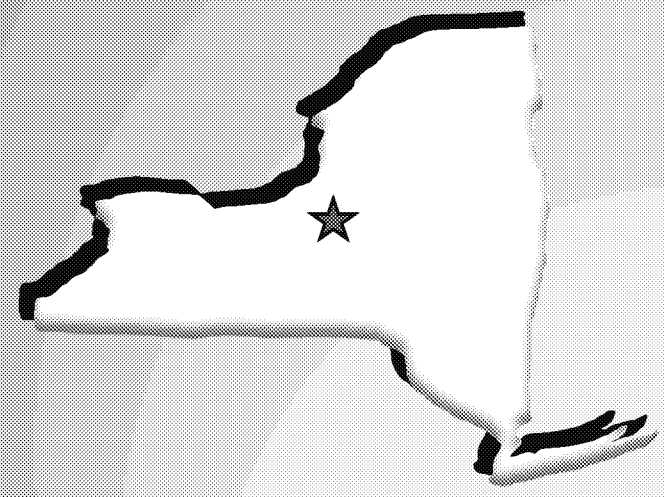
FINAL REMEDIAL INVESTIGATION REPORT

Old Ley Creek Channel Site (7-34-074)
Town of Salina, New York



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Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation

Prepared by:

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EA SCIENCE and TECHNOLOGY

November 2010

Remedial Investigation Report
Old Ley Creek Channel Site (7-34-074)
Town of Salina, New York

Prepared for

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I certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER approved work plan and any DER-approved modifications.

18 November 2010

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LIST OF ACRONYMS

4-4'DDD	4-4'Dichlorodiphenyldichloroethane
4-4'DDE	4-4'Dichlorodiphenyldichloroethylene
4-4'DDT	4-4'Dichlorodiphenyltrichloroethane
amsl	Above Mean Sea Level
ASP	Analytical Services Protocol
AWQS	Ambient Water Quality Standards
bgs	Below Ground Surface
CHA	Clough-Harbor Associates
COC	Contaminants of Concern
COEC	Contaminants of Ecological Concern
EA	EA Engineering, P.C. and its affiliate EA Science and Technology
ELAP	Environmental Laboratory Approval Program
FACU	Faculatative Upland
FACW	Faculatative Wet
FS	Feasibility Study
GPS	Global Positioning System
MTBE	Methyl tert butyl ether
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
OBL	Obligate
PCB	Polychlorinated Biphenyl
PID	Photoionization Detector
ppm	Parts Per Million
PSS1E	Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally flooded/saturated
QA	Quality Assurance
QC	Quality Control
RI	Remedial Investigation
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objectives

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SPS	Solvents and Petroleum Services, Inc.
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TOC	Total Organic Carbon
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

1. INTRODUCTION AND PROJECT OVERVIEW

The New York State Department of Environmental Conservation (NYSDEC) tasked EA Engineering, P.C. and its affiliate EA Science and Technology (EA), to perform a Remedial Investigation (RI)/Feasibility Study (FS) at the Old Ley Creek Channel site in the town of Salina, Onondaga County, New York (Figure 1-1). The original RI/FS Work Assignment requested the following four tasks:

- ***Task 1***—Background review and preparation of work plans.
- ***Task 2***—Phase I field investigation and RI Report – soil, surface water, and sediment investigations.
- ***Task 3***—Phase II field investigation and supplemental RI.
- ***Task 4***—Preparation of FS.

Based on the results of Task 2, the NYSDEC determined that additional surface water, soil, and groundwater sampling be completed prior to completion of the RI report. This RI Report has been prepared as part of Tasks 2 and 3 to discuss field activities, present tables and figures summarizing sample locations and analytical results, and evaluate the potential for impact to public health, as well as the environmental concerns for the Old Ley Creek Channel site. The information obtained during this RI will be used to evaluate and select remedial alternatives to be included in the FS for the Old Ley Creek Channel site.

1.1 SITE HISTORY

The Old Ley Creek Channel site is located west of the intersection of Factory Avenue and Wolf Street (State Route 11) in the town of Salina, Onondaga County, New York. The approximately 3.5-acre site is within an overgrown and wooded area adjacent to the banks of the former Ley Creek Channel between Route 11 and Ley Creek (Figure 1-1). Based upon analysis of soil and sediment samples collected by the NYSDEC, the site was listed as a Class 2 Hazardous Waste Site in 1999. The listing package stated that "both the Old Ley Creek Channel sediments and subsurface soil in the parcel of land to the east of the channel contain hazardous waste levels of PCBs (up to 237 ppm in sediments and 373 ppm in subsurface soil)." Concentrations of metals in sediments were also at levels in exceedance of NYSDEC Fish and Wildlife Severe and Lowest Effect Levels.

The Old Ley Creek Channel site is approximately 1,350 ft in length and flows from northeast to southwest draining to Ley Creek. The old channel is incised within the unconsolidated overburden suggesting that higher stream flows occur at this location. The base of the Old Ley Creek Channel site appears to be a layer of dense clay or till. In addition, a low swale east of the old channel also collects runoff which appears to slowly seep to the old channel.

Ley Creek, a major tributary to Onondaga Lake, flows from an area east of Syracuse and follows a circuitous path from its headwaters east of the Syracuse International Airport and then west-southwest parallel with Factory Avenue eventually discharging to Onondaga Lake. The creek drains both rural and industrial areas. Ley Creek was directly impacted by multiple industries located along Factory Avenue including the General Motors Fisher Guide (GM IFG) Plant.

The Town of Salina Landfill is located west and northwest of the Old Ley Creek Channel site. The landfill began operations in the 1950s and continued receiving waste into the 1980s (NYSDEC 2009a). The unlined landfill was established northeast from Onondaga Lake in a wetland complex that extended toward the village of Mattydale. During its operation, the landfill received domestic, commercial, and industrial wastes. Hazardous waste, including 640 tons of paint sludge, and 22 tons of waste paint thinner and reducer from the General Motors Inland Fisher Guide Division was disposed of at the landfill. The landfill ceased operations in 1975; however, additional waste was delivered after that time. Closure via a soil cover cap was not completed until 1982. The elevation of the landfill parcel adjacent to the Old Ley Creek Channel site is approximately 14 ft higher in elevation.

During the early-1970s, in an effort to limit flooding in the area, the U.S. Army Corps of Engineers re-routed Ley Creek through the landfill area (NYSDEC 2009b). The re-routing of the creek adjacent to Route 11 separated a fragment of the landfill between the new course of Ley Creek and the Old Ley Creek Channel. This portion of the landfill is referred to as the Town of Salina Landfill parcel in this report. Since the re-routing of Ley Creek, the source of water entering Old Ley Creek Channel has been through a culvert which drains storm water from State Route 11 and through groundwater discharge.

1.2 PURPOSE AND SCOPE

The purpose of this RI is to evaluate existing on-site conditions, possible human and ecological exposure to chemicals of concern, as well as develop a remedial approach to address site impacts. The focus of this RI was to characterize the nature and extent of impacts at the site, while collecting the data necessary to complete a FS for the Old Ley Creek Channel site. Specifically, the objectives of the RI are to:

- Identify possible source area(s) onsite.
- Define source areas and characterize the overall volume and distribution of impacts in environmental media.
- Assess pathways and possible human and ecological exposure to impacted media.

1.3 REPORT ORGANIZATION

This report presents the overall approach and details specific activities that were performed during the RI. Chapter 1 provides a description of the site background including site history, physical characteristics of the site, and a summary of previous investigations. Chapter 2

provides a summary of the procedures and techniques used to complete the field investigation program. Chapter 3 presents a discussion of the findings of the RI. Chapter 4 presents a discussion of the fate and transport of contaminants of concern (COC). Chapter 5 presents the qualitative human and ecological exposure assessment. Chapter 6 provides the fish and wildlife resources impact analysis. Chapter 7 presents recommendations and conclusions based on the available data.

1.4 BACKGROUND

The following section provides a brief discussion of the site background for the Old Ley Creek Channel site.

1.4.1 Site Location

The Old Ley Creek Channel site is located west of the intersection of Factory Avenue and Wolf Street (State Route 11) in the town of Salina, Onondaga County, New York. The approximately 3.5-acre site is within an overgrown and wooded area adjacent to the banks of the former Ley Creek Channel between Route 11 and Ley Creek (Figure 1-1). The area surrounding the site is primarily commercial and industrial. A National Grid right-of-way is located north and west of the site boundary. The right of way is located within the boundary of the Town of Salina Landfill parcel. The Solvents and Petroleum Services, Inc. (SPS) facility is located adjacent to the property along the former Old Ley Creek Channel and Route 11. SPS is a solvent and petroleum product distributor for numerous industries.

1.4.2 Property Information

The subject site is currently unoccupied. The site is the former channel for Ley Creek. Ley Creek was rerouted in the early-1970s, turning the channel into a tributary for the new channel. The site has been used as a disposal area for miscellaneous materials (i.e., tires, scrap metal, furniture). The sources of this material are unknown.

The property is currently owned by Plaza East. The parcel is approximately 3.5-acres and is zoned as commercial (Figure 1-2).

1.4.3 Physiography

The subject site is located on the U.S. Geological Survey West Syracuse, New York 7.5-minute topographic quadrangle map, dated 1978. The topography at the site is irregular having been modified through re-routing of the channel and dumping of waste along the banks of the old channel.

Elevation at the site is approximately 370 ft above mean sea level. The surface water feature as noted on the topographic map is Ley Creek, which is located north and west of the subject site. Ley Creek flows to the west-southwest into Onondaga Lake.

A review of a historic topographic map (U.S. Geological Survey 1947) indicates that the site was formerly a wetland complex which extended from the northeastern shore of Onondaga Lake to just south of the village of Mattydale. The extreme northern portion of this wetland complex was used as the Town of Salina Landfill. Landfilling operations appear to have encroached to the banks of the Old Ley Creek Channel. A portion of the wetland which was not covered by waste has been delineated by EA. The U.S. Fish and Wildlife Service has also mapped a wetland that encompasses the Old Ley Creek Channel site from the edge of the Town of Salina Landfill parcel to a point just east of State Route 11.

1.4.4 Site Geology

A review of the geologic map of New York, Finger Lakes Sheet published by the University of the State of New York, the State Education Department, dated 1970, indicates that bedrock in this area is made up of units of the Vernon Formation which consists of upper Silurian shale and dolostone.

1.4.5 Site Hydrogeology

Based on well logs available from drilling conducted in support of the Town of Salina Landfill, overburden in the vicinity of the Old Ley Creek Channel site consists of waste/fill, clay, silt, and silty clay at the surface with a combination of sand and gravel; and till at depth. Groundwater in the overburden is from 8 to 12 ft below ground surface (bgs). Evaluations of groundwater flow patterns completed as part of the *Well Installation and Sampling Report Town of Salina Landfill* (Clough-Harbor Associates [CHA], 2009) indicates that groundwater flow at the Old Ley Creek Channel site is moving radially toward Ley Creek to the north and west of the Old Ley Creek Channel site.

1.5 PREVIOUS INVESTIGATIONS

NYSDEC performed soil sampling at the Old Ley Creek Channel site in 1987, and again in 1997, that confirmed the presence of hazardous waste at the site (NYSDEC 1987 and 1997). Numerous monitoring wells and borings have been installed on the Town of Salina Landfill parcel as part of a RI completed for the Town of Salina Landfill. These logs have been used to assist in interpreting the hydrogeologic conditions at the Old Ley Creek Channel site.

1.5.1 Well Installation and Sampling at Town of Salina Landfill, CHA 2009

A well installation and sampling report was conducted by CHA in 2009 at the Town of Salina Landfill parcel located between the Old Ley Creek Channel and Ley Creek (Appendix A). The investigation included the installation of monitoring wells to assess hydrogeologic conditions between Ley Creek and Old Ley Creek Channel and water quality in the unconfined aquifer located within the landfill.

Soil borings were completed at the site as part of the investigation using a hollow-stem auger. Soil samples collected were screened for organic vapors using a photoionization detector (PID)

in the field and were used to describe site stratigraphy. Soil samples were not analyzed for impacts.

Installed wells were monitored for water quality parameters and groundwater levels. Wells were sampled and samples were sent to CHEMTECH for analysis of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, and metals.

Results showed that groundwater flow occurred primarily in the west/northwest direction toward Ley Creek. Groundwater in the area near Old Ley Creek appears to flow north away from Old Ley Creek. Groundwater analytical data from the CHA report suggests that the study area between Old Ley Creek and Ley Creek was not impacted by SVOCs, PCBs, or pesticides, but VOCs were found to be above groundwater standards.

2. FIELD INVESTIGATION

Field investigation activities were conducted in accordance with the RI/FS Work Plan (EA 2009), with the exception of the deviations specifically identified in the following sections. In accordance with the site specific Health and Safety Plan, health and safety officer responsibilities were assigned to one of the team members throughout the field program to ensure that the personnel were protected from both physical and chemical health hazards. Appropriate protective clothing was worn by field personnel while performing all intrusive activities for protection against contamination and to prevent cross-contamination between sample locations and matrices. Sample locations are illustrated on Figure 2-1.

2.1 FIELD ACTIVITIES

The following field activities were completed as part of the field investigation portion of the Work Assignment:

- Surface soil investigation
- Subsurface soil investigation
- Surface water investigation
- Sediment investigation
- Groundwater investigation
- Site survey.

As noted in DER-10, a soil vapor pathway is to be investigated at any site where buildings are presently located, or may be constructed in the future, when:

- A source of volatile chemical contamination in subsurface soil or groundwater is identified in the vicinity of the buildings or future building site.

- Based on known prior industrial, commercial or other land uses, a source of volatile chemical contamination in subsurface soil or groundwater may be suspected.

During development of the work plan for completion of this RI, the Old Ley Creek site did not meet the requirements for completion of a soil vapor investigation as stated in DER-10. As such a soil vapor investigation was not completed. This does not preclude the possibility that following completion of any remedial activities and prior to any potential development at the site a soil vapor study may be required.

2.2 SURFACE SOIL INVESTIGATION

A surface soil investigation was conducted as part of this RI to evaluate impact to the shallow overburden at the site (0-2 ft bgs). Surface soil samples were collected using a hand-driven slide

hammer driving a split-spoon sampling device which included dedicated acetate sleeves for collection of samples. A total of 65 soil samples were collected from 24 sampling locations at the site from 12 to 14 January 2010. An additional 21 samples were collected from seven locations on 26 April 2010. These samples were collected based on the results of the initial surface soil sampling effort. The sample locations were selected in order to provide improved resolution on the extent of impacts to surface soil. Each sampling location was flagged and its location recorded using a high-precision global positioning system (GPS) unit and each location was subsequently surveyed by a licensed surveyor.

As stated in the RI work plan, surface soil samples were collected from 0-6 in. bgs, 6-12 in. bgs, and 12-24 in. bgs at each of the sample locations. A total of 86 soil samples were collected and sent for laboratory analysis. Samples were submitted for VOCs analysis by United States Environmental Protection Agency (USEPA) Method 8260B, SVOCs analysis by USEPA Method 8270C, target analyte list (TAL) metals analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A. The soil samples were sent to Mitkem Labs, Warwick, Rhode Island, which is an approved Environmental Laboratory Approval Program (ELAP)-certified laboratory for VOC, SVOC, TAL metals, PCBs, and pesticides analysis in accordance with the NYSDEC Analytical Services Protocol (ASP).

Surface soil sampling forms are provided in Appendix B.

2.3 SUBSURFACE SOIL INVESTIGATION

A subsurface soil investigation was implemented as part of this RI to evaluate impacts to the overburden unit at the site. A total of 22 soil borings (SB-01, SB-03, SB-04, SB-05, SB-05A, SB-05B, SB-05C, and SB-06 through SB-20) were advanced throughout the study site to a depth of approximately 19 ft bgs. Each of the soil borings were advanced to the top of the till unit. The till unit was encountered from 8 to 19 ft bgs. Each soil boring location was flagged and its location recorded using a high-precision GPS unit and subsequently surveyed by a license surveyor.

The soil borings were completed from 18 to 20 January 2010. During the field effort, soil borings were advanced and sampled using direct-push technologies using a track-mounted drilling rig. Soil samples were collected from each of the 20 soil borings at 2 to 4-ft intervals. Because of elevated PID readings and a strong coal-tar like odor, three additional soil samples were collected in the vicinity of SB-05 from 2 to 4 ft bgs (SB-05A, SB-05B, and SB-05C). These borings were completed surrounding soil boring SB-05 to determine the extent of the potential impacts. SB-05A was collected from a location 10 ft south of SB-05; SB-05B was collected from a location 10 ft west of SB-05; and SB-05C was collected from a location 5 ft southwest of SB-05. Because of the density of utilities in the area, soil boring SB-02 was not completed. Each sub-surface soil sample was collected/composited with bias toward the most impacted interval based on PID screening, color, and odors, etc. Each soil sample was described and logged identifying its geologic characteristics. The Unified Soil Classification System was used to characterize the soil samples. Soil boring logs are provided in Appendix C.

A total of 59 soil samples were collected from the 22 borings and sent for laboratory analysis. Samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A. The soil samples were sent to Mitkem Labs, Warwick, Rhode Island, which is an approved ELAP-certified laboratory for VOC, SVOC, TAL metals, PCBs, and pesticides analysis in accordance with the NYSDEC ASP.

2.4 SURFACE WATER INVESTIGATION

Two rounds of surface water samples were collected as part of this RI. Surface water samples were collected directly from the water body by dipping sampling containers into the water. One sampling event was conducted during a low-flow period and the second during a high-flow period to evaluate differences in the concentrations of analytes during different flow conditions. The low-flow surface water investigation phase was conducted on 14 January 2010 in conjunction with the sediment investigation. The high-flow sampling event was conducted on 26 January 2010.

Based on the results of the initial sampling effort and at the request of NYSDEC, three additional surface water samples were collected on 24 May 2010.

A total of 17 surface water samples (not including quality assurance [QA]/quality control [QC] samples) were collected from Old Ley Creek Channel and Ley Creek, seven samples during the low-flow sampling event, seven samples during the high-flow sampling event, and three during the Phase II effort. The location of each surface water sample was recorded using a high-precision GPS unit and subsequently surveyed by a licensed surveyor. Samples were collected directly from the surface water body. Prior to sampling, water quality parameters were collected including temperature, Eh, pH, conductivity, oxidation reduction potential, and dissolved oxygen. Surface water sampling forms for each event are provided in Appendix D.

The 17 surface water samples were collected and sent for laboratory analysis. Samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081. The surface water samples were sent to Mitkem Labs, Warwick, Rhode Island, which is an approved ELAP-certified laboratory for VOC, SVOC, TAL metals, PCBs, and pesticides analysis in accordance with the NYSDEC ASP.

2.5 SEDMENT INVESTIGATION

Sediment samples were collected as part of this RI to evaluate potential impacts to sediment at the site. Sediment samples were collected using a split-spoon sampling device with dedicated acetate sleeves driven by a slide hammer. One round of samples were collected on 14 January 2010 during the low-flow surface water sampling event. A total of 14 sediment samples were collected from 8 locations at Old Ley Creek Channel and Ley Creek; the RI work plan stated that 12 would be sampled. However, at four of the locations (SED-07, -08, -09, and -10) there was

no sediment (dense till was encountered at these locations). The samples were to be collected from 0 to 6, 6 to 12, and 12 to 24 in. bgs, however, at a number of locations there was not enough sediment thickness to collect samples from each depth. In some instances, recovery for the first interval (0-6 in.) in sediment, was limited to thin muddy sediments predominated by vegetative matter (e.g., sticks, leaves, etc.) and the sampling method (open bottom acetate sleeve) did not allow for collection of sediment suitable for analysis. These locations are noted in the analytical data summary table. The location of each sediment sample was recorded using a high-precision GPS unit and subsequently surveyed by a licensed surveyor.

Low-flow sediment sampling was completed 14 January 2010, in conjunction with the surface water investigation. Samples were collected directly from Old Ley Creek Channel and Ley Creek.

A total of 14 sediment samples were collected from eight locations and sent for laboratory analysis. Samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals and mercury analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A. Sediment samples were also analyzed for total organic carbon (TOC) by USEPA Method 415.1. The sediment samples were sent to Mitkem Labs, Warwick, Rhode Island, which is an approved ELAP-certified laboratory for VOC, SVOC, TAL metals, PCBs, and pesticides analysis in accordance with the NYSDEC ASP.

2.6 MONITORING WELL INSTALLATION

The monitoring wells were installed on 26 and 27 April 2010 using 4.25-in. hollow-stem augers to depths of approximately 16 to 18 ft bgs with 10 ft of screen. Continuous split-spoon samples were collected to the bottom of each boring. Borings were terminated at the top of the till unit. The samples were described by a geologist and screened with a PID. The monitoring wells were constructed of 2-in. polyvinyl chloride screen and riser. A sand pack was installed around the screen up to 2 ft above the top of the screen. A 2-ft bentonite seal was placed above the sand pack and the remaining annular space was filled with bentonite grout to approximately 0.5 ft below the surface. Steel protective casings and concrete pads were installed to protect each of the monitoring wells. Additional subsurface soil samples were collected at each well location. One sample was collected every 4 ft (below the first 2 ft), or every 2 ft if there was visible staining, odors, or elevated PID readings. A total of nine soil samples were collected from the three monitoring well locations. The soil samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals and mercury analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A.

The newly installed monitoring wells were developed on 7 and 10 May 2010. The wells were developed using surging and pumping techniques. Well development was considered complete when temperature, conductivity, and pH stabilized; and a turbidity of less than 50 nephelometric turbidity units had been achieved. Development water and drill cuttings were drummed, sampled for waste characteristics, and disposed of as non-hazardous waste at an off-site facility by a licensed waste hauler. Waste manifests are included as Appendix E.

2.6.1 Groundwater Sampling

Three groundwater samples and requisite QA/QC samples were collected on 24 May 2010. Groundwater monitoring well sampling procedures included water level measurements, well purging, field measurements, and sample collection at each monitoring well location. A copy of the purging and sampling log forms used to record well purging, water quality measurements, and sampling flow rates is provided in Appendix A. The objective of the groundwater sampling protocol is to obtain samples that are representative of the aquifer in the well vicinity so that analytical results reflect the composition of the groundwater as accurately as possible.

Groundwater samples were collected after 3 well volumes were purged or stabilization of field parameters had been established. The wells were sampled using low-flow sampling techniques. Groundwater samples were analyzed for target compound list VOCs, SVOCs, pesticides, PCBs (total and dissolved), and TAL metals (total and dissolved).

Field equipment used during groundwater sampling activities included a Horiba U-22 water quality meter with a flow-through cell, which includes probes for measurement of pH, Eh, turbidity, dissolved oxygen, temperature, and conductivity. Additionally, a PID was used to get a headspace reading on the well head during groundwater sampling. Each piece of equipment was checked by the EA Site Manager to be in proper working order before its use and calibrated as required by the manufacturer. Prior to each use, field analytical equipment was decontaminated. After each use, the instrument was checked and stored in an area shielded from weather conditions.

Instruments were calibrated at the beginning of each day of groundwater sampling.

2.7 WETLAND DELINEATION

A wetland delineation was conducted at the Old Ley Creek Channel site on 7 May 2010 in accordance with the NYSDEC Freshwater Wetlands Delineation Manual (NYSDEC 1995). As per the technical criteria outlined, the presence of representative wetland vegetation species was used as the primary indicator of the wetland boundary. A visual assessment of the vegetative composition was conducted and the boundary was flagged and recorded using GPS, and included in the survey of the site. Plant species were identified, recorded, and classified by their respective type (i.e., obligate [OBL], facultative wet [FACW], facultative upland [FACU], etc.). Species classified as OBL and FACW were target species used to determine wetland boundary. A map of the delineation is provided as Figure 3-5 and delineation field notes are included as Appendix F.

2.8 SITE SURVEY

Each sample location was surveyed after installation by Popli Design Group, of Penfield, New York (a New York State licensed surveyor) on 17 May 2010. The surveyor established elevations with respect to benchmarks currently installed at the site. The elevations for each new

well location were established on the ground at the base of the well, at each top of casing, and the top of each riser pipe in the casing at a marked measuring point. Each elevation is referenced to the North American Vertical Datum of 1988 (NAVD 88) and reported to the nearest 0.01 ft. A copy of the survey map is provided in Appendix G.

The objective that sample and well locations be within 0.1 ft. was realized through horizontal control being established using GPS methods to record locations with respect to the New York State Plane coordinate system (central zone) and referenced to the North American Datum of 1983 (NAD83). Horizontal points were included in differential level runs between the established benchmarks. The horizontal positional accuracies were found to be within accepted tolerances for this work and points coordinated from them to be within the intended 0.1ft.

3. FIELD INVESTIGATION RESULTS

This chapter presents the findings of the field sampling activities conducted during the RI. Groundwater, surface water, soil, and sediment samples were analyzed for VOCs, SVOCs, pesticide/PCBs, TAL metals, and TOC (sediments only). As noted in Section 2.1 the Old Ley Creek Channel site did not meet the standards requiring completion of a soil vapor evaluation. Analytical methods were performed by an ELAP-certified laboratory. In addition, the laboratories followed the QA/QC, holding time, and reporting requirements as defined in the NYSDEC ASP of June 2000. Analyses were performed by Mitkem Labs, Warwick, Rhode Island, which is an approved ELAP-certified laboratory. Laboratory analytical data are reported using Category B deliverables and the standard electronic data deliverable. Analytical data collected for the RI were validated by Environmental Data Validation, Inc. an independent third party. Analytical data were reviewed for completeness; field and laboratory QC sample results were evaluated; significant laboratory control problems were assessed; and data qualifiers were assigned. The Data Usability Summary Reports are presented in Appendix H.

Standards, criteria, and guidance (SCGs) are promulgated requirements and non-promulgated guidance which govern activities that may affect the environment and are widely used at different stages of an investigation and remediation of a site. The SCGs applicable for the data set collected during this RI are 6 New York Code of Rules and Regulations (NYCRR) Subpart 375-6 Soil Cleanup Objectives, Division of Water Technical and Operational Guidance Series 1.1.1, Technical Guidance for Screening Contaminated Sediments, Freshwater Wetlands Delineation Manual (NYSDEC 1995), Freshwater Wetlands Act Environmental Conservation Law Article 24, 6 NYCRR Parts 663 and 664, and Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Site (NYSDEC, 1994).

3.1 GEOLOGY

A review of the geologic map of New York, Finger Lakes Sheet published by the University of the State of New York, the State Education Department, dated 1970, indicates that bedrock in this area is made up of units of the Vernon Formation which consists of upper Silurian shale and dolostone. During completion of the field activities for this RI, drilling was terminated at the top of the till layer, therefore bedrock was not encountered.

Based on a review of well logs available from drilling conducted in support of the town of Salina landfill, overburden in the vicinity of the Old Ley Creek Channel site consists of clay, silt, and silty clay at the surface with a combinations of silt and clay, silt, sand and gravel, and till at depth. Groundwater in the overburden is from 8 to 19 ft bgs. Well logs completed in support of this RI confirm that the overburden at Old Ley Creek Channel consists of fill, silt and organic material, silt and sand, silt and clay, peat, and till. Cross sections illustrate the nature of the overburden at the site (Figures 3-1 and 3-2). Cross section A-A' runs from northeast to southwest and cross section B-B' runs east to west across the southern portion of the site. Native deposits are overlain by fill material along the edges of the site. It appears that the low spot along Old Ley Creek Channel was used as a dumping area for construction and demolition debris

and general waste. The native material overburden above the underlying till layer varies in thickness across the site from less than a foot (top soil) to several feet thick (silt and clay and silt and sand).

3.2 HYDROGEOLOGY

As part of this RI, three new monitoring wells were installed with the purpose of evaluating groundwater quality on the site and, with the inclusion of data groundwater elevation data from the existing monitoring wells from the Town of Salina Landfill, providing water elevation information for evaluating the groundwater flow direction on-site and off-site. Each of the monitoring wells are screened within the shallow groundwater zone. The screened intervals for the new monitoring wells are provided in well logs provided in Appendix I. Groundwater level measurements were taken prior to monitoring well development and groundwater sampling on 10 and 24 May 2010, respectively. Depth to groundwater measurements were recorded from the top of the inner polyvinyl chloride casing using a water level indicator. Groundwater was encountered from 4.31 to 19.7 ft bgs on 10 May 2010 and 4.27 to 20.15 ft bgs on 24 May 2010. Table 3-1 indicates the depth to groundwater and the groundwater elevation at each monitoring well location for each gauging event. The groundwater flow direction based on the groundwater level measurements indicates that groundwater flow is radial from the property between Old Ley Creek Channel and Ley Creek. The old channel and the creek act as groundwater discharge zones. Groundwater within the boundary of the Old Ley Creek Channel site flows from east to west toward the Old Ley Creek Channel. The surface water in Old Ley Creek Channel then flows approximately 1,000 ft south-southwest to Ley Creek and subsequently to Onondaga Lake. Interpreted groundwater elevation surface maps illustrating the direction of groundwater flow for each gauging event are shown in Figures 3-3 and 3-4.

Old Ley Creek Channel and Ley Creek are Class B Streams. The best usage of Class B streams are for primary and secondary contact recreation and fishing. Class B streams are suitable for fish, shellfish, and wildlife propagation and survival. Old Ley Creek Channel is bounded by fill on either side in the northern portion of the site. The fill boundary continues until the channel turns and flows to the west. After the westward turn (after the SPS treatment system outfall), the channel is bounded by fill on its northern bank and native material to the south. The fill has limited the extent of the flood plain for the old channel. In the northern reach, the flood plain is located east of the channel. As the channel turns to the west, the flood plain is on the northern side of the channel. The extreme western portion of the old channel, for approximately the last 350 ft, there is no flood plain on either bank and the channel is incised between the fill to the north and native deposits to the south.

Flow in the upper reach of Old Ley Creek Channel is very slow to marginally stagnant. Water in this area pools and is from approximately 2 to 3 ft deep. The standing water area is filled with organic material and waste debris. Due to low surface water velocity, thicker sediment deposits are found in this area. The bulk of the water enters the old channel through a culvert which discharges from under Route 11. An additional source of water to Ley Creek is the city of Syracuse stormwater discharge located approximately 1,300 ft upstream of the confluence of Old Ley Creek Channel and Ley Creek. There are also two seeps located along the eastern boundary

of the site which contribute water to the channel. Flow in lower reach of the old channel is more rapid. The base of the channel in this area flows directly on the till unit with little sediment deposition within the channel itself. A city of Syracuse storm sewer discharges to Ley Creek at a point approximately 500 ft upstream from the confluence of Old Ley Creek Channel and Ley Creek.

3.3 WETLAND DELINEATION

The wetland area within the delineated boundary was approximately 1.14 acres, with dimensions of approximately 1,143.2 ft in length and 43.5-ft wide (Figure 3-5). The wetland area followed the course of the creek in a downward curve from the north of the site in a southwestern direction. Water source begins at the culvert located at the north end of the site and flows southwesterly to the confluence with Ley Creek. Wetland areas were located primarily along the edge of the creek. Historic topographic maps (1947) show the extent of wetland area to be larger than observed. Wetland area may have been lost due to dumping and the diversion of the creek.

The primary FACW species identified within the boundary consisted of highbush blueberry (*Vaccinium corymbosum*), jewelweed (*Impatiens capensis*), and reedgrass (*Phragmites australis*). Ground lilly (*Glechoma hederacea*) was the primary FACU species identified at the boundary. A photo log of plants identified during the delineation is provided in Appendix J. The only OBL species identified was lesser duckweed (*Lemna minor*). Maple (Acer) and oak (Quercus) species were observed, but were present in upland areas, as well, and so were not used as a primary boundary indicator species. As per the manual, >50 percent of identified species were FACW and 10 percent were OBL, meeting the criteria for hydrophytic vegetation. Since hydrophytic vegetation criteria were met, no hydric soil or hydrologic assessment was conducted.

The United States Fish and Wildlife Service National Wetland Inventory identifies the Old Ley Creek Channel wetland area as Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally flooded/saturated (PSS1E). Observation of the site during the delineation showed this to be an accurate description of the wetland area. No areas of stressed vegetation were observed. Primary species identified at the site are common for the Central New York area. No rare or endangered species were observed.

3.4 SURFACE SOIL SAMPLING ANALYTICAL RESULTS

A total of 86 soil samples were collected from the 31 surface soil sampling locations and sent for laboratory analysis. Because of a lack of recovery at locations with saturated soils below grade, samples were not collected and analyzed from sampling location SS-10 (6-12 in. bgs and 12-24 in. bgs), SS-13 (6-12 in. bgs and 12-24 in. bgs), SS-15 (12-24 in. bgs), SS-16 (12-24 in. bgs), and SS-22 (12-24 in. bgs). Because the boundary was modified following completion of the surface soil samples, the samples were collected both inside and outside the final site boundary (Figure 2-1).

The SCGs applied to the surface soil sample results were 6 NYCRR Part 375 Environmental Remediation Programs using the Unrestricted Use Soil Cleanup Objectives for Protection of Groundwater. The applicable SCG was applied because the potential source areas onsite would be considered a continuing source for groundwater.

3.4.1 Volatile Organic Compound Analytical Results

Analytical results indicate that low-level concentrations of VOCs (less than their respective Part 375 Unrestricted SCOs) were detected at numerous sampling locations. Acetone was detected in a single sample at a concentration greater than the Part 375 SCO; however, it is being treated as a potential laboratory contaminant. The VOCs identified include 1,1,1-trichloroethane, 2-butanone, acetone, carbon disulfide, *cis*-1,2-dichloroethene, methylene chloride, tetrachloroethene, and trichloroethene. The analytical results are summarized on Table 3-7.

3.4.2 Semivolatile Organic Compound Analytical Results

Seven SVOCs were detected at 26 surface soil sampling locations at concentrations greater than their respective 6 NYCRR Part 375 Unrestricted SCO for protection of groundwater. The SVOCs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenol. Table 3-8 shows the SVOC analytical results. The SVOCs detected were detected from 0 to 24 in. bgs.

Figure 3-6 illustrates the sampling locations which had VOC, SVOC, metals, pesticide, and PCB concentrations greater than their associated SCGs.

3.4.3 Target Analyte List Metals and Mercury Analytical Results

Nine TAL metals plus mercury were reported at concentrations greater than the Part 375 Unrestricted SCOs, including arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Table 3-9 presents a summary of the TAL metal and mercury results. Twenty-seven of the 31 soil sampling locations had concentrations of metals greater than their SCOs.

3.4.4 Polychlorinated Biphenyls and Pesticides Analytical Results

Total PCBs were reported at concentrations greater than the Part 375 Unrestricted SCO of 0.1 ppm for total PCBs at 30 of the 31 sampling locations. PCBs were detected at concentrations greater than the SCO from 0 to 24 in. bgs. Table 3-10 summarizes the analytical results for the surface soil samples. Figures 3-7 to 3-11 illustrate the locations, the depth, and concentrations of PCBs in each sample. PCBs at concentrations greater than the SCO were identified at concentrations that ranged from 0.112 ppm at SS-15 (6-12 in. bgs) to 420 ppm at SS-29 (0-6 in. bgs). The figures illustrate that the extent of PCB impacts decreases with depth, particularly the extent of impacts greater than 50 ppm, suggesting that the bulk of the impacted soil is less than 24 in. bgs.

The volume of soil with PCB impacts greater than 50 ppm from 0 to 24 in. bgs is approximately 1,256 yd^3. The volume of soil with PCB impacts between 25 and 50 ppm from 0 to 24 in. bgs is approximately 2,636 yd^3. The volume of soil with PCB impacts between 0 and 25 ppm from 0 to 24 in. bgs is approximately 6,022 yd^3.

Eighteen pesticides were identified at concentrations greater than the Part 375 SCOs at 30 of the 31 sampling locations. These pesticides were detected at depths from 0 to 24 in. bgs. Table 3-11 summarizes the analytical results for the surface soil samples. As noted in Table 3-11, other pesticides were identified at the various sampling locations, but at concentrations less than the Part 375 SCOs.

3.5 SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS

A total of 59 soil samples were collected from the 22 borings and sent for laboratory analysis. Samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A. The soil samples were sent to Mitkem Labs, Warwick, Rhode Island, which is an approved ELAP-certified laboratory for VOC, SVOC, TAL metals, PCBs, and pesticides analysis in accordance with the NYSDEC ASP. Because the boundary was modified following completion of the soil borings, soil borings were advanced both inside and outside the final site boundary (Figure 2-1)

Each soil boring was advanced until the till unit was encountered. Subsurface soil samples (2-14 ft bgs) were collected from each of the 39 soil borings except for SB-04- (8-12 ft bgs) and SB-18 (4-8 ft bgs) because of lack of recovery. Because of elevated PID readings and a strong coal-tar like odor, three additional soil samples were collected from 2 to 4 ft bgs in the vicinity of SB-05 (SB-05A, SB-05B, and SB05C). These samples were analyzed for each of the parameters.

The SCGs applied to the subsurface soil sample results were 6 NYCRR Part 375 Environmental Remediation Programs using the Unrestricted Use Soil Cleanup Objectives for Protection of Groundwater. The applicable SCG was applied because the potential source areas on-site would be considered a continuing source for groundwater.

3.5.1 Volatile Organic Compound Analytical Results

Several VOCs were detected at concentrations less than Part 375 Unrestricted Use Soil Cleanup Objectives (Table 3-2). Concentrations of acetone greater than the Part 375 Unrestricted Use SCO of 0.05 mg/kg were identified in a number of samples; however, with the exception of sample SB-12 (8-12 ft [25 mg/kg]) the concentrations are treated as lab contaminants.

3.5.2 Semivolatile Organic Compound Analytical Results

Seven SVOCs were detected in nine subsurface soil samples greater than their respective 6 NYCRR Part 375 Unrestricted SCOs for protection of groundwater. The SVOCs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene,

dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Table 3-3 shows the SVOC analytical results. The SVOCs detected were collected from 0 to 14 ft bgs. The locations of the impacted samples suggest that the highest concentrations and broadest types of SVOCs are related to locations where fill was identified in the soil borings or topographic evidence suggests the presence of fill near the sampling location (e.g., steep slopes adjacent to Old Ley Creek Channel). The additional samples collected at SB-05A, SB-05B, and SB-05C did not indicate significant differences in SVOC concentrations when compared with the other samples collected at the site.

Figure 3-6 illustrates the subsurface and surface soil sampling locations where concentrations of SVOCs, metals, and pesticides are greater than their associated SCG.

3.5.3 Target Analyte List Metals and Mercury Analytical Results

Nine TAL metals and mercury were reported at concentrations greater than the Part 375 Unrestricted SCOs including arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Table 3-4 presents a summary of the TAL metal and mercury results. Sixteen of the 22 soil sampling locations had concentrations of metals greater than their SCOs.

3.5.4 Polychlorinated Biphenyls and Pesticide Analytical Results

PCBs were reported at concentrations greater than the SCG of 0.1 part per million (ppm) for total PCBs at 17 of the 20 sampling locations. PCBs were detected at various depths below ground surface. Table 3-5 summarizes the analytical results for the subsurface soil samples. PCBs at concentrations greater than the SCO were identified at concentrations that ranged from 0.13 ppm at SB-16 (12-14 ft bgs) to 39 ppm at SB-09 (8-12 ft bgs).

Seven pesticides were identified at concentrations greater than the Part 375 SCOs at 12 of the 20 sampling locations, including 4,4'-dichlorodiphenyldichloroethane (4-4'-DDD), 4-4'-dichlorodiphenyldichloroethylene (4,4'-DDE), 4-4'-dichlorodiphenyltrichloroethane (4,4'-DDT), beta-BHC, delta-BHC, endrin, and dieldrin. These pesticides were detected at various depths from 0 to 14 ft bgs. Table 3-6 summarizes the analytical results for the subsurface soil samples. As noted in Table 3-6, other pesticides were identified at the various sampling locations, but at concentrations less than the Part 375 SCOs.

3.6 SUMMARY OF SOIL ANALYTICAL RESULTS

The subsurface and surface soil analytical results indicate that soil at the site is impacted by SVOCs, pesticides, PCBs, and metals. Only limited low-level impacts to soils by VOCs were identified. PCB impacts are the most wide spread in both areal and vertical extents. Based on the concentrations of PCBs detected from 0 to 24 in. bgs, PCBs will be used as the basis for determining the extent of impacts at the site. The other contaminants will be evaluated based on the spatial relationship between the locations and depths where they were identified and the locations and depths where PCBs were identified.

Figure 3-6 shows the overlap between samples exceeding the unrestricted SCOs for SVOCs, pesticides and/or metals, and the area containing PCBs in exceedance of 1 ppm, 25 ppm, and 50 ppm.

A review of the sampling locations with SVOC, pesticide, and metals impacts greater than the Part 375 SCO from 0 to 6 in. bgs indicates that:

- Six surface soil sampling locations (SS-07, SS-11, SS-14, SS-15, SS-21, and SS-26) are located within the 0-25 ppm PCB boundary
- Six surface soil sampling locations (SS-12, SS-19, SS-20, SS-22, SS-27, and SS-31) are located within the 25-50 ppm PCB boundary
- Twelve surface soil sampling locations (SS-08, SS-10, SS-13, SS-16, SS-17, SS-18, SS-23, SS-24, SS-25, SS-28, SS-29, and SS-30) are located within the >50 ppm boundary.

This suggests that remedial efforts to remove PCB-impacted soil completed in these areas from 0 to 6 in. bgs (e.g., excavation and disposal) would also include removal of soil impacted with SVOCs, pesticides, and metals from this depth.

A review of the sampling locations with SVOC, pesticide, and metals impacts greater than the Part 375 SCO from 6 to 12 in. bgs indicates that:

- Five surface soil sampling locations (SS-07, SS-11, SS-15, SS-21, and SS-26) are located within the 0-25 ppm PCB boundary
- Six surface soil sampling locations (SS-12, SS-19, SS-20, SS-22, SS-27, and SS-31) are located within the 25-50 ppm PCB boundary
- Ten surface soil sampling locations (SS-08, SS-16, SS-17, SS-18, SS-23, SS-24, SS-25, SS-28, SS-29, and SS-30) are located within the >50 ppm boundary.

This suggests that remedial efforts to remove PCB-impacted soil completed in these areas from 6 to 12 in. bgs (e.g., excavation and disposal) would also include removal of soil impacted with SVOCs, pesticides, and metals from this depth.

A review of the sampling locations with SVOC, pesticide, and metals impacts greater than the Part 375 SCO from 12 to 24 in. bgs indicates that:

- Four surface soil sampling locations (SS-07, SS-14, SS-15, and SS-26) are located within the 0-25 ppm PCB boundary
- Five surface soil sampling locations (SS-12, SS-20, SS-22, SS-27, and SS-31) are located within the 25-50 ppm PCB boundary

- Nine surface soil sampling locations (SS-08, SS-17, SS-18, SS-23, SS-24, SS-25, SS-28, SS-29, and SS-30) are located within the >50 ppm boundary.

This suggests that remedial efforts to remove PCB-impacted soil completed in these areas from 12 to 24 in. bgs (e.g., excavation and disposal) would also include removal of soil impacted with SVOCs, pesticides, and metals from this depth.

3.7 SEDIMENT SAMPLING ANALYTICAL RESULTS

A total of 14 sediment samples were collected from eight sediment sampling locations and sent for laboratory analysis. Because of the nature of the bottom of the Ley Creek channel (portions of Ley Creek flow over dense till with no sediment present), sediment samples from only 8 of the original 12 sediment samples were collected (SED-01 through SED-06, SED-11, and SED-12). The four samples not collected were located in Ley Creek (SED-07 through SED-10). The work plan stated that sediment samples would be collected from 0 to 6, 6-12, and 12-24 in. bgs; however, at a number of locations there was not enough sediment thickness to collect samples from each depth. In some instances, recovery for the first interval (0-6 in.) in sediment, was limited to thin muddy sediments predominated by vegetative matter (e.g., sticks, leaves, etc.) and the sampling method (open bottom acetate sleeve) did not allow for collection of sediment suitable for analysis.

The samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A.

Sediment sampling results were compared with standards developed from Technical Guidance for Screening Contaminated Sediments (NYSDEC 1999). Sediment criteria for non-polar organic compounds were developed using equilibrium partitioning methodology. Non-polar organic compounds tend to be hydrophobic (have low solubility in water). Low solubility compounds, such as pesticides and PCBs, persist in the environment and may bioaccumulate resulting in chronic toxicity effects to organisms.

Equilibrium partitioning uses various factors to determine the potential concentration of these persistent contaminants in interstitial pore water. The factors evaluated include the concentration of the contaminant in the sediment, the concentration of total organic carbon (TOC) in the sediment, and the affinity of the contaminant for organic carbon in the sediment. The organic carbon content of a sediment accounts for the largest variation in the uptake or sorption of a contaminant by sediment. The organic carbon/water partitioning coefficient (K_{oc}) is a measure of the concentration of a contaminant that adsorbs to the organic carbon content of the sediment divided by the concentration dissolved in water. When normalized for organic carbon, concentrations of a contaminant in different sediment samples are comparable (NYSDEC 1999). As such, the guidance values are calculated as a function of the TOC content of the sediment being evaluated. Because the amount of available organic carbon varies spatially, site-specific standards are developed using concentrations of organic carbon analyzed at each site. As part of this investigation, sediment samples were collected at each sampling location and analyzed for TOC. The TOC concentration was then utilized to calculate an average organic carbon concentration, the

standard deviation within the data set, the 95 percent confidence limit concentration, and a lower confidence limit concentration value. EA selected the lower confidence limit concentration value as the percent TOC (5 percent) for the derivation of the sediment criteria via equilibrium partitioning methodology. The TOC analytical data is provided in Table 3-12 and sediment criteria guidance values are provided in Table 3-13. This RI has used three criteria for evaluation purposes of the detected analytes, Human Health Bioaccumulation, Benthic Aquatic Life Chronic Toxicity, and Wildlife Bioaccumulation, whichever was the more stringent.

3.7.1 Volatile Organic Compound Analytical Results

Analytical results normalized to TOC indicate that low-level concentrations of VOCs (less than their respective Levels of Protection) were detected at six of the eight sediment sampling locations (SED-01, -02, -03, -04, -05, and -12) (Table 3-14). Each of these locations is within the Old Ley Creek Channel. Vinyl chloride was detected at a concentration greater than the Human Health Bioaccumulation standard of .015 mg/kg at SED-03 (0-6, 6-12, and 12-24 in.) at 4.7, 4.6 and 3.8 mg/kg, respectively. SED-03 is located within the Old Ley Creek Channel approximately 50 ft downstream from the outfall of the SPS treatment system.

SED-06 was collected from an isolated swale which drains into the Old Ley Creek Channel approximately 200 ft west and downstream of the SPS treatment system outfall. There are no indications of VOC impacts to shallow sediment at this location further suggesting that impacts within the main channel may be the result of discharge from the potential source if impacts SPS treatment system which discharges to the Old Ley Creek channel versus discharge from groundwater or another source. The design parameters of the system and the discharge permit requirements are unknown.

SED-11 was collected approximately 50 ft upstream from the convergence of the old channel and Ley Creek. No VOCs were identified at either of these locations.

3.7.2 Semivolatile Organic Compound Analytical Results

Analytical results indicate that low-level concentrations (less than their respective Levels of Protection) of 22 SVOCs were detected at each of the eight sediment sampling locations (Table 3-15). Five of the SVOCs detected were at concentrations greater than either the Human Health Bioaccumulation or Benthic Aquatic Life Chronic Toxicity standards. These SVOCs include benzo(a)anthracene, benzo(a)pyrene, fluorene, phenol, and phenanthrene. Combinations of these SVOCs were found at each of the sediment sampling locations. The lowest concentrations of these five SVOCs were detected at SED-01 and SED-02; although, in some instances these compounds were still found above the ecological or human health level of protection at these locations. These samples were collected from the upper portions of the Old Ley Creek Channel.

3.7.3 Metals and Mercury Analytical Results

Analytical results indicate that concentrations of metals greater than their respective lowest or severe effect levels were detected at each of the eight sediment sampling locations (Table 3-16).

Lowest effect levels were exceeded at each sampling location for a combination of the following metals, arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, silver, and zinc. Severe effect levels were exceeded at the following sampling locations SED-01, -02, -03, and -04. The severe effect levels were exceeded for chromium, copper, lead, nickel, silver, and zinc. The sediment samples were collected from locations from up to downstream in the Old Ley Creek Channel.

3.7.4 Polychlorinated Biphenyl and Pesticide Analytical Results

Analytical results indicate that concentrations of total PCBs were detected at four of the eight sediment sampling locations at concentrations greater than Human Health Bioaccumulation criteria of .0002 mg/kg at SED-01, -02, -03, and -04 from 0 to 24 in. bgs (Table 3-17). Total PCBs were detected at concentrations less than the Human Health Bioaccumulation criteria at SED-05, -06, -11, and -12. Samples SED-01 to SED-04 were collected in the upper portion of the Old Ley Creek Channel where sediments were thicker. Samples SED-05, -06, -11, and -12 were collected along the lower reach of the Old Ley Creek Channel where sediment was thinner. Water movement in the upper reach is very slow to nearly stagnant allowing for additional sediment. Water movement in the lower reach is faster with little stagnation reducing the potential for sedimentation.

Eight pesticides were detected at concentrations greater than Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity, the Human Health Bioaccumulation, or the Wildlife Bioaccumulation criterion (whichever was more stringent) at each sediment sampling location (Table 3-18). The pesticides included 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endosulfan I, delta-BHC, gamma-BHC (lindane), gamma-chlordane, and heptachlor.

3.8 SUMMARY OF SEDIMENT ANALYTICAL RESULTS

The sediment analytical results indicate that sediment at the site is impacted by VOCs, SVOCs, pesticides, PCBs, and metals. With the exception of vinyl chloride concentrations greater than Human Health criteria at SED-03 (located immediately downstream of SPS and in an area where VOCs were noted in groundwater on the Town of Salina Landfill parcel) only limited low-level impacts to sediment by VOCs were identified. PCB and pesticide impacts are the most wide spread in both areal and vertical extents. Based on the concentrations of PCB and pesticides detected from 0 to 24 in. bgs, PCBs and pesticides will be used as the basis for determining the extent of impacts at the site. The other contaminants will be evaluated based on the amount of overlap between the locations and depths where they were identified and the locations and depths where PCBs/pesticides were identified.

Figure 3-6 illustrates the extent of the overlap between PCB impacted soils and sediment from 0 to 6 in. bgs, 6 to 12 in. bgs, and 12 to 24 in. bgs; and the other contaminants identified at the site. The bulk of the impacts to sediment are within the 0 to 25 ppm PCB boundary, which includes the upper reach of the Old Ley Creek Channel. Samples SED-03 and SED-04 have concentrations of PCBs greater than 50 ppm from 0 to 6 in. bgs and from 12 to 24 in. bgs, respectively.

A review of the sampling locations with SVOC, pesticide, and metals impacts greater than the Part 375 SCO from 0 to 6 in. bgs indicates that:

- Five sediment sampling locations (SED-01, SED-05, SED-06, SED-11, and SED-12) are located within the 0-25 ppm PCB boundary
- One sediment sampling location (SED-04) is located within the 25-50 ppm PCB boundary
- One sediment sampling location (SED-03) is located within the >50 ppm PCB boundary.

A review of the sampling locations with SVOC, pesticide, and metals impacts greater than the Part 375 SCO from 6 to 12 in. bgs indicates that (due to no sample recovery at SED-05, -06, -11, and -12 from 6 to 24 in. bgs no data are available):

- Four sediment sampling locations (SED-01, SED-02, SED-03, and SED-04) are located within the 0-25 ppm PCB boundary
- No sediment sampling locations are located within the 25-50 ppm PCB boundary
- No sediment sampling locations are located within the >50 ppm PCB boundary.

A review of the sampling locations with SVOC, pesticide, and metals impacts greater than the Part 375 SCO from 12 to 24 in. bgs indicates that (due to no sample recovery at SED-05, -06, -11, and -12 from 6 to 24 in. bgs no data are available):

- Two sediment sampling locations (SED-02 and SED-03) are located within the 0-25 ppm PCB boundary
- One sediment sampling location (SED-01) is located within the 25-50 ppm PCB boundary
- One sediment sampling location (SED-04) is located within the >50 ppm PCB boundary.

This suggests that remedial efforts to remove PCB-impacted soils completed in these areas from 0 to 24 in. bgs (e.g. excavation and disposal) would also include removal of sediments impacted with SVOCs, pesticides, and metals from this depth interval.

3.9 GROUNDWATER SAMPLING ANALYTICAL RESULTS

This section presents a summary of the results for chemical analyses performed on groundwater samples collected from the monitoring well network associated with this RI. For comparing the groundwater results to appropriate SCGs, groundwater results were compared to NYSDEC Ambient Water Quality Standards (AWQS) for Class GA water. Groundwater grab samples were collected from the three new monitoring wells which were screened within the overburden.

When discussing groundwater quality, this RI Report is referring to the water bearing zone at depths ranging from approximately 8 to 20 ft bgs.

Groundwater samples were collected during a single sampling event from three monitoring wells OLCCMW-01 to OLCCMW-03. Groundwater samples were collected from each well on 24 May 2010. The groundwater samples were analyzed using USEPA Method 8260 (VOCs), USEPA Method 8270 (SVOCs), USEPA Methods 8082/8081 (PCBs/pest), and USEPA Methods 6010/7470 (TAL metals/mercury).

3.9.1 Volatile Organic Compounds Analytical Results

An estimated concentration of methyl tert butyl ether (MTBE) was identified at monitoring well OLCCMW-02 (3.4J ug/l). There is no Class GA groundwater standard for MTBE. This is the only VOC identified during sampling (Table 3-19).

3.9.2 Semivolatile Organic Compounds Analytical Results

A single SVOC was detected in the groundwater sample collected from OLCCMW-03. An estimated concentration of bis(2-ethylhexyl phthalate) was identified at 4.5J µg/l (Table 3-20). The Class GA groundwater standard for this compound is 5 µg/l. This is a plasticizer commonly found in tubing and supplies used in the collection and analysis of samples, and is considered a potential lab contaminant. The 2009 CHA report identified bis(2-ethyl-hexyl) phthalate as a potential lab contaminant.

3.9.3 Metals and Mercury Analytical Results

Numerous metals were identified in both total and dissolved samples collected from this site (Table 3-21). Total and dissolved samples were collected in order to determine the potential impact turbidity may have on the concentrations of metals (i.e., potential for false positives). Metals identified in the samples include aluminum, antimony, arsenic, barium, calcium, chromium, copper, iron, magnesium, manganese, nickel, potassium, selenium, sodium, vanadium, and zinc. Only antimony, iron, magnesium, manganese, selenium, and sodium were detected at concentrations greater than their Class GA AWQS. Aluminum, arsenic, barium, calcium, chromium, copper, iron, magnesium, manganese, nickel, potassium, and sodium were also detected during groundwater sampling conducted by others on the adjacent Salina Landfill site in support of the Town of Salina Landfill Design (CHA 2009). With the exceptions of barium and manganese, the concentrations of the other metals are similar to those identified in the nearby Town of Salina Landfill groundwater monitoring wells. The CHA report suggested that concentrations of iron, magnesium, and manganese were potentially related to turbidity or possibly leachate indicators. Groundwater flow patterns and turbidity measurements indicate that the concentrations of these compounds at the Old Ley Creek Channel site are not likely the result of leachate impacts from the landfill or from elevated turbidity.

3.9.4 Polychlorinated Biphenyl and Pesticide Analytical Results

Both total and dissolved groundwater samples were collected from the three monitoring wells for the analysis of PCBs. Groundwater samples were also collected from the three monitoring wells for the analysis of pesticides. Analysis indicates that no PCBs or pesticides were detected in groundwater at the site. This is consistent with the CHA groundwater sampling report (2009).

3.10 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

The groundwater analytical results indicate that concentrations of the metals antimony, iron, magnesium, manganese, selenium, and sodium were detected at concentrations greater than their Class GA AWQS. Analysis of groundwater at the site indicates that there are no impacts from VOCs, SVOCs, pesticides, or PCBs.

A review of the groundwater sampling locations with metals impacts greater than the Class GA AWQS indicates that:

- Groundwater sampling locations OLCCMW-1 and OLCCMW-3 are located within the 1-25 ppm PCB boundary
- Groundwater sampling location OLCCMW-2 is located within the 25-50 ppm PCB boundary.

3.11 SURFACE WATER SAMPLING ANALYTICAL RESULTS

This section presents a summary of the results for chemical analyses performed on surface water samples collected from 10 locations. For comparing the surface water results to appropriate SCGs, the results were compared to NYSDEC AWQS for Class B streams using aquatic chronic (A[C]) guidance values. Pesticides are compared to Class B Stream Human Consumption of Fish (H[(FC)]) standards. Aquatic chronic standards were established for the protection of aquatic life from chronic effects of different contaminants. Surface water grab samples were collected from the 10 sampling locations. Surface water samples were collected during three sampling events, a low-water event (14 January 2010), a high-water event (26 January 2010), and three additional samples collected during the groundwater sampling effort on 24 May 2010. During each sampling event, water quality parameter data were collected and are provided in Appendix K. The samples were submitted for VOC analysis by USEPA Method 8260B, SVOC analysis by USEPA Method 8270C, TAL metals analysis by USEPA Method 6010, and PCBs and pesticides by USEPA Method 8082/8081A.

3.11.1 Surface Water Volatile and Semivolatile Organic Compound Analytical Results

Seven surface water samples were collected during the 14 January 2010 low-water surface water sampling event. VOC analysis of the samples collected during the low-water sampling indicates that low-level concentrations (less than the Class B A (C) standard) were identified at each of the sampling locations (Table 3-22). The VOCs identified include 1,2,4-trimethylbenzene, acetone,

benzene, chloroethane, *cis*-1,2-dichloroethene, m,p-xylene, naphthalene, o-xylene, toluene, trichloroethene, vinyl chloride, and total xylenes. As stated earlier, the SPS treatment system which discharges to the Old Ley Creek Channel is a potential source of impacts to sediment and surface water. The design parameters of the system and the discharge permit requirements are unknown. However, analytical results suggest that the treatment system may be responsible for a portion of the impacts in environmental media at the site.

Seven surface water samples were collected during the 26 January 2010 high-water surface water sampling event. VOC analysis of the samples collected during the high-water sampling indicates that low-level concentrations (less than the Class B A (C) standard) were identified at each of the sampling locations (Table 3-23). The VOCs identified include *cis*-1,2-dichloroethene, m,p-xylene, naphthalene, toluene, and vinyl chloride.

Three surface water samples were collected during the 24 May 2010 sampling event (3-24). VOC analysis of the samples collected during this event indicates that acetone, carbon disulfide, MTBE, benzene, isopropylbenzene, and toluene are at concentrations less than the Class B A(C) surface water standard.

Seven surface water samples were collected during the 14 January 2010 low-water surface water sampling event. SVOC analysis of the samples collected during the low-water sampling indicates that a low-level concentration (1.3 µg/l) of 2-methylnaphthalene (less than the Class B A (C) standard of 4.7 µg/l) was identified at surface water sampling location SW-07 (Table 3-22).

Seven surface water samples were collected during the 26 January 2010 high-water surface water sampling event. SVOC analysis of the samples collected during the high-water sampling indicates that no SVOCs were identified in surface water.

Three surface water samples were collected during the 24 May 2010 sampling event (Table 3-25). Though the initial extraction for SW-10 SVOC analysis was completed within the holding time for the sample, due to non-compliant surrogate recoveries a re-extraction for SVOCs was completed on this sample outside of holding times. SVOC analysis of the samples collected during this event indicates that estimated concentrations of phenol, 4-methylphenol, phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, were detected at SW-10. The concentrations are less than the Class B A(C) surface water standard.

3.11.2 Surface Water Metals and Mercury Analytical Results

Seven surface water samples were collected during the 14 January 2010 low-water surface water sampling event. Metals and mercury analysis of the samples collected during the low-water sampling indicates that concentrations (greater than the Class B A (C) standard) were identified at each of the sampling locations (Table 3-26). The metals identified include aluminum, copper, and iron.

Seven surface water samples were collected during the 26 January 2010 high-water surface water sampling event. Metals and mercury analysis of the samples collected during the high-water sampling indicates that concentrations (greater than the Class B A (C) standard) were identified at each of the sampling locations (Table 3-27). The metals identified include aluminum and iron.

Three surface water samples were collected during the 24 May 2010 sampling event (Table 3-28). Metals and mercury analysis of the samples collected during this event indicate that concentrations of aluminum, chromium, cobalt, copper, iron, lead, mercury, nickel, silver, vanadium, and zinc are greater than the Class B A(C) surface water standard.

3.11.3 Surface Water PCBs and Pesticides Analytical Results

Seven surface water samples were collected during the 14 January 2010 low-water surface water sampling event. PCB and pesticide analysis of the samples collected during the low-water sampling indicated that no PCBs or pesticides were identified at any of the sampling locations. No pesticides were identified during the low-water sampling event.

Seven surface water samples were collected during the 26 January 2010 high-water surface water sampling event. PCB analysis of the samples collected during the high-water sampling indicates that concentrations (greater than the Class B A (C) standard of $1x10^{-6}$ parts per billion) of a PCB aroclor 1248 were identified at four of the seven sampling locations (Table 3-29). The PCB was identified at sample locations SW-01, SW-02, SW-05, and SW-07. SW-01, SW-02, and SW07 are located within Old Ley Creek Channel. SW-05 is located just upstream of the confluence of the Old Ley Creek Channel and Ley Creek. No pesticides were identified during the high-water sampling event.

Three surface water samples were collected during the 24 May 2010 sampling event (Table 3-30). PCB and pesticide analysis of the samples collected during this event indicate that concentrations of either aroclor 1248 or 1254, or both, are greater than the Class B A(C) surface water standard at SW-09 and SW-10. Surface water sampling location SW-09 is a seep located at the base of fill between surface soil sampling locations SS-14 and SS-15. Concentrations of PCB slightly greater than SCOs were identified at SS-14 and SS-15. PCB analysis at soil boring SB-14 identified no PCBs. PCB analysis at soil boring SB-15 indicated concentrations of PCBs at 4-8, 8-12, and 12-14 ft bgs; the highest concentration (28 ppm) was at 8-12 ft bgs. SW-10 is located downstream of the SPS treatment system. Sediment sample SED-03 located immediately downstream from SW-10 had concentrations of PCBs from 0 to 6 in. of 57.4 ppm.

Pesticides were detected in the May 2010 surface water sampling event (Table 3-31). Pesticides are compared to Class B Stream Human Consumption of Fish (H[(FC)]) standard. Heptachlor, heptachlor epoxide, 4,4'-DDE, 4,4'DDD, and 4,4'-DDT were identified at SW-09 at concentrations greater than their respective Class B H(FC) surface water standards. Concentrations of pesticides were identified at SS-14 and SS-15 including 4,4'-DDT and heptachlor epoxide. Heptachlor and aldrin were identified at SW-10 at concentrations greater than their respective Class B H(FC) surface water standards. Gamma BHC, heptachlor, aldrin,

endosulfan sulfate, and gamma chlordane were also identified at SED-03, the nearest sampling location to SW-10. No pesticides were identified at SW-08.

3.12 SUMMARY OF SURFACE WATER ANALYTICAL RESULTS

The surface water analytical results indicate that concentrations of the metals, pesticides, and PCBs were detected at concentrations greater than either there Class B (A) or Class B H(FC) surface water standards. Analysis of surface water at the site indicates that there are no impacts from VOCs or SVOCs.

A review of the surface water sampling locations with metals impacts greater than the Class B (A) standards indicates that:

- Surface water sampling location SW-01 is located within the 1-25 ppm PCB boundary
- Surface water sampling locations SW-02 and SW-03 are located within the 25-50 ppm PCB boundary
- Surface water sampling locations SW-04-SW-07 are located outside of the PCB boundaries.

A review of the surface water sampling locations with PCB impacts greater than the Class B (A) standards indicates that:

- Surface water sampling location SW-01 is located within the 1-25 ppm PCB boundary
- Surface water sampling locations SW-02, SW-09, and SW-10 are located within the 25-50 ppm PCB boundary.

A review of the surface water sampling locations with pesticide impacts greater than the Class B H(FC) standard indicates that:

- Surface water sampling locations SW-09 and SW-10 are located within the 25-50 ppm PCB boundary.

Surface water samples SW-03 to SW-07 are located outside the PCB-impacted area. Iron was detected at concentrations greater than Class B A(C) standards at each location during high- and low-flow sampling. Aluminum concentration at SW-07 was greater than Class B A(C) standard during low-flow sampling and at SW-04 through SW-06 during high-flow sampling.

3.13 DATA VALIDATION

The analytical data results were submitted to Nancy J. Potak for validation. This validation included a review of pertinent QA/QC data such as sample extraction and analysis, holding

times, calibration, a review of laboratory blanks and QA/QC sample results, and a review of the analytical case narrative. A Data Usability Summary Report was prepared which includes a compliance chart, a list of samples included in each sample delivery group, and recalculations of sample results. Nonconforming QA/QC results were evaluated with respect to their implications for data reliability and usability, and data results were flagged accordingly on the results sheets. These qualifiers were entered into the site-specific database and appear in the summary tables presented in this report. Data Usability Summary Reports for the analytical data packages are provided in Appendix H.

4. FATE AND TRANSPORT

This chapter presents the environmental fate and transport mechanisms for contaminants of concern (COC) identified at the Old Ley Creek Channel site during the RI. The COCs are evaluated to determine the potential for continued on-site presence and off-site migration. The evaluation process assists in the determination of the current and future potential for COC exposure to human populations and the potential technologies that may be appropriate for remediation of the site.

Three main factors are evaluated when assessing a COCs fate and transport in the environment:

- Physiochemical characteristics of individual COCs
- Site environmental characteristics
- Biological interactions.

4.1 CONTAMINANTS OF CONCERN PHYSICOCHEMICAL CHARACTERISTICS

Table 4-1 summarizes the physiochemical characteristics of the COCs identified within the soil and sediment at the Old Ley Creek Channel site that can influence their fate and transport. The COCs identified are compounds that were detected at concentrations greater than their SCOs in either soil or sediment. The specific characteristics are discussed in the following sections.

4.1.1 Water Solubility

Water solubility is the measure of the compounds ability to dissolve in water and is typically expressed in a unit of mass/volume (e.g., mg/L or µg/L). Aqueous solubility is one factor that can affect the compounds concentration in water and residence time in water. Compounds showing high water solubility remain in solution while compounds with low solubility tend to remain in a solid state (are hydrophobic). When reviewing Table 4-1, it should be noted that the non-chlorinated alkene acetone has a much higher water solubility (hydrophilic compound) than do the pesticides, PCBs, and SVOCs.

4.1.2 Volatilization

The process of volatilization involves the movement of a compound from the surface of a liquid to the vapor phase. Typically, only the neutral or uncharged form of a compound can volatilize. Volatilization is calculated from the equilibrium vapor pressure which is essentially the solubility of the compound in air (measured as a partial pressure). When measuring a compound's fate in the environment, a more manageable index is the Henry's Law Constant, which defines the ratio of the compound's vapor pressure and water solubility, reported in units of atm-m^3/moles. Generally, compounds with a higher Henry's Law Constant (10^{-3}) tend to volatilize more readily than those with lower Henry's Law Constants (10^{-5}).

When evaluating Table 4-1, the non-chlorinated alkene acetone identified at the site would readily volatilize when in contact with air. The other COCs (SVOCs, pesticides, and PCBs) have low Henry's Law Constants which result in lower volatility.

4.1.3 Adsorption/Desorption

Adsorption/desorption represents the degree to which compounds are bound to a solid matrix. Strongly adsorbed compounds are not available for loss processes such as hydrolisis and oxidation, and are not readily transported in the dissolved phase. However, due to the strong affinity in solid matrices, these compounds can be readily transported via particle transport mechanisms (e.g., surface runoff and erosion, suspended sediments in rivers or streams). Partition coefficients are used to quantify adsorption and desorption.

Partition coefficients are concentration ratios of the compound between two phases and include K_{ow}, K_d and K_{oc}; all have units of L/kg. The K_{ow} is the octanol-water partition coefficient, which quantifies the concentration ratio of the compound in the octanol (organic) phase and aqueous phase. Octanol is used as a substitute for lipids; therefore, the K_{ow} is typically used to relate the compound partitioning from water to biota. The K_d is the concentration ratio of the compound between a solid and aqueous phase at steady-state. The K_d is constant for inorganic analytes (metals), but varies for organic analytes. The latter led to the usage of the K_{oc}, which is the organic carbon-water partition coefficient. The product of the compounds K_{oc} and the organic carbon content of the site soil or sediment is the site specific K_d for the compound. Higher values for K_{ow}, $K_{d,}$ and K_{oc} indicate a preference of the compound for the non-aqueous phase (low solubility in water).

The SVOCs, pesticides, and PCBs identified at the site (with the exception of acetone) have high K_{ow} and K_{oc} values. These compounds are less mobile (tend to be less soluble in water), but more persistent in the environment.

4.2 SITE ENVIRONMENTAL CHARACTERISTICS

The environmental characteristics of the site can have influence on the fate and transport of the COCs present, and include geology, hydrology, and surface drainage.

4.2.1 Geology

The local geology of the site was detailed in Section 3.1. The depth and composition of the unconsolidated soil in the vadose zone was relatively constant across the site. The thickness of the vadose zone across the site was approximately 0-8-ft thick in most areas. The soil in the vadose zone is typically moist and consists of combinations of clay, silt, and silty clay at the surface. The saturated soil within the shallow aquifer is from 8 to 20 ft bgs terminating at a dense till layer. Soil in the phreatic zone consists of a combination of sand and gravel. The underlying till unit was encountered between 15 and 20 ft bgs at the site. Soil borings completed in support of the Town of Salina Landfill indicate that the till unit is from 15 to 30 ft bgs (CHA 2009). The till is continuous throughout the area.

The Old Ley Creek Channel site lies within Vernon Formation which consists of upper Silurian shale and dolostone.

4.2.2 Hydrogeology

The local hydrogeology was detailed in Section 3.2. The analysis of data collected during this RI focused on the shallow unconfined aquifer. Lateral migration of water through the overburden is through interstitial spaces between the grains and is controlled by hydraulic gradients across the site. Groundwater flow patterns mimic topography of the site, flowing radially from the recharge areas to Ley Creek and Old Ley Creek Channel which act as discharge zones. The CHA report (2009) indicates that groundwater may potentially be recharged by Old Ley Creek Channel in the vicinity of monitoring wells MW-18 and MW-19. The conditions during the sampling and gauging event completed by CHA are unknown (if there was a storm event the old channel may have had surface water elevations greater than the local groundwater elevations resulting in it becoming a losing stream during that time period). Groundwater and surface water conditions during the 24 May 2010 sampling effort indicate that groundwater was discharging to both Ley Creek and Old Ley Creek Channel indicating that the streams were gaining.

4.2.3 Surface Drainage and Topography

Topographic relief (including the area to the west outside of the Old Ley Creek Channel site boundary) varies. The highest elevation in the area is approximately 384 ft above mean sea level (amsl) in the center of Town of Salina Landfill parcel east of Ley Creek. The lowest elevation is 363 ft amsl at the confluence of the Old Ley Creek Channel and Ley Creek, a total relief of 21 ft. Old Ley Creek Channel is bounded by the Town of Salina Landfill parcel to the west and State Route 11 to the east. State Route 11 is approximately 378 ft amsl, the old channel is approximately 367 ft amsl, and the Town of Salina Landfill parcel is approximately 384 ft amsl. It appears that the landfill was constructed in a former wetland that was part of the drainage basin of Old Ley Creek Channel and Ley Creek. A historic topographic map from 1947 identifies a wetland complex west and southwest of Old Ley Creek Channel northwest (Appendix L).

Historically, and prior to construction of the new course, Ley Creek drained an area east of Syracuse Airport through an industrialized area eventually discharging to Onondaga Lake to the southwest. Ley Creek is currently recharged through a culvert in the northern portion of the site, from groundwater recharge, and precipitation.

4.3 BIOLOGICAL INTERACTIONS

The interactions between COCs and biota present at the Old Ley Creek Channel site may also affect the COCs fate and transport. These interactions are described in the following sections.

4.3.1 Biodegradation

Biodegradation of the COCs can occur and be interceded by both micro-organisms and higher biota. Transformation compounds the by-products of these biodegradations which may or may not be toxic to the organism may be further transformed by other organisms. Biodegradation includes a variety of enzyme-catalyzed oxidation and reduction processes. It has been documented that there is potential for biodegradation of PCBs to occur in sediments by micro-organisms. Investigations have shown that PCBs are susceptible to biodegradation processes, such as environmental dechlorination (i.e., congeners richer in chlorine appear to degrade slowly resulting in a higher number of congeners with fewer chlorine ions). The hypothesis is that the dechlorination is being done through dehalorespiration where organisms use the highly chlorinated PCBs as electron acceptors (Manahan, 2005). A typical degradation process is shown below for PCB, which is a main COC:

$$\{CH_2O\}+H_2O+CL\text{—}PCB \rightarrow CO_2+2H^{+}+2CL^{-}+2H\text{—}PCB$$

Where CL—PCB represents a site of chlorine substitution on a PCB molecule and 2H—PCB represents a site of hydrogen substitution. This process occurs in sediments under anaerobic conditions with long residence times.

4.3.2 Bioconcentration

Bioconcentration is the accumulation of compounds by biota to greater concentrations than present in the aqueous phase. This is quantified using the bioconcentration factor which is the ratio of the compound concentration in the biota and in the water. As stated in Section 4.1.3, bioconcentration factors are typically expressed in units of L/kg and higher values of K_{ow}, $K_{d,}$ and K_{oc} indicate a preference of the compound for the non-aqueous phase (low solubility in water). The majority of the COCs reported in the on-site subsurface soil typically had high values for K_{ow}, $K_{d,}$ and K_{oc} which means they would be more persistent in the on-site soil and biota, are hydrophobic, and do not tend to mobilize with the groundwater. Site sediments impacted with PCBs, pesticides, and SVOCs can be mobilized in surface water because of their affinity to adsorb to particulate matter.

4.3.3 Bioaccumulation

Bioaccumulation is the accumulation of compounds by biota from both aqueous phase and dietary phase exposure. The bioaccumulation factor, when related to the aqueous phase concentrations, is larger than the actual bioconcentration factor. No biota samples were taken during this RI to confirm whether the site was serving as a source to compounds accumulating in biota.

4.4 TRANSPORT AND MECHANISMS OF MIGRATION

Based upon the COCs physiochemical characteristics, geology and hydrogeology at the site, and the nature and extent of impacted media, COCs migration may be via several pathways. These pathways included migration of COCs via groundwater (metals only) and through sediment transport in surface water (pesticides and PCBs).

4.4.1 Migration of Emissions from Soil or Groundwater to Air

The COCs identified at the site, with the exception of acetone, have limited volatility; therefore, the migration of emissions from soil or groundwater to air is considered limited. No soil vapor sampling was conducted under this RI.

4.4.2 Migration within the Shallow Groundwater

COCs identified in groundwater at the site include the metals antimony, iron, manganese, and sodium detected at concentrations greater than their Class GA AWQS. No pesticides or PCBs were identified in groundwater samples. A single VOC (an estimated concentration of MTBE) was identified at OLCMW02 and a single SVOC (bis[2-ethyl-hexyl]) phthalate was identified at a concentration less than the AWQS. As such, only metals will be discussed in this section.

The physiochemical characteristics of the metals indicate that they have high water solubility and hence are mobile. Groundwater migration of these COCs would follow groundwater flow patterns.

The groundwater flow patterns for the site indicated that the flow is radial from the Town of Salina Landfill parcel, northwest to southwest toward Ley Creek, and east and south toward Old Ley Creek Channel. Groundwater flow on the Old Ley Creek Channel site is toward the old channel. The flow direction confirms the COCs migration pathway identified from the groundwater samples collected at the site. Because of the limited size of the site and the two parcels being bounded by Ley Creek and Old Ley Creek Channel, the migration pathways of dissolved metals is short with discharge directly to the surface water bodies.

4.4.3 Migration via Surface Water Runoff and Erosion

A likely migration pathway associated with runoff and erosion from the site includes surface water and surface soil that is transported from the site to Ley Creek. This form of transport may have resulted from surface drainage during rain events, surface water runoff, snow melt, or from general site dumping activities. PCB migration in the dissolved phase in surface water would likely be slow due to the low solubility, K_{ow} and K_{oc} properties of the PCBs. However, transport of PCBs through transport of surface soils via surface water is likely because of PCBs affinity for organic material found in surface soil and sediment at the site. PCBs bound to soil particles are easily transported by surface water during high energy storm events. Surface runoff and erosion at the site can provide a transport mechanism of PCBs from the site to off-site locations.

5. QUALITATIVE EXPOSURE ASSESSMENT

This chapter identifies potential current and future human receptors and their associated exposure pathways and provides a qualitative assessment of the potential significance of the exposure pathways as determined by the RI. During development of the work plan for completion of this RI, the Old Ley Creek site did not meet the requirements for completion of a soil vapor investigation as stated in DER-10. As such a soil vapor investigation was not completed. This does not preclude the possibility that following completion of any remedial activities and prior to any potential development at the site a soil vapor study may be required.

5.1 SITE SETTING

The Old Ley Creek Channel site is currently owned by Plaza East, LLC. There are no structures onsite. However, there is unrestricted public access to the site. No human receptors are present at the site. The 3.5 acre site is located on the west side of State Route 11 (Wolf Street) southwest of the intersection of State Route 11 and Factory Avenue. The site is wooded and includes a 1.8-acre wetland designated as a PSS1E by U.S. Fish and Wildlife Service National Wetland Inventory. The town of Salina has zoned the area as I1 – Industrial. However, the Onondaga County property listing indicates that the parcel is zoned commercial (05).

5.2 NATURE AND EXTENT OF CHEMICAL CONSTITUENTS

The nature and extent of chemical constituents that are being evaluated under this exposure assessment are limited to the chemicals reported in on-site soils (primary source) and surface water (secondary source). Surface and subsurface soil is considered the source of COC at the site and, as such, was the only on-site media evaluated as part of this RI. Because of the short distance between groundwater recharge and discharge zones, off-site groundwater was not evaluated under this RI. Primary COCs onsite include PCBs, pesticides, SVOCs, and metals. These COCs were reported at levels exceeding the applicable SCGs for surface and subsurface soil, sediment, and surface water, and the protection of groundwater. Because PCBs are the primary COC and they were identified in the broadest areal extent and at depth in the surface and subsurface soils, they will be evaluated extensively in this section. By evaluating, managing, and remediating the PCBs, in this case, it is also possible to manage the other site COCs.

5.3 SELECTION OF CONTAMINANTS OF CONCERN

SVOCs, pesticides, PCBs, and metals were detected in the surface and subsurface soil and surface water media at the Old Ley Creek Channel site. COCs for the site were selected following the practice established by the USEPA in the Risk Assessment Guidance for Superfund Volume I, Part A (USEPA, 1989). The selection criteria were as follows:

- The frequency of detection for chemicals in surface and subsurface soil, sediment, and surface water was utilized to determine COCs. Chemicals with a frequency of detection of less than 5 percent in a data set of 20 or more samples were excluded from this

assessment. Also, consideration was given as to whether the detected chemical is related to historic and current uses of the site.

- Chemicals not detected at least once above the limit of detection were automatically excluded from this assessment, regardless of the size of the data set.

A summary list of COCs by medium is provided in Table 5-1. Relevant and appropriate values (i.e., SCGs) for these COCs are discussed in Chapter 3.

This human exposure assessment provides qualitative descriptions of potential exposure to site-related COCs for human populations who may reasonably be expected to contact site media under present or future conditions. This qualitative assessment is comprised of two components:

- Description of exposure setting and identification of potentially exposed populations
- Identification of exposure pathways.

These components are discussed in greater detail in the following sections.

5.4 EXPOSURE SETTING AND IDENTIFICATION OF POTENTIALLY EXPOSED POPULATIONS

This section identifies potential receptors and exposure pathways. A complete exposure pathway is one that meets the following criteria (NYSDEC, 2002; USEPA, 1989):

- A source of COC must be present.

- Release and transport mechanisms and media must be available to move the chemicals from the source medium to an exposure medium.

- An opportunity must exist for receptors to contact the affected media.

- A receptor population and a means for chemical uptake (e.g., ingestion, inhalation) must exist.

Under current and future site use conditions, the potentially exposed populations (i.e., potential receptors) are those that might come into contact with the COCs. Table 5-2 presents the exposure pathway matrix and depicts the various exposure routes for current and future on-site and off-site human populations.

5.4.1 Scenarios

Because the site is currently vacant, on-site human populations considered in this qualitative exposure assessment are on-site trespassers, adult commercial workers, adult and child visitors, and adult construction workers. A complete exposure pathway to surface and subsurface soil, sediment, and surface water at the site is likely for each population identified.

Current off-site human populations considered in this qualitative exposure assessment include adult commercial and industrial workers, adult and child visitors to commercial/industrial establishments, adult construction workers, and adult nearby utility workers. A complete exposure pathway to surface and subsurface soil, sediment, and surface water is likely for each current off-site human population.

5.4.2 Future Scenarios

Future human populations considered in this exposure assessment include on-site and off-site construction workers, nearby off-site utility workers, on-site commercial workers, and on-site adult and child visitors to commercial/industrial establishments.

On-site construction workers are considered since virtually any site redevelopment would involve construction activity in some form. Potential on-site exposure media for construction workers would include surface and subsurface soil, sediment, surface water, and groundwater. While not evaluated as part of this RI, soil particulate in soil ambient air during construction excavation activities may be complete exposure pathways for this population.

Off-site construction work exposure to areas surrounding the site is considered in the event of future off-site redevelopment. Chemical exposure for nearby off-site utility workers could be expected because of the presence of subsurface utility lines in areas adjacent to the site. Potential off-site exposure media of construction workers and nearby off-site utility workers would include surface and subsurface soil, groundwater, surface water, and sediment as analyzed during this RI. In addition, soil particulates in ambient air during construction activities may impact off-site construction workers.

The possibility exists that the site may be used in the future for commercial purposes. Thus, exposure of adult on-site commercial workers and adult and child visitors to future on-site commercial establishments is possible. These individuals may be exposed to surface and subsurface soils, surface water, and sediments exhibiting contamination. It is expected that future land use may be deed restricted to prevent residential development; however, because deed restrictions are not yet in place, a future on-site residential scenario is included in this assessment. Potential on-site exposure media for these future on-site residents and/or workers would include surface and subsurface soil, groundwater, surface water, and sediment.

5.5 IDENTIFICATION OF EXPOSURE PATHWAYS

Table 5-2 provides qualitative descriptions of the potentially complete exposure pathways for current and future on-site and off-site human populations, and anticipates level of exposure potential.

Under current site use conditions, the on-site trespasser may receive exposure to surface subsurface soil, sediment, surface water, and groundwater via ingestion (oral), inhalation, or dermal contact. Current off-site populations may have exposure to surface and subsurface soil, sediment, surface water, and groundwater at the Old Ley Creek Channel site.

Under future site use conditions, on-site adult commercial and industrial workers, on-site construction workers, adult and child visitors, adult and child residents may potentially receive exposure to surface and subsurface soil, sediment, surface water, and groundwater through ingestion and dermal contact; and soil particulate in ambient air through inhalation. There is potential exposure for adult commercial and industrial works, adult and child visitors, adult construction workers, and nearby off-site utility and construction workers, which may potentially receive exposure to surface and subsurface soil, sediment, surface water, and groundwater through ingestion and dermal contact; and soil particulate in ambient air through inhalation.

5.6 CONCLUSIONS

There are several distinct human populations both on-site and in the vicinity of the site that could potentially be exposed to site-related COCs. Current on-site populations which may be exposed include trespassers. Current off-site populations which may be exposed include adult commercial and industrial workers, adult construction workers, adult and child visitors to commercial/industrial establishments, and adult nearby utility workers. Under future site use conditions, potential populations at risk of exposure include construction and utility workers, commercial/industrial workers, adult and child visitors to future on-site commercial establishments, and adult and child residents. A summary of the potential exposure pathways, by receptor, medium, and potential for exposure are presented in Table 5-2.

The RI and qualitative human exposure assessment have indicated that there are actual and potential pathways through which populations on-site and off-site could be exposed to potentially hazardous materials related to the Old Ley Creek Channel site. The potentially complete exposure pathways should be further evaluated to determine the best course of action to address them. These actions may consist of engineering and/or administrative controls and should be addressed in the development of a Remedial Action Plan for the site.

6. FISH AND WILDLIFE IMPACT ANALYSIS

Following the Appendix 3C Decision Key in the NYSDEC's Fish and Wildlife Resources Impact Analysis guidance document (NYSDEC, 2010), a Fish and Wildlife Resources Impact Analysis was deemed required (Table 6-1). Therefore, the following analysis identifies actual or potential risks to fish and wildlife residing on and in the vicinity of the Old Ley Creek Channel site from compounds potentially migrating from the site. The analysis focuses on risks associated with site-related compounds detected in the surface and subsurface soil, surface water sediment, and groundwater. This analysis contains:

- Site descriptions and a characterization of plant and animal resources and their value to humans.
- Evaluation of potential exposure pathways to fish and wildlife from site-related contaminants of ecological concern (COECs).
- Comparison of concentrations of COECs to regulatory criteria or derived toxicological benchmarks for the protection of fish and wildlife.
- Conclusions regarding the potential of exposure and possible risks to fish and wildlife on and in the vicinity of the site.

6.1 SITE DESCRIPTION

The purpose of this section is to identify the fish and wild life resources that presently exist and that existed before contaminant introduction. Included are figures that illustrate the site topography, cover type, and surface water drainage. In addition, applicable SCGs include 6 NYCRR Subpart 375-6 SCOs, Division of Water Technical and Operational Guidance Series 1.1.1, Technical Guidance for Screening Contaminated Sediments, Freshwater Wetlands Delineation Manual (NYSDEC 1995), Freshwater Wetlands Act Environmental Conservation Law Article 24, 6 NYCRR Parts 663 and 664, and Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Site (NYSDEC 2010).

Figure 6-1 is a topographic map with a radius of 2 mi from the site. The map includes regulated wetlands, streams, and lakes. The New York State Natural Heritage Program only identified red pigweed (*Chenopodium rubrum*) and troublesome sedge (*Carex molesta),* state listed threatened species, within a 2-mi radius of the site. Red pigweed was last documented in 1940 and troublesome sedge was last documented in 1999. The map indicates that the following regulated wetlands, streams, and lakes are identified within the 2-mi radius: Onondaga Lake, Ley Creek, and Beartrap Creek.

Figure 6-2 illustrates major vegetative communities including wetlands, aquatic habitats, NYSDEC significant habitats, areas of special concern within a 0.5 mi radius. The NYSDEC Natural Heritage Program descriptions and classifications are used to identify the cover types.

6.2 CONTAMINANT-SPECIFIC IMPACT ASSESSMENT

The objective of the contaminant-specific impact assessment is to determine the impacts of site-related contaminants on fish and wildlife resources. The impacts are predicted on the contaminants of environmental concern (COECs), the concentrations of contaminants in the media, the exposure of biota to the contaminants, and the toxic effects of the exposures. The impact has to demonstrate that contamination has a minimal impact on resources or, if significant impacts exist, identify the effects of site-related contaminants on the productivity, diversity, biomass, abundance, usability, etc. of fish and wildlife. The following sections, Pathway Analysis, Criteria-Specific Analysis, and Analysis of Toxic Effects will assess the impacts of site-related contaminants on fish and wildlife.

6.2.1 Pathway Analysis

In this section, fish and wildlife resources, COECs, sources of contaminants, and potential pathways of contaminant migration and exposure will be identified.

Fish and wildlife resources are described for the various cover types identified in the following section. The area includes numerous cover types within a 0.5-mi radius and the plants and animals identified in each of the areas, or expected to be found in each of the cover types.

Based upon activities completed onsite and information obtained from the New York Natural Heritage Program Draft Ecological Communities within New York State (NYSDEC, 2002), the following distinct ecological habitat types and wildlife identified and potentially associated with these habitat types were identified within a 0.5-mi radius of the site:

- **Urban structure exterior:** the exterior surfaces of metal, wood, or concrete structures (such as commercial buildings, apartment buildings, houses, bridges) or any structural surface composed of inorganic materials (glass, plastics, etc.) in an urban or densely populated suburban area. These sites may be sparsely vegetated with lichens, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks. Nooks and crannies may provide nesting habitats for birds and insects, and roosting sites for bats. Characteristic birds include common nighthawk (*Chordeiles minor*) on rooftops, American robin (*Turdus migratorius*) on porches or under shelter, and exotic birds such as rock dove (*Columba livia*), European starling (*Sturnus vulgaris),* and house sparrow (*Passer domesticus*).

- **Landfill/dump:** the site appears to have been a wetland complex that has been filled with a variety of waste streams. The bulk of the visible residual material in the landfill or dump is inorganic material (plastic, glass, metal, etc.).

- **Confined Stream:** the aquatic community of relatively large, fast flowing sections of streams with a moderate to gentle gradient. These streams have well-defined pattern of alternating pools, riffles, and runs. Confined rivers usually have poorly defined meanders (i.e., low sinuosity), occur in confined valleys and are most typical of the mid-reaches of

stream systems. These streams are typically of moderate depth, width and low flow discharge and usually represent a network of 3rd to 4th order stream segments. These streams have high water clarity and are well oxygenated. They are typically surrounded by open upland riverside communities including riverside sand/gravel bar, cobble shore or one of the shoreline outcrop communities. Characteristic fishes include creek chub (Semotilus atromaculatus), pumpkinseed (Lepomis gibbosus), common shiner (Luxilus cornutus), and trout-perch (Percopsis omiscomaycus) in pools; rosyface shiner (Notropis rubellus) at the head of pools; tessellated darter (Etheostoma olmstedi), longnose dace (Rhinichthys cataractae), slimy sculpin (Cottus cognatus) or mottled sculpin (C. bairdi), and stonecat (Noturus flavus) in riffles; and bluntnose minnow (Pimephales notatus) and northern hogsucker (Hypentelium nigricans) in runs. Characteristic macroinvertebrates include riffle and rocky bottom specialists as well as algae shredders such as crayfish (Cambaridae), mayflies (Ephemeroptera), stoneflies (Plecoptera), caddisflies (Trichoptera), cranefly (Hexatoma sp.), beetles (Oulimnius sp., Psephenus sp.), dobsonflies (Corydalidae), midge (Polypedilum sp.), craneflies (Tipulidae), and blackflies (Simulidae). Odonate (Odonata including Calopteryidae) larvae may be characteristic of runs. True bugs (Gerridae, Vellidae, Mesovellidae) are characteristic of pools. The site, depending on location, can also be considered a Backwater Slough in some areas.

- **Backwater Slough:** the aquatic community of quiet to stagnant waters in sloughs that form in embayments and old meanders that are cut off from an unconfined river or marsh headwater stream only at the upstream end by deposition of a levee. Many examples of this river type maybe relatively short-lived in dynamic river complexes, transforming into an oxbow lake through permanent formation of a downstream levee, or into an associated river type through permanent breaching of the upstream levee. The water is typically warm. Although classified as a river type, many hydrological characteristics may resemble those of lacustrine communities. Characteristic biota are pool specialists and may resemble those of lacustrine species assemblages or marsh headwater streams. Aquatic vegetation is usually abundant; characteristic aquatic plants include waterweed (Elodea canadensis), milfoil (Myriophyllum spp.), duckweed (Lemna minor), and pondweeds (Potamogeton spp.). Emergent aquatic plants may be abundant along the shores. Characteristic fishes are golden shiner (Notemigonus crysoleucas), pumpkinseed (Lepomis gibbosus), brown bullhead (Ictalurus nebulosus), and chain pickerel (Esox niger). Characteristic macroinvertebrates may include odonates (Odonata), stoneflies (Plecoptera), diving beetles (Dytiscidae), mosquitoes (Cuculidae), true flies (Tipula sp., Atherix sp., Simulum sp.), midges (Chironomidae), crustaceans (Hyalella sp.), clams (Pisdium sp.) and mayflies (Stenonema). Wading birds and ducks such as pied-billed grebe (Podilymbus podiceps) and great blue heron (Ardeas herodias) may be characteristic. A characteristic mammal may be muskrat (Ondatra zibethicus).

- **Shrub Swamp:** an inland wetland dominated by tall shrubs that occurs along the shore of a lake or river, in a wet depression or valley not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community. The substrate is usually mineral soil or muck. This is a very broadly defined type that includes several

distinct communities and many intermediates. Shrub swamps are very common and quite variable. They may be co-dominated by a mixture of species, or have a single dominant shrub species. The primary facultative wet species identified within the boundary consisted of highbush blueberry (*Vaccinium corymbosum*), jewelweed (*Impatiens capensis*), and reedgrass (*Phragmites australis*). Ground lilly (*Glechoma hederacea*) was the primary facultative upland species identified at the boundary. The obligate species identified was duckweed (*Lemna minor*). This area has been mapped as a palustrine, scrub-shrub, broad-leaved deciduous, seasonally flooded/saturated wetland. Mammal and bird species identified include muskrat (*Ondatra zibethicus*), gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), white tailed deer (*Odocoileus virginianus*), woodchuck (*Marmota monax*), red winged blackbird (*Agelaius phoeniceus*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and blue heron (*Ardea herodias*),

The wetland area is recharged from a culvert that daylights from beneath State Route 11 in the northern portion of the site, groundwater, and two seeps located on the eastern and southern boundary of the wetland.

- **Mowed lawn with trees:** residential, recreational, or commercial land in which the ground cover is dominated by clipped grasses and forbs, and it is shaded by at least 30 percent cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The groundcover is maintained by mowing. Characteristic animals include gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*) American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), yellow warbler (*Dendroica petechia),* cardinal *(Cardinalis cardinalis),* and mockingbird *(Mimus polyglottos).*

- **Paved road/path:** a road or pathway that is paved with asphalt, concrete, brick, stone, etc. There may be sparse vegetation rooted in cracks in the paved surface.

- **Brushy cleared land:** land that has been clearcut or cleared by brush-hog. There may be a lot of woody debris such as branches and slashings from trees that were logged. Vegetation is patchy, with scattered herbs, shrubs, and tree saplings. The amount of vegetative cover depends on soil fertility and the length of time since the land was cleared.

- **Eutrophic dimictic lake:** the aquatic community of a nutrient-rich lake that occurs in a broad, shallow basin. These lakes are dimictic: they have two periods of mixing or turnover (spring and fall); they are thermally stratified in the summer, and they freeze over and become inversely stratified in the winter. Characteristic features of a eutrophic lake include the following: yellow, green, or brownish-green water that is murky, with low transparency, water rich in plant nutrients (especially high in phosphorus, nitrogen and calcium), high primary productivity, lake sediments that are rich in organic matter (usually consisting of a fine organic silt or copropel), water that is well-oxygenated above the summer thermocline, but oxygen-depleted below the summer thermocline or under

ice; epilimnion volume that is relatively large compared with hypolimnion; and a weedy shoreline. Alkalinity is typically high. Usually there are many species of fish, especially minnows (Cyprinidae). Characteristic fishes are warmwater fishes such as yellow perch (Perca flavescens), largemouth bass (Micropterus salmoides), chain pickerel (Esox niger), bluegill (Lepomis macrochirus), pumpkinseed (L. gibbosus), yellow bullhead (Ictalurus natalis), brown bullhead (I. nebulosus), white sucker (Catostomus commersoni), golden shiner (Notemigonus crysoleucas), common shiner (Luxilus cornutus), northern redbelly dace (Phoxinus eos) and stocked white perch (Morone americana). (i.e., Onondaga Lake).

- **Successional northern hardwoods:** a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: quaking aspen (*Populus tremuloides*), bigtooth aspen (*P. grandidentata*), balsam poplar (*P. balsamifera*), paper birch (*Betula papyrifera*) or gray birch (*B. populifolia*), pin cherry (*Prunus pensylvanica*), black cherry (*P. serotina*), red maple (*Acer rubrum*), white pine (*Pinus strobus*), with lesser amounts of white ash (*Fraxinus americana*), green ash (*F. pensylvanica*), and American elm (*Ulmus americana*). Northern indicators include aspens, birches, and pin cherry. This is a broadly defined community and several seral and regional variants are known. Characteristic birds include yellow warbler (*Dendroica petechia*), cardinal (*Cardinalis cardinalis*), chestnut-sided warbler (*Dendroica pensylvanica*), Nashville warbler (*Vermivora ruficapilla*) in young forests with aspen and birch seedlings, and yellow-bellied sapsucker (*Sphyrapicus varius*) in mature aspen forests.

Observation of Stress

Though obvious signs of landfill activities had occurred at the site (debris piles and residual waste was observed throughout the site) no signs of stress to vegetation and wildlife at or around the site were noted during the field activities undertaken at the site.

Value of Habitat to Associated Fauna

The residential, commercial, and industrial properties are of little value to wildlife. The area surrounding the Old Ley Creek Channel is developed and only isolated areas of vegetation exist within 0.5-mi of the site. The site itself is located within the Ley Creek floodplain, functions as part of the stream corridor habitat, and contains wooded habitat, along with 1.1 acres of wetland. Though diversity appears to be low white tailed deer (*Odocoileus virginianus*), great blue heron (*Ardea herodias*), yellow warbler (*Dendroica petechia*), cardinal (*Cardinalis cardinalis),* and woodchuck (*Marmota monax*) were identified at the site. The wildlife expected to occur in the vicinity of the site included urbanized bird and mammalian species such as mockingbird (*Mimus polyglottos)* and gray squirrel *(Sciurus carolinensis)*. Due to the limited size of other habitat types in the vicinity of the site, larger mammalian and bird of prey species are not likely to occur. While the site itself cannot support a complete life-cycle of most species, it can be expected that the area will be used by a complete array of urban wildlife.

Value of Resources to Humans

The site and surrounding area is of little value to humans for recreational use or wildlife. Bird feeders may be in residential yards and minimal recreational use of the nearby parks may occur. The developed nature of the area precludes hunting of small game and deer in the vicinity of the site.

6.3 CRITERIA-SPECIFIC ANALYSIS

A criteria-specific analysis presumes the presence of contaminated resources and pathways of migration for site-related contaminants. Where published numerical data for analysis did not exist, then methods described in the appropriate SCGs were used to develop the standard (e.g., use of hardness for metals evaluation and total organic carbon for evaluation of organic compounds in sediment). Because concentrations of PCBs, pesticides, SVOCs, and metals were greater than their respective SCGs in various environmental media analysis of toxic effects is required.

Shallow and subsurface soils, groundwater, surface water, and sediment were analyzed as part of the RI. Primary COECs onsite include various PCBs, pesticides, SVOCs, and metals.

The 3.5-acre site consists of 1.1 acres of wetland. The balance of the site is lightly forested. The concentrations of COECs identified in environmental media at the site are elevated and toxic effect to plants is possible (Tables 3-1 through 3-31). Metals can accumulate in plants and can lead to inhibited growth, structural damage, and an overall decline in plant productivity. Pesticides, PCBs, and SVOCs have low water solubilities, low Henry's Law constants, high K_{oc}, and high K_{ow} values which indicate that have an affinity for bonding with soils with available organic carbon, do not readily volatilize, and are more fat soluble than water soluble. These chemical characteristics provide an exposure potential and the media that the COECs were detected in (surface water, groundwater, soil, and sediment) provide contact, ingestion, and inhalation pathways.

6.4 TOXIC EFFECT ANALYSIS

A toxic-effect analysis presumes that fish and wildlife resources have been identified and that the contamination of resources and contaminant pathways exist. Because biota samples were not collected, completion of toxic effects analysis is not possible.

6.5 CONCLUSIONS

Potential pathways for exposure have been identified between surface and subsurface soil, surface water, and sediment for fish and wildlife within the area of the site. As such, remedial activities specifically directed at wildlife exposure are recommended.

7. CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the conclusions and recommendations of the RI. The chapter provides a summary of the on-site conditions for the Old Ley Creek Channel site, as determined by the completion of the current RI work. This section also presents recommendations for management of the Old Ley Creek Channel site in the immediate future.

7.1 SUMMARY OF IMPACTS AT THE OLD LEY CREEK CHANNEL SITE

The following sections briefly summarize the environmental impacts at the Old Ley Creek Channel site. This section is organized by areas of potential concern for the Old Ley Creek Channel site. Areas of concern and the impacts associated with the environmental media are based on analytical results and their comparison with the appropriate SCGs. Table 7-1 summarizes the degree of impacts of the COPCs and compares the data with the SCGs for the site. As previously stated, this RI is focused on surface and subsurface soils, surface water, groundwater, and sediment.

7.2 VOLATILE ORGANIC COMPOUNDS IN SURFACE AND SUBSURFACE SOILS

- Analytical results from the soil sampling program completed under this RI indicate that VOCs in soil at concentrations greater than SCGs are limited to acetone. Though other VOCs were detected, their concentrations were less than their SCGs. Acetone was detected at several locations and depths ranging in concentration from 0.0011 to 25 ppm (at soil boring SB-12 from 8 to 12 ft bgs). Acetone was identified in groundwater at 10 ppm at monitoring well MW-14 in an area not hydraulically connected to the SB-12 location.

- Due to the undeveloped nature of the site and that it received surface water and sediment, and was used as a dumping site, there is no specific point source or source area identified. There are two adjacent parcels: the Town of Salina Landfill parcel and the SPS property. The landfill is undergoing a subsurface investigation and remediation. Multiple VOCs were identified in groundwater on the landfill parcel immediately adjacent to the Old Ley Creek Channel site. Groundwater from this parcel flows east-southeast toward Old Ley Creek Channel. The SPS property has been evaluated under NYSDEC guidance. Both vinyl chloride and 1,2-dichlorethene have been identified in groundwater at the site. Remediation, as required by NYSDEC, has been performed and semi-annual groundwater monitoring is being completed. There is a treatment system located on the southern bank of the Old Ley Creek Channel which appears to discharge to the channel. Groundwater on the eastern side of the old channel flows west-southwest toward the old channel.

- Figure 3-6 shows the overlay of both shallow subsurface and deep subsurface soil areas of concern. The contour lines indicate the ranges of PCB concentrations in soil from the

surface to 24 inches below grade. The flags indicate locations where other contaminants in soil and sediment were identified at concentrations greater than their SCGs.

7.3 VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

- Shallow groundwater analytical results at the Old Ley Creek Channel site identified only MTBE in groundwater at this site. The source of MTBE is unknown.

- Multiple VOCs have been identified in groundwater samples collected from the Town of Salina Landfill parcel immediately west of the old channel. Groundwater in the eastern portion of the parcel flows to the east-southeast toward the old channel where the channel acts as a local discharge zone. The VOCs were identified in monitoring wells MW-14, MW-15, and MW-19 (CHA 2009). Well MW-14 appears to be in a portion of groundwater flow that is toward Ley Creek. Groundwater flow in the area of well MW-15 is likely to be more toward Ley Creek than the old channel and groundwater flow in the area of MW-19 is toward the old channel. The VOCs identified in these wells include the chlorinated compounds 1,1,1-tricholorethane, 1,1-dichloroethane, *cis*-1,2-dichloroethene, and vinyl chloride. The concentrations of these and other compounds were greater than the AWQS. The highest concentrations of these compounds is in the vicinity of MW-14. The fewest number and lowest concentrations of VOCs was identified at MW-19. This suggests that groundwater at the Old Ley Creek Channel site and the Town of Salina Landfill parcel do not co-mingle or mix.

7.4 VOLATILE ORGANIC COMPOUNDS IN SURFACE WATER

- No VOCs were identified in surface water at concentrations greater than the Class B A(C) standard during any of the three surface water sampling events. Concentrations of VOCs were detected during each of the events including 1,2,4-trimethylbenzene, acetone, benzene, carbon disulfide, chloroethane, *cis*-1,2-dichloroethene, MTBE, m,p-xylene, naphthalene, o-xylene, toluene, trichloroethene, vinyl chloride, and total xylenes.

7.5 VOLATILE ORGANIC COMPOUNDS IN SEDIMENT

- Analytical results indicate that low-level concentrations of VOCs (less than their respective levels of protection) were detected at six of the eight sediment sampling locations (SED-01, -02, -03, -04, -05, and -12). Each of these locations is within the Old Ley Creek Channel.

- Vinyl chloride was detected at a concentration greater than the Human Health Bioaccumulation standard of .015 mg/kg at SED-03 (0-6, 6-12, and 12-24 inches) at 4.7, 4.6 and 3.8 mg/kg, respectively. SED-03 is located within the Old Ley Creek Channel approximately 50-ft downstream from the outfall of the SPS treatment system.

7.6 SEMIVOLATILE ORGANIC COMPOUNDS IN SURFACE AND SUBSURFACE SOIL

- Nine SVOCs were detected in surface and subsurface soil samples greater than their respective 6 NYCRR Part 375 Unrestricted Soil Cleanup Objectives for protection of groundwater. The SVOCs detected were collected from 0 to 14 ft bgs.

- Cross sections and topographic evidence suggest that the highest concentrations and broadest types of SVOCs are related to locations where fill was identified in the soil borings or topographic evidence suggests the presence of fill near the sampling location.

7.7 SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

- Bis(2-ethylhexyl)phthalate was identified at monitoring well MW-03 at a concentration below the AWQS.

7.8 SEMIVOLATILE ORGANIC COMPOUNDS IN SURFACE WATER

- Concentrations of several SVOCs were identified during the three surface water sampling events including, 2-methylnaphthalene at SW-07, 4-methylphenol, phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(g,h,i)perylene at SW-10. These compounds were identified at concentrations less than the AWQS.

7.9 SEMIVOLATILE ORGANIC COMPOUNDS IN SEDIMENT

- Analytical results indicate that low-level concentrations of 22 SVOCs (less than their respective Levels of Protection) were detected at each of the eight sediment sampling locations.

- Five of the SVOCs detected were at concentrations greater than either the Human Health Bioaccumulation or Benthic Aquatic Life Chronic Toxicity standards. These SVOCs include benzo(a)anthracene, benzo(a)pyrene, fluorene, phenol, and phenanthrene. Combinations of these SVOCs were found at each of the sediment sampling locations. The lowest concentrations were detected at SED-01 and SED-02. These samples were collected from the upper portions of the Old Ley Creek Channel.

- The SVOCs detected include, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenol. The SVOCs were more wide spread and at higher concentrations at the surface soil sampling locations.

7.10 PESTICIDES IN SURFACE AND SUBSURFACE SOIL

- Seven pesticides were identified at concentrations greater than the Part 375 SCOs at 12 of the 20 sampling locations including 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, beta-BHC, delta-BHC, endrin, and dieldrin. These pesticides were detected at various depths from 0 to 14 ft bgs.

- Other pesticides were identified at the various sampling locations, but at concentrations less than the Part 375 SCOs.

7.11 PESTICIDES IN GROUNDWATER

- Groundwater samples were collected from the three monitoring wells for the analysis of pesticides. Analysis indicates that no pesticides were detected in groundwater at the site. These results are consistent with the results of groundwater sampling performed by CHA on the Salina Landfill (south) site (2009).

7.12 PESTICIDES IN SURFACE WATER

- No pesticides were detected during the high-water and low-water sampling events in January 2010.

- Pesticides were detected in the May 2010 surface water sampling event. Pesticides are compared to Class B Stream Human Consumption of Fish (H[(FC)]) standard. Heptachlor, heptachlor epoxide, 4,4'-DDE, 4,4'DDD, and 4,4'-DDT were identified at SW-09 at concentrations greater than their respective Class B H(FC) surface water standards.

- Concentrations of pesticides were identified at SS-14 and SS-15 (which are adjacent to SW-09 sampling location) including 4,4'-DDT and heptachlor epoxide.

- Heptachlor and aldrin were identified at SW-10 at concentrations greater than their respective Class B H(FC) surface water standards. Gamma BHC, heptachlor, aldrin, endosulfan sulfate, and gamma chlordane were also identified at SED-03, the nearest sampling location to SW-10.

- No pesticides were identified at SW-08.

7.13 PESTICIDES IN SEDIMENT

- Eight pesticides were detected at concentrations greater than Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity, the Human Health Bioaccumulation, or the Wildlife Bioaccumulation criterion (whichever was more stringent) at each sediment sampling

location. The pesticides included, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endosulfan I, delta-BHC, gamma-BHC (lindane), gamma-chlordane, and heptachlor.

7.14 PCBS IN SURFACE AND SUBSURFACE SOIL

- PCBs are the most abundant organic compound identified at the site. PCBs were identified at concentrations greater than the SCO in 133 of 154 soil samples, or 47 of 53 soil sampling locations. Concentrations ranged from 0.042 to 440 mg/kg.

- The volume of surface soil from 0 to 24 in. bgs that has a concentration of PCBs greater than 50 mg/kg is 1,256 yd^3 (approximately 1,885 tons).

- The volume of surface soil from 0 to 24 in. bgs that has a concentration of PCBs between 25 and 50 mg/kg is 3,018 yd^3 (approximately 4,527 tons).

- The volume of surface soil from 0 to 24 in. bgs that has a concentration of PCBs between 0 and 25 mg/kg is 1,748 yd^3 (approximately 2,622 tons).

7.15 PCBS IN GROUNDWATER

- Total and dissolved groundwater samples were collected from the three monitoring wells for the analysis of PCBs. Analysis indicates that no PCBs were detected in groundwater at the site. These results are consistent with the results of groundwater sampling performed by CHA on the Salina Landfill (south) site (2009).

7.16 PCBS IN SURFACE WATER

- Seventeen surface water samples were collected during three different events at the site. The events included low-water and high-water sampling and collection of surface water samples from a culvert and two seeps which discharge to the old channel during the third event.

- Seven surface water samples were collected during the 14 January 2010 low-water surface water sampling event. PCB analysis of the samples collected during the low-water sampling indicated that no PCBs were identified at any of the sampling locations.

- Seven surface water samples were collected during the 26 January 2010 high-water surface water sampling event. PCB analysis of the samples collected during the high-water sampling indicates that concentrations (greater than the Class B A (C) standard of $1x10^{-6}$ parts per billion) of a PCB aroclor1248 were identified at four of the seven sampling locations. The PCB was identified at sample locations SW-01, SW-02, SW-05, and SW-07. SW-01, SW-02, and SW07 are located within the Old Ley Creek Channel. SW-05 is located just upstream of the confluence of the old channel and Ley Creek. No pesticides were identified during the high-water sampling event.

- Three surface water samples were collected during the 24 May 2010 sampling event. PCB analysis of the samples collected during this event indicates that concentrations of either aroclor 1248 or 1254, or both, are greater than the Class B A(C) surface water standard at SW-09 and SW-10. Surface water sampling location SW-09 is a seep located at the base of fill between surface soil sampling locations SS-14 and SS-15. Concentrations of PCBs slightly greater than SCOs were identified at SS-14 and SS-15. PCB analysis at soil boring SB-14 identified no PCBs. PCB analysis at soil boring SB-15 indicated concentrations of PCBs at 4-8, 8-12, and 12-14 ft bgs, the highest concentration (28 ppm) at 8-12 ft bgs. SW-10 is located downstream of the SPS treatment system. Sediment sample SED-03 located immediately downstream from SW-10 had concentrations of PCBs from 0 to 6 in. of 57.4 ppm.

7.17 PCBS IN SEDIMENT

- PCBs at concentrations greater than the SCG were identified in 10 of 14 sediment samples. PCBs were identified in 4 of the 8 sediment sampling locations.

- Analytical results indicate that concentrations of total PCBs were detected at concentrations greater than the Human Health Bioaccumulation criteria of .0002 mg/kg at SED-01, -02, -03, and -04 from 0 to 24 in. bgs (Table 3-17).

- Total PCBs were detected at concentrations less than the Human Health Bioaccumulation criteria at SED-05, -06, -11, and -12.

- Samples SED-01 to SED-04 were collected in the upper portion of the old channel where sediments were thicker. Samples SED-05, -06, -11, and -12 were collected along the lower reach of the old channel where sediment was thinner.

- Water movement in the upper reach is very slow to nearly stagnant allowing for additional sediment. Water movement in the lower reach is faster with little stagnation reducing the potential for sedimentation.

7.18 METALS IN SURFACE AND SUBSURFACE SOIL

- Nine TAL metals plus mercury were reported at concentrations greater than the Part 375 Unrestricted SCOs at surface soil sampling locations including arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Twenty-seven of the 31 surface soil sampling locations had concentrations of metals greater than their SCOs.

- Nine TAL metals and mercury were reported at concentrations greater than the Part 375 Unrestricted Soil Cleanup Objectives in subsurface soil including arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Sixteen of the 22 subsurface soil sampling locations had concentrations of metals greater than their SCOs.

7.19 METALS IN GROUNDWATER

- Numerous metals were identified in both total and dissolved samples collected from this site. Metals identified in the samples include aluminum, antimony, arsenic, barium, calcium, chromium, copper, iron, magnesium, manganese, nickel, potassium, selenium, sodium, vanadium, and zinc.

- Antimony, iron, magnesium, manganese, selenium, and sodium were detected at concentrations greater than their Class GA AWQS.

- Iron, magnesium, manganese, and sodium were also detected during groundwater sampling conducted in support of the Town of Salina Landfill (CHA 2009). The CHA report suggested that concentrations of iron, magnesium, and manganese were potentially related to turbidity or possibly leachate indicators.

- Groundwater flow patterns and turbidity measurements indicate that the concentrations of these compounds at the Old Ley Creek Channel site are not likely the result of leachate impacts from the landfill or from elevated turbidity.

7.20 METALS IN SURFACE WATER

- Seven surface water samples were collected during the 14 January 2010 low-water surface water sampling event. Metals and mercury analysis of the samples collected during the low-water sampling indicates that concentrations (greater than the Class B A (C) standard) were identified at each of the sampling locations. The metals identified include aluminum, copper, and iron.

- Seven surface water samples were collected during the 26 January 2010 high-water surface water sampling event. Metals and mercury analysis of the samples collected during the low-water sampling indicates that concentrations (greater than the Class B A (C) standard) were identified at each of the sampling locations. The metals identified include aluminum and iron.

- Three surface water samples were collected during the 24 May 2010 sampling event. Metals and mercury analysis of the samples collected during this event indicates that concentrations of aluminum, chromium, cobalt, copper, iron, lead, mercury, nickel, silver, vanadium, and zinc are greater than the Class B A(C) surface water standard.

7.21 METALS IN SEDIMENTS

- Analytical results indicate that concentrations of metals greater than their respective lowest or severe effect levels were detected at each of the eight sediment sampling locations.

- Lowest effect levels were exceeded at each sampling location for a combination of the following metals, arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, silver, and zinc.

- Severe effect levels were exceeded at the following sampling locations SED-01, -02, -03, and -04. The severe effect levels were exceeded for chromium, copper, lead, nickel, silver, and zinc.

- The sediment samples were collected from locations from up to downstream in the Old Ley Creek Channel. Each of these metals was also detected in surrounding surface and subsurface soil sampling locations at concentrations greater than their respective SCGs.

7.22 CURRENT CONCEPTUAL SITE MODEL

A conceptual site model provides the framework for identifying and quantifying known and unknown chemicals of concern in the environment at a site. Based on the data collected during this RI, the previous investigations performed at the Town of Salina Landfill, the following narrative outlines the conceptual site model.

Several factors have resulted to impacts to environmental media at the Old Ley Creek Channel site. Historical land-filling activities from the 1950s through the 1970s at the Town of Salina Landfill are one of the potential sources of impacts to the area. Topographic and soil boring evidence places the landfill along the western bank of the old channel along its entire extent. Analytical results in groundwater collected on the Town of Salina Landfill parcel adjacent to the Old Ley Creek Channel site indicate that VOCs are impactsing groundwater from waste located in this area. Historically, there is documented disposal of hazardous waste from the General Motors Fisher Guide Division. The waste included paint sludge and waste paint thinner and reducer. Other wastes were also disposed of in the landfill resulting in releases of PCBs, heavy metals, and other organic compounds into the environment downgradient of the landfill. Soil, groundwater, surface water, and sediment have each been impacted.

Ley Creek drains a variety of different areas from its headwaters to Onondaga Lake including residential, rural, recreational, and industrial areas. The cumulative effect of activities in these areas and the migration of sediments and impacted surface water from upstream to downstream has likely resulted in impacts from a variety of activities. The analytical results collected during completion of this RI confirmed that soil, surface water, groundwater, and sediment have been impacted by disposal activities at the site and the migration of contaminants to the site through natural processes.

A third potential source of impacts is the SPS treatment system which discharges to the Old Ley Creek Channel. The design parameters of the system and the discharge permit requirements are unknown. However, analytical results suggest that the treatment system may be responsible for a portion of the impacts in environmental media at the site.

Though additional confirmatory sampling may be required for surface water, the media sampling that has been conducted to date appears to be adequate for determining the nature and extent of impacts at the site. The focus of this investigation has been the extent of PCB impacts to soil and sediment in the area, the idea being that because of the extent of the PCB impacts (See figures 3-6 through 3-11), if the site is managed based on PCB impacts, the other contaminants in surface water, sediment, and groundwater will also be addressed.

7.23 RECOMMENDATIONS

7.23.1 Groundwater

- The impacts to groundwater at the site monitoring wells were limited with respect to VOCs, SVOCs, metals, pesticides, and PCBs. No additional groundwater sampling appears to be required. The monitoring wells should remain in place in order to be used for gauging purposes.

- The extent of groundwater impacts associated with the Town of Salina Landfill wells was notable for VOCs. Gauging at the landfill should include gauging of the Old Ley Creek Channel monitoring wells to further refine groundwater flow patterns in the area.

7.23.2 Surface Water

- PCBs were identified in surface water during two of the sampling rounds at concentrations greater than the surface water guidelines. Other contaminants, while present, were of a limited concern.

- Additional surface water sampling should be completed upstream of the site and included in the sampling for the landfill as well.

7.23.3 Soil

- PCBs were identified in site soils from the surface to several feet below grade, the highest concentrations being within the first 2 ft.

- There is unrestricted public access to the site. The exposure pathway for humans and wildlife is complete for surface soils. The analytical data suggests that an interim remedial measure (IRM) be conducted to remove highly impacted surface soil from the area, removing the potential for exposure to PCBs and other contaminants identified in the soil.

- Removing impacted soil through an IRM based on the extent of PCBs will also remove other contaminants limiting exposure to them as well.

- There are limited analytical data for soil samples from 2 to 4 ft bgs. Additional data may be required to determine the volumes of impacted soil for evaluating alternatives in the FS.

7.23.4 Sediment

- PCBs were identified in site sediment from the surface to 2 ft below grade.

- There is unrestricted public access to the site. The exposure pathway for humans and wildlife is complete for sediment. As noted above, the analytical data suggests that an IRM removing surface soil be conducted to remove highly impacted surface soil from the area. During completion of the IRM, it is recommended that sediment in the Old Ley Creek Channel also be excavated and treated or disposed of properly.

- To identify the extent of the impacted sediment, it is recommended that additional sediment samples be collected in the old channel.

7.24 PERFORM AN IRM

- Based on the site data collected during this RI, EA recommends that completion of an IRM with the intent of removing impacted soil and sediment from Old Ley Creek Channel site be completed.

- The IRM could potentially be completed in conjunction with the completion of excavation to place the fragment of the Town of Salina Landfill within the boundaries of the former landfill west of Ley Creek.

- It is assumed that due to the high concentrations of PCBs (greater than 50 mg/kg) in on-site soils and sediments, portions of the soil and sediment could not be placed within the boundaries of the former landfill and would have to be disposed of as hazardous waste.

8. REFERENCES

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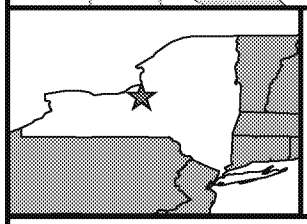

Legend

★ Old Ley Creek

Miles

0 1 2 4 6 8

Source: ESRI Streetmaps (2005).

Old Ley Creek Channel Remedial Investigation
(Site No. 7-34-074)
Town of Salina, New York

FIGURE 1-1
SITE LOCATION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
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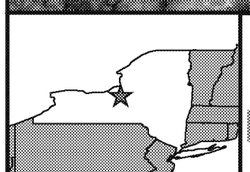


Legend

Site Boundary

Feet

0 50 100 200

Source: NY_CENTRAL_2006_1FT_NC (NYS Office of Cyber Security and Critical Infrastructure Coordination [CSCIC])

Old Ley Creek Channel Remedial Investigation Site (Site No. 7-34-074)
Town of Salina, New York

FIGURE 1-2
Site Map

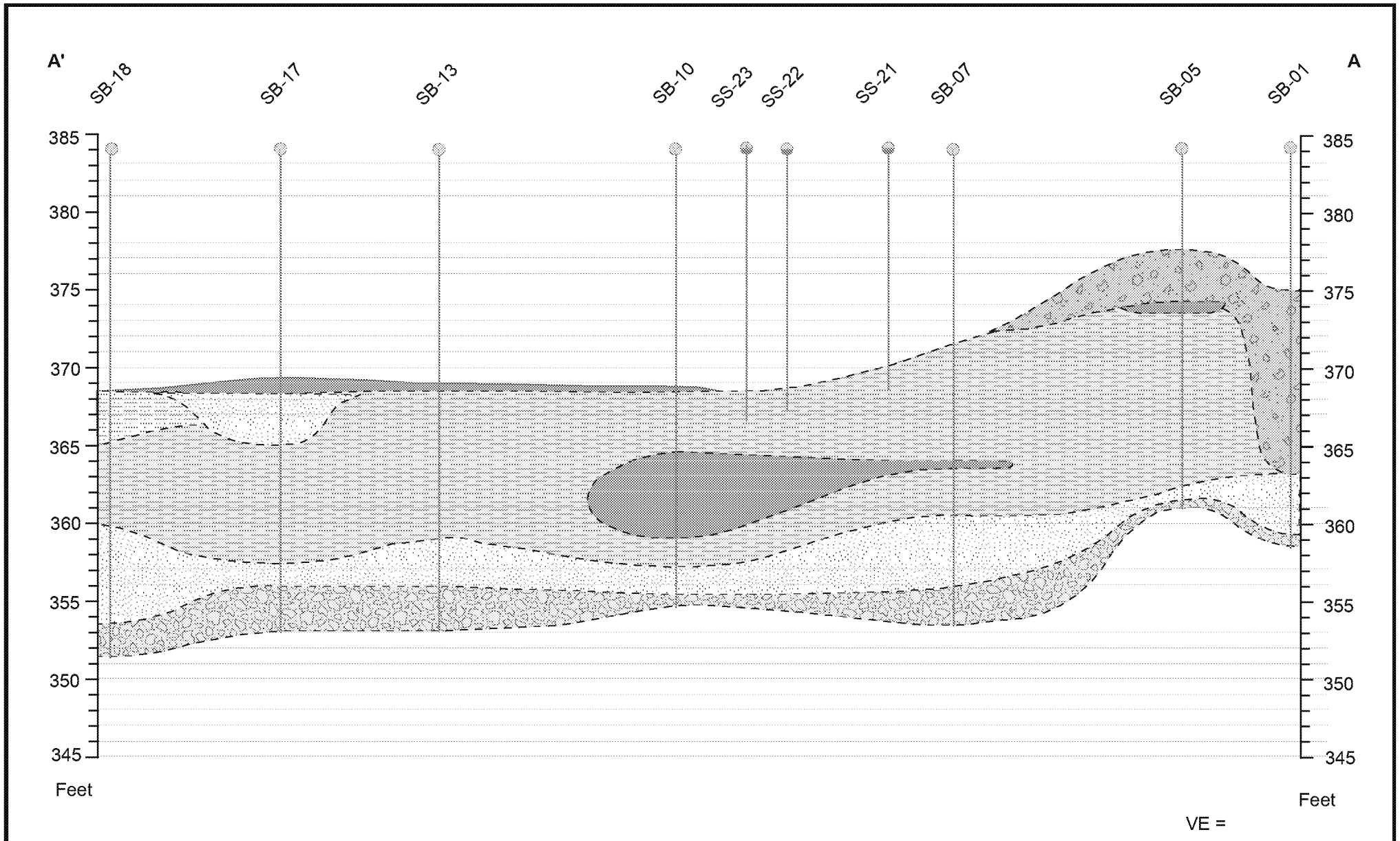
PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	CJS	CJS	CJS	AS SHOWN	JULY 2010	14638.42	GIS\FIGURES\1436842 _LeyCreek_Figure_2.MXD

FIGURE 2-1
MONITORING WELL AND SAMPLE LOCATION MAP

Old Ley Creek Channel (Site No. 7-34-074)
Remedial Investigation
TOWN OF SALINA, NEW YORK

PREPARED BY:
EA ENGINEERING, P.C.
AND ITS AFFILIATE
EA SCIENCE AND TECHNOLOGY

FIGURE	DRAWING NO.	FILE NAME	PROJECT NO.	SCALE	DATE	CHECKED BY	DRAWN BY	DESIGNED BY	PROJECT MGR.
FIGURE 2-1	1 OF 1	LocationMap	14368 42	AS SHOWN	NOVEMBER 2010	SLG	DW	SLG	SLG



Legend

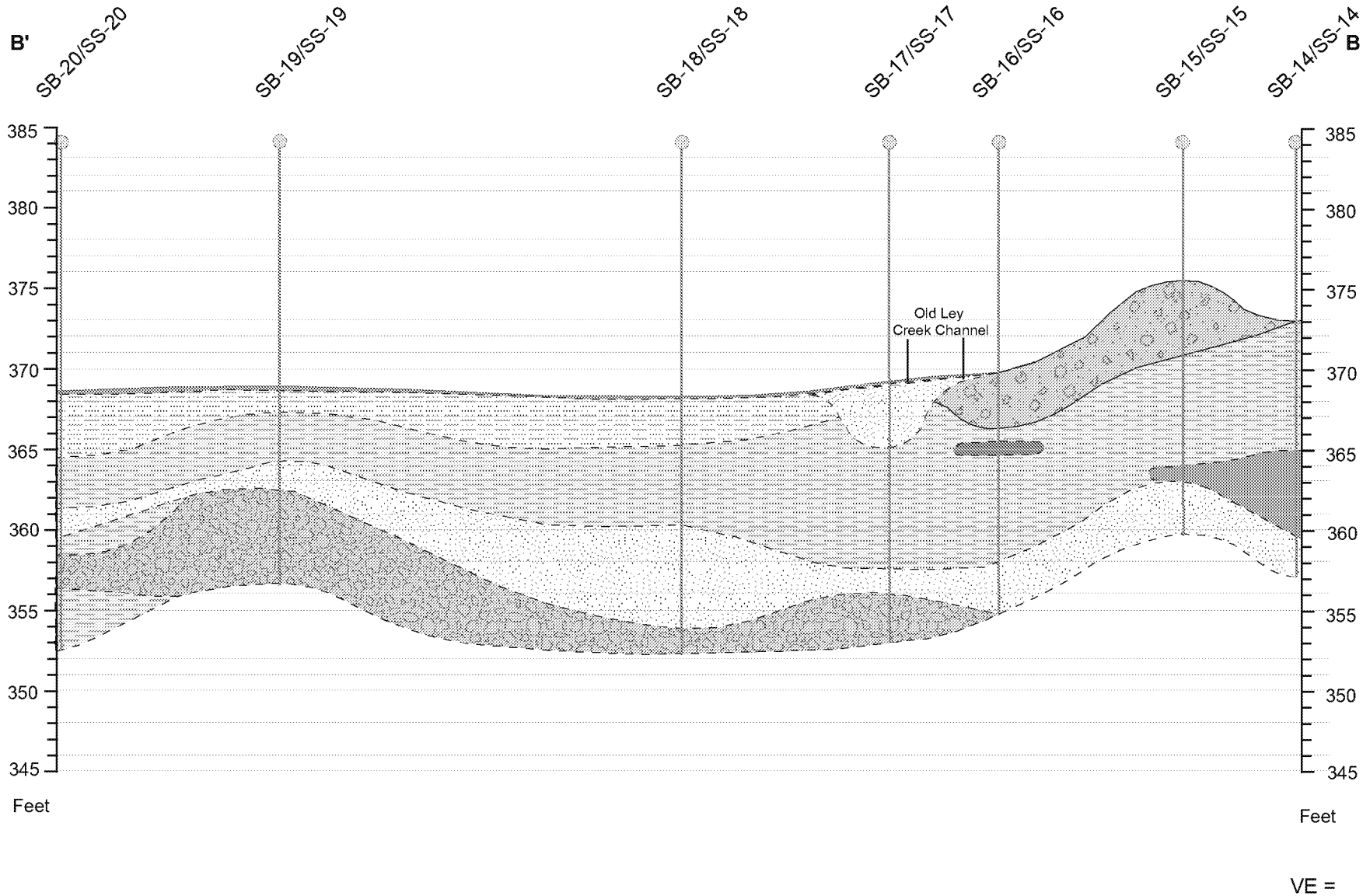
- Top Soil
- Fill Material
- Peat
- Silt and Organics
- Silt and Clay
- Silt and Sand
- Till

0 20 40 60 80 100
Feet

Old Ley Creek Channel Remedial Investigation (Site No. 7-34-074)
Town of Salina, New York

FIGURE 3-1
NORTHEAST-SOUTHWEST
GEOLOGICAL CROSS SECTION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	JCP	JCP	SLG	AS SHOWN	JULY 2010	14368.42	G:\Projects\State&Local\NYSDEC\D004438 - Inv_Des\1436842_Old Ley Creek\GIS\FIGURES



Legend

- Top Soil
- Fill Material
- Silt and Organics
- Silt and Clay
- Creek Deposits
- Peat
- Silt and Sand
- Till

0 20 40 60 80 100
Feet

Old Ley Creek Channel Remedial Investigation (Site No. 7-34-074)
Town of Salina, New York

FIGURE 3-2
WEST-EAST
GEOLOGICAL CROSS SECTION

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	JCP	JCP	SLG	AS SHOWN	JULY 2010	14368.42	G:\Projects\State&Local\NYSDEC\D004438 - Inv_Des\1436842_Old Ley Creek\GIS\FIGURES

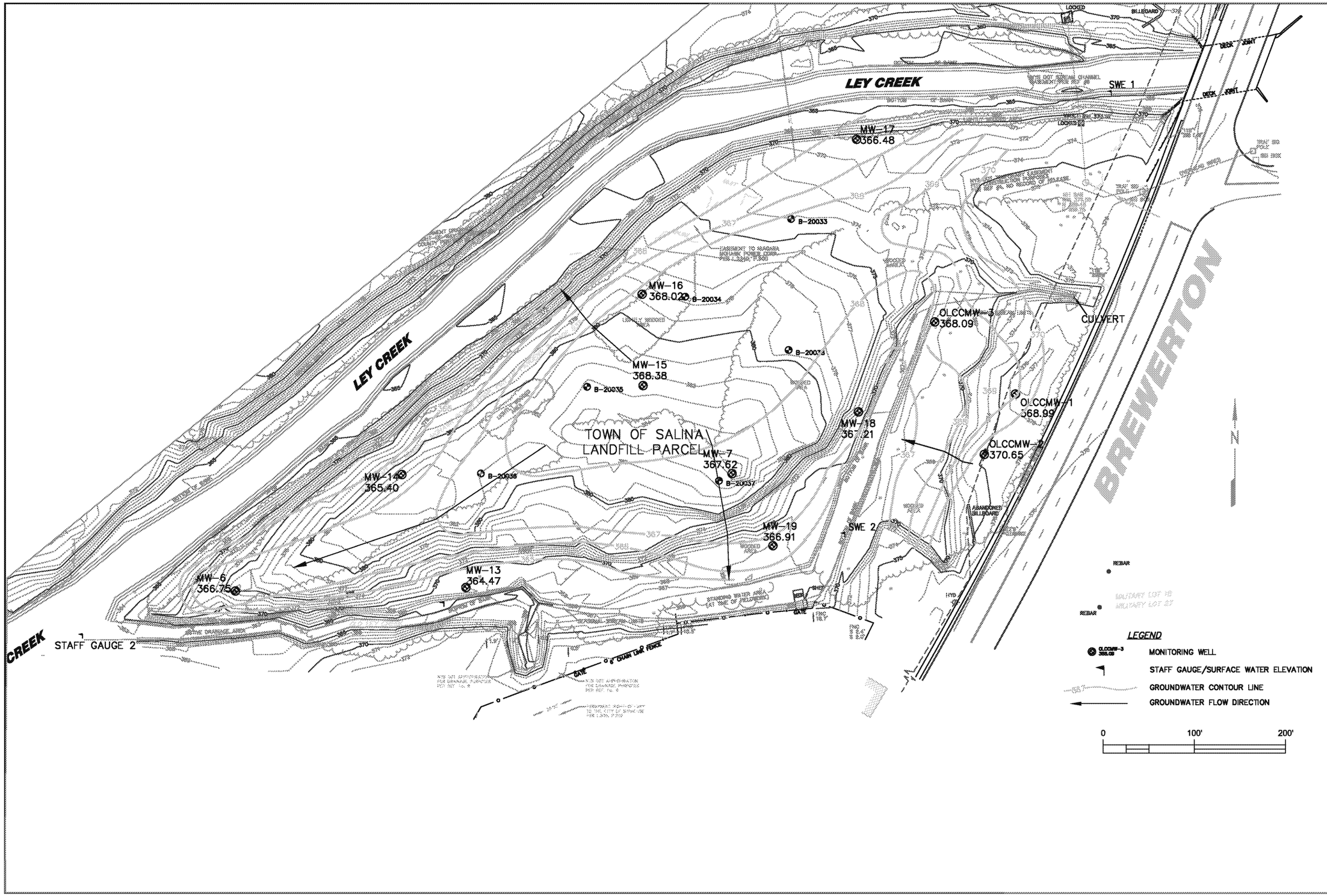


FIGURE 3-3
GROUNDWATER CONTOUR MAP
(10 MAY 2010)

Old Ley Creek Channel (Site No. 7-34-074)
Remedial Investigation
TOWN OF SALINA, NEW YORK

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PROJECT MGR.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE	PROJECT NO.	FILE NAME	DRAWING NO.	FIGURE
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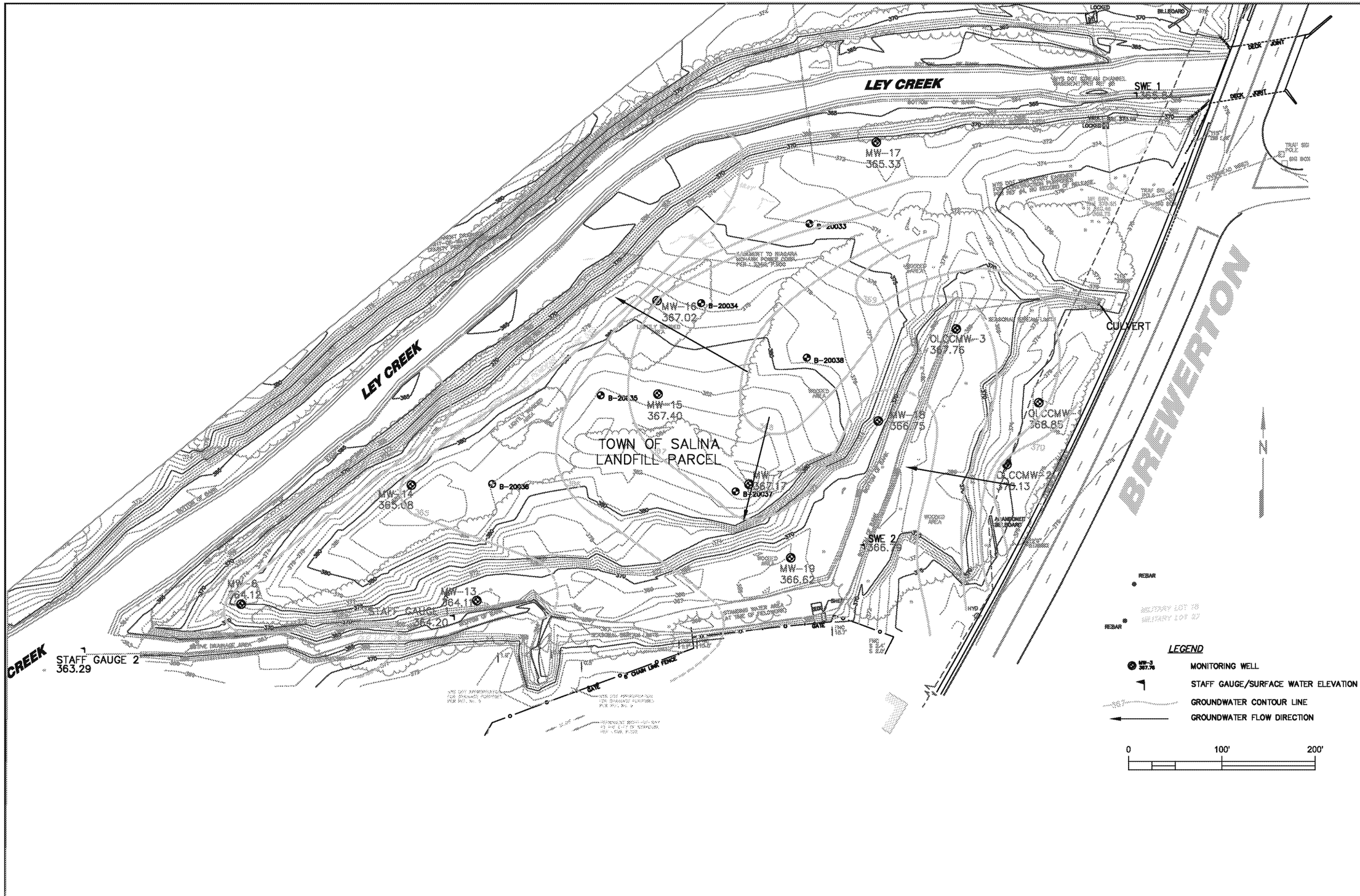

FIGURE 3-4
GROUNDWATER CONTOUR MAP
(24 MAY 2010)

Old Ley Creek Channel (Site No. 7-34-074)
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PROJECT MGR.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE	PROJECT NO.	FILE NAME	DRAWING NO.	FIGURE
SLG	SLG	DW	SLG	NOVEMBER 2010	AS SHOWN	14436842	GWContours	1 OF 1	FIGURE 3-4

FIGURE 3-5
WETLAND DELINEATION MAP

Old Ley Creek Channel (Site No. 7-34-074)
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TOWN OF SALINA, NEW YORK

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PROJECT MGR.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE	PROJECT NO.	FILE NAME	DRAWING NO.	FIGURE
SLG	SLG	DW	SLG	NOVEMBER 2010	AS SHOWN	14368 42	OLCC_Wetland	1 OF 1	FIGURE 3-5

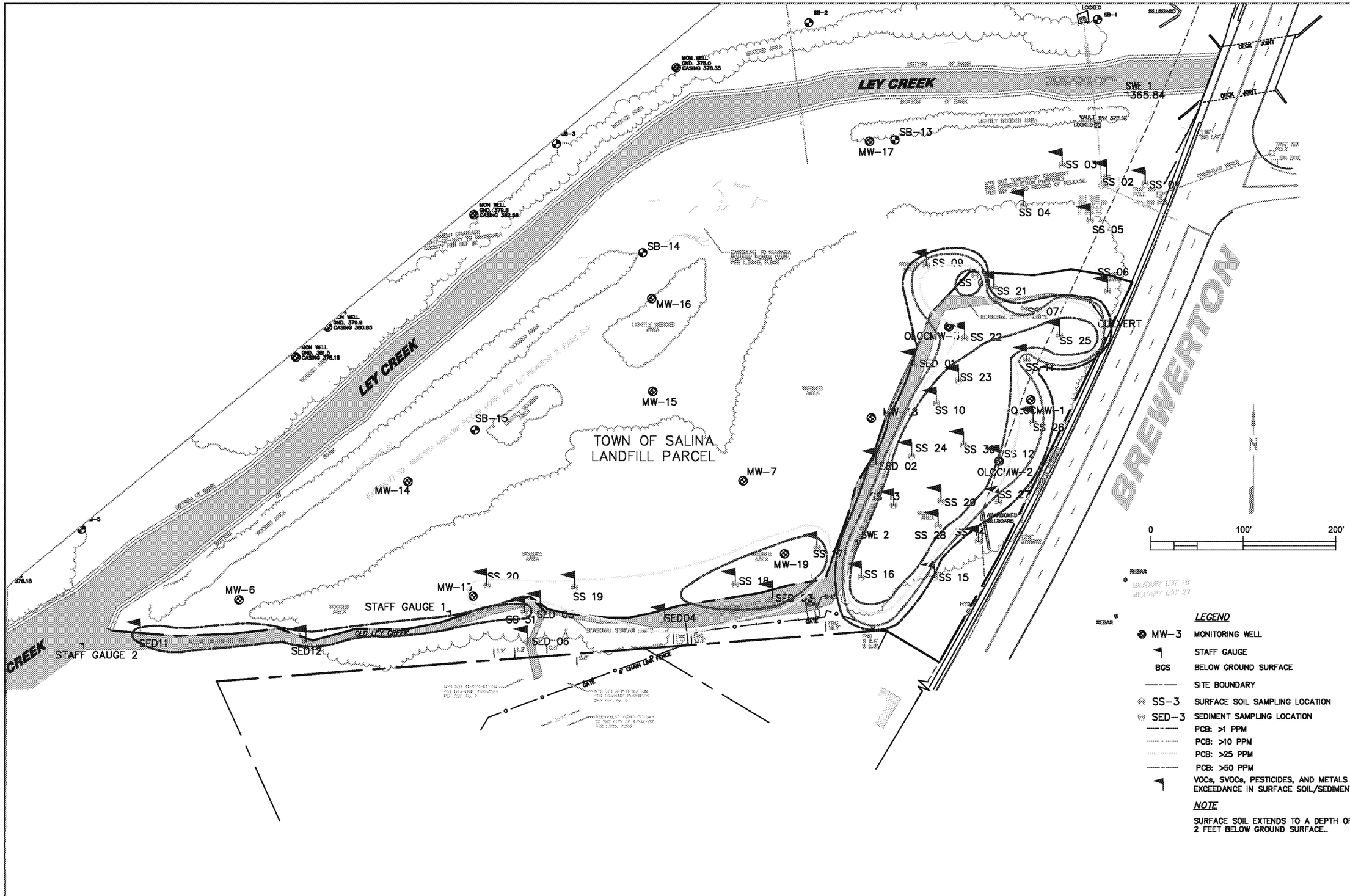

FIGURE 3-6
SURFACE SOIL/SEDIMENT VOCs, SVOCs, PESTICIDES, PCBs, AND METALS CONCENTRATION EXCEEDANCE MAP

Old Ley Creek Channel (Site No. 7-34-074)
Remedial Investigation
TOWN OF SALINA, NEW YORK

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PROJECT MGR.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE	PROJECT NO.	FILE NAME	DRAWING NO.	FIGURE
SLG	SLG	DW	SLG	NOVEMBER 2010	AS SHOWN	1436842	NonPCBMap	1 OF 1	FIGURE 3-6

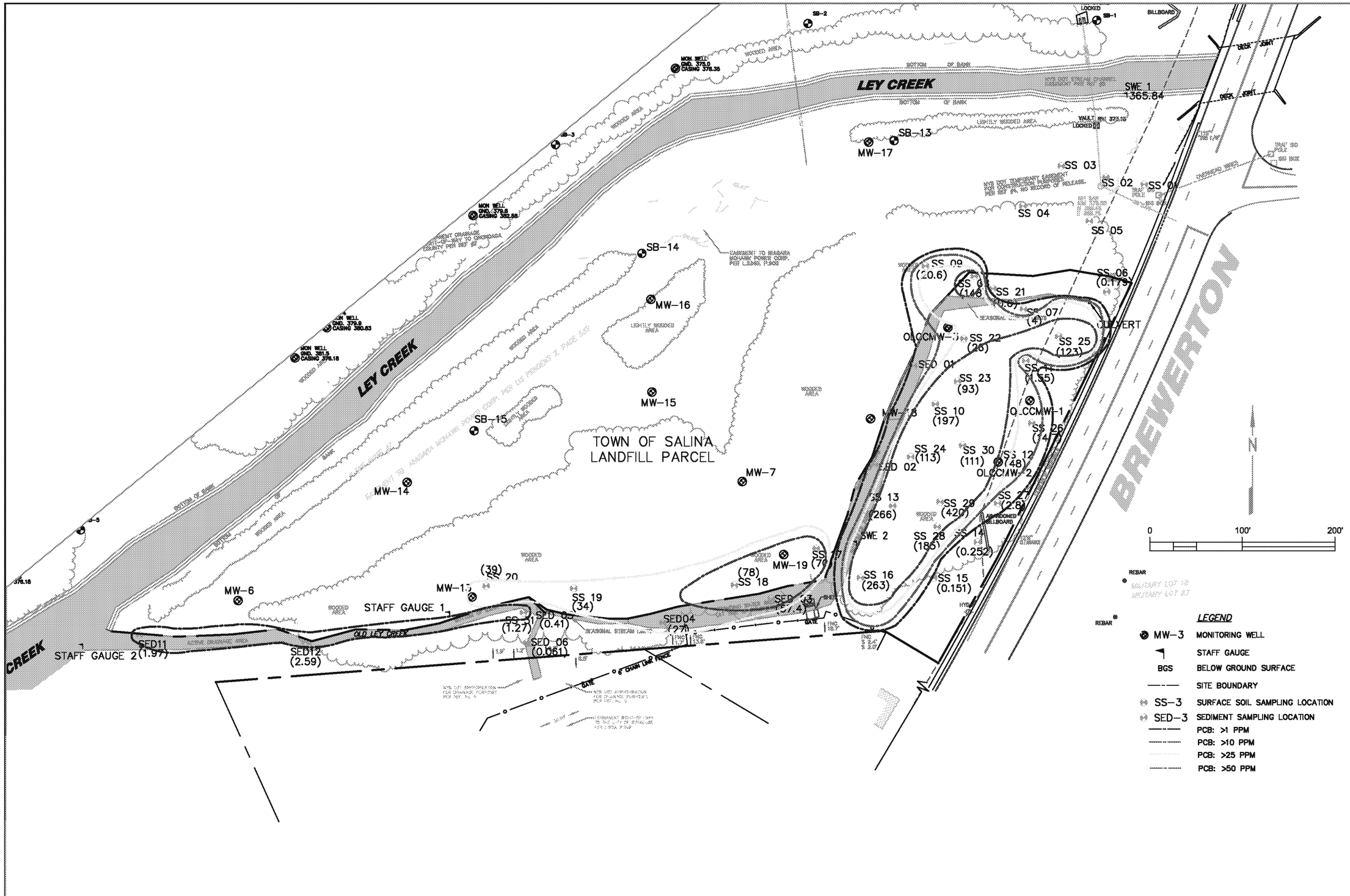

FIGURE 3-7
SURFACE SOIL/SEDIMENT PCB CONCENTRATION BOUNDARIES (0-6 IN BGS)

Old Ley Creek Channel (Site No. 7-34-074)
Remedial Investigation
TOWN OF SALINA, NEW YORK

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FIGURE	DRAWING NO.	FILE NAME	PROJECT NO.	SCALE	DATE	CHECKED BY	DRAWN BY	DESIGNED BY	PROJECT MGR.
FIGURE 3-7	1 OF 1	PCBBoundaries	1436842	AS SHOWN	NOVEMBER 2010	SLG	DW	SLG	SLG

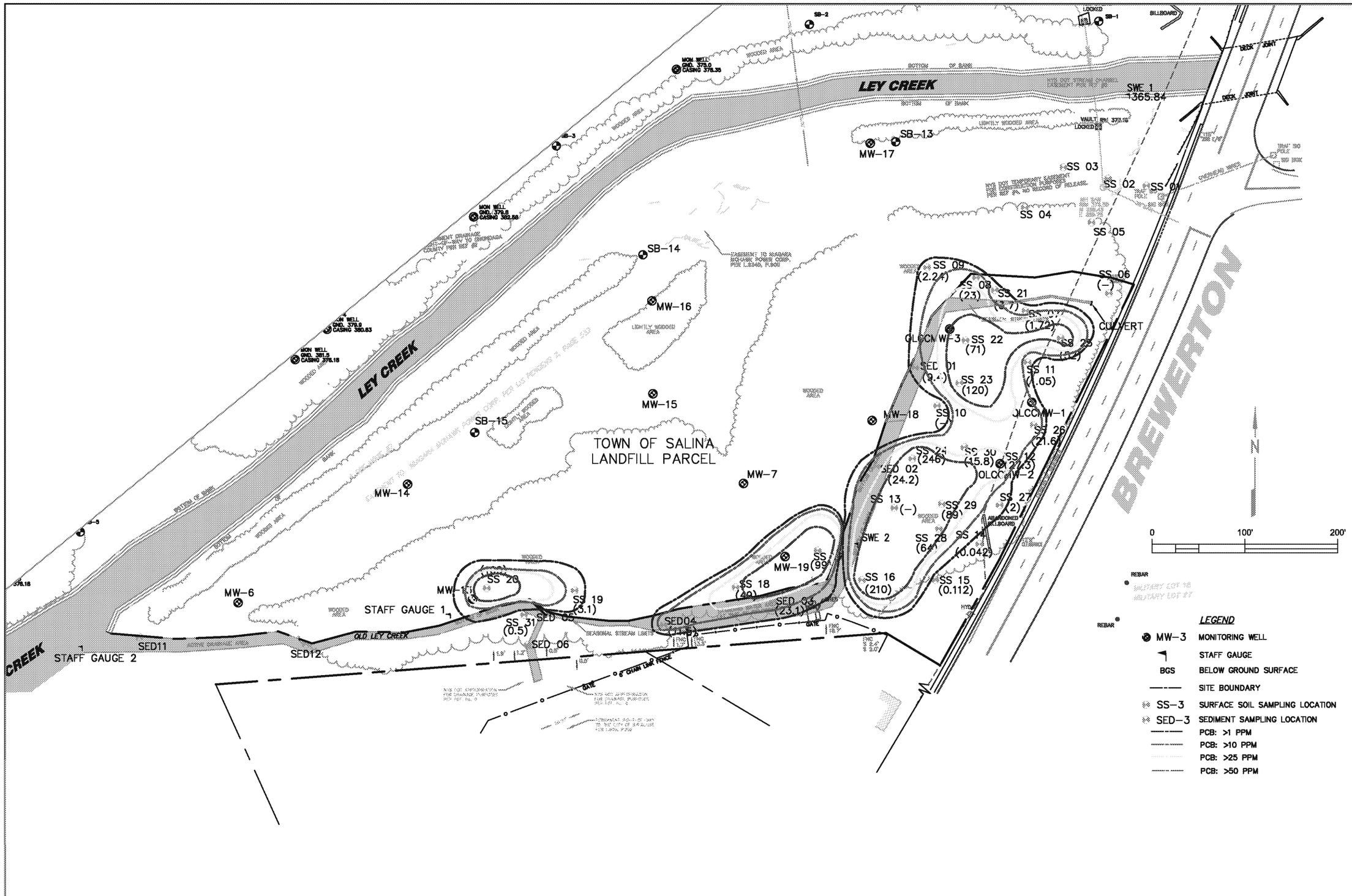

FIGURE 3-8
SURFACE SOIL/SEDIMENT PCB CONCENTRATION BOUNDARIES
(6-12 IN BGS)

Old Ley Creek Channel (Site No. 7-34-074)
Remedial Investigation
TOWN OF SALINA, NEW YORK

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PROJECT MGR.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE	PROJECT NO.	FILE NAME	DRAWING NO.	FIGURE
SLG	SLG	DW	SLG	NOVEMBER 2010	AS SHOWN	1436842	PCBBoundaries	1 OF 1	FIGURE 3-8

FIGURE 3-9
SURFACE SOIL/SEDIMENT PCB CONCENTRATION BOUNDARIES
(12-24 IN BGS)

Old Ley Creek Channel (Site No. 7-34-074)
Remedial Investigation
TOWN OF SALINA, NEW YORK

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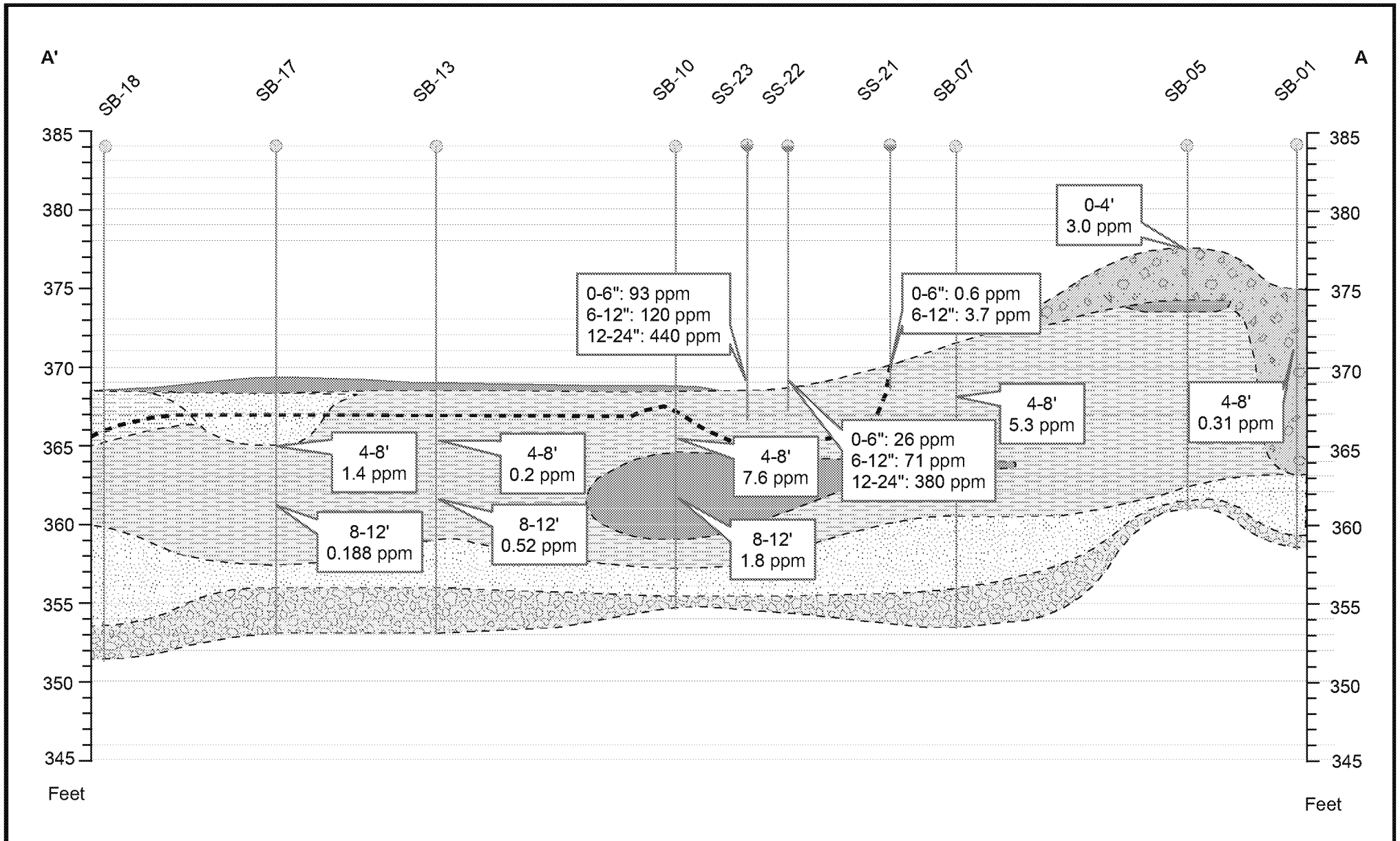
PROJECT MGR.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE	PROJECT NO.	FILE NAME	DRAWING NO.	FIGURE
SLG	SLG	DW	SLG	NOVEMBER 2010	AS SHOWN	1436842	PCBBoundaries	1 OF 1	FIGURE 3-9



Legend

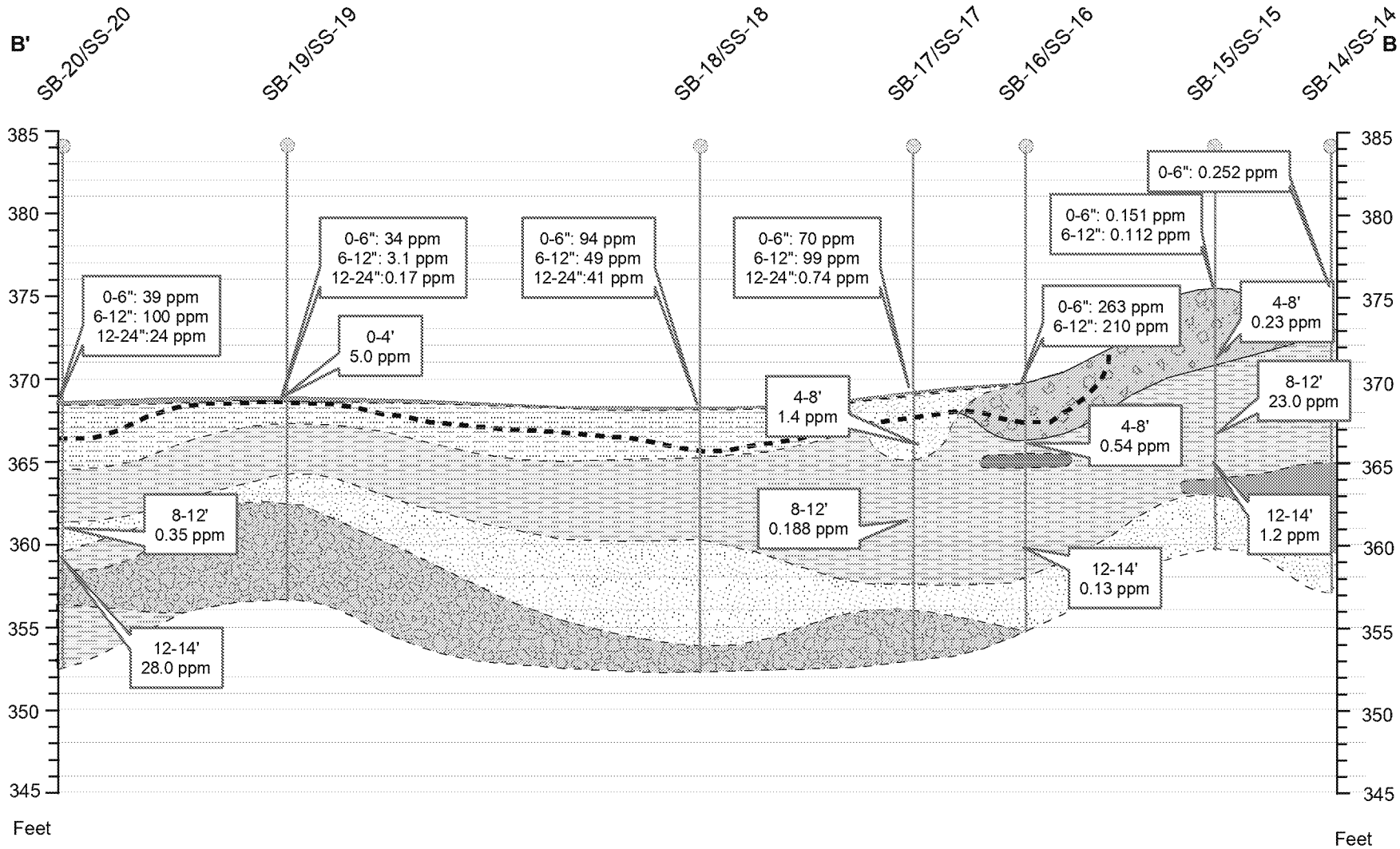
- Top Soil
- Fill Material
- Peat
- Silt and Organics
- Silt and Clay
- Silt and Sand
- Till
- Estimated Base of Soil with PCB Concentrations >50 ppm

0 20 40 60 80 100
Feet

Old Ley Creek Channel Remedial Investigation (Site No. 7-34-074)
Town of Salina, New York

FIGURE 3-10
NORTHEAST-SOUTHWEST
GEOLOGICAL CROSS SECTION
AND PCB CONCENTRATION PROFILE

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	JCP	JCP	SLG	AS SHOWN	JULY 2010	14368.42	G:\Projects\State&Local\NYSDEC\D004438 - Inv_Des\1436842_Old Ley Creek\GIS\FIGURES



Legend

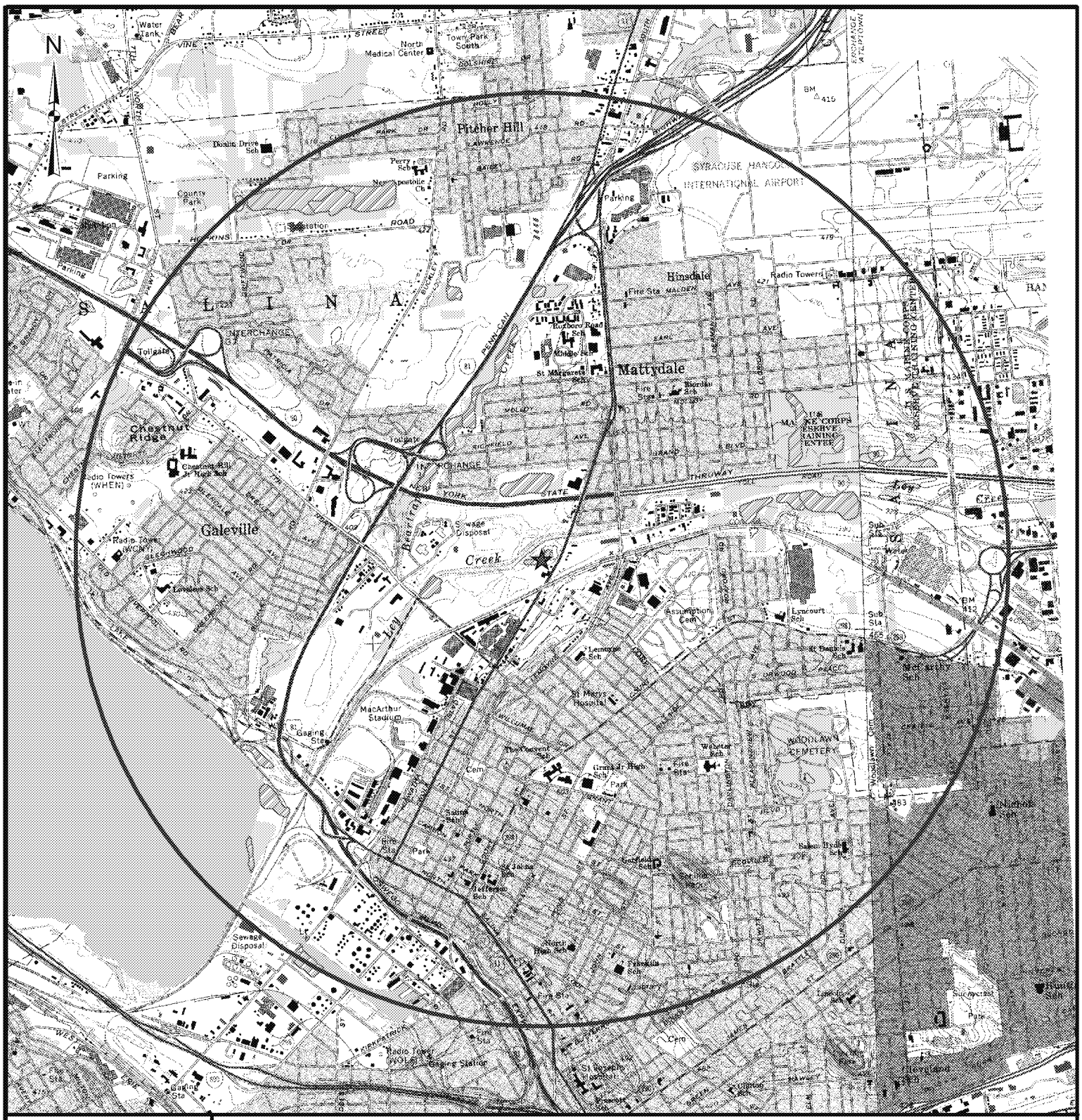
- Top Soil
- Fill Material
- Silt and Organics
- Silt and Clay
- Creek Deposits
- Peat
- Silt and Sand
- Till
- Estimated Base of Soil with PCB Concentrations >50 ppm

0 20 40 60 80 100
Feet

Old Ley Creek Channel Remedial Investigation (Site No. 7-34-074)
Town of Salina, New York

FIGURE 3-11
WEST-EAST
GEOLOGICAL CROSS SECTION
AND PCB CONCENTRATION PROFILE

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	JCP	JCP	SLG	AS SHOWN	JULY 2010	14368.42	G:\Projects\State&Local\NYSDEC\D004438 - Inv_Des\1436842_Old Ley Creek\GIS\FIGURES



Site Location

2-mile Buffer

Freshwater Wetland

Pond/Lake/River/Stream

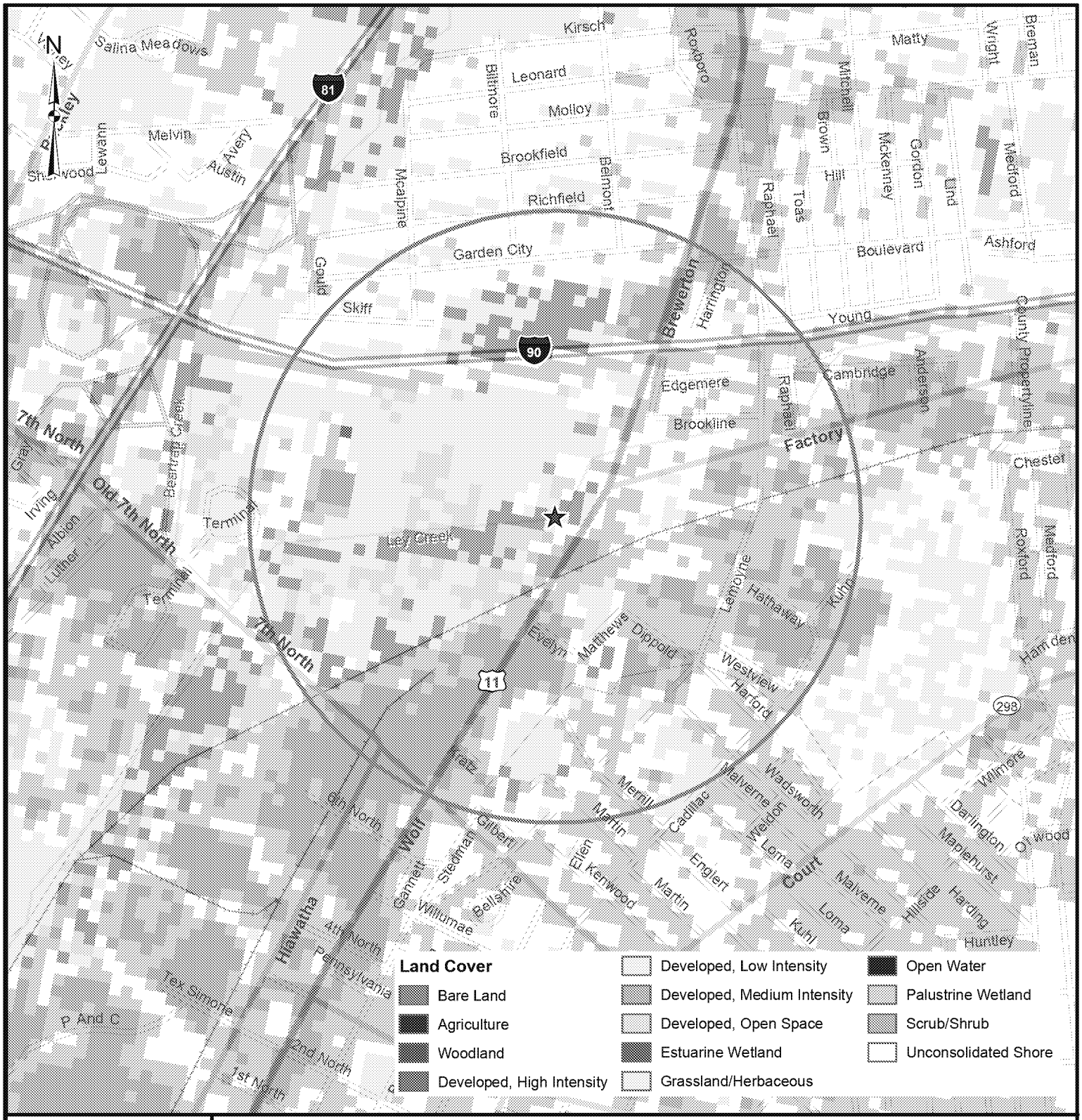
0 1 2 Miles

SOURCE: USGS 1978, USFWS 2010

Old Ley Creek Channel Remedial Investigation
(Site No. 7-34-074)
Town of Salina, New York

FIGURE 6-1
USGS TOPOGRAPHIC MAP

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	SAB	SAB	SLG	AS SHOWN	JULY 2010	14368.42	GIS/FIGURES/ FIGURE6-1.MXD



SOURCE: NYSDEC National Heritage Program
ESRI StreetMaps, 2005

Old Ley Creek Channel Remedial Investigation
(Site No. 7-34-074)
Town of Salina, New York

FIGURE 6-2
LAND COVER

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
SLG	RSC	SAB	SLG	AS SHOWN	JULY 2010	14368.42	GIS/FIGURES/ FIGURE6-2.MXD

TABLE 3-1 GROUNDWATER ELEVATION DATA

10 MAY 2010						
Monitoring Well Identification	Ground Elevation (ft AMSL)	Top of Casing Elevation (ft AMSL)	Top of Riser Elevation (ft AMSL)	Depth to Groundwater (ft btoc)	Depth to Well Bottom (ft btoc)	Groundwater Table Elevation (ft AMSL)
OLC-MW-1	377.0	379.16	378.87	9.88	20.32	368.99
OLC-MW-2	374.8	377.07	376.86	6.21	20.30	370.65
OLC-MW-3	370.3	372.63	372.40	4.31	18.12	368.09
MW-6	374.09	377.41	377.19	10.44	20.50	366.75
MW-7	384.36	387.57	387.32	19.70	30.50	367.62
MW-13	368.6	370.93	370.58	6.11	15.21	364.47
MW-14	382.8	385.13	384.42	19.02	30.31	365.40
MW-15	382.3	384.63	384.21	15.83	25.26	368.38
MW-16	379.5	381.91	381.58	13.56	25.50	368.02
MW-17	371.5	375.35	374.73	8.25	17.54	366.48
MW-18	371.4	374.66	374.31	7.05	15.24	367.26
MW-19	368	371.39	370.89	3.98	14.75	366.91
24 MAY 2010						
Monitoring Well Identification	Ground Elevation (ft AMSL)	Top of Casing Elevation (ft AMSL)	Top of Riser/Gauge Elevation (ft AMSL)	Depth to Groundwater (ft btoc)	Depth to Well Bottom (ft btoc)	Groundwater Table Elevation (ft AMSL)
OLC-MW-1	377.0	379.16	378.87	10.02	20.32	368.85
OLC-MW-2	374.8	377.07	376.86	6.73	20.30	370.13
OLC-MW-3	370.3	372.63	372.40	4.64	18.12	367.76
MW-6	374.09	377.41	377.19	13.07	20.50	364.12
MW-7	384.36	387.57	387.32	20.15	30.50	367.17
MW-13	368.6	370.93	370.58	6.47	15.21	364.11
MW-14	382.8	385.13	384.42	19.34	30.31	365.08
MW-15	382.3	384.63	384.21	16.81	25.26	367.40
MW-16	379.5	381.91	381.58	13.07	25.50	368.51
MW-17	371.5	375.35	374.73	9.40	17.54	365.33
MW-18	371.4	374.66	374.31	7.56	15.24	366.75
MW-19	368	371.39	370.89	4.27	14.75	366.62
SWE-1			366.48	2.64		363.84
SWE-2			368.64	1.85		366.79
SG-1			367.47	3.27		364.20
SG-2			365.85	2.56		363.29

NOTE: AMSL = Above mean sea level.
btoc = Below top of casing
Horizontal Datum New York State Plane LI 3104 1983/96
Vertical Datum NAVD 1988

TABLE 3-2 VOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SB-01			SB-03			SB-04			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8	8-12	12-14	4-8	8-12	12-14	4-8	8-12	12-14	
	Sample Date	1/19/2010			1/19/2010			1/19/2010			
	Sample Type	Composite			Composite			Composite			
1,1-Dichloroethane	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	0.27
1,2,4-Trimethylbenzene	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	3.6
2-Butanone	mg/kg	U	U	U	UJ	0.022 J	UJ	0.02	NR	0.018	---
4-Isopropyltoluene	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	---
Acetone	mg/kg	U	U	U	UJ	**0.1** J	0.021 J	**0.079**	NR	**0.11**	0.05
Carbon disulfide	mg/kg	U	U	U	UJ	UJ	0.0035 J	U	NR	U	---
Chloroethane	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	0.25
Methylene chloride	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	0.05
Naphthalene	mg/kg	0.0088	U	U	UJ	UJ	UJ	U	NR	U	---
Tetrachloroethene	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	1.3
Toluene	mg/kg	U	U	U	U	U	U	U	U	U	0.7
Vinyl chloride	mg/kg	U	U	U	UJ	UJ	UJ	U	NR	U	0.02

Parameter List USEPA Method 8260	Sample Location	SB-05				SB-05A	SB-05B	SB-05C	Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	0-4	4-8	8-12	12-14	2-4	2-4	2-4	
	Sample Date	1/19/2010				1/19/2010			
	Sample Type	Composite				Composite			
1,1-Dichloroethane	mg/kg	U	UJ	UJ	U	U	U	U	0.27
1,2,4-Trimethylbenzene	mg/kg	0.0015 J	UJ	UJ	U	U	U	U	3.6
2-Butanone	mg/kg	U	UJ	UJ	0.014	U	U	U	---
4-Isopropyltoluene	mg/kg	U	UJ	UJ	U	U	U	U	---
Acetone	mg/kg	U	UJ	0.0071 J	**0.066**	U	U	U	0.05
Carbon disulfide	mg/kg	U	UJ	UJ	U	U	U	U	---
Chloroethane	mg/kg	U	UJ	UJ	U	U	U	U	---
Chloroform	mg/kg	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	U	UJ	UJ	U	U	U	U	0.25
Methylene chloride	mg/kg	U	UJ	UJ	U	U	U	U	0.05
Naphthalene	mg/kg	0.053	UJ	UJ	0.0026 J	U	U	U	---
Tetrachloroethene	mg/kg	U	UJ	UJ	U	U	U	U	1.3
Toluene	mg/kg	U	U	U	U	U	U	U	0.7
Vinyl chloride	mg/kg	U	UJ	UJ	U	U	U	U	0.02

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.
U = Compound was analyzed for, but not detected.
J = Estimated value.
NR = No Recovery.
--- =
Bold values indicate exceedence of standard.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-2 VOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SB-06			SB-07			SB-08			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8	8-12	12-14	4-8	8-12	12-14	4-8	8-12	12-14	
	Sample Date	1/19/2010			1/18/2010			1/18/2010			
	Sample Type	Composite			Composite			Composite			
1,1-Dichloroethane	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	0.27
1,2,4-Trimethylbenzene	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	3.6
2-Butanone	mg/kg	UJ	UJ	UJ	0.053 J	UJ	U	U	U	U	---
4-Isopropyltoluene	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	---
Acetone	mg/kg	0.042 J	UJ	UJ	**0.22** J	0.026 J	0.018	0.033	0.033	0.0085	0.05
Carbon disulfide	mg/kg	UJ	UJ	UJ	UJ	0.006 J	0.0046 J	U	0.0031 J	0.0014 J	---
Chloroethane	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	0.25
Methylene chloride	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	0.05
Naphthalene	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	---
Tetrachloroethene	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	1.3
Toluene	mg/kg	U	U	U	U	U	U	U	U	U	0.7
Vinyl chloride	mg/kg	UJ	UJ	UJ	UJ	UJ	U	U	U	U	0.02

Parameter List USEPA Method 8260	Sample Location	SB-09			SB-10			SB-11			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8	8-12	12-14	4-8	8-12	12-14	4-8	8-12	12-14	
	Sample Date	1/19/2010			1/18/2010			1/18/2010			
	Sample Type	Composite			Composite			Composite			
1,1-Dichloroethane	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	0.27
1,2,4-Trimethylbenzene	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	3.6
2-Butanone	mg/kg	UJ	UJ	UJ	0.055	U	U	U	0.032	U	---
4-Isopropyltoluene	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	---
Acetone	mg/kg	0.012 J	UJ	UJ	**0.2**	0.018	0.0065	U	**0.13**	0.0071	0.05
Carbon disulfide	mg/kg	0.0013 J	UJ	UJ	U	0.0058 J	0.0017 J	U	U	0.0011 J	---
Chloroethane	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	0.25
Methylene chloride	mg/kg	UJ	UJ	UJ	U	U	U	0.0026 BJ	0.0056 BJ	0.003 BJ	0.05
Naphthalene	mg/kg	UJ	UJ	UJ	U	U	U	0.0017 J	U	U	---
Tetrachloroethene	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	1.3
Toluene	mg/kg	U	U	U	U	U	U	U	U	U	0.7
Vinyl chloride	mg/kg	UJ	UJ	UJ	U	U	U	U	U	U	0.02

NOTE: B = Method Blank.

TABLE 3-2 VOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SB-12						SB-13						SB-14						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-24		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
1,1-Dichloroethane	mg/kg		U		U		U		UJ		UJ		U		U		U		U	0.27
1,2,4-Trimethylbenzene	mg/kg		U		U		U		UJ		UJ		U		U		U		U	3.6
2-Butanone	mg/kg		U		U		U		UJ		UJ		U		U		U		U	---
4-Isopropyltoluene	mg/kg		U		U		U		UJ		UJ		U		U		U		U	---
Acetone	mg/kg		U	**25**		0.038		**0.05**	J		UJ	0.0068	J	0.028		**0.065**		0.0064		0.05
Carbon disulfide	mg/kg		U		U		U		UJ		UJ	0.0059	J	0.0019	J	0.0087	J		U	---
Chloroethane	mg/kg		U		U		U		UJ		UJ		U		U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U		U		U		UJ		UJ		U		U		U		U	0.25
Methylene chloride	mg/kg		U		U		U		UJ		UJ		U		U		U		U	0.05
Naphthalene	mg/kg	6.900			U		U		UJ		UJ		U	0.0058		0.0035	J		U	---
Tetrachloroethene	mg/kg		U		U		U		UJ		UJ		U		U		U		U	1.3
Toluene	mg/kg		U		U		U		U		U		U		U		U		U	0.7
Vinyl chloride	mg/kg		U		U		U		UJ		UJ		U		U		U		U	0.02

Parameter List USEPA Method 8260	Sample Location	SB-15						SB-16						SB-17						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
1,1-Dichloroethane	mg/kg		U		U		U		U		U	0.028			U		U		U	0.27
1,2,4-Trimethylbenzene	mg/kg		U	0.0034	J		U		U		U		U		U		U		U	3.6
2-Butanone	mg/kg		U	0.0075			U	0.017			U		U		U		U		U	---
4-Isopropyltoluene	mg/kg		U		U		U		U		U		U		U		U		U	---
Acetone	mg/kg	0.019		0.039		0.026		**0.11**		0.035		0.0086			U	0.021		0.0068		0.05
Carbon disulfide	mg/kg		U		U		U		U	0.0031	J	0.004	J		U	0.0022	J	0.0016	J	---
Chloroethane	mg/kg		U		U		U		U		U	0.018			U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.25
Methylene chloride	mg/kg	0.0031	BJ	0.0038	BJ	0.0036	BJ	0.005	BJ	0.0022	BJ		U		U		U		U	0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
Tetrachloroethene	mg/kg	0.0015	J		U		U		U		U		U		U		U		U	1.3
Toluene	mg/kg		U		U		U		U		U		U		U		U		U	0.7
Vinyl chloride	mg/kg		U		U		U		U		U		U		U		U		U	0.02

TABLE 3-2 VOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SB-18						SB-19						SB-20						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		0-4		4-8		8-12		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
1,1-Dichloroethane	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	0.27
1,2,4-Trimethylbenzene	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	3.6
2-Butanone	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	---
4-Isopropyltoluene	mg/kg	NR		0.019		0.02	J		U		U		UJ		UJ		UJ		UJ	---
Acetone	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	0.05
Carbon disulfide	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	---
Chloroethane	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	---
Chloroform	mg/kg	NR			U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg	NR		0.0024	J	0.015	J		U		U		UJ		UJ	0.013	J		UJ	0.25
Methylene chloride	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	0.05
Naphthalene	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	---
Tetrachloroethene	mg/kg	NR			U		UJ		U		U		UJ		UJ		UJ		UJ	1.3
Toluene	mg/kg	NR			U		U		U		U		U		U		U		U	0.7
Vinyl chloride	mg/kg	NR		0.0025	J	0.011	J		U		U		UJ		UJ		UJ		UJ	0.02

Parameter List USEPA Method 8260	Sample Location	MW-01						MW-02						MW-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	2-6		6-10		10-14		2-6		6-10		10-14		2-6		6-10		10-14		
	Sample Date	4/27/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
1,1-Dichloroethane	mg/kg		U		U		U		U		U		U		U		U		U	0.27
1,2,4-Trimethylbenzene	mg/kg		U		U		U		U		U		U		U		U		U	3.6
2-Butanone	mg/kg		R		R	0.009	J		R	0.0066	J		R		R	0.036	J	0.0043	J	---
4-Isopropyltoluene	mg/kg		U		U		U		U		U		U		U		U		U	---
Acetone	mg/kg		R		R	0.029	J		R	0.021	J		R	0.0057	J	**0.11**	J	0.022	J	0.05
Carbon disulfide	mg/kg		UJ		UJ		UJ		UJ		U		U		UJ	0.005	J	0.011	J	---
Chloroethane	mg/kg		U		U		U		U		U		U		U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.25
Methylene chloride	mg/kg		U		U		U		U		U		U		U		U		U	0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
Tetrachloroethene	mg/kg		U		U		U		U		U		U		U		U		U	1.3
Toluene	mg/kg		U	0.0013	J		U		U		U		U		U		U		U	0.7
Vinyl chloride	mg/kg		U		U		U		U		U		U		U		U		U	0.02

TABLE 3-2 VOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SB-DUP01 SB-15		SB-DUP02 SB-05		DUP-02 MW-02		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	12-14		0-4		6-10		
	Sample Date	1/18/2010		1/19/2010		4/26/2010		
	Sample Type	Composite		Composite		Composite		
1,1-Dichloroethane	mg/kg		UJ		U		U	0.27
1,2,4-Trimethylbenzene	mg/kg		UJ		U		U	3.6
2-Butanone	mg/kg	0.0092	J		U		R	---
4-Isopropyltoluene	mg/kg		UJ		U		U	---
Acetone	mg/kg	**0.051**	J		U		R	0.05
Carbon disulfide	mg/kg	0.004	J		U		UJ	---
Chloroethane	mg/kg		UJ		U		U	---
cis-1,2-Dichloroethene	mg/kg		UJ		U		U	0.25
Methylene chloride	mg/kg		UJ		U		U	0.05
Naphthalene	mg/kg		UJ	0.18			U	---
Tetrachloroethene	mg/kg		UJ		U		U	1.3
Vinyl chloride	mg/kg		UJ		U		U	0.02

TABLE 3-3 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SB-01						SB-03						SB-04						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg	0.75			U		U		U		U		U	0.093	J	NR			U	---
4-Methylphenol	mg/kg	0.053	J		U		U		U		U		U		U	NR			U	---
Acenaphthene	mg/kg	1.8			U		U		U		U		U	0.14	J	NR			U	20
Acenaphthylene	mg/kg	1.9			U		U	0.05	J		U		U	0.63		NR			U	100
Anthracene	mg/kg	4.3			U		U		U		U		U	0.74		NR		0.065	J	100
Benzo(a)anthracene	mg/kg	**7.4**	D		U		U	0.11	J		U		U	**1.1**		NR		0.13	J	1.0
Benzo(a)pyrene	mg/kg	**4.8**			U		U	0.099	J		U		U	**1.5**		NR		0.15	J	1.0
Benzo(b)fluoranthene	mg/kg	**6.5**	D		U		U	0.12	J		U		U	**2.1**		NR		0.2	J	1.0
Benzo(g,h,i)perylene	mg/kg	2.6			U		U	0.083	J		U		U	1.1		NR		0.11	J	100
Benzo(k)fluoranthene	mg/kg	**2.2**			U		U	0.052	J		U		U	**0.8**		NR		0.082	J	0.80
Bis(2-ethylhexyl)phthalate	mg/kg	0.12	J		U		U		U		U		U	1		NR		0.99		---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg	1.3			U		U		U		U		U	0.16	J	NR			U	---
Chrysene	mg/kg	**5.5**			U		U	0.13	J		U		U	**1.7**		NR		0.16	J	1.0
Dibenzo(a,h)anthracene	mg/kg	**0.99**			U		U		U		U		U	**0.41**	J	NR			U	0.33
Dibenzofuran	mg/kg	1.5			U		U		U		U		U	0.07	J	NR			U	---
Di-n-butylphthalate	mg/kg		U		U		U		U		U		U		U	NR			U	---
Fluoranthene	mg/kg	17	D		U		U	0.16	J		U		U	2.4		NR		0.28	J	100
Fluorene	mg/kg	3.2			U		U		U		U		U	0.17	J	NR			U	30
Indeno(1,2,3-cd)pyrene	mg/kg	**2.6**			U		U	0.067	J		U		U	**1.2**		NR		0.12	J	0.50
Naphthalene	mg/kg	0.93			U		U		U		U		U		U	NR			U	12
Phenanthrene	mg/kg	16	D		U		U	0.091	J		U		U	1.1		NR		0.14	J	100
Pyrene	mg/kg	12	D		U		U	0.19	J		U		U	2.5		NR		0.27	J	100

NOTE: USEPA = United States Environmental Protection Agency.

ppm = Parts per million.

U = Compound was analyzed for, but not detected.

J = Estimated value.

NR = No Recovery.

--- =

D = Dilution of sample or extract.

Bold values indicate exceedence of standard.

Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-3 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SB-05								SB-05A		SB-05B		SB-05C		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	0-4		4-8		8-12		12-14		2-4		2-4		2-4		
	Sample Date	1/19/2010								1/19/2010						
	Sample Type	Composite								Composite						
2-Methylnaphthalene	mg/kg	0.83		0.038	J		U		U	0.067	J		U		U	---
4-Methylphenol	mg/kg	0.082	J		U		U	0.062	J		U		U		U	---
Acenaphthene	mg/kg	0.33	J	0.056	J		U		U	0.079	J		U		U	20
Acenaphthylene	mg/kg	2.1		0.31	J	0.11	J		U	0.31	J	0.12	J	0.17	J	100
Anthracene	mg/kg	2.9		0.41		0.091	J	0.055	J	0.3	J	0.11	J	0.16	J	100
Benzo(a)anthracene	mg/kg	**4.6**		**1.1**		0.38	J	0.12	J	0.81		0.3	J	0.42		1.0
Benzo(a)pyrene	mg/kg	**3.4**		0.86		0.36	J	0.089	J	0.81		0.31	J	0.42		1.0
Benzo(b)fluoranthene	mg/kg	**4**		0.98		0.48		0.15	J	0.98		0.41		0.54		1.0
Benzo(g,h,i)perylene	mg/kg	2		0.58		0.27	J	0.071	J	0.59		0.23	J	0.31	J	100
Benzo(k)fluoranthene	mg/kg	**1.9**		0.62		0.2	J	0.067	J	0.57		0.19	J	0.27	J	0.80
Bis(2-ethylhexyl)phthalate	mg/kg		U		U		U		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U	---
Carbazole	mg/kg	0.79		0.095	J	0.045	J		U		U		U		U	---
Chrysene	mg/kg	**4.1**		**1.1**		0.39	J	0.16	J	0.85		0.34	J	0.46		1.0
Dibenzo(a,h)anthracene	mg/kg	**0.74**		0.18	J	0.068	J		U	0.19	J		U	0.096	J	0.33
Dibenzofuran	mg/kg	0.99		0.05	J		U		U	0.086	J		U		U	---
Di-n-butylphthalate	mg/kg		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg	11	D	2		0.82		0.23	J	1.4		0.46		0.72		100
Fluorene	mg/kg	1.9		0.13	J		U		U	0.11	J		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	**2**		**0.51**		0.23	J	0.065	J	**0.56**		0.22	J	0.29	J	0.50
Naphthalene	mg/kg	1.1			U		U		U		U		U		U	12
Phenanthrene	mg/kg	9.6	D	1.1		0.34	J	0.13	J	0.67		0.21	J	0.31	J	100
Pyrene	mg/kg	8.6	D	1.9		0.68		0.25	J	1.2		0.44		0.7		100

Parameter List USEPA Method 8270	Sample Location	SB-06						SB-07						SB-08						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg		U		U		U		U		U		U		U		U		U	20
Acenaphthylene	mg/kg		U		U		U	0.11	J		U		U		U		U		U	100
Anthracene	mg/kg	0.045	J		U		U	0.2	J		U		U		U		U		U	100
Benzo(a)anthracene	mg/kg	0.18	J		U		U	0.36	J		U		U		U		U		U	1.0
Benzo(a)pyrene	mg/kg	0.14	J		U		U	0.36	J		U		U		U		U		U	1.0
Benzo(b)fluoranthene	mg/kg	0.16	J		U		U	0.46	J		U		U		U		U		U	1.0
Benzo(g,h,i)perylene	mg/kg	0.085	J		U		U	0.25	J		U		U		U		U		U	100
Benzo(k)fluoranthene	mg/kg	0.11	J		U		U	0.19	J		U		U		U		U		U	0.80
Bis(2-ethylhexyl)phthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg		U		U		U		U		U		U		U		U		U	---
Chrysene	mg/kg	0.18	J		U		U	0.45	J		U		U		U		U		U	1.0
Dibenzo(a,h)anthracene	mg/kg		U		U		U	0.065	J		U		U		U		U		U	0.33
Dibenzofuran	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg	0.34	J		U		U	0.75			U		U		U		U		U	100
Fluorene	mg/kg		U		U		U	0.092	J		U		U		U		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.07	J		U		U	0.26	J		U		U		U		U		U	0.50
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Phenanthrene	mg/kg	0.21	J		U		U	0.52	J		U		U		U		U		U	100
Pyrene	mg/kg	0.34	J		U		U	0.71			U		U		U		U		U	100

TABLE 3-3 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SB-09						SB-10						SB-11						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg		U		U		U		U		U		U		U		U		U	20
Acenaphthylene	mg/kg		U	0.21	J		U	0.12	J		U		U	0.23	J		U		U	100
Anthracene	mg/kg		U	0.19	J		U	0.1	J		U		U	0.26	J		U		U	100
Benzo(a)anthracene	mg/kg		U	0.46			U	0.18	J		U		U	0.62			U		U	1.0
Benzo(a)pyrene	mg/kg		U	0.55		0.07	J	0.18	J		U		U	**1.4**			U		U	1.0
Benzo(b)fluoranthene	mg/kg		U	0.66		0.072	J	0.24	J		U		U	**1.7**			U		U	1.0
Benzo(g,h,i)perylene	mg/kg		U	0.45		0.068	J	0.18	J		U		U	1.1			U		U	100
Benzo(k)fluoranthene	mg/kg		U	0.31	J		U	0.12	J		U		U	**0.85**			U		U	0.80
Bis(2-ethylhexyl)phthalate	mg/kg		U		U		U	0.28	J		U		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg		U	0.065	J		U		U		U		U	0.11	J		U		U	---
Chrysene	mg/kg		U	0.56			U	0.22	J		U		U	0.95			U		U	1.0
Dibenzo(a,h)anthracene	mg/kg		U	0.13	J		U		U		U		U	**0.36**	J		U		U	0.33
Dibenzofuran	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg		U	0.95		0.069	J	0.36	J		U		U	1.3			U		U	100
Fluorene	mg/kg		U	0.069	J		U		U		U		U	0.073	J		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg		U	0.38	J	0.054	J	0.19	J		U		U	**1.2**			U		U	0.50
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Phenanthrene	mg/kg		U	0.54			U	0.16	J		U		U	0.6			U		U	100
Pyrene	mg/kg		U	0.82		0.078	J	0.34	J		U		U	1.3			U		U	100

SVOC Parameter List USEPA Method 8270	Sample Location	SB-12						SB-13						SB-14						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-24		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U	0.09	J		U		U	---
Acenaphthene	mg/kg		U	0.077	J		U		U		U		U		U	**67**	J		U	20
Acenaphthylene	mg/kg		U	0.22	J		U		U		U		U		U		U		U	100
Anthracene	mg/kg	0.054	J	0.25	J		U		U		U		U	0.042	J	0.15	J		U	100
Benzo(a)anthracene	mg/kg	0.17	J	0.54		0.06	J		U		U		U	0.13	J	0.47	J		U	1.0
Benzo(a)pyrene	mg/kg	0.16	J	0.53		0.056	J		U		U		U	0.13	J	0.4	J		U	1.0
Benzo(b)fluoranthene	mg/kg	0.2	J	0.78			U		U		U		U	0.15	J	0.52	J		U	1.0
Benzo(g,h,i)perylene	mg/kg	0.11	J	0.43	J		U		U		U		U	0.093	J	0.3	J		U	100
Benzo(k)fluoranthene	mg/kg	0.1	J	0.29	J		U		U		U		U	0.081	J	0.23	J		U	0.80
Bis(2-ethylhexyl)phthalate	mg/kg		U		U	0.33	J		U		U		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg		U		U		U		U		U		U		U		U		U	---
Chrysene	mg/kg	0.18	J	0.6		0.066	J		U		U		U	0.15	J	0.43	J		U	1.0
Dibenzo(a,h)anthracene	mg/kg		U	0.14	J		U		U		U		U		U		U		U	0.33
Dibenzofuran	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg	0.29	J	1.2		0.096	J		U		U		U	0.21	J	0.9			U	100
Fluorene	mg/kg		U	0.067	J		U		U		U		U		U		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.11	J	0.37	J		U		U		U		U	0.095	J	0.29	J		U	0.50
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Phenanthrene	mg/kg	0.14	J	0.57			U		U		U		U	0.1	J	0.38	J		U	100
Pyrene	mg/kg	0.27	J	1		0.094	J		U		U		U	0.2	J	0.77			U	100

TABLE 3-3 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SB-15						SB-16						SB-17						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg		U	0.073	J		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg		U	0.094	J		U		U		U		U		U		U		U	20
Acenaphthylene	mg/kg	0.14	J	0.31	J		U		U		U		U		U		U		U	100
Anthracene	mg/kg	0.18	J	0.4	J		U		U		U		U		U		U		U	100
Benzo(a)anthracene	mg/kg	0.48		0.66		0.071	J		U		U		U		U		U		U	1.0
Benzo(a)pyrene	mg/kg	0.54		0.81		0.072	J		U		U		U		U		U		U	1.0
Benzo(b)fluoranthene	mg/kg	0.7		**1.1**		0.11	J		U		U		U		U		U		U	1.0
Benzo(g,h,i)perylene	mg/kg	0.5		0.66		0.064	J		U		U		U		U		U		U	100
Benzo(k)fluoranthene	mg/kg	0.29	J	0.46			U		U		U		U		U		U		U	0.80
Bis(2-ethylhexyl)phthalate	mg/kg	0.37	J	1.4			U		U	0.16	J		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg		U	0.13	J		U		U		U		U		U		U		U	---
Chrysene	mg/kg	0.54		0.87		0.092	J		U		U		U		U		U		U	1.0
Dibenzo(a,h)anthracene	mg/kg	0.14	J	0.22	J		U		U		U		U		U		U		U	0.33
Dibenzofuran	mg/kg		U	0.089	J		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg		U	0.11	J		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg	0.9		1.6		0.16	J	0.074	J		U		U	0.064	J		U		U	100
Fluorene	mg/kg	0.054	J	0.16	J		U		U		U		U		U		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.49		**0.66**		0.066	J		U		U		U		U		U		U	0.50
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Phenanthrene	mg/kg	0.54		0.98		0.089	J		U		U		U		U		U		U	100
Pyrene	mg/kg	0.72		1.2		0.14	J	0.07	J		U		U	0.067	J		U		U	100

Parameter List USEPA Method 8270	Sample Location	SB-18						SB-19						SB-20						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		0-4		4-8		8-12		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg	NR			U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg	NR			U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg	NR			U		U		U		U		U		U		U	0.054	J	20
Acenaphthylene	mg/kg	NR			U		U		U		U		U		U		U	0.53		100
Anthracene	mg/kg	NR			U		U	0.065	J		U		U		U		U	0.49		100
Benzo(a)anthracene	mg/kg	NR			U		U	0.092	J		U		U		U		U	0.61		1.0
Benzo(a)pyrene	mg/kg	NR			U		U	0.11	J		U		U		U		U	0.71		1.0
Benzo(b)fluoranthene	mg/kg	NR			U		U	0.13	J		U		U		U		U	0.96		1.0
Benzo(g,h,i)perylene	mg/kg	NR			U		U	0.098	J		U		U		U		U	0.64		100
Benzo(k)fluoranthene	mg/kg	NR			U		U	0.078	J		U		U		U		U	0.39	J	0.80
Bis(2-ethylhexyl)phthalate	mg/kg	NR			U		U		U		U		U		U		U	0.27	J	---
Butylbenzylphthalate	mg/kg	NR			U		U		U		U		U		U		U		U	---
Carbazole	mg/kg	NR			U		U		U		U		U		U		U	0.13	J	---
Chrysene	mg/kg	NR			U		U	0.13	J		U		U		U		U	0.88		1.0
Dibenzo(a,h)anthracene	mg/kg	NR			U		U		U		U		U		U		U	0.18	J	0.33
Dibenzofuran	mg/kg	NR			U		U		U		U		U		U		U	0.051	J	---
Di-n-butylphthalate	mg/kg	NR			U		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg	NR			U		U	0.2	J		U		U		U		U	1.5		100
Fluorene	mg/kg	NR			U		U		U		U		U		U		U	0.13	J	30
Indeno(1,2,3-cd)pyrene	mg/kg	NR			U		U	0.084	J		U		U		U		U	**0.54**		0.50
Naphthalene	mg/kg	NR			U		U		U		U		U		U		U		U	12
Phenanthrene	mg/kg	NR			U		U	0.12	J		U		U		U		U	0.9		100
Pyrene	mg/kg	NR			U		U	0.2	J		U		U		U		U	1.3		100

TABLE 3-3 SVOC DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	MW-01						MW-02						MW-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	2-6		6-10		10-14		2-6		6-10		10-14		2-6		6-10		10-14		
	Sample Date	4/27/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
2-Methylnaphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg		U		U		U		U		U		U		U		U		U	20
Acenaphthylene	mg/kg		U		U	0.083	J	0.067	J	0.055	J		U	0.13	J		U		U	100
Anthracene	mg/kg		U		U	0.099	J	0.07	J	0.1	J		U	0.15	J		U		U	100
Benzo(a)anthracene	mg/kg	0.044	J		U	0.32	J	0.22	J	0.37	J		U	0.41	J	0.095	J		U	1.0
Benzo(a)pyrene	mg/kg		U		U	0.3	J	0.24	J	0.26	J		U	0.41	J	0.074	J		U	1.0
Benzo(b)fluoranthene	mg/kg		U		U	0.22	J	0.18	J	0.27	J		U	0.54	J	0.11	J		U	1.0
Benzo(g,h,i)perylene	mg/kg		U		U	0.14	J	0.12	J	0.14	J		U	0.3	J	0.061	J		U	100
Benzo(k)fluoranthene	mg/kg		U		U	0.32	J	0.19	J	0.19	J		U	0.23	J		U		U	0.80
Bis(2-ethylhexyl)phthalate	mg/kg		U		U	0.24	J	0.3	J	1.3	J		U	0.23	J	0.34	J	0.15	J	---
Butylbenzylphthalate	mg/kg		U		U		U	0.066	J		U		U		U		U		U	---
Carbazole	mg/kg		U		U		U		U		U		U	0.06	J		U		U	---
Chrysene	mg/kg	0.04	J		U	0.33	J	0.26	J	0.34	J		U	0.54		0.11	J		U	1.0
Dibenzo(a,h)anthracene	mg/kg		U		U		U		U		U		U	0.071	J		U		U	0.33
Dibenzofuran	mg/kg		U		U	0.52		0.33	J	0.56		0.057	J	0.82		0.16	J		U	---
Di-n-butylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg		U		U		U		U		U		U		U		U		U	100
Fluorene	mg/kg		U		U		U		U		U		U		U		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg		U		U	0.17	J	0.13	J	0.15	J		U	0.31	J	0.061	J		U	0.50
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Phenanthrene	mg/kg		U		U	0.3	J	0	J	0	J		U	0	J	0	J		U	---
Pyrene	mg/kg		U		U	0.6		0	J	1		0	J	1		0	J		U	---

Parameter List USEPA Method 8270	Sample Location	SB-DUP01 SB-15		SB-DUP02 SB-05		DUP02 MW-02		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	12-14		0-4		6-10		
	Sample Date	1/18/2010		1/19/2010		4/26/2010		
	Sample Type	Composite		Composite		Composite		
2-Methylnaphthalene	mg/kg	0.043	J	0.61			U	---
4-Methylphenol	mg/kg		U	0.076	J		U	---
Acenaphthene	mg/kg	0.06	J	0.22	J		U	20
Acenaphthylene	mg/kg	0.16	J	1.8		0.05	J	100
Anthracene	mg/kg	0.25	J	2.3		0.051	J	100
Benzo(a)anthracene	mg/kg	0.55		**4**		0.18	J	1.0
Benzo(a)pyrene	mg/kg	0.49		**3.2**		0.15	J	1.0
Benzo(b)fluoranthene	mg/kg	0.68		**3.9**		0.17	J	1.0
Benzo(g,h,i)perylene	mg/kg	0.37	J	1.8		0.092	J	100
Benzo(k)fluoranthene	mg/kg	0.28	J	**1.8**		0.076	J	0.80
Bis(2-ethylhexyl)phthalate	mg/kg	0.67			U	0.16	J	---
Butylbenzylphthalate	mg/kg		U		U		U	---
Carbazole	mg/kg	0.055	J	0.55			U	---
Chrysene	mg/kg	0.52		**3.5**		0.19	J	1.0
Dibenzo(a,h)anthracene	mg/kg	0.089	J	**0.68**			U	0.33
Dibenzofuran	mg/kg	0.05	J	0.76			U	---
Di-n-butylphthalate	mg/kg		U		U		U	---
Fluoranthene	mg/kg	1.2		8.5	D	0.27	J	100
Fluorene	mg/kg	0.1	J	1.4			U	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.33	J	**1.8**		0.1	J	0.50
Naphthalene	mg/kg		U	0.9			U	12
Phenanthrene	mg/kg	0.71		6.5	D	0.14	J	100
Pyrene	mg/kg	0.93		6.7	D	0.32	J	100

TABLE 3-4 METAL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-01						SB-03						SB-04						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	2940	J	1140	J	2660	J	7800	J	10400	J	9460	J	7590	J	NR		7000	J	---
Antimony	mg/kg		UJ		UJ		UJ		J	0.34	J	0.45	J		UJ	NR			UJ	---
Arsenic	mg/kg	3		3.1		2.3		3.1		3.2		8.9		**14.3**	J	NR		4.4	J	13
Barium	mg/kg	24.4	J	11.3	J	41.6	J	109	J	161	J	58.9	J	139	J	NR		78.7	J	350
Beryllium	mg/kg	0.14	J	0.074	J	0.14	BJ	0.31	J	0.24	J	0.42	J	0.53	J	NR		0.38	J	7.2
Cadmium	mg/kg	0.054	J		UJ		UJ	0.13	J		UJ		UJ	**7.3**		NR		0.54		2.5
Calcium	mg/kg	176000		297000		175000		3620		3290		3440		36300	J	NR		9060	J	---
Chromium	mg/kg	12	J	2.8	J	5.1	J	**133**	J	21.1	J	16.5	J	**1230**	J	NR		**34.1**	J	30
Cobalt	mg/kg	2.4	J	0.71	J	4	J	4.5	J	3.5	J	11	J	8.7	J	NR		6	J	---
Copper	mg/kg	16.4	J	2.6	J	17	J	**52**	J	21.6	J	16.5	J	**1020**	J	NR		**52.5**	J	50
Iron	mg/kg	6940		2340		7660		11400		11200		32100		24800	J	NR		21400	J	---
Lead	mg/kg	14.5	J	2.2	J	3	J	15.7	J	9.7	J	7.7	J	**171**	J	NR		18.3	J	63
Magnesium	mg/kg	33800	J	11000	J	16800	J	2780	J	2410	J	4500	J	11000	J	NR		3740	J	---
Manganese	mg/kg	186	J	58.7	J	311	J	120	J	86.1	J	158	J	356	J	NR		269	J	1,600
Mercury	mg/kg	0.007		0.0067	B	0.012	B	0.084		0.091		0.034		**0.28**		NR		**0.19**		0.18
Nickel	mg/kg	8.7	J	2.8	J	9.1	J	**71.3**	J	12	J	19.4	J	**445**	J	NR		18.1	J	30
Potassium	mg/kg	700		631		800		641		710		1110		716		NR		449		---
Selenium	mg/kg		U		U		U	1.3		1.2		1.8			U	NR		1.4		3.9
Silver	mg/kg		U		U		U		U		U		U	**4**	J	NR		0.35	J	2.0
Sodium	mg/kg	162		129		165		42.2		72.2		90.4		80.5		NR		43.1		---
Thallium	mg/kg	2.6		3.1		2.5		0.34		0.49		0.48		1.3		NR		0.65		---
Vanadium	mg/kg	6.5	J	2.7	J	5.7	J	15.7	J	20	J	24.7	J	20.4	J	NR		18	J	---
Zinc	mg/kg	21.1	J	6.2	J	13.2	J	63.7	J	32	J	48.9	J	**497**	J	NR		62.1	J	109

NOTE: USEPA = United States Environmental Protection Agency.

ppm = Parts per million.

mg/kg = Milligrams per kilogram.

J = Less than Contract Required Quantitation Limit, but greater than or equivalent to the Method Detection Limit.

NR = No Recovery

--- =

U = Less than Method Detection Limit.

B = Analyte found in asociated method blank, as well as sample.

Bold values indicate exceedence of standard.

Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-4 METAL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-05								SB-05A		SB-05B		SB-05C		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	0-4		4-8		8-12		12-14		2-4		2-4		2-4		
	Sample Date	1/19/2010								1/19/2010						
	Sample Type	Composite								Composite						
Aluminum	mg/kg	4910		5970	J	10300	J	6210	J	3820		3890		6500		---
Antimony	mg/kg		UJ		UJ		UJ	0.5	J		UJ		U		UJ	---
Arsenic	mg/kg	4.2		9		7.1		8.6		3.9		4.2		6.8		13
Barium	mg/kg	44.8	J	73.4	J	52.9	J	99.8	J	39.3	J	43	J	195	J	350
Beryllium	mg/kg	0.16	J	0.26	J	0.42	J	0.28	J	0.16		0.17	J	0.26	J	7.2
Cadmium	mg/kg	0.16	B	0.13	J	0.078	J	0.3	J	0.11		0.16		0.24	B	2.5
Calcium	mg/kg	54200		68400		50400		17500		26600		129000		32200		---
Chromium	mg/kg	24		10.1	J	16	J	9.6	J	17.6		**33.9**		**75.2**		30
Cobalt	mg/kg	4.6	J	6.7	J	7.7	J	5.1	J	3.4	J	3.8	J	5.1	J	---
Copper	mg/kg	48.1		29.4	J	**58.1**	J	**125**	J	34.9		34.8		**53.9**		50
Iron	mg/kg	13000		20700		27300		16300		9830		9730		13800		---
Lead	mg/kg	32.4		**70.4**	J	44.5	J	38.4	J	42.5		18.7		**83.5**		63
Magnesium	mg/kg	10700	J	8670	J	12900	J	5610	J	6430	J	10300	J	7890	J	---
Manganese	mg/kg	338	J	322	J	213	J	113	J	135	J	326	J	297	J	1,600
Mercury	mg/kg	0.14	J	0.11		0.8		**1.2**		0.14	J	0.068	J	0.11	J	0.18
Nickel	mg/kg	16.8	J	13.1	J	23	J	16.3	J	11.8	J	20.9	J	**31.7**	J	30
Potassium	mg/kg	1040		875		1230		773		617		900		749		---
Selenium	mg/kg		U		U	0.68		1.7			U		U		U	3.9
Silver	mg/kg		U		U	1.9		**9.7**		0.38			U	0.19		2.0
Sodium	mg/kg	73.2	J	145		200		484		49.7		97.6		65.5		---
Thallium	mg/kg	1.1		1.3		1.3			U	0.62		1.9		0.84		---
Vanadium	mg/kg	12		13.7	J	15.6	J	12.2	J	9		10.2		15		---
Zinc	mg/kg	57.9	J	67	J	78.8	J	**147**	J	56.1	J	41.9	J	**134**	J	109

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-06						SB-07						SB-08						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	9700	J	2330	J	3350	J	5680	J	6160	J	4200	J	8290		6870		4320		---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	5.2		1.3		2.4		7.5	J	12.6	J	4	J	2.5		3.9		4.8		13
Barium	mg/kg	54	J	39.2	J	30.6	J	81.1	J	122	J	36	J	118	J	43.6	J	39.7	J	350
Beryllium	mg/kg	0.33	J	0.093	J	0.12	J	0.27	J	0.21	J	0.13	J	0.24	J	0.22	BJ	0.16	J	7.2
Cadmium	mg/kg		UJ		UJ		UJ	0.53		0.17		0.12		0.014			U		U	2.5
Calcium	mg/kg	47600		32000		32500		43000	J	3170	J	50700	J	2940		4230		60300		---
Chromium	mg/kg	11.7	J	3.9	J	5.5	J	19.5	J	13.2	J	8.2	J	14		11.9		6.7		30
Cobalt	mg/kg	6.7	J	2.4	J	3	J	5.4	J	3.4	BJ	5.8	J	3.1	J	7	J	3.7	J	---
Copper	mg/kg	46.5	J	8.4	J	7.9	J	**60.2**	J	36.5	J	15.3	J	21.1		12.4		10		50
Iron	mg/kg	23400		6170		8190		13500	J	13600	J	16000	J	8370		21400		20000		---
Lead	mg/kg	33.7	J	1.6	J	1.8	J	37	J	7.3	J	4.4	J	6.6		4.6		2		63
Magnesium	mg/kg	22300	J	7240	J	9250	J	18300	J	1820	J	8610	J	2510	J	4040	J	16200	J	---
Manganese	mg/kg	433	J	176	J	202	J	431	J	128	J	298	J	69.3	J	153	J	380	J	1,600
Mercury	mg/kg	0.16		0.0088			U	**0.36**		0.065		0.022		0.047	J	0.016	BJ		J	0.18
Nickel	mg/kg	14.2	J	5.3	J	7.3	J	14.7	J	9.4	J	10.4	J	10.1	J	13.8	J	9.9	J	30
Potassium	mg/kg	1160		512		745		431		550		531		787		866		1070		---
Selenium	mg/kg	1.2			U		U	1.6		2.1			U	0.98		1.3			U	3.9
Silver	mg/kg		U		U		U	**2**	J		UJ		UJ		U		U		U	2.0
Sodium	mg/kg	370		95.8		81		1760		1780		611		1050		1250		179		---
Thallium	mg/kg	1.4		0.6		0.62		1.2			U	0.8	B		U		U	1.4		---
Vanadium	mg/kg	17.3	J	5.9	J	7.2	J	16.2	J	26.6	J	13.3	J	19.8		16.7		9.4		---
Zinc	mg/kg	44.1	J	9.4	J	13.5	J	69.8	J	30.2	J	30.2	J	32.5	J	44.3	J	14.2	J	109

TABLE 3-4 METAL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-09						SB-10						SB-11						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	8490	J	6660	J	8440	J	4730	J	6700	J	3130	J	5150	J	4090	J	4290	J	---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	1.6		8.8		2.9		5.9	J	2.6	J	5	J	7.2	J	4.5	J	5	J	13
Barium	mg/kg	133	J	74.6	J	98.5	J	55.4	J	48.2	J	22.8	J	52.2	J	70.9	J	48.4	J	350
Beryllium	mg/kg	0.24	J	0.33	J	0.28	J	0.2	J	0.24	J	0.11	J	0.25	J	0.16	BJ	0.25	J	7.2
Cadmium	mg/kg		UJ	**2.8**	J	0.3	J	0.46		0.2		0.071		0.66		0.39		0.12		2.5
Calcium	mg/kg	2640		24300		4240		15500	J	6170	J	60400	J	18300	J	5060	J	27500	J	---
Chromium	mg/kg	**37.4**	J	**513**	J	**32**	J	14.2	J	12.7	J	6	J	**71.5**	J	11.4	J	6.9	J	30
Cobalt	mg/kg	3.5	J	5	J	7.4	J	5.2	J	7.7	J	3.4	J	4.6	J	3.4	J	4.8	J	---
Copper	mg/kg	25.5	J	**702**	J	36.1	J	27.6	J	14.7	J	10.6	J	**109**	J	35	J	13.9	J	50
Iron	mg/kg	9960		15900		24500		19900	J	22100	J	15600	J	11300	J	6690	J	14600	J	---
Lead	mg/kg	9.6	J	**102**	J	10.1	J	7	J	5.6	J	3	J	51.2	J	5.6	J	3.7	J	63
Magnesium	mg/kg	2760	J	10700	J	4150	J	2310	J	3960	J	14100	J	6520	J	987	J	10300	J	---
Manganese	mg/kg	74	J	192	J	231	J	411	J	245	J	341	J	146	J	61.5	J	170	J	1,600
Mercury	mg/kg	0.025		**0.24**		0.027		0.08		0.024		0.0075		**0.39**		0.089		0.0097		0.18
Nickel	mg/kg	15.6	J	**212**	J	22.2	J	10	J	15.1	J	7.6	J	**30.7**	J	7.8	J	10.4	J	30
Potassium	mg/kg	625		870		949		360		606		508		405		376		552		---
Selenium	mg/kg	0.96	B	0.94		1.2		2.3		0.98			U	0.94	B	1.6			U	3.9
Silver	mg/kg		U	**3.3**			U		UJ		UJ		UJ	**2.1**	J		UJ		UJ	2.0
Sodium	mg/kg	83.5		67.4		98.3		2120		374		94.7		728		909		248		---
Thallium	mg/kg		U	0.78		0.62		0.77		0.57		1.3		0.39	B		U	0.57	B	---
Vanadium	mg/kg	15.3	J	15.9	J	17.4	J	10.7	J	16.6	J	7.9	J	12.9	J	19.5	J	11	J	---
Zinc	mg/kg	48.8	J	**465**	J	72	J	45.7	J	54.3	J	15.9	J	90.1	J	16.4	J	22.8	J	109

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-12						SB-13						SB-14						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-24		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	5140		6690		2330	J	5920	J	7000	J	3980	J	4720		4780		4260		---
Antimony	mg/kg		UJ		U		UJ		UJ		UJ		UJ		UJ	0.31	J		UJ	---
Arsenic	mg/kg	19		37		2.4	J	3.9	J	3.5	J	**17.7**	J	**19.8**		4.4		4.6		13
Barium	mg/kg	36.4	J	63.1		19.5	J	86.7	J	85	J	29.1	J	50	J	54.9	J	21.3	J	350
Beryllium	mg/kg	0.18	J	0.33		0.087	J	0.32	J	0.19	J	0.14	J	0.19	BJ	0.18	J	0.17		7.2
Cadmium	mg/kg	0.0082	U	0.61		0.14	B	0.51		0.27			UJ	0.027	BJ	0.14			U	2.5
Calcium	mg/kg	37700		43300		10800	J	2830	J	3650	J	56200	J	44200		14900		55400		---
Chromium	mg/kg	8.2		16		5.1	J	14.6	J	24	J	7.4	J	7.7		8.2		7		30
Cobalt	mg/kg	5.6	J	7		3.5	J	2.1	BJ	2.9	J	9.8	J	5.3	J	5	J	3.9	J	---
Copper	mg/kg	18		50.7		16.7	J	25.8	J	28.9	J	9.6	J	16		48.4		16		50
Iron	mg/kg	18600		28000		7380	J	5930	J	8330	J	22500		11800		14500		18300		---
Lead	mg/kg	8		49.4		7	J	6.8	J	6.9	J	2.7	J	13.9		11.9		3		63
Magnesium	mg/kg	12600	J	12100		3080	J	1480	J	2110	J	12600	J	12200	J	4500	J	11100	J	---
Manganese	mg/kg	379	J	306		107	J	56.5	J	86.7	J	312	J	242	J	274	J	352	J	1,600
Mercury	mg/kg	0.029	BJ	0.2		0.057		0.11		0.065			U	0.021	J	0.17	J	0.01	J	0.18
Nickel	mg/kg	11.4	J	16.4		6.3	J	7.2	J	10.2	J	10.8	J	10.8	J	9.3	J	10	J	30
Potassium	mg/kg	768		771		206		679		590		562		880		617		1010		---
Selenium	mg/kg	0.61	B	1.2	B	0.89		1.6		1.6		0.6	B		U		U		U	3.9
Silver	mg/kg		U	3		0.1	J		UJ		UJ		U		U	1.1	B		U	2.0
Sodium	mg/kg	198		449		199		667		584		161		152		1000		295		---
Thallium	mg/kg	1.1		1.1	B		U		U		U	1.2	J	0.92		0.64		1.2		---
Vanadium	mg/kg	11.7		14		5.4	J	16.5	J	15.5	J	10.1	J	10.9		10.4		10.2		---
Zinc	mg/kg	30.2	J	80.6		35.9	J	30	J	27.1	J	20.4	J	70	J	68	J	18	J	109

TABLE 3-4 METAL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-15						SB-16						SB-17						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	7600	J	4860	J	4770	J	6780	J	5540	J	3510	J	5880	J	7000	J	4090	J	---
Antimony	mg/kg	0.77	J		UJ	0.19	J		UJ		UJ		UJ		UJ		UJ		J	---
Arsenic	mg/kg	5.2	J	5.9	J	7.2	J	5.7	J	2.5	J	3.8	J	3.9		3.3		7.8		13
Barium	mg/kg	57.2	J	86.8	J	47.2	J	86.3	J	80.8	J	10.5	J	77.2	J	43.1	J	17.7	J	350
Beryllium	mg/kg	0.23	J	0.24	J	0.23	J	0.33	J	0.11	J	0.1	BJ	0.22	J	0.27	J	0.15	J	7.2
Cadmium	mg/kg	0.25		1.1		0.46		0.47		0.16		0.075	B	0.043	J		UJ		UJ	2.5
Calcium	mg/kg	42400	J	42700	J	20500	J	7190	J	3440	J	17300	J	4670		8930		48600		---
Chromium	mg/kg	13.4	J	**245**	J	17.4	J	12.3	J	11.8	J	7.7	J	9.3	J	13.7	J	6.9	J	30
Cobalt	mg/kg	7.4	J	4.6	J	5.4	J	5.2	J	3.7	J	4.5	J	2.7	J	6.7	J	3.7	J	---
Copper	mg/kg	22.9	J	**139**	J	**64.4**	J	**68.7**	J	16.5	J	8.4	J	28.7	J	15.7	J	11.9	J	50
Iron	mg/kg	23100	J	16600	J	22800	J	13000	J	11000	J	11600	J	7090		17100		9280		---
Lead	mg/kg	39.9	J	**92.1**	J	45.3	J	20.4	J	5.1	J	3.3	J	10.1	J	5.3	J	2.7	J	63
Magnesium	mg/kg	10800	J	7490	J	5780	J	3670	J	2400	J	8320	J	2340	J	4220	J	12500	J	---
Manganese	mg/kg	242	J	315	J	262	J	219	J	98.9	J	193	J	75.9	J	173	J	229	J	1,600
Mercury	mg/kg	0.073		0.12		**0.23**		**0.34**		0.036		0.011	B	**0.31**		0.013		0.0074		0.18
Nickel	mg/kg	16.4	J	**89.7**	J	15.9	J	13.2	J	9.5	J	8.5	J	7.9	J	13.5	J	8.6	J	30
Potassium	mg/kg	751		463		399		431		507		436		501		938		880		---
Selenium	mg/kg		U	0.67	B	1.3		1.3		1.3		0.85	B	1.1		1.6			U	3.9
Silver	mg/kg		UJ	**2.7**	J	**3**	J	**3**	J		UJ		UJ	1.1			U		U	2.0
Sodium	mg/kg	64.7		237		416		393		172		150		199		183		104		---
Thallium	mg/kg	0.91		0.96		0.77		0.44		0.27		0.45	B		U	0.59		1.1		---
Vanadium	mg/kg	14.6	J	12.4	J	11.7	J	15.2	J	14.3	J	12.8	J	14.6	J	17	J	10	J	---
Zinc	mg/kg	48.5	J	**137**	J	97	J	70	J	29.5	J	24.2	J	34.2	J	46.4	J	14.3	J	109

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-18						SB-19						SB-20						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		0-4		4-8		8-12		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	NR		3960	J	3890	J	13900		3740		3530		11500		11100		13800		---
Antimony	mg/kg	NR			UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	NR		2.6		2.3		7.4		4.5		3.2		5.6		5.1		6.2		13
Barium	mg/kg	NR		17.2	J	13.5	J	134	J	37	J	42.1	J	85.5	J	111	J	154	J	350
Beryllium	mg/kg	NR		0.15	BJ	0.14	J	0.64	J	0.14	BJ	0.14	BJ	0.52	J	0.39	J	0.57	J	7.2
Cadmium	mg/kg	NR			UJ		UJ	0.84			U		U		U	0.47		2.4		2.5
Calcium	mg/kg	NR		41200		37300		8450		72800		58800		6020		16400		11200		---
Chromium	mg/kg	NR		6.7	J	7.2	J	**182**		5.8		5.6		20		17.2		**240**		30
Cobalt	mg/kg	NR		4.3	J	4.4	J	9.8	J	4.8	J	3.7	J	9.1	J	4.6	J	6.6	J	---
Copper	mg/kg	NR		17.3	J	27.8	J	**70**		19.1		9.1		22.1		23.3		**270**		50
Iron	mg/kg	NR		10000		10000		32700		10300		9890		29200		13300		22300		---
Lead	mg/kg	NR		2.9	J	3.5	J	43.2		2.2		2.2		7.7		8.2		58.8		63
Magnesium	mg/kg	NR		10700	J	13900	J	5840	J	11700	J	14100	J	5480	J	7380	J	6530	J	---
Manganese	mg/kg	NR		221	J	187	J	269	J	413	J	350	J	157	J	173	J	182	J	1,600
Mercury	mg/kg	NR		0.011	B	0.015	B	0.044	J		UJ		UJ	0.0088	J	0.044	J	**0.2**	J	0.18
Nickel	mg/kg	NR		9.1	J	10	J	**80.6**	J	9.9	J	8.7	J	22.8	J	**32**	J	**116**	J	30
Potassium	mg/kg	NR		791		647		849		908		936		1250		965		1080		---
Selenium	mg/kg	NR			U		U		U		U		U		U		U		U	3.9
Silver	mg/kg	NR			U		U		U		U		U		U		U	1.2		2.0
Sodium	mg/kg	NR		72.8		67.4		142		90.1		90.3		128		86.1		102		---
Thallium	mg/kg	NR		0.93		0.83		0.42		1.5		1.3		0.53		0.5		0.37		---
Vanadium	mg/kg	NR		9.9	J	12.2	J	31.7		8.8		8.6		27.8		20		26.2		---
Zinc	mg/kg	NR		16.8	J	17.2	J	93.4	J	16.3	J	12.2	J	42.2	J	40.1	J	**149**	J	109

TABLE 3-4 METAL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	MW-01						MW-02						MW-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	2-6		6-10		10-14		2-6		6-10		10-14		2-6		6-10		10-14		
	Sample Date	4/27/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	1840		6660		6570		7360		7730		6050		9270		7790		5730		---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	2.4	J	12.6	J	10.5	J	9.2	J	**24.8**	J	**26.7**	J	5.7	J	5.7	J	4.4	J	13
Barium	mg/kg	18.9		49.6		62.3		57.7		53.8		36.6		124		98.3		10.1		350
Beryllium	mg/kg	0.1	J	0.24		0.23		0.3		0.31		0.25		0.26		0.22	J	0.14	J	7.2
Cadmium	mg/kg	0.14	J	0.19	J	0.56		0.19	J	0.29		0.29		0.91		0.49		0.18	J	2.5
Calcium	mg/kg	228000	J	47300	J	37100	J	38900	J	21600	J	41300	J	5920	J	4280	J	23800	J	---
Chromium	mg/kg	11	J	10.9	J	17.4	J	14.5	J	15.8	J	10.1	J	**133**	J	**35.1**	J	7.3	J	30
Cobalt	mg/kg	1.3	J	6.1	J	6.3	J	5.6	J	7.4	J	6.1	J	4	J	5.7	J	4.8	J	---
Copper	mg/kg	8.2		19.1		**51.2**		21.3		30.8		26		**73.7**		29.3		7.7		50
Iron	mg/kg	4720	J	17900	J	22100	J	18800	J	22300	J	23000	J	13500	J	13400	J	21700	J	---
Lead	mg/kg	9.1	J	12.5	J	33.2	J	13.6	J	24.2	J	34.3	J	35	J	10.8	J	2.9	J	63
Magnesium	mg/kg	27300		13200		11500		11900		9310		14300		3060		2130		13600		---
Manganese	mg/kg	274	J	529	J	452	J	409	J	308	J	432	J	120	J	120	J	281	J	1,600
Mercury	mg/kg	0.072		0.027	J	0.15		0.049		0.082	J	**0.3**		**0.55**		0.1		0.017	J	0.18
Nickel	mg/kg	7.1	J	12.9	J	15.1	J	13.6	J	16	J	13.4	J	**52**	J	18.3	J	9.6	J	30
Potassium	mg/kg	527		1060		944		1110		1100		1080		883		878		658		---
Selenium	mg/kg	3.1		1.1	J		U		U	0.73	J		U		U	0.84	J		U	3.9
Silver	mg/kg		U		U	0.69	J		U		U		U	0.67	J		U		U	2.0
Sodium	mg/kg	141		177		196		112		233		318		1090		1850		417		---
Thallium	mg/kg	2.3			U		U		U		U		U		U		U		U	---
Vanadium	mg/kg	9.6		14.9		13.4		15.1		16.1		12.1		21.2		19		13.3		---
Zinc	mg/kg	22.8	J	31.4	J	**148**	J	34.9	J	50	J	47.4	J	71.3	J	41.2	J	25.8	J	109

Parameter List USEPA Method 6010 & 7471	Sample Location	SB-DUP01 SB-15		SB-DUP02 SB-05		DUP-02 MW-02	
	Sample Depth (ft)	12-14		0-4		6-10	
	Sample Date	1/18/2010		1/19/2010		4/26/2010	
	Sample Type	Composite		Composite		Composite	
Aluminum	mg/kg	3660	J	5450		6590	
Antimony	mg/kg		UJ		UJ	0.15	UJ
Arsenic	mg/kg	4.5	J	5.2		**27.7**	J
Barium	mg/kg	38	J	53.3	J	47.2	
Beryllium	mg/kg	0.19	J	0.23	BJ	0.27	
Cadmium	mg/kg	0.22	J	0.22	B	0.27	
Calcium	mg/kg	80100	J	85800		30500	J
Chromium	mg/kg	13.7	J	**30.4**		16.1	J
Cobalt	mg/kg	4.4	J	4.9	J	7.7	J
Copper	mg/kg	28.9	J	**82.1**		23.2	
Iron	mg/kg	12600		11500		20900	J
Lead	mg/kg	37.8	J	55.2		22.4	J
Magnesium	mg/kg	22300	J	22400	J	11100	
Manganese	mg/kg	288	J	273	J	296	J
Mercury	mg/kg	**0.19**		0.14	J	0.15	J
Nickel	mg/kg	11.7	J	17.7	J	18.3	J
Potassium	mg/kg	392		939		1080	
Selenium	mg/kg		U		U	0.63	UJ
Silver	mg/kg	0.76		0.38		0.064	U
Sodium	mg/kg	316		101	J	125	
Thallium	mg/kg	1.4	J	1.6		0.19	U
Vanadium	mg/kg	9.7	J	13.1		13.4	
Zinc	mg/kg	59.2	J	66.7	J	49.9	J

TABLE 3-5 POLYCHLORINATED BIPHENYL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SB-01						SB-03						SB-04						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	0.17	J		U	0.047		2.8			U		U	32	J	NR		2.4		NA
Aroclor-1254	mg/kg	0.14	J		U		U		U		U		U		U	NR			U	NA
Total PCB	mg/kg	**0.31**		0		0.047		**2.8**		0		0		**32**		0		**2.4**		0.1

Parameter List USEPA Method 8082	Sample Location	SB-05							SB-05A		SB-05B		SB-05C		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	0-4		4-8		8-12		12-14	2-4		2-4		2-4		
	Sample Date	1/19/2010							1/19/2010						
	Sample Type	Composite							Composite						
Aroclor-1248	mg/kg	3		0.045			U		U	0.75		4.8		7		NA
Aroclor-1254	mg/kg		U		U		U		U		U		U		U	NA
Total PCB	mg/kg	**3**		0.045		0		0		**0.75**		**4.8**		**7**		0.1

Parameter List USEPA Method 8082	Sample Location	SB-06						SB-07						SB-08						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg		U		U		U	5.3			U		U	0.28			U		U	NA
Aroclor-1254	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total PCB	mg/kg	0		0		0		**5.3**		0		0		**0.28**		0		0		0.1

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.
J = Estimated value.
U = Compound was analyzed for, but not detected.
NR = No Recovery
NA =
PCB = Polychlorinated Biphenyl.
Bold values indicate exceedence of standard.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-5 POLYCHLORINATED BIPHENYL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SB-09						SB-10						SB-11						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	1.4	J	39		2.3	DP	7.6		0.18		0.091		2.6	J	0.052	J		U	NA
Aroclor-1254	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total PCB	mg/kg	**1.4**		**39**		**2.3**		**7.6**		**0.18**		0.091		**2.6**		0.052		0		0.1

Parameter List USEPA Method 8082	Sample Location	SB-12						SB-13						SB-14						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-24		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	0.071			U	1		0.2		0.52		0.045			U		U		U	NA
Aroclor-1254	mg/kg		U		U		U		U		U				U		U		U	NA
Total PCB	mg/kg	0.071		0		**1**		**0.2**		**0.52**		0.045		0		0		0		0.1

Parameter List USEPA Method 8082	Sample Location	SB-15						SB-16						SB-17						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	0.23		23	J	1.2	J	0.54		0.059		0.13		1.4		0.12			U	NA
Aroclor-1254	mg/kg		U		U		U		U		U		U		U	0.068	U		U	NA
Total PCB	mg/kg	**0.23**		**23**		**1.2**		**0.54**		0.059		**0.13**		**1.4**		**0.188**		0		0.1

NOTE: D = Compounds identified in analysis at secondary dilution factor.
P =

TABLE 3-5 POLYCHLORINATED BIPHENYL DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SB-18						SB-19						SB-20						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		0-4		4-8		8-12		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	NA		0.044			U	5			U		U		U	0.35		28		NA
Aroclor-1254	mg/kg	NA			U		U		U		U		U		U		U		U	NA
Total PCB	mg/kg	0		0.044		0		**5**		0		0		0		**0.35**		**28**		0.1

Parameter List USEPA Method 8082	Sample Location	MW-01						MW-02						MW-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	2-6		6-10		10-14		2-6		6-10		10-14		2-6		6-10		10-14		
	Sample Date	4/27/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	2.5	J	0.21	J	0.74	J	1.7		0.91	J		UJ	4.7	J	0.16	J	2.5	J	NA
Aroclor-1254	mg/kg		UJ		UJ		UJ		U		UJ		U		UJ		UJ		UJ	NA
Total PCB	mg/kg	**2.5**		**0.21**		**0.74**		**1.7**		**0.91**		0		**4.7**		**0.16**		**2.5**		0.1

Parameter List USEPA Method 8082	Sample Location	SB-DUP01 SB-15		SB-DUP02 SB-05		DUP-02 MW-02		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	12-14		0-4		6-10		
	Sample Date	1/18/2010		1/19/2010		1426/2010		
	Sample Type	Composite		Composite		Composite		
Aroclor-1248	mg/kg	1.3	J	2.5			UJ	NA
Aroclor-1254	mg/kg		U		U		UJ	NA
Total PCB	mg/kg	**1.3**		**2.5**		0		0.1

TABLE 3-6 PESTICIDE DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SB-01						SB-03						SB-04						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**0.0077**	J		U		U		U		U		U		U	NR			U	0.0033
4,4'-DDE	mg/kg		U		U		U		U		U		U		U	NR			U	0.0033
4,4'-DDT	mg/kg	**0.0087**	J		U		U		U		U		U		U	NR			U	0.0033
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U	NR			U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		U	NR			U	0.036
delta-BHC	mg/kg	0.0023	J		U		U	**0.075**			U		U	**1.8**		NR		**0.15**		0.04
Dieldrin	mg/kg		U		U		U		U		U		U		U	NR			U	0.005
Endosulfan I	mg/kg		U		U		U		U		U		U		U	NR			U	2.4
Endosulfan sulfate	mg/kg	0.02	J		U		U		U		U		U		U	NR			U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U	NR			U	0.014
Endrin aldehyde	mg/kg	0.008	J		U		U		U		U		U		U	NR			U	---
Endrin ketone	mg/kg	0.016	J		U		U		U		U		U		U	NR			U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U	NR			U	0.1
gamma-Chlordane	mg/kg	0.0027	J		U		U		U		U		U		U	NR			U	---
Heptachlor	mg/kg		U		U		U		U		U		U		U	NR			U	0.042
Heptachlor epoxide	mg/kg	0.0027	J		U	0.0023	P	0.13			U		U	1.3		NR		0.13		---
Methoxychlor	mg/kg		U		U		U		U		U		U		U	NR			U	---

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
mg/kg = Milligrams per kilogram.
J = Estimated value.
U = Compound was analyzed for, but not detected.
NR = No Recovery
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane
--- =
P =
Bold values indicate exceedence of standard.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-6 PESTICIDE DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SB-05								SB-05A		SB-05B		SB-05C		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	0-4		4-8		8-12		12-14		2-4		2-4		2-4		
	Sample Date	1/19/2010								1/19/2010						
	Sample Type	Composite								Composite						
4,4'-DDD	mg/kg	**0.013**	J		U		U		U		UJ	**0.03**	**J**	**0.035**	J	0.0033
4,4'-DDE	mg/kg	**0.03**	J		U		U		U		UJ	**0.045**	J	**0.062**	J	0.0033
4,4'-DDT	mg/kg	**0.034**	J		U		U		U	**0.013**	J	**0.044**	J	**0.051**	J	0.0033
alpha-Chlordane	mg/kg	0.014	J		U		U		U	0.0022	J		UJ		U	0.094
beta-BHC	mg/kg	0.03	J		U		U		U	0.0065	J	0.0038	J	0.0029	J	0.036
delta-BHC	mg/kg		U		U		U		U		UJ		UJ		U	0.04
Dieldrin	mg/kg	**0.011**	J		U		U		U		UJ	**0.019**	J	**0.023**	J	0.005
Endosulfan I	mg/kg	0.005	J		U		U		U	0.0024	J	0.0075	J	0.0084	J	2.4
Endosulfan sulfate	mg/kg	0.025	J	0.0038	J	0.0042			U	0.0068	J	0.0057	J	0.01	J	2.4
Endrin	mg/kg	0.0093	J		U		U		U		UJ		UJ	0.0064	J	0.014
Endrin aldehyde	mg/kg	0.019			U		U		U	0.0069	J	0.0059	J	0.0061	J	---
Endrin ketone	mg/kg	0.0098	J		U		U		U	0.01	J		UJ		U	---
gamma-BHC (Lindane)	mg/kg	0.0099	J		U		U		U	0.0022	J	0.0019	J	0.0052	J	0.1
gamma-Chlordane	mg/kg		U	0.01		0.0066	J		U		UJ		UJ		U	---
Heptachlor	mg/kg	0.0043	J		U		U		U		UJ		UJ		U	0.042
Heptachlor epoxide	mg/kg		U		U		U		U		UJ		UJ		U	---
Methoxychlor	mg/kg	0.065	J		U		U		U		UJ		UJ		U	---

Parameter List USEPA Method 8081	Sample Location	SB-06						SB-07						SB-08						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
4,4'-DDT	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		U		U		U	0.036
delta-BHC	mg/kg		U		U		U	**0.33**			U		U		U		U		U	0.04
Dieldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
Endosulfan I	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U		U		U	0.1
gamma-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	---
Heptachlor	mg/kg		U		U		U		U		U		U		U		U		U	0.042
Heptachlor epoxide	mg/kg		U		U		U	0.32			U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

TABLE 3-6 PESTICIDE DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SB-09						SB-10						SB-11						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U	**0.01**	J		U		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg		U		U	**0.012**			U		U		U	**0.04**			U		U	0.0033
4,4'-DDT	mg/kg		U		U	**0.012**			U		U		U	**0.044**			U		U	0.0033
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U	0.0078	J		U		U	0.036
delta-BHC	mg/kg	**0.098**		**1.3**			U	**0.37**		0.0064		0.0031		**0.3**	D		U		U	0.04
Dieldrin	mg/kg		U		U	**0.0058**	J		U		U		U	**0.018**	J		U		U	0.005
Endosulfan I	mg/kg		U		U	0.0046	J		U		U		U	0.013	J		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U		U		U	0.1
gamma-Chlordane	mg/kg		U		U	0.0028	J		U		U		U		U		U		U	---
Heptachlor	mg/kg		U		U	0.0078	J		U		U		U	0.02	J		U		U	0.042
Heptachlor epoxide	mg/kg	0.079		1.1			U	0.36		0.0092		0.0044		0.2	D		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

Parameter List USEPA Method 8081	Sample Location	SB-12						SB-13						SB-14						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-24		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/18/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
4,4'-DDT	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		U		U		U	0.036
delta-BHC	mg/kg		U		U	0.018		0.0042		0.012			U		U		U		U	0.04
Dieldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
Endosulfan I	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		U	0.01			U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U		U		U	0.1
gamma-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	---
Heptachlor	mg/kg		U		U		U		U		U		U		U		U		U	0.042
Heptachlor epoxide	mg/kg		U		U	0.047		0.0097		0.026			U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

TABLE 3-6 PESTICIDE DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SB-15						SB-16						SB-17						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		4-8		8-12		12-14		4-8		8-12		12-14		
	Sample Date	1/18/2010						1/18/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**0.01**	J		U		U		U		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg	**0.005**			U		U		U		U		U		U		U		U	0.0033
4,4'-DDT	mg/kg	**0.0099**			U		U		U		U		U		U		U		U	0.0033
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		U		U		U	0.036
delta-BHC	mg/kg	0.0032	J	**2.1**		**0.13**		0.012			U	0.0025		0.031			U		U	0.04
Dieldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
Endosulfan I	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U		U		U	0.1
gamma-Chlordane	mg/kg	0.004	J		U		U		U		U		U		U		U		U	---
Heptachlor	mg/kg		U		U		U	0.0025			U		U		U		U		U	0.042
Heptachlor epoxide	mg/kg	0.011		1.4		0.067		0.03		0.0031		0.0064		0.072		0.0065			U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

Parameter List USEPA Method 8081	Sample Location	SB-18						SB-19						SB-20						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	4-8		8-12		12-14		0-4		4-8		8-12		4-8		8-12		12-14		
	Sample Date	1/19/2010						1/19/2010						1/19/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	NR			U		U	**0.045**	J		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg	NR			U		U	**0.046**			U		U		U	**0.0079**		**0.22**		0.0033
4,4'-DDT	mg/kg	NR			U		U	**0.061**			U		U		U	**0.0052**		**0.19**		0.0033
alpha-Chlordane	mg/kg	NR			U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg	NR			U		U	0.0034	J		U		U		U		U		U	0.036
delta-BHC	mg/kg	NR			U		U		U		U		U		U		U		U	0.04
Dieldrin	mg/kg	NR			U		U	**0.023**	J		U		U		U		U		U	0.005
Endosulfan I	mg/kg	NR			U		U	0.01	J		U		U		U		U	0.043	J	2.4
Endosulfan sulfate	mg/kg	NR			U		U		U		U		U		U		U		U	2.4
Endrin	mg/kg	NR			U		U	0.0064	J		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg	NR			U		U	0.0084	J		U		U		U		U		U	---
Endrin ketone	mg/kg	NR			U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg	NR			U		U		U		U		U		U		U		U	0.1
gamma-Chlordane	mg/kg	NR			U		U		U		U		U		U		U		U	---
Heptachlor	mg/kg	NR			U		U		U		U		U		U		U		U	0.042
Heptachlor epoxide	mg/kg	NR		0.002			U		U		U		U		U		U		U	---
Methoxychlor	mg/kg	NR			U		U		U		U		U		U		U		U	---

TABLE 3-6 PESTICIDE DETECTIONS IN SUBSURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	MW-01						MW-02						MW-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	2-6		6-10		10-14		2-6		6-10		10-14		2-6		6-10		10-14		
	Sample Date	4/27/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		UJ		UJ	**0.0087**	J		UJ		UJ		U		U		UJ	0.0033
4,4'-DDE	mg/kg		U		UJ		UJ	**0.0093**	J		UJ		UJ	**0.1**			U		UJ	0.0033
4,4'-DDT	mg/kg		U		UJ		UJ	**0.0093**	J		UJ		UJ	**0.11**			U		UJ	0.0033
alpha-Chlordane	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	0.094
beta-BHC	mg/kg		U		UJ		UJ	0.0021	J	0.0022	J		UJ		U		U		UJ	0.036
delta-BHC	mg/kg	0.034			U		U	0.017		0.0061			U	**0.22**		**0.054**			U	0.04
Dieldrin	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	0.005
Endosulfan I	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	2.4
Endosulfan sulfate	mg/kg		U	0.0044	R		UJ		UJ		UJ		UJ		U		U		UJ	2.4
Endrin	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	0.014
Endrin aldehyde	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	---
Endrin ketone	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	---
gamma-BHC (Lindane)	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	0.1
gamma-Chlordane	mg/kg		U		UJ	0.0031	R	0.011	R	0.015	J		UJ	0.1	R		U		UJ	---
Heptachlor	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	0.042
Heptachlor epoxide	mg/kg		U		UJ		UJ		UJ		UJ		UJ	0.13	R	0.031	R		UJ	---
Methoxychlor	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		U		UJ	---

Parameter List USEPA Method 8081	Sample Location	SB-DUP01 SB-15		SB-DUP02 SB-05		DUP02 MW-02		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (ft)	12-14		0-4		6-10		
	Sample Date	1/18/2010		1/19/2010		4/26/2010		
	Sample Type	Composite		Composite		Composite		
4,4'-DDD	mg/kg		U	**0.0075**	J		U	0.0033
4,4'-DDE	mg/kg		U	**0.022**	J	0.041	J	0.0033
4,4'-DDT	mg/kg		U	**0.026**		0.049	J	0.0033
alpha-Chlordane	mg/kg		U	0.0048	J		U	0.094
beta-BHC	mg/kg		U	0.02			U	0.036
delta-BHC	mg/kg	**0.11**				0.098	J	0.04
Dieldrin	mg/kg		U	**0.0084**	J		U	0.005
Endosulfan I	mg/kg		U	0.0033	J		U	2.4
Endosulfan sulfate	mg/kg		U	0.014	J		U	2.4
Endrin	mg/kg		U	0.0066	J		U	0.014
Endrin aldehyde	mg/kg		U	0.0089	J		U	---
Endrin ketone	mg/kg		U	0.0056	J		U	---
gamma-BHC (Lindane)	mg/kg		U	0.0084	J		U	0.1
gamma-Chlordane	mg/kg	0.016	J				U	---
Heptachlor	mg/kg		U				U	0.042
Heptachlor epoxide	mg/kg	0.052				0.18	R	---
Methoxychlor	mg/kg		U	0.046			U	---

TABLE 3-7 VOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SS-01						SS-02						SS-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
1,1,1-Trichloroethane	mg/kg		U		U		U		U		U		U		U		U		U	0.68
2-Butanone	mg/kg		U		U		U		U		U		U		U		U		U	---
Acetone	mg/kg		U		U		U		U		U		U		U		U		U	0.05
Carbon disulfide	mg/kg		U		U		U		U		U		U		U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.25
Methylene chloride	mg/kg	0.005	J	0.0051			U	0.0046	J	0.006		0.0095		0.0044	J	0.002	J	0.0045	J	0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Tetrachloroethene	mg/kg		U		U		U		U		U		U		U		U		U	1.3
Trichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.47

Parameter List USEPA Method 8260	Sample Location	SS-04						SS-05						SS-06						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
1,1,1-Trichloroethane	mg/kg		U		U		U		U		U		U		U		U		U	0.68
2-Butanone	mg/kg		U		U		U		U		U		U		U		U		U	---
Acetone	mg/kg		U		U		U		U		U		U		U		U		U	0.05
Carbon disulfide	mg/kg		U		U		U		U		U		U		U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.25
Methylene chloride	mg/kg		U	0.0017	J	0.0029	J	0.0015	J	0.0087			U	0.0014	J	0.0051			U	0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Tetrachloroethene	mg/kg		U		U		U		U		U		U		U		U		U	1.3
Trichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.47

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.
U = Compound was note analyzed for, but not detected.
--- =
J = Estimated value.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives

TABLE 3-7 VOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SS-07						SS-08						SS-09						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
1,1,1-Trichloroethane	mg/kg		U		U		U		U		U		U		U		U		U	0.68
2-Butanone	mg/kg		U		U		U		U		U		U		U		U		U	---
Acetone	mg/kg		U		U		U		U		U		U		U		U		U	0.05
Carbon disulfide	mg/kg		U		U		U		U		U		U		U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.25
Methylene chloride	mg/kg	0.0023	J	0.0055	J		U		U		U		U		U		U		U	0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Tetrachloroethene	mg/kg		U		U		U		U		U		U		U		U		U	1.3
Trichloroethene	mg/kg		U		U		U		U		U		U		U		U		U	0.47

Parameter List USEPA Method 8260	Sample Location	SS-10						SS-11						SS-12						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
1,1,1-Trichloroethane	mg/kg		U	NR		NR			U		U		U		U		U		U	0.68
2-Butanone	mg/kg		U	NR		NR			U		U		U		U		U		U	---
Acetone	mg/kg		U	NR		NR			U		U		U		U		U		U	0.05
Carbon disulfide	mg/kg		U	NR		NR			U		U		U		U		U		U	---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U	NR		NR			U		U		U		U		U		U	0.25
Methylene chloride	mg/kg		U	NR		NR			U		U		U		U		U		U	0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Tetrachloroethene	mg/kg		U	NR		NR			U		U		U		U		U		U	1.3
Trichloroethene	mg/kg		U	NR		NR			U		U		U		U		U		U	0.47

Parameter List USEPA Method 8260	Sample Location	SS-13						SS-14						SS-15						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
1,1,1-Trichloroethane	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.68
2-Butanone	mg/kg		U	NR		NR			U		U		U		U		U	NR		---
Acetone	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.05
Carbon disulfide	mg/kg		U	NR		NR			U		U		U		U		U	NR		---
Chloroform	mg/kg		U		U		U		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		U	NR		NR			U		U		U		U	0.0013	J	NR		0.25
Methylene chloride	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.05
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Tetrachloroethene	mg/kg		U	NR		NR			U		U		U	0.012		0.017		NR		1.3
Trichloroethene	mg/kg		U	NR		NR			U		U		U	0.0018	J	0.0032	J	NR		0.47

NOTE: NR = No Recovery.

TABLE 3-7 VOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SS-16			SS-17			SS-18			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6	6-12	12-24	
	Sample Date	1/13/2010			1/13/2010			1/13/2010			
	Sample Type	Composite			Composite			Composite			
1,1,1-Trichloroethane	mg/kg	U	U	NR	U	U	U	U	U	J	0.68
2-Butanone	mg/kg	U	U	NR	U	U	U	U	U	J	---
Acetone	mg/kg	U	U	NR	U	U	U	U	U	J	0.05
Carbon disulfide	mg/kg	U	U	NR	U	U	U	U	U	J	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	U	U	NR	U	U	U	U	U	J	0.25
Methylene chloride	mg/kg	U	U	NR	U	U	U	U	U	J	0.05
Naphthalene	mg/kg	U	U	U	U	U	U	U	U	U	12
Tetrachloroethene	mg/kg	U	U	NR	U	U	U	U	U	J	1.3
Trichloroethene	mg/kg	U	U	NR	U	U	U	U	U	J	0.47

Parameter List USEPA Method 8260	Sample Location	SS-19			SS-20			SS-21			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6	6-12	12-24	
	Sample Date	1/13/2010			1/13/2010			1/13/2010			
	Sample Type	Composite			Composite			Composite			
1,1,1-Trichloroethane	mg/kg	U	U	J	U	0.0023 J	U	U	J	NR	0.68
2-Butanone	mg/kg	U	U	J	U	U	U	U	J	NR	---
Acetone	mg/kg	U	U	J	U	U	U	U	J	NR	0.05
Carbon disulfide	mg/kg	U	U	J	U	U	U	U	J	NR	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	U	U	J	U	U	U	U	J	NR	0.25
Methylene chloride	mg/kg	U	U	J	U	U	U	U	J	NR	0.05
Naphthalene	mg/kg	U	U	U	U	U	U	U	U	U	12
Tetrachloroethene	mg/kg	U	U	J	U	U	U	U	J	NR	1.3
Trichloroethene	mg/kg	U	U	J	U	U	U	U	J	NR	0.47

Parameter List USEPA Method 8260	Sample Location	SS-22			SS-23			SS-24			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6	6-12	12-24	
	Sample Date	1/13/2010			1/13/2010			1/13/2010			
	Sample Type	Composite			Composite			Composite			
1,1,1-Trichloroethane	mg/kg	U	U	U	U	U	U	U	U	U	0.68
2-Butanone	mg/kg	U	U	0.023	U	U	U	U	U	U	---
Acetone	mg/kg	U	U	**0.078**	U	U 0.0082	J	U	U	U	0.05
Carbon disulfide	mg/kg	U	U	U	U	U 0.0022	J	U	U	U	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	U	U	U	U	U	U	U	U	U	0.25
Methylene chloride	mg/kg	U	U	U	U	U	U	U	U	U	0.05
Naphthalene	mg/kg	U	U	U	U	U	U	U	U	U	12
Tetrachloroethene	mg/kg	U	U	U	U	U	U	U	U	U	1.3
Trichloroethene	mg/kg	U	U	U	U	U	U	U	U	U	0.47

Parameter List USEPA Method 8260	Sample Location	SS-25			SS-26			SS-27			Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6	6-12	12-24	
	Sample Date	4/26/2010			4/26/2010			4/26/2010			
	Sample Type	Composite			Composite			Composite			
1,1,1-Trichloroethane	mg/kg	U	U	U	U	U	U	U	U	U	0.68
2-Butanone	mg/kg	R	R	R	R	R	R	R	R	R	---
Acetone	mg/kg	U	U	U	U	U	U	U	U	U	0.05
Carbon disulfide	mg/kg	U	U	U	U	U	U	U	U	U	---
Chloroform	mg/kg	U	U	U	U	U	U	U	U	U	0.37
cis-1,2-Dichloroethene	mg/kg	U	U	U	U	U	U	U	U	U	0.25
Methylene chloride	mg/kg	U	U	U	U	U	U	U	U	U	0.05
Naphthalene	mg/kg	U	U	U	U	U	U	U	U	U	12
Tetrachloroethene	mg/kg	U	U	U	U	U	U	0.0016 J	U	U	1.3
Trichloroethene	mg/kg	U	U	U	U	U	U	U	U	U	0.47

TABLE 3-7 VOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8260	Sample Location	SS-28						SS-29						SS-30						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
1,1,1-Trichloroethane	mg/kg		U		U		U		UJ		U		U		U		U		U	0.68
2-Butanone	mg/kg		R		R		R		R		R		R		R	0.01	J	0.0072	J	---
Acetone	mg/kg		U		U		U		UJ		U		U		U	0.038	J	0.019	J	0.05
Carbon disulfide	mg/kg		U		U		U		UJ		U		U		U		UJ		UJ	---
Chloroform	mg/kg		U		U		U		UJ		U		U		U		U		U	
cis-1,2-Dichloroethene	mg/kg		U		U		U		UJ		U		U		U		U		U	0.25
Methylene chloride	mg/kg		U		U		U		UJ		U		U		U		U		U	0.05
Naphthalene	mg/kg		U		U		U		UJ		U		U		U		U		U	12
Tetrachloroethene	mg/kg	0.0024	J	0.0018	J		U	0.0025	J	0.0018	J		U	0.002	J		U		U	1.3
Trichloroethene	mg/kg		U		U		U		UJ		U		U		U		U		U	0.47

VOC Parameter List USEPA Method 8260	Sample Location	SS-31						SS-DUP SS-06		SS-DUP02 SS-12		SS-DUP03 SS-17		SS-DUP-01 SS-26		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		6-12		12-24		0-6		12-14		
	Sample Date	4/26/2010						1/12/2010		1/13/2010		1/13/2010		4/26/2010		
	Sample Type	Composite						Composite		Composite		Composite		Composite		
1,1,1-Trichloroethane	mg/kg		UJ		U		U		U		U		U		U	0.68
2-Butanone	mg/kg		R		R		R		U		U		U		R	---
Acetone	mg/kg		R		R		R		U		U		U		UJ	0.05
Carbon disulfide	mg/kg		UJ		UJ		UJ		U		U		U		UJ	---
Chloroform	mg/kg		UJ		U		U		U		U		U		U	0.37
cis-1,2-Dichloroethene	mg/kg		UJ		U		U		U		U		U		U	0.25
Methylene chloride	mg/kg		UJ		U		U		U		U		U		U	0.05
Naphthalene	mg/kg		UJ		U		U								U	12
Tetrachloroethene	mg/kg		UJ		U		U		U		U		U		U	1.3
Trichloroethene	mg/kg		UJ		U		U		U		U		U		U	0.47

NOTE : B = Analyte found in in associated method blank, as well as sample.

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-01						SS-02						SS-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg		U		U		U		U		U	0.046	J	0.48		0.13	J	0.094	J	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg		U		U		U	0.046	J	0.053	J	0.075	J	0.87		0.08	J		U	20
Acenaphthylene	mg/kg		U		U		U	0.13	J	0.34	J	0.22	J	0.33	J	0.18	J	0.15	J	100
Anthracene	mg/kg		U		U		U	0.16	J	0.41		0.29	J	3.2		0.36	J	0.14	J	100
Benzo(a)anthracene	mg/kg	0.061	J		U		U	0.41		**1.2**		0.67		**3.8**		0.69		0.33	J	1
Benzo(a)pyrene	mg/kg	0.063	J		U		U	0.42		**1.5**		0.74		**2.7**		0.62		0.33	J	1
Benzo(b)fluoranthene	mg/kg	0.098	J		U		U	0.61		**1.9**		0.91		**3.3**		0.78		0.46		1
Benzo(g,h,i)perylene	mg/kg	0.053	J		U		U	0.3	J	1.2		0.57		1.4		0.41		0.25	J	100
Benzo(k)fluoranthene	mg/kg		U		U		U	0.3	J	0.71		0.47		**1.8**		0.42		0.21	J	0.8
Bis(2-ethylhexyl)phthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg		U		U		U	0.054	J	0.094	J	0.11	J	1.2		0.08	J		U	---
Chrysene	mg/kg	0.072	J		U		U	0.47		**1.3**		0.7		**3.6**		0.73		0.37	J	1
Dibenzo(a,h)anthracene	mg/kg		U		U		U	0.065	J	0.24	J	0.13	J	**0.42**		0.11	J	0.06	J	0.33
Dibenzofuran	mg/kg		U		U		U		U		U	0.056	J	1.2		0.083	J		U	---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg	0.17	J	0.098	J	0.13	J	0.14	J	0.099	J	0.072	J	0.15	J	0.12	J	0.16	J	---
Fluoranthene	mg/kg	0.12	J		U		U	0.75		2		1.2		8.7	D	1.3		0.64		100
Fluorene	mg/kg		U		U		U	0.053	J	0.081	J	0.1	J	2		0.14	J	0.046	J	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.046	J		U		U	0.29	J	**1.1**		**0.51**		**1.5**		0.4		0.23	J	0.5
Naphthalene	mg/kg		U		U		U		U		U	0.094	J	0.38	J	0.075	J		U	12
Pentachlorophenol	mg/kg		U		U		U		U		U		U		U		U		U	0.8
Phenanthrene	mg/kg		U		U		U	0.43		0.74		0.7		9.4	D	0.85		0.31	J	100
Phenol	mg/kg		U		U		U		U		U		U		U		U		U	0.33
Pyrene	mg/kg	0.1	J		U		U	0.67		1.9		1.1		5.7		1.1		0.54		100

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
U = Compound was analyzed for, but not detected.
--- =
J = Estimated Value.
D = Dilution of sample or extract.
Bold values indicate exceedence of standard
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-04						SS-05						SS-06						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg	0.069	J	0.04	J	0.078	J	0.061	J	0.055	J	0.17	J		U		U		U	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg	0.056	J	0.053	J	0.063	J	0.1	J	0.045	J	0.088	J		U		U		U	20
Acenaphthylene	mg/kg	0.59		0.34	J	0.57		0.22	J	0.33	J	0.42		0.21	J	0.31	J	0.26	J	100
Anthracene	mg/kg	0.6		0.36	J	0.6		0.35	J	0.33	J	0.41		0.19	J	0.28	J	0.15	J	100
Benzo(a)anthracene	mg/kg	**1.7**		0.99		**1.5**		0.77		0.87		**1.6**		0.6		0.73		0.49		1
Benzo(a)pyrene	mg/kg	**1.6**		0.88		**1.3**		0.75		0.84		**1.7**		0.54		0.77		0.53		1
Benzo(b)fluoranthene	mg/kg	**2.1**		**1.1**		**1.8**		0.97		**1**		**2.1**		0.77		0.91		0.67		1
Benzo(g,h,i)perylene	mg/kg	**1**		0.54		0.85		0.51		0.53		1.2		0.36	J	0.55		0.35	J	100
Benzo(k)fluoranthene	mg/kg	**0.92**		0.5		0.66		0.46		0.55		**1.1**		0.32	J	0.35	J	0.32	J	0.8
Bis(2-ethylhexyl)phthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg	0.088	J	0.076	J	0.11	J	0.094	J	0.061	J	0.086	J	0.042	J	0.062	J		U	---
Chrysene	mg/kg	**1.8**		0.93		**1.5**		0.78		0.89		**1.5**		0.64		0.8		0.5		1
Dibenzo(a,h)anthracene	mg/kg	0.27	J	0.16	J	0.23	J	0.13	J	0.15	J	0.28	J	0.1	J	0.14	J	0.1	J	0.33
Dibenzofuran	mg/kg	0.067	J	0.054	J	0.075	J	0.068	J	0.056	J	0.087	J		U		U		U	---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg	0.12	J	0.27	J	0.22	J	0.14	J	0.086	J	0.11	J	0.098	J	0.12	J	0.12	J	---
Fluoranthene	mg/kg	2.9		1.6		2.7		1.4		1.6		2.2		1		1.2		0.67		100
Fluorene	mg/kg	0.14	J	0.11	J	0.13	J	0.13	J	0.11	J	0.13	J	0.04	J	0.059	J		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	**1**		**0.56**		**0.84**		0.47		**0.53**		**1.1**		0.35	J	0.48		0.35	J	0.5
Naphthalene	mg/kg	0.12	J	0.073	J	0.13	J	0.083	J	0.12	J	0.12	J		U		U		U	12
Pentachlorophenol	mg/kg		U		U		U		U		U		U		U		U		U	0.8
Phenanthrene	mg/kg	1.3		0.73		1.2		0.86		0.72		0.85		0.4		0.52		0.23	J	100
Phenol	mg/kg		U		U		U		U		U		U		U		U		U	0.33
Pyrene	mg/kg	2.4		1.4		2.2		1.2		1.3		2.1		0.96		1.2		0.64		100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-07						SS-08						SS-09						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg	0.11	J		U	0.11	J	0.13	J		U		U	0.15	J		U		U	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg	0.093	J	0.1	J	0.12	J	0.13	J		U		U	0.086	J		U		U	20
Acenaphthylene	mg/kg	1.1		0.82		0.92		1		0.15	J	0.064	J	1.2		0.15	J	0.057	J	100
Anthracene	mg/kg	1.1		0.9		1.1		1.1		0.13	J	0.054	J	1.1		0.13	J	0.054	J	100
Benzo(a)anthracene	mg/kg	**2.5**		**2.2**		**2.3**		**1.8**		0.2	J	0.12	J	**1.7**		0.26	J	0.09	J	1
Benzo(a)pyrene	mg/kg	**2.4**		**2.2**		**2.1**		**2.2**		0.24	J	0.13	J	**1.9**		0.27	J	0.1	J	1
Benzo(b)fluoranthene	mg/kg	**3**		**2.8**		**2.5**		**3.1**		0.32	J	0.2	J	**2.3**		0.31	J	0.15	J	1
Benzo(g,h,i)perylene	mg/kg	1.5		1.6		1.3		2.1		0.21	J	0.15	J	1.9		0.21	J	0.086	J	100
Benzo(k)fluoranthene	mg/kg	**1.4**		**1.2**		**1.1**		**1.4**		0.16	J	0.069	J	**1.2**		0.18	J	0.051	J	0.8
Bis(2-ethylhexyl)phthalate	mg/kg		U		U		U	0.36	J		U		U	0.29	J		U		U	---
Butylbenzylphthalate	mg/kg		U		U		U	0.065	J		U		U		U		U		U	---
Carbazole	mg/kg	0.18	J	0.13	J	0.14	J	0.34	J		U		U	0.2	J		U		U	---
Chrysene	mg/kg	**2.8**		**2.8**		**2.6**		**2.4**		0.29	J	0.14	J	**2**		0.27	J	0.12	J	1
Dibenzo(a,h)anthracene	mg/kg	**0.39**	J	**0.4**		**0.34**	J	**0.48**	J		U		U	**0.38**	J	0.053	J		U	0.33
Dibenzofuran	mg/kg	0.075	J		U	0.079	J	0.1	J		U		U	0.091	J		U		U	---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U		U	0.25	J	---
Di-n-butylphthalate	mg/kg	0.1	J	0.11	J	0.15	J	0.22	J	0.11	J	0.11	J	0.081	J	0.066	J	0.068	J	---
Fluoranthene	mg/kg	4		3.5		3.8		4.2		0.49	J	0.23	J	3		0.46		0.16	J	100
Fluorene	mg/kg	0.22	J	0.26	J	0.21	J	0.23	J		U		U	0.22	J	0.041	J		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	**1.4**		**1.3**		**1.2**		**2**		0.19	J	0.13	J	**1.6**		0.19	J	0.087	J	0.5
Naphthalene	mg/kg	0.12	J		U	0.11	J	0.12	J		U		U	0.15	J		U		U	12
Pentachlorophenol	mg/kg		U		U		U		U		U		U		U		U		U	0.8
Phenanthrene	mg/kg	1.7		2		1.7		2		0.24	J	0.11	J	1.6		0.26	J	0.082	J	100
Phenol	mg/kg	0.14	J		U		U		U		U		U		U		U		U	0.33
Pyrene	mg/kg	3.9		3.6		3.8		3.7		0.45	J	0.21	J	2.9		0.42		0.15	J	100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-10						SS-11						SS-12						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U	NR		NR			U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg	0.16	J	NR		NR			U	0.04	J		U	0.076	J	0.063	J	0.11	J	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U	NR		NR			U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U	NR		NR			U		U		U		U		U		U	---
Acenaphthene	mg/kg	0.22	J	NR		NR		0.048	J		U		U	0.063	J	0.057	J	0.097	J	20
Acenaphthylene	mg/kg	2.1		NR		NR		0.45		0.16	J	0.13	J	0.64		0.57		0.33	J	100
Anthracene	mg/kg	2.3		NR		NR		0.49		0.15	J	0.12	J	0.62		0.53		0.51		100
Benzo(a)anthracene	mg/kg	**2.9**		NR		NR		**1.4**		0.34	J	0.23	J	**1.1**		0.89		0.9		1
Benzo(a)pyrene	mg/kg	**3.6**		NR		NR		**1.3**		0.35	J	0.26	J	**1.2**		0.96		0.88		1
Benzo(b)fluoranthene	mg/kg	**5.5**		NR		NR		**1.5**		0.45		0.32	J	**1.5**		**1.2**		**1.2**		1
Benzo(g,h,i)perylene	mg/kg	3.3		NR		NR		0.79		0.24	J	0.19	J	0.87		0.74		0.61		100
Benzo(k)fluoranthene	mg/kg	**2**		NR		NR		0.78		0.22	J	0.16	J	**0.83**		**0.83**		0.5		0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.75		NR		NR			U		U		U	0.2	J	0.18	J		U	---
Butylbenzylphthalate	mg/kg	0.085	J	NR		NR			U		U		U		U		U		U	---
Carbazole	mg/kg	0.58	J	NR		NR		0.082	J		U		U	0.16	J	0.15	J	0.12	J	---
Chrysene	mg/kg	**4.2**		NR		NR		**1.3**		0.4	J	0.27	J	**1.4**		**1.2**		**1**		1
Dibenzo(a,h)anthracene	mg/kg	**0.76**		NR		NR		0.2	J	0.059	J	0.048	J	0.21	J	0.18	J	0.16	J	0.33
Dibenzofuran	mg/kg	0.15	J	NR		NR			U		U		U	0.049	J		U	0.074	J	---
Dimethylphthalate	mg/kg		U	NR		NR			U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg	0.32	J	NR		NR		0.11	J	0.094	J	0.1	J	0.15	J	0.12	J	0.084	J	---
Fluoranthene	mg/kg	7.2		NR		NR		2.3		0.64		0.45		2.5		2.1		2		100
Fluorene	mg/kg	0.41	J	NR		NR		0.081	J	0.044	J		U	0.12	J	0.11	J	0.15	J	30
Indeno(1,2,3-cd)pyrene	mg/kg	**3**		NR		NR		**0.75**		0.26	J	0.2	J	**0.8**		**0.68**		**0.59**		0.5
Naphthalene	mg/kg	0.14	J	NR		NR			U		U		U		U		U		U	12
Pentachlorophenol	mg/kg		U	NR		NR			U		U		U		U		U		U	0.8
Phenanthrene	mg/kg	3.4		NR		NR		0.76		0.31	J	0.21	J	1.1		1		1.2		100
Phenol	mg/kg		U	NR		NR			U		U		U		U		U		U	0.33
Pyrene	mg/kg	6.4		NR		NR		2.1		0.61		0.43		2.2		1.9		1.7		100

NOTE : NR = No Recovery.

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-13						SS-14						SS-15						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U	NR		NR			U		U		U		U		U	NR		---
2-Methylnaphthalene	mg/kg	0.23	J	NR		NR			U		U		U	0.14	J	0.076	J	NR		---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg	0	U	NR		NR			U		U		U		U		U	NR		---
4-Methylphenol	mg/kg	0	U	NR		NR			U		U		U	0.073	J		U	NR		---
Acenaphthene	mg/kg	0.19	J	NR		NR			U		U		U	0.1	J	0.097	J	NR		20
Acenaphthylene	mg/kg	2		NR		NR		0.078	J	0.079	J	0.076	J	1.6		0.32	J	NR		100
Anthracene	mg/kg	2.2		NR		NR		0.063	J	0.062	J	0.074	J	2.6		0.59		NR		100
Benzo(a)anthracene	mg/kg	**2.4**		NR		NR		0.15	J	0.2	J	0.21	J	**7.1**	D	**1.3**		NR		1
Benzo(a)pyrene	mg/kg	**2.9**		NR		NR		0.15	J	0.2	J	0.2	J	**4.5**		**1.3**		NR		1
Benzo(b)fluoranthene	mg/kg	**4.7**		NR		NR		0.21	J	0.28	J	0.26	J	**5.6**		**1.6**		NR		1
Benzo(g,h,i)perylene	mg/kg	2.6		NR		NR		0.1	J	0.14	J	0.14	J	2.1		0.89		NR		100
Benzo(k)fluoranthene	mg/kg	**1.6**		NR		NR		0.1	J	0.11	J	0.1	J	**3**		**0.86**		NR		0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.61		NR		NR			U		U		U	0.12	J	0.15	J	NR		---
Butylbenzylphthalate	mg/kg	0.072	J	NR		NR			U		U		U	0.11	J	0.088	J	NR		---
Carbazole	mg/kg	0.53	J	NR		NR			U		U		U	0.38		0.16	J	NR		---
Chrysene	mg/kg	**3.5**		NR		NR		0.18	J	0.21	J	0.21	J	**5.9**		**1.3**		NR		1
Dibenzo(a,h)anthracene	mg/kg	**0.63**		NR		NR			U		U		U	**0.79**		0.22	J	NR		0.33
Dibenzofuran	mg/kg	0.17	J	NR		NR			U		U		U	0.27	J	0.1	J	NR		---
Dimethylphthalate	mg/kg		U	NR		NR			U		U		U		U		U	NR		---
Di-n-butylphthalate	mg/kg	0.22	J	NR		NR		0.071	J	0.067	J	0.077	J	0.092	J	0.061	J	NR		---
Fluoranthene	mg/kg	6.2		NR		NR		0.32	J	0.34	J	0.39	J	14	D	2.4		NR		100
Fluorene	mg/kg	0.37	J	NR		NR			U		U		U	0.62		0.18	J	NR		30
Indeno(1,2,3-cd)pyrene	mg/kg	**2.4**		NR		NR		0.1	J	0.14	J	0.14	J	**2.4**		**0.87**		NR		0.5
Naphthalene	mg/kg	0.24	J	NR		NR			U		U		U	0.17	J	0.069	J	NR		12
Pentachlorophenol	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.8
Phenanthrene	mg/kg	3.1		NR		NR		0.15	J	0.15	J	0.22	J	5.2		1.4		NR		100
Phenol	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.33
Pyrene	mg/kg	5.5		NR		NR		0.28	J	0.33	J	0.36	J	9.5	D	1.9		NR		100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-16						SS-17						SS-18						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U		U	NR			U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg	0.16	J	0.058	J	NR		0.17	J	0.3	J		U	0.1	J	0.18	J	0.27	J	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U	NR			U	0.061	J		U		U		U		U	---
4-Methylphenol	mg/kg		U		U	NR			U		U		U		U		U	0.066	J	---
Acenaphthene	mg/kg	0.13	J	0.072	J	NR		0.17	J	0.17	J		U	0.14	J	0.15	J	0.22	J	20
Acenaphthylene	mg/kg	1.4		0.62		NR		1.4		1.9		0.21	J	1.1		2		2.1		100
Anthracene	mg/kg	1.5		0.69		NR		1.6		2.1		0.19	J	1.1		1.5		1.8		100
Benzo(a)anthracene	mg/kg	**1.7**		0.7		NR		**1.9**		**2**		0.67		**1.7**		**2.3**		**3**		1
Benzo(a)pyrene	mg/kg	**2**		0.88		NR		**2.1**		**2.2**		0.72		**2**		**2.9**		**3.4**		1
Benzo(b)fluoranthene	mg/kg	**3.1**		**1.3**		NR		**3.2**		**3**		0.85		**2.6**		**3.4**		**4.6**		1
Benzo(g,h,i)perylene	mg/kg	1.6		0.75		NR		1.5		1.7		0.56		1.9		2.6		2.9		100
Benzo(k)fluoranthene	mg/kg	**1.2**		0.62		NR		**1.3**		**1.4**		0.51		**1.6**		**1.9**		**2.5**		0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.37	J	0.17	J	NR		0.39	J	0.46	J		U	0.38	J	0.23	J	0.49	J	---
Butylbenzylphthalate	mg/kg		U		U	NR			U		U		U		U		U		U	---
Carbazole	mg/kg	0.39	J	0.16	J	NR		0.38	J	0.35	J	0.085	J	0.36	J	0.38	J	0.58		---
Chrysene	mg/kg	**2.3**		**1**		NR		**2.6**		**2.4**		0.79		**2.3**		**3.2**		**4.1**		1
Dibenzo(a,h)anthracene	mg/kg	**0.45**	J	0.18	J	NR		**0.39**	J	**0.41**	J	0.13	J	**0.4**	J	**0.51**	J	**0.63**		0.33
Dibenzofuran	mg/kg	0.12	J	0.05	J	NR		0.12	J	0.17	J		U	0.1	J	0.12	J	0.19	J	---
Dimethylphthalate	mg/kg		U		U	NR			U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg	0.13	J	0.093	J	NR		0.12	J	0.11	J	0.072	J	0.13	J	0.1	J	0.22	J	---
Fluoranthene	mg/kg	4.2		2		NR		4.7		4.2		1.3		4.6		5.2		7.6		100
Fluorene	mg/kg	0.26	J	0.12	J	NR		0.3	J	0.35	J	0.063	J	0.25	J	0.35	J	0.42	J	30
Indeno(1,2,3-cd)pyrene	mg/kg	**1.5**		**0.71**		NR		**1.5**		**1.5**		**0.51**		**1.8**		**2.3**		**2.8**		0.5
Naphthalene	mg/kg	0.17	J		U	NR		0.17	J	0.29	J		U		U	0.23	J	0.3	J	12
Pentachlorophenol	mg/kg		U		U	NR			U		U		U		U		U		U	0.8
Phenanthrene	mg/kg	2.1		0.95		NR		2.4		2.3		0.68		2.3		2.4		3.6		100
Phenol	mg/kg		U		U	NR			U		U		U		U		U		U	0.33
Pyrene	mg/kg	3.8		1.7		NR		4.1		3.9		1.3		3.7		4.4		5.8		100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-19						SS-20						SS-21						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U		U		U		U	0.088	J		U		U		U	NR		---
2-Methylnaphthalene	mg/kg	0.19	J		U		U	0.071	J	0.56		0.24	J		U	0.054	J	NR		---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U		U		U	0.13	J		U		U		U	NR		---
4-Methylphenol	mg/kg		U		U		U		U	0.1	J	0.084	J		U		U	NR		---
Acenaphthene	mg/kg	0.16	J		U		U	0.081	J	0.51		0.18	J	0.081	J	0.073	J	NR		20
Acenaphthylene	mg/kg	1.2			U		U	0.58		4.3		2.4		0.46		0.5		NR		100
Anthracene	mg/kg	1.2		0.046	J		U	0.61		4.1		1.9		0.45		0.5		NR		100
Benzo(a)anthracene	mg/kg	**1.2**		0.084	J		U	**1.2**		**4**		**3.3**		**1**		0.94		NR		1
Benzo(a)pyrene	mg/kg	**1.5**		0.093	J		U	**1.5**		**4.4**		**3.9**		0.93		**1.2**		NR		1
Benzo(b)fluoranthene	mg/kg	**1.8**		0.14	J		U	**2.2**		**5.7**		**4.9**		**1.1**		**1.6**		NR		1
Benzo(g,h,i)perylene	mg/kg	1.4		0.099	J		U	1.5		4.3		3.2		0.74		1.5		NR		100
Benzo(k)fluoranthene	mg/kg	**0.94**		0.054	J		U	**1.1**		**2.6**		**2.3**		0.53		**0.87**		NR		0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.37	J		U		U	0.24	J	0.77		0.4	J	0.17	J	0.16	J	NR		---
Butylbenzylphthalate	mg/kg		U		U		U		U		U	0	U		U		U	NR		---
Carbazole	mg/kg	0.3	J		U		U	0.23	J	0.91		0.5		0.092	J	0.12	J	NR		---
Chrysene	mg/kg	**1.8**		0.1	J		U	**1.7**		**5.4**		**4.2**		**1.1**		**1.1**		NR		1
Dibenzo(a,h)anthracene	mg/kg	0.3	J		U		U	0.32	J	**0.94**		**0.77**		0.15	J	0.29	J	NR		0.33
Dibenzofuran	mg/kg	0.13	J		U		U	0.056	J	0.45	J	0.2	J		U	0.049	J	NR		---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U		U	NR		---
Di-n-butylphthalate	mg/kg	0.096	J	0.062	J		U	0.37	J	0.13	J	0.1	J	0.079	J	0.088	J	NR		---
Fluoranthene	mg/kg	3.5		0.18	J		U	3		**11**	D	7.8	D	1.9		1.9		NR		100
Fluorene	mg/kg	0.27	J		U		U	0.16	J	0.96		0.49		0.24	J	0.13	J	NR		30
Indeno(1,2,3-cd)pyrene	mg/kg	**1.2**		0.1	J		U	**1.5**		**3.6**		**2.8**		**0.63**		**1.3**		NR		0.5
Naphthalene	mg/kg		U		U		U		U	0.67		0.31	J		U		U	NR		12
Pentachlorophenol	mg/kg		U		U		U		U		U		U		U		U	NR		0.8
Phenanthrene	mg/kg	2		0.092	J		U	1.3		6.4		3.7		1.4		0.86		NR		100
Phenol	mg/kg		U		U		U		U	0.07	J		U		U		U	NR		0.33
Pyrene	mg/kg	2.7		0.16	J		U	2.5		9.1	D	5.8		1.8		1.5		NR		100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-22						SS-23						SS-24						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dimethylphenol	mg/kg		U		U	0.38	J		U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg	0.096	J	0.2	J	0.27	J	0.29	J	0.49	J	0.29	J	0.15	J	0.13	J	0.077	J	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U		U		U	0.29	J		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U	0.14	J		U		U		U	---
Acenaphthene	mg/kg	0.092	J	0.18	J	0.096	J	0.26	J	0.18	J	0.1	J	0.16	J	0.096	J		U	20
Acenaphthylene	mg/kg	0.59	J	1.7		1.5		2.8		2.5		1.8		1.4		1		0.61		100
Anthracene	mg/kg	0.61	J	1.8		1.4		2.6		2.7		1.7		1.3		0.97		0.36	J	100
Benzo(a)anthracene	mg/kg	**1.2**		**2.9**		**1.1**		**3.5**		**1.7**		**1.6**		**1.8**		0.64	J	0.66		1
Benzo(a)pyrene	mg/kg	**1.6**		**4**		**2.4**		**4**		**2.1**		**2.6**		**2.1**		0.81		0.86		1
Benzo(b)fluoranthene	mg/kg	**1.8**		**4.3**		**2.7**		**5.5**		**2.6**		**2.6**		**2.5**		**1.1**		**1.3**		1
Benzo(g,h,i)perylene	mg/kg	2.2		4.1		2		3.6		2.4		2.4		1.6		0.8		0.82		100
Benzo(k)fluoranthene	mg/kg	**1.3**		**3.9**		**2.2**		**3**		**2.2**		**2.3**		**1.2**		0.64	J	0.42	J	0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.46	J	0.7		6		0.83		0.74		5.8		0.41	J	0.28	J	0.38	J	---
Butylbenzylphthalate	mg/kg	0.17	J	0.094	J		U	0.11	J		U		U		U		U		U	---
Carbazole	mg/kg	0.23	J	0.52	J	0.23	J	0.71		0.39	J	0.23	J	0.35	J	0.15	J	0.11	J	---
Chrysene	mg/kg	**1.7**		**3.5**		**2.2**		**4.5**		**2.5**		**2**		**2.3**		0.86		0.91		1
Dibenzo(a,h)anthracene	mg/kg	0.29	J	**0.78**		**0.44**	J	**0.79**		**0.5**	J	**0.52**	J	**0.38**	J	0.17	J	0.19	J	0.33
Dibenzofuran	mg/kg		U	0.15	J	0.15	J	0.2	J	0.23	J	0.13	J	0.11	J	0.076	J		U	---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg	0.14	J	0.28	J	0.12	J	0.2	J	0.17	J		U	0.07	J		U		U	---
Fluoranthene	mg/kg	3.1		6.7		2		9		3.9		2.8		4.8		1.6		1.4		100
Fluorene	mg/kg	0.15	J	0.37	J	0.13	J	0.51	J	0.41	J	0.16	J	0.29	J	0.17	J	0.1	J	30
Indeno(1,2,3-cd)pyrene	mg/kg	**1.6**		**3.4**		**1.8**		**3.4**		**2.1**		**2**		**1.4**		**0.69**		**0.8**		0.5
Naphthalene	mg/kg		U	0.19	J		U	0.27	J	0.39	J	0.27	J		U		U		U	12
Pentachlorophenol	mg/kg		U		U		U		U		U		U	0.42	J		U		U	0.8
Phenanthrene	mg/kg	1.2		2.8		1		3.8		2		1.2		2.2		0.84		0.66		100
Phenol	mg/kg		U		U		U		U		U		U		U		U		U	0.33
Pyrene	mg/kg	2.2		5.1		2.1		6.7		3.2		2.7		3.7		1.3		1.3		100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-25						SS-26						SS-27						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dichlorophenol	mg/kg		U		U		U		U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg		U		U		U		U		U		U		U		U		U	---
3,3'-Dichlorobenzidine	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Chloroaniline	mg/kg		U		U		U		U		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg		U	0.058	J		U		U		U		U		U		U		U	20
Acenaphthylene	mg/kg	0.19	J	0.73		0.19	J	0.12	J	0.1	J	0.18	J		U	0.069	J		U	100
Anthracene	mg/kg	0.2	J	0.59		0.14	J	0.11	J	0.076	J	0.12	J		U	0.056	J		U	100
Benzo(a)anthracene	mg/kg	0.36	J	1		0.28	J	0.23	J	0.17	J	0.29	J	0.11	J	0.18	J	0.07	J	1
Benzo(a)pyrene	mg/kg	0.32	J	0.91		0.23	J	0.21	J	0.13	J	0.25	J	0.081	J	0.13	J	0.058	J	1
Benzo(b)fluoranthene	mg/kg	0.45	J	1.3	J	0.3	J	0.28	J	0.19	J	0.35	J	0.12	J	0.19	J	0.068	J	1
Benzo(g,h,i)perylene	mg/kg	0.25	J	0.62		0.17	J	0.16	J	0.12	J	0.19	J	0.069	J	0.12	J	0.047	J	100
Benzo(k)fluoranthene	mg/kg	0.21	J	0.51		0.15	J	0.095	J	0.057	J	0.13	J	0.052	J	0.072	J		U	0.8
Bis(2-ethylhexyl)phthalate	mg/kg		U	0.23	J		U		U		U		U		U	1.2			U	---
Butylbenzylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Carbazole	mg/kg	0.057	J	0.11	J		U		U		U		U		U		U		U	---
Chrysene	mg/kg	0.5		1.3		0.34	J	0.33	J	0.21	J	0.32	J	0.12	J	0.2	J	0.073	J	1
Dibenzo(a,h)anthracene	mg/kg	0.078	J	0.18	J	0.059	J		U		U	0.046	J		U		U		U	0.33
Dibenzofuran	mg/kg		U	0.043	J		U		U		U		U		U		U		U	---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg		U	0.22	J		U		U		U		U		U		U		U	---
Fluoranthene	mg/kg	0.72		2.1		0.48		0.42	J	0.27	J	0.46		0.16	J	0.28	J	0.1	J	100
Fluorene	mg/kg		U	0.13	J		U		U		U		U		U		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.2	J	0.52		0.15	J	0.12	J	0.087	J	0.18	J	0.058	J	0.077	J		U	0.5
Naphthalene	mg/kg		U		U		U		U		U		U		U		U		U	12
Pentachlorophenol	mg/kg		U		U		U		U		U		U		U		U		U	0.8
Phenanthrene	mg/kg	0.43	J	0.86		0.3	J	0.24	J	0.15	J	0.22	J	0.085	J	0.14	J	0.046	J	100
Phenol	mg/kg		U		U		U		U		U		U		U		U		U	0.33
Pyrene	mg/kg	0.92		2.1		0.6		0.49		0.36	J	0.55		0.2	J	0.3	J	0.12	J	100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-28						SS-29						SS-30						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
2,4-Dichlorophenol	mg/kg		U		U		U		UJ		U		UJ		U		U		U	---
2-Methylnaphthalene	mg/kg		U		U		U		UJ		U		U		U		U		U	---
3,3'-Dichlorobenzidine	mg/kg		U		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
4-Chloroaniline	mg/kg		U		U		U		UJ		U		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		UJ		U		UJ		U		U		U	---
Acenaphthene	mg/kg	0.086	J		U		U		UJ		U		U		U		U		U	20
Acenaphthylene	mg/kg	0.78		0.23	J	0.079	J	0.82	J	0.32	J	0.056	J	0.5	J	0.11	J	0.071	J	100
Anthracene	mg/kg	0.76		0.17	J	0.053	J	0.55	J	0.22	J		U	0.36	J	0.083	J		U	100
Benzo(a)anthracene	mg/kg	**1.1**		0.3	J	0.13	J	0.72	J	0.4	UJ	0.092	J	0.63	J	0.17	J	0.13	J	1
Benzo(a)pyrene	mg/kg	0.9		0.31	J	0.097	J	0.93	J	0.4	J	0.061	J	0.7		0.16	J	0.11	J	1
Benzo(b)fluoranthene	mg/kg	**1.5**	J	0.24	J	0.12	J	0.79	J	0.47	J	0.09	J	0.89	J	0.21	J	0.16	J	1
Benzo(g,h,i)perylene	mg/kg	0.82		0.21	J	0.081	J	0.72	J	0.27	J		UJ	0.49	J		UJ	0.079	J	100
Benzo(k)fluoranthene	mg/kg	**0.81**		0.41	J	0.15	J	**0.99**	J	0.26	J	0.058	J	0.46	J	0.11	J	0.087	J	0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.3	J		UJ		UJ	0.41	J	0.17	J		UJ	0.18	J		UJ		UJ	---
Butylbenzylphthalate	mg/kg		U		UJ		UJ		UJ		UJ		UJ		U		UJ		UJ	---
Carbazole	mg/kg	0.21	J		U		U	0.14	J		U		U	0.12	J		U		U	---
Chrysene	mg/kg	**1.6**		0.53	J	0.2	J	**1.1**	J	0.57	J	0.096	J	**1**	J	0.23	J	0.18	J	1
Dibenzo(a,h)anthracene	mg/kg	0.11	J		UJ		UJ	0.17	J		U		UJ		UJ		UJ		UJ	0.33
Dibenzofuran	mg/kg		U		U		U		UJ		U		U		U		U		U	---
Dimethylphthalate	mg/kg		U		U		U		UJ		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg		U	0.087	J		U		UJ	0.1	J		U	0.13	J		U		U	---
Fluoranthene	mg/kg	2.8		0.56		0.25	J	1.4	J	0.6		0.12	J	1.4		0.27	J	0.22	J	100
Fluorene	mg/kg	0.16	J		U		U	0.12	J	0.056	J		U	0.088	J		U		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	0.14	J	0.21	J	0.069	J	0.55	J	0.25	J		UJ	0.41	J		UJ	0.079	J	0.5
Naphthalene	mg/kg		U		U		U		UJ		U		U		U		U		U	12
Pentachlorophenol	mg/kg		U		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	0.8
Phenanthrene	mg/kg	1.3		0.31	J	0.13	J	0.74	J	0.35	J	0.068	J	0.71		0.16	J	0.12	J	100
Phenol	mg/kg		U		U		U		UJ		U		UJ		U	**0.96**			U	0.33
Pyrene	mg/kg	2.9		0.75	J	0.32	J	1.7	J	0.95	J	0.15	J	1.6	J	0.39	J	0.27	J	100

TABLE 3-8 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8270	Sample Location	SS-31						SS-DUP SS-06		SS-DUP02 SS-12		SS-DUP03 SS-17		SS-DUP-01 SS-26		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		6-12		12-24		0-6		12-14		
	Sample Date	4/26/2010						1/12/2010		1/13/2010		1/13/2010		4/26/2010		
	Sample Type	Composite						Composite		Composite		Composite		Composite		
2,4-Dichlorophenol	mg/kg		U		U		U		U		U		U		U	---
2-Methylnaphthalene	mg/kg	0.15	J	0.39	J	0.37	J		U	0.11	J	0.12	J		U	---
3,3'-Dichlorobenzidine	mg/kg	0.15	J		U		U		U		U		U		U	
4-Chloroaniline	mg/kg		U		U	0.1	J		U		U		U		U	---
4-Methylphenol	mg/kg		U		U		U		U		U		U		U	---
Acenaphthene	mg/kg	0.75		1		1.3			U	0.11	J	0.13	J		U	20
Acenaphthylene	mg/kg	0.8		1.6		2		0.32	J	0.25	J	1		0.13	J	100
Anthracene	mg/kg	3.2		4.4		5		0.24	J	0.45		0.93		0.1	J	100
Benzo(a)anthracene	mg/kg	**8.2**	J	**13**		**14**		0.77		**1**		**1.5**		0.23	J	1
Benzo(a)pyrene	mg/kg	**6.2**		**11**		**12**		0.8		**1**		**1.8**		0.17	J	1
Benzo(b)fluoranthene	mg/kg	**7.4**	J	**12**	J	**12**	J	**1.1**		**1.4**		**2.5**		0.22	J	1
Benzo(g,h,i)perylene	mg/kg	3.7	J	5.9		5.7		0.59		0.7		1.5		0.13	J	100
Benzo(k)fluoranthene	mg/kg	**5.2**		**5.9**		**5.8**		0.38		0.55		**1.3**		0.11	J	0.8
Bis(2-ethylhexyl)phthalate	mg/kg	0.2	J	0.17	J	0.26	J		U		U	0.36	J		U	---
Butylbenzylphthalate	mg/kg	0.092	J		U		U		U		U		U		U	---
Carbazole	mg/kg	0.86		1.3		0.99		0.069	J	0.14	J	0.32	J		U	---
Chrysene	mg/kg	**11**		**12**		**12**		0.87		**1.1**		**2.3**		0.24	J	1
Dibenzo(a,h)anthracene	mg/kg	**1.3**	J	**2.5**		**2.3**		0.15	J	0.18	J	**0.44**	J		U	0.33
Dibenzofuran	mg/kg	0.52		0.61		0.88			U	0.096	J	0.097	J		U	---
Dimethylphthalate	mg/kg		U		U		U		U		U		U		U	---
Di-n-butylphthalate	mg/kg	0.066	J		U	0.12	J	0.11	J		U	0.078	J		U	---
Fluoranthene	mg/kg	23		30		33		1.3		2.2		4.4		0.34	J	100
Fluorene	mg/kg	1.1		1.7		0.11	J	0.063	J	0.19	J	0.24	J		U	30
Indeno(1,2,3-cd)pyrene	mg/kg	**3.6**		**5.9**		**5.4**		**0.53**		**0.69**		**1.5**		0.11	J	0.5
Naphthalene	mg/kg	0.2	J	0.28	J	0.17	J		U		U		U		U	12
Pentachlorophenol	mg/kg		UJ		U		U		U		U		U		U	0.8
Phenanthrene	mg/kg	12		21		24		0.59		1.4		2.2		0.17	J	100
Phenol	mg/kg		U		U		U		U		U		U		U	0.33
Pyrene	mg/kg	20		26	D	0.63		1.3		1.8		3.4		0.41		100

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-01						SS-02						SS-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	6230	J	2800	J	3050	J	4830	J	5630	J	4970	J	4440	J	3810	J	3550	J	---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	6		3.6		3.8		5.2		5.4		5.2		4.4		4.6		4.4		13
Barium	mg/kg	56.1	J	35.3	J	55.3	J	46.5	J	60.8	J	53.7	J	47.2	J	35.7	J	34.6	J	350
Beryllium	mg/kg	0.24	BJ	0.12	BJ	0.19	BJ	0.19	BJ	0.2	J	0.19	BJ	0.16	BJ	0.12	BJ	0.13	BJ	7.2
Cadmium	mg/kg	0.12	B	0.098	B	0.044	B	0.42		0.47		0.43		0.27		0.16	B	0.19	B	2.5
Calcium	mg/kg	154000		96500		79900		90500		63200		79500		91300		163000		152000		---
Chromium	mg/kg	11.7	J	4.1	J	5.2	J	**31.1**	J	**56.9**	J	**43.7**	J	19.1	J	14.8	J	13.9	J	30
Cobalt	mg/kg	7	J	3.3	J	3.2	J	4.2	J	4.5	J	4.1	J	3.8	J	3.1	J	2.6	J	---
Copper	mg/kg	25.4	J	11.5	J	14.3	J	44.4	J	**68.5**	J	**55.1**	J	35.1	J	25.9	J	24.9	J	50
Iron	mg/kg	14200	J	6750	J	10200	J	11600	J	16600	J	12300	J	9420	J	7970	J	7670	J	---
Lead	mg/kg	12	J	3.8	J	4.5	J	39.4	J	51.6	J	38.9	J	33.3	J	20.7	J	18.6	J	63
Magnesium	mg/kg	18800	J	33900	J	16600	J	18800	J	9760	J	14200	J	9920	J	8680	J	16400	J	---
Manganese	mg/kg	419	J	299	J	542	J	478	J	268	J	285	J	296	J	217	J	205	J	1,600
Mercury	mg/kg	0.014	B	0.0057	B		U	0.12		0.13		0.12		0.038	B	0.064		0.052		0.18
Nickel	mg/kg	20.1	J	8.9	J	10.8	J	19.4	J	26.9	J	23.1	J	13.3	J	11.8	J	10.4	J	30
Potassium	mg/kg	822	J	336	J	418	J	518	J	632	J	679	J	699	J	554	J	458	J	---
Selenium	mg/kg		U		U		U		U		U		U		U		U		U	3.9
Silver	mg/kg		U		U		U	0.39	B	0.65	B	0.26	B		U	0.15	B	0.14	B	2
Sodium	mg/kg	103	J	61.8	J	45.2	J	82.4	J	59.2	J	65.7	J	60.4	J	81.2	J	79.9	J	---
Thallium	mg/kg	2.5		2		1.8		1.8		1.1		1.4		1.5		2.3		2.4		---
Vanadium	mg/kg	11.7	J	6.2	J	6.8	J	11	J	12	J	10.8	J	10.4	J	8.4	J	8.3	J	---
Zinc	mg/kg	40.7	J	28	J	21.2	J	53.7	J	74.5	J	66	J	48.3	J	30.2	J	24.6	J	109

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.
J = Estimated Value.
--- =
U = Compound was analyzed for, but not detected.
B = Analyte found in associated method blank, as well as sample.
Bold values indicate exceedence of standard.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-04						SS-05						SS-06						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	4400	J	6390	J	6430	J	4470	J	4490	J	7210		6560	J	5220	J	6080	J	---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		U		UJ		UJ		UJ	---
Arsenic	mg/kg	5.3		5.7		6.8		5.8		5.2		5.4		4.1		6.6		4.8		13
Barium	mg/kg	34.4	J	54.4	J	61.3	J	43.8	J	33.4	U	48.4		45.2	J	49.4	J	48.6	J	350
Beryllium	mg/kg	0.16	BJ	0.22	J	0.26	J	0.16	BJ	0.17	BJ	0.22		0.23	J	0.2	BJ	0.2	BJ	7
Cadmium	mg/kg	0.26	B	0.33		0.61		0.46		0.18	B	0.23		0.18	B	0.36		0.15	B	3
Calcium	mg/kg	114000		51600		49000		117000		101000		64800		44700		64600		26300		---
Chromium	mg/kg	18.5	J	26.7	J	**56**	J	13.4	J	11.2	J	18.2		9.7	J	9.5	J	8.8	J	30
Cobalt	mg/kg	3.9	J	5.1	J	6.2	J	4.6	J	3.9	J	5.7		5.8	J	5.8	J	5	J	---
Copper	mg/kg	30.8	J	42.9	J	**74.5**	J	**1240**	J	38.9	J	**51.1**		27.5	J	37.6	J	27.6	J	50
Iron	mg/kg	9570	J	16100	J	21500	J	11200	J	9720	J	21200		17600	J	17700	J	16100	J	---
Lead	mg/kg	32.9	J	41.3	J	60.5	J	43.6	J	20.2	J	33.5		18.3	J	56.1	J	21	J	63
Magnesium	mg/kg	13200	J	11500	J	11900	J	15900	J	13100	J	16400		15300	J	12000	J	5780	J	---
Manganese	mg/kg	284	J	267	J	268	J	267	J	255	J	325		357	J	394	J	379	J	1,600
Mercury	mg/kg	0.1		0.14		0.17		0.096		0.074		0.12		0.058		0.043		0.046		0.18
Nickel	mg/kg	14	J	18.1	J	**30.2**	J	12.3	J	12.1	J	16.3		12.6	J	13.2	J	11.3	J	30
Potassium	mg/kg	662	J	751	J	743	J	856	J	697	J	664		924	J	814	J	619	J	---
Selenium	mg/kg		U		U		U		U		U		U		U		U	0.83	B	4
Silver	mg/kg	0.21	B	0.38	B	0.73	B		U	0.2	B	0.11			U		U		U	2
Sodium	mg/kg	58.4	J	47.6	J	52	J	79.2	J	60.7	J	77.5		65.8	J	82.5	J	92.8	J	---
Thallium	mg/kg	1.8		0.91		0.97		1.9		1.9		0.8		0.98		1.4		0.67	B	---
Vanadium	mg/kg	11.6	J	12.7	J	13.6	J	10	J	9.1	J	14.1		12	J	11.7	J	12.8	J	---
Zinc	mg/kg	48.2	J	59	J	97.2	J	61.6	J	31	J	60.1		31.6	J	60.2	J	35.5	J	109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-07						SS-08						SS-09						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	4210	J	6620	J	9070	J	9500	J	7600	J	9240	J	6090	J	7370	J	6500	J	---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	5.3		4.1		5		**14.8**	J	11	J	6.8	J	6.3	J	3.8	J	5.5	J	13
Barium	mg/kg	44.1	J	105	J	44.9	J	264	J	117	J	101	J	78.6	J	46.9	J	40.2	J	350
Beryllium	mg/kg	0.18	BJ	0.23	J	0.31	J	0.52	J	0.3	BJ	0.47	J	0.29	J	0.24	J	0.17	BJ	7
Cadmium	mg/kg	0.67		0.46		0.45		**3.2**	J	1.1	J	0.47	J	2.3	J	0.42	J	0.94	J	3
Calcium	mg/kg	120000		58200		39500		34600	J	5340	J	4570	J	43100	J	43600	J	23200	J	---
Chromium	mg/kg	29.3	J	24.6	J	24.2	J	**1110**	J	**476**	J	26	J	**419**	J	**41.3**	J	**156**	J	30
Cobalt	mg/kg	3.7	J	4.3	J	13.7	J	8.1	J	5.2	J	6.4	J	5.5	J	9.9	J	6.6	J	---
Copper	mg/kg	46.2	J	49.7	J	**108**	J	**403**	J	**246**	J	**121**	J	**495**	J	**85.7**	J	**847**	J	50
Iron	mg/kg	8540	J	9950	J	23200	J	25200	J	18000	J	15200	J	13800	J	12500	J	27500	J	---
Lead	mg/kg	52.8	J	49.6	J	45.3	J	**301**	J	**83.6**	J	32.5	J	**116**	J	17.3	J	22.6	J	63
Magnesium	mg/kg	7900	J	12400	J	17200	J	10900	J	3190	J	3660	J	11600	J	21100	J	9240	J	---
Manganese	mg/kg	215	J	181	J	445	J	368	J	405	J	117	J	409	J	316	J	414	J	1,600
Mercury	mg/kg	0.15		0.13		0.17		**0.51**	J	**0.19**	J	**0.6**	J	**0.25**	J	0.092	J	0.066	J	0.18
Nickel	mg/kg	16.7	J	14.6	J	22.5	J	**352**	J	**114**	J	22.9	J	**107**	J	27.9	J	**97.8**	J	30
Potassium	mg/kg	610	J	617	J	1250	J	896	J	562	J	622	J	775	J	1180	J	740	J	---
Selenium	mg/kg		U		U		U		UJ	1.2	J	1.3	J		UJ		UJ		UJ	4
Silver	mg/kg	0.69	B	0.59	B		U	**3.6**		1.1		**5.4**		**3**			U		U	2
Sodium	mg/kg	91	J	136	J	512	J	322	J	380	J	534	J	76.8	J	70.4	J	68.9	J	---
Thallium	mg/kg	1.8		1.2		1.2		0.81	BJ	0.62	J		UJ	0.64	BJ	1.1	J	0.45	BJ	---
Vanadium	mg/kg	14.1	J	15.1	J	16.6	J	41.7	J	23.4	J	20.2	J	14.3	J	11.4	J	15.6	J	---
Zinc	mg/kg	61.8	J	60.3	J	71.5	J	**375**	J	**118**	J	**114**	J	**321**	J	77.3	J	**2100**	J	109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Metal Parameter List USEPA Method 6010 & 7471	Sample Location	SS-10						SS-11						SS-12						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	9890	J	NR		NR		5280	J	5410	J	5800	J	8290	J	2160	J	5660	J	---
Antimony	mg/kg		UJ	NR		NR			UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	**17.9**	J	NR		NR		5.6	J	5.2	J	7.9	J	9.5	J	7.9	J	6	J	13
Barium	mg/kg	215	J	NR		NR		64	J	71.4	J	49.5	J	142	J	30.1	J	63.2	J	350
Beryllium	mg/kg	0.65	J	NR		NR		0.2	BJ	0.24	BJ	0.18	J	0.37	J	0.13	J	0.23	J	7
Cadmium	mg/kg	**9.1**	J	NR		NR		1.3	J	0.42	J	0.57	J	**3.5**	J	0.66	J	0.9	J	3
Calcium	mg/kg	39500	J	NR		NR		83700	J	10400	J	36400	J	22700	J	277000	J	20500	J	---
Chromium	mg/kg	**1770**	J	NR		NR		**32.5**	J	19.7	J	19.8	J	**416**	J	**57.1**	J	**115**	J	30
Cobalt	mg/kg	9.5	J	NR		NR		3.8	J	4.9	J	6.1	J	7.6	J	1.9	J	5.2	J	---
Copper	mg/kg	**640**	J	NR		NR		**91.5**	J	37.2	J	37.8	J	**217**	J	39.1	J	**92.5**	J	50
Iron	mg/kg	19700	J	NR		NR		10700	J	14100	J	34300	J	17200	J	6170	J	11800	J	---
Lead	mg/kg	**365**	J	NR		NR		**67.1**	J	27	J	22	J	**243**	J	43.9	J	**81**	J	63
Magnesium	mg/kg	12200	J	NR		NR		36400	J	4440	J	11300	J	7760	J	2900	J	6450	J	---
Manganese	mg/kg	534	J	NR		NR		176	J	186	J	301	J	301	J	257	J	251	J	1,600
Mercury	mg/kg	**0.62**	J	NR		NR		**0.33**	J	**0.19**	J	0.087	J	**0.42**	J	0.17	J	**0.21**	J	0.18
Nickel	mg/kg	**630**	J	NR		NR		15.6	J	13.6	J	15.2	J	**161**	J	27.4	J	**47.3**	J	30
Potassium	mg/kg	1030	J	NR		NR		561	J	501	J	570	J	1020	J	321	J	602	J	---
Selenium	mg/kg		UJ	NR		NR			UJ		UJ		UJ		UJ		UJ		UJ	4
Silver	mg/kg	**4.7**		NR		NR		**2.2**		0.29			J	1.9		0.13		1.4		2
Sodium	mg/kg	986	J	NR		NR		69.8	J	45.2	J	53	J	79.4	J	96.2	J	54.4	J	---
Thallium	mg/kg	1.1	BJ	NR		NR		1.1	J		UJ		UJ	0.53	BJ	3.5	J	0.28	BJ	---
Vanadium	mg/kg	33.1	J	NR		NR		11.4	J	14.5	J	19.9	J	21.4	J	4.8	J	12.8	J	---
Zinc	mg/kg	**596**	J	NR		NR		**132**	J	54.3	J	40.1	J	**409**	J	54.5	J	**109**	J	109

NOTE: NR = No Recovery.

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-13						SS-14						SS-15						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	9410	J	NR		NR		5270	J	5490	J	7500	J	4210	J	3300		NR		---
Antimony	mg/kg		UJ	NR		NR			UJ		UJ	0.19	J	0.2	BJ		U	NR		---
Arsenic	mg/kg	**16.5**	J	NR		NR		5.4	J	7.8	J	12.1	J	6.3	J	5.5		NR		13
Barium	mg/kg	203	J	NR		NR		37.4	J	45.2	J	47.5	J	38.1	J	40.9		NR		350
Beryllium	mg/kg	0.62	J	NR		NR		0.18	J	0.19	BJ	0.23	J	0.16	BJ	0.16	B	NR		7
Cadmium	mg/kg	**4.8**	J	NR		NR		0.23	J	0.19	BJ	0.23	J	0.58	J	0.56		NR		3
Calcium	mg/kg	36600	J	NR		NR		42400	J	37100	J	13200	J	170000	J	153000		NR		---
Chromium	mg/kg	**1570**	J	NR		NR		10.1	J	8.1	J	10.9	J	8.8	J	12.8		NR		30
Cobalt	mg/kg	8.8	J	NR		NR		4.6	J	5.4	J	6.6	J	3.9	J	3.3		NR		---
Copper	mg/kg	**546**	J	NR		NR		27.6	J	23.9	J	25.2	J	**114**	J	49.6		NR		50
Iron	mg/kg	18300	J	NR		NR		11900	J	13000	J	19800	J	9820	J	10800		NR		---
Lead	mg/kg	**358**	J	NR		NR		32.3	J	18.8	J	17.1	J	**85.3**	J	**94.5**		NR		63
Magnesium	mg/kg	11700	J	NR		NR		8550	J	11600	J	6040	J	13300	J	43600		NR		---
Manganese	mg/kg	376	J	NR		NR		345	J	514	J	296	J	269	J	387		NR		1,600
Mercury	mg/kg	**0.87**	J	NR		NR		0.074	J	0.069	J	0.081	J	0.14	J	0.063		NR		0.18
Nickel	mg/kg	**512**	J	NR		NR		11.4	J	11	J	12.9	J	10.9	J	8.6		NR		30
Potassium	mg/kg	1130	J	NR		NR		823	J	768	J	700	J	706	J	477		NR		---
Selenium	mg/kg		UJ	NR		NR			UJ		UJ		UJ		UJ		U	NR		4
Silver	mg/kg	**4.9**		NR		NR			U		U		U		U		U	NR		2
Sodium	mg/kg	302	J	NR		NR		67.2	J	60	J	211	J	114	J	132		NR		---
Thallium	mg/kg	0.91	J	NR		NR		0.83	J	0.98	BJ	0.26	J	2.4	J	2.8		NR		---
Vanadium	mg/kg	29.9	J	NR		NR		12.4	J	11.9	J	16	J	8.9	J	9.9		NR		---
Zinc	mg/kg	**514**	J	NR		NR		40.3	J	33.6	J	42.1	J	**185**	J	79.5	J	NR		109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-16						SS-17						SS-18						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	11700		9050	J	NR		11000	J	13600	J	7540	*E	11600	J	9250	J	9500	J	---
Antimony	mg/kg		U		UR	NR			UR		UR		UR		UR		UR		UR	---
Arsenic	mg/kg	**17.7**		12.5	N*E	NR		**21.5**	J	**17.4**	J	**15**	J	**21.2**	J	**13.7**	J	**16.6**	J	13
Barium	mg/kg	221		160	J	NR		251	J	157	J	88.7	J	198	J	119	J	185	J	350
Beryllium	mg/kg	0.71		0.58	J	NR		0.85	J	0.71	J	0.36	J	0.82	J	0.57	J	0.66	J	7
Cadmium	mg/kg	**7.9**		**4.4**	J	NR		**12.8**	J	**27.2**	J	0.54	J	**9.9**	J	**3.9**	J	**4.5**	J	3
Calcium	mg/kg	34200		69600	J	NR		57600	J	29000	J	13900	J	41700	J	21300	J	35300	J	---
Chromium	mg/kg	**2260**		**1160**		NR		**2990**		**1980**		**31.8**		**2680**		**916**		**1630**		30
Cobalt	mg/kg	9.4		7.6	J	NR		10.1	J	9.7	J	6	J	9.8	J	8.1	J	8.4	J	---
Copper	mg/kg	**1140**		**621**	J	NR		**778**	J	**1320**	J	**294**	J	**1170**	J	**919**	J	**490**	J	50
Iron	mg/kg	26100		17100	J	NR		31700	J	38500	J	17100	J	31600	J	25500	J	25600	J	---
Lead	mg/kg	**351**		**267**	J	NR		**363**	J	**270**	J	**72.2**	J	**325**	J	**185**	J	**270**	J	63
Magnesium	mg/kg	14500		20800	J	NR		13400	J	14200	J	7500	J	13000	J	9540	J	10300	J	---
Manganese	mg/kg	305		319	J	NR		331	J	297	J	177	J	276	J	218	J	351	J	1,600
Mercury	mg/kg	**0.6**		**0.25**		NR		**0.71**		**0.65**		**0.66**		**0.77**		**0.79**		**0.76**		0.18
Nickel	mg/kg	**587**		**352**	J	NR		**721**	J	**890**	J	**35.4**	J	**757**	J	**373**	J	**441**	J	30
Potassium	mg/kg	1600		1440	J	NR		1330	J	1640	J	684	J	1440	J	941	J	1060	J	---
Selenium	mg/kg	2	B	1.1	BJ	NR		1.2	J		UJ		UJ		UJ		UJ		UJ	4
Silver	mg/kg	**4.8**		**2.9**	J	NR		**6**	J	**6.2**	J	**22.1**	J	**4.9**	J	**7.6**	J	**9.2**	J	2
Sodium	mg/kg	141		139		NR		144		135		249		124		153		189		---
Thallium	mg/kg	1.4		1.9	J	NR		1.7	J	1.3	J	0.58	BJ	1.7	J	0.89	J	1.2	J	---
Vanadium	mg/kg	35.5		33.8	J	NR		38.9	J	35.6	J	16	J	35.7	J	22.8	J	29.1	J	---
Zinc	mg/kg	**571**	J	**385**	J	NR		**610**	J	**709**	J	**313**	J	**626**	J	**358**	J	**409**	J	109

NOTE: E = Compound response exceeded the response of the highest standard of the initial calibration range of the instrument for that specific evidence.
R =
N = Presumptive evidence of a compound.

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-19						SS-20						SS-21						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	12700	J	11700	J	19200	J	8450	J	11700	J	13300	J	5100	J	4030	J	NR		---
Antimony	mg/kg		UR		UR		UR		UR		UR	0.43	BR		UR		UR	NR		---
Arsenic	mg/kg	10.1	J	4.7	J	4.4	J	7.8	J	**20.3**	J	11.6	J	5.8	J	6	J	NR		13
Barium	mg/kg	122	J	89.9	J	251	J	117	J	207	J	165	J	58.7	J	67	J	NR		350
Beryllium	mg/kg	0.6	J	0.43	J	0.65	J	0.38	J	0.81	J	0.64	J	0.23	J	0.22	J	NR		7
Cadmium	mg/kg	**5**	J	0.63	J		UJ	2.2	J	**35.8**	J	**5.4**	J	0.83	J	1.3	J	NR		3
Calcium	mg/kg	22000	J	4280	J	3110	J	40000	J	32900	J	14900	J	113000	J	68600	J	NR		---
Chromium	mg/kg	**1110**		**56.3**		24.7		**490**		**3250**		**161**		40		**241**		NR		30
Cobalt	mg/kg	9.2	J	6	J	8.8	J	6.7	J	7.7	J	9.1	J	4.6	J	3.4	J	NR		---
Copper	mg/kg	**620**	J	35.5	J	7.2	J	**191**	J	**1280**	J	**349**	J	**56.8**	J	**99.5**	J	NR		50
Iron	mg/kg	27900	J	19700	J	28500	J	22600	J	29900	J	28500	J	13100	J	9250	J	NR		---
Lead	mg/kg	**159**	J	23.1	J	9.4	J	**131**	J	**283**	J	**218**	J	**94.8**	J	**220**	J	NR		63
Magnesium	mg/kg	11900	J	3190	J	4200	J	15000	J	13500	J	8380	J	10100	J	6720	J	NR		---
Manganese	mg/kg	419	J	198	J	169	J	369	J	232	J	312	J	270	J	171	J	NR		1,600
Mercury	mg/kg	**0.35**		0.079		0.048		**0.29**		**0.41**		**0.5**		0.088		**0.24**		NR		0.18
Nickel	mg/kg	**357**	J	**41.3**	J	22	J	**153**	J	**766**	J	**200**	J	24.6	J	**67.9**	J	NR		30
Potassium	mg/kg	1580	J	597	J	896	J	1310	J	1460	J	994	J	756	J	604	J	NR		---
Selenium	mg/kg	1.5	BJ		UJ		UJ		UJ		UJ	0.85	J		UJ		UJ	NR		4
Silver	mg/kg	**2.1**	J		UJ		UJ	1.6	J	**9.8**	J	**10.6**	J	0.4	J	0.43	BJ	NR		2
Sodium	mg/kg	82.7		67.5		97.2		87.2		194		106		933		1070		NR		---
Thallium	mg/kg	1.2	J	0.42	J	0.44	BJ	1.3	J	1.3	J	1.1	J	1.8	J	1.2	J	NR		---
Vanadium	mg/kg	26.9	J	22.9	J	25.5	J	21.8	J	33.6	J	25.9	J	19.6	J	15.8	J	NR		---
Zinc	mg/kg	**364**	J	59.7	J	36.2	J	**202**	J	**639**	J	**324**	J	**107**	J	**124**	J	NR		109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-22						SS-23						SS-24						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	9350	J	8360	J	13500	J	15200		14200		12400		10400		12100		9740		---
Antimony	mg/kg		UR		UR		UR		U		U		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	8.8	J	**20.7**	J	**17.5**	J	**14.3**		**13**		**15.5**		**19.6**		**20.9**		**15.2**		13
Barium	mg/kg	161	J	207	J	238	J	254		343		208	J	306	J	246	J	119	J	350
Beryllium	mg/kg	0.5	J	0.67	J	0.66	J	1.1		0.78		0.77	J	0.81	J	0.81	J	0.54	J	7
Cadmium	mg/kg	**6.5**	J	**7.3**	J	**7.4**	J	**9.3**		**19.5**		**8**		**8.2**		**17.4**		**3.4**		3
Calcium	mg/kg	67000	J	38700	J	32300	J	44900		34400		29700		37300		46900		14100		---
Chromium	mg/kg	**630**		**2670**		**1690**		**1980**		**2500**		**2080**	J	**3110**	J	**3320**	J	**525**	J	30
Cobalt	mg/kg	8.9	J	8.1	J	9.2	J	14.1		12.2		9.6	J	9.6	J	9.9	J	8	J	---
Copper	mg/kg	**280**	J	**571**	J	**1200**	J	**646**		**1550**		**1460**	J	**741**	J	**1420**	J	**546**	J	50
Iron	mg/kg	26800	J	26100	J	36400	J	26300		32700		24000	J	21400	J	34500	J	29600	J	---
Lead	mg/kg	**416**	J	**346**	J	**270**	J	**522**		**289**		**309**	J	**380**	J	**340**	J	**115**	J	63
Magnesium	mg/kg	12700	J	9870	J	13400	J	16700		14000		13900	J	11900	J	13800	J	7220	J	---
Manganese	mg/kg	355	J	237	J	251	J	672		565		278	J	340	J	412	J	295	J	1,600
Mercury	mg/kg	**0.47**		**0.6**		**0.79**		**0.72**		**0.75**		**0.61**		**0.87**		**0.87**		**0.97**		0.18
Nickel	mg/kg	**236**	J	**589**	J	**466**	J	**690**		**776**		**514**	J	**725**	J	**716**	J	**193**	J	30
Potassium	mg/kg	1410	J	1010	J	1580	J	1840		1630		1510	J	1410	J	1400	J	958	J	---
Selenium	mg/kg		UJ		UJ		UJ		U	1.5	B		U	2.2		1.2	B		U	4
Silver	mg/kg	1.3	J	**3.2**	J	**6.6**	J	**5.2**		**9.7**		**7.3**		**5.6**		**7.9**		**7**		2
Sodium	mg/kg	1880		1750		2910		1950		2120		1360		327		633		551		---
Thallium	mg/kg	1.8	J	1.1	J	1.3	J		U		U	1.3		1.7		1.7		0.96		---
Vanadium	mg/kg	33.9	J	34	J	30.9	J	45.2		36.6		32.7		36.9		34.9		23.3		---
Zinc	mg/kg	**527**	J	**485**	J	**696**	J	**778**		**844**		**682**	J	**629**	J	**775**	J	**304**	J	109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-25						SS-26						SS-27						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	10500		12100		10000		5440		4780		5630		7110		3380		5400		---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	11.4		2.4		5.8		4.6		4.1		4.5		6.1		3.2		9		13
Barium	mg/kg	169		244		110		54.6		61.9		50.9		52.1		38.7		44.7		350
Beryllium	mg/kg	0.48		0.32		0.41		0.23		0.2	J	0.24		0.29	J	0.13	J	0.21	J	7
Cadmium	mg/kg	**6.1**		0.48		1.6		1.3		1.8		0.84		1.4		1.9		0.81		3
Calcium	mg/kg	22300		5670		21000		33500		109000		84200		42900		25000		29400		---
Chromium	mg/kg	**809**	*	**55.3**		**147**		**76.6**		29.7		**60.4**	J	26.1		23.3		12.3		30
Cobalt	mg/kg	9.3		4.3		6.2		5		7.8		5.5		5.7		5.1		5		---
Copper	mg/kg	**436**		32.7		**119**		**60.3**		34.7		**78.7**	J	43.3		**50.7**		28.9		50
Iron	mg/kg	66100	J	13800	J	19700	J	15600	J	15400	J	18200	J	16800	J	67200	J	18200	J	---
Lead	mg/kg	**190**	J	23.6	J	**109**	J	55.7	J	15.1	J	35.4	J	52.4	J	33.2	J	19.6	J	63
Magnesium	mg/kg	6880		3500		8400		7150		2950		5490	J	19500		7980		8890		---
Manganese	mg/kg	459		113		294		274		853		286		370		403		318		1,600
Mercury	mg/kg	**0.3**		0.1		0.052		**0.18**		0.015	J	0.058	J	**0.18**		0.17		0.097		0.18
Nickel	mg/kg	**345**	J	26.3	J	**64.4**	J	**35.5**	J	**30.3**	J	**31.2**	J	18.8	J	15.9	J	12	J	30
Potassium	mg/kg	1210		923		908		940		1220		1260		1520		743		929		---
Selenium	mg/kg		U		U		U	0.75	J	2.4		1.7			U		U		U	4
Silver	mg/kg	**2.3**			U	0.68	J	0.26	J		U		U		U		U		U	2
Sodium	mg/kg	105		76.6		94.7		70.7		77.3		66.6		136		79		101		---
Thallium	mg/kg		U		U		U		U	1.1		0.27	J		U		U		U	---
Vanadium	mg/kg	23.5		18.5		20.9		12.6		10.9		12.8		15.3		7.6		12		---
Zinc	mg/kg	**430**	J	54.7	J	162	J	**123**	J	88.7	J	67.8	J	**344**	J	**615**	J	**218**	J	109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-28						SS-29						SS-30						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
Aluminum	mg/kg	9240		7850		5270		10300	J	8860		8320		10800		7880		8150		---
Antimony	mg/kg		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ		UJ	---
Arsenic	mg/kg	12.7		6.8		5		11.7	J	9.4		9		9.4		4.6		5.9		13
Barium	mg/kg	201		93		78.4		170	J	100		78.4		119		57.9		58.9		350
Beryllium	mg/kg	0.63		0.34		0.23		0.6	J	0.45		0.35		0.59		0.34		0.32		7
Cadmium	mg/kg	**6.1**		1.6		0.55		**4.1**	J	1.3		0.64		**3**		0.74		0.3		3
Calcium	mg/kg	35900		55100		42800		29900	J	15900		13600		22400		9170		7090		---
Chromium	mg/kg	**1280**		**265**		**45.6**		**2050**	J	**538**		**37**		**634**		**49.3**		13.5		30
Cobalt	mg/kg	7.8		5.2		4.9		8.5	J	7.3		6.3		8		6.7		6.3		---
Copper	mg/kg	**401**		**242**		**94.1**		**1080**	J	**450**		**85.5**		**341**		48.5		44.1		50
Iron	mg/kg	18100	J	14300	J	14900	J	25400	J	23400	J	21800	J	24300	J	17800	J	18400	J	---
Lead	mg/kg	**253**	J	62.6	J	29.6	J	**248**	J	**91.7**	J	29.1	J	**153**	J	23	J	13.9	J	63
Magnesium	mg/kg	10300		11400		11900		10400	J	7190		6170		8850		5080		4720		---
Manganese	mg/kg	309		400		358		876	J	709		415		322		204		173		1,600
Mercury	mg/kg		U	**0.43**		**0.69**		**0.5**	J	**0.28**		**0.89**		**0.31**			U	**1.4**		0.18
Nickel	mg/kg	**428**	J	**101**	J	25	J	**438**	J	**142**	J	23.2	J	**220**	J	**32**	J	16.3	J	30
Potassium	mg/kg	1650		1940		897		1470	J	1090		971		1250		790		764		---
Selenium	mg/kg	1.8	J		U		U	3.4	J		U		U	0.97	J		U		U	4
Silver	mg/kg	**4.3**		**2.1**		**4.4**		**3.8**	J	**2.5**		**4.7**		**2.8**		0.84	J	1.5		2
Sodium	mg/kg	373		440		270		841	J	490		393		500		296		269		---
Thallium	mg/kg		U		U		U		UJ		U		U		U		U		U	---
Vanadium	mg/kg	30.1		17.3		11.8		29.9	J	19.6		16.5		26.7		15.7		16		---
Zinc	mg/kg	**427**	J	**152**	J	91.6	J	**480**	J	**213**	J	94.1	J	**264**	J	66.2	J	62.6	J	109

TABLE 3-9 METAL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 6010 & 7471	Sample Location	SS-31						SS-DUP SS-06		SS-DUP02 SS-12		SS-DUP03 SS-17		SS-DUP-01 SS-26		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		6-12		12-24		0-6		12-14		
	Sample Date	4/26/2010						1/12/2010		1/13/2010		1/13/2010		4/26/2010		
	Sample Type	Composite						Composite		Composite		Composite		Composite		
Aluminum	mg/kg	2540		3980		3510		4250		5000		8530		5540		---
Antimony	mg/kg		UJ		UJ		UJ		U		UJ		UJ		UJ	---
Arsenic	mg/kg	2.8		4.4	J	4.2	J	4.3		5.5		**15.7**		4.7		13
Barium	mg/kg	46.7		97.8		50.5		35		41	J	178	J	28		350
Beryllium	mg/kg	0.12	J	0.18	J	0.18	J	0.15	B	0.2	J	0.64	J	0.27		7
Cadmium	mg/kg	0.98		1.1		0.92		0.16		0.97		**10.6**		0.3		3
Calcium	mg/kg	63800		108000	J	135000	J	76800		178000		36500		84100		---
Chromium	mg/kg	23.5		**33**	J	**43.2**	J	6.9		60	J	2180	J	12.4	J	---
Cobalt	mg/kg	2.6		3.5	J	2.7	J	3.6		3.6	J	7.7	J	5.1		---
Copper	mg/kg	**56.1**		**81.5**		**67.2**		21		**58.8**	J	**584**	J	21.8	J	50
Iron	mg/kg	13200	J	16600	J	14300	J	9440		9360	J	22900	J	21400	J	---
Lead	mg/kg	**176**	J	**282**	J	**353**	J	35.1		43.7	J	**258**	J	5.7	J	63
Magnesium	mg/kg	7770		14200		21900		11800		7870	J	9620	J	2950	J	---
Manganese	mg/kg	209		279	J	251	J	283		237	J	248	J	259		1,600
Mercury	mg/kg	**0.28**		**0.25**		**0.21**		0.05		**0.28**		**0.81**		0.1	J	0.18
Nickel	mg/kg	12.4	J	16.7	J	17.2	J	8.6		26	J	**592**	J	15.1	J	30
Potassium	mg/kg	462		633		491		645		877	J	1080	J	1270		---
Selenium	mg/kg	0.89	J	1.2	J	2			U		U		U		U	4
Silver	mg/kg		U		U		U		U	0.71	B	**4.9**			U	2
Sodium	mg/kg	74.8		140		164		92.4		119		103		63.1		---
Thallium	mg/kg		U	0.66		1.1		1.4		2.4		1.3			U	---
Vanadium	mg/kg	12.6		16.5		12.1		9.1		10.1		28.8		14.5		---
Zinc	mg/kg	**163**	J	**239**	J	**155**	J	31.7		59.4	J	**487**	J	25.9	J	109

TABLE 3-10 POLYCHLORINATED BIPEHNYL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SS-01						SS-02						SS-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	0.047			U		U	1.5		3.1		2.7		0.35		0.45		0.84		NA
Aroclor-1254	mg/kg		U		U		U	0.77		1.5		1.3		0.22		0.26		0.45		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	0.047		0		0		**2.27**		**4.6**		**4**		**0.57**		**0.71**		**1.29**		0.1

Parameter List USEPA Method 8082	Sample Location	SS-04						SS-05						SS-06						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	0.79		1.2		5.8		0.4		0.49	J	1	J	0.1			U		U	NA
Aroclor-1254	mg/kg	0.46		0.6		2.9		0.27		0.33		0.6		0.079			U		U	NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	**1.25**		**1.8**		**8.7**		**0.67**		**0.82**		**1.6**		**0.179**		0		0		0.1

Parameter List USEPA Method 8082	Sample Location	SS-07						SS-08						SS-09						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	2.5		1		0.99	D	100		15		1.7	J	15		1.6		11		NA
Aroclor-1254	mg/kg	1.5		0.72		0.52		48		8		0.83		5.6		0.64		3.5		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	**4**		**1.72**		**1.51**		**148**		**23**		**2.53**		**20.6**		**2.24**		**14.5**		0.1

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.
U = Compound was analyzed for, but not detected.
NA =
J = Estimated Value.
D = Secondary dilution factor.
Bold values indicate exceedence of standard.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-10 POLYCHLORINATED BIPEHNYL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SS-10						SS-11						SS-12						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	140		NA		NA		1		0.69		0.69		34		19		11		NA
Aroclor-1254	mg/kg	57		NA		NA		0.55		0.36		0.36		14		8.3		4.4		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	**197**		0		0		**1.55**		**1.05**		**1.05**		**48**		**27.3**		**15.4**		0.1

Parameter List USEPA Method 8082	Sample Location	SS-13						SS-14						SS-15						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	190		NA		NA		0.16	J	0.042	J		U	0.099	J	0.068	J	NR		NA
Aroclor-1254	mg/kg	76		NA		NA		0.092			U	0.083		0.052	J	0.044	J	NR		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U	NR		NA
Total Aroclor	mg/kg	**266**		0		0		**0.252**		0.042		0.083		**0.151**		**0.112**				0.1

Parameter List USEPA Method 8082	Sample Location	SS-16						SS-17						SS-18						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	180	J	210		NR		70		99		0.74		94	D	49		41		NA
Aroclor-1254	mg/kg	83			U	NR			U		U		U		U		U		U	NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	**263**		**210**				**70**		**99**		**0.74**		**94**		**49**		**41**		0.1

NOTE: NR = No Recovery.

TABLE 3-10 POLYCHLORINATED BIPEHNYL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SS-19						SS-20						SS-21						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	34		3.1		0.17		39		100		24		0.6		3.7	J	NR		NA
Aroclor-1254	mg/kg		U		U		U		U		U		U		U		U	NR		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	**34**		**3.1**		**0.17**		**39**		**100**		**24**		**0.6**		**3.7**		0		0.1

Parameter List USEPA Method 8082	Sample Location	SS-22						SS-23						SS-24						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	26		71	J	380		93		120		300		81		170		24		NA
Aroclor-1254	mg/kg		U		U		U		U		U	140		32		76		10		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		U		U		U	NA
Total Aroclor	mg/kg	**26**		**71**		**380**		**93**		**120**		**440**		**113**		**246**		**34**		0.1

Parameter List USEPA Method 8082	Sample Location	SS-25						SS-26						SS-27						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	87		35		25		9.1		15		32		1.5	J	1.1		0.32	J	NA
Aroclor-1254	mg/kg	36		17		9.8		5.6		6.6		12		1.3	J	0.99		0.29		NA
Aroclor-1260	mg/kg		U		U		U		U		U		U		UJ		U		U	NA
Total Aroclor	mg/kg	**123**		**52**		**34.8**		**14.7**		**21.6**		**44**		**2.8**		**2.09**		**0.61**		0.1

TABLE 3-10 POLYCHLORINATED BIPEHNYL DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8082	Sample Location	SS-28						SS-29						SS-30						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1248	mg/kg	130		48		7		320	J	68		5.1		76		11		3.1		NA
Aroclor-1254	mg/kg	55		16		2.6		100	J	21		1.7		35		4.8		1.5		NA
Aroclor-1260	mg/kg		U		U		U		UJ		U		U		U		U		U	NA
Total Aroclor	mg/kg	**185**		**64**		**9.6**		**420**		**89**		**6.8**		**111**		**15.8**		**4.6**		0.1

Parameter List USEPA Method 8082	Sample Location	SS-31						SS-DUP SS-06		SS-DUP02 SS-12		SS-DUP03 SS-17		SS-DUP-01 SS-26		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		6-12		12-24		0-6		12-14		
	Sample Date	4/26/2010						1/12/2010		1/13/2010		1/13/2010		4/26/2010		
	Sample Type	Composite						Composite		Composite		Composite		Composite		
Aroclor-1248	mg/kg	0.36	J	0.14	J	1.9	J		U	7.9		42		27		NA
Aroclor-1254	mg/kg		U		UJ		UJ		U	3.2		19		9.3		NA
Aroclor-1260	mg/kg	0.91		0.15	J	1.1	J									NA
Total Aroclor	mg/kg	**1.27**		**0.29**		**3**		0		**11.1**		**61**		**36.3**		0.1

TABLE 3-11 PESTICIDE DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SS-01						SS-02						SS-03						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U		U		U		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg		U		U		U		U		U		U		U	**0.004**		**0.0068**		0.0033
4,4'-DDT	mg/kg		U		U		U	**0.024**		**0.041**			U	**0.0074**		**0.0096**		**0.012**		0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		U	0.0033	P		U	0.036
delta-BHC	mg/kg		U		U		U	**0.04**		**0.11**		**0.14**		0.0083		0.012		0.019		0.04
Dieldrin	mg/kg		U		U		U		U		U		U		U	0.0043	J	**0.006**	J	0.005
Endosulfan I	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan II	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U	0.0054	J		U	0.0041	J	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-Chlordane	mg/kg		U		U		U	0.016		0.042	J		U		U		U		U	---
Heptachlor	mg/kg		U		U		U		U	0.024			U		U		U		U	0.042
Heptachlor epoxide	mg/kg		U		U		U		U		U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

Parameter List USEPA Method 8081	Sample Location	SS-04						SS-05						SS-06						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/12/2010						1/12/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U		U	**0.0077**	J		U		U		U	**0.0041**	J		U	0.0033
4,4'-DDE	mg/kg		U	**0.008**	J		U	**0.005**		**0.0052**	J		U		U		U		U	0.0033
4,4'-DDT	mg/kg	**0.013**		**0.013**		**0.078**		**0.014**		**0.013**		**0.018**			U	**0.0047**	J		U	0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg	0.0049		0.0033	P		U	0.0023	P	0.0044		0.013			U		U		U	0.036
delta-BHC	mg/kg	0.017		0.03		**0.27**		0.0097		0.0061	J	0.039	J		U		U		U	0.04
Dieldrin	mg/kg		U	**0.0068**	J		U	**0.0055**	J	**0.0058**	J		U		U		U		U	0.005
Endosulfan I	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan II	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U	0.0025			U		U		U		U		U		U		U	---
gamma-Chlordane	mg/kg		U		U		U	0.007		0.0083	J		U		U		U		U	---
Heptachlor	mg/kg		U	0.0056			U			0.0034	P		U		U		U		U	0.042
Heptachlor epoxide	mg/kg		U		U		U		U		U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

NOTE: USEPA = United States Environmental Protection Agency.
ppm = Parts per million.
4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
mg/kg = Milligrams per kilogram.
U = Compound was analyzed for, but not detected.
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane
P =
J = Estimated value.
--- =
Bold values indicate exceedence of standard.
Standards taken from Part 375 Unrestricted Soil Cleanup Objectives.

TABLE 3-11 PESTICIDE DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SS-07						SS-08						SS-09						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/12/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U	**0.0054**	J	**0.013**	J	**1.1**	J		U		U		U		U		U	0.0033
4,4'-DDE	mg/kg	**0.025**	J	**0.013**	J	**0.014**	J	**1.3**			U		U	**0.16**		**0.016**			U	0.0033
4,4'-DDT	mg/kg	**0.061**		**0.026**		**0.029**		**1.6**			U		U	**0.19**		**0.02**			U	0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U	0.0047		0.0048			U		U		U		U		U		U	0.036
delta-BHC	mg/kg	0.025		0.006	J	0.0098		**1.9**	J	**0.44**	J	**0.053**	J	**0.42**	J	**0.04**	J	**0.6**	J	0.04
Dieldrin	mg/kg	**0.017**		**0.0078**	J	**0.0081**			U		U		U		U	**0.0082**	J		U	0.005
Endosulfan I	mg/kg		U	0.0022	J	0.0026	J		U		U		U		U		U		U	2.4
Endosulfan II	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg	0.02	J	0.0062	J	0.01	J		U		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U	0.0056	J	0.01	J		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U	0.0021	J		U		U		U		U		U		U		U	---
gamma-Chlordane	mg/kg		U		U	0.014		1.8	J	0.31		0.031	J	0.23	J	0.02	J	0.19	J	---
Heptachlor	mg/kg		U	0.0043		0.005		1	J	**0.26**		0.027		**0.092**	J	0.0066	J		U	0.042
Heptachlor epoxide	mg/kg		U		U		U		U		U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

Parameter List USEPA Method 8081	Sample Location	SS-10						SS-11						SS-12						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**1.3**	J	NR		NR		**0.0057**	J		U		U	**0.36**	J	**0.23**	J	**0.099**	J	0.0033
4,4'-DDE	mg/kg	**1.7**		NR		NR		**0.0088**	J	**0.0064**	J	**0.0068**	J		U	**0.24**		**0.12**		0.0033
4,4'-DDT	mg/kg	**2.1**		NR		NR		**0.023**		**0.014**		**0.014**		**0.67**		**0.33**		**0.15**		0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U	NR		NR			U		U	0.0024	J		U		U		U	0.036
delta-BHC	mg/kg	**1.4**	J	NR		NR		0.011		0.0089		0.0096	J	**1.3**		**0.56**		**0.25**		0.04
Dieldrin	mg/kg	**0.94**	J	NR		NR		**0.0053**	J		U		U		U		U		U	0.005
Endosulfan I	mg/kg	0.38	J	NR		NR			U		U		U		U		U		U	2.4
Endosulfan II	mg/kg		U	NR		NR			U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U	NR		NR		0.0062	J		U		U		U		U		U	2.4
Endrin	mg/kg		U	NR		NR			U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U	NR		NR			U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U	NR		NR			U		U		U		U		U		U	---
gamma-Chlordane	mg/kg	2.3	J	NR		NR		0.014		0.0077		0.0065	J	0.54	J	0.32	J	0.15	J	---
Heptachlor	mg/kg	**1.3**		NR		NR		0.0025	J	0.0023	J	0.0035	J		U	**0.11**	J		U	0.042
Heptachlor epoxide	mg/kg		U	NR		NR			U		U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

NOTE: NR = No Recovery.

TABLE 3-11 PESTICIDE DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SS-13						SS-14						SS-15						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**1.7**	J	NR		NR			U		U		U		U		U	NR		0.0033
4,4'-DDE	mg/kg	**2**	J	NR		NR			U		U		U		U		U	NR		0.0033
4,4'-DDT	mg/kg	**2.7**		NR		NR		**0.0051**	J		U	**0.0073**		**0.0057**	J	**0.0071**		NR		0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.036
delta-BHC	mg/kg	**6.1**		NR		NR			U		U		U		U		U	NR		0.04
Dieldrin	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.005
Endosulfan I	mg/kg		U	NR		NR			U		U		U		U		U	NR		2.4
Endosulfan II	mg/kg		U	NR		NR			U		U		U	0.0087	J		U	NR		2.4
Endosulfan sulfate	mg/kg		U	NR		NR			U		U		U	0.0061	J		U	NR		2.4
Endrin	mg/kg		U	NR		NR			U		U		U		U		U	NR		0.014
Endrin aldehyde	mg/kg		U	NR		NR			U		U		U	0.0045	J		U	NR		---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U	NR		NR			U		U		U		U		U	NR		---
gamma-Chlordane	mg/kg	3	J	NR		NR			U		U		U		U		U	NR		---
Heptachlor	mg/kg	**0.85**	J	NR		NR			U		U		U		U		U	NR		0.042
Heptachlor epoxide	mg/kg		U	NR		NR			U		U		U	0.003	J		U	NR		---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

Parameter List USEPA Method 8081	Sample Location	SS-16						SS-17						SS-18						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**1.7**	J	**1.6**	J	NR		**0.96**	J	**1.1**	J		U	**1.4**	DJ	**0.53**	J	**0.45**	J	0.0033
4,4'-DDE	mg/kg	**2.5**		**4**		NR		**1.5**		**1.6**		**0.013**	J	**1.6**	DJ	**0.6**		**0.7**		0.0033
4,4'-DDT	mg/kg	**2**		**2.5**		NR		**1.4**		**1.5**		**0.02**		**1.6**	DJ	**0.67**		**0.67**		0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U	NR			U		U	0.0052	J	**0.061**	J		U		U	0.036
delta-BHC	mg/kg	**0.93**	J		U	NR		**3.3**		**2.7**			U		U	**1.8**		**1.8**		0.04
Dieldrin	mg/kg		U	**1.3**	J	NR		**0.59**	J	**0.68**	J	**0.0056**	J	**0.64**	J	**0.31**	J	**0.29**	J	0.005
Endosulfan I	mg/kg		U	0.77	J	NR			U	0.37	J		U	0.36	J	0.16	J		U	2.4
Endosulfan II	mg/kg		U		U	NR			U		U		U	0.083	J		U		U	2.4
Endosulfan sulfate	mg/kg		U		U	NR			U		U	0.0082		0.082	J		U		U	2.4
Endrin	mg/kg		U		U	NR			U		U		U	**0.17**	J		U		U	0.014
Endrin aldehyde	mg/kg		U		U	NR			U		U	0.0074		0.41			U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U	NR			U		U	0.0031		0.12	J		U		U	---
gamma-Chlordane	mg/kg	3.4	J	3.7		NR		1.2	P		U	0.011	J	1.4	DJ	0.62	J	0.45	J	---
Heptachlor	mg/kg	**0.74**	J		U	NR		**0.73**		**0.53**			U		U	**0.29**	J	**0.35**	J	0.042
Heptachlor epoxide	mg/kg		U		U	NR			U		U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

TABLE 3-11 PESTICIDE DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SS-19						SS-20						SS-21						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U	**0.034**	J		U	**0.22**	J	**1**	J		U		U	**0.047**	J	NR		0.0033
4,4'-DDE	mg/kg	**0.92**		**0.04**			U	**0.45**		**1.5**		**0.58**		**0.013**	P	**0.051**		NR		0.0033
4,4'-DDT	mg/kg	**1.1**		**0.051**			U	**0.42**		**1.3**		**0.72**		**0.021**		**0.06**		NR		0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U	0.0032	J		U	NR		0.036
delta-BHC	mg/kg		U		U		U	**1.6**		**4**			U		U		U	NR		0.04
Dieldrin	mg/kg		U	**0.019**	J		U		U	**0.58**	J		U	**0.0089**	J	**0.027**	J	NR		0.005
Endosulfan I	mg/kg		U	0.0078	J		U		U		U		U	0.0023	J	0.012	J	NR		2.4
Endosulfan II	mg/kg		U		U		U		U		U		U		U		U	NR		2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U	0.0074			U	NR		2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U	NR		0.014
Endrin aldehyde	mg/kg		U	0.01			U		U		U		U	0.007		0.018	J	NR		---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U	0.0033		0.0097	J	NR		---
gamma-Chlordane	mg/kg	0.94	P	0.029	J	0.0025	J	0.35	J	1.4	J	0.79	J	0.011	J	0.042	J	NR		---
Heptachlor	mg/kg		U	0.025			U	**0.25**	J	**1**			U		U		U	NR		0.042
Heptachlor epoxide	mg/kg		U		U		U		U		U		U		U		U	NR		---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

Parameter List USEPA Method 8081	Sample Location	SS-22						SS-23						SS-24						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/13/2010						1/13/2010						1/13/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**0.34**			U	**3.6**	J	**1.3**	J	**1.2**	J	**2.2**	J		U		U		U	0.0033
4,4'-DDE	mg/kg	**0.4**		**1.1**		**4.9**		**1.7**		**1.5**		**2.4**	J		U		U		U	0.0033
4,4'-DDT	mg/kg	**0.46**		**1.3**		**4**		**1.8**		**1.6**		**3**		**0.92**		**1.4**			U	0.0033
Aldrin	mg/kg		U		U		U		U		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		U		U		U	0.036
delta-BHC	mg/kg		U		U		U		U		U		U		U	**6.1**	J		U	0.04
Dieldrin	mg/kg		U	**0.81**	J	**2**	J	**0.96**	J	**0.76**	J	**1.8**	J		U		U		U	0.005
Endosulfan I	mg/kg	0.092	J		U	1.4	J		U		U	0.91	J		U		U		U	2.4
Endosulfan II	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		U		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		U		U		U		U		U		U	---
Endrin ketone	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		U		U		U		U		U		U	---
gamma-Chlordane	mg/kg	0.35	J	1.1	J	7.8	J	1.5		1.5	J	5.7	J	0.96	J		U	0.34	J	---
Heptachlor	mg/kg		U		U		U		U	**1.1**		**2**	J		U	**1.2**	J	**0.15**	J	0.042
Heptachlor epoxide	mg/kg		U		U		U		U		U		U		U		U		U	---
Methoxychlor	mg/kg		U		U		U		U		U		U		U		U		U	---

TABLE 3-11 PESTICIDE DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SS-25						SS-26						SS-27						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	**0.44**	J		U		U		U		U		U	**0.026**	J		U	**0.0042**	J	0.0033
4,4'-DDE	mg/kg	**0.41**		**0.33**		**0.24**			U		U		U		UJ		U		U	0.0033
4,4'-DDT	mg/kg	**0.67**	J	**0.41**		**0.26**			U	**0.14**			U	**0.037**	J	**0.024**		**0.0067**	J	0.0033
Aldrin	mg/kg		U		U		U		U		U		U		UJ		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		U		U		U		UJ		U		U	0.094
beta-BHC	mg/kg		U		U		U		U		U		U		UJ	0.0075		0.0022		0.036
delta-BHC	mg/kg	**1.8**		**0.83**		**0.62**		**0.22**		**0.3**		**1.3**	J	0.017	J		U		U	0.04
Dieldrin	mg/kg	**0.22**			U		U		U		U		U		UJ		U		U	0.005
Endosulfan I	mg/kg	0.091	R		U		U		U		U		U		UJ		U		U	2.4
Endosulfan II	mg/kg		U		U		U		U		U		U		UJ		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		U		U		U		UJ	0.0088	R		U	2.4
Endrin	mg/kg	**0.073**	J		U		U		U		U		U		UJ		U		U	0.014
Endrin aldehyde	mg/kg	0.079	J		U		U		U		U		U		UJ	0.0061			U	----
Endrin ketone	mg/kg		U		U		U		U		U		U		UJ	0.0058	R		U	---
gamma-BHC (Lindane)	mg/kg	0.031	R		U		U		U		U		U		UJ		U		U	---
gamma-Chlordane	mg/kg	0.054	R		U		U		U		U		U		UJ	0.0094	J	0.0026	J	----
Heptachlor	mg/kg	**0.064**	R	**0.23**		**0.22**			U		U		U		UJ		U	0.0025	J	0.042
Heptachlor epoxide	mg/kg	2	J	1.4	J	1	J	0.48		0.52		2.8	R	0.061	J	0.029		0.0075	J	---
Methoxychlor	mg/kg	0.15	R		U		U		U		U		U		UJ		U		U	---

Parameter List USEPA Method 8081	Sample Location	SS-28						SS-29						SS-30						Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	4/26/2010						4/26/2010						4/26/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U		U		UJ		U		U		U	**0.053**	J		U	0.0033
4,4'-DDE	mg/kg	**0.66**	J	**0.16**			U		UJ	**0.3**			U		U	**0.072**	J		U	0.0033
4,4'-DDT	mg/kg	**0.96**		**0.22**	J		U	**1.8**	J	**0.37**			U		U	**0.11**			U	0.0033
Aldrin	mg/kg		U		U		U		UJ		U		U		U		U		U	0.005
alpha-Chlordane	mg/kg		U		U		U		UJ		U		U		U		U		U	0.094
beta-BHC	mg/kg		U		U		U		UJ		U		U		U		U		U	0.036
delta-BHC	mg/kg	**1.9**		**0.43**			U	**6**	J	**1.3**		**0.049**		**2**		**0.19**		0.0012	R	0.04
Dieldrin	mg/kg		U		U		U		UJ		U		U		U		U		U	0.005
Endosulfan I	mg/kg		U		U		U		UJ		U		U		U		U		U	2.4
Endosulfan II	mg/kg		U		U		U		UJ		U		U		U		U		U	2.4
Endosulfan sulfate	mg/kg		U		U		U		UJ		U		U		U		U		U	2.4
Endrin	mg/kg		U		U		U		UJ		U		U		U		U		U	0.014
Endrin aldehyde	mg/kg		U		U		U		UJ		U		U		U		U		U	----
Endrin ketone	mg/kg		U		U		U		UJ		U		U		U		U		U	---
gamma-BHC (Lindane)	mg/kg		U		U		U		UJ		U		U		U		U		U	---
gamma-Chlordane	mg/kg		U		U		U		UJ		U		U		U		U		U	----
Heptachlor	mg/kg	**0.52**		**0.12**			U	**1.2**	J	**0.24**	J		U		U	**0.052**			U	0.042
Heptachlor epoxide	mg/kg	2.2	J	0.74		0.18	J	7.6	J	1.4		0.054	J	3.5	J	0.31	J	0.054	J	---
Methoxychlor	mg/kg		U		U		U		UJ		U		U		U		U		U	---

TABLE 3-11 PESTICIDE DETECTIONS IN SURFACE SOIL

Parameter List USEPA Method 8081	Sample Location	SS-31						SS-DUP SS-06		SS-DUP02 SS-12		SS-DUP03 SS-17		SS-DUP-01 SS-26		Part 375 Unrestricted Use Soil Cleanup Objectives (ppm)
	Sample Depth (in)	0-6		6-12		12-24		6-12		12-24		0-6		12-14		
	Sample Date	4/26/2010						1/12/2010		1/13/2010		1/13/2010		4/26/2010		
	Sample Type	Composite						Composite		Composite		Composite		Composite		
4,4'-DDD	mg/kg	**0.011**	R	**0.021**	R		UJ		U		U	**0.49**	P		U	0.0033
4,4'-DDE	mg/kg		U		UJ	**0.0053**	R		U		U	**0.6**			U	0.0033
4,4'-DDT	mg/kg	**0.032**	J	**0.038**	J	**0.03**	J	**0.0052**		**0.092**		**0.76**			U	0.0033
Aldrin	mg/kg		U	0.0023	R		UJ								U	0.005
alpha-Chlordane	mg/kg	0.009	R	0.017	R	0.013	R								U	0.094
beta-BHC	mg/kg		U	0.0031	R	0.0058	R		U		U		U		U	0.036
delta-BHC	mg/kg		U		U	0.0075	J		U	**0.15**	J	**1.6**		**0.44**	J	0.04
Dieldrin	mg/kg	**0.011**	R	**0.0066**	R	**0.0087**	R		U		U	**0.32**	J		U	0.005
Endosulfan I	mg/kg		U		UJ	0.0023	J		U		U		U		U	2.4
Endosulfan II	mg/kg		U		UJ		UJ		U		U		U		U	2.4
Endosulfan sulfate	mg/kg	0.018	R	0.013	R	0.022	J		U		U		U		U	2.4
Endrin	mg/kg	0.0051	J	0.0064	J	0.005	J		U		U		U		U	0.014
Endrin aldehyde	mg/kg	0.017	J	0.0098	J	0.013	J		U		U		U		U	---
Endrin ketone	mg/kg	0.022	J	0.042	J	0.039	R								U	---
gamma-BHC (Lindane)	mg/kg		U		UJ		UJ		U		U		U		U	----
gamma-Chlordane	mg/kg	0.011	J	0.017	R	0.01	J		U	0.11	J	0.79	J		U	---
Heptachlor	mg/kg		U		UJ		UJ		U		U	**0.39**			U	0.042
Heptachlor epoxide	mg/kg	0.0067	J	0.004	J	0.021	J		U		U		U		U	----
Methoxychlor	mg/kg	0.018	R		UJ	0.06	R		U		U		U		U	---

TABLE 3-12 TOTAL ORGANIC CARBON ANALYTICAL RESULTS IN SEDIMENT

Parameter List USEPA Method 9060	Sample Location	SED-01			SED-02			SED-03		
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6	6-12	12-24
	Sample Date	1/14/2010			1/14/2010			1/14/2010		
	Sample Type	Composite			Composite			Composite		
Total Organic Compound	(mg/kg)	20000	20000	18000	29000	29000	32000	53000	50000	46000
Average Organic Carbon (OC)	mgOC/kg	28047								
Standard Deviation	mgOC/kg	14732								
Confidence Limit (95%)	mgOC/kg	7218								
Lower Confidence Limit	mgOC/kg	20829								

Parameter List USEPA Method 9060	Sample Location	SED-04			SED-05			SED-06		
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6	6-12	12-24
	Sample Date	1/14/2010			1/14/2010			1/14/2010		
	Sample Type	Composite			Composite			Composite		
Total Organic Compound	(mg/kg)	43000	23000	45000	6500	NA	NA	10000	NA	NA

Parameter List USEPA Method 9060	Sample Location	SED-11			SED-12			SED-DUP01 SED-11
	Sample Depth (in)	0-6	6-12	12-24	0-6	6-12	12-24	0-6
	Sample Date	1/14/2010			1/14/2010			1/14/2010
	Sample Type	Composite			Composite			Composite
Total Organic Compound	(mg/kg)	20000	NA	NA	8300	NA	NA	24000

NOTE: USEPA = United States Environmental Protection Agency.
mg/kg = miligrams per kilogram = parts per million (ppm)
NA = Not analyzed.
Data provided by Mitkem. Only analytes that were detected in at least one sample are shown. Data validation to be completed by Environmental Data Validation, Inc.

TABLE 3-13 DERIVATION OF SEDIMENT CRITERIA FOR SELECT CONTAMINANTS OF CONCERN

				Human Health Bioaccumulation			Benthic Aquatic Life Acute Toxicity			Benthic Aquatic Life Chronic Toxicity			Wildlife Bioaccumulation		
Contaminant	Log K_{ow}	Value K_{ow}	% Carbon	Water Criteria µg/l	Sediment Criteria µg/gOC	Sediment Criteria µg/kg	Water Criteria µg/l	Sediment Criteria µg/gOC	Sediment Criteria µg/kg	Water Criteria µg/l	Sediment Criteria µg/gOC	Sediment Criteria µg/kg	Water Criteria µg/l	Sediment Criteria µg/gOC	Sediment Criteria µg/kg
VOLATILE ORGANIC COMPOUNDS															
1,1-dichloroethene	1.48	30.2	20.8290	0.8	0.02	5.0322									
1,2,4-trimethlybenzene	3.75	5,623.4	20.8290				290	1631	339677.2164	33	186	38652.9246			
Ethylbenzene	3.15	1,412.5	20.8290				150	212	44132.6168	17	24	5001.6966			
Isopropylbenzene	3.66	4,570.9	20.8290				23	105	21897.5868	2.6	12	2475.3794			
Naphthalene	3.37	2,344.2	20.8290				110	258	53710.7362	13	30	6347.6325			
Xylene	3.15	1,412.5	20.8290				590	833	173588.2926	65	92	19124.1339			
Toluene	2.69	489.8	20.8290				480	235	48967.6945	100	49	10201.6030			
Vinyl Chloride	0.6	4.0	20.8290	18.0000	0.0700	14.9259									
SEMIVOLATILE ORGANIC COMPOUNDS															
Acenaphthene	4.33	21,379.6	20.8290								140.0000	29160.6000			
Anthracene	4.45	28,183.8	20.8290				35.0000	986.0000	205464.3433	3.8000	107.0000	22307.5573			
Benzo(a)anthracene	5.61	407,380.3	20.8290				0.2300	94.0000	19516.2448	0.0300	12.0000	2545.5971			
Benzo(a)pyrene	6.04	1,096,478.2	20.8290	0.0012	1.3000	274.0625									
Bis(2-ethylhexyl)phthalate	5.3	199,526.2	20.8290							0.6000	199.5000	24935.5913			
Dichlorobenzenes	3.38	2,398.8	20.8290				50.0000	120.0000	24982.6454	5.0000	12.0000	2499.4800			
Fluoranthene	5.19	154,881.7	20.8290								1020.0000	212455.8000			
Fluorene	4.18	15,135.6	20.8290				4.8000	73.0000	15132.4643	0.5400	8.0000	1702.4022			
2-methylnaphthalene	3.86	7,244.4	20.8290				42.0000	304.0000	63374.9618	4.7000	34.0000	7081.8600			
Naphthalene	3.37	2,344.2	20.8290				110.0000	258.0000	53710.7362	13.0000	30.0000	6347.6325			
Phenanthrene	4.45	28,183.8	20.8290								120.0000	24994.8000			
Phenol	2	100.0	20.8290							5.0000	0.5000	104.1450			
Pyrene	5.32	208,929.6	20.8290				42.0000	8775.0000	1827753.8626	4.6000	961.0000	200182.5659			
PESTICIDES/POLYCHLORINATED BIPHENYLS															
Aldrin	5.0	100,000.0	20.8290	0.0010000	0.1000	20.8290							0.0077	0.7700	160.3833
a-BHC	3.8	6,309.6	20.8290	0.0090000	0.0600	11.8280	2.0000	12.6000	2628.4421	0.0100	0.0600	13.1422	0.2300	1.5000	302.2708
d-BHC	3.8	6,309.6	20.8290	0.0090000	0.0600	11.8280	2.0000	12.6000	2628.4421	0.0100	0.0600	13.1422	0.2300	1.5000	302.2708
g-BHC (Lindane)	3.8	6,309.6	20.8290	0.0090000	0.0600	11.8280	2.0000	12.6000	2628.4421	0.0100	0.0600	13.1422	0.2300	1.5000	302.2708
Chlordane	2.78	602.6	20.8290	0.0020000	0.0010	0.2510	2.4000	1.4000	301.2171	0.0430	0.0300	5.3968	0.0100	0.0060	1.2551
4,4'-DDD	6.0	1,000,000.0	20.8290	0.0000100	0.0100	2.0829							0.0010	1.0000	208.2900
4,4'-DDE	6.0	1,000,000.0	20.8290	0.0000100	0.0100	2.0829							0.0010	1.0000	208.2900
4,4'-DDT	6.0	1,000,000.0	20.8290	0.0000100	0.0100	2.0829	1.1000	1100.0000	229119.0000	0.0010	1.0000	208.2900	0.0010	1.0000	208.2900
Dieldrin	5.0	100,000.0	20.8290	0.0010000	0.1000	20.8290					9.0000	1874.6100	0.0077	0.7700	160.3833
Endosulfan (I)	3.55	3,548.1	20.8290				0.2200	0.7800	162.5890	0.0090	0.0300	6.6514			
Endosulfan (II)	3.55	3,548.1	20.8290				0.2200	0.7800	162.5890	0.0090	0.0300	6.6514			
Endosulfan Sulfate			20.8290												
Endrin	5.6	398,107.2	20.8290	0.0020000	0.8000	165.8435					4.0000	833.1600	0.0019	0.8000	157.5513
Endrin Ketone			20.8290												
Heptachlor	4.4	25,118.9	20.8290	0.0000300	0.0008	0.1570	0.5200	13.1000	2720.6443	0.0038	0.1000	19.8816	0.0010	0.0300	5.2320
Heptachlor Epoxide	4.4	25,118.9	20.8290	0.0000300	0.0008	0.1570	0.5200	13.1000	2720.6443	0.0038	0.1000	19.8816	0.0010	0.0300	5.2320
Methoxychlor	4.3	19,952.6	20.8290							0.0300	0.6000	124.6780			
PCBs (Total)	6.14	1,380,384.3	20.8290	0.0000006	0.0008	0.1725	2.0000	2760.8000	575040.4769	0.0140	19.3000	4025.2833	0.0010	1.4000	287.5202

NOTE: K_{ow} =
µg/l = Micrograms per Liter.
µg/gOC = Micrograms per gram organic carbon.
µg/kg = Micrograms per kilogram.
4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane
PCB = Polychlorinated Biphenyl.

TABLE 3-14 VOLATILE ORGANIC COMPOUND DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8260 LOW	Sample Location	SED-01						SED-02						SED-03						Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity or Human Health Bioaccumulation* (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
1,1-Dichloroethane	mg/kg	NR			U		U	NR			U		U	0.47	J	0.39	J		U	---
1,1-Dichloroethene	mg/kg	NR			U		U	NR			U		U		U		U		U	0.005*
1,2,4-Trimethylbenzene	mg/kg	NR		0.0067	J	0.075		NR		0.013		0.037			U		U		U	39
1,3,5-Trimethylbenzene	mg/kg	NR			U	0.02		NR		0.0052	J	0.012			U		U		U	---
2-Butanone	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Acetone	mg/kg	NR		0.0098		0.0068	J	NR		0.024		0.011			U		U		U	---
Carbon disulfide	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Chloroethane	mg/kg	NR			U		U	NR			U		U		U		U		U	---
cis-1,2-Dichloroethene	mg/kg	NR			U		U	NR			U		U	22		20		15		---
Ethylbenzene	mg/kg	NR			U	0.02		NR			U		U		U		U		U	5
Isopropylbenzene	mg/kg	NR			U	0.0051	J	NR			U	0.0033	J		U		U		U	2.5
m,p-Xylene	mg/kg	NR		0.0055	J	0.17		NR			U	0.009			U		U		U	19
Methylene chloride	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Naphthalene	mg/kg	NR			U	0.0031	J	NR			U		U		U		U		U	6.3
n-Butylbenzene	mg/kg	NR			U	0.0029	J	NR			U	0.0029	J		U		U		U	---
n-Propylbenzene	mg/kg	NR			U	0.0098		NR			U	0.0056	J		U		U		U	---
o-Xylene	mg/kg	NR			U	0.051		NR			U		U		U		U		U	19
Toluene	mg/kg	NR			U	0.0044	J	NR			U		U		U		U		U	10
trans-1,2-Dichloroethene	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Vinyl chloride	mg/kg	NR			U		U	NR			U		U	**4.7**	E	**4.6**		**3.8**		0.015*
Xylene (Total)	mg/kg	NR		0.0055	J	0.22		NR			U	0.009			U		U		U	19

NOTE: USEPA = United States Environmental Protection Agency.
mg/kg = Milligrams per kilogram
NR = No Recovery
U = Compound was analyzed for, but not detected.
J = Estimated Value.
--- =
E = Compound response exceeded the response of the highest standard in the initial calibration range of the instrument for that specific analysis.
Bold values indicate exceedence of Benthic Aquatic Life Chronic/Acute Toxicity.
Standards taken from NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999).

TABLE 3-14 VOLATILE ORGANIC COMPOUND DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8260 LOW	Sample Location	SED-04						SED-05						SED-06						Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity or Human Health Bioaccumulation* (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
1,1-Dichloroethane	mg/kg		U		U		U		U	NR		NR			U	NR		NR		---
1,1-Dichloroethene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		0.005*
1,2,4-Trimethylbenzene	mg/kg	0.0078	J	0.0019	J	0.023			U	NR		NR			U	NR		NR		39
1,3,5-Trimethylbenzene	mg/kg		U		U	0.0071	J		U	NR		NR			U	NR		NR		---
2-Butanone	mg/kg	0.044			U	0.014			U	NR		NR			U	NR		NR		---
Acetone	mg/kg	0.18		0.04		0.11			U	NR		NR			U	NR		NR		---
Carbon disulfide	mg/kg		U		U	0.0035	J		U	NR		NR			U	NR		NR		---
Chloroethane	mg/kg		U		U		U		U	NR		NR			U	NR		NR		---
cis-1,2-Dichloroethene	mg/kg		U	0.0047	J		U	0.0015	J	NR		NR			U	NR		NR		---
Ethylbenzene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		5
Isopropylbenzene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		2.5
m,p-Xylene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		19
Methylene chloride	mg/kg		U		U		U		U	NR		NR			U	NR		NR		---
Naphthalene	mg/kg	0.0084	J		U	0.0026	J		U	NR		NR			U	NR		NR		6.3
n-Butylbenzene	mg/kg		U		U	0.007	J		U	NR		NR			U	NR		NR		---
n-Propylbenzene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		---
o-Xylene	mg/kg		U		U	0.0026	J		U	NR		NR			U	NR		NR		19
Toluene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		10
trans-1,2-Dichloroethene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		---
Vinyl chloride	mg/kg		U		U		U		U	NR		NR			U	NR		NR		0.015*
Xylene (Total)	mg/kg		U		U	0.0026	J		U	NR		NR			U	NR		NR		19

TABLE 3-14 VOLATILE ORGANIC COMPOUND DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8260 LOW	Sample Location	SED-11						SED-12						SED-DUP01 SED-11		Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity or Human Health Bioaccumulation* (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		
	Sample Date	1/14/2010						1/14/2010						1/14/2010		
	Sample Type	Composite						Composite						Composite		
1,1-Dichloroethane	mg/kg		U	NR		NR			U	NR		NR			U	---
1,1-Dichloroethene	mg/kg		U	NR		NR			U	NR		NR			U	0.005*
1,2,4-Trimethylbenzene	mg/kg		U	NR		NR			U	NR		NR			U	39
1,3,5-Trimethylbenzene	mg/kg		U	NR		NR			U	NR		NR			U	---
2-Butanone	mg/kg		U	NR		NR			U	NR		NR			U	---
Acetone	mg/kg		U	NR		NR			U	NR		NR		0.013		---
Carbon disulfide	mg/kg		U	NR		NR			U	NR		NR			U	---
Chloroethane	mg/kg		U	NR		NR			U	NR		NR			U	---
cis-1,2-Dichloroethene	mg/kg		U	NR		NR		0.0031	J	NR		NR			U	---
Ethylbenzene	mg/kg		U	NR		NR			U	NR		NR			U	5
Isopropylbenzene	mg/kg		U	NR		NR			U	NR		NR			U	2.5
m,p-Xylene	mg/kg		U	NR		NR			U	NR		NR			U	19
Methylene chloride	mg/kg		U	NR		NR			U	NR		NR			U	---
Naphthalene	mg/kg		U	NR		NR			U	NR		NR			U	6.3
n-Butylbenzene	mg/kg		U	NR		NR			U	NR		NR			U	---
n-Propylbenzene	mg/kg		U	NR		NR			U	NR		NR			U	---
o-Xylene	mg/kg		U	NR		NR			U	NR		NR			U	19
Toluene	mg/kg		U	NR		NR			U	NR		NR		0.0039	J	10
trans-1,2-Dichloroethene	mg/kg		U	NR		NR			U	NR		NR			U	---
Vinyl chloride	mg/kg		U	NR		NR			U	NR		NR			U	0.015*
Xylene (Total)	mg/kg		U	NR		NR			U	NR		NR			U	19

TABLE 3-15 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8270	Sample Location	SED-01						SED-02						SED-03						Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity or Human Health Bioaccumulation* (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
1,2-Dichlorobenzene	mg/kg	NR			U		U	NR			U		U		U		U		U	2.5
2-Methylnaphthalene	mg/kg	NR		0.12	J	0.21	J	NR		0.069	J	0.096	J	0.19	J	0.16	J	0.087	J	7
4-Chloroaniline	mg/kg	NR			U		U	NR			U		U	0.37	J	0.19	J	0.18	J	---
4-Methylphenol	mg/kg	NR			U		U	NR			U		U	0.1	J	0.074	J		U	---
Acenaphthene	mg/kg	NR			U		U	NR		0.13	J	0.11	J	0.82	J	0.51	J	0.39	J	29
Acenaphthylene	mg/kg	NR		0.096	J	0.062	J	NR		0.36	J	0.23	J	1.5		1.1		0.73		---
Anthracene	mg/kg	NR		0.11	J	0.069	J	NR		0.52	J	0.38	J	3.1		2		1.5		22
Benzo(a)anthracene	mg/kg	NR		0.27	J	0.16	J	NR		0.94		0.69		**5.7**		**3.9**		**3**		2.5
Benzo(a)pyrene	mg/kg	NR		**0.28**	J	0.18	J	NR		**1**		**0.73**		**5.6**		**4**		**2.8**		0.27*
Benzo(b)fluoranthene	mg/kg	NR		0.41	J	0.27	J	NR		1.5		0.95		8.2		5.8		4		---
Benzo(g,h,i)perylene	mg/kg	NR		0.2	J	0.15	J	NR		0.8		0.57		4		2.9		2		---
Benzo(k)fluoranthene	mg/kg	NR		0.15	J	0.091	J	NR		0.7		0.43	J	3.1		2.6		2		---
Bis(2-ethylhexyl)phthalate	mg/kg	NR			U	0.18	J	NR		0.88		0.62		2.2		1.5		1.2		25
Butylbenzylphthalate	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Carbazole	mg/kg	NR			U		U	NR		0.11	J	0.073	J	0.74	J	0.39	J	0.33	J	---
Chrysene	mg/kg	NR		0.31	J	0.2	J	NR		1.4		0.9		7.4		5.3		3.8		---
Dibenzo(a,h)anthracene	mg/kg	NR			U		U	NR		0.21	J	0.16	J	1.1		0.75		0.53	J	---
Dibenzofuran	mg/kg	NR			U		U	NR			U	0.058	J	0.44	J	0.28	J	0.21	J	---
Di-n-butylphthalate	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Di-n-octylphthalate	mg/kg	NR			U		U	NR			U		U		U		U		U	---
Fluoranthene	mg/kg	NR		0.61		0.38	J	NR		3		2		18	D	11		8.9		212
Fluorene	mg/kg	NR		0.049	J		U	NR		0.21	J	0.18	J	1.4		0.88		0.69	J	1.7
Indeno(1,2,3-cd)pyrene	mg/kg	NR		0.22	J	0.15	J	NR		0.8		0.53	J	3.8		2.8		2		---
Naphthalene	mg/kg	NR			U		U	NR			U		U		U	0.17	J		U	6.3
Phenanthrene	mg/kg	NR		0.25	J	0.17	J	NR		1.1		0.9		5.9		4.6		2.7		25
Phenol	mg/kg	NR			U		U	NR			U		U		U	**0.12**	J		U	0.1
Pyrene	mg/kg	NR		0.5		0.31	J	NR		2.2		1.6		12		8.7		6.7		200

NOTE: USEPA = United States Environmental Protection Agency.
mg/kg = Milligrams per kilogram.
NR = No Recovery
U = Compound was analyzed for, but not detected.
J = Estimated Value.
--- =
Bold values indicate exceedence of Benthic Aquatic Life Chronic/Acute Toxicity.
Standards taken from NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999)

TABLE 3-15 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8270	Sample Location	SED-04						SED-05						SED-06						Sediment Criteria Benthic Aquatic Wildlife Acute* Chronic Toxicity (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
1,2-Dichlorobenzene	mg/kg		U		U		U		U	NR		NR			U	NR		NR		2.5
2-Methylnaphthalene	mg/kg	0.44	J	0.56		1.2			U	NR		NR		0.077	J	NR		NR		7
4-Chloroaniline	mg/kg	0.13	J		U	0.35	J		U	NR		NR			U	NR		NR		---
4-Methylphenol	mg/kg	0.088	J		U	0.21	J		U	NR		NR			U	NR		NR		---
Acenaphthene	mg/kg	1.5		1.1		2.9		0.1	J	NR		NR		0.55		NR		NR		29
Acenaphthylene	mg/kg	2.1		0.85		2.5		0.13	J	NR		NR		0.36	J	NR		NR		---
Anthracene	mg/kg	4.8		2.4		8.9		0.37	J	NR		NR		1.9		NR		NR		22
Benzo(a)anthracene	mg/kg	**8.6**		**3.5**		**15**	D	1.6		NR		NR		**6.9**		NR		NR		2.5
Benzo(a)pyrene	mg/kg	**7.5**		**3**		**13**	D	**1.3**		NR		NR		**5.7**		NR		NR		0.27*
Benzo(b)fluoranthene	mg/kg	9.6		3.6		17	D	1.7		NR		NR		10	D	NR		NR		---
Benzo(g,h,i)perylene	mg/kg	5		1.9		7.9		0.83		NR		NR		3.7		NR		NR		---
Benzo(k)fluoranthene	mg/kg	4.6		2.2		7.9		0.8		NR		NR		3.2		NR		NR		---
Bis(2-ethylhexyl)phthalate	mg/kg	1.3		0.77		4.4		0.32	J	NR		NR		1.1		NR		NR		25
Butylbenzylphthalate	mg/kg		U		U	0.12	J		U	NR		NR		0.12	J	NR		NR		---
Carbazole	mg/kg	1.2		0.57		2		0.23	J	NR		NR		1.1		NR		NR		---
Chrysene	mg/kg	9.6		4		17	D	1.7		NR		NR		7		NR		NR		---
Dibenzo(a,h)anthracene	mg/kg	1.6		0.52		2.4		0.25	J	NR		NR		1.1		NR		NR		---
Dibenzofuran	mg/kg	0.88		0.68		1.9		0.064	J	NR		NR		0.32	J	NR		NR		---
Di-n-butylphthalate	mg/kg		U		U	0	U		U	NR		NR		0.11	J	NR		NR		---
Di-n-octylphthalate	mg/kg		U		U	0	U		U	NR		NR			U	NR		NR		---
Fluoranthene	mg/kg	26	D	11	D	43	D	4		NR		NR		19	D	NR		NR		212
Fluorene	mg/kg	**2.5**		1.6		5		0.15	J	NR		NR		0.77		NR		NR		1.7
Indeno(1,2,3-cd)pyrene	mg/kg	4.6		1.9		7.6		0.83		NR		NR		3.7		NR		NR		---
Naphthalene	mg/kg	0.33	J	0.27	J	0.66	J		U	NR		NR			U	NR		NR		6.3
Phenanthrene	mg/kg	19	D	10	D	**33**	D	1.9		NR		NR		10	D	NR		NR		25
Phenol	mg/kg		U		U		U		U	NR		NR			U	NR		NR		0.1
Pyrene	mg/kg	20	D	8.8	D	33	D	2.9		NR		NR		14	D	NR		NR		200

NOTE: D = Dilution of sample or extract.

TABLE 3-15 SVOC DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8270	Sample Location	SED-11						SED-12						SED-DUP01 SED-11		Sediment Criteria Benthic Aquatic Wildlife Acute Chronic Toxicity or Human Health Bioaccumulation* (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		
	Sample Date	1/14/2010						1/14/2010						1/14/2010		
	Sample Type	Composite						Composite						Composite		
1,2-Dichlorobenzene	mg/kg		U	NR		NR		0.25	J	NR		NR			U	2.5
2-Methylnaphthalene	mg/kg	0.068	J	NR		NR		0.58		NR		NR		0.11	J	7
4-Chloroaniline	mg/kg		U	NR		NR		0.081	J	NR		NR			U	---
4-Methylphenol	mg/kg		U	NR		NR			U	NR		NR		0.1	J	---
Acenaphthene	mg/kg	0.3	J	NR		NR		2.8		NR		NR		0.46	J	29
Acenaphthylene	mg/kg	0.4	J	NR		NR		0.86		NR		NR		0.72		---
Anthracene	mg/kg	1.2		NR		NR		6.5		NR		NR		1.8		22
Benzo(a)anthracene	mg/kg	**3.7**		NR		NR		**17**	D	NR		NR		**6.3**		2.5
Benzo(a)pyrene	mg/kg	**3.4**		NR		NR		**14**	D	NR		NR		**6.1**		0.27*
Benzo(b)fluoranthene	mg/kg	4.9		NR		NR		18	D	NR		NR		8.4	D	---
Benzo(g,h,i)perylene	mg/kg	2.2		NR		NR		6.4		NR		NR		4.8		---
Benzo(k)fluoranthene	mg/kg	2		NR		NR		5.2		NR		NR		3.2		---
Bis(2-ethylhexyl)phthalate	mg/kg	0.72		NR		NR		1		NR		NR		2.2		25
Butylbenzylphthalate	mg/kg		U	NR		NR		8.8	D	NR		NR		0.17	J	---
Carbazole	mg/kg	0.46	J	NR		NR		3.5		NR		NR		0.84		---
Chrysene	mg/kg	4.1		NR		NR		18	D	NR		NR		7.5		---
Dibenzo(a,h)anthracene	mg/kg	0.63		NR		NR		2		NR		NR		1		---
Dibenzofuran	mg/kg	0.15	J	NR		NR		1.9		NR		NR		0.24	J	---
Di-n-butylphthalate	mg/kg	0.051	J	NR		NR		0.045	J	NR		NR		0.097	J	---
Di-n-octylphthalate	mg/kg		U	NR		NR		0	U	NR		NR		0.11	J	---
Fluoranthene	mg/kg	9.4	D	NR		NR		45	D	NR		NR		15	D	212
Fluorene	mg/kg	0.36	J	NR		NR		**3.5**		NR		NR		0.6		1.7
Indeno(1,2,3-cd)pyrene	mg/kg	2.2		NR		NR		6.4		NR		NR		4.4		---
Naphthalene	mg/kg		U	NR		NR		0.73		NR		NR		0.12	J	6.3
Phenanthrene	mg/kg	4		NR		NR		**34**	D	NR		NR		6.2		25
Phenol	mg/kg		U	NR		NR			U	NR		NR			U	0.1
Pyrene	mg/kg	6.5		NR		NR		34	D	NR		NR		12	D	200

TABLE 3-16 METAL DETECTIONS IN SEDIMENT

Parameter List USEPA Method 6010 & 7471	Sample Location	SED-01						SED-02						SED-03						NYSDEC Sediment Criteria Lowest Effect Level (ppm)	NYSDEC Sediment Criteria Severe Effect Level (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24			
	Sample Date	1/14/2010						1/14/2010						1/14/2010							
	Sample Type	Composite						Composite						Composite							
Aluminum	mg/kg	NR		6040		6160		NR		7110		9570		7340		7110		12100		---	---
Arsenic	mg/kg	NR		5		5.7		NR		**7.9**		**8.4**		**12.7**		**7.7**		4.4		6.0	33.0
Barium	mg/kg	NR		45	J	55.1	J	NR		72.5	J	94.7	J	157	J	131	J	201	J	---	---
Beryllium	mg/kg	NR		0.23	J	0.24	J	NR		0.29	J	0.38	J	0.38	J	0.3	J	0.18	J	---	---
Cadmium	mg/kg	NR		**1.3**		**1.6**		NR		**0.96**		**1.5**		**3.7**		**1.4**		0.33	B	0.6	9.0
Calcium	mg/kg	NR		20900		37200		NR		250000		40600		66400		23800		9380		---	---
Chromium	mg/kg	NR		**88.6**	J	**137**	J	NR		**173**	J	**323**	J	**557**	J	**222**	J	**67**	J	26.0	110
Cobalt	mg/kg	NR		6.2	J	6	J	NR		5.2	J	9.1	J	6.2	J	5.1	J	4.7	J	---	---
Copper	mg/kg	NR		**230**	J	**474**	J	NR		**243**	J	**494**	J	**460**	J	**123**	J	**50.6**	J	16.0	110
Iron	mg/kg	NR		**20100**	J	**24300**	J	NR		18000	J	**35700**	J	**31800**	J	14400	J	**22100**	J	2.0%	4.0%
Lead	mg/kg	NR		23	J	**32**	J	NR		**54**	J	**80.4**	J	**334**	J	**148**	J	**45.8**	J	31.0	110
Magnesium	mg/kg	NR		8900	J	8900	J	NR		10100	J	11600	J	11600	J	5490	J	5340	J	---	---
Manganese	mg/kg	NR		285	J	305	J	NR		**523**	J	**552**	J	287	J	147	J	150	J	460	1,100
Mercury	mg/kg	NR		0.11		0.12		NR		**0.21**		0.13			U	**0.15**		**0.36**		0.15	1.3
Nickel	mg/kg	NR		**81.4**	J	**128**	J	NR		**74.8**	J	**172**	J	**192**	J	**77**	J	**31**	J	16.0	50.0
Potassium	mg/kg	NR		899	J	816	J	NR		1020	J	1240	J	1080	J	898	J	1510	J	---	---
Selenium	mg/kg	NR			U		U	NR			J		U		U	1.2		1.7		---	---
Silver	mg/kg	NR		0.5		0.27		NR		0.24		0.52	J	**2.7**		0.54			U	1	2.2
Sodium	mg/kg	NR		684		696		NR		567		540		345		206		214		---	---
Thallium	mg/kg	NR		0.73		1		NR		3.6		1.3	B	1.4		0.58			U	---	---
Vanadium	mg/kg	NR		13		14.3		NR		14.3		21.7		27.5		24		24.7		---	---
Zinc	mg/kg	NR		**684**	J	**1480**	J	NR		**733**	J	**2690**	J	**631**	J	**192**	J	94.6	J	120	270

NOTE: USEPA = United States Environmental Protection Agency.
NYSDEC = New York State Department of Environmental Conservation.
ppm = Parts per million.
mg/kg = Milligrams per kilogram.
NR = No Recovery
--- =
J = Less than Contract Required Quantitation Limit, but greater than or equivalent to Method Dectection Limit.
B =
U = Less than Method Detection Limit.
Bold values indicate exceedence of Lowest Effect Level; **bold** and shaded values indicate exceedence of Lowest and Severe Effect Levels.
Standards taken from NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999)

TABLE 3-16 METAL DETECTIONS IN SEDIMENT

Parameter List USEPA Method 6010 & 7471	Sample Location	SED-04						SED-05						SED-06						NYSDEC Sediment Criteria Lowest Effect Level (ppm)	NYSDEC Sediment Criteria Severe Effect Level (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24			
	Sample Date	1/14/2010						1/14/2010						1/14/2010							
	Sample Type	Composite						Composite						Composite							
Aluminum	mg/kg	8070		5820		6980		983		NR		NR		2210		NR		NR		---	---
Arsenic	mg/kg	**12.2**		4.2		**11.3**		5.8		NR		NR		3.2		NR		NR		6.0	33.0
Barium	mg/kg	163	J	56.8	J	150	J	12	J	NR		NR		31.7	J	NR		NR		---	---
Beryllium	mg/kg	0.47	J	0.36	J	0.36	J	0.082	J	NR		NR		0.11	J	NR		NR		---	---
Cadmium	mg/kg	**7.7**		**1.5**		**4.7**		0.31		NR		NR		0.33		NR		NR		0.6	9.0
Calcium	mg/kg	51900		23600		68800		263000		NR		NR		115000		NR		NR		---	---
Chromium	mg/kg	**912**	J	**191**	J	**631**	J	**29.2**	J	NR		NR		21.7	J	NR		NR		26.0	110
Cobalt	mg/kg	7	J	5.8	J	6.5	J	2.4	J	NR		NR		2.5	J	NR		NR		---	---
Copper	mg/kg	**850**	J	**159**	J	**374**	J	**53.1**	J	NR		NR		**59.1**	J	NR		NR		16.0	110
Iron	mg/kg	19800	J	11800	J	17900	J	**39200**	J	NR		NR		10100	J	NR		NR		2.0%	4.0%
Lead	mg/kg	**324**	J	**79.3**	J	**489**	J	13.7	J	NR		NR		**47.5**	J	NR		NR		31.0	110
Magnesium	mg/kg	10400	J	9440	J	12000	J	13700	J	NR		NR		10900	J	NR		NR		---	---
Manganese	mg/kg	390	J	166	J	289	J	235	J	NR		NR		148	J	NR		NR		460	1,100
Mercury	mg/kg	**0.56**		**0.16**		0.13		0.01	B	NR		NR		0.11		NR		NR		0.15	1.3
Nickel	mg/kg	**312**	J	**71.3**	J	**187**	J	11	J	NR		NR		9.7	J	NR		NR		16.0	50.0
Potassium	mg/kg	1040	J	676	J	1010	J	337	J	NR		NR		432	J	NR		NR		---	---
Selenium	mg/kg	1.6		1.2			U		U	NR		NR			U	NR		NR		---	---
Silver	mg/kg	**10.3**		**1.6**	B	**4.6**			U	NR		NR			U	NR		NR		1	2.2
Sodium	mg/kg	441		172		339		197		NR		NR		280		NR		NR		---	---
Thallium	mg/kg	1.5		0.81	B	1.2		3.1		NR		NR		1.5		NR		NR		---	---
Vanadium	mg/kg	25		14.6		30.1		6.4		NR		NR		12.5		NR		NR		---	---
Zinc	mg/kg	**457**	J	112	J	**401**	J	34.8	J	NR		NR		**135**	J	NR		NR		120	270

TABLE 3-16 METAL DETECTIONS IN SEDIMENT

Parameter List USEPA Method 6010 & 7471	Sample Location	SED-11						SED-12						SED-DUP01 SED-11		NYSDEC Sediment Criteria Lowest Effect Level (ppm)	NYSDEC Sediment Criteria Severe Effect Level (ppm)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6			
	Sample Date	1/14/2010						1/14/2010						1/14/2010			
	Sample Type	Composite						Composite						Composite			
Aluminum	mg/kg	3290		NR		NR		2120		NR		NR		4020		---	---
Arsenic	mg/kg	**7.2**		NR		NR		2.6		NR		NR		**9.7**		6.0	33.0
Barium	mg/kg	32.5	J	NR		NR		25.6		NR		NR		40.8		---	---
Beryllium	mg/kg	0.15	J	NR		NR		0.11		NR		NR		0.17		---	---
Cadmium	mg/kg	0.52		NR		NR		0.3		NR		NR		**0.66**		0.6	9.0
Calcium	mg/kg	103000		NR		NR		197000		NR		NR		86600		---	---
Chromium	mg/kg	**42.1**	J	NR		NR		**45.3**		NR		NR		**51.9**		26.0	110
Cobalt	mg/kg	3.2	J	NR		NR		2		NR		NR		3.8		---	---
Copper	mg/kg	**49.6**	J	NR		NR		**57.5**		NR		NR		**61.4**		16.0	110
Iron	mg/kg	9080	J	NR		NR		7740		NR		NR		10600		2.0%	4.0%
Lead	mg/kg	**70.2**	J	NR		NR		30.3		NR		NR		**66.2**		31.0	110
Magnesium	mg/kg	9650	J	NR		NR		18600		NR		NR		10900		---	---
Manganese	mg/kg	210	J	NR		NR		185		NR		NR		200		460	1,100
Mercury	mg/kg	0.11		NR		NR		0.027		NR		NR		**3.1**		0.15	1.3
Nickel	mg/kg	**16.9**	J	NR		NR		13.4		NR		NR		**21.4**		16.0	50.0
Potassium	mg/kg	601	J	NR		NR		457		NR		NR		649		---	---
Selenium	mg/kg		U	NR		NR		1.2		NR		NR			U	---	---
Silver	mg/kg		U	NR		NR			U	NR		NR		0.15		1	2.2
Sodium	mg/kg	300		NR		NR		224		NR		NR		343		---	---
Thallium	mg/kg	1.6		NR		NR		2.7		NR		NR		1.1		---	---
Vanadium	mg/kg	12.6		NR		NR		12.2		NR		NR		14.9		---	---
Zinc	mg/kg	113	J	NR		NR		113		NR		NR		**159**		120	270

TABLE 3-17 POLYCHLORINATED BIPHENYL DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8082	Sample Location	SED-01						SED-02						SED-03						Sediment Criteria Human Health Bioaccumulation (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1242	mg/kg	NR			U		U	NR			U		U	48		19		13	D	---
Aroclor-1248	mg/kg	NR		6.3	J	31		NR		16		25			U		U		U	---
Aroclor-1254	mg/kg	NR		3.1		11		NR		8.2		13		9.4		4.1		2.7	D	---
Aroclor Total	mg/kg	NR		**9.4**		**42**		NR		**24.2**		**38**		**57.4**		**23.1**		**15.3**		0.0002

Parameter List USEPA Method 8082	Sample Location	SED-04						SED-05						SED-06						Sediment Criteria Human Health Bioaccumulation (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
Aroclor-1242	mg/kg	23		9.4		56			U	NR		NR			U	NR		NR		---
Aroclor-1248	mg/kg		U		U		U	0.41	J	NR		NR		0.061	J	NR		NR		---
Aroclor-1254	mg/kg	4		2.1		8.3			U	NR		NR			U	NR		NR		---
Aroclor Total	mg/kg	**27**		**11.5**		**64.3**		0.41		NR		NR		0.061		NR		NR		0.0002

Parameter List USEPA Method 8082	Sample Location	SED-11						SED-12						SED-DUP01 SED-11			Sediment Criteria Benthic Aquatic Wildlife Acute* Chronic Toxicity (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6			
	Sample Date	1/14/2010						1/14/2010						1/14/2010			
	Sample Type	Composite						Composite						Composite			
Aroclor-1242	mg/kg		U	NR		NR			U	NR		NR			U		---
Aroclor-1248	mg/kg	1.4		NR		NR		1.8	J	NR		NR		1.8			---
Aroclor-1254	mg/kg	0.57		NR		NR		0.79		NR		NR			U		---
Aroclor Total	mg/kg	1.97		NR		NR		2.59		NR		NR		1.8			4

NOTE: USEPA = United States Environmental Protection Agency.
mg/kg = Milligrams per kilogram.
NR = No Recovery
U = Compound was analyzed for, but not detected.
D = Secondary Dilution Factor.
--- =
J = Estimated Value.
Bold values indicate exceedence of Benthic Aquatic Life Chronic/Acute Toxicity.
Standards taken from NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999).

TABLE 3-18 PESTICIDE DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8081	Sample Location	SED-01						SED-02						SED-03						Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity* or Human Health Bioaccumulation or Wildlife Bioaccumulation** (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg	NR		**0.051**	P		U	NR		**0.16**	J		U		U		U	**0.02**	J	0.002
4,4'-DDE	mg/kg	NR		**0.066**		**0.28**	J	NR		**0.13**	J	**0.28**			U		U	**0.059**		0.002
4,4'-DDT	mg/kg	NR		**0.11**		**0.41**		NR		**0.18**		**0.31**		**0.27**		**0.14**		**0.069**		0.002
alpha-Chlordane	mg/kg	NR			U		U	NR			U		U		U		U		U	0.0003
beta-BHC	mg/kg	NR			U		U	NR			U		U		U		U		U	0.013*
delta-BHC	mg/kg	NR			U		U	NR			U		U		U		U		U	0.013*
Dieldrin	mg/kg	NR		0.053	J		U	NR			U		U		U		U	0.027	J	0.0003
Endosulfan I	mg/kg	NR			U		U	NR			U		U		U		U	**0.013**	J	0.007*
Endosulfan sulfate	mg/kg	NR			U		U	NR			U		U		U		U	0.018		---
Endrin aldehyde	mg/kg	NR			U		U	NR			U		U		U		U	0.021		---
gamma-BHC (Lindane)	mg/kg	NR			U		U	NR			U		U	**0.32**	J	**0.15**	J	**0.085**	D	0.013*
gamma-Chlordane	mg/kg	NR		**0.097**		**0.44**	J	NR		**0.27**	J	**0.47**	J	**0.21**	J	**0.092**	J	**0.069**	D	0.0003
Heptachlor	mg/kg	NR		**0.12**	J	**0.48**	J	NR		**0.33**		**0.53**		**0.45**	J	**0.28**		**0.15**	D	0.005**
Heptachlor epoxide	mg/kg	NR			U		U	NR			U		U		U		U		U	0.005**

NOTE: USEPA = United States Environmetnal Protection Agency.
mg/kg = Milligrams per kilogram.
4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
NR = No Recovery
P =
U = Compound was analyzed for, but not detected.
J = Estimated Value.
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane
--- =
D = Dilution of sample or extract.
Bold values indicate exceedence of Benthic Aquatic Life Chronic/Acute Toxicity.
Standards taken from NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999).

TABLE 3-18 PESTICIDE DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8081	Sample Location	SED-04						SED-05						SED-06						Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity* or Human Health Bioaccumulation or Wildlife Bioaccumulation** (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		6-12		12-24		
	Sample Date	1/14/2010						1/14/2010						1/14/2010						
	Sample Type	Composite						Composite						Composite						
4,4'-DDD	mg/kg		U		U		U		U	NR		NR		**0.0078**	J	NR		NR		0.002
4,4'-DDE	mg/kg		U		U		U		U	NR		NR			U	NR		NR		0.002
4,4'-DDT	mg/kg	**0.13**		**0.077**			U	**0.0045**		NR		NR		**0.0083**		NR		NR		0.002
alpha-Chlordane	mg/kg		U		U		U		U	NR		NR		0.0044	J	NR		NR		0.0003
beta-BHC	mg/kg		U		U		U	0.006	J	NR		NR			U	NR		NR		0.013*
delta-BHC	mg/kg		U		U		U	0.01	J	NR		NR			U	NR		NR		0.013*
Dieldrin	mg/kg		U		U		U		U	NR		NR			U	NR		NR		0.0003
Endosulfan I	mg/kg		U		U		U		U	NR		NR			U	NR		NR		0.007*
Endosulfan sulfate	mg/kg		U		U		U		U	NR		NR		0.0056	J	NR		NR		---
Endrin aldehyde	mg/kg		U		U		U		U	NR		NR		0.0047	J	NR		NR		---
gamma-BHC (Lindane)	mg/kg	**0.33**	J	**0.13**	J	**0.24**	J	0.0031	J	NR		NR			U	NR		NR		0.013*
gamma-Chlordane	mg/kg		U	**0.048**	J		U	**0.019**		NR		NR		**0.03**		NR		NR		0.0003
Heptachlor	mg/kg	**0.16**	P	**0.087**	J	**0.66**			U	NR		NR			U	NR		NR		0.005**
Heptachlor epoxide	mg/kg		U		U		U	0.012		NR		NR			U	NR		NR		0.005**

TABLE 3-18 PESTICIDE DETECTIONS IN SEDIMENT

Parameter List USEPA Method 8081	Sample Location	SED-11						SED-12						SED-DUP01 SED-11		Sediment Criteria Benthic Aquatic Wildlife Chronic Toxicity* or Human Health Bioaccumulation or Wildlife Bioaccumulation** (mg/kg)
	Sample Depth (in)	0-6		6-12		12-24		0-6		6-12		12-24		0-6		
	Sample Date	1/14/2010						1/14/2010						1/14/2010		
	Sample Type	Composite						Composite						Composite		
4,4'-DDD	mg/kg	**0.0055**	J	NR		NR		**0.011**	P	NR		NR			U	0.002
4,4'-DDE	mg/kg	**0.008**	J	NR		NR		**0.014**		NR		NR			U	0.002
4,4'-DDT	mg/kg	**0.016**		NR		NR		**0.022**		NR		NR		**0.031**		0.002
alpha-Chlordane	mg/kg		U	NR		NR		**0.0065**		NR		NR			U	0.0003
beta-BHC	mg/kg	0.011		NR		NR			U	NR		NR		**0.022**	J	0.013*
delta-BHC	mg/kg	**0.031**		NR		NR			U	NR		NR			U	0.013*
Dieldrin	mg/kg	0.0067	J	NR		NR			U	NR		NR			U	0.0003
Endosulfan I	mg/kg		U	NR		NR			U	NR		NR			U	0.007*
Endosulfan sulfate	mg/kg	0.0055	J	NR		NR			U	NR		NR		0.024	J	---
Endrin aldehyde	mg/kg	0.0069	J	NR		NR			U	NR		NR			U	---
gamma-BHC (Lindane)	mg/kg	0.0033	J	NR		NR		0.0063	J	NR		NR		0.011	J	0.013*
gamma-Chlordane	mg/kg	**0.013**	J	NR		NR		**0.019**	J	NR		NR		**0.027**	J	0.0003
Heptachlor	mg/kg	0.0028	J	NR		NR		0.0043	J	NR		NR			U	0.005**
Heptachlor epoxide	mg/kg		U	NR		NR			U	NR		NR			U	0.005**

TABLE 3-19 VOLATILE ORGANIC COMPOUND DETECTIONS IN GROUNDWATER

Parameter List (Detections Only) USEPA Method 8260	Sample Location	MW-01		MW-02		MW-03		DUPLICATE		AWQS and Guidance Values[a] Class GA H (WS)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		
Methyl tert-butyl ether	µg/L	4.2	J	3.4	J		U	4.4	J	---

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998

NOTE: USEPA = United States Environmental Protection Agency.

AWQS = Ambient Water Quality Standard.

H (WS) = Health (Water Source)

µg/L = Micrograms per Liter.

J = Estimated Value.

U = Compound was analyzed for, but not detected.

--- =

TABLE 3-20 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN GROUNDWATER

Parameter List (Detections Only) USEPA Method 8270	Sample Location	MW-01		MW-02		MW-03		DUPLICATE		AWQS and Guidance Values[(a)] Class GA H (WS)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		
Bis(2-ethylhexyl)phthalate						4.5	J			5

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency.
AWQS = Ambient Water Quality Standard.
H (WS) = Health (Water Source)
J = Estimated Value.

TABLE 3-21 METAL DETECTIONS IN GROUNDWATER

Parameter List (Detections Only) USEPA Method 6010 & 7470	Sample Location	OLCCMW-01		OLCCMW-01F		OLCCMW-02		OLCCMW-02-F		OLCCMW-03		OLCCMW-03F		OLCCDUPLICATE MW-01		OLCCDUPLICATE-F MW-01F		AWQS and Guidance Values[a] Class GA H (WS)
	Sample Date	5/24/2010		5/26/2010		5/24/2010		5/24/2010		5/24/2010		5/26/2010		5/24/2010		5/24/2010		
	Sample Type	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		
Aluminum	µg/L	49.6		20.3		84.8		18.6		43		37.7		35.6		22.8		---
Antimony	µg/L		U		U		U	**6.7**		**8.6**		**6.4**		**7.8**		**5.5**		3
Arsenic	µg/L		U		U	6.2			U		U		U	5.4		3.5		25
Barium	µg/L	201		193		120		117		346		352		208		193		1,000
Calcium	µg/L	137000		136000		130000		129000		445000		464000		140000		135000		---
Chromium	µg/L		U		U		U		U	1.3		1.1			U		U	50
Cobalt	µg/L		U		U		U	0.7	B		U		U	0.7			U	---
Copper	µg/L		U		U		U		U	5.3	B		U		U		U	200
Iron	µg/L	**16500**		**16300**		**9370**		**9090**		**26100**		**26300**		**17000**		**16100**		300
Magnesium	µg/L	21500		21300		19200		19000		**35200**		**37300**		22000		21200		35000 (g)
Manganese	µg/L	**1180**		**1170**		**1250**		**1240**		**2310**		**2330**		**1210**		**1160**		300
Nickel	µg/L	1.5		1.6		1.5		1.5		1.5		1.7		2.1		1.4		100
Potassium	µg/L	5550		5380		4640		4450		5400		5860		5660		5320		---
Selenium	µg/L	**15.4**			U		U		U		U		U		U		U	10
Sodium	µg/L	**400000**		**392000**		**194000**		**190000**		**1910000**		**2020000**		**403000**		**385000**		20,000
Vanadium	µg/L	0.91		0.76			U		U	0.95		1.1		0.77		1.1		---
Zinc	µg/L	25.5		20.1		17		17.1		16.2		19.3		24.7		20.9		2,000

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998

NOTE: USEPA = United States Environmental Protection Agency.
AWQS = Ambient Water Quality Standard.
H (WS) = Health (Water Source)
µg/L = Micrograms per liter.
B =
--- =
U = Less than Method Detection Limit.
Bold values indicate exceeedence of standard

TABLE 3-22 VOLATILE COMPOUND DETECTIONS IN SURFACE WATER (LOW-FLOW)

Parameter List (Detections Only) USEPA Method 8260B	Sample Location	SW-01		SW-02		SW-03		SW-04		SW-05		SW-06		SW-07		SW-DUP-01		AWQS and Guidance Values[(a)] Class B Stream A (C)
	Sample Date	1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		
VOLATILE ORGANIC COMPOUNDS																		
1,2,4-Trimethylbenzene	µg/L		U		U		U		U		U		U	2.5	J		U	33
Acetone	µg/L	5.9			U	6.6			U	5.7		5.4			U		U	---
Benzene	µg/L	2.4	J		U		U		U		U		U		U		U	210
Chloroethane	µg/L		U	1.8	J		U		U		U		U		U		U	---
cis-1,2-Dichloroethene	µg/L		U	2.9	J		U	4.4	J	4.4	J	6.5		8.9		9.2		---
m,p-Xylene	µg/L		U		U		U		U		U		U	3	J		U	65
Naphthalene	µg/L		U		U		U		U		U		U	1	J		U	13
o-Xylene	µg/L		U		U		U		U		U		U	1.2	J		U	65
Toluene	µg/L		U		U		U		U		U		U	2.4	J	1.5	J	100
Trichloroethene	µg/L		U		U		U	2.3	J	2.1	J		U		U		U	---
Vinyl chloride	µg/L		U	7.4			U		U		U	1.1	J	2.6	J	2.1	J	---
Xylene (Total)	µg/L		U		U		U		U		U		U	4.2	J		U	65
SEMIVOLATILE ORGANIC COMPOUNDS																		
2-Methylnaphthalene	µg/L		U		U		U		U		U		U	1.3	J		U	4.7

NOTE: USEPA = United States Environmental Protection Agency.
AWQS = Ambient Water Quality Standard.
A (C) = Aquatic (Chronic)
µg/L = Micrograms per liter.
U = Compound was analyzed for, but not detected.
--- =
J = Estimated Value.
Bold values indicate exceeedence of standard

TABLE 3-23 VOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE WATER (HIGH-FLOW)

Parameter List (Detections Only) USEPA Method 8260B	Sample Location	SW-01		SW-02		SW-03		SW-04		SW-05		SW-06		SW-07		SW-DUP-01		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		
cis-1,2-Dichloroethene	µg/L		U	2.6	J		U		U		U		U		U		U	---
m,p-Xylene	µg/L		U		U		U		U		U		U	1.1	J		U	65
Naphthalene	µg/L	4.2	J		U		U		U		U		U		U		U	13
Toluene	µg/L		U		U		U		U		U		U	1.7	J		U	100
Vinyl chloride	µg/L		U	3.1	J		U		U		U		U		U		U	---
Xylene (Total)	µg/L		U		U		U		U		U		U	1.1	J		U	65

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency.
AWQS = Ambient Water Quality Standards
A (C) = Aquatic (Chronic)
µg/L = Micrograms per Liter.
U = Compound was analyzed for, but not detected.
J = Estimated Value.
--- =

TABLE 3-24 VOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE WATER MAY 2010

Parameter List (Detections Only) USEPA Method 8260	Sample Location	SW-08		SW-09		SW-10		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		
Acetone	µg/L		U	7.9		7		---
Benzene	µg/L		U	5.4			U	210 (g)
Carbon disulfide	µg/L		U	1.7	J	5.6		---
Chloroethane	µg/L		U		U	3.5	J	---
Isopropylbenzene	µg/L		U	1.7	J		U	2.6 (g)
Methyl tert-butyl ether	µg/L		U	3.5	J		U	---
Toluene	µg/L		U		U	5.4		100 (g)

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency.
AWQS = Ambient Water Quality Standards
A (C) = Aquatic (Chronic)
µg/L = Micrograms per Liter.
U = Compound was analyzed for, but not detected.
--- =
J =

TABLE 3-25 SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SURFACE WATER MAY 2010

Parameter List (Detections Only) USEPA Method 8270	Sample Location	SW-08		SW-09		SW-10		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		
Benzo(a)anthracene	µg/L		U		U	1.1	J	---
Benzo(b)fluoranthene	µg/L		U		U	1.7	J	---
Benzo(g,h,i)perylene	µg/L		U		U	1	J	---
Bis(2-ethylhexyl)phthalate	µg/L		U		U	**2.8**	J	0.6
Butylbenzylphthalate	µg/L		U		U	2.7	J	---
Chrysene	µg/L		U		U	2.9	J	---
Fluoranthene	µg/L		U		U	3.5	J	---
Phenanthrene	µg/L		U		U	1.5	J	5.0
Pyrene	µg/L		U		U	2.9	J	4.6

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency.
AWQS = Ambient Water Quality Standards
A (C) = Aquatic (Chronic)
µg/L = Micrograms per Liter.
U = Compound was analyzed for, but not detected.
J =
--- =

TABLE 3-26 METAL DETECTIONS IN SURFACE WATER (LOW-FLOW)

Parameter List (Detections Only) USEPA Method 6010 & 7470	Sample Location	SW-01		SW-02		SW-03		SW-04		SW-05		SW-06		SW-07		SW-DUP-01		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		1/14/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		
Aluminum	µg/L	**695**		**193**		26.5		23.6		14.6	J	32.2		**458**		72.4	J	100
Arsenic	µg/L	8.3			U		U	4.5	B		U		U		U	3.1		150
Barium	µg/L	294		218			U		U		U		U		U		U	---
Beryllium	µg/L		U		U		U		U		U		U		U		U	1,100
Cadmium	µg/L	0.91			U		U		U		U		U		U		U	*
Calcium	µg/L	202000		191000		224000		196000		190000		225000		220000		230000		---
Chromium	µg/L	12.2		19.7			U		U		U	0.84		1.9		0.66	B	*
Cobalt	µg/L		U		U		U		U		U		U		U		U	5
Copper	µg/L	**53.1**		**48.5**			U		U		U		U	30.9			U	*
Iron	µg/L	**17100**		**10400**		**510**		**533**		**514**		**572**		**1420**		**571**		300
Lead	µg/L	9.9		6.9		2.4			U		U	3.9		26.1		4		*
Magnesium	µg/L	29100		28000		44400		33200		32400		44400		43500		45200		---
Manganese	µg/L	4360		2510		166		162		158		146		166		153		---
Nickel	µg/L	20.3	B	16.4		2.4	B	3.7		2.1	J	3.9		4		3.6	J	*
Potassium	µg/L	6600		5390		3930		3550		3470		3810		3910		3960		---
Sodium	µg/L	216000		231000		369000		319000		314000		341000		406000		364000		---
Vanadium	µg/L		U		U		U		U		U		U		U		U	14
Zinc	µg/L	101			U		U		U		U	50.2		96.8		34.5	U	*
Hardness-based standards																		
Cadmium	µg/L	9		8		10		9		9		10		10		10		
Chromium	µg/L	332		318		383		333		325		384		377		390		
Copper	µg/L	43		41		50		43		42		50		49		51		
Lead	µg/L	26		24		31		26		25		31		30		31		
Nickel	µg/L	245		234		283		245		239		284		279		289		
Zinc	µg/L	392		375		454		393		383		455		447		463		

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998

NOTE: USEPA = United States Environmental Protection Agency.

AWQS = Ambient Water Quality Standards
A (C) = Aquatic (Chronic)
µg/L = Micrograms per Liter.
J = Reported value was obtained from a reading that was less than the Contract Required Quantitation Limit, but greater than or equivalent to the Method Detection Limit.
U = Reading was less than Method Detection Limit.
--- =
B =
Bold values indicate exceedance of standard.
* = Class A drinking water standards; see below for hardness-based standards

TABLE 3-27 METAL DETECTIONS IN SURFACE WATER (HIGH-FLOW)

Parameter List (Detections Only) USEPA Method 6010 & 7470	Sample Location	SW-01		SW-02		SW-03		SW-04		SW-05		SW-06		SW-07		SW-DUP-01		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		1/26/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		Surface Water		
Aluminum	µg/L	**242**			U		U	**442**		**472**		**203**			U	**473**		100
Antimony	µg/L		U	4.8			U		U		U		U		U		U	---
Arsenic	µg/L		U		U		U		U		U		U	3.6			U	150
Barium	µg/L	84.3		107		94.8		59.2		58.6		92.9		95		58		---
Calcium	µg/L	135000		139000		168000		71800		68800		169000		170000		68700		---
Chromium	µg/L	8		10.7		1.6		1.4		1.6		2.9		3.1		1.5		*
Cobalt	µg/L	1		1.1			U		U		U		U	0.81		0.76		5
Copper	µg/L		U		U		U		U		U		U		U	7.8		*
Iron	µg/L	**2670**		**2610**		**608**		**1200**		**1260**		**837**		**856**		**1260**		300
Lead	µg/L		U		U	3.1	B		U		U	6.9		9.3			U	*
Magnesium	µg/L	16100	J	19900	J	32200	J	14200	J	13800	J	32900	J	33000	J	13800	J	---
Manganese	µg/L	319		1030		214		204		223		236		213		196		---
Nickel	µg/L	47.2		28.2		6		2.4		2.4		5.9		6		2.1		*
Potassium	µg/L	3230		3510		3980		3210		3110		3930		3980		3110		---
Sodium	µg/L	331000		228000		401000		172000		166000		348000		355000		162000		---
Vanadium	µg/L		U		U		U		U		U		U	1.4	U		U	14
Zinc	µg/L	133		54.5			U		U		U	60.8		53.5			U	*

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998

NOTE: USEPA = United States Environmental Protection Agency.

AWQS = Ambient Water Quality Standards

A (C) = Aquatic (Chronic)

µg/L = Micrograms per Liter.

U = Reading was less than Method Detection Limit.

--- =

B =

J = Reported value was obtained from a reading that was less than the Contract Required Quantitation Limit, but greater than or equivalent to the Method Detection Limit.

Bold values indicate exceedance of standard.

* = Class A drinking water standards; see below for hardness-based standards

Hardness-based standards																		
Chromium	µg/L	232		244		300		151		146		303		304		146		
Copper	µg/L	29		31		39		19		18		39		39		18		
Lead	µg/L	17		18		23		10		9		23		23		9		
Nickel	µg/L	169		178		221		108		105		222		223		105		
Zinc	µg/L	270		285		353		173		167		356		358		167		

TABLE 3-28 METAL DETECTIONS IN SURFACE WATER MAY 2010

Parameter List (Detections Only) USEPA Method 6010 & 7470	Sample Location	SW-08		SW-09		SW-10		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		
Aluminum	µg/L	39.8		**21200**		**5790**		100
Arsenic	µg/L		U	107		14.8		150
Barium	µg/L	339		1990		345		---
Beryllium	µg/L		U	1.8		0.31		1100
Cadmium	µg/L		U	6.6		7.7		*
Calcium	µg/L	285000		363000		305000		---
Chromium	µg/L	0.56		**2330**		**538**		*
Cobalt	µg/L	0.95		**11.7**		**11.1**		5
Copper	µg/L		U	**1320**		**461**		*
Iron	µg/L	**12000**		**191000**		**39600**		300
Lead	µg/L		U	**758**		**154**		*
Magnesium	µg/L	39900		52200		42200		---
Manganese	µg/L	2310		4160		2630		---
Mercury	µg/L		U	**1.6**			U	0.77
Nickel	µg/L	1.4		**622**		268		*
Potassium	µg/L	4830		7130		7310		---
Silver	µg/L		U	**2.6**		**14.4**		0.1
Sodium	µg/L	879000		161000		286000		---
Vanadium	µg/L		U	**87.8**		**23.2**		14
Zinc	µg/L	25		**1840**		**747**		*

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998

NOTE: USEPA = United States Environmental Protection Agency.

AWQS = Ambient Water Quality Standards

A (C) = Aquatic (Chronic)

µg/L = Micrograms per Liter.

U = Reading was less than Method Detection Limit.

--- =

B =

J = Reported value was obtained from a reading that was less than the Contract Required Quantitation Limit, but greater than or equivalent to the Method Detection Limit.

Bold values indicate exceedance of standard.

* = Class A drinking water standards; see below for hardness-based standards

Hardness-based standards							
Cadmium	µg/L	21		25		22	
Chromium	µg/L	438		537		463	
Copper	µg/L	57		71		61	
Lead	µg/L	36		46		38	
Nickel	µg/L	326		402		345	
Zinc	µg/L	523		645		553	

TABLE 3-29 POLYCHLORINATED BIPHENYL DETECTIONS IN SURFACE WATER (HIGH-FLOW)

Parameter List (Detections Only) USEPA Method 8082	Sample Location	SW-01	SW-02	SW-03	SW-04	SW-05	SW-06	SW-07	SW-DUP-01	AWQS and Guidance Values[a] Class B Stream H (FC)
	Sample Date	1/26/2010	1/26/2010	1/26/2010	1/26/2010	1/26/2010	1/26/2010	1/26/2010	1/26/2010	
	Sample Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
Aroclor-1248	µg/L	**3.1**	**3.1**	U	U	**1.1**	U	**1.8**	U	1.00E-06

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency
AWQS = Ambient Water Quality Standard.
H (FC) = Human (Fish Consumption)
µg/L = Micrograms per Liter.
U = Compound was analyzed for, but not detected.
Bold values indicate excceedence of standard.

TABLE 3-30 POLYCHLORINATED BIPHENYL DETECTIONS IN SURFACE WATER MAY 2010

Parameter List (Detections Only) USEPA Method 8082	Sample Location	SW-08		SW-09		SW-10		AWQS and Guidance Values[a] Class B Stream A (C)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		
Aroclor-1248	µg/L		U	110		6.1		---
Aroclor-1254	µg/L		U	36		2.5		---
Total				**146**		**8.6**		1.00E-06

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency
AWQS = Ambient Water Quality Standard.
A (C) = Aquatic (Chronic)
µg/L = Micrograms per Liter.
U = Compound was analyzed for, but not detected.
--- =
Bold values indicate excceedence of standard.

TABLE 3-31 PESTICIDE DETECTIONS IN SURFACE WATER MAY 2010

Parameter List (Detections Only) USEPA Method 8081	Sample Location	SW-08		SW-09		SW-10		AWQS and Guidance Values[a] Class B Stream H (FC)
	Sample Date	5/24/2010		5/24/2010		5/24/2010		
	Sample Type	Surface Water		Surface Water		Surface Water		
4,4'-DDD	µg/L		UJ	**0.1**	J		UJ	0.00008
4,4'-DDE	µg/L		UJ	**0.16**	J		UJ	0.000007
4,4'-DDT	µg/L		UJ	**0.15**			UJ	0.00001
Aldrin	µg/L		UJ		U	**0.23**	J	0.001
delta-BHC	µg/L		UJ	0.66		0.5		---
Endosulfan sulfate	µg/L		UJ		U	0.14	J	---
gamma-BHC (Lindane)	µg/L		UJ		U	0.055	J	---
gamma-Chlordane	µg/L		UJ		U	0.43	J	---
Heptachlor	µg/L		UJ	**0.075**	J	**0.075**		0.0002
Heptachlor epoxide	µg/L		UJ	**0.52**			UJ	0.0003

(a) Division of Water Technical and Operational Guidance Series (1.1.1), June 1998
NOTE: USEPA = United States Environmental Protection Agency
AWQS = Ambient Water Quality Standard.
H (FC) = Human (Fish Consumption)
µg/L = Micrograms per Liter.
4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
U = Compound was analyzed for, but not detected.
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane
Bold values indicate excceedence of standard.

TABLE 4-1 ENVIRONMENTAL FATE AND TRANSPORT PARAMETERS FOR CHEMICALS OF CONCERN[a]

Analyte	Water Solubility (mg/L)	Vapor Pressure (mm Hg)	Henry's Law Constant (atm-m^3/mol)	Kow (L/kg)	Koc (L/kg)
POLYCHLORINATED BIPHENYLS					
Polychlorinated Biphenyls	5.55E-02	7.60E-05	1.75E-02	2.00E+06	5.30E+05
PESTICIDES					
gamma-Chlordane[b]	2.28E-01	4.17E-06	4.11E-03	9.25E+06	3.93E+05
4,4-DDD[b]	9.00E-02	8.66E-07	1.70E-04	7.47E+05	8.51E+04
4,4-DDE[b]	6.50E-02	5.66E-06	8.73E-04	9.90E+05	1.10E+04
4,4-DDT[b]	3.10E-03	3.93E-07	2.20E-03	6.23E+06	1.37E+05
Delta BHC[b]	2.59E+00	2.87E-05	1.80E-04	1.00E+04	8.51E+03
Dieldrin[b]	1.95E-01	9.96E-07	1.10E-04	2.80E+05	2.14E+04
Endosulfan Sulfate[b]	1.00E-01	1.62E-07	3.65E-05	1.02E+06	7.94E+05
Endosulfan I[b]	1.73E+00	2.75E-06	3.55E-05	1.58E+05	1.57E+04
Gamma BHC[b]	5.75E+00	3.72E-05	1.40E-04	1.81E+04	1.10E+03
Heptachlor[b]	1.80E-01	3.26E-04	2.44E-02	1.61E+06	1.17E+04
Heptachlor Epoxide[b]	2.75E-01	4.34E-06	3.40E-04	8.04E+04	7.25E+03
SEMIVOLATILE ORGANIC CHEMICALS					
Benzo(a)anthracene[b]	1.00E-02	1.54E-07	1.40E-04	3.32E+05	3.55E+05
Benzo(a)pyrene[b]	1.62E-03	4.89E-09	4.70E-05	1.29E+06	9.55E+05
Benzo(b)fluoranthene[b]	1.50E-03	8.06E-08	5.00E-04	1.26E+06	1.20E+06
Benzo(k)fluoranthene[b]	5.50E-04	9.59E-11	4.45E-07	1.29E+06	1.23E+06
Chrysene[b]	2.00E-03	7.80E-09	5.03E-05	3.32E+05	3.09E+05
Dibenz(a,h)anthracene[b]	5.00E-04	2.11E-11	4.66E-07	4.98E+06	1.91E+06
Fluorene[b]	1.98E+00	3.20E-03	2.60E-03	1.04E+04	7.59E+03
Phenanthrene[b]	9.94E-01	6.80E-04	5.40E-03	2.21E+04	1.41E+04
Indeno(1,2,3-cd)pyrene[b]	3.80E-03	1.40E-10	2.85E-06	4.98E+06	3.47E+06
NON-CHLORINATED ALKENE					
Acetone[b]	6.00E+05	2.27E+02	1.60E-03	5.82E-01	5.70E-01
METALS					
Antimony[b]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E+01
Arsenic[b]	0.00E+00	0.00E+00	0.00E+00	4.78E+00	2.51E+01
Cadmium[b]	0.00E+00	0.00E+00	0.00E+00	8.49E-01	1.51E+01
Copper[b]	0.00E+00	0.00E+00	0.00E+00	2.69E-01	3.98E+01
Iron[b]	0.00E+00	0.00E+00	0.00E+00	NA	NA
Lead[b]	0.00E+00	0.00E+00	0.00E+00	5.36E+00	1.00E+01
Magnesium[b]	0.00E+00	0.00E+00	0.00E+00	NA	NA
Manganese[b]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E+01
Mercury[b]	3.00E-02	1.30E-03	4.74E-01	3.38E-01	4.00E-02
Nickel[b]	0.00E+00	0.00E+00	0.00E+00	2.69E-01	1.58E+01
Silver[b]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01
Sodium[b]	NA	0.00E+00	0.00E+00	NA`	NA
Zinc[b]	0.00E+00	0.00E+00	0.00E+00	3.38E-01	1.58E+01

(a) Adapted from: USEPA. 1996. *Soil Screening Guidance: Technical Background Document*, Office of Emergency and Remedial Response, Washington, D.C., EPA/540/R95/128

(b) GSI Environmental, 2009. GSI Chemical Properties Database.

NOTE: 4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane

TABLE 5-1 HUMAN HEALTH CONTAMINANTS OF CONCERN

Contaminants of Concern			
Medium	Pesticides/Polychlorinated Biphenyls	Semivolatile Organic Chemicals	Metals
Surface Soil, Subsurface Soil, and Sediment (Onsite)	gamma-Chlordane, 4,4-Dichlorodiphenyldichloroethane, 4,4-Dichlorodiphenyldichloroethylene, 4,4-Dichlorodiphenyltrichloroethane, Delta BHC, Dieldrin, Endosulfan Sulfate, Endosulfan I, Gamma BHC, Heptachlor, Heptachlor Epoxide, Polychlorinated Biphenyls	Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluorene, Phenanthrene, Indeno(1,2,3-cd)pyrene	Antimony, Arsenic, Cadmium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Silver, Sodium, Zinc
Surface Water	Aldrin, Delta-bhc, Endosulfan Sulfate, gamma-Chlordane, Heptachlor, Heptachlor Epoxide, 4,4-Dichlorodiphenyldichloroethane, 4,4-Dichlorodiphenyldichloroethylene, 4,4-Dichlorodiphenyltrichloroethane	Phenol, 4-methylphenol, Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene	Aluminum, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Nickel, Vanadium
Groundwater			Antimony, Iron, Magnesium, Manganese, Selenium, and Sodium

TABLE 5-2 EXPOSURE MATRIX

Media		Surface and Subsurface Soil/Sediment/Surface Water/Groundwater		Soil Particulate	Ambient Air
Potential Exposure		Ingestion	Dermal Contact	Inhalation	Inhalation
Scenario	Receptor				
Onsite	Trespassers - C	Complete	Complete	None	None
	Adult Commercial Workers - F	Complete	Complete	None	None
	Adult and Child Visitors - F	Complete	Complete	None	None
	Adult and Child Residents F	Complete	Complete	Complete	None
	Adult Construction Workers - F	Complete	Complete	Complete	None
Offsite	Adult Commercial and Industrial Workers - C, F	Complete	Complete	Complete	None
	Adult and Child Visitors - C, F	Complete	Complete	Complete	None
	Adult Construction Workers - C, F	Complete	Complete	Complete	None
	Adult Nearby Utility Workers - C, F	Complete	Complete	Complete	None

NOTE: C = Potential Current Exposure
F = Potential Future Exposure, no Remedial Action

TABLE 6-1 FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS DECISION KEY

	Yes	No
1) Is the site or area of concern a discharge or spill event?		x
2) Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas?		x
3) Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation?		x
4) Does the site contain habitat of an endangered, threatened, or special concern species?		x
5) Has the contamination gone off-site?	x	
6) Is there any discharge or erosion of contamination or the potential for discharge or erosion of contamination?	x	
7) Are the site contaminants PCBs, pesticides, or other persistent, bioaccumulable substances?	x	
8) Does contamination exist at concentrations that could exceed SCGs or be toxic to aquatic life if discharged to surface water?	x	
9) Does the site or any adjacent or downgradient property contain any of the following resources?		
a. Any endangered, threatenend, or special concern species or rare plants or their habitats		x
b. Any NYSDEC designated significant habitats or rare NYS ecological communities		x
c. Tidal or freshwater wetlands	x	
d. Streams, creeks, or river	x	
e. Pond, lake, or lagoon		x
f. Drainage ditch or channel	x	
g. Other surface water features		x
h. Other marine or freshwater habitats	x	
i. Forest		x
j. Grassland or grassy field		x
k. Parkland or woodland	x	
l. Shrubby area	x	
m. Urban wildlife habitat	x	
n. Other terrestrial habitat	x	
10) Is the lack of resources due to contamination?		x
11) Is the contamination a localized source which has not migrated from the source to impact any on-site or off-site resources?		x
12) Does the site have widespread soil contamination that is not confined under and around buildings or paved areas?	x	
13) Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened, or special concern species or other fish and wildlife resources?	x	
14) Fish and wildlife resources impact analysis needed?	x	

TABLE 7-1 SUMMARY OF DEGREE OF IMPACT FROM CONTAMINANTS OF CONCERN AT OLD LEY CREEK CHANNEL

Sediment	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
VOCs	Vinyl Chloride	3.8-4.7	0.06	3/14
SVOCs	Benzo(a)anthracene	0.16-15	2.5	9/14
	Benzo(a)pyrene	0.18-12	0.27	13/14
	Fluorene	0.049-3.5	1.7	2/14
	Phenanthrene	0.17-26	25	1/14
	Phenol	0-0.12	0.1	1/14
Pesticides	4,4'-DDD	0.0055-0.16	0.002	6/14
	4,4'-DDE	0.0045-0.28	0.002	7/14
	4,4'-DDT	0.069-0.41	0.002	13/14
	delta-BHC	0.01-0.031	0.013	1/14
	Endosulfan I	0.0-0.013	0.007	1/14
	gamma-BHC (Lindane)	0.0031-0.33	0.013	6/14
	gamma-Chlordane	0.013-0.44	0.005	12/14
	Heptachlor	0.028-0.66	0.02	10/14
PCBs	Total Aroclor	1.97-64.3	4	10/14
Metals	Arsenic	2.6-12.7	6.0-33.0	7/14
	Cadmium	0.31-7.7	0.6-9.0	9/14
	Chromium	21.7-912	26-110	13/14
	Copper	49.6-850	16-110	14/14
	Iron	7740-39200	2%-4%	6/14
	Lead	13.7-489	31-110	11/14
	Manganese	147-552	460-1100	2/14
	Mercury	0.01-0.56	0.15-1.3	5/14
	Nickel	9.7-312	16-50	11/14
	Silver	0.24-10.3	1-2.2	4/14
	Zinc	34.8-2690	120-270	9/14

(a) ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil
(b) Technical Guidance for Screening Contaminated Sediments
NOTE: ppm = Parts per million
SCG = Standards, Criteria, and Guidance.
VOC = Volatile Organic Compound
SVOC = Semivolatile Organic Compound
4,4'-DDD = 4,4'-Dichlorodiphenyldichloroethane
4,4'-DDE = 4,4'-Dichlorodiphenyldichloroethylene
4,4'-DDT = 4,4'-Dichlorodiphenyltrichloroethane

Appendix A

Well Installation and Sampling Report, CHA 2009

November 17, 2009

John Grathwol, P.E.
New York State Department of Environmental Conservation
Bureau of Central Remedial Action
625 Broadway - 12th Floor
Albany, NY 12233-7016

RE: Well Installation and Sampling Report
Town of Salina Landfill, Salina, New York
CHA Project No. 6967.3018.1106

Dear John:

On behalf of the Town of Salina (Town), CHA has prepared this Well Installation and Sampling Report to present the scope of the activities performed at the Town of Salina Landfill (Figure 1) to document the flow direction and water quality of groundwater in the unconfined aquifer within the southeast corner of the landfill. The specific area of interest is located between Ley Creek and Old Ley Creek on property owned by Plaza East.

The specific objectives of this supplemental investigation were to:

1. Determine whether or not a groundwater collection trench on the southern side of the Plaza East parcel (northern bank of Old Ley Creek) is necessary.
2. Determine whether or not a groundwater collection trench on the northern side of the Plaza East parcel (southern bank of Ley Creek) is necessary.

This Well Installation and Sampling Report provides site background information, the scope of the recently completed site investigation activities, a summary of the groundwater sampling activities, a discussion of the laboratory analytical results, and a description of the hydrogeology of the area located between Ley Creek and Old Ley Creek on property owned by Plaza East. CHA's conclusions and recommendations regarding the installation of a groundwater collection trench on the northern and southern sides of the Plaza East Parcel are also provided herein based on the data generated through this investigation and others.

Background

The former Town of Salina Landfill is a 55-acre former municipal solid waste landfill located off of Route 11 in the Town of Salina (Figure 1). The landfill site is bounded to the east by Route 11 and to the north by the New York State Thruway. The Onondaga County Transfer Station is located

immediately to the west of the landfill. Ley Creek forms the southern boundary of the landfill except in the southeastern portion where Old Ley Creek is the southern boundary. Figure 2 illustrates the configuration of the landfill site

In 2007, the NYSDEC published the Record of Decision for the site. The remedial action for the site included construction of a 6 NYCRR Part 360 cap over the landfill areas north and south of Ley Creek with engineered drainage controls and fencing; construction of groundwater/leachate collection trenches on the north and south sides of Ley Creek with consolidation of the excavated sediments and the soils and wastes (from the excavation of the collection trenches) on the landfill areas; and construction of an on-site treatment plant to treat the contaminated groundwater/leachate collected in the trenches. In April 2009, CHA submitted the Basis of Design Report for the project and in August 2009 CHA submitted the 50% design plans for the site

The NYSDEC, as part of their comments on the Basis of Design Report, requested an evaluation of whether a groundwater collection trench on the north side of Old Ley Creek was necessary to complete the remediation of the Salina Landfill. In response to NYSDEC's request, on May 21, 2009 CHA collected a round of groundwater levels in all accessible monitoring wells screened in the upper, unconfined aquifer at the site. This consisted of measurements from 10 wells on the north side of Ley Creek and 2 wells on the south side of Ley Creek. It is important to note that Well MW-8 located on the peninsula on the south side of Ley Creek is damaged and is not accessible for monitoring purposes (Figure 2). CHA calculated the groundwater elevation at each well based on previous survey information for the elevation at the top of the well casing. A piezometric map was prepared to indicate the direction(s) of groundwater flow from the collected data.

Based on the groundwater elevations measured on May 21, 2009, the groundwater south of Ley Creek was interpreted to flow north/northwest towards Ley Creek. Based on this data, CHA concluded in the July 2, 2009 memo that there is no reason to install a groundwater collection trench on the north side of Old Ley Creek. However, since the elevation in MW-8 could not be measured, groundwater flow across the Plaza East parcel was subject to interpretation. In addition, the groundwater elevations measured in MW-6 and MW-7 are slightly higher than the surface water elevations in Old Ley Creek and, therefore, may indicate a slight gradient to the south toward Old Ley Creek. As a result, during recent discussions with the CHA, the NYSDEC requested additional information related to the direction of groundwater flow in the area between Ley Creek and Old Ley Creek.

Based on the NYSDEC's request, a *Monitoring Well and Sampling Work Plan* (Work Plan) was submitted to NYSDEC and approved in October 2009. The Work Plan identified the scope of work associated with the installation of additional monitoring wells that would serve as water level and water quality monitoring points in the area between Ley Creek and Old Ley Creek.

Following approval of the Work Plan, CHA performed the associated field activities between October 6 and October 22, 2009. The following sections discuss the field activities conducted to date, the results of those activities, and our recommendations for proceeding with the design of the groundwater collection system.

CHA

Field Activities

Soil Borings

On October 6th through October 12th, 2009, CHA installed a total of seven (7) additional borings/monitoring wells on the Plaza East parcel between Ley Creek and Old Ley Creek. The borings/monitoring wells were installed at representative locations identified on Figure 2. Borings were installed as close as possible to proposed locations depending upon access. In the case of MW-18, additional site clearing was performed to be able to get closer to the planned location for the boring. At each boring location, a borehole was advanced using hollow stem auger methods (HSA) to facilitate penetration through the waste mass.

Each boring was advanced through the waste mass, if present, and below the observed groundwater table to depths ranging from 12 to 30 feet below ground surface (ft bgs). The depths of the borings varied as a result of varying geologic conditions between locations. At each boring location, soil samples were collected continuously throughout the first 20 feet of each boring and at a rate of one (1) per five-foot interval beyond 20 feet. Soil samples were screened in the field by a qualified CHA scientist for the presence of visual, olfactory, or photoionic evidence of contamination. A Rae Systems, Model MiniRae 2000 photoionization detector (PID) was used to screen each sample for the presence of organic vapors. The unit was calibrated with 100 parts per million (PPM) isobutylene gas on-site prior to use.

Copies of the boring logs summarizing the subsurface conditions and field screening results at each location are included as Attachment 1.

Groundwater Monitoring Well Installation

Each of the seven (7) soil borings were completed as 2-inch diameter monitoring wells to facilitate the collection of representative groundwater samples. The locations of the newly installed monitoring wells are illustrated on Figure 2.

All monitoring wells were constructed using a 10-foot section of 2-inch diameter, 10-slot PVC screen and finished with the requisite length of solid PVC riser pipe. The well screen was set to straddle the water table as observed during drilling. A sand pack consisting of #0 Morie sand was installed within the annular space between the well screen and the borehole. The sand pack was installed to a depth of one foot above the top of the well screen. For all wells except MW-13 and MW-19, a 2-foot bentonite seal was then placed above the sand pack. Due to the presence of a shallow groundwater table, monitoring wells MW-13 and MW-19 were installed with a 1-foot bentonite seal to allow for an adequate surface seal.

For all wells, the remaining borehole was backfilled with bentonite-cement grout and extended to the ground surface. The PVC riser on each monitoring well was set to extend between 24 and 40 inches above the ground surface. An air vent was drilled into the top of riser pipe, just below the gripping J-Plug cap. A protective PVC pipe (4-inch minimum diameter) set in a concrete surface seal was placed over the PVC monitoring well riser to protect the monitoring well. The concrete surface seal was graded so that it slopes away from the protective casing to help reduce the likelihood of

freeze/thaw damage. The monitoring well identification number was painted on exterior of the protective casing using a permanent paint pen. Well construction details are included as Table 1. Well construction logs are included as Attachment 2.

Monitoring well installation equipment was decontaminated between sample locations to prevent cross-contamination. Additionally, all equipment was properly decontaminated prior to leaving the Site in accordance with procedures outlined the Field Sampling Plan (FSP) (CHA, 1998). Drill cuttings generated during drilling were discharged directly to the ground away from the well head.

Once the wells were installed, they were developed for a maximum of 2 hours, or until the evacuated well water had turbidity of less than 50 NTUs. Well development was performed using a surge block and alternating surging the well and evacuating the well water.

Stream Gauge Installation

CHA identified three locations along Ley Creek and Old Ley Creek to install stream gauges to determine surface water elevations. Staff Gauge-1 and Staff Gauge-2 were installed by inserting a wooden stake firmly into the creek channel. A culvert outlet pipe, located in the vicinity of MW-9, was used as Staff Guage-3. This culvert is partially submerged in Ley Creek. The three locations are presented on Figure 2.

Surveying

Using NAD 83 (NYSP central zone) for the horizontal control and NAVD 88 for the vertical control, both expressed in US Survey feet, CHA located the newly installed monitoring wells on the Town of Salina Landfill site south of Ley Creek, west of US Route 11. Coordinates, ground elevation at each monitoring well/stream gauge, and the elevation of the top of each monitoring well and stream gauge were generated using electronic total stations coupled with data collectors and used to update existing mapping using AUTODESK software. For Staff Gauge-3, the top center point of the culvert was surveyed to be used as a reference point. Elevations of each monitoring well and stream gauging station are included in Table 1.

Water Level Monitoring

On October 20, 2009, water level measurements were collected in each of the newly installed monitoring wells and in existing wells MW-6 and MW-7. All water levels were referenced to the surveyed mark at the top of the protective casing.

Additionally, CHA collected stream level measurements from the three stream gauging locations concurrently with the collection of monitoring well water levels. Measurements were collected at Staff Gauge-1 and Staff Gauge-2 by measuring from the top of the surveyed stake to the surface water table. Measurement at Staff Gauge-3 was collected by measuring the distance between the top of the culvert to the surface water table at the bottom of the pipe. All water level data, including stream elevations, are presented in Table 2.

Water Quality Sampling

Following the measurement of water levels, a groundwater sample was collected from each of the seven (7) newly installed monitoring wells and the two (2) existing wells (MW-6 and MW-7) in the area between Ley Creek and Old Ley Creek. Prior to collecting a groundwater sample, each well was purged using low-flow sampling techniques and dedicated tubing to minimize disturbance. During the purging activities, field indicator parameters including pH, temperature, conductivity, and turbidity were measured to evaluate well stabilization in accordance with the approved Field Sampling Plan (CHA, 1998). The purging activities continued until two consecutive field parameter readings were within ten percent and until a minimum of five well volumes had been removed. Following purging, a groundwater sample was collected for analyses using the low-flow pump through dedicated tubing. Well sampling logs are included as Attachment 3.

One set of quality control samples were collected in accordance with the site-specific QAPP (CHA, 1998) and included a trip blank, equipment rinsate blank, field duplicate and matrix spike/matrix spike duplicate (MS/MSD). Analytical results were provided by the laboratory in NYSDEC Analytical Services Protocol Category B deliverable format and are available upon request. The analytical results-only package is included as Attachment 4.

All groundwater samples submitted for analyses were delivered to CHEMTECH of Mountainside, New Jersey to conduct the necessary analyses. Groundwater samples were analyzed for the full list of Target Compound List (TCL) and Target Analyte List (TAL) for volatile organic compounds, semi-volatile organic compounds, pesticides, PCBs, and metals. In addition, samples were analyzed for leachate parameters as listed in the Routine Parameters Table of the Water Quality Analysis Tables in paragraph 360-2.11(d)(6) of Part 360 of the New York Codes, Rules and Regulations (excluding metals, which were analyzed as noted above). A groundwater sampling summary is provided in Table 3.

Purge water was discharged directly to the ground away from the well head. Sampling equipment was decontaminated between sampling locations in accordance with procedures outlined the FSP (CHA, 1998).

Results & Discussion

Field Observations

Waste was encountered in most of the borings drilled including MW-14, MW-15, MW-16, MW-17 and MW-18. No waste was encountered in monitoring wells MW-13 and MW-19. It is also noted that waste was encountered in monitoring wells MW-6 and MW-7, which were previously installed in 1998. With the exception of the limited paper debris observed in the boring for MW-6, it appears that waste does not extend south all the way to Old Ley Creek. However, the results indicate that waste is present across much of the remaining portions of the "peninsula" between Ley Creek and Old Ley Creek.

Site Stratigraphy

Four cross-sections across the study area were prepared to document the lithology and to aid in the interpretation of groundwater flow direction. The locations of the cross-sections are presented on Figure 2. The four cross-sections are presented as Figures 3a through 3d.

The cross-sections are somewhat generalized, but show that much of the study area is immediately underlain by waste. Soils consisting of a mixture of sand, silt and clay underlie the waste. A till layer is present beneath the sand, silt and clay at depths ranging from 15 feet to more than 30 feet below grade. The water table is located within the waste mass virtually everywhere.

Groundwater Flow Direction

As noted above, depth to groundwater measurements were collected from the newly installed monitoring wells prior to sampling. Using the surveyed riser elevations for each well and the measured depths to groundwater, CHA computed the groundwater elevation in each monitoring well gauged. Using the surveyed elevations for each staff gauge and the measured depths to surface water, stream level elevations were calculated for each stream gauging location. Groundwater and surface water elevations are summarized in Table 2. Groundwater elevation surface contours are presented on Figure 4.

Based on the groundwater contours presented in Figure 4, groundwater in the study area between Ley Creek and Old Ley Creek generally appears to be flowing in a somewhat radial pattern with a primary component of flow northwest towards Ley Creek but also with a component of flow to the north toward Ley Creek and another component of flow to the west towards the convergence of Ley Creek and Old Ley Creek.

Groundwater along the northern portion of the study area in the vicinity of monitoring wells MW-15, MW-16, MW-17 and MW-18, appears to flow northwest towards Ley Creek. Groundwater in the southern-most portion of the study area, in the vicinity of monitoring wells MW-19, MW-13, MW-7, and MW-6 flows nearly directly west towards Ley Creek.

There appears to be little, if any, component of flow towards the Old Ley Creek channel. In the vicinity of monitoring wells MW-18 and MW-19, the groundwater flow direction is actually inward to the island, flowing away from the Old Ley Creek channel. Surface water elevations in staff gauges SG-1 and SG-2 are on the order of one (1) foot higher than groundwater elevations in nearby monitoring wells MW-13 and MW-6, respectively. Although not strictly shown on the contours, these data suggest that there is a clear inward gradient from Old Ley Creek to the "peninsula" in this area.

Groundwater Analytical Results

The groundwater analytical results from the monitoring wells installed at the Salina Landfill are summarized in Tables 4, 5, and 6. A results-only laboratory analytical report is provided in Attachment 4; a copy of the complete ASP Category B data package is available upon request. To evaluate the data, the groundwater analytical results were compared to the ambient water quality

standards and guidance values as listed in the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) (TOGS 1.1.1) for class GA groundwater. Those values that are bold in Tables 4 through 6 indicate that the associated parameter was detected at a concentration above TOGS 1.1.1 groundwater standards. A discussion of the results is provided in the following sections.

VOCs **-** As indicated in Table 4, one or more VOCs were detected in all nine monitoring wells that were sampled. Due to high concentrations of VOCs in select wells, a number of samples were re-run up to two times at dilution factors of 10 and 100. For these dilution runs, only compounds detected above the reporting limit are presented. Dilution factors are provided at the head of each column in Table 4.

There were no VOCs detected above an associated TOGS 1.1.1 standard in monitoring well MW-6. Only one parameter (cis, 1-2-dichloroethane) was detected above the associated standard in monitoring wells MW-13 and MW-18, and only two parameters (cis, 1-2-dichloroethane and benzene) were detected above the associated standard in monitoring well MW-7. Monitoring wells MW-16 and MW-17 both contained several parameters that were detected at concentrations in exceedance of standards, but were generally less impacted than monitoring wells MW-14, MW-15 and MW-19, as discussed below.

Monitoring wells MW-14, MW-15, and MW-19 all contained a number of parameters at concentrations which exceed the TOGS 1.1.1 standard. The parameters detected at concentrations in exceedance of standards are summarized in the table below:

	Sample ID	**MW-14**	**MW-15**	**MW-19**
Parameter	***TOGS 1.1.1 Guidance Value[1]***			
1,1,1-Trichloroethane	5	1 U	**190 D**	1 U
1,1-Dichloroethane	5	**1,300 D**	**72 D**	**510 D**
1,1-Dichloroethene	5	**310 D**	**42 D**	1 U
1,2-Dichlorobenzene	3	1 U	**80**	1 U
2-Butanone	50	**2,500 D**	5 U	5 U
Acetone	50	**10,000 D**	5 U	5 U
Benzene	1	**100 D**	**40**	1 U
Chloroethane	5	1 U	1 U	**260 D**
cis-1,2-Dichloroethene	5	**44,000 D**	**6,200 ED**	**36 D**
o-Xylene	5	1 U	**22**	1 U
Toluene	5	**220 E**	**19**	1 U
trans-1,2-Dichloroethene	5	**200 E**	1 U	1 U
Trichloroethene	5	**11**	**27 D**	1 U
Vinyl Chloride	2	**2,200 D**	**210 E**	**280 D**

Note: The highest concentration from all dilution runs is shown in the table above. Qualifiers are identified on Table 4.

As shown in the table above, the groundwater sample from monitoring well MW-19 contains only four parameters which exceeded groundwater standards. Monitoring well MW-15 contains cis-1,2-dichloroethene at a concentration significantly above the standard, but all other parameters were relatively low in comparison. Monitoring well MW-14 clearly is the most impacted, with several

parameters well in exceedance of groundwater standards. In general, the VOCs present are breakdown products of chlorinated solvents.

SVOCs – Analytical results for SVOCs are presented on Table 5. As indicated, phenol, 3+4-methylphenols, and bis(2-ethylhexyl)phthalate were the only three SVOCs detected in any of the monitoring wells. Phenol was detected in monitoring well MW-14 at an estimated concentration of 7.4 J μg/L, which is slightly above the groundwater standard of 2 μg/L. The parameter 3+4-methylphenols was also detected in monitoring well MW-14, at a concentration of 3.7 J μg/L. There is no groundwater standard for 3+4-methylphenols.

Bis(2-ethylhexyl)phthalate was detected at estimated concentrations below the reporting limit in monitoring well MW-17 as well as the Equipment Rinsate sample. Bis(2-ethylhexyl)phthalate is used as a plasticizer and is often a contaminant from tubing and/or supplies used in sampling and analyses of the samples. Based on this information and the fact that the parameter was detected in the equipment rinsate sample, the detections of bis(2-ethylhexyl)phthalate are determined to be an artifact of laboratory contamination. No other SVOCs were detected.

PCBs/Pesticides – PCB and pesticide analytical results are presented on Table 5. There were no PCBs or pesticides detected in any of the monitoring wells. It is noted that the reporting limits for these compounds are above the associated groundwater standard, but are well within the specified limits of the analytical method.

Metals – Metal analytical results are presented on Table 5. A number of metals were detected at concentrations which exceed TOGS 1.1.1 groundwater standards.

Iron was detected well above the groundwater standard in each monitoring well. Magnesium and sodium were detected above standards in each monitoring well with the exception of MW-17. Manganese was detected above the standard of 300 μg/L in all monitoring wells except MW-7, MW-13 and MW-14. In general, the highest concentrations of iron, magnesium, and manganese are present in the wells with the highest turbidity. Although the elevated iron, magnesium, and manganese levels are likely partially related to the high turbidity, they may also be indicative of leachate impacts.

Arsenic was detected slightly above the groundwater standard of 25 μg/L in monitoring well MW-13, while barium was detected above the groundwater standard in wells MW-14 and MW-17. There were no other metals detected at concentrations in exceedance of a TOGS 1.1.1 groundwater standard.

Leachate Indicators – The results from the leachate indicator analyses are provided in Table 6. It is noted that, due to high concentrations of total kjeldahl nitrogen (TKN), chloride, sulfate and/or ammonia, a number of samples were re-run at variable dilution factors. For these dilution runs, only compounds detected above the reporting limit are presented. Dilution factors are provided at the head of each column in Table 6. In addition to being compared to TOGS 1.1.1 groundwater standards, analytical results from monitoring well MW-0 are presented. Monitoring well MW-0, installed in 1998 as part of the Remedial Investigation, is upgradient from the landfill and the results

from this well are considered indicative of background levels. It is noted that not all parameters measured during this investigation were measured in MW-0.

A number of leachate parameters were detected at concentrations in exceedance of TOGS 1.1.1 standards. For all wells, turbidity and total recoverable phenolics were detected at concentrations above the associated groundwater standard. Ammonia was detected above groundwater standards in MW-7, MW-16, MW-17 and MW-18. One or more anions, including bromide, chloride and sulfate were detected at concentrations in exceedance of groundwater standards in all wells except MW-17. No other leachate parameters were detected at concentrations in exceedance of a TOGS 1.1.1 groundwater standard.

A comparison of results between MW-0 and wells sampled during this investigation indicate that many parameters, some which were detected above standards, are well within background levels. For example, although ammonia was detected in a number of monitoring wells at levels above groundwater standards, these values are considerably lower than background values. Alkalinity and hardness, which are both often indicators of leachate impacts, were detected at concentrations below background levels.

The anions which were detected at concentrations above groundwater standards (bromide, chloride and sulfate) were generally also above background values (where analyzed). Total dissolved solids (TDS) for all wells are in the range of 570 mg/L to 1,900 mg/L, concentrations which are typical of landfill leachate. The high TDS concentrations are likely caused by the elevated levels of sulfate, iron, magnesium, chloride and bromide.

A review of the wet chemistry data from the remaining monitoring wells indicates that groundwater in the vicinity of each well has been impacted to some degree by leachate. Elevated levels of one or more common leachate indicator parameters are present in each of the other wells, including ammonia, iron, magnesium, manganese, sodium, chloride, total dissolved solids, and sulfate. However, concentrations of leachate parameters are varied across the Plaza East parcel and there does not appear to be a significant relationship between parameter concentrations, presence of waste, and the location of the well on the Plaza East parcel.

The ratio of alkalinity to sulfate can be used to show leachate impacts more effectively than single parameters alone. Groundwater with high alkalinity to sulfate ratios are generally indicative of leachate impacts whereas groundwater with a low alkalinity/sulfate ratio indicate a lower relative impact by leachate. Monitoring wells MW-14, MW-15, MW-17, and MW-18 all show high alkalinity to sulfate ratios, whereas the remaining wells have relatively low ratios in comparison. Again, these data indicate that impacts from waste may be heterogeneous across the area, with the highest impacts in the central portion of the "peninsula" and lesser impacts along the southern boundary with Old Ley Creek.

Conclusions

Based on these most recent groundwater elevation data, the dominant groundwater flow direction in the area located between Ley Creek and Old Ley Creek is to the west/northwest towards Ley Creek.

It does not appear that groundwater is flowing toward Old Ley Creek. Rather, the gradient in this area is to the north, from Old Ley Creek inward to the study area.

Despite the presence of waste across much of the Plaza East parcel, analytical data suggests that the area between Ley Creek and Old Ley Creek is not impacted by SVOCs, PCBs, or pesticides. However, the data indicates that the central portion of the study area is impacted by VOCs that are present at concentrations well above groundwater standards. Significant impacts appear to be limited to monitoring wells MW-14, MW-15 and MW-19. The absence of significant impacts in the vicinity of monitoring well MW-7, which is centrally located among the three wells mentioned above, may suggest that contamination associated with the waste mass is relatively heterogeneous.

The data suggest the southwestern most part of the study area, in the vicinity of monitoring wells MW-6 and MW-13, is unimpacted by organic contaminants. However, leachate indicators in these two wells suggest there is some, although minimal, influence on groundwater from leachate. Analytical data from the remaining monitoring wells indicates that each well has been impacted to some degree by leachate as well. Elevated levels of one or more common leachate indicators are present in each of the other wells but are variable across the area between Ley Creek and Old Ley Creek, and may further support the idea that contamination is variable across the Plaza East parcel.

Recommendations

As discussed above, the specific objectives of this supplemental investigation were to determine whether or not a groundwater collection trench is necessary on the southern side of the Plaza East parcel (northern bank of Old Ley Creek) and/or on the northern side of the Plaza East parcel (southern bank of Ley Creek).

Based on the recently measured groundwater elevations, groundwater within the Plaza East parcel generally flows northwest towards Ley Creek. Based on this hydraulic data, along with the analytical results from the southern-most portion of the Plaza East parcel that indicate that groundwater is not impacted by VOCs, CHA concludes that there is no reason to install a groundwater collection trench on the north side of Old Ley Creek.

The analytical results indicate that groundwater in a limited area of the study area is significantly impacted by VOCs and, as such, the installation of a groundwater collection trench on the south side of Ley Creek may still be warranted to prevent discharge of contaminated groundwater to Ley Creek. However, CHA notes that due to the limited area of impact, other alternatives besides a collection trench, may equally or more effective at preventing contamination from migrating into Ley Creek. These alternatives could include source removal or in-situ treatment alternatives.

CHA

Please feel free to contact me at (804) 897-3564 if you have any additional questions or require further information. I look forward to your response.

Sincerely,

Christopher Burns, Ph.D., P.G.
Vice President

SDN/
Enclosures
cc: Supervisor Mark Nicotra, Town of Salina
Mark Granger, USEPA
Frank Pavia, Harris Beach
K:\6967\RD\Tech\Reports\2009 Well Installation\Report\Well Installation and Sampling Report.doc

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LIST OF ATTACHMENTS

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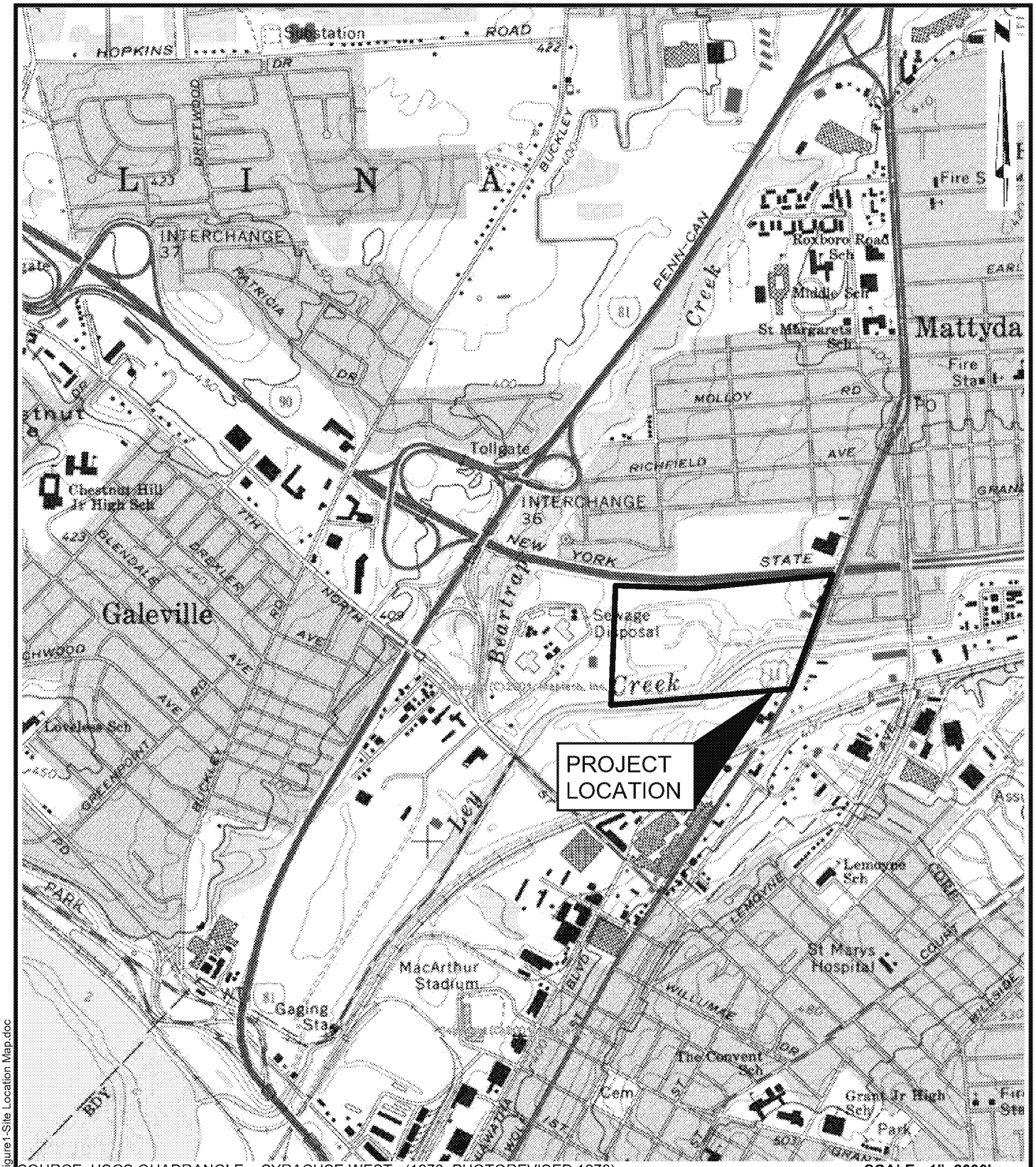
Attachment 2: Well Construction Logs
Attachment 3: Well Sampling Records
Attachment 4: Laboratory Analytical Report – Results Only

FIGURES



SOURCE: USGS QUADRANGLE – SYRACUSE WEST. (1973, PHOTOREVISED 1978).

SCALE: 1"=2000' ±

CHA

441 South Salina Street, Syracuse, NY 13202-4712
Main: (315) 471-3920 • www.chacompanies.com

SITE LOCATION MAP

TOWN OF SALINA LANDFILL

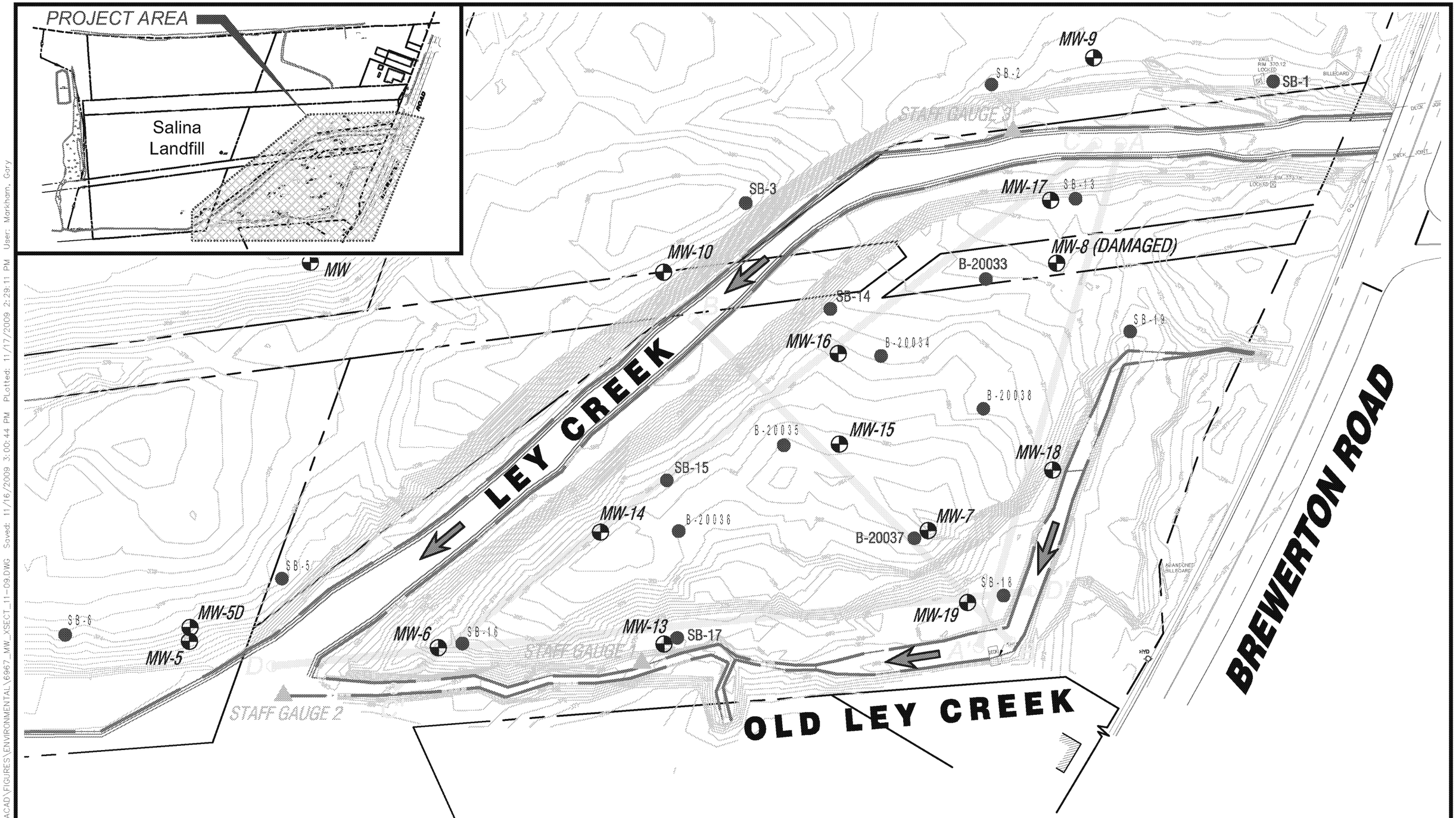
TOWN OF SALINA, NEW YORK
ONONDAGA, STATE OF NEW YORK

PROJECT NO. 6967

DATE: 07/02/09

FIGURE 1

K:\6967\RD\Tech\Reports\HASP\Figure1-Site Location Map.doc



KEY

- MONITORING WELL LOCATION
- STAFF GAUGE LOCATION
- SOIL BORING LOCATION
- CROSS SECTION LOCATION

N

0 100 200

SCALE IN FEET

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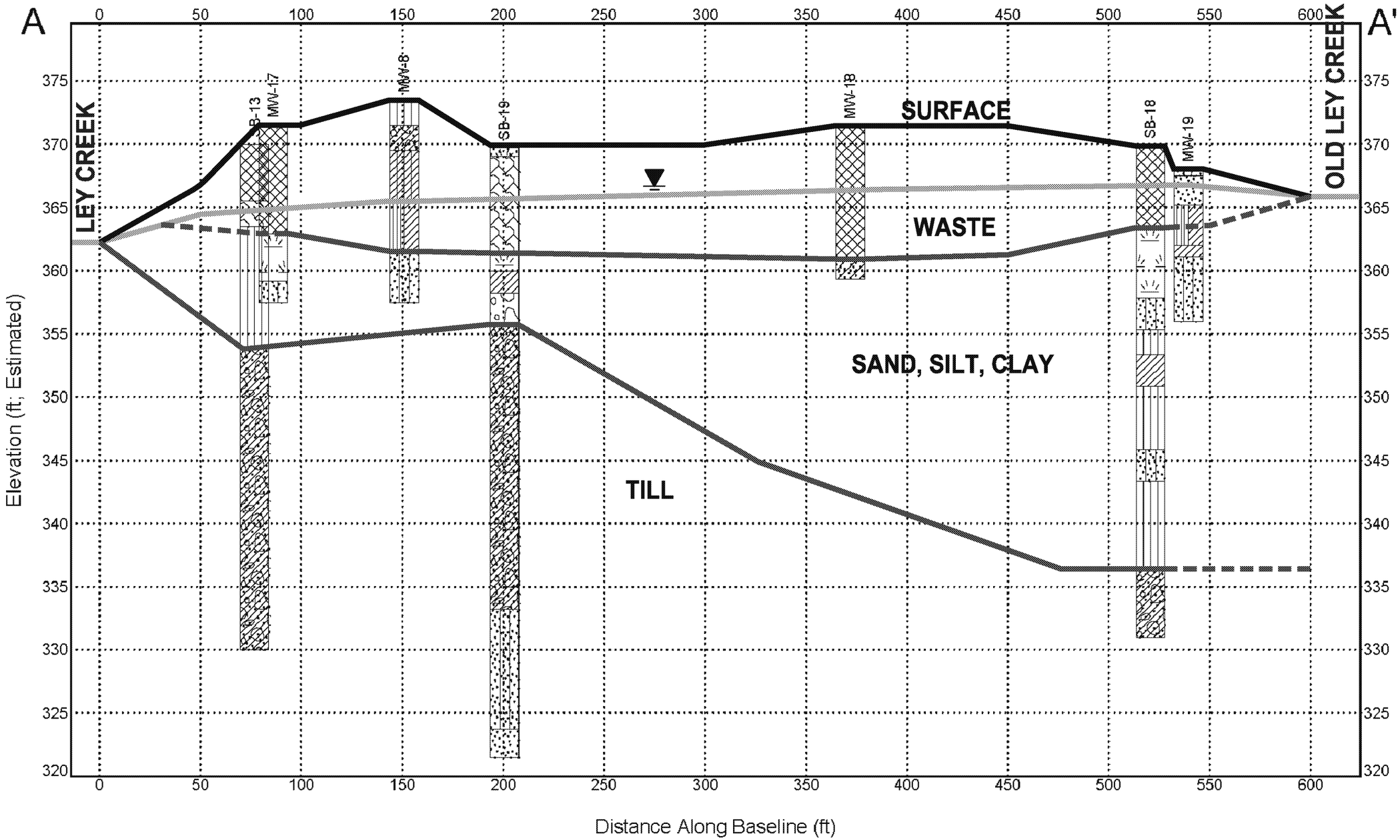
MONITORING WELL AND CROSS-SECTION LOCATION MAP
Town of Salina Landfill
Salina, NY

PROJ. NO: 6967
DATE: 11/09
FIGURE: 2

File: K:\6967\RD\CADD\ACAD\FIGURES\ENVIRONMENTAL\6967_MW_XSECT_11-09.DWG Saved: 11/16/2009 3:00:44 PM Plotted: 11/17/2009 2:29:11 PM User: Markham, Gary



KEY

Lithology Graphics

Topsoil
USCS Poorly-graded Gravel
Waste
USCS Low Plasticity Clay
Fill (made ground)
Glacial Till
USCS Silt
USCS Peat
USCS Poorly-graded Sand
Completely Weathered Bedrock
USCS Silty Sand

Explanation:

SB-01 — Borehole Number

Borehole Lithology

▼ Water Level Reading prior to sampling.

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CROSS SECTION A-A'
Town of Salina Landfill
Salina, NY

PROJ. NO: 6967
DATE: 11/09
FIGURE: 3A

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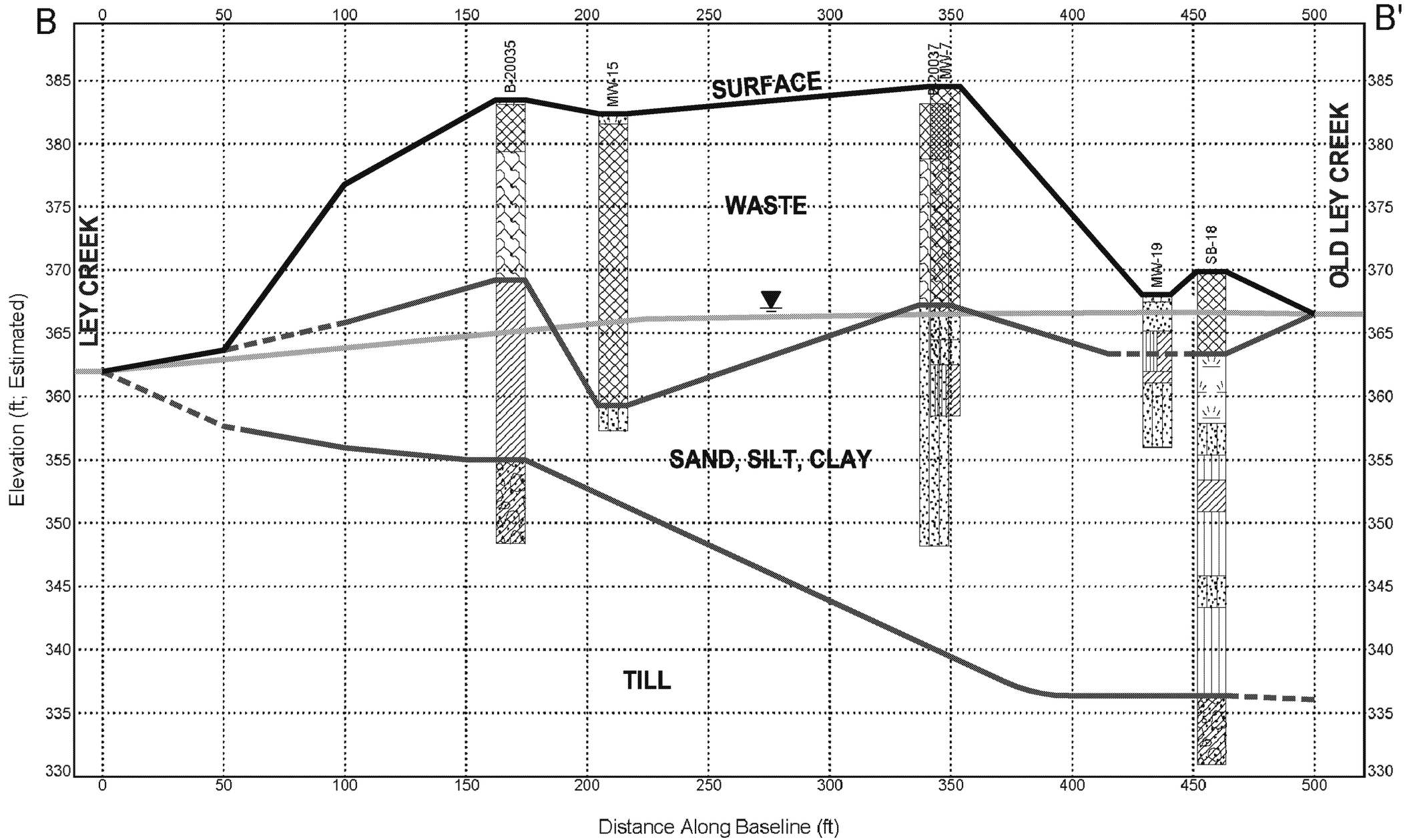

KEY

Lithology Graphics

Topsoil
JSCS Poorly-graded Gravel
Waste
JSCS Low Plasticity Clay
Fill (made ground)
Glacial Till
USCS Silt
USCS Peat
USCS Poorly-grade Sand
Completely Weathered Bedrock
USCS Silty Sand

Explanation:

SB-01 — Borehole Number

Borehole Lithology

Water Level Reading prior to sampling.

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CROSS SECTION B-B'
Town of Salina Landfill
Salina, NY

PROJ. NO: 6967
DATE: 11/09
FIGURE: 3B

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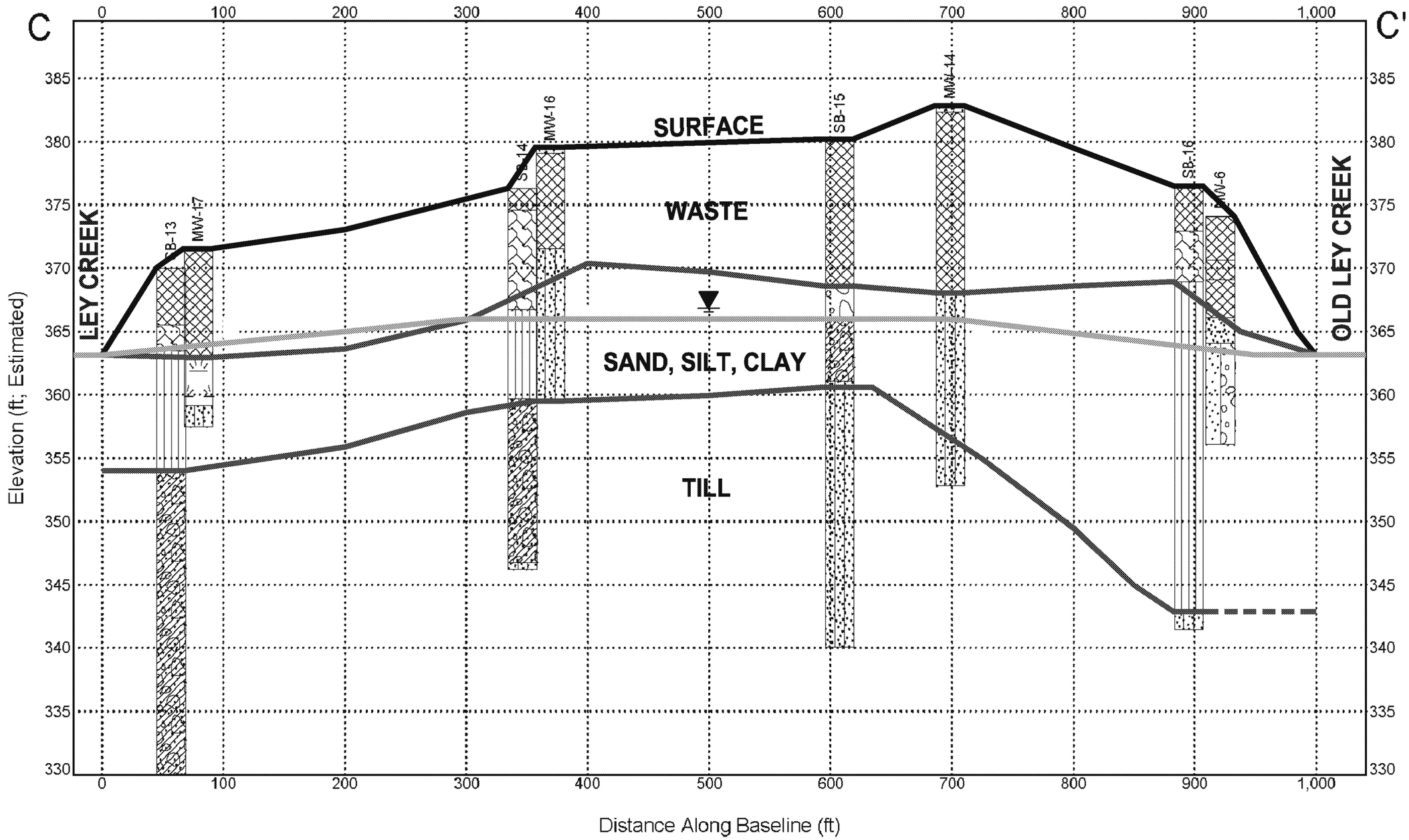

KEY

Lithology Graphics

- Topsoil
- USCS Poorly-graded Gravel
- Waste
- USCS Low Plasticity Clay
- Fill (mace ground)
- Glacial Till
- USCS Silt
- USCS Peat
- USCS Poorly-graded Sand
- Completely Weathered Bedrock
- USCS Silty Sand

Explanation:

SB-01 — Borehole Number

Borehole Lithology

▼ Water Level Reading prior to sampling.

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CROSS SECTION C-C'
Town of Salina Landfill
Salina, NY

PROJ. NO: 6967
DATE: 11/09
FIGURE: 3C

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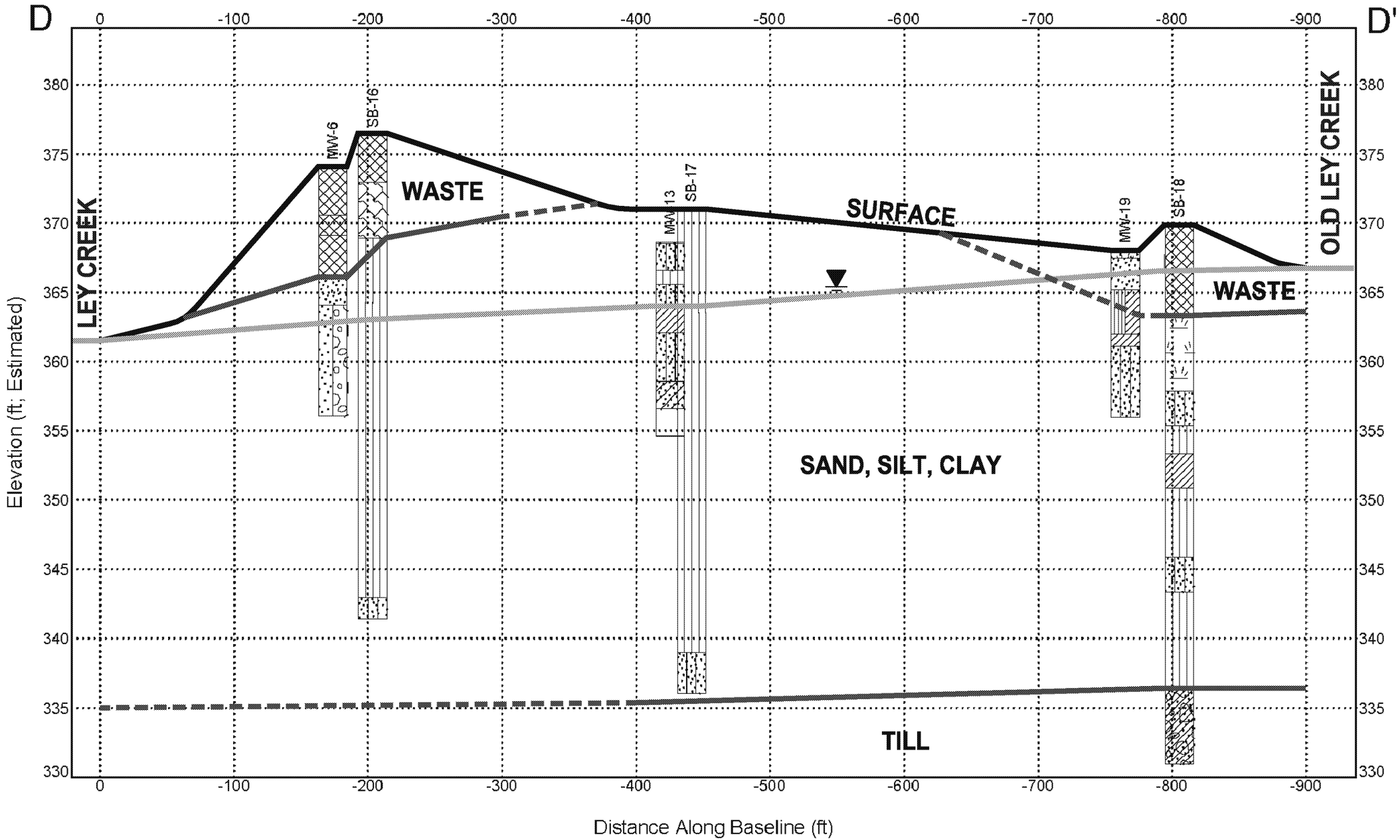

KEY

Lithology Graphics

Topsoil
USCS Poorly-graded Gravel
Waste
USCS Low Plasticity Clay
Fill (made ground)
Glacial Till
USCS Silt
USCS Peat
USCS Poorly-graded Sand
Completely Weathered Bedrock
USCS Silty Sand

Explanation:

SB-01 — Borehole Number

Borehole Lithology

Water Level Reading prior to sampling.

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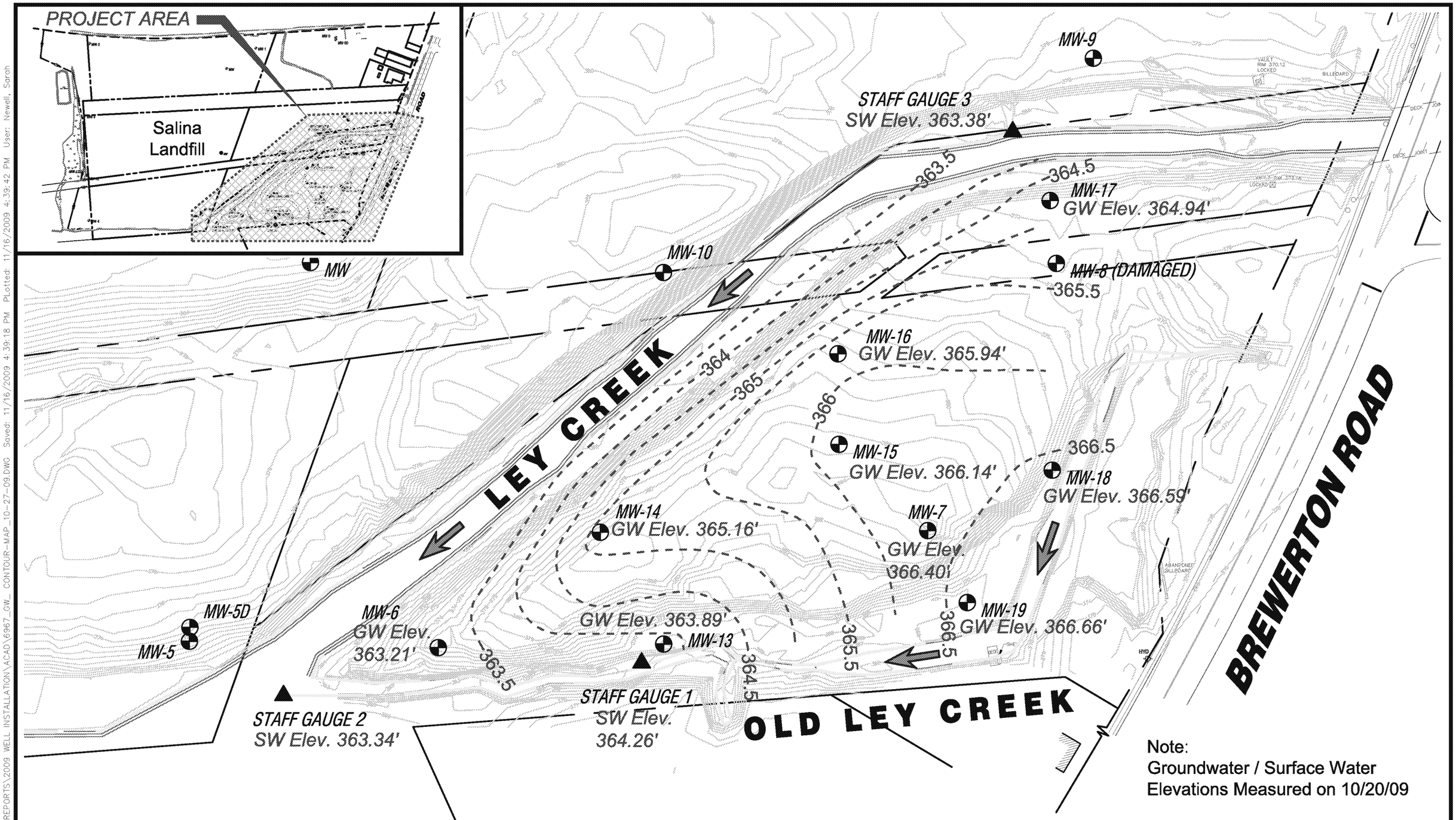
CROSS SECTION D-D'
Town of Salina Landfill
Salina, NY

PROJ. NO: 6967
DATE: 11/09
FIGURE: 3D

File: K:\6967\RD\CADD\ACAD\FIGURES\ENVIRONMENTAL\6967_XSECT_FIG-3D.DWG Saved: 11/17/2009 2:27:44 PM Plotted: 11/17/2009 2:27:59 PM User: Markham, Gary



KEY

MONITORING WELL LOCATION

STAFF GAUGE LOCATION

364 GROUNDWATER ELEVATION CONTOUR (0.5 FT. INTERVAL)

N

0 100 200

SCALE IN FEET

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Groundwater Piezometric Map

Upper Unconfined Aquifer
Town of Salina Landfill
Salina, NY

PROJ. NO: 6967
DATE: 10/27/09
FIGURE: 4

File: K:\6967\RD\TECH\REPORTS\2009 WELL INSTALLATION\ACAD\6967_GW_ CONTOUR-MAP_10-27-09.DWG Saved: 11/16/2009 4:39:18 PM PLotted: 11/16/2009 4:39:42 PM User: Newell, Sarah

TABLES

TABLE 1
WELL CONSTRUCTION SUMMARY

Well Installation and Sampling Report
Salina Landfill
Salina, New York

Well Location	Date Completed (D/M/Y)	Ground Elevation (ft. AMSL)	Total Depth (ft bgs)	Screened Interval ft bgs	Top of Casing (TOC) Elevation (ft AMSL)	Top of Riser (TOR) Elevation (ft AMSL)
MW-6	7/8/1998	374.09	17.5	7 to 17.5	377.41	377.19
MW-7	7/8/1998	384.36	26.5	16.5 to 26.5	387.57	387.32
MW-13	10/9/2009	368.6	13.0	3 to 13	370.93	370.58
MW-14	10/7/2009	382.8	28.0	18 to 28	385.13	384.42
MW-15	10/9/2009	382.3	23.0	13 to 23	384.63	384.21
MW-16	10/9/2009	379.5	23.0	13 to 23	381.91	381.58
MW-17	10/9/2009	371.5	14.0	4 to 14	375.35	374.73
MW-18	10/12/2009	371.4	12.0	2 to 12	374.66	374.31
MW-19	10/8/2009	368.0	12.0	2 to 12	371.39	370.89

Notes:
ft = feet
bgs = below ground surface
AMSL = above mean sea level

TABLE 2
GROUNDWATER AND SURFACE WATER ELEVATIONS

Well Installation and Sampling Report
Salina Landfill
Salina, New York

Well/Surface Water Monitoring Location	Reference Elevation[1] (ft AMSL)	Depth to Water (ft) (10/20/09)	Groundwater Elevation (ft AMSL)
MW-6	377.41	14.20	363.21
MW-7	387.57	21.17	366.40
MW-13	370.93	7.04	363.89
MW-14	385.13	19.97	365.16
MW-15	384.63	18.49	366.14
MW-16	381.91	15.97	365.94
MW-17	375.35	10.41	364.94
MW-18	374.66	8.07	366.59
MW-19	371.39	4.73	366.66
SG-1	367.47	3.21	364.26
SG-2	365.85	2.51	363.34
SG-3	365.1	1.72	363.38

Notes:
ft = feet
AMSL = above mean sea level
1.) Reference elevation for monitoring wells is the top of casing (TOC). Reference elevation for SG-1 and SG-2 was the top of the staff gauge. Reference elevation for SG-3 is the invert elevation of a culvert pipe.

TABLE 3
MONITORING WELL GROUNDWATER SAMPLING SUMMARY

Well Installation and Sampling Report
Salina Landfill
Salina, New York

Sample I.D.	Well I.D.	Sample Collection Date	Sample Collection Time	Sample Ship Date	QA/QC	Analysis
MW-6	MW-6	22-Oct-09	10:25	21-Oct-09		A
MW-7	MW-7	21-Oct-09	14:30	21-Oct-09		A
		22-Oct-09	07:45	22-Oct-09		
MW-13	MW-13	22-Oct-09	16:00	22-Oct-09		A
MW-14	MW-14	22-Oct-09	11:35	22-Oct-09		A
MW-15	MW-15	21-Oct-09	08:50	21-Oct-09		A
MW-16	MW-16	20-Oct-09	15:15	21-Oct-09		A
		21-Oct-09	16:15	21-Oct-09		
MW-17	MW-17	20-Oct-09	13:02	21-Oct-09	MS/MSD	A
MW-18	MW-18	21-Oct-09	11:50	21-Oct-09		A
MW-19	MW-19	20-Oct-09	17:23	21-Oct-09		A
CHA-1	MW-19	20-Oct-09	14:00	21-Oct-09	Duplicate	B
Equipment Rinsate	NA	20-Oct-09	11:00	21-Oct-09		B

Notes:
(A) = Analyses: VOCs, SVOCs, PCBs, Pesticides, Metals, Routine Leachate Parameters, Turbidity
(B) = Analyses: VOCs, SVOCs, PCBs, Pesticides, Metals, Routine Leachate Parameters
QA/QC = Quality Assurance/Quality Control
MS/MSD = Matrix Spike/Matrix Spike Duplicate

TABLE 4
GROUNDWATER ANALYTICAL DATA SUMMARY - VOCs

Well Installation and Sampling Report
Salina Landfill
Salina, New York

		Sample Identification	MW-6	MW-7	MW-7RE	MW-13	MW-14	MW-14	MW-14
		Sampling Location	MW-6	MW-7	MW-7	MW-13	MW-14	MW-14	MW-14
		Sample Date	10/22/2009	10/21/2009 and 10/22/09	10/21/2009 and 10/22/09	10/22/09	10/22/09	10/22/09	10/22/09
		Dilution Factor	1	1	1	1	1	10	100
Parameter	*Units*	*TOGS 1.1.1 Guidance Value*[1]							
1,1,1-Trichloroethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
1,1,2,2-Tetrachloroethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
1,1,2-Trichloroethane	µg/L	1	1 U	1 U	1 U	1 U	1 U	-	-
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
1,1-Dichloroethane	µg/L	5	1 U	1 U	1 U	1 U	570 E	1200 D	1300 D
1,1-Dichloroethene	µg/L	5	1 U	1 U	1 U	1 U	260 E	310 D	-
1,2,4-Trichlorobenzene	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
1,2-Dibromo-3-Chloropropane	µg/L	0.04	1 U	1 U	1 U	1 U	1 U	-	-
1,2-Dibromoethane	µg/L	0.0006	1 U	1 U	1 U	1 U	1 U	-	-
1,2-Dichlorobenzene	µg/L	3	1 U	1.6	1	1 U	1 U	-	-
1,2-Dichloroethane	µg/L	0.6	1 U	1 U	1 U	1 U	1 U	-	-
1,2-Dichloropropane	µg/L	1	1 U	1 U	1 U	1 U	1 U	-	-
1,3-Dichlorobenzene	µg/L	3	1 U	1 U	1 U	1 U	1 U	-	-
1,4-Dichlorobenzene	µg/L	3	1 U	0.73 J	0.63 J	1 U	1 U	-	-
2-Butanone	µg/L	50	5 U	5 U	5 U	5 U	940 E	2500 D	-
2-Hexanone	µg/L	50	5 U	5 U	5 U	5 U	5 U	-	-
4-Methyl-2-Pentanone	µg/L	NA	5 U	5 U	5 U	5 U	1700 E	470 D	-
Acetone	µg/L	50	5 U	17	36	5 U	5200 E	14000 D	10000 D
Benzene	µg/L	1	1 U	3.1	3	1 U	75	100 D	-
Bromodichloromethane	µg/L	50	1 U	1 U	1 U	1 U	1 U	-	-
Bromoform	µg/L	50	1 U	1 U	1 U	1 U	1 U	-	-
Bromomethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Carbon Disulfide	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
Carbon Tetrachloride	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Chlorobenzene	µg/L	5	1 U	4.4	4.1	1 U	1 U	-	-
Chloroethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Chloroform	µg/L	7	1 U	1 U	1 U	1 U	1 U	-	-
Chloromethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
cis-1,2-Dichloroethene	µg/L	5	1 U	21	11	5.2	4300 E	39000 ED	44000 D
cis-1,3-Dichloropropene	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
Cyclohexane	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
Dibromochloromethane	µg/L	50	1 U	1 U	1 U	1 U	1 U	-	-
Dichlorodifluoromethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Ethyl Benzene	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Isopropylbenzene	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
m/p-Xylenes	µg/L	5	2 U	2 U	2 U	2 U	2 U	-	-
Methyl Acetate	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
Methyl tert-butyl Ether	µg/L	50	1 U	0.66 J	1.2	1 U	1 U	-	-
Methylcyclohexane	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
Methylene Chloride	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
o-Xylene	µg/L	5	1 U	0.64 J	1 U	1 U	1 U	-	-
Styrene	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
t-1,3-Dichloropropene	µg/L	NA	1 U	1 U	1 U	1 U	1 U	-	-
Tetrachloroethene	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Toluene	µg/L	5	0.76 J	0.72 J	0.73 J	1 U	220 E	92 D	-
trans-1,2-Dichloroethene	µg/L	5	1 U	1 U	1 U	1 U	200 E	65 D	-
Trichloroethene	µg/L	5	1 U	1 U	1 U	1 U	11	-	-
Trichlorofluoromethane	µg/L	5	1 U	1 U	1 U	1 U	1 U	-	-
Vinyl Chloride	µg/L	2	1 U	1 U	1 U	1 U	3300 E	2700 D	2200 D

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values")
– = Indicates the parameter was not detected at the specified dilution factor.
NA = Guidance/standard value not available
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.
The concentration given is an approximate value.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
E = Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater.

TABLE 4
GROUNDWATER ANALYTICAL DATA SUMMARY - VOCs

Well Installation and Sampling Report
Salina Landfill
Salina, New York

		Sample Identification	MW-15	MW-15	MW-15	MW-16	MW-16	MW-17	MW-18
		Sampling Location	MW-15	MW-15	MW-15	MW-16	MW-16	MW-17	MW-18
		Sample Date	10/21/09	10/21/09	10/21/09	10/20/2009 and 10/21/09	10/20/2009 and 10/21/09	10/20/09	10/21/09
		Dilution Factor	1	10	100	1	10	1	1
Parameter	*Units*	*TOGS 1.1.1 Guidance Value*[1]							
1,1,1-Trichloroethane	µg/L	5	170 E	190 D	67 JD	1 U	-	1 U	1 U
1,1,2,2-Tetrachloroethane	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
1,1,2-Trichloroethane	µg/L	1	1 U	-	-	1 U	-	1 U	1 U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	45	57 D	-	0.97 J	-	1 U	1 U
1,1-Dichloroethane	µg/L	5	67	72 D	49 JD	19	14 D	1 U	1 U
1,1-Dichloroethene	µg/L	5	38	42 D	-	1.5	-	1 U	1 U
1,2,4-Trichlorobenzene	µg/L	NA	1 U	-	-	1 U	-	1 U	1 U
1,2-Dibromo-3-Chloropropane	µg/L	0.04	1 U	-	-	1 U	-	1 U	1 U
1,2-Dibromoethane	µg/L	0.0006	1 U	-	-	1 U	-	1 U	1 U
1,2-Dichlorobenzene	µg/L	3	80	69 D	-	1 U	-	3.7	1 U
1,2-Dichloroethane	µg/L	0.6	1 U	-	-	1 U	-	1 U	1 U
1,2-Dichloropropane	µg/L	1	1 U	-	-	1 U	-	1 U	1 U
1,3-Dichlorobenzene	µg/L	3	1 U	-	-	1 U	-	1 U	1 U
1,4-Dichlorobenzene	µg/L	3	1.4	-	-	1 U	-	1.4	1 U
2-Butanone	µg/L	50	5 U	-	-	5 U	-	5 U	5 U
2-Hexanone	µg/L	50	5 U	-	-	5 U	-	5 U	5 U
4-Methyl-2-Pentanone	µg/L	NA	5 U	-	-	5 U	-	5 U	5 U
Acetone	µg/L	50	5 U	-	-	8.3	-	5 U	5 U
Benzene	µg/L	1	40	18 D	-	1.8	-	0.71 J	1 U
Bromodichloromethane	µg/L	50	1 U	-	-	1 U	-	1 U	1 U
Bromoform	µg/L	50	1 U	-	-	1 U	-	1 U	1 U
Bromomethane	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
Carbon Disulfide	µg/L	NA	1 U	-	-	1 U	-	1 U	1 U
Carbon Tetrachloride	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
Chlorobenzene	µg/L	5	2.2	-	-	1 U	-	7.4	1 U
Chloroethane	µg/L	5	1 U	-	-	9.2	-	1 U	1 U
Chloroform	µg/L	7	1 U	-	-	1 U	-	1 U	1 U
Chloromethane	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
cis-1,2-Dichloroethene	µg/L	5	3400 E	6200 ED	3800 D	250 E	190 D	19	9.1
cis-1,3-Dichloropropene	µg/L	NA	1 U	-	-	1 U	-	1 U	1 U
Cyclohexane	µg/L	NA	1 U	-	-	1 U	-	1 U	1 U
Dibromochloromethane	µg/L	50	1 U	-	-	1 U	-	1 U	1 U
Dichlorodifluoromethane	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
Ethyl Benzene	µg/L	5	3.8	-	-	1 U	-	1 U	1 U
Isopropylbenzene	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
m/p-Xylenes	µg/L	5	1.4 J	-	-	2 U	-	2 U	2 U
Methyl Acetate	µg/L	NA	1 U	-	-	4.6	-	1 U	1 U
Methyl tert-butyl Ether	µg/L	50	1 U	-	-	1 U	-	1 U	0.83 J
Methylcyclohexane	µg/L	NA	1 U	-	-	1 U	-	1 U	1 U
Methylene Chloride	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
o-Xylene	µg/L	5	22	17 D	-	1 U	-	1 U	1 U
Styrene	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
t-1,3-Dichloropropene	µg/L	NA	1 U	-	-	1 U	-	1 U	1 U
Tetrachloroethene	µg/L	5	0.39 J	-	-	1 U	-	1 U	1 U
Toluene	µg/L	5	19	4.1 JD	-	1 U	-	1 U	1 U
trans-1,2-Dichloroethene	µg/L	5	1 U	-	-	1	-	0.95 J	1 U
Trichloroethene	µg/L	5	24	27 D	-	9.3	6.6 JD	1.6	1 U
Trichlorofluoromethane	µg/L	5	1 U	-	-	1 U	-	1 U	1 U
Vinyl Chloride	µg/L	2	210 E	200 D	130 D	8.7	-	5.2	1 U

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values")
– = Indicates the parameter was not detected at the specified dilution factor.
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TABLE 4
GROUNDWATER ANALYTICAL DATA SUMMARY - VOCs

Well Installation and Sampling Report
Salina Landfill
Salina, New York

		Sample Identification	MW-19	MW-19	CHA-1	CHA-1	EQUIPMENTRINSATE	TRIPBLANK	TRIPBLANK
		Sampling Location	MW-19	MW-19	MW-19	MW-19	NA	NA	NA
		Sample Date	10/20/09	10/20/09	10/20/09	10/20/09	10/20/2009	NA	NA
		Dilution Factor	1	10	1	10			
Parameter	*Units*	*TOGS 1.1.1 Guidance Value*[1]							
1,1,1-Trichloroethane	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
1,1,2-Trichloroethane	µg/L	1	1 U	-	1 U	-	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	5	380 E	510 D	420 E	420 D	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
1,2,4-Trichlorobenzene	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	µg/L	0.04	1 U	-	1 U	-	1 U	1 U	1 U
1,2-Dibromoethane	µg/L	0.0006	1 U	-	1 U	-	1 U	1 U	1 U
1,2-Dichlorobenzene	µg/L	3	1 U	-	1 U	-	1 U	1 U	1 U
1,2-Dichloroethane	µg/L	0.6	1 U	-	1 U	-	1 U	1 U	1 U
1,2-Dichloropropane	µg/L	1	1 U	-	1 U	-	1 U	1 U	1 U
1,3-Dichlorobenzene	µg/L	3	1 U	-	1 U	-	1 U	1 U	1 U
1,4-Dichlorobenzene	µg/L	3	1 U	-	1 U	-	1 U	1 U	1 U
2-Butanone	µg/L	50	5 U	-	5 U	-	5 U	5 U	5 U
2-Hexanone	µg/L	50	5 U	-	5 U	-	5 U	5 U	5 U
4-Methyl-2-Pentanone	µg/L	NA	5 U	-	5 U	-	5 U	5 U	5 U
Acetone	µg/L	50	5 U	-	5 U	-	5 U	5 U	5 U
Benzene	µg/L	1	1 U	-	1 U	-	1 U	1 U	1 U
Bromodichloromethane	µg/L	50	1 U	-	1 U	-	1 U	1 U	1 U
Bromoform	µg/L	50	1 U	-	1 U	-	1 U	1 U	1 U
Bromomethane	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Carbon Disulfide	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
Carbon Tetrachloride	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Chlorobenzene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Chloroethane	µg/L	5	250 E	260 D	270 E	220 D	1 U	1 U	1 U
Chloroform	µg/L	7	1 U	-	1 U	-	1 U	1 U	1 U
Chloromethane	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	5	34	36 D	37	30 D	1 U	1 U	1 U
cis-1,3-Dichloropropene	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
Cyclohexane	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
Dibromochloromethane	µg/L	50	1 U	-	1 U	-	1 U	1 U	1 U
Dichlorodifluoromethane	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Ethyl Benzene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Isopropylbenzene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
m/p-Xylenes	µg/L	5	2 U	-	2 U	-	2 U	2 U	2 U
Methyl Acetate	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
Methyl tert-butyl Ether	µg/L	50	1 U	-	1 U	-	1 U	1 U	1 U
Methylcyclohexane	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
Methylene Chloride	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
o-Xylene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Styrene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
t-1,3-Dichloropropene	µg/L	NA	1 U	-	1 U	-	1 U	1 U	1 U
Tetrachloroethene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Toluene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Trichloroethene	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Trichlorofluoromethane	µg/L	5	1 U	-	1 U	-	1 U	1 U	1 U
Vinyl Chloride	µg/L	2	250 E	280 D	280 E	240 D	1 U	1 U	1 U

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values")
– = Indicates the parameter was not detected at the specified dilution factor.
NA = Guidance/standard value not available
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
E = Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater.

TABLE 5
GROUNDWATER ANALYTICAL DATA SUMMARY - SVOCs, PCBs, PESTICIDES AND METALS

Well Installation and Sampling Report
Salina Landfill
Salina, New York

		Sample Identification	MW-6	MW-7	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	CHA-1	Equipment Rinsate
		Sampling Location	MW-6	MW-7	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-19	--
		Sample Date	10/22/2009	10/21 and 10/22/09	10/22/09	10/22/09	10/21/09	10/20 and 10/21/09	10/20/09	10/21/09	10/20/09	10/20/09	10/20/09
PARAMETER	***Units***	***TOGS 1.1.1 Guidance Value***											
Semi-Volatiles													
1,1-Biphenyl	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,2-oxybis(1-Chloropropane)	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,4,6-Trichlorophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,4-Dichlorophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,4-Dimethylphenol	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,4-Dinitrophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,4-Dinitrotoluene	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2,6-Dinitrotoluene	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2-Chloronaphthalene	µg/L	10	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2-Chlorophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2-Methylnaphthalene	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2-Methylphenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2-Nitroaniline	µg/L	4	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
2-Nitrophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
3+4-Methylphenols	µg/L	NA	11 U	11 U	11 U	3.7 J	11 U	11 U	11 U	11 U	11 U	11 U	11 U
3-Nitroaniline	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4,6-Dinitro-2-methylphenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4-Bromophenyl-phenylether	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4-Chloro-3-methylphenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4-Chloroaniline	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4-Chlorophenyl-phenylether	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4-Nitroaniline	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
4-Nitrophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Acenaphthene	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Acenaphthylene	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Acetophenone	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Anthracene	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Atrazine	µg/L	7.5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Benzaldehyde	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Benzo(a)anthracene	µg/L	0.002	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Benzo(a)pyrene	µg/L	0	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Benzo(b)fluoranthene	µg/L	0.002	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Benzo(g,h,i)perylene	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Benzo(k)fluoranthene	µg/L	0.002	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
bis(2-Chloroethoxy)methane	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
bis(2-Chloroethyl)ether	µg/L	1	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
bis(2-Ethylhexyl)phthalate	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	1.8 J	11 U	11 U	11 U	1.5 J
Butylbenzylphthalate	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Caprolactam	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Carbazole	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Chrysene	µg/L	0.002	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Dibenzofuran	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Diethylphthalate	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Dimethylphthalate	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Di-n-butylphthalate	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Di-n-octyl phthalate	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Fluoranthene	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Fluorene	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Hexachlorobenzene	µg/L	0.04	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Hexachlorobutadiene	µg/L	0.5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Hexachloroethane	µg/L	5	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	µg/L	0.002	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Isophorone	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Naphthalene	µg/L	10	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Nitrobenzene	µg/L	0.4	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
N-Nitroso-di-n-propylamine	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
N-Nitrosodiphenylamine	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Pentachlorophenol	µg/L	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Phenanthrene	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Phenol	µg/L	2	11 U	11 U	11 U	7.4 J	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Pyrene	µg/L	50	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U

TABLE 5
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Salina Landfill
Salina, New York

		Sample Identification	MW-6	MW-7	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	CHA-1	Equipment Rinsate
		Sampling Location	MW-6	MW-7	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-19	--
		Sample Date	10/22/2009	10/21 and 10/22/09	10/22/09	10/22/09	10/21/09	10/20 and 10/21/09	10/20/09	10/21/09	10/20/09	10/20/09	10/20/09
PARAMETER	***Units***	***TOGS 1.1.1 Guidance Value***											
Polychlorinated Biphenols (PCBs)													
Aroclor 1016	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Aroclor 1221	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Aroclor 1232	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Aroclor 1242	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Aroclor 1248	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Aroclor 1254	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Aroclor 1260	µg/L	0.09	0.54 U	0.56 U	0.54 U	0.54 U	0.55 U	0.55 U	0.56 U	0.53 U	0.54 U	0.54 U	0.57 U
Pesticides													
4,4-DDD	µg/L	0.3	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
4,4-DDE	µg/L	0.2	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
4,4-DDT	µg/L	0.2	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Aldrin	µg/L	0.001	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
alpha-BHC	µg/L	0.01	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
alpha-Chlordane	µg/L	NA	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
beta-BHC	µg/L	0.04	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
delta-BHC	µg/L	0.04	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Dieldrin	µg/L	0.001	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Endosulfan	µg/L	NA	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Endosulfan II	µg/L	NA	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Endosulfan Sulfate	µg/L	NA	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Endrin	µg/L	ND	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Endrin aldehyde	µg/L	5	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Endrin ketone	µg/L	5	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
gamma-BHC	µg/L	0.05	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
gamma-Chlordane	µg/L	NA	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Heptachlor	µg/L	0.04	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Heptachlor epoxide	µg/L	0.03	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Methoxychlor	µg/L	35	0.056 U	0.057 U	0.054 U	0.055 U	0.055 U	0.056 U	0.057 U	0.051 U	0.054 U	0.055 U	0.054 U
Toxaphene	µg/L	0.06	0.56 U	0.57 U	0.54 U	0.55 U	0.55 U	0.56 U	0.57 U	0.51 U	0.54 U	0.55 U	0.54 U
Metals													
Aluminum	µg/L	NA	174	16.8 J	245	79.7	21.2 J	1300	24.8 J	48.7 J	706	718	50 U
Antimony	µg/L	3	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Arsenic	µg/L	25	8.74 J	10 U	26.3	10 U	8.69 J	10 U	10 U	14.1	16	17.5	10 U
Barium	µg/L	1000	145	695	14.8 J	1,180	278	88.6	3,840	138	33.4 J	33.8 J	50 U
Beryllium	µg/L	3	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Cadmium	µg/L	5	3 U	0.64 J	3 U	3 U	3 U	3 U	0.52 J	3 U	3 U	3 U	3 U
Calcium	µg/L	NA	241,000	125,000	256,000	225,000	212,000	163,000	143,000	196,000	307,000	310,000	289 J
Chromium	µg/L	50	5 U	1.66 J	5 U	5 U	5 U	2.62 J	5 U	1.3 J	1.91 J	2.42 J	5 U
Cobalt	µg/L	NA	15 U	15 U	15 U	15 U	11.9 J	15 U	15 U	15 U	15 U	15 U	15 U
Copper	µg/L	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	12.8	6.6 J	10 U	10 U
Iron	µg/L	300	10,700	43,900	4,060	1,770	9,220	3,060	33,800	10,200	8,740	8,880	50 U
Lead	µg/L	25	9.96	6.81	13.9	11	10.9	7.79	7.83	9.14	8.91	11.2	6 U
Magnesium	µg/L	35000	43,300	55,000	43,900	68,400	80,600	65,400	24,100	36,200	46,300	46,500	62 J
Manganese	µg/L	300	577	165	85	81.4	1,610	1,000	314	502	429	445	10 U
Mercury	µg/L	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	µg/L	100	20 U	4.24 J	20 U	20 U	16.9 J	10.3 J	19.1 J	20 U	20 U	4.6 J	20 U
Potassium	µg/L	NA	3,310	17,100	5,030	10,100	9,800	23,000	5,160	7,510	11,500	11,400	75.2 J
Selenium	µg/L	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Silver	µg/L	50	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	µg/L	20000	32,400	79,600	64,100	104,000	86,200	66,000	16,400	148,000	163,000	167,000	372 J
Thallium	µg/L	0.5	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium	µg/L	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Zinc	µg/L	2000	8.02 J	9.71 J	10.4 J	9.28 J	11.9 J	13.6 J	25.4	53	10.4 J	12.6 J	20 U

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values")
– = Indicates the parameter was not detected at the specified dilution factor.
NA = Guidance/standard value not available
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.
The concentration given is an approximate value.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
E (Organics) = Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
E (Inorganics) = The reported value is estimated because of the presence of interference.
Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater.

TABLE 6
GROUNDWATER ANALYTICAL DATA SUMMARY - ROUTINE LEACHATE PARAMETERS

Well Installation and Sampling Report
Salina Landfill
Salina, New York

		Sample Identification	MW-0	MW-6	MW-6	MW-7	MW-7	MW-13	MW-13	MW-14	MW-14	MW-15	MW-15
		Sampling Location	MW-0	MW-6	MW-6	MW-7	MW-7	MW-13	MW-13	MW-14	MW-14	MW-15	MW-15
		Sample Date	*8/18/1998*	10/22/2009	10/22/2009	10/21 and 10/22/09	10/21 and 10/22/09	10/22/09	10/22/09	10/22/09	10/22/09	10/21/09	10/21/09
		Dilution Factor		1	10	1	50*^	1	25	1	100	1	50
Parameter	*Units*	*TOGS 1.1.1 Guidance Value*											
Turbidity	NTU	5	200	560	-	320	-	42	-	7	-	76	-
Total Organic Carbon	mg/l	NA	26	8.23	-	61	-	4.5	-	49	-	47	-
Total Kjeldahl Nitrogen	mg/l	NA	38.15	2.61	-	190	97	2.63	-	2.24	-	5.17	-
Total Dissolved Solids	mg/l	NA	NS	1,200	-	1,000	-	1,400	-	1,700	-	1,600	-
Phenolics	mg/l	0.001	NS	0.048	-	0.042	-	0.139	-	0.175	-	0.152	-
Total Hardness, CaCO3	mg/l	NA	1164	780		566		820		843		860	
Chemical Oxygen Demand	mg/l	NA	NS	14	-	180	-	6.04	-	200	-	140	-
Biological Oxygen Demand	mg/l	NA	2.2	2 U	-	2 U	-	2 U	-	99	-	2 U	-
Bromide	mg/l	2	NS	1.83	-	4.09	-	3.59	-	3.25	-	2.8	-
Chloride	mg/l	250	81	110 OR	75 D	280 OR	210 D	160 OR	130 D	660 OR	490 D	320 OR	260 D
Nitrate	mg/l	10	10	0.1 U	-	0.1 U	-	0.1 U	-	0.1 U	-	0.1 U	-
Sulfate	mg/l	250	23	510	360 D	1.53	-	420 OR	420 D	79 OR	78 D	17	-
Ammonia as N	mg/l	2	40	0.392	-	3.87 OR	4.09 D	0.587	-	0.287	-	1.13	-
Alkalinity	mg/l	NA	1122	320	-	2 U	-	540	-	540	-	790	-

		Sample Identification	MW-0	MW-16	MW-16	MW-17	MW-17	MW-18	MW-18	MW-19	MW-19	CHA-1	CHA-1	EQUIPMENTRINSATE
		Sampling Location	MW-0	MW-16	MW-16	MW-17	MW-17	MW-18	MW-18	MW-19	MW-19	MW-19	MW-19	NA
		Sample Date	*8/18/1998*	10/20/2009 and	10/20/2009 and	10/20/09	10/20/09	10/21/09	10/21/09	10/20/09	10/20/09	10/20/09	10/20/09	10/20/2009
		Dilution Factor		1	50*	1	5*	1	100*	1	100	1	100	NA
Parameter	*Units*	*TOGS 1.1.1 Guidance Value*												
Turbidity	NTU	5	200	56	-	210	-	76	-	75	-	N/A	-	
Total Organic Carbon	mg/l	NA	26	17	-	12	-	19	-	13	-	13	-	0.4 U
Total Kjeldahl Nitrogen	mg/l	NA	38.15	2.08	-	18	-	5.76	-	3.39	-	3.42	-	3.63
Total Dissolved Solids	mg/l	NA	NS	1,300	-	570	-	1,300	-	1,800	-	1,900	-	10 U
Phenolics	mg/l	0.001	NS	0.031	-	0.028	-	0.042	-	0.051	-	0.052	-	0.053
Calcium	mg/l			142,000	-	143,000	-	196,000	-	307,000	-	310,000	-	289 J
Magnesium	mg/l			68,400	-	24,100	-	36,200	-	46,300	-	46,500	-	62 J
Total Hardness, CaCO3	mg/l	NA	1164	635		456		638		957		966		977
Total Concentration.	mg/l	NA		210,400	-	167,100	-	232,200	-	353,300	-	356,500	-	351
Chemical Oxygen Demand	mg/l	NA	NS	47	-	39	-	52	-	36	-	35	-	5 U
Biological Oxygen Demand	mg/l	NA	2.2	2 U	-	17	-	2 U	-	2 U	-	23	-	2 U
Bromide	mg/l	2	NS	1.44	-	1.19	-	0.5 U	-	0.5 U	-	0.5 U	-	0.5 U
Chloride	mg/l	250	81	190 OR	140 D	36 OR	50 D	430 OR	320 D	580 OR	440 D	580 OR	440 D	0.5 U
Nitrate	mg/l	10	10	0.1 U	-	0.1 U	-	0.1 U	-	0.1 U	-	0.1 U	-	0.1 U
Sulfate	mg/l	250	23	260 OR	230	21	-	65	-	420 OR	360 D	420 OR	360	0.5 U
Ammonia as N	mg/l	2	40	4.36 OR	5.03 D	3.85 OR	4.06 D	2.9 OR	3.01 D	1.45	-	0.707	-	0.112
Alkalinity	mg/l	NA	1122	560	-	510	-	800	-	470	-	460	-	450

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values")
– = Indicates the parameter was not detected at the specified dilution factor.
NS = Not Sampled/Analyzed
* = Dilution factor for ammonia is 5 for MW-7, MW-17 and MW-16. Dilution factor is 2 for MW-18.
^ = Dilution factor for TKN analyis for MW-7 is 10.
NA = Guidance/standard value not available
U = The compound was not detected at the indicated concentration.
J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.
The concentration given is an approximate value.
D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
OR = Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater.

ATTACHMENT 1

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-13

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/9/2009 8:30:00 AM	
FINISH DATE and TIME: 10/9/2009 9:40:00 AM	
SURFACE ELEV: 368.60 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
	10-9-09	12:00 AM		4.8	14	14

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
									TOPSOIL, (TOPSOIL)			
S-1	2	0.9	2-4-4-7	8					**f. SAND and SILT** little clay, trace organics (roots), mottled black/brown/orange, m. stiff, moist. **(SM)**	368		
							2		**SILT**, some Clay, trace f. sand, trace organics (roots), mottled black/brown, stiff, moist. **(ML)**	366		
S-2	2	0.7	4-4-5-7	9					**f. SAND and SILT** little clay, trace roots, mottled black/brown, m. compact, moist. **(SM)**			
							4			364		▽
S-3	2	1	5-7-6-7	13					**CLAY**, some Silt, some f. Sand, trace organics (roots), dark gray, stiff, moist. **(CL)** **CLAY**, some Silt, trace organics (roots), gray, stiff, moist. **(CL)**			
							6			362		
S-4	2	1.3	3-6-4-6	10					**f. SAND**, little silt, little clay, gray, loose, wet. **(SM)**			
							8		Grades to some Clay **(SC)**	360		
S-5	2	1.4	2-3-4-5	7								
							10		**f. SAND and CLAY** some Silt, gray, loose, wet. **(SC)**	358		
S-6	2	0.6	6-18-20-9	38					Grades to trace f.c. gravel, trace c. sand, brown/gray, compact			
							12		No Recovery (12' to 14')	356		
S-7	2	0	2-3-6-4	9								
							14		End of Boring at 14 ft	354		

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-14

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/6/2009	
FINISH DATE and TIME: 10/6/2009	
SURFACE ELEV: 382.80 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
	10-6-09	1:50 PM		20.5	30	30
	10-6-09	3:30 PM		27.5	30	30

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
									TOPSOIL, **(TOPSOIL)**			
S-1	2	1	2-4-6-6	10					**f. SAND and SILT** trace f.c. gravel, gray, loose, dry. **(FILL)**	382		
							2		**c. GRAVEL**, some m. Gravel, trace silt, trace f. sand, red/brown, m. compact, dry. **(FILL)**			
S-2	2	0.6	5-7-11-11	18						380		
							4		**f. SAND and SILT** little clay, trace f.c. gravel, trace waste (tires, wood), red/brown, m. compact, dry. **(WASTE)**			
S-3	2	1.1	7-12-11-7	23						378		
							6		**f. SAND and SILT** trace clay, trace f.c. gravel, red/brown, loose, dry. **(FILL)**			
S-4	2	0.8	4-4-6-8	10						376		
									f. SAND and SILT some Clay, trace f.c. gravel, trace waste (tires, wood), red/brown, loose, dry. **(WASTE)**			
							8		Grades to little clay **(WASTE)**			
S-5	2	1.3	5-5-6-7	11					**f. SAND and WASTE** (asphalt, tar-like staining), black, m. compact, moist. **(WASTE)**	374		
									SILT, some f. Sand, some Clay, trace waste (plastic), gray, stiff, moist. **(WASTE)**			
							10		**SILT and CLAY**, little f. sand, trace f.c. gravel, trace waste (glass), reddish brown, loose, moist. **(WASTE)**			
S-6	2	1.6	4-5-5-5	10					**SILT and CLAY**, little f. sand, gray/black, loose, moist. **(FILL)**	372		
							12		Grades to trace f.c. gravel, reddish/brown **(FILL)**			
S-7	2	1.1	5-6-4-9	10					**f. SAND and SILT** little waste, trace f.c. gravel, brown, loose, wet. **(WASTE)**	370		
							14		**f. SAND and SILT** some Clay, trace f.c. gravel, trace waste (black staining), gray/black, v. compact, moist. **(WASTE)**	368		

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-14

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-8	2	1.3	6-19-44-79	63					**f. SAND and SILT** little f.c. gravel, trace clay, red/brown, v. compact, moist. **(SM)** *(continued)*			
							16					
										366		
S-9	2	1.7	16-36-32-20	68								
							18					
										364		
S-10	2	1.1	9-22-46-54	68								
							20		No Sample			▽
										362		
							22					
										360		
									f. SAND and SILT little clay, little f.c. gravel, brown, compact, wet. **(SM)**			
S-11	2	1.5	8-16-21-24	37			24					
										358		
									No Sample			
							26					
										356		
							28		**f. SAND and SILT** some Clay, trace f.c. gravel, brown, compact, wet. **(SM)**			
S-12	2	1.7	14-18-30-40	48						354		
							30		End of Boring at 30 ft			
										352		
							32					
										350		

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-15

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/7/2009	
FINISH DATE and TIME: 10/7/2009	
SURFACE ELEV: 382.30 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
									TOPSOIL, **(TOPSOIL)**	382		
S-1	2	1	3-3-9-9	12					**SILT**, some Clay, trace f. sand, trace roots, trace c. gravel, brown/gray, loose, moist. **(FILL)**			
							2		**SILT**, some Clay, trace f.m.c. sand, trace roots, trace c. gravel, trace black staining, brown/gray, m. compact, moist. **(FILL)**	380		
S-2	2	1.1	6-15-65-53\3"	80								
							4		**SILT and WASTE** (plastic, black staining), some Clay, trace f. sand, gray, loose, moist. **(WASTE)**	378		
S-3	2	1	3-2-3-4	5								
							6		**SILT and CLAY**, some Waste (plastic, paper, wood, black staining), little f.m.c. sand, trace c. gravel, gray, loose, moist. **(WASTE)**	376		
S-4	2	1.1	3-3-3-9	6								
							8		**WASTE**, some Organics (roots), little silt, trace clay, brown, m. compact, moist. **(WASTE)**	374		
S-5	2	0.6	14-14-5-7	19								
							10		**SILT and CLAY**, little waste (wood, black staining), trace f.m.c. sand, brown, m. compact, moist. **(WASTE)**	372		
S-6	2	0.6	6-7-8-9	15								
							12		**SILT and WASTE** (cloth, wood), brown, m. compact, moist. **(WASTE)**	370		
S-7	2	0.7	9-7-13-14	20					**SILT**, some Clay, little f.m.c. sand, trace waste (black staining), mottled gray/brown/green, v. stiff, wet. **(WASTE)**			
							14		Grades to trace f.m.c. sand, little waste (green staining) **(WASTE)**	368		

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-15

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-8	2	1.4	6-19-44-79	63					Grades to trace f.m.c. sand, little waste (green staining) **(WASTE)** *(continued)*			
							16		**WASTE**, (plastic, wood, orange/yellow staining), compact, wet. **(WASTE)**	366		
S-9	2	1.3	16-36-32-20	68					**f.m.c. SAND and SILT** some Clay, trace f.c. gravel, trace f.m.c. sand, red/brown, compact, wet. **(FILL)**			
							18		**SILT**, some Clay, little waste (plastic, black staining), mottled red/black/gray, hard, wet. **(WASTE)**	364		
S-10	2	0.4	9-22-46-54	68								
							20		No Sample	362		
							22			360		
									f. SAND and SILT little clay, trace f.c. gravel, red/brown, v. compact, wet. **(SM)**			
S-11	2	1.3	8-16-21-24	37			24			358		
									End of Boring at 25 ft			
							26			356		
							28			354		
							30			352		
							32			350		

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-16

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/7/2009	
FINISH DATE and TIME: 10/7/2009	
SURFACE ELEV: 379.50 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
	10-8-09	7:30 AM			23	23

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
									TOPSOIL, **(TOPSOIL)**			
S-1	2	1.1	2-5-9-21	14					**SILT**, some f. Sand, trace clay, trace organics (roots), trace waste (glass, plastic, black staining), mottled brown/red/green, m. compact, moist. **(WASTE)**	378		
							2					
S-2	2	1.3	6-7-14-17	21						376		
							4		**f. SAND and SILT** some f.c. Gravel, trace clay, trace organics (roots), trace waste (glass), mottled brown/red, m. compact, moist. **(WASTE)**			
S-3	2	1.3	3-8-9-9	17						374		
							6		Grades to some Clay, trace f.c. gravel **(WASTE)**			
S-4	2	1.3	3-5-6-16	11					**SILT and WASTE** some f. Sand, trace clay, red/brown, m. compact, moist. **(WASTE)**	372		
							8		**f. SAND and SILT** trace clay, trace f. gravel, trace organics (roots), mottled red/brown/gray, m. compact, moist. **(SM)**			
S-5	2	1	5-8-8-14	16					Grades to brown/yellow staining **(SM)**	370		
							10					
S-6	2	1.7	4-7-7-9	14					**f. SAND and SILT** trace clay, trace f.c. gravel, mottled red/brown/gray, m. compact, moist. **(SM)**	368		
							12					
S-7	2	0.6	5-15-21-18	36						366		
							14		becomes compact **(SM)**			

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-16

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-8	2	1.3	20-17-25-25	42					becomes compact **(SM)** *(continued)*			
									becomes wet **(SM)**	364		
							16		becomes v. compact **(SM)**			
S-9	2	0.1	61->50/.25'	R						362		
							18					
S-10	2	0.6	62->50/.25'	R						360		
							20		End of Boring at 20 ft			
										358		
							22					
										356		
							24					
										354		
							26					
										352		
							28					
										350		
							30					
										348		
							32					

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-17

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/8/2009 9:30:00 AM	
FINISH DATE and TIME: 10/8/2009 11:00:00 AM	
SURFACE ELEV: 371.50 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
	10-8-09	11:20 AM		6.8	14	14

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
									TOPSOIL, (TOPSOIL)			
S-1	2	0.9	6-8-11-19	19					**f.m.c. SAND and SILT** some f.c. Gravel, trace clay, reddish brown, m. compact, moist. **(FILL)**	370		
							2		**f.m.c. SAND and SILT** some f.c. Gravel, trace clay, trace waste (glass), black staining, reddish brown, m. compact, moist. **(WASTE)**			
S-2	2	0.7	12-15-11-13	26						368		
							4					
S-3	2	0.5	3-4-8-4	12					**WASTE**, (glass, plastic, wood), black staining, m. compact, moist. **(WASTE)**	366		
							6		No Recovery (6' to 8')			
S-4	2	0	6-3-3-4	6						364		▽
							8		**WASTE**, (glass, plastic, wood), black staining, loose, moist. **(WASTE)**			
S-5	2	1	4-3-2-2	5					**PEAT**, trace wood, trace organics (roots), dark brown, loose, wet. **(PEAT)**	362		
							10		**PEAT**, dark brown, loose, wet. **(PEAT)** Grades to trace organics (roots), trace black staining **(PEAT)**			
S-6	2	0.5	2-2-2-3	4					**PEAT**, some f.m.c. Sand, trace organics (roots), trace shells, dark brown, loose, wet. **(PEAT)**	360		
							12		**f.m.c. SAND and SILT** some f.c. Gravel, trace clay, trace wood, trace black staining, brown, loose, wet. **(SM)**			
S-7	2	0.7	2-1-1-6	2						358		
							14		End of Boring at 14 ft			

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-18

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/12/2009 11:45:00 AM	
FINISH DATE and TIME: 10/12/2009 1:00:00 PM	
SURFACE ELEV: 371.40 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
	10-12-09	1:00 PM		8.1	12	12
	10-13-09	1:15 PM		4.3	12	12

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	0.8	2-2-6-5	8					**SILT**, some Clay, little f. sand, trace waste (plastic, glass), trace organics (roots), trace f. gravel, mottled brown/black/gray, m. stiff, moist. **(WASTE)**	370		
							2		**f. SAND**, some Silt, trace f.c. gravel, trace clay, reddish brown, loose, moist. **(FILL)**			
S-2	2	0.7	2-3-4-7	7					**f. SAND**, some Silt, little f.c. gravel, little waste (metal), trace clay, reddish brown, loose, moist. **(WASTE)**			
									SILT, some f. Sand, some Clay, trace waste (plastic), black staining, mottled brown/black, m. stiff, moist. **(WASTE)**	368		
							4		Grades to trace waste (glass) **(WASTE)**			▽
S-3	2	0.8	4-4-4-6	8								
										366		
							6		**SILT and CLAY**, some f. Sand, trace waste, mottled black/brown, black staining, m. stiff, moist. **(WASTE)**			
S-4	2	0.2	4-3-4-4	7					**CLAY**, some Silt, trace f. sand, trace wood, trace waste, black staining, mottled black/gray, m. stiff, moist. **(WASTE)**			
										364		
							8					
S-5	2	1.6	2-2-2-3	4								
										362		
							10		Becomes wet **(WASTE)**			
S-6	2	1.6	10-8-5-7	13					**f. SAND and CLAY**, some Silt, little f.c. gravel, gray/black, m. compact, wet. **(SC)**			
									f. SAND and CLAY, some f.c. Gravel, reddish brown, m. compact, wet. **(SC)**	360		
							12		End of Boring at 12 ft			
										358		
							14					

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NUMBER: 6967

Former Town of Salina Landfill
SUBSURFACE LOG
HOLE NUMBER MW-19

LOCATION: Salina, New York	DRILL FLUID: / DRILLING METHOD: Hollow Stem Auger
CLIENT: Town of Salina	
CONTRACTOR: Nature's Way, Inc.	
DRILLER: E. Laurienzo / INSPECTOR: D. Benati	
START DATE and TIME: 10/8/2009 1:45:00 PM	
FINISH DATE and TIME: 10/8/2009 2:45:00 PM	
SURFACE ELEV: 368.00 (ft; Estimated) / CHECKED BY: C. Burns	

WATER LEVEL OBSERVATIONS DURING DRILLING	DATE	TIME	READING TYPE	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
	10-8-09	2:45 PM		4.1	12	12

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	Casing Blows per 0.3 m	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
									TOPSOIL, **(TOPSOIL)**			
S-1	2	0.9	1-1-1-2	2					**f.m. SAND**, trace silt, trace clay, mottled black/gray/orange, very loose, moist. **(SP)**			
							2		Grades to some Silt **(SP)**	366		
S-2	2	1.1	2-2-2-4	4					**SILT and CLAY**, dark gray, soft, moist. **(ML/CL)**			
							4		No Recovery (4' to 6')	364		▽
S-3	2	0	1-1-2-1	3								
							6		**CLAY**, some Silt, dark gray/black, soft, wet. **(CL)**	362		
S-4	2	1.2	1-1-3-6	4					**f.m. SAND and SILT** some Clay, little f.c. gravel, dark gray/brown, very loose, wet. **(SM)**			
							8			360		
S-5	2	0.5	1-3-3-10	6								
							10		**f.m. SAND**, some Silt, little f.c. gravel, purple/gray, m. compact, moist. **(SM)**	358		
S-6	2	1.1	9-9-10-13	19								
							12		End of Boring at 12 ft	356		
							14			354		

CASING BLOW LOG 6967_2009 WELL INSTALL BORING LOGS.GPJ UPDATEDCHA.GDT 11/13/09

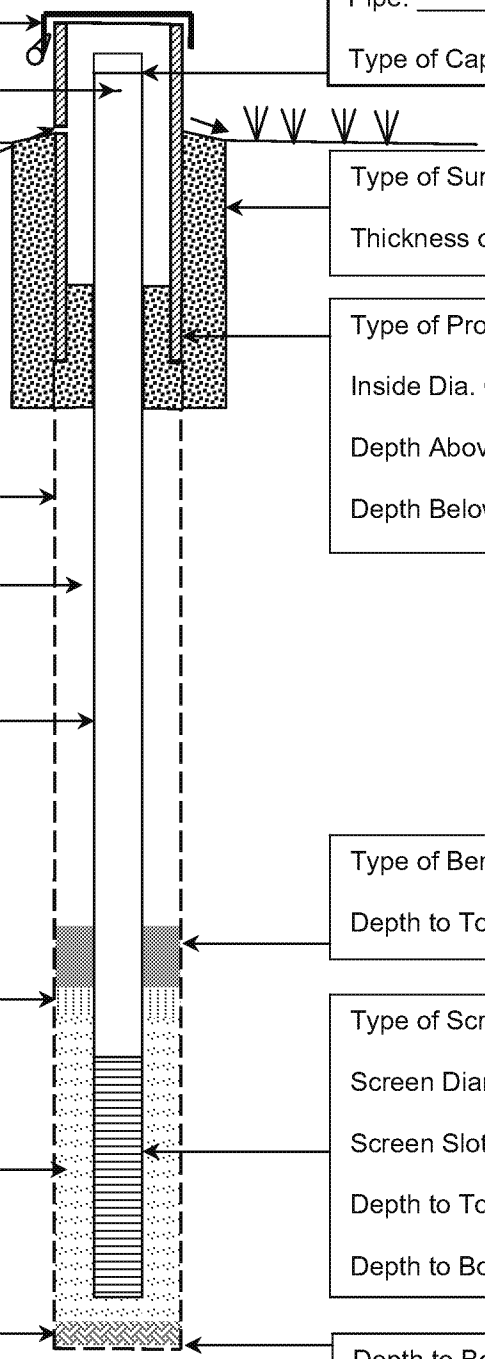
ATTACHMENT 2

WELL CONSTRUCTION LOG

WELL NO. MW-13

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/9/09 TIME: 09:40
FINISH DATE: 10/9/09 TIME: 10:40
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand
Depth to Top of Sand Pack: 1.9'
Depth to Bottom of Sand Pack: 13.6'

Backfill (if any): Sand

Depth Above/Below Ground of Riser Pipe: 2'
Type of Cap: J-Plug

Type of Surface Seal: Portland Cement
Thickness of Surface Seal: 1'

Type of Protective Casing: PVC
Inside Dia. Of Casing: 4"
Depth Above Ground of Casing: 2.3'
Depth Below Ground of Casing: 2.7'

Type of Bentonite Seal: Bentonite Chips
Depth to Top of Bentonite Seal: 1'

Type of Screen: PVC
Screen Diameter: 2"
Screen Slot Size: 0.010"
Depth to Top of Screen: 3'
Depth to Bottom of Screen: 13'

Depth to Bottom of Borehole: 13.6'

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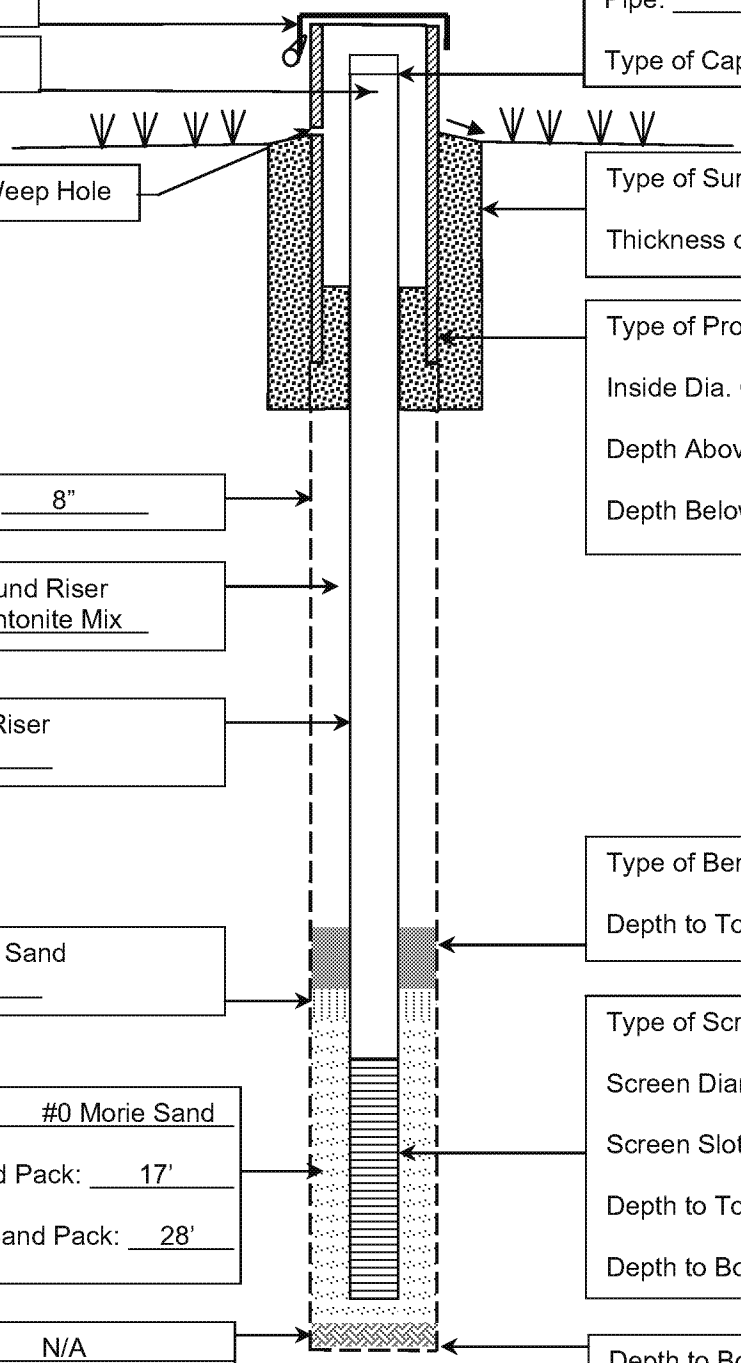
WELL CONSTRUCTION LOG

WELL NO. MW-14

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/6/09 TIME: 15:55
FINISH DATE: 10/7/09 TIME: 15:00
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand
Depth to Top of Sand Pack: 17'
Depth to Bottom of Sand Pack: 28'

Backfill (if any): N/A

Depth Above/Below Ground of Riser Pipe: 2'
Type of Cap: J-Plug

Type of Surface Seal: Portland Cement
Thickness of Surface Seal: 1'

Type of Protective Casing: PVC
Inside Dia. Of Casing: 4"
Depth Above Ground of Casing: 2.34'
Depth Below Ground of Casing: 2.66'

Type of Bentonite Seal: Bentonite Chips
Depth to Top of Bentonite Seal: 13.1'

Type of Screen: PVC
Screen Diameter: 2"
Screen Slot Size: 0.010"
Depth to Top of Screen: 18'
Depth to Bottom of Screen: 28'

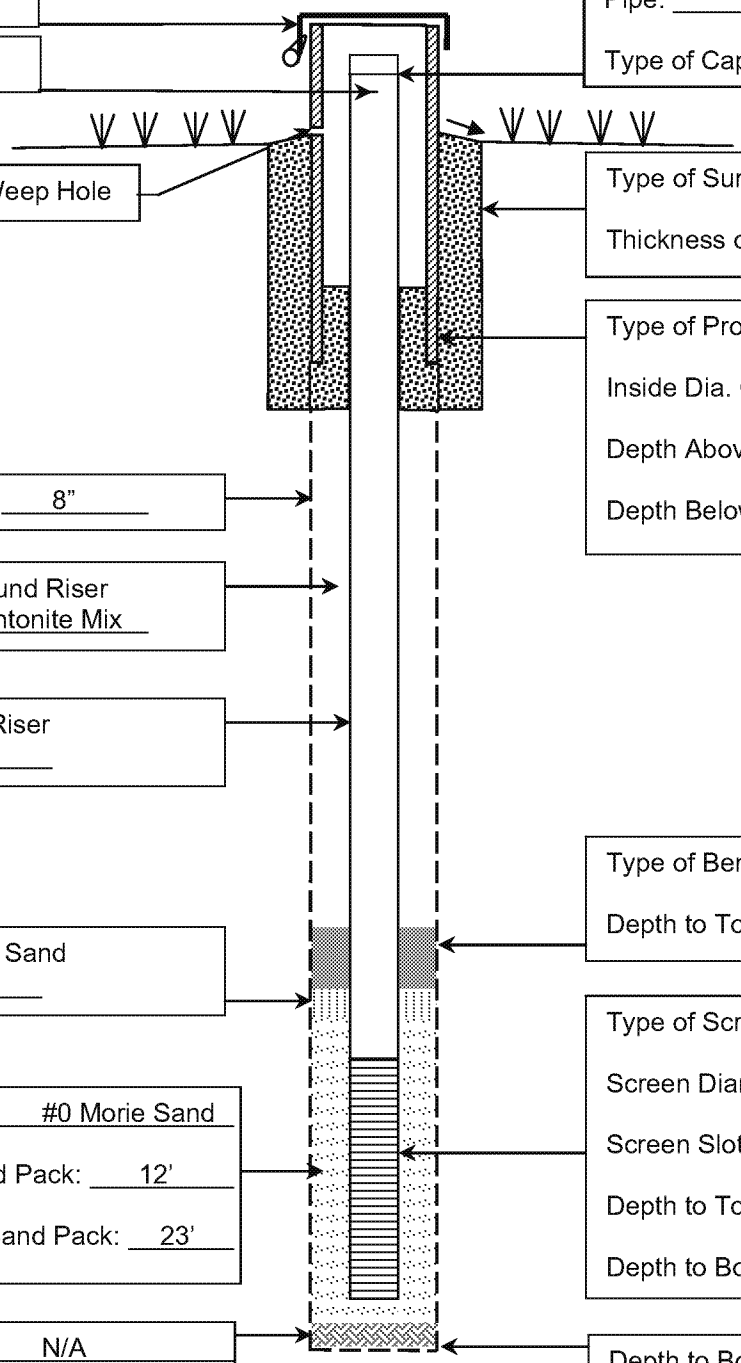
Depth to Bottom of Borehole: 28'

WELL CONSTRUCTION LOG

WELL NO. MW-15

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/7/09 TIME: 11:00
FINISH DATE: 10/9/09 TIME: 16:00
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand
Depth to Top of Sand Pack: 12'
Depth to Bottom of Sand Pack: 23'

Backfill (if any): N/A

Depth Above/Below Ground of Riser Pipe: 2'
Type of Cap: J-Plug

Type of Surface Seal: Portland Cement
Thickness of Surface Seal: 1'

Type of Protective Casing: PVC
Inside Dia. Of Casing: 4"
Depth Above Ground of Casing: 2.5'
Depth Below Ground of Casing: 2.5'

Type of Bentonite Seal: Bentonite Chips
Depth to Top of Bentonite Seal: 8.9'

Type of Screen: PVC
Screen Diameter: 2"
Screen Slot Size: 0.010"
Depth to Top of Screen: 13'
Depth to Bottom of Screen: 23'

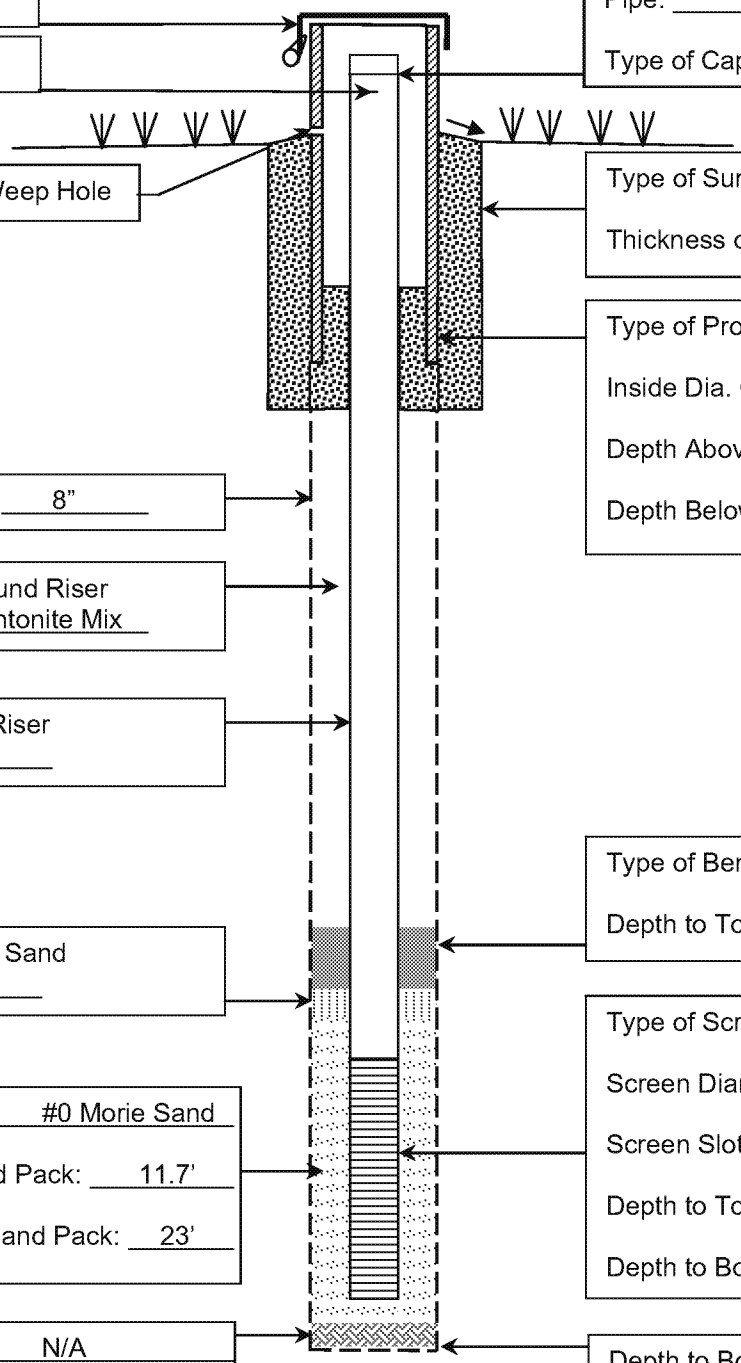
Depth to Bottom of Borehole: 23'

WELL CONSTRUCTION LOG

WELL NO. MW-16

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/8/09 TIME: 07:15
FINISH DATE: 10/9/09 TIME: 15:15
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand

Depth to Top of Sand Pack: 11.7'

Depth to Bottom of Sand Pack: 23'

Backfill (if any): N/A

Depth Above/Below Ground of Riser Pipe: 2.5'

Type of Cap: J-Plug

Type of Surface Seal: Portland Cement

Thickness of Surface Seal: 1'

Type of Protective Casing: PVC

Inside Dia. Of Casing: 4"

Depth Above Ground of Casing: 2.7'

Depth Below Ground of Casing: 2.3'

Type of Bentonite Seal: Bentonite Chips

Depth to Top of Bentonite Seal: 8.7'

Type of Screen: PVC

Screen Diameter: 2"

Screen Slot Size: 0.010"

Depth to Top of Screen: 13'

Depth to Bottom of Screen: 23'

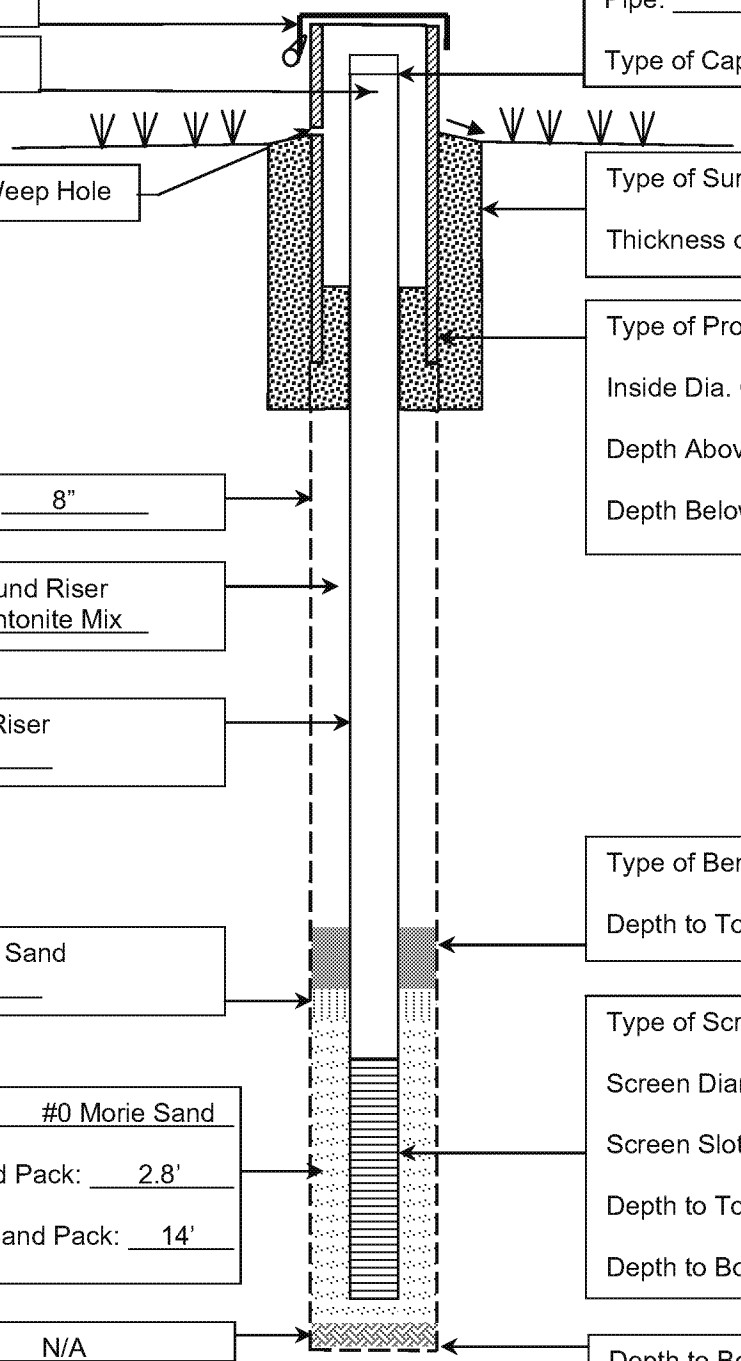
Depth to Bottom of Borehole: 23'

WELL CONSTRUCTION LOG

WELL NO. MW-17

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/8/09 TIME: 11:00
FINISH DATE: 10/9/09 TIME: 13:00
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand

Depth to Top of Sand Pack: 2.8'

Depth to Bottom of Sand Pack: 14'

Backfill (if any): N/A

Depth Above/Below Ground of Riser Pipe: 3.4'

Type of Cap: J-Plug

Type of Surface Seal: Portland Cement

Thickness of Surface Seal: 0.8"

Type of Protective Casing: PVC

Inside Dia. Of Casing: 4"

Depth Above Ground of Casing: 3.7'

Depth Below Ground of Casing: 1.3'

Type of Bentonite Seal: Bentonite Chips

Depth to Top of Bentonite Seal: 0.8'

Type of Screen: PVC

Screen Diameter: 2"

Screen Slot Size: 0.010"

Depth to Top of Screen: 4'

Depth to Bottom of Screen: 14'

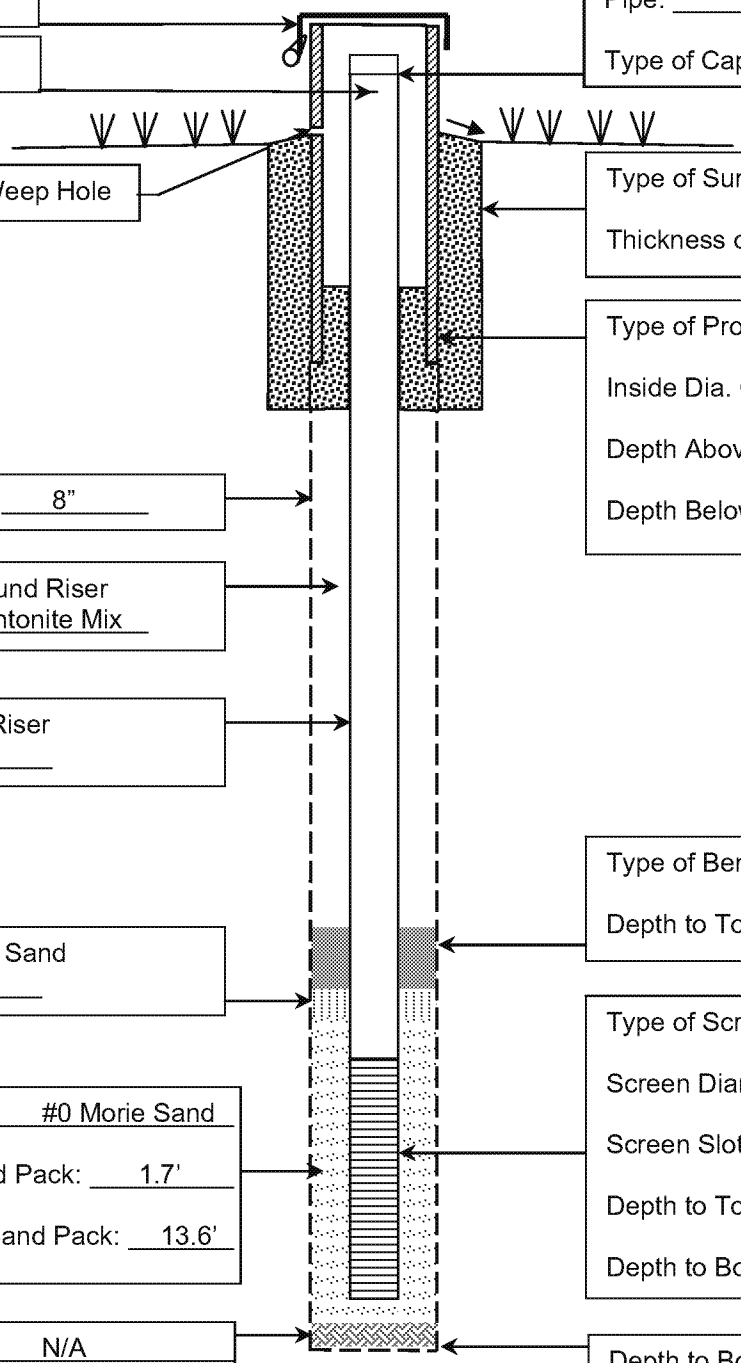
Depth to Bottom of Borehole: 14'

WELL CONSTRUCTION LOG

WELL NO. MW-18

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/12/09 TIME: 11:45
FINISH DATE: 10/12/09 TIME: 13:00
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand
Depth to Top of Sand Pack: 1.7'
Depth to Bottom of Sand Pack: 13.6'

Backfill (if any): N/A

Depth Above/Below Ground of Riser Pipe: 3.1'
Type of Cap: J-Plug

Type of Surface Seal: Portland Cement
Thickness of Surface Seal: 1'

Type of Protective Casing: PVC
Inside Dia. Of Casing: 4"
Depth Above Ground of Casing: 3.5'
Depth Below Ground of Casing: 1.1'

Type of Bentonite Seal: Bentonite Chips
Depth to Top of Bentonite Seal: 1'

Type of Screen: PVC
Screen Diameter: 2"
Screen Slot Size: 0.010"
Depth to Top of Screen: 2'
Depth to Bottom of Screen: 12'

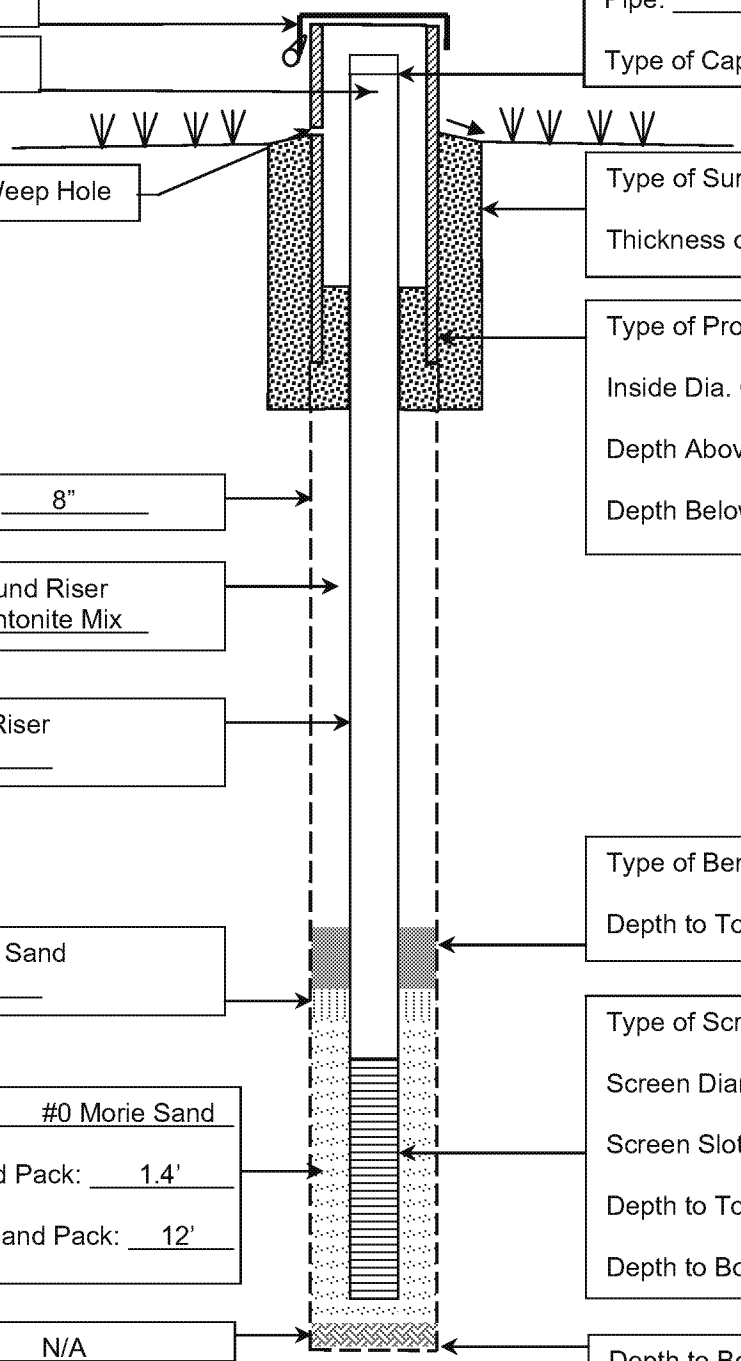
Depth to Bottom of Borehole: 12'

WELL CONSTRUCTION LOG

WELL NO. MW-19

PROJECT & LOCATION: Salina Landfill
CLIENT: Town of Salina
CONTRACTOR: Nature's Way, Inc.

PROJECT NO.: 6967.3018.1106
SHEET NO.: 1 OF 1
START DATE: 10/8/09 TIME: 14:45
FINISH DATE: 10/8/09 TIME: 15:450
DRILLER: E. Laurienzo
INSPECTOR: D. Benati



Locking Steel Cap

Riser Vent Hole

Protective Casing Weep Hole

Diameter Borehole: 8"

Type of Backfill Around Riser Pipe: Cement/Bentonite Mix

Inside Diameter of Riser Pipe: 2"

Depth to Top of Fine Sand Choke: N/A

Type of Sand Pack: #0 Morie Sand
Depth to Top of Sand Pack: 1.4'
Depth to Bottom of Sand Pack: 12'

Backfill (if any): N/A

Depth Above/Below Ground of Riser Pipe: 3'
Type of Cap: J-Plug

Type of Surface Seal: Portland Cement
Thickness of Surface Seal: 1'

Type of Protective Casing: PVC
Inside Dia. Of Casing: 4"
Depth Above Ground of Casing: 3.5'
Depth Below Ground of Casing: 1.5'

Type of Bentonite Seal: Bentonite Chips
Depth to Top of Bentonite Seal: 1'

Type of Screen: PVC
Screen Diameter: 2"
Screen Slot Size: 0.010"
Depth to Top of Screen: 2'
Depth to Bottom of Screen: 12'

Depth to Bottom of Borehole: 12'

ATTACHMENT 3

CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-6

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/22/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 20.85 ft. (from TOC)

(2) Depth to Water: 14.20 ft. (from TOC)

(3) Column of Water: 5.85 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 0.95 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	1.2	2.0	2.5	2.9	3.2	3.5			
Time	09:25	09:30	09:35	09:41	09:46	09:51	09:56			
ORP/EH (mV)	-25.7	-51.1	-55.9	-59.3	-62.2	-65.8	-66.5			
pH	6.42	7.70	7.81	7.86	7.90	7.92	7.93			
Cond. (µS/CM)	1749	1668	1618	1607	1602	1581	1633			
Turbidity (NTU)	110	E7*	E7*	14.1	21.0	15.1	20.1			
D.O. (mg/L)	2.62	2.06	1.11	0.73	0.78	1.82	2.80			
Temperature (°C)	11.56	11.56	11.59	11.65	11.78	12.01	12.36			
Depth to Water (Feet)	14.11	16.22	16.95	17.57	18.22	19.84	20.22[1]			

Total Volume Purged: 1.2 gal.

Total Purge Time: 31 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 10:25

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Comments: Water is light orange and turbid. Odorless. No effervescence. Water clears during purging. Orange sediment in purge water.

*E7 = Turbidity meter error (light leak)

[1] = Well purged dry. Wait for monitoring well to recharge before sampling.

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-7

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/21/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 29.9 ft. (from TOC)

(2) Depth to Water: 21.17 ft. (from TOC)

(3) Column of Water: 8.73 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.4 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	0.1	0.25	0.4	0.8					
Time	14:04	14:09	14:15	14:20	14:26					
ORP/EH (mV)	-73.4	-71.4	-70.0	-71.2	-73.5					
pH	7.59	7.77	7.79	7.82	7.80					
Cond. (µS/CM)	2273	2277	2276	2278	2277					
Turbidity (NTU)	E7*	NM	NM	15.9	14.5					
D.O. (mg/L)	1.99	2.66	2.79	2.82	2.19					
Temperature (°C)	14.38	13.78	13.49	13.49	13.60					
Depth to Water (Feet)	21.17	21.66	21.76	21.82	21.85					

Total Volume Purged: 0.8 gal.

Total Purge Time: 31 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 14:30

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Stopped sampling at 16:30. Will continue to collect samples on 10/22/09
Remaining samples collected at 0745 on 10/22/09

*E7 = Turbidity meter error (light leak)

NM = Not Measured

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-13

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/22/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 15.3 ft. (from TOC)

(2) Depth to Water: 7.04 ft. (from TOC)

(3) Column of Water: 8.26 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.35 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	1	1.3	1.75	2.2	2.5	3.0	4.0	4.5	5.5
Time	14:24	14:41	14:46	14:51	14:56	14:59	15:06	15:35	15:39	15:45
ORP/EH (mV)	-59.5	-70.0	-71.2	-74.3	-75.9	-77.3	-77.7	-75.0	-78.5	-79.9
pH	7.48	7.86	7.85	7.91	7.93	8.02	7.94	8.06	8.02	8.03
Cond. (µS/CM)	1820	1864	1866	1867	1867	1867	1862	1866	1867	1867
Turbidity (NTU)	18.1	253	143	143	81.7	69.9	63.7	99.2	102	64.7
D.O. (mg/L)	3.22	1.17	0.76	0.67	0.66	0.57	0.28	0.73	0.34	0.34
Temperature (°C)	13.14	12.40	12.64	12.49	12.46	12.42	12.92	12.16	12.09	12.05
Depth to Water (Feet)	7.01	NM	NM	7.47	NM	7.38	7.22	7.64	7.78	7.82

Total Volume Purged: 6.4 gal.

Total Purge Time: 81 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 16:00

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Comments: Water is clear, odorless, no effervescence.

Faulty pump at 3.0 gallons. Decide to stop purging and switch out pump.

NM = Not Measured

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-14

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/22/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 30.34 ft. (from TOC)

(2) Depth to Water: 19.97 ft. (from TOC)

(3) Column of Water: 10.37 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.69 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	0.1	0.2	0.4	0.5	0.8	1.0	1.2	1.3	1.5
Time	10:25	10:31	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10
ORP/EH (mV)	-92.2	-96.4	-96.9	-95.4	-97.4	-100.9	-105.4	-108.8	-112.6	-113.4
pH	7.68	8.18	8.24	8.24	8.25	8.24	8.23	8.23	8.24	8.24
Cond. (µS/CM)	2412	2443	2455	2466	2470	2454	2429	2407	2378	2344
Turbidity (NTU)	385	404	386	295	224	181	150	112	96.7	83.8
D.O. (mg/L)	2.55	3.19	3.34	3.22	3.35	3.16	2.94	2.81	2.58	2.29
Temperature (°C)	15.40	14.40	14.07	13.91	13.85	13.89	13.97	14.04	13.88	13.55
Depth to Water (Feet)	19.59	20.61	20.64	20.66	20.67	20.68	20.69	20.69	20.69	20.71

Total Volume Purged: 2.2 gal.

Total Purge Time: 68 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 11:35 (start) 13:30 (end)

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Water is cloudy, odorless, no effervescence

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-15

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/21/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 25.5 ft. (from TOC)

(2) Depth to Water: 18.51 ft. (from TOC)

(3) Column of Water: 6.99 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.14 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	0.2	0.4	0.6	1.0	1.1	1.2			
Time	08:15	08:20	08:25	08:30	08:38	08:42	08:46			
ORP/EH (mV)	-39.3	-43.5	-44.0	-46.3	-46.2	-56.3	-57.1			
pH	7.66	7.75	7.75	7.75	7.80	7.78	7.77			
Cond. (µS/CM)	1527	1718	1718	1610	2123	2125	2131			
Turbidity (NTU)	E7*	39.3	30.5	22.7	22.7	9.97	9.62			
D.O. (mg/L)	0.52	-1.92	-4.01	-3.29	2.05	1.39	1.29			
Temperature (°C)	13.91	15.47	16.30	18.18	11.85	11.84	11.85			
Depth to Water (Feet)	18.51	19.06	19.20	19.31	19.45	19.49	19.52			

Total Volume Purged: 1.2 gal.

Total Purge Time: 31 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 08:50

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Comments: Water is clear, colorless, odorless, no effervescence

Batteries were changed on water quality meters at 08:30

*E7 = Turbidity meter error (light leak)

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-16

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/20/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 25.7 ft. (from TOC)

(2) Depth to Water: 15.97 ft. (from TOC)

(3) Column of Water: 9.73 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.58 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	0.25	0.75	1.0	1.25	1.50				
Time	14:48	14:53	14:58	15:03	15:08	15:13				
ORP/EH (mV)	-43.0	-49.0	-55.2	-62.4	-70.1	-72.1				
pH	7.02	7.58	7.58	7.59	7.59	7.62				
Cond. (µS/CM)	1840	1724	1592	1567	1556	1552				
Turbidity (NTU)	24.4	10.5	6.81	4.96	10.3	21.7				
D.O. (mg/L)	2.62	1.94	2.14	1.95	1.72	1.71				
Temperature (°C)	16.44	13.18	13.31	13.38	13.53	13.63				
Depth to Water (Feet)	15.97	16.91	17.21	17.55	17.88	18.21				

Total Volume Purged: 1.5 gal.

Total Purge Time: 25 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 15:15

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Comments: Water is clear, low turbidity, odorless, no effervescence

Parameters ammonia, hardness, phenolics, and SVOCs were sampled on 10/21/09 at 16:15.

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-17

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/20/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 17.7 ft. (from TOC)

(2) Depth to Water: 10.41 ft. (from TOC)

(3) Column of Water: 7.29 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.19 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0.5	0.8	1.0	1.5	2.0	2.5				
Time	11:21	12:42	12:47	12:50	12:55	13:00				
ORP/EH (mV)	-60.0	-63.6	-59.6	-65.5	-69.8	-73.2				
pH	7.25	7.65	7.34	7.36	7.38	7.34				
Cond. (µS/CM)	1027	1008	1047	1063	1091	1128				
Turbidity (NTU)	156	114	26.7	11.8	7.57	5.41				
D.O. (mg/L)	1.92	3.10	0.32	0.27	0.22	0.20				
Temperature (°C)	12.51	14.09	12.14	12.06	12.06	12.06				
Depth to Water (Feet)	10.41	10.41	10.76	10.79	10.79	10.79				

Total Volume Purged: 2.5 gal.

Total Purge Time: 39 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 13:02

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Equipment rinsate collected here at 11:00
MS/MSD collected here at 13:31

Water is clear, odorless, slightly turbid, no effervescence

Pump breaks at 11:25. Returned to Pine Environmental for another pump

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-18

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/21/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 15.5 ft. (from TOC)

(2) Depth to Water: 8.07 ft. (from TOC)

(3) Column of Water: 7.43 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.21 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	0.9	1.4	2.5	3.0	3.5	3.75	4.1		
Time	11:15	11:22	11:27	11:32	11:36	11:41	11:46	11:50		
ORP/EH (mV)	-30.0	-51.9	-57.2	-62.7	-68.6	-69.0	-73.9	-79.4		
pH	6.98	7.86	7.89	7.90	7.96	7.96	7.98	8.00		
Cond. (µS/CM)	1949	1934	1980	2022	2044	2050	2060	2072		
Turbidity (NTU)	E7*	E7	NM	NM	NM	NM	11.3	5.83		
D.O. (mg/L)	2.20	0.89	0.71	0.64	0.52	0.40	0.34	0.26		
Temperature (°C)	11.95	12.46	12.29	12.04	11.77	11.85	11.80	11.71		
Depth to Water (Feet)	8.07	10.30	10.98	11.16	11.29	11.21	10.99	10.21		

Total Volume Purged: 2.5 gal.

Total Purge Time: 39 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 11:50

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

*E7 = Turbidity meter error (light leak)

NM = Not Measured

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CHA	Well Sampling/ Development Log	Sample/Well Designation: MW-19

Project Name: Salina Landfill

Logged By: Benati/Burke

Project Location: Salina, NY

Date: 10/20/09

Project Number: 6967.3018.1106

Screen Length: 10 feet

Purge Information:

(1) Depth to Bottom of Well: 15.5 ft. (from TOC)

(2) Depth to Water: 4.73 ft. (from TOC)

(3) Column of Water: 10.77 ft. [(1) – (2)]

(4) Well Riser Diameter: 2 in.

(5) Volume Conversion: 0.163 gal./ft. (see below)

(6) 1 Well Volume: 1.75 gal. [(3) x (5)]

Method of Purging: ☐ WaTerra ☐ Bailer ☐ Submersible ☒ Other: Peristaltic Pump

Volume Conversion: (gal./ft.)
2" = 0.163 4" = 0.653 6" = 1.469 8" 2.611 10" = 4.08

Field Analysis:

Volume Purged (gal.)	0	1	1.4	2.0	2.25	2.9				
Time	16:55	17:00	17:05	17:10	17:15	17:20				
ORP/EH (mV)	-60.9	-70.6	-74.7	-79.0	-84.5	-94.1				
pH	7.30	7.58	7.66	7.69	7.71	7.71				
Cond. (µS/CM)	2771	2838	2843	2837	2816	2798				
Turbidity (NTU)	21.7	>1000	960	241	46.6	36.4				
D.O. (mg/L)	2.51	0.42	0.29	0.22	0.22	0.18				
Temperature (°C)	13.74	12.64	12.60	12.48	12.36	12.37				
Depth to Water (Feet)	4.78	4.99	4.92	4.91	4.91	4.91				

Total Volume Purged: 2.9 gal.

Total Purge Time: 25 minutes

Sampling Information:

Sampling Method: Peristaltic Pump

No. of Bottles: 18

Sampling Time: 17:23

Sample Analyses: VOCs, SVOCs, PCBs, Pesticides, Total Metals, Baseline leachate parameters

Water is cloudy gray, odorless, no effervescence

Field Blank CHA-1 collected here

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ATTACHMENT 4

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022411.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	5.2	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	0.95	J
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	19	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	0.71	J
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1.6	
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022411.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	7.4	
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1.4	
95-50-1	1,2-Dichlorobenzene	3.7	
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022414.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	250	E
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	250	E
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	380	E
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	34	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022414.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022561.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	280	D
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	260	D
75-69-4	Trichlorofluoromethane	10	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	510	D
110-82-7	Cyclohexane	10	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	10	U
156-59-2	cis-1,2-Dichloroethene	36	D
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
108-87-2	Methylcyclohexane	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
108-10-1	4-Methyl-2-Pentanone	50	U
108-88-3	Toluene	10	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022561.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethyl Benzene	10	U
179601-23-1	m/p-Xylenes	20	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022415.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	280	E
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	270	E
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	420	E
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	37	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022415.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022562.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	240	D
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	220	D
75-69-4	Trichlorofluoromethane	10	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	420	D
110-82-7	Cyclohexane	10	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	10	U
156-59-2	cis-1,2-Dichloroethene	30	D
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
108-87-2	Methylcyclohexane	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
108-10-1	4-Methyl-2-Pentanone	50	U
108-88-3	Toluene	10	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022562.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethyl Benzene	10	U
179601-23-1	m/p-Xylenes	20	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

CHEMTECH

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027004.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	8.7	
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	9.2	
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.97	J
75-35-4	1,1-Dichloroethene	1.5	
67-64-1	Acetone	8.3	
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	4.6	
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	
75-34-3	1,1-Dichloroethane	19	
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	250	E
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1.8	
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	9.3	
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027004.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

-1E-

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027004.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 Dilution Factor: 1

Soil Extract Volume: 5000 Soil Aliquot Volume:

Number TICS found: 2 Concentration Units: ug/L

(ug/L or ug/Kg)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	unknown1.08	1.08	18	J
60-29-7	Diethyl Ether	1.51	5.6	J

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CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027005.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	14	D
110-82-7	Cyclohexane	10	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	10	U
156-59-2	cis-1,2-Dichloroethene	190	D
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
108-87-2	Methylcyclohexane	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	6.6	JD
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
108-10-1	4-Methyl-2-Pentanone	50	U
108-88-3	Toluene	10	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027005.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethyl Benzene	10	U
179601-23-1	m/p-Xylenes	20	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022417.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	0.83	J
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	9.1	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022417.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027006.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	210	E
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	45	
75-35-4	1,1-Dichloroethene	38	
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	67	
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	3400	E
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	170	E
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	40	
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	24	
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	19	

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027006.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	0.39	J
108-90-7	Chlorobenzene	2.2	
100-41-4	Ethyl Benzene	3.8	
179601-23-1	m/p-Xylenes	1.4	J
95-47-6	o-Xylene	22	
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1.4	
95-50-1	1,2-Dichlorobenzene	80	
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

-1E-

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027006.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 Dilution Factor: 1

Soil Extract Volume: 5000 Soil Aliquot Volume:

Number TICS found: 2 Concentration Units: ug/L

(ug/L or ug/Kg)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	unknown2.54	2.54	18	J
91-20-3	Naphthalene	11.12	1.1	J

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CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027007.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	200	D
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
76-13-1	1,1,2-Trichlorotrifluoroethane	57	D
75-35-4	1,1-Dichloroethene	42	D
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	10	U
1634-04-4	Methyl tert-butyl Ether	10	U
79-20-9	Methyl Acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	72	D
110-82-7	Cyclohexane	10	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	10	U
156-59-2	cis-1,2-Dichloroethene	6200	ED
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	190	D
108-87-2	Methylcyclohexane	10	U
71-43-2	Benzene	18	D
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	27	D
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
108-10-1	4-Methyl-2-Pentanone	50	U
108-88-3	Toluene	4.1	JD

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027007.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 10

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethyl Benzene	10	U
179601-23-1	m/p-Xylenes	20	U
95-47-6	o-Xylene	17	D
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	69	D
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15DL2

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09DL2

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022601.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 11/03/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 100

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	100	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	130	D
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-69-4	Trichlorofluoromethane	100	U
76-13-1	1,1,2-Trichlorotrifluoroethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	500	U
75-15-0	Carbon Disulfide	100	U
1634-04-4	Methyl tert-butyl Ether	100	U
79-20-9	Methyl Acetate	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	49	JD
110-82-7	Cyclohexane	100	U
78-93-3	2-Butanone	500	U
56-23-5	Carbon Tetrachloride	100	U
156-59-2	cis-1,2-Dichloroethene	3800	D
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	67	JD
108-87-2	Methylcyclohexane	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	U
79-01-6	Trichloroethene	100	U
78-87-5	1,2-Dichloropropane	100	U
75-27-4	Bromodichloromethane	100	U
108-10-1	4-Methyl-2-Pentanone	500	U
108-88-3	Toluene	100	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15DL2

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09DL2

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022601.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 11/03/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 100

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
591-78-6	2-Hexanone	500	U
124-48-1	Dibromochloromethane	100	U
106-93-4	1,2-Dibromoethane	100	U
127-18-4	Tetrachloroethene	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethyl Benzene	100	U
179601-23-1	m/p-Xylenes	200	U
95-47-6	o-Xylene	100	U
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
98-82-8	Isopropylbenzene	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U
96-12-8	1,2-Dibromo-3-Chloropropane	100	U
120-82-1	1,2,4-Trichlorobenzene	100	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022419.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	17	
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	0.66	J
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	21	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	3.1	
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	0.72	J

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022419.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	4.4	
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	0.64	J
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	0.73	J
95-50-1	1,2-Dichlorobenzene	1.6	
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022419.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 Dilution Factor: 1

Soil Extract Volume: 5000 Soil Aliquot Volume:

Number TICS found: 1 Concentration Units: ug/L

(ug/L or ug/Kg)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
75-65-0	Tert butyl alcohol	1.91	41	J

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7RE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10RE

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022602.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 11/03/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	36	
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1.2	
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	11	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	3	
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	0.73	J

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7RE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10RE

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022602.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 11/03/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	4.1	
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	0.63	J
95-50-1	1,2-Dichlorobenzene	1	
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027010.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027010.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLANK

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-12

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022404.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLANK

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-12

Sample wt/vol: 5 (g/mL) ml Lab File ID: VG022404.D

Level: (low/med) Date Received: 10/22/09

% Moisture: not dec. 100 Date Analyzed: 10/23/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027011.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	0.76	J

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027011.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027013.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	3300	E
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	260	E
67-64-1	Acetone	5200	E
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	200	E
75-34-3	1,1-Dichloroethane	570	E
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	940	E
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	4300	E
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	75	
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	11	
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	1700	E
108-88-3	Toluene	220	E

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027013.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

-1E-

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027013.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 Dilution Factor: 1

Soil Extract Volume: 5000 Soil Aliquot Volume:

Number TICS found: 7 Concentration Units: ug/L

(ug/L or ug/Kg)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000359-11-5	Ethene, trifluoro-	1.3	150	J
000075-38-7	Ethene, 1,1-difluoro-	1.38	67	J
	unknown1.44	1.44	730	J
	unknown2.27	2.27	1600	J
	unknown3.76	3.76	4400	J
000064-19-7	Acetic acid	5.61	45	J
000631-61-8	Ammonium acetate	7.08	20	J

FORM I SV-TIC

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027014.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 50

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	50	U
74-87-3	Chloromethane	50	U
75-01-4	Vinyl Chloride	2700	D
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-69-4	Trichlorofluoromethane	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	50	U
75-35-4	1,1-Dichloroethene	310	D
67-64-1	Acetone	14000	D
75-15-0	Carbon Disulfide	50	U
1634-04-4	Methyl tert-butyl Ether	50	U
79-20-9	Methyl Acetate	50	U
75-09-2	Methylene Chloride	50	U
156-60-5	trans-1,2-Dichloroethene	65	D
75-34-3	1,1-Dichloroethane	1200	D
110-82-7	Cyclohexane	50	U
78-93-3	2-Butanone	2500	D
56-23-5	Carbon Tetrachloride	50	U
156-59-2	cis-1,2-Dichloroethene	39000	ED
67-66-3	Chloroform	50	U
71-55-6	1,1,1-Trichloroethane	50	U
108-87-2	Methylcyclohexane	50	U
71-43-2	Benzene	100	D
107-06-2	1,2-Dichloroethane	50	U
79-01-6	Trichloroethene	50	U
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
108-10-1	4-Methyl-2-Pentanone	470	D
108-88-3	Toluene	92	D

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14DL

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15DL

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027014.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 50

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethyl Benzene	50	U
179601-23-1	m/p-Xylenes	100	U
95-47-6	o-Xylene	50	U
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-Chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14DL2

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15DL2

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027015.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 500

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	500	U
74-87-3	Chloromethane	500	U
75-01-4	Vinyl Chloride	2200	D
74-83-9	Bromomethane	500	U
75-00-3	Chloroethane	500	U
75-69-4	Trichlorofluoromethane	500	U
76-13-1	1,1,2-Trichlorotrifluoroethane	500	U
75-35-4	1,1-Dichloroethene	500	U
67-64-1	Acetone	10000	D
75-15-0	Carbon Disulfide	500	U
1634-04-4	Methyl tert-butyl Ether	500	U
79-20-9	Methyl Acetate	500	U
75-09-2	Methylene Chloride	500	U
156-60-5	trans-1,2-Dichloroethene	500	U
75-34-3	1,1-Dichloroethane	1300	D
110-82-7	Cyclohexane	500	U
78-93-3	2-Butanone	2500	U
56-23-5	Carbon Tetrachloride	500	U
156-59-2	cis-1,2-Dichloroethene	44000	D
67-66-3	Chloroform	500	U
71-55-6	1,1,1-Trichloroethane	500	U
108-87-2	Methylcyclohexane	500	U
71-43-2	Benzene	500	U
107-06-2	1,2-Dichloroethane	500	U
79-01-6	Trichloroethene	500	U
78-87-5	1,2-Dichloropropane	500	U
75-27-4	Bromodichloromethane	500	U
108-10-1	4-Methyl-2-Pentanone	2500	U
108-88-3	Toluene	500	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14DL2

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15DL2

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027015.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 500

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	500	U
10061-01-5	cis-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	U
591-78-6	2-Hexanone	2500	U
124-48-1	Dibromochloromethane	500	U
106-93-4	1,2-Dibromoethane	500	U
127-18-4	Tetrachloroethene	500	U
108-90-7	Chlorobenzene	500	U
100-41-4	Ethyl Benzene	500	U
179601-23-1	m/p-Xylenes	1000	U
95-47-6	o-Xylene	500	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
98-82-8	Isopropylbenzene	500	U
79-34-5	1,1,2,2-Tetrachloroethane	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
96-12-8	1,2-Dibromo-3-Chloropropane	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027012.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	5.2	
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD027012.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/30/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

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Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-17

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD026990.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/29/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl Chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	1	U
1634-04-4	Methyl tert-butyl Ether	1	U
79-20-9	Methyl Acetate	1	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
110-82-7	Cyclohexane	1	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	U
108-87-2	Methylcyclohexane	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
108-10-1	4-Methyl-2-Pentanone	5	U
108-88-3	Toluene	1	U

CHEMTECH

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLANK

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-17

Sample wt/vol: 5 (g/mL) ml Lab File ID: VD026990.D

Level: (low/med) Date Received: 10/23/09

% Moisture: not dec. 100 Date Analyzed: 10/29/09

GC Column: RTX-VMS ID: 0.18 (mm) Dilution Factor: 1

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
10061-02-6	t-1,3-Dichloropropene	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
127-18-4	Tetrachloroethene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethyl Benzene	1	U
179601-23-1	m/p-Xylenes	2	U
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
Client ID:	**CHA-1**								
A4803-05	CHA-1	WATER	Vinyl Chloride		280.00	E	1.0	0.34	ug/L
A4803-05	CHA-1	WATER	Chloroethane		270.00	E	1.0	0.66	ug/L
A4803-05	CHA-1	WATER	1,1-Dichloroethane		420.00	E	1.0	0.36	ug/L
A4803-05	CHA-1	WATER	cis-1,2-Dichloroethene		37.00		1.0	0.35	ug/L
			Total Voc :			**1,007.00**			
			Total Concentration:			**1,007.00**			
Client ID:	**CHA-1DL**								
A4803-05DL	CHA-1DL	WATER	Vinyl Chloride		240.00	D	10	3.4	ug/L
A4803-05DL	CHA-1DL	WATER	Chloroethane		220.00	D	10	6.6	ug/L
A4803-05DL	CHA-1DL	WATER	1,1-Dichloroethane		420.00	D	10	3.6	ug/L
A4803-05DL	CHA-1DL	WATER	cis-1,2-Dichloroethene		30.00	D	10	3.5	ug/L
			Total Voc :			**910.00**			
			Total Concentration:			**910.00**			
Client ID:	**MW-13**								
A4803-16	MW-13	WATER	cis-1,2-Dichloroethene		5.20		1.0	0.35	ug/L
			Total Voc :			**5.20**			
			Total Concentration:			**5.20**			
Client ID:	**MW-14**								
A4803-15	MW-14	WATER	Vinyl Chloride		3,300.00	E	1.0	0.34	ug/L
A4803-15	MW-14	WATER	1,1-Dichloroethene		260.00	E	1.0	0.47	ug/L
A4803-15	MW-14	WATER	Acetone		5,200.00	E	5.0	2.8	ug/L
A4803-15	MW-14	WATER	trans-1,2-Dichloroethene		200.00	E	1.0	0.41	ug/L
A4803-15	MW-14	WATER	1,1-Dichloroethane		570.00	E	1.0	0.36	ug/L
A4803-15	MW-14	WATER	2-Butanone		940.00	E	5.0	1.3	ug/L
A4803-15	MW-14	WATER	cis-1,2-Dichloroethene		4,300.00	E	1.0	0.35	ug/L
A4803-15	MW-14	WATER	Benzene		75.00		1.0	0.32	ug/L
A4803-15	MW-14	WATER	Trichloroethene		11.00		1.0	0.28	ug/L
A4803-15	MW-14	WATER	4-Methyl-2-Pentanone		1,700.00	E	5.0	2.1	ug/L
A4803-15	MW-14	WATER	Toluene		220.00	E	1.0	0.37	ug/L
			Total Voc :			**16,776.00**			
A4803-15	MW-14	WATER	unknown1.44	*	730.00	J	0	0	ug/L
A4803-15	MW-14	WATER	unknown2.27	*	1,600.00	J	0	0	ug/L
A4803-15	MW-14	WATER	unknown3.76	*	4,400.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Acetic acid	*	45.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Ethene, 1,1-difluoro-	*	67.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Ethene, trifluoro-	*	150.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Ammonium acetate	*	20.00	J	0	0	ug/L
			Total Tics :			**7,012.00**			
			Total Concentration:			**23,788.00**			

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
Client ID:	**MW-14DL**								
A4803-15DL	MW-14DL	WATER	Vinyl Chloride		2,700.00	D	50	17	ug/L
A4803-15DL	MW-14DL	WATER	1,1-Dichloroethene		310.00	D	50	24	ug/L
A4803-15DL	MW-14DL	WATER	Acetone		14,000.00	D	250	140	ug/L
A4803-15DL	MW-14DL	WATER	trans-1,2-Dichloroethene		65.00	D	50	20	ug/L
A4803-15DL	MW-14DL	WATER	1,1-Dichloroethane		1,200.00	D	50	18	ug/L
A4803-15DL	MW-14DL	WATER	2-Butanone		2,500.00	D	250	66	ug/L
A4803-15DL	MW-14DL	WATER	cis-1,2-Dichloroethene		39,000.00	ED	50	18	ug/L
A4803-15DL	MW-14DL	WATER	Benzene		100.00	D	50	16	ug/L
A4803-15DL	MW-14DL	WATER	4-Methyl-2-Pentanone		470.00	D	250	100	ug/L
A4803-15DL	MW-14DL	WATER	Toluene		92.00	D	50	18	ug/L
			Total Voc :			**60,437.00**			
			Total Concentration:			**60,437.00**			
Client ID:	**MW-14DL2**								
A4803-15DL2	MW-14DL2	WATER	Vinyl Chloride		2,200.00	D	500	170	ug/L
A4803-15DL2	MW-14DL2	WATER	Acetone		10,000.00	D	2500	1400	ug/L
A4803-15DL2	MW-14DL2	WATER	1,1-Dichloroethane		1,300.00	D	500	180	ug/L
A4803-15DL2	MW-14DL2	WATER	cis-1,2-Dichloroethene		44,000.00	D	500	180	ug/L
			Total Voc :			**57,500.00**			
			Total Concentration:			**57,500.00**			
Client ID:	**MW-15**								
A4803-09	MW-15	WATER	Vinyl Chloride		210.00	E	1.0	0.34	ug/L
A4803-09	MW-15	WATER	1,1,2-Trichlorotrifluoroethane		45.00		1.0	0.45	ug/L
A4803-09	MW-15	WATER	1,1-Dichloroethene		38.00		1.0	0.47	ug/L
A4803-09	MW-15	WATER	1,1-Dichloroethane		67.00		1.0	0.36	ug/L
A4803-09	MW-15	WATER	cis-1,2-Dichloroethene		3,400.00	E	1.0	0.35	ug/L
A4803-09	MW-15	WATER	1,1,1-Trichloroethane		170.00	E	1.0	0.40	ug/L
A4803-09	MW-15	WATER	Benzene		40.00		1.0	0.32	ug/L
A4803-09	MW-15	WATER	Trichloroethene		24.00		1.0	0.28	ug/L
A4803-09	MW-15	WATER	Toluene		19.00		1.0	0.37	ug/L
A4803-09	MW-15	WATER	Tetrachloroethene		0.39	J	1.0	0.27	ug/L
A4803-09	MW-15	WATER	Chlorobenzene		2.20		1.0	0.49	ug/L
A4803-09	MW-15	WATER	Ethyl Benzene		3.80		1.0	0.53	ug/L
A4803-09	MW-15	WATER	1,4-Dichlorobenzene		1.40		1.0	0.32	ug/L
A4803-09	MW-15	WATER	1,2-Dichlorobenzene		80.00		1.0	0.45	ug/L
			Total Voc :			**4,100.79**			
A4803-09	MW-15	WATER	Naphthalene	*	1.10	J	1.0	0.67	ug/L
A4803-09	MW-15	WATER	unknown2.54	*	18.00	J	0	0	ug/L
			Total Tics :			**19.10**			
			Total Concentration:			**4,119.89**			

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
Client ID:	**MW-15DL**								
A4803-09DL	MW-15DL	WATER	Vinyl Chloride		200.00	D	10	3.4	ug/L
A4803-09DL	MW-15DL	WATER	1,1,2-Trichlorotrifluoroethane		57.00	D	10	4.5	ug/L
A4803-09DL	MW-15DL	WATER	1,1-Dichloroethene		42.00	D	10	4.7	ug/L
A4803-09DL	MW-15DL	WATER	1,1-Dichloroethane		72.00	D	10	3.6	ug/L
A4803-09DL	MW-15DL	WATER	cis-1,2-Dichloroethene		6,200.00	ED	10	3.5	ug/L
A4803-09DL	MW-15DL	WATER	1,1,1-Trichloroethane		190.00	D	10	4.0	ug/L
A4803-09DL	MW-15DL	WATER	Benzene		18.00	D	10	3.2	ug/L
A4803-09DL	MW-15DL	WATER	Trichloroethene		27.00	D	10	2.8	ug/L
A4803-09DL	MW-15DL	WATER	Toluene		4.10	JD	10	3.7	ug/L
A4803-09DL	MW-15DL	WATER	1,2-Dichlorobenzene		69.00	D	10	4.5	ug/L
			Total Voc :			**6,879.10**			
			Total Concentration:			**6,879.10**			
Client ID:	**MW-15DL2**								
A4803-09DL2	MW-15DL2	WATER	Vinyl Chloride		130.00	D	100	34	ug/L
A4803-09DL2	MW-15DL2	WATER	1,1-Dichloroethane		49.00	JD	100	36	ug/L
A4803-09DL2	MW-15DL2	WATER	cis-1,2-Dichloroethene		3,800.00	D	100	35	ug/L
A4803-09DL2	MW-15DL2	WATER	1,1,1-Trichloroethane		67.00	JD	100	40	ug/L
			Total Voc :			**4,046.00**			
			Total Concentration:			**4,046.00**			
Client ID:	**MW-16**								
A4803-06	MW-16	WATER	Vinyl Chloride		8.70		1.0	0.34	ug/L
A4803-06	MW-16	WATER	Chloroethane		9.20		1.0	0.66	ug/L
A4803-06	MW-16	WATER	1,1,2-Trichlorotrifluoroethane		0.97	J	1.0	0.45	ug/L
A4803-06	MW-16	WATER	1,1-Dichloroethene		1.50		1.0	0.47	ug/L
A4803-06	MW-16	WATER	Acetone		8.30		5.0	2.8	ug/L
A4803-06	MW-16	WATER	Methyl Acetate		4.60		1.0	0.83	ug/L
A4803-06	MW-16	WATER	trans-1,2-Dichloroethene		1.00		1.0	0.41	ug/L
A4803-06	MW-16	WATER	1,1-Dichloroethane		19.00		1.0	0.36	ug/L
A4803-06	MW-16	WATER	cis-1,2-Dichloroethene		250.00	E	1.0	0.35	ug/L
A4803-06	MW-16	WATER	Benzene		1.80		1.0	0.32	ug/L
A4803-06	MW-16	WATER	Trichloroethene		9.30		1.0	0.28	ug/L
			Total Voc :			**314.37**			
A4803-06	MW-16	WATER	Diethyl Ether	*	5.60	J	1.0	0.27	ug/L
A4803-06	MW-16	WATER	unknown1.08	*	18.00	J	0	0	ug/L
			Total Tics :			**23.60**			
			Total Concentration:			**337.97**			
Client ID:	**MW-16DL**								
A4803-06DL	MW-16DL	WATER	1,1-Dichloroethane		14.00	D	10	3.6	ug/L
A4803-06DL	MW-16DL	WATER	cis-1,2-Dichloroethene		190.00	D	10	3.5	ug/L

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter	Concentration	C	RDL	MDL	Units
A4803-06DL	MW-16DL	WATER	Trichloroethene	6.60	JD	10	2.8	ug/L
			Total Voc :		**210.60**			
			Total Concentration:		**210.60**			
Client ID:	**MW-17**							
A4803-01	MW-17	WATER	Vinyl Chloride	5.20		1.0	0.34	ug/L
A4803-01	MW-17	WATER	trans-1,2-Dichloroethene	0.95	J	1.0	0.41	ug/L
A4803-01	MW-17	WATER	cis-1,2-Dichloroethene	19.00		1.0	0.35	ug/L
A4803-01	MW-17	WATER	Benzene	0.71	J	1.0	0.32	ug/L
A4803-01	MW-17	WATER	Trichloroethene	1.60		1.0	0.28	ug/L
A4803-01	MW-17	WATER	Chlorobenzene	7.40		1.0	0.49	ug/L
A4803-01	MW-17	WATER	1,4-Dichlorobenzene	1.40		1.0	0.32	ug/L
A4803-01	MW-17	WATER	1,2-Dichlorobenzene	3.70		1.0	0.45	ug/L
			Total Voc :		**39.96**			
			Total Concentration:		**39.96**			
Client ID:	**MW-18**							
A4803-08	MW-18	WATER	Methyl tert-butyl Ether	0.83	J	1.0	0.35	ug/L
A4803-08	MW-18	WATER	cis-1,2-Dichloroethene	9.10		1.0	0.35	ug/L
			Total Voc :		**9.93**			
			Total Concentration:		**9.93**			
Client ID:	**MW-19**							
A4803-04	MW-19	WATER	Vinyl Chloride	250.00	E	1.0	0.34	ug/L
A4803-04	MW-19	WATER	Chloroethane	250.00	E	1.0	0.66	ug/L
A4803-04	MW-19	WATER	1,1-Dichloroethane	380.00	E	1.0	0.36	ug/L
A4803-04	MW-19	WATER	cis-1,2-Dichloroethene	34.00		1.0	0.35	ug/L
			Total Voc :		**914.00**			
			Total Concentration:		**914.00**			
Client ID:	**MW-19DL**							
A4803-04DL	MW-19DL	WATER	Vinyl Chloride	280.00	D	10	3.4	ug/L
A4803-04DL	MW-19DL	WATER	Chloroethane	260.00	D	10	6.6	ug/L
A4803-04DL	MW-19DL	WATER	1,1-Dichloroethane	510.00	D	10	3.6	ug/L
A4803-04DL	MW-19DL	WATER	cis-1,2-Dichloroethene	36.00	D	10	3.5	ug/L
			Total Voc :		**1,086.00**			
			Total Concentration:		**1,086.00**			
Client ID:	**MW-6**							
A4803-14	MW-6	WATER	Toluene	0.76	J	1.0	0.37	ug/L
			Total Voc :		**0.76**			
			Total Concentration:		**0.76**			
Client ID:	**MW-7**							
A4803-10	MW-7	WATER	Acetone	17.00		5.0	2.8	ug/L
A4803-10	MW-7	WATER	Methyl tert-butyl Ether	0.66	J	1.0	0.35	ug/L
A4803-10	MW-7	WATER	cis-1,2-Dichloroethene	21.00		1.0	0.35	ug/L

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
A4803-10	MW-7	WATER	Benzene		3.10		1.0	0.32	ug/L
A4803-10	MW-7	WATER	Toluene		0.72	J	1.0	0.37	ug/L
A4803-10	MW-7	WATER	Chlorobenzene		4.40		1.0	0.49	ug/L
A4803-10	MW-7	WATER	1,4-Dichlorobenzene		0.73	J	1.0	0.32	ug/L
A4803-10	MW-7	WATER	1,2-Dichlorobenzene		1.60		1.0	0.45	ug/L
			Total Voc :			**49.21**			
A4803-10	MW-7	WATER	Tert butyl alcohol	*	41.00	J	5.0	2.6	ug/L
			Total Tics :			**41.00**			
			Total Concentration:			**90.21**			
Client ID:	**MW-7RE**								
A4803-10RE	MW-7RE	WATER	Acetone		36.00		5.0	2.8	ug/L
A4803-10RE	MW-7RE	WATER	Methyl tert-butyl Ether		1.20		1.0	0.35	ug/L
A4803-10RE	MW-7RE	WATER	cis-1,2-Dichloroethene		11.00		1.0	0.35	ug/L
A4803-10RE	MW-7RE	WATER	Benzene		3.00		1.0	0.32	ug/L
A4803-10RE	MW-7RE	WATER	Toluene		0.73	J	1.0	0.37	ug/L
A4803-10RE	MW-7RE	WATER	Chlorobenzene		4.10		1.0	0.49	ug/L
A4803-10RE	MW-7RE	WATER	1,4-Dichlorobenzene		0.63	J	1.0	0.32	ug/L
A4803-10RE	MW-7RE	WATER	1,2-Dichlorobenzene		1.00		1.0	0.45	ug/L
			Total Voc :			**57.66**			
			Total Concentration:			**57.66**			

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031985.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031985.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031985.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.8	J
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031985.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 7

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.15	110	J
141-79-7	3-Penten-2-one, 4-methyl-	3.22	64	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.64	10	A
108-90-7	Benzene, chloro-	3.74	2.3	J
95-50-1	1,2-Dichlorobenzene	5.35	2.6	J
934-34-9	2(3H)-Benzothiazolone	9.11	4.0	J
80-39-7	Benzenesulfonamide, N-ethyl-4-meth	9.33	5.4	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031939.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031939.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031939.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031939.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 3

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.16	110	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.65	11	A
498-07-7	1,6-Anhydro-.beta.-D-glucopyranose	8.02	5.1	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031940.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031940.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

CHEMTECH

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031940.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031940.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 4

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.16	100	J
25414-22-6	Furan, 2-methoxy-	3.24	3.4	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.65	9.7	A
2595-97-3	D-Allose	8.02	5.4	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-07

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031980.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-07

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031980.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-07

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031980.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-07

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031980.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 7

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.15	91	J
123-91-1	1,4-Dioxane	2.4	110	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.64	9.6	A
	unknown8.46	8.46	6.8	J
	unknown9.62	9.62	2.7	J
57-10-3	n-Hexadecanoic acid	10.47	2.8	J
57-11-4	Octadecanoic acid	11.44	4.9	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 940 (g/mL) ml Lab File ID: BF031981.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 940 (g/mL) ml Lab File ID: BF031981.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 940 (g/mL) ml Lab File ID: BF031981.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 940 (g/mL) ml Lab File ID: BF031981.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 3

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.15	110	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.63	9.8	A
98-73-7	Benzoic acid, p-tert-butyl-	7.98	2.9	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031982.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031982.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031982.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 920 (g/mL) ml Lab File ID: BF031982.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 22

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.15	94	J
79-01-6	Trichloroethylene	2.35	3.8	J
123-91-1	1,4-Dioxane	2.4	170	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.63	11	A
108-38-3	Benzene, 1,3-dimethyl-	3.87	2.7	J
2175-91-9	1,3-Cyclopentadiene, 5-(1-methylet	4.17	14	J
130930-47-1	2-t-Butyl-5-methyl[1,3]dioxolan-4-	5.1	2.5	J
95-50-1	1,2-Dichlorobenzene	5.35	46	J
	unknown5.60	5.6	2.6	J
	unknown5.64	5.64	2.4	J
76-22-2	Camphor	6.11	4.8	J
2728-05-4	Benzamide, N,N-diethyl-4-methyl-	8.53	3.6	J
	unknown8.77	8.77	3.4	J
934-34-9	2(3H)-Benzothiazolone	9.11	4.6	J
	unknown10.20	10.2	2.6	J
	unknown10.23	10.23	3.8	J
57-10-3	n-Hexadecanoic acid	10.47	2.8	J
57-11-4	Octadecanoic acid	11.44	6.1	J
	unknown11.51	11.51	4.8	J
80-05-7	Phenol, 4,4-(1-methylethylidene)b	11.62	5.2	J
	unknown12.63	12.63	3.0	J
140925-23-1	2,3-Oxiranedicarboxylic acid, 2-me	12.7	3.4	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031983.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031983.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

CHEMTECH

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031983.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031983.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 15

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.15	120	J
123-91-1	1,4-Dioxane	2.4	230	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.63	11	A
	unknown5.64	5.64	2.7	J
54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidin	7.3	2.7	J
1758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	7.67	2.5	J
6331-04-0	Acetic acid, (2,4-xylyl)-	7.69	2.2	J
	unknown8.61	8.61	2.9	J
126-73-8	Tributyl phosphate	8.82	3.0	J
934-34-9	2(3H)-Benzothiazolone	9.12	9.7	J
80-39-7	Benzenesulfonamide, N-ethyl-4-meth	9.33	9.0	J
57-11-4	Octadecanoic acid	11.44	4.1	J
80-30-8	Benzenesulfonamide, N-cyclohexyl-4	11.57	2.9	J
80-05-7	Phenol, 4,4-(1-methylethylidene)b	11.62	15	J
78-51-3	Ethanol, 2-butoxy-, phosphate (3:1	12.48	3.8	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031984.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

CHEMTECH

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031984.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.5	J

Comments:

CHEMTECH

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031984.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 900 (g/mL) ml Lab File ID: BF031984.D

Level: (low/med) LOW Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/28/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
994-05-8	Butane, 2-methoxy-2-methyl-	2.15	110	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.63	8.8	A

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059212.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

CHEMTECH

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059212.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

CHEMTECH

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059212.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059212.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.17	10	A

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059213.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	7.4	J
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	3.7	J
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059213.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059213.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

CHEMTECH

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 900 (g/mL) ml Lab File ID: BE059213.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
123-91-1	1,4-Dioxane	1.98	340	J
108-11-2	2-Pentanol, 4-methyl-	2.43	3.6	J
544-25-2	1,3,5-Cycloheptatriene	2.5	29	J
	unknown2.69	2.69	9.5	J
120-92-3	Cyclopentanone	2.72	2.7	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.17	25	A
	unknown3.33	3.33	3.8	J
142-62-1	Hexanoic acid	3.38	11	J
616-62-6	Propanedioic acid, propyl-	3.65	14	J
108-94-1	Cyclohexanone	3.72	3.5	J
97-61-0	Pentanoic acid, 2-methyl-	4.15	33	J
646-07-1	Pentanoic acid, 4-methyl-	4.31	26	J
1561-11-1	Hexanoic acid, 4-methyl-	5	19	J
149-57-5	Hexanoic acid, 2-ethyl-	5.43	39	J
4536-23-6	Hexanoic acid, 2-methyl-	5.49	38	J
65-85-0	Benzoic acid	5.73	58	J
118-90-1	Benzoic acid, 2-methyl-	6.13	2.8	J
103-82-2	Benzeneacetic acid	6.19	47	J
99-04-7	Benzoic acid, 3-methyl-	6.27	6.3	J
99-94-5	Benzoic acid, 4-methyl-	6.31	3.0	J
501-52-0	Benzenepropanoic acid	6.66	27	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 950 (g/mL) ml Lab File ID: BE059214.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
100-52-7	Benzaldehyde	11	U
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2-oxybis(1-Chloropropane)	11	U
98-86-2	Acetophenone	11	U
65794-96-9	3+4-Methylphenols	11	U
621-64-7	N-Nitroso-di-n-propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	bis(2-Chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
105-60-2	Caprolactam	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1-Biphenyl	11	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 950 (g/mL) ml Lab File ID: BE059214.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
1912-24-9	Atrazine	11	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 950 (g/mL) ml Lab File ID: BE059214.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
117-84-0	Di-n-octyl phthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenz(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 950 (g/mL) ml Lab File ID: BE059214.D

Level: (low/med) LOW Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Concentration Units: ug/L

Number TICS found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
141-79-7	3-Penten-2-one, 4-methyl-	2.77	6.8	J
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.17	7.5	A

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
Client ID :	**CHA-1**								
A4803-05	CHA-1	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	9.70	A	0	0	ug/L
A4803-05	CHA-1	WATER	Butane, 2-methoxy-2-methyl-	*	100.00	J	0	0	ug/L
A4803-05	CHA-1	WATER	D-Allose	*	5.40	J	0	0	ug/L
A4803-05	CHA-1	WATER	Furan, 2-methoxy-	*	3.40	J	0	0	ug/L
			Total Tics :			**118.50**			
			Total Concentration:			**118.50**			
Client ID :	**EQUIPMENTRINSATE**								
A4803-11	EQUIPMENTRINSA]	WATER	bis(2-Ethylhexyl)phthalate		1.50	J	11	0.180	ug/L
			Total Svoc :			**1.50**			
A4803-11	EQUIPMENTRINSA]	WATER	Butane, 2-methoxy-2-methyl-	*	110.00	J	0	0	ug/L
A4803-11	EQUIPMENTRINSA]	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	8.80	A	0	0	ug/L
			Total Tics :			**118.80**			
			Total Concentration:			**120.30**			
Client ID :	**MW-13**								
A4803-16	MW-13	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	7.50	A	0	0	ug/L
A4803-16	MW-13	WATER	3-Penten-2-one, 4-methyl-	*	6.80	J	0	0	ug/L
			Total Tics :			**14.30**			
			Total Concentration:			**14.30**			
Client ID :	**MW-14**								
A4803-15	MW-14	WATER	Phenol		7.40	J	11	0.230	ug/L
A4803-15	MW-14	WATER	3+4-Methylphenols		3.70	J	11	0.420	ug/L
			Total Svoc :			**11.10**			
A4803-15	MW-14	WATER	Benzoic acid	*	58.00	J	11	8.2	ug/L
A4803-15	MW-14	WATER	1,4-Dioxane	*	340.00	J	11	11	ug/L
A4803-15	MW-14	WATER	2-Pentanol, 4-methyl-	*	3.60	J	0	0	ug/L
A4803-15	MW-14	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	25.00	A	0	0	ug/L
A4803-15	MW-14	WATER	1,3,5-Cycloheptatriene	*	29.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Propanedioic acid, propyl-	*	14.00	J	0	0	ug/L
A4803-15	MW-14	WATER	unknown2.69	*	9.50	J	0	0	ug/L
A4803-15	MW-14	WATER	unknown3.33	*	3.80	J	0	0	ug/L
A4803-15	MW-14	WATER	Benzoic acid, 2-methyl-	*	2.80	J	0	0	ug/L
A4803-15	MW-14	WATER	Benzoic acid, 3-methyl-	*	6.30	J	0	0	ug/L
A4803-15	MW-14	WATER	Benzoic acid, 4-methyl-	*	3.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Cyclohexanone	*	3.50	J	0	0	ug/L
A4803-15	MW-14	WATER	Cyclopentanone	*	2.70	J	0	0	ug/L
A4803-15	MW-14	WATER	Hexanoic acid	*	11.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Hexanoic acid, 2-ethyl-	*	39.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Hexanoic acid, 2-methyl-	*	38.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Hexanoic acid, 4-methyl-	*	19.00	J	0	0	ug/L

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Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
A4803-15	MW-14	WATER	Pentanoic acid, 2-methyl-	*	33.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Pentanoic acid, 4-methyl-	*	26.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Benzeneacetic acid	*	47.00	J	0	0	ug/L
A4803-15	MW-14	WATER	Benzenepropanoic acid	*	27.00	J	0	0	ug/L
			Total Tics :			**741.20**			
			Total Concentration:			**752.30**			

Client ID : MW-15

A4803-09	MW-15	WATER	1,2-Dichlorobenzene	*	46.00	J	11	0.280	ug/L
A4803-09	MW-15	WATER	1,4-Dioxane	*	170.00	J	11	11	ug/L
A4803-09	MW-15	WATER	2(3H)-Benzothiazolone	*	4.60	J	0	0	ug/L
A4803-09	MW-15	WATER	2,3-Oxiranedicarboxylic acid, 2-me	*	3.40	J	0	0	ug/L
A4803-09	MW-15	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	11.00	A	0	0	ug/L
A4803-09	MW-15	WATER	2-t-Butyl-5-methyl[1,3]dioxolan-4-	*	2.50	J	0	0	ug/L
A4803-09	MW-15	WATER	Benzamide, N,N-diethyl-4-methyl-	*	3.60	J	0	0	ug/L
A4803-09	MW-15	WATER	Benzene, 1,3-dimethyl-	*	2.70	J	0	0	ug/L
A4803-09	MW-15	WATER	Butane, 2-methoxy-2-methyl-	*	94.00	J	0	0	ug/L
A4803-09	MW-15	WATER	Camphor	*	4.80	J	0	0	ug/L
A4803-09	MW-15	WATER	n-Hexadecanoic acid	*	2.80	J	0	0	ug/L
A4803-09	MW-15	WATER	Octadecanoic acid	*	6.10	J	0	0	ug/L
A4803-09	MW-15	WATER	Phenol, 4,4-(1-methylethylidene)b	*	5.20	J	0	0	ug/L
A4803-09	MW-15	WATER	Trichloroethylene	*	3.80	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown10.20	*	2.60	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown10.23	*	3.80	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown11.51	*	4.80	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown12.63	*	3.00	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown5.60	*	2.60	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown5.64	*	2.40	J	0	0	ug/L
A4803-09	MW-15	WATER	unknown8.77	*	3.40	J	0	0	ug/L
A4803-09	MW-15	WATER	1,3-Cyclopentadiene, 5-(1-methylet	*	14.00	J	0	0	ug/L
			Total Tics :			**397.10**			
			Total Concentration:			**397.10**			

Client ID : MW-16

A4803-07	MW-16	WATER	1,4-Dioxane	*	110.00	J	11	11	ug/L
A4803-07	MW-16	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	9.60	A	0	0	ug/L
A4803-07	MW-16	WATER	Butane, 2-methoxy-2-methyl-	*	91.00	J	0	0	ug/L
A4803-07	MW-16	WATER	n-Hexadecanoic acid	*	2.80	J	0	0	ug/L
A4803-07	MW-16	WATER	Octadecanoic acid	*	4.90	J	0	0	ug/L
A4803-07	MW-16	WATER	unknown8.46	*	6.80	J	0	0	ug/L
A4803-07	MW-16	WATER	unknown9.62	*	2.70	J	0	0	ug/L
			Total Tics :			**227.80**			
			Total Concentration:			**227.80**			

Client ID : MW-17

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter		Concentration	C	RDL	MDL	Units
A4803-01	MW-17	WATER	bis(2-Ethylhexyl)phthalate		1.80	J	11	0.180	ug/L
			Total Svoc :			**1.80**			
A4803-01	MW-17	WATER	1,2-Dichlorobenzene	*	2.60	J	11	0.290	ug/L
A4803-01	MW-17	WATER	Butane, 2-methoxy-2-methyl-	*	110.00	J	0	0	ug/L
A4803-01	MW-17	WATER	2(3H)-Benzothiazolone	*	4.00	J	0	0	ug/L
A4803-01	MW-17	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	10.00	A	0	0	ug/L
A4803-01	MW-17	WATER	3-Penten-2-one, 4-methyl-	*	64.00	J	0	0	ug/L
A4803-01	MW-17	WATER	Benzene, chloro-	*	2.30	J	0	0	ug/L
A4803-01	MW-17	WATER	Benzenesulfonamide, N-ethyl-4-met	*	5.40	J	0	0	ug/L
			Total Tics :			**198.30**			
			Total Concentration:			**200.10**			
Client ID :	**MW-18**								
A4803-08	MW-18	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	9.80	A	0	0	ug/L
A4803-08	MW-18	WATER	Benzoic acid, p-tert-butyl-	*	2.90	J	0	0	ug/L
A4803-08	MW-18	WATER	Butane, 2-methoxy-2-methyl-	*	110.00	J	0	0	ug/L
			Total Tics :			**122.70**			
			Total Concentration:			**122.70**			
Client ID :	**MW-19**								
A4803-04	MW-19	WATER	1,6-Anhydro-.beta.-D-glucopyranos	*	5.10	J	0	0	ug/L
A4803-04	MW-19	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	11.00	A	0	0	ug/L
A4803-04	MW-19	WATER	Butane, 2-methoxy-2-methyl-	*	110.00	J	0	0	ug/L
			Total Tics :			**126.10**			
			Total Concentration:			**126.10**			
Client ID :	**MW-6**								
A4803-14	MW-6	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	10.00	A	0	0	ug/L
			Total Tics :			**10.00**			
			Total Concentration:			**10.00**			
Client ID :	**MW-7**								
A4803-10	MW-7	WATER	1,4-Dioxane	*	230.00	J	11	11	ug/L
A4803-10	MW-7	WATER	2(3H)-Benzothiazolone	*	9.70	J	0	0	ug/L
A4803-10	MW-7	WATER	2-Pentanone, 4-hydroxy-4-methyl-	*	11.00	A	0	0	ug/L
A4803-10	MW-7	WATER	Acetic acid, (2,4-xylyl)-	*	2.20	J	0	0	ug/L
A4803-10	MW-7	WATER	Benzene, 2-ethyl-1,4-dimethyl-	*	2.50	J	0	0	ug/L
A4803-10	MW-7	WATER	Benzenesulfonamide, N-cyclohexyl-	*	2.90	J	0	0	ug/L
A4803-10	MW-7	WATER	Benzenesulfonamide, N-ethyl-4-met	*	9.00	J	0	0	ug/L
A4803-10	MW-7	WATER	Butane, 2-methoxy-2-methyl-	*	120.00	J	0	0	ug/L
A4803-10	MW-7	WATER	Ethanol, 2-butoxy-, phosphate (3:1	*	3.80	J	0	0	ug/L
A4803-10	MW-7	WATER	Octadecanoic acid	*	4.10	J	0	0	ug/L
A4803-10	MW-7	WATER	Phenol, 4,4-(1-methylethylidene)b	*	15.00	J	0	0	ug/L
A4803-10	MW-7	WATER	Pyridine, 3-(1-methyl-2-pyrrolidin	*	2.70	J	0	0	ug/L
A4803-10	MW-7	WATER	Tributyl phosphate	*	3.00	J	0	0	ug/L

CHEMTECH

Hit Summary Sheet
SW-846

SDG No.: A4803

Client: Clough Harbour & Associates LLP

Sample ID	Client ID		Parameter	Concentration		C	RDL	MDL	Units
A4803-10	MW-7	WATER	unknown5.64	*	2.70	J	0	0	ug/L
A4803-10	MW-7	WATER	unknown8.61	*	2.90	J	0	0	ug/L
			Total Tics :			**421.50**			
			Total Concentration:			**421.50**			

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 880 (g/mL) ml Lab File ID: P7042705.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.057	U
319-85-7	beta-BHC	0.057	U
319-86-8	delta-BHC	0.057	U
58-89-9	gamma-BHC	0.057	U
76-44-8	Heptachlor	0.057	U
309-00-2	Aldrin	0.057	U
1024-57-3	Heptachlor epoxide	0.057	U
959-98-8	Endosulfan I	0.057	U
60-57-1	Dieldrin	0.057	U
72-55-9	4,4-DDE	0.057	U
72-20-8	Endrin	0.057	U
33213-65-9	Endosulfan II	0.057	U
72-54-8	4,4-DDD	0.057	U
1031-07-8	Endosulfan Sulfate	0.057	U
50-29-3	4,4-DDT	0.057	U
72-43-5	Methoxychlor	0.057	U
53494-70-5	Endrin ketone	0.057	U
7421-93-4	Endrin aldehyde	0.057	U
5103-71-9	alpha-Chlordane	0.057	U
5103-74-2	gamma-Chlordane	0.057	U
8001-35-2	Toxaphene	0.57	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 920 (g/mL) ml Lab File ID: P7042708.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.054	U
72-55-9	4,4-DDE	0.054	U
72-20-8	Endrin	0.054	U
33213-65-9	Endosulfan II	0.054	U
72-54-8	4,4-DDD	0.054	U
1031-07-8	Endosulfan Sulfate	0.054	U
50-29-3	4,4-DDT	0.054	U
72-43-5	Methoxychlor	0.054	U
53494-70-5	Endrin ketone	0.054	U
7421-93-4	Endrin aldehyde	0.054	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	0.54	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 910 (g/mL) ml Lab File ID: P7042709.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.055	U
319-85-7	beta-BHC	0.055	U
319-86-8	delta-BHC	0.055	U
58-89-9	gamma-BHC	0.055	U
76-44-8	Heptachlor	0.055	U
309-00-2	Aldrin	0.055	U
1024-57-3	Heptachlor epoxide	0.055	U
959-98-8	Endosulfan I	0.055	U
60-57-1	Dieldrin	0.055	U
72-55-9	4,4-DDE	0.055	U
72-20-8	Endrin	0.055	U
33213-65-9	Endosulfan II	0.055	U
72-54-8	4,4-DDD	0.055	U
1031-07-8	Endosulfan Sulfate	0.055	U
50-29-3	4,4-DDT	0.055	U
72-43-5	Methoxychlor	0.055	U
53494-70-5	Endrin ketone	0.055	U
7421-93-4	Endrin aldehyde	0.055	U
5103-71-9	alpha-Chlordane	0.055	U
5103-74-2	gamma-Chlordane	0.055	U
8001-35-2	Toxaphene	0.55	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06

Sample wt/vol: 900 (g/mL) ml Lab File ID: P7042710.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.056	U
319-85-7	beta-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC	0.056	U
76-44-8	Heptachlor	0.056	U
309-00-2	Aldrin	0.056	U
1024-57-3	Heptachlor epoxide	0.056	U
959-98-8	Endosulfan I	0.056	U
60-57-1	Dieldrin	0.056	U
72-55-9	4,4-DDE	0.056	U
72-20-8	Endrin	0.056	U
33213-65-9	Endosulfan II	0.056	U
72-54-8	4,4-DDD	0.056	U
1031-07-8	Endosulfan Sulfate	0.056	U
50-29-3	4,4-DDT	0.056	U
72-43-5	Methoxychlor	0.056	U
53494-70-5	Endrin ketone	0.056	U
7421-93-4	Endrin aldehyde	0.056	U
5103-71-9	alpha-Chlordane	0.056	U
5103-74-2	gamma-Chlordane	0.056	U
8001-35-2	Toxaphene	0.56	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 980 (g/mL) ml Lab File ID: P7042711.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.051	U
72-55-9	4,4-DDE	0.051	U
72-20-8	Endrin	0.051	U
33213-65-9	Endosulfan II	0.051	U
72-54-8	4,4-DDD	0.051	U
1031-07-8	Endosulfan Sulfate	0.051	U
50-29-3	4,4-DDT	0.051	U
72-43-5	Methoxychlor	0.051	U
53494-70-5	Endrin ketone	0.051	U
7421-93-4	Endrin aldehyde	0.051	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	0.51	U

Comments:

FORM I PEST

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 910 (g/mL) ml Lab File ID: P7042712.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.055	U
319-85-7	beta-BHC	0.055	U
319-86-8	delta-BHC	0.055	U
58-89-9	gamma-BHC	0.055	U
76-44-8	Heptachlor	0.055	U
309-00-2	Aldrin	0.055	U
1024-57-3	Heptachlor epoxide	0.055	U
959-98-8	Endosulfan I	0.055	U
60-57-1	Dieldrin	0.055	U
72-55-9	4,4-DDE	0.055	U
72-20-8	Endrin	0.055	U
33213-65-9	Endosulfan II	0.055	U
72-54-8	4,4-DDD	0.055	U
1031-07-8	Endosulfan Sulfate	0.055	U
50-29-3	4,4-DDT	0.055	U
72-43-5	Methoxychlor	0.055	U
53494-70-5	Endrin ketone	0.055	U
7421-93-4	Endrin aldehyde	0.055	U
5103-71-9	alpha-Chlordane	0.055	U
5103-74-2	gamma-Chlordane	0.055	U
8001-35-2	Toxaphene	0.55	U

Comments:

FORM I PEST

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 870 (g/mL) ml Lab File ID: P7042713.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.057	U
319-85-7	beta-BHC	0.057	U
319-86-8	delta-BHC	0.057	U
58-89-9	gamma-BHC	0.057	U
76-44-8	Heptachlor	0.057	U
309-00-2	Aldrin	0.057	U
1024-57-3	Heptachlor epoxide	0.057	U
959-98-8	Endosulfan I	0.057	U
60-57-1	Dieldrin	0.057	U
72-55-9	4,4-DDE	0.057	U
72-20-8	Endrin	0.057	U
33213-65-9	Endosulfan II	0.057	U
72-54-8	4,4-DDD	0.057	U
1031-07-8	Endosulfan Sulfate	0.057	U
50-29-3	4,4-DDT	0.057	U
72-43-5	Methoxychlor	0.057	U
53494-70-5	Endrin ketone	0.057	U
7421-93-4	Endrin aldehyde	0.057	U
5103-71-9	alpha-Chlordane	0.057	U
5103-74-2	gamma-Chlordane	0.057	U
8001-35-2	Toxaphene	0.57	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 920 (g/mL) ml Lab File ID: P7042714.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.054	U
72-55-9	4,4-DDE	0.054	U
72-20-8	Endrin	0.054	U
33213-65-9	Endosulfan II	0.054	U
72-54-8	4,4-DDD	0.054	U
1031-07-8	Endosulfan Sulfate	0.054	U
50-29-3	4,4-DDT	0.054	U
72-43-5	Methoxychlor	0.054	U
53494-70-5	Endrin ketone	0.054	U
7421-93-4	Endrin aldehyde	0.054	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	0.54	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 890 (g/mL) ml Lab File ID: P7042747.D

Level: (low/med) Low Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/30/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.056	U
319-85-7	beta-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC	0.056	U
76-44-8	Heptachlor	0.056	U
309-00-2	Aldrin	0.056	U
1024-57-3	Heptachlor epoxide	0.056	U
959-98-8	Endosulfan I	0.056	U
60-57-1	Dieldrin	0.056	U
72-55-9	4,4-DDE	0.056	U
72-20-8	Endrin	0.056	U
33213-65-9	Endosulfan II	0.056	U
72-54-8	4,4-DDD	0.056	U
1031-07-8	Endosulfan Sulfate	0.056	U
50-29-3	4,4-DDT	0.056	U
72-43-5	Methoxychlor	0.056	U
53494-70-5	Endrin ketone	0.056	U
7421-93-4	Endrin aldehyde	0.056	U
5103-71-9	alpha-Chlordane	0.056	U
5103-74-2	gamma-Chlordane	0.056	U
8001-35-2	Toxaphene	0.56	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 910 (g/mL) ml Lab File ID: P7042748.D

Level: (low/med) Low Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/30/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.055	U
319-85-7	beta-BHC	0.055	U
319-86-8	delta-BHC	0.055	U
58-89-9	gamma-BHC	0.055	U
76-44-8	Heptachlor	0.055	U
309-00-2	Aldrin	0.055	U
1024-57-3	Heptachlor epoxide	0.055	U
959-98-8	Endosulfan I	0.055	U
60-57-1	Dieldrin	0.055	U
72-55-9	4,4-DDE	0.055	U
72-20-8	Endrin	0.055	U
33213-65-9	Endosulfan II	0.055	U
72-54-8	4,4-DDD	0.055	U
1031-07-8	Endosulfan Sulfate	0.055	U
50-29-3	4,4-DDT	0.055	U
72-43-5	Methoxychlor	0.055	U
53494-70-5	Endrin ketone	0.055	U
7421-93-4	Endrin aldehyde	0.055	U
5103-71-9	alpha-Chlordane	0.055	U
5103-74-2	gamma-Chlordane	0.055	U
8001-35-2	Toxaphene	0.55	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: a4803 SAS No.: a4803 SDG No.: a4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 920 (g/mL) ml Lab File ID: P7042749.D

Level: (low/med) Low Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/30/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.054	U
72-55-9	4,4-DDE	0.054	U
72-20-8	Endrin	0.054	U
33213-65-9	Endosulfan II	0.054	U
72-54-8	4,4-DDD	0.054	U
1031-07-8	Endosulfan Sulfate	0.054	U
50-29-3	4,4-DDT	0.054	U
72-43-5	Methoxychlor	0.054	U
53494-70-5	Endrin ketone	0.054	U
7421-93-4	Endrin aldehyde	0.054	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	0.54	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Sample wt/vol: 900 (g/mL) ml Lab File ID: P6032622.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.56	U
11104-28-2	Aroclor-1221	0.56	U
11141-16-5	Aroclor-1232	0.56	U
53469-21-9	Aroclor-1242	0.56	U
12672-29-6	Aroclor-1248	0.56	U
11097-69-1	Aroclor-1254	0.56	U
11096-82-5	Aroclor-1260	0.56	U

Comments:

FORM I PEST

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Sample wt/vol: 920 (g/mL) ml Lab File ID: P6032629.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.54	U
11104-28-2	Aroclor-1221	0.54	U
11141-16-5	Aroclor-1232	0.54	U
53469-21-9	Aroclor-1242	0.54	U
12672-29-6	Aroclor-1248	0.54	U
11097-69-1	Aroclor-1254	0.54	U
11096-82-5	Aroclor-1260	0.54	U

Comments:

FORM I PEST

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Sample wt/vol: 920 (g/mL) ml Lab File ID: P6032630.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.54	U
11104-28-2	Aroclor-1221	0.54	U
11141-16-5	Aroclor-1232	0.54	U
53469-21-9	Aroclor-1242	0.54	U
12672-29-6	Aroclor-1248	0.54	U
11097-69-1	Aroclor-1254	0.54	U
11096-82-5	Aroclor-1260	0.54	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06

Sample wt/vol: 910 (g/mL) ml Lab File ID: P6032631.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.55	U
11104-28-2	Aroclor-1221	0.55	U
11141-16-5	Aroclor-1232	0.55	U
53469-21-9	Aroclor-1242	0.55	U
12672-29-6	Aroclor-1248	0.55	U
11097-69-1	Aroclor-1254	0.55	U
11096-82-5	Aroclor-1260	0.55	U

Comments:

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CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Sample wt/vol: 940 (g/mL) ml Lab File ID: P6032632.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.53	U
11104-28-2	Aroclor-1221	0.53	U
11141-16-5	Aroclor-1232	0.53	U
53469-21-9	Aroclor-1242	0.53	U
12672-29-6	Aroclor-1248	0.53	U
11097-69-1	Aroclor-1254	0.53	U
11096-82-5	Aroclor-1260	0.53	U

Comments:

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CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Sample wt/vol: 910 (g/mL) ml Lab File ID: P6032633.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.55	U
11104-28-2	Aroclor-1221	0.55	U
11141-16-5	Aroclor-1232	0.55	U
53469-21-9	Aroclor-1242	0.55	U
12672-29-6	Aroclor-1248	0.55	U
11097-69-1	Aroclor-1254	0.55	U
11096-82-5	Aroclor-1260	0.55	U

Comments:

FORM I PEST

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Sample wt/vol: 890 (g/mL) ml Lab File ID: P6032634.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.56	U
11104-28-2	Aroclor-1221	0.56	U
11141-16-5	Aroclor-1232	0.56	U
53469-21-9	Aroclor-1242	0.56	U
12672-29-6	Aroclor-1248	0.56	U
11097-69-1	Aroclor-1254	0.56	U
11096-82-5	Aroclor-1260	0.56	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Sample wt/vol: 880 (g/mL) ml Lab File ID: P6032635.D

Level: (low/med) Low Date Received: 10/22/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/23/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/29/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.57	U
11104-28-2	Aroclor-1221	0.57	U
11141-16-5	Aroclor-1232	0.57	U
53469-21-9	Aroclor-1242	0.57	U
12672-29-6	Aroclor-1248	0.57	U
11097-69-1	Aroclor-1254	0.57	U
11096-82-5	Aroclor-1260	0.57	U

Comments:

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CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Sample wt/vol: 920 (g/mL) ml Lab File ID: P6032523.D

Level: (low/med) Low Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.54	U
11104-28-2	Aroclor-1221	0.54	U
11141-16-5	Aroclor-1232	0.54	U
53469-21-9	Aroclor-1242	0.54	U
12672-29-6	Aroclor-1248	0.54	U
11097-69-1	Aroclor-1254	0.54	U
11096-82-5	Aroclor-1260	0.54	U

Comments:

FORM I PEST

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Sample wt/vol: 920 (g/mL) ml Lab File ID: P6032524.D

Level: (low/med) Low Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.54	U
11104-28-2	Aroclor-1221	0.54	U
11141-16-5	Aroclor-1232	0.54	U
53469-21-9	Aroclor-1242	0.54	U
12672-29-6	Aroclor-1248	0.54	U
11097-69-1	Aroclor-1254	0.54	U
11096-82-5	Aroclor-1260	0.54	U

Comments:

CHEMTECH

1E

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Contract: CLOU03

Lab Code: CHEM Case No.: A4803 SAS No.: A4803 SDG No.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Sample wt/vol: 920 (g/mL) ml Lab File ID: P6032525.D

Level: (low/med) Low Date Received: 10/23/09

% Moisture: 100 Decanted: (Y/N) N Date Extracted: 10/26/09

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/27/09

Injection Volume: 1 Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: 5 Extraction: (Type) SEPF

Concentration Units:

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.54	U
11104-28-2	Aroclor-1221	0.54	U
11141-16-5	Aroclor-1232	0.54	U
53469-21-9	Aroclor-1242	0.54	U
12672-29-6	Aroclor-1248	0.54	U
11097-69-1	Aroclor-1254	0.54	U
11096-82-5	Aroclor-1260	0.54	U

Comments:

FORM I PEST

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Metals
HARDNESS RESULTS

Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 SAS No.: A4803 SDG NO.: A4803

Calculation: Ca (mg/L) * 2.497 + Mg (mg/L) * 4.118

Detection Limit: 0.10

Sample ID	Client ID	Ca (ug/L)	Ca Dil Fac	Mg (ug/L)	Mg Dil Fac	Final (mg/L)	Matrix
A4803-01	MW-17	142860.00	1	24140.00	1	456.13	WATER
A4803-04	MW-19	307180.00	1	46263.00	1	957.54	WATER
A4803-05	CHA-1	309840.00	1	46516.00	1	965.22	WATER
A4803-07	MW-16	141910.00	1	68404.00	1	636.04	WATER
A4803-08	MW-18	196070.00	1	36247.00	1	638.85	WATER
A4803-09	MW-15	211970.00	1	80577.00	1	861.11	WATER
A4803-11	EQUIPMENTRINSATE	289.07	1	62.05	1	0.98	WATER
A4803-13	MW-7	131440.00	1	58195.00	1	567.85	WATER
A4803-14	MW-6	241170.00	1	43313.00	1	780.56	WATER
A4803-15	MW-14	224640.00	1	68382.00	1	842.52	WATER
A4803-16	MW-13	255740.00	1	43886.00	1	819.31	WATER

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-01

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	24.8	J		P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	3840			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	0.52	J		P
7440-70-2	Calcium	143000			P
7440-47-3	Chromium	5.000	U		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	33800			P
7439-92-1	Lead	7.830			P
7439-95-4	Magnesium	24100			P
7439-96-5	Manganese	314			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	19.1	J		P
7440-09-7	Potassium	5160			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	16400			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	25.4			P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-04

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	706			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	16.0			P
7440-39-3	Barium	33.4	J		P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	307000			P
7440-47-3	Chromium	1.910	J		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	6.600	J		P
7439-89-6	Iron	8740			P
7439-92-1	Lead	8.910			P
7439-95-4	Magnesium	46300			P
7439-96-5	Manganese	429			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	11500			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	163000			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	10.4	J		P

Color Before: Colorless Clarity Before: Cloudy Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHA-1

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-05

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	718			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	17.5			P
7440-39-3	Barium	33.8	J		P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	310000			P
7440-47-3	Chromium	2.420	J		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	8880			P
7439-92-1	Lead	11.2			P
7439-95-4	Magnesium	46500			P
7439-96-5	Manganese	445			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.600	J		P
7440-09-7	Potassium	11400			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	167000			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	12.6	J		P

Color Before: Colorless Clarity Before: Cloudy Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-06

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1300			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	88.6			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	163000			P
7440-47-3	Chromium	2.620	J		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	3060			P
7439-92-1	Lead	7.790			P
7439-95-4	Magnesium	65400			P
7439-96-5	Manganese	1000			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	10.3	J		P
7440-09-7	Potassium	23000			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	66000			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	13.6	J		P

Color Before: Brown Clarity Before: Cloudy Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-16

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-07

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	142000			P
7439-95-4	Magnesium	68400			P

Color Before: Brown Clarity Before: Cloudy Texture:

Color After: Yellow Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-08

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	48.7	J		P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	14.1			P
7440-39-3	Barium	138			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	196000			P
7440-47-3	Chromium	1.300	J		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	12.8			P
7439-89-6	Iron	10200			P
7439-92-1	Lead	9.140			P
7439-95-4	Magnesium	36200			P
7439-96-5	Manganese	502			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	7510			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	148000			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	53.0			P

Color Before: Colorless Clarity Before: Cloudy Texture:

Color After: Yellow Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-15

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-09

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21.2	J		P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	8.690	J		P
7440-39-3	Barium	278			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	212000			P
7440-47-3	Chromium	5.000	U		P
7440-48-4	Cobalt	11.9	J		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	9220			P
7439-92-1	Lead	10.9			P
7439-95-4	Magnesium	80600			P
7439-96-5	Manganese	1610			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	16.9	J		P
7440-09-7	Potassium	9800			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	86200			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	11.9	J		P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-10

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16.8	J		P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	695			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	0.64	J		P
7440-70-2	Calcium	125000			P
7440-47-3	Chromium	1.660	J		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	43900			P
7439-92-1	Lead	6.810			P
7439-95-4	Magnesium	55000			P
7439-96-5	Manganese	165			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.240	J		P
7440-09-7	Potassium	17100			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	79600			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	9.710	J		P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQUIPMENTRINSATE

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-11

Level (low/med): LOW Date Received: 10/22/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	50.0	U		P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	50.0	U		P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	289	J		P
7440-47-3	Chromium	5.000	U		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	50.0	U		P
7439-92-1	Lead	6.000	U		P
7439-95-4	Magnesium	62.0	J		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	75.2	J		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	372	J		P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-13

Level (low/med): LOW Date Received: 10/23/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-70-2	Calcium	131000			P
7439-95-4	Magnesium	58200			P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-14

Level (low/med): LOW Date Received: 10/23/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	174			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	8.740	J		P
7440-39-3	Barium	145			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	241000			P
7440-47-3	Chromium	5.000	U		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	10700			P
7439-92-1	Lead	9.960			P
7439-95-4	Magnesium	43300			P
7439-96-5	Manganese	577			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	3310			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	32400			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	8.020	J		P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-14

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-15

Level (low/med): LOW Date Received: 10/23/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	79.7			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	1180			P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	225000			P
7440-47-3	Chromium	5.000	U		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1770			P
7439-92-1	Lead	11.0			P
7439-95-4	Magnesium	68400			P
7439-96-5	Manganese	81.4			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	10100			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	104000			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	9.280	J		P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Metals

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13

Lab Name: Chemtech Consulting Group Contract: Clough Harbour & Associates LLP

Lab Code: CTECH Case No.: A4803 NRAS No.: A4803 SDG NO.: A4803

Matrix (soil/water): WATER Lab Sample ID: A4803-16

Level (low/med): LOW Date Received: 10/23/2009

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	245			P
7440-36-0	Antimony	25.0	U		P
7440-38-2	Arsenic	26.3			P
7440-39-3	Barium	14.8	J		P
7440-41-7	Beryllium	3.000	U		P
7440-43-9	Cadmium	3.000	U		P
7440-70-2	Calcium	256000			P
7440-47-3	Chromium	5.000	U		P
7440-48-4	Cobalt	15.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	4060			P
7439-92-1	Lead	13.9			P
7439-95-4	Magnesium	43900			P
7439-96-5	Manganese	85.0			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	20.0	U		P
7440-09-7	Potassium	5030			P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	5.000	U		P
7440-23-5	Sodium	64100			P
7440-28-0	Thallium	20.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	10.4	J		P

Color Before: Colorless Clarity Before: Clear Texture:

Color After: Colorless Clarity After: Clear Artifacts:

Comments:

Chemtech Consulting Group

Hit Summary Sheet
SW-846

SDG No.: A4803 | Order ID: A4803

Client: Clough Harbour & Associates LLP | Project ID: Salina Landfill GW no.6967.3018.1

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**CHA-1**							
A4803-05	CHA-1	WATER	Aluminum	718		50.0	6.500	ug/L
A4803-05	CHA-1	WATER	Arsenic	17.5		10.0	4.200	ug/L
A4803-05	CHA-1	WATER	Barium	33.8	J	50.0	4.000	ug/L
A4803-05	CHA-1	WATER	Calcium	310000		1000	31.8	ug/L
A4803-05	CHA-1	WATER	Chromium	2.420	J	5.000	1.100	ug/L
A4803-05	CHA-1	WATER	Iron	8880		50.0	20.4	ug/L
A4803-05	CHA-1	WATER	Lead	11.2		6.000	2.600	ug/L
A4803-05	CHA-1	WATER	Magnesium	46500		1000	32.5	ug/L
A4803-05	CHA-1	WATER	Manganese	445		10.0	1.700	ug/L
A4803-05	CHA-1	WATER	Nickel	4.600	J	20.0	4.200	ug/L
A4803-05	CHA-1	WATER	Potassium	11400		1000	38.8	ug/L
A4803-05	CHA-1	WATER	Sodium	167000		1000	13.9	ug/L
A4803-05	CHA-1	WATER	Zinc	12.6	J	20.0	6.500	ug/L
Client ID:	**EQUIPMENTRINSATE**							
A4803-11	EQUIPMENTRINSA	WATER	Calcium	289	J	1000	31.8	ug/L
A4803-11	EQUIPMENTRINSA	WATER	Magnesium	62.0	J	1000	32.5	ug/L
A4803-11	EQUIPMENTRINSA	WATER	Potassium	75.2	J	1000	38.8	ug/L
A4803-11	EQUIPMENTRINSA	WATER	Sodium	372	J	1000	13.9	ug/L
Client ID:	**MW-13**							
A4803-16	MW-13	WATER	Aluminum	245		50.0	6.500	ug/L
A4803-16	MW-13	WATER	Arsenic	26.3		10.0	4.200	ug/L
A4803-16	MW-13	WATER	Barium	14.8	J	50.0	4.000	ug/L
A4803-16	MW-13	WATER	Calcium	256000		1000	31.8	ug/L
A4803-16	MW-13	WATER	Iron	4060		50.0	20.4	ug/L
A4803-16	MW-13	WATER	Lead	13.9		6.000	2.600	ug/L
A4803-16	MW-13	WATER	Magnesium	43900		1000	32.5	ug/L
A4803-16	MW-13	WATER	Manganese	85.0		10.0	1.700	ug/L
A4803-16	MW-13	WATER	Potassium	5030		1000	38.8	ug/L
A4803-16	MW-13	WATER	Sodium	64100		1000	13.9	ug/L
A4803-16	MW-13	WATER	Zinc	10.4	J	20.0	6.500	ug/L

Chemtech Consulting Group

Hit Summary Sheet
SW-846

SDG No.: A4803 | Order ID: A4803

Client: Clough Harbour & Associates LLP | Project ID: Salina Landfill GW no.6967.3018.1

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**MW-14**							
A4803-15	MW-14	WATER	Aluminum	79.7		50.0	6.500	ug/L
A4803-15	MW-14	WATER	Barium	1180		50.0	4.000	ug/L
A4803-15	MW-14	WATER	Calcium	225000		1000	31.8	ug/L
A4803-15	MW-14	WATER	Iron	1770		50.0	20.4	ug/L
A4803-15	MW-14	WATER	Lead	11.0		6.000	2.600	ug/L
A4803-15	MW-14	WATER	Magnesium	68400		1000	32.5	ug/L
A4803-15	MW-14	WATER	Manganese	81.4		10.0	1.700	ug/L
A4803-15	MW-14	WATER	Potassium	10100		1000	38.8	ug/L
A4803-15	MW-14	WATER	Sodium	104000		1000	13.9	ug/L
A4803-15	MW-14	WATER	Zinc	9.280	J	20.0	6.500	ug/L
Client ID:	**MW-15**							
A4803-09	MW-15	WATER	Aluminum	21.2	J	50.0	6.500	ug/L
A4803-09	MW-15	WATER	Arsenic	8.690	J	10.0	4.200	ug/L
A4803-09	MW-15	WATER	Barium	278		50.0	4.000	ug/L
A4803-09	MW-15	WATER	Calcium	212000		1000	31.8	ug/L
A4803-09	MW-15	WATER	Cobalt	11.9	J	15.0	5.800	ug/L
A4803-09	MW-15	WATER	Iron	9220		50.0	20.4	ug/L
A4803-09	MW-15	WATER	Lead	10.9		6.000	2.600	ug/L
A4803-09	MW-15	WATER	Magnesium	80600		1000	32.5	ug/L
A4803-09	MW-15	WATER	Manganese	1610		10.0	1.700	ug/L
A4803-09	MW-15	WATER	Nickel	16.9	J	20.0	4.200	ug/L
A4803-09	MW-15	WATER	Potassium	9800		1000	38.8	ug/L
A4803-09	MW-15	WATER	Sodium	86200		1000	13.9	ug/L
A4803-09	MW-15	WATER	Zinc	11.9	J	20.0	6.500	ug/L
Client ID:	**MW-16**							
A4803-06	MW-16	WATER	Aluminum	1300		50.0	6.500	ug/L
A4803-06	MW-16	WATER	Barium	88.6		50.0	4.000	ug/L
A4803-06	MW-16	WATER	Calcium	163000		1000	31.8	ug/L
A4803-06	MW-16	WATER	Chromium	2.620	J	5.000	1.100	ug/L
A4803-06	MW-16	WATER	Iron	3060		50.0	20.4	ug/L
A4803-06	MW-16	WATER	Lead	7.790		6.000	2.600	ug/L
A4803-06	MW-16	WATER	Magnesium	65400		1000	32.5	ug/L
A4803-06	MW-16	WATER	Manganese	1000		10.0	1.700	ug/L
A4803-06	MW-16	WATER	Nickel	10.3	J	20.0	4.200	ug/L
A4803-06	MW-16	WATER	Potassium	23000		1000	38.8	ug/L
A4803-06	MW-16	WATER	Sodium	66000		1000	13.9	ug/L
A4803-06	MW-16	WATER	Zinc	13.6	J	20.0	6.500	ug/L
Client ID:	**MW-16**							
A4803-07	MW-16	WATER	Calcium	142000		1000	31.8	ug/L
A4803-07	MW-16	WATER	Magnesium	68400		1000	32.5	ug/L

Chemtech Consulting Group

Hit Summary Sheet
SW-846

SDG No.: A4803 | Order ID: A4803

Client: Clough Harbour & Associates LLP | Project ID: Salina Landfill GW no.6967.3018.1

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**MW-17**							
A4803-01	MW-17	WATER	Aluminum	24.8	J	50.0	6.500	ug/L
A4803-01	MW-17	WATER	Barium	3840		50.0	4.000	ug/L
A4803-01	MW-17	WATER	Cadmium	0.52	J	3.000	0.50	ug/L
A4803-01	MW-17	WATER	Calcium	143000		1000	31.8	ug/L
A4803-01	MW-17	WATER	Iron	33800		50.0	20.4	ug/L
A4803-01	MW-17	WATER	Lead	7.830		6.000	2.600	ug/L
A4803-01	MW-17	WATER	Magnesium	24100		1000	32.5	ug/L
A4803-01	MW-17	WATER	Manganese	314		10.0	1.700	ug/L
A4803-01	MW-17	WATER	Nickel	19.1	J	20.0	4.200	ug/L
A4803-01	MW-17	WATER	Potassium	5160		1000	38.8	ug/L
A4803-01	MW-17	WATER	Sodium	16400		1000	13.9	ug/L
A4803-01	MW-17	WATER	Zinc	25.4		20.0	6.500	ug/L
Client ID:	**MW-18**							
A4803-08	MW-18	WATER	Aluminum	48.7	J	50.0	6.500	ug/L
A4803-08	MW-18	WATER	Arsenic	14.1		10.0	4.200	ug/L
A4803-08	MW-18	WATER	Barium	138		50.0	4.000	ug/L
A4803-08	MW-18	WATER	Calcium	196000		1000	31.8	ug/L
A4803-08	MW-18	WATER	Chromium	1.300	J	5.000	1.100	ug/L
A4803-08	MW-18	WATER	Copper	12.8		10.0	6.600	ug/L
A4803-08	MW-18	WATER	Iron	10200		50.0	20.4	ug/L
A4803-08	MW-18	WATER	Lead	9.140		6.000	2.600	ug/L
A4803-08	MW-18	WATER	Magnesium	36200		1000	32.5	ug/L
A4803-08	MW-18	WATER	Manganese	502		10.0	1.700	ug/L
A4803-08	MW-18	WATER	Potassium	7510		1000	38.8	ug/L
A4803-08	MW-18	WATER	Sodium	148000		1000	13.9	ug/L
A4803-08	MW-18	WATER	Zinc	53.0		20.0	6.500	ug/L
Client ID:	**MW-19**							
A4803-04	MW-19	WATER	Aluminum	706		50.0	6.500	ug/L
A4803-04	MW-19	WATER	Arsenic	16.0		10.0	4.200	ug/L
A4803-04	MW-19	WATER	Barium	33.4	J	50.0	4.000	ug/L
A4803-04	MW-19	WATER	Calcium	307000		1000	31.8	ug/L
A4803-04	MW-19	WATER	Chromium	1.910	J	5.000	1.100	ug/L
A4803-04	MW-19	WATER	Copper	6.600	J	10.0	6.600	ug/L
A4803-04	MW-19	WATER	Iron	8740		50.0	20.4	ug/L
A4803-04	MW-19	WATER	Lead	8.910		6.000	2.600	ug/L
A4803-04	MW-19	WATER	Magnesium	46300		1000	32.5	ug/L
A4803-04	MW-19	WATER	Manganese	429		10.0	1.700	ug/L
A4803-04	MW-19	WATER	Potassium	11500		1000	38.8	ug/L
A4803-04	MW-19	WATER	Sodium	163000		1000	13.9	ug/L
A4803-04	MW-19	WATER	Zinc	10.4	J	20.0	6.500	ug/L

Chemtech Consulting Group

Hit Summary Sheet
SW-846

SDG No.: A4803 | Order ID: A4803

Client: Clough Harbour & Associates LLP | Project ID: Salina Landfill GW no.6967.3018.1

Sample ID	Client ID	Matrix	Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**MW-6**							
A4803-14	MW-6	WATER	Aluminum	174		50.0	6.500	ug/L
A4803-14	MW-6	WATER	Arsenic	8.740	J	10.0	4.200	ug/L
A4803-14	MW-6	WATER	Barium	145		50.0	4.000	ug/L
A4803-14	MW-6	WATER	Calcium	241000		1000	31.8	ug/L
A4803-14	MW-6	WATER	Iron	10700		50.0	20.4	ug/L
A4803-14	MW-6	WATER	Lead	9.960		6.000	2.600	ug/L
A4803-14	MW-6	WATER	Magnesium	43300		1000	32.5	ug/L
A4803-14	MW-6	WATER	Manganese	577		10.0	1.700	ug/L
A4803-14	MW-6	WATER	Potassium	3310		1000	38.8	ug/L
A4803-14	MW-6	WATER	Sodium	32400		1000	13.9	ug/L
A4803-14	MW-6	WATER	Zinc	8.020	J	20.0	6.500	ug/L
Client ID:	**MW-7**							
A4803-10	MW-7	WATER	Aluminum	16.8	J	50.0	6.500	ug/L
A4803-10	MW-7	WATER	Barium	695		50.0	4.000	ug/L
A4803-10	MW-7	WATER	Cadmium	0.64	J	3.000	0.50	ug/L
A4803-10	MW-7	WATER	Calcium	125000		1000	31.8	ug/L
A4803-10	MW-7	WATER	Chromium	1.660	J	5.000	1.100	ug/L
A4803-10	MW-7	WATER	Iron	43900		50.0	20.4	ug/L
A4803-10	MW-7	WATER	Lead	6.810		6.000	2.600	ug/L
A4803-10	MW-7	WATER	Magnesium	55000		1000	32.5	ug/L
A4803-10	MW-7	WATER	Manganese	165		10.0	1.700	ug/L
A4803-10	MW-7	WATER	Nickel	4.240	J	20.0	4.200	ug/L
A4803-10	MW-7	WATER	Potassium	17100		1000	38.8	ug/L
A4803-10	MW-7	WATER	Sodium	79600		1000	13.9	ug/L
A4803-10	MW-7	WATER	Zinc	9.710	J	20.0	6.500	ug/L
Client ID:	**MW-7**							
A4803-13	MW-7	WATER	Calcium	131000		1000	31.8	ug/L
A4803-13	MW-7	WATER	Magnesium	58200		1000	32.5	ug/L

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-17**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-01**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	17		2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	39		5.00	mg/L	1	10/23/2009	SM5220 D COD
TDS	570		10.00	mg/L	1	10/23/2009	SM2540C TDS
Turbidity	210		0.10	NTU	2	10/23/2009	SM2130 B Turbidity
TOC	12		1.60	mg/L	4	10/28/2009	SM5310B TOC
Alkalinity	510.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Chloride	36	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	1.190		0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	21		0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.028		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	3.850	OR	0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	18		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-17DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-01DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Chloride	50	D	2.50	mg/L	5	10/27/2009	300.0 Anions
Ammonia as N	4.060	D	1.00	mg/L	5	10/28/2009	SM4500-NH3-H Ammonia

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-19**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-04**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	36		5.00	mg/L	1	10/23/2009	SM5220 D COD
TDS	1800		10.00	mg/L	1	10/23/2009	SM2540C TDS
Turbidity	75		0.05	NTU	1	10/23/2009	SM2130 B Turbidity
TOC	13		0.40	mg/L	1	10/28/2009	SM5310B TOC
Alkalinity	470.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Chloride	580	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	0.50	U	0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	420	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.051		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	1.450		0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	3.390		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-19DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-04DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Sulfate	360	D	5.00	mg/L	10	10/27/2009	300.0 Anions
Chloride	440	D	50.00	mg/L	10(	10/27/2009	300.0 Anions

Comment

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Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**CHA-1**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-05**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	23		2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	35		5.00	mg/L	1	10/23/2009	SM5220 D COD
TDS	1900		10.00	mg/L	1	10/23/2009	SM2540C TDS
TOC	13		0.40	mg/L	1	10/28/2009	SM5310B TOC
Alkalinity	470.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Chloride	580	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	0.50	U	0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	420	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.052		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	0.7070		0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	3.420		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**CHA-1DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-05DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Sulfate	360	D	5.00	mg/L	10	10/27/2009	300.0 Anions
Chloride	440	D	50.00	mg/L	10(	10/27/2009	300.0 Anions

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-16**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-06**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	47		5.00	mg/L	1	10/23/2009	SM5220 D COD
TDS	1300		10.00	mg/L	1	10/23/2009	SM2540C TDS
Turbidity	56		0.05	NTU	1	10/23/2009	SM2130 B Turbidity
TOC	17		0.40	mg/L	1	10/28/2009	SM5310B TOC
Alkalinity	460.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Chloride	190	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	1.440		0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	260	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
TKN	2.080		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-16DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-06DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Sulfate	230	D	5.00	mg/L	10	10/27/2009	300.0 Anions
Chloride	140	D	25.00	mg/L	50	10/28/2009	300.0 Anions

Comment

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Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-16**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-07**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Ammonia as N	4.360	OR	0.20	mg/L	1	11/5/2009	SM4500-NH3
Phenolics	0.031		0.025	mg/L	1	10/28/2009	420.1 Phenolics

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/21/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-16DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-07DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Ammonia as N	5.030	D	5.00	mg/L	5	11/5/2009	SM4500-NH3

Comment

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Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-18**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-08**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	52		5.00	mg/L	1	10/23/2009	SM5220 D COD
TDS	1300		10.00	mg/L	1	10/23/2009	SM2540C TDS
Turbidity	76		0.05	NTU	1	10/23/2009	SM2130 B Turbidity
TOC	19		0.40	mg/L	1	10/28/2009	SM5310B TOC
Alkalinity	560.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Chloride	430	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	0.50	U	0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	65		0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.042		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	2.900	OR	0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	5.760		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/21/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-18DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-08DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Chloride	320	D	50.00	mg/L	10(	10/28/2009	300.0 Anions
Ammonia as N	3.010	D	0.40	mg/L	2	10/28/2009	SM4500-NH3-H Ammonia

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/21/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-15**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-09**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	140		5.00	mg/L	2	10/23/2009	SM5220 D COD
TDS	1600		10.00	mg/L	1	10/23/2009	SM2540C TDS
Turbidity	76		0.05	NTU	1	10/23/2009	SM2130 B Turbidity
TOC	47		1.60	mg/L	4	10/28/2009	SM5310B TOC
Alkalinity	800.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Chloride	320	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	2.800		0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	17		0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.152		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	1.130		0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	5.170		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/21/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-15DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-09DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Chloride	260	D	25.00	mg/L	50	10/28/2009	300.0 Anions

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/21/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-7**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-10**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	180		5.00	mg/L	2	10/23/2009	SM5220 D COD
Turbidity	320		0.10	NTU	2	10/23/2009	SM2130 B Turbidity
Alkalinity	790.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
Ammonia as N	3.870	OR	0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	190	OR	0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/21/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**MW-7DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-10DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Ammonia as N	4.090	D	1.00	mg/L	5	10/28/2009	SM4500-NH3-H Ammonia
TKN	97	D	5.00	mg/L	10	10/30/2009	SM4500-N Org B or C TKN

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/22/2009**
Client Sample ID:	**EQUIPMENTRINSATE**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-11**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/22/2009	SM5210B BOD5
COD	5.00	U	5.00	mg/L	1	10/23/2009	SM5220 D COD
TDS	10.00	U	10.00	mg/L	1	10/23/2009	SM2540C TDS
Alkalinity	2.00	U	2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
TOC	0.40	U	0.40	mg/L	1	10/28/2009	SM5310B TOC
Chloride	0.50	U	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	0.50	U	0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	0.50	U	0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.053		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	0.20	U	0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	3.630		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/22/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-7**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-13**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
TDS	1000		10.00	mg/L	1	10/26/2009	SM2540C TDS
TOC	61		1.60	mg/L	4	10/28/2009	SM5310B TOC
Chloride	280	OR	0.50	mg/L	1	10/22/2009	300.0 Anions
Bromide	4.090		0.50	mg/L	1	10/22/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/22/2009	300.0 Anions
Sulfate	1.530		0.50	mg/L	1	10/22/2009	300.0 Anions
Phenolics	0.042		0.025	mg/L	1	10/28/2009	420.1 Phenolics

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/22/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-7DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-13DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Chloride	210	D	25.00	mg/L	50	10/28/2009	300.0 Anions

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-6**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-14**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/23/2009	SM5210B BOD5
Turbidity	560		0.20	NTU	4	10/23/2009	SM2130 B Turbidity
TDS	1200		10.00	mg/L	1	10/26/2009	SM2540C TDS
Alkalinity	450.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
TOC	8.230		1.60	mg/L	4	10/28/2009	SM5310B TOC
COD	14		5.00	mg/L	1	10/27/2009	SM5220 D COD
Chloride	110	OR	0.50	mg/L	1	10/23/2009	300.0 Anions
Bromide	1.830		0.50	mg/L	1	10/23/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/23/2009	300.0 Anions
Sulfate	510	OR	0.50	mg/L	1	10/23/2009	300.0 Anions
Phenolics	0.048		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	0.3920		0.2000	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	2.610		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-6DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-14DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Chloride	75	D	5.00	mg/L	10	10/28/2009	300.0 Anions
Sulfate	360	D	5.00	mg/L	10	10/28/2009	300.0 Anions

Comment

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-14**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-15**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	99		2.00	mg/L	1	10/23/2009	SM5210B BOD5
Turbidity	7.000		0.05	NTU	1	10/23/2009	SM2130 B Turbidity
TDS	1700		10.00	mg/L	1	10/26/2009	SM2540C TDS
Alkalinity	320.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
TOC	49		2.00	mg/L	5	10/28/2009	SM5310B TOC
COD	200		5.00	mg/L	2	10/27/2009	SM5220 D COD
Chloride	660	OR	0.50	mg/L	1	10/23/2009	300.0 Anions
Bromide	3.250		0.50	mg/L	1	10/23/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/23/2009	300.0 Anions
Sulfate	79		0.50	mg/L	1	10/23/2009	300.0 Anions
Phenolics	0.175		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	0.2870		0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	2.240		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-14DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-15DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Sulfate	78	D	1.00	mg/L	2	10/28/2009	300.0 Anions
Chloride	490	D	50.00	mg/L	10(	10/28/2009	300.0 Anions

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-13**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-16**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
BOD5	2.00	U	2.00	mg/L	1	10/23/2009	SM5210B BOD5
Turbidity	42		0.05	NTU	1	10/23/2009	SM2130 B Turbidity
TDS	1400		10.00	mg/L	1	10/26/2009	SM2540C TDS
Alkalinity	540.000		2.00	mg/L	1	10/26/2009	SM2320 B Alkalinity
TOC	4.500		1.60	mg/L	4	10/28/2009	SM5310B TOC
COD	6.040		5.00	mg/L	1	10/27/2009	SM5220 D COD
Chloride	160	OR	0.50	mg/L	1	10/23/2009	300.0 Anions
Bromide	3.590		0.50	mg/L	1	10/23/2009	300.0 Anions
Nitrate	0.10	U	0.10	mg/L	1	10/23/2009	300.0 Anions
Sulfate	420	OR	0.50	mg/L	1	10/23/2009	300.0 Anions
Phenolics	0.139		0.025	mg/L	1	10/28/2009	420.1 Phenolics
Ammonia as N	0.5870		0.20	mg/L	1	10/28/2009	SM4500-NH3-H Ammonia
TKN	2.630		0.50	mg/L	1	10/30/2009	SM4500-N Org B or C TKN

Comment

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Report of Analysis

Client:	**Clough Harbour & Associates LLP**	**Date Collected:**	**10/20/2009**
Project:	**Salina Landfill GW no.6967.3018.1**	**Date Received:**	**10/23/2009**
Client Sample ID:	**MW-13DL**	**SDG No.:**	**A4803**
Lab Sample ID:	**A4803-16DL**	**Matrix:**	**WATER**
% Solids:	**0.00**		

Analyte	Result	Qualifier	RL	Units	DF	Date Analyzed	Method
Nitrate	1.000	U	1.000	mg/L	10	10/28/2009	300.0 Anions
Chloride	130	D	12.50	mg/L	25	10/28/2009	300.0 Anions

Comment

Appendix B

Surface Soil Sampling Forms

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC Ley Creek	Marshall Transformer

Sampling Method:

Sample Location:: B01

Sheet 1 of 1

Weather Conditions: 20°, Sunny, Cloudy

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals Merc.	Pesticides	Polychlorinated Biphenyls	USCS Log
0-6		0	X	X	X	X	X	
6-12		0	X	X	X	X	X	
12-24		0	X	X	X	X	X	

Surface Conditions:
Weather: Sunny
Temperature: 20

Logged by: CS/SB

Date: 1/12/2010

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC	Marshall Transformer

Sampling Method:

Sample Location:: B02

Sheet 1 of 1

Weather Conditions: 20 Snow

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		
6-12		0	X	X	X	X	X		
12-24		0	X	X	X	X	X		

Logged by: CS/SB

Date: 1/12/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC	Marshall Transformer

Sampling Method:

Sample Location:: B03

Sheet 1 of 1

Weather Conditions: 20 Snow

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: Weather: Temperature:
0-6		0	X	X	X	X	X		
6-12		0	X	X	X	X	X		
12-24		0	X	X	X	X	X		

Logged by: CS/JB

Date: 1/12/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC	Marshall Transformer

Sampling Method:

Sample Location: Box

Sheet 1 of 1

Weather Conditions: 20 Snow

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		
6-12		0	|	|	|	|	|		
12-24		0	|	|	|	|	|		

Logged by: CS/SB

Date: 1/12/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:

Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC	Marshall Transformer

Sampling Method:

Sample Location:: BOS

Sheet 1 of 1

Weather Conditions: 20 Snow

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		
6-12		0	|	|	|	|	|		
12-24		0	|	|	|	|	|		

Logged by: CS/SB

Date: 1/12/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC	Marshall Transformer

Sampling Method:

Sample Location:: B06

Sheet 1 of 1

Weather Conditions: 20 Snow

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log
0-6		0	X	X	X	X	X	
6-12		0	|	|	|	|	|	
12-24		0	|	|	|	|	|	

Surface Conditions:
Weather:
Temperature:

Logged by: CS/SB

Date: 1/12/10

Sample Interval:

Time:

Duplicate 01

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC	Marshall Transformer

Sampling Method:

Sample Location:: B07

Sheet 1 of 1

Weather Conditions: 20 Snow

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		
6-12		0	1	1	1	1	1		
12-24		0	1	1	1	1	1		

Logged by: CS/SB

Date: 1/12/10

Sample Interval:

Time:

MS/MSD

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.12	NYSDEC Old Log Creek	~~Marshall Transformer~~
Sampling Method:		Sample Location:: FS08
		Sheet 1 of 1
Weather Conditions:		Sampling: Start / Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		0858
6-12		0	↓	↓	↓	↓	↓		0909
12-24		0.2	↓	↓	↓	↓	↓		0918

Logged by: CS/DB
Date: 1/13/10
Sample Interval:
Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.11	NYSDEC Ad Hoc Crane	~~Marshall Transformer~~
Sampling Method:		Sample Location:: B09
		Sheet 1 of 1
Weather Conditions:		Sampling: Start / Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: Weather: Temperature:
0-6		0	X	X	X	X	X		0925
6-12		0.4	|	|	|	|	|		0930
12-24		0.6	|	|	|	|	|		0937

Logged by: CS/SB
Sample Interval:
Date: 1/13/10
Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Job. No.	Client:	Location
14368.17	NYSDEC Adley Creek	~~Marshall Transformer~~
Sampling Method:		Sample Location:: B10
		Sheet 1 of 1
Weather Conditions:		Sampling: Start / Finish

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0.5	X	X	X	X	X		1008
6-12		—	X	X	X				Refusal @ 6, no, No Recov.

Logged by: CS/SB
Date: 1/13/10
Sample Interval:
Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC Oil Bay Creek	Marshall Transformer

Sampling Method:

Sample Location:: B11

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: Weather: Temperature:
0-6		0.1	X	X	X	X	X		0950
6-12		0.5	|	|	|	|	|		0955
12-24		0.3	|	|	|	|	|		1002

Logged by: CS/SB

Sample Interval:

Date: 1/13/10

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC old Bay Creek	~~Marshell Transformer~~

Sampling Method:

Sample Location:: R12

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0.1	✓	✓	✓	✓	✓		1023
6-12		0.1	✓	✓	✓	✓	✓		1033
12-24		0.4	✓	✓	✓	✓	✓		1040

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

DUP02 (12-24)

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC Old Ley Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location: B13

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0.3	X	X	X	X	X		1111
6-12		—							H2O No Recov.

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC old Ley Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location:: B14

Sheet 1 of 1

Weather Conditions:

Sampling	
Start	Finish

Sample Interval	Feet Drvn/Ft Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: Weather: Temperature:
0-6		0							1049
6-12		0.4							1056
12-24		0.5							1105

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC Old Bay Creek	Marshall Transformer

Sampling Method:

Sample Location: B17

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0.4	X	X	X	X	X		1152
10-12		0.4	X	X	X	X	X		1157, Reddish, gravel

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Job. No.	Client:	Location
14368.17	NYSDEC Old Bay Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location:: B16

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		1132
6-12		0	X	X	X	X	X		1145 Refusal @ 6 concrete

Logged by: CS/SB **Date:** 1/13/10

Sample Interval: **Time:**

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client: NYSDEC	Location
14368.17	Old Ley Creek	~~Marshall Transformer~~
Sampling Method:		Sample Location: B D
		Sheet 1 of 1
Weather Conditions:		Sampling Start / Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		1410
6-12		0	X	X	X	X	X		1425
12-24		0	X	X	X	X	X		1435

Logged by: CS/SB
Date: 1/13/10
Sample Interval:
Time:

~~Duplicate 02 (6-12)~~

Dup 03 (0-6)

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client: NYSDEC	Location
14368.17	old Ley Creek	~~Marshall Transformer~~
Sampling Method:		Sample Location:: B18
		Sheet 1 of 1
Weather Conditions:		Sampling: Start / Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		1440
6-12		0	X	X	X	X	X		1445
12-24		0	X	X	X	X	X		1455

Logged by: CS/SB
Date: 1/13/10
Sample Interval:
Time:

MS/MSD
(0-6)

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC Old Ley Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location:: B19

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
D10		0	X	X	X	X	X		1505
D12		0	|	|	|	|	|		1510
D24		0	|	|	|	|	|		1520

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location
14368.17	NYSDEC Old Bay Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location:: B20

Sheet 1 of 1

Weather Conditions:

Sampling	
Start	Finish

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		1523
6-12		0	|	|	|	|	|		1527
12-24		0	|	|	|	|	|		1535

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Job. No.	Client:	Location
14368.17	NYSDEC Old Key Creek	Marshall Transformer

Sampling Method:

Sample Location:: B21

Sheet 1 of 1

Weather Conditions:

Sampling	
Start	Finish

Coordinates:

Surface Elevation:

Reference Elevation:

Reference Description:

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		1600
6-12		0	X	X	X	X	X		1605
12-24		—							No Recov.

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Job. No.	Client:	Location
14368.19	NYSDEC old Ley Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location:: B22

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: Weather: Temperature:
0-10		0	X	X	X	X	X		1620
10-12		0	X	X	X	X	X		1623
22-24		0	X	X	X	X	X		1625

Logged by: CS/SB
Date: 1/13/10
Sample Interval:
Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Job. No.	Client:	Location
14368.17	NYSDEC Old Leg Green	Marshall Transformer

Sampling Method:

Sample Location: B23

Sheet 1 of 1

Weather Conditions:

Sampling	
Start	Finish

Coordinates:

Surface Elevation:

Reference Elevation:

Reference Description:

Sample Interval	Feet Drvn/FL Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: Weather: Temperature:
0-6		0	X	X	X	X	X		1628
6-12		0	X	X	X	X	X		1632
12-24		0	X	X	X	X	X		1635

Logged by: CS/SB

Date: 1/13/10

Sample Interval:

Time:

Surface Soil Sampling Log Form

EA Engineering, P.C.
EA Science and Technology

LOG OF SURFACE SOIL

Job. No.	Client:	Location
14368.1	NYSDEC Valley Creek	~~Marshall Transformer~~

Sampling Method:

Sample Location:: B24

Sheet 1 of 1

Weather Conditions:

Sampling Start	Sampling Finish

Coordinates:
Surface Elevation:
Reference Elevation:
Reference Description:

Sample Interval	Feet Drvn/Ft. Recvrd	PID (ppm) HNu	VOCs	SVOCs	Metals	Pesticides	Polychlorinated Biphenyls	USCS Log	Surface Conditions: / Weather: / Temperature:
0-6		0	X	X	X	X	X		1640
6-12		0	|	|	|	|	|		1645
12-24		0	|	|	|	|	|		1648

Logged by: CSJB

Date: 1/13/10

Sample Interval:

Time:

Appendix C

Subsurface Soil Boring Logs

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-01

Sampling Method: Macro-Core

Sheet 1 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					822	917

Surface Conditions: Top soil
Weather: Cloudy, snow
Temperature: 30 F

Blow Counts (140-lb) Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/3		0.0	0		0-4' Medium brown moist noncohesive silt and sand fill material with gravel and asphalt debris (0831)
			1		
			2		
			3		
4/1		0.0	4		4-8' Medium brown moist noncoshesive silt and sand fill material with gravel (0836)
			5		
			6		
			7		
4/0 4/1		0.0	8		8-12' No recovery. Relocated 10' west. Gray moist cohesive silt and sand fill material with gravel (0907)
			9		
			10		
			11		
4/1.5		0.0	12		12-13' Wet silty gravel
			13		13-15.75' Gray moist silt and sand with with small stone
			14		
			15		15.75-16' Dense silt and sand with small pebbles and rock fragments (till) (0917)
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-03

Sampling Method: Macro-Core

Sheet 2 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1007	1031

Surface Conditions: Top soil
Weather: Cloudy, snow
Temperature: 35 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/3.5		0.0	0		0-2.5' Dark reddish brown dense silt with some clay and pebbles
			1		
			2		2.5-2.75' Asphalt debris fill material
			3		2.75-4' Brown dense silt with pebbles and gravel and some clay (1014)
4/4		0.0	4		4-7' Dark gray organic silty clay
			5		
			6		
			7		7-8' Brown moist silt with small pebbles (1017)
4/3.5		0.0	8		8-8.25' Reddish brown silty clay 8.25-10' Dark brown to black dense silt with some clay
			9		
			10		10-12' Dark gray moist silty clay (1024)
			11		
4/4		0.0	12		12-12.5' Gray wet silty clay 12.5-13.5' Dark brown organic silt with some sand (peat)
			13		13.5-16' Gray moist to wet silt and clay (1031)
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-04

Sampling Method: Macro-Core

Sheet 3 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1341	1410

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 45 F

Blow Counts (140-lb) Feet / Drvn/Ft. / Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/2		0.0	0		0-4' Brown slightly moist noncohesive silt with gravel and rock fragments and some organics (1345)
			1		
			2		
			3		
4/2		0.0	4		4-6' Brown to gray dense silty clay
			5		
			6		6-8' Dark brown to black moist cohesive organic clay (1352)
			7		
4/0		0.0	8		8-12' No recovery
			9		
			10		
			11		
4/1		0.0	12		12-16' Black moist cohesive silty clay (1410)
			13		
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-05

Sampling Method: Macro-Core

Sheet 4 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					748	814

Surface Conditions: Top soil
Weather: Cloudy, snow
Temperature: 30 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	
	4/3		>9999	0			0-3.5' Dark brown sandy silt fill material with gravel and asphalt debris (napthalene odor)
				1			
				2			
				3			
							3.5-4' Dark brown moist organic silt with some sand (peat) (0755)
	4/4		7.0	4			4-6' Dark brown dense silt with some sand and rock fragments
				5			
				6			6-7' Reddish brown dense sandy silt with minimal rock fragments
				7			7-8' Dark brown to black moist silt and sand (0801)
	4/3.5		0.0	8			8-10' Dark brown to black moist slightly cohesive organic silt, sand, and clay
				9			
				10			10-11.5' Dark gray/green dense silt and clay with some rock fragment
				11			
							11.5-12' Silt and sand with organics (sawdust) (0809)
	4/3		15.5	12			12-12.25' Brown moist organic silt with some clay
							12.25-15.5' Black moist to wet silt, sand, and clay with some gravel
				13			
				14			
				15			
							15.5-16' Reddish brown silt with some clay and small stone (till) (0814)
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
							Sample collected at each interval
				18			
				19			
							* Duplicate-02 sampled from 0-4'
				20			

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-05A

Sampling Method: Macro-Core

Sheet 5 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1450	1500

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	
	4/1.5		0.0	0			0-.25' Detritus
							.25-4' Dark brown silt with gravel and rock fragments (1500)
				1			
				2			
				3			
	4/4		0.0	4			4-5' Dark brown dry silty sand with small pebbles
				5			5-8' Reddish brown dense silt with small pebbles and minimal ceramic debris (1500)
				6			
				7			
				8			
				9			
				10			
				11			
				12			
				13			
				14			
				15			
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
							Sample collected from 2-4' only
				18			
				19			
				20			

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-05B

Sampling Method: Macro-Core

Sheet 6 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1515	1523

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
		0.0	0		0-3' Dark brown silt and sand with gray rock fragments
4/3			1		
			2		
			3		3-4' Brown to reddish brown silt with some organics (1519)
4/4		0.0	4		4-4.5' Light brown dry silt with small pebbles and rock fragments
					4.5-6' Dark brown to black dense silt
			5		
			6		6-7' Dark brown silty sand with small pebbles
			7		7-8' Medium brown moist silt and clay with some orgnics (small lenses of peat) (1523)
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected from 2-4' only
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-05C

Sampling Method: Macro-Core

Sheet 7 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1525	1535

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
		0.0	0		0-3' Dark brown silt with gravel and rock fragments
			1		
4/3.5			2		
			3		3-4' Reddish brown dense silt with organics and minimal rock fragments (1535)
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected from 2-4' only
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-06

Sampling Method: Macro-Core

Sheet 8 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					923	950

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	Surface Conditions: Top soil Weather: Cloudy Temperature: 35 F
	4/3.5		0.0	0			0-1' Dark brown moist silt with organics
				1			1-2' Reddish brown silt with small stones and pebbles
				2			2-4' Brown to gray dense silt with some sand and small pebbles (0930)
				3			
	4/3.75		0.0	4			4-5' Dark brown wet silt and sand
				5			5-6' Medium brown wet silty clay, cohesive
				6			6-8' Dark gray moist slightly cohesive silt with some clay (0935)
				7			
	4/3.5		0.0	8			8-10' Dark brown wet silt and sand (0952)
				9			
				10			10-11' Medium brown silt with small stone and pebbles and some silt and clay
				11			11-12' Reddish brown silt with small stone and pebbles and some silt and clay (till)
	4/3.5		0.0	12			12-16' Reddish brown silt with small stone and pebbles and some silt and clay (till)
				13			
				14			
				15			
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides Sample collected at each interval
				18			
				19			
				20			

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-07

Sampling Method: Macro-Core

Sheet 9 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1258	1325

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 45 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/2		0.0	0		0-.5' Dark brown moist organic top soil
					.5-1' Gray moist cohesive silty clay
			1		1-3.5' Reddish brown moist silt and sand with some clay and gravel
			2		
			3		
					3.5-4' Dark brown moist cohesive silty clay (1305)
4/2.5		0.0	4		4-4.5' Brown wet moderately cohesive silty clay
					4.5-6.5' Dark brown to black moist silt with some sand and clay (organic odor)
			5		
			6		
					6.5-8' Gray moist cohesive silty clay with some organics (1310)
			7		
4/2.5		0.0	8		8-8.5' Dark brown moist peat with some sand and clay
					8.5-11.5' Brown and gray moist cohesive silty clay
			9		
			10		
			11		
					11.5-12' Dark brown slightly cohesive silt and fine sand with trace clay (1318)
4/2.5		0.0	12		12-15' Dark brown slightly cohesive silt and fine sand with organics
			13		
			14		
			15		15-16' Gray wet sand and gravel (1324)
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-08

Sampling Method: Macro-Core

Sheet 10 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1110	1133

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 40 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	
	4/3		0.0	0			0-.5' Top soil with organics
							.5-2' Brown moist cohesive silty clay
				1			
				2			2-4' Dark brown silt with some clay and organics (1117)
				3			
	4/3.5		0.0	4			4-6.5' Dark gray moist clay
				5			
				6			
							6.5-6.75' Dark brown wet silt with some clay
				7			6.75-7.75' Dark gray moist clay
							7.75-8' Dark brown moist silty fine sand with some clay (1125)
	4/2		0.0	8			8-8.5' Dark brown moist silty fine sand with some clay
							8.5-11' Dark gray moist clay
				9			
				10			
				11			11-12' Dark brown moist silt with some sand and clay (1128)
	2/2		0.0	12			12-14' Reddish brown very wet till (1133)
				13			
				14			
				15			
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
							Sample collected at each interval
				18			
				19			
				20			

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-09

Sampling Method: Macro-Core

Sheet 11 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1104	1125

Surface Conditions: Top soil
Weather: Cloudy, flurries
Temperature: 35 F

Blow Counts (140-lb) / Feet / Drvn/Ft. / Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/2.5		0.0	0		0-1' Dark brown silt with minimal clay and organics
			1		1-3' Dark brown moist silty sand with organics (wood fragments)
			2		
			3		3-4' Reddish brown moist silt with pebbles (1115)
4/3.5		0.0	4		4-6.5' Dark brown wet to moist silt and clay
			5		
			6		
					6.5-8' Dark brown moist silt, sand, and clay (1120)
			7		
4/3.5		0.0	8		8-8.5' Medium brown moist silty clay
					8.5-9' Dark brown to black moist silt with organics
			9		9-11' Medium brown moist silty clay with organics
			10		
			11		11-12' Medium brown moist clay with some silt (1126)
4/3		0.0	12		12-14' Dark brown wet silty clay with some organics (shell and wood debris)
			13		
			14		14-16' Medium brown silty clay with some organics (1130)
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-10

Sampling Method: Macro-Core

Sheet 12 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1030	1102

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 40 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
		4.8	0		0-1' Dark brown organic top soil
4/2.5			1		1-1.25' Medium brown wet slightly cohesive silt with some clay
					1.25-4' Dark brown to black cohesive silty clay (1040)
			2		
			3		
4/1.5		5.1	4		4-4.25' Dark brown to black cohesive silty clay
					4.25-8' Dark brown peat with sand stringers and organics (shell fragments) (peat) (1045)
			5		
			6		
			7		
4/3		1.8	8		8-10' Dark brown wet peat with some sand
			9		
			10		10-11.5' Gray wet cohesive silty clay
			11		
					11.5-12' Dark brown silt, sand, and clay (1049)
2/1.5		0.0	12		12-13' Dark gray wet sand with small stone
			13		13-13.5' Gray silt and fine sand
					13.5-14' Reddish brown dense silt with some sand and fine gravel (till)
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-11

Sampling Method: Macro-Core

Sheet 13 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1230	1252

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 40 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
		0.0	0		0-.75' Dark brown top soil with some gravel
					.75-1' Brown moist silty clay
			1		1-2' Dark brown moist silt and sand with some organics (peat)
4/3			2		2-3' Light reddish brown cohesive silty clay
			3		3-4' Dark brown dry silt and sand (1237)
		0.0	4		4-5' Dark brown dry silt and sand
			5		5-5.5' Peat
4/2.5					5.5-8' Dark gray clay with silt and sand (1240)
			6		
			7		
		0.0	8		8-8.25' Dark gray clay with silt and sand
					8.25-11' Dark brown silt with some sand and clay
			9		
4/2.5			10		
			11		11-11.5' Dark or silty clay with organics
					11.5-12' Dark gray clay with silt and sand (1245)
		0.0	12		12-14' Gray wet silty clay
			13		
4/2.5			14		14-16' Reddish brown till (1252)
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-12

Sampling Method: Macro-Core

Sheet 14 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1507	1530

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 45 F

Blow Counts (140-lb) Feet / Drvn/Ft. / Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/3		0.0	0		0-.5' Dark brown top soil with organics
					.5-4' Brown moist slightly cohesive silt, sand, and gravel (1513)
			1		
			2		
			3		
4/1.5		0.0	4		4-8' Reddish brown slightly cohesive moist silt sand and gravel/rock fragments (1517)
			5		
			6		
			7		
4/2		0.0	8		8-8.75' Brown to gray moist cohesive silty clay
					8.75-11.75' Gray moist clay and gravel
			9		
			10		
			11		
					11.75-12' Gray wet silty sand (1521)
4/4		0.0	12		12-15' Gray wet silty sand
			13		
			14		
			15		15-16' Brown slightly cohesive peat with sand stringers and some clay (1527)
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-13

Sampling Method: Macro-Core

Sheet 15 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					900	940

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb) Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/2.5		0.0	0		0-1' Organic top soil with trace clay
		0.0	1		1-4' Wet silty clay (0905)
		0.0	2		
		0.0	3		
4/0 4/2.5		---	4		4-8' Zero recovery. Relocated 2' adjacent. Wet silty clay (0932)
		---	5		
		---	6		
		---	7		
4/3		---	8		8-10' Wet silty clay
		---	9		
		4.2	10		10-12' Silty sand with some clay (0918)
		9.3	11		
4/4		4.2	12		12-13' Moist silty sand with some clay
		5.0	13		13-14' Dark gray wet till with pebbles and some clay
		---	14		14-16' Reddish brown silt with some sand and small stone (till) (0927)
		---	15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-14

Sampling Method: Macro-Core

Sheet 16 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1420	1443

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	
							Surface Conditions: Top soil
							Weather: Cloudy
							Temperature: 45 F
			0.0	0			0-1' Reddish brown cohesive silty clay
	4/2			1			1-1.5' Dark brown slighlty cohesive silty clay with some organics
							1.5-4' Light brown to reddish brown cohesive silty clay with some sand (1430)
				2			
				3			
	4/2		0.0	4			4-7' Reddish brown silty clay with some sand and gravel
				5			
				6			
				7			7-8' Gray wet sand and gravel (1435)
	4/2.5		0.0	8			8-8.5' Wet sand and gravel with moderate clay
							8.5-9' Gray silt and sand with trace clay
				9			9-12' Brown peat with some clay (organic odor) (1438)
				10			
				11			
	4/2		0.0	12			12-13' Gray moist cohesive silty clay with some gravel
				13			13-16' Reddish brown silt with sand, clay, and gravel (till) (1443)
				14			
				15			
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
							Sample collected at each interval
				18			
				19			
				20			

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-15

Sampling Method: Macro-Core

Sheet 17 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1341	1412

Surface Conditions: Top soil, plowed
Weather: Cloudy
Temperature: 45 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/1.25		0.0	0		0-.5' Dark brown moist sand and gravel fill material
					.5-4' Dry concrete and gravel debris (1350)
			1		
			2		
			3		
4/1.75		0.0	4		4-4.75' Dark brown moist sand and gravel fill material
					4.75-8' Brown moist cohesive silty clay with moderate gravel (1355)
			5		
			6		
			7		
4/2		0.0	8		8-9' Brown to gray wet silt, sand, and clay with moderate gravel
			9		9-12' Gray moist cohesive silty clay (1405)
			10		
			11		
4/3		0.0	12		12-13' Brown moist slightly cohesive peat
			13		13-13.5' Gray moist noncohesive silty sand with organics
					13.5-14' Black silty sand with organic odor
			14		14-16' Gray wet silt and sand with some gravel (1412)
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
					* Duplicate-01 sampled from 12-14'
			20		

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-16

Sampling Method: Macro-Core

Sheet 18 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					955	1024

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 40 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	
	4/2		3.7	0			0-25' Dark brown organic top soil
							.25-3.5' Black stony fill material
				1			
				2			
				3			
							3.5-4' Dark gray silt and sand with some clay (1005)
	4/3		4.0	4			4-4.25' Dark gray cohesive silty sand with clay
							4.25-5' Dark gray wet stony till (creek deposits)
				5			5-6.5' Dark brown cohesive silt with organics
				6			
							6.5-8' Dark gray moist cohesive clay (1010)
				7			
	4/2.5		4.1	8			8-10.5' Dark gray very wet cohesive silty clay
				9			
				10			
							10.5-12' Dark brown slightly cohesive silt with sand stringers and some clay (1018)
				11			
	3/3		4.6	12			12-15' Dark gray wet silty fine sand (1024)
				13			
				14			
				15			
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
							Sample collected at each interval
				18			
				19			
				20			

Logged by: JCP Date: 1/18/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-17

Sampling Method: Macro-Core

Sheet 19 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1205	1219

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
		0.0	0		0-1' Dark brown to black moist organic silt
4/2			1		1-4' Dark brown moist silt and sand with some clay (1208)
			2		
			3		
4/3		0.0	4		4-5' Dark brown wet sandy silt with some organics
			5		5-6' Dark brown moist silt with some organics
			6		6-7' Dark brown moist silty clay
			7		7-8' Dark brown moist silt and clay (1212)
4/2		0.0	8		8-9' Dark brown moist silty clay
			9		9-11.5' Dark brown moist silt with some clay and organics (shell fragments)
			10		
			11		11.5-12' Light gray moist sandy silt with pebbles (1216)
4/3		0.0	12		12-13' Reddish brown silty sand with pebbles
			13		13-16' Reddish brown dense silt with small stone and pebbles (till) (1219)
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-18

Sampling Method: Macro-Core

Sheet 20 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1137	1159

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb) Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/3		0.0	0		0-3' Dark brown moist organic silt with some clay
			1		
			2		
			3		3-4' Dark brown moist silt with moderate clay (1141)
4/0		0.0	4		4-8' No recovery
			5		
			6		
			7		
4/4		0.0	8		8-8.25' Dark brown wet silty clay
					8.25-9' Dark brown wet sand and silt with some gravel
			9		9-12' Reddish brown moist to wet silt with some clay and small pebbles (1149)
			10		
			11		
4/3.5		0.0	12		12-13.5' Very wet silt and sand
			13		
					13.5-14.5' Dark gray wet sand and gravel
			14		
					14.5-16' Reddish brown dense silt with small stone and pebbles (till) (1159)
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-19

Sampling Method: Macro-Core

Sheet 21 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1319	1350

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb) / Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	
4/3		0.0	0		0-1.5' Dark brown moist organic silt
			1		1.5-4' Light brown silty clay (1334)
			2		
			3		
4/3.75		0.0	4		4-5' Reddish brown dense silt with small stones and pebbles
			5		5-6.5' Reddish brown dense silt with stones and pebbles and small pockets of sand
			6		6.5-8' Reddish brown dense silt with small stones and pebbles (till) (1342)
			7		
4/3.5		0.0	8		8-12' Reddish brown dense silt with small stones and pebbles (till) (1350)
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
					Sample collected at each interval
			18		
			19		
			20		

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Coordinates:
Surface Elevation:
Casing Below Surface:
Reference Elevation:
Reference Description:

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek

Drilling Method: Direct Push - GeoProbe

Soil Boring Number: SB-20

Sampling Method: Macro-Core

Sheet 22 of 22

Water Lev.					Drilling Start	Drilling Finish
Time					1354	1434

Surface Conditions: Top soil
Weather: Cloudy
Temperature: 35 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet		USCS Log	
	4/2		0.0	0			0-.5' Brown moist silt with some organics
							.5-4' Dark brown and black moist silt with some clay (1358)
				1			
				2			
				3			
	4/4		0.0	4			4-4.25' Gray moist silty clay
							4.25-7.5' Medium brown dense silty clay
				5			
				6			
				7			
							7.5-8' Reddish brown moist silt and sand with small pebbles (1405)
	4/2		0.0	8			8-10' Medium brown moist silty clay
				9			
				10			10-12' Reddish brown silt with small stones and pebbles (till)
				11			
	4/0 4/3.5		0.0	12			12-16' Zero recovery. Relocated 2' adjacent.
							12-14.5' Dark brown moist silt with some organics
				13			
				14			
							14.5-16' Light brown silty clay with minimal organics (1434)
				15			
				16			
				17			* Analyses: VOCs/SVOCs/Metals/Mercury/PCBs/Pesticides
							Sample collected at each interval
				18			
				19			
				20			

Logged by: JCP Date: 1/19/10

Drilling Contractor: PW Driller: IG/WB

Appendix D

Surface Water Sampling Forms

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW01 (low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1200	6.91	3.81	44.9	10.66	2.9	-50	na

Samplers: Chris Schroer and Sean Blakeney
Sampling Date:
Sediment Sample ID: 7-34-074-SW-01
MS/MSD/DUP Sample II none
Sampling Time: 1200
Split Sample With: none
Sample Type: SW
MS/MSD/DUP (circle appropriate)
COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW02(low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1240	7.11	2.75	29.1	13.27	1.21	-47	na

Samplers: Chris Schroer and Sean Blakeney
Sampling Date:
Sediment Sample ID: 7-34-074-SW-02
MS/MSD/DUP Sample II none
Sampling Time: 1240
Split Sample With: none
Sample Type: SW
MS/MSD/DUP (circle appropriate)
COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW03(low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1307	6.85	3.71	20	14.03	5.06	-14	na

Sampling Time: 1305

Samplers: Chris Schroer and Sean Blakeney

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW-03

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample II none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW04(low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1442	7.17	4.21	13.4	15.46	2.76	62	na

Sampling Time: 1442

Samplers: Chris Schroer and Sean Blakeney

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW-04

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW012(low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1448	7.02	4.19	17	15.96	2.13	55	na

Sampling Time: 1448

Samplers: Chris Schroer and Sean Blakeney

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW-05

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID 7-34-074-SW-DUP01

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW06(low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1510	7.13	4.24	12.9	13.61	5.32	40	na

Sampling Time: 1510

Samplers: Chris Schroer and Sean Blakeney

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW-06

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample II none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW07(low-flow)	**EA Personnel:** Chris Schroer and Sean Blakeney	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 30
Depth of Water: 1'	**Date:** 14-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Sean Blakeney	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1525	7.31	3.85	15.4	13.86	5.32	19	na

Sampling Time: 1525

Samplers: Chris Schroer and Sean Blakeney

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW-07

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID 7-34-074-SW-MS/MSD07

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-01(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1351	7.51	1.51	63.3	12.86	3.21	16	na

Sampling Time: 1351

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-01

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-02(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1342	7.69	1.32	79.8	10.13	2.17	-23	na

Sampling Time: 1342

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-02

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-03(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1335	7.54	1.94	41.4	10.86	5.75	-11	na

Sampling Time: 1335

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-03

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample II none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-04(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1225	7.64	0.716	116	13.27	1.9	161	na

Sampling Time: 1225

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-04

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample II none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-05(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1240	7.69	0.681	86.8	12.7	1.6	155	na

Sampling Time: 1240

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-05

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID 7-34-074-SW2-DUP01

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-06(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1300	7.48	0.755	66.8	12.05	2.65	182	na

Sampling Time: 1300

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-06

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID 7-34-074-SW2-MS/MSD06

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-07(high-flow)	**EA Personnel:** Chris Schroer and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Overcast, 34
Depth of Water: 1'	**Date:** 26-Jan-10	**Reference Elevation:** NA
	Field Technician: Chris Schroer and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
1310	7.27	1.78	47.8	11.05	5.78	71	na

Sampling Time: 1310

Samplers: Chris Schroer and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-07

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample II none

COMMENTS AND OBSERVATIONS:

EA Engineering PC and its Affliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-08	**EA Personnel:** Megan Scott and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Sunny, 88 deg
Depth of Water: 1.5'	**Gauge Date:** NA	**Reference Elevation:** NA
Gauge Time: NA	**Field Technician:** Megan Scott and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
10:30	6.84	2.31		0	16.31	-40	na

Sampling Time: 915

Samplers: Megan Scott and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-08

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample I none

COMMENTS AND OBSERVATIONS: Collected at a culvert coming from Route 11

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-09	**EA Personnel:** Megan Scott and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Sunny, 88 deg
Depth of Water: 3-4"	**Gauge Date:** NA	**Reference Elevation:** NA
Gauge Time: NA	**Field Technician:** Megan Scott and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
10:30	7.50	1.4		4.25	16.6	-184	na

Sampling Time: 1010

Samplers: Megan Scott and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-09

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample II none

COMMENTS AND OBSERVATIONS: Collected from a seep coming from Route 11

EA Engineering PC and its Affiliate,
EA Science and Technology

SURFACE WATER SAMPLING

Sample I.D.: SW2-10	**EA Personnel:** Megan Scott and Rachel Ribaudo	**Client:** NYSDEC
Location: Old Ley Creek, Salina, NY		**Weather:** Sunny, 88 deg
Depth of Water: 1'	**Gauge Date:** NA	**Reference Elevation:** NA
Gauge Time: NA	**Field Technician:** Megan Scott and Rachel Ribaudo	

Water Quality Parameters

Time (hrs)	pH (pH units)	Conductivity (S/m)	Turbidity (ntu)	DO (mg/L)	Temperature (oC)	ORP (mV)	DTW (ft btoc)
10:30	7.50	1.4		4.25	16.6	-184	na

Sampling Time: 1105

Samplers: Megan Scott and Rachel Ribaudo

Split Sample With: none

Sampling Date:

Sample Type: SW

Sediment Sample ID: 7-34-074-SW2-10

MS/MSD/DUP (circle appropriate)

MS/MSD/DUP Sample ID none

COMMENTS AND OBSERVATIONS: Collected near the concrete structure

Appendix E

Waste Manifests

ENVIRONMENTAL PRODUCTS & SERVICES OF VERMONT, INC.

24-Hour Emergency Phone Number
1-800-843-8265

Please print or type

BILL OF LADING

1. Document No. SYR1744
2. Page 1 of 1

3. Generator's Name and Mailing Address
NYSDEC
625 BROADWAY
ALBANY NY 12233

4. Generator's Phone (315) 345-8332

Site Address
FACTORY AVE. & BREWERTON
SYRACUSE NY 13208

5. Transporter 1 Company Name
ENVIRONMENTAL PROD. & SVCS OF VT, INC.

6.

A. State Transporter's ID 39092 (VT)

B. Transporter 1 Phone (315) 451-6666

7. Transporter 2 Company Name

8.

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
ENVIRONMENTAL PROD & SVCS. OF VT, INC.
532 STATE FAIR BOULEVARD
HM SYRACUSE NY 13204

10.

E. State Facility's ID

F. Facility's Phone (315) 451-6666

GENERATOR

	11. Shipping Name	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
	a. NON-RCRA, NON-DOT LIQUIDS, N.O.S. (GROUNDWATER)	3	D M	125	G
	b. NON-RCRA, NON-DOT SOLIDS, N.O.S. (Petroleum CONTAMINATED SOIL)	3	D M	1000	P
	c.				
	d.				

G. Additional Descriptions for Materials Listed Above
a. APPROVAL # 0710038-OT 55 GAL
b. APPROVAL # 0710039-DT 55 GAL
c.
d.

a. b. c. d.

JOB#N8825

15. Special Handling Instructions and Additional Information
a. DEXSIL SCREEN PRIOR TO UNLOADING
Hydro-Chloro

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this document are not subject to federal manifest requirements.
on behalf of (NYSDEC)

Printed/Typed Name: Megan Scott ~~On Behalf of NYSDEC~~ Mark Denny (RP)
Signature: Megan Scott
Date: Month 7 Day 9 Year 10

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Mark Denny
Signature:
Date: Month 7 Day 9 Year 10

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the materials covered by this bill of lading except as noted in item 19.
Printed/Typed Name: M Legnello
Signature:
Date: Month 7 Day 9 Year 10

BILL OF LADING

Appendix F

Wetland Delineation Field Notes

Wetland/Project Name: Old Ley Creek Applicant:
Quad: Address: Wolf Rd (Rte 11)
County: Onondaga
Town: Salina Tax Map
#:
Date: 5/7/10 Telephone: ( )
Inspection By: SB Title:

Dominant Plant Species:

Name:	Status:	Stratum:
Phragmites	FACW	>50%
Jewelweed	FACW	~25%
Blueberry	FACW	10%
Duckweed	OBL	10%
Ground Lily	FACW	10%

Is the hydrophytic vegetation criterion met? Yes
Rationale: >50% FACW species
10% OBL

Vegetation Field Indicators Met IF:
1) FACW's or wetter>50% of dominants and no FACU or UPL species dominant
2) OBL's > or = 10% of dominants & evenly dispersed & not restricted to depressions
3) any dominant shows: hypertrophied lenticels, multiple trunks, adventitious or shallow roots
4) Sphagnum or other regionally applicable bryophytes present in unbroken expanses on persistently wet soils

Soils:
Series/Phase: Subgroup:
Is the soil on the hydric soils list?:
Is the soil a Histosol?: Histic epipedon present?
Is the soil mottled? gleyed?
Matrixcolor:
Other hydric soil indicators:
Is the hydric soil criterion met?
Rationale:

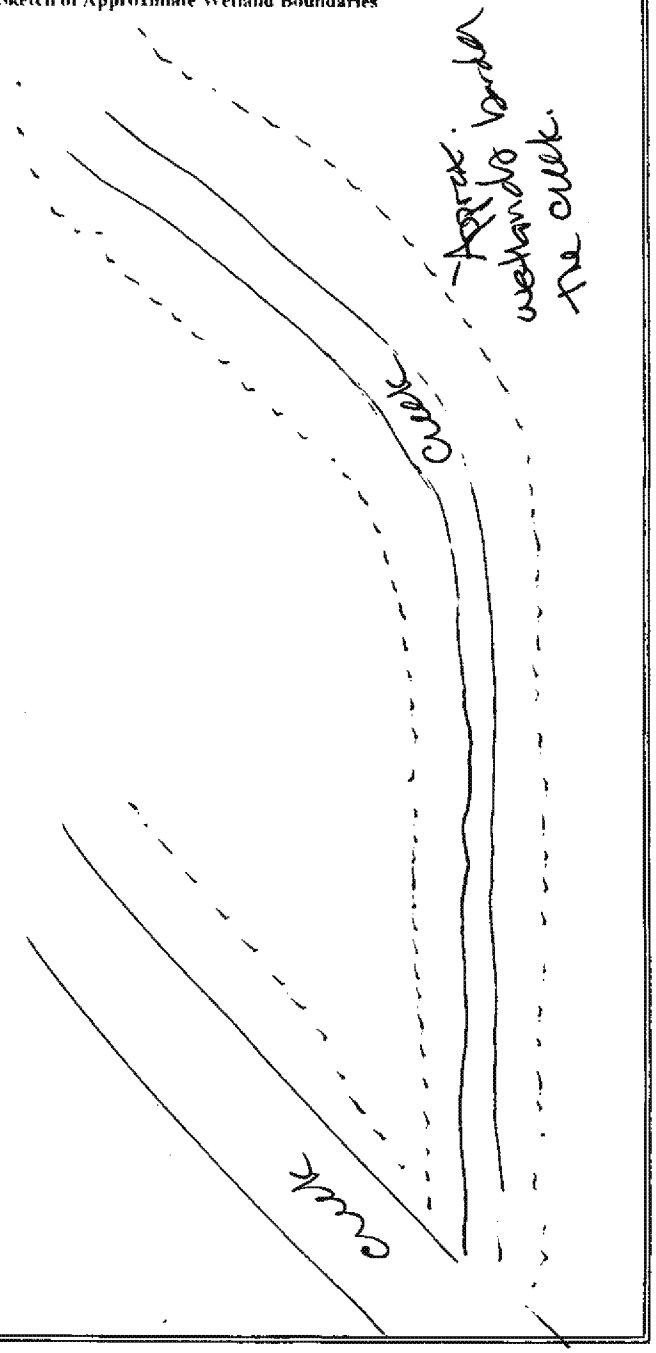
Hydric Soil Field Indicators (any one):
1) organic soils - except folists
2) histic epipedon - 8-16" organic surface
3) sulfidic material w/in 12" of surface
4) low chroma (< or =2 w/mottles or =1)

See Manual for continuation of sandy and non-sandy soil criteria

Hydrology:
Is the ground surface inundated? NO Surface H20 depth:
Is the soil saturated? YES
Depth of water in borehole:
Other evidence of inund. or satur. Along creek. Visual observation of inundation & tide marks.
Is the wetland hydrology criterion met? yes
Rationale Visual observations.

Hydrologic Field Indicators:
Primary: any one of the following:
1) visual observation of inundation
2) visual observation of saturation
3) water marks - mineral stains
4) drift lines - debris and wrack deposits
5) sediment deposits - silt and clay
6) drainage patterns - meanders/braiding
Secondary: any two of the following:
1) oxidized rhizospheres - rusty root channel
2) water stained leaves - gray/black
3) surface scour
4) dead vegetation - non-wetland species

Sketch of Approximate Wetland Boundaries



APPENDIX A: FIELD FORMS - FRESHWATER WETLAND PLANT LIST AND FIELD INSPECTION SHEET

Trees

____Ash, Black **Fraxinus nigra** FACW
____Ash, Green **Fraxinus pennsylvanica** FACW
____Aspen, Trembling **Populus tremuloides** FACU
____Birch, Gray **Betula populifolia** FAC
____Birch, Yellow **Betula allechaniensis** FAC
____Cedar, A. White **Chamaecyparis thyoides** OBL
____Cedar, N. White **Thuja occidentalis** FACW
____Cottonwood, Eastern **Populus deltoides** FAC
____Elm, American **Ulmus americana** FACW
____Fir, Balsam **Abies balsamea** FAC
____Gum, Black **Nyssa sylvatica** FAC
____Hemlock, Eastern **Tsuga canadensis** FACU
____Hornbeam, American **Carpinus caroliniana** FAC
____Larch, Eastern **Larix laricina** FACW
____Maple, Red **Acer rubrum** FAC
____Maple, Silver **Acer saccharinum** FACW
____Oak, Burr **Quercus macrocarpa** FAC
____Oak, Pin **Quercus palustris** FACW
____Oak, Swamp White **Quercus bicolor** FACW
____Pine, Eastern White **Pinus strobus** FACU
____Poplar, Balsam **Populus balsamifera** FACW
____Shadbush, Serviceberry **Amelanchier arborea** FAC
____Spruce, Black **Picea mariana** FACW
____Spruce, Red **P. rubens** FACU
____Sycamore, American **Platanus occidentalis** FACW
____Willow, Black **Salix nigra** FACW

Shrubs and Vines (see also Bog Mat)

____Alder, Speckled **Alnus incana** ssp. **rugosa** FACW
____Azalea, Swamp **Rhododendron viscosum** OBL
____Birch, Low **Betula pumila** OBL
X Blueberry, Highbush **Vaccinium corymbosum** FACW
____Buttonbush **Cephalanthus occidentalis** OBL
____Chokeberry, Black **Aronia melanocarpa** FAC
____Cranberry-bush **Viburnum trilobum** FACW
____Currant, Black **Ribes americanum** FACW
____Dogwood, Red Osier **Cornus sericea** FACW
____Elder, American **Sambucus canadensis** FACW
____Gale, Sweet **Myrica gale** OBL
____Gooseberries **Ribes lacustre**, **R.glandulosum** FACW
____Honeysuckle, Swamp Fly **Lonicera oblongifolia** OBL
____Inkberry **Ilex glabra** FACW
____Leatherleaf **Chamaedaphne calyculata** OBL
____Maleberry **Lyonia ligustrina** FACW
____Mountainholly **Nemopanthus mucronatus** OBL
____Pepperbush, Sweet **Clethra alnifolia** FAC
____Rose, Swamp **Rosa palustris** OBL
____Spicebush **Lindera benzoin** FACW
____Sweetbells **Leucothoe racemosa** FACW
____Sweetgale **Myrica gale** OBL
____Viburnum, (Arrowwood) **Viburnum recognitum** FACW
____Viburnum, (Wildraisin) **Viburnum cassinoides** FACW
____Water-willow **Decodon verticillatus** OBL
____Willow, Pussy **Salix discolor** FACW
____Willows **Salix** spp. FAC/FACW/OBL
____Winterberry, Holly **Ilex verticillata** FACW
____Witch-hazel, American **Hamamelis virginiana** FAC

Emergent/Wet Meadow/Understory

____Arrow Arum **Peltandra virginica** OBL
____Arrowhead **Sagittaria** spp. OBL
____Arrow-leaved Tearthumb **Polygonum sagittatum** OBL
____Aster, Purple Stem **Aster puniceus** OBL
____Groundsel-Tree **Baccharis halimifolia** FAC
____Bedstraws **Galium** sp. mostle FACW & OBL
____Beggar Tick **Bidens** spp. OBL/FAC/FACW
____Blackberry, Dwarf **Rubus pubescens** FACW
____Bluegrass, Fowl **Poa palustris** FACW
____Bluejoint **Calamagrostis canadensis** FACW
____Boneset **Eupatorium perfoliatum** FACW
____Bulrush, Common **Scirpus atrovirens** OBL
____Bulrush, Soft Stem **Scirpus validus** OBL
____Bulrush, Hard Stem **Scirpus acutus** OBL
____Burreed, Giant **Sparganium eurycarpum** OBL
____Burreed, Narrow-leaved **Sparganium emersum** OBL
____Burreeds **Sparganium spp.** OBL
____Cardinal Flower **Lobelia cardinalis** FACW
____Cattails **Typha latifolia**, **T. angustifolia**, **T.x glauca** OBL
____Cinquefoil, Marsh **Potentilla palustris** OBL
____Dock, Swamp **Rumex verticillatus** OBL
____Forget-me-not **Myosotis scorpioides** OBL
____Goldenrod **Solidago** spp. various
____Hedgey-Hyssop **Gratiola** sp. OBL
____Iris, Wild **Iris versicolor** OBL
X Jewelweed **Impatiens capensis** FACW
____Joe-Pye-Weed, Spotted **Eupatorium maculatum**FACW
____Joe-Pye-Weed, Green-stemmed **E. purpureum** FAC
____Lily, Wild Calla **Calla palustris** FACW
____Lobelia, Ontario **Lobelia kalmii** OBL
____Lobelia, Water **L. dortmanna** OBL
____Loosestrife, Purple **Lythrum salicaria** FACW
____Mannagrass, Slender **Glyceria melicaria** OBL
____Mannagrass, Canada **Glyceria canadensis** OBL
____Mannagrass, Pale **Torreyochloa pallida** OBL
____Mannagrass, Fowl **Glyceria striata** OBL
____Marigold, Marsh **Caltha palustris** OBL
____Meadowrue **Thalictrum** sp. FAC/FACW
____Milkweed, Swamp **Asclepias incarnata** OBL
____Millet, Wild **Echinochloa** spp. FACW
____Mint, Water **Mentha aquatica** OBL
____Monkeyflower **Mimulus** spp. OBL
____Orchid, Purple Fringed **Platanthera psychodes** FACW
____Parsnip, Water **Sium sauve** OBL
____Pickerelweed **Pontederia cordata** OBL
____Pipewort **Eriocaulon septangulare** OBL
____Reed-Meadow Grass **Glyceria grandis** OBL
____Reed Canary Grass **Phariaris arundinacea** FACW/OBL
X Reedgrass **Phragmites australis** FACW
____Rice Cut-grass **Leersia oryzoides** OBL
____Rice, Wild **Zizania aquatica** spp. OBL
____Rush, River **Scirpus fluviatilis** OBL
____Rush, Slender **Juncus debilis** OBL
____Rush, Soft **Juncus effusus** FACW
____Saxifrage, Swamp **Saxifraga pennsylvanica** OBL
____Sedge, Tussock **Carex stricta** OBL
____Sedge, Three-way **Dulichium arundinaceum** OBL
____Sedges **Carex** spp. mostly FACW & OBL
____Skullcap **Scutellaria** spp. OBL
____Skunk Cabbage **Symplocarpus foetidus** OBL
____Smartweed **Polygonum** spp. OBL/FACW
____Spearmint **Mentha spicata** FACW
____Speedwell, Marsh **Veronica americana** OBL
____Spikerush **Eleocharis** spp. OBL/FACW+
____Spiraea **Spiraea spp.** FAC & FACW
____St. Johnswort, Marsh **Triadenum virginicum** OBL
____Swamp Candles **Lysimachia terrestris** OBL
____Sweet Flag **Acorus calamus** OBL
____Three-square **Scirpus americanus** OBL
____Turtlehead **Chelone glabra** OBL
____Vervain **Verbena** sp. FACW
____Water-horehound (Bugleweed) **Lycopus** spp. OBL
____Water Plantain **Alisma** spp. OBL
____Waterwillow **Decodon verticillatus** OBL
____Willow Herb **Epilobium** spp. OBL/FAC/FACW
____Woolgrass **Scirpus cyperinus** spp. FACW
____Yellow-eyed Grass **Xyris** sp. OBL

Floating Leaved/Submergent

____Bladderworts **Utricularia spp.** OBL
____Chara **Chara spp.** OBL*
____Coontail **Ceratophyllum demersum** OBL
X Duckweed, Lesser **Lemna minor** OBL
____Frog's-Bit **Hydrocharis morus-ranae** OBL
____Hearts, Floating **Nymphoides cordata** OBL
____Lily, White Water **Nymphaea odorata** OBL
____Lily, Yellow Pond **Nuphar** spp. OBL
____Milfoil, Water **Myriophyllum** spp. OBL
____Naiad **Najas spp.** OBL
____Nitella **Nitella spp.** OBL*
____Pondweeds **Potomogeton** spp. OBL
____Ribbongrass **Vallisneria americana** OBL
____Saxifrage, Golden **Chrysosplenium americanum** OBL
____Smartweed, Water **Polygonum amphibium** OBL
____Starwort, Water **Callitriche** sp. OBL
____Watermeal **Wolffia** spp. OBL
____Watershield **Brasenia schreberi** OBL

Bog Mat (Use only if mat is present)

____Aster, Bog **Aster nemoralis** FACW
____Bladderwort **Utricularia spp.** OBL
____Bogbean **Menyanthes trifolia** OBL
____Cottongrass **Eriophorum spp.** OBL
____Cranberry, Small **Vaccinium oxycoccos** OBL
____Cranberry, Large **Vaccinium macrocarpon** OBL
____Labrador Tea **Ledum groenlandicum** OBL
____Laurel, Bog **Kalmia polifolia** OBL
____Laurel, Sheep **Kalmia angustifolia** FAC
____Leatherleaf **Chamaedaphne calyculata** OBL
____Orchid, Fringed White **Platanthera blephariglottis** OBL
____Pink, Grass **Calopogon tuberosus** FACW
____Pitcher Plant **Sarracenia purpurea** OBL
____Pogonia, Rose **Pogonia ophioglossoides** OBL
____Rhodora **Rhododendron canadense** FACW
____Rosemary, Bog **Andromeda glaucophylla** OBL
____Few-seeded Sedge **Carex oligosperma** OBL
____Sundews **Drosera** spp. OBL

Bryophytes

____**Sphagnum spp.**

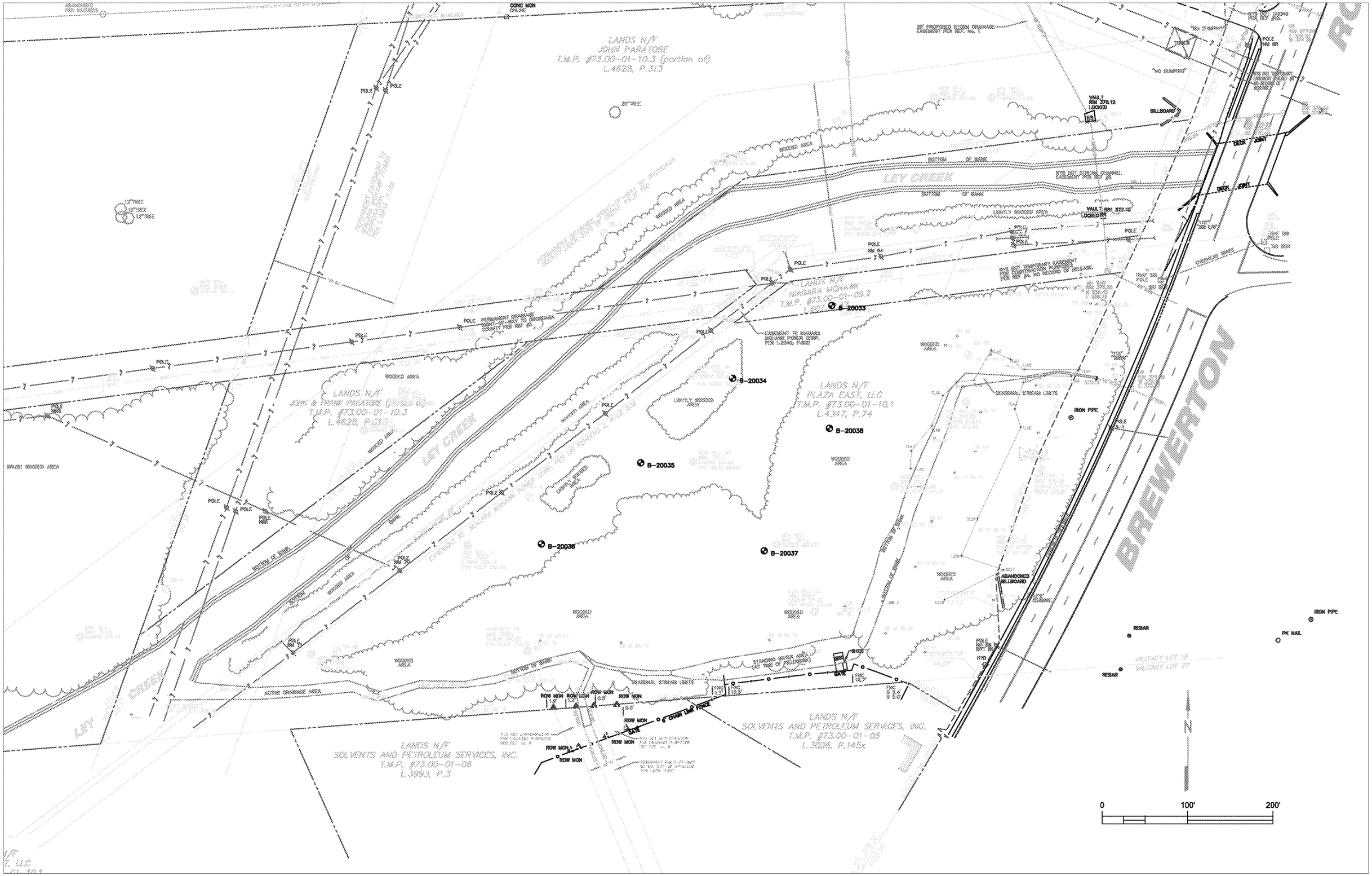
Ferns and Allies

____Clubmoss, Bog **Lycopodium inundatum** OBL
____Horsetail, Variegated **Equisetum variegatum** FACW
____Horsetail, Water **E. fluviatile** OBL
____Horsetail, Rough **E. hyemale** FACW
____Horsetail, Marsh **E. palustre** FACW
____Scouring-rush, Dwarf **E. scirpoides** FAC
____Chain Fern, Netted **Lorinseria areolata** FACW
____Chain Fern, Virginia **Anchistea virginica** OBL
____Cinnamon Fern **Osmunda cinnamomea** FACW
____Clinton's Fern **Dryopteris clintoniana** FACW
____Crested Shield Fern **D. cristata** FACW
____Interrupted Fern **Osmunda claytoniana** FAC
____Marsh Fern **Thelypteris palustris** FACW
____Ostrich Fern **Matteuccia struthiopteris** FACW
____Royal Fern **Osmunda regalis** OBL
____Sensitive Fern **Onoclea sensibilis** FACW

Ground Ivy
Glechoma
hederacea -
FACU

Appendix G

Survey Map


LANDS N/F
JOHN PARATORE
T.M.P. #73.00-01-10.3 (portion of)
L.4628, P.313
LANDS N/F
JOHN & FRANK PARATORE
T.M.P. #73.00-01-10.3
L.4628, P.313
LANDS N/F
NIAGARA MOHAWK
T.M.P. #73.00-01-09.2
LANDS N/F
PLAZA EAST, LLC
T.M.P. #73.00-01-10.1
L.4347, P.74
LANDS N/F
SOLVENTS AND PETROLEUM SERVICES, INC.
T.M.P. #73.00-01-08
L.3993, P.13
LANDS N/F
SOLVENTS AND PETROLEUM SERVICES, INC.
T.M.P. #73.00-01-05
L.3528, P.145x
LEY CREEK
BREWERTON
B-20033
B-20034
B-20035
B-20036
B-20037
B-20038
VAULT
RIM 370.12
LOCKED
BILLBOARD
DECK JOINT
ABANDONED BILLBOARD
IRON PIPE
REBAR
PK NAIL
6' CHAIN LINK FENCE
GATE
ROW MON
POLE
0
100'
200'

Appendix H

Data Usability Summary Reports
(Provided on CD)

Appendix I

Well Logs

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Northing:	1125704.61
Easting:	935871.61
Ground Elevation:	376.99
Casing Elevation:	379.16
Riser Elevation:	378.87

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek
Drilling Method:	Hollow Stem Augers	Soil Boring Number: OLC - MW-1
Sampling Method:	split spoons	Sheet 1 of 1

Water Lev.					Drilling Start	Drilling Finish
Time					830	1130

Surface Conditions: Swamp / Top soil
Weather: Overcast / Rain / Snow
Temperature: 45 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	Description
2			0.0	0		0-2' Red Brown SILT, Fine Sand. Dry
2	.5/2					
3				1		
2						
35			0.0	2		2-4' Red Brown / Black SILT, Some Gravel. Moist. Rock in spoon.
10	.5/2					
6				3		
6						
10			0.0	4		4-6' Red Brown SILT, Some Fine Sand and Clay. Moist. Rock in spoon.
7	.2/2					
4				5		
5						
7			0.0	6		6-8' Red Brown SILT, Some Fine Sand. Moist. Rock in spoon.
8	.5/2					
8				7		
6						
6			0.0	8		8-10' Red Brown SILTY CLAY, Some Fine Sand. Moist.
5	1.5/2					
5				9		
6						
hw			0.0	10		10-12' Brown SILT, Some Clay and Fine Sand. Moist
hw	.5/2					
3				11		
3						
3			0.0	12		12-14' Red Brown SILT, Some Fine Sand and Clay. Black lense of SILT, SAND and CLAY, Trace Glass Fragments.
1	.5/2					Slight odor. Rock in Spoon. Wet at 14 feet.
6				13		
4						
1			0.0	14		14-16' Red Brown SILT with Fine Sand, Clay and Gravel. Moist.
3	.5/2					
5				15		
5						
4			0.0	16		16-18' Red Brown Till Layer, Silt, Sand and Gravel. Stiff.
5	.5/2					
6				17		Set well at 18 feet.
8						Screen 8-18'
				18		Sand 6-18'
						Bentonite Seal 4-6'
				19		Grout grade-4'
						Stick up.
				20		

Logged by: SN Date: 4/27/10 hw = hammer weight

Drilling Contractor: PW Driller: G. Lansing

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Northing:	1125638.54
Easting:	935837.23
Ground Elevation:	374.75
Casing Elevation:	377.07
Riser Elevation:	376.86

Job. No. 14368.42	Client:	New York State Department of Environmental Conservation	Location: Old Ley Creek
Drilling Method:	Hollow Stem Augers		Soil Boring Number: OLC - MW-2
Sampling Method:	split spoons		Sheet 1 of 1

Water Lev.					Drilling Start	Drilling Finish
Time					1330	530

Surface Conditions: Swamp / Top soil
Weather: Overcast / Humid
Temperature: 55 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	Description
2			0.0	0		0-2' Red Brown SILT, ORGANICS and WOOD, Trace Gravel. Dry
2	.5/2					
8				1		
9						
3			0.0	2		2-4' Red Brown / Black SILT, Some Gravel. Dry.
3	.5/2					
6				3		
11						
5			0.0	4		4-6' Red Brown SILT, Some Fine Sand and Gravel. Dry.
3	.5/2					
2				5		
2						
2			0.0	6		6-8' Brown / Black ORGANICS and WOOD, Some Sand and Gravel. Moist.
2	.5/2					
1				7		
1						
8			0.0	8		8-10' Brown SILT, Fine SAND and CLAY. Moist.
3	.5/2					
2				9		
2						
1			0.0	10		10-12' Red Brown SILT, Some Fine Sand, Gravel and Clay. Grey Sand lense at 11.7 -12.0'. Moist
1	2/2					
1				11		
1						
1			0.0	12		12-14' Red Brown SILT, PEAT with ORGANICS, WOOD and STICKS. Soft. Moist. Swamp odor.
1	2/2					
1				13		
1						
hw			0.0	14		14-16' Light Grey SILT, very Fine SAND (Lake Marl). Swamp odor.
hw	2/2					Wet at 14 feet.
hw				15		
hw						
3			0.0	16		16-18' Light Grey SILT, very Fine SAND (Lake Marl). Red Brown Till Layer, SILT, SAND and GRAVEL. Tight.
4	1.5/2					
7				17		Set well at 18 feet.
5						Screen 8-18'
				18		Sand 6-18'
						Bentonite Seal 4-6'
				19		Grout grade-4'
						Stick up.
				20		

Logged by: SN Date: 4/26/10 hw = hammer weight

Drilling Contractor: PW Driller: G. Lansing

FIELD BORING LOG FORM

EA Engineering, P.C.
EA Science and Technology

LOG OF SOIL BORING

Northing:	1125783.71
Easting:	935782.93
Ground Elevation:	370.3
Casing Elevation:	372.63
Riser Elevation:	372.4

Job. No.	Client:	Location:
14368.42	New York State Department of Environmental Conservation	Old Ley Creek
Drilling Method:	Hollow Stem Augers	Soil Boring Number: OLC - MW-3
Sampling Method:	split spoons	Sheet 1 of 1

Water Lev.					Drilling Start	Drilling Finish
Time					930	1200

Surface Conditions: Swamp / Top soil
Weather: Overcast / Humid
Temperature: 55 F

Blow Counts (140-lb)	Feet Drvn/Ft. Recvrd	Well Diagram	PID (ppm) HNu	Depth in Feet	USCS Log	Description
1			0.0	0		0-2' Black ORGANICS and WOOD, Trace Clay.
1	2./2					
2				1		
2						
2			0.0	2		2-4' Black ORGANICS, WOOD, STICKS and ROOTS, Some Silt, Fine Sand and Clay. Tight
3	1/2					
3				3		
4						
hw			0.0	4		4-6' Brown SILT, Some Clay. Tight. Sticky. Moist.
hw	1/2					
hw				5		
hw						
hw			0.0	6		6-8' Brown SILT, Some Clay. Tight. Sticky. Moist.
hw	2/2					Wet at 6 feet.
hw				7		
hw						
hw			0.0	8		8-10' Brown SILT, Some Grey Fine Sand and Clay. Tight. Sticky. Moist. Swamp odor.
hw	2/2					
hw				9		
hw						
hw			0.0	10		10-12' Brown SILT, SAND and CLAY. Shells in the silt. Saturated. Swamp odor.
hw	2/2					Wood chunk in spoon at 12 feet.
hw				11		
hw						
21			0.0	12		12-14' Brown SILT and SAND, Some Clay. Wood and shells. Saturated.
14	2/2					
13				13		
15						
5			0.0	14		14-16' Red Brown Till, SILT, SAND and GRAVEL. Hard. Stiff.
9	1.5/2					
17				15		
18						
				16		
				17		Set well at 16 feet.
						Screen 6-16'
				18		Sand 4-16'
						Bentonite Seal 2-4'
				19		Grout grade-2'
						Stick up.
				20		

Logged by: SN Date: 4/26/10 hw = hammer weight

Drilling Contractor: PW Driller: G. Lansing

Appendix J

Photo Logs

PHOTO 1: Highbush blueberry (*Vaccinium corymbosum*)

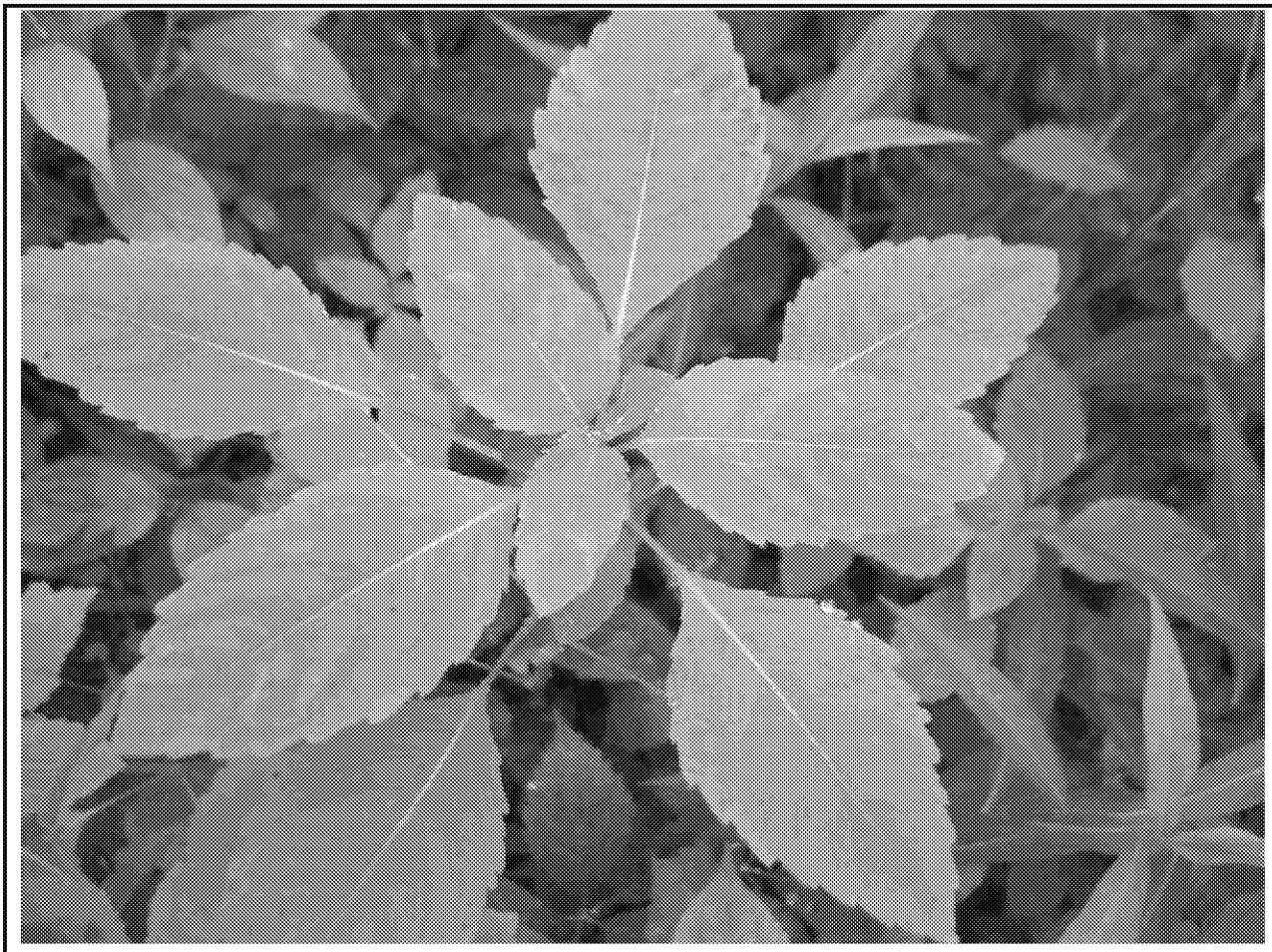


PHOTO 2: Jewelweed (*Impatiens capensis*)

PHOTO 3: Reedgrass (*Phragmites australis*)

PHOTO 4: Lesser duckweed (*Lemna minor*)

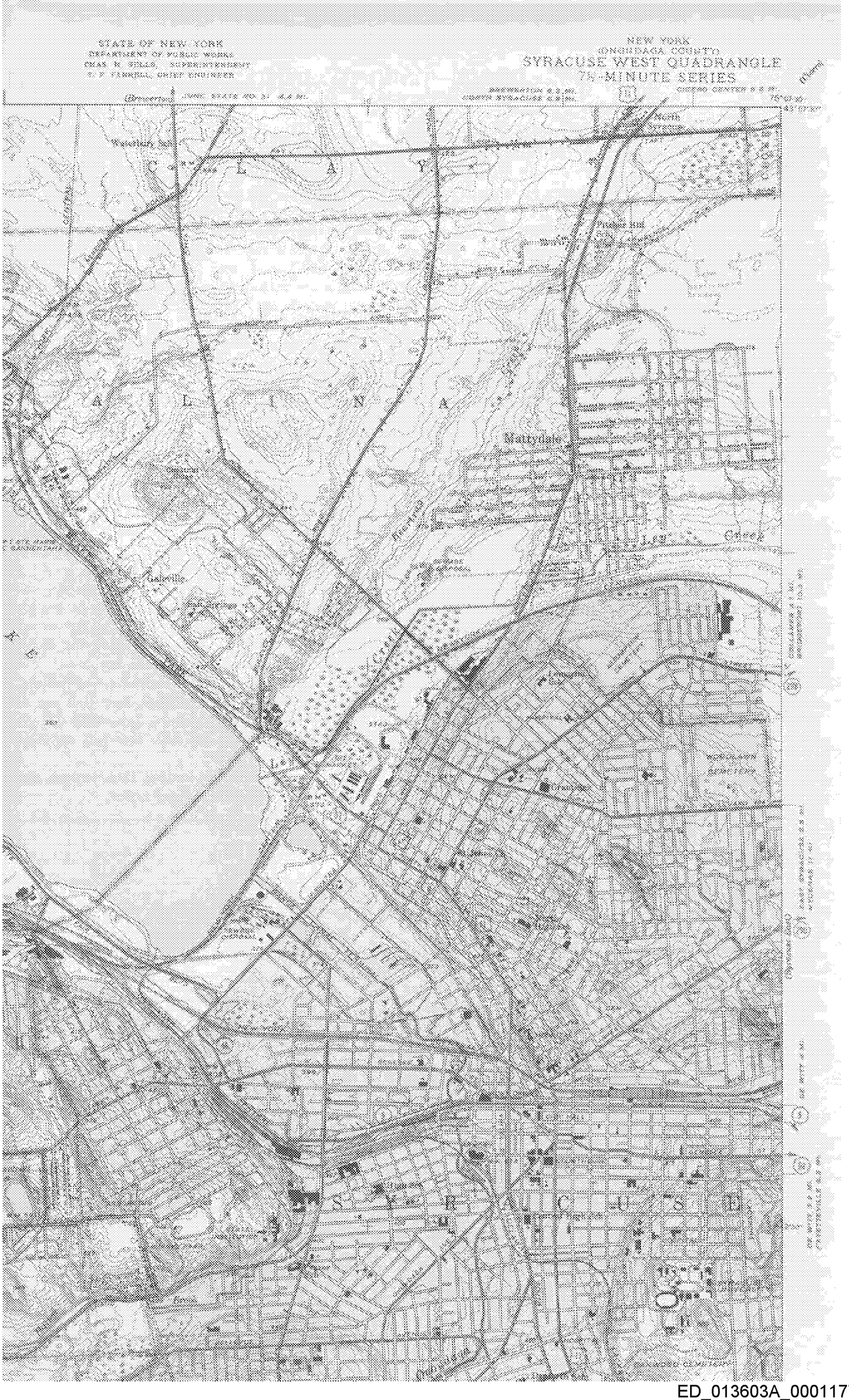
PHOTO 5: Ground lilly (*Glechoma hederacea*)

Appendix K

Form I Analytical Results
(Provided on CD)

Appendix L

Historic Topographic Map (1947)


STATE OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
CHAS. H. SELLS, SUPERINTENDENT
T. F. FARRELL, CHIEF ENGINEER
NEW YORK
(ONONDAGA COUNTY)
SYRACUSE WEST QUADRANGLE
7½-MINUTE SERIES
B
CLAY
SALINA
Mattydale
Galeville
Ley Creek
Onondaga Creek
SYRACUSE
North