

**FINAL  
SITE CHARACTERIZATION REPORT  
KENTUCKY AVENUE SITE 1  
HORSEHEADS, NEW YORK  
SITE NO. 8-08-027**

**Prepared For:**

**New York State Department of Environmental Conservation  
Albany, New York**

**Prepared by:**

**MACTEC Engineering and Consulting, PC  
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**MACTEC NO. 3612052036**

**OCTOBER 2006**

**This document was prepared for the sole use of New York State Department of Environmental Conservation, the only intended beneficiary of our work. No other party shall rely on the information contained herein without prior written consent of MACTEC Engineering and Consulting, P.C.**

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*Submitted to:*

New York State Department of Environmental Conservation  
Albany, New York

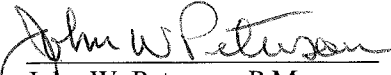
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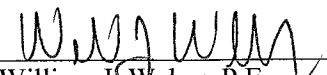
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## ACRONYMS

ABB-ES	ABB Environmental Services
ASP	Analytical Services Protocol
ASTM	
bgs	below ground surface
DUSR	Data Usability Summary Report
EDR	Environmental Data Resources, Inc.
°F	degrees Fahrenheit
ID	inside diameter
KAW	Kentucky Avenue Wellfield
MACTEC	MACTEC Engineering and Consulting, Inc..
MCL	Maximum Concentration Limit
MITKEM	Mitkem Corp.
msl	mean sea level
NYCRR	New York Codes, Rules, and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	State of New York Department of Health
NYSDOT	New York State Department of Transportation
ORP	
PCBs	Poly-Chlorinated Biphenols
PCE	tetrachloroethene
PID	photoionization detector
ppm	parts per million
PVC	polyvinyl chloride
QAPP	Quality Assurance Project Plan
Report	Site Characterization Report
SC	Site Characterization
SCG	Standards, Criteria and guidance values
Site	Kentucky Avenue
SVOC	Semi-volatile organic compound

TAGM	Technical and Administrative Guidance Memoranda
TCE	trichloroethylene
TCL	Target Compound List
TIC	Tentatively Identified Compounds
µg/L	micrograms per Liter
USCS	United Soil Classification System
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WA	Work Assignment

## 1.0 INTRODUCTION

MACTEC Engineering and Consulting, PC (MACTEC), is submitting this Site Characterization Report (Report) to the New York State Department of Environmental Conservation (NYSDEC). The Report addresses the Site Characterization (SC) at the Kentucky Avenue, Site 1 (Site) in the town of Horseheads, Chemung County, New York (Figure 1.1). This Report was prepared in response to Work Assignment (WA) No. D0003826-19 dated April 22, 2005 (NYSDEC, 2005), and in accordance with the requirements of the July 1997 Superfund Standby Contract No. D003826 between the NYSDEC and MACTEC.

The Site is listed as Site No. 8-08-027 in the Registry of Hazardous Waste Sites in New York State. It is currently listed as a potential hazardous waste site, or "P" site, by the NYSDEC, because insufficient information existed to determine whether wastes were disposed of at the site and whether, if present, those wastes posed a potential significant threat to public health or the environment (New York State [NYS], 1998.)

The purpose of the SC is to provide information to be used by the NYSDEC to reclassify the site to one of the following categories:

Class 2	Hazardous waste sites presenting a significant threat to public health or the environment; defined by the NYSDEC as sites that had a release(s) resulting in violation of the NYSDEC environmental quality standards and guidelines.
Class 3	Hazardous waste sites not presenting a significant threat to public health or the environment.
Delist	Sites where hazardous waste disposal is not documented.

To complete its reclassification, the NYSDEC requires information to establish the following:

- The existence of documented hazardous waste disposal, as defined in Title 6 of the New York Codes, Rules, and Regulations (NYCRR) Part 371 (NYS, 1999a).
- The site's significance with respect to the threat it poses to public health and the environment as defined in 6 NYCRR Part 375 (NYSDEC, 1998).
- Identification of contaminant source.

MACTEC collected reclassification documentation and is presenting it to the NYSDEC so it can recommend follow up action for the site (i.e., reclassify, delist, or perform additional investigation).

During Task 1, MACTEC conducted a search of state and county site records, and performed a site inspection to develop information necessary for reclassification or delisting. The information collected is presented in Section 2 of this document. Task 1 activities did not develop adequate data on which to base a delist or reclassification recommendation. Therefore, additional field investigations were conducted under Task 2 – Field Investigations.

Section 3 of this Report presents the work conducted during the field investigations. Section 4 presents results of the field investigation. Section 5 presents an investigation summary.

Task 3 is the preparation of this Report. Resources used to prepare this Report include: (1) information provided in the Work Assignment, (2) appropriate guidelines in the NYSDEC Draft DER-10 Guidance (NYSDEC, 2002), (3) results of previous investigations, if applicable, and (4) results of the SC investigation

## **2.0 SITE BACKGROUND AND PHYSICAL SETTING**

On September 9 and 10, 2005, MACTEC personnel reviewed available records from the NYSDEC office in Albany, New York, and visited the City of Horseheads, New York town offices. As part of the review, MACTEC ordered a copy of an Environmental Data Resources, Inc. (EDR) report which provides a listing of federal and state governmental information pertaining to potential and documented environmental impacts, both at the Site and within the ASTM recommended search radii. Complete lists of all recommended ASTM record searches for standard due diligence requirements are included in the EDR report provided under separate cover. This information was reviewed to support a Site classification, and to help prepare the scope of work for the SC field investigations. The information collected from these sources is summarized below.

### **2.1 SITE LOCATION**

The Site is located at 730 West Chemung St. along the north side of West Chemung St. in a mixed residential/commercial area. It is 10.10 acres in size, and contains two primary structures which house offices and maintenance facilities for the New York State Department of Transportation (NYSDOT). Additionally on the site are stockpiles of road salt and sand for winter application. The bulk of the site is paved, providing space for parking employee vehicles and work vehicles.

Roads, businesses, and private residences surround the Site. Several private residences either border or are located near the site (primarily to the west). Other adjacent properties include additional industrial/commercial facilities.

### **2.2 SITE HISTORY**

The Site is located at 730 West Chemung St. in the Township of Horseheads in Chemung County, New York and is owned by the NYSDOT.

History of the Site has been interpreted from Sanborn® Fire Insurance Maps dating back to 1897, City of Elmira Atlases dated 1878, 1896, and 1904, and Chemung County Atlases from 1869 and 1904. Historical information is summarized below.

The Chemung County Atlas from 1869 provides no indication of ownership of the property, but also indicates no buildings at that time. The earliest indication of site ownership and improvements is provided in the 1897 Sanborn® Fire Insurance Map which shows two buildings on the 730 West Chemung St. property. These buildings are listed as Horseheads Bridge Co.'s Bridge Works and Terry Mfg. Co. specializing in Door Hangers and other Specialties. The 1897 Sanborn® Fire Insurance Map also shows a Standard Oil Co. Pumping Station across the street at 803 West Chemung St.. The pumping station is accompanied by multiple small outbuildings which likely house offices and operations facilities related to the pumping station. By 1903, as indicated by the 1903 Sanborn® Fire Insurance Map, the 730 West Chemung St. buildings were operating under new names. The Horseheads Bridge Co. had become Empire Bridge Co. and the other facility was listed as "formerly owned by" Terry Mfg. The 1904 Chemung County Atlas lists Empire Bridge Co., on the northern portion of 730 West Chemung St., but lists the southern portion as owned by E.A. Perkins. The atlas provides no indication of a second building south of the bridgeworks. The 803 West Chemung St. property is still listed as a Standard Oil Co. Pumping station in 1908. There is no information regarding ownership of the property at 730 West Chemung St. between 1908 and 1932 however the 1914 Sanborn® Fire Insurance Map still indicates the property at 803 West Chemung St to be a Standard Oil Co. Pump Station. The New York State apparently purchased the 730 West Chemung Street property between 1903 and 1932. By 1932 (according to the 1932 Sanborn® Fire Insurance Map) the New York State Highway Department occupies the property (two buildings). There appears to be no change in ownership of the property since that time.

## **2.3 PREVIOUS INVESTIGATIONS**

The file review and site visit did not indicate that previous investigations had been conducted on the site property.

Two major well fields located downgradient of the Site are the Kentucky Avenue Well-field and the Sullivan Street Well-field. Chlorinated solvents (specifically TCE) were detected in both well-fields in the 1980's. It is suspected that the source of the TCE groundwater plume is the contaminated soils at the Westinghouse Electric Corporation's manufacturing facility, located up-gradient of the well-fields and the Site. that the TCE contamination reportedly migrated in groundwater out of the southeast corner of the Westinghouse site, hooked to the south upon joining the main valley of Newton Creek, and continued migrating south (NYSDEC, 2005).

Numerous remedial activities have been conducted at the Westinghouse site, including the removal of 179 buried drums and 1,300 tons of hazardous soils (NYSDEC, 2005). MACTEC reviewed a copy of the "2005 Annual Report, Long Term Groundwater Monitoring, Operable Unit 2, Kentucky Avenue Well Field Site, Horseheads, NY (Cummings, Riter Inc., 2006). This groundwater monitoring program is being implemented by Viacom Inc. formerly known as Westinghouse Electric Corporation, pursuant to the requirements of an Administrative Order for Remedial Action issued by the USEPA in June 1991. The groundwater monitoring program is designed to assess the effectiveness of the barrier well groundwater recovery and treatment system installed on the Westinghouse property as part of OU-2. This system is designed to remove trichloroethene and other volatile organic compounds from the affected area of the Newtown Creek aquifer, down-gradient of the former Westinghouse plant site and up-gradient of the Kentucky Avenue Wellfield property. There are three groundwater monitoring wells sampled annually that are in close proximity to the Kentucky Avenue site; MW-100S, MW-100D (both located 100 ft. northwest of the Site), and MW-113D (located 400 ft. west of the Site). The July 2005 sample results for the wells were 3J  $\mu\text{g/L}$ , 9  $\mu\text{g/L}$  and 32  $\mu\text{g/L}$ , respectively; two of which exceeded the NYS Class GA groundwater standard for TCE of 5  $\mu\text{g/L}$ . Findings indicated that groundwater recovery system is functioning as designed, capturing groundwater in the Newton Creek aquifer at the down-gradient edge of the former Westinghouse facility.

## **2.4 PHYSICAL SETTING**

### **Topography**

The Site is located immediately south of the State Highway 17 in Horseheads, New York at approximately 900 feet above mean sea level (msl). The City of Horseheads is situated in a relatively flat flood plain formed by the Newtown Creek to the east. The flood plain is bordered on the west and east by sharp ridges, apparently formed by the down cutting of Newtown Creek.

The topography at the site slopes generally to the southeast toward the surface water body known as Kopper's Pond.

The topography is relatively flat for approximately one mile to the east of the Site, before rising sharply up a ridge to an elevations over 1600 feet above msl. The topography is also relatively flat to the west of the Site before similarly rising up a ridge to over 1600 feet above msl..

## **Climate**

The climate of the area is characterized by moderately warm summers and cold winters. Mean monthly temperatures range from 24 degrees Fahrenheit (°F) in January to 70°F in July. Average annual precipitation is 34 inches. Average annual snowfall is 43 inches (National Climatic Data Center, 1999).

## **Surface Water Hydrology**

The Site is mostly paved and surface water most likely flows to storm water drainages situated at the site.

## **Groundwater Hydrology**

Groundwater at the site is interpreted to flow to the south and this was also verified by the 2005 Kentucky Avenue Wellfield groundwater monitoring report. Based on regional groundwater flow and topography, the Chemung River and, to a lesser extent Newtown Creek, are presumed local groundwater discharge areas. Groundwater was encountered between 11 and 22 feet below ground surface (bgs) beneath the Site.

## **Geology**

Overburden soils at the site are greater than 35 feet thick according to data collected by MACTEC. Drilling at the site indicated that soils consisted primarily of light brown sands, silts, and gravels. Overburden is mapped as sand, silt, and gravel associated with a glacial outwash depositional environment (Muller et al., 1986). Based on regional geologic mapping (Rickard and Fisher, 1970) bedrock is expected to consist of shale and siltstones associated with the Upper Devonian West Falls Group. Specifically, the Beers Hill Shale; Grimes Siltstone; Dunn Hill, Millport, and Moreland Shales (Rickard and Fisher, 1970).



## **Site Walkover**

On June 13, 2005 MACTEC personnel (Dave Bufo) conducted a site visit at the subject location. The site walkover consisted of viewing the Site to assess possible contamination sources and the logistical concerns for the field program. Prior to the MACTEC site visit, NYSDEC representative Jeff McCullough visited the Site and was provided a tour by operations personnel. Information from Mr. McCullough's visit was communicated to MACTEC and was included in the Work Plan where pertinent.

No obvious sources of contamination were observed (i.e., leaking down), however, potential sources of contamination were observed including sweepings piles, scrap piles, parking areas, and maintenance shops. MACTEC gathered additional information for the purpose of identifying potential sources during the field investigation. Photographs of the site are included in Appendix A.

## **2.5 FILE REVIEW**

On June 24, 2005 MACTEC personnel visited the City of Horseheads municipal offices (including Code Enforcement, Fire Department, Public Works/Engineering and Tax Assessment Office) and the Elmira Public Library. Information pertaining to the history of Site operations and past releases of contamination was reviewed to help prepare the Work Plan for the field investigation. In addition, MACTEC reviewed the EDR report. The information collected, as well as information provided in the WA, is included in various sections of this Report.

## **2.6 SUMMARY OF DATA RECORDS SEARCH AND ASSESSMENT FINDINGS**

Data records searches (conducted through the EDR) for the site indicated numerous minor spills consisting predominantly of fuel, fuel oil, and petroleum based liquids typically used at maintenance and operations facilities. The site is noted as generating hazardous wastes; however no spills or releases of such materials were noted.

Under federal and state regulations a solid waste may be regulated as a hazardous waste if it is a material included in one of the USEPA or the NYSDEC's lists of hazardous wastes. If a material is regulated because of its inclusion on a federal or state list, it is commonly referred to as a "listed

hazardous waste." A waste may also be regulated under the Resource Conservation and Recovery Act as a "characteristic hazardous waste" if it exhibits one of the characteristics of toxicity, corrosivity, reactivity, or flammability.

Results of sampling and analysis of the Kentucky Avenue and Sullivan Street Supply Wells indicated the presence of chlorinated solvents (TCE) in groundwater. Spent chlorinated solvents not originating from a household sources, including TCE are included on both the USEPA's and the NYSDEC's lists of hazardous wastes. Under 6 NYCRR Part 371.4(a)(1), these spent solvents constitute hazardous waste from non-specified sources. Disposal of these chlorinated solvents has been confirmed by available analytical results from the supply wells, but it is not known if the Site is a contributing source of contamination.

As defined by 6 New York Codes, Rules, and Regulations (NYCRR) Part 375, significant threat can be established by documenting a contravention of environmental standards. Surface water and groundwater are the only media for which New York State (NYS) has promulgated standards. Under NYS Water Quality Regulations (6 NYCRR Parts 70-705) the state has set numeric standards that are the maximum concentration of compounds in groundwater and surface water that protect public health and/or the environment.

Information collected during the file review and site visit was not sufficient to determine if hazardous wastes were disposed of at the site, or if the site poses a significant threat to human health or the environment.

Analytical data had not been collected from the Site and therefore it was not known if the Site was a contributing source of the TCE contamination or if the Site posed a significant threat from other hazardous wastes. As a result, Task 2, the SC Field Investigation, was conducted to:

- collect the data necessary to verify the likelihood of uncontrolled waste disposal,
- determine if potential contamination is present on the Site and is migrating offsite, and
- provide sufficient information to allow the NYSDEC to re-classify the site.

### **3.0 SCOPE OF WORK**

To classify the Site, the NYSDEC requires data documenting hazardous waste disposal as set forth in 6 NYCRR Part 371, and the potential significant threat to human health and the environment as defined in 6 NYCRR Part 375. Because data necessary to determine if hazardous wastes were disposed of on-site was not available in state and county files reviewed during Task 1, and because historic analytical data had not been collected from the Site, the field investigation described below was performed. Task 2 activities include the field investigation. The objective of Task 2 activities was to determine whether there is a contravention of applicable standards, criteria and guidance values (SCGs) for Volatile Organic Compounds (VOCs), Semi-volatile Organic Compounds (SVOCs) Pesticides or Poly Chlorinated Biphenols (PCBs) and in Site soils and/or groundwater. In particular, based on a review of historical documentation and current site activities, the sampling and analysis program was developed to address potential for fuel related compounds, lubricants, waste oils/PCBs, and chlorinated solvents. Because insufficient information exists regarding other potential site contaminants, additional analytes included pesticides and metals. Task 3 was the preparation and distribution of this Report.

#### **TASK 2 - FIELD INVESTIGATIONS**

Field investigations included:

- 1) Soil sampling and monitoring well installation
- 2) Round 1 groundwater sampling
- 3) Round 2 groundwater sampling

The subsurface soil borings, groundwater monitoring well installation, and subsurface soil sample collection activities were conducted from November 13, 2005 to November 17, 2005.

Groundwater sampling events were conducted during the period from December 7, 2005 to December 9, 2005 and again on March 3, 2006. A Site land survey was completed by LU Engineers on February 1<sup>st</sup>, 2006.

The following subsections describe the activities conducted during the field investigation portion of the Site SC. The work generally followed the scope of work as outlined in the SC Work Plan (MACTEC, 2005), with the exception that one additional well was installed at the Site. The field investigation was conducted in accordance with the specifications presented in the Quality Assurance Program Plan (QAPP) (ABB-ES, 1995) and the site specific Quality Assurance Project Plan. Laboratory analyses was performed by Mitkem Corporation (Mitkem), a New York State Department of Health (NYSDOH) approved laboratory. Laboratory analysis complied with the NYSDEC Analytical Services Protocols (ASP) (NYSDEC, 2000).

### **3.1 General Field Activities**

General field activities, including mobilization, health and safety, and decontamination, are described in the following subsections.

#### **3.1.1 Mobilization**

After receiving the NYSDEC authorization to begin fieldwork, MACTEC and its subcontractors conducted utility clearance, mobilized to the Site and began the field exploration program. On November 2, 2005, the MACTEC site lead, David Bufo, visited the Site and met with representatives from the NYSDOT to discuss well locations. Well locations were agreed upon and marked at that time.

On November 13<sup>th</sup> 2005 a field team orientation meeting was held on-site with MACTEC personnel to familiarize field workers with site history, health and safety requirements, equipment calibration procedures, and other field procedures.

#### **3.1.2 Health and Safety**

Field investigation activities were conducted at Level D personal protection. Based on photo ionization detection (PID) readings, no upgrades of personal protection were warranted.

### **3.1.3 Decontamination**

Sampling methods and equipment for this field program were chosen to minimize investigation derived waste and minimize possibility of cross contamination. Disposable sampling equipment was used as much as practical to minimize decontamination time and water disposal.

Non disposable sampling equipment was decontaminated by 1) scrubbing the sample collection equipment with potable water and Liquinox, rinsing with potable water, rinsing with de-ionized water, and then allowing the equipment to air dry, or 2) steam cleaning the equipment and then allowing the equipment to air dry. Decontamination fluids did not exhibit visual or olfactory evidence of contamination and were released to the ground surface in the area of the exploration, so as to allow the liquids to infiltrate into the soil.

### **3.1.4 Investigation Derived Wastes**

The field investigation did not result in the generation of wastes that were considered hazardous (i.e., no visual or olfactory signs of contamination, and no PID readings above 5 parts per million (ppm) were detected). Therefore drill cuttings and purge water resulting from the investigation were placed on the ground surface in the area of exploration, or used as backfill for the borings, and personal protective equipment and disposable sampling equipment were double bagged and disposed of as non-hazardous refuse.

## **3.2 Soil Borings and Sampling**

Field investigation activities included the completion of seven soil borings, the collection and analysis of soil and groundwater samples. The purpose of the activities was to provide groundwater data for comparison to NYS Class GA Groundwater Quality Standards set forth under 6 NYCRR Parts 700-705 (NYS, 1999b), and to assist the NYSDEC in evaluating significant threat to public health and the environment as defined by 6 NYCRR Part 375 (NYS, 1998). Soil sample analyses were used to assess whether hazardous waste constituents were present in site soils, and, if possible, confirm a source of contamination.

Boring locations are shown on Figure 3.1. Locations were chosen to determine soil and groundwater conditions across the Site including up gradient and down gradient portions to assess variations in potential soil and groundwater contamination potentially resulting from site activity.

Seven soil borings (BS-1 through BS-7) were completed during the period from November 14, 2005 through November 17, 2005. Soil samples were collected using 2-inch split-spoon sampler driven ahead of four and a quarter-inch hollow stem auger. Soil samples were collected continuously from the ground surface to approximately 10 to 15 feet below the water table. PID headspace readings were used to screen soil samples for the presence of VOCs upon opening the split-spoon sampler. Samples were described using the Unified Soil Classification System (USCS). Sample description and classification, VOC headspace reading, and boring observations were recorded on the Test Boring Logs, presented in Appendix B. Based on the PID readings and physical evidence of contamination such as color and odor, seven soil samples were submitted to the off-site analytical laboratory for analysis. Samples exhibiting the highest PID readings and physical evidence of contamination were selected for analysis. Soil samples were shipped to Mitkem for analyses of target compound list (TCL) VOCs, SVOCs, TAL metals, and Pesticides/PCBs at using USEPA OLM04.2\_VOA, OLM04.2\_SVOA, OLM4.2\_PP and ILM04.1\_ICP methods as described in the NYSDEC ASP of June 2000. Laboratory analysis included Category B deliverables.

**3.3 Overburden Well Installation.** All seven (7) of the soil borings were converted to overburden monitoring wells. The monitoring wells were installed after the soil was classified and pertinent soil samples were collected from the borings. The monitoring wells were constructed of 2-inch inside diameter schedule 40 polyvinyl chloride (PVC) riser with 10-foot PVC well screens. Well screens have 0.010-inch wide machine slots with #0 sand pack to 3 feet above the screen, a two foot bentonite seal above the sand pack and a cement/bentonite grout backfill to the ground surface. The wells were completed with a locking cap and a six inch flush mount cover.

Each newly installed monitoring well was developed using the procedures for well development presented in Subsection 4.4.3 of the QAPP (ABB-Environmental Services, 1995.) Development was completed by Geologic, NY on November 18, 2005. Development records are included in Appendix B.

**3.4 Groundwater Sampling.** The first round of groundwater samples was collected for laboratory analysis during the period from December 7, 2005 to December 9, 2005. All new monitoring wells were sampled using low-flow sampling procedures as described in the QAPP, located in Appendix A. Samples were collected from the presumed least contaminated to the most contaminated locations as determined from the hydrogeology and known Site conditions. Field measurements for pH, temperature, specific conductivity, ORP, dissolved oxygen, and turbidity were collected from each well during pre-sampling purging. Prior to sampling, a full round of groundwater levels were recorded. Sampling data records are included in Appendix B.

The second round of groundwater sampling occurred during the period from March 28, 2005 to March 29, 2006. Similar to the first round groundwater sampling, monitoring wells were sampled using low-flow sampling procedures. Field measurements for pH, temperature, specific conductivity, ORP, dissolved oxygen, and turbidity were collected from each well during pre-sampling purging. Sampling data records are included in Appendix B.

### **3.5 Site Survey**

On February 1, 2006, MACTEC's survey subcontractor (Lu Engineers) surveyed the Site and new monitoring wells. Monitoring well locations were added to the base map. Vertical elevation accuracy was 0.01 foot and horizontal accuracy was 0.1 foot. Horizontal positions were tied into the NYS Plane Coordinate System using North American Datum of 1983. Vertical elevations were tied to msl, North American Vertical Datum 1988. Surveyed items included:

- Horizontal locations of seven new monitoring wells and;
- Vertical elevations of seven new monitoring wells, including top of the riser, top of the protective casing, and the ground surface.
- Location of buildings, landmarks and site boundaries.

## **4.0 DATA ASSESSMENT**

This section presents results of the site investigation activities and laboratory analyses for soil, groundwater, and air samples collected during Task 2, as well as results of the water level survey.

### **4.1 FIELD OBSERVATIONS/RESULTS**

Soils at the site varied from fill material consisting of concrete/pavement fragments, combined with silty sands and gravels near the surface to fine grained silts and sands beneath the fill. Fill thicknesses were greater in the northwest portion of the site (BS-001) down to 18-20 feet and lessened toward the southeast (BS-006, BS-007) down to 10-12 feet.

Ground water depth measurements were collected on December 7, 2005 and between March 28 and 29, 2006. Well survey and water elevation data are presented in Tables 4.1 and 4.2. .

Depth to water across the Site varied from 10.84 ft bgs to 22.95 ft bgs resulting in groundwater elevations across the site ranging from 888.34 to 889.66 ft. Potentiometric surface maps are presented in Figures 4.1 and 4.2.

### **4.2 ANALYTICAL RESULTS**

Soil and groundwater analytical results were compared to appropriate standards or guidelines. Reported concentrations of individual analytes indicating contravention of standards or guidelines are summarized in the following sections, and noted in Tables 4.3 through 4.5.

A Data Usability Summary Report (DUSR) was completed in accordance with the NYSDEC's Guidance for the Development of Data Usability Summary Reports (NYSDEC, 1997). This report and complete analytical results including tentatively identified compounds (TIC) are presented in Appendix D. TICs were not evaluated as part of the DUSR.

Based on laboratory or data usability review, some of the data was qualified with a J, B, R and/or an D. Compounds were qualified J if the concentration listed was an estimated value, which was



less than the specified minimum reporting limit but greater than the instrument detection limit. Compounds qualified J were analyzed for and determined to be present in the sample, and the mass spectrum of the compound met the identification criteria of the method. The reporting limits for most target VOCs using the OLM04.2 Methods, including the target chlorinated solvents compounds were 10 µg/L. This is above most of the NYS Class GA groundwater standards; however, the actual instrument detection limit was below the NYS Class GA groundwater standards.

Compounds qualified B indicate that the compound was found in the trip blank, or laboratory blank, and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.

Compounds qualified D indicate that the compound was reported from an analytical run that required a dilution due to concentrations greater than the highest calibration standard.

Compounds qualified R indicate that the result was rejected during data validation. Data was deemed unusable due to gross deviations from validation criteria.

Analytical results were compared to the standards or guidelines described below.

**Soil Samples.** Analytical results were compared to the Recommended Soil Cleanup Objectives in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) No. 94-4046 (NYSDEC, 1994).

**Groundwater Samples.** Analytical results were compared to: (1) the NYS Class GA Groundwater Quality Standards from 6 NYCRR Parts 700-706 (NYS, 1999b) or, where applicable, (2) the NYS Class GA Groundwater Quality Guidance Values from the Division of Water Technical and Operational Guidance Series 1.1.1 "Ambient Water Quality Standards and Guidance Values" (NYSDEC, 1998).

#### **4.2.1 Soil Sample Results**

A summary of target VOCs, SVOCs, Pesticides and Metals detected in soil samples are presented in Table 4.3.

##### **VOCs**

Chlorinated solvents were not detected in soil samples and VOCs were not detected at concentrations above the NYSDEC Soil Cleanup Objectives.

##### **SVOCs**

One SVOC, Benzo(a)pyrene was detected in soil borings BS-002 and BS-007 at 0.1(J) and 0.72(J) mg/kg respectively, exceeding the TAGM level of 0.061 mg/kg.

##### **Metals**

Aluminum, arsenic, beryllium, calcium, copper, iron, magnesium, manganese, nickel, potassium, thallium, and zinc exceeded their TAGM levels in soil samples from borings BS-001, BS-002, BS-003, BS-004, BS-005, and BS-007. No soil samples were taken from BS-006 due to cobbles stuck in sleeve. The following summarizes these results;

- Aluminum exceedances ranged from 6,400 mg/kg to 8,730 mg/kg exceeding the TAGM concentration of 4,800 mg/kg.
- Arsenic exceeded the TAGM of 7.5 mg/kg at BS-007 with a concentration of 8.8 mg/kg.
- Beryllium detections ranged from 0.19 mg/kg to 0.48 mg/kg exceeding the TAGM concentration of 0.16 mg/kg.
- Calcium detections ranged from 28,200 mg/kg to 95,000 mg/kg exceeding the TAGM concentration of 100 mg/kg.
- Copper detections ranged from 26.9 mg/kg to 43.3 mg/kg exceeding the TAGM concentration of 25 mg/kg.
- Iron detections ranged from 14,700 mg/kg to 22,900 mg/kg exceeding the TAGM concentration of 2,000 mg/kg.
- Magnesium detections ranged from 7,160 mg/kg to 18,500 mg/kg exceeding the TAGM concentration of 600 mg/kg.

- Manganese detections ranged from 412 mg/kg to 594 mg/kg exceeding the TAGM concentration of 50mg/kg.
- Nickel detections ranged from 17.6 mg/kg to 24.3 mg/kg exceeding the TAGM concentration of 13 mg/kg.
- Potassium detections ranged from 578 mg/kg to 727 mg/kg exceeding the TAGM concentration of 400 mg/kg.
- Thallium detections ranged from 0.78 mg/kg to 2.8 mg/kg exceeding the TAGM concentration of 0.1 mg/kg.
- Zinc detections ranged from 72.1 mg/kg to 106 mg/kg exceeding the TAGM concentration of 20 mg/kg.

### **Pesticides/PCBs**

One Pesticide was detected in one soil sample from the Site. Endrin Ketone was detected in soil from BS-007 at 0.0023 mg/kg and there is no TAGM level for this compound. No PCBs were detected in any of the soil samples.

### **4.2.2 Groundwater Sample Results**

This subsection presents analytical results for VOCs, SVOCs, TAL Metals, and Pesticides/PCBs for the groundwater samples collected during the December 2005 and March 2006 events. Table 4.4 shows a summary of target compounds detected in the groundwater samples from the December 2005 sampling event. Table 4.5 shows a summary of target compounds detected in the groundwater samples from the March 2006 sampling event.

### **VOCs**

During the December 2005 sampling event the only VOC detected in exceedance of the NYS Class GA groundwater standard was trichloroethene (TCE) in a groundwater sample from MW-05. TCE was detected at 8 (J) µg/l which exceeds the NY State GA Standard of 5 µg/l.

During the March 2006 sampling event the only VOC detected in exceedance of the NYS Class GA groundwater standard was also TCE. TCE was detected in groundwater from MW-006 at 6(J) µg/l. Trichloroethene was also detected at 6(J) µg/l in the duplicate sample collected from MW-006.

## **SVOCs**

During the December 2005 and March 2006 sampling events SVOCs were not detected at concentrations in groundwater that exceed the NYS standards or guidance values. During the March 2006 sampling event the only SVOC detected was Bis(2-ethylhexyl)phthalate (a common laboratory contaminant). Bis (2-ethylhexyl)phthalate was detected in groundwater from MW-007 at 1 (J) µg/l.

## **Metals**

During the December 2005 sampling event the only TAL Metal found at concentrations exceeding NYS Class GA standard was Sodium. Sodium concentrations exceeded the standard of 20,000 µg/l at all locations and detected concentrations ranged from 138,000 µg/l to 246,000 µg/l.

During the March 2006 sampling event Iron, Manganese, and Sodium were found to exceed NYS Class GA Standards. Sodium concentrations exceeded the standard of 20,000 µg/l at all locations. Detected Sodium concentrations ranged from 133,000 µg/l to 286,000 µg/l. Iron exceeded the standard of 300 µg/l at MW-001 and MW-005 with detected concentrations of 393 (J) µg/l and 1010 (J) µg/l respectively. Manganese exceeded the standard of 300 µg/l at MW-005 with a detected concentration of 321 µg/l.

## **Pesticides/PCBs.**

Pesticides and PCBs were not detected at concentrations that exceeded applicable standards or guidance values in either of the two groundwater sampling events

## 5.0 INVESTIGATION FINDINGS

A review of physical and chemical data collected during the SC resulted in the following findings:

- 1) The site is located in a mixed industrial/residential neighborhood that is serviced by public water.
- 2) Groundwater flow is interpreted to flow to the south.
- 3) TCE was not detected in soil samples collected at the Site property. The following metals did exceed TAGM 4045 soil cleanup objectives to protect groundwater in the soil samples collected; Aluminum, arsenic, beryllium, calcium, copper, iron, magnesium, manganese, nickel, potassium, thallium, and zinc
- 4) TCE was detected at low concentrations in groundwater samples collected from all seven wells at the site and exceeded the NYS Class GA groundwater standards in two wells MW-005 at 6(J)  $\mu\text{g/L}$  and MW-006 at 8(J)  $\mu\text{g/L}$  compared to the standard to 5  $\mu\text{g/L}$ . This is consistent with the reported information that low concentrations of VOCs, specifically, TCE have been detected in area ground water, and are attributed to activities at the Westinghouse site, located up-gradient of the site. Based on the Kentucky Avenue Wellfield Groundwater Monitoring Report from 2005, TCE groundwater concentrations were higher up-gradient of the Site (max of 32  $\mu\text{g/L}$ ) towards the former Westinghouse property, and lower down-gradient of the Kentucky Avenue site.
- 5) The following metals exceeded their criteria in groundwater samples collected; sodium, iron and manganese.
- 6) Based on these results, the Site does not appear to be a source of chlorinated solvents because chlorinated solvents detected in the monitoring wells do not appear to be originating from the Site. Elevated concentrations of iron and manganese in soils could be impacting groundwater beneath the site.

## 6.0 REFERENCES

- ABB Environmental Services, 1995. Program Quality Assurance Program Plan. Prepared for the New York State Department of Environmental Conservation, Albany, New York. June 1995. (ABB Environmental Services, 1995)
- Annual Report 2005, Longterm Groundwater Monitoring, Operable Unit 2, Kentucky Avenue Well Field Site, Horseheads, NY, (Cummings, Riter Inc., 2006)
- National Climactic Data Center (NCDC), 2004. Comparative Climactic Data for the United States, 1971 to 2000. February, 2004.
- New York State (NYS), 1999a. New York Codes, Rules, and Regulations, Title 6, Part 371 Identification and Listing of Hazardous Wastes. Amended November 1999.
- New York State (NYS), 1999b. New York Codes, Rules, and Regulations, Title 6, Part 700-705 Water Quality Regulations Surface Water and Groundwater Classifications and Standards. Amended August 1999.
- New York State (NYS), 1998. New York Codes, Rules, and Regulations, Title 6, Part 375 Inactive Hazardous Waste Disposal Sites Remedial Program. Amended January 1998.
- New York State (NYS), 1998. Class GA Groundwater Quality Guidance Values from the Division of Water Technical and operational Guidance Series 1.1.1 "Ambient Water Quality Standards and Guidance Values"
- New York State Department of Environmental Conservation (NYSDEC), 1997. "Guidance for the Development of Data Usability Reports"; Division of Environmental Remediation; September 1997.
- New York State Department of Environmental Conservation (NYSDEC), 2002. Draft DER-10, Technical Guidance for Site Investigation and Remediation. December 2002.
- New York State Department of Environmental Conservation (NYSDEC), 2000. "Analytical Services Protocols"; 6/00 Edition; June 2000.
- New York State Department of Environmental Conservation (NYSDEC), 1994. Revised Technical and Administrative Guidance Memorandum HWR 94-4046: Determination of Soil Cleanup Objectives and Cleanup Levels. January 1994.
- Rickard and Fisher, 1970. Geologic Map of New York, Finger Lakes Sheet, New York State Map and Chart Series 15. by L.V. Rickard and D.W. Fisher. March, 1970. (Rickard and Fisher, 1970).

## **TABLES**

**TABLE 4.1: GROUNDWATER WELL SURVEY AND WATER ELEVATION DATA  
Dec-05**

Well	Riser Elevation	Depth to Water	Water Elevation
MW-01	912.61	22.45	890.16
MW-02	909.75	20.13	889.62
MW-03	903.08	14.14	888.94
MW-04	902.28	13.96	888.32
MW-05	899.18	10.84	888.34
MW-06	899.25	11.6	887.65
MW-07	900.91	13.02	887.89

Created by: JMI 7/25/06

Checked by: CRS 7/28/06

Notes:

1. Depth to water measured from top of well riser 12/07/05.
2. Elevations in feet above mean sea level-NYS Plane Coordinates, NAVD 1988.
3. Depth to water = feet below top of riser.



**TABLE 4.2: GROUNDWATER WELL SURVEY AND WATER ELEVATION DATA**  
 Mar-06

Well	Riser Elevation	Depth to Water	Water Elevation
MW-01	912.61	22.95	889.66
MW-02	909.75	20.58	889.17
MW-03	903.08	14.55	888.53
MW-04	902.28	14.38	887.90
MW-05	899.18	11.31	887.87
MW-06	899.25	11.97	887.28
MW-07	900.91	13.36	887.55

Created by: JMI 7/25/06

Checked by: CRS 7/28/06

Notes:

1. Depth to water measured from top of well riser 3/28/06.
2. Elevations in feet above mean sea level-NYS Plan Coordinates, NAVD 1988.
3. Depth to water = feet below top of riser.

**Table 4.3: Soil Sampling Results**

October 2006  
Final

Parameter	Location Name		BS-001		BS-002		BS-003		BS-004		BS-005		BS-005		BS-005		BS-007	
	Field Sample Id		STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX		STBS00508001XD		STBS00508001XX		STBS00701001XX	
	Sample Depth		16-18 ft		18-20 ft		16-18 ft		6-8 ft		17-19 ft		8-10 ft		8-10 ft		10-12 ft	
	Field Sample Date		11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005		11/15/2005		11/15/2005		11/14/2005	
Parameter	QC Code		FS		FS		FS		FS		FS		FD		FS		FS	
	TAGM	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
<b>Volatile Organic Compounds</b>																		
Acetone	0.2	MG/KG	-		0.018		-		0.036	J	-		-		0.022	J	-	
Benzene	0.06	MG/KG	0.003	J	0.003	J	-		0.003	J	-		0.003	J	0.003	J	-	
Chloroform	0.3	MG/KG	-		-		-		-		-		-		0.001	J	-	
Cyclohexane		MG/KG	-		0.01	J	0.006	J	0.01	J	1.8	D	0.011		-		-	
Methyl cyclohexane		MG/KG	0.015		0.014		0.008	J	0.016		3.8	D	0.018		0.016		-	
Methylene chloride	0.1	MG/KG	-		0.011		0.009		-		-		-		-		-	
Toluene	1.5	MG/KG	0.009	J	0.004	J	0.003	J	0.008	J	-		0.01	J	0.011		-	
Xylenes, Total	1.2	MG/KG	0.004	J	0.001	J	-		0.004	J	-		0.005	J	0.007	J	-	
<b>Semi-Volatile Organic Compounds</b>																		
Benzo[a]anthracene	0.224	MG/KG	-		0.096	J	-		-		-		-		-		0.059	J
Benzo[a]pyrene	0.061	MG/KG	-		0.1	J	-		-		-		-		-		0.072	J
Benzo[b]fluoranthene	0.224	MG/KG	-		0.14	J	-		-		-		-		-		0.12	J
Benzo[k]fluoranthene	0.224	MG/KG	-		0.065	J	-		-		-		-		-		-	
Bis(2-Ethylhexyl)phthalate	50	MG/KG	0.096	J	0.057	J	0.16	J	0.05	J	0.11	J	0.044	J	0.054	J	0.059	J
Chrysene	0.4	MG/KG	-		0.1	J	-		-		-		-		-		0.15	J
Fluoranthene	50	MG/KG	-		0.2	J	-		-		-		-		-		0.12	J
Indeno[1,2,3-cd]pyrene	3.2	MG/KG	-		-		-		-		-		-		-		0.036	J
Phenanthrene	50	MG/KG	-		0.092	J	-		-		0.046	J	-		-		0.1	J
Pyrene	50	MG/KG	-		0.15	J	-		-		-		-		-		0.12	J
<b>Pesticides</b>																		
Endrin ketone		MG/KG	-		-		-		-		-		-		-		0.0023	J
<b>TAL Metals</b>																		
Aluminum	4,800	MG/KG	8730		7710		6800		6400		NA		8430	J	6640	J	7720	
Arsenic	7.5	MG/KG	2.8		5.4		2.7		3.1		NA		4.6		3		8.8	
Barium	300	MG/KG	54.3		52.4		53.6		27.7	B	NA		48.5		36.6	B	90.3	
Beryllium	0.16	MG/KG	0.21	B	0.25	B	0.19	B	0.19	B	NA		0.3	B	0.21	B	0.48	B
Cadmium	10	MG/KG	-		-		-		0.077	B	NA		0.11	B	0.22	B	0.15	B
Calcium	100	MG/KG	42600		70700		59800				NA		45300	J	95000	J	28200	
Chromium	50	MG/KG	13.3	E	12	E	13.2	E	10.8	E	NA		18	E	14	E	13.9	E
Cobalt	30	MG/KG	8	J	8.4	J	6.3	J	6.2	J	NA		8.2	J	5.9	J	9	J
Copper	25	MG/KG	29.9	J		R		R	26.9	J	NA		30.2	J	23.8	J	43.3	J
Iron	2,000	MG/KG	19900	J	19200	J	16500	J	15000	J	NA		19300	J	14700	J	22900	J
Lead	400	MG/KG	10.6	J		R		R	9.5	J	NA		11.1	J	9.3	J	43.7	J
Magnesium	600	MG/KG	12100	*	18500	*	9200	*	11200	*	NA		8700	*	14200	*	7160	*

**Table 4.3: Soil Sampling Results**

October 2006  
 Final

Parameter	Location Name		BS-001		BS-002		BS-003		BS-004		BS-005		BS-005		BS-005		BS-007	
	Field Sample Id		STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX		STBS00508001XD		STBS00508001XX		STBS00701001XX	
	Sample Depth		16-18 ft		18-20 ft		16-18 ft		6-8 ft		17-19 ft		8-10 ft		8-10 ft		10-12 ft	
	Field Sample Date		11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005		11/15/2005		11/15/2005		11/14/2005	
	QC Code		FS		FS		FS		FS		FS		FD		FS		FS	
TAGM	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	
Manganese	50	MG/KG	452		508		532		445		NA		502		412		594	
Nickel	13	MG/KG	20.5	J	21.9	J	17.6	J	21.4	E	NA		24.3	J	17.6	J	21.3	J
Potassium	400	MG/KG	657	B	727	B	623	B	578	B	NA		682	B	667	B	688	B
Sodium	750	MG/KG	105	B		R		R	126	B	NA		105	B	131	B	488	B
Thallium	0.1	MG/KG	2		2	B	1.9		0.99	B	NA		2		0.78	B	2.8	
Vanadium	150	MG/KG	12.3		12.4		10.1		11		NA		14		11.3		17	
Zinc	20	MG/KG	72.1	J		R		R	69.4	J	NA		106	J	83.8	J	86.7	J

Notes:

Results in milligrams per kilogram (mg/kg)

Only detected compounds shown.

QC Code:

FS = Field Sample

FD = Field Duplicate

Qualifiers:

U = Not detected at a concentration greater than the reporting limit

J = Result is estimated

B = The reported result fell above the IDL but below the CRDL

E= The percent difference between the parent sample and its serial dilution's concentration exceeds 10%.

R= Sample was rejected.

NA= Not Analyzed

Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (NYSDEC, 1998).

\* = New York State GA Standard

Results in **BOLD** exceed associated criteria

Methods:

Volatile Organic Compounds analyzed with OLM4.2\_VOA

Sem-Volatile Organic Compouds analyzed with OLM4.2\_SVOA

Inorganic Compounds analyzed with OLM4.2\_PP

TAL Metals analvzed with ILM4.1\_ICP

Created by: JMI 7/25/06

Checked by: CRS 7/28/06

**Table 4.4: Groundwater Sampling Results**  
**12/05**

Parameter	Location Name	MW-001		MW-002		MW-003		MW-004		MW-005		MW-006		MW-007		MW-007	
	Field Sample Id	STMW001XXX01XX		STMW002XXX01XX		STMW003XXX01XX		STMW004XXX01XX		STMW005XXX01XX		STMW006XXX01XX		STMW007XXX01DU		STMW007XXX01XX	
	Field Sample Date	12/8/2005		12/9/2005		12/9/2005		12/8/2005		12/8/2005		12/7/2005		12/7/2005		12/7/2005	
	Qc Code	FS		FS		FS		FS		FS		FS		FD		FS	
Criteria		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
<b>Volatile Organic Compounds</b>																	
Methyl cyclohexane	NA	10	U	10	U	10	U	10	U	5	J	10	U	10	U	10	U
Trichloroethene	5*	4	J	4	J	2	J	4	J	8	J	5	J	10	U	10	U
<b>Semivolatile Organic Compounds</b>																	
All analytes non-detect	NA																
<b>Inorganics</b>																	
All analytes non-detect	NA																
<b>TAL Metals</b>																	
Antimony	3*	60	U	60	U	60	U	60	U	2.4	B	60	U	60	U	60	U
Barium	1000*	147	B	166	B	154	B	196	B	230		221		159	B	160	B
Calcium	NA	89600		95500		89300		124000		120000		126000		95600		93200	
Chromium	50*	0.79	B	0.66	B	0.64	B	0.71	B	0.64	B	0.55	B	0.85	B	0.91	B
Cobalt	NA	1.1	B	0.68	B	0.58	B	0.7	B	0.65	B	0.83	B	0.8	B	0.99	B
Copper	200*	1.8	B	25	U	25	U	2.2	B	3.6	B	6.7	B	6.5	B	19.2	B
Iron	300*	26.8	B	20.4	B	19.6	B	15.4	B	88.3	B	19.5	B	21.3	B	40.4	B
Magnesium	35000	18600		20200		18700		24900		24500		25500		19900		19300	
Manganese	300*	95.8		6.7	B	4.2	B	69.1		125		89.3		40.4		46.4	
Nickel	100*	2	B	1.5	B	1.7	B	2.3	B	2.3	B	2.4	B	2	B	2.3	B
Potassium	NA	2090	B	1790	B	1870	B	2080	B	2470	B	2190	B	1970	B	2000	B
Silver	50*	0.61	B	0.59	B	10	U	10	U	0.64	B	0.81	B	10	U	0.98	B
Sodium	20000*	154000		141000		138000		192000		140000		246000		163000		164000	
Zinc	2000	5.2	B	5.2	B	3.7	B	7.7	B	15.8	B	14.6	B	6.7	B	23.7	

Created by: AZ 6/27/06  
Checked by: CRS 7/28/06

**Notes:**

Results in microgram per liter (µg/L)

Only detected compounds shown.

QC Code:

FS = Field Sample

FD = Field Duplicate

Qualifiers:

U = Not detected at a concentration greater than the reporting limit

J = Result is estimated

B = The reported result fell above the IDL but below the CRDL

Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (NYSDEC, 1998).

\* = New York State GA Standard

Results in **BOLD** exceed associated criteria

Methods:

Volatile Organic Compounds analyzed with OLM4.2\_VOA

Sem-Volatile Organic Compounds analyzed with OLM4.2\_SVOA

Inorganic Compounds analyzed with OLM4.2\_PP

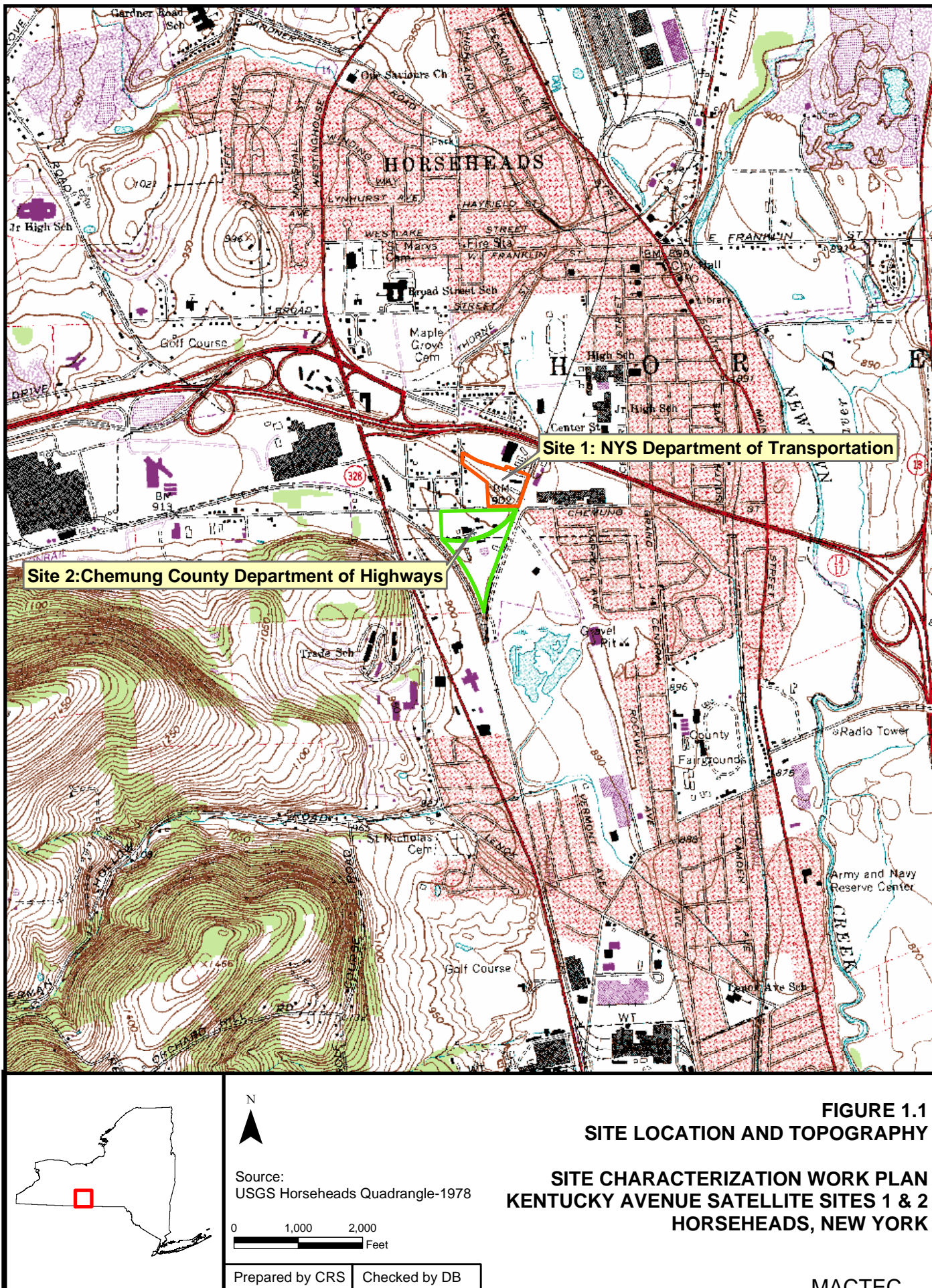
TAL Metals analyzed with ILM4.1\_ICP

**Table 4.5: Groundwater Sampling Results**  
**03/06**

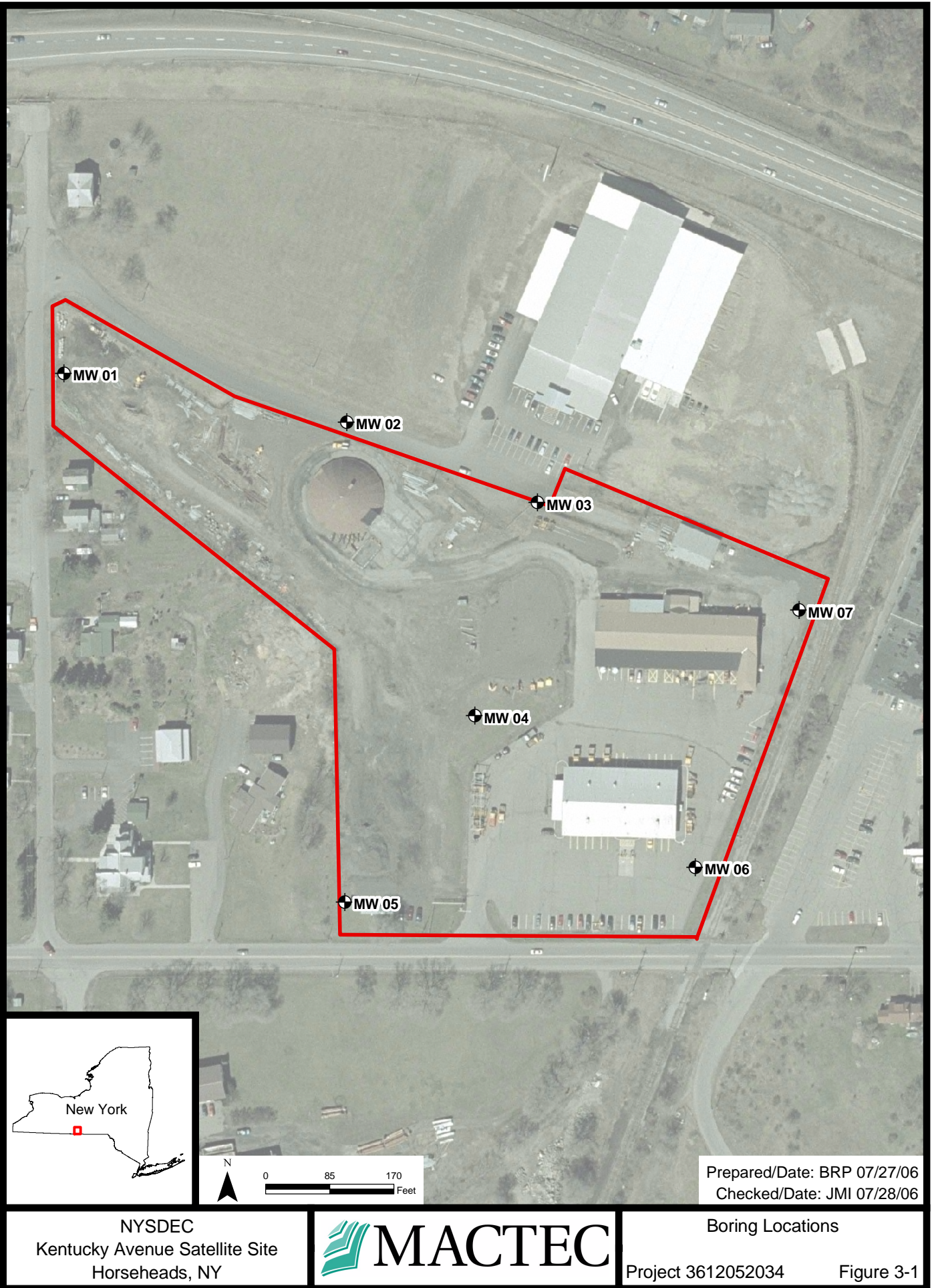
Location Name		MW-001		MW-002		MW-003		MW-004		MW-005		MW-006		MW-006		MW-007	
Field Sample Id		STMW00102502XX		STMW00202502XX		STMW00302002XX		STMW00402002XX		STMW00501502XX		STMW00602002XD		STMW00602002XX		STMW00701802XX	
Field Sample Date		3/28/2006		3/28/2006		3/28/2006		3/29/2006		3/29/2006		3/28/2006		3/28/2006		3/29/2006	
Lab Sample Id		E0379-04A		E0379-05A		E0379-06A		E0379-07A		E0379-09A		E0379-02A		E0379-01A		E0379-08B	
Qc Code		FS		FS		FS		FS		FS		FD		FS		FS	
Criteria		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
<b>Volatile Organic Compounds</b>																	
Cyclohexane	NA	10	U	10	U	10	U	10	U	18		10	U	10	U	10	U
Methyl cyclohexane	NA	10	U	10	U	10	U	10	U	35		10	U	10	U	10	U
Methylene chloride	5*	10	U	10	U	10	U	10	U	10	U	1	J	1	J	10	U
Trichloroethene	5*	3	J	4	J	2	J	4	J	5	J	6	J	6	J	1	J
<b>Semi-Volatile Organic Compounds</b>																	
Bis(2-Ethylhexyl)phthalate	5*	10	U	10	U	10	U	10	U	10	U	10	U	10	U	1	J
<b>Inorganics</b>																	
All analytes non-detect	NA																
<b>TAL Metals</b>																	
Aluminum	NA	222		200	U	200	U	200	U	200	U	200	U	200	U	200	U
Barium	1000*	158	BE	168	BE	171	BE	148	BE	252	E	203	E	208	E	152	BE
Cadmium	5*	0.23	B	0.38	B	0.54	B	0.34	B	5	U	5	U	0.31	B	1.1	B
Calcium	NA	90,400		95,700		101,000		97,400		106,000		110,000		109,000		97,000	
Chromium	50*	0.95	B	10	U	10	U	10	U	10	U	10	U	0.52	B	10	U
Iron	300*	393	J	23.9	UJ	100	UJ	100	UJ	1010	J	19.2	UJ	67.3	JB	17.1	UJ
Magnesium	35000	19,300	EJ	20,700	EJ	21,300	EJ	20,400	EJ	21,700	EJ	22,800	EJ	22,600	JE	20,800	EJ
Manganese	300*	90.2		2.6	U	1.4	U	0.86	U	321		3.7	U	4.1	B	4.6	B
Potassium	NA	4,380	B	1,820	B	1,840	B	1,600	B	2,020	B	1,900	B	1,880	B	1,670	B
Selenium	10*	5	UN	5	UN	5	UN	5	UN	3.1	BN	5	UN	5	UN	5	UN
Sodium	20000	149,000		143,000		145,000		163,000		133,000		282,000		286,000		157,000	
Vanadium	NA	0.98	B	50	U	50	U	0.47	B	50	U	50	U	0.51	B	50	U
<b>Notes:</b> Results in microgram per liter (µg/L) Only detected compounds shown. QC Code: FS = Field Sample FD = Field Duplicate Qualifiers: U = Not detected at a concentration greater than the reporting limit J = Result is estimated B = The reported result fell above the IDL but below the CRDL E = The percent difference between the parent sample and its serial dilution's concentration exceeds 10%. N = The matrix or pre-digested spike sample recovery for an analyte is not within the specified control limit. Criteria = Values from Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (NYSDEC, 1998). * = New York State GA Standard Results in <b>BOLD</b> exceed associated criteria Methods: Volatile Organic Compounds analyzed with OLM4.2_VOA Sem-Volatile Organic Compounds analyzed with OLM4.2_SVOA Inorganic Compounds analyzed with OLM4.2_PP TAL Metals analyzed with ILM4.1_ICP																	

## **FIGURES**



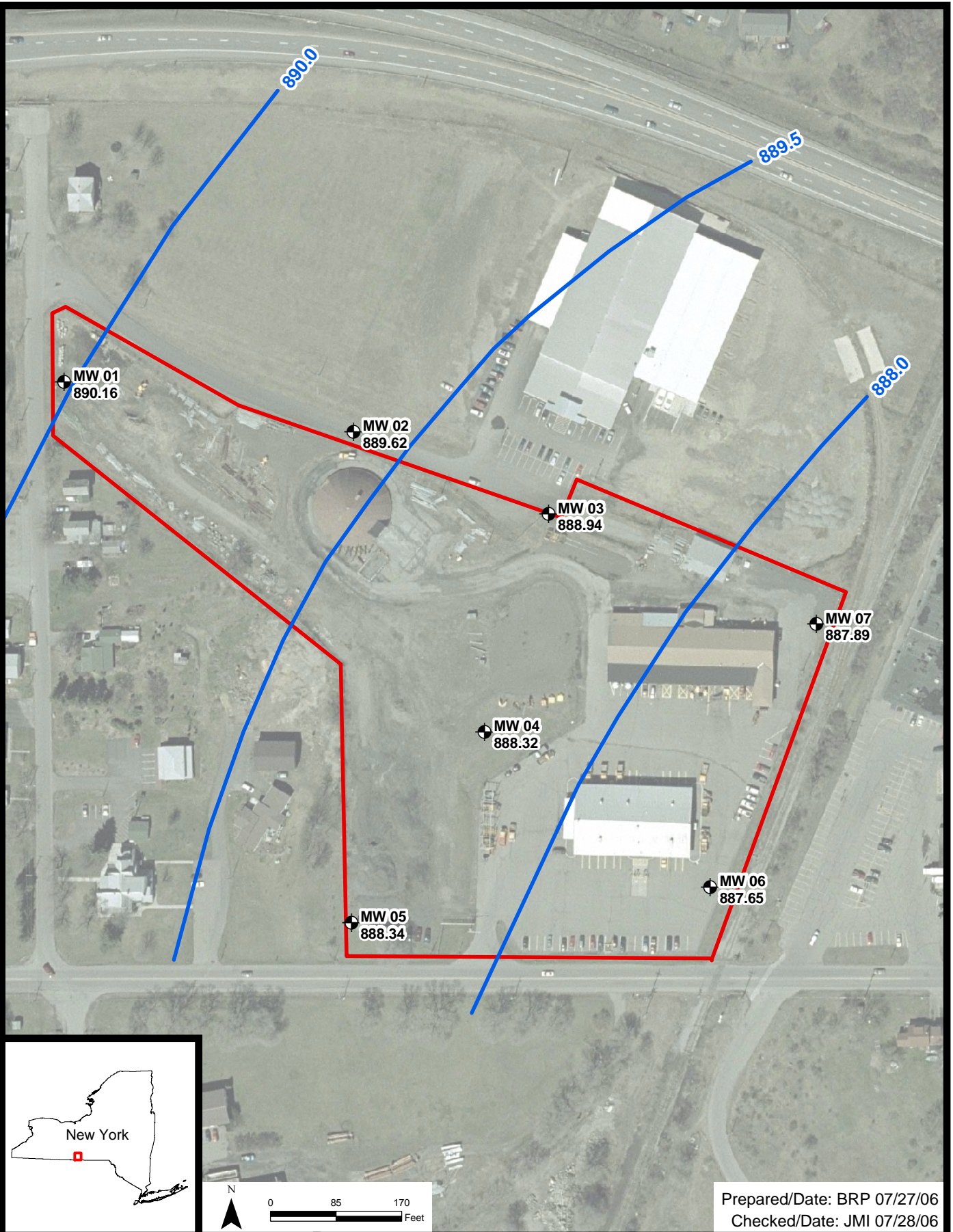








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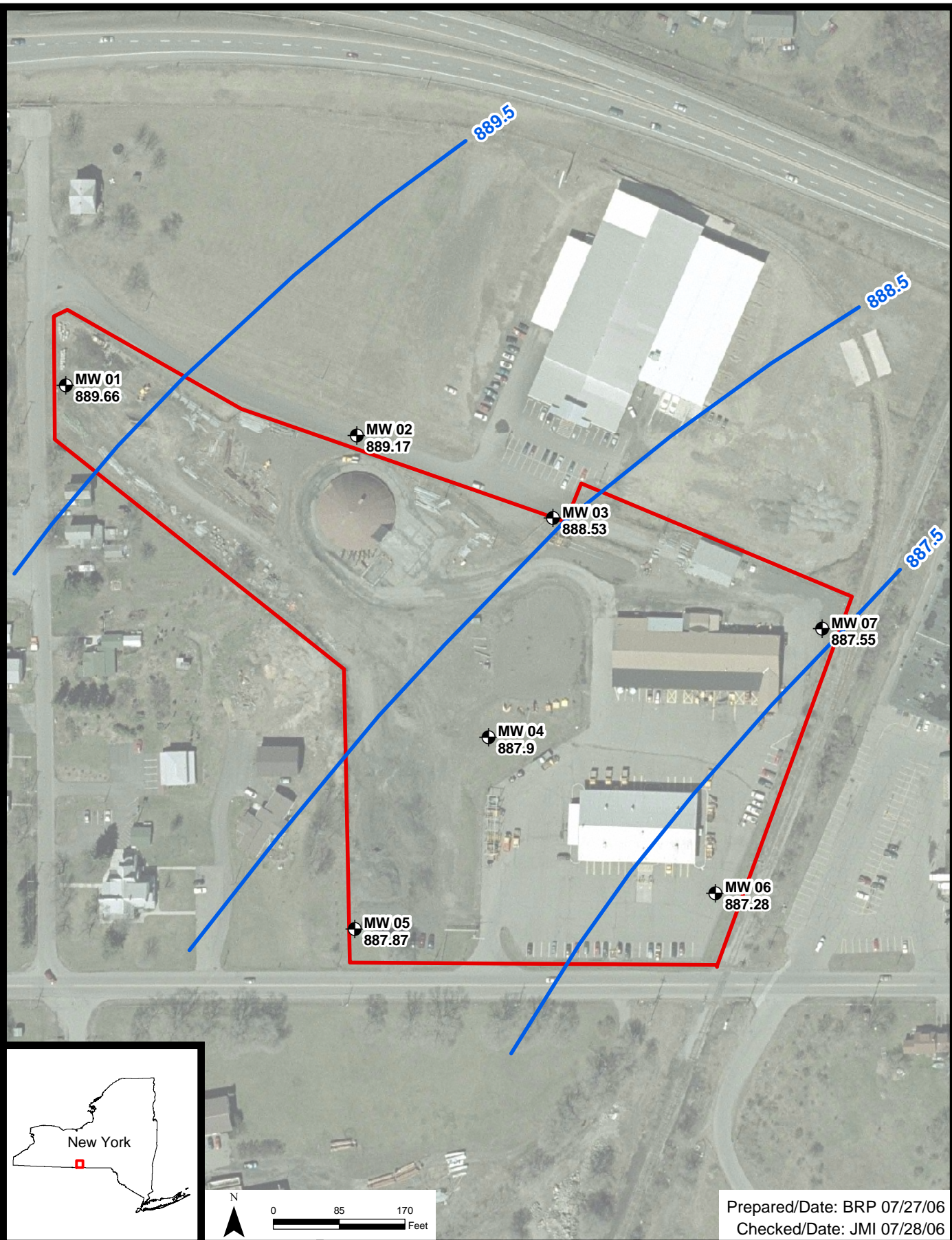


NYSDEC  
Kentucky Avenue Satellite Site  
Horseheads, NY



Potentiometric Surface Map  
December 2005  
Project 3612052034 Figure 4-1





NYSDEC  
Kentucky Avenue Satellite Site  
Horseheads, NY



Potentiometric Surface Map  
March 2006  
Project 3612052034 Figure 4-2

**APPENDIX A:**  
**SITE PHOTOGRAPHS**





Photo 1  
Kentucky Avenue  
Main site building looking toward the southeast






Photo 2  
Kentucky Avenue  
Main site buildings looking toward the southeast

**APPENDIX B:**  
**FIELD DATA RECORDS**

**Field Records:**

**Well Installation Boring Logs**


 <p><b>MACTEC</b></p> <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <u>BS-1 (MW1)</u>			
		Project Name: <u>Kentucky Ave I</u>	Geologist: <u>Brandon Snow</u>		
		Date Started: <u>11/15/15</u>	Drilling Company: <u>Geologic NY</u>		
		Date Completed: <u>11/15/15</u>	Drilling Method: <u>HSA Auger - 4 1/2"</u>		
		Total Depth: <u>34.5'</u>	Depth to Water: <u>~24.0'</u>		
		Comments: <u>3012052034 - NYSDEC</u>			
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0' to 2'	0' to 0.5' Black/Brown Sand loam/PG fines + fine sand, trace coarse sand, SP → SP 0.5' to 2' Lt olive/yellow w/ red & lt. gravel w/ clay, WG, very stiff, damp, SP, very angular to subrounded → GC	1.0 / 2.0	<0.1	10-14 14-2	STB500101601XX
2' to 4'	2' to 4' Lt brown/olive gravel sand clay very stiff, SP, damp, WG-fines to coarse gravel, angular to subrounded → GC 3.3' to 3.6' DK Brown lense of organic loamy sand w/ fines moist SP → OL	0.9 / 2.0	<0.1	16-14 12-12	
4' to 6'	4' to 6' Lt brown/yellow gravelly clay cobbles @ ~5.8' pink sand stone ~5.2' WG-fines to coarse, very angular to rounded 5.8' to 6' Lt brown sand stiff, moist, SP → GC Sandy clay w/ gravel → GC	1.1 / 2.0	<0.1	12-11 4-9	
6' to 8'	6' to 6.6' DK olive sandy gravelly clay, stiff WG, SP, wet → GC 6.6' to 8' Brown/olive clay w/ gravel, WG, stiff wet, HP → GC; grey rocks (coarse sand @ ~8') ~7' white powdery rock w/ orange	1.2 / 2.0	<0.1	9-11 14-24	
8' to 10'	8' to 8.4' Olive clay w/ gravel, very dense, WG fines to gravel, angular to rounded dry, SP → GC; 8.4' to 9.4' - Sandy gravel w/ many fines, WG, dry, very dense → GC	0.9 / 1.4	<0.1	14-34 50 @ 4	
10' to 12'	10' to 10.2' DK olive clay w/ gravel WG fines to fine gravel, very angular to rounded, damp, MP → GCSC	0.2 / 0.2	<0.1	50 to 0.2'	TOOK 2 photos of cuttings rising to the surface.
12' to 14'	12' to 12.3' pink/red gravel w/ sand very dense, NP, PG, looks like broken rock, dry → GP	0.2' / 0.3'	<0.1	50 @ 0.3	Tough drilling, many rocks ~2", broken.
14' to 16'	14' to 16' Lt brown/olive clay-gravel WG fines to coarse gravel, very angular to subrounded, rounded, dry, NP/SP, very stiff → GC	0.5 / 2.0	<0.1	24-27 28-25	
16' to 18'	Lt Brown sand-gravel-dry mixture SP, dry very dense/hard, WG → GM	0.5 / 2.0	<0.1	44-35 34-46	STB500101601XX






<p><b>MACTEC</b></p> <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <u>BS-1 (MW1)</u>			
		Project Name: <u>Kentucky Ave</u>		Geologist: <u>Brandon Shaw</u>	
		Date Started: <u>11/15/05</u>		Drilling Company: <u>Geologiz NY</u>	
		Date Completed: <u>11/15/05</u>		Drilling Method: <u>HSA Auger</u>	
		Total Depth: <u>34.5'</u>		Depth to Water: <u>~24.0'</u>	
		Comments: <u>3612052034 - NYSDEC</u>			


Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID
18' to 20'	18'-19' gravels w/ some fine sand & clay, dry, dense, SP-fines, WG, → GW 19'-20' Lt brown/olive silty fine sand w/ little clay, v. dense, friable, damp, SP trace coarse sand → SMSC	0.9 / 20	20.1	36-18 14-9	
20' to 22'	20-20.1' Lt Brown silty fine sand w/ some clay, PG, dry, very dense, friable, damp, SP → SM 20.1-20.2' grey gravel w/ some sand, PG, conglular, clay, very dense/hard, NP → GP	0.2' / 0.2'	40.1	50 @ 0.2'	
22' to 24'	22-22.5' DK Grey silty fine sand w/ trace angular fine gravel throughout, PG-fines to fine sand, very stiff, slightly friable, SP, damp → SM	1.5 / 20	40.1	12-16 24-28	
24' to 26'	24-25.5' Same as S12, but color is DK grey → SM 25.5-25.8' DK grey silty fine sand w/ gravel, the rest is Same as S12 → SM 25.8-26' grey-brown gravel sand silt mix w/ fines to fine gravel, Subrounded to well rounded, very friable, clay, very dense/stiff → GM	2.0 / 20	20.1	15-17 47-50	
26' to 28'	26-27' olive grey gravel sand clay mix fine WG, Saturated, v. stiff → GC 27-28' Lt brown, gravel and coarse sand mix w/ some fines, WG, loose, Saturated → GW/GM	1.0 / 20	40.1	36-17 21-13	
28' to 30'	28-30' Lt Brown, gravel w/ coarse sand, WG and some fines; very dense, Sat. NP → GM	0.8 / 20	40.1	12-17 34-13	
30' to 32'	Augering to Bottom of Boring. BOB @ 34.5' Bottom of Well = 33.6'				


 <p><b>MACTEC</b> Soil Boring Log MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <b>BS-2(MW2)</b>				
		Project Name: <b>Kentucky Ave</b>		Geologist: <b>Braden Shaw</b>		
		Date Started: <b>11/16/05</b>		Drilling Company: <b>Geologic NY</b>		
		Date Completed: <b>11/17/05</b>		Drilling Method: <b>HSA Ayer</b>		
		Total Depth: <b>33'</b>		Depth to Water: <b>~22.5'</b>		
		Comments: <b>3612052034 - NYSDEC</b>				
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID	
0' to 2'	Olive/Black silty gravel w/ sand WG, soft, wet, MP/SP, m/b trace clay → GM	0.7 2.0	LO.1	2-3 3-2		
2' to 2 1/2'	Lt orange clay/sandy gravel, WG, soft, MP, saturated, → GC @ 4' olive/brown sandy clay w/ sand, more dense, moist, → SC	0.8 2.0	LO.1	2-2 1-2		
4' to 6'	4' to 5.2' Lt Brown/olive gravel w/ some sand and clay, med dense, WG, saturated w/ layers of olive clay (0.1') → GC 5.2-6' brown/olive gravelly clay w/ some sand (coarse) stiff, WG, damp, friable, → GC	1.5 2.0	LO.1	7-4 16-13		
6' to 8'	Brown 6 to 7" same as S3 7' to 8' Brown sand and gravel w/ some fines, WG, v. dense, dry, NP, → GC	0.6 2.0	LO.1	18-23 34-40		
8' to 9 1/2'	8' to 8.4' Lt brown/lk olive sand-gravel clay WG, hard, saturated SP → GC 8.4' to 9.1' Dk olive/lk orange clay w/ gravel WG, v. dense, stiff, damp, friable → GC	2.0 2.0	LO.1	50-45 30-19		
9' to 10'	9.1' to 9.4' Lt Gray Rocky large gravel w/ some fines, WG, dry, v. dense → BW 9.4' to 9.6' Same as (8.4' to 9.1') 9.6' to 9.7' Same as (9.1' to 9.4') but more angular than before	0.3	LO.1	50 0.3		
	9.7' to 10' Dk orange/olive sand-gravel - clay mix, WG, dry, v. dense, friable → GC	1.4		33-50 50 (LO.4)		
10' to 12'	10' to 10.3' Olive Brown sand-gravel dry WG, v. hard, wet, SP → GC 10.3' to 10.9' Same as (10-10.3), but damp 10.9' to 12' Lt Brown sand gravel w/ some fines, WG, v. dense (hard, dry, friable, → GC	1.2 0.3	LO.1	50 0.3		
12' to 14'	Olive/brown gravelly clay, WG, fines to coarse gravel, v. hard, dry, friable, v. angular to subrounded → GC	1.0 1.4	LO.1	33-50 0.4		

 <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <b>BS-2 (MW2)</b>			
		Project Name: <b>Kentucky Ave</b>		Geologist: <b>Brandon Shaw</b>	
		Date Started: <b>11/16/05</b>		Drilling Company: <b>Geologic NY</b>	
		Date Completed: <b>11/17/05</b>		Drilling Method: <b>HSA Auger 4 1/2"</b>	
		Total Depth: <b>33'</b>		Depth to Water: <b>~22.5'</b>	
Comments: <b>3612052034 - NYSDEC</b>					
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
14' to 16'	Olive/Brown gravelly clay, WB, hard friable, MP, wet → GC one very coarse gravel @ 14'	1.3 / 0.3	<0.1	50 @ 0.3	
16' to 18'	16 to 16.6' olive gravelly clay, WB, hard, damp, friable, MP → GC	0.2 / 0.6	<0.1	44-50 @ 0.1	
18' to 20'	Composited sample: olive brown sand and gravel of some fines, WB v. hard, SP, moist, fines to coarse gravel → GC	1.3 / 1.4	<0.1	40-44 @ 0.1	BS00201801XX @ 1745
20' to 22'	Same 22'-22.5' same as S10 22.5 to 24' Lt Brown olive sand and gravel w/ some clay, WB, v. hard, dry, MP, → GC	1.2 / 1.8	<0.1	36-43 @ 0.1	
22' to 24'	22 to 25' Lt Brown sand and gravel of some fines, WB, dense, saturated, → GC 25 to 26' Brown coarse sand and gravel, WB, set, dense, SP → GC 1' of olive brown clay from 25.8-25.9	1.0 / 2.0	<0.1	15-17 @ 0.1	
24' to 26'	Lt brown olive sandy clay gravel WB, hard, saturated, SP, → GC Boney sample	0.3' / 2.0	<0.1	21-27 @ 0.1	
Agency down to BOD. BOD @ 33' Bottom of well: 33.1' 32.1'					
					


 <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <b>BS-3 (MW3)</b>			
		Project Name: <b>Kentucky Ave</b>		Geologist: <b>Brandon Shaw</b>	
		Date Started: <b>11/16/05</b>		Drilling Company: <b>Geologix NY</b>	
		Date Completed: <b>11/16/05</b>		Drilling Method: <b>HSA Auger - 4 1/2"</b>	
		Total Depth: <b>28.0'</b>		Depth to Water: <b>~18'</b>	
		Comments: <b>361205 2034 - NYSDEC STBS00301601XK</b>			
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0 to 1	DK Brown Silty Sand w/ gravel, med. stiff, moist, SP → SM	0.8 / 2.0	Lo.1	16-10	
1 to 2	1' to 2' Brown/ yellow clayey gravel, med. dense, damp, SP → GC			6-4	
2 to 3	2' to 3' orange/ DK Brown clayey gravel, med/ stiff/ soft, wet, WG, MP → GC	0.5 / 2.0	Lo.1	4-3	
3 to 4	2.3' to 4' lt brown/ orange grainy clay, WG, saturated, med stiff, MP → GC			4-6	
4 to 5	4' to ~5.5' lt orange/ Brown sand and gravel clay, WG, soft, MP → GC	0.7 / 2.0	Lo.1	4-2	
5 to 6	5.5' to 6' Sand and gravel of some clay WG, soft, Saturated, MP → GC			3-3	
6 to 8	Brown (coarse sand and gravel) WG trace fines, fines to coarse gravel, med dense, NP, wet → GC	1.0 / 2.0	Lo.1	5-7	
8 to 10	8' to 8.8' Brown Silty Sand and gravel, WG fines to fine gravel, very stiff, wet, SP → SM	0.8 / 1.4	Lo.1	21-36	
10 to 12	8.8' to 9.4' Brown/ olive sand gravelly clay, WG, v. argill. to saturated, v. dense, damp, SP → GC			50 @ 4	
12 to 14	10' to 11.1' DK Brown Sand gravel clay, WG fines to coarse gravel, v. stiff, moist, SP → GC	1.3 / 2.0	Lo.1	19-14	
14 to 16	11.1' to 12' lt yellow/ olive clayey gravel, WG, v. stiff, dry (fragile), key marks well			26-29	
16 to 18	No recovery here.	0.0 / 0.7'	N/A	33-50 @ 0.2	
18 to 20	14' to 14.6' grey/ lt brown gravel of little silt, fine gravel to coarse gravel of little fines, very dense, SP → SM	0.6 / 2.0	Lo.1	29-40	
20 to 22	14.6' to 16' stratified olive brown- yellow sand gravel + clay WG, dry, friable → GC			35-38	
22 to 24	olive/ Brown Sand and gravel w/ a o.d. clay lense, WG, very stiff, wet, SP, wet rounded to subangular	1.3 / 2.0	Lo.1	38-29	
24 to 28	→ GC			21-18	STBS00301601XK - Composite core for sample

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 <p><b>MACTEC</b></p> <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <u>BS-3(MW3)</u>				
		Project Name: <u>Kentucky Ave I</u>		Geologist: <u>Brandon Shaw</u>		
		Date Started: <u>11/16/15</u>		Drilling Company: <u>Geologiz NY</u>		
		Date Completed: <u>11/16/15</u>		Drilling Method: <u>HSA Auger-4 1/2"</u>		
		Total Depth: <u>28.0'</u>		Depth to Water: <u>~18'</u>		
Comments: <u>3612052034 - NYSDEC</u>						
Depth (feet)	Stratigraphy Description	Penetration/Recovery (feet)	Headspace (ppm)	Blows/6 inches	Sample ID	
18' to 20'	<u>coarse DK. Brown / tan Sandgravel - clay WC, very stiff, saturated, v. angular to well rounded, → GC SP</u>	<u>1.5 / 2.0</u>	<u>LOI</u>	<u>17-14</u> <u>16-8</u>		
20' to 22'	<u>Same as S10.</u>	<u>~1.0' / 2.0</u>	<u>LOI</u>	<u>7-8</u> <u>20-18</u>		
	<u>Augering down to ~28'</u>					
	<u>BOB @ 28'</u>					
	<u>Depth @ bottom of well &gt; 27.1'</u>					

 <p><b>MACTEC</b></p> <p>Soil Boring Log</p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <u>BS-4(MW4)</u>			
		Project Name: <u>Kentucky Ave</u>		Geologist: <u>Brandon Shaw</u>	
		Date Started: <u>11/15/05</u>		Drilling Company: <u>Geologic M</u>	
		Date Completed: <u>11/15/05</u>		Drilling Method: <u>HSA - Ayer</u>	
		Total Depth: <u>26.0'</u>		Depth to Water: <u>~15.2</u>	
		Comments: <u>3612052034 - M/SDEC</u>			
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
S <sub>1</sub> 0' to 2'	0' to 0.8' DK Brown Silty loam, WG fines to coarse sand, med dense, damp, SP → SM 0.8' to 2' orange brown silty sand w/ gravel and clay, WG, med dense, dry, SP → SC	1.8 / 2.0	LO.1	2-2 7-10	
S <sub>2</sub> 2' to 4'	2' to 4' Stratified Brown of orange, black and Lt brown lenses, sandy clay w/ layers of clean sand and clay, trace fine gravel and cobble, stiff, WG, moist, MP → SC	1.6 / 2.0	1.8	6-6 5-5	
S <sub>3</sub> 4' to 6'	4' to 5.5' Orange / Brown Silty Sand w/ fine gravel, WG, very stiff, trace cobble, moist, MP → SM 5.5' to 6' - Brown Sand and gravel of silt, WG fines to fine gravel, damp, SP → GM	1.0 / 2.0	LO.1	7-11 15-20	
S <sub>4</sub> 6' to 8'	6' to 8' Brown silty sand and gravel, very stiff, damp, SP → GM	1.2 / 2.0	<0.1	14-17 16-17	STBS00406000 KK
S <sub>5</sub> 8' to 10'	8' to 8.5' Lt Brown sandy clay w/ gravel, very stiff, moist/wet, MP → SC 8.5' to 10' Brown to Lt Brown silty sand & gravel, very dense, trace cobble, damp to dry, SP → GM	1.0 / 2.0	LO.1	10-38 35-46	
S <sub>6</sub> 10' to 12'	10' to 12' Gravel (sand stone and other) w/ sand and lenses of stratified olive/brown dry clay throughout, hard, dry, NP, but clay lenses have SP → GC	1.0 / 2.0	<0.1	23-31 48-46	
S <sub>7</sub> 12' to 14'	12' to 13.5' olive/brown/yellow silty sand w/ clay and gravel, WG fines to fine gravel, dry, yellow, SP → GM/GC 13.5' to 14' Shallowest dry olive clay (silt) then same as 12' to 13.5'	0.7 / 1.2	<0.1	41-49 50-52	
S <sub>8</sub> 14' to 16'	Not representative of Sample. Discard S <sub>8</sub> stone	0.1 / 0.2	N/A	50 P 0.2	
S <sub>9</sub> 16' to 18'	14' to 16' 16' to 18' coarse gravel w/ some silty fine sand and trace fine gravel, WG-fines to coarse gravel, dry, NP → GC	0.3 / 0.4	<0.1	50 P 0.4'	

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 <p><b>MACTEC</b></p> <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <b>BS-4 (MW4)</b>				
		Project Name: <b>Kentucky Ave I</b>		Geologist: <b>Brandon Shaw</b>		
		Date Started: <b>11/15/15</b>		Drilling Company: <b>Geologic NY</b>		
		Date Completed: <b>11/15/15</b>		Drilling Method: <b>HSA Auger</b>		
		Total Depth: <b>26.0'</b>		Depth to Water: <b>~15.2'</b>		
Comments: <b>3612052034 - MSDEC</b>						
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID	
18' to 20'	Coarse sand w/ gravel and some fines, med dense, saturated, NP, large of clay @ ~19' (0.1') very uniform to remainder	1.0 / 2.0	<0.1	14-16 / 11-12		
20' to 22'	20.0-20.1' Brown clean sand w/ trace fine gravel and trace fines, Sat, NP 20.1 to 20.2' - Same as S10.	0.3' / 0.3'	<0.1	50 to 62		
22' to 26'	Auguring the rest of the way to BOB, which is @ 26.0' Bottom of well @ 25.05'					

1 of 2

 <p><b>MACTEC</b></p> <p>Soil Boring Log</p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <b>BS-5 (MW5)</b>				
		Project Name: <b>Kentucky Ave I</b>		Geologist: <b>Brandon Shaw</b>		
		Date Started: <b>11/15/05</b>		Drilling Company: <b>Geologic NY</b>		
		Date Completed: <b>11/15/05</b>		Drilling Method: <b>HSA Auger</b>		
		Total Depth: <b>220'</b>		Depth to Water: <b>15.2'</b>		
Comments: <b>3612052034 - NISDEZ</b>						
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID	
0' to 2'	0' to ~1' DK brown silty lean. PG fines to fine sand w/ trace fine gravel. Stiff moist, MP. Some grass. ~1' to 2' stratified LT brown/orange sandy clay w/ some gravel, WG-fine to coarse gravel damp.	1.0 / 2.0	<0.1	0-5 / 6-5	STBS00508001XX	
2' to 4'	MP, clay lvs to rounded. - SC. 2 to 4' orange/brown sandy clay w/ fine gravel. WG, med stiff, moist, MP - SC	0.5 / 2.0	<0.1	4-4 / 3-2		
4' to 6'	4' to ~4.2' Brown sandy clay w/ trace gravel med stiff, damp, MP - SC. 4.2' to 4.8' - Brown silty sand, PG, med dense damp, SP → SM; 4.8' to 6' - yellow/brown sand	1.4 / 2.0	<0.1	8-12 / 6-9		
6' to 8'	w/ gravel, WG, Dense, damp, NP - SW. 6' to ~7' Brown silty sand, very dense, WG-fines to fine gravel, MP → SM. 7' to 8' - Fill w/ sand, crushed rocks, c. 7.5' fine sandstone, c. 8' a clay LT brown clay	0.7 / 0.7	<0.1	47-50 / 10-20		
8' to 10'	8' to 8.5' LT Brown Silty Sand w/ some gravel WG-fines to fine gravel, dense, damp, SP → SM. 8.5' to 10' Brown sand and gravel w/ some coarse dense to loose WG-fine sand to cobbles, clay NP → GW (fill may be or could be fine grained)	2.0 / 0.8	<0.1	17-27 / 38-50	*STBS00508001XX	← Used 3" Spoon
10' to 12'	10' to ~10.5' LT Brown Silty clay, dense wet, MP. Sand and crushed gravel w/ lenses of clay LT fine clay throughout the sleeve WG-fines to coarse gravel, damp today, CUBC	0.6 / 0.7	28	18-41 / 50 (0.2')		
12' to 14'	N/A	0.0' / 0.0'	N/A	50 (0.0)		
14' to 16'	14' to ~15' LT Brown silty sand, WG, Sat. SP → SM. 15' to 16' Gray silty sand over a light brown clay loam, dry & strong gas/diesel smell.	0.7 / 2.0	4.9	17-15 / 14-18		
16' to 18'	16' to 18' Silty gray, hetero sandy gravel w/ fines, saturated strong clay. Sampled here, left screen on decan water.	0.8 /	59	20-16 / 12-15	STBS00501601XX	




1 of 2

 <p><b>MACTEC</b> Soil Boring Log MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <u>BS-6(MW6) - 1<sup>st</sup> Attempt.</u>			
		Project Name: <u>Kentucky Ave I</u>		Geologist: <u>Brandon Shaul</u>	
		Date Started: <u>11/14/05</u>		Drilling Company: <u>Geologiz N/</u>	
		Date Completed: <u>11/14/05</u>		Drilling Method: <u>HSA - Auger</u>	
		Total Depth: <u>26.0'</u>		Depth to Water: <u>~12.7'</u>	
Comments: <u>3612052034 - MGDZ</u>					
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID
0'	0' to 0.4' - Black top - No sample	N/A	<0.1	N/A-0	
0.5' to 2'	0.5' to 2' DK Brown gravelly sand w/ loose, wet, SW	0.9/1.5	0.4	3-5	N/A
2'	- Fill			6	
2' to 2.5'	2' to 2.5' - Same as S1			15-11	
2.5' to 4'	2.5' to 4' - DK Brown silty sand w/ gravel, w/ stiff, damp, SM	1.0/2.0	<0.1	12-11	N/A
4'	- Fill				
4' to 4.3'	Rebar @ 4.3' w/ a piece of copper (something) going in w/ Auger	0.3/2.0	5-4-4	20-	
4.3' to 6'	Stopped drilling. In a Railroad embankment - large cement structure. Black/Brown clayey sand w/ lots of gravel, stiff, damp, MP	N/A	N/A	50	N/A
6'	Stopped drilling. In a Railroad embankment - large cement structure. Black/Brown clayey sand w/ lots of gravel, stiff, damp, MP	5	<0.1	Stopped @ 4.3'	2nd Hole ran.
6' to 8'	160Ks like a fill - SC	0.5/2.0	6-5	5-6	N/A
8'	8.0' - 8.5' Black Sandy gravel, damp, Fill material			8-13	
8.5' to 10'	8.5' - 10' Red Brown clayey sand w/ gravel, damp, again looks like fill	0.8/2.0	<0.1	9-6	N/A
10'	10' - 10.5' Black Silty Sand w/ gravel - Fill		4-6		
10.5' to 12'	10.5' - 12' Brown sandy gravel w/ clay - Fill	1.2/2.0	7-14	<0.1	N/A
12'	12' - 12.5' Brown Sandy clay w/ gravel - Fill			15-25	* water @ 12.7'
12.5' to 14'	12.5' - 14' Grey/Brown, Sandy gravel w/ some fines - Fill	1.0/2.0	<0.1	24-16	No Sample because all fill material.
14'	14' - 15.5' Brown Sandy clay w/ gravel fines to 16', Hard, MP, saturated - SC			15-22	* Some round and many angular particles
15.5' to 16.5'	15.5' - 16.5' Brown silty gravel, w/ fine to med gravel, Hard/Dense, Saturated, SP	0.8/2.0	0.9	21-40	
16.5' to 17.5'	16.5' - 17.5' Crushed gravel (small) and much coarse sand, w/ trace fines, Fill	1.0/2.0	<0.1	44-35	* red/pink sandstone @ bottom of shoe
17.5' to 18'	17.5' - 18' w/ coarse sand w/ fines, Brown Saturated, Fill			22-19	
18'	17.5' - 18' Sandstone red/pink rock				


Filled material

Deeper of 2nd 4' to 6' at Brown/Black gravelly sand, w/ trace fines. Deep SW Fill

 <p><b>MACTEC</b></p> <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <u>BS-6 (MW6) - 2nd Attempt Hole</u>				
		Project Name: <u>Kentucky Ave I</u>		Geologist: <u>Brenden Shaw</u>		
		Date Started: <u>11/14/05</u>		Drilling Company: <u>Geologic M</u>		
		Date Completed: <u>11/14/05</u>		Drilling Method: <u>HSA - Auger</u>		
		Total Depth: <u>26.0'</u>		Depth to Water: <u>~12.7'</u>		
		Comments: <u>3612052034 - MYSDEC</u>				
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID	
18' to 20'	18'-18.2' Brown sandy clay w/ fines to coarse gravel, saturated, very angular to rounded - fill	0.2/0.2	0.9	50-0.2'	- Cobble stuck	
20' to 22'	20'-20.7' Brown sandy clay, PG fines to coarse sand, Hard, Sat., MP trace 20.7'-22' Brown, sandy gravel w/ fine same fines, WG fines to fine gravel, Hard, Sat, SP, Very angular to subrounded	1.6/2.0	0.9	47-42' 36-30		
22' to 24'	22'-22.3' Brown WG sandy gravel fines to coarse gravel, Sat. Hard, NP, Angular + Rounded	1.9/0.3	20.1	50-20 0.3'		
24' to 26'	Drilling down w/ Auger. - drilling got very hard. - large rock - cobble from 22-3' to 24'.	N/A	N/A	N/A		
BOB @ ~26.0'						
Depth of well - 25.0'						

1 of 2

MACTEC		Boring Location: BS-7 (MW7)				
Soil Boring Log MACTEC 511 Congress Street Portland, ME		Project Name: Kentucky Ave I		Geologist: Brandon Shaw		
		Date Started: 11/14/05		Drilling Company: Geologic NY		
		Date Completed: 11/14/05		Drilling Method: HSA Ayer		
		Total Depth: 24.0'		Depth to Water: ~12.9		
		Comments: 3612052034 - M/SDC				
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID	
0' to 2'	0-0.5' Black top Slight odor 0.5-1.6' Black Sandy gravel, WG-fines to coarse gravel, damp-Fill 1.6-2.0' Olive brown sandy gravel clayey gravel-Fill?	N/A 0.4/2.0	NA LO.1	N/A -5 5-4		
2' to 4'	2' to 4' - Black clayey gravel WG Fines to fine gravel, Subangular to rounded, MP, Stiff, Moist - Fill GC	0.2/2.0	LO.1	4-4 4-3		
4' to 6'	4'-5' Black Sand w/ some gravel and some fines, WG, fines to fine gravel, loose, damp, SP → SW 5' to 6' - Lt orange/brown silty gravel w/ some sand, WG fines to coarse gravel, loose, MP → GM	0.8/2.0	LO.1	1-1 1-7		
6' to 8'	6'-7' Olive brown/orange + black layers Sandy gravel, loose, Saturated - GM 7'-8' Brown gravel w/ sand, PE, very dense, dry, NP → GP (Fill layer)	1.1/2.0	LO.1	25-37 50 @ 0.4'	* There was water sitting over the coarse gravel fill layer	
8' to 10'	DK Olive Sandy gravel w/ some fines WG fines to coarse gravel, saturated very dense, SP	0.1/0.2	LO.1	50 to 0.2'		
10' to 12'	10-11' - DK brown olive Sand w/ gravel and fines WG fines to coarse gravel, moist very dense - Fill SW 11-12' Lt Brown Sandy gravel WG, dry very dense Fill - GW	1.4/2.0	LO.1	10-13 21-12	* STB500701001XX (#1310)	
12' to 14'	12' to 14' Lt Brown gravelly Sand w/ yellow/lt brown clay lenses to ~13' (0.1' in depth) WG, Dry, very dense, fines to coarse gravel, angular to subrounded, → SP	0.8/0.2	LO.1	50 0.0		
14' to 16'	14' to 16' Brown w/ streaks of orange and black, Sandy gravel w/ some fines WG-fines to coarse gravel, very dense, NP/SP in clay lenses, → GW-Fill	1.2/2.0	LO.1	50-43 49-37		
16' to 18'	* This soil banded in the shoe. Olive brown sandy gravel w/ fines, WG fines to fine gravel, Saturated, dense, SP → GW-Fill	0.1/0.0	LO.1	50 @ 0.0'		

 <p><b>Soil Boring Log</b></p> <p>MACTEC 511 Congress Street Portland, ME</p>		Boring Location: <b>BS-7 (MW7)</b>				
		Project Name: <b>Kentucky Ave I</b>		Geologist: <b>Brandon Shaw</b>		
		Date Started: <b>11/14/05</b>		Drilling Company: <b>Geologic NY</b>		
		Date Completed: <b>11/14/05</b>		Drilling Method: <b>HST Auger</b>		
		Total Depth: <b>24.0</b>		Depth to Water: <b>~12.9'</b>		
		Comments: <b>36120 2034 - NYSDEC</b>				
Depth (feet)	Stratigraphy Description	Penetration/ Recovery (feet)	Headspace (ppm)	Blows/ 6 inches	Sample ID	
18' to 20'	olive brown to life brown silty gravel WG-fines to coarse gravel, very dense, wet, SP → GM-fill	0.1 / 0.1	LOI	50 @ 0.1'	N/A	
20' to 22.5'	20 to 21' olive silty gravel w/ clay and sand, very dense, saturated, SP - GM fill 21' to 22.5' olive gray gravel w/ sand and fines. WG, dense, damp, GM-fill	2.0 / 2.0	< 0.1	35-32 34-50	N/A	
21.8' to 22'	21.5-22.8' orange/white clean sand to, loose, dry, SP - Fill 21.8'-22' olive gravel w/ sand, dense saturated, WP, WG-fines to coarse gravel	" "	" "	" "	N/A	
22' to 24'	Augered down to BOB. 24' - BOB, Bottom of well @ 22.95'					

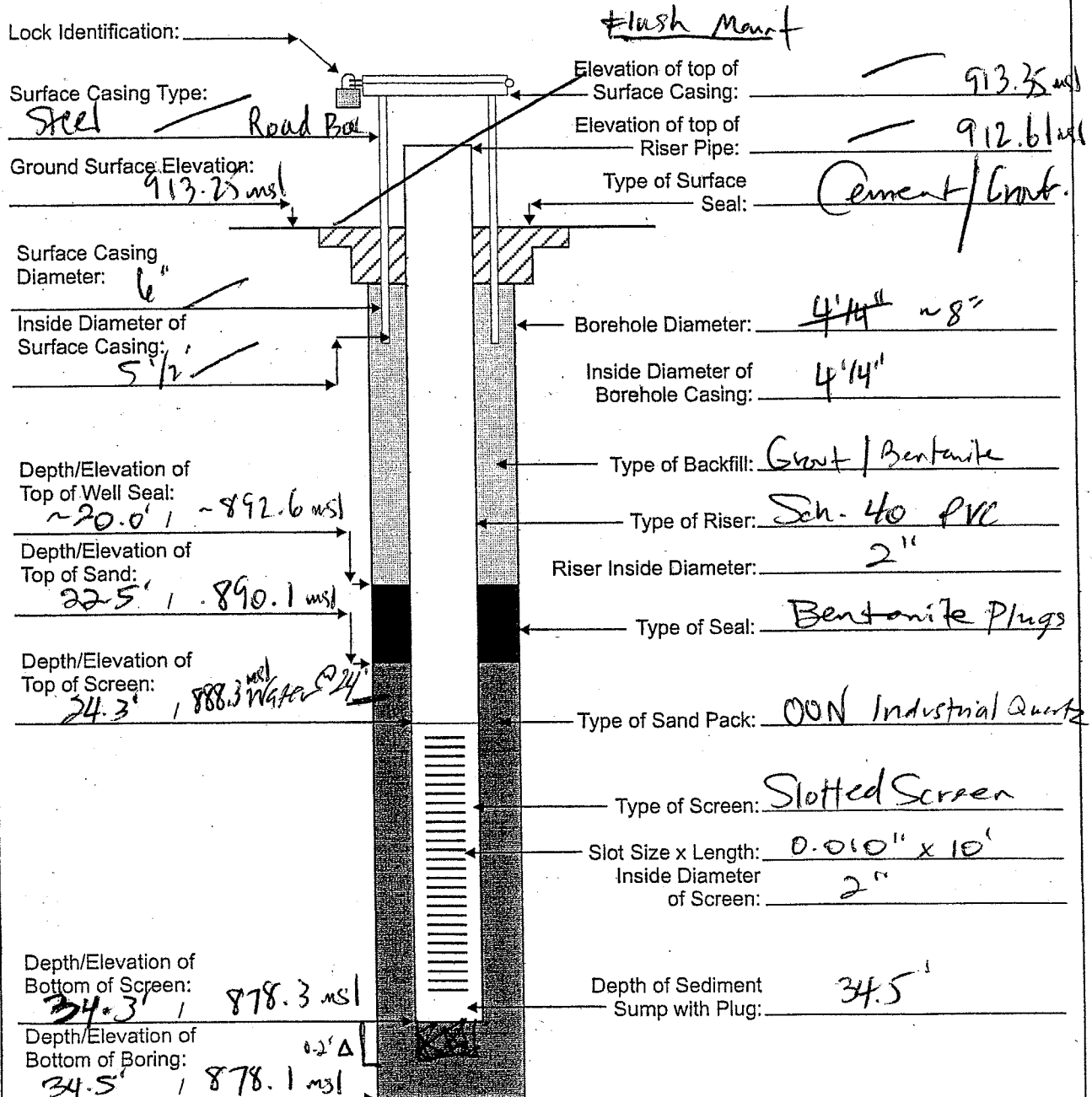
Field Records:

Well Installation Records

# Monitoring Well Log (Stick Up Type)

Well No.: MW-1

Project No.: 3612052034	Project Name: Kentucky Ave Satellite Site I		
Contractor: Geologic		Driller: Jeffery Grant	Method: HSA
Logged By: Brandon Shaw		Date Started: 1/15/05	Completed: 1/16/05
Checked By: TDL	Date: 7-31-06		



Not To Scale

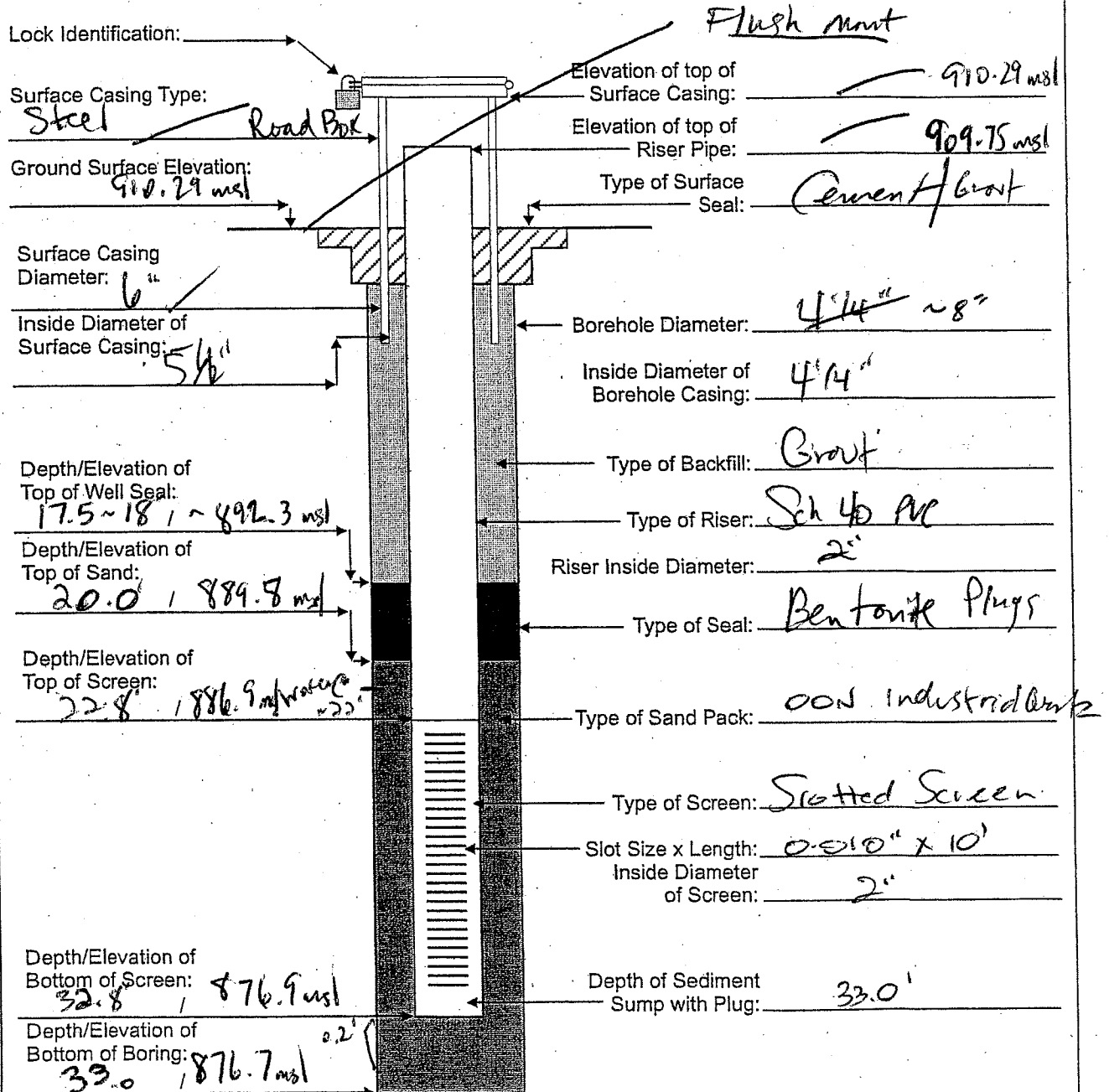
FIGURE

MACTEC Engineering and Consulting, Inc.

# Monitoring Well Log (Stick Up Type)

Well No.: MW-2

Project No.: 36120520034	Project Name: Kentucky Ave. Satellite Site I		
Project Area: NYSDOT - Elmira, NY			
Contractor: Geolog, Inc.	Driller: Jeffery Grant	Method: HSA	
Logged By: Brandon Shaw	Date Started: 4/16/05	Completed: 11/17/05	
Checked By: TDL	Date: 7-31-06		



Not To Scale

FIGURE

MACTEC Engineering and Consulting, Inc.

✓ JJ 7/31/06

# Monitoring Well Log (Stick Up Type)

Well No.: MW-3

Project No.: 362052024

Project Name: Kentucky Ave. Satellite Site I

Project Area: NYSDEC - Elmira, NY

Contractor: Geologix

Driller: Jeffery Grant

Method: HST

Logged By: Brandon Shaw

Date Started: 4/16/05

Completed: 4/16/05

Checked By: TDL

Date: 7-31-06

Lock Identification: \_\_\_\_\_

Surface Casing Type: Steel

Road Bit

Elevation of top of Surface Casing: \_\_\_\_\_

903.68 msl

Elevation of top of Riser Pipe: \_\_\_\_\_

903.08 msl

Ground Surface Elevation: \_\_\_\_\_

903.68 msl

Type of Surface Seal: \_\_\_\_\_

Cement / Grout

Surface Casing Diameter: \_\_\_\_\_

6"

Inside Diameter of Surface Casing: \_\_\_\_\_

5 1/2"

Borehole Diameter: \_\_\_\_\_

4 1/4" ~ 8"

Inside Diameter of Borehole Casing: \_\_\_\_\_

4 1/4"

Depth/Elevation of Top of Well Seal: \_\_\_\_\_

~12' / ~891.1 msl

Type of Backfill: \_\_\_\_\_

Grout

Depth/Elevation of Top of Sand: \_\_\_\_\_

15.5' / 887.6 msl

Type of Riser: \_\_\_\_\_

Sch 40 PVC

Riser Inside Diameter: \_\_\_\_\_

2"

Depth/Elevation of Top of Screen: \_\_\_\_\_

17.8' / 885.3 msl

Type of Seal: \_\_\_\_\_

Bentonite Plugs

Type of Sand Pack: \_\_\_\_\_

00N Industrial Quartz

Type of Screen: \_\_\_\_\_

Slotted Screen

Slot Size x Length: \_\_\_\_\_

0.010" x 10'

Inside Diameter of Screen: \_\_\_\_\_

2"

Depth/Elevation of Bottom of Screen: \_\_\_\_\_

27.8' / 875.3 msl

Depth of Sediment Sump with Plug: \_\_\_\_\_

28.0'

Depth/Elevation of Bottom of Boring: \_\_\_\_\_

28.0' / 875.1 msl

Not To Scale

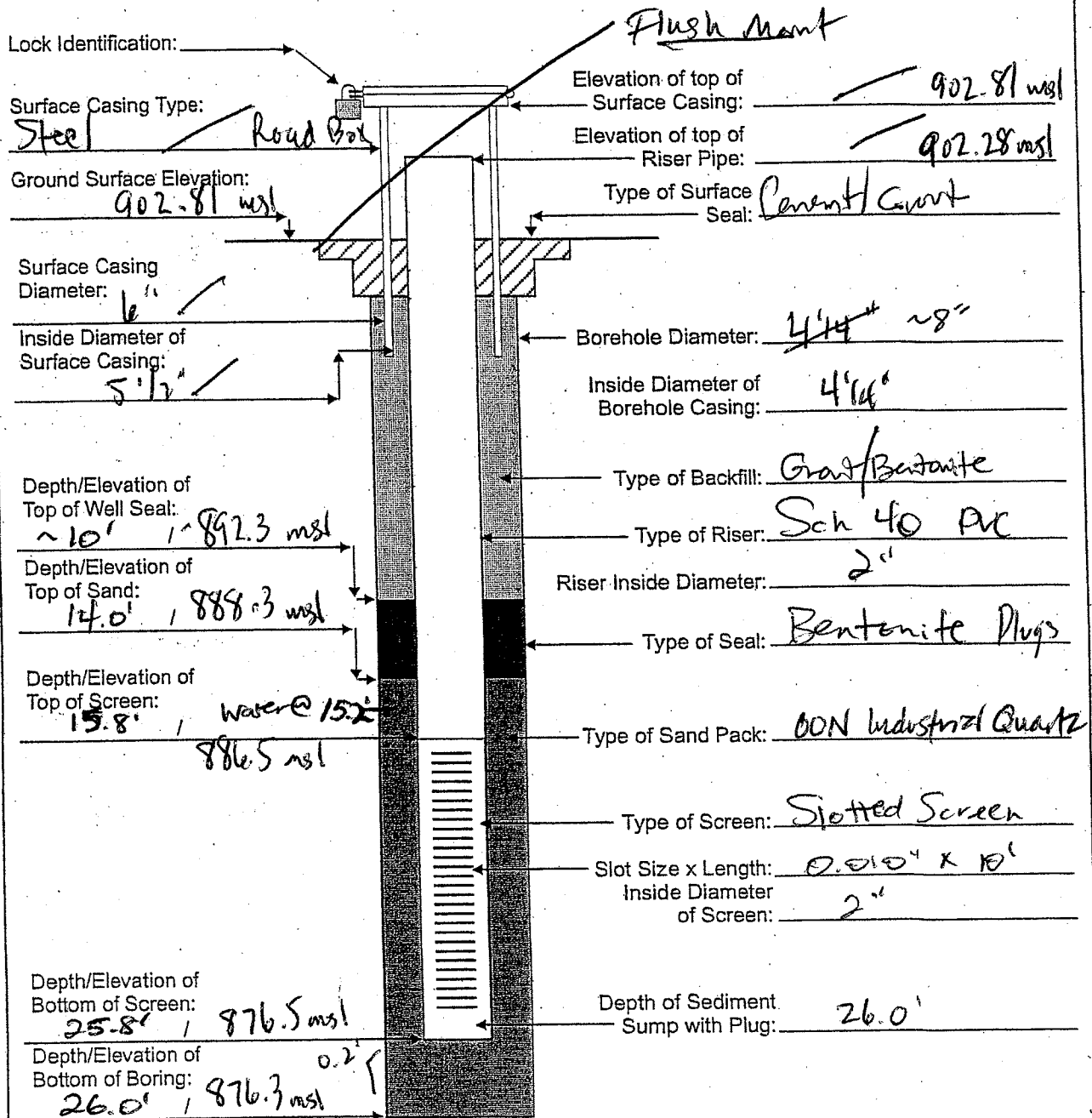
FIGURE



# Monitoring Well Log (Stick Up Type)

Well No.: MW-4

Project No.: 3612052034 Project Name: Kentucky Ave. Satellite Site I  
 Project Area: NYSDOC Elmira, NY  
 Contractor: Geologic Driller: Jeffery Grant Method: HSA 4 1/4" ID  
 Logged By: Brandon Shaw Date Started: 11/15/05 Completed: 11/15/05  
 Checked By: TDL Date: 7-31-06



Not To Scale

FIGURE

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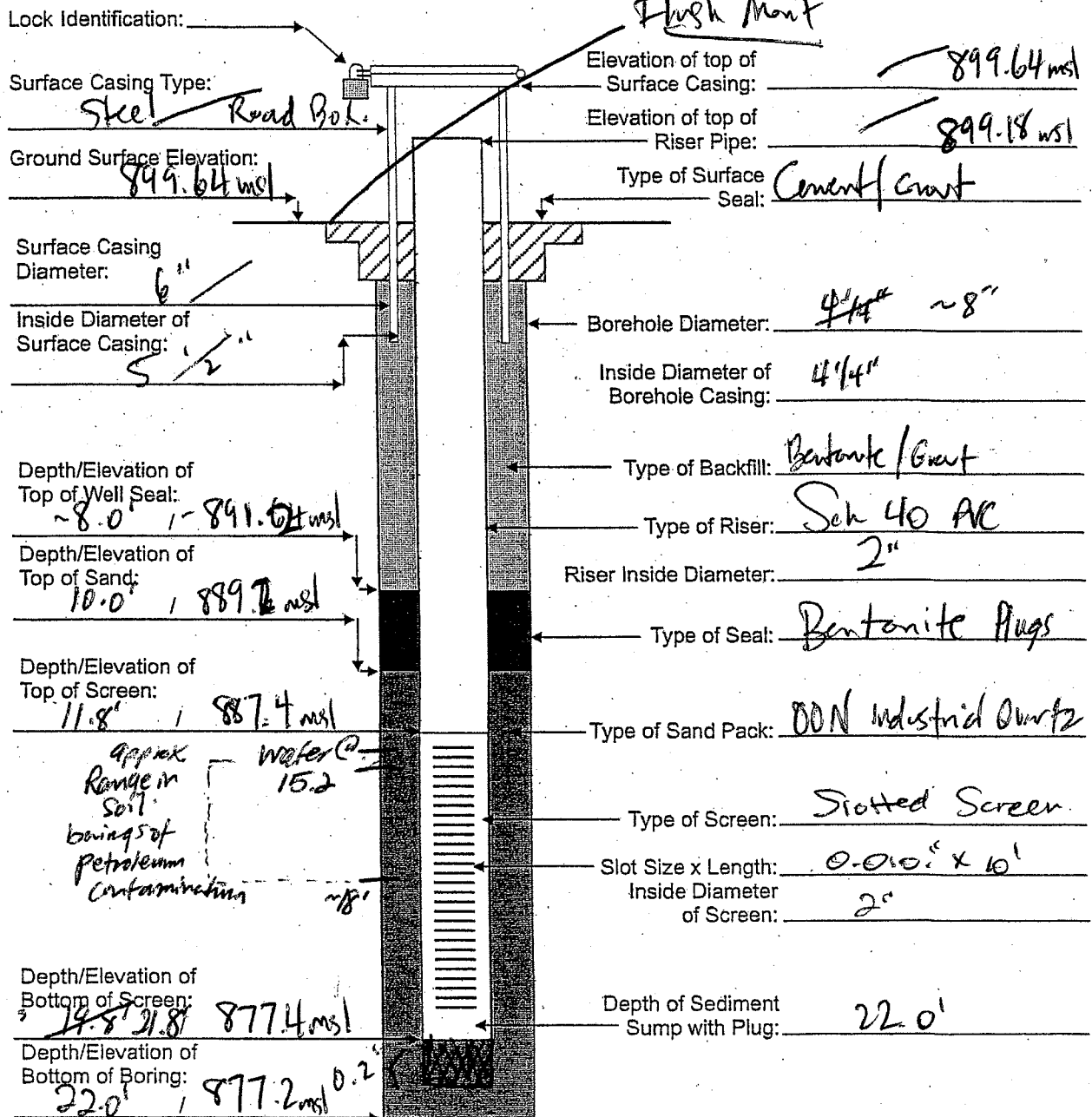
Graphics\Misc\Forms

1/22 7/31/06

# Monitoring Well Log (Stick Up Type)

Well No.: MW-5

Project No.: 362052034		Project Name: Kentucky Ave Sat 1.7c Site I	
		Project Area: WSDTZ - Elmira, NY	
Contractor: Geologic	Driller: Jeffery Grant	Method: HSA - 4'14" IS	
Logged By: Brandon Shaw		Date Started: 4/15/05	Completed: 11/10/05
Checked By: TDL	Date: 7-31-06		



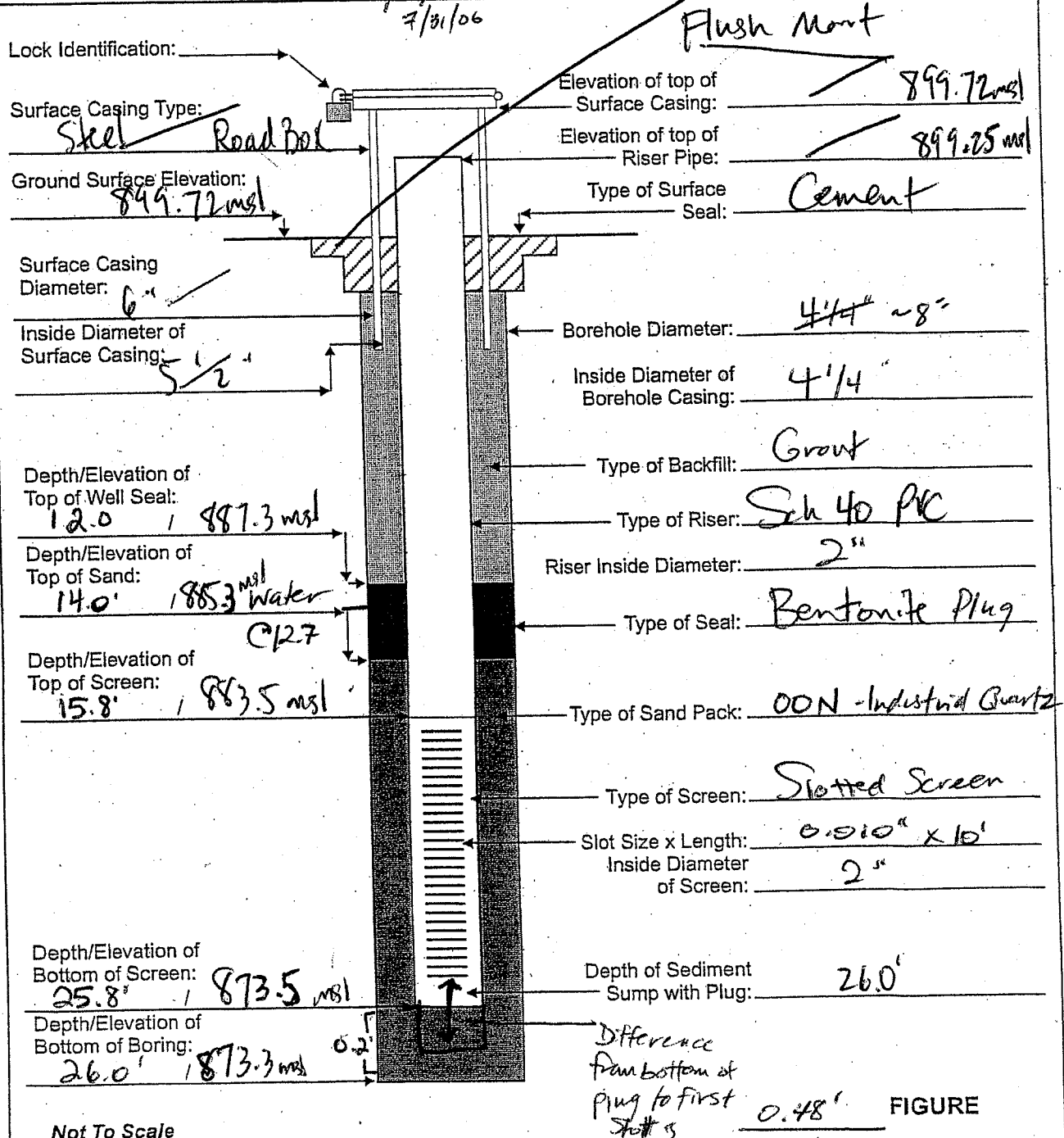
Not To Scale

FIGURE

# Monitoring Well Log (Stick Up Type)

Well No.: MW-6

Project No.: 3612052034 Project Name: Kentucky Ave - Satellite Site I  
 Project Area: NYSDOC - Elmira, NY  
 Contractor: Geologic Driller: Jeffery Grant Method: HST 4 1/4" ID  
 Logged By: Brandon Shaw Date Started: 11/14/05 Completed: 11/15/05  
 Checked By: TDL Date: 11/14/05



MACTEC Engineering and Consulting, Inc.

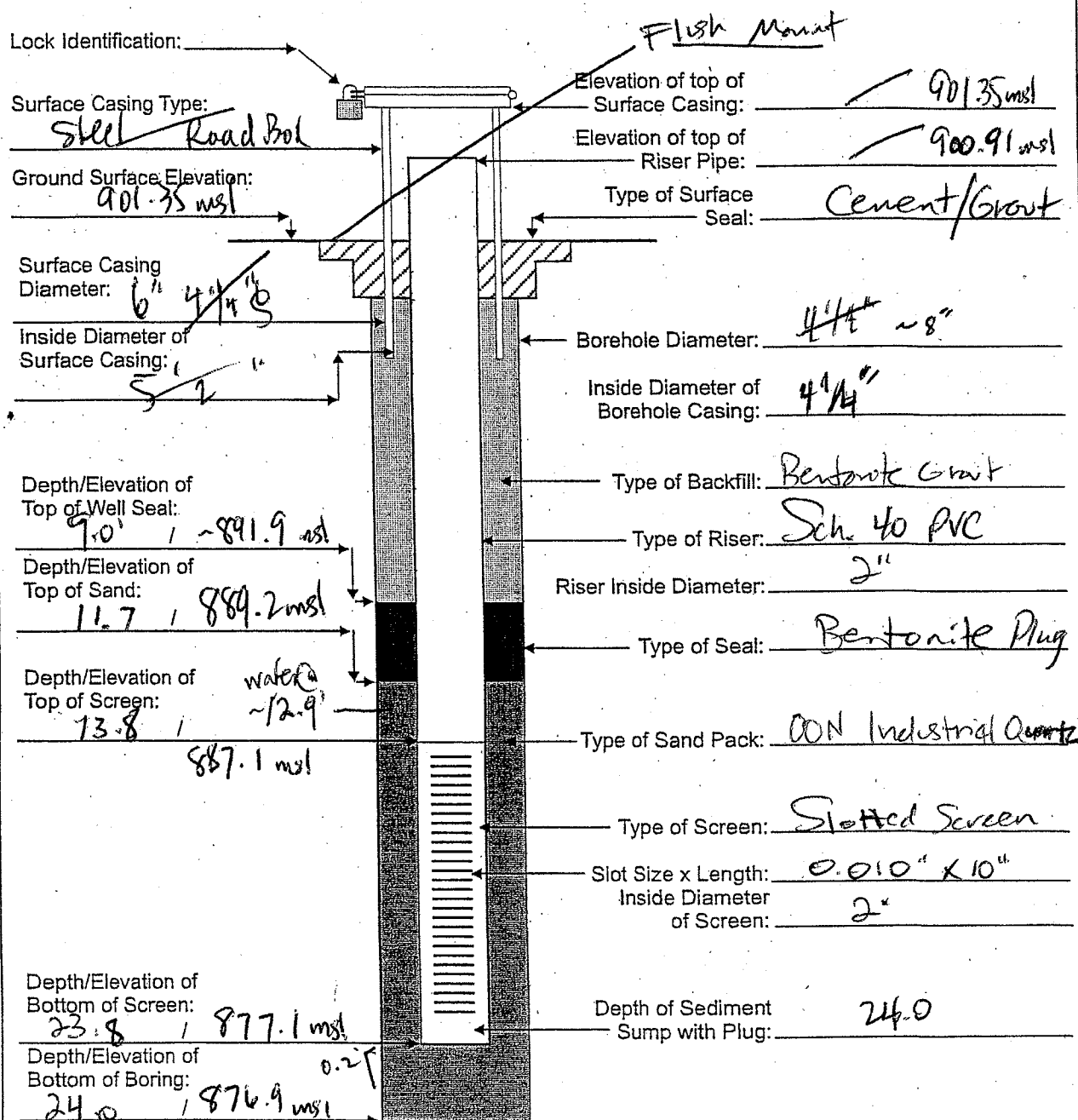
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192 7/31/06

# Monitoring Well Log (Stick Up Type)

Well No.: MW-7

Project No.: 3612052034	Project Name: Kentucky Ave. Sch. 1.7 Site I	
Project Area: NYSDEC - Elmira, NY		
Contractor: Geologiz	Driller: Jeffrey Grant	Method: HSA - 4 1/4 ID
Logged By: Brandon Snow	Date Started: 4/14/05	Completed: 11/14/05
Checked By: TDL	Date: 7-31-06	



Not To Scale

FIGURE

**Field Records:  
Well Development Records**

NYS DOT GARAGE  
HORSEHEADS, NEW YORK  
WELL DEVELOPMENT TABLE

<u>Well #</u>	<u>Description</u>	<u>Hours</u>
MW-1	2.5 GPM, 55 Gallons Pumped, 86 NTU	1.5
MW-2	4.0 GPM, 55 Gallons Pumped, 139 NTU	1.0
MW-3	4.0 GPM, 55 Gallons Pumped, 44 NTU	1.25
MW-4	3.5 GPM, 55 Gallons Pumped, 132 NTU	1.5
MW-5	3.0 GPM, 55 Gallons Pumped, 112 NTU	3.0
MW-6	3.0 GPM, 55 Gallons Pumped, 103 NTU	1.5
MW-7	1.0 GPM, 55 Gallons Pumped, 127 NTU	2.0

11/18/05

MW-1

Logged By: Brandon Snaw

Project Name: Kentucky Ave I

Checked By:

Start Date: 11/15/05

Finish Date: 11/16/05

Start Time: N/A

Finish Time: 5/1A

Water Level during Initial Pumping/Purging (ft.): 21.4

Water Level at Termination of Pumping/Purging (ft.):  $N/A$

Weather: N/A

$\pi \cdot (3.14)^2 \cdot 29.01 \text{ in}^3 \text{ water} \cdot (16.387 \text{ ml/in}^3) = 574$  Total  
 Height of Water Column: X 0.16 gal./ft. (2 in.)  
11.15 (ft.) x          0.65 gal./ft. (4 in.)  
         1.5 gal./ft. (6 in.)  
         gal./ft. (         in.) = 1.78 Well Volume (gal./ft.)

[illegible]

Notes: Total volume purged: 55 gallons

- Geologic M, Inc. developed these wells.
- Water column: 11.15'
- DHW: 22.45'
- BOB: 33.6'

Well Developers Signature

## FIGURE

- MACTEC Engineering and Consulting, Inc.

MW-2

Logged By: Brandon Shaw

Project Name: Kentucky Ave I

Checked By:

Start Date: 11/16/05

Finish Date: 4/17/05

Start Time: N/A

Finish Time:	N/A
--------------	-----

Initial Water Level (ft.): 20.13

Water Level during Initial Pumping/Purging (ft.): N/A

Water Level at Termination of Pumping/Purging (ft.): *N/A*

Weather: N/A

~~$\pi (3.14) = 37.59 \text{ in}^2 (16.28 \text{ m}^2/\text{in}^2) = 616$~~  ~~total well~~

Height of Water Column: X 0.16 gal./ft. (2 in.)  
11.97 (ft.) x          0.65 gal./ft. (4 in.)  
         1.5 gal./ft. (6 in.)  
         gal./ft. (          in.) = 1.92 Well Volume (gal./ft.)

[illegible]

Notes:

Total volume purged: 55 gallons

- Geologic NY, Inc. developed these wells

Water column: 11.97'

D to water: 20.13'; BOB: 32.1'

Well Developers Signature:

**FIGURE**



mw-3

N/A  
 ~~$\pi \cdot (3.14) \cdot 40.69 \text{ m}^2 \cdot (16.3871 \text{ m}^3/\text{m}^2) = 1667 \text{ total well vol (m}^3\text{)}$~~   
 Height of Water Column: X 0.16 gal./ft. (2 in.)  
12.96 (ft.) x 0.65 gal./ft. (4 in.)  
 1.5 gal./ft. (6 in.)  
 gal./ft. ( in.) = 2.07 Well Volume (gal.)  
 15

[illegible]

Notes: • Geologic NY, Inc developed wells for MATREC w/ HACH 2100P  
• BOB - 27.1  
• Initial DtoW = 14.14' > water column → 12.96'  
• Total volume pumped = 55 gallons

FIGURE

- MACTEC Engineering and Consulting, Inc.



MW-5

Logged By: Brandon Shaw

Project Name: Kentucky Ave. I

Checked By:

Start Date: 11/15/05

Finish Date: 11/15/05

Start Time: N/A

Finish Time: N/A

10.84

Water Level during Initial Pumping/Purging (ft.): N/A

N/A
-----

Water Level at Termination of Pumping/Purging (ft.):  $N/A$

N/A

Weather: N/A

0.16 gal./ft. (2 in.)

10.16 (ft.)

x \_\_\_\_\_ 0.65 gal./ft. (4 in.)

\_\_\_\_\_ 1.5 gal./ft. (6 in.)

$$\text{_____ gal./ft. (_____ in.)} = \text{_____ well volume (gallons)}$$

Well Volume (gal./ft.)

Notes:

Geologic NY. Inc. developed the wells.

• Water column - 10.16'

$D \cdot W = 10.84$

2013 : 21

• BOB = 21  
• Total volume pumped: 55 gallons

Well Developers Signature

**FIGURE**

- MACTEC Engineering and Consulting, Inc.

[illegible]

## FIGURE

Graphics\Misc.\Forms

- MACTEC Engineering and Consulting, Inc.

mw-7

NYS DOT GARAGE  
HORSEHEADS, NEW YORK  
WELL DEVELOPMENT TABLE

<u>Well #</u>	<u>Description</u>	<u>Hours</u>
MW-1	2.5 GPM, 55 Gallons Pumped, 86 NTU	1.5
MW-2	4.0 GPM, 55 Gallons Pumped, 139 NTU	1.0
MW-3	4.0 GPM, 55 Gallons Pumped, 44 NTU	1.25
MW-4	3.5 GPM, 55 Gallons Pumped, 132 NTU	1.5
MW-5	3.0 GPM, 55 Gallons Pumped, 112 NTU	3.0
MW-6	3.0 GPM, 55 Gallons Pumped, 103 NTU	1.5
MW-7	1.0 GPM, 55 Gallons Pumped, 127 NTU	2.0

11/18/05

MW-1

$\pi \cdot (3.14)^2 = 39.01 \text{ in}^2 \text{ water} \cdot (16.387 \text{ gal./in}^3) = 574$  Total  
 Height of Water Column: X 0.16 gal./ft. (2 in.)  
11.15 (ft.) x 0.65 gal./ft. (4 in.)  
1.5 gal./ft. (6 in.)  
gal./ft. ( in.) = 1.78 Well Volume (gal./ft.)

[illegible]

Notes: Total volume purged: 55 gallons

Notes: Total volume pumped: 55 gals.  
Geologic M, Inc. developed these wells.

• water column: 11.15'

D.H.W. = 22.45'

BOB: 33.6'

Well Developers Signature

## FIGURE

- MACTEC Engineering and Consulting, Inc.

MW-2

Logged By: Brandon Shriv

Project Name: Kentucky Ave I

Checked By:

Start Date: 11/16/05

Finish Date: 4/17/05

Start Time: N/A

Finish Time:	N/A
--------------	-----

Initial Water Level (ft.): 20.13

Water Level during Initial Pumping/Purging (ft.): N/A

Water Level at Termination of Pumping/Purging (ft.): *N/A*

Weather: N/A

~~$\pi (3.14) = 37.59 \text{ in}^2 (16.28 \text{ m}^2/\text{in}^2) = 616$~~  ~~total well~~

Height of Water Column: X 0.16 gal./ft. (2 in.)  
11.97 (ft.) x          0.65 gal./ft. (4 in.)  
         1.5 gal./ft. (6 in.)  
         gal./ft. (          in.) = 1.92 Well Volume (gal./ft.)

[illegible]

Notes:

Total volume purged: 55 gallons

- Geologic NY, Inc. developed these wells

Water column: 11.97'

D to water: 20.13'; BOB: 32.1'

Well Developers Signature:

**FIGURE**



mw-3

~~N/A~~  
 ~~$\pi \cdot (3.14) \cdot 40.69 \text{ in}^2 \cdot (16.387 \text{ m}^3/\text{in}^2) = 1667 \text{ total well}$~~   
 Height of Water Column: X 0.16 gal./ft. (2 in.) yd ~~vol (cfs).~~  
12.96 (ft.) x          0.65 gal./ft. (4 in.)  
         1.5 gal./ft. (6 in.)  
         gal./ft. (         in.) = 2.07 Well Volume (gal.) X  
15

[illegible]

Notes: • Geologic NY, Inc developed wells for MATREC w/ HACH 2100P  
• BOB - 27.1  
• Initial DtoW = 14.14' > water column → 12.96'  
• Total volume pumped = 55 gallons

FIGURE

- MACTEC Engineering and Consulting, Inc.

MW 41

~~Ht of water Column:  $11.09 \text{ ft.} \times (3.14) = \text{in.}^2 \text{ of water} = 54.09 \text{ ft.} \times (16.3871 \text{ ml/in.}) = 511 \text{ Well Volume} \rightarrow \text{Total}$~~

Height of Water Column: 11.09 (ft.)  
 x 0.16 gal./ft. (2 in.)  
 x 0.65 gal./ft. (4 in.)  
 x 1.5 gal./ft. (6 in.)  
 gal./ft. (     in.) = 1.77 Well Volume (gal./ft.)

[illegible]

Notes: Geologic NY, Inc. developed these wells.

• Water column = 11-09'

$D \rightarrow W = 13.96'$

- BOB - 25.05

- Total Volume Purged = 559 gallons

Well Developers Signature: \_\_\_\_\_

FIGURE

MW-5

Logged By: Brandon Shaw

Project Name: Kentucky Ave.

Checked By:

Start Date: 11/15/05

Finish Date: 11/15/05

Start Time: N/A

Finish Time:	N/A
--------------	-----

10.84

NIA

N/A
-----

Weather: N/A

0.16 gal./ft. (2 in.)

x \_\_\_\_\_ 0.65 gal./ft. (4 in.)  
\_\_\_\_\_ 1.5 gal./ft. (6 in.)

1.5 gal./ft. (6 in.)  
gal./ft. /

\_\_\_\_\_ gal./lt. (\_\_\_\_\_ in.) \_\_\_\_\_

Well Volume (gal./ft.)

Notes:

Geologic NY. Inc. developed the wells.

• Water column - 10.16'

$D \rightarrow W = 10.84'$   
 $BOD = 21'$

• 2013 = 21  
• Total volume pumped: 55 gallons

Well Developers Signature

FIGURE

- MACTEC Engineering and Consulting, Inc.

[illegible]

## FIGURE

Graphics\Misc.\Forms

- MACTEC Engineering and Consulting, Inc.

mw-7

$\pi (3.14) = 31.18 \text{ in}^2 = (16.387 \text{ ml/in}^2) = 511 \text{ 1/2 gal}$   
 Height of Water Column: 9.93 (ft.)  
 x 0.16 gal./ft. (2 in.)  
 x 0.65 gal./ft. (4 in.)  
 x 1.5 gal./ft. (6 in.)  
 gal./ft. ( ) in. = 1.59 Well Volume (gal./ft.)

[illegible]

Notes: Geologic NY, Inc developed the well (surged).

BOB = 22.95' > Water Column = 9.93'

- Total volume purged: 55 gallons

Well Developers Signature: \_\_\_\_\_

FIGURE

- MACTEC Engineering and Consulting, Inc.

Field Records:  
Groundwater Round I

# FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT **NYSDEC-KY AVE SITE 1** JOB NUMBER **3612042034/10.2.2**  
 LOCATION ID **MW-1** FIELD SAMPLE ID **STMW001XXX01XX** EVENT NO. **1**  
 ACTIVITY **START 1310 END ~1630** SAMPLE TIME **1600** DATE **8 Dec 05**

## WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT  
☒ TOP OF WELL RISER  
☐ TOP OF PROTECTIVE CASING  
 INITIAL DEPTH TO WATER **22.45** feet  
 FINAL DEPTH TO WATER **22.45** feet  
 SCREEN LENGTH **10** feet  
 TOTAL VOL. PURGED **9.4** gallons  
 (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)  
 HISTORICAL WELL DEPTH (TOR) **33.6** feet  
 PRESSURE TO PUMP **—** psi  
 REFILL SETTING **—**  
 PROTECTIVE CASING STICKUP (FROM GROUND) **0** feet  
 PID AMBIENT AIR **20.1** ppmv  
 PID WELL MOUTH **20.1** ppmv  
 DISCHARGE SETTING **200**  
 CASING / WELL DIFFERENCE **11.15** feet  
 WELL DIAMETER **2** inches  
 WELL INTERGRITY:  
 INTEGRITY: YES NO N/A  
 CAP ☒ ☐ ☐  
 CASING LOCKED ☒ ☐ ☐  
 COLLAR ☒ ☐ ☐

## PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (+/- deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)	PUMP INTAKE DEPTH (ft)	COMMENTS
1320	22.45	200	10.3	1.48	7.4	6.9	177	40	25'	
1325			11.0	1.44	7.4	5.8	124	25		
1330			11.1	1.46	7.3	5.4	108	42		
1335			11.2	1.47	7.3	5.6	92	50		
1340			10.9	1.49	7.3	5.7	98.5	61		
1400			11.0	1.49	7.3	5.7	168	64		
1420			10.7	1.50	7.3	5.7	128	72		
1440			10.8	1.49	7.3	6.0	72	75		
1500			10.9	1.48	7.3	6.0	70.1	83		
1520			10.6	1.48	7.3	6.0	59.9	87		
1540			11.0	1.48	7.3	6.0	52	88		
1550			10.9	1.48	7.3	6.0	38.2	84		
1600			10.8	1.48	7.3	6.0	31.1	84		sample

## EQUIPMENT DOCUMENTATION

TYPE OF PUMP  
☐ DEDICATED MARSCHALK BLADDER  
☐ NON-DEDICATED MARSCHALK BLADDER  
☒ OTHER Peristaltic - Geopump  
 TYPE OF TUBING  
☒ HIGH DENSITY POLYETHYLENE  
☐ OTHER —

## ANALYTICAL PARAMETERS

CONTROL NUMBER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
<input type="checkbox"/> VOCs - 25 ml Purge (low conc.)	OLCO2.1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> VOCs - 5 ml Purge	OLMO4.2	HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> SVOCs	OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> PESTICIDES	OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> METALS	ILMO4.2	HNO3 to pH <2	1 X 500 ML P	<input checked="" type="checkbox"/>	— / — / —
<input type="checkbox"/> MANGANESE / IRON -	SW846 6010	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> SULFATE / CHLORIDE / ALKALINITY	USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 x 1 L P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> NO2 - NO3	USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> TOC	USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> METHANE / ETHANE / ETHYLENE	EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> OTHER				<input type="checkbox"/>	— / — / —

## PURGE OBSERVATIONS

PURGE WATER  
 CONTAINERIZED YES ☒ NO ☐

## NOTES:

SIGNATURE: [Signature]  
 CHECKED BY: —

## LOCATION NOTES

pump struggles @ 25' - set to full power @ 600 rpm.

# FIELD DATA RECORD - LOW FLOW / GROUNDWATER SAMPLING

PROJECT NYSDEC-KY AVE SITE 1 JOB NUMBER 3612042034/10.2.2

LOCATION ID MW-2 FIELD SAMPLE ID 5THMW002XXY01XX EVENT NO. 1

ACTIVITY START 0710 END ~1030 SAMPLE TIME 1020 DATE 9 Dec 05

**WATER LEVEL / PUMP SETTINGS**

INITIAL DEPTH TO WATER 20.13 feet

FINAL DEPTH TO WATER 20.13 feet

SCREEN LENGTH 10 feet

TOTAL VOL. PURGED 6.74 gallons  
(purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)

**MEASUREMENT POINT**

☒ TOP OF WELL RISER  
☐ TOP OF PROTECTIVE CASING

HISTORICAL WELL DEPTH (TOR) 32.1 feet

PRESSURE TO PUMP        psi

REFILL SETTING       

**PROTECTIVE CASING STICKUP (FROM GROUND)** 0 feet

PID AMBIENT AIR 20.1 ppmv

PID WELL MOUTH 20.1 ppmv

DISCHARGE SETTING 200 ml/min

**CASING / WELL DIFFERENCE** 11.97 feet

**WELL DIAMETER** 2 inches

**WELL INTERGRITY:**

INTEGRITY:	YES	NO	N/A
CAP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CASING	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LOCKED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COLLAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PURGE DATA										PUMP INTAKE DEPTH (ft)	COMMENTS
TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/min)	TEMP. (+/- deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)			
810	20.13	200	9.3	1.43	6.8	8.7	21.0	115			
820			10.0	1.40	7.2	8.7	19.6	28			
830			10.7	1.37	7.1	9.0	7.3	42			
840			10.6	1.42	7.2	9.2	7.4	95			
900			10.7	1.42	7.2	7.7	9.6	111			
915			10.4	1.42	7.3	7.9	21.0	117			
930			10.7	1.43	7.3	7.8	21.0	120			
1000			10.9	1.37	7.3	7.5	21.0	125			
1010			10.3	1.41	7.3	7.5	21.0	132			
1020			10.4	1.40	7.3	7.5	21.0	133			Sample

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP

☐ DEDICATED MARSCHALK BLADDER ☒ OTHER Peristaltic - Geopump

☐ NON-DEDICATED MARSCHALK BLADDER

TYPE OF TUBING

☒ HIGH DENSITY POLYETHYLENE ☐ OTHER       

ANALYTICAL PARAMETERS		METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
<b>CONTROL NUMBER</b>						
<input type="checkbox"/> VOCs - 25 ml Purge (low conc.)		OLCO2.1	HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> VOCs - 5 ml Purge		OLMO4.2	HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> SVOCs		OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> PESTICIDES		OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> METALS		ILMO4.2	HNO3 to pH <2	1 X 500 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> MANGANESE / IRON -		SW846 6010	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	
<input type="checkbox"/> SULFATE / CHLORIDE / ALKALINITY		USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 X 1 L P	<input type="checkbox"/>	
<input type="checkbox"/> NO2 - NO3		USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	<input type="checkbox"/>	
<input type="checkbox"/> TOC		USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	<input type="checkbox"/>	
<input type="checkbox"/> METHANE / ETHANE / ETHYLENE		EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	
<input type="checkbox"/> OTHER					<input type="checkbox"/>	

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED YES ☐ NO ☒

**NOTES:**

SIGNATURE: [Signature]

CHECKED BY: [Signature]

**LOCATION NOTES**



# FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT NYSDEC-KY AVE SITE 1 JOB NUMBER 3612042034/10.2.2  
 LOCATION ID R1W-3 FIELD SAMPLE ID STMW003XXX01XX EVENT NO. 1  
 ACTIVITY START 1150 END 1400 SAMPLE TIME 1400 DATE 12/9/05

**WATER LEVEL / PUMP SETTINGS** MEASUREMENT POINT  
☒ TOP OF WELL RISER  
☐ TOP OF PROTECTIVE CASING  
 INITIAL DEPTH TO WATER 14.14 feet  
 FINAL DEPTH TO WATER 14.14 feet  
 SCREEN LENGTH 10 feet  
 TOTAL VOL. PURGED 12.48 gallons  
 (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)  
 HISTORICAL WELL DEPTH (TOR) 27.1 feet  
 PRESSURE TO PUMP — psi  
 REFILL SETTING —  
 PROTECTIVE CASING STICKUP (FROM GROUND) 6 feet  
 PID AMBIENT AIR <1.0 ppmv  
 PID WELL MOUTH <1.0 ppmv  
 DISCHARGE SETTING 400 ml/min  
 CASING / WELL DIFFERENCE 12.94 feet  
 WELL DIAMETER 2 inches  
 WELL INTERGRITY:  
 INTEGRITY: YES NO N/A  
 CAP ☒ ☐ ☐  
 LOCKED ☒ ☐ ☐  
 COLLAR ☒ ☐ ☐

PURGE DATA										
TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/min)	TEMP. (+/- deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)	PUMP INTAKE DEPTH (ft)	COMMENTS
1200	14.14	400	9.7	1.34	7.5	9.1	38.2	89	20	
1205			11.6	1.32	7.1	7.6	109	66		
1210			11.9	1.34	7.3	7.8	98.5	86		
1215			11.8	1.34	7.3	8.1	57.9	89		
1230			11.8	1.37	7.3	7.5	119.	106		
1245			11.5	1.36	7.3	7.9	64.2	124		
1300			11.4	1.37	7.3	7.4	35.3	131		
1315			11.9	1.36	7.3	7.8	50	134		
1330			11.9	1.34	7.3	7.5	<1.0	139		
1345			11.9	1.34	7.3	7.6	<1.0	137		
1400			11.9	1.36	7.3	7.4	<1.0	138		Sample

## EQUIPMENT DOCUMENTATION

TYPE OF PUMP

- ☐ DEDICATED MARSCHALK BLADDER  
☐ NON-DEDICATED MARSCHALK BLADDER

☒ OTHER Peristaltic - Geopump

TYPE OF TUBING

- ☒ HIGH DENSITY POLYETHYLENE  
☐ OTHER

## ANALYTICAL PARAMETERS

CONTROL NUMBER

- ☐ VOCs - 25 ml Purge (low conc.)  
☒ VOCs - 5 ml Purge  
☒ SVOCs  
☒ PESTICIDES  
☒ METALS  
☐ MANGANESE / IRON -  
☐ SULFATE / CHLORIDE / ALKALINITY  
☐ NO2 - NO3  
☐ TOC  
☐ METHANE / ETHANE / ETHYLENE  
☐ OTHER

METHOD NUMBER

- OLCO2.1  
 OLMO4.2  
 OLMO4.2  
 OLMO4.2  
 ILM04.2  
 SW846 6010  
 USEPA 375.4 / 325.3 / 310.1  
 USEPA 353.2 / 354.1  
 USEPA 415.1  
 EPA Region 1

PRESERVATION METHOD

- HCL / 4 DEG. C  
 HCL / 4 DEG. C  
 4 DEG. C  
 4 DEG. C  
 HNO3 to pH <2  
 HNO3 to pH <2  
 4 DEG. C  
 H2SO4 to pH <2  
 H2SO4 to pH <2  
 HCL / 4 DEG. C

VOLUME REQUIRED

- 3 X 40 ML  
 3 X 40 ML  
 2 X 1 L AG  
 2 X 1 L AG  
 1 X 500 ML P  
 1 X 500 ML P  
 1 X 1 L P  
 1 X 500 ML P  
 1 X 250 ML AG  
 3 X 40 ML

SAMPLE COLLECTED

☐  
☒  
☒  
☒  
☒  
☐  
☐  
☐  
☐  
☐  
☐

SAMPLE BOTTLE ID LETTERS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## PURGE OBSERVATIONS

PURGE WATER  
 CONTAINERIZED YES ☒ NO

NOTES:

SIGNATURE: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

## LOCATION NOTES

# FIELD DATA RECORD - LOW FL / GROUNDWATER SAMPLING

PROJECT: NYSDEC-KY AVE SITE 1 JOB NUMBER: 3612042034/10.2.2

LOCATION ID: mw-5 mw-7 FIELD SAMPLE ID: 5Tmw104XXXXXX EVENT NO.: 1

ACTIVITY: START 1025 END 1300 SAMPLE TIME: 1230 DATE: 8 Dec 05

**WATER LEVEL / PUMP SETTINGS**

INITIAL DEPTH TO WATER: 13.94 feet

FINAL DEPTH TO WATER: 14.0 feet

SCREEN LENGTH: 10 feet

TOTAL VOL. PURGED: 11.94 gallons

(purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)

**MEASUREMENT POINT**

☒ TOP OF WELL RISER

☐ TOP OF PROTECTIVE CASING

HISTORICAL WELL DEPTH (TOR): 2505 feet

PRESSURE TO PUMP:        psi

REFILL SETTING:       

**PROTECTIVE CASING STICKUP (FROM GROUND)**: 0 feet

PID AMBIENT AIR: 20.1 ppmv

PID WELL MOUTH: 20.1 ppmv

DISCHARGE SETTING: 400

**CASING / WELL DIFFERENCE**: 11.09 feet

WELL DIAMETER: 2 inches

**WELL INTERGRITY:**

INTEGRITY: YES NO N/A

CAP: ☒ ☐ ☐

CASING: ☒ ☐ ☐

LOCKED: ☒ ☐ ☐

COLLAR: ☒ ☐ ☐

PURGE DATA			SPECIFIC							PUMP	COMMENTS
TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (+/- deg. C)	CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)	INTAKE DEPTH (ft)		
1035	14.0	400	10.3	0.95	7.3	10.3	217	97	20		
1038			12.0	1.57	6.9	6.3	142	101			
1040			12.4	1.70	6.9	5.8	183	104			
1045			12.3	1.77	7.0	5.4	194	105			
1050			12.3	1.84	7.0	5.1	178	112			
1055			12.4	1.92	7.0	5.5	167	118			
1100			12.4	1.93	7.0	5.4	166	124			
1115			12.2	1.92	7.0	5.3	214	135			
1130			12.4	1.92	7.0	5.1	211	134			
1145			12.4	1.92	7.0	5.2	200	135			
1200			12.4	1.90	7.0	4.9	48	140			
1215			12.4	1.91	7.0	5.6	46	141			
1230			12.6	1.90	7.0	5.3	48	141		Sample	

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP: ☐ DEDICATED MARSCHALK BLADDER ☒ OTHER Peristaltic - Geopump

TYPE OF TUBING: ☒ HIGH DENSITY POLYETHYLENE ☐ OTHER       

ANALYTICAL PARAMETERS		METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
CONTROL NUMBER	<input type="checkbox"/> VOCs - 25 ml Purge (low conc.)	OLCO2.1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	___/___/___
	<input checked="" type="checkbox"/> VOCs - 5 ml Purge	OLMO4.2	HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	___/___/___
	<input checked="" type="checkbox"/> SVOCs	OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	___/___/___
	<input checked="" type="checkbox"/> PESTICIDES	OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	___/___/___
	<input checked="" type="checkbox"/> METALS	ILM04.2	HNO3 to pH <2	1 X 500 ML P	<input checked="" type="checkbox"/>	___/___/___
	<input type="checkbox"/> MANGANESE / IRON -	SW846 6010	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	___/___/___
	<input type="checkbox"/> SULFATE / CHLORIDE / ALKALINITY	USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 x 1 L P	<input type="checkbox"/>	___/___/___
	<input type="checkbox"/> NO2 - NO3	USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	<input type="checkbox"/>	___/___/___
	<input type="checkbox"/> TOC	USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	<input type="checkbox"/>	___/___/___
	<input type="checkbox"/> METHANE / ETHANE / ETHYLENE	EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	___/___/___
	<input type="checkbox"/> OTHER				<input type="checkbox"/>	___/___/___

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES ☐ NO ☒

**NOTES:**

SIGNATURE:       

CHECKED BY:       

**LOCATION NOTES**

# FIELD DATA RECORD - LOW FLOW / GROUNDWATER SAMPLING

PROJECT: **NYSDEC-KY AVE SITE 1** JOB NUMBER: **3612042034/10.2.2**  
 LOCATION ID: **1hw-5** FIELD SAMPLE ID: **STMW005 XXXXIXX** EVENT NO.: **1**  
 ACTIVITY: **START 0745 END 1000** SAMPLE TIME: **0930** DATE: **8 Dec 05**

## WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT  
☒ TOP OF WELL RISER  
☐ TOP OF PROTECTIVE CASING  
 PROTECTIVE CASING STICKUP (FROM GROUND): **0** feet  
 CASING / WELL DIFFERENCE: **10.14** feet  
 INITIAL DEPTH TO WATER: **10.84** feet  
 FINAL DEPTH TO WATER: **10.84** feet  
 HISTORICAL WELL DEPTH (TOR): **21** feet  
 PID AMBIENT AIR: **20.1** ppmv  
 SCREEN LENGTH: **10** feet  
 PRESSURE TO PUMP: **—** psi  
 PID WELL MOUTH: **20.1** ppmv  
 TOTAL VOL. PURGED: **8.32** gallons  
 REFILL SETTING: **—**  
 DISCHARGE SETTING: **400**  
 WELL INTERGRITY:  
 INTEGRITY: YES NO N/A  
 CAP: ☒ ☐ ☐  
 CASING: ☒ ☐ ☐  
 LOCKED: ☒ ☐ ☐  
 COLLAR: ☒ ☐ ☐  
 WELL DIAMETER: **2** inches

## PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (+/- deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)	PUMP INTAKE DEPTH (ft)	COMMENTS
810	10.84	400	11.3	1.45	6.7	5.4	4.4	144	15'	
812			12.4	1.58	7.0	4.4	2.4	114		
815			12.5	1.58	7.1	4.3	947	110		
820			12.4	1.57	7.1	4.2	942	107		
830			12.5	1.57	7.1	3.7	528	74		
845			12.7	1.56	7.1	3.5	174	19		
900			12.8	1.55	7.1	3.6	75.7	18		
0915			12.7	1.55	7.0	3.5	53.2	24		
0925			12.7	1.55	7.1	3.5	21.2	23		
0930			12.9	1.54	7.0	3.4	14.3	30		SAMPLE

## EQUIPMENT DOCUMENTATION

TYPE OF PUMP  
☐ DEDICATED MARSCHALK BLADDER  
☐ NON-DEDICATED MARSCHALK BLADDER  
☒ OTHER Peristaltic - Geopump  
 TYPE OF TUBING  
☒ HIGH DENSITY POLYETHYLENE  
☐ OTHER

## ANALYTICAL PARAMETERS

CONTROL NUMBER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
<input type="checkbox"/> VOCs - 25 ml Purge (low conc.)	OLCO2.1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> VOCs - 5 ml Purge	OLMO4.2	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> SVOCs	OLMO4.2	4 DEG. C	2 X 1 L AG	<input type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> PESTICIDES	OLMO4.2	4 DEG. C	2 X 1 L AG	<input type="checkbox"/>	— / — / —
<input checked="" type="checkbox"/> METALS	ILMO4.2	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> MANGANESE / IRON -	SW846 6010	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> SULFATE / CHLORIDE / ALKALINITY	USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 x 1 L P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> NO2 - NO3	USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> TOC	USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> METHANE / ETHANE / ETHYLENE	EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	— / — / —
<input type="checkbox"/> OTHER				<input type="checkbox"/>	— / — / —

## PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: **YES** ☒ **NO** ☐  
*Petrochem odor in purge water*

## NOTES:

SIGNATURE: *[Signature]*  
 CHECKED BY: *[Signature]*

## LOCATION NOTES

# FIELD DATA RECORD - LOW FL / GROUNDWATER SAMPLING

PROJECT **NYSDEC-KY AVE SITE 1** JOB NUMBER **3612042034/10.2.2**  
 LOCATION ID **MW-4** FIELD SAMPLE ID **5TMW000XXXX01XX** EVENT NO. **1**  
 ACTIVITY **START 1315 END 1430** SAMPLE TIME **1510** DATE **7 Dec 03**

**WATER LEVEL / PUMP SETTINGS** MEASUREMENT POINT  
☒ TOP OF WELL RISER  
☐ TOP OF PROTECTIVE CASING  
 INITIAL DEPTH TO WATER **11.6** feet  
 FINAL DEPTH TO WATER **11.6** feet  
 SCREEN LENGTH **10** feet  
 TOTAL VOL. PURGED **10.01** gallons  
 (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)  
 HISTORICAL WELL DEPTH (TOR) **25** feet  
 PRESSURE TO PUMP **—** psi  
 REFILL SETTING **—**  
 PROTECTIVE CASING STICKUP (FROM GROUND) **0** feet  
 PID AMBIENT AIR **40.1** ppmv  
 PID WELL MOUTH **40.1** ppmv  
 DISCHARGE SETTING **350**  
 CASING / WELL DIFFERENCE **13.4** feet  
 WELL DIAMETER **2** inches  
 WELL INTERGRITY:  
 INTEGRITY: YES NO N/A  
 CAP ☒ ☐ ☐  
 LOCKED ☒ ☐ ☐  
 COLLAR ☒ ☐ ☐

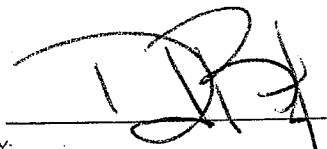
PURGE DATA										PUMP	COMMENTS
TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (+/- deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)	PUMP INTAKE DEPTH (ft)		
1320	11.6	350	12.5	2.21	7.3	7.4	87.4	154	20		
1322			12.4	2.21	7.2	5.4	67.8	162			
1325			12.7	2.22	7.2	4.8	26.0	160			
1330			12.9	2.22	7.2	4.7	27.7	165			
1335			12.4	2.23	7.2	4.8	36.6	148			
1345			12.5	2.21	7.2	5.1	41.5	175			
1400			12.5	2.22	7.2	4.9	48.2	178			
1415			12.4	2.24	7.2	4.9	55.7	184			
1430			12.5	2.25	7.2	4.9	50.1	191			
1445			12.1	2.17	7.2	5.0	35.7	197			
1500			12.1	2.19	7.2	4.8	35.1	195			
1510			12.1	2.17	7.2	4.9	33.2	197		Sample	

**EQUIPMENT DOCUMENTATION**  
 TYPE OF PUMP  
☐ DEDICATED MARSCHALK BLADDER  
☐ NON-DEDICATED MARSCHALK BLADDER  
☒ OTHER Peristaltic - Geopump  
 TYPE OF TUBING  
☒ HIGH DENSITY POLYETHYLENE  
☐ OTHER

ANALYTICAL PARAMETERS		METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
<b>CONTROL NUMBER</b>						
<input type="checkbox"/> VOCs - 25 ml Purge (low conc.)		OLCO2.1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	
<input checked="" type="checkbox"/> VOCs - 5 ml Purge		OLMO4.2	HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> SVOCs		OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> PESTICIDES		OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> METALS		ILMO4.2	HNO3 to pH <2	1 X 500 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> MANGANESE / IRON -		SW846 6010	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	
<input type="checkbox"/> SULFATE / CHLORIDE / ALKALINITY		USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 x 1 L P	<input type="checkbox"/>	
<input type="checkbox"/> NO2 - NO3		USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	<input type="checkbox"/>	
<input type="checkbox"/> TOC		USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	<input type="checkbox"/>	
<input type="checkbox"/> METHANE / ETHANE / ETHYLENE		EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	
<input type="checkbox"/> OTHER					<input type="checkbox"/>	

**PURGE OBSERVATIONS**  
 PURGE WATER CONTAINERIZED YES ☐ NO ☒

## LOCATION NOTES

**NOTES:**  
  
 SIGNATURE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_

# FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: **NYSDEC-KY AVE SITE 1** JOB NUMBER: **3612042034/10.2.2**  
 LOCATION ID: **MW-7** FIELD SAMPLE ID: **57MW607XXX01XX** EVENT NO.: **1**  
 ACTIVITY: **START 0930 END 1310** SAMPLE TIME: **1200** DATE: **7 DEC 05**

## WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: ☒ TOP OF WELL RISER ☐ TOP OF PROTECTIVE CASING  
 INITIAL DEPTH TO WATER: **13.02** feet PROTECTIVE CASING STICKUP (FROM GROUND): **0** feet CASING / WELL DIFFERENCE: **9.93** feet  
 FINAL DEPTH TO WATER: **13.01** feet HISTORICAL WELL DEPTH (TOR): **22.95** feet PID AMBIENT AIR: **<0.1** ppmv WELL DIAMETER: **2** inches  
 SCREEN LENGTH: **10'** feet PRESSURE TO PUMP: **—** psi PID WELL MOUTH: **<0.1** ppmv WELL INTERGRITY: INTEGRITY: YES NO N/A  
 TOTAL VOL. PURGED: **7.28** gallons REFILL SETTING: **—** DISCHARGE SETTING: **250**  
 (purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)

## PURGE DATA

TIME	DEPTH TO WATER (ft)	PURGE RATE (ml/m)	TEMP. (+/- deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH (units)	DISS. O2 (mg/L)	TURBIDITY (NTU)	REDOX (+/- mV)	PUMP INTAKE DEPTH (ft)	COMMENTS
1012	13.0	250	10.8	1.59	6.49	8.2	6.4	171	17.95	
1015	13.0		9.9	1.65	7.1	7.1	2.1	153		
1018			10.4	1.61	7.2	6.7	4.6	174		
1020			10.9	1.59	7.2	6.7	<1.0	134		
1025			10.4	1.62	7.3	6.9	4.7	104		
1030			10.7	1.61	7.3	7.4	<1.0	92		
1045			10.3	1.56	7.3	6.7	<1.0	109		
1100			10.3	1.54	7.3	6.6	<1.0	124		
1115			10.8	1.57	7.3	6.8	<1.0	136		
1130			10.4	1.57	7.3	6.8	<1.0	142		
1145			10.4	1.57	7.3	6.8	<1.0	141		
1200			10.3	1.54	7.3	6.8	<1.0	142		Sample Time

## EQUIPMENT DOCUMENTATION

TYPE OF PUMP: ☐ DEDICATED MARSCHALK BLADDER ☒ OTHER Peristaltic - Geopump  
 TYPE OF TUBING: ☒ HIGH DENSITY POLYETHYLENE ☐ OTHER

## ANALYTICAL PARAMETERS

CONTROL NUMBER	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
<input type="checkbox"/> VOCs - 25 ml Purge (low conc.)	OLCO2.1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	
<input checked="" type="checkbox"/> VOCs - 5 ml Purge - 2 hcl per	OLMO4.2	HCL / 4 DEG. C	8 X 40 ML	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> SVOCs - 12 amber	OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> PESTICIDES - 12 amber	OLMO4.2	4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> METALS - 12 amber	ILMO4.2	HNO3 to pH <2	1 X 500 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> MANGANESE / IRON -	SW846 6010	HNO3 to pH <2	1 X 500 ML P	<input type="checkbox"/>	
<input type="checkbox"/> SULFATE / CHLORIDE / ALKALINITY	USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 x 1 L P	<input type="checkbox"/>	
<input type="checkbox"/> NO2 - NO3 1 pint	USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	<input type="checkbox"/>	
<input type="checkbox"/> TOC	USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	<input type="checkbox"/>	
<input type="checkbox"/> METHANE / ETHANE / ETHYLENE	EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	<input type="checkbox"/>	
<input type="checkbox"/> OTHER				<input type="checkbox"/>	

## PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED YES ☐ NO ☒

## NOTES:

SIGNATURE: *[Signature]*  
 CHECKED BY: \_\_\_\_\_

## LOCATION NOTES

Also Collected ms/msd/avg @ this location

**Field Records:**

**Ground Water Round II**

# FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT NYSDEC - Kew-Forest Ave SAMPLE NUMBER STMW00102502AK STUDY AREA / AOC MW-1  
 SITE ID ST SITE TYPE DEC DATE 03/28/06  
 ACTIVITY START 0935 END 1052 JOB NUMBER 361205024 FILE TYPE /  
 WEATHER 34°F, Sunny

## WATER LEVEL / WELL DATA

MEASURED WELL DEPTH 34.19 FT (TOR) HISTORICAL WELL DEPTH 33.6 FT (TOR) PROTECTIVE CASING STICKUP (FROM GROUND)        FT PROTECTIVE CASING / WELL DIFFERENCE        FT  
 DEPTH TO WATER 22.95 FT (TOR) SCREEN LENGTH 10 FT WELL DIAMETER 2 IN WELL MATERIAL Sch 40 AN  
 HEIGHT OF WATER COLUMN 11.24 FT x 0.16 GAL/FT (2 INCH WELL) = 3.60 GAL/VOL  
 PID AMBIENT AIR 41.0 PPM PID WELL MOUTH 41.0 PPM TOTAL VOLUME PURGED 17000 GAL  
 WELL INTEGRITY: CAP ☒ YES ☐ NO ☐ N/A  
 CASING ☒ LOCKED  
 COLLAR ☒ LOCKED

## PURGE DATA

TIME: 0956 1001 1006 1011 1016 1021 1030 - Simple time

PURGE VOLUME (gallons)	DTW	22.95	22.95	22.95	22.95	22.95	22.95
PURGE RATE (gpm)	ml/min	250	250	250	250	250	250
TEMPERATURE (degreesC)		11.6	11.7	11.8	11.8	11.8	11.8
pH (units)		8.1	7.7	7.6	7.6	7.6	7.6
TURBIDITY (ntu)		38	50	45	37	30	29
SPEC. COND. (uhmhos/cm)		1.31	1.30	1.30	1.30	1.30	1.29
TURBIDITY (ntu)	<u>DO</u>	6.54	5.57	5.59	5.67	5.60	5.67
REDOX POTENTIAL (+/- mv)		230	200	190	180	170	160

## SAMPLE OBSERVATIONS:

☐ CLEAR  
☐ COLORED  
☒ CLOUDY slight  
☐ TURBID  
☐ ODOR  
☐ OTHER (see notes)

1048 - Pump off

## EQUIPMENT DOCUMENTATION

PURGING ☒ SAMPLING ☒  
 PERISTALTIC PUMP  
 SUBMERSIBLE PUMP  
 BLADDER PUMP  
 PVC/SILICON TUBING  
 TEFLON/SILICON TUBING  
 BAILER  
 IN LINE FILTER

DECON FLUIDS USED  
☒ ALKINOX  
☒ LIQUINOX  
☒ POTABLE WATER  
☒ DEIONIZED WATER  
☐ STEAM CLEANING  
☐ NITRIC ACID

WATER LEVEL EQUIPMENT USED  
☒ ELECTRIC COND. PROBE  
☐ FLOAT ACTIVATED  
☐ KECK INTERFACE PROBE

NUMBER OF FILTERS USED 0

0940 - Pump on

## ANALYTICAL PARAMETERS

☒ VOC  
☒ VOB  
☒ SVOC  
☒ PEST / PCBs  
☒ HERBICIDES  
☒ METAL INORGANICS TRV metals  
☐ SULFATE NITRATE/NITRITE  
☐ SULFIDE  
☐ IRON ONLY  
☐ FERROUS IRON  
☐ TOTAL PHOSPHORUS  
☐ MANGANESE ONLY  
☐ AMMONIA NIROGEN  
☐ TOC  
☐ TSS ONLY  
☐ OTHER

METHOD NUMBER  
 OLM04.2

FRACTION CODE

PRESERVATION METHOD

VOLUME REQUIRED

SAMPLE COLLECTED

SAMPLE BOTTLE ID NUMBERS

USEPA 300  
 USEPA 376.1

FIELD METHOD  
 USEPA-365.4

USEPA-350.1  
 USEPA-415.1  
 USEPA-160.2

HCL / 4 DEG. C 2 X 40 ML  
 HCL / 4 DEG. C 3 X 40 ML  
 4 DEG. C 1 X 1 L AG  
 4 DEG. C 2 X 1 L AG  
 4 DEG. C 2 X 1 L AG  
 HNO3 to pH <2 1 X 1 L P-Cube  
 4 DEG. C 1 X 50 ML P  
 NAOH to pH >9 1 X 500 ML P  
 HNO3 to pH <2 1 X 1 L P-Cube  
 H2SO4 to pH <2 1 X 50 ML P  
 HNO3 to pH <2 1 X 1 L P  
 H2SO4 to pH <2 1 X 400 ML P  
 4 DEG. C 1 X 1 L P

## NOTES

Duplicate / MS (MSD) collected are maps  
9

SIGNATURE: [Signature]

RECEIVED BY:       

MW-1

# FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT NYSDEC - Kentucky Ave SAMPLE NUMBER STMW06202502KK STUDY AREA / AOC MMW-2  
 SITE ID ST SITE TYPE DEC DATE 03/28/04  
 ACTIVITY START 1058 END 1210 JOB NUMBER 3612052024 FILE TYPE /  
 WEATHER 35°F / Sunny

## WATER LEVEL / WELL DATA

MEASURED WELL DEPTH 32.66 FT (TOR) HISTORICAL WELL DEPTH 32.1 FT (TOR) PROTECTIVE CASING STICKUP (FROM GROUND) / FT PROTECTIVE CASING / WELL DIFFERENCE / FT  
 DEPTH TO WATER 20.58 FT (TOR) SCREEN LENGTH 10 FT WELL DIAMETER 2 IN WELL MATERIAL Sch 40 PC  
 HEIGHT OF WATER COLUMN 12.08 FT  $\times$  0.16 GAL/FT (2 INCH WELL) = 3.87 GAL/VOL WELL INTEGRITY: CAP / YES NO N/A  
 PID AMBIENT AIR 21.0 PPM PID WELL MOUTH 41.0 PPM TOTAL VOLUME PURGED 14700 WT GAL COLLAR / LOCKED /

PURGE DATA 1155 Pump TIME: 1120 1125 1130 1135 1140 1145 1150 Sample Time

PURGE VOLUME (gallons)	<u>28.59</u>	<u>20.60</u>	<u>20.60</u>	<u>20.60</u>	<u>20.60</u>	<u>20.60</u>
PURGE RATE (gpm) / <u>min</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
TEMPERATURE (degreesC)	<u>11.8</u>	<u>11.9</u>	<u>12.0</u>	<u>12.0</u>	<u>12.0</u>	<u>12.1</u>
pH (units)	<u>7.5</u>	<u>7.4</u>	<u>7.5</u>	<u>7.5</u>	<u>7.5</u>	<u>7.5</u>
TURBIDITY (ntu)	<u>8.8</u>	<u>7.5</u>	<u>7.1</u>	<u>6.2</u>	<u>5.1</u>	<u>4.2</u>
SPEC. COND. (u/mhos/cm)	<u>1.32</u>	<u>1.31</u>	<u>1.31</u>	<u>1.31</u>	<u>1.31</u>	<u>1.31</u>
TURBIDITY (ntu) <u>DO</u>	<u>6.53</u>	<u>6.23</u>	<u>6.19</u>	<u>6.20</u>	<u>6.18</u>	<u>6.26</u>
REDOX POTENTIAL (+/- mv)	<u>226</u>	<u>210</u>	<u>200</u>	<u>190</u>	<u>190</u>	<u>180</u>

SAMPLE OBSERVATIONS:  
☒ CLEAR  
☐ COLORED \_\_\_\_\_  
☐ CLOUDY \_\_\_\_\_  
☐ TURBID \_\_\_\_\_  
☐ ODOR \_\_\_\_\_  
☐ OTHER (see notes) \_\_\_\_\_

1204 - Pump off

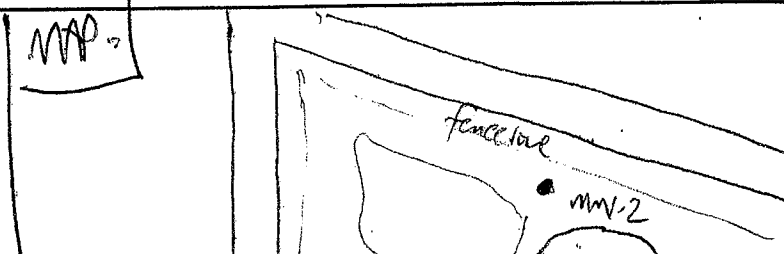
## EQUIPMENT DOCUMENTATION

PURGING ☒ SAMPLING ☒  
 PERISTALTIC PUMP ☒  
 SUBMERSIBLE PUMP ☒  
 BLADDER PUMP ☒  
 PVC/SILICON TUBING ☒  
 TEFLON/SILICON TUBING ☒  
 BAILER ☒  
 IN LINE FILTER ☒  
 DECON FLUIDS USED: ALKINOX ☒ LIQUINOX ☒ POTABLE WATER ☒ DEIONIZED WATER ☒ STEAM CLEANING ☒ NITRIC ACID ☒  
 WATER LEVEL EQUIPMENT USED: ELECTRIC COND. PROBE ☒ FLOAT ACTIVATED ☒ KECK INTERFACE PROBE ☒  
 NUMBER OF FILTERS USED 10

## ANALYTICAL PARAMETERS

	METHOD NUMBER	FRACTION CODE	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
<input checked="" type="checkbox"/> VOC	OLM04.2		HCL / 4 DEG. C	2 X 40 ML	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> VOC			HCL / 4 DEG. C	2 X 40 ML	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> SVOC			4 DEG. C	12 X 1 L AG	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> PEST / PCBs			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> HERBICIDES			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> PAC INORGANICS <u>Trace metals</u>			HNO3 to pH <2	1 x 1 L P	<input checked="" type="checkbox"/>	/ /
<input type="checkbox"/> SULFATE NITRATE/NITRITE	USEPA 300		4 DEG. C	1 X 50 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> SULFIDE	USEPA 376.1		NAOH to pH >9	1 X 500 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> IRON ONLY			HNO3 to pH <2	1 x 1 L P-Cube	<input type="checkbox"/>	/ /
<input type="checkbox"/> FERROUS IRON	FIELD METHOD		-	-	<input type="checkbox"/>	/ /
<input type="checkbox"/> TOTAL PHOSPHORUS	USEPA-365.4		H2SO4 to pH <2	1 X 50 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> MANGANESE ONLY			HNO3 to pH <2	1 X 1 L P	<input type="checkbox"/>	/ /
<input type="checkbox"/> AMMONIA NIROGEN	USEPA-350.1		H2SO4 to pH <2	1 X 400 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> TOC	USEPA-415.1				<input type="checkbox"/>	/ /
<input type="checkbox"/> TSS ONLY	USEPA-160.2		4 DEG. C	1 X 1 L P	<input type="checkbox"/>	/ /
<input type="checkbox"/> OTHER					<input type="checkbox"/>	/ /

## NOTES

SIGNATURE [Signature]  
 RECEIVED BY: \_\_\_\_\_  




# FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT NWSEEL - Kentucky Ave SAMPLE NUMBER STMW00302002XX STUDY AREA / AOC MW-3  
 SITE ID ST SITE TYPE DEC DATE 03/28/06  
 ACTIVITY START 1205 END 1305 JOB NUMBER 361252024 FILE TYPE /  
 WEATHER 40°F/PC

## WATER LEVEL / WELL DATA

MEASURED WELL DEPTH 27.69 FT (TOR) HISTORICAL WELL DEPTH 27.1 FT (TOR) PROTECTIVE CASING STICKUP (FROM GROUND) / FT PROTECTIVE CASING / WELL DIFFERENCE / FT  
 DEPTH TO WATER 14.55 FT (TOR) SCREEN LENGTH 10 FT WELL DIAMETER 2 IN WELL MATERIAL Sch 40 PVC  
 HEIGHT OF WATER COLUMN 13.14 FT x 0.16 GAL/FT (2 INCH WELL) = 4.20 GAL/VOL  
 PID AMBIENT AIR <1.0 PPM PID WELL MOUTH <1.0 PPM TOTAL VOLUME PURGED 19200 GAL  
 WELL INTEGRITY: CAP ☒ YES ☐ NO ☐ N/A  
 CASING ☒  
 COLLAR ☒  
 LOCKED ☒

PURGE DATA 1218 - Pump TIME: 1220 1225 1230 1235 1240 1245 1300 - Sample Time

PURGE VOLUME (gallons) DTW	14.55	14.55	14.55	14.55	14.55	14.55
PURGE RATE (gpm) ml/min	400	400	400	400	400	400
TEMPERATURE (degrees C)	10.9	11.0	11.0	11.0	11.0	11.0
pH (units)	7.6	7.5	7.5	7.5	7.5	7.5
TURBIDITY (ntu)	5.75	3.28	4.20	2.31	2.21	2.42
SPEC. COND. (uhmhos/cm)	1.36	1.35	1.35	1.35	1.35	1.35
TURBIDITY (ntu) DO	8.14	7.24	7.21	7.30	7.28	7.31
REDOX POTENTIAL (+/- mv)	240	230	230	220	210	210

SAMPLE OBSERVATIONS:  
☒ CLEAR  
☐ COLORED  
☐ CLOUDY  
☐ TURBID  
☐ ODOR  
☐ OTHER (see notes)

1306 - Pump off

## EQUIPMENT DOCUMENTATION

PURGING ☒ SAMPLING ☒  
 PERISTALTIC PUMP ☒  
 SUBMERSIBLE PUMP ☒  
 BLADDER PUMP ☒  
 PVC/SILICON TUBING ☒  
 TEFLON/SILICON TUBING ☒  
 BAILER ☒  
 IN LINE FILTER ☒  
 DECON FLUIDS USED  
☒ ALKINOX  
☒ LIQUINOX  
☒ POTABLE WATER  
☒ DEIONIZED WATER  
☒ STEAM CLEANING  
☒ NITRIC ACID  
 WATER LEVEL EQUIPMENT USED  
☒ ELECTRIC COND. PROBE  
☒ FLOAT ACTIVATED  
☒ KECK INTERFACE PROBE  
 NUMBER OF FILTERS USED 0

## ANALYTICAL PARAMETERS

METHOD NUMBER	FRACTION CODE	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
OLM04.2		HCL / 4 DEG. C	2 X 40 ML	<input checked="" type="checkbox"/>	/ /
		HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	/ /
		4 DEG. C	1 X 1 L AG	<input checked="" type="checkbox"/>	/ /
		4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
		4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
		HNO3 to pH <2	1 X 1 L P-500ml	<input checked="" type="checkbox"/>	/ /
		4 DEG. C	1 X 50 ML P	<input checked="" type="checkbox"/>	/ /
		NAOH to pH >9	1 X 500 ML P	<input checked="" type="checkbox"/>	/ /
		HNO3 to pH <2	1 X 1 L P-Cube	<input checked="" type="checkbox"/>	/ /
		USEPA 300		H2SO4 to pH <2	1 X 50 ML P
HNO3 to pH <2	1 X 1 L P			<input checked="" type="checkbox"/>	/ /
H2SO4 to pH <2	1 X 400 ML P			<input checked="" type="checkbox"/>	/ /
4 DEG. C	1 X 1 L P			<input checked="" type="checkbox"/>	/ /
USEPA 376.1				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
FIELD METHOD USEPA-365.4				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
USEPA-350.1				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
USEPA-415.1				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
USEPA-160.2				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /
				<input checked="" type="checkbox"/>	/ /

ANALYTICAL PARAMETERS  
☐ VOC  
☒ SVOC  
☒ PEST / PCBs  
☒ HERBICIDES  
☒ METAL INORGANICS Trace Metals  
☐ SULFATE NITRATE/NITRITE  
☐ SULFIDE  
☐ IRON ONLY  
☐ FERROUS IRON  
☐ TOTAL PHOSPHORUS  
☐ MANGANESE ONLY  
☐ AMMONIA NIROGEN  
☐ TOC  
☐ TSS ONLY  
☐ OTHER

## NOTES

SIGNATURE: [Signature]  
 RECEIVED BY: [Signature]  
 MAP: [Map]  
 MW-3  
 fence line

# FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT NV8DEC-Kentucky Ave SAMPLE NUMBER STW/0040200220 STUDY AREA / AOC mm 4  
 SITE ID ST SITE TYPE DEC DATE 03/29/06  
 ACTIVITY START 0805 END 0910 JOB NUMBER 3612052034 FILE TYPE /  
 WEATHER 29°F / Sunny

## WATER LEVEL / WELL DATA

MEASURED WELL DEPTH 25.66 FT (TOR) HISTORICAL WELL DEPTH 25.05 FT (TOR) PROTECTIVE CASING STICKUP (FROM GROUND) / FT PROTECTIVE CASING / WELL DIFFERENCE / FT  
 DEPTH TO WATER 14.38 FT (TOR) SCREEN LENGTH 10 FT WELL DIAMETER 2 IN WELL MATERIAL Sch 40 PVC  
 HEIGHT OF WATER COLUMN 11.28 FT x 0.16 GAL/FT (2 INCH WELL) = 361 GAL/VOL WELL INTEGRITY: CAP ✓ YES NO N/A  
 PID AMBIENT AIR 21.0 PPM PID WELL MOUTH 21.0 PPM TOTAL VOLUME PURGED 16800 24 GAL CASING COLLAR ✓ LOCKED ✓

PURGE DATA 0819 Purge Time: 0823 0828 0833 0838 0843 0848 0900 - Pump off

PURGE VOLUME (gallons)	<u>14.40</u>	<u>14.41</u>	<u>14.41</u>	<u>14.41</u>	<u>14.41</u>	<u>14.41</u>
PURGE RATE (gpm)	<u>350</u>	<u>350</u>	<u>350</u>	<u>350</u>	<u>350</u>	<u>350</u>
TEMPERATURE (degrees C)	<u>10.6</u>	<u>10.7</u>	<u>10.7</u>	<u>10.8</u>	<u>10.8</u>	<u>10.8</u>
pH (units)	<u>6.5</u>	<u>6.8</u>	<u>7.0</u>	<u>7.1</u>	<u>7.2</u>	<u>7.2</u>
TURBIDITY (ntu)	<u>6.14</u>	<u>5.78</u>	<u>3.32</u>	<u>2.81</u>	<u>1.25</u>	<u>1.59</u>
SPEC. COND. (uhmhos/cm)	<u>1.39</u>	<u>1.34</u>	<u>1.39</u>	<u>1.36</u>	<u>1.38</u>	<u>1.39</u>
TURBIDITY (ntu)	<u>7.02</u>	<u>6.54</u>	<u>6.55</u>	<u>6.51</u>	<u>6.56</u>	<u>6.50</u>
REDOX POTENTIAL (+/- mv)	<u>320</u>	<u>280</u>	<u>270</u>	<u>250</u>	<u>240</u>	<u>230</u>

SAMPLE OBSERVATIONS:  
☒ CLEAR  
☐ COLORED \_\_\_\_\_  
☐ CLOUDY \_\_\_\_\_  
☐ TURBID \_\_\_\_\_  
☐ ODOR \_\_\_\_\_  
☐ OTHER (see notes) \_\_\_\_\_

1900 Sample Time

## EQUIPMENT DOCUMENTATION

PURGING ☒ SAMPLING ☒  
 PERISTALTIC PUMP ☒  
 SUBMERSIBLE PUMP ☒  
 BLADDER PUMP ☒  
 PVC/SILICON TUBING ☒  
 TEFLON/SILICON TUBING ☒  
 BAILER ☒  
 IN LINE FILTER ☒  
 DECON FLUIDS USED ☒ ALKINOX ☒ EQUINOX ☒ POTABLE WATER ☒ DEIONIZED WATER ☒ STEAM CLEANING ☒ NITRIC ACID ☒  
 WATER LEVEL EQUIPMENT USED ☒ ELECTRIC COND. PROBE ☒ FLOAT ACTIVATED ☒ KECK INTERFACE PROBE ☒  
 NUMBER OF FILTERS USED 0

## ANALYTICAL PARAMETERS

	METHOD NUMBER	FRACTION CODE	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
<input checked="" type="checkbox"/> VOC	OLM04.2		HCL / 4 DEG. C	2 X 40 ML	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> VOC			HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> SVOC			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> PEST / PCBs			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> HERBICIDES			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	/ /
<input checked="" type="checkbox"/> PAC INORGANICS <u>TAN metals</u>			HNO3 to pH <2	1 x 1 L P <u>same</u>	<input checked="" type="checkbox"/>	/ /
<input type="checkbox"/> SULFATE NITRATE/NITRITE	USEPA 300		4 DEG. C	1 X 50 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> SULFIDE	USEPA 376.1		NAOH to pH >9	1 X 500 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> IRON ONLY			HNO3 to pH <2	1 x 1 L P-Cube	<input type="checkbox"/>	/ /
<input type="checkbox"/> FERROUS IRON	FIELD METHOD				<input type="checkbox"/>	/ /
<input type="checkbox"/> TOTAL PHOSPHORUS	USEPA-365.4		H2SO4 to pH <2	1 X 50 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> MANGANESE ONLY			HNO3 to pH <2	1 X 1 L P	<input type="checkbox"/>	/ /
<input type="checkbox"/> AMMONIA NIROGEN	USEPA-350.1		H2SO4 to pH <2	1 X 400 ML P	<input type="checkbox"/>	/ /
<input type="checkbox"/> TOC	USEPA-415.1				<input type="checkbox"/>	/ /
<input type="checkbox"/> TSS ONLY	USEPA-160.2		4 DEG. C	1 X 1 L P	<input type="checkbox"/>	/ /
<input type="checkbox"/> OTHER					<input type="checkbox"/>	/ /

## NOTES

SIGNATURE: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_

MAP mm 4 Building parent gate

# FIELD DATA RECORD - GROUNDWATER SAMPLING

PROJECT MSDEC - Kentucky Ave SAMPLE NUMBER STMN00501502AK STUDY AREA / AOC mw-5  
 SITE ID ST SITE TYPE DEC DATE 03/29/06  
 ACTIVITY START 1021 END 1120 JOB NUMBER 3612052034 FILE TYPE             
 WEATHER 39°F / Sunny

## WATER LEVEL / WELL DATA

MEASURED WELL DEPTH 21.59 FT (TOR) HISTORICAL WELL DEPTH 21 FT (TOR) PROTECTIVE CASING STICKUP (FROM GROUND)            FT PROTECTIVE CASING / WELL DIFFERENCE            FT  
 DEPTH TO WATER 11.31 FT (TOR) SCREEN LENGTH 10 FT WELL DIAMETER 2 IN WELL MATERIAL Sch 40 PVC  
 HEIGHT OF WATER COLUMN 10.28 FT x 0.16 GAL/FT (2 INCH WELL) = 3.29 GAL/VOL  
 PID AMBIENT AIR 4.0 PPM PID WELL MOUTH 4.0 PPM TOTAL VOLUME PURGED 18400 GAL  
 WELL INTEGRITY: CAP ☒ YES ☐ NO ☐ N/A  
 CASING COLLAR LOCKED ☒ YES ☐ NO ☐ N/A

PURGE DATA 1024 - Pump ON

	1026	1031	1036	1041	1046	1051
PURGE VOLUME (gallons)	<u>11.37</u>	<u>11.37</u>	<u>11.37</u>	<u>11.37</u>	<u>11.37</u>	<u>11.37</u>
PURGE RATE (gpm)	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
TEMPERATURE (degrees C)	<u>11.0</u>	<u>11.0</u>	<u>11.2</u>	<u>11.3</u>	<u>11.3</u>	<u>11.3</u>
pH (units)	<u>7.3</u>	<u>7.2</u>	<u>7.2</u>	<u>7.2</u>	<u>7.2</u>	<u>7.2</u>
TURBIDITY (ntu)	<u>110</u>	<u>500</u>	<u>2.6</u>	<u>2.6</u>	<u>2.5</u>	<u>2.3</u>
SPEC. COND. (uhmhos/cm)	<u>1.32</u>	<u>1.32</u>	<u>1.32</u>	<u>1.32</u>	<u>1.31</u>	<u>1.32</u>
TURBIDITY (ntu)	<u>2.50</u>	<u>1.09</u>	<u>2.48</u>	<u>1.93</u>	<u>1.91</u>	<u>1.89</u>
REDOX POTENTIAL (+/- mv)	<u>-80</u>	<u>-80</u>	<u>-80</u>	<u>-80</u>	<u>-80</u>	<u>-80</u>

SAMPLE OBSERVATIONS:  
☒ CLEAR  
☐ COLORED             
☐ CLOUDY             
☐ TURBID             
☐ ODOR             
☐ OTHER (see notes)  
1110 - Pump off

## EQUIPMENT DOCUMENTATION

PURGING ☒ SAMPLING ☒  
 PERISTALTIC PUMP ☒  
 SUBMERSIBLE PUMP ☒  
 BLADDER PUMP ☒  
 PVC/SILICON TUBING ☒  
 TEFLON/SILICON TUBING ☒  
 BAILER ☒  
 IN LINE FILTER ☒  
 DECON FLUIDS USED ☒ ALKINOX ☒ LIQUINOX ☒ POTABLE WATER ☒ DEIONIZED WATER ☒ STEAM CLEANING ☒ NITRIC ACID  
 WATER LEVEL EQUIPMENT USED ☒ ELECTRIC COND. PROBE ☒ FLOAT ACTIVATED ☒ KECK INTERFACE PROBE  
 NUMBER OF FILTERS USED 2

## ANALYTICAL PARAMETERS

	METHOD NUMBER	FRACTION CODE	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
<input type="checkbox"/> VOC	OLM04.2		HCL / 4 DEG. C	2 X 40 ML	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> VOC			HCL / 4 DEG. C	3 X 40 ML	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> SVOC			4 DEG. C	1 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> PEST / PCBs			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> HERBICIDES			4 DEG. C	2 X 1 L AG	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> METAL INORGANICS <u>TAV metals</u>			HNO3 to pH <2	1 X 1 L P-Cube	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> SULFATE NITRATE/NITRITE	USEPA 300		4 DEG. C	1 X 50 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> SULFIDE	USEPA 376.1		NAOH to pH >9	1 X 500 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> IRON ONLY			HNO3 to pH <2	1 X 1 L P-Cube	<input checked="" type="checkbox"/>	
<input type="checkbox"/> FERROUS IRON	FIELD METHOD				<input checked="" type="checkbox"/>	
<input type="checkbox"/> TOTAL PHOSPHORUS	USEPA-365.4		H2SO4 to pH <2	1 X 50 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> MANGANESE ONLY			HNO3 to pH <2	1 X 1 L P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> AMMONIA NITROGEN	USEPA-350.1		H2SO4 to pH <2	1 X 400 ML P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> TOC	USEPA-415.1				<input checked="" type="checkbox"/>	
<input type="checkbox"/> TSS ONLY	USEPA-160.2		4 DEG. C	1 X 1 L P	<input checked="" type="checkbox"/>	
<input type="checkbox"/> OTHER					<input checked="" type="checkbox"/>	

## NOTES

degraded hydrocarbon odor;  
Purge water is w/ particles in it  
1035 - purge water cleared up.  
DEF building  
gate  
 SIGNATURE: [Signature]  
 RECEIVED BY:





# FIELD DATA RECORD - GROUNDWATER SAMPLING

2 of 2

PROJECT NYSDEC - Kentucky Ave SAMPLE NUMBER STMW00701802X STUDY AREA / AOC MW-7  
 SITE ID ST SITE TYPE DEC DATE 03/29/06  
 ACTIVITY START 0915 END 1615 JOB NUMBER 3612052031 FILE TYPE ✓  
 WEATHER 36°F / Sunny

## WATER LEVEL / WELL DATA

MEASURED WELL DEPTH 23.55 FT (TOR) HISTORICAL WELL DEPTH 22.95 FT (TOR) PROTECTIVE CASING STICKUP (FROM GROUND) ✓ FT PROTECTIVE CASING / WELL DIFFERENCE ✓ FT  
 DEPTH TO WATER 13.36 FT (TOR) SCREEN LENGTH 10 FT WELL DIAMETER 2 IN WELL MATERIAL 3" 40 PVC  
 HEIGHT OF WATER COLUMN 10.19 FT  $\times 1.16$  GAL/FT (2 INCH WELL) = 3.26 GAL/VOL WELL INTEGRITY: CAP ✓ YES NO N/A  
 Casing Locked ✓ COLLAR ✓ LOCKED ✓  
 PID AMBIENT AIR <1.0 PPM PID WELL MOUTH <1.0 PPM TOTAL VOLUME PURGED 19206 mL GAL

## PURGE DATA

PURGE VOLUME (gallons)	13.41	13.41	13.41	
PURGE RATE (gpm)	4.00	4.00	4.00	
TEMPERATURE (degrees C)	10.4	10.5	10.5	
pH (units)	7.4	7.4	7.4	
TURBIDITY (ntu)	2.5	2.5	2.3	
SPEC. COND. (u/mhos/cm)	1.36	1.35	1.35	
TURBIDITY (ntu)	6.67	6.71	6.70	
REDOX POTENTIAL (+/- mv)	180	170	170	

## SAMPLE OBSERVATIONS:

- ☒ CLEAR  
☐ COLORED \_\_\_\_\_  
☐ CLOUDY \_\_\_\_\_  
☐ TURBID \_\_\_\_\_  
☐ ODOR \_\_\_\_\_  
☐ OTHER (see notes)

Pump off - 1008

## EQUIPMENT DOCUMENTATION

PURGING ☒ SAMPLING ☒  
☒ PERISTALTIC PUMP  
☒ SUBMERSIBLE PUMP  
☒ BLADDER PUMP  
☒ PVC/SILICON TUBING  
☒ TEFLON/SILICON TUBING  
☒ BAILER  
☒ IN LINE FILTER

DECON FLUIDS USED  
☒ ALKINOX  
☒ LIQUINOX  
☒ POTABLE WATER  
☒ DEIONIZED WATER  
☒ STEAM CLEANING  
☒ NITRIC ACID

WATER LEVEL EQUIPMENT USED  
☒ ELECTRIC COND. PROBE  
☒ FLOAT ACTIVATED  
☒ KECK INTERFACE PROBE

NUMBER OF FILTERS USED 0

## ANALYTICAL PARAMETERS

- ☐ VOC  
☒ VOC  
☒ SVOC  
☒ PEST / PCBs  
☐ HERBICIDES  
☒ PAH INORGANICS TAL metals  
☐ SULFATE NITRATE/NITRITE  
☐ SULFIDE  
☐ IRON ONLY  
☐ FERROUS IRON  
☐ TOTAL PHOSPHORUS  
☐ MANGANESE ONLY  
☐ AMMONIA NIROGEN  
☐ TOC  
☐ TSS ONLY  
☐ OTHER

METHOD NUMBER  
 OLM04.2  
 USEPA 300  
 USEPA 376.1  
 FIELD METHOD  
 USEPA-365.4  
 USEPA-350.1  
 USEPA-415.1  
 USEPA-160.2

FRACTION CODE

PRESERVATION METHOD

HCL / 4 DEG. C  
 HCL / 4 DEG. C  
 4 DEG. C  
 4 DEG. C  
 4 DEG. C  
 HNO3 to pH <2  
 4 DEG. C  
 NaOH to pH >9  
 HNO3 to pH <2  
 -  
 H2SO4 to pH <2  
 HNO3 to pH <2  
 H2SO4 to pH <2  
 4 DEG. C

VOLUME REQUIRED  
 2 X 40 ML  
 3 X 40 ML  
 1 X 1 L AG  
 2 X 1 L AG  
 2 X 1 L AG  
 1 X 1 L P  
 1 X 500 ML P  
 1 X 1 L P-Cube  
 -  
 1 X 50 ML P  
 1 X 1 L P  
 1 X 400 ML P  
 1 X 1 L P

SAMPLE COLLECTED

SAMPLE BOTTLE ID NUMBERS

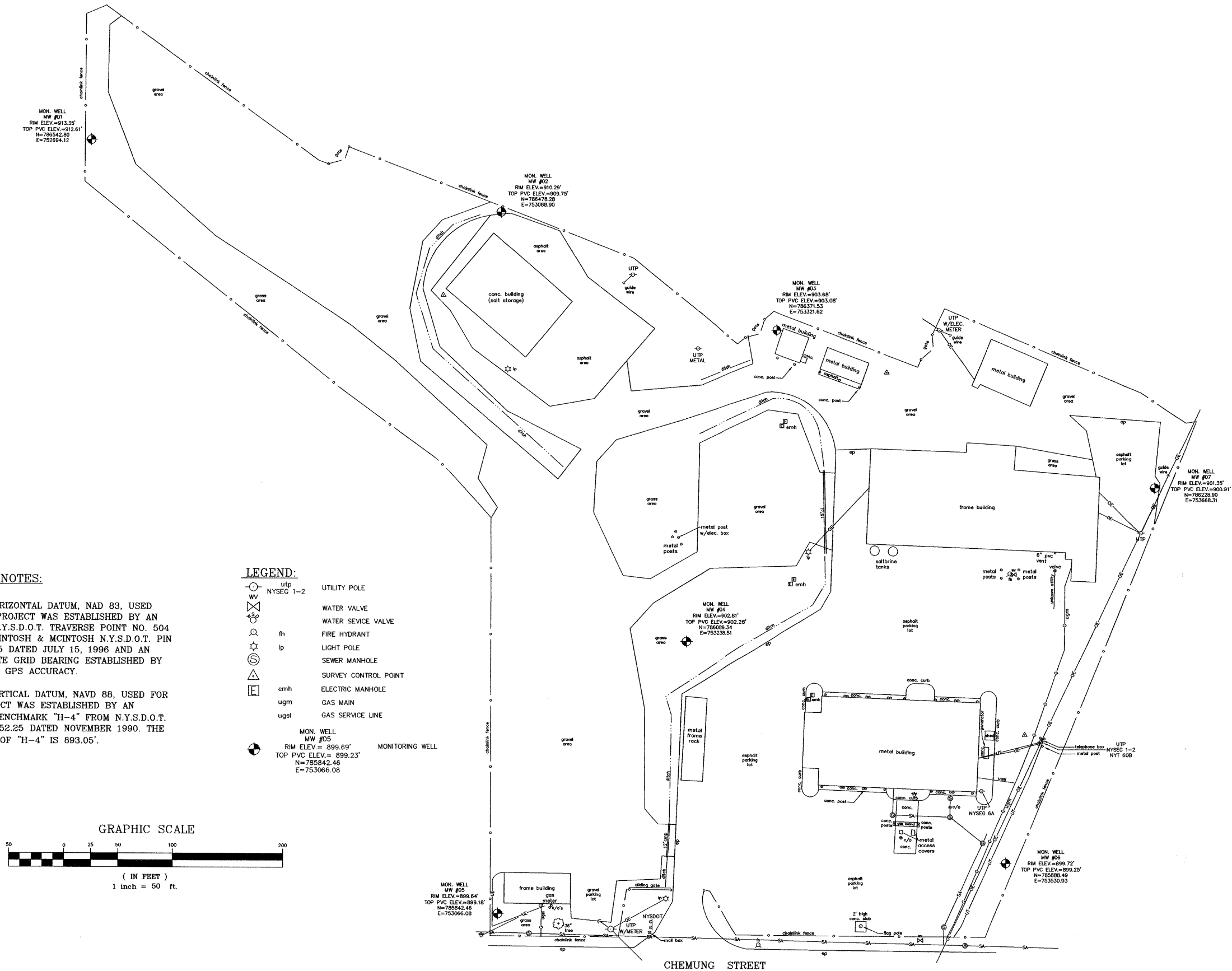
## NOTES

SIGNATURE: \_\_\_\_\_  
 RECEIVED BY: \_\_\_\_\_

MAP:



**APPENDIX C:**  
**SURVEY DRAWING – SITE MAP**



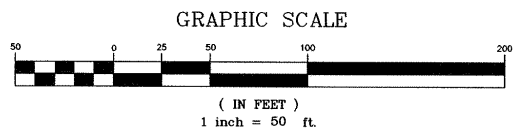
#### SURVEY NOTES:

1.) THE HORIZONTAL DATUM, NAD 83, USED FOR THIS PROJECT WAS ESTABLISHED BY AN EXISTING N.Y.S.D.O.T. TRAVERSE POINT NO. 504 SET BY MCINTOSH & MCINTOSH N.Y.S.D.O.T. PIN NO. 6752.25 DATED JULY 15, 1996 AND AN APPROXIMATE GRID BEARING ESTABLISHED BY SUB METER GPS ACCURACY.

2.) THE VERTICAL DATUM, NAVD 88, USED FOR THIS PROJECT WAS ESTABLISHED BY AN EXISTING BENCHMARK "H-4" FROM N.Y.S.D.O.T. PIN NO. 6752.25 DATED NOVEMBER 1990. THE ELEVATION OF "H-4" IS 893.05'.

#### LEGEND:

- |   |                        |                      |
|---|------------------------|----------------------|
| ○ | utp                    | UTILITY POLE         |
| ○ | WV                     | WATER VALVE          |
| ○ | NYSEG 1-2              | WATER SERVICE VALVE  |
| ○ | fh                     | FIRE HYDRANT         |
| ○ | lp                     | LIGHT POLE           |
| ○ | SM                     | SEWER MANHOLE        |
| ○ | SC                     | SURVEY CONTROL POINT |
| ○ | emh                    | ELECTRIC MANHOLE     |
| ○ | ugm                    | GAS MAIN             |
| ○ | ugl                    | GAS SERVICE LINE     |
| ○ | MON. WELL MW #05       | MONITORING WELL      |
| ○ | RIM ELEV.= 899.69'     |                      |
| ○ | TOP PVC ELEV.= 899.23' |                      |
| ○ | N=785842.46            |                      |
| ○ | E=753066.08            |                      |



DATE	REVISIONS	BY

**DRAWING ALTERATION**  
WARNING: It is a violation of the New York State Education Law, Article 145, Section 7209, Special Provision 2, for any person unless he is acting under the direction of a Licensed Professional Engineer or Land Surveyor to alter an item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his seal and notation "altered by" followed by his signature and date of such alteration, and a specific description of the alteration.

BY: \_\_\_\_\_  
DATE: \_\_\_\_\_



JOSEPH C. LU ENGINEERING AND  
LAND SURVEYING, P.C.  
2230 Penfield Road  
Penfield, New York 14526  
(585) 377-1450  
FAX: (585) 377-1266

PROJECT:

**N.Y.S.D.O.T. PROPERTY  
730 CHEMUNG STREET**

CLIENT:

**MACTEC ENGINEERING, INC  
511 CONGRESS STREET  
PORTLAND, ME 04101**

DRAWING TITLE:

**SITE  
MAP**

DESIGNED BY:	SCALE: 1"=50'
DRAWN BY: JRH	DATE: 02/06/06
CHECKED BY: CJC/CAP	PROJECT No. 36406

SHEET	DRAWING No.
1 OF 1	1



**APPENDIX D:**  
**DUSR AND LABORATORY ANALYTICAL RESULTS**

# ***DATA VALIDATION REPORT***

***Volatile, Semi-volatile, Pesticide/PCB, and Metals Analyses***

***SDG No. D1367***

***Sampling Date: November 14-16, 2005***

***Submitted to:***

***MACTEC, Inc.,  
511 Congress Street  
Portland, ME 04112  
207-775-5401***

***Submitted by:***

***EDV, Inc.,  
1326 Oranewood Avenue  
Pittsburgh, PA 15216  
412-341-5281***

***February 27, 2006***

Site: Kentucky Ave/NYSDEC  
Client: MACTEC, Inc.  
Analytical Laboratory: Mitkem Corporation  
17 Metro Center Boulevard  
Warwick RI 02886

Sample Delivery Group (SDG): D1367

Sampling Date: November 14-16, 2005

Analyses: Volatile, semi-volatile, pesticide/PCB, metals  
Analytical Method: NYSDEC ASP  
Summary of Data Validation:

The adherence of laboratory analytical performance to CLP and SW-846 Analytical Specifications were evaluated during the data validation process. The USEPA Region II's data validation SOP Checklists (SOP HW-2 Rev 1, January 1992, SOP, HW-15 Rev 2, May 1993), the National Functional Guidelines for Organic Data Review (October 1999), the National Functional Guidelines for Inorganic Data Review (October 2004) were used as guidelines for data qualifications.

**Volatile:** Several compounds were qualified as estimated due to calibration issues. One methylene chloride result was qualified as non-detect due to blank contamination. Some sample results were qualified as estimated due to calibration issues.

**Semi-volatile analyses:** Some sample results were qualified as estimated due to calibration issues.

**Pesticide/PCB:** Some compounds in one sample were qualified as estimated due to surrogate issues.

**Metals:** Selenium and silver results were rejected in all samples due to matrix spike issues. Some copper, lead, sodium and zinc results were rejected due to field blank contamination. Antimony, cobalt, copper, iron, lead, nickel and zinc results were qualified as estimated due to either matrix spike, CRDL or ICP serial dilution issues.

The sample qualifiers applied by the data validator are in section 15.0 and Attachment A- Form 1s. The detailed discussions can be found in the report.

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## 1.0 Sample Identifications

The following table summarizes sample IDENTIFICATIONS, matrix of each sample and analyses present in the data package for each sample.

Client Sample ID	Matrix	Volatile	Semi-volatile	Pesticide/PCB	Metals
<i>SDG D1367</i>					
STBS00701001XX	SOIL	X	X	X	X
STQT001XXX05XX	WATER	X	-	-	-
STBS00508001XX	SOIL	X	X	X	X
STBS00508001XD	SOIL	X	X	X	X
STBS00406001XX	SOIL	X	X	X	X
STBS00501701XX	SOIL	X	X	-	-
STBS00101601XX	SOIL	X	X	X	X
STQT002XXX05XX	WATER	X	-	-	-
STBS00301601XX	SOIL	X	X	X	X
STQS001XXX05XX	WATER	X	X	X	X
STQT003XXX05XX	WATER	X	-	-	-
STBS00201801XX	SOIL	X	X	X	X
<b>QC sample ID</b>	<b>Matrix</b>				
STBS00508001XX MS	WATER	X	X	X	X
STBS00508001XX MSD	WATER	X	X	X	X

## 2.0 Completeness Checklist

The following table identifies the summary form information and raw data found in the data package. Form numbers shown in parentheses refer to the current U.S. EPA CLP SOW equivalent reporting of results in an alternate summary format that has been determined to be acceptable. Analyses in this data package were performed in accordance with CLP and NYSDEC Methods.

Completeness Checklist

X	Case Narrative
X	Chain of Custody Records/Traffic Reports/Tracking Records
X	Preservation Information
X	Sample Cross Reference with Unique Identifiers
X	Sample Results Summary Form (Form 1/Form 1-TIC)
X	CLP Flagging used on Results Summary
X	SMC/Surrogate Results Summary (Form 2)
NR	Matrix Spike/Matrix Spike Duplicate Results Summary (Form 3)
X	Laboratory Control Sample (LCS)/ Blank Spike Results Summary (Form 3)
NR	Control Charts
X	Method/Preparation Blank Results Summary (Form 4)
X	Volatile Initial Calibration Summary (Forms 6)
X	Volatile Continuing Calibration Summary (Form 7)
X	Volatile Analytical Sequence (Form 8)
x	Internal Standard Area Summary (Form X11)
X	Raw Data (incl. IS, Surr/SMC, RT, quant. Reports, etc.)
X	Samples
X	Initial Calibration
NR	Clean-ups
X	Continuing Calibration
NR	Instrument Blanks
X	Preparation Blanks/Method Blanks
O	Other Blanks
X	LCS/Blank Spike
X	Matrix Spikes/Matrix Spike Duplicates
NR	Matrix Duplicates/Replicates
O	Field Blanks – Trip Blank
X	Field Duplicates
X	Extraction Log Benchsheets
X	Instrument Run Logs
X	Sample Descriptions
X	Legible Pages
x	Pages in Package Numbered and in Sequence
X	Electronic Data Deliverable (EDD)

X: Included in original Data Package

NR: Not Required

O: Not Included and/or Not Available

RS: Provided as a Resubmission

X/RS: Incomplete in original data package, completed as a resubmission

### 3.0 Detection Limits

Detection limits are acceptable.

### 4.0 Holding Time

Holding times were acceptable.

#### 4.1 Sample Preservation

The appropriate samples were preserved and cooled to 4°C.

#### 4.2 Percent Moisture

Percent moisture results were acceptable.

#### 4.3 Chain of Custody Record

Chain of Custody Records were present.

### 5.0 Calibration Quality Control

#### 5.1 Initial Calibration (ICAL)

The ICAL was acceptable.

#### 5.2 Continuing Calibration (CCAL)

VOA: For CCV, the following compounds exceeded the +/-25% criterion;

Compound	%D-11/15/05 V5	%D-01/16/05 V5	%D-01/17/05 V5
Bromomethane	27.3	-	-
1,1-Dichloroethene	27.0	-	-
Chloroethane	41.6	-	-
Acetone	51.8	42.0	26.6
2-Butanone	45.4	27.4	-
Trichlorofluoromethane	26.0	-	28.8
Dichlorodifluoromethane	-	-	26.1

Detected affected compounds were qualified "J" to indicate the results are estimated and non-detected results were qualified "UJ" to indicate the results are estimated due to this anomaly.

SVOA: For CCV, the following compounds exceeded the +/-25% criterion;

Compound	%D-12/16/05 S1	%D-12/20/05 S1
4-Chloroaniline	-	529.9
Caprolactam	-	31.1
Benzaldehyde	29.8	55.4
Atrazine	2	64.5
3,3-Dichlorobenzidine	32.8	77.2



Compound	%D-12/16/05 S1	%D-12/20/05 S1
Indeno (1,2-3-cd)pyrene	30.4	-
Dibenzo(a,h) anthracene	38.2	34.9
Benzo (g,h,i ) perylene	33.7	-

All samples were affected. All affected compounds were non-detects and were qualified "UJ" to indicate the results are estimated due to this anomaly.

### 5.3 CRDL Standard

Recoveries for copper (74.7%) and zinc (75.2%) were outside the required 80-120% QC limit. All sample results for these compounds were qualified "J" to indicate the results are estimated due to this anomaly.

## 6.0 Blanks Quality Control

VOA: Method blanks reported acetone and methylene chloride contamination. Associated detected compound were qualified as non-detects.

## 7.0 Surrogate Recoveries

PEST/PCB: Decachlorobiphenyl recovery was 27% due to dilution in sample STQS001XXX05XX. This was outside the required QC limits of 30-150%. All non-detected compounds in this sample were qualified "UJ" and all detected compounds were qualified "J" to indicate the results are estimated due to this anomaly.

## 8.0 Accuracy

### 8.1 Laboratory Control Samples (LCS)/Blank Spikes

Recoveries were acceptable.

### 8.2 Matrix Spike/Matrix Spike Duplicates (MS/MSD)

#### 8.2.1 Frequency

Frequency was met.

#### 8.2.2 Recovery

Metals- Matrix spike recovery for antimony-25.6%, lead-151.5%, selenium-0% and silver-0% were outside the 75-125% QC requirement. This resulted in all associated antimony results being qualified as estimated. All selenium and silver results being qualified "R" to indicate the results have been rejected and are not usable. All affected lead results were qualified "J" to indicate the results are estimated due to this anomaly.

## 9.0 Precision

RPDs were acceptable.

## 9.1 Matrix Spike Duplicates

## 9.2 Matrix Duplicate

RPDs were acceptable.

## 9.3 ICP Serial Dilution

ICP serial dilution results were not acceptable for cobalt, iron, lead, nickel and zinc. All cobalt, iron and nickel results were qualified “J” to indicate the results are estimated due to this anomaly. All zinc results were previously qualified due to CRDL or field blank issues and required no further qualification. All affected lead results were previously qualified due to matrix spike effect and required no further qualification.

ICP serial dilution for copper and iron in sample STQS001XXX05XX were not acceptable. Copper and iron results in this sample were qualified as estimated due to this anomaly.

## 10.0 Field QC

### 10.1 Field Blanks/Rinse

SVOA: Rinse blank reported bis (2-ethylhexyl) phthalate contamination. Associated samples reported no low level contamination thus, no action was necessary.

Metals: Field blank reported gross contamination for copper, iron, lead, sodium and zinc. Samples STBS00301601XX and STBS00201801XX were the associated affected samples. Copper, lead, sodium and zinc were rejected in these two samples due to this contamination. Iron results required no qualification.

### 10.2 Trip Blanks

Trip blanks reported no contamination.

### 10.3 Field Duplicate

Sample STBS00508001XXD was presented as a field duplicate. The original sample is identified as STBS00508001XX. RPDs are calculated when both original and duplicate report detects. RPDs were acceptable except for the metals shown below.

Original	Duplicate	RPD	
8430	6640	842978%	AL
45300	95000	4529966%	Ca
502	412	50177%	Mn

Aluminum, calcium and manganese results in both original and duplicate samples were qualified as estimated due to this anomaly.

## 11.0 Internal Standards (IS)

### **11.1 IS Area Counts**

IS area counts were within quality control limit.

### **11.2 Retention Time (RT)**

All RTs were within the method accepted criteria.

## **12.0 Target Compound Identification**

All were acceptable.

### **12.1 Tentatively Identified Compounds (TICs)**

VOA: Some TICs were rejected because they are volatile target compounds and therefore cannot be reported as VOA TICs. Some were rejected because they were suspect artifact or common laboratory contaminant.

SVOA: Some TICs were rejected because they are volatile target compounds and therefore cannot be reported as SVOA TICs.

## **13.0 Calculations and Transcription**

Raw data were accurately transcribed to summary data sheets.

## **14.0 Additional Comments**

## 15.0 Data Qualifier Table

### Volatile

Sample Identification	Compound	Qualifier	Section Reference
STBS00101601XX	Acetone, 2-butanone	UJ	5.2
STBS00406001XX, STBS00508001XX	Acetone	J	5.2
STBS00406001XX, STBS00508001XX	2-Butanone	UJ	5.2
STBS00701001XX	Bromomethane, chloroethane, trichlorofluoromethane, 1,1- dichlorethene, 2-butanone	UJ	5.2
STBS00701001XX	Acetone	UJ	5.2
STBS00701001XX	Methylene chloride	11U	6.0
STQS001XXX05XX, STQT001XXX05XX, STQT002XXX05XX, STQT003XXX05XX	Dichlorodifluoromethane, trichlorofluoromethane, acetone	UJ	5.2

### SVOA

Sample Identification	Compound	Qualifier	Section Reference
STBS00406001XX, STBS00508001XX, STBS00508001XXD	Benzaldehyde , 3,3'-dichlorobenzidine, indeno (1,2,3-cd)pyrene, dibenzo(a,h) anthracene, benzo (g,h,i) perylene	UJ	5.2
STBS00501701XX	Benzaldehyde, caprolactam, atrazine, 3,3'-dichlorobenzidine, dibenzo (a,h) anthracene	UJ	5.2
STBS00701001XX	Benzaldehyde , 3,3'-dichlorobenzidine, dibenzo(a,h) anthracene, benzo (g,h,i) perylene	UJ	5.2

## Pest/PCB

Sample Identification	Compound	Qualifier	Section Reference
STQS001XXX05XX	alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Aldrin Heptachlor epoxide Endosulfan I Dieldrin 4,4-DDE 4,4'-DDD Endrin Endosulfan II Endosulfan sulfate 4,4-DDT Methoxychlor Endrin ketone Endrin aldehyde alpha-Chlordane gamma-Chlordane Toxaphene Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	UJ	7.0

## Metals

Sample Identification	Compound	Qualifier	Section Reference
STBS00101601XX, STBS00201801XX, STBS00301601XX, STBS00406001XX, STBS00508001XX, STBS00508001XXD, STBS00701001XX	Antimony	UJ	8.2.2
STBS00101601XX, STBS00201801XX, STBS00301601XX, STBS00406001XX, STBS00508001XX, STBS00508001XXD, STBS00701001XX	Cobalt, copper, iron, lead, nickel, zinc	J	5.3/8.2.2/9.3
STBS00101601XX, STBS00201801XX, STBS00301601XX,	Selenium, silver	R	8.2.2

<b>Sample Identification</b>	<b>Compound</b>	<b>Qualifier</b>	<b>Section Reference</b>
STBS00406001XX, STBS00508001XX, STBS00508001XXD, STBS00701001XX			
STQS001XXX05XX	Copper, iron	J	9.3
STBS00508001XX, STBS00508001XXD	Aluminum, calcium, manganese	J	10.3
STBS00301601XX, STBS00201801XX	Copper, lead, sodium, zinc	R	10.1

# ***DATA VALIDATION REPORT***

***Volatile, Semi-volatile, Pesticide/PCB, and Metals Analyses***

***SDG No. D1488***

***Sampling Date: December 8-9, 2005***

***Submitted to:***

***MACTEC, Inc.,  
511 Congress Street  
Portland, ME 04112  
207-775-5401***

***Submitted by:***

***EDV, Inc.,  
1326 Oranewood Avenue  
Pittsburgh, PA 15216  
412-341-5281***

***February 20, 2006***

Site: Diamond Cleaners/NYSDEC

Client: MACTEC, Inc.

Analytical Laboratory: Mitkem Corporation  
17 Metro Center Boulevard  
Warwick RI 02886

Sample Delivery Group (SDG): D1488

Sampling Date: December 8-9, 2005

Analyses: Volatile, semi-volatile, pesticide/PCB and metals

Analytical Method: NYSDEC ASP

Summary of Data Validation:

The adherence of laboratory analytical performance to CLP and SW-846 Analytical Specifications were evaluated during the data validation process. The USEPA Region II's data validation SOP Checklists (SOP HW-2 Rev 1, January 1992, SOP, HW-15 Rev 2, May 1993), the National Functional Guidelines for Organic Data Review (October 1999), the National Functional Guidelines for Inorganic Data Review (October 2004) were used as guidelines for data qualifications.

**Volatile:** Some sample results were qualified as estimated due to calibration issues.

**Semi-volatile analyses:** Some sample results were qualified as estimated due to calibration and method blank issues.

**Pesticide/PCB:** The results are acceptable.

**Metals:** Selenium results in all samples were qualified as estimated due to laboratory control sample issues.

The sample qualifiers applied by the data validator are in section 15.0 and Attachment A- Form 1s. The detailed discussions can be found in the report.



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- B Case Narrative and Chain of Custody

## 1.0 Sample Identifications

The following table summarizes sample IDENTIFICATIONS, matrix of each sample and analyses present in the data package for each sample.

Client Sample ID	Matrix	Volatile	Semi-volatile	Pesticide/PCB	Metals
<i>SDG D1488</i>					
STMW007XXX01XX	WATER	X	X	X	X
STMW007XXX01XXD	WATER	X	X	X	X
STMW006XXX01XX	WATER	X	X	X	X
STQT004XXX01XXTB	WATER	X	-	-	-
STMW005XXX01XX	WATER	X	X	X	X
STMW004XXX01XX	WATER	X	X	X	X
STMW001XXX01XX	WATER	X	X	X	X
STQT002XXX01XXTB	WATER	X	-	-	-
STMW002XXX01XX	WATER	X	X	X	X
STMW003XXX01XX	WATER	X	X	X	X
STQT003XXX01XXTB	WATER	X	-	-	-
<b>QC sample ID</b>	<b>Matrix</b>				
STMW007MS	WATER	X	X	X	X
STMW007MSD	WATER	X	X	X	X

## 2.0 Completeness Checklist

The following table identifies the summary form information and raw data found in the data package. Form numbers shown in parentheses refer to the current U.S. EPA CLP SOW equivalent reporting of results in an alternate summary format that has been determined to be acceptable. Analyses in this data package were performed in accordance with CLP and NYSDEC Methods.

Completeness Checklist	
X	Case Narrative
X	Chain of Custody Records/Traffic Reports/Tracking Records
X	Preservation Information
X	Sample Cross Reference with Unique Identifiers
X	Sample Results Summary Form (Form 1/Form 1-TIC)
X	CLP Flagging used on Results Summary
X	SMC/Surrogate Results Summary (Form 2)
NR	Matrix Spike/Matrix Spike Duplicate Results Summary (Form 3)
X	Laboratory Control Sample (LCS)/ Blank Spike Results Summary (Form 3)
NR	Control Charts
X	Method/Preparation Blank Results Summary (Form 4)
X	Volatile Initial Calibration Summary (Forms 6)
X	Volatile Continuing Calibration Summary (Form 7)
X	Volatile Analytical Sequence (Form 8)
x	Internal Standard Area Summary (Form X11)
X	Raw Data (incl. IS, Surr/SMC, RT, quant. Reports, etc.)
X	Samples
X	Initial Calibration
NR	Clean-ups
X	Continuing Calibration
NR	Instrument Blanks
X	Preparation Blanks/Method Blanks
O	Other Blanks
X	LCS/Blank Spike
X	Matrix Spikes/Matrix Spike Duplicates
NR	Matrix Duplicates/Replicates
O	Field Blanks – Trip Blank
X	Field Duplicates
X	Extraction Log Benchsheets
X	Instrument Run Logs
X	Sample Descriptions
X	Legible Pages
x	Pages in Package Numbered and in Sequence
X	Electronic Data Deliverable (EDD)

X: Included in original Data Package

NR: Not Required

O: Not Included and/or Not Available

RS: Provided as a Resubmission

X/RS: Incomplete in original data package, completed as a resubmission

### 3.0 Detection Limits

Detection limits are acceptable.

### 4.0 Holding Time

Holding times were acceptable.

#### 4.1 Sample Preservation

Preservation met quality control requirements

#### 4.2 Percent Moisture

Percent moisture was not applicable since samples were of an aqueous matrix.

#### 4.3 Chain of Custody Record

Chain of Custody Records were present.

### 5.0 Calibration Quality Control

#### 5.1 Initial Calibration

The ICAL was acceptable.

#### 5.2 Continuing Calibration (CCAL)

VOA: For CCV, the following compounds exceeded the +/- 25% criterion;

Compound	%RSD-12/09/05 V2	%RSD-12/14/05 V2
Dichlorodifluoromethane	35.9	-
Chloromethane	27.2	-
Vinyl chloride	28.1	-
Methylene chloride	-	42.9

All affected compounds were non-detects and were qualified "UJ" to indicate the results are estimated due to this anomaly.

SVOA: For CCV, the following compounds exceeded the +/- 25% criterion;

Compound	%D-12/20/05 S1
4-Chloroaniline	529.9
Caprolactam	31.1
Benzaldehyde	55.4
Atrazine	64.5
3,3-Dichlorobenzidine	77.2
Dibenzo(a,h) anthracene	34.9

All affected compounds were non-detects and were qualified "UJ" to indicate the results are estimated due to this anomaly.

### **5.3 CRDL Standard**

Recoveries were acceptable.

### **6.0 Blanks Quality Control**

SVOA: Method blanks reported bis (2-ethyl hexyl) phthalate contamination. Associated detected compounds were qualified as non-detects at CRDL due to this anomaly.

### **7.0 Surrogate Recoveries**

Recoveries were acceptable.

### **8.0 Accuracy**

#### **8.1 Laboratory Control Samples (LCS)/Blank Spikes**

SVOA: Recovery for 4-nitrophenol-88% and 2, 4-dinitrotoluene-108% was above the 10-80% QC requirement. There were no associated detected 4-nitrophenol or 2, 4-dinitrotoluene compounds therefore, no qualification was necessary.

Metals: Recovery for selenium-61% was below the required QC limits of 80-120%. Selenium results in all samples were qualified as estimated due to this anomaly.

#### **8.2 Matrix Spike/Matrix Spike Duplicates (MS/MSD)**

##### **8.2.1 Frequency**

Frequency was met.

##### **8.2.2 Recovery**

Recoveries were acceptable.

### **9.0 Precision**

#### **9.1 Matrix Spike Duplicates**

The results were acceptable.

#### **9.2 Matrix Duplicate**

RPDs were acceptable.

#### **9.3 ICP Serial Dilution**

ICP serial dilution results were acceptable.

### **10.0 Field QC**

## **10.1 Field Blanks/Rinse Blanks**

Field blank reported methylene chloride contamination however, there were no detected methylene chloride results in associated samples thus, no qualification was necessary.

## **10.2 Trip Blanks**

The trip blank reported no contamination

## **10.3 Field Duplicate**

Sample STMW007XXX01XXD was presented as a field duplicate. The original sample is identified as STMW007XXX01XX. RPDs are calculated when both original and duplicate report detects. RPDs are acceptable

## **11.0 Internal Standards (IS)**

### **11.1 IS Area Counts**

IS area counts were acceptable.

### **11.2 Retention Time (RT)**

All RTs were within the method accepted criteria.

## **12.0 Target Compound Identification**

All identifications are acceptable.

### **12.1 Tentatively Identified Compounds (TICs)**

TIC results are acceptable.

## **13.0 Calculations and Transcription**

Raw data were accurately transcribed to summary data sheets.

## **14.0 Additional Comments**

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## 15.0 Data Qualifier Table

### Volatile

Sample Identification	Compound	Qualifier	Section Reference
STMW001, STMW004, STMW005, STMW006, STMW007, STMW007D, STQT002, STQT004	Dichlorodifluoromethane, chloromethane, vinyl chloride	UJ	5.2
STMW002, STMW003	Methylene chloride	UJ	5.2

### SVOA

Sample Identification	Compound	Qualifier	Section Reference
STMW001, STMW002, STMW003, STMW004, STMW005, STMW006, STMW007, STMW007D	Benzaldehyde , 4-chloroaniline, caprolactam, atrazine, 3,3'dichlorobenzidene, dibenzo(a,h) anthracene	UJ	5.2
STMW001, STMW002, STMW003, STMW004, STMW005, STMW006, STMW007, STMW007D	Bis-2-ethyl hexyl phthalate	10U	5.2

### Metals

Sample Identification	Compound	Qualifier	Section Reference
STMW001, STMW002, STMW003, STMW004, STMW005, STMW006, STMW007, STMW007D	Selenium	UJ	8.1



**Appendix D**  
**Table 1.1: Groundwater VOC Results**

Loc Name Field Sample Id Field Sample Date Lab Sample Id Qc Code	MW-001	MW-002	MW-003	MW-004
	STMW00102502XX	STMW00202502XX	STMW00302002XX	STMW00402002XX
	3/28/2006	3/28/2006	3/28/2006	3/29/2006
	E0379-04A	E0379-05A	E0379-06A	E0379-07A
	FS	FS	FS	FS
	final_result	final_result	final_result	final_result
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10 UJ	10 UJ	10 UJ	10 UJ
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 UJ	10 UJ	10 UJ	10 UJ
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane	10 U	10 U	10 U	10 U
1,2-Dibromoethane	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U
2-Hexanone	10 UJ	10 UJ	10 UJ	10 UJ
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
Acetic acid, methyl ester	10 U	10 U	10 U	10 U
Acetone	10 UJ	10 UJ	10 UJ	10 UJ
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 UJ	10 UJ	10 UJ	10 UJ
Carbon disulfide	10 UJ	10 UJ	10 UJ	10 UJ
Carbon tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 UJ	10 UJ	10 UJ	10 UJ
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Cyclohexane	10 U	10 U	10 U	10 U
Dichlorodifluoromethane	10 U	10 U	10 U	10 U
Ethyl benzene	10 U	10 U	10 U	10 U

**Appendix D**  
**Table 1.1: Groundwater VOC Results**

Loc Name Field Sample Id Field Sample Date Lab Sample Id Qc Code	MW-001	MW-002	MW-003	MW-004
	STMW00102502XX	STMW00202502XX	STMW00302002XX	STMW00402002XX
	3/28/2006	3/28/2006	3/28/2006	3/29/2006
	E0379-04A	E0379-05A	E0379-06A	E0379-07A
	FS	FS	FS	FS
	final_result	final_result	final_result	final_result
Isopropylbenzene	10 U	10 U	10 U	10 U
Methyl cyclohexane	10 U	10 U	10 U	10 U
Methyl Tertbutyl Ether	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Trichloroethene	3 J	4 J	2 J	4 J
Trichlorofluoromethane	10 UJ	10 UJ	10 UJ	10 UJ
Vinyl chloride	10 U	10 U	10 U	10 U
Xylenes, Total	10 U	10 U	10 U	10 U

Notes:  
Results in micrograms per liter (µg/L)  
Samples analyzed for VOCs by Method EPA OLM04.2  
QC Code:  
FS = Field Sample  
FD = Field Duplicate  
Qualifiers:  
U = Not detected at a concentration above the reporting limit  
J = Result is estimated

Table Created By: AZ 6/27/06  
Table Checked By: CRS 7/31/06

**Appendix D**  
**Table 1.1: Groundwater VOC Results**

Loc Name Field Sample Id Field Sample Date Lab Sample Id Qc Code	MW-005	MW-006	MW-006	MW-007
	STMW00501502XX	STMW00602002XD	STMW00602002XX	STMW00701802XX
	3/29/2006	3/28/2006	3/28/2006	3/29/2006
	E0379-09A	E0379-02A	E0379-01A	E0379-08A
	FS	FD	FS	FS
	final_result	final_result	final_result	final_result
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10 UJ	10 UJ	10 UJ	10 UJ
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 UJ	10 UJ	10 UJ	10 UJ
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane	10 U	10 U	10 U	10 U
1,2-Dibromoethane	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U
2-Hexanone	10 UJ	10 UJ	10 UJ	10 UJ
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
Acetic acid, methyl ester	10 U	10 U	10 U	10 U
Acetone	10 UJ	10 UJ	10 UJ	10 UJ
Benzene	10 U	10 UJ	10 UJ	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 UJ	10 UJ	10 UJ	10 UJ
Carbon disulfide	10 UJ	10 UJ	10 UJ	10 UJ
Carbon tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 UJ	10 UJ	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 UJ	10 UJ	10 UJ	10 UJ
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Cyclohexane	18	10 U	10 U	10 U
Dichlorodifluoromethane	10 U	10 U	10 U	10 U
Ethyl benzene	10 U	10 U	10 U	10 U

**Appendix D**  
**Table 1.1: Groundwater VOC Results**

Loc Name Field Sample Id Field Sample Date Lab Sample Id Qc Code	MW-005	MW-006	MW-006	MW-007
	STMW00501502XX	STMW00602002XD	STMW00602002XX	STMW00701802XX
	3/29/2006	3/28/2006	3/28/2006	3/29/2006
	E0379-09A	E0379-02A	E0379-01A	E0379-08A
	FS	FD	FS	FS
	final_result	final_result	final_result	final_result
Isopropylbenzene	10 U	10 U	10 U	10 U
Methyl cyclohexane	35	10 U	10 U	10 U
Methyl Tertbutyl Ether	10 U	10 U	10 U	10 U
Methylene chloride	10 U	1 J	1 J	10 U
Styrene	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 UJ	10 UJ	10 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Trichloroethene	5 J	6 J	6 J	1 J
Trichlorofluoromethane	10 UJ	10 UJ	10 UJ	10 UJ
Vinyl chloride	10 U	10 U	10 U	10 U
Xylenes, Total	10 U	10 U	10 U	10 U
<p>Notes:</p> <p>Results in micrograms per liter (µg/L)</p> <p>Samples analyzed for VOCs by Method EPA OLM04.2</p> <p>QC Code:</p> <p>FS = Field Sample</p> <p>FD = Field Duplicate</p> <p>Qualifiers:</p> <p>U = Not detected at a concentration above the reporting limit</p> <p>J = Result is estimated</p>				

Table Created By: AZ 6/27/06  
Table Checked By: CRS 7/31/06

**Appendix D**  
**Table 1.2: GW SVOC Results**

Loc Name	MW-001	MW-002	MW-003	MW-004	MW-005	MW-006	MW-006	MW-007
Field Sample Id	STMW00102502XX	STMW00202502XX	STMW00302002XX	STMW00402002XX	STMW00501502XX	STMW00602002XD	STMW00602002XX	STMW00701802XX
Field Sample Date	3/28/2006	3/28/2006	3/28/2006	3/29/2006	3/29/2006	3/28/2006	3/28/2006	3/29/2006
Lab Sample Id	E0379-04C	E0379-05C	E0379-06C	E0379-07C	E0379-09C	E0379-02C	E0379-01C	E0379-08C
Qc Code	FS	FS	FS	FS	FS	FD	FS	FS
	final_result	final_result	final_result	final_result	final_result	final_result	final_result	final_result
2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
2,4-Dinitrophenol	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
4-Chlorophenyl phenyl ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetophenone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Atrazine	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(ghi)perylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Biphenyl	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroisopropyl)ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Ethylhexyl)phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 J
Butylbenzylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Loc Name	MW-001	MW-002	MW-003	MW-004	MW-005	MW-006	MW-006	MW-007
Field Sample Id	STMW00102502XX	STMW00202502XX	STMW00302002XX	STMW00402002XX	STMW00501502XX	STMW00602002XD	STMW00602002XX	STMW00701802XX
Field Sample Date	3/28/2006	3/28/2006	3/28/2006	3/29/2006	3/29/2006	3/28/2006	3/28/2006	3/29/2006
Lab Sample Id	E0379-04C	E0379-05C	E0379-06C	E0379-07C	E0379-09C	E0379-02C	E0379-01C	E0379-08C
Qc Code	FS	FS	FS	FS	FS	FD	FS	FS
	final_result	final_result	final_result	final_result	final_result	final_result	final_result	final_result
Caprolactum	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Phenanthrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table Created By: AZ 6/27/06  
Table Checked By: CRS 7/31/06

Notes:

Results in micrograms per liter (µg/L)

Samples analyzed for SVOCs by Method EPA OLM04.2

QC Code:

FS = Field Sample

FD = Field Duplicate

Qualifiers:

U = Not detected at a concentration above the reporting limit

J = Result is estimated

**Appendix D**  
**Table 1.3: GW Pest/PCB Results**

Loc Name	MW-001		MW-002		MW-003		MW-004		MW-005		MW-006		MW-006		MW-007	
Field Sample Id	STMW00102502XX		STMW00202502XX		STMW00302002XX		STMW00402002XX		STMW00501502XX		STMW00602002XD		STMW00602002XX		STMW00701802XX	
Field Sample Date	3/28/2006		3/28/2006		3/28/2006		3/29/2006		3/29/2006		3/28/2006		3/28/2006		3/29/2006	
Lab Sample Id	E0379-04C		E0379-05C		E0379-06C		E0379-07C		E0379-09C		E0379-02C		E0379-01C		E0379-08C	
Qc Code	FS		FS		FS		FS		FS		FD		FS		FS	
	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
4,4'-DDD	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
4,4'-DDE	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
4,4'-DDT	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Aldrin	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Alpha-BHC	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Alpha-Chlordane	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Aroclor-1016	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Aroclor-1221	2 U		2 U		2 U		2 U		2 U		2 U		2 U		2 U	
Aroclor-1232	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Aroclor-1242	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Aroclor-1248	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Aroclor-1254	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Aroclor-1260	1 U		1 U		1 U		1 U		1 U		1 U		1 U		1 U	
Beta-BHC	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Delta-BHC	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Dieldrin	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Endosulfan I	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Endosulfan II	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Endosulfan sulfate	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Endrin	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Endrin aldehyde	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Endrin ketone	0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U	
Gamma-BHC/Lindane	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Gamma-Chlordane	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Heptachlor	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Heptachlor epoxide	0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U	
Methoxychlor	0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U		0.5 U	
Toxaphene	5 U		5 U		5 U		5 U		5 U		5 U		5 U		5 U	

Notes:

Results in micrograms per liter (µg/L)

Samples analyzed for Pesticides/PCBs by Method EPA OLM04.2

QC Code:

FS = Field Sample

FD = Field Duplicate

Qualifiers:

U = Not detected at a concentration above the reporting limit

Table Created By: AZ 6/27/06

Table Checked By: CRS 7/31/06

**Appendix D**  
**Table 1.3: GW Pest/PCB Results**

August 2006  
Draft

Loc Name	MW-001		MW-002		MW-003		MW-004		MW-005		MW-006		MW-006		MW-007	
Field Sample Id	STMW00102502XX		STMW00202502XX		STMW00302002XX		STMW00402002XX		STMW00501502XX		STMW00602002XD		STMW00602002XX		STMW00701802XX	
Field Sample Date	3/28/2006		3/28/2006		3/28/2006		3/29/2006		3/29/2006		3/28/2006		3/28/2006		3/29/2006	
Lab Sample Id	E0379-04C		E0379-05C		E0379-06C		E0379-07C		E0379-09C		E0379-02C		E0379-01C		E0379-08C	
Qc Code	FS		FS		FS		FS		FS		FD		FS		FS	
	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier



**Appendix D**  
**Table1.4: GW Metals Results**

August 2006  
Draft

Loc Name Field Sample Id Field Sample Date Lab Sample Id Qc Code	MW-001		MW-002		MW-003		MW-004		MW-005		MW-006		MW-006		MW-007	
	STMW00102502XX		STMW00202502XX		STMW00302002XX		STMW00402002XX		STMW00501502XX		STMW00602002XD		STMW00602002XX		STMW00701802XX	
	3/28/2006		3/28/2006		3/28/2006		3/29/2006		3/29/2006		3/28/2006		3/28/2006		3/29/2006	
	E0379-04		E0379-05		E0379-06		E0379-07		E0379-09		E0379-02		E0379-01		E0379-08	
	FS		FS		FS		FS		FS		FD		FS		FS	
	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Mercury	0.3	U	0.3	U	0.3	U	0.28	U	0.3	U	0.3	U	0.29	U	0.3	U
Aluminum	222		200	U	200	U	200	U	200	U	200	U	200	U	200	U
Antimony	60	U	60	U	60	U	60	U	60	U	60	U	60	U	60	U
Arsenic	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Barium	158	BE	168	BE	171	BE	148	BE	252	E	203	E	208	E	152	BE
Beryllium	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Cadmium	0.23	B	0.38	B	0.54	B	0.34	B	5	U	5	U	0.31	B	1.1	B
Calcium	90,400		95,700		101,000		97,400		106,000		110,000		109,000		97,000	
Chromium	0.95	B	10	U	10	U	10	U	10	U	10	U	0.52	B	10	U
Cobalt	2	U	50	U	50	U	50	U	50	U	50	U	0.51	U	50	U
Copper	5.4	U	2.4	U	2.2	U	1.9	U	2.8	U	3.9	U	9.9	U	1.7	U
Iron	393	J	23.9	UJ	100	UJ	100	UJ	1010	J	19.2	UJ	67.3	JB	17.1	UJ
Lead	1.1	U	3	U	3	U	3	U	3	U	3	U	1.2	U	3	U
Magnesium	19,300	EJ	20,700	EJ	21,300	EJ	20,400	EJ	21,700	EJ	22,800	EJ	22,600	JE	20,800	EJ
Manganese	90.2		2.6	U	1.4	U	0.86	U	321		3.7	U	4.1	B	4.6	B
Nickel	1.4	U	40	U	40	U	40	U	0.79	U	0.71	U	1.5	U	40	U
Potassium	4,380	B	1,820	B	1,840	B	1,600	B	2,020	B	1,900	B	1,880	B	1,670	B
Selenium	5	UN	5	UN	5	UN	5	UN	3.1	BN	5	UN	5	UN	5	UN
Silver	0.94	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Sodium	149,000		143,000		145,000		163,000		133,000		282,000		286,000		157,000	
Thallium	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Vanadium	0.98	B	50	U	50	U	0.47	B	50	U	50	U	0.51	B	50	U
Zinc	13.3	U	11.3	U	9.2	U	9.9	U	8.1	U	8.4	U	13.3	U	9	U

Notes:

Results in micrograms per liter (µg/L)

Samples analyzed for Metals by Method EPA ILM04.1

QC Code:

FS = Field Sample

FD = Field Duplicate

Qualifiers:

U = Not detected at a concentration above the reporting limit

J = Result is estimated

B = The reported result fell above the IDL but below the CRDL

E = The percent difference between the serial dilution and the parent sample was greater than 10%

N = The matrix spike recovery is outside of specified control limits

Table Created By: AZ 6/27/06

Table Checked By: CRS 7/31/06

Lab Sample Delivery Group				D1367		D1367		D1367		D1367		D1367	
Loc Name				BS-001		BS-002		BS-003		BS-004		BS-005	
Field Sample Id				STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX	
Field Sample Date				11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005	
Qc Code				FS		FS		FS		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_VOA	1,1,1-Trichloroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,1,2,2-Tetrachloroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,1,2-Trichloroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,1-Dichloroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,1-Dichloroethene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,2,4-Trichlorobenzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,2-Dibromo-3-chloropropane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,2-Dibromoethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,2-Dichlorobenzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,2-Dichloroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,2-Dichloropropane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,3-Dichlorobenzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	1,4-Dichlorobenzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	2-Butanone	ug/kg	10	UJ	11	U	11	U	11	UJ	610	U
SOIL	OLM4.2_VOA	2-Hexanone	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	4-Methyl-2-pentanone	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Acetic acid, methyl ester	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Acetone	ug/kg	10	UJ	18		11	U	36	J	610	U
SOIL	OLM4.2_VOA	Benzene	ug/kg	3	J	3	J	11	U	3	J	610	U
SOIL	OLM4.2_VOA	Bromodichloromethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Bromoforn	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Bromomethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Carbon disulfide	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Carbon tetrachloride	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Chlorobenzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Chlorodibromomethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Chloroethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Chloroform	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Chloromethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Cis-1,2-Dichloroethene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	cis-1,3-Dichloropropene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Cyclohexane	ug/kg	10	U	10	J	6	J	10	J	1800	D
SOIL	OLM4.2_VOA	Dichlorodifluoromethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Ethyl benzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Isopropylbenzene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Methyl cyclohexane	ug/kg	15		14		8	J	16		3800	D
SOIL	OLM4.2_VOA	Methyl Tertbutyl Ether	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Methylene chloride	ug/kg	12	U	11		9		13	U	610	U
SOIL	OLM4.2_VOA	Styrene	ug/kg	10	U	11	U	11	U	11	U	610	U

Lab Sample Delivery Group				D1367		D1367		D1367		D1367		D1367	
Loc Name				BS-001		BS-002		BS-003		BS-004		BS-005	
Field Sample Id				STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX	
Field Sample Date				11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005	
Qc Code				FS		FS		FS		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_VOA	Tetrachloroethene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Toluene	ug/kg	9	J	4	J	3	J	8	J	610	U
SOIL	OLM4.2_VOA	trans-1,2-Dichloroethene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	trans-1,3-Dichloropropene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Trichloroethene	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Trichlorofluoromethane	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Vinyl chloride	ug/kg	10	U	11	U	11	U	11	U	610	U
SOIL	OLM4.2_VOA	Xylenes, Total	ug/kg	4	J	1	J	11	U	4	J	610	U
SOIL	OLM4.2_SVOA	2,4,5-Trichlorophenol	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	2,4,6-Trichlorophenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2,4-Dichlorophenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2,4-Dimethylphenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2,4-Dinitrophenol	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	2,4-Dinitrotoluene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2,6-Dinitrotoluene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2-Chloronaphthalene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2-Chlorophenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2-Methylnaphthalene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2-Methylphenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	2-Nitroaniline	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	2-Nitrophenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	3,3'-Dichlorobenzidine	ug/kg	340	U	360	U	350	U	350	UJ	370	UJ
SOIL	OLM4.2_SVOA	3-Nitroaniline	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	4,6-Dinitro-2-methylphenol	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	4-Bromophenyl phenyl ether	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	4-Chloro-3-methylphenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	4-Chloroaniline	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	4-Chlorophenyl phenyl ether	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	4-Methylphenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	4-Nitroaniline	ug/kg	860	U	910	U	880	U	890	U		
SOIL	OLM4.2_SVOA	4-Nitrophenol	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	Acenaphthene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Acenaphthylene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Acetophenone	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Anthracene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Atrazine	ug/kg	340	U	360	U	350	U	350	U	370	UJ
SOIL	OLM4.2_SVOA	Benzaldehyde	ug/kg	340	U	360	U	350	U	350	UJ	370	UJ
SOIL	OLM4.2_SVOA	Benzo[a]anthracene	ug/kg	340	U	96	J	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Benzo[a]pyrene	ug/kg	340	U	100	J	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Benzo[b]fluoranthene	ug/kg	340	U	140	J	350	U	350	U	370	U

Lab Sample Delivery Group				D1367		D1367		D1367		D1367		D1367	
Loc Name				BS-001		BS-002		BS-003		BS-004		BS-005	
Field Sample Id				STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX	
Field Sample Date				11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005	
Qc Code				FS		FS		FS		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_SVOA	Benzo[ghi]perylene	ug/kg	340	U	360	U	350	U	350	UJ	370	U
SOIL	OLM4.2_SVOA	Benzo[k]fluoranthene	ug/kg	340	U	65	J	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Biphenyl	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Bis(2-Chloroethoxy)methane	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Bis(2-Chloroethyl)ether	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Bis(2-Chloroisopropyl)ether	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Bis(2-Ethylhexyl)phthalate	ug/kg	96	J	57	J	160	J	50	J	110	J
SOIL	OLM4.2_SVOA	Butylbenzylphthalate	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Caprolactum	ug/kg	340	U	360	U	350	U	350	U	370	UJ
SOIL	OLM4.2_SVOA	Carbazole	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Chrysene	ug/kg	340	U	100	J	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Di-n-butylphthalate	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Di-n-octylphthalate	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Dibenz[a,h]anthracene	ug/kg	340	U	360	U	350	U	350	UJ	370	UJ
SOIL	OLM4.2_SVOA	Dibenzofuran	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Diethylphthalate	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Dimethylphthalate	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Fluoranthene	ug/kg	340	U	200	J	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Fluorene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Hexachlorobenzene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Hexachlorobutadiene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Hexachlorocyclopentadiene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Hexachloroethane	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Indeno[1,2,3-cd]pyrene	ug/kg	340	U	360	U	350	U	350	UJ	370	U
SOIL	OLM4.2_SVOA	Isophorone	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	N-Nitrosodi-n-propylamine	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	N-Nitrosodiphenylamine	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Naphthalene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Nitrobenzene	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Pentachlorophenol	ug/kg	860	U	910	U	880	U	890	U	930	U
SOIL	OLM4.2_SVOA	Phenanthrene	ug/kg	340	U	92	J	350	U	350	U	46	J
SOIL	OLM4.2_SVOA	Phenol	ug/kg	340	U	360	U	350	U	350	U	370	U
SOIL	OLM4.2_SVOA	Pyrene	ug/kg	340	U	150	J	350	U	350	U	370	U
SOIL	OLM4.2_PP	4,4'-DDD	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	4,4'-DDE	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	4,4'-DDT	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Aldrin	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Alpha-BHC	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Alpha-Chlordane	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Aroclor-1016	ug/kg	34	U	36	U	35	U	35	U		

Lab Sample Delivery Group				D1367		D1367		D1367		D1367		D1367	
Loc Name				BS-001		BS-002		BS-003		BS-004		BS-005	
Field Sample Id				STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX	
Field Sample Date				11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005	
Qc Code				FS		FS		FS		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_PP	Aroclor-1221	ug/kg	69	U	73	U	72	U	72	U		
SOIL	OLM4.2_PP	Aroclor-1232	ug/kg	34	U	36	U	35	U	35	U		
SOIL	OLM4.2_PP	Aroclor-1242	ug/kg	34	U	36	U	35	U	35	U		
SOIL	OLM4.2_PP	Aroclor-1248	ug/kg	34	U	36	U	35	U	35	U		
SOIL	OLM4.2_PP	Aroclor-1254	ug/kg	34	U	36	U	35	U	35	U		
SOIL	OLM4.2_PP	Aroclor-1260	ug/kg	34	U	36	U	35	U	35	U		
SOIL	OLM4.2_PP	Beta-BHC	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Delta-BHC	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Dieldrin	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Endosulfan I	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Endosulfan II	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Endosulfan sulfate	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Endrin	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Endrin aldehyde	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Endrin ketone	ug/kg	3.4	U	3.6	U	3.5	U	3.5	U		
SOIL	OLM4.2_PP	Gamma-BHC/Lindane	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Gamma-Chlordane	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Heptachlor	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Heptachlor epoxide	ug/kg	1.7	U	1.9	U	1.8	U	1.8	U		
SOIL	OLM4.2_PP	Methoxychlor	ug/kg	17	U	19	U	18	U	18	U		
SOIL	OLM4.2_PP	Toxaphene	ug/kg	170	U	190	U	180	U	180	U		
SOIL	ILM4.1_HG	Mercury	mg/kg	0.086	U	0.096	U	0.1	U	0.094	U		
SOIL	ILM4.1_ICP	Aluminum	mg/kg	8,730		7,710		6,800		6,400			
SOIL	ILM4.1_ICP	Antimony	mg/kg	9.4	UJ	12	UJ	9.9	UJ	11	UJ		
SOIL	ILM4.1_ICP	Arsenic	mg/kg	2.8		5.4		2.7		3.1			
SOIL	ILM4.1_ICP	Barium	mg/kg	54.3		52.4		53.6		27.7	B		
SOIL	ILM4.1_ICP	Beryllium	mg/kg	0.21	B	0.25	B	0.19	B	0.19	B		
SOIL	ILM4.1_ICP	Cadmium	mg/kg	0.78	U	1	U	0.83	U	0.077	B		
SOIL	ILM4.1_ICP	Calcium	mg/kg	42,600		70,700		59,800					
SOIL	ILM4.1_ICP	Chromium	mg/kg	13.3	E	12	E	13.2	E	10.8	E		
SOIL	ILM4.1_ICP	Cobalt	mg/kg	8	J	8.4	J	6.3	J	6.2	J		
SOIL	ILM4.1_ICP	Copper	mg/kg	29.9	J		R		R	26.9	J		
SOIL	ILM4.1_ICP	Iron	mg/kg	19,900	J	19,200	J	16,500	J	15,000	J		
SOIL	ILM4.1_ICP	Lead	mg/kg	10.6	J		R		R	9.5	J		
SOIL	ILM4.1_ICP	Magnesium	mg/kg	12,100	*	18,500	*	9,200	*	11,200	*		
SOIL	ILM4.1_ICP	Manganese	mg/kg	452		508		532		445			
SOIL	ILM4.1_ICP	Nickel	mg/kg	20.5	J	21.9	J	17.6	J	21.4	E		
SOIL	ILM4.1_ICP	Potassium	mg/kg	657	B	727	B	623	B	578	B		
SOIL	ILM4.1_ICP	Selenium	mg/kg		R		R		R		R		
SOIL	ILM4.1_ICP	Silver	mg/kg		R		R		R		R		

**Appendix D**  
**Table 2.1: Soil Results**

August 2006  
 Draft

				D1367		D1367		D1367		D1367		D1367	
				BS-001		BS-002		BS-003		BS-004		BS-005	
				STBS00101601XX		STBS00201801XX		STBS00301601XX		STBS00406001XX		STBS00501701XX	
				11/15/2005		11/16/2005		11/16/2005		11/15/2005		11/15/2005	
				FS		FS		FS		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	ILM4.1_ICP	Sodium	mg/kg	105	B		R		R	126	B		
SOIL	ILM4.1_ICP	Thallium	mg/kg	2		2	B	1.9		0.99	B		
SOIL	ILM4.1_ICP	Vanadium	mg/kg	12.3		12.4		10.1		11			
SOIL	ILM4.1_ICP	Zinc	mg/kg	72.1	J		R		R	69.4	J		

Lab Sample Delivery Group				D1367		D1367		D1367	
Loc Name				BS-005		BS-005		BS-007	
Field Sample Id				STBS00508001XD		STBS00508001XX		STBS00701001XX	
Field Sample Date				11/15/2005		11/15/2005		11/14/2005	
Qc Code				FD		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_VOA	1,1,1-Trichloroethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,1,2,2-Tetrachloroethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,1,2-Trichloroethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,1-Dichloroethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,1-Dichloroethene	ug/kg	10	U	11	U	11	UJ
SOIL	OLM4.2_VOA	1,2,4-Trichlorobenzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,2-Dibromo-3-chloropropane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,2-Dibromoethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,2-Dichlorobenzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,2-Dichloroethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,2-Dichloropropane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,3-Dichlorobenzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	1,4-Dichlorobenzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	2-Butanone	ug/kg	10	UJ	11	UJ	11	UJ
SOIL	OLM4.2_VOA	2-Hexanone	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	4-Methyl-2-pentanone	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Acetic acid, methyl ester	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Acetone	ug/kg	10	UJ	22	J	11	UJ
SOIL	OLM4.2_VOA	Benzene	ug/kg	3	J	3	J	11	U
SOIL	OLM4.2_VOA	Bromodichloromethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Bromoform	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Bromomethane	ug/kg	10	U	11	U	11	UJ
SOIL	OLM4.2_VOA	Carbon disulfide	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Carbon tetrachloride	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Chlorobenzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Chlorodibromomethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Chloroethane	ug/kg	10	U	11	U	11	UJ
SOIL	OLM4.2_VOA	Chloroform	ug/kg	10	U	1	J	11	U
SOIL	OLM4.2_VOA	Chloromethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Cis-1,2-Dichloroethene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	cis-1,3-Dichloropropene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Cyclohexane	ug/kg	11		11	U	11	U
SOIL	OLM4.2_VOA	Dichlorodifluoromethane	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Ethyl benzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Isopropylbenzene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Methyl cyclohexane	ug/kg	18		16		11	U
SOIL	OLM4.2_VOA	Methyl Tertbutyl Ether	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Methylene chloride	ug/kg	13	U	11	U	11	U
SOIL	OLM4.2_VOA	Styrene	ug/kg	10	U	11	U	11	U

Lab Sample Delivery Group				D1367		D1367		D1367	
Loc Name				BS-005		BS-005		BS-007	
Field Sample Id				STBS00508001XD		STBS00508001XX		STBS00701001XX	
Field Sample Date				11/15/2005		11/15/2005		11/14/2005	
Qc Code				FD		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_VOA	Tetrachloroethene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Toluene	ug/kg	10	J	11		11	U
SOIL	OLM4.2_VOA	trans-1,2-Dichloroethene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	trans-1,3-Dichloropropene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Trichloroethene	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Trichlorofluoromethane	ug/kg	10	U	11	U	11	UJ
SOIL	OLM4.2_VOA	Vinyl chloride	ug/kg	10	U	11	U	11	U
SOIL	OLM4.2_VOA	Xylenes, Total	ug/kg	5	J	7	J	11	U
SOIL	OLM4.2_SVOA	2,4,5-Trichlorophenol	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	2,4,6-Trichlorophenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2,4-Dichlorophenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2,4-Dimethylphenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2,4-Dinitrophenol	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	2,4-Dinitrotoluene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2,6-Dinitrotoluene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2-Chloronaphthalene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2-Chlorophenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2-Methylnaphthalene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2-Methylphenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	2-Nitroaniline	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	2-Nitrophenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	3,3'-Dichlorobenzidine	ug/kg	350	UJ	350	UJ	360	UJ
SOIL	OLM4.2_SVOA	3-Nitroaniline	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	4,6-Dinitro-2-methylphenol	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	4-Bromophenyl phenyl ether	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	4-Chloro-3-methylphenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	4-Chloroaniline	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	4-Chlorophenyl phenyl ether	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	4-Methylphenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	4-Nitroaniline	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	4-Nitrophenol	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	Acenaphthene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Acenaphthylene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Acetophenone	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Anthracene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Atrazine	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Benzaldehyde	ug/kg	350	UJ	350	UJ	360	UJ
SOIL	OLM4.2_SVOA	Benzo[a]anthracene	ug/kg	350	U	350	U	59	J
SOIL	OLM4.2_SVOA	Benzo[a]pyrene	ug/kg	350	U	350	U	72	J
SOIL	OLM4.2_SVOA	Benzo[b]fluoranthene	ug/kg	350	U	350	U	120	J



Lab Sample Delivery Group				D1367		D1367		D1367	
Loc Name				BS-005		BS-005		BS-007	
Field Sample Id				STBS00508001XD		STBS00508001XX		STBS00701001XX	
Field Sample Date				11/15/2005		11/15/2005		11/14/2005	
Qc Code				FD		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_SVOA	Benzo[ghi]perylene	ug/kg	350	UJ	350	UJ	360	UJ
SOIL	OLM4.2_SVOA	Benzo[k]fluoranthene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Biphenyl	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Bis(2-Chloroethoxy)methane	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Bis(2-Chloroethyl)ether	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Bis(2-Chloroisopropyl)ether	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Bis(2-Ethylhexyl)phthalate	ug/kg	44	J	54	J	59	J
SOIL	OLM4.2_SVOA	Butylbenzylphthalate	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Caprolactum	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Carbazole	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Chrysene	ug/kg	350	U	350	U	150	J
SOIL	OLM4.2_SVOA	Di-n-butylphthalate	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Di-n-octylphthalate	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Dibenz[a,h]anthracene	ug/kg	350	UJ	350	UJ	360	UJ
SOIL	OLM4.2_SVOA	Dibenzofuran	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Diethylphthalate	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Dimethylphthalate	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Fluoranthene	ug/kg	350	U	350	U	120	J
SOIL	OLM4.2_SVOA	Fluorene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Hexachlorobenzene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Hexachlorobutadiene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Hexachlorocyclopentadiene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Hexachloroethane	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Indeno[1,2,3-cd]pyrene	ug/kg	350	UJ	350	UJ	36	J
SOIL	OLM4.2_SVOA	Isophorone	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	N-Nitrosodi-n-propylamine	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	N-Nitrosodiphenylamine	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Naphthalene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Nitrobenzene	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Pentachlorophenol	ug/kg	880	U	890	U	900	U
SOIL	OLM4.2_SVOA	Phenanthrene	ug/kg	350	U	350	U	100	J
SOIL	OLM4.2_SVOA	Phenol	ug/kg	350	U	350	U	360	U
SOIL	OLM4.2_SVOA	Pyrene	ug/kg	350	U	350	U	120	J
SOIL	OLM4.2_PP	4,4'-DDD	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	4,4'-DDE	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	4,4'-DDT	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	Aldrin	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Alpha-BHC	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Alpha-Chlordane	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Aroclor-1016	ug/kg	35	U	35	U	36	U

Lab Sample Delivery Group				D1367		D1367		D1367	
Loc Name				BS-005		BS-005		BS-007	
Field Sample Id				STBS00508001XD		STBS00508001XX		STBS00701001XX	
Field Sample Date				11/15/2005		11/15/2005		11/14/2005	
Qc Code				FD		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	OLM4.2_PP	Aroclor-1221	ug/kg	71	U	72	U	73	U
SOIL	OLM4.2_PP	Aroclor-1232	ug/kg	35	U	35	U	36	U
SOIL	OLM4.2_PP	Aroclor-1242	ug/kg	35	U	35	U	36	U
SOIL	OLM4.2_PP	Aroclor-1248	ug/kg	35	U	35	U	36	U
SOIL	OLM4.2_PP	Aroclor-1254	ug/kg	35	U	35	U	36	U
SOIL	OLM4.2_PP	Aroclor-1260	ug/kg	35	U	35	U	36	U
SOIL	OLM4.2_PP	Beta-BHC	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Delta-BHC	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Dieldrin	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	Endosulfan I	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Endosulfan II	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	Endosulfan sulfate	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	Endrin	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	Endrin aldehyde	ug/kg	3.5	U	3.5	U	3.6	U
SOIL	OLM4.2_PP	Endrin ketone	ug/kg	3.5	U	3.5	U	2.3	J
SOIL	OLM4.2_PP	Gamma-BHC/Lindane	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Gamma-Chlordane	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Heptachlor	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Heptachlor epoxide	ug/kg	1.8	U	1.8	U	1.8	U
SOIL	OLM4.2_PP	Methoxychlor	ug/kg	18	U	18	U	18	U
SOIL	OLM4.2_PP	Toxaphene	ug/kg	180	U	180	U	180	U
SOIL	ILM4.1_HG	Mercury	mg/kg	0.093	U	0.1	U	0.087	U
SOIL	ILM4.1_ICP	Aluminum	mg/kg	8,430	J	6,640	J	7,720	
SOIL	ILM4.1_ICP	Antimony	mg/kg	12	UJ	11	UJ	8.9	UJ
SOIL	ILM4.1_ICP	Arsenic	mg/kg	4.6		3		8.8	
SOIL	ILM4.1_ICP	Barium	mg/kg	48.5		36.6	B	90.3	
SOIL	ILM4.1_ICP	Beryllium	mg/kg	0.3	B	0.21	B	0.48	B
SOIL	ILM4.1_ICP	Cadmium	mg/kg	0.11	B	0.22	B	0.15	B
SOIL	ILM4.1_ICP	Calcium	mg/kg	45,300	J	95,000	J	28,200	
SOIL	ILM4.1_ICP	Chromium	mg/kg	18	E	14	E	13.9	E
SOIL	ILM4.1_ICP	Cobalt	mg/kg	8.2	J	5.9	J	9	J
SOIL	ILM4.1_ICP	Copper	mg/kg	30.2	J	23.8	J	43.3	J
SOIL	ILM4.1_ICP	Iron	mg/kg	19,300	J	14,700	J	22,900	J
SOIL	ILM4.1_ICP	Lead	mg/kg	11.1	J	9.3	J	43.7	J
SOIL	ILM4.1_ICP	Magnesium	mg/kg	8,700	*	14,200	*	7,160	*
SOIL	ILM4.1_ICP	Manganese	mg/kg	502		412		594	
SOIL	ILM4.1_ICP	Nickel	mg/kg	24.3	J	17.6	J	21.3	J
SOIL	ILM4.1_ICP	Potassium	mg/kg	682	B	667	B	688	B
SOIL	ILM4.1_ICP	Selenium	mg/kg		R		R		R
SOIL	ILM4.1_ICP	Silver	mg/kg		R		R		R

**Appendix D**  
**Table 2.1: Soil Results**

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Lab Sample Delivery Group				D1367		D1367		D1367	
Loc Name				BS-005		BS-005		BS-007	
Field Sample Id				STBS00508001XD		STBS00508001XX		STBS00701001XX	
Field Sample Date				11/15/2005		11/15/2005		11/14/2005	
Qc Code				FD		FS		FS	
Media	Method	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
SOIL	ILM4.1_ICP	Sodium	mg/kg	105	B	131	B	488	B
SOIL	ILM4.1_ICP	Thallium	mg/kg	2		0.78	B	2.8	
SOIL	ILM4.1_ICP	Vanadium	mg/kg	14		11.3		17	
SOIL	ILM4.1_ICP	Zinc	mg/kg	106	J	83.8	J	86.7	J

Lab Sample Delivery Group				D1488		D1488		D1488		D1488	
Loc Name				MW-001		MW-002		MW-003		MW-004	
Field Sample Id				STMW001XXX01XX		STMW002XXX01XX		STMW003XXX01XX		STMW004XXX01XX	
Field Sample Date				12/8/2005		12/9/2005		12/9/2005		12/8/2005	
Qc Code				FS		FS		FS		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_VOA	1,1,1-Trichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1,2,2-Tetrachloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1,2-Trichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1-Dichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1-Dichloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2,4-Trichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dibromo-3-chloropropane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dibromoethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dichloropropane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,3-Dichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,4-Dichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	2-Butanone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	2-Hexanone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	4-Methyl-2-pentanone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Acetic acid, methyl ester	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Acetone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Benzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Bromodichloromethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Bromoform	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Bromomethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Carbon disulfide	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Carbon tetrachloride	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chlorodibromomethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chloroform	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chloromethane	ug/l	10	UJ	10	U	10	U	10	UJ
GW	OLM4.2_VOA	Cis-1,2-Dichloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	cis-1,3-Dichloropropene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Cyclohexane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Dichlorodifluoromethane	ug/l	10	UJ	10	U	10	U	10	UJ
GW	OLM4.2_VOA	Ethyl benzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Isopropylbenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Methyl cyclohexane	ug/l	10	U	10	U	10	U	10	U

Lab Sample Delivery Group			D1488		D1488			D1488		D1488	
Loc Name			MW-001		MW-002			MW-003		MW-004	
Field Sample Id			STMW001XXX01XX		STMW002XXX01XX			STMW003XXX01XX		STMW004XXX01XX	
Field Sample Date			12/8/2005		12/9/2005			12/9/2005		12/8/2005	
Qc Code			FS		FS			FS		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_VOA	Methyl Tertbutyl Ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Methylene chloride	ug/l	10	U	10	UJ	10	UJ	10	U
GW	OLM4.2_VOA	Styrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Tetrachloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Toluene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	trans-1,2-Dichloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	trans-1,3-Dichloropropene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Trichloroethene	ug/l	4	J	4	J	2	J	4	J
GW	OLM4.2_VOA	Trichlorofluoromethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Vinyl chloride	ug/l	10	UJ	10	U	10	U	10	UJ
GW	OLM4.2_VOA	Xylenes, Total	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4,5-Trichlorophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	2,4,6-Trichlorophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4-Dichlorophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4-Dimethylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4-Dinitrophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	2,4-Dinitrotoluene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,6-Dinitrotoluene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Chloronaphthalene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Chlorophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Methylnaphthalene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Methylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Nitroaniline	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	2-Nitrophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	3,3'-Dichlorobenzidine	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	3-Nitroaniline	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	4,6-Dinitro-2-methylphenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	4-Bromophenyl phenyl ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Chloro-3-methylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Chloroaniline	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	4-Chlorophenyl phenyl ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Methylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Nitroaniline	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	4-Nitrophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	Acenaphthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Acenaphthylene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Acetophenone	ug/l	10	U	10	U	10	U	10	U

Lab Sample Delivery Group				D1488		D1488		D1488		D1488	
Loc Name				MW-001		MW-002		MW-003		MW-004	
Field Sample Id				STMW001XXX01XX		STMW002XXX01XX		STMW003XXX01XX		STMW004XXX01XX	
Field Sample Date				12/8/2005		12/9/2005		12/9/2005		12/8/2005	
Qc Code				FS		FS		FS		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_SVOA	Anthracene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Atrazine	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Benzaldehyde	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Benzo[a]anthracene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[a]pyrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[b]fluoranthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[ghi]perylene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[k]fluoranthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Biphenyl	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Chloroethoxy)methane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Chloroethyl)ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Chloroisopropyl)ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Ethylhexyl)phthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Butylbenzylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Caprolactum	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Carbazole	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Chrysene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Di-n-butylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Di-n-octylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Dibenz[a,h]anthracene	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Dibenzofuran	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Diethylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Dimethylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Fluoranthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Fluorene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachlorobutadiene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachlorocyclopentadiene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Indeno[1,2,3-cd]pyrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Isophorone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	N-Nitrosodi-n-propylamine	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	N-Nitrosodiphenylamine	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Naphthalene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Nitrobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Pentachlorophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	Phenanthrene	ug/l	10	U	10	U	10	U	10	U

Lab Sample Delivery Group				D1488		D1488		D1488		D1488	
Loc Name				MW-001		MW-002		MW-003		MW-004	
Field Sample Id				STMW001XXX01XX		STMW002XXX01XX		STMW003XXX01XX		STMW004XXX01XX	
Field Sample Date				12/8/2005		12/9/2005		12/9/2005		12/8/2005	
Qc Code				FS		FS		FS		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_SVOA	Phenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Pyrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_PP	4,4'-DDD	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	4,4'-DDE	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	4,4'-DDT	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Aldrin	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Alpha-BHC	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Alpha-Chlordane	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Aroclor-1016	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1221	ug/l	2	U	2	U	2	U	2	U
GW	OLM4.2_PP	Aroclor-1232	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1242	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1248	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1254	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1260	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Beta-BHC	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Delta-BHC	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Dieldrin	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endosulfan I	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Endosulfan II	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endosulfan sulfate	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endrin	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endrin aldehyde	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endrin ketone	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Gamma-BHC/Lindane	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Gamma-Chlordane	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Heptachlor	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Heptachlor epoxide	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Methoxychlor	ug/l	0.5	U	0.5	U	0.5	U	0.5	U
GW	OLM4.2_PP	Toxaphene	ug/l	5	U	5	U	5	U	5	U
GW	ILM4.1_HG	Mercury	ug/l	0.28	U	0.28	U	0.29	U	0.3	U
GW	ILM4.1_ICP	Aluminum	ug/l	200	U	200	U	200	U	200	U
GW	ILM4.1_ICP	Antimony	ug/l	60	U	60	U	60	U	60	U
GW	ILM4.1_ICP	Arsenic	ug/l	10	U	10	U	10	U	10	U
GW	ILM4.1_ICP	Barium	ug/l	147	B	166	B	154	B	196	B
GW	ILM4.1_ICP	Beryllium	ug/l	5	U	5	U	5	U	5	U
GW	ILM4.1_ICP	Cadmium	ug/l	5	U	5	U	5	U	5	U

Lab Sample Delivery Group				D1488		D1488		D1488		D1488	
Loc Name				MW-001		MW-002		MW-003		MW-004	
Field Sample Id				STMW001XXX01XX		STMW002XXX01XX		STMW003XXX01XX		STMW004XXX01XX	
Field Sample Date				12/8/2005		12/9/2005		12/9/2005		12/8/2005	
Qc Code				FS		FS		FS		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	ILM4.1_ICP	Calcium	ug/l	89600		95500		89300		124000	
GW	ILM4.1_ICP	Chromium	ug/l	0.79	B	0.66	B	0.64	B	0.71	B
GW	ILM4.1_ICP	Cobalt	ug/l	1.1	B	0.68	B	0.58	B	0.7	B
GW	ILM4.1_ICP	Copper	ug/l	1.8	B	25	U	25	U	2.2	B
GW	ILM4.1_ICP	Iron	ug/l	26.8	B	20.4	B	19.6	B	15.4	B
GW	ILM4.1_ICP	Lead	ug/l	3	U	3	U	3	U	3	U
GW	ILM4.1_ICP	Magnesium	ug/l	18600		20200		18700		24900	
GW	ILM4.1_ICP	Manganese	ug/l	95.8		6.7	B	4.2	B	69.1	
GW	ILM4.1_ICP	Nickel	ug/l	2	B	1.5	B	1.7	B	2.3	B
GW	ILM4.1_ICP	Potassium	ug/l	2090	B	1790	B	1870	B	2080	B
GW	ILM4.1_ICP	Selenium	ug/l	5	UJ	5	UJ	5	UJ	5	UJ
GW	ILM4.1_ICP	Silver	ug/l	0.61	B	0.59	B	10	U	10	U
GW	ILM4.1_ICP	Sodium	ug/l	154000		141000		138000		192000	
GW	ILM4.1_ICP	Thallium	ug/l	10	U	10	U	10	U	10	U
GW	ILM4.1_ICP	Vanadium	ug/l	50	U	50	U	50	U	50	U
GW	ILM4.1_ICP	Zinc	ug/l	5.2	B	5.2	B	3.7	B	7.7	B



Lab Sample Delivery Group Loc Name Field Sample Id Field Sample Date Qc Code				D1488		D1488		D1488		D1488	
				MW-005		MW-006		MW-007		MW-007	
				STMW005XXX01XX		STMW006XXX01XX		STMW007XXX01DU		STMW007XXX01XX	
				12/8/2005		12/7/2005		12/7/2005		12/7/2005	
				FS		FS		FD		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_VOA	1,1,1-Trichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1,2,2-Tetrachloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1,2-Trichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1-Dichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,1-Dichloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2,4-Trichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dibromo-3-chloropropane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dibromoethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dichloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,2-Dichloropropane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,3-Dichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	1,4-Dichlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	2-Butanone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	2-Hexanone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	4-Methyl-2-pentanone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Acetic acid, methyl ester	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Acetone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Benzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Bromodichloromethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Bromoform	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Bromomethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Carbon disulfide	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Carbon tetrachloride	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chlorodibromomethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chloroform	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Chloromethane	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_VOA	Cis-1,2-Dichloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	cis-1,3-Dichloropropene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Cyclohexane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Dichlorodifluoromethane	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_VOA	Ethyl benzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Isopropylbenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Methyl cyclohexane	ug/l	5	J	10	U	10	U	10	U

Lab Sample Delivery Group Loc Name Field Sample Id Field Sample Date Qc Code				D1488		D1488		D1488		D1488	
				MW-005		MW-006		MW-007		MW-007	
				STMW005XXX01XX		STMW006XXX01XX		STMW007XXX01DU		STMW007XXX01XX	
				12/8/2005		12/7/2005		12/7/2005		12/7/2005	
				FS		FS		FD		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_VOA	Methyl Tertbutyl Ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Methylene chloride	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Styrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Tetrachloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Toluene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	trans-1,2-Dichloroethene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	trans-1,3-Dichloropropene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Trichloroethene	ug/l	8	J	5	J	10	U	10	U
GW	OLM4.2_VOA	Trichlorofluoromethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_VOA	Vinyl chloride	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_VOA	Xylenes, Total	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4,5-Trichlorophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	2,4,6-Trichlorophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4-Dichlorophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4-Dimethylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,4-Dinitrophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	2,4-Dinitrotoluene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2,6-Dinitrotoluene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Chloronaphthalene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Chlorophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Methylnaphthalene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Methylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	2-Nitroaniline	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	2-Nitrophenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	3,3' -Dichlorobenzidine	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	3-Nitroaniline	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	4,6-Dinitro-2-methylphenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	4-Bromophenyl phenyl ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Chloro-3-methylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Chloroaniline	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	4-Chlorophenyl phenyl ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Methylphenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	4-Nitroaniline	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	4-Nitrophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	Acenaphthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Acenaphthylene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Acetophenone	ug/l	10	U	10	U	10	U	10	U

Lab Sample Delivery Group			D1488		D1488			D1488		D1488	
Loc Name			MW-005		MW-006			MW-007		MW-007	
Field Sample Id			STMW005XXX01XX		STMW006XXX01XX			STMW007XXX01DU		STMW007XXX01XX	
Field Sample Date			12/8/2005		12/7/2005			12/7/2005		12/7/2005	
Qc Code			FS		FS			FD		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_SVOA	Anthracene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Atrazine	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Benzaldehyde	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Benzo[a]anthracene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[a]pyrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[b]fluoranthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[ghi]perylene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Benzo[k]fluoranthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Biphenyl	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Chloroethoxy)methane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Chloroethyl)ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Chloroisopropyl)ether	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Bis(2-Ethylhexyl)phthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Butylbenzylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Caprolactum	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Carbazole	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Chrysene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Di-n-butylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Di-n-octylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Dibenz[a,h]anthracene	ug/l	10	UJ	10	UJ	10	UJ	10	UJ
GW	OLM4.2_SVOA	Dibenzofuran	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Diethylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Dimethylphthalate	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Fluoranthene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Fluorene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachlorobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachlorobutadiene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachlorocyclopentadiene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Hexachloroethane	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Indeno[1,2,3-cd]pyrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Isophorone	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	N-Nitrosodi-n-propylamine	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	N-Nitrosodiphenylamine	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Naphthalene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Nitrobenzene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Pentachlorophenol	ug/l	25	U	25	U	25	U	25	U
GW	OLM4.2_SVOA	Phenanthrene	ug/l	10	U	10	U	10	U	10	U

Lab Sample Delivery Group				D1488		D1488		D1488		D1488	
				MW-005		MW-006		MW-007		MW-007	
				STMW005XXX01XX		STMW006XXX01XX		STMW007XXX01DU		STMW007XXX01XX	
				12/8/2005		12/7/2005		12/7/2005		12/7/2005	
				FS		FS		FD		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	OLM4.2_SVOA	Phenol	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_SVOA	Pyrene	ug/l	10	U	10	U	10	U	10	U
GW	OLM4.2_PP	4,4`-DDD	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	4,4`-DDE	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	4,4`-DDT	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Aldrin	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Alpha-BHC	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Alpha-Chlordane	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Aroclor-1016	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1221	ug/l	2	U	2	U	2	U	2	U
GW	OLM4.2_PP	Aroclor-1232	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1242	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1248	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1254	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Aroclor-1260	ug/l	1	U	1	U	1	U	1	U
GW	OLM4.2_PP	Beta-BHC	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Delta-BHC	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Dieldrin	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endosulfan I	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Endosulfan II	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endosulfan sulfate	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endrin	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endrin aldehyde	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Endrin ketone	ug/l	0.1	U	0.1	U	0.1	U	0.1	U
GW	OLM4.2_PP	Gamma-BHC/Lindane	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Gamma-Chlordane	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Heptachlor	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Heptachlor epoxide	ug/l	0.05	U	0.05	U	0.05	U	0.05	U
GW	OLM4.2_PP	Methoxychlor	ug/l	0.5	U	0.5	U	0.5	U	0.5	U
GW	OLM4.2_PP	Toxaphene	ug/l	5	U	5	U	5	U	5	U
GW	ILM4.1_HG	Mercury	ug/l	0.31	U	0.31	U	0.28	U	0.3	U
GW	ILM4.1_ICP	Aluminum	ug/l	200	U	200	U	200	U	200	U
GW	ILM4.1_ICP	Antimony	ug/l	2.4	B	60	U	60	U	60	U
GW	ILM4.1_ICP	Arsenic	ug/l	10	U	10	U	10	U	10	U
GW	ILM4.1_ICP	Barium	ug/l	230		221		159	B	160	B
GW	ILM4.1_ICP	Beryllium	ug/l	5	U	5	U	5	U	5	U
GW	ILM4.1_ICP	Cadmium	ug/l	5	U	5	U	5	U	5	U

Lab Sample Delivery Group				D1488		D1488		D1488		D1488	
Loc Name				MW-005		MW-006		MW-007		MW-007	
Field Sample Id				STMW005XXX01XX		STMW006XXX01XX		STMW007XXX01DU		STMW007XXX01XX	
Field Sample Date				12/8/2005		12/7/2005		12/7/2005		12/7/2005	
Qc Code				FS		FS		FD		FS	
Media	Method	Parameter	Units	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier	Final Result	Final Qualifier
GW	ILM4.1_ICP	Calcium	ug/l	120000		126000		95600		93200	
GW	ILM4.1_ICP	Chromium	ug/l	0.64	B	0.55	B	0.85	B	0.91	B
GW	ILM4.1_ICP	Cobalt	ug/l	0.65	B	0.83	B	0.8	B	0.99	B
GW	ILM4.1_ICP	Copper	ug/l	3.6	B	6.7	B	6.5	B	19.2	B
GW	ILM4.1_ICP	Iron	ug/l	88.3	B	19.5	B	21.3	B	40.4	B
GW	ILM4.1_ICP	Lead	ug/l	3	U	3	U	3	U	3	U
GW	ILM4.1_ICP	Magnesium	ug/l	24500		25500		19900		19300	
GW	ILM4.1_ICP	Manganese	ug/l	125		89.3		40.4		46.4	
GW	ILM4.1_ICP	Nickel	ug/l	2.3	B	2.4	B	2	B	2.3	B
GW	ILM4.1_ICP	Potassium	ug/l	2470	B	2190	B	1970	B	2000	B
GW	ILM4.1_ICP	Selenium	ug/l	5	UJ	5	UJ	5	UJ	5	UJ
GW	ILM4.1_ICP	Silver	ug/l	0.64	B	0.81	B	10	U	0.98	B
GW	ILM4.1_ICP	Sodium	ug/l	140000		246000		163000		164000	
GW	ILM4.1_ICP	Thallium	ug/l	10	U	10	U	10	U	10	U
GW	ILM4.1_ICP	Vanadium	ug/l	50	U	50	U	50	U	50	U
GW	ILM4.1_ICP	Zinc	ug/l	15.8	B	14.6	B	6.7	B	23.7	

Tentatively Identified Compounds (TICs)

sample_name	sample_date	Lab_Del_Group	lab_anl_method_name	cas_rn	chemical_name	result_value	lab_qualifiers	result_unit
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	37	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	35	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	5	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	13	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	25	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	16	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	8	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	15	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	8	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	10	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA		STRAIGHT-CHAIN ALKANE	7	J	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_VOA	21895-13-6	BENZENE, 1-METHYL-2-[(3-METH	9	NJ	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	39	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	36	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	13	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	44	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	12	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		STRAIGHT-CHAIN ALKANE	28	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	9	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	9	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	7	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		STRAIGHT-CHAIN ALKANE	12	J	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_VOA		STRAIGHT-CHAIN ALKANE	7	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	34	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	29	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA	75-18-3	DIMETHYL SULFIDE	13	NJ	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	11	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		STRAIGHT-CHAIN ALKANE	21	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	11	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA	141-78-6	ETHYL ACETATE	220	NJ	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	6	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	6	J	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	11	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	590	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	1000	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	680	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	1300	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	1500	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1300	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	1000	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	2100	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1600	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1100	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	1100	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	960	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1200	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	900	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1100	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	740	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1200	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	1500	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	850	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	830	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA	493-02-7	NAPHTHALENE, DECAHYDRO-, TRA	1200	NJ	µg/kg

Tentatively Identified Compounds (TICs)

sample_name	sample_date	Lab_Del_Group	lab_anl_method_name	cas_rn	chemical_name	result_value	lab_qualifiers	result_unit
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	960	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1300	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1400	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	670	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	1000	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	1600	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA	2958-76-1	NAPHTHALENE, DECAHYDRO-2-MET	910	NJ	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	820	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	930	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	4400	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	2700	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	5300	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	3300	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2500	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	3500	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2500	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	7600	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	2300	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	4600	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	3600	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	8000	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2600	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		BRANCHED ALKANE	5600	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	7000	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2900	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	8000	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	6900	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2700	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	4000	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	3800	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2900	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA	493-02-7	NAPHTHALENE, DECAHYDRO-, TRA	5300	NJD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	3100	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	5300	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA	1000152-47-3	TRANS-DECALIN, 2-METHYL-	4200	NJD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		CYCLIC ALKANE	3800	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA	2958-76-1	NAPHTHALENE, DECAHYDRO-2-MET	3200	NJD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	2500	JD	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	3700	JD	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	27	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	32	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	10	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	10	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	18	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	14	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	210	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	6	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	13	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	6	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_VOA		UNKNOWN	6	J	µg/kg
STBS00301601XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	28	J	µg/kg
STBS00301601XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	10	J	µg/kg
STBS00301601XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	14	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	94	J	µg/kg

Tentatively Identified Compounds (TICs)

sample_name	sample_date	Lab_Del_Group	lab_anl_method_name	cas_rn	chemical_name	result_value	lab_qualifiers	result_unit
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	46	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA	109-66-0	PENTANE	46	NJ	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	15	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA	110-54-3	HEXANE	22	NJ	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	9	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	9	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_VOA		UNKNOWN	9	J	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA		UNKNOWN	82	J	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA	872-05-9	1-DECENE	510	NJB	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA		UNKNOWN	220	J	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA	2531-84-2	PHENANTHRENE, 2-METHYL-	92	NJ	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA		UNKNOWN	110	J	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA	604-83-1	PHENANTHRENE, 9,10-DIMETHYL-	75	NJ	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA		UNKNOWN	88	J	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA	192-97-2	BENZO[E]PYRENE	130	NJ	µg/kg
STBS00701001XX	11/14/2005	D1367	OLM4.2_SVOA		UNKNOWN	1300	JB	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_SVOA	872-05-9	1-DECENE	470	NJB	µg/kg
STBS00508001XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	1700	JB	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_SVOA	78-40-0	TRIETHYL PHOSPHATE	100	NJ	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_SVOA	872-05-9	1-DECENE	510	NJB	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_SVOA	111-02-4	2,6,10,14,18,22-TETRACOSAHEX	97	NJ	µg/kg
STBS00508001XD	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	2200	JB	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_SVOA	78-40-0	TRIETHYL PHOSPHATE	120	NJ	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_SVOA	872-05-9	1-DECENE	550	NJB	µg/kg
STBS00406001XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	2000	JB	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	1500	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	320	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	460	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	670	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	680	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	330	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	440	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	570	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA	493-02-7	NAPHTHALENE, DECAHYDRO-, TRA	1400	NJ	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	1200	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	280	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	290	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	620	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	1400	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	560	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	310	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	3200	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	740	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	1700	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	800	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA	3031-15-0	NAPHTHALENE, 1,2,3,4-TETRA	1100	NJ	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	470	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	740	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA	1000104-10-8	3-METHYL-4-(METHOXYCARBONYL)	580	NJ	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	1000	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	300	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	980	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	300	J	µg/kg
STBS00501701XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	4400	J	µg/kg



Tentatively Identified Compounds (TICs)

sample_name	sample_date	Lab_Del_Group	lab_anl_method_name	cas_rn	chemical_name	result_value	lab_qualifiers	result_unit
STBS00101601XX	11/15/2005	D1367	OLM4.2_SVOA	872-05-9	1-DECENE	500	NJB	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_SVOA	2156-97-0	DODECYL ACRYLATE	120	NJ	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	99	J	µg/kg
STBS00101601XX	11/15/2005	D1367	OLM4.2_SVOA		UNKNOWN	2300	J	µg/kg
STBS00301601XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	100	J	µg/kg
STBS00301601XX	11/16/2005	D1367	OLM4.2_SVOA	2156-97-0	DODECYL ACRYLATE	360	NJ	µg/kg
STBS00301601XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	78	J	µg/kg
STQS001XXX05XX	11/16/2005	D1367	OLM4.2_SVOA	54446-78-5	ETHANOL, 1-(2-BUTOXYETHOXY)-	3	NJ	µg/l
STQS001XXX05XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	3	J	µg/l
STQS001XXX05XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	42	J	µg/l
STQS001XXX05XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	60	J	µg/l
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA	112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	290	NJ	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	130	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA	872-05-9	1-DECENE	440	NJB	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	470	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	91	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	79	J	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA	198-55-0	PERYLENE	130	NJ	µg/kg
STBS00201801XX	11/16/2005	D1367	OLM4.2_SVOA		UNKNOWN	1900	J	µg/kg
SBLK1A		D1367	OLM4.2_SVOA	112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	4	NJ	µg/l
SBLK1J		D1367	OLM4.2_SVOA	872-05-9	1-DECENE	420	NJ	µg/kg
SBLK1J		D1367	OLM4.2_SVOA		UNKNOWN	1900	J	µg/kg
STMW003XXX01XX	12/9/2005	D1488	OLM4.2_SVOA	50-84-0	BENZOIC ACID, 2,4-DICHLORO-	10	NJ	µg/l

TIC_retention_time
02.56
02.77
02.92
03.94
04.21
04.83
05.41
05.47
05.59
06.03
07.85
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02.56
02.77
03.25
03.70
03.94
04.21
04.82
05.42
05.59
06.02
07.85
02.56
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04.22
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04.97
05.41
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06.03
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11.49
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11.69
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11.87
11.92
11.99
12.42

TIC_retention_time
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12.67
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03.30
04.20
02.02

TIC_retention_time
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14.14
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15.46

TIC_retention_time
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15.54
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18.17
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23.97
08.74
10.82
24.17
10.98