 U
Benzo(a)anthracene	224 or MDL	320 J	340 U	390 U	410 U	400 U
Benzo(a)pyrene	61 or MDL	300 J	340 U	390 U	410 U	400 U
Benzo(b)fluoranthene	1,000	510	340 U	390 U	410 U	400 U
Benzo(g,h,i)perylene	50,000	350 UJ	340 UJ	390 UJ	410 UJ	400 UJ
Benzo(k)fluoranthene	800	240 J	340 U	390 U	410 U	400 U
Bis(2-chloroethoxy)methane	None Established	350 U	340 UJ	390 U	410 U	400 UJ
Bis(2-chloroethyl)ether	None Established	350 U	340 U	390 U	410 U	400 U
Bis(2-ethylhexyl)phthalate	50,000	120,000 E	340 U	390 U	410 U	400 U
Butylbenzylphthalate	50,000	1100	340 U	390 U	410 U	400 U
Carbazole	None Established	350 U	340 U	390 U	410 U	400 U
Chrysene	400	380	340 U	390 U	410 U	400 U
Dibenz(a,h)anthracene	15 or MDL	350 UJ	340 UJ	390 UJ	410 UJ	400 UJ
Dibenzofuran	6,200	350 U	340 U	390 U	410 U	400 U
Diethylphthalate	7,100	350 U	340 U	390 U	410 U	400 U
Dimethylphthalate	2,000	430 U	340 U	390 U	410 U	400 U
Di-n-butylphthalate	8,100	1300	340 U	390 U	410 U	400 U
Di-n-octylphthalate	50,000	450 J	340 UJ	390 UJ	410 UJ	400 UJ
Fluoranthene	50,000	450	340 U	390 U	410 U	400 U
Fluorene	30,000	350 U	340 U	390 U	410 U	400 U
Hexachlorobenzene	330	350 U	340 U	390 U	410 U	400 U
Hexachlorobutadiene	None Established	350 U	340 U	390 U	410 U	400 U
Hexachlorocyclopentadiene	None Established	350 UJ	340 UJ	390 UJ	410 UJ	400 UJ
Hexachloroethane	None Established	350 U	340 U	390 U	410 U	400 U
Indeno(1,2,3-cd)pyrene	500	77 UJ	340 UJ	390 UJ	410 UJ	400 UJ
Isophorone	4,400	350 U	340 U	390 U	410 U	400 U
Naphthalene	12000	350 U	340 U	390 U	410 U	400 U
Nitrobenzene	201 or MDL	350 U	340 U	390 U	410 U	400 U
N-Nitroso-di-n-propylamine	None Established	350 U	340 U	390 U	410 U	400 U
N-Nitrosodiphenylamine	None Established	350 U	340 U	390 U	410 U	400 U
Pentachlorophenol	800	710 R	690 R	800 R	830 R	810 R
Phenanthrene	50,000	200 J	340 U	390 U	410 U	400 U
Phenol	30 or MDL	350 U	340 UJ	390 U	410 U	400 UJ
Pyrene	50,000	1200	340 U	390 U	410 U	400 U

Notes:

µg/m3 - micrograms per meter cubed

U - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-2
Direct Push Groundwater Sampling Results

Sample ID	Site-Specific	130172-DG-GW-85	130172-MIP2-GW-85	130172-MIP7-GW-85	130172-MIP8-GW-85	130172-MIP9-GW-85	130172-MIP99-GW-85
Sample Location	Groundwater Delineation Criteria (SSGWDC)	Downgradient Point	MIP-2 (Area of FMR Cesspool)	MIP-7 (Area of FMR drywell near solvent tank)	MIP-8 (Area of FMR Solvent Holding Tank)	MIP-9 (Area of FMR Cooling Tower)	MIP-9 (Duplicate)
Lab Sample Number	G0569-14A/B	G0569-17A/B	G0569-05A/B	G0569-09A/B	G0569-11A/B	G0569-12A/B	
Sampling Date	4/24/2008	4/24/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008	
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Volatile Organic Compounds (SW 8260)							
1,1,2-Tetrachloroethane	5	0.45U	25U	5U	5U	5U	5U
1,1,1-Trichloroethane	5	0.41U	25U	5U	6	5U	5U
1,1,2-Tetrachloroethane	5	0.39U	25U	5U	5U	5U	5U
1,1,2-Trichloroethane	1	0.51U	25U	5U	5U	5U	5U
1,1-Dichloroethane	5	0.4U	25U	5U	5U	5U	5U
1,1-Dichloroethene	5	0.57U	25U	5U	5U	5U	5U
1,1-Dichloropropane	5	0.73U	25U	5U	5U	5U	5U
1,2,3-Trichlorobenzene	5	0.5U	25U	5U	5U	5U	5U
1,2,3-Trichloropropane	0.04	0.84U	25U	5U	5U	5U	5U
1,2,4-Trichlorobenzene	5	0.49U	25U	5U	4	13	15
1,2,4-Trimethylbenzene	5	0.42U	25U	5U	5U	5U	5U
1,2-Dibromo-3-chloropropane	0.04	0.72U	25U	5U	5U	5U	5U
1,2-Dibromoethane	0.0006	0.3U	25U	5U	5U	5U	5U
1,2-Dichlorobenzene	3	0.39U	25U	5U	5U	5U	5U
1,2-Dichloroethane	0.6	0.33U	25U	5U	5U	5U	5U
1,2-Dichloropropane	1	0.72U	25U	5U	5U	5U	5U
1,3,5-Trimethylbenzene	5	0.31U	25U	5U	5U	5U	5U
1,3-Dichlorobenzene	3	0.36U	25U	5U	5U	5U	5U
1,3-Dichloropropane	5	0.6U	25U	5U	5U	5U	5U
1,4-Dichlorobenzene	3	0.37U	25U	5U	5U	5U	5U
2,2-Dichloropropane	5	0.35U	25U	5U	5U	5U	5U
2-Bromoaniline	50	1.9R	25R	5R	5R	5R	5R
Chlorotoluene	5	0.53U	25U	5U	5U	5U	5U
2-Hexanone	50	0.4U	25U	5U	5U	5U	5U
4-Chlorotoluene	5	0.71U	25U	5U	5U	5U	5U
4-Isopropyltoluene	5	0.46U	25U	5U	5U	5U	5U
4-Methyl-2-pentanone	50	2.9U	25U	5U	5U	5U	5U
Acetone	50	4.8R	25R	5R	5R	5R	5R
Benzene	1	0.39U	25U	5U	5U	5U	5U
Bromobenzene	5	0.35U	25U	5U	5U	5U	5U
Bromoform	5	0.35U	25U	5U	5U	5U	5U
Bromodichloromethane	50	0.43U	25U	5U	5U	5U	5U
Bromoform	50	0.27U	25U	5U	5U	5U	5U
Bromomethane	5	0.77U	25U	5U	5U	5U	5U
Carbon disulfide	50	0.25U	25U	5U	5U	5U	5U
Carbon tetrachloride	5	0.37U	25U	5U	5U	5U	5U
Chlorobenzene	5	0.32U	25U	5U	2J	5U	5U
Chloroethane	5	0.75U	25U	5U	5U	5U	5U
Chloroform	7	0.4U	25U	5U	5U	5U	5U
Chloromethane	5	0.44U	25U	5U	5U	5U	5U
cis-1,2-Dichloroethene	5	10	25U	30	400 EJ	32	24
cis-1,3-Dichloropropene	0.4	0.46U	25U	5U	5U	5U	5U
Dibromochloromethane	50	0.33U	25U	5U	5U	5U	5U
Dibromomethane	5	0.76U	25U	5U	5U	5U	5U
Dichlorodifluoromethane	5	0.77U	25U	5U	5U	5U	5U
Ethylbenzene	5	0.33U	25U	5U	5U	5U	5U
Hexachlorobutadiene	0.5	0.84U	25U	5U	5U	5U	5U
Iodomethane	5	0.46U	25U	5U	5U	5U	5U
Isopropylbenzene	5	0.27U	25U	5U	5U	5U	5U
m,p-Xylene	5	0.92U	25U	5U	4J	5U	5U
Methyl tert-butyl ether	10	0.43U	25U	5U	5U	5U	5U
Methylene chloride	5	0.44U	25U	5U	5U	5U	5U
Naphthalene	50	0.46U	25U	5U	3J	5U	5U
n-Butylbenzen	5	0.49U	25U	5U	5U	5U	5U
n-Propylbenzene	5	0.27U	25U	5U	5U	5U	5U
o-Xylene	5	0.45U	25U	5U	3.1J	5U	5U
sec-Butylbenzene	5	0.33U	25U	5U	5U	5U	5U
Styrene	5	0.48U	25U	5U	5U	5U	5U
tert-Butylbenzene	5	0.46U	25U	5U	5U	5U	5U
Tetrachloroethene (PCE)	5	4,400 E	430	2,300	8,500	4,000	4,200
Toluene	5	0.71U	25U	5U	4J	5U	5U
trans-1,2-Dichloroethene	5	0.44U	25U	5U	5U	5U	5U
trans-1,3-Dichloropropene	0.4	0.66U	25U	5U	5U	5U	5U
Trichloroethene (TCE)	5	44	25U	20	870 EJ	46	49
Trichlorofluoromethane	5	0.84U	25U	5U	5U	5U	5U
Vinyl acetate	50	0.46U	25U	5U	5U	5U	5U
Vinyl chloride	2	0.44U	25U	5U	2J	5U	5U
Xylene (Total)	5	1.3U	25U	5U	8	5U	5U

Notes:

upm3 - micrograms per meter cubed

ND - Non Detected

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-2
Direct Push Groundwater Sampling Results

Sample ID	Site-Specific	130172-DG-GW-85		130172-MIP2-GW-85		130172-MIP7-GW-85		130172-MIP8-GW-85		130172-MIP9-GW-85		130172-MIP99-GW-85	
Sample Location	Groundwater Delineation Criteria (SSGWDC)	Downgradient Point		MIP-2 (Area of FMR Cesspool)		MIP-7 (Area of FMR drywell near solvent tank)		MIP-8 (Area of FMR Solvent Holding Tank)		MIP-9 (Area of FMR Cooling Tower)		MIP-9 (Duplicate)	
Lab Sample Number	G0569-14A/B			G0569-17A/B		G0569-05A/B		G0569-09A/B		G0569-11A/B		G0569-12A/B	
Sampling Date	4/24/2008			4/24/2008		4/23/2008		4/23/2008		4/23/2008		4/23/2008	
Unit	µg/L			µg/L		µg/L		µg/L		µg/L		µg/L	
Semi-Volatile Organic Compounds (SW 8270)													
1,2,4-Trichlorobenzene	5	10	U	10	U	10	U	2.4	J	20	10		
1,2-Dichlorobenzene	3	10	U	10	U	10	U	10	U	10	U		
1,3-Dichlorobenzene	3	10	U	10	U	10	U	10	U	10	U		
1,4-Dichlorobenzene	3	10	U	10	U	10	U	10	U	10	U		
2,2-oxybis(1-Chloropropane)	5	10	U	10	U	10	U	10	U	10	U		
2,4,5-Trichlorophenol	50	20	U	20	U	20	U	20	U	20	U		
2,4,6-Trichlorophenol	50	10	U	10	U	10	U	10	U	10	U		
2,4-Dichlorophenol	5	10	U	10	U	10	U	10	U	10	U		
2,4-Dimethylphenol	50	10	J	10	U	10	U	10	U	10	U		
2,4-Dinitrophenol	10	20	U	20	U	20	U	20	U	20	U		
2,4-Dinitrotoluene	5	10	U	10	U	10	U	10	U	10	U		
2,6-Dinitrotoluene	5	10	U	10	U	10	U	10	U	10	U		
2-Chloronaphthalene	50	10	U	10	U	10	U	10	U	10	U		
2-Chlorophenol	50	10	U	10	U	10	U	10	U	10	U		
2-Methylnaphthalene	50	10	U	10	U	10	U	10	U	10	U		
2-Methylphenol	50	10	U	10	U	10	U	10	U	10	U		
2-Nitroaniline	5	20	U	20	U	20	U	20	U	20	U		
2-Nitrophenol	50	10	U	10	U	10	U	10	U	10	U		
3,3'-Dichlorobenzidine	5	10	U	10	U	10	U	10	U	10	U		
3-Nitroaniline	5	20	U	20	U	20	U	20	U	20	U		
4,6-Dinitro-2-methylphenol	50	20	U	20	U	20	U	20	U	20	U		
4-Bromophenyl-phenylether	50	10	U	10	U	10	U	10	U	10	U		
4-Chloro-3-methylphenol	50	10	U	10	U	10	U	10	U	10	U		
4-Chloroaniline	5	10	U	10	U	10	U	10	U	10	U		
4-Chloromethyl-phenylether	50	10	U	10	U	10	U	10	U	10	U		
4-Methylphenol	50	10	U	10	U	10	U	10	U	10	U		
4-Nitroaniline	5	20	U	20	U	20	U	20	U	20	U		
4-Nitrophenol	50	20	U	20	U	20	U	20	U	20	U		
Acenaphthene	50	10	U	10	U	10	U	10	U	10	U		
Acenaphthylene	50	10	U	10	U	10	U	10	U	10	U		
Anthracene	50	10	U	10	U	10	U	10	U	10	U		
Benzofluanthracene	0.002	10	U	10	U	10	U	10	U	10	U		
Benzoc[a]pyrene	0.2	10	U	10	U	10	U	10	R	10	U		
Benzoc[b]fluoranthene	0.002	10	U	10	U	10	R	10	U	10	U		
Benzoc[h]perylene	50	10	U	10	U	10	R	10	U	10	U		
Benzoc[fluoranthene]	0.002	10	U	10	U	10	U	10	U	10	U		
Bis(2-chloroethoxy)methane	5	10	U	10	U	10	U	10	U	10	U		
Bis(2-chloroethyl)ether	1	10	U	10	U	10	U	10	U	10	U		
Bis(2-ethylhexyl)phthalate	5	10	U	3.4	J	10	U	10	U	10	U		
Butylbenzylphthalate	50	10	U	10	U	10	U	10	U	10	U		
Carbazole	50	10	U	10	U	10	U	10	U	10	U		
Chrysene	0.002	10	U	10	U	10	U	10	U	10	U		
Dibenz(a,h)anthracene	50	10	U	10	U	10	R	10	U	10	U		
Dibenzofuran	50	10	U	10	U	10	U	10	U	10	U		
Diethylphthalate	50	10	U	10	U	10	U	10	U	10	U		
Dimethylphthalate	50	10	U	10	U	10	U	10	U	10	U		
Di-n-butylphthalate	50	10	U	10	U	10	U	10	U	10	U		
Di-n-octylphthalate	50	10	U	10	U	10	R	10	U	10	U		
Fluoranthene	50	10	U	10	U	10	U	10	U	10	U		
Fluorene	50	10	U	10	U	10	U	10	U	10	U		
Hexachlorobenzene	0.04	10	U	10	U	10	U	10	U	10	U		
Hexachlorobutadiene	0.5	10	U	10	U	10	U	10	U	10	U		
Hexachlorocyclopentadiene	5	10	U	10	U	10	U	10	U	10	U		
Hexachloroethane	5	10	U	10	U	10	U	10	U	10	U		
Indeno[1,2,3-d]pyrene	0.002	10	U	10	U	10	R	10	U	10	U		
Isophorone	50	10	U	10	U	10	U	10	U	10	U		
Naphthalene	50	10	U	10	U	10	U	10	U	2	J		
Nitrobenzene	0.4	10	U	10	U	10	U	10	U	10	U		
N-Nitroso-di-n-propylamine	50	10	U	10	U	10	U	10	U	10	U		
N-Nitrosodiphenylamine	50	10	U	10	U	10	U	10	U	10	U		
Pentachlorophenol	1	20	U	20	U	20	U	20	U	20	U		
Phenanthrene	50	10	U	10	U	10	U	10	U	10	U		
Phenol	1	10	U	10	U	10	U	10	U	2	U		
Pyrene	50	10	U	10	U	10	U	10	U	10	U		

Notes:
µg/m³ - micrograms per meter cubed

U - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-2
Direct Push Groundwater Sampling Results

Sample ID	Site-Specific	130172-MIP10-GW-85	130172-TB-42308	130172-FB1-42308	130172-FB2-42308	130172-FB42408	130172-TB-42408
Sample Location	Groundwater NW Bldg Corner)	MIP-10 (Area of FMR drywell,	TRIP BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	TRIP BLANK
Lab. Sample Number		G0569-16A/B	G0569-01A	G0569-02A/B	G0569-06A/B	G0569-15A/B	G0569-13A
Sampling Date		4/24/2008	4/23/2008	4/23/2008	4/23/2008	4/24/2008	4/24/2008
Unit		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Volatile Organic Compounds (SW 8260)							
1,1,2-Tetrachloroethane	5	200U	5U	5U	5U	5U	5U
1,1,1-Trichloroethane	5	200U	5U	5U	5U	5U	5U
1,1,2,2-Tetrachloroethane	5	200U	5U	5U	5U	5U	5U
1,1,2-Trichloroethane	1	200U	5U	5U	5U	5U	5U
1,1-Dichloroethane	5	200U	5U	5U	5U	5U	5U
1,1-Dichloroethene	5	200U	5U	5U	5U	5U	5U
1,1-Dichloropropene	5	200U	5U	5U	5U	5U	5U
1,2,3-Trichlorobenzene	5	200U	5U	5U	5U	5U	5U
1,2,3-Trichloropropane	0.04	200U	5U	5U	5U	5U	5U
1,2,4-Trichlorobenzene	5	200U	5U	5U	5U	5U	5U
1,2,4-Trimethylbenzene	5	200U	5U	5U	5U	5U	5U
1,2-Dibromo-3-chloropropane	0.04	200U	5U	5U	5U	5U	5U
1,2-Dibromoethane	0.0006	200U	5J	5U	5U	5U	5U
1,2-Dichlorobenzene	3	200U	5U	5U	5U	5U	5U
1,2-Dichloroethane	0.6	200U	5U	5U	5U	5U	5U
1,2-Dichloropropane	1	200U	5R	5U	5U	5U	5U
1,3,5-Trimethylbenzene	5	200U	5U	5U	5U	5U	5U
1,3-Dichlorobenzene	3	200U	5U	5U	5U	5U	5U
1,3-Dichloropropane	5	200UJ	5UJ	5UJ	5UJ	5UJ	5UJ
1,4-Dichlorobenzene	3	200U	5U	5U	5U	5U	5U
2,2-Dichloropropane	5	200U	5U	5U	5U	5U	5U
2-Butanone	50	200R	5R	5R	5R	5R	5R
2-Chlorobutene	5	200U	5U	5U	5U	5U	5U
2-Hexanone	50	200U	5U	5U	5U	5U	5U
4-Chlorotoluene	5	200U	5U	5U	5U	5U	5U
4-Isopropyltoluene	5	200U	5U	5U	5U	5U	5U
4-Methyl-2-pentanone	50	200U	5U	5U	5U	5U	5U
Acetone	50	200R	5R	5R	5R	5R	5R
Benzene	1	200U	5U	5U	5U	5U	5U
Bromobenzene	5	200U	5U	5U	5U	5U	5U
Bromochloromethane	5	200U	5U	5U	5U	5U	5U
Bromodichloromethane	50	200U	5U	5U	5U	5U	5U
Bromoform	50	200U	5U	5U	5U	5U	5U
Bromomethane	5	200U	5U	5U	5U	5U	5U
Carbon disulfide	50	200U	5U	5U	5U	5U	5U
Carbon tetrachloride	5	200U	5U	5U	5U	5U	5U
Chlorobenzene	5	200U	5U	5U	5U	5U	5U
Chloroethane	5	200U	5U	5U	5U	5U	5U
Chloroform	7	200U	5J	5U	5U	5U	5U
Chloromethane	5	200U	5U	5U	5U	5U	5U
cis-1,2-Dichloroethene	5	200U	5U	5U	5U	5U	5U
cis-1,3-Dichloropropene	0.4	200U	5U	5U	5U	5U	5U
Dibromochloromethane	50	200U	5U	5U	5U	5U	5U
Dibromomethane	5	200U	5U	5U	5U	5U	5U
Dichlorodifluoromethane	5	200U	5UJ	5UJ	5UJ	5UJ	5UJ
Ethylbenzene	5	200U	5U	5U	5U	5U	5U
Hexachlorobutadiene	0.5	200U	5U	5U	5U	5U	5U
Iodomethane	5	200U	5U	5U	5U	5U	5U
Isopropylbenzene	5	200U	5U	5U	5U	5U	5U
m,p-Xylene	5	200U	5U	5U	5U	5U	5U
Methyl tert-butyl ether	10	200U	5U	5U	5U	5U	5U
Methylene chloride	5	200U	5U	5U	5U	5U	5U
Naphthalene	50	200U	5U	5U	5U	5U	5U
n-Butylbenzene	5	200U	5U	5U	5U	5U	5U
n-Propylbenzene	5	200U	5U	5U	5U	5U	5U
c-Xylene	5	200U	5U	5U	5U	5U	5U
sec-Butylbenzene	5	200U	5U	5U	5U	5U	5U
Styrene	5	200U	5U	5U	5U	5U	5U
tert-Butylbenzene	5	200U	5U	5U	5U	5U	5U
Tetrachloroethene (PCE)	5	3,600	5U	5U	43J	37J	2J
Toluene	5	200U	5U	5U	5U	5U	5U
trans-1,2-Dichloroethene	5	200U	5U	5U	5U	5U	5U
trans-1,3-Dichloropropene	0.4	200U	5U	5U	5U	5U	5U
Trichloroethene (TCE)	5	200U	5U	5U	5U	5U	5U
Trichlorofluoromethane	5	200U	5U	5U	5U	5U	5U
Vinyl acetate	50	200U	5U	5U	5U	5U	5U
Vinyl chloride	2	200U	5U	5U	5U	5U	5U
Xylene (Total)	5	200U	5U	5U	5U	5U	5U

Notes:
µg/m³ - micrograms per meter cubed

ND - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-2
Direct Push Groundwater Sampling Results

Sample ID	Site-Specific	130172-MIP10-GW-85	130172-TB-42308	130172-FB1-42308	130172-FB2-42308	130172-FB42408	130172-TB-42408
Sample Location	Groundwater Delineation Criteria (SSGWDC)	MIP-10 (Area of FMR drywell, NW Bldg Corner) G0569-16A/B 4/24/2008	TRIP BLANK G0569-01A 4/23/2008	FIELD BLANK G0569-02A/B 4/23/2008	FIELD BLANK G0569-06A/B 4/23/2008	FIELD BLANK G0569-15A/B 4/24/2008	TRIP BLANK G0569-13A 4/24/2008
Unit		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Semi-Volatile Organic Compounds (SW 8270)							
1,2,4-Trichlorobenzene	5	10 U	NA	10 U	10 U	10 U	NA
1,2-Dichlorobenzene	3	10 U	NA	10 U	10 U	10 U	NA
1,3-Dichlorobenzene	3	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
1,4-Dichlorobenzene	3	10 U	NA	10 U	10 U	10 U	NA
2,2'-oxybis(1-Chloropropane)	5	10 UJ	NA	10 UJ	10 UJ	10 U	NA
2,4,5-Trichlorophenol	50	20 UJ	NA	20 UJ	20 UJ	20 U	NA
2,4,6-Trichlorophenol	50	10 U	NA	10 U	10 U	10 U	NA
2,4-Dichlorophenol	5	10 U	NA	10 U	10 U	10 U	NA
2,4-Dimethylphenol	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
2,4-Dinitrophenol	10	20 UJ	NA	20 UJ	20 UJ	20 U	NA
2,4-Dinitrotoluene	5	10 U	NA	10 U	10 U	10 U	NA
2,6-Dinitrotoluene	5	10 U	NA	10 U	10 U	10 U	NA
2-Chloronaphthalene	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
2-Chlorophenol	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
2-Methylnaphthalene	50	10 U	NA	10 U	10 U	10 U	NA
2-Methylphenol	50	10 U	NA	10 U	10 U	10 U	NA
2-Nitroaniline	5	20 U	NA	20 U	20 U	20 U	NA
2-Nitrophenol	50	10 U	NA	10 U	10 U	10 U	NA
3,3'-Dichlorobenzidine	5	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
3-Nitroaniline	5	20 U	NA	20 U	20 U	20 U	NA
4,6-Dinitro-2-methylphenol	50	20 U	NA	20 UJ	20 UJ	20 U	NA
4-Bromophenyl-phenylether	50	10 UJ	NA	10 U	10 UJ	10 UJ	NA
4-Chloro-3-methylphenol	50	10 U	NA	10 U	10 U	10 U	NA
4-Chloroaniline	5	10 UU	NA	10 UU	10 UU	10 UU	NA
4-Chlorophenyl-phenylether	50	10 UU	NA	10 UU	10 UU	10 UU	NA
4-Methoxyphenol	50	10 UU	NA	10 UU	10 UU	10 UU	NA
4-Nitroaniline	5	20 U	NA	20 U	20 U	20 U	NA
4-Nitrophenol	50	20 U	NA	20 U	20 U	20 U	NA
Acenaphthene	50	10 U	NA	10 U	10 U	10 U	NA
Acenaphthylene	50	10 U	NA	10 U	10 U	10 U	NA
Anthracene	50	10 UU	NA	10 UU	10 UU	10 UU	NA
Benz(a)anthracene	0.002	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Benz(a)pyrene	0.2	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Benz(b)fluoranthene	0.002	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Benz(g,h,i)perylene	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Benz(k)fluoranthene	0.002	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Bis(2-chloroethoxy)methane	5	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Bis(2-chloromethyl)ether	1	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Bis(2-ethylhexyl)phthalate	5	10 UJ	NA	10 UJ	10 UJ	3.1 J	NA
Butylbenzylphthalate	50	10 U	NA	10 U	10 U	10 U	NA
Carbazole	50	10 U	NA	10 U	10 U	10 U	NA
Chrysene	0.002	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Dibenzo(a,h)anthracene	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Dibenzofuran	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Diethylphthalate	50	10 U	NA	10 U	10 U	10 U	NA
Dimethylphthalate	50	10 U	NA	10 U	10 U	10 U	NA
Di-n-butylphthalate	50	10 UJ	NA	10 UJ	10 UJ	10 U	NA
Di-n-octylphthalate	50	10 UJ	NA	10 UJ	10 UJ	10 U	NA
Fluoranthene	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Fluorene	50	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Hexachlorobenzene	0.04	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Hexachlorobutadiene	0.5	10 U	NA	10 U	10 U	10 U	NA
Hexachlorocyclopentadiene	5	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Hexachloroethane	5	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Indeno(1,2,3-cd)pyrene	0.002	10 UJ	NA	10 UJ	10 UJ	10 UJ	NA
Isophorone	50	10 U	NA	10 U	10 U	10 U	NA
Naphthalene	50	10 U	NA	10 U	10 U	10 U	NA
Nitrobenzene	0.4	10 U	NA	10 U	10 U	10 U	NA
N-Nitroso-di-n-propylamine	50	10 U	NA	10 U	10 U	10 U	NA
N-Nitrosodiphenylamine	50	10 UJ	NA	10 UJ	10 UJ	10 U	NA
Pentachlorophenol	1	20 UJ	NA	20 UJ	20 UJ	20 U	NA
Phenanthrene	50	10 UJ	NA	10 UJ	10 U	10 U	NA
Phenol	1	10 U	NA	10 U	10 U	10 U	NA
Pyrene	50	10 U	NA	10 U	10 U	10 U	NA

Notes:

µg/m³ - micrograms per meter cubed

U - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-3
Soil Vapor and Ambient Air Sampling Results

Sample ID	130172-SV-MIP3-S	130172-SV-MIP3-D	130172-SV-MIP7-S	130172-SV-MIP7-D	130172-SV-MIP9-S
Sample Location	MIP 3 G0606-10A\SA77882-10	MIP 3 G0606-09A\SA77882-09	MIP 7 G0606-06A\SA77882-06	MIP 7 G0606-07A\SA77882-07	MIP 9 G0606-03A\SA77882-03
Lab ID					
Sampling Date	4/7/2008	4/9/2008	4/11/2008	4/13/2008	4/15/2008
Unit	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Volatile Organic Compounds					
Propene	19.55	61.4	27.2	19.6	93 J
Dichlorodifluoromethane (Freon12)	9.89 U	4.2	49.45 U	49.45 U	9.89 U
Chloromethane	4.13 U	2.07 U	20.65 U	20.65 U	4.13 U
1,2-Dichlorotetrafluoroethane (Freon 114)	13.98 U	6.99 U	69.9 U	69.9 U	13.98 U
Vinyl chloride	5.11 U	2.56 U	25.56 U	25.56 U	5.11 U
1,3-Butadiene	4.42 U	2.21 U	22.09 U	22.09 U	4.42 U
Bromomethane	7.76 U	3.88 U	38.81 U	38.81 U	7.76 U
Chloroethane	5.28 U	2.64 U	26.38 U	26.38 U	5.28 U
Acetone	305.2	139.32	82	59.4	310 J
Trichlorofluoromethane (Freon 11)	7 U	13.48	56.2 U	56.2 U	11.24 U
Ethanol	13.2	34.16	35.6 J	29 J	108 J
1,1-Dichloroethene	7.93 U	3.97 U	39.67 U	39.67 U	7.93 U
Methylene chloride	6.94 U	3.47 U	34.72 U	34.72 U	6.94 U
1,1,2-Trichlorotrifluoroethane (Freon 113)	15.33 U	7.66 U	76.65 U	76.65 U	15.33 U
Carbon disulfide	6.22 U	3.11 U	31.12 U	31.12 U	2.4 J
trans-1,2-Dichloroethene	7.93 U	3.97 U	39.65 U	39.65 U	7.93 U
1,1-Dichloroethane	8.1 U	4.05 U	40.49 U	40.49 U	8.1 U
Methyl tert-butyl ether	7.21 U	3.61 U	36.07 U	36.07 U	7.21 U
Isopropyl alcohol	3.68 U	2.45 U	24.54 UJ	24.54 UJ	4.91 U
2-Butanone (MEK)	10.85	161.36	168	115	298.9
cis-1,2-Dichloroethene	7.93 U	3.97 U	42	124	10 J
Hexane	7.05 U	11.06	35.26 U	35.26 U	7.05 U
Ethyl acetate	7.21 U	3.6 U	36.03 U	36.03 U	7.21 U
Chloroform	9.73 U	4.87 U	48.67 U	48.67 U	9.73 U
Tetrahydrofuran	5.91 U	2.74	29.49 U	29.49 U	5.9 U
1,2-Dichloroethane	8.1 U	4.05 U	40.49 U	40.49 U	8.1 U
1,1,1-Trichloroethane	10.91 U	5.46 U	54.56 U	54.56 U	10.91 U
Benzene	6.38 U	5.08	31.9 U	31.9 U	6.38 U
Carbon tetrachloride	12.58 U	6.29 U	62.9 U	62.9 U	12.58 U
Cyclohexane	6.88 U	1.92	34.42 U	34.42 U	6.88 U
1,2-Dichloropropane	9.24 U	4.62 U	46.22 U	46.22 U	9.24 U
Bromodichlormethane	13.41 U	6.7 U	66.99 U	66.99 U	13.4 U
Trichloroethene (TCE)	2.2 U	5.37 U	61.8	39.2	9.6 U
n-Heptane	9.02	5.22	40.98 U	40.98 U	8.2 U
4-Methyl-2-pentanone (MIBK)	8.2 U	4.1 U	40.98 U	40.98 U	8.2 U
cis-1,3-Dichloropropene	9.08 U	4.54 U	45.4 U	45.4 U	9.08 U
trans-1,3-Dichloropropene	9.08 U	4.54 U	45.4 U	45.4 U	9.08 U
1,1,2-Trichloroethane	18.81 U	5.46 U	54.56 U	54.56 U	10.91 U
Toluene	70.74	30.88	10	17	12 U
2-Hexanone (MBK)	8.2 U	14.28	14.2	40.98 U	38 J
Dibromochlormethane	17.04 U	8.52 U	85.19 U	85.19 U	17.04 U
1,2-Dibromoethane (EDB)	170 U	7.69 U	76.85 U	76.85 U	15.37 U
Tetrachloroethene (PCE)	1156.06	171.36	1370	1549	310 U
Chlorobenzene	5 U	4.61 U	46.05 U	46.05 U	9.21 U
Ethylbenzene	18.5	3.94	43.35 U	43.35 U	2.6 U
m,p-Xylene	80.29	15	86.71 U	86.71 U	9.2 U
Bromoform	20.67 U	10.34 U	103.35 U	103.35 U	20.67 U
Styrene	6.28 U	4.25 U	42.54 U	42.54 U	8.51 U
o-Xylene	27.23	4.54	43.35 U	43.35 U	2.8 U
1,1,2,2-Tetrachloroethane	2.24 U	6.87 U	68.67 U	68.67 U	13.73 U
1,3,5-Trimethylbenzene	11.01	1.48	49.16 U	49.16 U	9.83 U
4-Ethyltoluene	6.84 U	1.12	49.16 U	49.16 U	9.83 U
1,2,4-Trimethylbenzene	33.63	3.82	49.16 U	49.16 U	2.1 U
1,3-Dichlorobenzene	12.02 U	6.01 U	60.12 U	60.12 U	12.02 U
Benzyl chloride	10.31 U	5.15 U	51.53 U	51.53 U	10.31 U
1,4-Dichlorobenzene	12.02 U	6.01 U	60.12 U	60.12 U	12.02 U
1,2-Dichlorobenzene	12.02 U	6.01 U	60.12 U	60.12 U	12.02 U
1,2,4-Trichlorobenzene	14.85 U	7.42 UJ	296.93 U	296.93 U	14.85 U
Hexachlorobutadiene	21.33 U	10.66 U	426.5 U	426.5 U	21.33 U

Notes:
µg/m³ - micrograms per meter cubed
U - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits

Table 4-3
Soil Vapor and Ambient Air Sampling Results

Sample ID	130172-SV-MIP9-D MIP 9 G0606-04A SA77882-04	130172-SV-MIP99-D MIP 9 Duplicate G0606-05A SA77882-05	130172-SV-MIP10-S MIP 10 G0606-02A SA77882-02	130172-SV-MIP10-D MIP 10 G0606-01A SA77882-01	130172-SV-AA Outdoor Ambient Air G0606-08A SA77882-08
Lab ID					
Sampling Date	4/17/2008	4/19/2008	4/21/2008	4/23/2008	4/25/2008
Unit	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Volatile Organic Compounds					
Propene	1359.64 U	1127.3 U	101.54 U	1153.11 U	0.86 U
Dichlorodifluoromethane (Freon12)	3906.38 U	3238.83 U	291.74 U	3313.01 U	0.61 U
Chloromethane	1631.7 U	1352.86 U	121.86 U	1383.84 U	0.71 U
1,2-Dichlorotetrafluoroethane (Freon 114)	5521.92 U	4578.3 U	412.4 U	4683.15 U	3.49 U
Vinyl chloride	2019.43 U	1674.34 U	150.82 U	1712.68 U	1.28 U
1,3-Butadiene	1744.79 U	1446.63 U	130.31 U	1479.75 U	1.1 U
Bromomethane	3066.3 U	2542.31 U	229 U	2600.53 U	1.94 U
Chloroethane	2084.05 U	1727.91 U	155.64 U	1767.48 U	1.32 U
Acetone	1975 U	1795 U	730 U	1675 U	6.09 U
Trichlorofluoromethane (Freon 11)	4439.51 U	3680.86 U	331.56 U	3765.15 U	2.81 U
Ethanol	2148.8 U	1952 U	96.8 U	1100 U	7.08 U
1,1-Dichloroethene	3134.15 U	2598.57 U	234.07 U	2658.08 U	1.98 U
Methylene chloride	2743.19 U	2274.42 U	204.87 U	2326.5 U	1.74 U
1,1,2-Trichlorotrifluoroethane (Freon 113)	6055.05 U	5020.33 U	452.21 U	5135.3 U	3.83 U
Carbon disulfide	2458.85 U	2038.67 U	183.64 U	2085.36 U	1.56 U
trans-1,2-Dichloroethene	3132.54 U	2597.23 U	233.95 U	2656.71 U	1.98 U
1,1-Dichloroethane	3198.77 U	2652.15 U	238.9 U	2712.88 U	2.02 U
Methyl tert-butyl ether	2849.82 U	2362.82 U	212.83 U	2416.93 U	1.8 U
Isopropyl alcohol	4345 U	6589 U	135 U	1822 U	1.23 U
2-Butanone (MEK)	2329.61 U	1931.51 U	173.98 U	1889 U	1.47 U
cis-1,2-Dichloroethene	3132.54 U	2597.23 U	281 U	2656.71 U	1.98 U
Hexane	2785.19 U	2309.24 U	208.01 U	2362.13 U	1.76 U
Ethyl acetate	2846.58 U	2360.14 U	212.59 U	2414.19 U	1.8 U
Chloroform	3844.99 U	3187.93 U	287.16 U	3260.94 U	2.43 U
Tetrahydrofuran	2329.61 U	1931.51 U	173.98 U	1975.75 U	1.47 U
1,2-Dichloroethane	3198.77 U	2652.15 U	238.9 U	2712.88 U	2.02 U
1,1,1-Trichloroethane	4310.27 U	3573.7 U	321.91 U	3655.54 U	2.73 U
Benzene	2520.25 U	2089.57 U	188.22 U	2137.42 U	1.6 U
Carbon tetrachloride	4969.41 U	4120.2 U	371.13 U	4214.56 U	3.15 U
Cyclohexane	2719.28 U	2254.59 U	203.09 U	2306.23 U	1.72 U
1,2-Dichloropropane	3651.12 U	3027.2 U	272.68 U	3096.52 U	2.31 U
Bromodichloromethane	5292.52 U	4388.1 U	395.26 U	4488.59 U	3.35 U
Trichloroethylene (TCE)	932.2 U	956 U	353 J	763.8 J	2.69 U
n-Heptane	3237.55 U	2684.29 U	241.79 U	2745.77 U	2.05 U
4-Methyl-2-pentanone (MIBK)	884.8 U	2684.29 U	241.79 U	2745.77 U	2.05 U
cis-1,3-Dichloropropene	3586.5 U	2973.62 U	267.85 U	3041.72 U	2.27 U
trans-1,3-Dichloropropene	3586.5 U	2973.62 U	267.85 U	3041.72 U	2.27 U
1,1,2-Trichloroethane	4310.27 U	3573.7 U	321.91 U	3655.54 U	2.73 U
Toluene	2972.6 U	2464.62 U	222 U	2521.06 U	1.88 U
2-Hexanone (MBK)	3237.55 U	2684.29 U	241.79 U	2745.77 U	2.05 U
Dibromochloromethane	6730.35 U	5580.23 U	502.65 U	5708.02 U	4.26 U
1,2-Dibromoethane (EDB)	6071.21 U	5033.72 U	453.42 U	5149 U	3.84 U
Tetrachloroethylene (PCE)	507891 U	419986 U	14686.28 U	419152 U	3.39 U
Chlorobenzene	3638.2 U	3016.48 U	271.71 U	3085.56 U	2.3 U
Ethylbenzene	3424.95 U	2839.67 U	255.79 U	2904.7 U	2.17 U
m,p-Xylene	6849.9 U	5679.35 U	511.57 U	5809.41 U	4.34 U
Bromoform	8164.95 U	6769.67 U	609.79 U	6924.7 U	5.17 U
Styrene	3360.33 U	2786.09 U	250.96 U	2849.9 U	2.13 U
o-Xylene	3424.95 U	2839.67 U	255.79 U	2904.7 U	2.17 U
1,1,2,2-Tetrachloroethane	5424.99 U	4497.93 U	405.16 U	4600.94 U	3.43 U
1,3,5-Trimethylbenzene	3883.76 U	3220.08 U	290.05 U	3293.82 U	2.46 U
4-Ethyltoluene	3883.76 U	3220.08 U	290.05 U	3293.82 U	2.46 U
1,2,4-Trimethylbenzene	3883.76 U	3220.08 U	290.05 U	3293.82 U	2.46 U
1,3-Dichlorobenzene	4749.69 U	3938.04 U	354.72 U	4028.22 U	3.01 U
Benzyl chloride	4071.17 U	3375.46 U	304.05 U	3452.76 U	2.58 U
1,4-Dichlorobenzene	4749.69 U	3938.04 U	354.72 U	4028.22 U	3.01 U
1,2-Dichlorobenzene	4749.69 U	3938.04 U	354.72 U	4028.22 U	3.01 U
1,2,4-Trichlorobenzene	5864.42 UJ	4862.27 U	437.98 UJ	4973.62 UJ	3.71 U
Hexachlorobutadiene	8423.44 U	6983.99 U	629.09 U	7143.93 U	5.33 U

Notes:

µg/m³ - micrograms per meter cubed

U - Non Detect

E - Value above quantitation range

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Table 4-4
Site-Specific Soil Delineation Criteria

Parameter	Unit	6 NYCRR Part 375-6 Unrestricted Use Criteria (3)	TAGM #4046 Criteria (1)	Site-Specific Soil Delineation Criteria (SSSDC)
			Recommended Soil Cleanup Objective (2)	
Volatile Organic Compounds (VOCs)				
1,1,1,2-Tetrachloroethane	µg/kg		600	600
1,1,1-Trichloroethane	µg/kg	680	800	680
1,1,2,2-Tetrachloroethane	µg/kg	-	600	600
1,1,2-Trichloroethane	µg/kg	-	None Established	None Established
1,1-Dichloroethane	µg/kg	270	200	200
1,1-Dichloroethene	µg/kg	330	400	330
1,1-Dichloropropene	µg/kg	-	None Established	None Established
1,2,3-Trichlorobenzene	µg/kg	-	None Established	None Established
1,2,3-Trichloropropane	µg/kg	-	400	400
1,2,4-Trichlorobenzene	µg/kg	-	3,400	3,400
1,2,4-Trimethylbenzene	µg/kg	-	None Established	None Established
1,2-Dibromo-3-chloropropane	µg/kg	-	None Established	None Established
1,2-Dibromoethane	µg/kg	-	None Established	None Established
1,2-Dichlorobenzene	µg/kg	1,100	7,900	1,100
1,2-Dichloroethane	µg/kg	20	100	20
1,2-Dichloropropane	µg/kg	-	None Established	None Established
1,3,5-Trimethylbenzene	µg/kg	-	None Established	None Established
1,3-Dichlorobenzene	µg/kg	2,400	1,600	1,600
1,3-Dichloropropane	µg/kg	-	300	300
1,4-Dichlorobenzene	µg/kg	1,800	8,500	1,800
2,2-Dichloropropane	µg/kg	-	None Established	None Established
2-Butanone (MEK)	µg/kg	120	300	120
2-Chlorotoluene	µg/kg	-	None Established	None Established
2-Hexanone	µg/kg	-	None Established	None Established
4-Chlorotoluene	µg/kg	-	None Established	None Established
4-Isopropyltoluene	µg/kg	-	None Established	None Established
4-Methyl-2-pentanone	µg/kg	-	1,000	1,000
Acetone	µg/kg	50	200	50
Benzene	µg/kg	60	60	60
Bromobenzene	µg/kg	-	None Established	None Established
Bromochloromethane	µg/kg	-	None Established	None Established
Bromodichloromethane	µg/kg	-	None Established	None Established
Bromform	µg/kg	-	None Established	None Established
Bromomethane	µg/kg	-	None Established	None Established
Carbon Disulfide	µg/kg	-	2,700	2,700
Carbon tetrachloride	µg/kg	760	600	600
Chlorobenzene	µg/kg	1,100	1,700	1,100
Chloroethane	µg/kg	-	1,900	1,900
Chloroform	µg/kg	370	300	300
Chloromethane	µg/kg	-	None Established	None Established
cis-1,2-Dichloroethene	µg/kg	250	None Established	250
cis-1,3-Dichloropropene	µg/kg	-	None Established	None Established
Dibromochloromethane	µg/kg	-	None Established	None Established
Dibromoethane	µg/kg	-	None Established	None Established
Dichlorodifluoromethane	µg/kg	-	None Established	None Established
Ethylbenzene	µg/kg	1,000	5,500	1,000
Hexachlorobutadiene	µg/kg	330	None Established	330
Iodomethane	µg/kg	-	None Established	None Established
Isopropylbenzene	µg/kg	-	None Established	None Established
m&p-Xylene	µg/kg	-	1,200	1,200
Methyl t-butyl ether (MTBE)	µg/kg	930	None Established	930
Methylene chloride	µg/kg	50	100	50
Naphthalene	µg/kg	-	13,000	13,000
n-Butylbenzene	µg/kg	12,000	None Established	12,000
n-Propylbenzene	µg/kg	3,900	None Established	3,900
o-Xylene	µg/kg	-	1,200	1,200
sec-Butylbenzene	µg/kg	11,000	None Established	11,000
Styrene	µg/kg	-	None Established	None Established
tert-Butylbenzene	µg/kg	5,900	None Established	5,900
Tetrachloroethene	µg/kg	1,300	1,400	1,300
Toluene	µg/kg	700	1,500	700
trans-1,2-Dichloroethene	µg/kg	190	None Established	190
trans-1,3-Dichloropropene	µg/kg	-	None Established	None Established
Trichloroethene	µg/kg	470	700	470
Trichlorofluoromethane	µg/kg	-		None Established
Vinyl acetate	µg/kg			
Vinyl chloride	µg/kg	20	200	20
Xylenes (Total)	µg/kg	260	1,200	260

Notes:

(1) Recommended Soil Cleanup Objectives are specified in the New York Department of Environmental Conservation's, "Technical and Administrative Guidance Memorandum #4046" or TAGM.

(2) In addition to the Soil Cleanup Objectives specified under TAGM #4046, the standard of Total VOCs of less than or equal to 10,000 µg/kg also applies.

(3) The criteria listed for unrestricted soil use obtained from NYCRR Part 375-6 became effective December 14, 2006 and supersedes TAGM #4046 values.

Acronyms:

µg/kg - micrograms per kilogram

Table 4-4
Site-Specific Soil Delineation Criteria

Parameter	Unit	6 NYCRR Part 375-6 Unrestricted Use Criteria (3)	TAGM #4046 Criteria (1)	Site-Specific Soil Delineation Criteria (SSSDC)
			Recommended Soil Cleanup Objective (2)	
Semi-Volatile Organic Compounds (SVOCs)				
1,2,4-Trichlorobenzene	µg/kg	-	None Established	None Established
1,2-Dichlorobenzene	µg/kg	1,100	None Established	1100
1,3-Dichlorobenzene	µg/kg	2,400	None Established	2400
1,4-Dichlorobenzene	µg/kg	1,800	None Established	1800
2,2'-oxybis(1-Chloropropane)	µg/kg	-	None Established	None Established
2,4,5-Trichlorophenol	µg/kg	-	100	100
2,4,6-Trichlorophenol	µg/kg	-	None Established	None Established
2,4-Dichlorophenol	µg/kg	-	400	400
2,4-Dimethylphenol	µg/kg	-	None Established	None Established
2,4-Dinitrophenol	µg/kg	-	200 or MDL	200 or MDL
2,4-Dinitrotoluene	µg/kg	-	None Established	None Established
2,6-Dinitrotoluene	µg/kg	-	1,000	1,000
2-Chloronaphthalene	µg/kg	-	None Established	None Established
2-Chlorophenol	µg/kg	-	800	800
2-Methylnaphthalene	µg/kg	-	36,400	36,400
2-Methylphenol	µg/kg	-	100 or MDL	100 or MDL
2-Nitroaniline	µg/kg	-	430 or MDL	430 or MDL
2-Nitrophenol	µg/kg	-	330 or MDL	330 or MDL
3,3'-Dichlorobenzidine	µg/kg	-	None Established	None Established
3-Nitroaniline	µg/kg	-	500 or MDL	500 or MDL
4,6-Dinitro-2-methylphenol	µg/kg	-	None Established	None Established
4-Bromophenyl-phenylether	µg/kg	-	None Established	None Established
4-Chloro-3-methylphenol	µg/kg	-	240 or MDL	240 or MDL
4-Chloroaniline	µg/kg	-	220 or MDL	220 or MDL
4-Chlorophenyl-phenylether	µg/kg	-	None Established	None Established
4-Methylphenol	µg/kg	-	900	900
4-Nitroaniline	µg/kg	-	None Established	None Established
4-Nitrophenol	µg/kg	-	100 or MDL	101 or MDL
Acenaphthene	µg/kg	20,000	50,000	20000
Acenaphthylene	µg/kg	100,000	41,000	41,000
Anthracene	µg/kg	100,000	50,000	50,000
Benz(a)anthracene	µg/kg	1,000	224 or MDL	224 or MDL
Benz(a)pyrene	µg/kg	1,000	61 or MDL	61 or MDL
Benz(b)fluoranthene	µg/kg	1,000	1,100	1,000
Benz(g,h,i)perylene	µg/kg	100,000	50,000	50,000
Benz(k)fluoranthene	µg/kg	800	1,100	800
Bis(2-chloroethoxy)methane	µg/kg	-	None Established	None Established
Bis(2-chloroethyl)ether	µg/kg	-	None Established	None Established
Bis(2-ethylhexyl)phthalate	µg/kg	-	50,000	50,000
Butylbenzylphthalate	µg/kg	-	50,000	50,000
Carbazole	µg/kg	-	None Established	None Established
Chrysene	µg/kg	1,000	400	400
Dibenzo(a,h)anthracene	µg/kg	330	14 or MDL	15 or MDL
Dibenzofuran	µg/kg	-	6,200	6,200
Diethylphthalate	µg/kg	-	7,100	7,100
Dimethylphthalate	µg/kg	-	2,000	2,000
Di-n-butylphthalate	µg/kg	-	8,100	8,100
Di-n-octylphthalate	µg/kg	-	50,000	50,000
Fluoranthene	µg/kg	100,000	50,000	50,000
Fluorene	µg/kg	30,000	50,000	30,000
Hexachlorobenzene	µg/kg	330	410	330
Hexachlorobutadiene	µg/kg	-	None Established	None Established
Hexachlorocyclopentadiene	µg/kg	-	None Established	None Established
Hexachloroethane	µg/kg	-	None Established	None Established
Indeno(1,2,3-cd)pyrene	µg/kg	500	3,200	500
Isophorone	µg/kg	-	4,400	4,400
Naphthalene	µg/kg	12,000	13,000	12000
Nitrobenzene	µg/kg	-	200 or MDL	200 or MDL
N-Nitroso-di-n-propylamine	µg/kg	-	None Established	None Established
N-Nitrosodiphenylamine	µg/kg	-	None Established	None Established
Pentachlorophenol	µg/kg	800	1,000 or MDL	800
Phenanthrene	µg/kg	100,000	50,000	50,000
Phenol	µg/kg	330	30 or MDL	30 or MDL
Pyrene	µg/kg	100,000	50,000	50,000

Notes:

(1) Recommended Soil Cleanup Objectives are specified in the New York Department of Environmental Conservation's, "Technical and Administrative Guidance Memorandum #4046" or TAGM.

(2) In addition to the Soil Cleanup Objectives specified under TAGM #4046, the standard of Total VOCs of less than or equal to 10,000 µg/kg also applies.

(3) The criteria listed for unrestricted soil use obtained from NYCRR Part 375-6 became effective December 14, 2006 and supersedes TAGM #4046 values.

Acronyms:

µg/kg - micrograms per kilogram

Table 4-5
Site-Specific Groundwater Delineation Criteria

CAS No.	Chemical Name	Unit	National Primary Drinking Water Standards (1)		New York State Standards (S) and Guidance (G) Values for Class GA Groundwater (2)		NYSDOH Drinking Water Quality Standards (3,4)		Site-Specific Groundwater Delineation Criteria (SSGWDc) Value		
			Value	Note	Value	Note	G/S	Value	Note	G/S	
Volatile Organic Compounds											
71-55-6	1,1,1-Trichloroethane	µg/L	200		5	PC	S	5	POC	S	5
79-34-5	1,1,2,2-Tetrachloroethane	µg/L	NL		5		S	5	POC	S	5
630-20-6	1,1,2,2-Tetrachloroethane	µg/L	NL		5	PC	S	5	POC	S	5
79-00-5	1,1,2-Trichloroethane	µg/L	5		1		S	5	POC	S	1
75-34-3	1,1-Dichloroethane	µg/L	NL		5	PC	S	5	POC	S	5
75-35-4	1,1-Dichloroethene	µg/L	7		5	PC	S	5	POC	S	5
563-58-6	1,1-Dichloropropene	µg/L	NL		5	PC	S	5	POC	S	5
87-61-6	1,2,3-Trichlorobenzene	µg/L	NL		5	PC	S	5	POC	S	5
96-18-4	1,2,3-Trichloropropane	µg/L	NL		0.04		S	5	POC	S	0.04
120-82-1	1,2,4-Trichlorobenzene	µg/L	70		5	PC	S	5	POC	S	5
95-63-6	1,2,4-Trimethylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
96-12-8	1,2-Dibromo-3-chloropropane	µg/L	0.2		0.04		S	0.2		S	0.04
106-93-4	1,2-Dibromoethane (or ethylene dibromide)	µg/L	0.05		0.0006		S	0.05		S	0.0006
95-50-1	1,2-Dichlorobenzene	µg/L	600		3		S	5	POC	S	3
107-06-2	1,2-Dichloroethane	µg/L	5		0.6		S	5	POC	S	0.6
78-87-5	1,2-Dichloropropane	µg/L	5		1		S	5	POC	S	1
108-67-8	1,3,5-Trimethylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
541-73-1	1,3-Dichlorobenzene	µg/L	NL		3		S	5	POC	S	3
142-28-9	1,3-Dichloropropane	µg/L	NL		5	PC	S	5	POC	S	5
106-46-7	1,4-Dichlorobenzene	µg/L	75		3		S	5	POC	S	3
594-20-7	2,2-Dichloropropane	µg/L	NL		5	PC	S	5	POC	S	5
78-93-3	2-Butanone (Methyl Ethyl Ketone)	µg/L	NL		50		G	50	UOC	S	50
95-49-8	2-Chlorotoluene	µg/L	NL		5	PC	S	5	POC	S	5
591-78-6	2-Hexanone	µg/L	NL		50		G	50	UOC	S	50
106-43-4	4-Chlorotoluene	µg/L	NL		5	PC	S	5	POC	S	5
99-87-6	4-Isopropyltoluene	µg/L	NL		5	PC	S	5	POC	S	5
108-10-1	4-Methyl-2-pentanone	µg/L	NL		NL			50	UOC	S	50
67-64-1	Acetone	µg/L	NL		50		G	50	UOC	S	50
71-43-2	Benzene	µg/L	5		1		S	5	POC	S	1
108-66-1	Bromobenzene	µg/L	NL		5	PC	S	5	POC	S	5
74-97-5	Bromochloromethane	µg/L	NL		5	PC	S	5	POC	S	5
75-27-4	Bromodichloromethane (TTHMs)	µg/L	80	T	50		G	80	T	S	50
75-25-2	Bromoform (TTHMs)	µg/L	80	T	50		G	80	T	S	50
74-83-9	Bromomethane	µg/L	NL		5	PC	S	5	POC	S	5
75-15-0	Carbon Disulfide	µg/L	NL		60		G	50	UOC	S	50
56-23-5	Carbon Tetrachloride	µg/L	5		5		S	5	POC	S	5
108-90-7	Chlorobenzene	µg/L	100		5	PC	S	5	POC	S	5
75-00-3	Chloroethane	µg/L	NL		5	PC	S	5	POC	S	5
67-66-3	Chloroform (TTHMs)	µg/L	80	T	7		S	80	T	S	7
74-87-3	Chloromethane	µg/L	NL		5	PC	S	5	POC	S	5
156-59-2	cis-1,2-Dichloroethene	µg/L	70		5	PC	S	5	POC	S	5
10061-01-5	cis-1,3-Dichloropropane	µg/L	NL		0.4	J	S	5	POC	S	0.4
124-48-1	Dibromochloromethane (TTHMs)	µg/L	80	T	50		G	80	T	S	50
74-95-3	Dibromomethane [methylene bromide]	µg/L	NL		5	PC	S	5	POC	S	5
75-71-8	Dichlorodifluoromethane	µg/L	NL		5	PC	S	5	POC	S	5
100-41-4	Ethylbenzene	µg/L	700		5	PC	S	5	POC	S	5
87-68-3	Hexachlorobutadiene	µg/L	NL		0.5		S	5	POC	S	0.5
74-88-4	Iodomethane	µg/L	NL		5	PC	S	50	UOC	S	5
98-82-8	Isopropylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
1330-20-7	m,p-Xylene	µg/L	NL		5	PC	S	5	POC	S	5
1634-04-4	Methyl Tert-Butyl Ether (MTBE)	µg/L	NL		10		G	10		S	10
75-09-2	Methylene Chloride (dichloromethane)	µg/L	5		5	PC	S	5	POC	S	5
91-20-3	Naphthalene	µg/L	NL		NL			50	UOC	S	50
104-51-8	n-Butylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
103-65-1	n-Propylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
95-47-6	o-Xylene	µg/L	NL		5	PC	S	5	POC	S	5
135-98-8	sec-Butylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
100-42-5	Styrene	µg/L	100		5	PC	S	5	POC	S	5
98-06-6	tert-Butylbenzene	µg/L	NL		5	PC	S	5	POC	S	5
127-18-4	Tetrachloroethene	µg/L	5		5	PC	S	5	POC	S	5
108-88-3	Toluene	µg/L	1,000		5	PC	S	5	POC	S	5
156-60-5	trans-1,2-Dichloroethene	µg/L	100		5	PC	S	5	POC	S	5
10061-02-6	trans-1,3-Dichloropropene	µg/L	NL		0.4	J	S	5	POC	S	0.4
79-01-6	Trichloroethene	µg/L	5		5	PC	S	5	POC	S	5
75-69-4	Trichlorodifluoromethane	µg/L	NL		5	PC	S	5	POC	S	5
108-05-4	Vinyl acetate	µg/L	NL		NL			50	UOC	S	50
75-01-4	Vinyl Chloride	µg/L	2		2		S	2		S	2
1330-20-7	Xylenes (total)	µg/L	10,000		5	PC	S	5	POC	S	5

Notes:

- (1) EPA National Primary Drinking Water Standards (web page <http://www.epa.gov/safewater/contaminants/index.html>), last updated November 28, 2006.
- (2) NYSDEC, June 1998. TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. Includes April 2000 and June 2004 Addendum values. (<http://www.dec.ny.gov/regulations/2652.html>)
- (3) New York State Department of Health Drinking Water Standards, NYCRR Title 10, Part 5, Subpart 5-1 Public Water Systems, Effective November 23, 2005 (Statutory authority: Public Health Law 225. Effective May 26, 2004). (<http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm>)
- (4) The maximum contaminant level determination for the sum of principal organic contaminants (POC) and unspecified organic contaminants (UOC) is 100 µg/L.

Acronyms:

- J - Applies to the sum of cis-1,3-Dichloropropane and trans-1,3-Dichloropropane
- PC - Principal Organic Contaminant
- POC - Principal Organic Contaminant (total of POC and UOC contaminants can not exceed 100 µg/L)
- UOC - Unspecified Organic Contaminant (total of POC and UOC contaminants can not exceed 100 µg/L)
- T - Value applies to total trihalomethanes (bromodichloromethane, bromoform, chloroform, dibromochloromethane)
- G - Guidance Value
- S - Standard Value
- NL - Chemical name not listed or screening value of this type not listed for the chemical
- TTHMs - Total trihalomethanes
- µg/L - Microgram per liter

Table 4-5
Site-Specific Groundwater Delineation Criteria

CAS No.	Chemical Name	Unit	National Primary Drinking Water Standards (1)			New York State Standards (S) and Guidance (G) Values for Class GA Groundwater (2)			NYSDOH Drinking Water Quality Standards (3,4)			Site-Specific Groundwater Delineation Criteria (SSGWDc) Value		
			Value	Note		Value	Note	G/S	Value	Note	G/S	Value	Note	G/S
Semi-Volatile Organic Compounds														
120-82-1	1,2,4-Trichlorobenzene	µg/L	70			5 PC	S		5 POC	S		5		
95-50-1	1,2-Dichlorobenzene	µg/L	NL			3 PC	S		5 POC	S		3		
541-73-1	1,3-Dichlorobenzene	µg/L	NL			3 PC	S		5 POC	S		3		
106-46-7	1,4-Dichlorobenzene	µg/L	NL			3 PC	S		5 POC	S		3		
108-60-1	2,2'-oxybis(1-Chloropropane)	µg/L	NL			5 PC	S		50 UOC	S		5		
95-95-4	2,4,5-Trichlorophenol	µg/L	50			NL			50 UOC	S		50		
88-06-2	2,4,6-Trichlorophenol	µg/L	NL			NL			50 UOC	S		50		
120-83-2	2,4-Dichlorophenol	µg/L	NL			5 PC	S		50 UOC	S		5		
105-67-9	2,4-Dimethylphenol	µg/L	NL			50	G		50 UOC	S		50		
51-28-5	2,4-Dinitrophenol	µg/L	NL			10	G		50 UOC	S		10		
121-14-2	2,4-Dinitrotoluene	µg/L	NL			5 PC	S		50 UOC	S		5		
606-20-2	2,6-Dinitrotoluene	µg/L	NL			5 PC	S		50 UOC	S		5		
91-58-7	2-Chloronaphthalene	µg/L	NL			NL			50 UOC	S		50		
95-57-8	2-Chlorophenol	µg/L	NL			NL			50 UOC	S		50		
91-57-6	2-Methylnaphthalene	µg/L	NL			NL			50 UOC	S		50		
95-48-7	2-Methylphenol	µg/L	NL			NL			50 UOC	S		50		
88-74-4	2-Nitroaniline	µg/L	NL			5 PC	S		50 UOC	S		5		
88-75-5	2-Nitrophenol	µg/L	NL			NL			50 UOC	S		50		
91-94-1	3,3'-Dichlorobenzidine	µg/L	NL			5 PC	S		50 UOC	S		5		
99-09-2	3-Nitroaniline	µg/L	NL			5 PC	S		50 UOC	S		5		
534-52-1	4,6-Dinitro-2-methylphenol	µg/L	NL			NL			50 UOC	S		50		
101-55-3	4-Bromophenyl-phenylether	µg/L	NL			NL			50 UOC	S		50		
59-50-7	4-Chloro-3-methylphenol	µg/L	NL			NL			50 UOC	S		50		
106-47-8	4-Chloroaniline	µg/L	NL			5 PC	S		50 UOC	S		5		
7005-72-3	4-Chlorophenyl-phenylether	µg/L	NL			NL			50 UOC	S		50		
106-44-5	4-Methylphenol	µg/L	NL			NL			50 UOC	S		50		
100-01-6	4-Nitroaniline	µg/L	NL			5 PC	S		50 UOC	S		5		
100-02-7	4-Nitrophenol	µg/L	NL			NL			50 UOC	S		50		
83-32-9	Acenaphthene	µg/L	NL			NL			50 UOC	S		50		
208-96-8	Acenaphthylene	µg/L	NL			NL			50 UOC	S		50		
120-12-7	Anthracene	µg/L	NL			50	G		50 UOC	S		50		
56-55-3	Benz(a)anthracene	µg/L	NL		0.002	G			50 UOC	S	0.002			
50-32-8	Benz(a)pyrene	µg/L	NL			NL			0.2	S	0.2			
205-99-2	Benz(b)fluoranthene	µg/L	NL		0.002	G			50 UOC	S	0.002			
191-24-2	Benz(g,h,i)perylene	µg/L	NL			NL			50 UOC	S	50			
207-08-9	Benz(k)fluoranthene	µg/L	NL		0.002	G			50 UOC	S	0.002			
111-91-1	Bis(2-chloroethoxy)methane	µg/L	NL			5 PC	S		50 UOC	S	5			
111-44-4	Bis(2-chloroethyl)ether	µg/L	NL		1	S			50 UOC	S	1			
117-81-7	Bis(2-ethylhexyl)phthalate	µg/L	NL		5	S			50 UOC	S	5			
85-68-7	Butylbenzylphthalate	µg/L	NL		50	G			50 UOC	S	50			
86-74-8	Carbazole	µg/L	NL			NL			50 UOC	S	50			
218-01-9	Chrysene	µg/L	NL		0.002	G			50 UOC	S	0.002			
	Dibenzo(a,h)anthracene	µg/L	NL						50 UOC	S	50			
132-64-9	Dibenzofuran	µg/L	NL			NL			50 UOC	S	50			
84-66-2	Diethylphthalate	µg/L	NL		50	G			50 UOC	S	50			
131-11-3	Dimethylphthalate	µg/L	NL		50	G			50 UOC	S	50			
84-74-2	Di-n-butylphthalate	µg/L	NL		50	S			50 UOC	S	50			
117-84-0	Di-n-octylphthalate	µg/L	NL		50	G			50 UOC	S	50			
206-44-0	Fluoranthene	µg/L	NL		50	G			50 UOC	S	50			
86-73-7	Fluorene	µg/L	NL		50	G			50 UOC	S	50			
118-74-1	Hexachlorobenzene	µg/L	NL		0.04	S	1		S	1	0.04			
87-68-3	Hexachlorobutadiene	µg/L	NL		0.5	S			50 UOC	S	0.5			
77-47-4	Hexachlorocyclopentadiene	µg/L	NL		5 PC	S			50 UOC	S	5			
67-72-1	Hexachloroethane	µg/L	NL		5 PC	S			50 UOC	S	5			
193-39-5	Indeno(1,2,3-cd)pyrene	µg/L	NL		0.002	G			50 UOC	S	0.002			
78-59-1	Iso phorone	µg/L	NL		50	G			50 UOC	S	50			
91-20-3	Naphthalene	µg/L	NL			NL			50 UOC	S	50			
98-95-3	Nitrobenzene	µg/L	NL		0.4	S			50 UOC	S	0.4			
621-64-7	N-Nitrosodi-n-propylamine	µg/L	NL			NL			50 UOC	S	50			
86-30-6	N-Nitrosodiphenylamine	µg/L	NL		50	G			50 UOC	S	50			
87-86-5	Pentachlorophenol	µg/L	NL			NL			1	S	1			
85-01-6	Phenanthrene	µg/L	NL		50	G			50 UOC	S	50			
108-95-2	Phenol	µg/L	NL		1	S			50 UOC	S	1			
129-00-0	Pyrene	µg/L	NL		50	G			50 UOC	S	50			

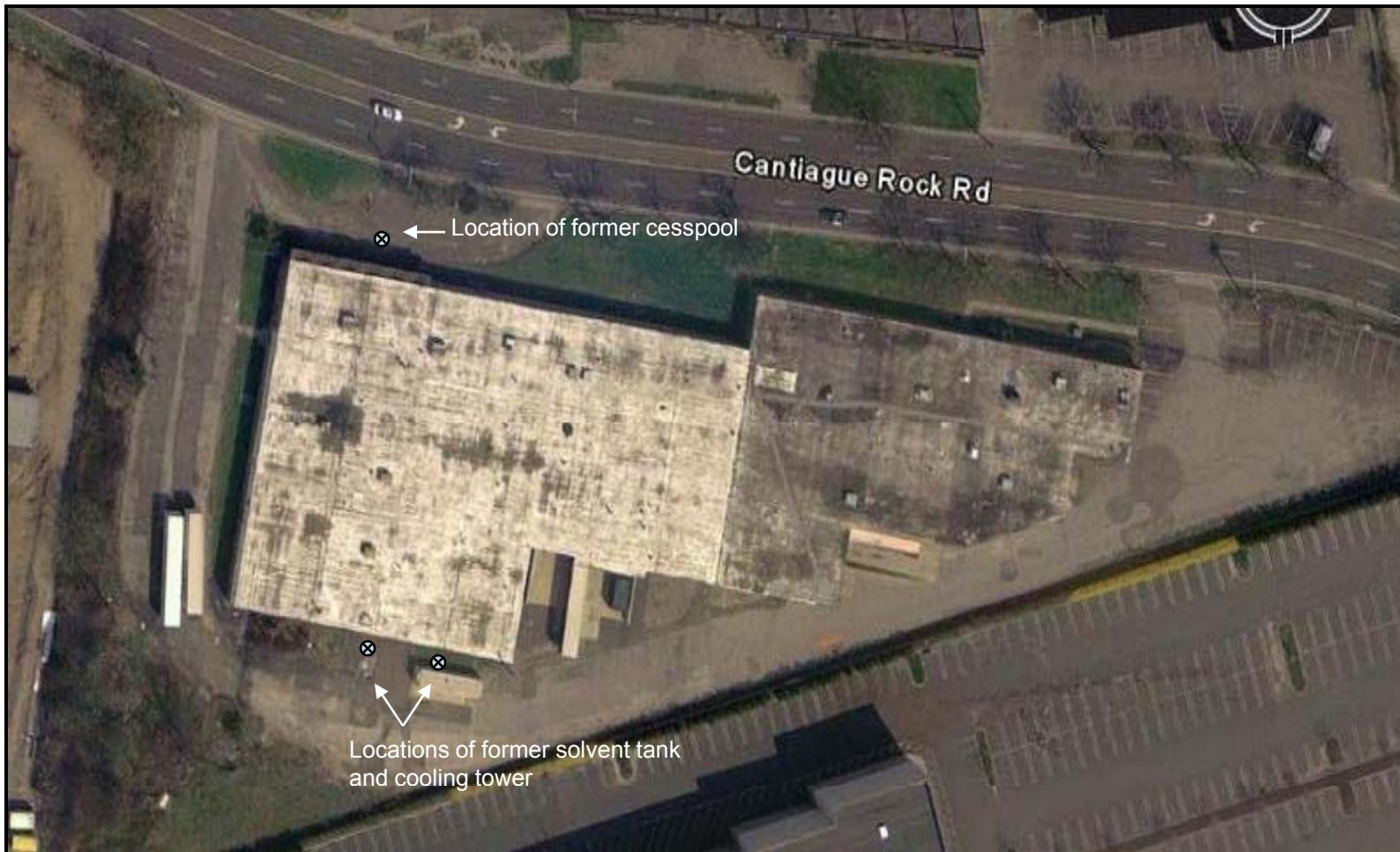
Notes:

- (1) EPA National Primary Drinking Water Standards (web page <http://www.epa.gov/safewater/contaminants/index.html>), last updated November 28, 2006.
- (2) NYSDEC, June 1998. TOGS 1.1.1. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. Includes April 2000 and June 2004 Addendum values. (<http://www.dec.ny.gov/regulations/2652.html>)
- (3) New York State Department of Health Drinking Water Standards, NYCRR Title 10, Part 5, Subpart 5-1 Public Water Systems, Effective November 23, 2005 (Statutory authority: Public Health Law 225, Effective May 26, 2004). (<http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm>)
- (4) The maximum contaminant level determination for the sum of principal organic contaminants (POC) and unspecified organic contaminants (UOC) is 100 µg/L.

Acronyms:

- J - Applies to the sum of cis-1,3-Dichloropropane and trans-1,3-Dichloropropane
- POC - Principal Organic Contaminant
- POC - Principal Organic Contaminant (total of POC and UOC contaminants can not exceed 100 µg/L)
- UOC - Unspecified Organic Contaminant (total of POC and UOC contaminants can not exceed 100 µg/L)
- T - Value applies to total trihalomethanes (bromodichloromethane, bromoform, chloroform, dibromochloromethane)
- G - Guidance Value
- S - Standard Value
- NL - Chemical name not listed or screening value of this type not listed for the chemical
- TTHMs - Total trihalomethanes
- µg/L - Microgram per liter

Figures



↑
NORTH

Figure 1-1
Solvent Finishers Site Map
601-603 Cantiague Rock Rd.
Site No. 1-30-172

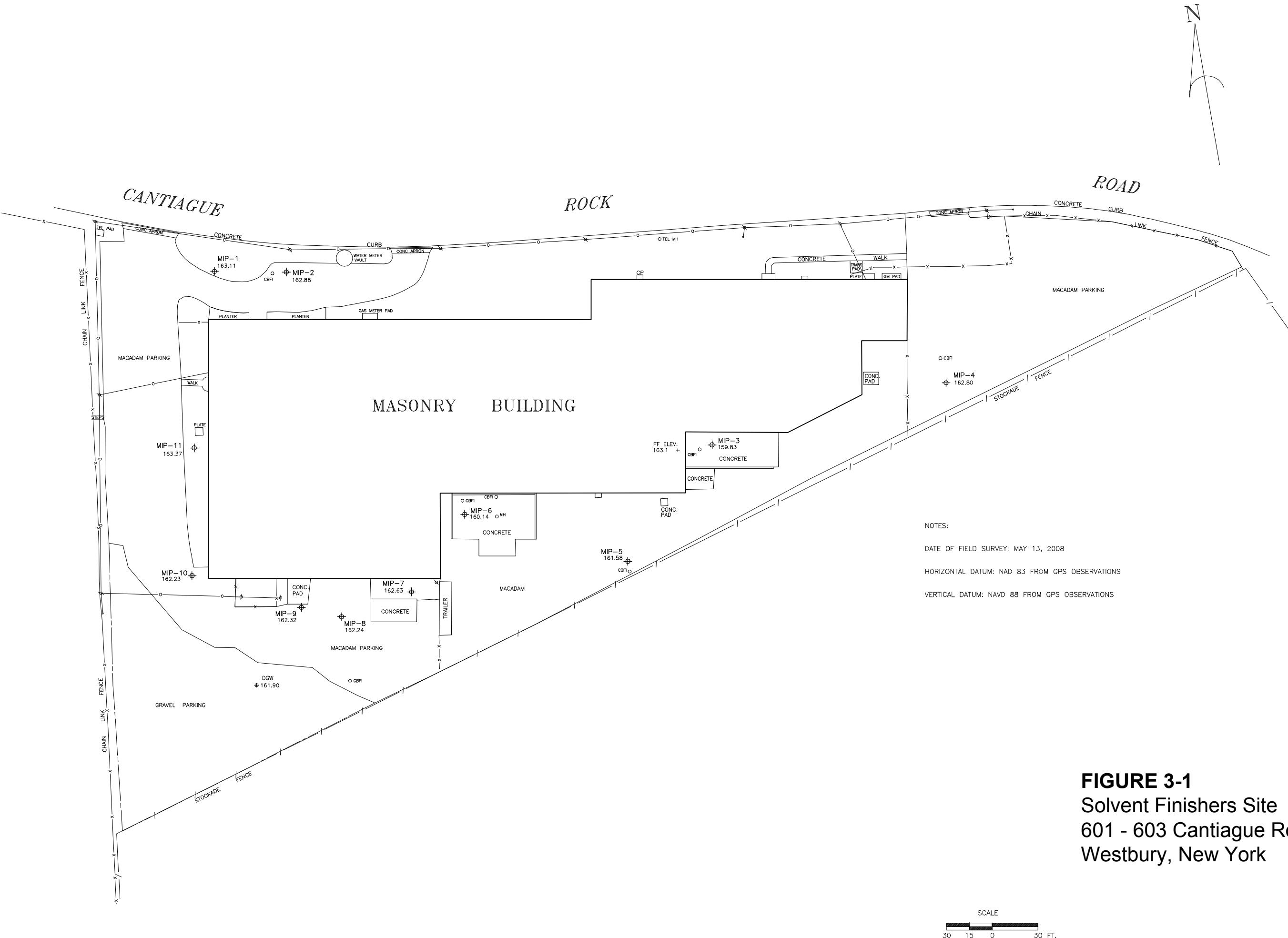


FIGURE 3-1
Solvent Finishers Site
601 - 603 Cantiague Rock Rd.
Westbury, New York

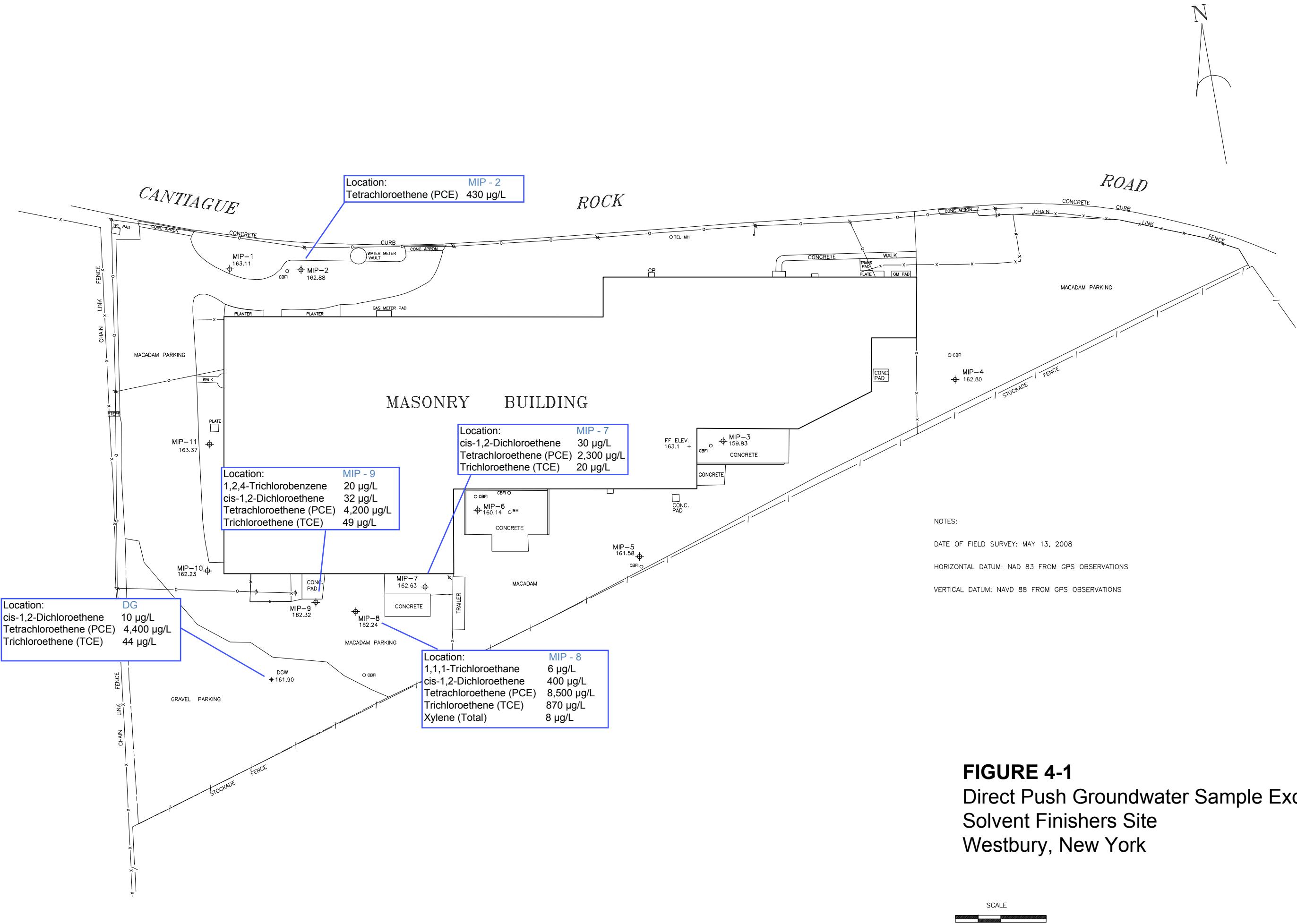


FIGURE 4-1
Direct Push Groundwater Sample Exceedances
Solvent Finishers Site
Westbury, New York

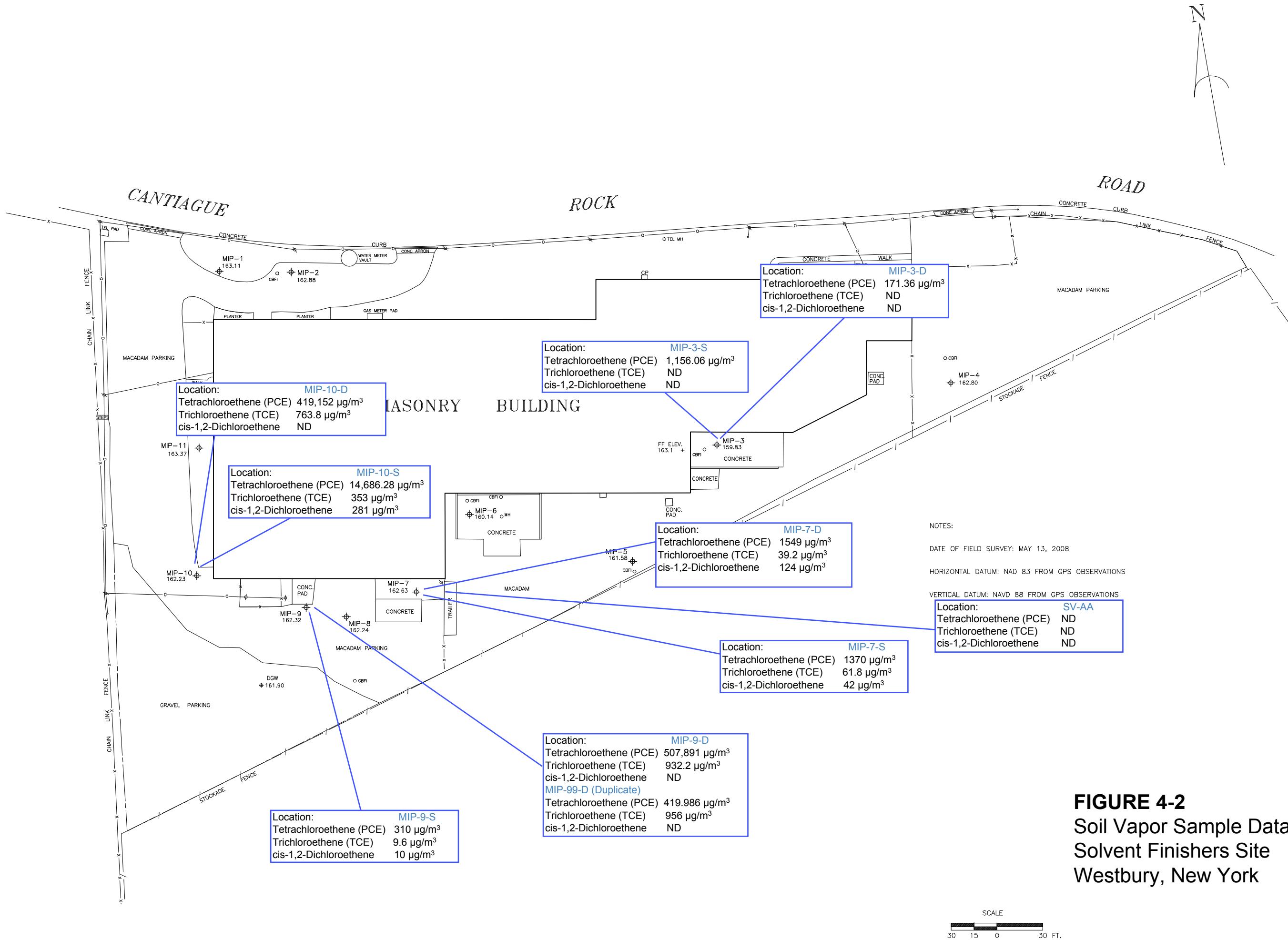
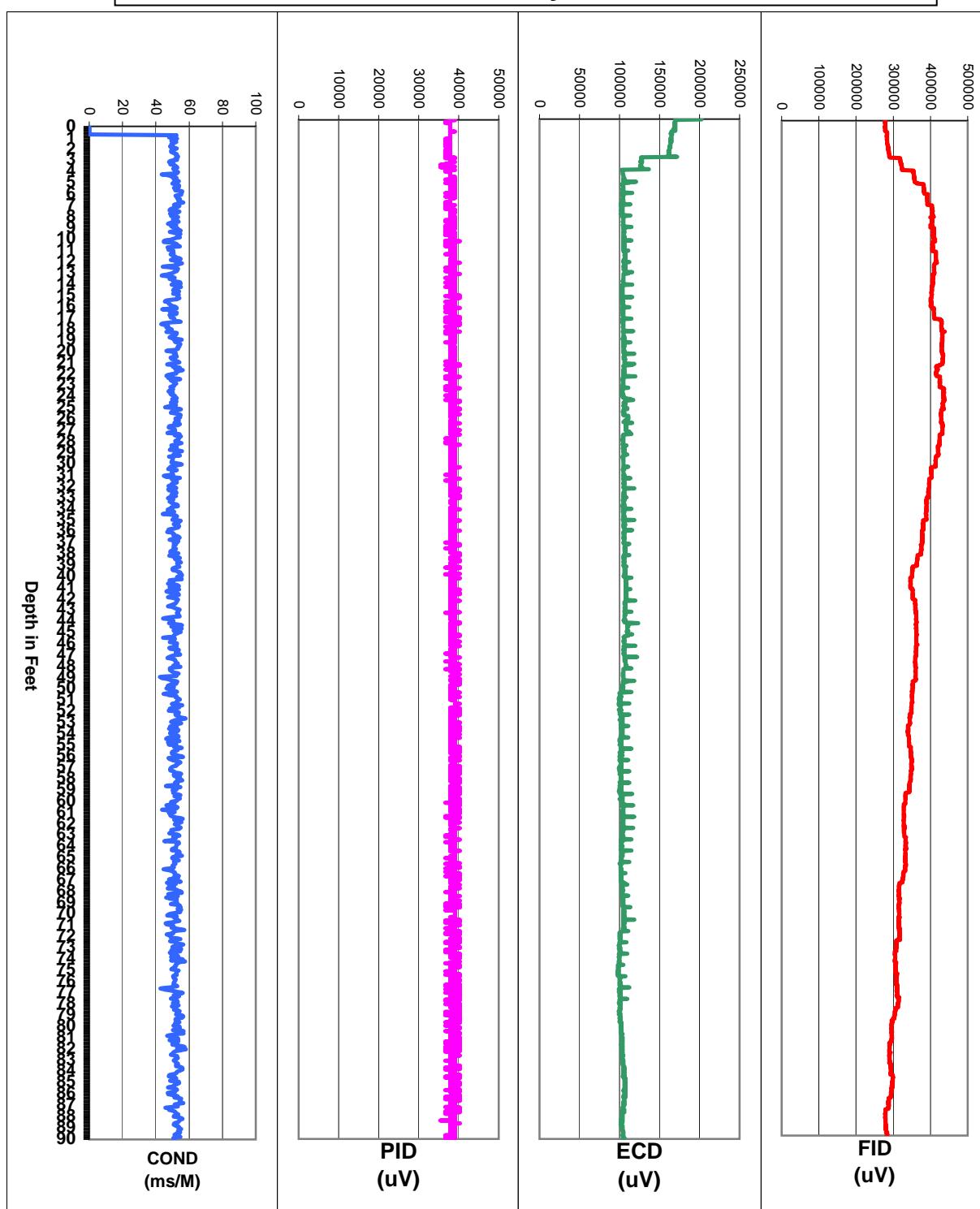


FIGURE 4-2
Soil Vapor Sample Data
Solvent Finishers Site
Westbury, New York

Appendix A

MIP RESULTS

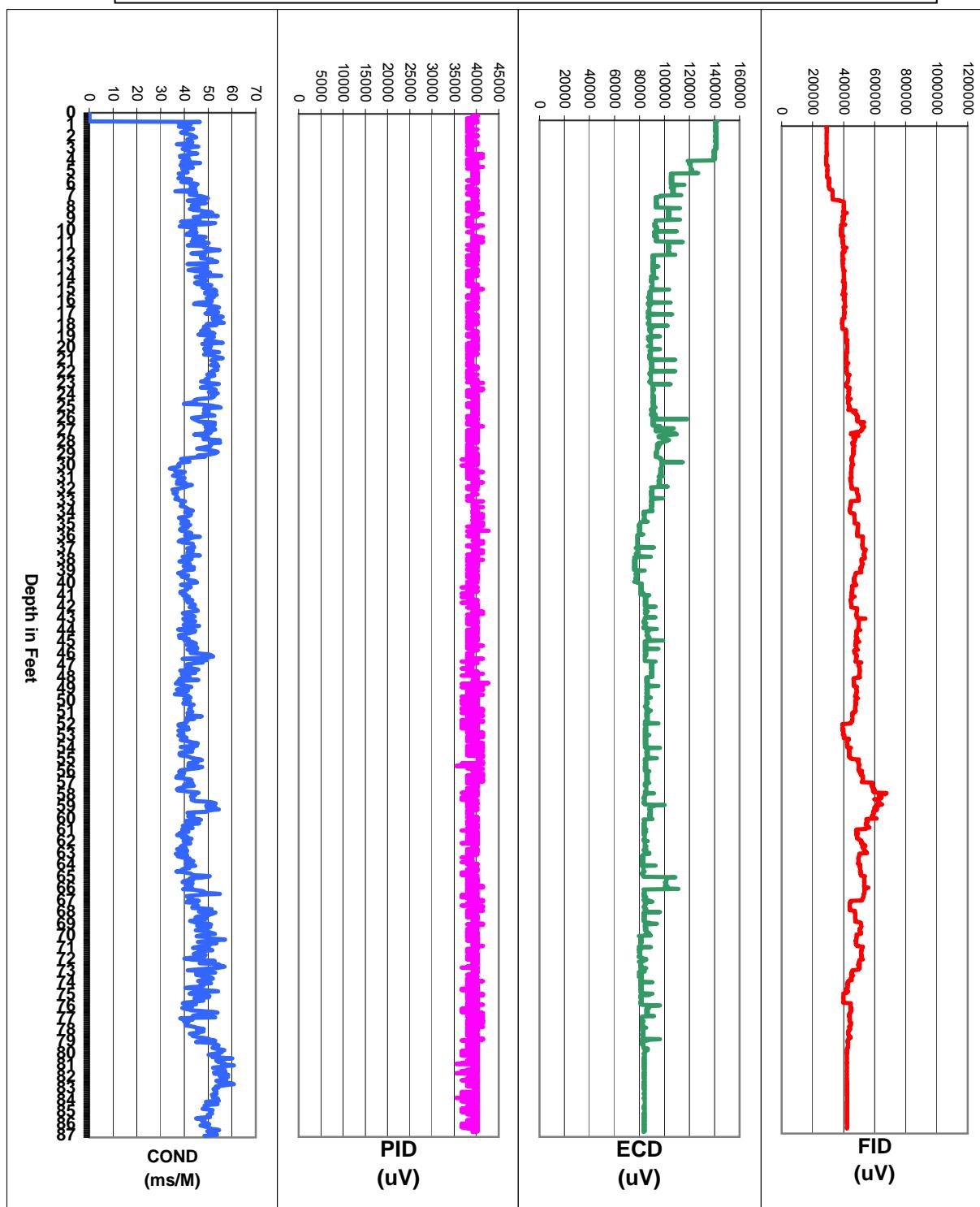
ZEBRA EC/MIP Summary Log, Point CMIP1
Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/15/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 1 of 2

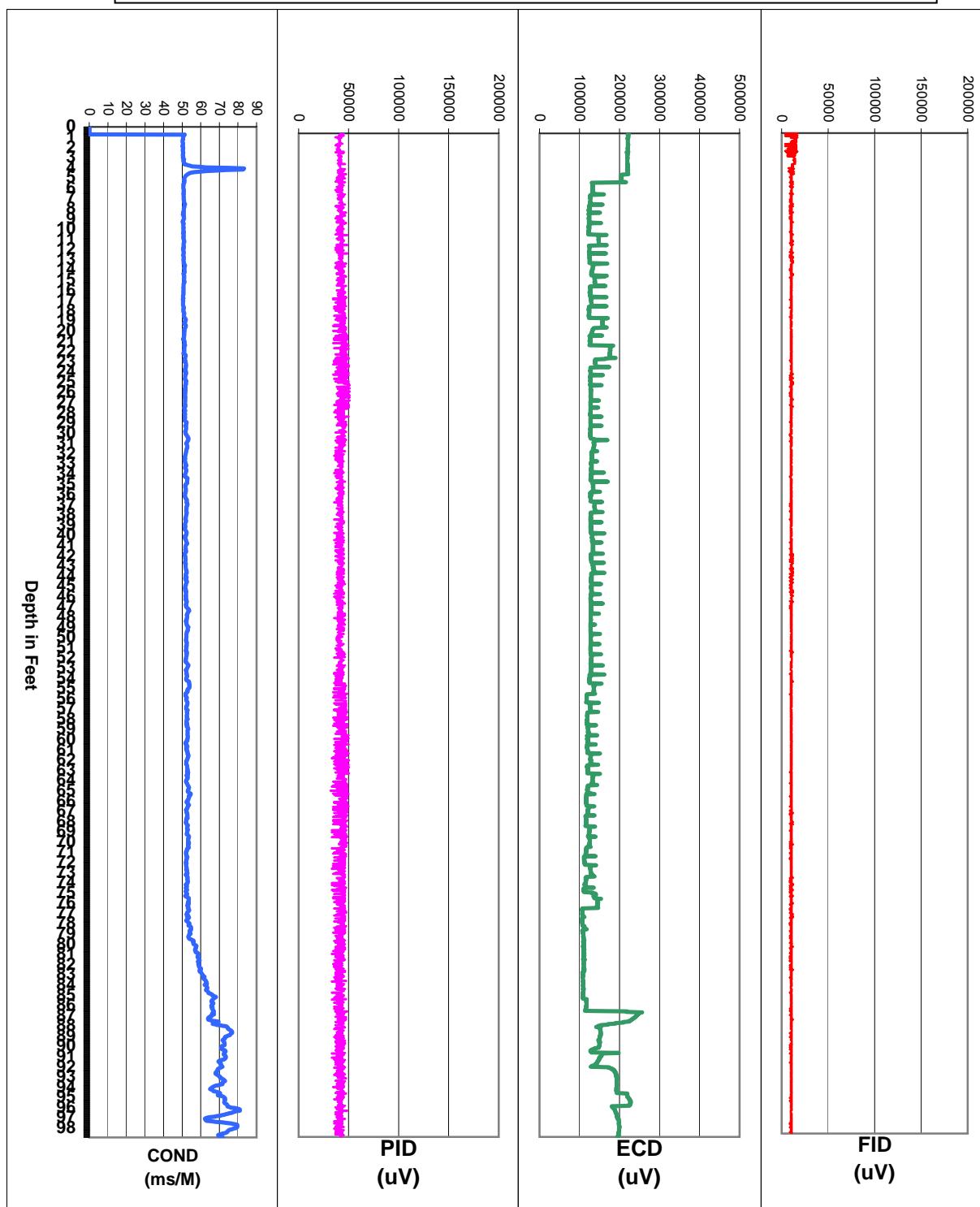
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Westbury, NY



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by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/15/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 2 of 2

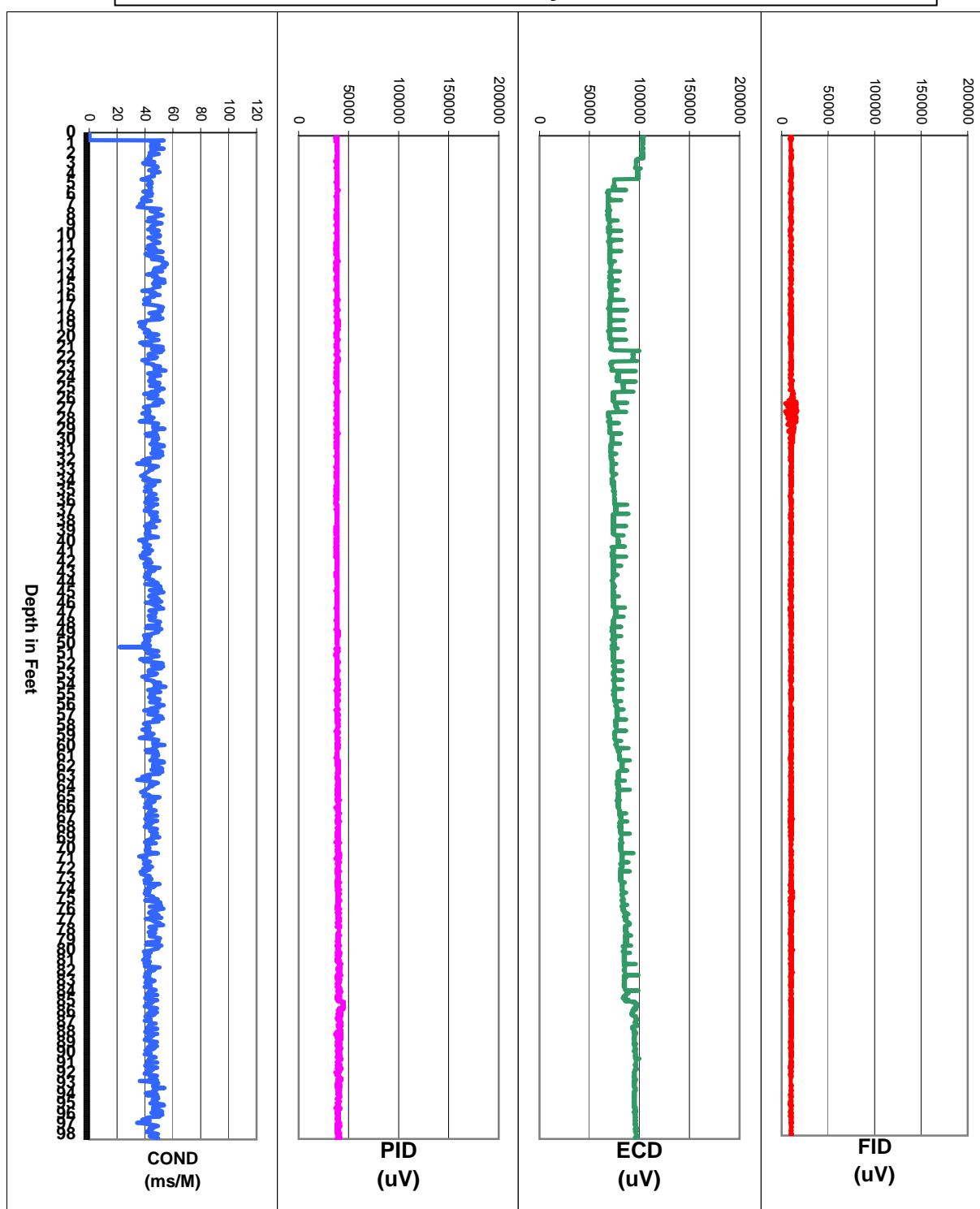
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/16/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 3 of 2

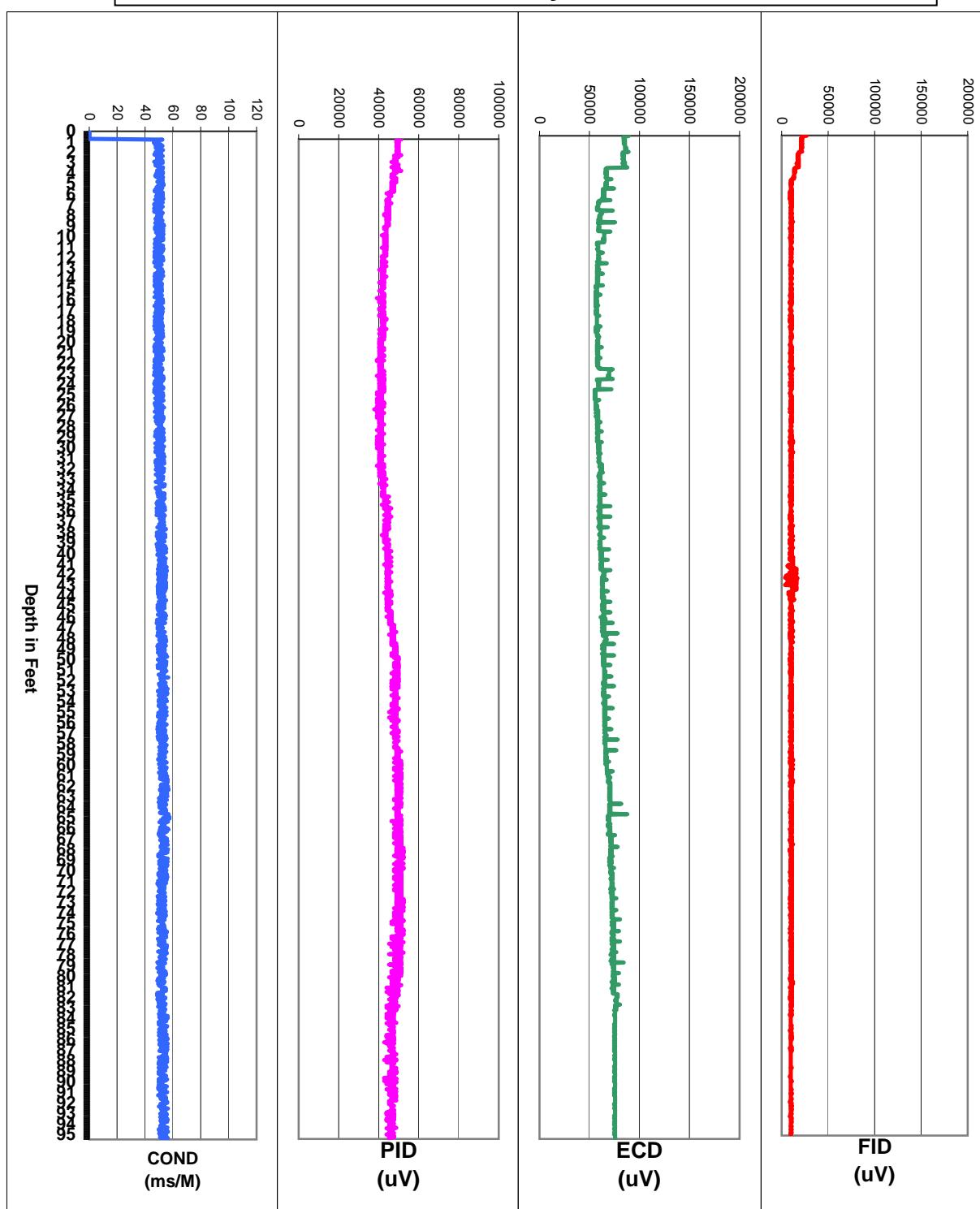
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/16/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 4 of 2

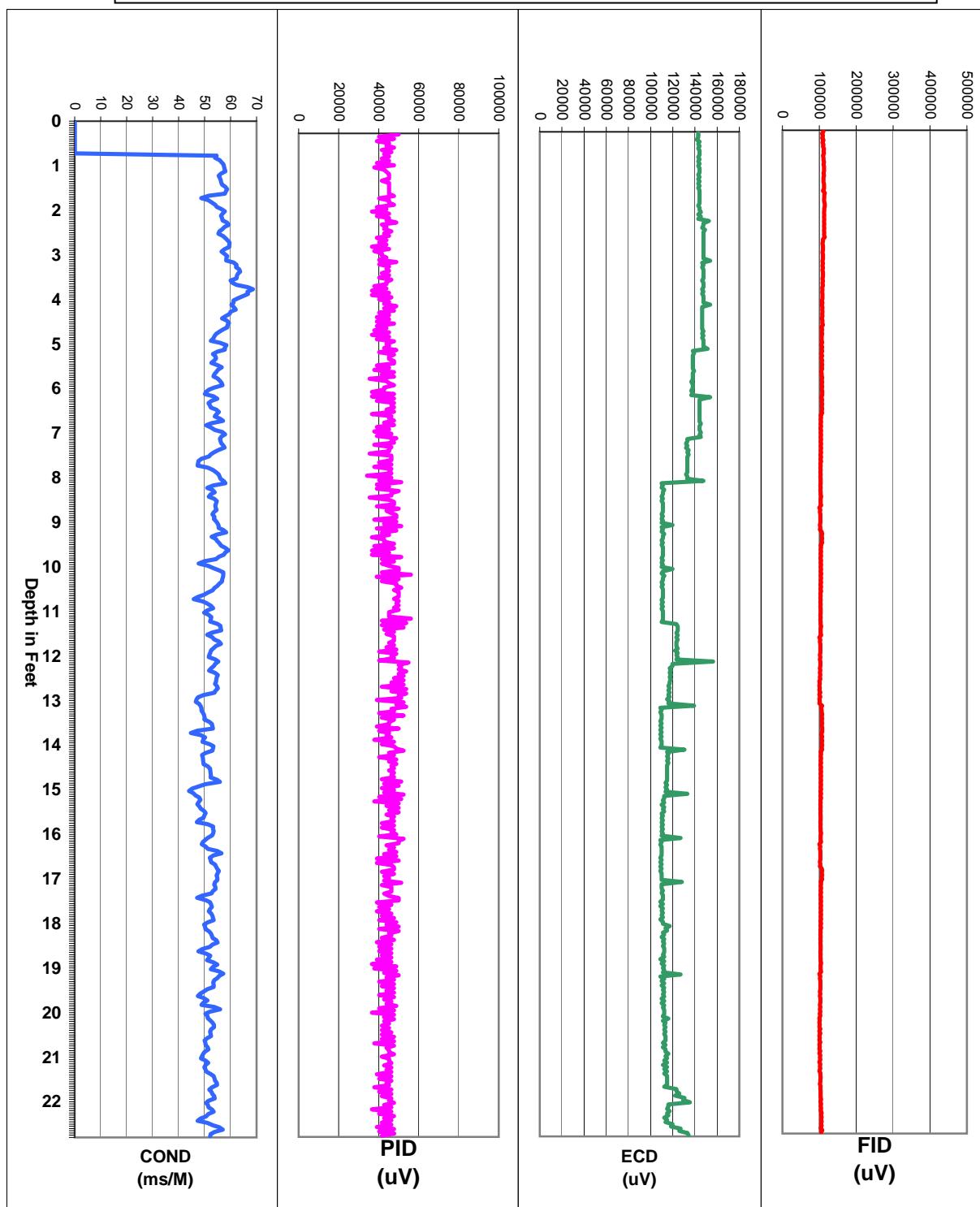
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/17/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 5 of 2

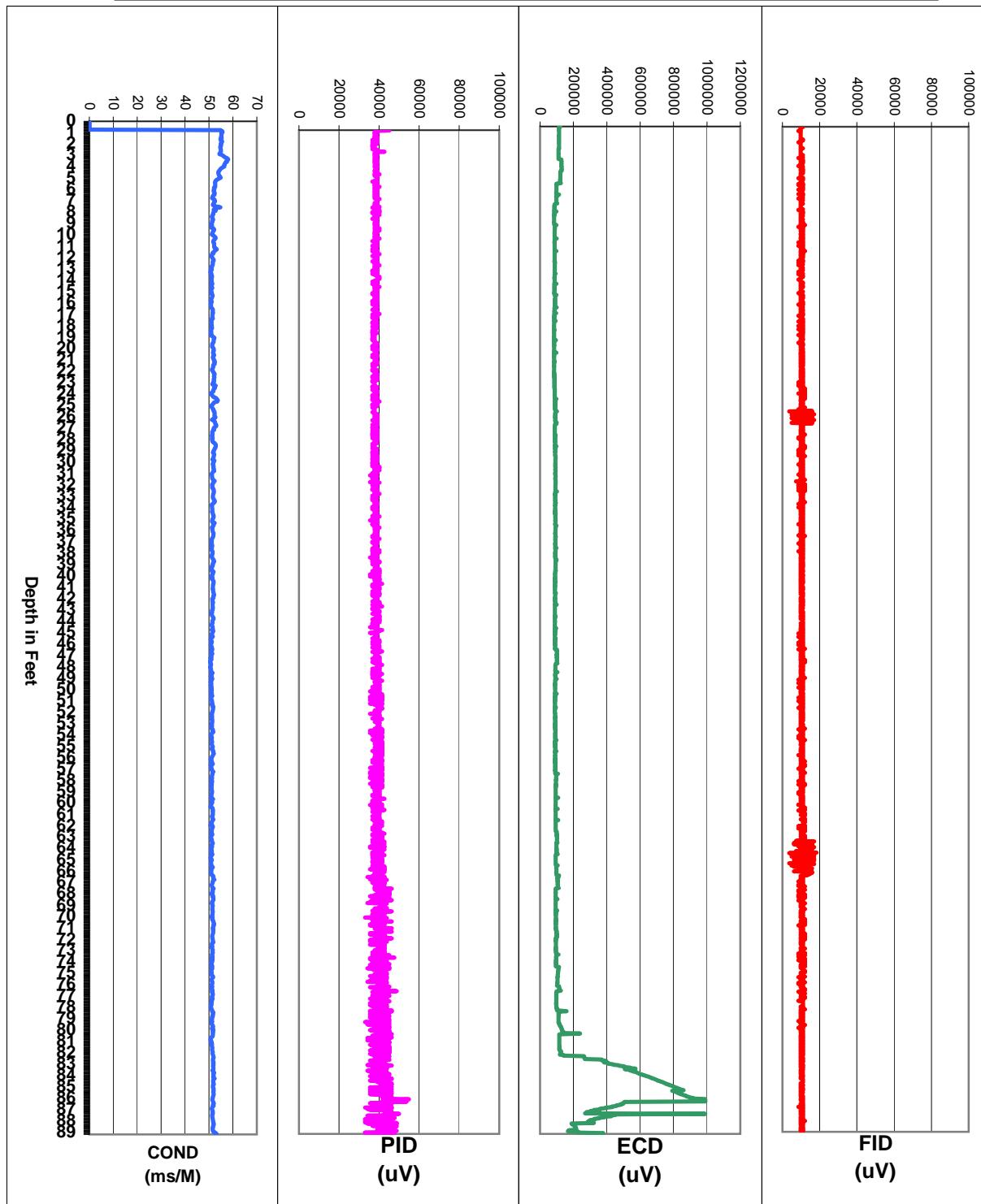
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/17/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 6 of 2

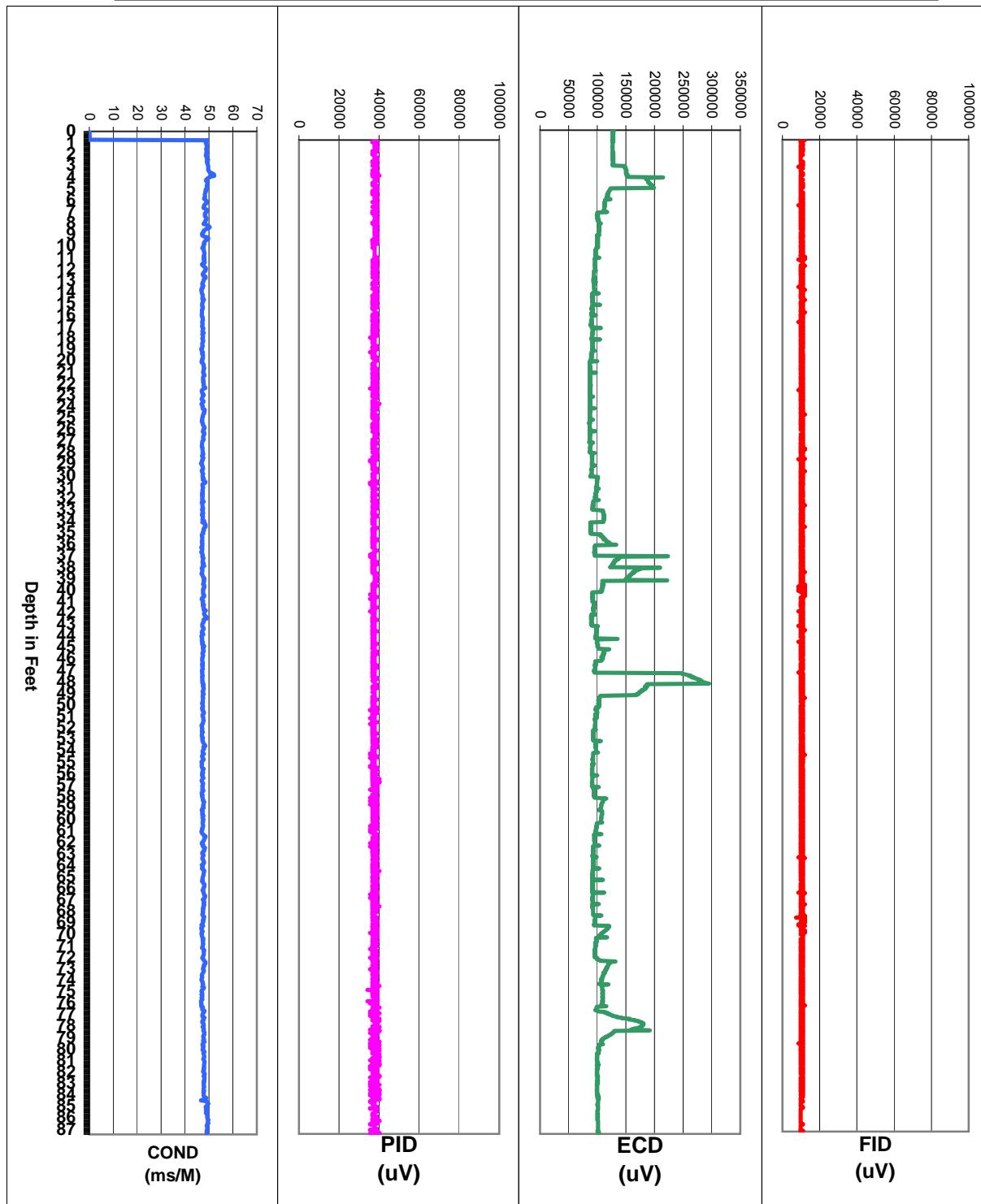
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/18/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 7 of 0

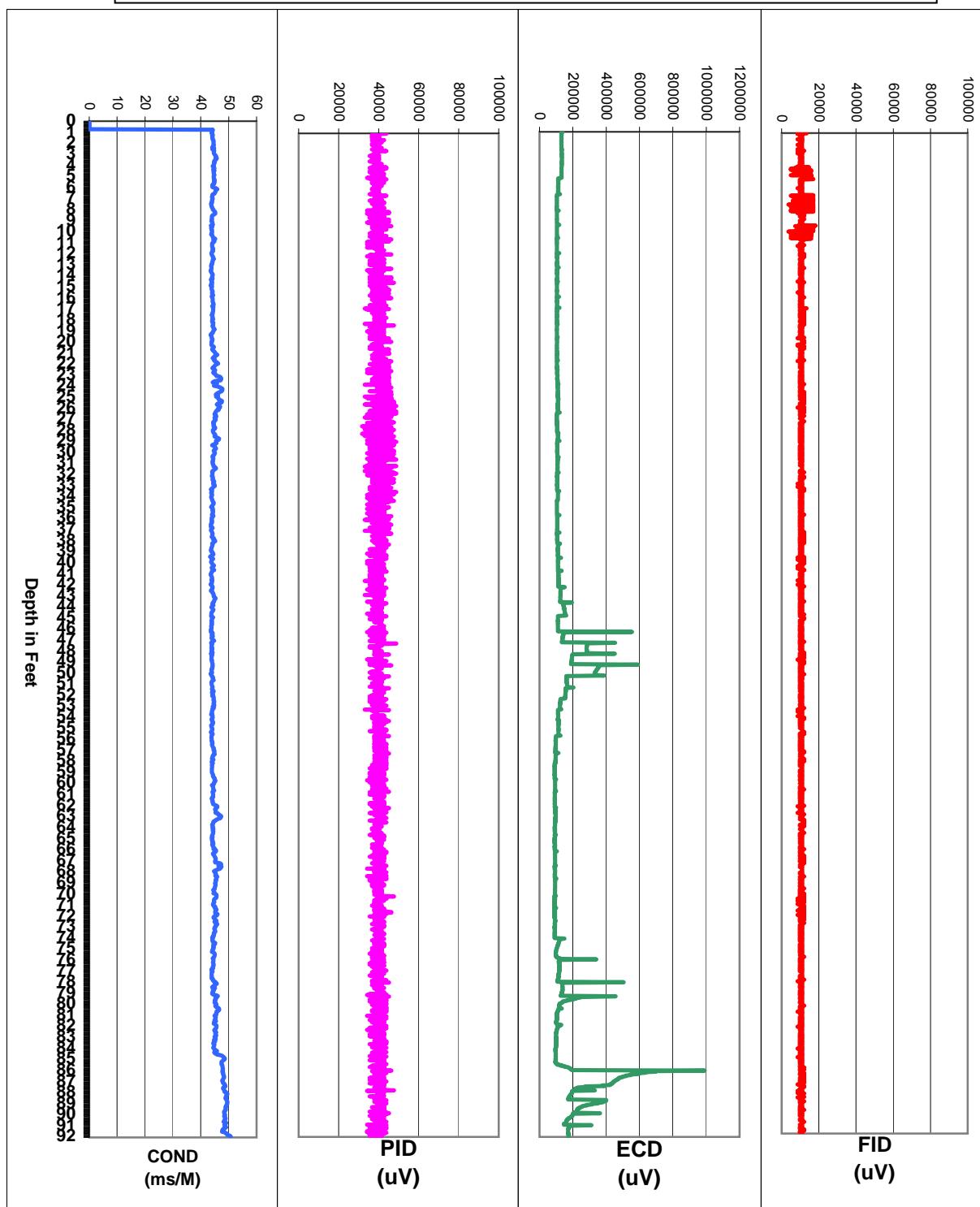
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/21/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 8 of 0

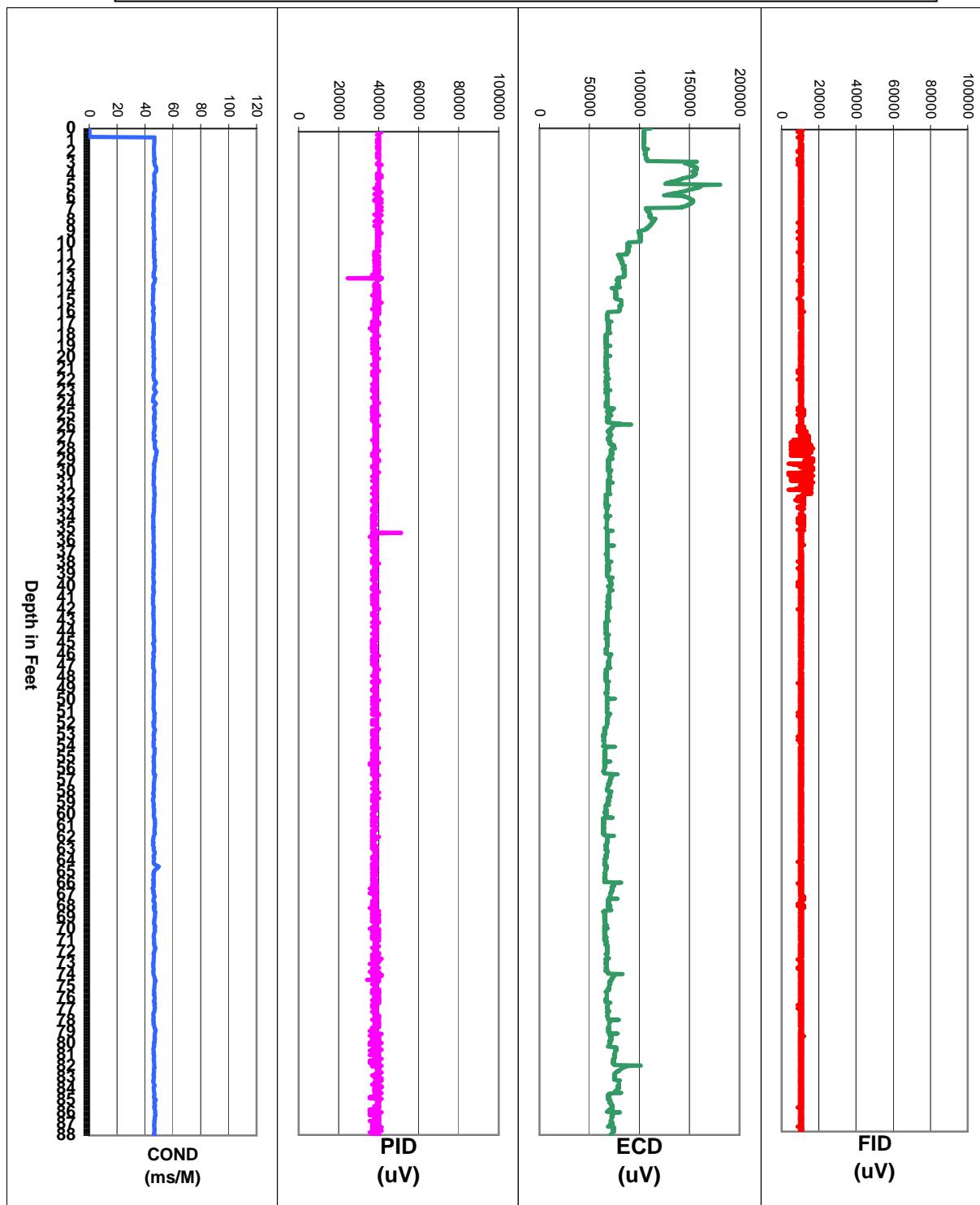
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/21/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 9 of 0

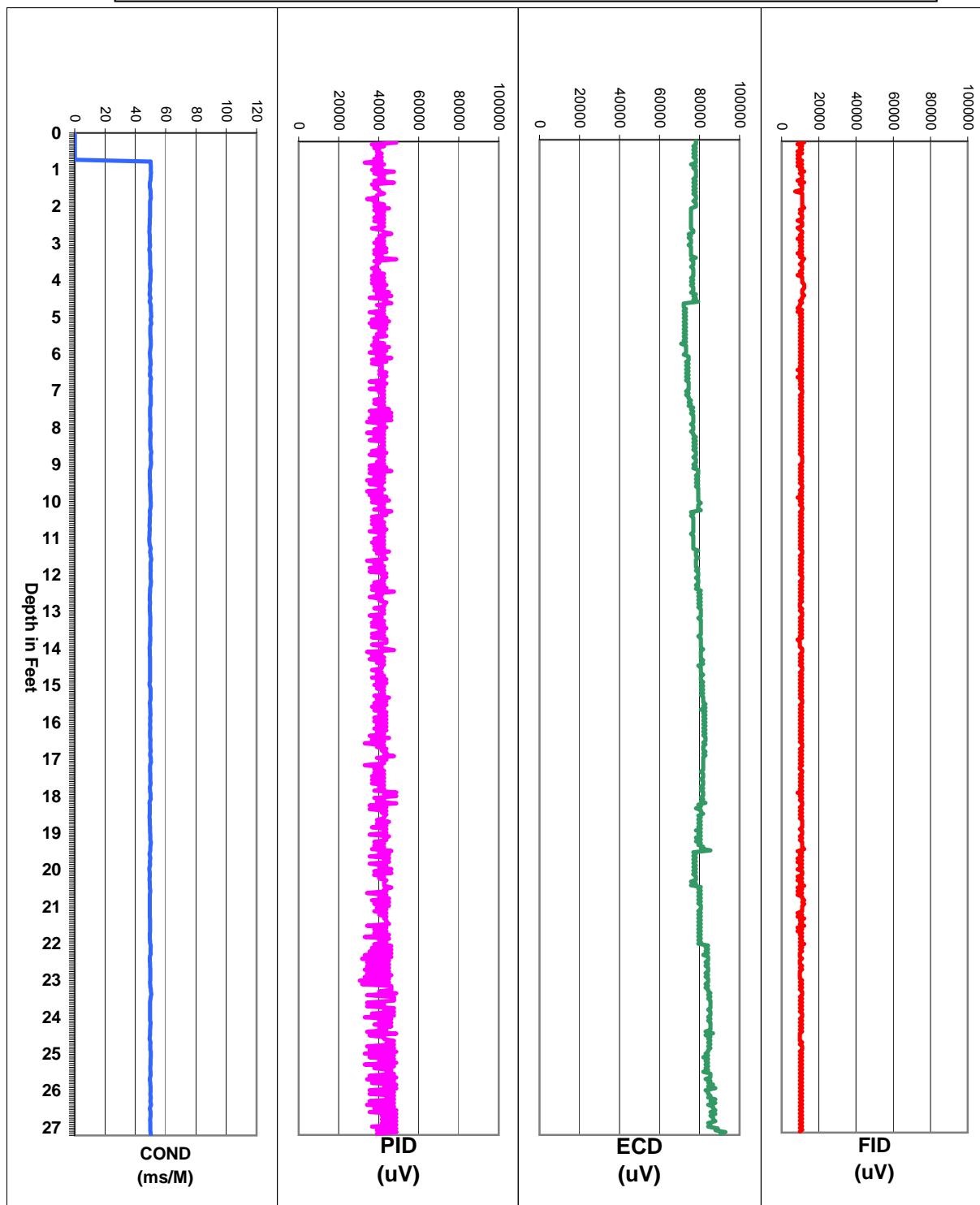
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Westbury, NY



for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

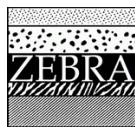
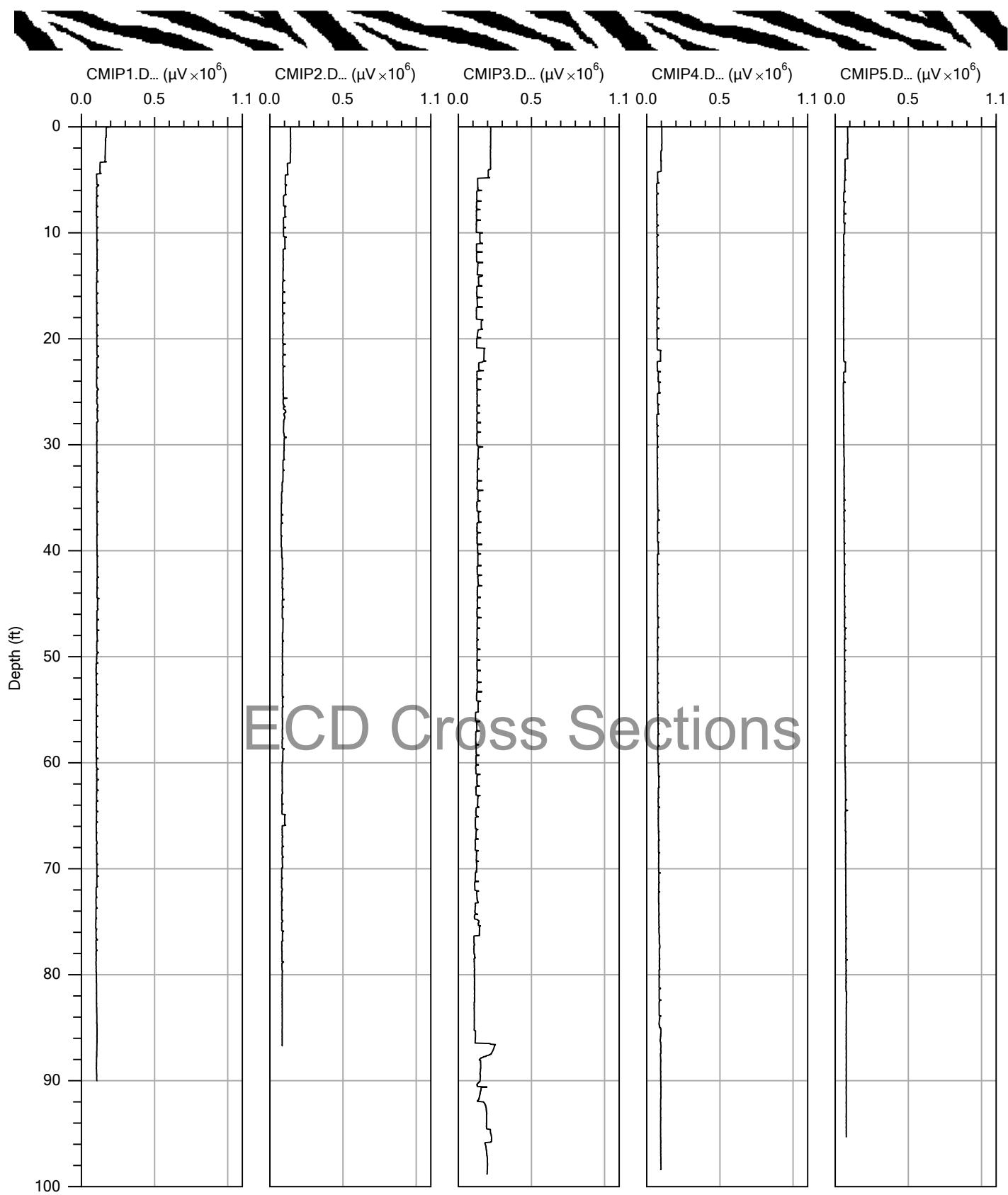
Date: 4/22/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 10 of 0

ZEBRA EC/MIP Summary Log, Point WMIP11
Westbury, NY

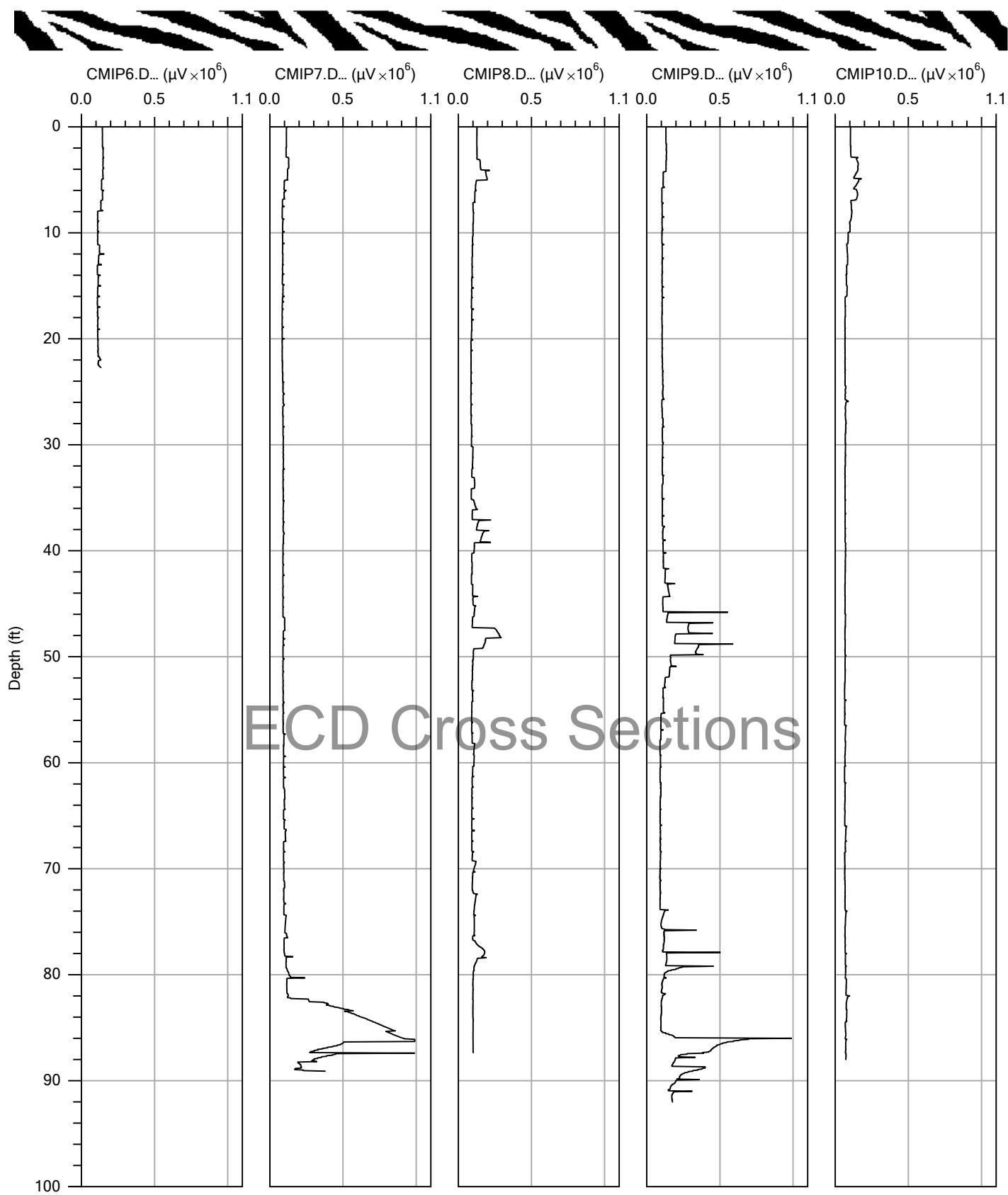


for: CDM
by: Zebra Environmental
30 No. Prospect Avenue
Lynbrook, NY 11563
(516) 596-6300

Date: 4/22/2008
Proj. Name: Solvent Finishers
Proj. #: DS12969
Operators: Will M
Point 11 of 0



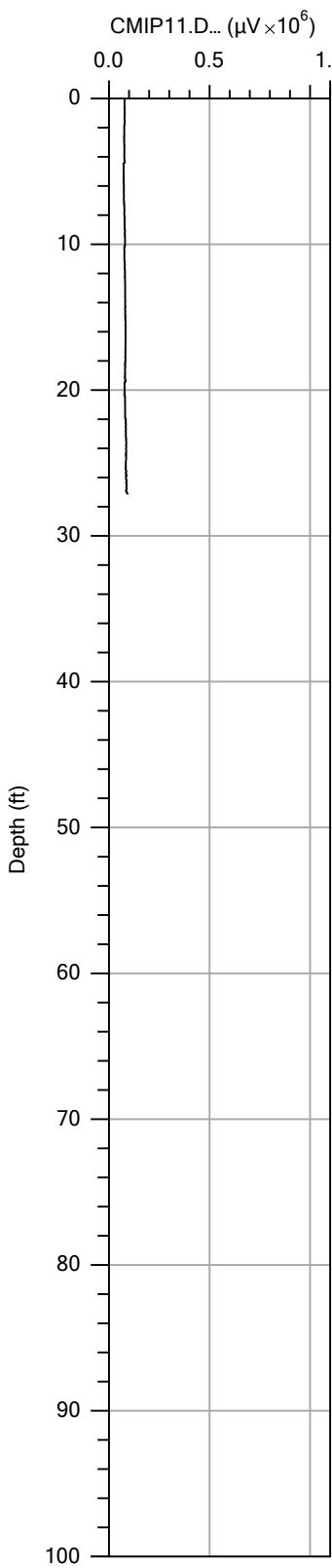
Company:	ZEBRA Environmental	Operator:	Will M
Project ID:	Solvent Finishers	Client:	CDM



ECD Max

Company: ZEBRA Environmental	Operator: Will M
Project ID: Solvent Finishers	Client: CDM

ZEBRA ENVIRONMENTAL Subsurface Sampling, Injection and Data Collection For Environmental Professionals (800-PROBE-IT)



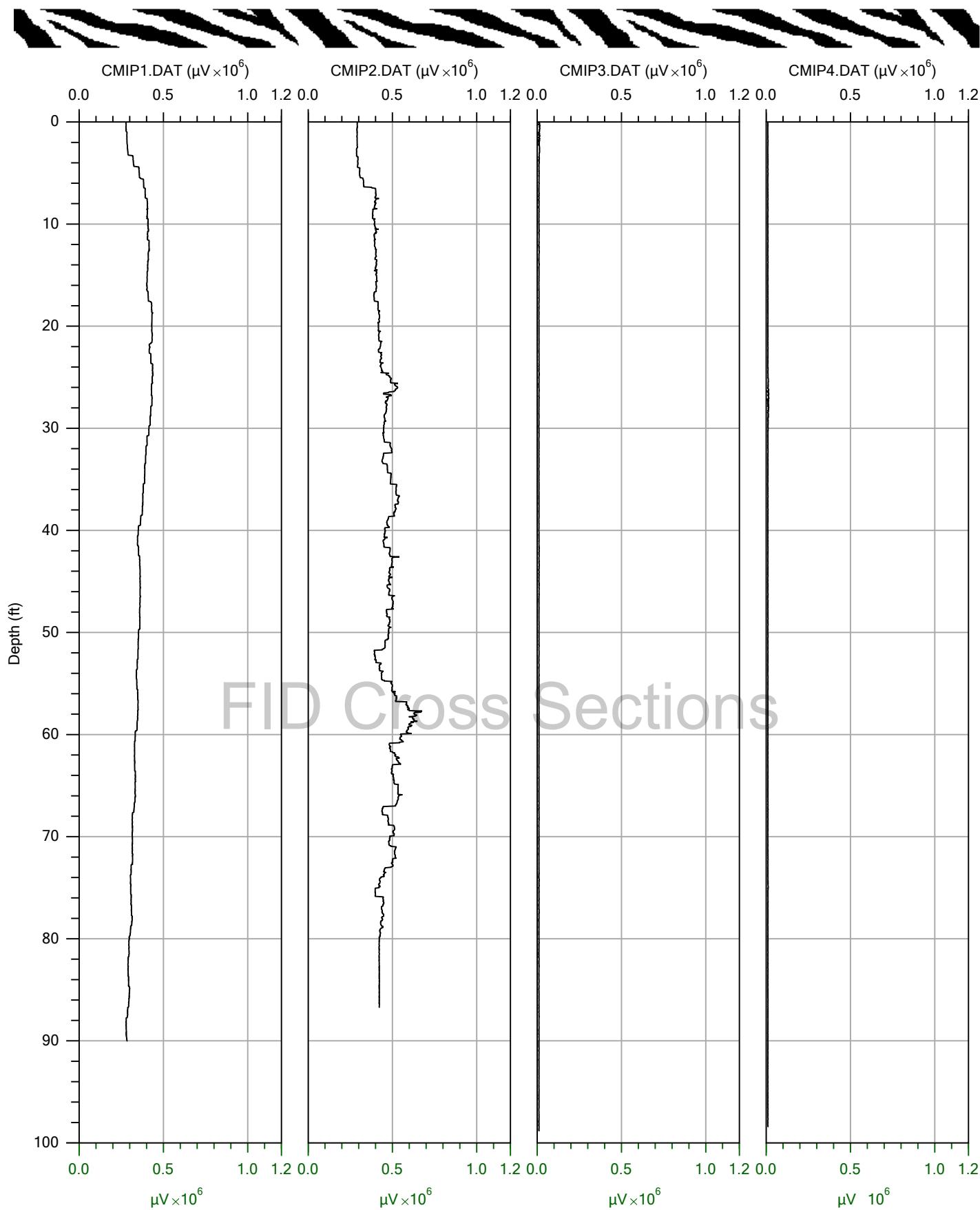
ECD Cross Sections



ECD Max

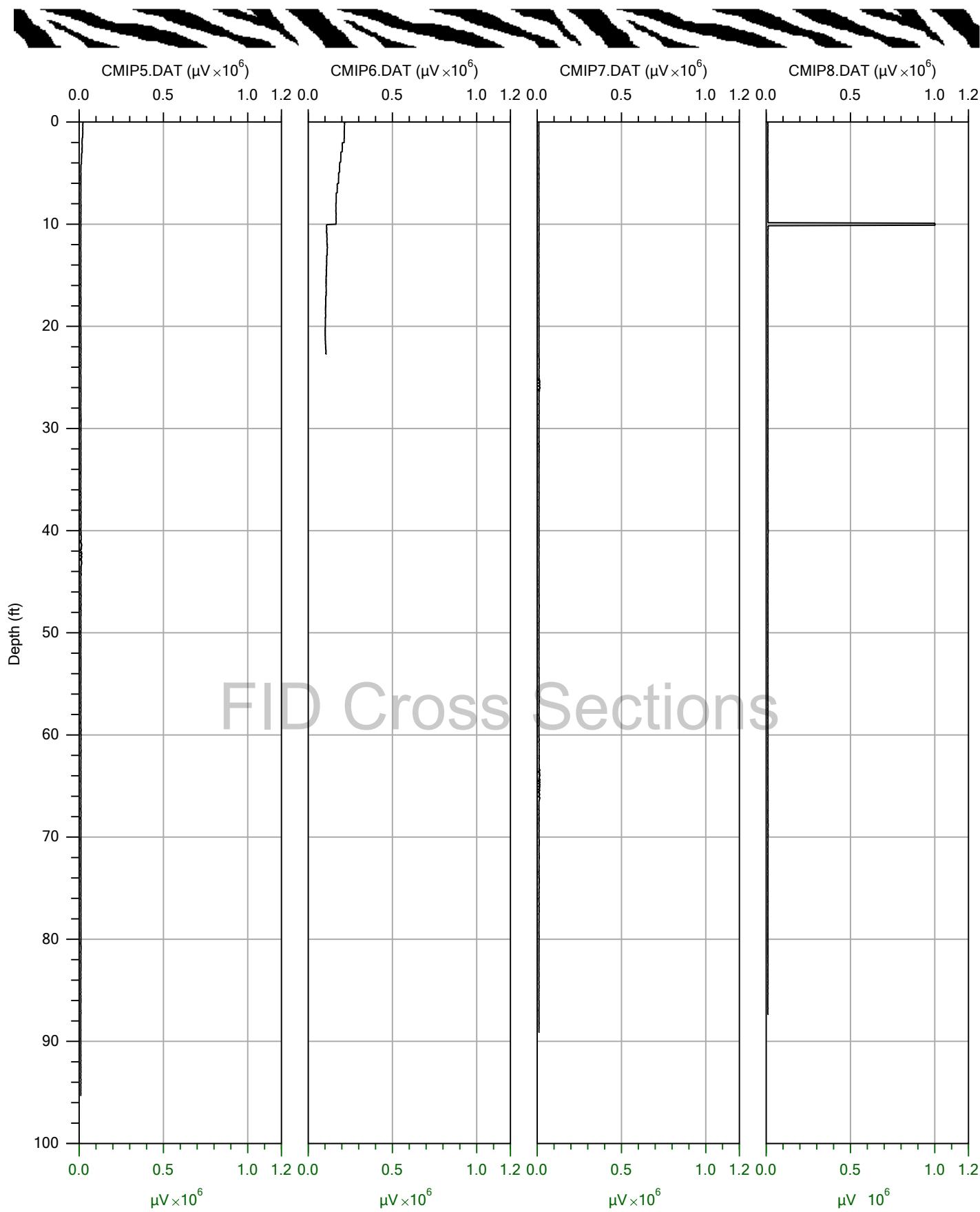
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Project ID: Solvent Finishers	Client: CDM

ZEBRA ENVIRONMENTAL Subsurface Sampling, Injection and Data Collection For Environmental Professionals (800-PROBE-IT)



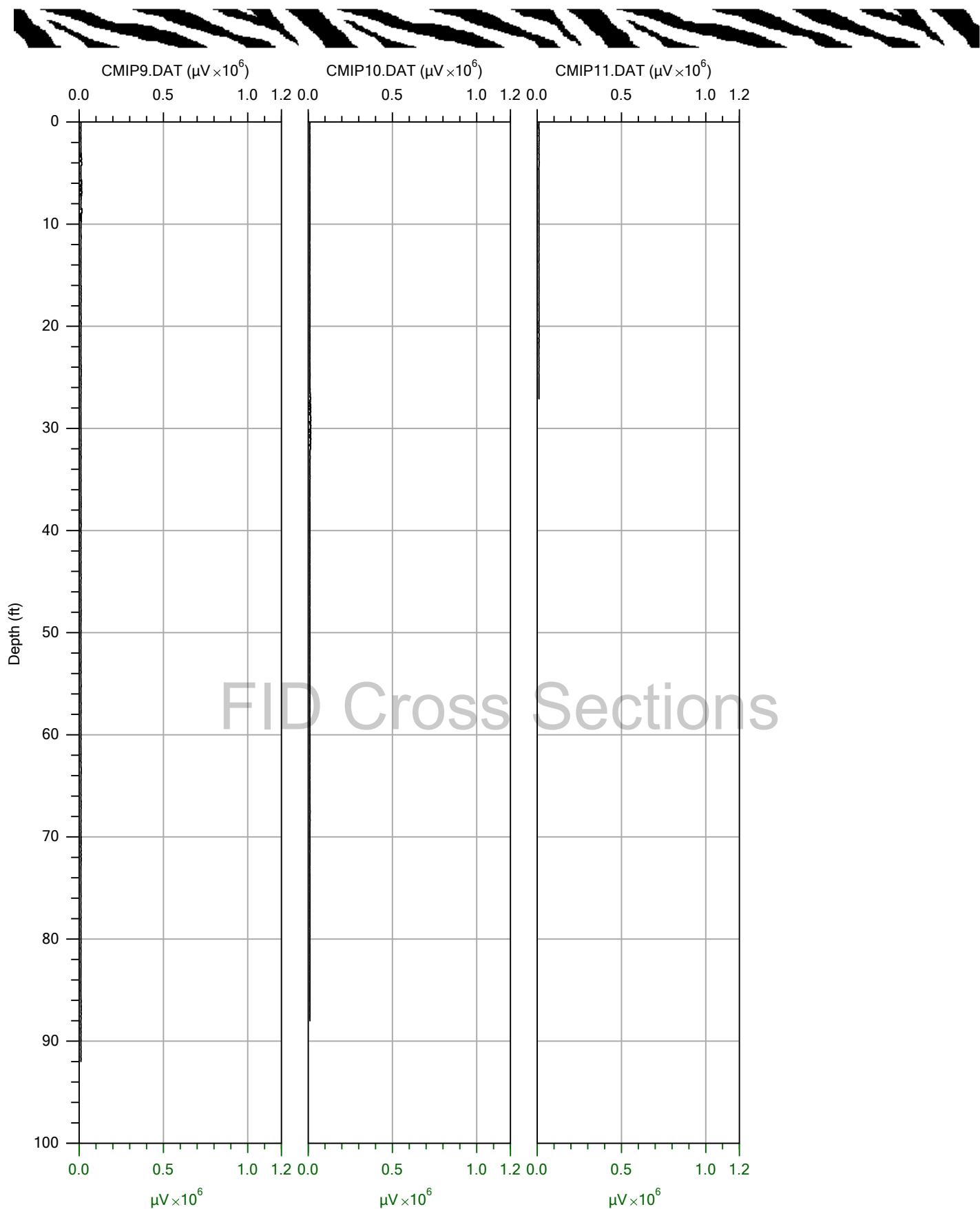
FID Max

Company: ZEBRA Environmental	Operator: Will M
Project ID: Solvent Finishers	Client: CDM



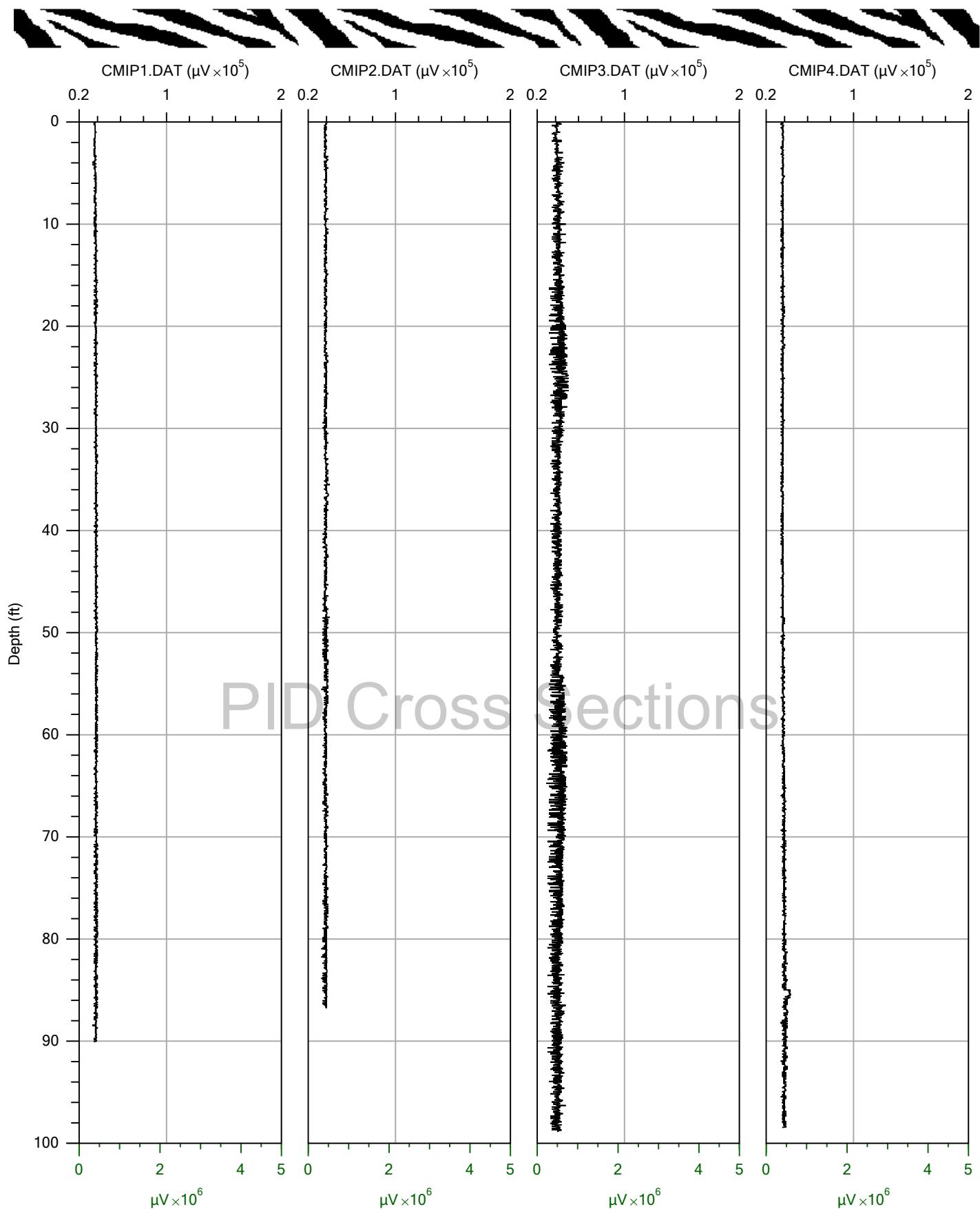
FID Max

Company: ZEBRA Environmental	Operator: Will M
Project ID: Solvent Finishers	Client: CDM



FID Max

Company: ZEBRA Environmental	Operator: Will M
Project ID: Solvent Finishers	Client: CDM

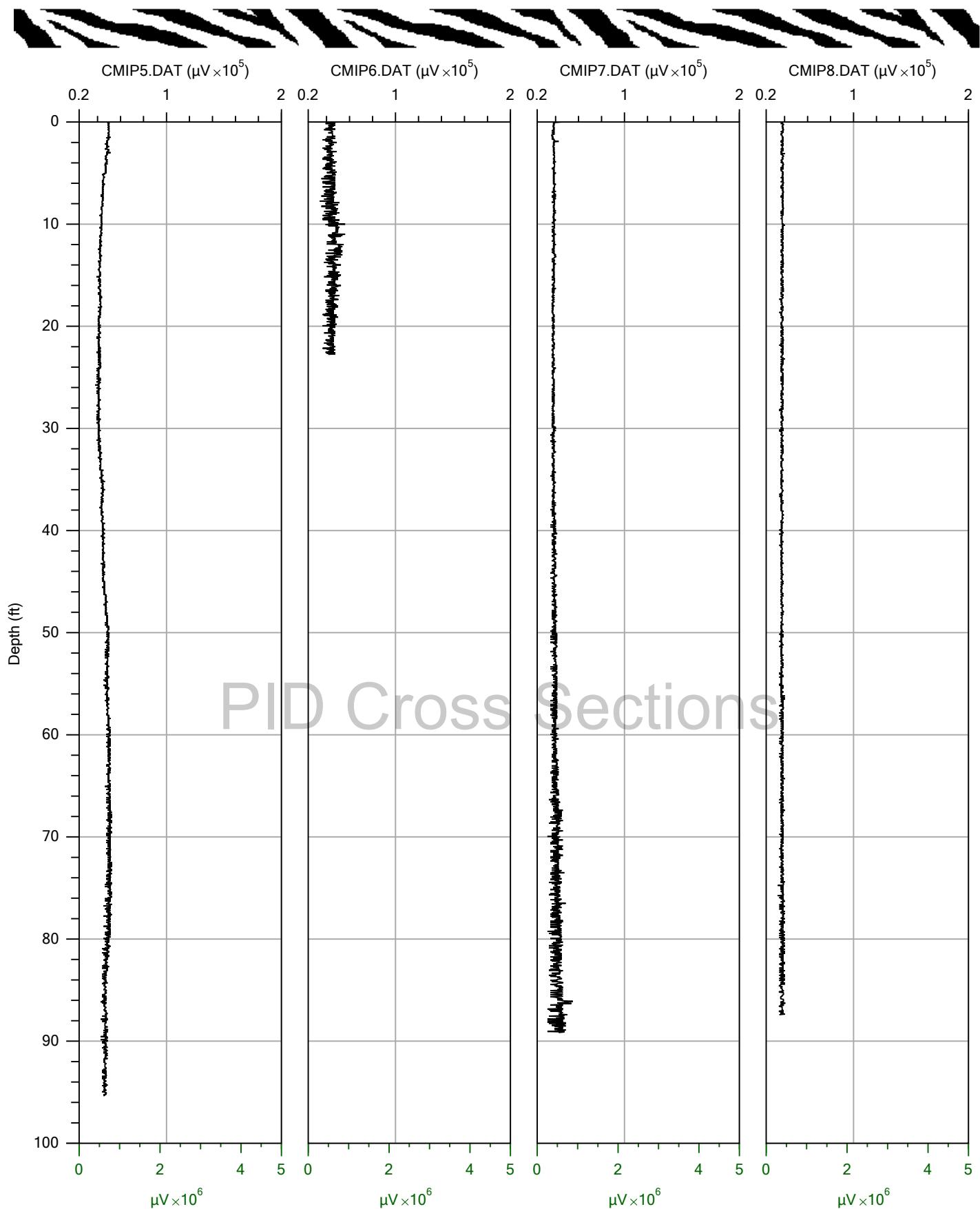


Company:
ZEBRA Environmental
Project ID:
Solvent Finishers

Operator:
Will M

Client:
CDM

PID Max

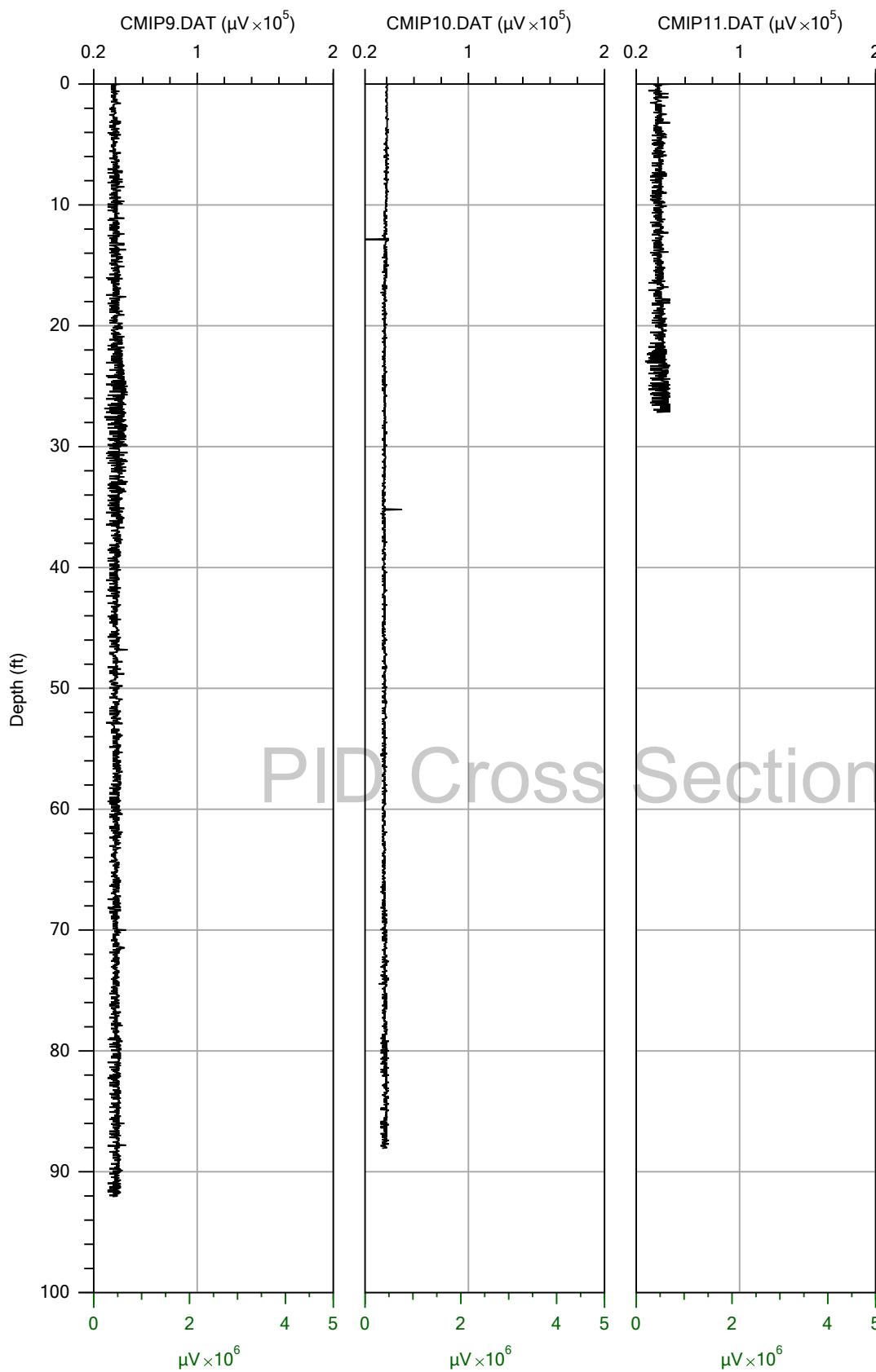


Company:
ZEBRA Environmental
Project ID:
Solvent Finishers

Operator:
Will M

Client:
CDM

PID Max



PID Max

Company: ZEBRA Environmental	Operator: Will M
Project ID: Solvent Finishers	Client: CDM

Appendix B

LAB DATA

Provided Separately

Appendix C

DATA USABILITY SUMMARY REPORT

SUMMARY OF THE ANALYTICAL DATA VALIDATION
Solvent Finishers Site in Westbury, NY 0897-59173

Soil and Water Semivolatile Organic Analyses

Samples Collected: April 23rd & 24th, 2008

Samples Received: April 24th & 25th, 2008

Laboratory: Mitkem / Spectrum

Sample Delivery Group: G0569

Laboratory Reference Numbers:

Samples Collected 4/23

130172-FB1-42308	G0569-02
130172-MIP7-S-5	G0569-03
130172-MIP7-S-5 DL	G0569-03 DL
130172-MIP7S-22	G0569-04
130172-MIP7-GW-85	G0569-05
130172-MIP7-GW-85 MS	G0569-05 MS
130172-MIP7-GW-85 MSD	G0569-05 MSD
130172-FB2-423008	G0569-06
130172-MIP8-S-5	G0569-07
130172-MIP88-S-5	G0569-08
130172-MIP8-GW-85	G0569-09
130172-MIP9-S-5	G0569-10
130172-MIP9-S-5 MS	G0569-10 MS
130172-MIP9-S-5 MSD	G0569-10 MSD
130172-MIP9-GW-85	G0569-11
130172-MIP99-GW-85	G0569-12

Samples Collected 4/24

130172-DG-GW-85	G0569-14
130172-FB-42408	G0569-15
130172-MIP10-GW-85	G0569-16
130172-MIP2-6-GW-85	G0569-17

Soil and water samples were validated for analyses of semivolatile organics by the US EPA Region II data validation SOP (HW-22, Revision 3). Data were reviewed for usability according to the following criteria:

- * - Data Completeness
- * - GC/MS Tuning
- * - Holding Times
 - Calibrations
- * - Laboratory Blanks
- * - Field Blanks
 - Laboratory Control Sample
 - Surrogate Compound Recoveries
 - Internal Standard Recoveries
 - Matrix Spike / Matrix Spike Duplicate
- * - Compound Identification
- * - Compound Quantitation

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The raw data for the 5/13 continuing calibration (S1F6751.D) associated with sample -03 was not found in the report.

This was received from the laboratory on 8/26.

The problems with the calibrations, internal standards, matrix spike and laboratory control samples should be noted. These are discussed in detail below.

Holding Times

All samples were extracted and analyzed within the contractual and technical times required by the US EPA Region II protocols.

Continuous extraction of water samples for semivolatile analysis was started within 7 days of the date of collection. Soils were extracted within 7 days.

Extracts were analyzed within 40 days of the date of extraction

Tunes

No problems were detected with any of the tunes associated with the samples of this delivery group.

Surrogate Recoveries

All surrogate recoveries were within the required limits with the exceptions of the terphenyl-d14 surrogate in samples 130172-MIP7-GW-85 MS (G0569-05 MS), 33%, 130172-MIP8-GW-85 (G0569-09), 50% and 130172-MIP9-S-5 (G0569-10), 196%.

The NYS DEC ASP requirements allow for one surrogate to be outside of the quality assurance limits (as long as the recovery is greater than 10%). The data were not required to be qualified for the low recoveries.

Matrix Spike / Matrix Spike Duplicate

Sample 130172-MIP7-GW-85 (G0569-05) was used as the water matrix spike and matrix spike duplicate. All recoveries were within the required limits with the following exceptions:

Compound	MS % Rec.	MSD % Rec.	RPD
1,3-Dichlorobenzene		41%	
2,2'-oxybis(1-Chloropropane)		42%	
2,4,5-Trichlorophenol			42%
2,4-Dinitrophenol			59%
2-Chloronaphthalene			44%
2-Chlorophenol		41%	
3,3'-Dichlorobenzidine	20%		
4-Bromophenyl-phenylether			49%
4-Chlorophenyl-phenylether			42%
4-Methylphenol		41%	
Anthracene	53%		42%
Benzo(a)anthracene	42%		58%
Benzo(a)pyrene	29%		71%
Benzo(b)fluoranthene	35%		69%
Benzo(g,h,i)perylene	22%		76%
Benzo(k)fluoranthene	33%		73%
Bis(2-chloroethoxy)methane		41%	
Bis(2-chloroethyl)ether		48%	
Bis(2-ethylhexyl)phthalate	35%		69%
Chrysene	42%		65%
Di-n-butylphthalate	54%		42%
Di-n-octylphthalate	33%		77%
Dibenzo(a,h)anthracene	23%		84%
Dibenzofuran			42%
Fluoranthene	52%		42%
Fluorene			46%
Hexachlorobenzene	47%		51%
Hexachlorocyclopentadiene	10%	16%	46%
Hexachloroethane		42%	
Indeno(1,2,3-cd)pyrene	24%		75%
N-Nitrosodiphenylamine	49%		
Pentachlorophenol			49%
Phenanthrene			43%
Phenol		43%	

Sample 130172-MIP9-S-5 (G0569-10) was used as the soil matrix spike and matrix spike duplicate. All recoveries were within the required limits with the following exceptions:

Compound	MS % Rec.	MSD % Rec.	RPD
2,2'-oxybis(1-Chloropropane)			43%
2,4-Dinitrophenol			76%
4,6-Dinitro-2-methylphenol			82%
Benzo(g,h,i)perylene	37%		52%
Di-n-octylphthalate	147%		60%
Dibenzo(a,h)anthracene			41%
Hexachlorocyclopentadiene			116%
Indeno(1,2,3-cd)pyrene			43%
Pentachlorophenol	5%	13%	89%
Phenanthrene	116%		

Undetected data for pentachlorophenol were flagged with the "R" qualifier and technically rejected since the recovery in the matrix spike was less than 5%.

The data for the other compounds were flagged with the "J" qualifier and are estimated values.

Laboratory Control Samples

The recovery of hexachlorocyclopentadiene (12%) was less than the quality control limit in LCS S1BLCS associated with the analysis of sample -05.

The data for this compound were flagged with the "J" qualifier and is an estimated value.

All other recoveries were within the required limits.

Calibrations

The %RSDs of all compounds in the 5/8 initial calibration associated with the analysis of samples -058, QC-1C, -06, -06, -09, -11, -12, -14, -15, -16, -17, -03, -03DL, -04, -10 were less than 15% with the exceptions of 2,4-dimethylphenol (19%), hexachlorocyclopentadiene (35%), 2,4-dinitrophenol (24%) and pentachlorophenol (22%).

The %RSDs of all compounds in the 5/8 initial calibration associated with the analysis of samples -058, QC-1C, -07 and -08 were less than 15% with the exceptions of 2,4-dimethylphenol (31%), hexachlorocyclopentadiene (32%), 2,4-dinitrophenol (24%) and 4,6-dinitro-2-methylphenol (20%).

The percent difference of all compounds in the 5/09 continuing calibration associated with the analysis of samples -02, -06, -09, -11 and -12 were less than 20% with the exceptions of phenol (24%), 2,2'-oxybis(1-chloropropane) (34%), 2,4-dinitrophenol (39%), and 4,6-dinitro-2-methylphenol (30%).

The percent difference of all compounds in the 5/12 continuing calibration associated with the analysis of samples -14, -15, -16 and -17 were less than 20% with the exception of pentachlorophenol (25%).

The percent difference of all compounds in the 5/13 continuing calibration associated with the analysis of sample -03 were less than 20% with the exceptions of 2,2'-oxybis(1-chloropropane) (22%), 2,4-dinitrophenol (23%), di-n-octylphthalate (33%), indeno(1,2,3-cd)pyrene (36%), dibenzo(a,h)anthracene (38%) and benzo(g,h,i)perylene (46%).

The raw data for the 5/13 continuing calibration (S1F6751.D) associated with sample -03 was not found in the report.

This was received from the laboratory on 8/26.

The percent difference of all compounds in the 5/14 continuing calibration associated with the analysis of samples -03DL, -04 and -10 were less than 20% with the

exceptions of phenol (24%), 2,2'-oxybis(1-chloropropane) (33%), bis(2-chloroethoxy)methane (22%) and 4-nitrophenol (37%).

The percent difference of hexachlorocyclopentadiene (51%) was above the 20% quality control limit in the 5/21 continuing calibration associated with the analyses of samples -07 and -08.

The data for these compounds were flagged with the "J" qualifier and they are estimated values.

Method Blanks

No target compounds were detected in the method blanks. One non-target compound was detected in a water method blank, but this was not included in the EDDs.

Field Blanks

No compounds were detected in the either of the field blanks.

Internal Standard Areas and Retention Times

All internal standard recoveries and retention times were within the required limits with the exceptions of the 5th (39%) and 6th (13%) internal standards in sample 130172-MIP7-GW-85 (G0569-05).

The undetected compounds quantitated against the 6th internal standard were flagged with the "R" qualifier and technically rejected since the recovery was less than 25%.

The detected data quantitated against the 6th internal standard and all of the data quantitated against the 5th internal standard were flagged with the "J" qualifier and are estimated values.

Sample Results

No problems were found with the results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA USABILITY
Solvent Finishers Site in Westbury, NY 0897-59173

Soil and Water Volatile Organic Analyses

Samples Collected: April 23rd & 24th, 2008

Samples Received: April 24th & 25th, 2008

Laboratory: Mitkem / Spectrum

Sample Delivery Group: G0569

Laboratory Reference Numbers:

Samples Collected 4/23

130172-TB-42308	G0569-01
130172-FB1-42308	G0569-02
130172-MIP7-S-5	G0569-03
130172-MIP7S-22	G0569-04
130172-MIP7-GW-85	G0569-05
130172-MIP7-GW-85 MS	G0569-05 MS
130172-MIP7-GW-85 MSD	G0569-05 MSD
130172-MIP7-GW-85 DL	G0569-05 DL
130172-FB2-423008	G0569-06
130172-MIP8-S-5	G0569-07
130172-MIP88-S-5	G0569-08
130172-MIP8-GW-85	G0569-09
130172-MIP8-GW-85 DL	G0569-09 DL
130172-MIP9-S-5	G0569-10
130172-MIP9-S-5 MS	G0569-10 MS
130172-MIP9-S-5 MSD	G0569-10 MSD
130172-MIP9-GW-85	G0569-11
130172-MIP9-GW-85 DL	G0569-11 DL
130172-MIP99-GW-85	G0569-12
130172-MIP99-GW-85 DL	G0569-12 DL

Samples Collected 4/24

130172-TB-42408	G0569-13
130172-DG-GW-85	G0569-14
130172-DG-GW-85 DL	G0569-14 DL
130172-FB-42408	G0569-15
130172-MIP10-GW-85	G0569-16
130172-MIP2-6-GW-85	G0569-17

Water samples were validated for analyses of volatile organics by the US EPA Region II data validation SOP (HW-24, Revision 2). Data were reviewed for usability according to the following criteria:

- * - Data Completeness
- * - GC/MS Tuning
- * - Holding Times
- Calibrations
- Laboratory Blanks
- Trip Blanks
- Field Blanks
- Storage Blank
- * - System Monitoring Compound Recoveries
- * - Internal Standard Recoveries
- Matrix Spike / Matrix Spike Duplicate
- Laboratory Control Samples
- * - Compound Identification
- * - Compound Quantitation

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

None of the laboratory qualifiers were included in the EDD. These were added during the data validation.

The problems with the calibrations, matrix spike, blanks and laboratory control samples should be noted. These are described in detail below.

No other significant problems were found with this sample delivery group which would affect the usability of the data.

Holding Times

Preserved aqueous samples and soils were analyzed within 14 days of collection.

Tunes

No problems were detected with the tunes associated with the samples of this delivery group.

System Monitoring Compound Recoveries

All of the surrogate recoveries were within the required limits.

Calibrations

The relative response factors of chloroethane (0.047), acetone (0.009) and 2-butanone (0.022) were less than the 0.050 quality control limit used for the purposes of the data validation in the 4/29 initial calibration associated with samples -01, -02, -

05, -06, -09, -11, -12, -14, QC-X5, -05DL, -09DL, -11DL, -11DL, -12DL, -14DL, -16, -17, -15 and -13.

The percent RSD of chloroethane (32%), acetone (30%) and 2-butanone (24%) were also greater than the 20% quality control limit in the 4/29 initial calibration.

The relative response factors of acetone (0.038) and 2-butanone (0.041) were less than the 0.050 quality control limit used for the purposes of the data validation in the 4/24 initial calibration associated with samples -03, -04, -07, -08 and -10.

The percent RSD of acetone (22%) was also greater than the 20% quality control limit in the 4/24 initial calibration.

The relative response factors of these compounds were also less than 0.05 in all of the continuing calibration standards.

The data for these compounds were flagged with the "J" qualifier when they were detected in a sample. Non-detects were flagged with the "R" qualifier and were technically rejected. It is possible that low concentrations were overlooked.

All percent differences in the 4/28 continuing calibration associated with samples -03, -04 and -07 were less than 20% with the exception of dichlorodifluoromethane (23%).

All percent differences in the 4/29 continuing calibration associated with samples -08 and -10 were less than 20% with the exception of carbon disulfide (30%).

All percent differences in the 4/29 continuing calibration V5I6740.D associated with samples -01, -02, -05, -06, -09, -11, -12 and -14 were less than 20% with the exception of dichlorodifluoromethane (31%).

All percent differences in the 4/30 continuing calibration associated with samples -05DL, -09DL, -11DL, -11DL, -12DL, -14DL, -16, -17, -15 and -13 were less than 20% with the exceptions of acetone (38%) and 2-butanone (28%).

The data for these compounds were flagged with the "J" qualifier and are estimated values.

Matrix Spike and Matrix Spike Duplicate

Some of the laboratory's in-house quality control limits were as low as 30% and as high as 163%. Quality control limits of 70% - 130% were used for the validation.

Sample 130172-MIP7-GW-85 (G0569-05) was used as the water matrix spike and matrix spike duplicate. All recoveries and RPDs were within the required limits with the following exceptions:

Compound	MS	MSD	RPD
1,1-Dichloroethene	137%		
1,3-Dichloropropane	44%	46%	
2-Butanone	134%		
Acetone	138%	156%	
Carbon disulfide	132%		
Chloroethane	151%	137%	

Sample 130172-MIP9-S-5 (G0569-10) was used as the water matrix spike and matrix spike duplicate. All recoveries and RPDs were within the require limits with the following exceptions:

Compound	MS	MSD	RPD
Vinyl Acetate	67%	60%	
1,2,4-Trichlorobenzene		61%	

The compounds with high recoveries were flagged with the "J" qualifier when they were detected in a sample. Non-detects were not qualified since high recoveries do not affect undetected data.

The compounds with low recoveries were flagged with the "J" qualifier and are estimated values.

Laboratory Control Sample

Some of the laboratory's in-house quality control limits were as low as 30% and as high as 163%. Quality control limits of 70% - 130% were used for the validation.

All of the laboratory control samples were within the required limits in LCS-36126 associated with the analyses of samples -05DL, -09DL, -11DL, -11DL, -12DL, -14DL, -16, -17, -15 and -13 with the exception of acetone (134%).

All of the laboratory control samples were within the required limits in LCS-36075 associated with the analyses of samples -03, -04 and -07 with the exception of dichlorodifluoromethane (131%).

Compounds with high recoveries were flagged with the "J" qualifier when they were detected in a sample. Non-detects were not qualified since high recoveries do not affect undetected data.

All other laboratory control samples were within the required limits. All of the target compounds were included in the laboratory control samples.

Method Blanks

Methylene chloride was found in laboratory blank VBLK1I associated with samples - 03, -04 and -07 at a concentration of 1.9J ug/l.

Methylene chloride was found in laboratory blank VBLK1J associated with samples - 08 and -10 at a concentration of 3.4J ug/l.

The low concentrations of methylene chloride detected in the samples were reported at the quantitation limit and flagged with the UB qualifier.

No compounds were detected in the other method blanks.

Trip Blank

Tetrachloroethene was found in trip blank 130172-TB2-42408 at a concentration of 2.4J ug/l.

The concentration of tetrachloroethene in the associated samples were too high to be affected by the trip blank contamination.

No compounds were detected in the other trip blank.

Field Blank

Tetrachloroethene was found in field blank 130172-FB2-42408 at a concentration of 3.7J ug/l.

The concentration of tetrachloroethene in the associated samples were too high to be affected by the trip blank contamination.

Internal Standard Areas and Retention Times

The recoveries and retention times of all internal standards were within the required quality control limits.

Sample Results

Sample 130172-MIP8-GW-85 (G0569-09)

This sample was reanalyzed at a 2000X dilution due to a very high concentration of tetrachloroethene (300,000 ug/l).

cis-1,2-Dichloroethene (400E ug/l) and trichloroethene (870E ug/l) were detected in the undiluted analysis, but were diluted out in the 2,000X dilution.

The data for these two compounds should be reported from the undiluted analysis, but the concentrations are highly estimated.

No other problems were detected with the samples.

SUMMARY OF THE ANALYTICAL DATA USABILITY
Solvent Finishers

Air Volatile Organic Analyses

Samples Collected: April 25, 2008

Samples Received: April 29, 2008

Laboratory: Spectrum Analytical

Sample Delivery Group: G0606 / SA77882

Laboratory Reference Numbers:

130172-SV-MIP10-D	Z0606-01	SA77882-01
130172-SV-MIP10-D RE	Z0606-01 RE	SA77882-01 RE
130172-SV-MIP10-S	Z0606-02	SA77882-02
130172-SV-MIP10-S RE	Z0606-02 RE	SA77882-02 RE
130172-SV-MIP9-S	Z0606-03	SA77882-03
130172-SV-MIP9-S RE	Z0606-03 RE	SA77882-03 RE
130172-SV-MIP9-D	Z0606-04	SA77882-04
130172-SV-MIP9-D RE	Z0606-04 RE	SA77882-04 RE
130172-SV-MIP99-D	Z0606-05	SA77882-05
130172-SV-MIP99-D RE	Z0606-05 RE	SA77882-05 RE
130172-SV-MIP7-S	Z0606-06	SA77882-06
130172-SV-MIP7-D	Z0606-07	SA77882-07
130172-SV-AA	Z0606-08	SA77882-08
130172-SV-AA DUP	Z0606-08 DUP	SA77882-08 DUP
130172-SV-MIP3-D	Z0606-09	SA77882-09
130172-SV-MIP3-D RE	Z0606-09 RE	SA77882-09 RE
130172-SV-MIPS-S	Z0606-10	SA77882-10
130172-SV-MIPS-S RE	Z0606-10 RE	SA77882-10 RE

Air samples were validated for analyses of volatile organics by the US EPA Region II checklist. Data were reviewed for usability according to the following criteria:

- * - Data Completeness
- * - GC/MS Tuning
- * - Holding Times
- * - Calibrations
- * - Laboratory Blanks
 - Trip Blanks
 - Field Blanks
- * - Matrix Duplicate
- * - Surrogate Compound Recoveries
 - Internal Standard Recoveries
 - Laboratory Control Samples
- * - Compound Identification
 - Compound Quantitation

* - Indicates that all criteria were met for this parameter.

DATA VALIDATION SUMMARY

The problems with the laboratory control samples and internal standards should be noted.

No other problems were detected with these samples.

Holding Times

All samples were analyzed within 14 days of collection.

Tunes

No problems were detected with the tunes associated with the samples of this delivery group.

Surrogate Compound Recoveries

All surrogate compound recoveries were within the required quality assurance limits.

Calibrations

No problems were detected with the calibrations.

All RRF's were greater than 0.05.

Laboratory Control Sample

The recovery of ethanol (52%) in the 4/30 LCS was less than the quality assurance limit in the LCS associated with samples -06 and -07.

The recoveries of chloroethane (132%) and 1,2,4-trichlorobenzene (62%) in the 5/1 LCS was outside the 70% - 130% quality assurance limits in the LCS associated with samples -08, -09, -10, -03, -01, -02, -04 and -05.

The recoveries of ethanol (63%), isopropyl alcohol (65%) and hexachlorobutadiene (66%) in the 5/2 LCS was outside the 70% - 130% quality assurance limits in the LCS associated with samples -09RE, -10RE, -03RE, -01RE, -02RE, -04RE and -05RE.

The data for these compounds were flagged with the "J" qualifier and are estimated values.

All of the other laboratory control sample recoveries were within the 70% - 130% required limits.

Matrix Duplicate

Sample 130172-SV-AA DUP (Z0606-08 DUP / SA77882-08 DUP) was used as the matrix duplicate. All RPDs which could be accurately calculated were less than 20%.

Method Blanks

No compounds were detected in any of the method blanks.

Trip Blank

A trip blank was not analyzed with this sample delivery group.

Internal Standard Areas and Retention Times

All internal standard recoveries were within the 60% - 140% required limits with the following exceptions:

		IS #1	IS #2	IS #3
130172-SV-MIP10-D	SA77882-01		143%	
130172-SV-MIP10-S	SA77882-02		144%	141%
130172-SV-MIP9-S	SA77882-03	142%	148%	141%

Detected compounds that were quantitated against these internal standards were flagged with the "J" qualifier and are estimated values. Nondetects were not qualified since high recoveries do not affect undetected data.

Note: The laboratory used quality control limits of 50% - 200% for their QC requirements. The data were qualified against the 60% - 140% limits referenced in the method.

Sample Results

The calculated raw data for samples -01, -01RE, -02, -02RE, -04, -04RE, -05, -05RE, did not agree with that reported on the EDD.

The laboratory pointed out an additional dilution factor for these samples that was not included on the sample summary page.

No other problems were found with the results of any of the samples of this delivery group.

SUMMARY OF THE ANALYTICAL DATA USABILITY
Solvent Finishers Site in Westbury, NY 0897-59173

Soil and Water Semivolatile Organic Analyses

Samples Collected: April 23rd & 24th, 2008

Samples Received: April 24th & 25th, 2008

Laboratory: Mitkem / Spectrum

Sample Delivery Group: G0569

Laboratory Reference Numbers:

Samples Collected 4/23	
130172-FB1-42308	G0569-02
130172-MIP7-S-5	G0569-03
130172-MIP7-S-5 DL	G0569-03 DL
130172-MIP7S-22	G0569-04
130172-MIP7-GW-85	G0569-05
130172-MIP7-GW-85 MS	G0569-05 MS
130172-MIP7-GW-85 MSD	G0569-05 MSD
130172-FB2-423008	G0569-06
130172-MIP8-S-5	G0569-07
130172-MIP88-S-5	G0569-08
130172-MIP8-GW-85	G0569-09
130172-MIP9-S-5	G0569-10
130172-MIP9-S-5 MS	G0569-10 MS
130172-MIP9-S-5 MSD	G0569-10 MSD
130172-MIP9-GW-85	G0569-11
130172-MIP99-GW-85	G0569-12
Samples Collected 4/24	
130172-DG-GW-85	G0569-14
130172-FB-42408	G0569-15
130172-MIP10-GW-85	G0569-16
130172-MIP2-6-GW-85	G0569-17

**SEMOVOLATILE ORGANICS
INITIAL CALIBRATION**

Instrument ID: S1

Level: Low

Tune File ID: S1F6640.D

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: S1F6641.D

Date: 5/8/2008

Page: 664

Associated Samples:

QC-1B, -05, QC-1C, -06, -06, -09, -11, -12, -14, -15, -16, -17, -03, -03DL, -04, -10

CALIBRATION VERIFICATION:

PPB	Compound 1,2,4-Trichlorobenzene				Pyrene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
10	150,304	1,593,288	0.377	0.377	475,517	1,678,586	1.133	1.133
20	368,433	1,868,746	0.394	0.394	1,125,931	2,090,996	1.077	1.077
50	953,340	1,654,490	0.461	0.461	2,962,374	1,987,665	1.192	1.192
80	1,464,303	1,616,141	0.453	0.453	4,250,642	1,813,774	1.172	1.172
120	2,244,063	1,605,003	0.466	0.466	6,645,318	1,983,742	1.117	1.117
160	2,674,938	1,549,043	0.432	0.432	7,918,385	1,838,478	1.077	1.077
Average		0.423	0.431			1.130	1.128	
Calc Reported						Calc	Reported	
%RSD		8.73%	8.60%			4.23%	4.20%	

Compound % RSD

**SEMIVOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: S1
 Level: Low
 Tune File ID: S1F6640.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: Date: Page: 744
 Initial Calibration File ID: S1F6641.D Date: 5/8/2008 Page: 664
 Associated Samples: QC-1B, -05

CALIBRATION VERIFICATION:

Compound 2,4-Dinitrophenol				Fluoranthene			
PPB	Area x	Area IS	calc rrf	PPB	Area x	Area IS	calc rrf
50	315193	1,136,317	0.222	0.222	2,613,084	1,781,825	1.173
% D	Avg RRF	% D	% D		Avg RRF	% D	% D
	0.216	Calc	Reported		1.258	Calc	Reported
		2.73	2.70			-6.74	6.70

**SEMIVOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: S1
 Level: Low
 Tune File ID: S1F6640.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: Date: Page: 747
 Initial Calibration File ID: S1F6641.D Date: 5/8/2008 Page: 664
 Associated Samples: QC-1C, -06, -06, -09, -11, -12

CALIBRATION VERIFICATION:

Compound 2-Chlorophenol				Pyrene			
PPB	Area x	Area IS	calc rrf	PPB	Area x	Area IS	calc rrf
50	525491	308,812	1.361	1.361	1,868,708	1,208,555	1.237
% D	Avg RRF	% D	% D		Avg RRF	% D	% D
	1.39	Calc	Reported		1.128	Calc	Reported
		-2.06	2.00			9.66	9.70

**SEMIVOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: S1
 Level: Low
 Tune File ID: S1F6270.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: S1F6271.D Date: 5/12/2008 Page: 753
 Initial Calibration File ID: S1F6641.D Date: 5/8/2008 Page: 664
 Associated Samples: -14, -15, -16, -17

CALIBRATION VERIFICATION:

Compound Nitrobenzene				Carbazole			
PPB	Area x	Area IS	calc rrf	PPB	Area x	Area IS	calc rrf
50	832,256	1,531,815	0.435	0.435	1,373,062	1,398,797	0.785
% D	Avg RRF	% D	% D		Avg RRF	% D	% D
	0.379	Calc	Reported		0.942	Calc	Reported
		14.68	14.60			-16.64	16.60

**SEMIVOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: S1
 Level: Low
 Tune File ID: S1F6750.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: S1F6751.D Date: 5/13/2008 Page: 756
 Initial Calibration File ID: S1F6641.D Date: 5/8/2008 Page: 664
 Associated Samples: -3

Raw data missing

CALIBRATION VERIFICATION:

Compound Dimethylphthalate				Benzo(a)pyrene			
PPB	Area x	Area IS	calc rrf	PPB	Area x	Area IS	calc rrf
50		#DIV/0!	1.474			#DIV/0!	1.242
% D	Avg RRF	% D	% D		Avg RRF	% D	% D
	1.431	Calc	Reported		1.197	Calc	Reported

#DIV/0! 3.00

#DIV/0! 3.80

**SEMVOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: S1
Level: Low
Tune File ID: S1F6780.D Acceptable: Yes Time Requirements Met: Yes
Calibration File ID: S1F6781.D Date: 5/14/2008 Page: 759
Initial Calibration File ID: S1F6641.D Date: 5/8/2008 Page: 664
Associated Samples: -03DL, -04, -10

CALIBRATION VERIFICATION:

Compound Dibenzofuran				Anthracene			
PPB	Area x	Area IS	calc rrf	Area x	Area IS	calc rrf	Rptd rrf
50	1,206,172	568,276	1.698	1,698	1,509,876	1,030,397	1.172
% D	Avg RRF	% D	% D		Avg RRF	% D	% D
	1.67	Calc	Reported		1.246	Calc	Reported
		1.68	1.70			-5.92	5.90

**SEMVOLATILE ORGANICS
INITIAL CALIBRATION**

Instrument ID: S1
Level: Low
Tune File ID: S1F6870.D Acceptable: Yes Time Requirements Met: Yes
Initial Calibration File ID: S1F6871.D Date: 5/20/2008 Page: 721
Associated Samples: -07, -08

CALIBRATION VERIFICATION:

Compound Acenaphthene				Chrysene			
PPB	Area x	Area IS	calc rrf	Area x	Area IS	calc rrf	Rptd rrf
10	52,150	183,868	1.135	1.135	46,882	168,503	1.113
20	97,276	164,079	1.186	1.186	89,175	152,458	1.170
50	233,328	149,194	1.251	1.251	237,941	153,315	1.242
80	304,942	127,695	1.194	1.194	299,356	124,910	1.198
120	418,903	124,446	1.122	1.122	412,774	124,376	1.106
160	675,739	151,737	1.113	1.113	585,968	123,714	1.184
Average		1.176	1.167		1.181	1.169	
		Calc	Reported		Calc	Reported	
%RSD		4.52%	4.60%		4.39%	4.40%	

**SEMVOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: S1
Level: Low
Tune File ID: S1F6890.D Acceptable: Yes Time Requirements Met: Yes
Calibration File ID: S1F6891.D Date: 5/20/2008 Page: 762
Initial Calibration File ID: S1F6871.D Date: 5/20/2008 Page: 721
Associated Samples: -07, -08

CALIBRATION VERIFICATION:

Compound Acenaphthene				Chrysene			
PPB	Area x	Area IS	calc rrf	Area x	Area IS	calc rrf	Rptd rrf
50	1,424,026	983,988	1.158	1.158	1,813,769	1,363,494	1.064
% D	Avg RRF	% D	% D		Avg RRF	% D	% D
	1.075	Calc	Reported		0.967	Calc	Reported
		7.70	7.70			10.05	10.10

SUMMARY OF THE ANALYTICAL DATA USABILITY
Solvent Finishers Site in Westbury, NY 0897-59173

Soil and Water Volatile Organic Analyses

Samples Collected: April 23rd & 24th, 2008

Samples Received: April 24th & 25th, 2008

Laboratory: Mitkem / Spectrum

Sample Delivery Group: G0569

Laboratory Reference Numbers:

Samples Collected 4/23

130172-TB-42308	G0569-01
130172-FB1-42308	G0569-02
130172-MIP7-S-5	G0569-03
130172-MIP7S-22	G0569-04
130172-MIP7-GW-85	G0569-05
130172-MIP7-GW-85 MS	G0569-05 MS
130172-MIP7-GW-85 MSD	G0569-05 MSD
130172-MIP7-GW-85 DL	G0569-05 DL
130172-FB2-423008	G0569-06
130172-MIP8-S-5	G0569-07
130172-MIP88-S-5	G0569-08
130172-MIP8-GW-85	G0569-09
130172-MIP8-GW-85 DL	G0569-09 DL
130172-MIP9-S-5	G0569-10
130172-MIP9-S-5 MS	G0569-10 MS
130172-MIP9-S-5 MSD	G0569-10 MSD
130172-MIP9-GW-85	G0569-11
130172-MIP9-GW-85 DL	G0569-11 DL
130172-MIP99-GW-85	G0569-12
130172-MIP99-GW-85 DL	G0569-12 DL

Samples Collected 4/24

130172-TB-42408	G0569-13
130172-DG-GW-85	G0569-14
130172-DG-GW-85 DL	G0569-14 DL
130172-FB-42408	G0569-15
130172-MIP10-GW-85	G0569-16
130172-MIP2-6-GW-85	G0569-17

VOLATILE ORGANICS
INITIAL CALIBRATION

Instrument ID: V1

Level: Low

Tune File ID: V1J5669.D

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: V1J5669.D

Date: 4/24/2008

Page: 244

Associated Samples:

QC-1I, -03, -04, -07, QC-1J, -08, -10

CALIBRATION VERIFICATION:

Compound	Chloroform				Bromoform			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
5	43,758	1,138,299	0.384	0.384	17,253	832,945	0.207	0.207
20	196,773	1,166,452	0.422	0.422	72,355	831,687	0.217	0.217
50	493,151	1,156,009	0.427	0.427	195,077	840,939	0.232	0.232
100	1,009,467	1,207,356	0.418	0.418	418,854	878,040	0.239	0.239
200	1,941,875	1,197,319	0.405	0.405	791,184	863,276	0.229	0.229
Average			0.411	0.411			0.225	0.225
			Calc Reported				Calc Reported	
%RSD			4.11%	4.10%			5.55%	5.60%

VOLATILE ORGANICS

CONTINUING CALIBRATION

Instrument ID: V1

Level: Low

Tune File ID: V1J5842.D

Acceptable: Yes

Time Requirements Met: Yes

Calibration File ID: V1J5843.D

Date: 4/28/2008

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Initial Calibration File ID: V1J5669.D

Date: 4/24/2008

Page: 244

Associated Samples: QC-1I, -03, -04, -07

CALIBRATION VERIFICATION:

Compound	Trichloroethene				Isopropylbenzene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
50	302,366	1,295,151	0.233	0.233	1,107,116	897,889	1.233	1.233
% D		Avg RRF	% D	% D		Avg RRF	% D	% D
		0.226	Calc	Reported		1.147	7.50	Reported
			3.30	3.30				7.50

VOLATILE ORGANICS

CONTINUING CALIBRATION

Instrument ID: V1

Level: Low

Tune File ID: V1J5870.D

Acceptable: Yes

Time Requirements Met: Yes

Calibration File ID: V1J5871.D

Date: 4/29/2008

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Initial Calibration File ID: V1J5669.D

Date: 4/24/2008

Page: 244

Associated Samples: QC-1J, -08, -10

CALIBRATION VERIFICATION:

Compound	Benzene				Styrene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
50	1,350,538	1,409,306	0.958	0.958	832,913	908,602	0.917	0.917
% D		Avg RRF	% D	% D		Avg RRF	% D	% D
		1.021	Calc	Reported		0.925	-0.90	Reported
			-6.14	6.10				0.90

VOLATILE ORGANICS
INITIAL CALIBRATION

Instrument ID: V5

Level: Low

Tune File ID: V5I6711

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: V5I6712

Date: 4/29/2008

Page: 244

Associated Samples:

QC-W5, -01, -02, -05, -06, -09, -11, -12, -14, QC-X5, -05DL, -09DL, -11DL, -11DL, -12DL, -14DL, -16, -17, -15, -13

CALIBRATION VERIFICATION:

Compound	Vinyl Chloride				Naphthalene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
5	18,324	1,563,725	0.117	0.117	101,659	577,791	1.759	1.759
20	76,677	1,514,643	0.127	0.127	396,405	561,638	1.765	1.765
50	243,446	1,573,961	0.155	0.155	955,643	575,866	1.659	1.659
100	438,176	1,500,463	0.146	0.146	1,916,639	550,213	1.742	1.742
200	878,527	1,498,791	0.147	0.147	3,602,745	540,791	1.665	1.665
Average			0.138	0.138			1.718	1.718
			Calc Reported				Calc Reported	
%RSD			11.32%	11.30%			3.00%	3.00%

VOLATILE ORGANICS

CONTINUING CALIBRATION

Instrument ID: V5

Level: Low

Tune File ID: V5I6739

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: V5I6740

Date: 4/29/2008

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Initial Calibration File ID: V5I6712

Date: 4/29/2008

Page: 244

Associated Samples: QC-W5, -01, -02, -05, -06, -09, -11, -12, -14

CALIBRATION VERIFICATION:

Compound	Toluene				Hexachlorobutadiene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
50	1,117,732	1,358,008	0.823	0.823	125,374	509,466	0.246	0.246
% D		Avg RRF	% D	% D		Avg RRF	% D	% D
		0.813	Calc	Reported		0.254	Calc	Reported
			1.24	1.20			-3.11	3.20

VOLATILE ORGANICS

CONTINUING CALIBRATION

Instrument ID: V5

Level: Low

Tune File ID: V5I6770

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: V5I6771

Date: 4/30/2008

Page: 299

Initial Calibration File ID: V5I6712

Date: 4/29/2008

Page: 244

Associated Samples: QC-X5, -05DL, -09DL, -11DL, -11DL, -12DL, -14DL, -16, -17, -15, -13

CALIBRATION VERIFICATION:

Compound	Toluene				1,4-Dichlorobenzene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
50	1,096,829	1,317,491	0.833	0.833	563,385	501,681	1.123	1.123
% D		Avg RRF	% D	% D		Avg RRF	% D	% D
		0.813	Calc	Reported		1.108	Calc	Reported
			2.40	2.40			1.35	1.30

G0569-02

G0569-05DL

G0569-11

G0569-11 DL 200X

G0569-06

G0569-09

G0569-09 DL 2000X

G0569-12

G0569-12DL 200X

G0569-14

G0569-14DL 200X

G0569-16 40X

G0569-17 5X

G0569-15

G0569-13

G0569-07

sample_id	param_name	result_value	result_unit	DV	Conc.	MB	Surr	MS	LCS	IC	CC	IS	DV
													Qual.
130172-MIP8-S-5	1,1,1,2-Tetrachloroethane		ug/Kg										
130172-MIP8-S-5	1,1,1-Trichloroethane		ug/Kg										
130172-MIP8-S-5	1,1,2,2-Tetrachloroethane		ug/Kg										
130172-MIP8-S-5	1,1,2-Trichloroethane		ug/Kg										
130172-MIP8-S-5	1,1-Dichloroethane		ug/Kg										
130172-MIP8-S-5	1,1-Dichloroethene		ug/Kg										
130172-MIP8-S-5	1,1-Dichloropropene		ug/Kg										
130172-MIP8-S-5	1,2,3-Trichlorobenzene		ug/Kg										
130172-MIP8-S-5	1,2,3-Trichloropropane		ug/Kg										
130172-MIP8-S-5	1,2,4-Trichlorobenzene		ug/Kg										
130172-MIP8-S-5	1,2,4-Trimethylbenzene		ug/Kg										
130172-MIP8-S-5	1,2-Dibromo-3-chloropropane		ug/Kg										
130172-MIP8-S-5	1,2-Dibromoethane		ug/Kg										
130172-MIP8-S-5	1,2-Dichlorobenzene		ug/Kg										
130172-MIP8-S-5	1,2-Dichloroethane		ug/Kg										
130172-MIP8-S-5	1,2-Dichloropropane		ug/Kg										
130172-MIP8-S-5	1,3,5-Trimethylbenzene		ug/Kg										
130172-MIP8-S-5	1,3-Dichlorobenzene		ug/Kg										
130172-MIP8-S-5	1,3-Dichloropropane		ug/Kg										
130172-MIP8-S-5	1,4-Dichlorobenzene		ug/Kg										
130172-MIP8-S-5	2,2-Dichloropropane		ug/Kg										
130172-MIP8-S-5	2-Butanone	4.4	ug/Kg	4									
130172-MIP8-S-5	2-Chlorotoluene		ug/Kg										
130172-MIP8-S-5	2-Hexanone		ug/Kg										
130172-MIP8-S-5	4-Chlorotoluene		ug/Kg										
130172-MIP8-S-5	4-Isopropyltoluene		ug/Kg										
130172-MIP8-S-5	4-Methyl-2-pentanone		ug/Kg										
130172-MIP8-S-5	Acetone	23	ug/Kg	22.61905									
130172-MIP8-S-5	Benzene		ug/Kg										
130172-MIP8-S-5	Bromobenzene		ug/Kg										
130172-MIP8-S-5	Bromochloromethane		ug/Kg										
130172-MIP8-S-5	Bromodichloromethane		ug/Kg										
130172-MIP8-S-5	Bromoform		ug/Kg										
130172-MIP8-S-5	Bromomethane		ug/Kg										
130172-MIP8-S-5	Carbon disulfide		ug/Kg										
130172-MIP8-S-5	Carbon tetrachloride		ug/Kg										
130172-MIP8-S-5	Chlorobenzene		ug/Kg										
130172-MIP8-S-5	Chloroethane		ug/Kg										
130172-MIP8-S-5	Chloroform		ug/Kg										
130172-MIP8-S-5	Chloromethane		ug/Kg										
130172-MIP8-S-5	cis-1,2-Dichloroethene	9.2	ug/Kg	9									
130172-MIP8-S-5	cis-1,3-Dichloropropene		ug/Kg										
130172-MIP8-S-5	Dibromochloromethane		ug/Kg										
130172-MIP8-S-5	Dibromomethane		ug/Kg										
130172-MIP8-S-5	Dichlorodifluoromethane		ug/Kg										
130172-MIP8-S-5	Ethylbenzene		ug/Kg										
130172-MIP8-S-5	Hexachlorobutadiene		ug/Kg										
130172-MIP8-S-5	Iodomethane		ug/Kg										
130172-MIP8-S-5	Isopropylbenzene		ug/Kg										
130172-MIP8-S-5	m,p-Xylene		ug/Kg										
130172-MIP8-S-5	Methyl tert-butyl ether		ug/Kg										
130172-MIP8-S-5	Methylene chloride	2.6	ug/Kg	2	1.9								
130172-MIP8-S-5	n-Butylbenzene		ug/Kg										
130172-MIP8-S-5	n-Propylbenzene		ug/Kg										
130172-MIP8-S-5	Naphthalene		ug/Kg										
130172-MIP8-S-5	o-Xylene		ug/Kg										
130172-MIP8-S-5	sec-Butylbenzene		ug/Kg										
130172-MIP8-S-5	Styrene		ug/Kg										
130172-MIP8-S-5	tert-Butylbenzene		ug/Kg										
130172-MIP8-S-5	Tetrachloroethene	27	ug/Kg	26									
130172-MIP8-S-5	Toluene	1.3	ug/Kg	1									
130172-MIP8-S-5	trans-1,2-Dichloroethene		ug/Kg										
130172-MIP8-S-5	trans-1,3-Dichloropropene		ug/Kg										
130172-MIP8-S-5	Trichloroethene		ug/Kg										
130172-MIP8-S-5	Trichlorofluoromethane		ug/Kg										
130172-MIP8-S-5	Vinyl acetate		ug/Kg										
130172-MIP8-S-5	Vinyl chloride		ug/Kg										
130172-MIP8-S-5	Xylene (Total)		ug/Kg										
												67%	J
													UB Method Blank

G0569-08

G0569-10

sample_id	param_name	result_value	result_unit	DV							DV								
				Conc.	MB	Surr	MS	LCS	IC	CC	IS	Conc.	MB	Surr	MS	LCS	IC	CC	IS
130172-MIP9-S-5	1,1,1,2-Tetrachloroethane		ug/Kg																
130172-MIP9-S-5	1,1,1-Trichloroethane		ug/Kg																
130172-MIP9-S-5	1,1,2,2-Tetrachloroethane		ug/Kg																
130172-MIP9-S-5	1,1,2-Trichloroethane		ug/Kg																
130172-MIP9-S-5	1,1-Dichloroethane		ug/Kg																
130172-MIP9-S-5	1,1-Dichloroethene		ug/Kg																
130172-MIP9-S-5	1,1-Dichloropropene		ug/Kg																
130172-MIP9-S-5	1,2,3-Trichlorobenzene		ug/Kg																
130172-MIP9-S-5	1,2,3-Trichloropropane		ug/Kg																
130172-MIP9-S-5	1,2,4-Trichlorobenzene		ug/Kg																
130172-MIP9-S-5	1,2,4-Trimethylbenzene		ug/Kg																
130172-MIP9-S-5	1,2-Dibromo-3-chloropropane		ug/Kg																
130172-MIP9-S-5	1,2-Dibromoethane		ug/Kg																
130172-MIP9-S-5	1,2-Dichlorobenzene		ug/Kg																
130172-MIP9-S-5	1,2-Dichloroethane		ug/Kg																
130172-MIP9-S-5	1,2-Dichloropropane		ug/Kg																
130172-MIP9-S-5	1,3,5-Trimethylbenzene		ug/Kg																
130172-MIP9-S-5	1,3-Dichlorobenzene		ug/Kg																
130172-MIP9-S-5	1,3-Dichloropropane		ug/Kg																
130172-MIP9-S-5	1,4-Dichlorobenzene		ug/Kg																
130172-MIP9-S-5	2,2-Dichloropropane		ug/Kg																
130172-MIP9-S-5	2-Butanone		ug/Kg													RRF/24%		R	
130172-MIP9-S-5	2-Chlorotoluene		ug/Kg																
130172-MIP9-S-5	2-Hexanone		ug/Kg																
130172-MIP9-S-5	4-Chlorotoluene		ug/Kg																
130172-MIP9-S-5	4-Isopropyltoluene		ug/Kg																
130172-MIP9-S-5	4-Methyl-2-pentanone		ug/Kg																
130172-MIP9-S-5	Acetone	2.7	ug/Kg			2										RRF/30%		R	
130172-MIP9-S-5	Benzene		ug/Kg																
130172-MIP9-S-5	Bromobenzene		ug/Kg																
130172-MIP9-S-5	Bromochloromethane		ug/Kg																
130172-MIP9-S-5	Bromodichloromethane		ug/Kg																
130172-MIP9-S-5	Bromoform		ug/Kg																
130172-MIP9-S-5	Bromomethane		ug/Kg																
130172-MIP9-S-5	Carbon disulfide		ug/Kg													30%		J	
130172-MIP9-S-5	Carbon tetrachloride		ug/Kg																
130172-MIP9-S-5	Chlorobenzene		ug/Kg																
130172-MIP9-S-5	Chloroethane		ug/Kg													RRF/32%		R	
130172-MIP9-S-5	Chloroform		ug/Kg																
130172-MIP9-S-5	Chloromethane		ug/Kg																
130172-MIP9-S-5	cis-1,2-Dichloroethene		ug/Kg																
130172-MIP9-S-5	cis-1,3-Dichloropropene		ug/Kg																
130172-MIP9-S-5	Dibromochloromethane		ug/Kg																
130172-MIP9-S-5	Dibromomethane		ug/Kg																
130172-MIP9-S-5	Dichlorodifluoromethane		ug/Kg																
130172-MIP9-S-5	Ethylbenzene		ug/Kg																
130172-MIP9-S-5	Hexachlorobutadiene		ug/Kg																
130172-MIP9-S-5	Iodomethane		ug/Kg																
130172-MIP9-S-5	Isopropylbenzene		ug/Kg																
130172-MIP9-S-5	m,p-Xylene		ug/Kg																
130172-MIP9-S-5	Methyl tert-butyl ether		ug/Kg																
130172-MIP9-S-5	Methylene chloride		ug/Kg																
130172-MIP9-S-5	n-Butylbenzene		ug/Kg																
130172-MIP9-S-5	n-Propylbenzene		ug/Kg																
130172-MIP9-S-5	Naphthalene		ug/Kg																
130172-MIP9-S-5	o-Xylene		ug/Kg																
130172-MIP9-S-5	sec-Butylbenzene		ug/Kg																
130172-MIP9-S-5	Styrene		ug/Kg																
130172-MIP9-S-5	tert-Butylbenzene		ug/Kg																
130172-MIP9-S-5	Tetrachloroethene		ug/Kg																
130172-MIP9-S-5	Toluene		ug/Kg																
130172-MIP9-S-5	trans-1,2-Dichloroethene		ug/Kg																
130172-MIP9-S-5	trans-1,3-Dichloropropene		ug/Kg																
130172-MIP9-S-5	Trichloroethene		ug/Kg																
130172-MIP9-S-5	Trichlorofluoromethane		ug/Kg																
130172-MIP9-S-5	Vinyl acetate		ug/Kg																
130172-MIP9-S-5	Vinyl chloride		ug/Kg																
130172-MIP9-S-5	Xylene (Total)		ug/Kg																

3.4

SUMMARY OF THE ANALYTICAL DATA USABILITY
Solvent Finishers

Air Volatile Organic Analyses

Samples Collected: April 25, 2008

Samples Received: April 29, 2008

Laboratory: Spectrum Analytical

Sample Delivery Group: G0606 / SA77882

Laboratory Reference Numbers:

130172-SV-MIP10-D	Z0606-01	SA77882-01
130172-SV-MIP10-D RE	Z0606-01 RE	SA77882-01 RE
130172-SV-MIP10-S	Z0606-02	SA77882-02
130172-SV-MIP10-S RE	Z0606-02 RE	SA77882-02 RE
130172-SV-MIP9-S	Z0606-03	SA77882-03
130172-SV-MIP9-S RE	Z0606-03 RE	SA77882-03 RE
130172-SV-MIP9-D	Z0606-04	SA77882-04
130172-SV-MIP9-D RE	Z0606-04 RE	SA77882-04 RE
130172-SV-MIP99-D	Z0606-05	SA77882-05
130172-SV-MIP99-D RE	Z0606-05 RE	SA77882-05 RE
130172-SV-MIP7-S	Z0606-06	SA77882-06
130172-SV-MIP7-D	Z0606-07	SA77882-07
130172-SV-AA	Z0606-08	SA77882-08
130172-SV-AA DUP	Z0606-08 DUP	SA77882-08 DUP
130172-SV-MIP3-D	Z0606-09	SA77882-09
130172-SV-MIP3-D RE	Z0606-09 RE	SA77882-09 RE
130172-SV-MIPS-S	Z0606-10	SA77882-10
130172-SV-MIPS-S RE	Z0606-10 RE	SA77882-10 RE

VOLATILE ORGANICS INITIAL CALIBRATION

Instrument ID: Air 1
 Level: Low
 Tune File ID: A28210.D Acceptable: Yes Time Requirements Met: Yes
 Initial Calibration File ID: 0804025 Date: 4/4/2008 Page: 77 / 138
 Associated Samples: QC-S805516, -06, -07, QC-S805656, -09RE, -10RE, -03RE, -01RE, -02RE, -04RE, -05RE

CALIBRATION VERIFICATION:

Compound	Chloroform				Bromoform			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
0.5	226,803	1,176,401	3.856	3.856	128,491	3,223,810	0.797	0.797
2	677,624	1,180,589	2.870	2.870	474,469	3,236,396	0.733	0.733
5	1,596,242	1,172,987	2.722	2.722	1,290,681	3,236,829	0.797	0.797
10	3,135,432	1,175,368	2.668	2.668	2,789,933	3,233,628	0.863	0.863
20	6,201,488	1,188,324	2.609	2.609	5,951,266	3,277,206	0.908	0.908
25	9,094,833	1,160,867	3.134	3.134	9,398,212	3,053,207	1.231	1.231
50	17,561,004	1,139,793	3.081	3.081	18,675,336	3,120,458	1.197	1.197
100	33,848,978	1,111,470	3.045	3.045	36,778,654	3,232,219	1.138	1.138
Average			2.998	2.998			0.958	0.958
			Calc Reported				Calc Reported	
%RSD			13.32%	13.32%			20.80%	20.80%

VOLATILE ORGANICS CONTINUING CALIBRATION

Instrument ID: Air 1
 Level: Low
 Tune File ID: A28234.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: A28234.D Date: 4/30/2008 Page: 192
 Initial Calibration File ID: 0804025 Date: 4/4/2008 Page: 77 / 138
 Associated Samples: QC-S805516, -06, -07

CALIBRATION VERIFICATION:

Compound	Trichloroethene				Isopropylbenzene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
10	2,339,223	6,526,196	0.358	0.358	9,187,681	3,403,320	2.700	2.7
% D	Avg RRF	% D	% D		Avg RRF	% D	% D	
	0.334	Calc	Reported		2.667	Calc	Reported	
		7.32	7.20			1.22	1.20	

VOLATILE ORGANICS CONTINUING CALIBRATION

Instrument ID: Air 1
 Level: Low
 Tune File ID: A28270.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: A28270.D Date: 5/2/2008 Page: 300
 Initial Calibration File ID: 0804025 Date: 4/4/2008 Page: 77 / 138
 Associated Samples: QC-S805656, -09RE, -10RE, -03RE, -01RE, -02RE, -04RE, -05RE

CALIBRATION VERIFICATION:

Compound	MIBK				Styrene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
10	4,585,181	7,016,103	0.654	0.654	5,083,249	3,753,732	1.354	1.354
% D	Avg RRF	% D	% D		Avg RRF	% D	% D	
	0.636	Calc	Reported		1.427	Calc	Reported	
		2.76	2.80			-5.10	5.10	

**VOLATILE ORGANICS
INITIAL CALIBRATION**

Instrument ID: Air 2

Level: Low

Tune File ID: B23954.D

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: B23954.D

Date: 4/18/2008

Page: 165

Associated Samples: QC-8050204, -08, -09, -10, -03, -01, -02, -04, -05

CALIBRATION VERIFICATION:

Compound	Hexane				o-Xylene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
0.5	84,942	775,143	2.192	2.192	91,724	1,927,891	0.952	0.952
2	298,774	803,051	1.860	1.860	347,078	2,006,513	0.865	0.865
5	733,450	790,250	1.856	1.856	884,401	2,002,765	0.883	0.883
10	1,476,289	780,982	1.890	1.890	1,802,248	2,037,227	0.885	0.885
20	3,233,122	887,891	1.821	1.821	4,000,884	2,128,973	0.940	0.940
25	4,657,026	781,532	2.384	2.384	5,645,135	1,866,390	1.210	1.210
50	9,252,546	818,187	2.262	2.262	10,698,209	2,063,250	1.037	1.037
100	15,812,318	839,749	1.883	1.883	16,369,582	1,852,099	0.884	0.884
Average		2.018	2.998				0.957	0.957
		Calc Reported					Calc Reported	
%RSD		11.04%	13.32%				12.19%	12.19%

**VOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: Air 2

Level: Low

Tune File ID: B24166.D

Acceptable: Yes

Time Requirements Met: Yes

Calibration File ID: B24166.D

Date: 5/1/2008

Page: 223

Initial Calibration File ID: B23954.D

Date: 4/18/2008

Page: 165

Associated Samples: QC-8050204, -08, -09, -10, -03, -01, -02, -04, -05

CALIBRATION VERIFICATION:

Compound	Hexane				1,3-Dichlorobenzene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
2	1,171,480	574,036	2.041	2.041	2,508,386	1,520,432	1.650	1.649785
% D		Avg RRF	% D	% D		Avg RRF	% D	% D
		2.018	Calc	Reported		1.698	Calc	Reported
			1.13	1.10			-2.86	2.90

SUMMARY OF THE ANALYTICAL DATA USABILITY
Solvent Finishers

Air Volatile Organic Analyses

Samples Collected: April 25, 2008

Samples Received: April 29, 2008

Laboratory: Spectrum Analytical

Sample Delivery Group: G0606 / SA77882

Laboratory Reference Numbers:

130172-SV-MIP10-D	Z0606-01	SA77882-01
130172-SV-MIP10-D RE	Z0606-01 RE	SA77882-01 RE
130172-SV-MIP10-S	Z0606-02	SA77882-02
130172-SV-MIP10-S RE	Z0606-02 RE	SA77882-02 RE
130172-SV-MIP9-S	Z0606-03	SA77882-03
130172-SV-MIP9-S RE	Z0606-03 RE	SA77882-03 RE
130172-SV-MIP9-D	Z0606-04	SA77882-04
130172-SV-MIP9-D RE	Z0606-04 RE	SA77882-04 RE
130172-SV-MIP99-D	Z0606-05	SA77882-05
130172-SV-MIP99-D RE	Z0606-05 RE	SA77882-05 RE
130172-SV-MIP7-S	Z0606-06	SA77882-06
130172-SV-MIP7-D	Z0606-07	SA77882-07
130172-SV-AA	Z0606-08	SA77882-08
130172-SV-AA DUP	Z0606-08 DUP	SA77882-08 DUP
130172-SV-MIP3-D	Z0606-09	SA77882-09
130172-SV-MIP3-D RE	Z0606-09 RE	SA77882-09 RE
130172-SV-MIPS-S	Z0606-10	SA77882-10
130172-SV-MIPS-S RE	Z0606-10 RE	SA77882-10 RE

**VOLATILE ORGANICS
INITIAL CALIBRATION**

Instrument ID: Air 1
 Level: Low
 Tune File ID: A28210.D Acceptable: Yes Time Requirements Met: Yes
 Initial Calibration File ID: 0804025 Date: 4/4/2008 Page: 77 / 138
 Associated Samples: QC-S805516, -06, -07, QC-S805656, -09RE, -10RE, -03RE, -01RE, -02RE, -04RE, -05RE

CALIBRATION VERIFICATION:

Compound	Chloroform				Bromoform			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
0.5	226,803	1,176,401	3.856	3.856	128,491	3,223,810	0.797	0.797
2	677,624	1,180,589	2.870	2.870	474,469	3,236,396	0.733	0.733
5	1,596,242	1,172,987	2.722	2.722	1,290,681	3,236,829	0.797	0.797
10	3,135,432	1,175,368	2.668	2.668	2,789,933	3,233,628	0.863	0.863
20	6,201,488	1,188,324	2.609	2.609	5,951,266	3,277,206	0.908	0.908
25	9,094,833	1,160,867	3.134	3.134	9,398,212	3,053,207	1.231	1.231
50	17,561,004	1,139,793	3.081	3.081	18,675,336	3,120,458	1.197	1.197
100	33,848,978	1,111,470	3.045	3.045	36,778,654	3,232,219	1.138	1.138
Average			2.998	2.998			0.958	0.958
			Calc Reported				Calc Reported	
%RSD			13.32%	13.32%			20.80%	20.80%

**VOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: Air 1
 Level: Low
 Tune File ID: A28234.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: A28234.D Date: 4/30/2008 Page: 192
 Initial Calibration File ID: 0804025 Date: 4/4/2008 Page: 77 / 138
 Associated Samples: QC-S805516, -06, -07

CALIBRATION VERIFICATION:

Compound	Trichloroethene				Isopropylbenzene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
10	2,339,223	6,526,196	0.358	0.358	9,187,681	3,403,320	2.700	2.7
% D	Avg RRF	% D	% D		Avg RRF	% D	% D	
	0.334	Calc	Reported		2.667	1.22	1.20	
		7.32	7.20					

**VOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: Air 1
 Level: Low
 Tune File ID: A28270.D Acceptable: Yes Time Requirements Met: Yes
 Calibration File ID: A28270.D Date: 5/2/2008 Page: 300
 Initial Calibration File ID: 0804025 Date: 4/4/2008 Page: 77 / 138
 Associated Samples: QC-S805656, -09RE, -10RE, -03RE, -01RE, -02RE, -04RE, -05RE

CALIBRATION VERIFICATION:

Compound	MIBK				Styrene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
10	4,585,181	7,016,103	0.654	0.654	5,083,249	3,753,732	1.354	1.354
% D	Avg RRF	% D	% D		Avg RRF	% D	% D	
	0.636	Calc	Reported		1.427	-5.10	5.10	
		2.76	2.80					

**VOLATILE ORGANICS
INITIAL CALIBRATION**

Instrument ID: Air 2

Level: Low

Tune File ID: B23954.D

Acceptable: Yes

Time Requirements Met: Yes

Initial Calibration File ID: B23954.D

Date: 4/18/2008

Page: 165

Associated Samples: QC-8050204, -08, -09, -10, -03, -01, -02, -04, -05

CALIBRATION VERIFICATION:

Compound	Hexane				o-Xylene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
0.5	84,942	775,143	2.192	2.192	91,724	1,927,891	0.952	0.952
2	298,774	803,051	1.860	1.860	347,078	2,006,513	0.865	0.865
5	733,450	790,250	1.856	1.856	884,401	2,002,765	0.883	0.883
10	1,476,289	780,982	1.890	1.890	1,802,248	2,037,227	0.885	0.885
20	3,233,122	887,891	1.821	1.821	4,000,884	2,128,973	0.940	0.940
25	4,657,026	781,532	2.384	2.384	5,645,135	1,866,390	1.210	1.210
50	9,252,546	818,187	2.262	2.262	10,698,209	2,063,250	1.037	1.037
100	15,812,318	839,749	1.883	1.883	16,369,582	1,852,099	0.884	0.884
Average		2.018	2.998				0.957	0.957
		Calc Reported					Calc Reported	
%RSD		11.04%	13.32%				12.19%	12.19%

**VOLATILE ORGANICS
CONTINUING CALIBRATION**

Instrument ID: Air 2

Level: Low

Tune File ID: B24166.D

Acceptable: Yes

Time Requirements Met: Yes

Calibration File ID: B24166.D

Date: 5/1/2008

Page: 223

Initial Calibration File ID: B23954.D

Date: 4/18/2008

Page: 165

Associated Samples: QC-8050204, -08, -09, -10, -03, -01, -02, -04, -05

CALIBRATION VERIFICATION:

Compound	Hexane				1,3-Dichlorobenzene			
	Area x	Area IS	calc rrf	Rptd rrf	Area x	Area IS	calc rrf	Rptd rrf
PPB								
2	1,171,480	574,036	2.041	2.041	2,508,386	1,520,432	1.650	1.649785
% D		Avg RRF	% D	% D		Avg RRF	% D	% D
		2.018	Calc	Reported		1.698	Calc	Reported
			1.13	1.10			-2.86	2.90

Appendix D

FIELD LOG BOOK AND FIELD DOCUMENTATION

Tues 4/8/08
Jencks NY
Silent Finisher
Geophysical Survey

From album
Hydrogeological Survey Notes
MIP-1

0730 - Frank Brown on site

Overshoot 40°

0640 - Cars already in parking lot, workers from Binsw went about parking here

0645 - Marked out location of MIP locations of Brew dealer

0725 - Larry sent Jolico out to direct car away from MIP location

0810 - Hwy on site Evan Thompson and Chris Flynn

0820 - Neva on site: John Adamson, Amelia Paruch, Jeff Gauvin

0700 - Dennis B (cont) on site

1010 - Dennis leaving the site

1145 - Ahmed cleaning all 12 locations

11 MIP + 1 downgradient

1150 - Ahmed leaves the site

1155 - Evan (Hern) + Frank Brown leaves the site

0630 - F. Brown on site

Clear ~38°

0655 - Collected multilevels ok but LEL spec error, will call fine & set repeat

0700 - W.H. (Zebun) on site w/ repeat unit

0735 - Taken borehole on site (John + Hern)

0800 - Evan (Hern) on site. Overdrill for down

0805 - Started a test bore hole C in part to see if soil the fracture is like

0845 - Gave H & S trigate meeting with Zebun crew

0850 - Went down to 75', no water hitting rods

0945 - Rods out of the borehole, setting up

0955 - minihole has O sensor was reading

1000 - now reading High order. Started Drilling on MIP-T

0945 - Cilled fine env. - will sand replace multilane as far as delivery

0955 - Down to 30' (no hit)

1015 - Down to 50' - No hit

Final ~~hit~~

Final ~~hit~~

True
Holes

Wed
4/16/03

Location

MIP-2 / MIP-2
Solvent Anodes

MIP-4 / MIP-3
Solvent Anodes

1100. Down to 70' - No hits so far
1120. Down to 80' - No hits
1135. Refuel C 90' @ MIP-2
1140. Rolly rods.
1300. Lined our way to MIP-2
1345. Down to 20' - No hits
1400. Down to 30' - No hits
1425. Down to 45' - No hits
1455. Down to 60' - No hits
1520. Down to 7' - No hits
1540. Down to 80' - no hits
1600. Refuel C 87' - No hits
1630. Zebra cleaned up and main (zebra) and MIP tank to the back for the night

start

0630. F. Robinson on site
Clear ~ 36' off Zebra (will) on site; no operator
0740. Zebra (Ewan + John) on site
0745. Setting up on MIP-4
0750. Starting on MIP-4
0815. Down to 10' No hits
Ewan (Horn) on site
0825. Down to 20' No shift
0830. Down to 20' No shift
Will said that after today all the MIP's will last night if loaded like winter
is ~79-80' BG
0845. Down to 30' No hits
0905. Down to 40' No hits
0925. Down to 50' No hits
0935. Down to 60' No hits
1015. Down to 80' No hits
1040. William & James (MIP/C) down on site
1045. Down to 90' No hits
1050. Started C 98.5', end of drill string
No hits
1130. Rain + bush 3
1205. Started down on
1230. Down to 18' air
Sediment thickness 5-6'

Wed
4/16/08
Date

Solvent Finishes

M.P.-3

- 1325 - Went to Woodbury office + picked up replacement air mast. Rae due. P.D. (S.W. / 6/04)
1355 - Back from WBY office
1405 - Down to 40'. Small hits off the way down
1430 - Down to 55'. Still getting small hits
more like "noise" on the flat record
1440 - Down to 60'. Small hits ("noise")
1500 - Down to 70'
1520 - Down to 80'
1535 - Small hit on ECO C ~ 88-89' (in water)
1545 - Down to 95' still getting small hits (in water)
1550 - Stopped @ 99' end of drill rods
1555 - Boring rods out
Note - Zebra packing up. Less hair
Nisi on site cigar
1600 - Leaving the site. Air handling ok. only backwash sand

1600 - Solvent Finishes
M.P. 5 / M.P. 6

- 0615 - F. Robin at building office putting away some cans/tins delivered yesterday
0645 - At Solvent Finishes site
Clear to 38°
0650 - Zebra (Will) on site
0700 - Calibrated multi-hole pros - 01C
See Calibration sheet for details
0710 - Zebra + Evan onsite (S.J. today)
0715 - Will is installing a new probe. So: today
0735 - Evan (Hern) on site
0800 - Starting down on M.P. 5
0810 - Down to 16' no hits
0845 - Down to 25' no hits
0855 - Union Jones (W.S.D.C. Pro) on site
0925 - Down to 40' no hits
1015 - Down to 70' no hits
1115 - Refurb C 95' no hits. Pulling rods
1140 - moving complete to M.P. 6
1155 - Going to Lunch (Zebra)
1300 - Starting down on M.P. 6
1315 - Down to 10' pulling probe to check it

N.B. There was a leak in the membrane
1325 - Problem was a leak in the membrane
1330 - Probe down + 10'

initial

Tower

4/17/08

9/1/868

9

Solvent finishes

MIP-6

- 1350 - Down to 20' No hits
1355 - Below C 22.75'
1405 - Moved a 5' bldg south, up the body dock
Punches down to 23' with just red
then will sand out down to start over
1415 - Below C 25', very hard ground here
1435 - Zebra patching up holes and asphalt cold patch
and concrete
- 1455 - Leaving site.
- Air Monitoring. All readings at background

Solvent finishes

MIP-7

- 0630 - At Zebra on site
Clear ~ 45°
Cover off around MIP-7 + 8 in
Parking lot.
0645 Zebra (will) on site
0700 - Collected on the Rue Rus - Et
see Carl Sheets for details
0715 - Zebra (Eun) on site
0725 - Starters down on MIP-7
0740 - Down to 10' No hits
0800 - Down to 25' No hits
0810 - Eun (Hun) on site
0825 - Down to 35' no hits
0830 - Down to 45' no hits
0910 - Down to 50' no hits
0935 - Down to 60' no hits
1000 - Down to 70' no hits
Chris (Hun) on site
1020 - Down to 80' no hits
1025 - Ht C & S pretty big in the water
1030 - Return C 83' - 89' - 89'
Hub from 1/15 - Leaving the site. Will driving back to Albany
1/30 - In West Seneca office

1100
4/21/68

Solvent Finisher

MIP-8

0630 - P. Brown on site. At building site picking up colors & equipment C 0540
Gandy 4/5.
0650 - Calibrated no Hi-Pres Pres - ok
See cal sheets for details
0725 - Zebra on-site. Zebra
0805 - Zebra will on sit
0815 - Gandy (H2K) on site
0840 - Starting down on MIP-8
Often down to 20' off the bottom
Lift ~ 5'
0945 - Down to 30' no hits

1000 - Small hit C 38' and 39'

1005 - Down to 40'

1045 - Down to 60' no hits between 50' &

1115 - Down to 70' no hits between 60' &

1135 - Down to 80' lift ~ 79' (60?)

1145 - Fresh C 87.3' No hits from 79-87.3'

1150 - Going to Wadley office to pick up equipment
1240 - Back for wood box, moved to MIP-9

1310 - Zebra back from Wadley

Stretch

MIP-9

1320 - Started down on MIP-9
1335 - Down + 8' no hits
1355 - Hit extremely hard later than C 23' Cutout
1415 - Down to 30' no hits they cut out
1430 - Down to 40' lift ~ 60'
1445 - Hit C 46' +
1450 - Down to 50' lift 46-50' So-Ca
1510 - Down + 60', no hits So-Ca
1530 - Down + 70', no hits
1540 - Lift ~ 78' - 60'
1545 - Lifts 78-80'
1555 - Lift C 86'
1600 - Down to 90' smaller hits C 87-88
1605 - Report C 92'
1625 - Rock + Park out of the ground
1630 - Lense the set

1968
4/22/68

Silver Finches
Location: Solvent Finches

1968
4/22/68

mid-10 / mid-11

Obs.: L. Brown upside, at Wallaby
office at 0545 to pick up winter bird
indicative.

Cloudy flag 48°
0625 - Setting up cases and mid-10

0655 - Zebra (will) consiste

0705 - Setting up on mid-10

0715 - Zebra - Sun - on site
0755 - Starting down on mid-10
0805 - Down to 01' No hit

0820 - Down to 20' No hit

0845 - Down to 30' No hit, 1 hand

layer 23. 28'

0930 Down to 60' No hit

0950 - Down to 70' No hit

1005 - Down to 80' No hit

1020 - Redbird C 88' Small hit ~83' in 60'

1045 - Moving to mid-11 setting up

Sand winter probe down open hole at mid-10

went down to 83' No hit

1100 - Taking an early lunch before started

mid-11

William Jones (missed) on site

1120 - Back on lunch
First finch

1320 - Starts down on mid-11

1330 - Down to 10' No hit

1345 - Down to 20' No hit

1350 - Very hard steady at ~24'

1355 - Redbird C 27.15' will ease up

So do the south then start again. Will probe
down through hard layer then start

mid-10 as soon

1360 - Pulled my probe went down to 34'
with probe, will pull rails then send

1375 - Redbird C 27' Again, ease with
probe from 34' won't get beyond

21st 27' Very hard
1420 - Redbird C 27' All for mid-11

1435 - Sun (Hn) long song

15: - Zebra + Zebra (long)

1100 - Taking an early lunch before started

Q: Q616. 1. *Bischof* on site
J: J617 ~ 48°
Q: Q625. *Gibbula* in H-plate fls - ok
Q: See cel sheet for details
Q: Q635. *Gibbula*: H-plate 0-12 ok
Q: See cel sheet for details
Q: size 1.5-2.5 mm. Even & John
Q: prefer. Treba on site
Q: ✓

⑨ Coffea an
 O CERT Collected Field Block of Geoprise
 O 8 lined. 2 18 amber + 2 wet vials
 O 130172 - FB1 - 42308
 O 6 0800. Even H2O on site
 L 0825. Setting up on milt +
 O 0830. Shaking down on milt for soil + straw supply

EE t - ill papers 1930
S - S - St. Louis - Oct 1931
t - ill papers 1930

104 130122-2010-5-22
See O&G. Intell. & small. Soil very pale

0950. Gws Quality - m1, p. T:
 $\text{pH} = 6.41$ Cond = 0.176 Do = 6.78
 $\text{temp} = 16.5^{\circ}\text{C}$ $62\% \text{Tu} - 6.7000$
 10/10. Collected field block of
 Check value
 130172-162 423.08 C 0.88
 1620. m11 Deep Soil 0.91 m11 C 0.88
 130172-SU-m1p7-0
 1625. mixed to m1.p-8
 1035. Sampled m1.p 8-4.5
 130172-m1p8-S-5 and
 Q. Discard
 130172. m1.p 88-5-5 C 10.40
 1110. Sampled m1.p-8 for Gws
 130172-m1p8-Gws-85
 Gws Quality: pH = 6.16 cond = 0.408
 temp > 16.00 Do = 2.49 Tu = 18.07
 Gwp = -12
 1130. mixed m1.p-8
 1140. Out to 15" for Soil Sample
 1145. Sampled m1.p-5
 130172-m1p9-S-5
 took mgs / 1/50 here
 took sample

1 hour
Date: 4/24/08

Solvent Finishes

location:

Solvent Finishes

0 0925. Started down on mfp-10

> 0930. Down to 90'

> 1010. Sampled mfp-10
130172-mfp10-6w-85

0 Gw Quality - pH: 5.63 cond= 0.280

0 Do: 8.30 Temp: 16.32 ORP: 135

> 1015. > 1800 NTU

0 1040. Initiated 130172-SU-mfp10-0

> 1050. Initiated 130172-SU-mfp10-5

0 1055. Moving + mfp-3 SU-S

> 1100. Started down on mfp-3

0 1110. Initiated 130172-SU-mfp3-S

> 1115. Started down on mfp-3 for 6w

09 hours. Down to 90', until night 75-90'

09 1235. Screen did not open up, tried to get

no water, none came up, check valve mostly

10 1255. Rods out, will install the deep SU

Set no water sample, he broke 3 rods

we turn down not want to risk breakers

11 more equipment. Said it was hard all

the way down

12 1245. Installed 130172-SU-mfp10-0

Stuck R.

1330. Conducted helmet test on
130172-SU-mfp10-S - Test ok no
helmet in SU point.
1345 - Conducted helmet test on
130172-SU-mfp3-S - Test ok
be detailed in SU Part
1400 - Bulk fm Lurel - Zebra
1400 - Started down on mfp-2
1400 - Down to 90'
1400 - Sanded mfp-2
1500 - Sanded mfp-2
130172-mfp2-Gw-85
6w (Quality) - R = 5.54 cond = 1.52
tools > 1000 hrs. Do: 8.50
temp = 18.17 ORP = 83 OR
1550. At higher discharge off
1 collar with my walk samples
2 set sample from helmets done
A/B# 8655 65391529

Stuck R.

12

Silvertown Finishes

- C. Observed Pollution on site
- Hay 48°
 - 0.6000-Carbonated multilayer plastic - VOC = 0
 - Sea collection sheep fur debris
 - c 0.655- Settled up fur samples
 - b Large trees & Dead wells SU Park
 - c C 80° = 23 minutes
 - c Purge the beaker Shallow SU Points C 86° = 3.2 minutes
 - a 0.635- Started to Sample 130172-SU-m103-D (-29.5) VOC = 1606 ppm
 - b 0.638 Started to Sample 130172-SU-m103-S (-30.0) VOC = 47 ppm
 - c 0.642. Started to Sample 130172-m104-D
 - d 0.647 VOC = 13395 and Duplicate
 - e 130172-m1097-D (-30.0) VOC = 0 ppm
 - f 0.649. Started to Sample 130172-m107-D
 - g (-28.5) VOC = 3.0 ppm
 - h 0.654- Started to Sample 130172-m107-S
 - i 0.655. Started to Sample 130172-SU-FA
 - j Ambient Air. Counter set up over m107 area
 - k 110 (-29.0) VOC = 2.0
 - l 111 (-30.5) VOC = 0 ppm
 - m 112 (-30.5) VOC = 0 ppm

- D. 0735- Shipped Samples (130172-SU-m103-D (-5.0) VOC = 0
- D. 0750- Shipped Samples (130172-SU-m103-D (-29.5) VOC = 0
- D. 0883- Shipped Samples (130172-SU-m103-D (-8.5) VOC = 0 ppm
- D. 0891- Shipped Samples (130172-SU-m103-S (-9.0) VOC = 0 ppm
- D. 0897- Shipped Samples (130172-SU-m107-D (-5.0) VOC = 0
- D. 0917- Shipped Samples (130172-SU-m107-S (-4.0) VOC = 0
- D. 0922- Shipped Samples (130172-SU-m103-S (-5.0) VOC = 0
- D. 0930- Shipped Samples (130172-SU-m107-S (-5.0) VOC = 0
- D. 0935- Shipped Samples (130172-SU-FA
- D. 0940- Shipped Samples (130172-SU-FA
- D. 0950- Shipped Samples (130172-SU-m103-D (-5.0) VOC = 0
- D. 0955- Shipped Samples (130172-SU-FA
- D. 1001 (-30.0) VOC = 0 ppm
- D. 1011 (-30.0) VOC = 0 ppm
- D. 1012 Shipped Samples (130172-SU-m103-S (-5.0) VOC = 0
- D. 1013 Shipped Samples (130172-SU-m103-S (-4.0) VOC = 0
- D. 1015- Leaky site air is Zebra - VOC = 0 ppm
- D. 1016 (H2O) Zebra (air and 0720) Even though zebra had holes and pulled SV packin

Location _____
Project / Client _____

Silent Skies ~58°
Cloudy

6610 - F. Robinson at Shrews Drive site
Getting ready to set up at Sod-Knobs
0620. At Sod-Knobs setting up cores
at map locations 7 8 9 10 and
background. Surveyors will be on site
this morning to survey site
of new Surveyors - VEC on site

Don & Allen
11/15 - Checking in with Surveyors, everything going smoothly. Concentrating on B row parking area first due to having to set up cones around point.
13/15 - Surveyors finished working in B row parking lot, picked up cones. Don said they will have to come back to finish work.

0640153375

MIP Field Book

CDM	Solvent Finishers			
Number of Days MIP	6	1	2	
Weather		sunny	sunny	
DEPTH for DAY		178	198	
DATE		4/15/2008	4/15/2008	4/16/2008
DS12969				
Number of locations	11	CMIP1	CMIP2	CMIP3
MIP Unit		gator	gator	gator
	0			
Probe #H654	883	90	88	99
Probe #H679	0			
	0			
Total Depth	883			
Response Test Result	10ul TCE	Good	Good	Good
PID MAX		40293	42735	51282
ECD MAX		202686	142857	256410
FID MAX		438339	676435	17094
Water		78	79	
PID Lamp Percentage		50	50	50
Mass Flow		40	40	40
ECD		Location Notes	Location Notes	Location Notes
Base	250000			
250000	300000			
300000	500000			
500000	700000			
700000	900000			
900000	900000			

MIP Field Book

CDM	Solvent Finishers							
Number of Days MIP	6	3	4	5		6		
Weather		sunny						
DEPTH for DAY		119	90	181		117		
DATE		4/17/2008	4/17/2008	4/18/2008	4/21/2008	4/21/2008	4/22/2008	4/22/2008
DS12969								
Number of locations	11	CMIP5	CMIP6	WMIP7	WMIP8	WMIP9	WMIP10	WMIP11
MIP Unit		gator						
	0							
Probe #H654	883	96	23	90	88	93	89	28
Probe #H679	0							
	0							
Total Depth	883							
Response Test Result	10ul TCE	Good						
PID MAX		52503	56166	54945	40293	48840	51282	48840
ECD MAX		89133	283272	991453	295482	991453	180708	92796
FID MAX		26862	229548	18315	12210	18315	17094	12210
Water								
PID Lamp Percentage		50	50	50	50	50	50	50
Mass Flow		40	40	40	40	40	40	40
ECD		Location Notes						
Base	250000							
250000	300000							
300000	500000							
500000	700000							
700000	900000							
900000	900000							

Appendix E

SITE PHOTODOCUMENTATION

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 1: Concrete block



Photo 2: Front entrance 601 Cantiague Rock Road

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 3: View looking at west along front entrance 601 Cantiagu Rock Road



Photo 4: View of north walls where buildings adjoin (601 and 603 Cantiague Rock Road)

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 5: Front entrance of 603 Cantiague Rock Road



Photo 6: View looking south along east wall,
603 Cantiague Rock Road

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 7: View of rear wall (loading area) 603 Cantiague Rock Road



Photo 8: Loading area. Rear of building.

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 9: Loading area. Rear of building.



Photo 10: View
looking west along
south wall. Note:
Concrete pad

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 11: Loading area. Rear of building. Note: Storm drain.



Photo 12: Loading area. Rear of building.

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 13: Loading area. Rear of building.



Photo 14: Suspect location of former holding tank and cooling tower. Note concrete pad and circular moss patch.

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 15: View looking north along west wall of 601 Cantiague Rock Road



Photo 16: Transformer area. Rear wall, west corner. 601 Cantiague Rock Road

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 17: Steel plates covering hole of unknown purpose.



Photo 18: Front entrance 601 Cantiague Rock Road

Solvent Finishers Inc.
601-603 Cantiague Rock Road
Westbury, Nassau County, Long Island, New York



Photo 19: Driveway and gate entry. View looking across Cantiague Rock Road