FINAL
SITE CHARACTERIZATION REPORT
REGION 8 DRY CLEANERS – GROUP 2
HTS COIN OPERATED LAUNDRY & DRY CLEANERS SITE

SITE NO. 8-08-038

WORK ASSIGNMENT NO. D004434-5

Prepared for:

New York State Department of Environmental Conservation

Albany, New York

Prepared by:

MACTEC Engineering and Consulting, PC
Portland, Maine

MACTEC: 3612062059

JULY 2007

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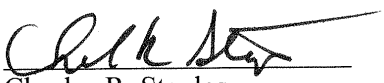

Charles R. Staples
Task Manager

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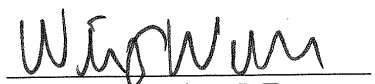

William J. Weber, P.E.
Program Manager

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LIST OF ACRONYMS

1,1,1-TCA	1,1,1-trichloroethane
ASP	Analytical Services Protocol
ASTM	American Standards of Testing and Measurements
bgs	below ground surface
Chemtech	Chemtech Consulting Group, Inc.
DUSR	Data Usability Summary Report
EDR	Environmental Data Resources, Inc.
°F	degrees Fahrenheit
MACTEC	MACTEC Engineering and Consulting, P.C.
msl	mean sea level
NYCRR	Title 6 of the New York Codes, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCE	tetrachloroethene
PID	photoionization detector
Report	Site Characterization Report
ROW	right of way
SC	Site Characterization

LIST OF ACRONYMS (CONTINUED)

Site	HTS Coin Operated Laundry & Dry Cleaners Site
SVOC	semi-volatile organic compound
TCE	trichloroethylene
TCL	Target Compound List
TICs	tentatively identified compounds
µg/L	micrograms per Liter
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WA	Work Assignment

1.0 INTRODUCTION

MACTEC Engineering and Consulting, P.C. (MACTEC), is submitting this Site Characterization (SC) Report (Report) to the New York State Department of Environmental Conservation (NYSDEC). This Report addresses the SC at the former HTS Coin Operated Laundry & Dry Cleaners site (Site) in the Village of Elmira Heights, New York (Figure 1.1). This Report was prepared in response to Work Assignment (WA) No. D0003826-29 (NYSDEC, 2006), and in accordance with the requirements of the July 1997 Superfund Standby Contract No. D003826 between the NYSDEC and MACTEC. The field work and report were conducted under WA# D0004434-5 and the April 2005 Superfund Standby Contract No. D0004434-5 between the NYSDEC and MACTEC.

This WP is one of six site-specific SC reports for the Region 8 Dry Cleaners – Group 2 multiple site, Site Characterizations WA. The other five SC work plans address the sites listed below:

- Ruddick's Dry Cleaners (Site No. 8-08-037)
- Universal Dry Cleaners (Site No. 8-08-040)
- Up to Date Cleaners (Site No. 8-26-019)
- Associated Textile Rental Services (Site No. 8-08-041-replaced Schmidt Brothers)
- Rolling Plains (Site No. 8-28-138 – replaced Ace Cleaners)

The former HTS Coin Operated Laundry & Dry Cleaners site, Site No. 8-08-038, is currently listed as a potential hazardous waste site, or "P" site, by the NYSDEC, because insufficient information exists to determine whether wastes were disposed of at the site and whether, if present, those wastes pose a potential significant threat to public health or the environment (New York State (NYS), 2006).

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 1 Hazardous waste constitutes a significant threat to public health or the environment, as described in Title 6 of the New York Codes, Rules and

Regulations (NYCRR) Part 375 (NYS, 2006); and the significant threat to public health or the environment is causing, or presents an imminent danger of causing, either irreversible or irreparable damage to the environment.

Class 2 — Hazardous waste constitutes a significant threat to public health or the environment as described in NYCRR Part 375 (NYS, 2006).

Class 3 — Hazardous waste does not presently constitute a significant threat to public health or the environment, as described in NYCRR Part 375 (NYS, 2006).

Not Classified — 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 6 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 (NYS, 2006).
- 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).

The WA was divided into three tasks. Task 1-Work Plan Development, included a search of state and county site records, and performance of a site inspection to develop information necessary for reclassification or delisting. Task 1 activities did not develop adequate data on which to base a delist or reclassification recommendation. Therefore, Task 2, Subsurface Investigation, was conducted. Task 3-Reporting, is the preparation of this Report. Resources used to prepare this Report include: (1) information provided in the WA, (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.

This report is divided into five sections:

Section 1 - Introduction to the report.

Section 2 - Describes the site background and physical setting, including a summary of previous investigations.

Section 3 - Presents the work conducted during the field investigations.

Section 4 - Presents results of the field investigation.

Section 5 - Presents an investigation summary.

2.0 SITE BACKGROUND AND PHYSICAL SETTING

On May 2 and 3, 2006, MACTEC personnel reviewed available records from the NYSDEC office in Albany, New York, and visited the Chemung County, New York offices. Information was also collected from the Site owner by the NYSDEC. As part of the review, MACTEC obtained 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 American Standards of Testing and Measurements (ASTM) recommended search radii. Complete lists of all recommended ASTM record searches for standard due diligence requirements are included in the EDR report which was provided to the NYSDEC 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 former HTS Coin Operated Laundry & Dry Cleaners site is located at 224 Oakwood Avenue in a mixed residential/commercial neighborhood of the Village of Elmira Heights, Chemung County, New York (Figure 1.1). The site property consists of approximately 0.14 acres. The Site is bordered by Oakwood Ave to the west, a pet grooming building to the north, and a small alley to the east and south. The Purolator Products Co. (formerly Facet Enterprises Superfund site), Site #808001, is located approximately 1500 feet north of the Site (TCE is the primary contaminants of concern at Site #808001). The Sullivan Street Public Supply Wells is located to the southeast of this site.

2.2 SITE HISTORY

It is not known when the Site was originally developed, but the Site building is listed as a 2-story grocer on the 1898 Sanborn Map. The structure that was reportedly used as a butcher shop (Schmidt, 2006) first appears on the 1931 Sanborn map. In addition, a structure in the general reported location of the former solvent tanks first appears on the 1931 Sanborn. According to the EDR-City Directory the site was the location of the former HTS Coin Operated Laundry & Dry

Cleaners facility from the approximately 1970 to 1990. A letter by the former Site owner (See Appendix A) claims that a coin operated dry cleaner using tetrachloroethene (PCE) was in operation from approximately 1968 to 1975, at which time the cleaner was replaced with an owner operated dry cleaner that used Valclean, a chlorofluorocarbon based solvent (Schmidt, 2006). Dry cleaning at the site ceased in approximately 1981-1982. The site building is currently used as a retail store (mattress sales) with an apartment above.

2.3 PREVIOUS INVESTIGATIONS

Previous site investigations have reportedly not been completed for the Site property.

The site is of concern based on the presence of chlorinated solvents in the City of Elmira's Sullivan Street Supply Well. Although other sources of chlorinated solvents exit in the Newtown Creek Aquifer, it is not known if this Site is contributing to the contamination plume. Chlorinated solvents (primarily trichloroethylene [TCE]) were first detected in the City Sullivan supply wells in the mid 1980's. Samples collected between 1981 and 1992 indicated concentrations of TCE in the Sullivan Street Wells ranging from 5.0 to 10.3 micrograms per Liter (µg/L), in relation to a NYS groundwater standard of 5 µg/L (NYSDOH, 1994). These wells are located approximately 1.7 miles southeast of the Site, on the west side Newtown Creek (Figure 1.1). There are two supply wells in close proximity to each other. These wells can each produce approximately 3 million gallons per day. The 18-inch diameter wells have casing set to approximately 60 feet below ground surface (bgs), with shutter screen down to 98 feet bgs. Although an air stripper was installed in the late 1990's, the wells are currently not used (LaDouce, 2005). They are turned on twice per year and sampled.

2.4 PHYSICAL SETTING

Topography

The Site is located in the Newtown Creek Valley, which runs north-south, joining the Chemung River Valley to the south, which runs east-west. The Site property is located at 878 feet above mean sea level (msl) and is relatively flat. The valley slopes slightly down to the south and east. Newtown Creek is located at an elevation of approximately 860 feet above msl 0.9 miles east of the

Site. Newtown Creek runs south, joining the Chemung River in 3.4 miles. The Chemung River is located at an elevation of approximately 835 feet above msl at the confluence with Newtown Creek. The topography to the west of the site is relatively flat for approximately 0.5 miles, and then rises to a ridge at 1600 feet above msl approximately 1.3 miles from the site. The topography east of Newtown Creek is flat for approximately 0.3 miles, and then rises sharply to a ridge at 1600 feet above msl approximately 1.9 miles from the site.

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 35 inches. Average annual snowfall is 43 inches (National Climatic Data Center, 2004).

Surface Water Hydrology

Surface drainage from the site generally follows the topography, flowing toward low areas and then infiltrating into the ground. The Site property is not located within the 100 or 500 year FEMA flood zones (EDR, 2006).

Groundwater Hydrology

The Newtown Creek and eventually the Chemung River are local groundwater discharge areas. Groundwater at the Site was encountered at approximately 19 feet bgs, and based on water level measurements collected, is interpreted to flow southeast towards Newtown Creek.

Geology

Overburden soils at the site consisted of lacustrine silts, sands and gravels. Surficial geology is mapped as oxidized, non calcareous, fine sand to gravel (Muller, 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 May 3, 2006 MACTEC and the NYSDEC personnel, as well as the current and former Site property owners conducted a walkover of the Site area.

SITE WALKOVER ATTENDEES

NAME	TITLE	AFFILIATION/TELEPHONE
Charles Staples	Site Lead	MACTEC Engineering and Consulting 207-775-5401
Matthew Dunham	Environmental Engineer NYSDEC Project Manager	NYSDEC Division of Environmental Remediation, Albany 518-402-9812
Marty Schmidt		Former Site owner
John Schmidt		Son of former Site owner
William Goodwin		Current Site owner

The site walkover consisted of viewing the former HTS Coin Operated and Dry Cleaners property, and the surrounding neighborhood to assess possible contamination sources and the logistical concerns for the field program. MACTEC personnel documented the walkover with photographs (Appendix B).

During the site walkover, Mr. Marty Schmidt indicated the location of a reported former above ground storage tank for PCE on the south side of the site building. Concrete footings were noted in the pavement. Visible sources of contamination (e.g., leaking drums) were not observed, however, detailed inspections of potential sources were not conducted during the site walkover.

2.5 FILE REVIEW

MACTEC reviewed files from various state and local agency offices, as well as the EDR Site report, to develop information to support a reclassification or delisting, and to help prepare the scope of work for the SC field investigations.

2.6 SUMMARY OF DATA RECORDS SEARCH AND ASSESSMENT FINDINGS

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 United States Environmental Protection Agency's (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 (RCRA) 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 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 Sullivan Street Wells, but the source area has not been identified.

As defined by 6 NYCRR Part 375, significant threat can be established by documenting a contravention of environmental standards. Surface water, soil and groundwater are the only media for which NYS has promulgated standards. Under NYS Water Quality Regulations (6 NYCRR Parts 701 to 706) 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 (NYS, 1999b). In addition, standards for soils have been promulgated under the revised 6 NYCRR Part 375 Regulations (NYS, 2006).

No analytical data has been collected from the Site and therefore it was not known if the Site is the source of the TCE contamination or if the Site posed a significant threat. As a result, the SC field investigations were conducted to:

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

3.0 SCOPE OF WORK

To reclassify 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 by 6 NYCRR Part 375. Because data necessary to determine if the chlorinated compounds present in the Sullivan Street Wells originated from the Site or if potential contamination present in Site media are migrating off-site and pose a potential significant threat to human health or the environment were not available in federal and state files reviewed during Task 1, additional field investigations were performed as described below. Task 2 activities included the Field Investigation. The objective of Task 2 activities was to determine, if possible, whether the volatile organic compounds (VOCs) detected in the city supply well originated from the Site, or whether potential onsite VOC contamination is migrating offsite. Task 3 was the preparation and distribution of the SC Data Summary Report.

TASK 2 - FIELD INVESTIGATIONS

Field investigations included:

1) Existing Monitoring Well Sampling
2) Geoprobe® Soil and Groundwater Sampling
3) Microwell Installation
4) Well Development
5) Basement Air Sampling
6) Synoptic Groundwater Measurement Round

The subsurface soil borings, groundwater monitoring well installation, subsurface soil and groundwater sample collection and well development activities were conducted from October 9 through October 13, 2006 and also from November 2 to November 3, 2006. Sample locations are shown on Figures 3.1 and 3.2.

The synoptic groundwater measurement round was conducted on November 2, 2006. A Site land survey was completed by Joseph Lu Engineers on December 14, 2006.

3.1 GENERAL FIELD ACTIVITIES

The following subsections describe the activities conducted during the field investigation, including mobilization, health and safety, and decontamination.

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. Field investigations were conducted on-site from October 9 through October 13, 2006 and also from November 2 to November 3, 2006.

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 photoionization detector (PID) readings, no upgrades on personal protection were warranted.

3.1.3 Decontamination

Sampling methods and equipment for this field program were chosen to minimize investigation derived wastes 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 before and after the collection of each sample.

Non disposable sampling equipment was decontaminated by scrubbing the sample collection equipment with potable water and Liquinox, rinsing with potable water, rinsing with deionized water, and then allowing the equipment to air dry. Decontamination fluids were released on-site to the ground surface in the area of decontamination, allowing the liquid to infiltrate into the soil and

not run off-site. Decontamination fluids did not exhibit visual or olfactory evidence of contamination, so fluids were not containerized for off-site disposal.

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 were detected). Therefore drill cuttings and purge water resulting from the investigation were placed on the ground surface in the area of exploration and personal protective equipment and disposable sampling equipment were double bagged and disposed of as non-hazardous refuse.

3.2 EXISTING MONITORING WELL SAMPLING

Seven existing monitoring wells were sampled, six were presumed to be up gradient from the Site. Upgradient off-site wells sampled helped to assess Site groundwater conditions within the context of regional groundwater conditions. Groundwater samples were obtained from three existing groundwater wells (including MW-D13, MW-16U, and MW-16L on Figure 3.2) in the vicinity of West 17th Stret and Oakwood Avenue. Groundwater samples were collected from two existing groundwater wells (MW-7S and MW-7D) located in front of 238 Birchwood Street. A groundwater sample was collected from an existing well located in a parking lot northeast of the Site and east of College Avenue (labeled as MW-5 on Figure 3.2). Additionally, a groundwater sample was collected from an existing well located at the intersection of Elmwood Street and East 11th Street (labeled as MW-3 on Figure 3.2). These existing monitoring wells were sampled in accordance with the USEPA "low flow" guidance. Groundwater parameters including water levels, turbidity, temperature, dissolved oxygen, specific conductance, pH and redox potential were recorded in a field log and on a field data record. All low flow sampling requirements were met while sampling these five existing wells. Groundwater Field Data Records are available in Appendix C.

These samples were submitted to Chemtech Consulting Group, Inc. (Chemtech) and analyzed for Target Compound List (TCL) VOCs using USEPA OLM04.3 methods as described in the NYSDEC Analytical Services Protocol (ASP) of June 2000.

3.3 SURFACE SOIL SAMPLING

A surface soil sample was scoped in the Site Work Plan, but no obvious staining was noted and therefore a sample was not collected from the dirt basement floor of the Site building.

3.4 GEOPROBE® BORINGS AND SAMPLING

Field investigation activities included the drilling of Geoprobe® borings, the collection and analysis of groundwater, soil, and soil vapor samples, and the installation of microwells. Geoprobe® sampling was conducted for seven days during two separate events, from October 9 to October 13, 2006 and again from November 2 to November 3, 2006. 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 for assisting the NYSDEC in evaluating significant threat to public health and the environment as defined by 6 NYCRR Part 375 (NYS, 2006). Soil sample analyses were used to assess whether hazardous waste constituents are present in Site soils, and, if possible, confirm a source of chlorinated solvents. Soil vapor sampling results were used to evaluate whether VOCs present in soil and/or groundwater are migrating towards occupied buildings via vapor migration.

MACTEC used a Geoprobe® 66DT rubber-mounted track rig sampling device to collect groundwater, soil, and soil vapor samples to identify potential chlorinated solvents. The Geoprobe® pushed and/or hammered rods and probe tips into the subsurface for sample collection. A total of 21 borings were completed during this investigation, including 3 soil vapor borings and four microwells. A total of 31 groundwater samples, 5 soil samples and 3 soil vapor samples were collected.

MACTEC worked closely with the NYSDEC, the HTS Cleaners building owner, neighboring property owners, and utility companies while obtaining access to these exploration locations. Boring locations are shown on Figure 3.1 and 3.2 (GS locations correspond to GW locations). These locations were chosen to determine groundwater conditions upgradient and downgradient of, as well as adjacent to, the Site building. One of the borings, GW/GS-1, was completed in the vicinity of the reported former PCE above ground storage tank to determine if there had been spills at this location.

Subsurface Soil Sampling. Discrete subsurface soil samples were collected using a 4-foot long 2 inch diameter core sampler with an acrylic liner. Soil samples were collected continuously from the ground surface to five feet below the groundwater table. PID headspace readings were used to screen soil samples for the presence of VOCs as each soil sample was removed from the sample collection tube. One soil boring (SB-16) was selected for continuous soil sampling to 29 feet bgs, to better characterize site soils. Samples were described using the Unified Soil Classification System. The sample description and classification, VOC headspace reading, and boring observations were recorded on the Field Data Record, included in Appendix C. Based on the PID readings and physical evidence such as color or odor, five unsaturated soil samples were submitted to the laboratory for VOC analysis. Samples which exhibited the highest PID readings and physical evidence of contamination were selected for analysis. Soil samples were shipped to Chemtech for analyses of TCL VOCs using USEPA OLM04.3 methods as described in the NYSDEC ASP of June 2000, including calculation of % moisture. Off-site laboratory analysis included Category B deliverables.

Groundwater Sampling. Groundwater samples were collected using a small diameter stainless steel wire wound screen that was exposed to the aquifer, after being pushed to the desired depth interval. A peristaltic pump was used for the collection of discrete groundwater samples. A minimum of one tubing volume of water was purged and one set of parameters, including temperature, conductivity, pH, and turbidity, was collected prior to sampling. VOC samples were collected at a purge rate of 100 milliliters per minute, to minimize any potential volatilization.

To assess vertical extent of contamination, MACTEC attempted to collect groundwater samples from two locations in each boring, the water table and 10 feet into the water table (10 feet below the first sample). Each boring was advanced to at least 10 feet into the water table, which was encountered from 17 to 19 feet bgs.

Due to the soil formation, the actual number of samples per boring and sample collection depths varied. Only one groundwater sample was collected from four borings (GW-8, GW-9, and GW-13). No groundwater samples could be collected from GW-16. Two groundwater samples were collected at varying depths at all other boring locations. Groundwater samples were shipped to Chemtech for analyses of TCL VOCs using USEPA OLM04.3 Methods as described in the NYSDEC ASP of June 2000. In addition, one sample from boring GW-1 was collected for semi-

volatile organic compound (SVOC) analyses using USEPA OLM04.3 Methods. Two additional SVOC samples were scoped in the work plan, but could not be collected from the designated locations due to the low groundwater recharge rate. Off-site laboratory analysis included Category B deliverables.

Microwell Installation. To determine groundwater flow direction at the Site, four Geoprobe® borings were fitted with one-inch diameter microwells (GW-2, GW-5, GW-7 and GW-18). Microwell locations are shown on Figure 3.1. Microwell GW-2 was installed in the blacktop on the southwest corner of the site property. The second microwell, GW-5, was installed in the blacktop on the southeast corner of the site property. The third microwell, GW-7, was installed in the right of way (ROW) off West 14th Street, in front of Key West Tanning Salon. The fourth microwell, GW-18, was installed in the ROW off West 14th Street, due north of the Puppy Palace.

Groundwater was encountered at approximately 19 feet bgs. The one-inch diameter microwells were installed after groundwater samples were collected from each boring. The microwells were installed as piezometers and used primarily for water level measurements. Microwells were constructed with schedule 40 polyvinyl chloride, with 10 foot lengths of 0.01-inch machine slotted well screens. The well screens were set across the water table to collect surface water measurements and determine groundwater flow. The wells were constructed with a # 0 sand pack or the native soil backfill and sealed at the ground surface with cement. The wells were completed with a locking cap and a six inch flush mount cover. The wells were developed for a minimum of twenty minutes with a peristaltic pump to clean the screen and determine if the wells were conductive with groundwater. Well construction diagrams are included in Appendix C

Soil Vapor Sampling. Based on proximity to nearby residences and/or businesses, and discussions with the NYSDEC, three soil vapor samples were collected (GV-1, GV-2, GV-3) and used to evaluate the potential vapor migration of contaminants from the groundwater (Figure 3.1).

The Geoprobe® rods were pushed to 9 feet bgs, anticipated to be below the rain infiltration line, but above the water table fringe zone. Soil vapor was collected above the water table to give an indication of the possible vapor migration from potentially contaminated groundwater.

Soil vapor samples were collected from the Geoprobe® points using the Geoprobe® PRT system. To sample with the Geoprobe® PRT system, a specialized point was attached to the end of the Geoprobe® rods. The PRT point was exposed to the soil by allowing a disposable point to drop off the bottom of the rods while pulling the rods up 0.5 feet (after having been driven to the desired sampling depth). The PRT point allows ¼-inch tubing to be threaded directly to the bottom of the rods, for a small discrete sample point. The tubing was run to the surface and connected directly to the sample collection device. The outside of the rods were sealed at the ground surface with pre-hydrated bentonite. Approximately 2 liters of soil vapor, plus the volume of the tubing, was purged at a rate of 400 ml/min using 580B OVM PID pump before collecting samples. During the soil vapor purge, vapors were screened using a PID. In addition, helium leak tests were conducted on a subset of the Region 8 Dry Cleaners Group 2 Sites soil vapor samples to ensure samples were representative of sub-surface conditions and not outdoor ambient air. Helium tests were conducted by encapsulating the sample point with a bucket sealed to the ground surface with bentonite. The encapsulated area was filled with helium. The soil vapor sample port was tested for helium breakthrough with a portable monitoring device both before and after collection of the soil vapor sample. No sample had greater than 10 percent of the tracer vapor breakthrough. The soil vapor samples were collected with one-liter SUMMA®-type canisters with flow valves (set to approximately 30 minutes per sample). Flow into the canisters was less than 0.1 liters per minute. Samples were sent to Chemtech for VOC analysis by USEPA Method TO-15.

3.5 BASEMENT AIR SAMPLING

Based on site observations during the field program, one basement air sample was collected. Because the basement had a dirt floor this sample is considered equivalent to a sub-slab sample, but since no additional first floor samples were collected, analytical results were compared to indoor air guidance values. The sample was collected in a 6-liter SUMMA®-type canister with a 24-hour flow valve. The time of sample collection, canister vacuum (in inches Hg), weather conditions, and barometric pressure was recorded in the field log book.

Approximately 24 hours after commencing sample collection, the flow valves were shut off. The time, remaining vacuum in the canister, and barometric pressure was noted in the field log book. The sample was shipped to Chemtech for analyses of VOCs via USEPA Method TO-15. Laboratory analysis included Category B deliverables.

3.6 WATER LEVEL SURVEY

Water level measurements were collected November 2, 2006. The water level round consisted of measuring water levels at the four newly installed microwells. Well caps were opened and the wells were allowed to equilibrate to atmospheric pressure. The depths of the wells as well as the depth to water were measured using a conductivity probe from the top of well risers. Groundwater table elevations were calculated from the well riser elevations (subsection 3.6). Well information and groundwater measurements are presented in Table 3.1.

3.7 SITE SURVEY

After completion of field sampling activities LU Engineers surveyed the Site, its surrounding area and microwell locations. A base map of the Site was created indicating locations of microwells and all other media sampling locations. Horizontal locations were tied to the NYS Plane Coordinate System using North American Datum of 1983. The Site plan provided horizontal locations of all relevant Site features, which included surrounding homes and businesses at a scale of 1 inch to 50 feet. Relevant features included, but are not limited to all structures, buildings, roads, fences, new monitoring wells, marked underground utilities, fire plugs, and power poles.

Vertical elevations of the four new microwells and five existing monitoring wells were tied to msl, North Atlantic Vertical Datum of 1988, and measured to an accuracy of 0.01 feet. Horizontal well measurements are accurate of 0.1 ft. The base map was used to accurately locate all Geoprobe® sample points, microwells, and all other media sampling locations. Temporary sample points were located using a Trimble global positioning system. Sample points are included on Figure 3.1 and 3.2, and the Joseph Lu Engineers survey map is included in Appendix D.

4.0 DATA ASSESSMENT

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

4.1 ANALYTICAL RESULTS

Soil groundwater and indoor air analytical results were compared to appropriate standards, criteria or guidelines (SCGs). There are no exterior soil vapor standards or guidance values, but if detected concentrations exceeded the New York State Department of Health (NYSDOH) sub-slab soil vapor guidance values recommended for mitigation, these concentrations were noted as potential concerns. Reported concentrations of individual analytes indicating contravention of standards or guidelines are summarized in the following sections, and noted on Tables 4.1, 4.2, and 4.3.

A Data Usability Summary Report (DUSR) was completed in accordance with the NYSDEC's Guidance for the Development of DUSRs (NYSDEC, 1997). This report and complete analytical results, including tentatively identified compounds (TICS), are presented in Appendix E. 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, D and/or an R. Compounds were qualified J if the concentration listed was an estimated value, which was less than the specified minimum reporting limit but greater than 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 OLM04.3 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. A list of Chemtech's instrument reporting limits for the OLM04.3 Method is included in Appendix E.

Compounds qualified B indicated 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 indicated 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 indicated that the compound result was rejected during data validation. Results were deemed unusable and should not be used in the characterization of the site.

Analytical results were compared to the SCGs described below.

Soil Samples. Analytical results were compared to NYS Soil SCGs. Soil SCGs are based on the NYSDEC's Soil Cleanup Objectives (SCOs) from 1) 6 NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives for Unrestricted Use, and, if not listed in (1), then 2) "Technical and Administrative Guidance Memorandum 4046 (NYSDEC, 1994); Determination of SCOs and Cleanup Levels".

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).

Soil Vapor/Indoor Air Samples. There are currently no SCGs for concentrations of compounds in exterior soil vapor. Exterior soil vapor samples were collected to determine whether this environmental medium is contaminated, characterize the nature and extent of contamination, and identify possible sources of the contamination. The one basement air sample, although considered a sub-slab sample due to the presence of a dirt floor, was compared to the NYSDOH indoor air guidance values (currently promulgated for carbon tetrachloride, 1,l-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, l,l,l-trichloroethane, trichloroethene and vinyl chloride)(NYSDOH, 2007).

4.1.1 Soil Sample Results

A summary of target VOCs detected in soil samples is presented in Table 4.1. VOCs were not detected in soil samples above the NYSDEC Soil SCGs.

Trace concentrations of one or more of the following compounds were found at sample locations GS-3 and GS-16; 2-butanone, ethylbenzene, methylene chloride, o-xylene, PCE, toluene, and m,p-xylene.

4.1.2 Groundwater Sample Results

A summary of target VOCs detected in groundwater samples collected is presented in Table 4.2 and maximum detections of PCE and TCE per boring are presented on Figure 4.1. Because PCE is a common dry cleaning solvent and it was reportedly used at the Site, PCE results are presented on Figure 4.1, even though their were no PCE detections.

TCE was detected at sixteen of the seventeen Geoprobe® groundwater boring locations and all seven of the existing monitoring well locations. TCE detections range from 4.3 J µg/L (GW-11) to 68 J µg/L (MW-5). TCE concentrations in groundwater exceed the NYS Class GA groundwater standard for TCE of 5 µg/L at fifteen of the seventeen groundwater boring locations and all of the existing monitoring well locations (see Table 4.1).

Cis-1,2-dichloroethene was detected at sixteen of the seventeen Geoprobe® groundwater boring locations and four of the seven existing monitoring well locations. Cis-1,2-dichloroethene detections range from 0.88 J µg/L (MW-3) to 27 µg/L (GW-7). Cis-1,2-dichloroethene concentrations in groundwater exceed the NYS Class GA groundwater standard of 5 µg/L at thirteen of the seventeen soil boring locations and three of the five existing monitoring well locations (see Table 4.1).

Chloromethane was detected at one of the seventeen Geoprobe® groundwater boring locations (GW-11). Of the two samples from this boring, the sample with the highest detection (6.7 J µg/L) (collected at thirty-one feet) exceeded the NYS Class GA groundwater standard of 5 µg/L (see Table 4.1).

Vinyl chloride was detected at two of the seven existing monitoring well locations. Vinyl chloride was detected at location MW-16L at 5.5 J µg/L, which exceeds the NYS Class GA groundwater standard of 2 µg/L (see Table 4.1).

Trace concentrations of one or more of the following compounds were detected in samples GW-6, GW-11, GW-12, and GW-15; 2-butanone, acetic acid, acetone, benzene, chloroform, methyl cyclohexane, methylene chloride, and toluene. All results were below the NYS Class GA groundwater standards designated for these compounds (see Table 4.1).

One semi-volatile sample was collected at location GW-1. Target compound SVOCs were not detected. Because there were no SVOC detections, this sample is not presented on Table 4.1, but is included in Appendix E.

Several TICs were also detected in the VOC and SVOC groundwater samples collected. TICs are reported in Appendix E.

4.1.3 Soil Vapor Sample Results

A summary of target VOCs detected in soil vapor samples is presented in Table 4.3.

The NYSDOH has promulgated guidance values for soil vapor for TCE, PCE, 1,1,1-trichloroethane (1,1,1-TCA), carbon tetrachloride, 1,1,-dichlorethene, cis-1,2-dichloroethene, and vinyl chloride. These guidance values are only applicable when evaluating sub-slab soil vapor samples in relation to indoor air concentrations, and not exterior soil vapor samples.

Although no exterior soil vapor criteria have been promulgated PCE, TCE, and 1,1,1-TCA detected in soil vapor samples were compared to the NYSDOH guidelines for sub-slab soil vapor recommending mitigation without need to consider indoor air concentrations. All results for PCE, TCE, and 1,1,1-TCA were detected at trace levels and thus well below sub-slab vapor recommendations. However, elevated concentrations of benzene, cyclohexane, heptane, hexane, and propylene were reported at sample locations GV-01 and GV-03 (see Table 4.3).

4.1.4 Basement Air Sample Results

A summary of target VOCs detected in the basement air sample is presented in Table 4.4.

The NYSDOH has promulgated guidance values for soil vapor/indoor air for TCE, PCE, 1,1,1-TCA, carbon tetrachloride, 1,1,-dichlorethene, cis-1,2-dichloroethene, and vinyl chloride. These guidance values are only applicable when evaluating sub-slab soil vapor samples in relation to indoor air concentrations, and not solely sub-slab or indoor air samples.

Low concentrations of several VOCs were detected in the basement air sample (see Table 4.4). Of the analytes with guidance values, only PCE was detected. The detected concentration was 1.77 $\mu g/M^3$ compared to a guidance indoor air value of 100 $\mu g/M^3$.

4.2 POTENTIOMETRIC SURFACE MAP

The microwell survey and depth to water measurements were used to calculate groundwater table elevations and create a potentiometric surface water map (Figure 4.2). Microwell survey and water elevation data are presented in Table 3.1. Depth to water across the survey area varied from approximately 17 feet bgs to 23 feet bgs. Groundwater elevations from MW-16U to GW-2 varied from 858.78 feet above msl, to 855.51 feet above msl. The groundwater table gradient appears to be relatively flat, varying by 3.27 feet in elevation over 1150 feet of distance, or 0.003 ft/ft (MW-16U to GW-2). Although groundwater measurements from Site microwells and MW-3, located approximately 1300 feet east/southeast of the Site, would appear to indicate that these locations are along the same gradient, MW-3 is interpreted to be cross-and slightly down gradient of the Site based on regional groundwater measurements. Interpreted groundwater flow, based on site groundwater elevations, as well as groundwater elevations measured at the other Region 8 Dry Cleaner's - Group II sites in the Elmira Valley, is to the south/southeast, towards the Newtown Creek.

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 residential neighborhood that is serviced by public water. Low concentrations of TCE (<10.3 µg/L) have been detected in the City of Elmira's Sullivan Street public supply well, located approximately 1.7 miles southeast of the Site. Groundwater measurements collected at the Site and in the Newtown Creek Valley indicate that groundwater flow is generally to the south south-east towards this supply well.
2) Chlorinated solvents were not detected above the NYSDEC Soil Cleanup objectives in the five soil samples collected. PCE, the only chlorinated solvent detected, was detected at a concentration 1000 times below the NYSDEC SCO for PCE. This detection was in a sample collected from the vicinity of the reported former PCE above ground storage tank.
3) PCE, a common dry cleaning solvent was reportedly used at the former dry cleaner at the Site (Schmidt, 2006). PCE was not detected in any of the groundwater samples collected, including from GW-1, which was completed in the vicinity of the reported location of the PCE above ground storage tank. As stated in Finding 2, PCE was detected at concentrations 1000 times below the SCO for PCE in the vicinity of the PCE storage tank. Based on this information, reported historic use of PCE does not appear to have resulted in soil or groundwater contamination at concentrations that would indicate a potential concern.
4) TCE, a NYS listed hazardous waste, was detected at locations at and adjacent to the Site at concentration up go 38 J µg/L in comparison to the NYS standard of 5 µg/L. The highest concentration detected was 68 µg/L in a sample from monitoring well MW-5, located approximately 400 feet northeast of the Site, which is up, or slightly cross-gradient of the Site. TCE was detected at concentrations up to 26 µg/L at location GW-9, located approximately 700 feet upgradient of the Site. Concentrations of TCE detected at the Site, upgradient of the Site, and downgradient of the Site, as well as slightly higher concentrations of TCE detected slightly up and cross-gradient of the Site, indicate that the Site is not likely a contributing source to the TCE detected in the Newtown Creek Aquifer, and thus in the city supply wells.
5) Exterior soil vapor samples and the basement indoor air sample do not indicate vapor intrusion as a potential issue at the Site.

Data Gaps.

1. The source of the TCE detected in groundwater at and in the vicinity of the Site is assumed to originate from the Purolator Products Co. (formerly Facet Enterprises Superfund Site), Site # 808001, located approximately 1500 feet upgradient of the Site, but this has not been confirmed.

6.0 REFERENCES

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TABLES

Table 3.1: Monitoring Well Information and Water Level Data

Location ID	Elevation Ground	Elevation (TOC)	Elevation (TOR)	Well Depth (feet BTOR) (12/06)	Depth to Water (feet BTOR) (11/02/2006)	Groundwater Elevation (11/02/2006)
MW-3	873.67	873.67	873.67	23.65	18.00	855.67
MW-D13	882.07	882.07	881.80	31.50	22.91	858.89
MW-5	878.92	881.62	881.56	32.80	25.46*	856.10*
MW-16L	880.83	880.83	880.43	32.65	21.65	858.78
MW-16U	880.87	880.87	880.09	23.28	21.31	858.78
GW-2	875.28	875.28	874.92	25.70	19.41	855.51
GW-5	872.84	872.84	872.47	22.28	17.05	855.42
GW-7	875.54	875.54	875.31	21.50	19.17	856.14
GW-18	875.67	875.67	875.27	27.42	19.74	855.53

Notes:
Wells surveyed by Joseph Lu Engineers on December 14, 2006.
Elevations in feet above mean sea level, using North Atlantic Vertical Datum of 1988.
Water level measurements collected by MACTEC Engineering.
TOC - Top of Casing
TOR - Top of Riser
BTOR - Below Top of Riser
* = Measured on 10/11/06

	Location	GS-1		GS-3		GS-6		GS-14		GS-16	
	Sample Date	10/11/2006		10/11/2006		10/12/2006		10/9/2006		10/9/2006	
	Sample ID	HTGS00100801XX		HTGS00300501XX		HTGS00600101XX		HTGS01400301XX		HTGS01601001XX	
	Sample Depth (ft bgs)	8-10		5-7		1-3		3-5		10-12	
	Qc Code	FS		FS		FS		FS		FS	
Paraeter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	120	58	U	57	U	61	U	59	U	**6.1**	**J**
Ethyl benzene	1000	12	U	**1.4**	**J**	12	U	12	U	11	U
Methylene chloride	50	12	U	**1.5**	**J**	12	U	12	U	11	U
o-Xylene	260	12	U	**1.4**	**J**	12	U	12	U	11	U
Tetrachloroethene	1300	12	U	**1.2**	**J**	12	U	12	U	11	U
Toluene	700	12	U	**1.3**	**J**	12	U	12	U	11	U
Xylene, m/p	260	12	U	**4.4**	**J**	12	U	12	U	11	U
Percent Solids (%)	NA	**86**		**87**		**81**		**85**		**93**	

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Percent Solids analyzed by EPA Merhod 160.3
Results in microgram per kilogram (µg/kg)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value

Criteria = Values from Subpart 375-6.8(a)
Unrestricted Use Soil Cleanup, "Remedial
Program Soil Clean-up Objectives"
(NYSDEC, 2006)

	Location	GW-1		GW-1		GW-2		GW-2		GW-3	
	Sample Date	10/11/2006		10/11/2006		10/10/2006		10/10/2006		10/11/2006	
	Sample ID	HTGW00102501XX		HTGW00103501XX		HTGW00202301XX		HTGW00203301XX		HTGW00302101XX	
	Sample Depth (ft bgs)	25		35		23		33		21	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	50*	50	U	50	UJ	50	UJ	50	UJ	50	UJ
Acetic acid, methyl ester	NA	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Acetone	50*	50	U	50	UJ	50	UJ	50	UJ	50	UJ
Benzene	1	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Chloroform	7	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Chloromethane	5	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Cis-1,2-Dichloroethene	5	**10**		**9.5**	**J**	**5.4**	**J**	**9.7**	**J**	**7.1**	**J**
Methyl cyclohexane	NA	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Methylene chloride	5	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Trichloroethene	5	**24**	**J**	**16**	**J**	**14**	**J**	**16**	**J**	**14**	**J**
Vinyl chloride	2	10	U	10	UJ	10	UJ	10	UJ	10	UJ

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	GW-3		GW-4		GW-4		GW-5		GW-5	
	Sample Date	10/11/2006		10/10/2006		10/10/2006		10/10/2006		10/10/2006	
	Sample ID	HTGW00303101XX		HTGW00402101XX		HTGW00403101XX		HTGW00502101XX		HTGW00503101XX	
	Sample Depth (ft bgs)	31		21		31		21		31	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	Criteria	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
2-Butanone	50*	50	U	50	U	50	U	50	U	50	UJ
Acetic acid, methyl ester	NA	10	U	10	U	10	U	10	U	10	UJ
Acetone	50*	50	U	50	U	50	U	50	U	50	UJ
Benzene	1	10	U	10	U	10	U	10	U	10	UJ
Chloroform	7	10	U	10	U	10	U	10	U	10	UJ
Chloromethane	5	10	U	10	U	10	U	10	U	10	UJ
Cis-1,2-Dichloroethene	5	**11**		**13**		**18**		**18**	**J**	**18**	**J**
Methyl cyclohexane	NA	10	U	10	U	10	U	10	U	10	UJ
Methylene chloride	5	10	U	10	U	10	U	10	U	10	UJ
Toluene	5	10	U	10	U	10	U	10	U	10	UJ
Trichloroethene	5	**23**	**J**	**34**	**J**	**38**	**J**	**28**	**J**	**32**	**J**
Vinyl chloride	2	10	U	10	U	10	U	10	U	10	UJ

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	GW-5		GW-6		GW-6		GW-7		GW-7	
	Sample Date	10/10/2006		10/12/2006		10/12/2006		10/12/2006		10/12/2006	
	Sample ID	HTGW00503101XD		HTGW00602301XX		HTGW00603301XX		HTGW00702301XX		HTGW00702301XD	
	Sample Depth (ft bgs)	31		23		33		23		23	
	Qc Code	FD		FS		FS		FS		FD	
Parameter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	50*	50	UJ	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	NA	10	UJ	10	U	10	U	10	U	10	U
Acetone	50*	50	UJ	50	U	50	U	50	U	50	U
Benzene	1	10	UJ	10	U	10	U	10	U	10	U
Chloroform	7	10	UJ	10	U	**1.2**	**J**	10	U	10	U
Chloromethane	5	10	UJ	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene	5	**16**	**J**	**20**	**J**	**19**		**27**		**25**	
Methyl cyclohexane	NA	10	UJ	10	U	10	U	10	U	10	U
Methylene chloride	5	10	UJ	10	U	**0.81**	**J**	10	U	10	U
Toluene	5	10	UJ	10	U	10	U	10	U	10	U
Trichloroethene	5	**27**	**J**	**31**	**J**	**30**		**40**		**38**	
Vinyl chloride	2	10	UJ	10	U	10	U	10	U	10	U

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	GW-7		GW-8		GW-9		GW-10		GW-10	
	Sample Date	10/12/2006		10/12/2006		11/3/2006		10/11/2006		10/11/2006	
	Sample ID	HTGW00703301XX		HTGW00802601XX		HTGW00902701XX		HTGW01002501XX		HTGW01003101XX	
	Sample Depth (ft bgs)	33		26		27		25		31	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	50*	50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	NA	10	U	10	U	10	UJ	10	U	10	U
Acetone	50*	50	U	50	U	50	U	50	U	50	U
Benzene	1	10	U	10	U	10	U	10	U	10	U
Chloroform	7	10	U	10	U	10	U	10	U	10	U
Chloromethane	5	10	U	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene	5	**3.9**	**J**	**2**	**J**	**6.2**	**J**	**9.4**	**J**	**13**	
Methyl cyclohexane	NA	10	U	10	U	10	U	10	U	10	U
Methylene chloride	5	10	U	10	U	10	U	10	U	10	U
Toluene	5	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	**7.9**	**J**	**20**		**26**		**15**	**J**	**21**	**J**
Vinyl chloride	2	10	U	10	U	10	U	10	U	10	U

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	GW-11		GW-11		GW-12		GW-12		GW-13	
	Sample Date	10/12/2006		10/12/2006		10/12/2006		10/12/2006		11/3/2006	
	Sample ID	HTGW01102301XX		HTGW01103101XX		HTGW01202301XX		HTGW01203101XX		HTGW01302701XX	
	Sample Depth (ft bgs)	23		31		23		31		27	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	50*	**4**	**J**	**6.3**	**J**	**3.2**	**J**	**4.6**	**J**	50	UJ
Acetic acid, methyl ester	NA	**2.1**	**J**	10	U	10	U	10	U	10	UJ
Acetone	50*	50	U	50	U	50	U	**16**	**J**	50	UJ
Benzene	1	10	U	**0.8**	**J**	10	U	**0.84**	**J**	10	UJ
Chloroform	7	**1**	**J**	**1.1**	**J**	10	U	10	U	10	UJ
Chloromethane	5	**3.9**	**J**	**6.7**	**J**	10	U	10	U	10	UJ
Cis-1,2-Dichloroethene	5	**2.1**	**J**	**3**	**J**	**2.2**	**J**	**2.1**	**J**	10	UJ
Methyl cyclohexane	NA	10	U	10	U	10	U	**0.97**	**J**	10	UJ
Methylene chloride	5	10	U	10	U	10	U	10	U	10	UJ
Toluene	5	10	U	10	U	10	U	**1.3**	**J**	10	UJ
Trichloroethene	5	**4.3**	**J**	**4.8**	**J**	**8.3**	**J**	**11**	**J**	10	UJ
Vinyl chloride	2	10	U	10	U	10	U	10	U	10	UJ

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	GW-14		GW-14		GW-15		GW-15		GW-17	
	Sample Date	10/9/2006		10/9/2006		11/2/2006		11/2/2006		11/3/2006	
	Sample ID	HTGW01402501XX		HTGW01403501XX		HTGW01502501XX		HTGW01503401XX		HTGW01702101XX	
	Sample Depth (ft bgs)	25		35		25		34		21	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	Criteria	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
2-Butanone	50*	50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	NA	10	U	10	U	10	UJ	10	UJ	10	UJ
Acetone	50*	50	U	50	U	50	U	50	U	50	U
Benzene	1	10	U	10	U	10	U	10	U	10	U
Chloroform	7	10	U	10	U	**1.3**	**J**	**1.3**	**J**	10	U
Chloromethane	5	10	U	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene	5	**23**		**17**		**9.5**	**J**	**10**	**J**	**7**	**J**
Methyl cyclohexane	NA	10	U	10	U	10	U	10	U	10	U
Methylene chloride	5	10	U	10	U	10	U	10	U	10	U
Toluene	5	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	**9.1**	**J**	**15**		**35**		**42**		**47**	
Vinyl chloride	2	10	U	10	U	10	U	10	U	10	U

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	GW-17		GW-18		GW-18		MW-3		MW-5	
	Sample Date	11/3/2006		10/11/2006		10/11/2006		10/3/2006		10/11/2006	
	Sample ID	HTGW01703401XX		HTGW01802401XX		HTGW01803101XX		HTMW00301801XX		HTMW00503001XX	
	Sample Depth (ft bgs)	34		24		31		18		30	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	50*	50	U	50	UJ	50	U	50	U	50	UJ
Acetic acid, methyl ester	NA	10	UJ	10	UJ	10	U	10	U	10	UJ
Acetone	50*	50	U	50	UJ	50	U	50	U	50	UJ
Benzene	1	10	U	10	UJ	10	U	10	U	10	UJ
Chloroform	7	10	U	10	UJ	10	U	10	U	10	UJ
Chloromethane	5	10	U	10	UJ	10	U	10	U	10	UJ
Cis-1,2-Dichloroethene	5	**9.7**	**J**	**25**	**J**	**22**		**0.88**	**J**	**13**	**J**
Methyl cyclohexane	NA	10	U	10	UJ	10	U	10	U	10	UJ
Methylene chloride	5	10	U	10	UJ	10	U	10	U	10	UJ
Toluene	5	10	U	10	UJ	10	U	10	U	10	UJ
Trichloroethene	5	**53**		**45**	**J**	**40**	**J**	**25**		**68**	**J**
Vinyl chloride	2	10	U	10	UJ	10	U	10	U	10	UJ

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	MW-D13		MW-16U		MW-16L		MW-7S		MW-7D	
	Sample Date	10/3/2006		10/4/2006		10/4/2006		5/10/2007		5/9/2007	
	Sample ID	HTMWD1302601XX		HTMW16U02201XX		HTMW16L03001XX		HTMW07S02502XX		HTMW07D03502XX	
	Sample Depth (ft bgs)	26		22		30		25		35	
	Qc Code	FS		FS		FS		FS		FS	
Parameter	**Criteria**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
2-Butanone	50*	50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	NA	10	U	10	U	10	U	10	UJ	10	UJ
Acetone	50*	50	U	50	U	50	U	50	UJ	50	UJ
Benzene	1	10	U	10	U	10	U	10	U	10	U
Chloroform	7	10	U	10	U	10	U	10	U	10	U
Chloromethane	5	10	U	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene	5	10	U	**6.4**	**J**	**9.8**	**J**	10	U	10	U
Methyl cyclohexane	NA	10	U	10	U	10	U	10	U	10	U
Methylene chloride	5	10	U	10	U	10	U	10	UJ	10	U
Toluene	5	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	**15**		**11**		**10**		**5.5**	**J**	**5.9**	**J**
Vinyl chloride	2	10	U	**0.97**	**J**	**5.5**	**J**	10	U	10	U

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

	Location	MW-7D	
	Sample Date	5/9/2007	
	Sample ID	HTMW07D03502XD	
	Sample Depth (ft bgs)	35	
	Qc Code	FD	
Parameter	**Criteria**	**Result**	**Qualifier**
2-Butanone	50*	50	U
Acetic acid, methyl ester	NA	10	UJ
Acetone	50*	50	UJ
Benzene	1	10	U
Chloroform	7	10	U
Chloromethane	5	10	U
Cis-1,2-Dichloroethene	5	10	U
Methyl cyclohexane	NA	10	U
Methylene chloride	5	10	U
Toluene	5	10	U
Trichloroethene	5	**6.4**	**J**
Vinyl chloride	2	10	U

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method OLM04.3.
Results in microgram per liter (µg/L)
ft bgs = feet below ground surface
QC Code:
FS = Field Sample
FD = Field Duplicate
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
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 Guidance Values
Highlighted results exceed associated criteria

Table 4.3: Exterion Soil Vapor Results

Location	GV-01		GV-02		GV-03	
Sample Date	10/13/2006		10/13/2006		10/13/2006	
Sample ID	HTGV00100801XX		HTGV00200801XX		HTGV00300801XX	
Task Name	Remedial Investigation		Remedial Investigation		Remedial Investigation	
Qc Code	FS		FS		FS	
Paraeter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	**30.5**		1.09	U	27.74	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	**29.7**		**4.28**		39.01	U
1,2,4-Trimethylbenzene	**14.5**		0.98	U	25.03	U
1,3,5-Trimethylbenzene	**6.38**		0.98	U	25.03	U
2-Butanone	**14.5**		**4.12**		29.45	U
2-Propanol	0.98	U	**2.5**		24.54	U
4-Ethyltoluene	**7.95**		0.98	U	25.03	U
Acetone	0.95	U	**30.4**		23.72	U
Benzene	**47.7**		**2.81**		**76.5**	**D**
Carbon disulfide	**13.2**		**5.97**		15.85	U
Chloroethane	**0.69**		0.53	U	13.56	U
Chloroform	**1.75**		0.97	U	24.82	U
Chloromethane	**2.49**		**0.57**		10.43	U
Cyclohexane	**311**	**D**	**1.81**		**265**	**D**
Dichlorodifluoromethane	**2.47**		**2.28**		25.24	U
Ethyl benzene	**12.2**		0.87	U	22.11	U
Heptane	**505**	**D**	**1.64**		**269**	**D**
Hexane	**1326**	**D**	**28.3**		**945**	**D**
Isooctane	0.93	U	**4.57**		23.78	U
Methylene chloride	**3.62**		**4.52**		34.76	U
o-Xylene	**2.69**		0.87	U	22.11	U
Propylene	**542**	**J**	**19.2**		**1626**	**D**
Tetrachloroethene	**4.35**		1.36	U	34.63	U
Toluene	**25.1**		**6.17**		**21.1**	**D**
Trichloroethene	**3.11**		1.07	U	**35.5**	**D**
Trichlorofluoromethane	**3.47**		**1.79**		28.58	U
Xylene, m/p	**77.8**		**2.08**		43.35	U

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method TO-15.
Results in microgram per cubic meter (µg/m3)
QC Code:
FS = Field Sample
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
D = Result is reported from a diluted analytical run
E = Result exceeded the calibration curve of the instrument

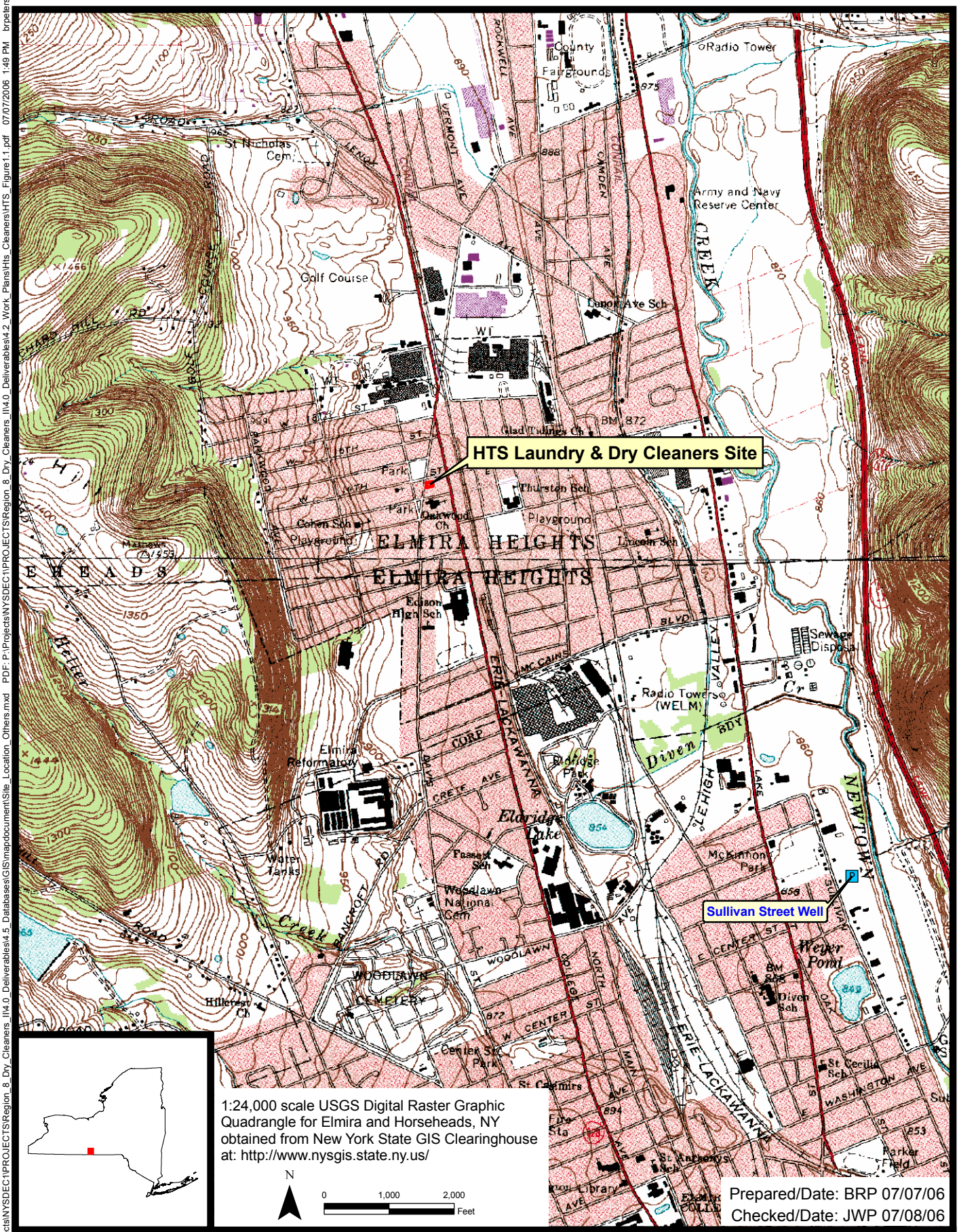
Table 4.4: Basement Air Results

	Location	BA-01	
	Sample Date	10/12/2006	
	Sample ID	HTSV001XXX01XX	
	Task Name	Remedial Investigation	
	QC Code	FS	
Paraeter	**Guidance Value**	**Result**	**Qualifier**
1,1,2-Trichloro-1,2,2-Trifluoroethane	NA	**0.84**	
2-Butanone	NA	**1.09**	
Benzene	NA	**0.99**	
Carbon disulfide	NA	**0.44**	
Chloromethane	NA	**0.86**	
Cyclohexane	NA	**0.77**	
Dichlorodifluoromethane	NA	**2.28**	
Heptane	NA	**0.7**	
Hexane	NA	**4.99**	
Methylene chloride	NA	**17.8**	
Tetrachloroethene	100	**1.77**	
Toluene	NA	**6.51**	
Trichlorofluoromethane	NA	**1.74**	

Notes:
Only Detected Compounds shown.
Samples analyzed for VOCs by USEPA Method TO-15.
Results in microgram per cubic meter (µg/m3)
QC Code:
FS = Field Sample

Guidance Value = Indoor air guidance value from the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Final, October 2006, and the Letter from Gary A. Litman, Director, Bureau of Environmental Exposure Investigation, New York State Department of Health, to Dale Desnoyers, Director, Division of Environmental Remediation, New York State Department of Environmental Conservation, RE: Soil Vapor/Indoor Air Matrices, June 25, 2007.
NA = Not available

FIGURES



NYSDEC
HTS Laundry & Dry Cleaners Site
Elmira, New York

MACTEC

Site Location
Project 3612-06-2059
Figure 1.1

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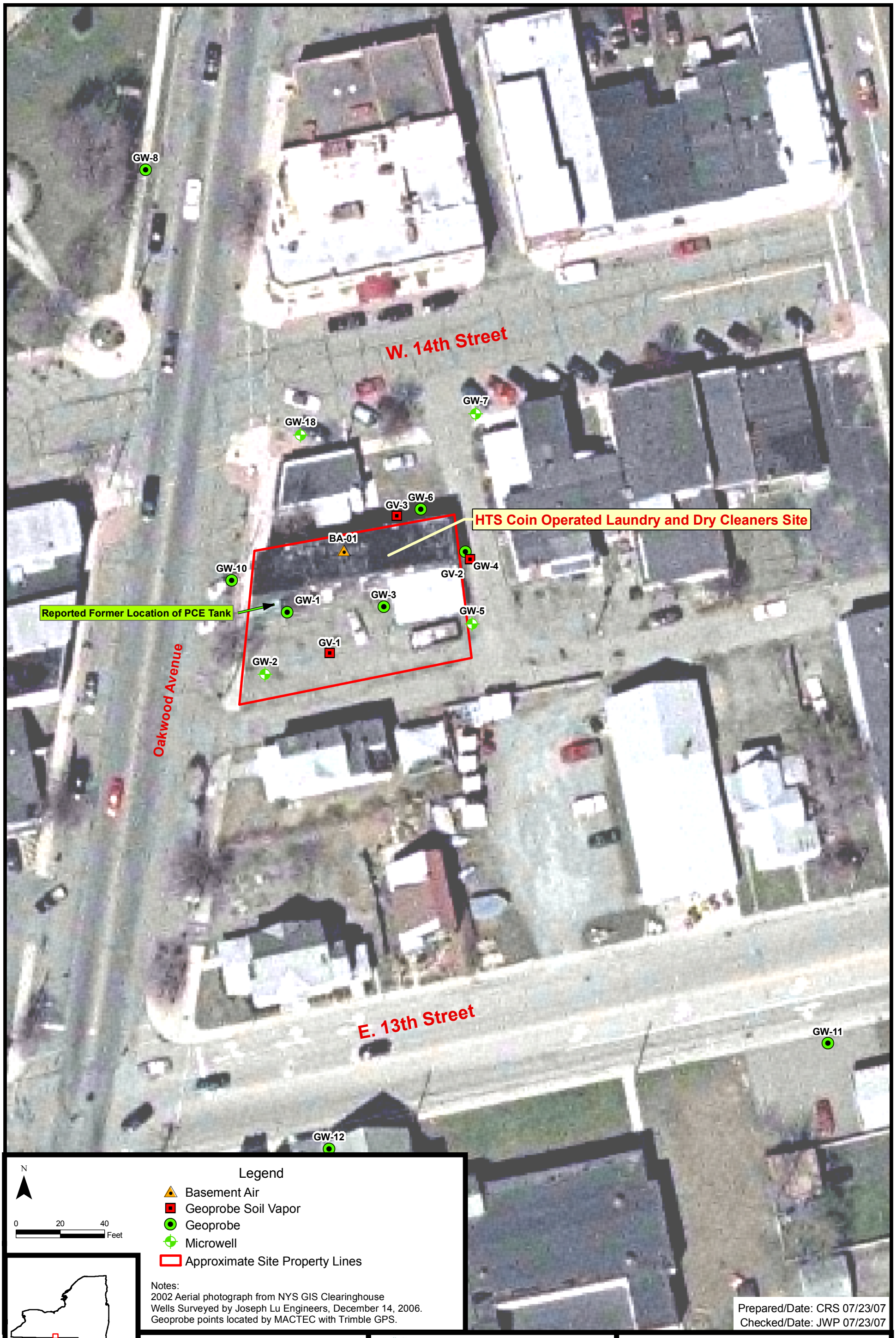

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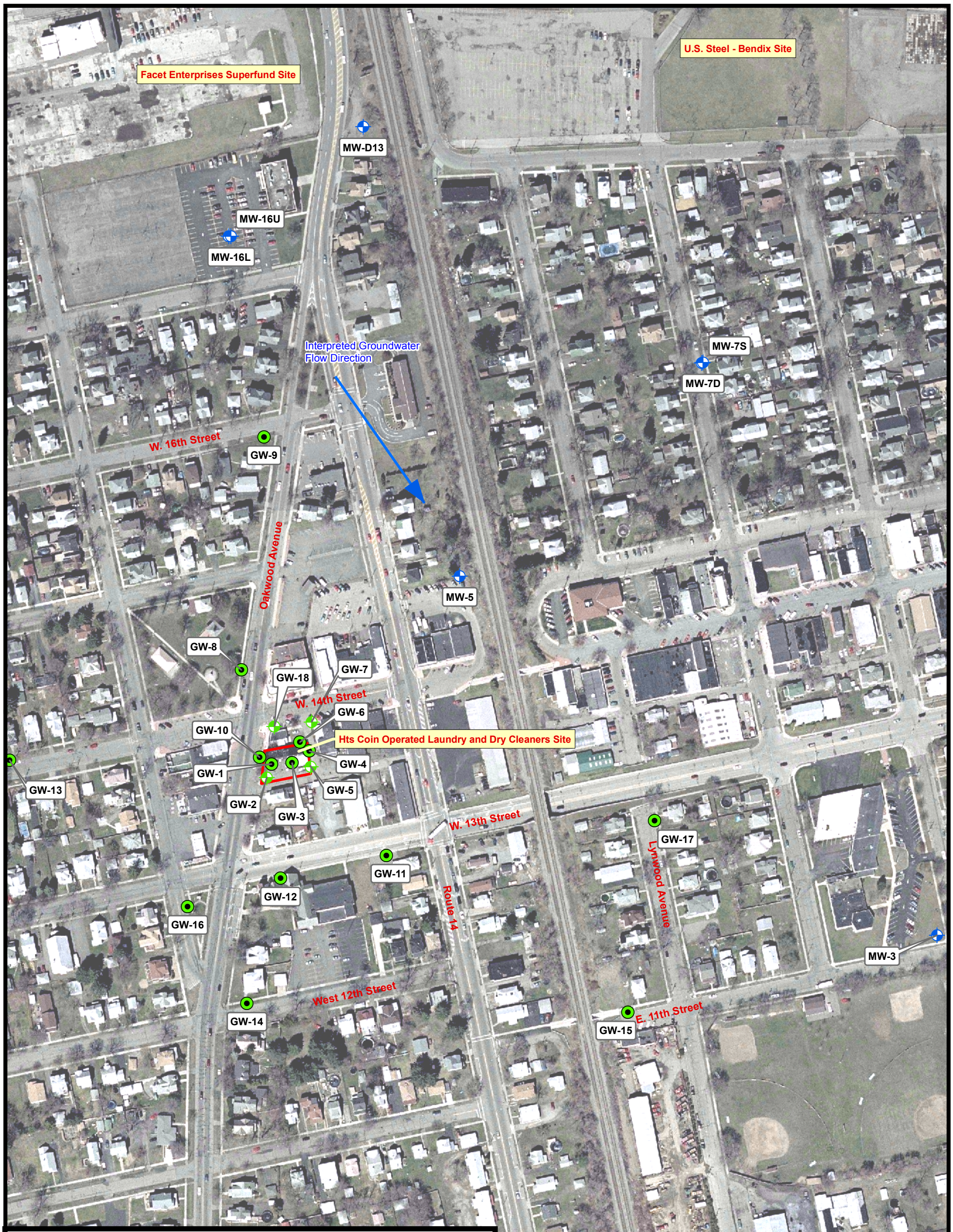

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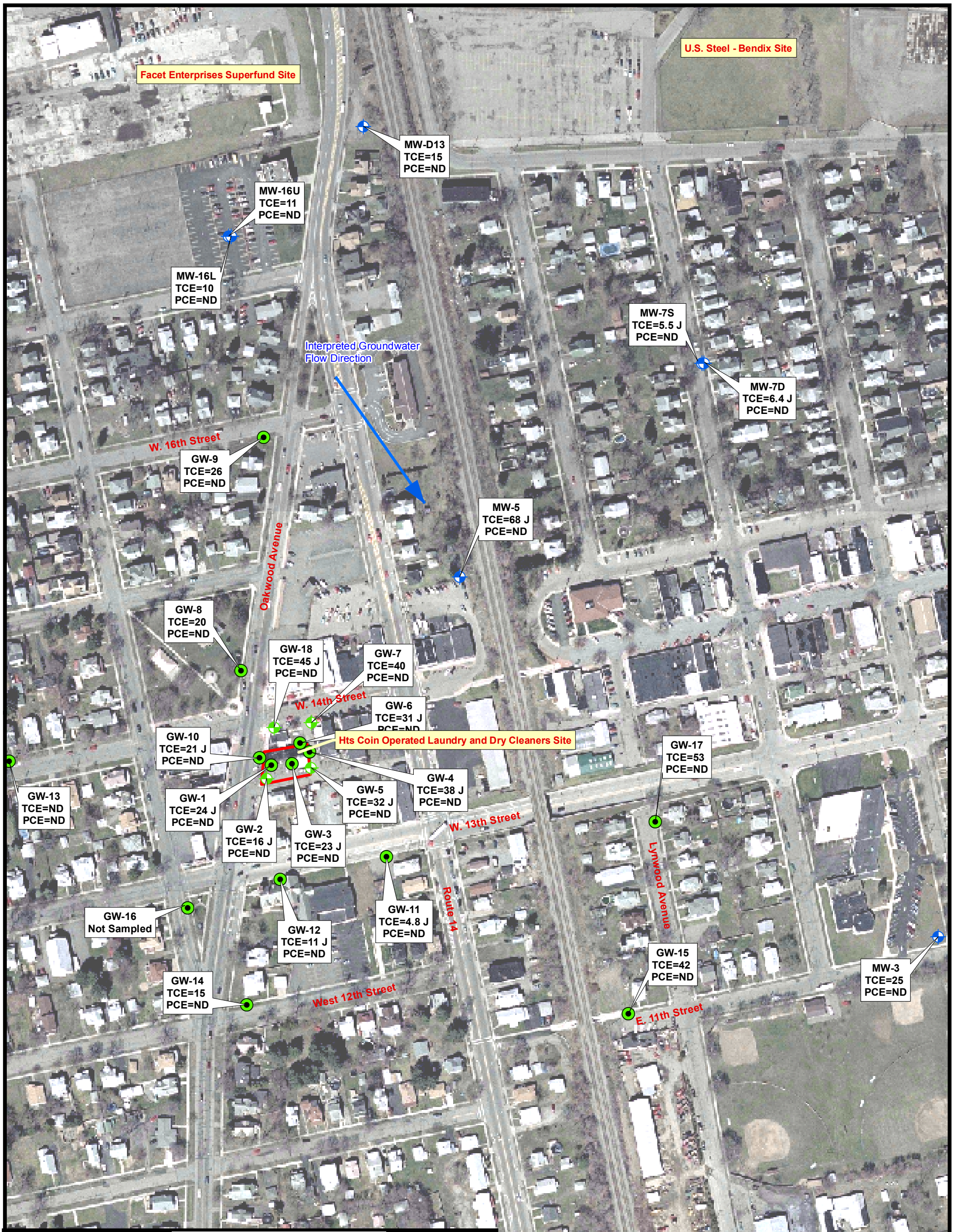

NYSDEC
HTS Dry Cleaners Site
Elmira Heights, NY

MACTEC

PCE and TCE Results in Groundwater

Project 3612-06-2059 Figure 4.1

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Facet Enterprises Superfund Site

U.S. Steel - Bendix Site

MW-D13
858.89

859

MW-16U
858.78

MW-16L
858.78

858

MW-7S and MW-7D
Not Measured

Interpreted Groundwater
Flow Direction

W. 16th Street

Oakwood Avenue

857

MW-5
856.10

856

GW-7
856.14

W. 14th Street

GW-18
855.53

Hts Coin Operated Laundry and Dry Cleaners Site

GW-5
855.42

GW-2
855.51

W. 13th Street

Lynwood Avenue

Route 14

MW-3
855.67

West 12th Street

E. 11th Street

855

N

0 100 200 Feet

Legend

- Microwell (groundwater elevation)
- Existing Monitoring Well (groundwater elevation)
- Interpreted Groundwater Contours
- Approximate Site Property Lines

Notes:
2002 Aerial photograph from NYS GIS Clearinghouse
Wells Surveyed by Joseph Lu Engineers, December 14, 2006.
Groundwater elevations in feet above mean sea level, NAVD 88.
Water levels collected by MACTEC in October and November 2006.
Groundwater contours approximated from measured elevations in the general Elmira Valley.

Prepared/Date: CRS 07/23/07
Checked/Date: JWP 07/23/07

NYSDEC
HTS Dry Cleaners Site
Elmira Heights, NY

MACTEC

Interpreted Groundwater Contours

Project 3612-06-2059 Figure 4.2

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APPENDIX A

SITE OWNER RECORDS

224 Oakwood ave

April 30, 2006

To Whom It May Concern:

What follows is a time line of when the property at 224 Oakwood Avenue, Elmira Heights, New York, contained dry cleaning machinery. As the times that the dry cleaning equipment in question was on this property were from thirty-eight years ago to about twenty-five years ago, some of this time frame is approximated.

January, 1968 -- The Heights Coin-Op and Dry Cleaning business opened at the above listed address. The business was a coin-operated laundramat, which contained two coin operated dry cleaning machines. These machines used Perchlorethylene as the cleaning agent. The owners of the business at that time recall that they purchased the Perchlorethylene from Brewer Oil Co. of Elmira, NY. They aver that the used cleaning agent was never dumped on the property nor disposed of through the sewer system.

1975 – At some time during 1975, the old coin operated machines were removed by Statewide Machinery of Rochester, NY, and replaced with one new machine that was not coin operated but was operated by the owners. This machine used Valclean as the cleaning agent.

1981 or 1982 – The dry cleaning machine was removed and dry cleaning was never done on this property again.

Notes on the cleaning agents used at 224 Oakwood Avenue, Elmira Heights, NY:

Perchlorethylene

Perchlorethylene is a derivative of tetrachlorethylene, which, along with trichlorethylene, also was, and is, used as an industrial solvent.

Valclean

Valclean is a chlorofluorocarbon based cleaning agent that was evaporated by the drying cycle of the dry cleaning machine.

Summary

The years of 1968 to 1975 were the only years that any chemical derivative of tetrachlorethylene was used.

Other possible sources of trichlorethylene or tetrachlorethylene in the vicinity of 224 Oakwood Avenue, Elmira Heights, NY

- Less than one-half mile to the North is the site of the former Bendix Corporation, which was designated as a toxic "brown field" at sometime around 1990.
- About five hundred yards to the West of the old Bendix site there was the American Bridge plant, which manufactured steel.
- About one mile to the south is the former Hardinge, Inc. plant, which manufactured machine tools.
- About one-half mile south of the former Hardinge plant was a General Electric Foundry that produced cast iron.
- Just to the North of the Sullivan Street site is Eastern Metal, which manufactures metal signs.
- One-half mile North of Eastern Metal is Image Now, a printing company that is on the site of the former Artistic Greetings that was also a major printer.
- There are numerous sites that housed auto dealerships or auto repair garages between Oakwood Avenue and Sullivan Street.
- There are numerous sites that housed commercial dry cleaning business between Oakwood Avenue and Sullivan Street.

This list contains businesses or industries that could have used trichlorethylene or tetrachlorethylene as part of their daily operations. The list contains only those businesses that I can recall as I sit here writing this – a thorough investigation would most likely discover more businesses that would have had reason to use these chemicals. Most of these companies were in business a lot longer than the dry cleaning operation at 224 Oakwood Avenue, Elmira Heights, NY, and many of them operated on a much larger scale.
These are the pertinent facts as I see them. Please call me if more information is needed.

Marty Schmidt
607-742-0005

Marty Schmidt
5/3/06

John Schmidt
607-733-4529


224 oakwood Ave
"Over" 1mile TO Site
MARK TWAIN COMMUNITY GOLF COURSE
ELMIRA HEIGHTS
ELMIRA CORRECTIONAL FACILITY
ELDRIDGE PARK
ELDRIDGE LAKE
ELMIRA
NATIONAL CEMETERY
WOODLAWN CEMETERY
MARK TWAIN'S GRAVE
WEST ELMIRA
ELMIRA FREE ACADEMY HIGH SCHOOL
ELMIRA COLLEGE
WEYER POND
NEWTOWN CREEK
DIVEN CREEK
LAKE CREEK
Well
LEGEND
STATE ROUTES
COUNTY HIGHWAYS
RAILROADS
AIRPORT
CEMETERY
COLLEGE
PARK
SCHOOL
0 0.25 0.5
Miles
© OCTOBER 1999
REVISED AUGUST 2003

APPENDIX B

SITE PHOTOGRAPHS

SITE PHOTOGRAPHS
HTS COIN OPERATED LAUNDRY & DRY CLEANERS SITE

View looking east at Site (Empire Mattress Store is former Dry Cleaners).

Looking northeast – Geoprobe drilling GW-2.

Looking southwest towards Site (gray 2-story building). Drilling GW-7.

Looking southeast at property (two story gray building).

Looking west into basement. Concrete base and metal supports on left side reportedly installed to support former dry cleaning equipment on floor above.

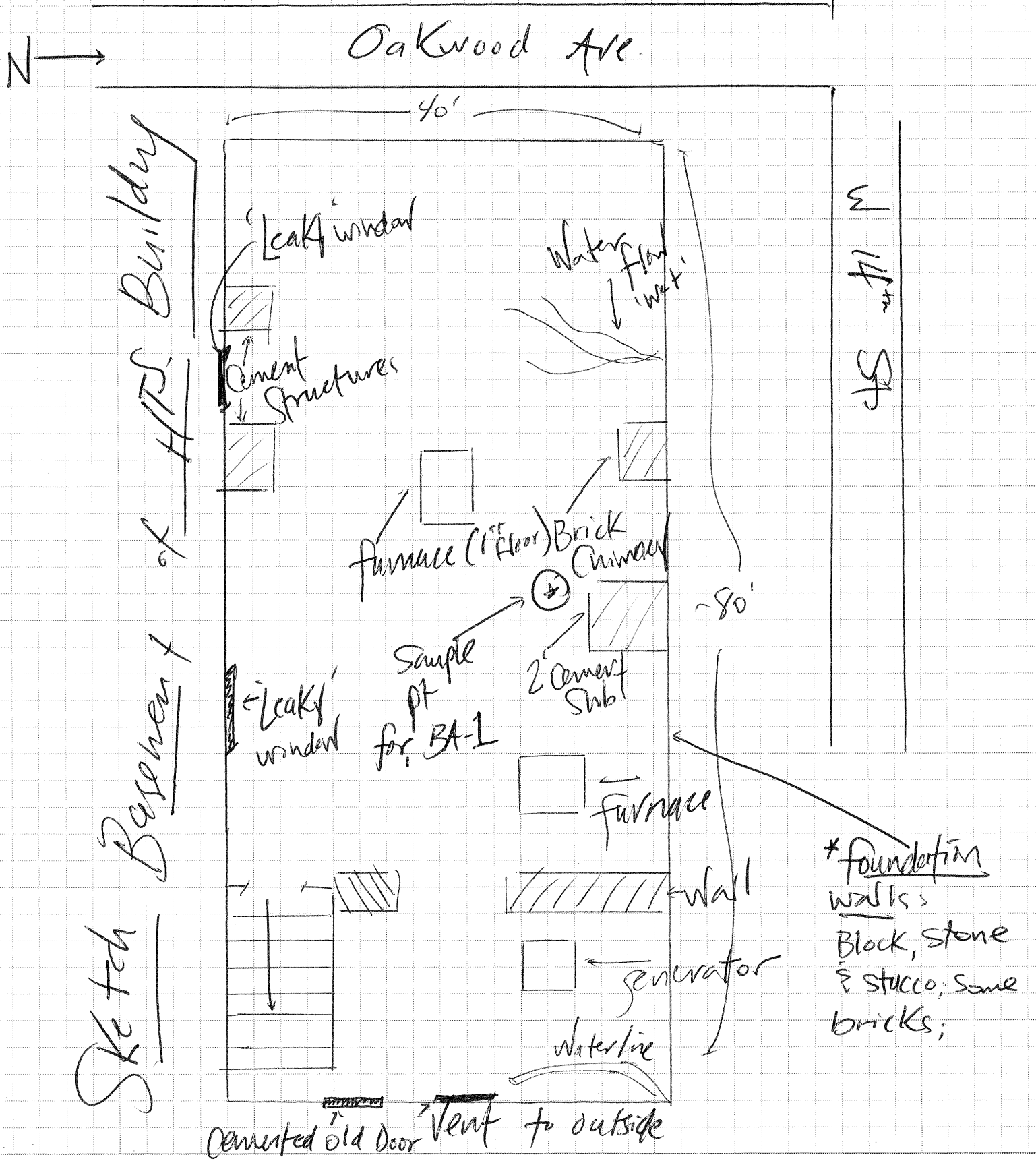

Looking east across basement.

APPENDIX C

FIELD DATA RECORDS

MACTEC
MACTEC Engineering and Consulting, Inc.
511 Congress Street, P.O. Box 7050
Portland, ME 04112-7050

JOB NO. 361206205 9/02.2 SHEET 1 OF 1
PHASE Indoor Air Sampling TASK 02
JOB NAME Region 5 D.C. Group 2 - HTS
BY Brandon A. Shaw DATE 10/12/2016
CHECKED BY _____ DATE _____



FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: Region 8 Group 2 Dry Cleaners
SAMPLE I.D. NUMBER: HTMW07S02502KK
SAMPLE TIME: 0840
EXPLORATION ID: MW - 75
SITE: HTS.
DATE: 05/10/07
TIME: START 0720 END 0852
JOB NUMBER: 36126620559
FILE TYPE: NYSDEC

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER ____
PROTECTIVE CASING STICKUP (FROM GROUND): Flush mont 0.0 FT
PROTECTIVE CASING / WELL DIFFERENCE: 0.32 FT

INITIAL DEPTH TO WATER: 19.70 FT
WELL DEPTH (TOR): measured 29.59 FT
PID AMBIENT AIR: <0.1 PPM
WELL DIAMETER: 2-PVC IN

FINAL DEPTH TO WATER: 19.72 FT
SCREEN LENGTH: * 10 FT
PID WELL MOUTH: <0.1 PPM
WELL INTEGRITY: CAP YES ✓ NO — N/A —; CASING YES ✓ NO ✓ N/A —; LOCKED YES X NO ✓ N/A —; COLLAR YES — NO ✓ N/A X

DRAWDOWN VOLUME: <0.01 GAL
(initial - final x 0.16 {2-inch} or x 0.65 {4-inch})
* Screen length unknown
RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED: <0.01
PRESSURE TO PUMP: / PSI

TOTAL VOL. PURGED: 2.7 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)
REFILL TIMER SETTING: / SECONDS
DISCHARGE TIMER SETTING: / SECONDS

PURGE DATA

* using U-22 readings

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
1749	PUMP ON								~25	PUMP ON
1755	19.72	200	15.4	0.591	6.4	7.4	750	70		
0800	19.72	200	13.9	0.571	6.8	7.5	370	40		Cloudy, purge water orange
0805	19.72	200	13.5	0.567	7.0	7.0	320	20		
0810	19.72	200	13.4	0.565	7.2	7.1	210	20		
0815	19.72	200	13.5	0.561	7.2	7.0	140	30		
0820	19.72	200	13.5	0.561	~~7.2~~ 6.9	6.9	150	30		
0825	19.72	200	13.5	0.561	~~7.3~~ 6.9	6.9	120	40		
0830	19.72	200	13.5	0.562	7.3	6.4	110	40		
0835	19.72	200	13.5	0.565	7.3	6.3	100	40		
0840	Sample time									Sample time
0843	Pump off									
0852	Finished @ mw-75									

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [ ] MARSCHALK BLADDER [ ] SIMCO BLADDER [✓] GEOPUMP
TYPE OF TUBING: [X] SILASTIC [X] HIGH DENSITY POLYETHYLENE [ ] OTHER ____
TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [✓] OTHER none
TYPE OF BLADDER MATERIAL: [ ] TEFLON [✓] OTHER none

ANALYTICAL PARAMETERS

To Be Collected	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[X] VOC	8260B	HCL / 4 DEG. C	3 X 40 mL	[X] VOC
[ ] SVOC	CLP	4 DEG. C	2 X 1 L AG	[ ] SVOC
[ ] PEST / PCBs	CLP	4 DEG. C	2 X 1 L AG	[ ] PEST / PCBs
[ ] TAL INORGANICS	CLP	HNO3 to pH <2	1 x 1 L P	[ ] TAL INORGANICS
[ ] Other ____				[ ]

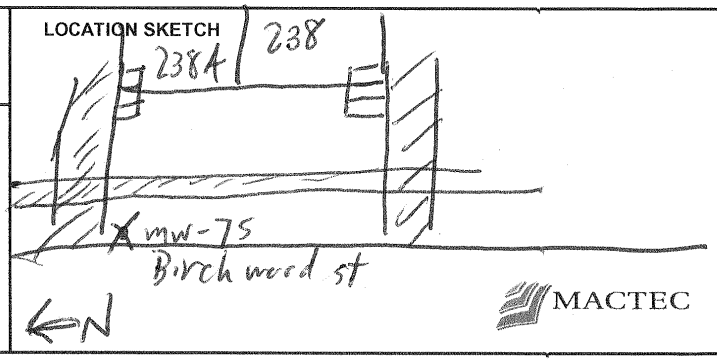
PURGE OBSERVATIONS: purge water: cloudy, orange
PURGE WATER CONTAINERIZED: YES [NO]
NUMBER OF GALLONS GENERATED: 2.7

NOTES

All Equipment used either dedicated or deconned prior to arrival on site. No rinseate/ field blank required

SIGNATURE: ____

LOCATION SKETCH



MACTEC

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: Region 8 Group 2 Dry Cleaners | SAMPLE I.D. NUMBER: HTMW07D05502KX | SAMPLE TIME: 1905
EXPLORATION ID: MW - 7D | SITE: HTS | DATE: 05/09/07
TIME START: 1750 END: 1920 | JOB NUMBER: 361206205.4 | FILE TYPE: NYSDEC

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [X] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING [ ] OTHER ____
PROTECTIVE CASING STICKUP (FROM GROUND): FLUSH MOUNT N/A FT
PROTECTIVE CASING / WELL DIFFERENCE: 0.39 FT

INITIAL DEPTH TO WATER: 19.91 FT
WELL DEPTH (TOR): 40.39 FT measured
PID AMBIENT AIR: <0.1 PPM
WELL DIAMETER: 2-PVC IN

FINAL DEPTH TO WATER: 20.01 FT
SCREEN LENGTH: * 10 FT
PID WELL MOUTH: <0.1 PPM
WELL INTEGRITY: CAP YES ✓ NO — N/A —; CASING LOCKED YES — NO ✓ N/A ✓; COLLAR YES — NO ✓ N/A X

DRAWDOWN VOLUME: 0.02 GAL
(initial - final x 0.16 {2-inch} or x 0.65 {4-inch})
* Screen length unknown
RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED: <0.01
PRESSURE TO PUMP: PSI

TOTAL VOL. PURGED: 2.1 GAL
(purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)
REFILL TIMER SETTING: SECONDS
DISCHARGE TIMER SETTING: SECONDS

PURGE DATA

* Using U-22 readings.

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
1811	PUMP ON								~35	PUMP ON
1814	20.01	110	17.8	0.439	7.1	10.9	191	150		
1819	20.01	125	16.3	0.523	7.1	7.0	120	140		
1824	20.01	150	16.2	0.542	7.2	6.7	90	130		* not using the U-22 turb readings when taking into account stabilization of GW
1829	20.01	150	16.4	0.543	7.2	5.7	100	110		
1834	20.01	150	16.2	0.546	7.2	5.7	110	80		
1839	20.01	150	16.9	0.546	7.3	5.5	120	60		
1844	20.01	150	16.9	0.551	7.3	5.3	100	50		
1849	20.01	150	17.1	0.553	7.3	5.2	110	30		
1854	20.01	150	16.9	0.549	7.3	5.2	80	30		
1859	20.01	150	16.7	0.552	7.3	5.0	90	20		
1904	20.01	150	16.9	0.553	7.3	5.2	90	20		
1905	Sample time @ MW-7D									05/09/07.
1909	Pump off									

EQUIPMENT DOCUMENTATION

TYPE OF PUMP: [ ] MARSCHALK BLADDER [ ] SIMCO BLADDER [✓] GEOPUMP
TYPE OF TUBING: [X] SILASTIC [X] HIGH DENSITY POLYETHYLENE [ ] OTHER ____
TYPE OF PUMP MATERIAL: [ ] POLYVINYL CHLORIDE [ ] STAINLESS STEEL [✓] OTHER N/A
TYPE OF BLADDER MATERIAL: [ ] TEFLON [✓] OTHER N/A

ANALYTICAL PARAMETERS

To Be Collected	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
* [X] VOC (* Dup collected here as well. (S))	8260B	HCL / 4 DEG. C	3 X 40 mL	[X] VOC
[ ] SVOC	CLP	4 DEG. C	2 X 1 L AG	[ ] SVOC
[ ] PEST / PCBs	CLP	4 DEG. C	2 X 1 L AG	[ ] PEST / PCBs
[ ] TAL INORGANICS	CLP	HNO3 to pH <2	1 x 1 L P	[ ] TAL INORGANICS
[ ] Other ____				[ ]

PURGE OBSERVATIONS

purge water has slight orange tint to it

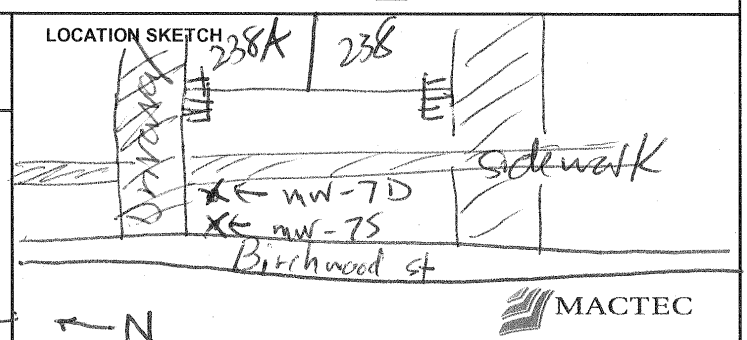
PURGE WATER CONTAINERIZED: YES [NO]
NUMBER OF GALLONS GENERATED: 2.1

NOTES

All Equipment used either dedicated or deconned prior to arrival on site. No rinseate/ field blank required

SIGNATURE: ____

LOCATION SKETCH



MACTEC

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: NYSDEC - Region 8 Dry Cleaners Group 2 - HTS Dry Cleaners | JOB NUMBER: 361206259

LOCATION ID: MW-D13 | FIELD SAMPLE ID: HTMWD13062601XX | EVENT NO.: 1

ACTIVITY: START 14:30 END 15:50 | SAMPLE TIME: ~~15:40~~ 15:40 | DATE: 18-Jul-06

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [x] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	23.25 feet	HISTORICAL WELL DEPTH (TOR)	31.50 feet	PROTECTIVE CASING STICKUP (FROM GROUND)	feet
FINAL DEPTH TO WATER	23.28 feet	PID AMBIENT AIR	ppmv	CASING / WELL DIFFERENCE	feet
SCREEN LENGTH	unknown feet	PRESSURE TO PUMP	psi	PID WELL MOUTH	ppmv
TOTAL VOL. PURGED	2.6 gallons	REFILL SETTING		DISCHARGE SETTING	
				WELL DIAMETER	2 inches

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

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
~~14:50~~	23.28	160	15	1.09	7.8	8.65	63	158	26	
15:00	23.28	200	14	1.02	7.6	7.77	33	160		
15:05	23.28	200	13	1.02	7.5	7.44	17	159		
15:10	23.28	200	13	1.02	7.5	7.19	18	158		
15:20	23.28	200	13	1.02	7.5	6.99	6	158		
15:25	23.28	200	13	0.964	7.5	7.09	2.6	156		Lamotte Meter
15:30	23.28	200	13	0.965	7.5	6.77		156		
15:35	~~sample~~	200	13	0.965	7.5	6.65		156		
~~15:40~~	23.28	200	13	0.964	7.5	6.58		157		
15:40	23.29	200	Sample							
15:45	23.28	200	13	1.03	7.5	7.32		159		

EQUIPMENT DOCUMENTATION

TYPE OF PUMP

[ ] DEDICATED MARSCHALK BLADDER
[ ] NON-DEDICATED MARSCHALK BLADDER
[x] OTHER Peristaltic - Geopump

TYPE OF TUBING

[x] ~~HIGH~~ DENSITY POLYETHYLENE
[ ] OTHER _____

ANALYTICAL PARAMETERS

CONTROL NUMBER _____

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

PURGE OBSERVATIONS

clear

PURGE WATER CONTAINERIZED YES (NO)

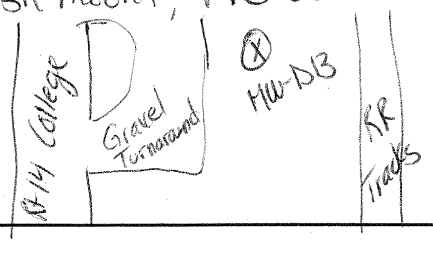
NOTES:

SIGNATURE: Rebecca C. May

CHECKED BY

LOCATION NOTES

flush mount, PVC well riser



FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: NYSDEC-Dry Cleaners-Group 2-HIS Cleaners | JOB NUMBER: 361206259

LOCATION ID: MW-16U | FIELD SAMPLE ID: HTMW16U022Ø1XX/MS/MD | EVENT NO.: 1

ACTIVITY: START 7 45 END 905 | SAMPLE TIME: 8:50 | DATE: 10-4-06

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [x] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	21.50 feet	HISTORICAL WELL DEPTH (TOR)	24 feet (23.28')	PROTECTIVE CASING STICKUP (FROM GROUND)	flush feet
FINAL DEPTH TO WATER	21.50 feet	PID AMBIENT AIR	ppmv	CASING / WELL DIFFERENCE	feet
SCREEN LENGTH	5' feet	PRESSURE TO PUMP	psi	PID WELL MOUTH	ppmv
TOTAL VOL. PURGED	1.3 gallons	REFILL SETTING		DISCHARGE SETTING	
				WELL DIAMETER	2 inches

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

WELL INTEGRITY:

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
8:10	21.62	120	17.1	0.589	7.5	6.12	230	64	22	
8:15	21.64	120	17.4	0.602	7.4	4.17	245	34		
8:25	21.66	120	17.4	0.603	7.4	2.77	170	-29		
8:30	21.66	120	17.4	0.602	7.4	2.65	140	-41		
8:35	21.66	120	17.4	0.602	7.4	2.34	100	-50		
8:40	21.66	120	17.5	0.604	7.4	2.18	60	-54		
8:45	21.66	120	17.5	0.605	7.4	2.16	27	-55		Lamotte Meter
8:50	21.66	120	17.5	0.607	7.4	2.12		-56		
8:50	sample									
8:55	21.68	120	17.4	0.609	7.4	2.43		-35		

EQUIPMENT DOCUMENTATION

TYPE OF PUMP

[ ] DEDICATED MARSCHALK BLADDER
[ ] NON-DEDICATED MARSCHALK BLADDER
[x] OTHER Peristaltic - Geopump

TYPE OF TUBING

[x] HIGH DENSITY POLYETHYLENE
[ ] OTHER _____

ANALYTICAL PARAMETERS

CONTROL NUMBER _____

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

PURGE OBSERVATIONS

Clear

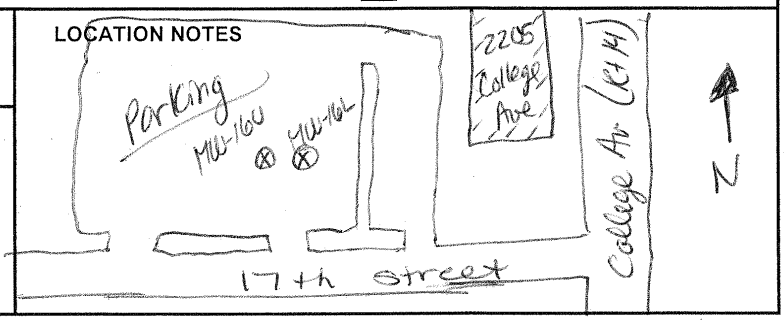
PURGE WATER CONTAINERIZED YES (NO)

NOTES:

SIGNATURE: Rebecca C May

CHECKED BY:

LOCATION NOTES



FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: NYSDEC - Dry Cleaners Group 2 - HTS Cleaners | JOB NUMBER: 3612062059

LOCATION ID: MW-16L | FIELD SAMPLE ID: HTMW16L030001XX | EVENT NO.: 1

ACTIVITY: START 9:20 END 10:30 | SAMPLE TIME: 10:10 | DATE: 10-4-06

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT: [x] TOP OF WELL RISER [ ] TOP OF PROTECTIVE CASING

INITIAL DEPTH TO WATER	21.83 feet	HISTORICAL WELL DEPTH (TOR)	32.65 measured / 34.5 feet	PROTECTIVE CASING STICKUP (FROM GROUND)	flush feet
FINAL DEPTH TO WATER	21.83 feet	PID AMBIENT AIR	— ppmv	CASING / WELL DIFFERENCE	/ feet
SCREEN LENGTH	5 feet	PRESSURE TO PUMP	/ psi	PID WELL MOUTH	— ppmv	WELL DIAMETER	/ inches
TOTAL VOL. PURGED	1.5 gallons	REFILL SETTING	/	DISCHARGE SETTING	—

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

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
9:35	21.83	160	17.2	0.575	7.7	2.95	170	60	30'	
9:40	21.83	160	16.6	0.577	7.7	2.28	140	50		
9:45	21.83	160	16.3	0.585	7.7	1.94	160	37		
9:50	21.83	160	16.3	0.625	7.6	1.79	120	31		
9:55	21.83	160	16.2	0.651	7.5	1.70	90	26		
10:00	21.83	160	16.2	0.662	7.5	1.66	80	23		
10:05	21.83	160	16.2	0.664	7.5	1.59	60	22		
10:10	21.83	160	16.2	0.668	7.5	1.54	25	21		Lamotte Meter
10:10	Sample									
10:15	21.83	160	16.2	0.665	7.4	1.64		24		

EQUIPMENT DOCUMENTATION

TYPE OF PUMP

[x] DEDICATED MARSCHALK BLADDER
[ ] NON-DEDICATED MARSCHALK BLADDER
[x] OTHER Peristaltic - Geopump

TYPE OF TUBING

[x] HIGH DENSITY POLYETHYLENE
[ ] OTHER _____

ANALYTICAL PARAMETERS

CONTROL NUMBER _____

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

PURGE OBSERVATIONS

Clear

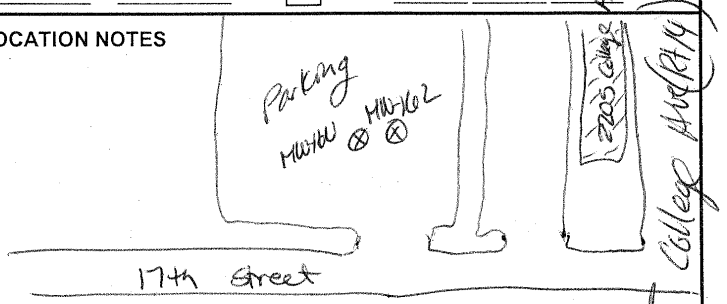
PURGE WATER CONTAINERIZED YES (NO)

NOTES:

SIGNATURE: Rebecca C May

CHECKED BY: _____

LOCATION NOTES



FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: NYSDEC- Region 8 D.C. - Group II
JOB NUMBER: 36120520[illegible]-02.2
LOCATION ID: MW-5
FIELD SAMPLE ID: HTMW005030001XX
EVENT NO.: 1
ACTIVITY: START 1615 END 1715
SAMPLE TIME: 1700
DATE: 10/11/06

WATER LEVEL / PUMP SETTINGS

INITIAL DEPTH TO WATER: 25.46 feet
FINAL DEPTH TO WATER: 25.94 feet
SCREEN LENGTH: unKnown feet
TOTAL VOL. PURGED: 1.3 gallons
(purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter)

MEASUREMENT POINT
- [x] TOP OF WELL RISER
- [ ] TOP OF PROTECTIVE CASING

~~HISTORICAL~~ Measured WELL DEPTH (TOR): 32.80 feet
PRESSURE TO PUMP: — psi
REFILL SETTING: —

PROTECTIVE CASING STICKUP (FROM GROUND): 2.7 feet
PID AMBIENT AIR: — ppmv
PID WELL MOUTH: — ppmv
DISCHARGE SETTING: —

CASING / WELL DIFFERENCE: — feet
WELL DIAMETER: 2 inches

WELL INTERGRITY:

INTEGRITY:	YES	NO	N/A
CAP	✓		
CASING	✓	-Bent	
*LOCKED	✓		
COLLAR	✓		

* Broke lock

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
1636	Pump on.								~30'	Pump on
1640	25.74	200	13.8	0.837	7.1	5.3	~136	—		
1645	25.80	150	13.6	0.839	7.1	5.2	~114	—		
1650	25.87	150	13.5	0.835	7.0	5.3	~70/59	—		
1655	25.94	150	13.5	0.831	7.0	5.3	~42	—		
1700	SAMPLE TIME									Sample
1704	Pump off									Pump off
1715	Finished @ MW-5									

* Turbidity is an estimate; took from the U-10; only (1) pt calibration

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [ ] DEDICATED MARSCHALK BLADDER
- [ ] NON-DEDICATED MARSCHALK BLADDER
- [x] OTHER Geo pump

TYPE OF TUBING
- [x] HIGH DENSITY POLYETHYLENE
- [x] OTHER Silastic

ANALYTICAL PARAMETERS

CONTROL NUMBER _____

	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID LETTERS
[x] VOCs - 25 ml Purge (~~low conc.~~) (5)	~~OLC02.1~~ OLM4.2	HCL / 4 DEG. C	3 X 40 ML	[x]	XX
[ ] VOCs - 5 ml Purge	OLM04.2	HCL / 4 DEG. C	3 X 40 ML	[ ]	
[ ] SVOCs	OLM04.2	4 DEG. C	2 X 1 L AG	[ ]	
[ ] PESTICIDES	OLM04.2	4 DEG. C	2 X 1 L AG	[ ]	
[ ] METALS	ILM04.2	HNO3 to pH <2	1 X 500 ML P	[ ]	
[ ] MANGANESE / IRON -	SW846 6010	HNO3 to pH <2	1 X 500 ML P	[ ]	
[ ] SULFATE / CHLORIDE / ALKALINITY	USEPA 375.4 / 325.3 / 310.1	4 DEG. C	1 x 1 L P	[ ]	
[ ] NO2 - NO3	USEPA 353.2 / 354.1	H2SO4 to pH <2	1 X 500 ML P	[ ]	
[ ] TOC	USEPA 415.1	H2SO4 to pH <2	1 X 250 ML AG	[ ]	
[ ] METHANE / ETHANE / ETHYLENE	EPA Region 1	HCL / 4 DEG. C	3 X 40 ML	[ ]	
[ ] OTHER _____				[ ]	

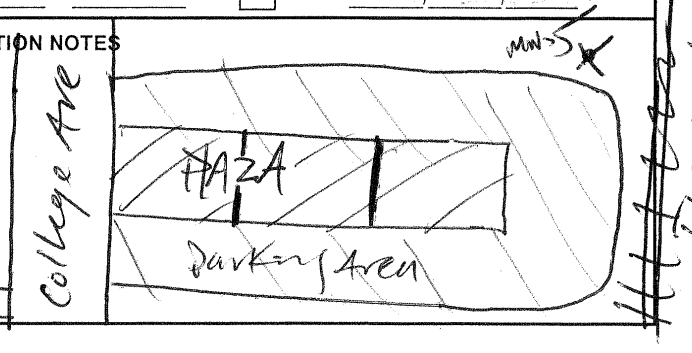
PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED YES (NO)

NOTES:

SIGNATURE: _____
CHECKED BY: _____

LOCATION NOTES



Test Boring Log

Project: REGION 8 D.C. - GROUP II		Boring/Well No.: SB/GW-001	Project No.: 361206259/02.2
Client: NYSDEC	Site: HTS		Sheet No.: 1 of 2
Logged By: B. Shaw	Ground Elevation	Start Date: 10/11/2006	Finish Date: 10/11/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummings		Rig Type: 66 DT.
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV)	Casing Size: 1 1/2 / Auger Size: 2.1
Soil Drilled: 24'	Rock Drilled:	Total Depth: 14'	Depth to Groundwater/Date: ~21.5' 10/11/2006 — Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
1	S1 0.9/4.0					0-0.5 asphalt 0.5-4 olive Brn Sandy clay w Asph; ceramic pieces, wet HP, soft, slight odor?)	Fill		0.1		
2											
3									10ppm		
4						4 to 9 orange Brn gravelly clay & lot of sand, moist to wet, HP/MP, Mstiff,	GC SC		0.1		Composite Soil sample from 2 to 8' HTGS001W801XX
5											
6	S2 2.2/5.0										
7											
8											
9						9 to 14 Silty sand & gravel cobbles @ ~10 (pink) moisture; moist @ ~12 & 13.5	ML		4.1		
10											
11	S3 3.1/5.0					(white); moist @	SM GM				
12											
13							ML				
14							SM GM				

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: Region 8 D.C. - Group II		Boring/Well No.: SB/GW-001	Project No.: 361206205901/02.2
Client: NYSDEC	Site: HTS		Sheet No.: 2 of 2
Logged By: B. Shaw	Ground Elevation	Start Date: 10/11/2006	Finish Date: 10/11/2006
Drilling Contractor: Geologic	Driller's Name: Liam Cummins		Rig Type: 66 DT
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV): /	Casing Size: 1 1/2"	Auger Size: 2"
Soil Drilled: 24	Rock Drilled: /	Total Depth: 46 ~~48~~	Depth to Groundwater/Date: ~21.5 10/11/06	Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
14											
15						14 to 19 m coarse sand, gravel w little fine S, damp, NP, Dense/MDense,	SW	1 ppm			
16	S4 31/5.0										
17								3 ppm			
18											
19								3 ppm			
20	S5 28/5.0					19 to 21.5 Same as 14 to 19	SW				
21						21.5 to 23.5 m coarse sand, Saturated, fine gravel @ ~21.5 to 21.8, MDense		1 ppm		Battery dead for camera	
22											
23						23.5 to 24, gravel w Sand & silt/Saturated	SP				
24							SM SW				
25											
26											
27											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS Dry CLEANERS - GROUP II
Project Number: 361206205981022
Site: HTS
Date: 10/11/2006
Time: Start: 1050 End: 1117
Sample Location ID: HTGW00102501XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = [_____ Gal/Vol. _____ Total Gal Purged]

Well Integrity: Yes / No
Prot. Casing Secure
Concrete Collar Intact
Other _____

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	mill/ST.t	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air ____ ppm Well Mouth ____ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ___ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.0 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	16.1					
pH, units	7.3					
Specific Conductivity (µmhos/cm)	1.32					
Turbidity (NTUS)	2,000					
Oxidation - Reduction, +/- mv						
Dissolved Oxygen, ppm mg/L	5.2					

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	
✓ SVOCs	✓	4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

1,00

Notes: SCREEN: 24' to 26'
Purge water: Lt Brown → cleary
MS / MSD were

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 Dry CLEANERS - GROUP II
Project Number: 36120620591022
Sample Location ID: HTGW0010350IXX

Site: HTS
Date: 10/11/2006
Time: Start: 0940 End: 1048
Signature of Sampler:

Water Level/Well Data

Well Depth ______ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing

Well Riser Stick-up ______ Ft. (from ground)

Protective ______ Ft. Casing/Well Difference

Protective ______ Ft. Casing

Depth to Water ______ Ft.

Well Material: ___ PVC ___ SS

Well Locked?: ___ Yes ___ No

GEOPROBE

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column ______ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = ______ Gal/Vol. ______ Total Gal Purged

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other ______		

Equipment Documentation

Purging/Sampling Equipment Used:

Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	mill slot	

Decontamination Fluids Used:

(✓ All That Apply at Location)

- ___ Methanol (100%)
- ___ 25% Methanol/75% ASTM Type II water
- ✓ Deionized Water
- ✓ Liquinox Solution
- ___ Hexane
- ___ HNO_3/D.I. Water Solution
- ___ Potable Water
- ___ None

Field Analysis Data

PID: Ambient Air / ppm Well Mouth / ppm

Purge Data Collected ___ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	15.7				
pH, units	7.1				
Specific Conductivity (~~μmhos~~ ms/cm)	1.48				
Turbidity (NTUS)	71000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ~~ppm~~ mg/L	~~5.6~~ 5.4				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3x40 ml	@ 1045
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 36 to 34
Purge water Lt Brown silty clay → clearing

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

Test Boring Log

Project: REGION 8 D.C. - GROUP II	Boring/Well No.: SB/GW-002	Project No.: 361206259/022	
Client: NYSDEC	Site: HTS	Sheet No.: 1 of 21	
Logged By: B. Shaw	Ground Elevation:	Start Date: 10/10/2006	Finish Date: 10/10/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummins	Rig Type: 66 DT.	
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV):	Casing Size: 1 1/2	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled:	Total Depth: 34'	Depth to Groundwater/Date: ~21'	Piez ☑ Well ☐ Boring ☐

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
1	S1 2.2/4.0					0-0.3 Asphalt 0.3-0.8 olive silty sand 0.8-1.5 Fill-Ash, white/grey, 1.5-3 olive silt-clay-sand mix, MP, moist 3-3.7 fine sand/gravel, dry 3.7-4 pieces of cement; dry clay - Fill	Fill		30 ppm 20 ppm 10 ppm		
2											
3											
4											
5						4 to 5.2 Fill-Ash, ceramic, metal, glass, silt			25 ppm		
6	S2 3.1/5.0					5.2-7 ~~silty~~ fine sand/gravel, fine gravel, damp MP/SP, MDense	ML GM		10 ppm		
7											
8						7-9 silty sandy gravel, dry loose,	SM GM				
9											
10	S3 2.9/5.0					9-10 same as 7-9 10-12.5 olive Brown sandy clay w/ gravel, laminations/lenses Cl of broken cobbles; moist, MP.	SM GM		10 ppm		
11							CL GC		12 ppm		
12						12.5-14 clean silty medium coarse sand, damp, NP, loose/MDense			10 ppm		
13							SM				
14	S4 3.4/5.0					14 to 19 Silty Sand & gravel, dry to wet (wet @ ~18'), trace clay lenses & fragments	SM GM cobbles				
19											
20	S5 3.1/5.0					19 to 22 same as 14 to 19 22 to 24 LT Brown coarse Sand & gravel w/ lots of silt, saturated	SM GM SW				
24											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 DRY CLEANERS - GROUP II
Project Number: 3612062059/02.2
Sample Location ID: HTGW0020223011XX
Site: HTS
Date: 10/10/06
Time: Start: 1517 End: 1530
Signature of Sampler:

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up ____ Ft. (from ground)
Protective ____ Ft. Casing/Well Difference
Protective ____ Ft. Casing

Depth to Water ____ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

GEOPROBE

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = [____ Gal/Vol. ____ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other		

Equipment Documentation

Purging/Sampling Equipment Used:

Purging	Sampling	(✓ If Used For)	Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	
		MillStat	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air / ppm Well Mouth / ppm
Purge Data Collected ✓ In-line ✓ In Container
Sample Observations: ___ Turbid ___ Colored ___ Clear ___ Odor ✓ Cloudy

Purge Data	@ ~2.0 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	17.9				
pH, units	7.3				
Specific Conductivity (~~µmhos/cm~~) ms/cm	1.32				
Turbidity (NTUS)	~500				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ~~ppm~~ mg/L	5.3				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle Lot Nos.
✓ VOCs	✓	4°C	3 2x40 ml	@ 1525
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 24 H 22'
Purge water: Brown → clearing

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services

9404014D L22

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II Site: HTS
Project Number: 361206205981022 Date: 10/10/06
Time: Start: 1501 End: 1517
Sample Location ID: HTGW00203301XX Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing Well Riser Stick-up _____ Ft. (from ground) Protective _____ Ft. Casing/Well Difference Protective _____ Ft. Casing

Depth to Water _____ Ft. Well Material: ___ PVC ___ SS _____ Well Locked?: ___ Yes ___ No Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____ Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure Yes ___ No ___
Concrete Collar Intact Yes ___ No ___
Other _____ Yes ___ No ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	mini Slot	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm Purge Data Collected ✓ In-line ✓ In Container Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~2.0 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	17.8				
pH, units	7.34				
Specific Conductivity (umhos/cm)	1.48				
Turbidity (NTUS)	1000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm	4.8				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 2x40 ml	@ 1515
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 34' to 32'
Purge water: Lt Brown, Sandy

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

Test Boring Log

Project	REGION 8 D.C. - GROUP II	Boring/Well No.	SB/GW-003	Project No.	3612062059/02.2
Client	NYSDEC	Site	HTS	Sheet No.	1 of 2
Logged By	B. Shaw	Ground Elevation		Start Date: 10/11/2006	Finish Date: 10/11/2006
Drilling Contractor	Geologic, NY	Driller's Name	Liam Cummins	Rig Type	66 DT.
Drilling Method	Direct Push	Protection Level: D	P.I.D. (eV): —	Casing Size: 1 1/2	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled: —	Total Depth: 32'	Depth to Groundwater/Date: 20.5	Piez ☐ Well ☐	Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	PI Meter Head Space		Lab Tests
0–4	S1 1.2/4.0					0-0.5 Asphalt 0.5-~3 Brown silty sand & gravel, damp, SP/NP, m.dense 3 to 4 olive Brown Sandy Clay, wet, HP, soft/m.stiff	Fill SM GM CL		~2ppm			
4–9	S2 3.3/5.0					4 to 5.5 Same as 3 to 4 5.5 to 9' Silty sand & gravel; trace cobbles; dry Dense/m.dense,	CL SM GM		<0.1			Composite 4' to 5.5' HTSS003005 01XX @ 1200
9–14	S3 3.0/5.0					9 to 14 silty sand of some gravel; dry, Dense, stratification @ ~12'; orange to gray - well drained; lense of 4" olive/tan dry clay @ 11.8';	SMGM		<0.1			

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services, Inc.

9404014D(z) L33

Test Boring Log

Project: Region 8 D.C. - Group II		Boring/Well No.: SB/GW-003	Project No.: 361206209/1.2.2
Client: NYSDEC	Site: HTS		Sheet No.: 2 of 2
Logged By: B. Shaw	Ground Elevation	Start Date: 10/11/2006	Finish Date: 10/11/2006
Drilling Contractor: Geologic	Driller's Name: Liam Cummins		Rig Type: 66 DT
Drilling Method: Direct-Push	Protection Level: D	P.I.D. (eV): /	Casing Size: 1 1/2"	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled: /	Total Depth: 32'	Depth to Groundwater/Date: ~20.5	Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	Monitoring (ppm) PI Meter Head Space	Lab Tests
14											
15						silty sand & gravel, dry, m Dense,	SM GM		0.1		
16	S4 2.8/5.0					@ 18.5 drilling got soft, clean silty lifer, v. Dense moist/wet					
17											
18							SM GM				
19						19 to 20.5 LT Brn sand (m/c coarse Sand, Sat, M Dense, some rounded gravel	SW		0.1		
20								purched H2O to here			
21						20.5 to ~22 silty fine sand wet, V. Dense, NP					
22	S5 4.0+/5.0					22 to 24 Olive Brn silty Gravel w lots of Sand, loose, Saturated	GM				
23											
24											
25											
26											
27											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II Site: HTS
Project Number: 361206205901.2 Date: 10/11/2006
Time: Start: 1211 End: 1230
Sample Location ID: HTGW003021 01 X X Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing Well Riser Stick-up _____ Ft. (from ground) Protective _____ Ft. Casing/Well Difference Protective _____ Ft. Casing

Depth to Water _____ Ft. Well Material: ___ PVC ___ SS ___ _____ Well Locked?: ___ Yes ___ No (Stopped) Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____ Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__ in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure — Yes ___ No ___; Concrete Collar Intact — Yes ___ No ___; Other _____ — Yes ✓ No ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Millipore	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm Purge Data Collected ✓ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ✓ Odor

Purge Data	@ ~1.5 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	16.4				
pH, units	7.3				
Specific Conductivity (µmhos/cm)	1.23				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm mg/L	3.7				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mL P	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: Screen: 20' to 22'
Purge water: Brown Silty Slight odor.

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II Site: HTS

Project Number: 361206 2059 / 02.2 Date: 10/11/2006

Time: Start: 1150 End: 1217

Sample Location ID: HTGW 00303 01 X X Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing Well Riser Stick-up _____ Ft. (from ground) Protective _____ Ft. Casing/Well Difference Protective _____ Ft. Casing

Depth to Water _____ Ft. Well Material: ___ PVC ___ SS _____ Well Locked?: ___ Yes ___ No Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____ Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure Yes / No; Concrete Collar Intact Yes / No; Other _____ Yes / No

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Not Used	

Decontamination Fluids Used: (✓ All That Apply at Location)

___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm Purge Data Collected ✓ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~3.0 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	15.8				
pH, units	7.4				
Specific Conductivity (µmhos/cm)	1.43				
Turbidity (NTUS)	71000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm	2.3				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	@ 1215
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: SCREEN: 32 to 30

Purge water: Lt Brown → clearing

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: REGION 8 D.C. - GROUP II	Boring/Well No.: SB/GW-004	Project No.: 361206259/02	
Client: NYSDEC	Site: HTS	Sheet No.: 1 of 2	
Logged By: B. Shaw	Ground Elevation	Start Date: 10/10/2006	Finish Date: 10/10/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummings	Rig Type: 66 DT.	
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV)	Casing Size: 1 1/2	Auger Size: 2"
Soil Drilled: 14'	Rock Drilled	Total Depth: 32'	Depth to Groundwater/Date: ~18.5 10/10/2006	Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	PI Meter Head Space	Lab Tests
1						0-0.5 Asphalt	FILL		5 ppm		
2	S1 1.9/4.0					0.5 to 1.5 olive Brown silty sand	SM		15 ppm		
3						1.5 to 2 White/Lt grey/Black fill - Ash, glass, coal, light	Fill				
4						2-3.5 olive silty clay w/ little m coarse coarse Sand; wet, HP, soft,	CL		10 ppm		
5	S2 3.2/5.0					3.5 soft orange Brown sandy clay, wet, HP	ML		10 ppm		
6						4 to 5 Same as 3.5 to 4	ML				
7						5 to 9 silty sand & gravel, lenses of dry fine clay, moist NP, M Dense,	SM GM		8 ppm		
8											
9											
10						9 to 13.6 Same as 5' to 9' moist @ ~12'	SM GM		8 ppm		
11	S3 4.0+/5.0					13.6 to 14' Brown, silty fine sand, V. Dense, dry,			10 ppm		
12									8 ppm		
13											
14							SM				

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: Region 8 D.C.-Group A	Boring/Well No.: B/GW-004	Project No.: 361206.2059/02.2	
Client: NYSDEC	Site: HTS	Sheet No.: 2 of 2	
Logged By: B. Snow	Ground Elevation:	Start Date: 10/10/06	Finish Date: 10/10/06
Drilling Contractor: Geologic	Driller's Name: Liam Cummins	Rig Type: 66 DT	
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV):	Casing Size: 1 1/2"	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled:	Total Depth: 32'	Depth to Groundwater/Date: ~18.5 10/10/2006	Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	Monitoring (ppm) PI Meter Head Space	Lab Tests
14											
15						14-15 ft Brown silty fine sand w/ trace fine gravel; dry	SM GM		8 ppm		
16	31/5.0					15-18.5 ft silty/clayey sand & gravel; moist to wet; medium dense	SM GM				
17									10 ppm		
18						18.5-19 same as above, but saturated.					
19							SM GM		20 ppm		
20											
21	N/A										
22	/5.0										
23											
24											
25											
26											
27											

S4

S5

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services, Inc.

9404014D(z) L33

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 DRY CLEANERS - GROUP II
Site: HTS
Project Number: 3612062059/02.2
Date: 10/10/06
Time: Start: 1340 End: 1355
Sample Location ID: HTGW004021 01 XX
Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up ____ Ft. (from ground)
Protective ____ Ft. Casing/Well Difference
Protective ____ Ft. Casing

Depth to Water ____ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = [____ Gal/Vol. ____ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other ____		

GEOPROBE

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	
		mtl slot.	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air / ppm Well Mouth / ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ___ Turbid ✓ Clear ✓ Cloudy ___ Colored ___ Odor

Purge Data	@ ~46.0 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	16.7				
pH, units	7.1				
Specific Conductivity (~~μmhos/cm~~) (ms/cm)	1.41				
Turbidity (NTUS)	200				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ~~ppm~~ mg/L	4.1				

Sample Collection Requirements
(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs		4°C	3x40 ml	
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3, 4°C	1x1 liter P	
Cyanide		NaOH, 4°C	1x500mLP	@ 1355
Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4, 4°C	2x1 liter AG	
TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: SCREEN: 32 to 20
Purge water: Lt Brn → Clear

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS Dry CLEANERS - GROUP II
Project Number: 361206205901022
Site: HTS
Date: 10/10/06
Time: Start: 1320 End: 1337
Sample Location ID: HTGW0040301XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure Yes / No; Concrete Collar Intact Yes / No; Other _____ Yes / No

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	mills lot	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ 3.0 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	16.4				
pH, units	7.3				
Specific Conductivity (µmhos/cm)	1.50				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm mg/L	3.1				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	1335
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN 32 to 70
Purge water: Lt Brown

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

Test Boring Log

Project: REGION 8 D.C. - GROUP II	Boring/Well No.: SB/GW-005	Project No.: 361206259/02.2	
Client: NYSDEC	Site: HTS	Sheet No.: 1 of 2	
Logged By: B. Shaw	Ground Elevation:	Start Date: 10/10/2006	Finish Date: 10/10/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummings	Rig Type: 66 DT.	
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV):	Casing Size: 1 1/2	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled:	Total Depth: 32	Depth to Groundwater/Date: ~14.5 10/10/2006	Piez ☑ Well ☐ Boring ☐

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
1	S1 2.1/4.0					0-0.2 Black top 0.2-0.6 Brown silty sand, dry. 0.6-3.4 Fill - Ash, coal, Lt gray to white to Black, orange/red brick @ ~2.2; ceramic pieces; wet 3.4-4 Dk Brown Sand - silty clay fines to coarse sand, wet, HP	Fill		2 ppm 5 ppm 44 ppm 20 ppm		
2							CL				
3											
4						4 to 7 orange/red/Rich Brown gravelly clay w/ some sand, wet/moist, HP, Stiff/v Stiff,	GC		4 to 5 ppm		
5											
6	S2 3.2/5.0										
7						7 to 8.5 Brown silty sand & gravel, v Dense, wet, HP					
8						8.5 to 8.6 Lt Tan dry clay 8.6-9 Same as 7 to 8.5	SM GM				
9							Smear				
10						9 to 14 Same as 8.6-9			4.1 to 5 ppm		
11	S3 3.6/5.0										
12											
13											
14											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: REGION 8 D.C. - GROUP II	Boring/Well No.: SB/GW-005	Project No.: 361206215902.2	
Client: NYSDEC	Site: HTS	Sheet No.: 2 of 2	
Logged By: B. Shaw	Ground Elevation	Start Date: 10/10/2006	Finish Date: 10/10/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummins	Rig Type: 66 DT.	
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV)	Casing Size: 1 1/2	Auger Size: 2"
Soil Drilled: 24	Rock Drilled:	Total Depth: 32'	Depth to Groundwater/Date: ~18.5'	Piez ☑ Well ☐ Boring ☐

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
14						14 to ~18 silty sand; ground, dry, cobble laminations @ ~17	SM GM		4 to 5 ppm		
15	21/5.0										
16						18-19 reddish brown silty gravel, w/ little sand, saturated, loose	ML				
17							GM GP				
18											
19						19-24 silty sand fines to medium sand saturated, Lt Brn,	SM		4 to 5 ppm		
20											
21	3.1/5.0										
22											
23											
24											
25											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 DRY CLEANERS - GROUP II   Site: HTS
Project Number: 361206 2059/02.2   Date: 10/10/06
Time: Start: 1120   End: 1147
Sample Location ID: HTGW005021 01XX   Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing ___ ____
Well Riser Stick-up ____ Ft. (from ground)
Protective ____ Ft. Casing/Well Difference
Protective ____ Ft. Casing

Depth to Water ____ Ft.
Well Material: ___ PVC ___ SS ___ ____
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ ____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ ____

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__in.) = [____ Gal/Vol. ____ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other ____	___	___

Geoprobe

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Multi Sensor	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air ____ ppm Well Mouth ____ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	17.2				
pH, units	7.4				
Specific Conductivity (µmhos/cm) (ms/cm)	1.35				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm (mg/L)	5.2				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs		4°C	3x40 ml	@ 1147
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 22' to 20'
Purge water: reddish Brown - Lt Brown

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 DRY CLEANERS - GROUP II
Project Number: 3612062059/022
Sample Location ID: HTGW0050310XX

Site: HTS
Date: 10/10/06
Time: Start: 1057 End: 1117
Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing

Well Riser Stick-up ____ Ft. (from ground)

Protective ____ Ft. Casing/Well Difference

Protective ____ Ft. Casing

Depth to Water ____ Ft.

Well Material: ___ PVC ___ SS

Well Locked?: ___ Yes ___ No

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = ____ Gal/Vol. ____ Total Gal Purged

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other		

Geoprobe

Equipment Documentation

Purging/Sampling Equipment Used:

Purging (✓ If Used For)	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Mill Slot	

Decontamination Fluids Used:

(✓ All That Apply at Location)

- ___ Methanol (100%)
- ___ 25% Methanol/75% ASTM Type II water
- ✓ Deionized Water
- ✓ Liquinox Solution
- ___ Hexane
- ___ HNO_3/D.I. Water Solution
- ___ Potable Water
- ___ None

Field Analysis Data

PID: Ambient Air ____ ppm Well Mouth ____ ppm

Purge Data Collected ___ In-line ✓ In Container

Sample Observations: ___ Turbid ___ Colored ✓ Clear ___ Odor ✓ Cloudy

Purge Data	@ ~3.0 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	15.8				
pH, units	7.1				
Specific Conductivity (µmhos/cm) (ms/cm)	1.43				
Turbidity (NTUS)	~200				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ~~ppm~~ mg/L	5.5				

Sample Collection Requirements
(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs		4°C	~~2~~ 3x40 ml	@ 1115
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 32 to 30'

Purge water: Lt Brown → clearing

+ DUP HERE

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

Test Boring Log

Project	Boring/Well No.	Project No.
REGION 8 D.C. - GROUP II	SB/GW-006	3612062159/02.2

Client	Site	Sheet No.
NYSDEC	HTS	1 of 2

Logged By	Ground Elevation	Start Date	Finish Date
B. Shaw		10/12/2006	10/12/2006

Drilling Contractor	Driller's Name	Rig Type
Geologic, NY	Liam Cummings	66 DT.

Drilling Method	Protection Level	P.I.D. (eV)	Casing Size	Auger Size
Direct Push	D	—	1 1/2	2"

Soil Drilled	Rock Drilled	Total Depth	Depth to Groundwater/Date	Piez	Well	Boring
24'	—	24		☐	☐	☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	PI Meter Head Space		Lab Tests
0–4	S1 2.1/4.0					* removed 1.2' of coarse grained road bed 0-1 olive Brown silty sand w/ ash white to gray 1-1.4 Red Bricks 1.4-3 Black to olive/Brown silty sand, moist, glass, 3-4 olive Lt Brown sandy clay, coarse sand, wet, HP/MP, MSFFT	Fill ML SC		<0.1 10ppm <0.1 5ppm 3ppm 2ppm	—		composite soil sample from 0.5 to 1' HTGS0600101XX - VOA @ 0810
4–9	S2 3.4/5.0					4-4.5 Same as 3-4 4.5-8 olive Brown silty coarse sand, damp, trace dry clay, m dense, 8-8.2 white/gray crushed gravel, v. angular dry, dense 8.2-9 olive Brn silty M coarse sand, dry, lense of Dk brown clean silt @ ~8.4, SP	ML SC SM SC SM		<0.1			
9–14	S3 3.4/5.0					9 to 14 Lt Brown/olive silty fine sand & fine gravel, dry Dense, NP, rounded gravel @ 9.5 & 11.5	GP SM GM GP SM GM		<0.1			

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: Region 8 D.C. - Group II		Boring/Well No.: SB/GW-006	Project No.: 361206205901202
Client: NYSDEC	Site: HTS		Sheet No.: 2 of 2
Logged By: B. Shaw	Ground Elevation	Start Date: 10/12/2006	Finish Date: 10/12/2006
Drilling Contractor: Geologic	Driller's Name: Liam Cummins		Rig Type: 66 DT
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV):	Casing Size: 1 1/2"	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled:	Total Depth: 24'	Depth to Groundwater/Date	Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	PI Meter Head Space	Lab Tests
14						14-15.5 Same as 9 to 14.	SM		Lo.1		
15						15.5 to 19 Olive to Brwn + Lt Brwn silty m coarse sand & gravel, dry to dmp, lenses of white/orange m coarse sand @ ~17 & 18.5, & lense of yellow/olive dry clay @ ~16.5	GM				
16	S4						SM				
17	3.8/5.0						GM				
18							SP				
19						19 to ~22.5 Same as 15.5 to 19; 22.5 to 24 Lt Brwn saturated sandy gravel w some silt, m Dense; pink sandstone @ 22.5 to 22.8;	SM GM		Lo.1		
20											
21	S5										
22	4.0+/5.0						SW				
23							ML		3ppm		
24							SW				
25											
26											
27											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS Dry CLEANERS - GROUP II Site: HTS

Project Number: 361206205901022 Date: 10/11/06

Time: Start: 1917 End: 0921

Sample Location ID: HTGW0060123011X1 Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical

___ Top of Well ___ Top of Protective Casing ___ _____

Well Riser Stick-up _____ Ft. (from ground)

Protective _____ Ft. Casing/Well Difference

Protective _____ Ft. Casing

Depth to Water _____ Ft.

Well Material: ___ PVC ___ SS _____

Well Locked?: ___ Yes ___ No GEOPROBE

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) = [_____ Gal/Vol. _____ Total Gal Purged]

Well Integrity:

	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other _____	___	___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
✓		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Millipore	

Decontamination Fluids Used: (✓ All That Apply at Location)

___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm

Purge Data Collected ✓ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ✓ Cloudy ___ Colored ___ Odor

Purge Data	@ ~2.0 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	15.7				
pH, units	7.3				
Specific Conductivity (µmhos/cm)	7.46 (ms/)				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ppm	3.8 mg/L				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	0920
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: SCREEN: 24' to 27'

Purge water: Burn → cleaning

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 Dry Cleaners - Group II
Project Number: 36120620591022
Sample Location ID: HTGW0060B301XX

Site: HTS
Date: 10/11/2006
Time: Start: 0835 End: 0903
Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ______ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing ___ ______

Well Riser Stick-up ______ Ft. (from ground)

Protective ______ Ft. Casing/Well Difference

Protective ______ Ft. Casing

Depth to Water ______ Ft.

Well Material: ___ PVC ___ SS ______

Well Locked?: ___ Yes ___ No

GEOPROBE

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ ______

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ ______

Height of Water Column ______ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__ in.) = [______ Gal/Vol. ______ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other ______		

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
/		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Mill Slot	

Decontamination Fluids Used:

(✓ All That Apply at Location)

___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ ______

Field Analysis Data

PID: Ambient Air / ppm Well Mouth / ppm

Purge Data Collected: ___ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ✓ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.5 ~1.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	15.7				
pH, units	7.5				
Specific Conductivity (~~µmhos~~ mS/cm)	1.37				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ~~ppm~~ mg/L	5.0				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle /Lot Nos.
✓ VOCs	✓	4°C	3 2x40 ml	@ 0900
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3, 4°C	1x1 liter P	
Cyanide		NaOH, 4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4, 4°C	2x1 liter AG	
TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: Screen: 24-32'
Purge water: Lt Brown - silty → clearing
Slight sheen on purge water bubbles

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

Test Boring Log

Project: REGION 8 D.C. - GROUP II		Boring/Well No.: SB/GW-007	Project No.: 361206259/022
Client: NYSDEC	Site: HTS		Sheet No.: 1 of 1
Logged By: B. Shaw	Ground Elevation	Start Date: 10/12/2006	Finish Date: 10/12/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummins		Rig Type: 66 DT.
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV)	Casing Size: 1 1/2	Auger Size: 2-1
Soil Drilled: 18'	Rock Drilled:	Total Depth: 34'	Depth to Groundwater/Date: ~20.5'	Piez ☑ Well ☐ Boring ☐

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	Monitoring (ppm) PI Meter Head Space	Lab Tests
1	S1 0.9/4.0					An Asphalt in sleeve, pushed soil down;	Fill		Ko.1		
2											
3											
4											
5						4 to 5 Lt Brownish Olive clayey sandy gravel, fines to fine gravel, Saturated, Moist	GC		5ppm		
6	S2 3.2/5.0					5 to 6.5 Olive silty Coarse sand & trace fine gravel, wet, Dense,	SM		2ppm		
7						6.5 to ~8 Lt Brown Sandy gravel, dry, dense, some cobbles	GW		Ko.1		
8						8-9 Olive/DK Brn silty sand & gravel, moist, M Dense	SMGM				
9						unknown; liner got stuck in the macro core	?		N/A		
10	S3 N/A/5.0					11.5 to 16' V. Dense, silty fine sand w/ some coarse sand, dry	N/A				
11											
12											
13											
14											
15	S4 N/A/4.0					unknown - V Dense Sandy gravel w fines, dry, filling Def.	GW		N/A		
16											
17											
18											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II
Project Number: 3612062059/02.2
Sample Location ID: HTGW0079230IXX
Site: HTS
Date: 10/12/2006
Time: Start: 1135 End: 1217
Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing ___ ___

Well Riser Stick-up ____ Ft. (from ground)

Protective ____ Ft. Casing/Well Difference

Protective ____ Ft. Casing

Depth to Water ____ Ft.

Well Material: ___ PVC ___ SS ___

Well Locked?: ___ Yes ___ No

GEOPROBE

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ ___

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ ___

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = ____ Gal/Vol. ____ Total Gal Purged

Well Integrity:	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other ____	___	___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling	Equipment	Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Millslot	

Decontamination Fluids Used:

(✓ All That Apply at Location)

- ___ Methanol (100%)
- ___ 25% Methanol/75% ASTM Type II water
- ✓ Deionized Water
- ✓ Liquinox Solution
- ___ Hexane
- ___ HNO_3/D.I. Water Solution
- ___ Potable Water
- ___ None

Field Analysis Data

PID: Ambient Air — ppm Well Mouth — ppm

Purge Data Collected ___ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ✓ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	16.5				
pH, units	7.3				
Specific Conductivity (~~µmhos/cm~~ ms/cm)	1.48				
Turbidity (NTUS)	800				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ~~ppm~~ mg/L	6.1				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle /Lot Nos.
✓ VOCs	✓	4°C	3 ~~2~~x40 ml	@ 1215
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 26' to 22'

Purge water: V. Silty 1st 1/2 Lt Brown → clearing

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS Dry CLEANERS - GROUP II Site: HTS

Project Number: 361206205901022 Date: 10/12/2006

Time: Start: 1100 End: 1132

Sample Location ID: HTGW00703101XX Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical

___ Top of Well ___ Top of Protective Casing

Well Riser Stick-up _____ Ft. (from ground)

Protective _____ Ft. Casing/Well Difference

Protective _____ Ft. Casing

Depth to Water _____ Ft.

Well Material: ___ PVC ___ SS _____

Well Locked?: ___ Yes ___ No GEOPROBE

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) = [_____ Gal/Vol. _____ Total Gal Purged]

Well Integrity: Yes / No

Prot. Casing Secure ___ ___

Concrete Collar Intact ___ ___

Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Multiple	

Decontamination Fluids Used: (✓ All That Apply at Location)

___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm

Purge Data Collected ___ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.2 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C					
pH, units	Cust				
Specific Conductivity (µmhos/cm)					
Turbidity (NTUS)	71000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm	mg/L				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

1130

Notes: SCREEN: 34 to 32

Purge water: V. Soil, Brown

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II
Project Number: 36120620591022
Sample Location ID: HGGW00802601XX
Site: HTS
Date: 10/12/2006
Time: Start: 1410 End: 1600
Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up ____ Ft. (from ground)
Protective ____ Ft. Casing/Well Difference
Protective ____ Ft. Casing

Depth to Water ____ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes ___ No
GEOPROBE
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = [____ Gal/Vol. ____ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other		

Equipment Documentation

Purging/Sampling Equipment Used:

Purging (✓ If Used For)	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	~~Mini Site~~ Split Stainless Steel	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air ____ ppm Well Mouth ____ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ___ Turbid ___ Colored ___ Clear ___ Odor ✓ Cloudy

Purge Data	@ ~1.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	14.4				
pH, units	7.7				
Specific Conductivity (~~µmhos/cm~~) mS/cm	0.767				
Turbidity (NTUS)	300				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ~~ppm~~ mg/L	5.1				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3x40 ml	@ 1555
__ SVOCs		4°C	2x1 liter AG	
__ Metals		HNO_3, 4°C	1x1 liter P	
__ Cyanide		NaOH, 4°C	1x500mLP	
__ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
__ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
__ Pest/PCB		4°C	3x1 liter AG	
__ TPH		H_2SO_4, 4°C	2x1 liter AG	
__ TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: SCREEN: 24 to 28
Purge water: U-Burn

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205 9/02.2

Site: HTS Cleaners
Date: 11/03/06
Time: Start: 1106 End: 1132
Signature of Sampler:

Sample Location ID: HTGW00902701XX

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical

___ Top of Well ___ Top of Protective Casing ___ _____

Well Riser Stick-up (from ground) _____ Ft.

Protective _____ Ft. Casing/Well Difference

Protective _____ Ft. Casing

Depth to Water _____ Ft.

Well Material: ___ PVC ___ SS ___ Geoprobe

Well Locked?: ___ Yes ___ No

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) = [_____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure ___ Yes ___ No; Concrete Collar Intact ___ Yes ___ No; Other _____ ___ Yes ___ No

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	SP-15

Decontamination Fluids Used: (✓ All That Apply at Location)

___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm

Purge Data Collected ___ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.1 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	13.6				
pH, units	7.42				
Specific Conductivity (µmhos/cm)	1000				
Turbidity (NTUS)					
Oxidation - Reduction, +/- mv	13.6				
Dissolved Oxygen, ppm					

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	1200
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

Notes: Screen: 29 to 25

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II
Site: HTS
Project Number: 36120620591/02.2
Date: 10/11/2006
Time: Start: 1331 End: 1350
Sample Location ID: HTGW0100250 1XX
Signature of Sampler:

Water Level/Well Data

Well Depth ______ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up ______ Ft. (from ground)
Protective ______ Ft. Casing/Well Difference
Protective ______ Ft. Casing

Depth to Water ______ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes ___ No
GEOPROBE
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column ______ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = [______ Gal/Vol. ______ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other ______		

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Millipore	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air — ppm Well Mouth — ppm
Purge Data Collected ✓ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	16.9				
pH, units	7.4				
Specific Conductivity (~~μmhos~~ ms/cm)	1.40				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ~~ppm~~ mg/L	5.9				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle /Lot Nos.
✓ VOCs	✓	4°C	3 x40 ml	@ 1345
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 26'-24'
Purge water: Lt Brown w/ Coarse gray sand, sheen

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

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GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS Dry CLEANERS - GROUP II
Project Number: 361206205901022
Site: HTS
Date: 10/11/2006
Time: Start: 1300 End: 1330
Sample Location ID: HTGW01003/01XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___Measured ___Historical
___Top of Well ___Top of Protective Casing ___ _____
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___PVC ___SS _____
Well Locked?: ___Yes ___No Geoprobe
Well Dia. ___2 inch ___4 inch ___6 inch ___ _____
Water Level Equip. Used: ___Elect. Cond. Probe ___Float Activated ___Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___.16 Gal/Ft. (2 in.) ___.65 Gal/Ft. (4 in.) ___1.5 Gal/Ft. (6 in.) ___ __ Gal/Ft. (__in.) = _____Gal/Vol. _____Total Gal Purged

Well Integrity: Yes No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	milk lot	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___Methanol (100%)
___25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___Hexane
___HNO_3/D.I. Water Solution
___Potable Water
___None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air / ppm Well Mouth / ppm
Purge Data Collected ✓ In-line ✓ In Container
Sample Observations: __Turbid __Clear __Cloudy __Colored __Odor

Purge Data	@ ~0.25 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C					
pH, units	CMS				
Specific Conductivity (µmhos/cm)					
Turbidity (NTUS)					
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ~~ppm~~ mg/L	RO pumpers				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	1320
__ SVOCs		4°C	2x1 liter AG	
__ Metals		HNO_3,4°C	1x1 liter P	
__ Cyanide		NaOH,4°C	1x500mLP	
__ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
__ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
__ Pest/PCB		4°C	3x1 liter AG	
__ TPH		H_2SO_4,4°C	2x1 liter AG	
__ TOC		H_2SO_4,4°C	1x1 liter P	
	I			

Notes: Screen: 32 to 30
Purge water: Lt Brown w lots of fine sand slight sheen

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205-9/02.2
Site: HTS cleaners
Date: 10/12/06
Time: Start: 1750 End: 1805
Sample Location ID: HTGW01/10230HL
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing ___ _____
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS ___ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__in.) = _____ Gal/Vol. / _____ Total Gal Purged

Well Integrity:

	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other _____	___	___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓		Press/Vac Filter	
	✓	Mi11S10T	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ____ ppm Well Mouth ____ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data @ 10.1 Gal.	@ ____ Gal.	@ ____ Gal.	@ ____ Gal.	@ ____ Gal.	@ ____ Gal.
Temperature, Deg. C				✓	
pH, units					
Specific Conductivity (µmhos/cm)				✓	
Turbidity (NTUS)	2000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm					

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

1800

Notes: Screen: 22' to 24'

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205-9/02.2
Site: HTS cleaners
Date: 10/12/06
Time: Start: 1725 End: 1750
Sample Location ID: HTGW011031011XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up (from ground) _____ Ft.
Protective Casing/Well Difference _____ Ft.
Protective Casing _____ Ft.

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS _____ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) =
_____ Gal/Vol.
_____ Total Gal Purged

Well Integrity:

	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other _____	___	___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	mills/lot

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ 10.1 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C					
pH, units					
Specific Conductivity (µmhos/cm)					
Turbidity (NTUS)	N/A				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm					

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs	___	4°C	2x1 liter AG	
___ Metals	___	HNO_3,4°C	1x1 liter P	
___ Cyanide	___	NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate	___	H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate	___	H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB	___	4°C	3x1 liter AG	
___ TPH	___	H_2SO_4,4°C	2x1 liter AG	
___ TOC	___	H_2SO_4,4°C	1x1 liter P	

Notes: Screen: 32 to 30'

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FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205-9/02.2
Site: HTS cleaners
Date: 10/12/06
Time: Start: 1700 End: 1720
Sample Location ID: HTGW01202301 ✓
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up (from ground) _____ Ft.
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS _____ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ __ Gal/Ft. (__in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Yes / No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	Millslot

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ✓ In-line ___ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ 40.1 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C					
pH, units					
Specific Conductivity (µmhos/cm)	N/A				
Turbidity (NTUS)					
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm					

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	1710
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

Notes: Screen: 22' to 24'

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205-9/02.2
Site: HTS cleaners
Date: 10/12/06
Time: Start: 1615 End: 1700
Sample Location ID: HTGW01203101XA
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up (from ground) _____ Ft.
Protective Casing/Well Difference _____ Ft.
Protective Casing _____ Ft.

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS ___ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = _____ Gal/Vol. / _____ Total Gal Purged

Well Integrity: Yes No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	Millipore

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ 40-1 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C					
pH, units					
Specific Conductivity (µmhos/cm)	N/A				
Turbidity (NTUS)					
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm					

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	1655
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

Notes: Screen: 30' to 32'

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 DRY CLEANERS - GROUP II
Project Number: 36120620591022
Site: HTS
Date: 10/12/2006
Time: Start: 1650 End: 1657
Sample Location ID: HTGW01201310XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing ___ _____
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS _____
Well Locked?: ___ Yes ___ No
GeoProbe
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__in.) = [_____ Gal/Vol. _____ Total Gal Purged

Well Integrity:

	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other _____	___	___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	mw1 Slot	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.2 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	✓			✓	
pH, units	Case				
Specific Conductivity (µmhos/cm)	✓				
Turbidity (NTUS)	21000				
Oxidation - Reduction, +/- mv	✓				
Dissolved Oxygen, ppm	mg/L				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x 40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

1655

Notes: SCREEN 32' to 30'
Purge water: V. DK Brn
VI Silt

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205-9/02.2
Site: HTS Cleaners
Date: 11/03/06
Time: Start: 1030 End: 1055
Sample Location ID: HTGW01302701XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up (from ground) _____ Ft.
Protective Casing/Well Difference _____ Ft.
Protective Casing _____ Ft.

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS ___ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Yes No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	SP-15	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None

Field Analysis Data

PID: Ambient Air ____ ppm Well Mouth ____ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.1 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	11.5				
pH, units	7.3				
Specific Conductivity (µmhos/cm)	652				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ppm	13.2				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓	✓			
___ VOCs	___	4°C	2x40 ml	
___ SVOCs	___	4°C	2x1 liter AG	
___ Metals	___	HNO_3, 4°C	1x1 liter P	
___ Cyanide	___	NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate	___	H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate	___	H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB	___	4°C	3x1 liter AG	
___ TPH	___	H_2SO_4, 4°C	2x1 liter AG	
___ TOC	___	H_2SO_4, 4°C	1x1 liter P	
	___			1045

Notes: Screen: 25 to 29

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: Region 8, D.L. - Group II	Boring/Well No.: SB/GW-014	Project No.: 3612062059/022
Client: **NYSDEC**	Site: HTS	Sheet No. 1 of 2
Logged By: B. Shaw	Ground Elevation:	Start Date: 10/09/06 / Finish Date: 10/09/06
Drilling Contractor: Geologic NY	Driller's Name: Li...	Rig Type: 66 DT
Drilling Method: Direct Push	Protection Level: D / P.I.D. (eV): —	Casing Size: 1 1/2" / Auger Size: 2"
Soil Drilled: 24' / Rock Drilled: —	Total Depth: 36'	Depth to Groundwater/Date: 10/09/06 : 23.3' — Piez ☐ Well ☐ Boring ☒

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	PI Meter Head Space		Lab Tests
0–4 (S1)	2.1/4.0					0-0.5 - Brown silty loam, dry, roots 0.5-1 Brown ~~silt gravel~~ sandy silt, NP, fines w/ little coarse gravel, moist/dry 1-1.2 Black m coarse sand; 1.2-2.2 Same as 0.5-1 2.2-2.3 white/grey Black ash (coal ash?) 2.3-4 silty clay to silt-sand-clay mix olive brown, wet, HP, m stiff.	Fill ML/SC		<0.1 24 ppm 20 ppm 18 ppm		* Composite 0.5 to 3' HTGS00400301XX @ 1450	
4–9 (S2)	1.1/5.0					4 to 9 orange/Lt Brown Sandy clay w/gravel; NP; saturated - perched water table, loose/soft.	ML GC		~10 ppm			
9–14 (S3)	2.9/5.0					9-11.5 Same as above, but less clay & more coarse sand; 11.5-11.6 Tan/dry Clay lense, clean 11.6-14 Brown/Tan Sandy dry silty clay w/ trace fine gravel, dry, NP; friable	SM GM ML SC SM		12 to 17 ppm			

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services, Inc.

9404014D(z) L33

Test Boring Log

Project: Region 8 S.C - Group II	Boring/Well No.: SB014	Project No.: 361206259/02.2	
Client: NYSDEC	Site: H13	Sheet No.: 2 of 2	
Logged By: BShaw	Ground Elevation:	Start Date: 10/09/06	Finish Date: 10/09/06
Drilling Contractor: Geologic	Driller's Name: Liam Cummins	Rig Type: 66 DT	
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV):	Casing Size: 1½	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled:	Total Depth: 36	Depth to Groundwater/Date: ~~24.8~~ 23.3'	Piez ☐ Well ☐ Boring ☑

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
15											
16											
17	S4 23/5.0										
18											
19						18 - 19 Brn silty clay & some coarse sand; moist, trace cobbles, lenses of any clay;	ML		4 to 7 ppm		
20						19 - 19.5 lt grey silty fine sand; Dry	SM				
21	S5 24/5.0					19.5 - 21 silty sand & gravel w/ trace clay; MP/HP	GM		10 ppm		
22						21 - 21.5 olive Brn silty clay & coarse rounded gravel, wet HP	SM				
23						21.5 - 24 silty/sand & gravel, wet NP, loose/m Dense	GM		15 ppm		
24									20 ppm		
25											
26											
27											
28											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services, Inc.

9404014D(z) L33

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGION 8 Dry CLEANERS - GROUP II
Site: HTS
Project Number: 3612062059/02.2
Date: 10/09/06
Time: Start: 1543 End: 1600
Sample Location ID: HTGW014025011XX
Signature of Sampler: [signature]

Water Level/Well Data

Well Depth ______ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up ______ Ft. (from ground)
Protective ______ Ft. Casing/Well Difference
Protective ______ Ft. Casing

Depth to Water ______ Ft.
Well Material: ___ PVC ___ SS
Well Locked?: ___ Yes
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

GEOPROBE

Height of Water Column ______ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = [______ Gal/Vol. ______ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure	___	___
Concrete Collar Intact	___	___
Other ______	___	___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Millsoft	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ___ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~2.0 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	17.1				
pH, units	7.1				
Specific Conductivity (~~µmhos/cm~~) mS/cm	1.07				
Turbidity (NTUS)	500				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ~~ppm~~ mg/L	6.0				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle /Lot Nos.
✓ VOCs	✓	4°C	3 ~~2~~x40 ml	@ 1555
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 20' to 24'
Purge water: Brown → cleared

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services

9404014D L22

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II Site: HTS
Project Number: 361206205981021.2 Date: 10/09/06
Time: Start: 1510 End: 1542
Sample Location ID: HTGW01141035DIIXX Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft. Well Material: ___ PVC ___ SS _____
Well Locked?: ___ Yes ___ No (Stickup)
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ __ Gal/Ft. (__ in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Yes / No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓		Bailer	
	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Millipore	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected: ✓ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ✓ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.5 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	20.0				
pH, units	7.3				
Specific Conductivity (µmhos/cm)	CMS				
Turbidity (NTUS)	~1000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm mg/L	3.9				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

1540

Notes: SCREEN: 36 to 34
Purge water: 1/4 Barrel + Sink → cleaned up

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205 9/02.2
Site: HTS cleaners
Date: 11/2/06
Time: Start: 1615 End: 1645
Sample Location ID: HTGW01502501KK
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up (from ground) _____ Ft.
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS _____ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Yes / No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	Mullslot	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.0 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	12.3				
pH, units	6.7				
Specific Conductivity (µmhos/cm)	1420				
Turbidity (NTUS)	400				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm	15.9				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

1635

Notes: Screen: 24 to 26

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205 9/02.2
Site: HTS cleaners
Date: 11/2/06
Time: Start: 1515 End: 1615
Sample Location ID: HTGW01503401XX
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS _____ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (___ in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Yes No
Prot. Casing Secure ___ ___
Concrete Collar Intact ___ ___
Other _____ ___ ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
✓		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	SP-15	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air 1.4 ppm Well Mouth 1.4 ppm
Purge Data Collected ___ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.1 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	13.2				
pH, units	5.6				
Specific Conductivity (µmhos/cm)	1590				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ppm	10.4				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

1635
1610

Notes: Screen: 33' to 34'

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

9404014D L22

Test Boring Log

Project: Region 8 D.C. - Group #	Boring/Well No. SB-016	Project No. 36120620591022
Client: **NYSDEC**	Site: HTS	Sheet No. 1 of 2
Logged By: B. Swm	Ground Elevation:	Start Date: 10/09/06 · Finish Date: 10/09/06
Drilling Contractor: Geologic	Driller's Name: Vim Commis	Rig Type: 66 DT
Drilling Method: Direct Push	Protection Level: D · P.I.D. (eV): —	Casing Size: 1 1/2" · Auger Size: 2"
Soil Drilled: 29' · Rock Drilled: —	Total Depth: 32'	Depth to Groundwater/Date: Piez ☐ Well ☐ Boring ☑

Sample	Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	PI Meter Head Space		Lab Tests
S1	0–4	2.4 / 4.0					0-0.5 Lt Brwn silty loam, mP, roots	Fill		<0.1			
							0.5-1.2 Brwn silty loam; coarse sand, dmp, SP, some quartz cobble	Fill		17ppm	} Slight odor		
							1.2-3.5 Brwn silty sand, some gravel, moist, m Dense	SM GM		24ppm			
							3.5-4 fine sand w/ trace clay; coarse gravel, wet.	SW		17ppm			
										20ppm			
S2	4–9	1.5 / 5.0					4 to 9 Brwn/orange Brwn sandy clay w/ fine gravel, saturated, soft, mP/HP stratified	SC GC		17ppm			
										25ppm			
										20ppm			
S3	9–14	3.4 / 5.0					9 to 9.5 Same as 4 to 9.						
							9.5-10.5 clean m coarse sand dmp, odor, m Dense	SP	odor	22 ppm			Composited soil from 9.5 to 10.5 HTS5016010 (@ 1635)
							10.5-14 silty m coarse sand & fine gravel, dmp m Dense	SM GM	odor				

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services, Inc.

9404014D(z) L33

Test Boring Log

Project	Boring/Well No.	Project No.
Region 8 D.C. - Group II	SB016	3612062059/02.2

Client	Site	Sheet No.
NYSDEC	HTS	2 of 2

Logged By	Ground Elevation	Start Date	Finish Date
B. Smd		10/09/06	10/09/06

Drilling Contractor	Driller's Name	Rig Type
Geologic	Liam Cumming	66 DT.

Drilling Method	Protection Level	P.I.D. (eV)	Casing Size	Auger Size
Direct Push	D	—	1½"	2"

Soil Drilled	Rock Drilled	Total Depth	Depth to Groundwater/Date	Piez	Well	Boring
29'	—	32'		☐	☐	☑

	Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	PI Meter Head Space		Lab Tests
S4	14–19	4.0'/5.0					14 to 16.5 Brown silty sand & fine gravel, Dense, moist. 16.5 to 16.7 Sandy clay & fine gravel, HPlmp, wet, Soft. 16.7 - 19 Lt Brown V. Dense Silty fine Sand/fine Sandy silt, trace rounded coarse sand; glacier deposit/fluvial deposit bone dry; fryable.	SM GM SC GC SM GM		20 ppm			
S5	19–23	4.0'/4.0					19 to 22 Same as 16.7 to 19; 22-23 Lt grey fine sandy Silt; some clay, dry, V Dense Some rounded coarse sand; fryable.	ML		15; 10 ppm			
	23–24						Same as 22-23			8 ppm			
S6	24–26	3.0'/4.0 (3.0)								8 ppm; 11 ppm			
S7	26–29	3.0'/3.0					Same as 22 to 23						

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2 Site: HTS cleaners
Project Number: 361206205-9/02.2 Date: 11/3/06
Time: Start: 0850 End: 0905
Sample Location ID: HTGW01702101XX Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS _____ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch ___ _____
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer ___ _____

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ ___ Gal/Ft. (__in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure Yes ___ No ___; Concrete Collar Intact Yes ___ No ___; Other _____ Yes ___ No ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ___ In-line ___ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.5 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	10.7				
pH, units	6.9				
Specific Conductivity (µmhos/cm)	771				
Turbidity (NTUS)	~300				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ppm	13.0				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3, 4°C	1x1 liter P	
___ Cyanide		NaOH, 4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	~0900
___ Pest/PCB		4°C	3x1 liter AG	
___ TPH		H_2SO_4, 4°C	2x1 liter AG	
___ TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: Screen: 14 to 23'

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: Region 8 Dry Cleaners - Group 2
Project Number: 361206205 9/02.2
Site: HTS cleaners
Date: 11/3/06
Time: Start: 0800 End:
Sample Location ID: HTGW01703401KK
Signature of Sampler:

Water Level/Well Data

Well Depth _____ Ft. ___ Measured ___ Historical
___ Top of Well ___ Top of Protective Casing
Well Riser Stick-up _____ Ft. (from ground)
Protective _____ Ft. Casing/Well Difference
Protective _____ Ft. Casing

Depth to Water _____ Ft.
Well Material: ___ PVC ___ SS ___ Geoprobe
Well Locked?: ___ Yes ___ No
Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch
Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column _____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = _____ Gal/Vol. _____ Total Gal Purged

Well Integrity: Prot. Casing Secure Yes ___ No ___; Concrete Collar Intact Yes ___ No ___; Other _____ Yes ___ No ___

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For) Purging	Sampling		Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
✓	✓	Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
✓	✓	Press/Vac Filter	SP-15

Decontamination Fluids Used: (✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
___ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
✓ Potable Water
___ None
___ _____
___ _____

Field Analysis Data

PID: Ambient Air ___ ppm Well Mouth ___ ppm
Purge Data Collected ✓ In-line ✓ In Container
Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~0.5 Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.	@ _____ Gal.
Temperature, Deg. C	11.4				
pH, units	7.2				
Specific Conductivity (µmhos/cm)	661				
Turbidity (NTUS)	71000				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ppm	11.8				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	2x40 ml	
___ SVOCs		4°C	2x1 liter AG	
___ Metals		HNO_3,4°C	1x1 liter P	
___ Cyanide		NaOH,4°C	1x500mLP	
___ Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
___ Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
___ Pest/PCB		4°C	3x1 liter AG	0845
___ TPH		H_2SO_4,4°C	2x1 liter AG	
___ TOC		H_2SO_4,4°C	1x1 liter P	

Notes: Screen: 33' to 34'

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

Test Boring Log

Project: REGION 8 D.L. - GROUP II		Boring/Well No.: SB/GW-01	Project No.: 361206.2159/02.2
Client: NYSDEC	Site: LTS		Sheet No.: 1 of 2
Logged By: B. Shaw	Ground Elevation	Start Date: 10/11/2006	Finish Date: 10/11/2006
Drilling Contractor: Geologic, NY	Driller's Name: Liam Cummings		Rig Type: 66 DT.
Drilling Method: Direct Push	Protection Level: D	P.I.D. (eV)	Casing Size: 1 1/2	Auger Size: 2"
Soil Drilled: 24'	Rock Drilled	Total Depth: 32'	Depth to Groundwater/Date: ~21.5	Piez ☑ Well ☐ Boring ☐

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm): PI Meter Field Scan	Monitoring (ppm): PI Meter Head Space	Lab Tests
1	S1 2.1/4.0					0-0.5 Asphalt 0.5-1 Brown silty sand w/ gravel moist, Dense	FILL SM GM		0.1		
2						1-3 olive Brown clayey sand w gravel, fine to fine gravel, wet mP/HP, mStiff	SC GC				
3						3-4 olive Sandy clay, wet HP, mStiff,	CL				
4									5 ppm		
5						4 to 6.5 Same as 3-4, 4 Brown dry clay lense @ ~5'			0.1		
6	S2 3.4/5.0					6.5-6.7 cobble layer 6.7-6.8 yellow Brown mcoarse sand					
7						6.8-9 Sandy gravel w/ lots of fines, moist. to damp; mDense	ML SP GW				
8						dry Brown clay lense @ ~7.5'					
9											
10						9 to ~13 Brown silty sands fine gravel, dry to damp	SM GM		0.1		
11	S3 3.2/5.0					mDense/Dense, NP/SP					
12						13 to 14 Brown course sand & gravel w/ some fines, damp					
13						loose/mDense, NP					
14							GW				

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

Test Boring Log

Project: Region 8 D.C. - Group II		Boring/Well No.: SB/GW-018	Project No.: 361206259/0.2.2
Client: NYSDEC	Site: HTS		Sheet No.: 2 of 2
Logged By: B. Shaw	Ground Elevation	Start Date: 10/11/2006	Finish Date: 10/11/2006
Drilling Contractor: Geologic	Driller's Name: Liam Cummins		Rig Type: 66 DT
Drilling Method: Direct-Push	Protection Level: D	P.I.D. (eV): /	Casing Size: 1 1/2"	Auger Size: 2"
Soil Drilled: 24	Rock Drilled: /	Total Depth: 32'	Depth to Groundwater/Date: ~21.5	Piez: ☑ Well: ☐ Boring: ☐

Depth (Feet)	Sample No. & Penetration/ Recovery (Feet)	Sample Type	SPT Blows/6" or Core Rec./Rqd. %	SPT-N (Blows/Ft.)	Graphic Log	Sample Description	USCS Group Symbol	Notes on Drilling	Monitoring (ppm) PI Meter Field Scan	Monitoring (ppm) PI Meter Head Space	Lab Tests
14											
15						14 to 17 silty sand & gravel dry, medium dense,	SM GM		60.1		
16	S4					17-17.4 fine to medium sand, orange, loose, PG					
17	3.5'/5.0					17.4 - 19 same as 14-17	SP				
18							SM GM				
19											
20						19 to ~21.5 Brown silty sand & fine gravel, dry, medium dense	SM GM		<0.1		
21						~21.5 to 24 orange/Brown sandy gravel, medium sand to fine gravel, w/ some fines loose, saturated.					
22	S5 1/5.0						GW				
23											
24											
25											
26											
27											

FIGURE 4-6
TYPICAL TEST BORING LOG
NYSDEC QUALITY ASSURANCE PROGRAM PLAN

ABB Environmental Services, Inc.

9404014D(z) L33

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II Site: HTS
Project Number: 3612062059/02.2 Date: 10/11/2006
Time: Start: 1536 End: 1602
Sample Location ID: HTGW0180240LXX Signature of Sampler:

Water Level/Well Data

Well Depth ____ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing Well Riser Stick-up ____ Ft. (from ground) Protective ____ Ft. Casing/Well Difference Protective ____ Ft. Casing

Depth to Water ____ Ft. Well Material: ___ PVC ___ SS Well Locked?: ___ Yes ___ No Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

GEOPROBE

Height of Water Column ____ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__in.) = [____ Gal/Vol. ____ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other		

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling	Equipment	Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
✓	✓	PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	millSLt	

Decontamination Fluids Used:

(✓ All That Apply at Location)
___ Methanol (100%)
___ 25% Methanol/75% ASTM Type II water
✓ Deionized Water
✓ Liquinox Solution
___ Hexane
___ HNO_3/D.I. Water Solution
___ Potable Water
___ None

Field Analysis Data

PID: Ambient Air / ppm Well Mouth / ppm Purge Data Collected ___ In-line ✓ In Container

Sample Observations: ___ Turbid ___ Clear ✓ Cloudy ___ Colored ___ Odor

Purge Data	@ ~2.5 Gal.	@ Gal.	@ Gal.	@ Gal.	@ Gal.
Temperature, Deg. C	16.4				
pH, units (Const)	7.3				
Specific Conductivity (~~µmhos/cm~~)	1.57				
Turbidity (NTUS)	>1000				
Oxidation - Reduction, +/- mv	—				
Dissolved Oxygen, ~~ppm~~ mg/L	5.9				

Sample Collection Requirements

(✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 x40 ml	
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3,4°C	1x1 liter P	
Cyanide		NaOH,4°C	1x500mLP	@ 1600
Nitrate/Sulfate		H_2SO_4,4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4,4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4,4°C	2x1 liter AG	
TOC		H_2SO_4,4°C	1x1 liter P	

Notes: SCREEN: 25 to 23'
Purge water: Lt Brwn → Clear

FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

GROUNDWATER SAMPLE FIELD DATA RECORD

Project: REGIONS DRY CLEANERS - GROUP II
Project Number: 361206 2059/0.2
Sample Location ID: HTGW018031011XX

Site: HTS
Date: 10/11/2006
Time: Start: 1505 End: 1540
Signature of Sampler:

Water Level/Well Data

Well Depth ______ Ft. ___ Measured ___ Historical ___ Top of Well ___ Top of Protective Casing

Well Riser Stick-up ______ Ft. (from ground)

Protective ______ Ft. Casing/Well Difference

Protective ______ Ft. Casing

Depth to Water ______ Ft.

Well Material: ___ PVC ___ SS

Well Locked?: ___ Yes ___ No Geoprobe

Well Dia. ___ 2 inch ___ 4 inch ___ 6 inch

Water Level Equip. Used: ___ Elect. Cond. Probe ___ Float Activated ___ Press. Transducer

Height of Water Column ______ Ft. X ___ .16 Gal/Ft. (2 in.) ___ .65 Gal/Ft. (4 in.) ___ 1.5 Gal/Ft. (6 in.) ___ Gal/Ft. (__ in.) = [______ Gal/Vol. ______ Total Gal Purged]

Well Integrity:	Yes	No
Prot. Casing Secure		
Concrete Collar Intact		
Other		

Equipment Documentation

Purging/Sampling Equipment Used:

(✓ If Used For)

Purging	Sampling	Equipment	Equipment ID
✓	✓	Peristaltic Pump	
		Submersible Pump	
		Bailer	
		PVC/Silicon Tubing	
		Teflon/Silicon Tubing	
		Airlift	
		Hand Pump	
		In-line Filter	
		Press/Vac Filter	
✓	✓	MilS10L	

Decontamination Fluids Used:

(✓ All That Apply at Location)

- ___ Methanol (100%)
- ___ 25% Methanol/75% ASTM Type II water
- ✓ Deionized Water
- ✓ Liquinox Solution
- ___ Hexane
- ___ HNO_3/D.I. Water Solution
- ___ Potable Water
- ___ None

Field Analysis Data

PID: Ambient Air ______ ppm Well Mouth ______ ppm

Purge Data Collected ✓ In-line ✓ In Container

Sample Observations: ✓ Turbid ___ Clear ___ Cloudy ___ Colored ___ Odor

Purge Data	@ ~1.0 Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.	@ ___ Gal.
Temperature, Deg. C	17.6				
pH, units	7.5				
Specific Conductivity (µmhos/cm) mS	1.20				
Turbidity (NTUS)	>1,000				
Oxidation - Reduction, +/- mv					
Dissolved Oxygen, ppm mg/l	3.8				

Sample Collection Requirements (✓ If Required at this Location)

Analytical Parameter	✓ If Sample Collected	Preservation Method	Volume Required	Sample Bottle ILot Nos.
✓ VOCs	✓	4°C	3 2x40 ml	@ 1535
SVOCs		4°C	2x1 liter AG	
Metals		HNO_3, 4°C	1x1 liter P	
Cyanide		NaOH, 4°C	1x500mLP	
Nitrate/Sulfate		H_2SO_4, 4°C	1x1 liter P	
Nitrate/Phosphate		H_2SO_4, 4°C	1x1 liter P	
Pest/PCB		4°C	3x1 liter AG	
TPH		H_2SO_4, 4°C	2x1 liter AG	
TOC		H_2SO_4, 4°C	1x1 liter P	

Notes: SCREEN: 32' to 30'
Purge water: Brown, faint sheen

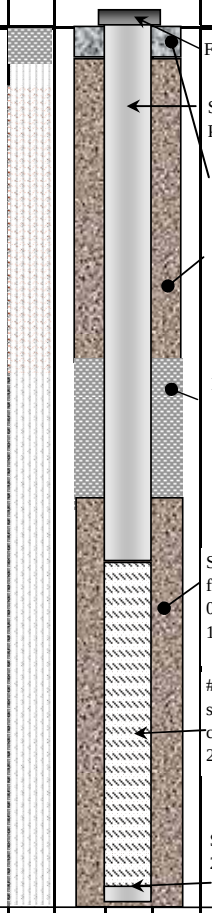
FIGURE 4-1
GROUNDWATER SAMPLE DATA RECORD
NYSDEC QUALITY ASSURANCE PROGRAM PLAN
ABB Environmental Services

Microwell Completion Diagram

Well No: GW-2

Project No.: 3612062059/02.2	**Project:** Region 8 Group 2 - HTS	**Checked By:** LONGLEY	
Client Name: NYSDEC	**Logged By:** SHAW	**Protection Level:** D	**Ground Elevation:**
Drilling Contractor: GEOLOGIC	**Drilling Method:** DIRECT PUSH	**Driller's Name:** LIAM CUMMINS	
Bit Type/Size: GEOPROBE ROD - 1 1/2"	**Soil Drilled:** 26'	**Rig Type:** 66 DT Track Rig	**Start Date:** 10/10/2006	**Finish Date:** 10/10/2006
Well Material: 1" I.D. Sch 40 PVC		**P.I.D. (eV): NA**	**Casing Size** N/A	**Auger Size:** 2"

Depth (feet) | Graphic Log | Well Diagram | Well Construction Notes



Notes:

Well Construction Notes: (all depths in feet from ground surface)

Depth to Water Levels:

11/2/2006: 19.41' (TOR)

noted water at 20.1 during installation

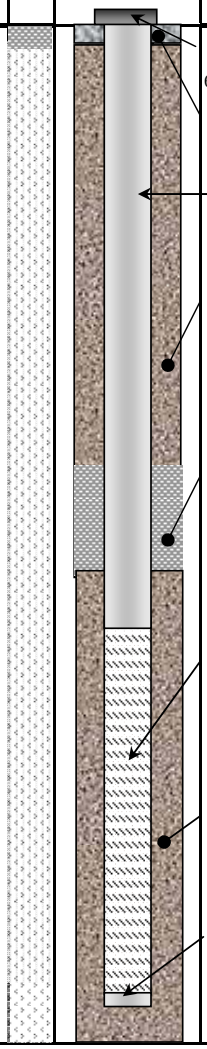
BOW: 25.70' (TOR)
TD = 26.0'

Microwell Completion Diagram

Well No: GW-5

Project No.: 3612062059/02.2	**Project:** Region 8 Group 2 - HTS	**Checked By:** LONGLEY	
Client Name: NYSDEC	**Logged By:** SHAW	**Protection Level:** D	**Ground Elevation:**
Drilling Contractor: GEOLOGIC	**Drilling Method:** DIRECT PUSH	**Driller's Name:** LIAM CUMMINS	
Bit Type/Size: GEOPROBE ROD - 1 1/2"	**Soil Drilled:** 24'	**Rig Type:** 66DT Track Rig	**Start Date:** 10/10/2006	**Finish Date:** 10/10/2006
Well Material: 1" I.D. Sch 40 PVC		**P.I.D. (eV): NA**	**Casing Size** N/A	**Auger Size:** 2"

Depth (feet) | Graphic Log | Well Diagram | Well Construction Notes



Notes:

Well Construction Notes: (all depths in feet from ground surface)

Depth to Water Levels:

10/31/2006: 17.02' (TOR)
11/02/2006: 17.05' (TOR)

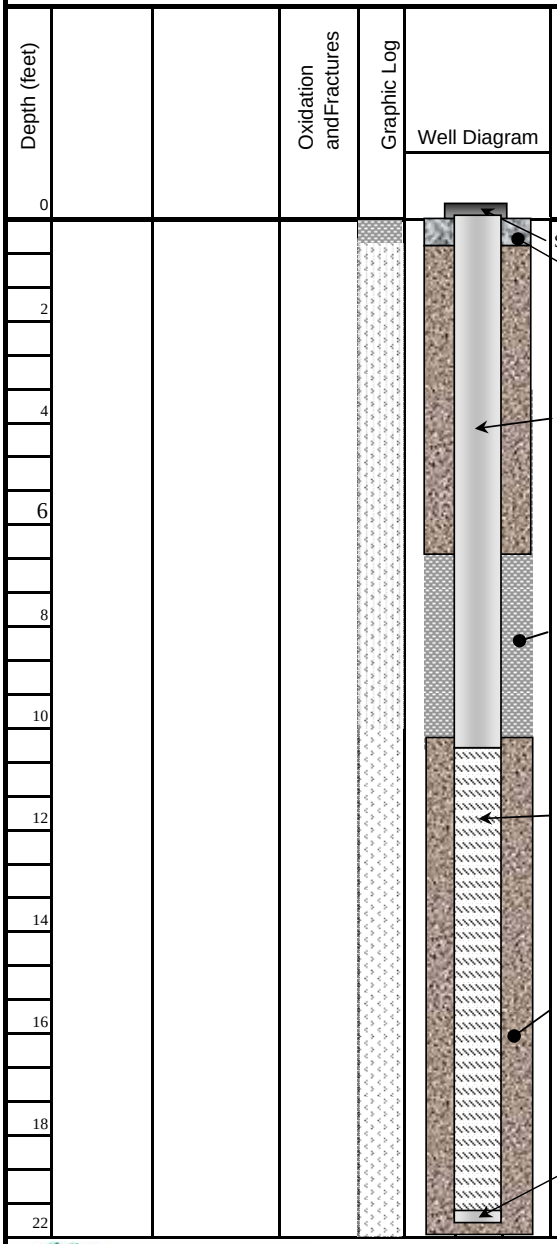
noted water at 17.6' during installation

BOW: 22.28' (TOR)
TD = 24'

Microwell Completion Diagram

Well No: GW-7

Project No.: 3612062059/02.2	**Project:** Region 8 Group 2 - HTS	**Checked By:** LONGLEY	
Client Name: NYSDEC	**Logged By:** SHAW	**Protection Level:** D	**Ground Elevation:**
Drilling Contractor: GEOLOGIC	**Drilling Method:** DIRECT PUSH		**Driller's Name:** LIAM CUMMINS
Bit Type/Size: GEOPROBE ROD - 1 1/2"	**Soil Drilled:** 22'	**Rig Type:** 66DT Track Rig	**Start Date:** 10/12/2006 / **Finish Date:** 10/12/2006
Well Material: 1" I.D. Sch 40 PVC		**P.I.D. (eV): NA**	**Casing Size** N/A / **Auger Size:** 2"



Notes:

Well Construction Notes: (all depths in feet from ground surface)

Depth to Water Levels:

10/31/2006: 19.48' (TOR)
11/2/2006: 19.17' (TOR)

perched zone noted at between 5' to 6' during drilling

water noted at 19.95' at time of setting well

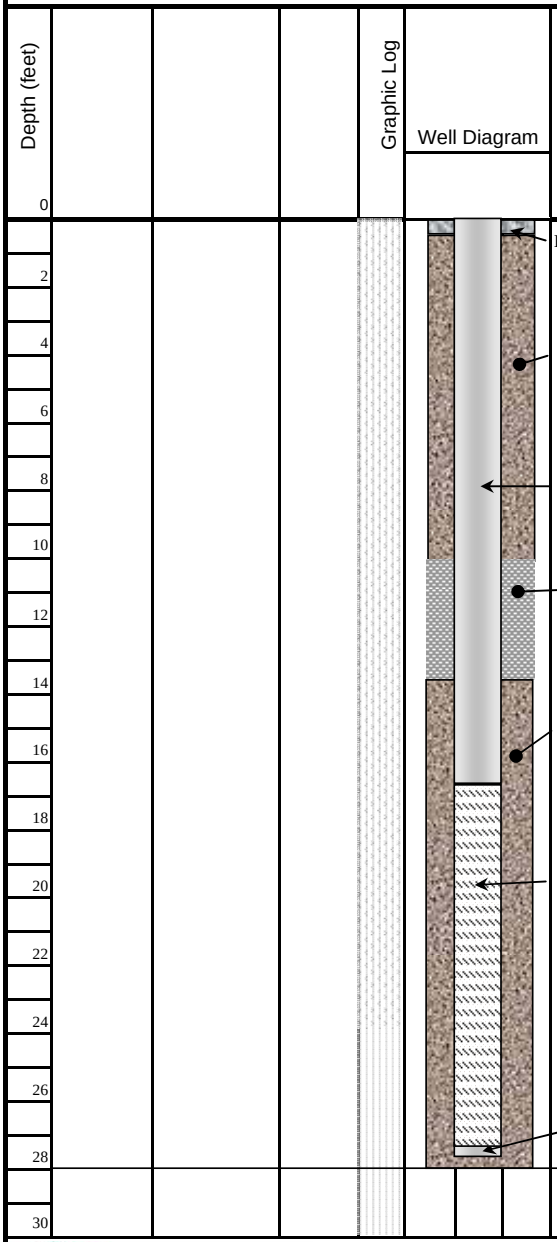
BOW:
TD = 22'

MACTEC

Microwell Completion Diagram

Well No: GW-18

Project No.: 3612062059/02.2	**Project:** Region 8 Group 2 - HTS	**Checked By:** LONGLEY	
Client Name: NYSDEC	**Logged By:** SHAW	**Protection Level:** D	**Ground Elevation:**
Drilling Contractor: GEOLOGIC	**Drilling Method:** DIRECT PUSH	**Driller's Name:** LIAM CUMMINS	
Bit Type/Size: GEOPROBE ROD - 1 1/2"	**Soil Drilled:** 28'	**Rig Type:** 66DT Track Rig	**Start Date:** 10/11/2006 / **Finish Date:** 10/11/2006
Well Material: 1" I.D. Sch 40 PVC		**P.I.D. (eV): NA**	**Casing Size** N/A / **Auger Size:** 2"



Notes:

Well Construction Notes: (all depths in feet from ground surface)

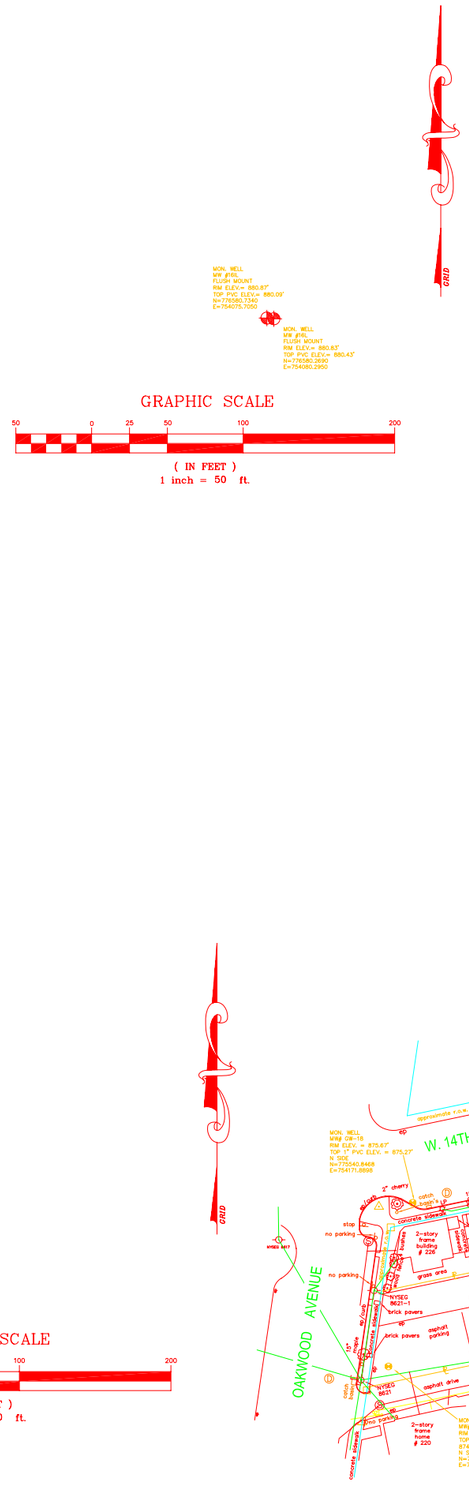
Depth to Water Levels:

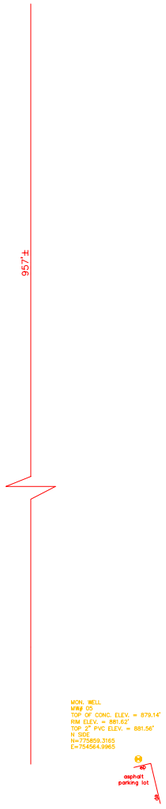
10/31/2006: 19.75' (TOR)
11/02/2006: 19.74' (TOR)

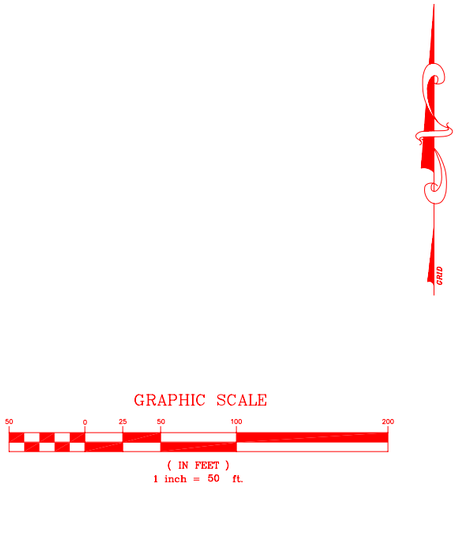
BOW: 27.42' (TOR)
TD = 28'

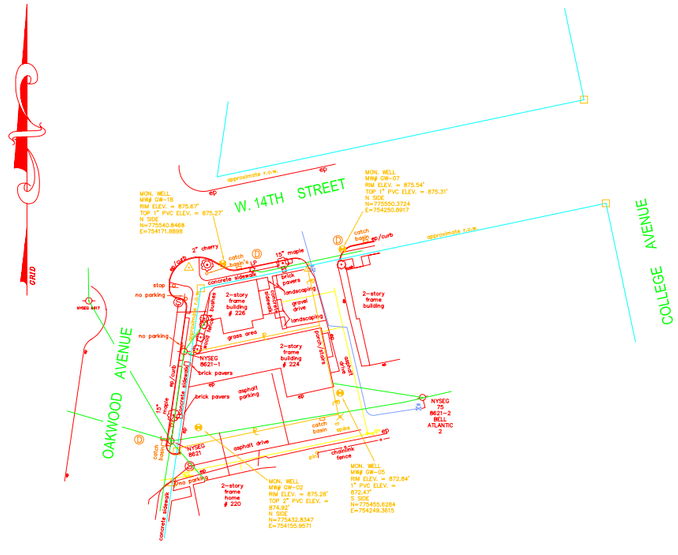
APPENDIX D

SITE SURVEY









LEGEND

UTP NYSEG 6302		UTILITY POLE
WV		WATER VALVE
		WATER SEVICE VALVE
GV		GAS VALVE
UPL NYSEG 6298 NYT 4		UTILITY POLE WITH LIGHT
		SURVEY CONTROL POINT
catb		DRAINAGE CATCH BASIN
DMH		DRAINAGE MANHOLE
		SEWER LINE
		GAS MAIN
MON. WELL MW #04 RIM ELEV.= 854.18' TOP PVC ELEV.= 853.90' N=764634.7515 E=760549.2186		MONITORING WELL

SURVEY NOTES:

1.) THE VERTICAL ELEVATIONS LISTED HEREON ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

2.) THE HORIZONTAL COORDINATES ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATES SYSTEM, CENTRAL ZONE. THEY ARE BASED ON THE NAD 1983 COORDINATE DATUM.

3.) ALL ELEVATIONS ON MONITORING WELL PVC WAS TAKEN ON THE NORTH SIDE UNLESS OTHERWISE SPECIFIED.

4.) PROPERTY LINES ARE APPROXIMATE FROM TAX MAPS.

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: _____

LU ENGINEERS
Civil and Environmental

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

PROJECT:

HTS CLEANERS
ELMIRA, NY

CLIENT:

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

DRAWING TITLE:

Environmental MAP

DESIGNED BY:	SCALE: 1"= 50'
DRAWN BY: JRH	DATE: 12/18/06
CHECKED BY: CJR	PROJECT No. 36414-03

SHEET	DRAWING No.
1 OF 1	S-1

J:\Projects\36400 MACTEC\36414 Region 8 Cleaners Site\36414-03 Hts\Cadd\ HTS Cleaners.dwg

APPENDIX E

DATA USABILITY SUMMARY REPORT

DATA VALIDATION REPORT

Volatile Analyses

SDG No. X4779 & X4945
Sampling Date: October 3 & 13, 2006

Submitted to:

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

Submitted by:

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

January 12, 2007

Site:	HTS Cleaners/NYSDEC
Client:	MACTEC, Inc.
Analytical Laboratory:	Chemtech 284 Sheffield Street Mountainside, NJ 07092
Sample Delivery Group (SDG):	X4779 & 4945
Sampling Date:	October 3 & 13, 2006
Analyses:	Volatile
Analytical Method:	CLP OLM 4.3 & USEPA TO-15

Summary of Data Validation:

The adherence of laboratory analytical performance to CLP and USEPA TO-15 Analytical Specifications were evaluated during the data validation process. The USEPA Region II's data validation SOP Checklists (SOP HW-18 Rev 0, August 1994**,** SOP, HW-15 Rev 2, May 1993) and the National Functional Guidelines for Organic Data Review (October 1999), were used as guidelines for data qualifications.

SDG X4779: Trichlorofluoromethane results in both samples were qualified as estimated due to calibration issues.

SDG X4945: Hexachloro-1,3-butadiene and 1,2,4-trichlrobenzene were rejected in all samples due to LCS recovery 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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List of Appendices

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	TO-15
SDG X4779			
HTMWD1302601XX	WATER	X	–
HTMW00301801XX	WATER	X	–
SDG X4945			
HTGV00100801XX	AIR	–	X
HTGV00200801XX	AIR	–	X
HTGV00300801XX	AIR	–	X
HTSV001XXX01XX	AIR	–	X
QC sample ID	**Matrix**		
LCS	WATER	X	–
LCSD	WATER	X	–
HTSV001XXX01XXMS	AIR	–	X
HTSV001XXX01XXMSD	AIR	–	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 USEPA CLP and TO-15 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 were acceptable.

4.0 Holding Time

Holding times were acceptable.

4.1 Sample Preservation

Samples were appropriately preserved.

4.2 Percent Moisture

Percent moisture results were not acceptable.

4.3 Chain of Custody Record

Chain of Custody Record was present.

5.0 Calibration Quality Control

5.1 Initial Calibration

The initial calibration was acceptable.

5.2 Continuing Calibration (CCAL)

SDG X4779: Trichlorofluoromethane-27% exceeded the 25% QC criterion. Affected compounds qualified as estimated "UJ" to indicate a low bias..

SDG X4945: Hexachloro-1,3-butadiene-74% and 1,2,4-trichlrobenzene exceeded the 30 %D. See Section 8.1.

6.0 Blanks Quality Control

SDDG X4779: Method blank reported acetone and methylene contamination but there were no detects thus, no qualification was necessary.

7.0 Surrogate Recoveries

Recoveries were acceptable.

8.0 Accuracy

8.1 Laboratory Control Samples (LCS)/Blank Spikes

SDG X4945: Hexachloro-1,3-butadiene-33% and 1,2,4-trichlrobenzene -52% were below the 65-135 % QC limits. Both these compounds were rejected in all samples.

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

8.2.1 Frequency
Frequency was met.

8.2.2 Recovery
Recoveries were not applicable.

9.0 Precision

9.1 Matrix Spike Duplicates
RPDs were not applicable.

9.2 Matrix Duplicate
RPDs were acceptable.

10.0 Field QC

10.1 Field Blanks/Rinse Blanks
No rinse blanks were reported with this SDG.

10.2 Trip Blanks
No trip blank was reported

10.3 Field Duplicate
No field duplicates were reported with these SDGs.

11.0 Internal Standards (IS)

11.1 IS Area Counts
IS area counts were within QC limit.

11.2 Retention Time (RT)
All RTs were within the method accepted criteria.

12.0 Target Compound Identification
All target compounds identification is acceptable.

12.1 Tentatively Identified Compounds (TICs)
No TICs were reported.

13.0 Calculations and Transcription

Raw data were accurately transcribed to summary data sheets.

14.0 Additional Comments

None

15.0 Data Qualifier Table

SDG X4779-Volatile

Sample Identification	Compound	Qualifier	Section Reference
HTMWD1302601XX, HTMW00301801XX	Trichlorofluoromethane	UJ	5.2

SDG X4945-Volatile

Sample Identification	Compound	Qualifier	Section Reference
HTGV00100801XX	Propene	J	14.0
HTGV00100801XX HTGV00200801XX HTGV00300801XX HTSV001XXX01XX	1,2, 4-Trichlorobenzene, hexachloro-1,3-butadiene	R	8.1

DATA VALIDATION REPORT

Volatile Analyses

SDG No. X4826
Sampling Date: October 4 & 9, 2006

Submitted to:

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

Submitted by:

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

January 12, 2007

Site:	HTS Cleaners/NYSDEC
Client:	MACTEC, Inc.
Analytical Laboratory:	Chemtech 284 Sheffield Street Mountainside, NJ 07092
Sample Delivery Group (SDG):	X4826
Sampling Date:	October 4 & 9, 2006
Analyses:	Volatile
Analytical Method:	CLP OLM 4.3

Summary of Data Validation:

The adherence of laboratory analytical performance to CLP Analytical Specifications was evaluated during the data validation process. The USEPA Region II's data validation SOP Checklists (SOP HW-18 Rev 0, August 1994**,** SOP, HW-15 Rev 2, May 1993) and the National Functional Guidelines for Organic Data Review (October 1999), were used as guidelines for data qualifications.

Volatile: Tetrachloroethene results in some samples were qualified as estimated due to calibration issues. Acetone results in some samples were qualified as non-detects due to blank contamination.

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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List of Appendices

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**
SDG X4826		
HTMW16L03001XX	WATER	X
HTMW16U02201XX	WATER	X
HTGS01400301XX	SOIL	X
HTGW01402501XX	WATER	X
HTGW01403501XX	WATER	X
HTTB001XXX01XX	WATER	X
AMGW01503102XX	WATER	X
HTGS01601001XX	SOIL	X
QC sample ID	**Matrix**	
HTMW16U02201XXMS	WATER	X
HTMW16U02201XXMSD	WATER	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 USEPA CLP Method.

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 were acceptable.

4.0 Holding Time

Holding times were acceptable.

4.1 Sample Preservation

Samples were appropriately preserved.

4.2 Percent Moisture

Percent moisture results were acceptable.

4.3 Chain of Custody Record

Chain of Custody Record was present.

5.0 Calibration Quality Control

5.1 Initial Calibration

The initial calibration was acceptable.

.

5.2 Continuing Calibration (CCAL)

Percent difference for tetrachloroethene-25.9% exceeded the required 25% criterion. This compound in affected samples was qualified as estimated due to this anomaly.

6.0 Blanks Quality Control

Method blank reported acetone contamination. All affected detected acetone results were qualified as non-detects due to this anomaly.

7.0 Surrogate Recoveries

Recoveries were acceptable.

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
Recoveries were acceptable.

9.0 Precision

9.1 Matrix Spike Duplicates
The results were acceptable.

9.2 Matrix Duplicate
RPDs were acceptable.

10.0 Field QC

10.1 Field Blanks/Rinse Blanks
No rinse blanks were reported with this SDG.

10.2 Trip Blanks
Trip blank reported acetone contamination. Affected detected results were qualified as non-detects.

10.3 Field Duplicate
No field duplicates were presented with this SDG.

11.0 Internal Standards (IS)

11.1 IS Area Counts
IS area counts were within QC limit.

11.2 Retention Time (RT)
All RTs were within the method accepted criteria.

12.0 Target Compound Identification
All target compounds identification is acceptable.

12.1 Tentatively Identified Compounds (TICs)
No TICs were reported.

13.0 Calculations and Transcription
Raw data were accurately transcribed to summary data sheets.

14.0 Additional Comments
None

15.0 Data Qualifier Table

Volatile

Sample Identification	Compound	Qualifier	Section Reference
HTMW16L03001XX, HTMW16U02201XX	Tetrachloroethene	UJ	5.2
HTGS01400301XX, HTGW1403501XX, HTGS01601001XX	Acetone	U	6.0/10.2

DATA VALIDATION REPORT

Volatile & Semi-volatile Analyses

SDG No. X4921
Sampling Date: October 10-11, 2006

Submitted to:

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

Submitted by:

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

January 12, 2007

Site:	HTS Cleaners/NYSDEC
Client:	MACTEC, Inc.
Analytical Laboratory:	Chemtech 284 Sheffield Street Mountainside, NJ 07092
Sample Delivery Group (SDG):	X4587
Sampling Date:	October 10-11, 2006
Analyses:	Volatile & Semi volatile
Analytical Method:	CLP OLM 4.3

Summary of Data Validation:

The adherence of laboratory analytical performance to CLP Analytical Specifications was evaluated during the data validation process. The USEPA Region II's data validation SOP Checklists (SOP HW-18 Rev 0, August 1994**,** SOP, HW-15 Rev 2, May 1993) and the National Functional Guidelines for Organic Data Review (October 1999), were used as guidelines for data qualifications.

Volatile: Some detected acetone results were qualified as non-detects due to blank contamination. Hexachloro-1,3-butadiene results in some samples were qualified as estimated due to calibration issues. One acetone sample result was qualified as estimated due to calibration range exceedance. Trichloroethene in one groundwater sample was qualified as estimated due to surrogate recovery 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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List of Appendices

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
SDG X4921			
HTGS00100801XX	SOIL	X	–
HTGS00300501XX	SOIL	X	–
HTGW00102501XX	WATER	X	X
HTGW00103501XX	WATER	X	–
HTGW00202301XX	WATER	X	–
HTGW00203301XX	WATER	X	–
HTGW00302101XX	WATER	X	–
HTGW00303101XX	WATER	X	–
HTGW00402101XX	WATER	X	–
HTGW00403101XX	WATER	X	–
HTGW00502101XX	WATER	X	–
HTGW00503101XX	WATER	X	–
HTGW00503101XD	WATER	X	–
HTGW01002501XX	WATER	X	–
HTGW01003101XX	WATER	X	–
HTGW01802401XX	WATER	X	–
HTGW01803101XX	WATER	X	–
HTTB002XXX01XX	WATER	X	–
HTMW005033001XX	WATER	X	–
QC sample ID	**Matrix**		
HTGS00100801XXMS	SOIL	X	–
HTGS00100801XXMSD	SOIL	X	–
HTGW00102501XXMS	WATER	X	X
HTGW00102501XXMSD	WATER	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 USEPA CLP 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 were acceptable.

4.0 Holding Time

Holding times were acceptable.

4.1 Sample Preservation

Samples were appropriately preserved.

4.2 Percent Moisture

Percent moisture is not applicable.

4.3 Chain of Custody Record

Chain of Custody Record was present.

5.0 Calibration Quality Control

5.1 Initial Calibration

The initial calibration was acceptable.

.

5.2 Continuing Calibration (CCAL)

VOA: The following compounds exceeded the 25% QC criterion;

Compound	**%D-10/20/03**
Vinyl chloride	27
1,1,2-Trichlorotrifluoroethane	33
Methyl acetate	32
Cyclohexane	26

SVOA: Percent difference for 2,4-dinitrophenol -35.7% exceeded the 25% QC criterion. Result for this compound was qualified as estimated due to this anomaly.

6.0 Blanks Quality Control

Method blank reported acetone and 2-butanone contamination. All affected detected acetone results were qualified as non-detects due to this anomaly.

SVOA: Method blank reported bis (ethyl hexyl) phthalate contamination. This resulted in detected result for this compound being qualified as non-detect.

7.0 Surrogate Recoveries

Several samples reported surrogate recoveries that were outside QC limits. Based on professional judgment and technical information, the validator presented the best runs. See Section 15.0.

8.0 Accuracy

8.1 Laboratory Control Samples (LCS)/Blank Spikes

SVOA: Acenaphthene-29% and n-nitroso-di-n-propylamine-29% recovered below their minimum QC limits of 46 and 4% respectively. Both these compound will be rejected in all affected samples "R" and is usable.

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

8.2.1 Frequency

Frequency was met.

8.2.2 Recovery

For ground water samples 3 of 5 MS recoveries were above QC limits. Surrogate recoveries were also high for this MS. However, surrogate recoveries in the original sample were within QC limits. Therefore no qualification was made.

9.0 Precision

9.1 Matrix Spike Duplicates

RPD for all samples in the MS/MSD pair were outside QC limits. This is indicative of a systematic precision issue thus, all detected groundwater samples were qualified for all MS/MSD compounds. See below.

Compound	RPD (%)	QC limits (%)
1,1-Dichloroethene	19	14
Benzene	29	11
Trichloroethene	58	14
Toluene	24	13
Chlorobenzene	20	13

9.2 Matrix Duplicate

RPDs were acceptable.

10.0 Field QC

10.1 Field Blanks/Rinse Blanks

No rinse blanks were reported with this SDG.

10.2 Trip Blanks

Trip blank reported no contamination.

10.3 Field Duplicate

HTGW00503101XD was presented as a field duplicate. The original field sample is HTGW00503101XX. RPDs are calculated when both samples report detects. The RPDs are acceptable.

11.0 Internal Standards (IS)

11.1 IS Area Counts

IS area counts were within QC limit.

11.2 Retention Time (RT)

All RTs were within the method accepted criteria.

12.0 Target Compound Identification

All target compounds identification is acceptable.

12.1 Tentatively Identified Compounds (TICs)

No TICs were reported.

13.0 Calculations and Transcription

Raw data were accurately transcribed to summary data sheets.

14.0 Additional Comments

The laboratory experience difficulty performing on compounds acenaphthene and n-nitroso-di-n-propylamine. Both compounds reported low recoveries in the LCS ,MS and MSD. Due to this both these compounds were qualified for low bias.

VOA: The data package was analyzed with some major deficiencies. For some groundwater samples surrogate recoveries were very low as well as LCS and blank samples. Based on professional judgment and technical information the validator presented the best runs for all samples involved. See Sections 8.2 and 15.0.

15.0 Data Qualifier Table

Volatile

Sample Identification	Compound	Qualifier	Section Reference
HTGW00102501XX HTGW00303101XX HTGW00402101XX HTGW00403101XX HTGW01002501XX HTGW01003101XX HTGW01803101XX	Trichloroethene	J	9.1
HTGS00100801XX, HTGS00300501XX	Vinyl chloride, 1,1,2-trichlorotrifluoroethane, methyl acetate, cyclohexane	UJ	5.2
HTGS00100801XX HTGS00300501XX	Acetone, 2-butanone	U	6.0
HTGW00303101XX, HTGW00502101XX, HTGW01003101XX	Acetone	U	6.0
HTGW00502101XX	Cis1,2-dichloroethene, trichloroethene		7.0
HTGW00103501XXRE HTGW00202301XXRE, HTGW00203301XXRE HTGW00302101XXRE	Methylene chloride Carbon disulfide Bromoform Bromodichloromethane 1,1-Dichloroethane 1,1-Dichloroethene Trichlorofluoromethane Dichlorodifluoromethane 1,1,2-Trichloro-1,2,2-Trifluoroethane 1,2-Dichloropropane 2-Butanone 1,1,2-Trichloroethane Acetic acid, methyl ester 1,1,2,2-Tetrachloroethane o-Xylene 1,2-Dichlorobenzene 1,2-Dibromo-3-chloropropane Isopropyl benzene Xylene, m/p cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,4-Dichlorobenzene 1,2-Dibromoethane 1,2-Dichloroethane 4-Methyl-2-pentanone Methyl cyclohexane Toluene	UJ	7.0

Sample Identification	Compound	Qualifier	Section Reference
	Chlorobenzene Cyclohexane 1,2,4-Trichlorobenzene Chlorodibromomethane Tetrachloroethene trans-1,2-Dichloroethene Methyl Tertbutyl Ether 1,3-Dichlorobenzene Carbon tetrachloride 2-Hexanone Acetone Chloroform Benzene 1,1,1-Trichloroethane Bromomethane		
HTGW00103501XXRE HTGW00202301XXRE HTGW00203301XXRE, HTGW00302101XXRE	Cis-1,2-Dichloroethene	J	7.0
HTGW00503101XXRE, HTGW00503101XDRE, HTGW01802401XX, HTMW00503001XX	Methylene chloride Carbon disulfide Bromoform Bromodichloromethane 1,1-Dichloroethane 1,1-Dichloroethene Trichlorofluoromethane Dichlorodifluoromethane 1,1,2-Trichloro-1,2,2-Trifluoroethane 1,2-Dichloropropane 2-Butanone 1,1,2-Trichloroethane Acetic acid, methyl ester 1,1,2,2-Tetrachloroethane o-Xylene 1,2-Dichlorobenzene 1,2-Dibromo-3-chloropropane Isopropylbenzene Xylene, m/p cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,4-Dichlorobenzene 1,2-Dibromoethane 1,2-Dichloroethane 4-Methyl-2-pentanone Methyl cyclohexane Toluene Chlorobenzene Cyclohexane 1,2,4-Trichlorobenzene Chlorodibromomethane Tetrachloroethene trans-1,2-Dichloroethene Methyl Tertbutyl Ether 1,3-Dichlorobenzene	UJ	7.0

Sample Identification	Compound	Qualifier	Section Reference
	Carbon tetrachloride 2-Hexanone Acetone Chloroform Benzene 1,1,1-Trichloroethane Bromomethane		
HTGW00503101XXRE, HTGW00503101XDRE, HTGW01802401XX, HTMW00503001XX	Trichloroethene Cis-1,2-Dichloroethene	J	7.0

Semi-volatile

Sample Identification	Compound	Qualifier	Section Reference
HTGW00102501XX	N-nitroso-di-n-propyl amine, acenaphthene	R	8.1
HTGW00102501XX	2,4-Dinitrophenol	UJ	5.2
HTGW00102501XX	Bis (2-ethyl hexyl) phthalate	U	6.0

DATA VALIDATION REPORT

Volatile Analysis

SDG No. X4926
Sampling Date: October 12, 2006

Submitted to:

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

Submitted by:

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

January 12, 2007

Site:	HTS Cleaners/NYSDEC
Client:	MACTEC, Inc.
Analytical Laboratory:	Chemtech 284 Sheffield Street Mountainside, NJ 07092
Sample Delivery Group (SDG):	X4926
Sampling Date:	October 12, 2006
Analyses:	Volatile
Analytical Method:	CLP OLM 4.3

Summary of Data Validation:

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

Volatile: Some compounds were qualified as estimated due to surrogate recovery issues. Some acetone and one 2-butanone result were qualified as non-detected due to blank contamination.

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**
SDG X4926		
HTGS00600101XX	SOIL	X
HTGW00602301XX	WATER	X
HTGW00603301XX	WATER	X
HTGW00702301XX	WATER	X
HTGW00703301XX	WATER	X
HTGW00802601XX	WATER	X
HTGW01102301XX	WATER	X
HTGW01103101XX	WATER	X
HTGW01202301XX	WATER	X
HTGW01203101XX	WATER	X
HTTB003XXX01XX	WATER	X
QC sample ID	**Matrix**	
LCS	WATER	X
LCSD	WATER	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 USEPA CLP Method.

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 were acceptable.

4.0 Holding Time

Holding times were acceptable.

4.1 Sample Preservation

Samples were appropriately preserved.

4.2 Percent Moisture

Percent moisture results were acceptable.

4.3 Chain of Custody Record

Chain of Custody Record was present.

5.0 Calibration Quality Control

5.1 Initial Calibration

The initial calibration was acceptable.

5.2 Continuing Calibration (CCAL)

The CCAL was acceptable.

6.0 Blanks Quality Control

Method blank reported no contamination.

7.0 Surrogate Recoveries

1,2-Dichloroethane-d4 in sample HTGW00602301XXRE and HTGW01203101XX recovered at 117% and 126% respectively and were outside the QC limits of 76-114%. All detected compounds in this sample were qualified as estimated "J" 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

No MS/MSD pair was analyzed.

8.2.2 Recovery

Recoveries were not applicable.

9.0 Precision

9.1 Matrix Spike Duplicates

RPDs were not applicable.

9.2 Matrix Duplicate

RPDs were acceptable.

10.0 Field QC

10.1 Field Blanks/Rinse Blanks

No rinse blanks were reported with this SDG.

10.2 Trip Blanks

Trip blank reported acetone and methylene contamination. There were no detects thus no qualification was necessary.

10.3 Field Duplicate

HTGW00702301XD was presented as a field duplicate. The original field sample is HTGW00702301XX. RPDs are calculated when both samples report detects. The RPDs are acceptable.

11.0 Internal Standards (IS)

11.1 IS Area Counts

IS area counts were within QC limit.

11.2 Retention Time (RT)

All RTs were within the method accepted criteria.

12.0 Target Compound Identification

All target compounds identification is acceptable.

12.1 Tentatively Identified Compounds (TICs)

TICs were acceptable.

13.0 Calculations and Transcription

Raw data were accurately transcribed to summary data sheets.

14.0 Additional Comments

None

15.0 Data Qualifier Table

Volatile

Sample Identification	Compound	Qualifier	Section Reference
HTGS00600101XX	Acetone, 2-butanone	U	6.0
HTGW00602301XXRE	Trichloroethene Cis-1,2-Dichloroethene	J	7.0
HTGW00702301XX HTGW00703301XX HTGW01102301XX HTGW01103101XX HTGW01202301XX	Acetone	U	6.0
HTGW01203101XX	Trichloroethene	J	7.0

DATA VALIDATION REPORT

Volatile Analyses

SDG No. X5269
Sampling Date: November 2-3, 2006

Submitted to:

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

Submitted by:

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

January 12, 2007

Site:	HTS Cleaners/NYSDEC
Client:	MACTEC, Inc.
Analytical Laboratory:	Chemtech 284 Sheffield Street Mountainside, NJ 07092
Sample Delivery Group (SDG):	X5269
Sampling Date:	November 2-3, 2006
Analyses:	Volatile
Analytical Method:	CLP OLM 4.3

Summary of Data Validation:

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

Volatile: Some compounds were qualified as estimated due to surrogate recovery issues. Some compounds were qualified as estimated due to calibration 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.

Table of Contents

Table of Contents (Continued)

List of Appendices

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
SDG X5269		
HTGW00902701XX	WATER	x
HTGW01302701XX	WATER	x
HTGW01502501XX	WATER	x
HTGW01503401XX	WATER	x
HTGW01703401XX	WATER	x
HTGW01702101XX	WATER	x
HTTB001XXX01XX	WATER	x
QC sample ID	**Matrix**	
LCS	WATER	x
LCSD	WATER	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 USEPA CLP Method.

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 were acceptable.

4.0 Holding Time

Holding times were acceptable.

4.1 Sample Preservation

Samples were appropriately preserved.

4.2 Percent Moisture

Percent moisture results were not acceptable.

4.3 Chain of Custody Record

Chain of Custody Record was present.

5.0 Calibration Quality Control

5.1 Initial Calibration

The initial calibration was acceptable.

5.2 Continuing Calibration (CCAL)

VOA: The following compounds exceeded the 25% QC criterion;

Compound	%D-10/13/06
Dichlorodifluoromethane	27
Trichlorofluoromethane	28
1,1,2-Trichlorotrifluoroethane	26
Methyl acetate	74
Cyclohexane	30

All samples were affected; all were qualified as estimated due to this exceedance.

6.0 Blanks Quality Control

Method blank reported no contamination.

7.0 Surrogate Recoveries

Toluene-d8 in sample HTGW1302701XX recovered at 86% which is outside the QC limits of 88-110%. All compounds in this sample were qualified as estimated "UJ" 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

No MS/MSD pair was analyzed.

8.2.2 Recovery

Recoveries were not applicable.

9.0 Precision

9.1 Matrix Spike Duplicates

RPDs were not applicable.

9.2 Matrix Duplicate

RPDs were acceptable.

10.0 Field QC

10.1 Field Blanks/Rinse Blanks

No rinse blanks were reported with this SDG.

10.2 Trip Blanks

Trip blank reported acetone and methylene contamination. There were no detects thus no qualification was necessary.

10.3 Field Duplicate

No field duplicates were presented with this SDG.

11.0 Internal Standards (IS)

11.1 IS Area Counts

IS area counts were within QC limit.

11.2 Retention Time (RT)

All RTs were within the method accepted criteria.

12.0 Target Compound Identification

All target compounds identification is acceptable.

12.1 Tentatively Identified Compounds (TICs)

No TICs were reported.

13.0 Calculations and Transcription

Raw data were accurately transcribed to summary data sheets.

14.0 Additional Comments

None

15.0 Data Qualifier Table

Volatile

Sample Identification	Compound	Qualifier	Section Reference
HTGW00902701XX HTGW01502501XX HTGW01503401XX HTGW01703401XX HTGW01702101XX HTTB001XXX01XX	Dichlorodifluoromethane Trichlorofluoromethane 1,1,2-Trichlorotrifluoroethane Methyl acetate Cyclohexane	UJ	5.2
HTGW01302701XX	Methylene chloride Carbon disulfide Bromoform Bromodichloromethane 1,1-Dichloroethane 1,1-Dichloroethene Trichlorofluoromethane Dichlorodifluoromethane 1,1,2-Trichloro-1,2,2-Trifluoroethane 1,2-Dichloropropane 2-Butanone 1,1,2-Trichloroethane Trichloroethene Acetic acid, methyl ester 1,1,2,2-Tetrachloroethane o-Xylene 1,2-Dichlorobenzene 1,2-Dibromo-3-chloropropane Isopropyl benzene Xylene, m/p cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,4-Dichlorobenzene 1,2-Dibromoethane 1,2-Dichloroethane 4-Methyl-2-pentanone Methyl cyclohexane Toluene Chlorobenzene Cyclohexane 1,2,4-Trichlorobenzene Chlorodibromomethane Tetrachloroethene Cis-1,2-Dichloroethene	UJ	7.0

Sample Identification	Compound	Qualifier	Section Reference
	trans-1,2-Dichloroethene Methyl Tertbutyl Ether 1,3-Dichlorobenzene Carbon tetrachloride 2-Hexanone Acetone Chloroform Benzene 1,1,1-Trichloroethane Bromomethane		

DATA USABILITY SUMMARY REPORT
OCTOBER 2006 SAMPLING EVENT
HTS SITE
REGION 8, NEW YORK

1.0 Introduction:

Water and air samples were collected at the HTS site in October 2006 and submitted for off-site laboratory analyses. Samples were analyzed by CHEMTECH in Mountainside, New Jersey. A listing of samples included in this investigation is presented in Table 1. Samples were analyzed for the following parameters:

- Air: EPA Method TO-15 for VOCs
- Water: VOCs and SVOCs by CLP OLM04.3
- Soil: VOCs by CLP OLM04.3

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 1995; NYSDEC, 2000).

Data validation was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 1997) and USEPA Region II Guidelines (USEPA, 1993; USEPA, 1994) and the USEPA National Functional Guidelines (USEPA, 1999). Samples were reported in lab sample delivery groups X4779, X4826, X4921, X4926, X4945, and X5269. Validation was completed by EDV, Inc. in Pittsburgh, Pennsylvania. Validation reports for each SDG are presented in Attachment 1. The validation reports were reviewed by the MACTEC QA Officer and the reports were accepted as presented by EDV with several exceptions that are documented in Sections 2 and 3, and Attachment 1.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated

A summary of final sample results is presented in Appendix E. Tentatively identified compounds (TICs) were reported in accordance with the CLP methods if detected. A summary of detected TICs is provided in Appendix E. Only samples with reported TICs are listed on the summary table. Samples that are not listed had no TICs detected.

2.0 Water Samples

Water samples were reported in lab sample delivery groups X4779, X4826, X4921, X4926, and X5269. Data validation qualification actions are summarized for each SDG.

2.1 VOCs

X4779

Percent difference for trichlorofluoromethane (27%) in the continuing calibration associated with samples MW-13D and MW-3 exceeded the validation limit of 25 percent. Result were reported as non-detect in both samples and reporting limits were qualified estimated (UJ).

X4826

Percent difference for tetrachloroethene (26%) in the continuing calibration associated with samples MW-16L and MW-16U exceeded the validation limit of 25 percent. Result were reported as non-detect in both samples and reporting limits were qualified estimated (UJ).

Results for acetone were qualified non-detect (U) in samples due to method blank contamination.

X4926

High recovery of surrogate 1,2-dichloroethane-d4 was reported in samples HTGW00602301XXRE (117%) and HTGW01203101XX (126%) above the QC limits of 76-114 percent. All results for detected target compounds were qualified estimated (J) and may be biased high.

X5269

Percent difference for dichlorofluoromethane (27%), trichlorofluoromethane (28%), 1,1,2-trichlorotrifluoroethane (26%), methyl acetate (74%), and cyclohexane (30%) in the continuing calibration associated with samples HTGW00902701XX, HTGW01302701XX, HTGW01502501XX, HTGW01503401XX, HTGW01703401XX, and HTGW01702101XX exceeded the validation limit of 25 percent. Result were reported as non-detect in both samples and reporting limits were qualified estimated (UJ).

Low recovery of surrogate toluene-d8 was reported in samples HTGW01302701XX (88%) below the QC limits of 76-114 percent. All results were reported as non-detect and reporting limits were qualified estimated (J) and may be biased low.

X4921

Percent difference for vinyl chloride (27%), 1,1,2-trichlorotrifluoroethane (33%), methyl acetate (74%), and cyclohexane (30%) in the continuing calibration associated with samples HTGS00100801XX and HTGS00300501XX exceeded the validation limit of 25 percent. Result were reported as non-detect in both samples and reporting limits were qualified estimated (UJ).

Results for acetone and 2-butanone were qualified non-detect (U) in samples due to method blank contamination.

All results in samples HTGW00103501XX, HTGW00202301XX, HTGW00203301XX, HTGW00302101XX, HTGW00503101XX, HTGW00503101XD, HTGW00503001XX and HTGW01802401XX were qualified estimated (J/UJ) due to low surrogate recoveries.

2.2 SVOCs

X4921

Percent difference for 2,4-dichlorophenol (36%) in the continuing calibration associated with sample HTGW00102501XX exceeded the validation limit of 25 percent. The Result was reported as non-detect and reporting limits were qualified estimated (UJ).

The result for bis(2ethylhexyl)phthalate in sample HTGW00102501XX was qualified non-detect (U) due to method blank contamination.

Low recovery was reported for acenaphthene (29%) and n-nitroso-di-n-propylamine (29%) in the LCS. Results in sample HTGW00102501XX were reported as non-detect and reporting limits were qualified estimated (UJ) and may be biased low.

Results for positive detections of trichloroethene in all samples in SDG 4921were qualified estimated (J) due to relative percent difference (58) in the MS/MSD that exceeded the QC limit of 14.

3.0 Air Samples

X4945

In the laboratory control sample (LCS) recovery for hexachloro-1,3-butadiene (33%) and 1,2,4-trichlorobenzene (52%) were below the control limits of 65 - 135 percent. Results were reported as non-detect in samples and reporting limits were qualified estimated (UJ) and may be biased low.

Table 1
Summary of Samples

SDG	Lab ID	Field Sample ID	Sample Date	Method	Media	QC Code
X4779	X4779-21	HTMW00301801XX	10/3/2006	OLM04.3_VOA	GW	FS
X4779	X4779-20	HTMWD1302601XX	10/3/2006	OLM04.3_VOA	GW	FS
X4826	X4826-05	HTGS01400301XX	10/9/2006	OLM04.3_VOA	Soil	FS
X4826	X4826-10	HTGS01601001XX	10/9/2006	OLM04.3_VOA	Soil	FS
X4826	X4826-06	HTGW01402501XX	10/9/2006	OLM04.3_VOA	GW	FS
X4826	X4826-07	HTGW01403501XX	10/9/2006	OLM04.3_VOA	GW	FS
X4826	X4826-01	HTMW16L03001XX	10/4/2006	OLM04.3_VOA	GW	FS
X4826	X4826-02	HTMW16U02201XX	10/4/2006	OLM04.3_VOA	GW	FS
X4826	X4826-08	HTTB001XXX01XX	10/9/2006	OLM04.3_VOA	BW	TB
X4921	X4921-05	HTGW00102501XX	10/11/2006	OLM04.3_SVOA	GW	FS
X4921	X4921-01	HTGS00100801XX	10/11/2006	OLM04.3_VOA	Soil	FS
X4921	X4921-04	HTGS00300501XX	10/11/2006	OLM04.3_VOA	Soil	FS
X4921	X4921-05	HTGW00102501XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-08RE	HTGW00103501XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-09RE	HTGW00202301XX	10/10/2006	OLM04.3_VOA	GW	FS
X4921	X4921-10RE	HTGW00203301XX	10/10/2006	OLM04.3_VOA	GW	FS
X4921	X4921-11RE	HTGW00302101XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-12	HTGW00303101XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-13	HTGW00402101XX	10/10/2006	OLM04.3_VOA	GW	FS

X4921	X4921-14	HTGW00403101XX	10/10/2006	OLM04.3_VOA	GW	FS
X4921	X4921-15RE	HTGW00502101XX	10/10/2006	OLM04.3_VOA	GW	FS
X4921	X4921-17RE	HTGW00503101XD	10/10/2006	OLM04.3_VOA	GW	FD
X4921	X4921-16RE	HTGW00503101XX	10/10/2006	OLM04.3_VOA	GW	FS
SDG	**Lab ID**	**Field Sample ID**	**Sample Date**	**Method**	**Media**	**QC Code**
X4921	X4921-18	HTGW01002501XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-19	HTGW01003101XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-20	HTGW01802401XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-21	HTGW01803101XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-23	HTMW00503001XX	10/11/2006	OLM04.3_VOA	GW	FS
X4921	X4921-22	HTTB002XXX01XX	10/11/2006	OLM04.3_VOA	BW	TB
X4926	X4926-01	HTGS00600101XX	10/12/2006	OLM04.3_VOA	Soil	FS
X4926	X4926-02RE	HTGW00602301XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-03	HTGW00603301XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-05	HTGW00702301XD	10/12/2006	OLM04.3_VOA	GW	FD
X4926	X4926-04	HTGW00702301XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-06	HTGW00703301XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-07	HTGW00802601XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-08	HTGW01102301XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-09	HTGW01103101XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-10	HTGW01202301XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-11	HTGW01203101XX	10/12/2006	OLM04.3_VOA	GW	FS
X4926	X4926-12	HTTB003XXX01XX	10/12/2006	OLM04.3_VOA	BW	TB
X4945	X4945-01DL	HTGV00100801XX	10/13/2006	TO-15	SV	FS
X4945	X4945-01	HTGV00100801XX	10/13/2006	TO-15	SV	FS
X4945	X4945-02	HTGV00200801XX	10/13/2006	TO-15	SV	FS
X4945	X4945-03DL	HTGV00300801XX	10/13/2006	TO-15	SV	FS
X4945	X4945-04	HTSV001XXX01XX	10/12/2006	TO-15	SV	FS
X5269	X5269-01	HTGW00902701XX	11/3/2006	OLM04.3_VOA	GW	FS
X5269	X5269-02	HTGW01302701XX	11/3/2006	OLM04.3_VOA	GW	FS
X5269	X5269-03	HTGW01502501XX	11/2/2006	OLM04.3_VOA	GW	FS
X5269	X5269-04	HTGW01503401XX	11/2/2006	OLM04.3_VOA	GW	FS
X5269	X5269-06	HTGW01702101XX	11/3/2006	OLM04.3_VOA	GW	FS
X5269	X5269-05	HTGW01703401XX	11/3/2006	OLM04.3_VOA	GW	FS
X5269	X5269-07	HTTB004XXX01XX	11/3/2006	OLM04.3_VOA	BW	TB

Reference:

New York State Department of Environmental Conservation (NYSDEC), 1995. "Analytical Services Protocols"; 10/95 Edition; October 1995.

New York State Department of Environmental Conservation (NYSDEC), 1997. "Guidance for the Development of Data Usability Reports"; Division of Environmental Remediation; September 1997.

U.S. Environmental Protection Agency (USEPA), 1993. "USEPA Region II Checklist SOP HW-15"; Revision 2; May 1993.

U.S. Environmental Protection Agency (USEPA), 1994. "USEPA Region II Checklist SOP HW-18"; Revision 0; August 1994.

Quality Assurance Officer: Chris Ricardi, NRCC-EAC

Date: 3/16/07

ATTACHMENT 1
DATA VALIDATION REPORTS

SDG X4779 and 4945
SDG X4826
SDG X4921
SDG X4926
SDG X5269

DATA USABILITY SUMMARY REPORT
MAY 2007 SAMPLING PROGRAM
HTS
REGION 8, NEW YORK

1.0 Introduction:

Three groundwater samples were collected at the HTS site in May 2007 and submitted for off-site laboratory analyses. Samples were analyzed by CHEMTECH in Mountainside, New Jersey. A listing of samples included in this investigation is presented in Table 1. A summary of the analytical results is presented in Appendix E, Tables 1.1. Samples were analyzed for the following parameters:

- VOCs by EPA Method OLM04.3

Deliverables for the off-site laboratory analyses included a Category B deliverable as defined in the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocols (NYSDEC, 1995; NYSDEC, 2000).

A project chemist review was completed based on NYSDEC Division of Environmental Remediation guidance for Data Usability Summary Reports (NYSDEC, 2002). Laboratory QC limits were used during the data evaluation unless noted otherwise. The project chemist review included evaluations of sample collection, data package completeness, holding times, QC data (blanks, instrument calibrations, duplicates, surrogate recovery, and spike recovery), data transcription, electronic data reporting, calculations, and data qualification.

With the exception of the items discussed in the validation report in Attachment 1, results are interpreted to be usable as reported by the laboratory. A summary of final sample results is presented in Appendix E. The following qualifiers are used in the final data presentation.

U = target analyte is not detected at the reported detection limit
J = concentration is estimated
UJ = target analyte is not detected at the reported detection limit and is estimated

2.0 Groundwater Samples - Volatile Organic Compounds

Initial Calibration

The initial calibration had relative standard deviations that were greater than the control limit of 30 for chloroethane (38), acetone (39), and methyl acetate (33). The results for these compounds in samples HTMW07S02502XX, HTMW07D03502XX, and HTMW07D03502XD were non-detect and were qualified as estimated (UJ).

Continuing Calibration

The continuing calibration had percent differences between the initial and continuing calibration responses factors that were greater than the control limit of 25 for trichlorofluoromethane (32) and bromoform (29). The results for these compounds in sample HTMW07D03502XD were non-detect and were qualified as estimated (UJ).

The continuing calibration had percent differences greater than the control limit of 25 for methylene chloride (-29). The results for methylene chloride in samples HTMW07S02502XX, and HTMW07D03502XX were non-detect and were qualified as estimated (UJ).

Laboratory Control Sample

The LCS had a percent recovery for trichloroethene (125) that was greater than the laboratory control limit of 70-120, indicating a potential high bias. The results for trichloroethene in sample HTMW07D03502XD was positive and were qualified as estimated (J).

Tentatively Identified Compounds

Tentatively identified compounds (TICs) were reported in accordance with the CLP methods if detected. A summary of detected TICs is provided in Appendix E Table 1.2. Only samples that reported TICs are included in Table 1.2.

TABLE 1
SAMPLE SUMMARY TABLE

SDG	Lab Sample ID	Field Sample ID	Sample Date	Analysis Method	Media	QC Code
Y2694	Y2694-05	UNTB004XXX02XX	5/10/07	OLM04.3-VOC	BW	TB
Y2694	Y2694-07	HTMW07S02502XX	5/10/07	OLM04.3-VOC	GW	FS
Y2694	Y2694-08	HTMW07D03502XX	5/9/07	OLM04.3-VOC	GW	FS
Y2694	Y2694-09	HTMW07D03502XD	5/9/07	OLM04.3-VOC	GW	FD

Reference:

New York State Department of Environmental Conservation (NYSDEC), 1995. "Analytical Services Protocols"; 10/95 Edition; October 1995.

New York State Department of Environmental Conservation (NYSDEC), 1997. "Guidance for the Development of Data Usability Reports"; Division of Environmental Remediation; September 1997.

U.S. Environmental Protection Agency (USEPA), 1993. "USEPA Region II Checklist SOP HW-15"; Revision 2; May 1993.

U.S. Environmental Protection Agency (USEPA), 1999. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review"; Office of Emergency and Remedial Response; EPA-540/R-99/008; October 1999.

Data Validation Review: Amanda Zeidler

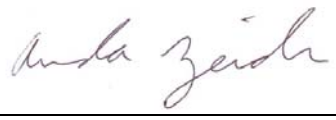
Signature:  Date: 6/6/07

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4779-20		X4779-21		X4826-01		X4826-02		X4826-06	
	SDG	X4779		X4779		X4826		X4826		X4826	
	Location	MW-13D		MW-3		MW-16L		MW-16U		GW-14	
	Field Sample Id	HTMWD1302601XX		HTMW00301801XX		HTMW16L03001XX		HTMW16U02201XX		HTGW01402501XX	
	Field Sample Date	10/3/2006		10/3/2006		10/4/2006		10/4/2006		10/9/2006	
	Qc Code	FS		FS		FS		FS		FS	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane		10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane		10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane		10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane		10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane		10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene		10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene		10	U	10	U	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane		10	U	10	U	10	U	10	U	10	U
1,2-Dibromoethane		10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane		10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane		10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		10	U	10	U	10	U	10	U	10	U
2-Butanone		50	U	50	U	50	U	50	U	50	U
2-Hexanone		50	U	50	U	50	U	50	U	50	U
4-Methyl-2-pentanone		50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester		10	U	10	U	10	U	10	U	10	U
Acetone		50	U	50	U	50	U	50	U	50	U
Benzene		10	U	10	U	10	U	10	U	10	U
Bromodichloromethane		10	U	10	U	10	U	10	U	10	U
Bromoform		10	U	10	U	10	U	10	U	10	U
Bromomethane		10	U	10	U	10	U	10	U	10	U
Carbon disulfide		10	U	10	U	10	U	10	U	10	U
Carbon tetrachloride		10	U	10	U	10	U	10	U	10	U
Chlorobenzene		10	U	10	U	10	U	10	U	10	U
Chlorodibromomethane		10	U	10	U	10	U	10	U	10	U
Chloroethane		10	U	10	U	10	U	10	U	10	U
Chloroform		10	U	10	U	10	U	10	U	10	U
Chloromethane		10	U	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene		10	U	0.88	J	9.8	J	6.4	J	23	
cis-1,3-Dichloropropene		10	U	10	U	10	U	10	U	10	U
Cyclohexane		10	U	10	U	10	U	10	U	10	U
Dichlorodifluoromethane		10	U	10	U	10	U	10	U	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4779-20		X4779-21		X4826-01		X4826-02		X4826-06	
	SDG	X4779		X4779		X4826		X4826		X4826	
	Location	MW-13D		MW-3		MW-16L		MW-16U		GW-14	
	Field Sample Id	HTMWD1302601XX		HTMW00301801XX		HTMW16L03001XX		HTMW16U02201XX		HTGW01402501XX	
	Field Sample Date	10/3/2006		10/3/2006		10/4/2006		10/4/2006		10/9/2006	
	Qc Code	FS		FS		FS		FS		FS	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		10	U	10	U	10	U	10	U	10	U
Isopropylbenzene		10	U	10	U	10	U	10	U	10	U
Methyl cyclohexane		10	U	10	U	10	U	10	U	10	U
Methyl Tertbutyl Ether		10	U	10	U	10	U	10	U	10	U
Methylene chloride		10	U	10	U	10	U	10	U	10	U
o-Xylene		10	U	10	U	10	U	10	U	10	U
Styrene		10	U	10	U	10	U	10	U	10	U
Tetrachloroethene		10	U	10	U	10	UJ	10	UJ	10	U
Toluene		10	U	10	U	10	U	10	U	10	U
trans-1,2-Dichloroethene		10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene		10	U	10	U	10	U	10	U	10	U
Trichloroethene		15		25		10		11		9.1	J
Trichlorofluoromethane		10	UJ	10	UJ	10	U	10	U	10	U
Vinyl chloride		10	U	10	U	5.5	J	0.97	J	10	U
Xylene, m/p		10	U	10	U	10	U	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X4826-07		X4826-08		X4921-05		X4921-08RE		X4921-09RE	
SDG	X4826		X4826		X4921		X4921		X4921	
Location	GW-14		QC		GW-1		GW-1		GW-2	
Field Sample Id	HTGW01403501XX		HTTB001XXX01XX		HTGW00102501XX		HTGW00103501XX		HTGW00202301XX	
Field Sample Date	10/9/2006		10/9/2006		10/11/2006		10/11/2006		10/10/2006	
Qc Code	FS		TB		FS		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U	10	U	10	U	10	UJ	10	UJ
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	UJ	10	UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	U	10	U	10	U	10	UJ	10	UJ
1,1,2-Trichloroethane	10	U	10	U	10	U	10	UJ	10	UJ
1,1-Dichloroethane	10	U	10	U	10	U	10	UJ	10	UJ
1,1-Dichloroethene	10	U	10	U	10	U	10	UJ	10	UJ
1,2,4-Trichlorobenzene	10	U	10	U	10	U	10	UJ	10	UJ
1,2-Dibromo-3-chloropropane	10	U	10	U	10	U	10	UJ	10	UJ
1,2-Dibromoethane	10	U	10	U	10	U	10	UJ	10	UJ
1,2-Dichlorobenzene	10	U	10	U	10	U	10	UJ	10	UJ
1,2-Dichloroethane	10	U	10	U	10	U	10	UJ	10	UJ
1,2-Dichloropropane	10	U	10	U	10	U	10	UJ	10	UJ
1,3-Dichlorobenzene	10	U	10	U	10	U	10	UJ	10	UJ
1,4-Dichlorobenzene	10	U	10	U	10	U	10	UJ	10	UJ
2-Butanone	50	U	50	U	50	U	50	UJ	50	UJ
2-Hexanone	50	U	50	U	50	U	50	UJ	50	UJ
4-Methyl-2-pentanone	50	U	50	U	50	U	50	UJ	50	UJ
Acetic acid, methyl ester	10	U	10	U	10	U	10	UJ	10	UJ
Acetone	50	U	9.7	J	50	U	50	UJ	50	UJ
Benzene	10	U	10	U	10	U	10	UJ	10	UJ
Bromodichloromethane	10	U	10	U	10	U	10	UJ	10	UJ
Bromoform	10	U	10	U	10	U	10	UJ	10	UJ
Bromomethane	10	U	10	U	10	U	10	UJ	10	UJ
Carbon disulfide	10	U	10	U	10	U	10	UJ	10	UJ
Carbon tetrachloride	10	U	10	U	10	U	10	UJ	10	UJ
Chlorobenzene	10	U	10	U	10	U	10	UJ	10	UJ
Chlorodibromomethane	10	U	10	U	10	U	10	UJ	10	UJ
Chloroethane	10	U	10	U	10	U	10	UJ	10	UJ
Chloroform	10	U	10	U	10	U	10	UJ	10	UJ
Chloromethane	10	U	10	U	10	U	10	UJ	10	UJ
Cis-1,2-Dichloroethene	17		10	U	10		9.5	J	5.4	J
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	UJ	10	UJ
Cyclohexane	10	U	10	U	10	U	10	UJ	10	UJ
Dichlorodifluoromethane	10	U	10	U	10	U	10	UJ	10	UJ

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4826-07		X4826-08		X4921-05		X4921-08RE		X4921-09RE	
	SDG	X4826		X4826		X4921		X4921		X4921	
	Location	GW-14		QC		GW-1		GW-1		GW-2	
	Field Sample Id	HTGW01403501XX		HTTB001XXX01XX		HTGW00102501XX		HTGW00103501XX		HTGW00202301XX	
	Field Sample Date	10/9/2006		10/9/2006		10/11/2006		10/11/2006		10/10/2006	
	Qc Code	FS		TB		FS		FS		FS	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		10	U	10	U	10	U	10	UJ	10	UJ
Isopropylbenzene		10	U	10	U	10	U	10	UJ	10	UJ
Methyl cyclohexane		10	U	10	U	10	U	10	UJ	10	UJ
Methyl Tertbutyl Ether		10	U	10	U	10	U	10	UJ	10	UJ
Methylene chloride		10	U	10	U	10	U	10	UJ	10	UJ
o-Xylene		10	U	10	U	10	U	10	UJ	10	UJ
Styrene		10	U	10	U	10	U	10	UJ	10	UJ
Tetrachloroethene		10	U	10	U	10	U	10	UJ	10	UJ
Toluene		10	U	10	U	10	U	10	UJ	10	UJ
trans-1,2-Dichloroethene		10	U	10	U	10	U	10	UJ	10	UJ
trans-1,3-Dichloropropene		10	U	10	U	10	U	10	UJ	10	UJ
Trichloroethene		15		10	U	24	J	16	J	14	J
Trichlorofluoromethane		10	U	10	U	10	U	10	UJ	10	UJ
Vinyl chloride		10	U	10	U	10	U	10	UJ	10	UJ
Xylene, m/p		10	U	10	U	10	U	10	UJ	10	UJ

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
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FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X4921-10RE		X4921-11RE		X4921-12		X4921-13		X4921-14	
SDG	X4921		X4921		X4921		X4921		X4921	
Location	GW-2		GW-3		GW-3		GW-4		GW-4	
Field Sample Id	HTGW00203301XX		HTGW00302101XX		HTGW00303101XX		HTGW00402101XX		HTGW00403101XX	
Field Sample Date	10/10/2006		10/11/2006		10/11/2006		10/10/2006		10/10/2006	
Qc Code	FS		FS		FS		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	UJ	10	UJ	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	UJ	10	UJ	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	UJ	10	UJ	10	U	10	U	10	U
1,1,2-Trichloroethane	10	UJ	10	UJ	10	U	10	U	10	U
1,1-Dichloroethane	10	UJ	10	UJ	10	U	10	U	10	U
1,1-Dichloroethene	10	UJ	10	UJ	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	UJ	10	UJ	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane	10	UJ	10	UJ	10	U	10	U	10	U
1,2-Dibromoethane	10	UJ	10	UJ	10	U	10	U	10	U
1,2-Dichlorobenzene	10	UJ	10	UJ	10	U	10	U	10	U
1,2-Dichloroethane	10	UJ	10	UJ	10	U	10	U	10	U
1,2-Dichloropropane	10	UJ	10	UJ	10	U	10	U	10	U
1,3-Dichlorobenzene	10	UJ	10	UJ	10	U	10	U	10	U
1,4-Dichlorobenzene	10	UJ	10	UJ	10	U	10	U	10	U
2-Butanone	50	UJ	50	UJ	50	U	50	U	50	U
2-Hexanone	50	UJ	50	UJ	50	U	50	U	50	U
4-Methyl-2-pentanone	50	UJ	50	UJ	50	U	50	U	50	U
Acetic acid, methyl ester	10	UJ	10	UJ	10	U	10	U	10	U
Acetone	50	UJ	50	UJ	50	U	50	U	50	U
Benzene	10	UJ	10	UJ	10	U	10	U	10	U
Bromodichloromethane	10	UJ	10	UJ	10	U	10	U	10	U
Bromoform	10	UJ	10	UJ	10	U	10	U	10	U
Bromomethane	10	UJ	10	UJ	10	U	10	U	10	U
Carbon disulfide	10	UJ	10	UJ	10	U	10	U	10	U
Carbon tetrachloride	10	UJ	10	UJ	10	U	10	U	10	U
Chlorobenzene	10	UJ	10	UJ	10	U	10	U	10	U
Chlorodibromomethane	10	UJ	10	UJ	10	U	10	U	10	U
Chloroethane	10	UJ	10	UJ	10	U	10	U	10	U
Chloroform	10	UJ	10	UJ	10	U	10	U	10	U
Chloromethane	10	UJ	10	UJ	10	U	10	U	10	U
Cis-1,2-Dichloroethene	9.7	J	7.1	J	11		13		18	
cis-1,3-Dichloropropene	10	UJ	10	UJ	10	U	10	U	10	U
Cyclohexane	10	UJ	10	UJ	10	U	10	U	10	U
Dichlorodifluoromethane	10	UJ	10	UJ	10	U	10	U	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4921-10RE		X4921-11RE		X4921-12		X4921-13		X4921-14	
	SDG	X4921		X4921		X4921		X4921		X4921	
	Location	GW-2		GW-3		GW-3		GW-4		GW-4	
	Field Sample Id	HTGW00203301XX		HTGW00302101XX		HTGW00303101XX		HTGW00402101XX		HTGW00403101XX	
	Field Sample Date	10/10/2006		10/11/2006		10/11/2006		10/10/2006		10/10/2006	
	Qc Code	FS		FS		FS		FS		FS	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		10	UJ	10	UJ	10	U	10	U	10	U
Isopropylbenzene		10	UJ	10	UJ	10	U	10	U	10	U
Methyl cyclohexane		10	UJ	10	UJ	10	U	10	U	10	U
Methyl Tertbutyl Ether		10	UJ	10	UJ	10	U	10	U	10	U
Methylene chloride		10	UJ	10	UJ	10	U	10	U	10	U
o-Xylene		10	UJ	10	UJ	10	U	10	U	10	U
Styrene		10	UJ	10	UJ	10	U	10	U	10	U
Tetrachloroethene		10	UJ	10	UJ	10	U	10	U	10	U
Toluene		10	UJ	10	UJ	10	U	10	U	10	U
trans-1,2-Dichloroethene		10	UJ	10	UJ	10	U	10	U	10	U
trans-1,3-Dichloropropene		10	UJ	10	UJ	10	U	10	U	10	U
Trichloroethene		16	J	14	J	23	J	34	J	38	J
Trichlorofluoromethane		10	UJ	10	UJ	10	U	10	U	10	U
Vinyl chloride		10	UJ	10	UJ	10	U	10	U	10	U
Xylene, m/p		10	UJ	10	UJ	10	U	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
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FD = Field Duplicate
TB = Trip Blank
Qualifiers:
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J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X4921-15RE		X4921-16RE		X4921-17RE		X4921-18		X4921-19	
SDG	X4921		X4921		X4921		X4921		X4921	
Location	GW-5		GW-5		GW-5		GW-10		GW-10	
Field Sample Id	HTGW00502101XX		HTGW00503101XX		HTGW00503101XD		HTGW01002501XX		HTGW01003101XX	
Field Sample Date	10/10/2006		10/10/2006		10/10/2006		10/11/2006		10/11/2006	
Qc Code	FS		FS		FD		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U	10	UJ	10	UJ	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	UJ	10	UJ	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	U	10	UJ	10	UJ	10	U	10	U
1,1,2-Trichloroethane	10	U	10	UJ	10	UJ	10	U	10	U
1,1-Dichloroethane	10	U	10	UJ	10	UJ	10	U	10	U
1,1-Dichloroethene	10	U	10	UJ	10	UJ	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	UJ	10	UJ	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U	10	UJ	10	UJ	10	U	10	U
1,2-Dibromoethane	10	U	10	UJ	10	UJ	10	U	10	U
1,2-Dichlorobenzene	10	U	10	UJ	10	UJ	10	U	10	U
1,2-Dichloroethane	10	U	10	UJ	10	UJ	10	U	10	U
1,2-Dichloropropane	10	U	10	UJ	10	UJ	10	U	10	U
1,3-Dichlorobenzene	10	U	10	UJ	10	UJ	10	U	10	U
1,4-Dichlorobenzene	10	U	10	UJ	10	UJ	10	U	10	U
2-Butanone	50	U	50	UJ	50	UJ	50	U	50	U
2-Hexanone	50	U	50	UJ	50	UJ	50	U	50	U
4-Methyl-2-pentanone	50	U	50	UJ	50	UJ	50	U	50	U
Acetic acid, methyl ester	10	U	10	UJ	10	UJ	10	U	10	U
Acetone	50	U	50	UJ	50	UJ	50	U	50	U
Benzene	10	U	10	UJ	10	UJ	10	U	10	U
Bromodichloromethane	10	U	10	UJ	10	UJ	10	U	10	U
Bromoform	10	U	10	UJ	10	UJ	10	U	10	U
Bromomethane	10	U	10	UJ	10	U	10	U	10	U
Carbon disulfide	10	U	10	UJ	10	UJ	10	U	10	U
Carbon tetrachloride	10	U	10	UJ	10	UJ	10	U	10	U
Chlorobenzene	10	U	10	UJ	10	UJ	10	U	10	U
Chlorodibromomethane	10	U	10	UJ	10	UJ	10	U	10	U
Chloroethane	10	U	10	UJ	10	UJ	10	U	10	U
Chloroform	10	U	10	UJ	10	UJ	10	U	10	U
Chloromethane	10	U	10	UJ	10	UJ	10	U	10	U
Cis-1,2-Dichloroethene	18	J	18	J	16	J	9.4	J	13	
cis-1,3-Dichloropropene	10	U	10	UJ	10	UJ	10	U	10	U
Cyclohexane	10	U	10	UJ	10	UJ	10	U	10	U
Dichlorodifluoromethane	10	U	10	UJ	10	UJ	10	U	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4921-15RE		X4921-16RE		X4921-17RE		X4921-18		X4921-19	
	SDG	X4921		X4921		X4921		X4921		X4921	
	Location	GW-5		GW-5		GW-5		GW-10		GW-10	
	Field Sample Id	HTGW00502101XX		HTGW00503101XX		HTGW00503101XD		HTGW01002501XX		HTGW01003101XX	
	Field Sample Date	10/10/2006		10/10/2006		10/10/2006		10/11/2006		10/11/2006	
	Qc Code	FS		FS		FD		FS		FS	
Parameter		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Ethyl benzene		10	U	10	UJ	10	UJ	10	U	10	U
Isopropylbenzene		10	U	10	UJ	10	UJ	10	U	10	U
Methyl cyclohexane		10	U	10	UJ	10	UJ	10	U	10	U
Methyl Tertbutyl Ether		10	U	10	UJ	10	UJ	10	U	10	U
Methylene chloride		10	U	10	UJ	10	UJ	10	U	10	U
o-Xylene		10	U	10	UJ	10	UJ	10	U	10	U
Styrene		10	U	10	UJ	10	UJ	10	U	10	U
Tetrachloroethene		10	U	10	UJ	10	UJ	10	U	10	U
Toluene		10	U	10	UJ	10	UJ	10	U	10	U
trans-1,2-Dichloroethene		10	U	10	UJ	10	UJ	10	U	10	U
trans-1,3-Dichloropropene		10	U	10	UJ	10	UJ	10	U	10	U
Trichloroethene		28	J	32	J	27	J	15	J	21	J
Trichlorofluoromethane		10	U	10	UJ	10	UJ	10	U	10	U
Vinyl chloride		10	U	10	UJ	10	UJ	10	U	10	U
Xylene, m/p		10	U	10	UJ	10	UJ	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X4921-20		X4921-21		X4921-22		X4921-23		X4926-02RE	
SDG	X4921		X4921		X4921		X4921		X4926	
Location	GW-18		GW-18		QC		MW-5		GW-6	
Field Sample Id	HTGW01802401XX		HTGW01803101XX		HTTB002XXX01XX		HTMW00503001XX		HTGW00602301XX	
Field Sample Date	10/11/2006		10/11/2006		10/11/2006		10/11/2006		10/12/2006	
Qc Code	FS		FS		TB		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	UJ	10	U	10	U	10	UJ	10	U
1,1,2,2-Tetrachloroethane	10	UJ	10	U	10	U	10	UJ	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	UJ	10	U	10	U	10	UJ	10	U
1,1,2-Trichloroethane	10	UJ	10	U	10	U	10	UJ	10	U
1,1-Dichloroethane	10	UJ	10	U	10	U	10	UJ	10	U
1,1-Dichloroethene	10	UJ	10	U	10	U	10	UJ	10	U
1,2,4-Trichlorobenzene	10	UJ	10	U	10	U	10	UJ	10	U
1,2-Dibromo-3-chloropropane	10	UJ	10	U	10	U	10	UJ	10	U
1,2-Dibromoethane	10	UJ	10	U	10	U	10	UJ	10	U
1,2-Dichlorobenzene	10	UJ	10	U	10	U	10	UJ	10	U
1,2-Dichloroethane	10	UJ	10	U	10	U	10	UJ	10	U
1,2-Dichloropropane	10	UJ	10	U	10	U	10	UJ	10	U
1,3-Dichlorobenzene	10	UJ	10	U	10	U	10	UJ	10	U
1,4-Dichlorobenzene	10	UJ	10	U	10	U	10	UJ	10	U
2-Butanone	50	UJ	50	U	50	U	50	UJ	50	U
2-Hexanone	50	UJ	50	U	50	U	50	UJ	50	U
4-Methyl-2-pentanone	50	UJ	50	U	50	U	50	UJ	50	U
Acetic acid, methyl ester	10	UJ	10	U	10	U	10	UJ	10	U
Acetone	50	UJ	50	U	50	U	50	UJ	50	U
Benzene	10	UJ	10	U	10	U	10	UJ	10	U
Bromodichloromethane	10	UJ	10	U	10	U	10	UJ	10	U
Bromoform	10	UJ	10	U	10	U	10	UJ	10	U
Bromomethane	10	UJ	10	U	10	U	10	UJ	10	U
Carbon disulfide	10	UJ	10	U	10	U	10	UJ	10	U
Carbon tetrachloride	10	UJ	10	U	10	U	10	UJ	10	U
Chlorobenzene	10	UJ	10	U	10	U	10	UJ	10	U
Chlorodibromomethane	10	UJ	10	U	10	U	10	UJ	10	U
Chloroethane	10	UJ	10	U	10	U	10	UJ	10	U
Chloroform	10	UJ	10	U	10	U	10	UJ	10	U
Chloromethane	10	UJ	10	U	10	U	10	UJ	10	U
Cis-1,2-Dichloroethene	25	J	22		10	U	13	J	20	J
cis-1,3-Dichloropropene	10	UJ	10	U	10	U	10	UJ	10	U
Cyclohexane	10	UJ	10	U	10	U	10	UJ	10	U
Dichlorodifluoromethane	10	UJ	10	U	10	U	10	UJ	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4921-20		X4921-21		X4921-22		X4921-23		X4926-02RE	
	SDG	X4921		X4921		X4921		X4921		X4926	
	Location	GW-18		GW-18		QC		MW-5		GW-6	
	Field Sample Id	HTGW01802401XX		HTGW01803101XX		HTTB002XXX01XX		HTMW00503001XX		HTGW00602301XX	
	Field Sample Date	10/11/2006		10/11/2006		10/11/2006		10/11/2006		10/12/2006	
	Qc Code	FS		FS		TB		FS		FS	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		10	UJ	10	U	10	U	10	UJ	10	U
Isopropylbenzene		10	UJ	10	U	10	U	10	UJ	10	U
Methyl cyclohexane		10	UJ	10	U	10	U	10	UJ	10	U
Methyl Tertbutyl Ether		10	UJ	10	U	10	U	10	UJ	10	U
Methylene chloride		10	UJ	10	U	10	U	10	UJ	10	U
o-Xylene		10	UJ	10	U	10	U	10	UJ	10	U
Styrene		10	UJ	10	U	10	U	10	UJ	10	U
Tetrachloroethene		10	UJ	10	U	10	U	10	UJ	10	U
Toluene		10	UJ	10	U	10	U	10	UJ	10	U
trans-1,2-Dichloroethene		10	UJ	10	U	10	U	10	UJ	10	U
trans-1,3-Dichloropropene		10	UJ	10	U	10	U	10	UJ	10	U
Trichloroethene		45	J	40	J	10	U	68	J	31	J
Trichlorofluoromethane		10	UJ	10	U	10	U	10	UJ	10	U
Vinyl chloride		10	UJ	10	U	10	U	10	UJ	10	U
Xylene, m/p		10	UJ	10	U	10	U	10	UJ	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X4926-03		X4926-04		X4926-05		X4926-06		X4926-07	
SDG	X4926		X4926		X4926		X4926		X4926	
Location	GW-6		GW-7		GW-7		GW-7		GW-8	
Field Sample Id	HTGW00603301XX		HTGW00702301XX		HTGW00702301XD		HTGW00703301XX		HTGW00802601XX	
Field Sample Date	10/12/2006		10/12/2006		10/12/2006		10/12/2006		10/12/2006	
Qc Code	FS		FS		FD		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U	10	U	10	U	10	U	10	U
1,2-Dibromoethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
2-Butanone	50	U	50	U	50	U	50	U	50	U
2-Hexanone	50	U	50	U	50	U	50	U	50	U
4-Methyl-2-pentanone	50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	10	U	10	U	10	U	10	U	10	U
Acetone	50	U	50	U	50	U	50	U	50	U
Benzene	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Carbon tetrachloride	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Chlorodibromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
Chloroform	1.2	J	10	U	10	U	10	U	10	U
Chloromethane	10	U	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene	19		27		25		3.9	J	2	J
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Cyclohexane	10	U	10	U	10	U	10	U	10	U
Dichlorodifluoromethane	10	U	10	U	10	U	10	U	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4926-03		X4926-04		X4926-05		X4926-06		X4926-07	
	SDG	X4926		X4926		X4926		X4926		X4926	
	Location	GW-6		GW-7		GW-7		GW-7		GW-8	
	Field Sample Id	HTGW00603301XX		HTGW00702301XX		HTGW00702301XD		HTGW00703301XX		HTGW00802601XX	
	Field Sample Date	10/12/2006		10/12/2006		10/12/2006		10/12/2006		10/12/2006	
	Qc Code	FS		FS		FD		FS		FS	
Parameter		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Ethyl benzene		10	U	10	U	10	U	10	U	10	U
Isopropylbenzene		10	U	10	U	10	U	10	U	10	U
Methyl cyclohexane		10	U	10	U	10	U	10	U	10	U
Methyl Tertbutyl Ether		10	U	10	U	10	U	10	U	10	U
Methylene chloride		0.81	J	10	U	10	U	10	U	10	U
o-Xylene		10	U	10	U	10	U	10	U	10	U
Styrene		10	U	10	U	10	U	10	U	10	U
Tetrachloroethene		10	U	10	U	10	U	10	U	10	U
Toluene		10	U	10	U	10	U	10	U	10	U
trans-1,2-Dichloroethene		10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene		10	U	10	U	10	U	10	U	10	U
Trichloroethene		30		40		38		7.9	J	20	
Trichlorofluoromethane		10	U	10	U	10	U	10	U	10	U
Vinyl chloride		10	U	10	U	10	U	10	U	10	U
Xylene, m/p		10	U	10	U	10	U	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X4926-08		X4926-09		X4926-10		X4926-11		X4926-12	
SDG	X4926		X4926		X4926		X4926		X4926	
Location	GW-11		GW-11		GW-12		GW-12		QC	
Field Sample Id	HTGW01102301XX		HTGW01103101XX		HTGW01202301XX		HTGW01203101XX		HTTB003XXX01XX	
Field Sample Date	10/12/2006		10/12/2006		10/12/2006		10/12/2006		10/12/2006	
Qc Code	FS		FS		FS		FS		TB	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U	10	U	10	U	10	U	10	U
1,2-Dibromoethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
2-Butanone	4	J	6.3	J	3.2	J	4.6	J	50	U
2-Hexanone	50	U	50	U	50	U	50	U	50	U
4-Methyl-2-pentanone	50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	2.1	J	10	U	10	U	10	U	10	U
Acetone	50	U	50	U	50	U	16	J	7.6	JB
Benzene	10	U	0.8	J	10	U	0.84	J	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Carbon tetrachloride	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Chlorodibromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
Chloroform	1	J	1.1	J	10	U	10	U	10	U
Chloromethane	3.9	J	6.7	J	10	U	10	U	10	U
Cis-1,2-Dichloroethene	2.1	J	3	J	2.2	J	2.1	J	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Cyclohexane	10	U	10	U	10	U	10	U	10	U
Dichlorodifluoromethane	10	U	10	U	10	U	10	U	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X4926-08		X4926-09		X4926-10		X4926-11		X4926-12	
	SDG	X4926		X4926		X4926		X4926		X4926	
	Location	GW-11		GW-11		GW-12		GW-12		QC	
	Field Sample Id	HTGW01102301XX		HTGW01103101XX		HTGW01202301XX		HTGW01203101XX		HTTB003XXX01XX	
	Field Sample Date	10/12/2006		10/12/2006		10/12/2006		10/12/2006		10/12/2006	
	Qc Code	FS		FS		FS		FS		TB	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		10	U	10	U	10	U	10	U	10	U
Isopropylbenzene		10	U	10	U	10	U	10	U	10	U
Methyl cyclohexane		10	U	10	U	10	U	0.97	J	10	U
Methyl Tertbutyl Ether		10	U	10	U	10	U	10	U	10	U
Methylene chloride		10	U	10	U	10	U	10	U	10	U
o-Xylene		10	U	10	U	10	U	10	U	10	U
Styrene		10	U	10	U	10	U	10	U	10	U
Tetrachloroethene		10	U	10	U	10	U	10	U	10	U
Toluene		10	U	10	U	10	U	1.3	J	10	U
trans-1,2-Dichloroethene		10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene		10	U	10	U	10	U	10	U	10	U
Trichloroethene		4.3	J	4.8	J	8.3	J	11	J	10	U
Trichlorofluoromethane		10	U	10	U	10	U	10	U	10	U
Vinyl chloride		10	U	10	U	10	U	10	U	10	U
Xylene, m/p		10	U	10	U	10	U	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X5269-01		X5269-02		X5269-03		X5269-04		X5269-05	
SDG	X5269		X5269		X5269		X5269		X5269	
Location	GW-9		GW-13		GW-15		GW-15		GW-17	
Field Sample Id	HTGW00902701XX		HTGW01302701XX		HTGW01502501XX		HTGW01503401XX		HTGW01703401XX	
Field Sample Date	11/3/2006		11/3/2006		11/2/2006		11/2/2006		11/3/2006	
Qc Code	FS		FS		FS		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U	10	UJ	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	UJ	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1,2-Trichloroethane	10	U	10	UJ	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	UJ	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	UJ	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	UJ	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U	10	UJ	10	U	10	U	10	U
1,2-Dibromoethane	10	U	10	UJ	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	UJ	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	UJ	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	UJ	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	UJ	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	UJ	10	U	10	U	10	U
2-Butanone	50	U	50	UJ	50	U	50	U	50	U
2-Hexanone	50	U	50	UJ	50	U	50	U	50	U
4-Methyl-2-pentanone	50	U	50	UJ	50	U	50	U	50	U
Acetic acid, methyl ester	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Acetone	50	U	50	UJ	50	U	50	U	50	U
Benzene	10	U	10	UJ	10	U	10	U	10	U
Bromodichloromethane	10	U	10	UJ	10	U	10	U	10	U
Bromoform	10	U	10	UJ	10	U	10	U	10	U
Bromomethane	10	U	10	UJ	10	U	10	U	10	U
Carbon disulfide	10	U	10	UJ	10	U	10	U	10	U
Carbon tetrachloride	10	U	10	UJ	10	U	10	U	10	U
Chlorobenzene	10	U	10	UJ	10	U	10	U	10	U
Chlorodibromomethane	10	U	10	UJ	10	U	10	U	10	U
Chloroethane	10	U	10	UJ	10	U	10	U	10	U
Chloroform	10	U	10	UJ	1.3	J	1.3	J	10	U
Chloromethane	10	U	10	UJ	10	U	10	U	10	U
Cis-1,2-Dichloroethene	6.2	J	10	UJ	9.5	J	10	J	9.7	J
cis-1,3-Dichloropropene	10	U	10	UJ	10	U	10	U	10	U
Cyclohexane	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Dichlorodifluoromethane	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X5269-01		X5269-02		X5269-03		X5269-04		X5269-05	
	SDG	X5269		X5269		X5269		X5269		X5269	
	Location	GW-9		GW-13		GW-15		GW-15		GW-17	
	Field Sample Id	HTGW00902701XX		HTGW01302701XX		HTGW01502501XX		HTGW01503401XX		HTGW01703401XX	
	Field Sample Date	11/3/2006		11/3/2006		11/2/2006		11/2/2006		11/3/2006	
	Qc Code	FS		FS		FS		FS		FS	
Parameter		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Ethyl benzene		10	U	10	UJ	10	U	10	U	10	U
Isopropylbenzene		10	U	10	UJ	10	U	10	U	10	U
Methyl cyclohexane		10	U	10	UJ	10	U	10	U	10	U
Methyl Tertbutyl Ether		10	U	10	UJ	10	U	10	U	10	U
Methylene chloride		10	U	10	UJ	10	U	10	U	10	U
o-Xylene		10	U	10	UJ	10	U	10	U	10	U
Styrene		10	U	10	UJ	10	U	10	U	10	U
Tetrachloroethene		10	U	10	UJ	10	U	10	U	10	U
Toluene		10	U	10	UJ	10	U	10	U	10	U
trans-1,2-Dichloroethene		10	U	10	UJ	10	U	10	U	10	U
trans-1,3-Dichloropropene		10	U	10	UJ	10	U	10	U	10	U
Trichloroethene		26		10	UJ	35		42		53	
Trichlorofluoromethane		10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Vinyl chloride		10	U	10	UJ	10	U	10	U	10	U
Xylene, m/p		10	U	10	UJ	10	U	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	X5269-06		X5269-07		Y2694-07		Y2694-08		Y2694-09	
SDG	X5269		X5269		Y2694		Y2694		Y2694	
Location	GW-17		QC		MW-7S		MW-7D		MW-7D	
Field Sample Id	HTGW01702101XX		HTTB004XXX01XX		HTMW07S02502XX		HTMW07D03502XX		HTMW07D03502XD	
Field Sample Date	11/3/2006		11/3/2006		5/10/2007		5/9/2007		5/9/2007	
Qc Code	FS		TB		FS		FS		FD	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	UJ	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U	10	U	10	U	10	U	10	U
1,2-Dibromoethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
2-Butanone	50	U	50	U	50	U	50	U	50	U
2-Hexanone	50	U	50	U	50	U	50	U	50	U
4-Methyl-2-pentanone	50	U	50	U	50	U	50	U	50	U
Acetic acid, methyl ester	10	UJ	10	U	10	UJ	10	UJ	10	UJ
Acetone	50	U	9.7	J	50	UJ	50	UJ	50	UJ
Benzene	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	UJ
Bromomethane	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Carbon tetrachloride	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Chlorodibromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	UJ	10	UJ	10	UJ
Chloroform	10	U	10	U	10	U	10	U	10	U
Chloromethane	10	U	10	U	10	U	10	U	10	U
Cis-1,2-Dichloroethene	7	J	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Cyclohexane	10	UJ	10	U	10	U	10	U	10	U
Dichlorodifluoromethane	10	UJ	10	U	10	U	10	U	10	U

Table 1.1: Groundwater VOC Results

	Lab Sample Id	X5269-06		X5269-07		Y2694-07		Y2694-08		Y2694-09	
	SDG	X5269		X5269		Y2694		Y2694		Y2694	
	Location	GW-17		QC		MW-7S		MW-7D		MW-7D	
	Field Sample Id	HTGW01702101XX		HTTB004XXX01XX		HTMW07S02502XX		HTMW07D03502XX		HTMW07D03502XD	
	Field Sample Date	11/3/2006		11/3/2006		5/10/2007		5/9/2007		5/9/2007	
	Qc Code	FS		TB		FS		FS		FD	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		10	U	10	U	10	U	10	U	10	U
Isopropylbenzene		10	U	10	U	10	U	10	U	10	U
Methyl cyclohexane		10	U	10	U	10	U	10	U	10	U
Methyl Tertbutyl Ether		10	U	10	U	10	U	10	U	10	U
Methylene chloride		10	U	1.4	J	10	UJ	10	UJ	10	U
o-Xylene		10	U	10	U	10	U	10	U	10	U
Styrene		10	U	10	U	10	U	10	U	10	U
Tetrachloroethene		10	U	10	U	10	U	10	U	10	U
Toluene		10	U	10	U	10	U	10	U	10	U
trans-1,2-Dichloroethene		10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene		10	U	10	U	10	U	10	U	10	U
Trichloroethene		47		10	U	5.5	J	5.9	J	6.4	J
Trichlorofluoromethane		10	UJ	10	U	10	U	10	U	10	UJ
Vinyl chloride		10	U	10	U	10	U	10	U	10	U
Xylene, m/p		10	U	10	U	10	U	10	U	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.1: Groundwater VOC Results

Lab Sample Id	**Y2694-05**	
SDG	**Y2694**	
Location	**QC**	
Field Sample Id	**UNTB004XXX02XX**	
Field Sample Date	**5/10/2007**	
Qc Code	**TB**	
Parameter	**Result**	**Qualifier**
1,1,1-Trichloroethane	10	U
1,1,2,2-Tetrachloroethane	10	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	10	U
1,1,2-Trichloroethane	10	U
1,1-Dichloroethane	10	U
1,1-Dichloroethene	10	U
1,2,4-Trichlorobenzene	10	U
1,2-Dibromo-3-chloropropane	10	U
1,2-Dibromoethane	10	U
1,2-Dichlorobenzene	10	U
1,2-Dichloroethane	10	U
1,2-Dichloropropane	10	U
1,3-Dichlorobenzene	10	U
1,4-Dichlorobenzene	10	U
2-Butanone	50	U
2-Hexanone	50	U
4-Methyl-2-pentanone	50	U
Acetic acid, methyl ester	10	U
Acetone	50	U
Benzene	10	U
Bromodichloromethane	10	U
Bromoform	10	U
Bromomethane	10	U
Carbon disulfide	10	U
Carbon tetrachloride	10	U
Chlorobenzene	10	U
Chlorodibromomethane	10	U
Chloroethane	10	U
Chloroform	10	U
Chloromethane	10	U
Cis-1,2-Dichloroethene	10	U
cis-1,3-Dichloropropene	10	U
Cyclohexane	10	U
Dichlorodifluoromethane	10	U

Table 1.1: Groundwater VOC Results

Lab Sample Id	**Y2694-05**	
SDG	**Y2694**	
Location	**QC**	
Field Sample Id	**UNTB004XXX02XX**	
Field Sample Date	**5/10/2007**	
Qc Code	**TB**	
Parameter	**Result**	**Qualifier**
Ethyl benzene	10	U
Isopropylbenzene	10	U
Methyl cyclohexane	10	U
Methyl Tertbutyl Ether	10	U
Methylene chloride	10	U
o-Xylene	10	U
Styrene	1.3	JB
Tetrachloroethene	10	U
Toluene	10	U
trans-1,2-Dichloroethene	10	U
trans-1,3-Dichloropropene	10	U
Trichloroethene	10	U
Trichlorofluoromethane	10	U
Vinyl chloride	10	U
Xylene, m/p	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
FD = Field Duplicate
TB = Trip Blank
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Value
D = Analyte was reported from a dilited analytical run.
B = Analyte was detected in the method blank

Table 1.2: Groundwater SVOC Results

	Lab Sample Id	X4921-05	
	SDG	X4921	
	Location	GW-1	
	Field Sample Id	HTGW00102501XX	
	Field Sample Date	10/11/2006	
	Qc Code	FS	
Parameter		**Result**	**Qualifier**
2,4,5-Trichlorophenol		10	U
2,4,6-Trichlorophenol		10	U
2,4-Dichlorophenol		10	U
2,4-Dimethylphenol		10	U
2,4-Dinitrophenol		20	UJ
2,4-Dinitrotoluene		10	U
2,6-Dinitrotoluene		10	U
2-Chloronaphthalene		10	U
2-Chlorophenol		10	U
2-Methylnaphthalene		10	U
2-Methylphenol		10	U
2-Nitroaniline		10	U
2-Nitrophenol		10	U
3,3`-Dichlorobenzidine		20	U
3-Nitroaniline		10	U
4,6-Dinitro-2-methylphenol		20	U
4-Bromophenyl phenyl ether		10	U
4-Chloro-3-methylphenol		10	U
4-Chloroaniline		10	U
4-Chlorophenyl phenyl ether		10	U
4-Methylphenol		10	U
4-Nitroaniline		10	U
4-Nitrophenol		20	U
Acenaphthene		10	UJ
Acenaphthylene		10	U
Acetophenone		10	U
Anthracene		10	U
Atrazine		10	U
Benzaldehyde		10	U
Benzo(a)anthracene		10	U
Benzo(a)pyrene		10	U
Benzo(b)fluoranthene		10	U
Benzo(ghi)perylene		10	U
Benzo(k)fluoranthene		10	U
Biphenyl		10	U
Bis(2-Chloroethoxy)methane		10	U
Bis(2-Chloroethyl)ether		10	U
Bis(2-Chloroisopropyl)ether		10	U
Bis(2-Ethylhexyl)phthalate		13	U
Butylbenzylphthalate		10	U
Caprolactum		10	U
Carbazole		10	U
Chrysene		10	U
Di-n-butylphthalate		10	U
Di-n-octylphthalate		10	U
Dibenz(a,h)anthracene		10	U
Dibenzofuran		10	U
Diethylphthalate		10	U
Dimethylphthalate		10	U
Fluoranthene		10	U
Fluorene		10	U
Hexachlorobenzene		10	U
Hexachlorobutadiene		10	U

Table 1.2: Groundwater SVOC Results

Lab Sample Id	**X4921-05**	
SDG	**X4921**	
Location	**GW-1**	
Field Sample Id	**HTGW00102501XX**	
Field Sample Date	**10/11/2006**	
Qc Code	**FS**	
Parameter	**Result**	**Qualifier**
Hexachlorocyclopentadiene	10	U
Hexachloroethane	10	U
Indeno(1,2,3-cd)pyrene	10	U
Isophorone	10	U
N-Nitrosodi-n-propylamine	10	UJ
N-Nitrosodiphenylamine	10	U
Naphthalene	10	U
Nitrobenzene	10	U
Pentachlorophenol	20	U
Phenanthrene	10	U
Phenol	10	U
Pyrene	10	U

Notes:
Results in micrograms per liter (µg/L)
Samples analyzed for SVOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated Result
R = Analyte was rejected during data validation

Table 1.3: Soil VOC Results

Lab Sample Id	X4826-05		X4826-10		X4921-01		X4921-04		X4926-01	
SDG	X4826		X4826		X4921		X4921		X4926	
Location	GS-14		GS-16		GS-1		GS-3		GS-6	
Field Sample Id	HTGS01400301XX		HTGS01601001XX		HTGS00100801XX		HTGS00300501XX		HTGS00600101XX	
Field Sample Date	10/9/2006		10/9/2006		10/11/2006		10/11/2006		10/12/2006	
Qc Code	FS		FS		FS		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	12	U	11	U	12	U	11	U	12	U
1,1,2,2-Tetrachloroethane	12	U	11	U	12	U	11	U	12	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	12	U	11	U	12	UJ	11	UJ	12	U
1,1,2-Trichloroethane	12	U	11	U	12	U	11	U	12	U
1,1-Dichloroethane	12	U	11	U	12	U	11	U	12	U
1,1-Dichloroethene	12	U	11	U	12	U	11	U	12	U
1,2,4-Trichlorobenzene	12	U	11	U	12	U	11	U	12	U
1,2-Dibromo-3-chloropropane	12	U	11	U	12	U	11	U	12	U
1,2-Dibromoethane	12	U	11	U	12	U	11	U	12	U
1,2-Dichlorobenzene	12	U	11	U	12	U	11	U	12	U
1,2-Dichloroethane	12	U	11	U	12	U	11	U	12	U
1,2-Dichloropropane	12	U	11	U	12	U	11	U	12	U
1,3-Dichlorobenzene	12	U	11	U	12	U	11	U	12	U
1,4-Dichlorobenzene	12	U	11	U	12	U	11	U	12	U
2-Butanone	59	U	6.1	J	58	U	57	U	61	U
2-Hexanone	59	U	54	U	58	U	57	U	61	U
4-Methyl-2-pentanone	59	U	54	U	58	U	57	U	61	U
Acetic acid, methyl ester	12	U	11	U	12	UJ	11	UJ	12	U
Acetone	59	U	54	U	58	U	57	U	61	U
Benzene	12	U	11	U	12	U	11	U	12	U
Bromodichloromethane	12	U	11	U	12	U	11	U	12	U
Bromoform	12	U	11	U	12	U	11	U	12	U
Bromomethane	12	U	11	U	12	U	11	U	12	U
Carbon disulfide	12	U	11	U	12	U	11	U	12	U
Carbon tetrachloride	12	U	11	U	12	U	11	U	12	U
Chlorobenzene	12	U	11	U	12	U	11	U	12	U
Chlorodibromomethane	12	U	11	U	12	U	11	U	12	U
Chloroethane	12	U	11	U	12	U	11	U	12	U
Chloroform	12	U	11	U	12	U	11	U	12	U
Chloromethane	12	U	11	U	12	U	11	U	12	U
Cis-1,2-Dichloroethene	12	U	11	U	12	U	11	U	12	U
cis-1,3-Dichloropropene	12	U	11	U	12	U	11	U	12	U
Cyclohexane	12	U	11	U	12	UJ	11	UJ	12	U
Dichlorodifluoromethane	12	U	11	U	12	U	11	U	12	U

Table 1.3: Soil VOC Results

	Lab Sample Id	X4826-05		X4826-10		X4921-01		X4921-04		X4926-01	
	SDG	X4826		X4826		X4921		X4921		X4926	
	Location	GS-14		GS-16		GS-1		GS-3		GS-6	
	Field Sample Id	HTGS01400301XX		HTGS01601001XX		HTGS00100801XX		HTGS00300501XX		HTGS00600101XX	
	Field Sample Date	10/9/2006		10/9/2006		10/11/2006		10/11/2006		10/12/2006	
	Qc Code	FS		FS		FS		FS		FS	
Parameter		**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
Ethyl benzene		12	U	11	U	12	U	1.4	J	12	U
Isopropylbenzene		12	U	11	U	12	U	11	U	12	U
Methyl cyclohexane		12	U	11	U	12	U	11	U	12	U
Methyl Tertbutyl Ether		12	U	11	U	12	U	11	U	12	U
Methylene chloride		12	U	11	U	12	U	1.5	J	12	U
o-Xylene		12	U	11	U	12	U	1.4	J	12	U
Styrene		12	U	11	U	12	U	11	U	12	U
Tetrachloroethene		12	U	11	U	12	U	1.2	J	12	U
Toluene		12	U	11	U	12	U	1.3	J	12	U
trans-1,2-Dichloroethene		12	U	11	U	12	U	11	U	12	U
trans-1,3-Dichloropropene		12	U	11	U	12	U	11	U	12	U
Trichloroethene		12	U	11	U	12	U	11	U	12	U
Trichlorofluoromethane		12	U	11	U	12	U	11	U	12	U
Vinyl chloride		12	U	11	U	12	UJ	11	UJ	12	U
Xylene, m/p		12	U	11	U	12	U	4.4	J	12	U

Notes:
Results in micrograms per kilogram (µg/kg)
Samples analyzed for VOCs by EPA Method OLM04.3
QC Code:
FS = Field Sample
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value

Table 1.4: Soil Vapor VOC Results

Lab Sample Id	X4945-01		X4945-02		X4945-03DL		X4945-04	
SDG	X4945		X4945		X4945		X4945	
Location	GV-01		GV-02		GV-03		BA-01	
Field Sample Id	HTGV00100801XX		HTGV00200801XX		HTGV00300801XX		HTSV001XXX01XX	
Field Sample Date	10/13/2006		10/13/2006		10/13/2006		10/12/2006	
Qc Code	FS		FS		FS		FS	
Parameter	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**	**Result**	**Qualifier**
1,1,1-Trichloroethane	30.5		1.09	U	27.74	U	0.54	U
1,1,2,2-Tetrachloroethane	1.37	U	1.37	U	35.04	U	0.69	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	29.7		4.28		39.01	U	0.84	
1,1,2-Trichloroethane	1.09	U	1.09	U	27.74	U	0.54	U
1,1-Dichloroethane	0.81	U	0.81	U	20.65	U	0.4	U
1,1-Dichloroethene	0.79	U	0.79	U	20.23	U	0.4	U
1,2,4-Trichlorobenzene	1.48	UJ	1.48	UJ	37.75	UJ	0.74	UJ
1,2,4-Trimethylbenzene	14.5		0.98	U	25.03	U	0.49	U
1,2-Dibromoethane	1.54	U	1.54	U	39.21	U	0.77	U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	1.4	U	1.4	U	35.67	U	0.7	U
1,2-Dichlorobenzene	1.2	U	1.2	U	30.66	U	0.6	U
1,2-Dichloroethane	0.81	U	0.81	U	20.65	U	0.4	U
1,2-Dichloropropane	0.92	U	0.92	U	23.57	U	0.46	U
1,3,5-Trimethylbenzene	6.38		0.98	U	25.03	U	0.49	U
1,3-Dichlorobenzene	1.2	U	1.2	U	30.66	U	0.6	U
1,4-Dichlorobenzene	1.2	U	1.2	U	30.66	U	0.6	U
1,4-Dioxane	1.44	U	1.44	U	35.99	U	0.72	U
2-Butanone	14.5		4.12		29.45	U	1.09	
2-Hexanone	1.64	U	1.64	U	40.9	U	0.82	U
2-Propanol	0.98	U	2.5		24.54	U	0.49	U
4-Ethyltoluene	7.95		0.98	U	25.03	U	0.49	U
4-Methyl-2-pentanone	1.64	U	1.64	U	40.9	U	0.82	U
Acetone	0.95	U	30.4		23.72	U	0.47	U
Allyl chloride	0.63	U	0.63	U	16.06	U	0.31	U
Benzene	47.7		2.81		76.5	D	0.99	
Benzyl chloride	1.15	U	1.15	U	29.41	U	0.58	U
Bromodichloromethane	1.34	U	1.34	U	34.21	U	0.67	U
Bromoform	2.07	U	2.07	U	52.77	U	1.03	U
Bromomethane	0.78	U	0.78	U	19.82	U	0.39	U
Butadiene, 1,3-	0.44	U	0.44	U	11.26	U	0.22	U
Carbon disulfide	13.2		5.97		15.85	U	0.44	
Carbon tetrachloride	1.26	U	1.26	U	32.12	U	0.63	U
Chlorobenzene	0.92	U	0.92	U	23.57	U	0.46	U
Chlorodibromomethane	1.7	U	1.7	U	43.39	U	0.85	U
Chloroethane	0.69		0.53	U	13.56	U	0.27	U
Chloroform	1.75		0.97	U	24.82	U	0.49	U
Chloromethane	2.49		0.57		10.43	U	0.86	
Cis-1,2-Dichloroethene	0.79	U	0.79	U	20.23	U	0.4	U

Table 1.4: Soil Vapor VOC Results

	Lab Sample Id	X4945-01		X4945-02		X4945-03DL		X4945-04	
	SDG	X4945		X4945		X4945		X4945	
	Location	GV-01		GV-02		GV-03		BA-01	
	Field Sample Id	HTGV00100801XX		HTGV00200801XX		HTGV00300801XX		HTSV001XXX01XX	
	Field Sample Date	10/13/2006		10/13/2006		10/13/2006		10/12/2006	
	Qc Code	FS		FS		FS		FS	
Parameter		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
cis-1,3-Dichloropropene		0.91	U	0.91	U	23.15	U	0.45	U
Cyclohexane		311	D	1.81		265	D	0.77	
Dichlorodifluoromethane		2.47		2.28		25.24	U	2.28	
Ethyl acetate		0.72	U	0.72	U	18.36	U	0.36	U
Ethyl benzene		12.2		0.87	U	22.11	U	0.43	U
Heptane		505	D	1.64		269	D	0.7	
Hexachlorobutadiene		2.13	UJ	2.13	UJ	54.44	UJ	1.07	UJ
Hexane		1326	D	28.3		945	D	4.99	
Isooctane		0.93	U	4.57		23.78	U	0.47	U
Methyl Tertbutyl Ether		0.72	U	0.72	U	18.36	U	0.36	U
Methylene chloride		3.62		4.52		34.76	U	17.8	
o-Xylene		2.69		0.87	U	22.11	U	0.43	U
Propylene		542	J	19.2		1626	D	0.86	U
Styrene		0.85	U	0.85	U	21.69	U	0.43	U
Tetrachloroethene		4.35		1.36	U	34.63	U	1.77	
Tetrahydrofuran		1.18	U	1.18	U	29.45	U	0.59	U
Toluene		25.1		6.17		21.1	D	6.51	
trans-1,2-Dichloroethene		0.79	U	0.79	U	20.23	U	0.4	U
trans-1,3-Dichloropropene		0.91	U	0.91	U	23.15	U	0.45	U
Trichloroethene		3.11		1.07	U	35.5	D	0.54	U
Trichlorofluoromethane		3.47		1.79		28.58	U	1.74	
Vinyl acetate		0.7	U	0.7	U	17.94	U	0.35	U
Vinyl bromide		0.88	U	0.88	U	22.32	U	0.44	U
Vinyl chloride		0.51	U	0.51	U	13.04	U	0.26	U
Xylene, m/p		77.8		2.08		43.35	U	0.87	U

Notes:

Results in micrograms per cubic meter ($\mu g/m^3$)
Samples analyzed for VOCs by EPA Method TO-15
QC Code:
FS = Field Sample
Qualifiers:
U = Not detected at a concentration greater than the RL
J = Estimated value
D = Analyte was reported from a diluted analytical run
R = Analyte was rejected during data validation

Table 1.5: Groundwater TIC Results

Field Sample ID	Lab ID	SDG	Method	Chemical_name	Result	Final Qualifier	Unit
HTGW01203101XX	X4926-11	X4926	OLM04.3_VOA	Propene	25	NJ	ug/L
HTGW01203101XX	X4926-11	X4926	OLM04.3_VOA	1-Propene, 2-methyl-	23	NJ	ug/L
HTGW01203101XX	X4926-11	X4926	OLM04.3_VOA	1-Pentene	7.2	NJ	ug/L
HTGW01102301XX	X4926-08	X4926	OLM04.3_VOA	Propene	20	NJ	ug/L
HTGW01103101XX	X4926-09	X4926	OLM04.3_VOA	Propene	27	NJ	ug/L
HTGW01103101XX	X4926-09	X4926	OLM04.3_VOA	Cyclobutane, methyl-	6.6	NJ	ug/L
HTGW01202301XX	X4926-10	X4926	OLM04.3_VOA	Propene	7.2	NJ	ug/L
HTGW01202301XX	X4926-10	X4926	OLM04.3_VOA	1-Propene, 2-methyl-	6.8	NJ	ug/L
HTGW01202301XX	X4926-10RE	X4926	OLM04.3_VOA	Propene	13	NJ	ug/L
HTGW00102501XX	X4921-05	X4921	OLM04.3_SVOA	Trichloroacetic acid, hexadecyl es	6.1	NJ	ug/L
HTGW00102501XX	X4921-05	X4921	OLM04.3_SVOA	2,6,10,14,18,22-Tetracosahexaene,	4.2	NJ	ug/L
HTMW07S02502XX	Y2694-07	Y2694	OLM04.3_VOA	Silanol, trimethyl-	13	NJ	ug/L

Notes:
Qualifiers:
NJ = Analyte was tenatively identified and the value is estimated

Appendix B

Example Form I - Representative sample result showing CHEMTECH OLM04.3 VOC Method Detection Limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	MACTEC Inc.	**Date Collected:**	02/07/06
Project ID:	D003826 Region 8 Dry Cleaners-American MEC02060003	**Date Received:**	02/08/06
Customer Sample No.:	AMPW00102101XX	**Lab Sample ID:**	X1523-01
Test:	VOC-TCLVOA 4.3-10NP	**SDG ID:**	X1523
Analytical Method:	EPA OLM04.3 - VOA	**% Moisture:**	100.00
Result Type:		**Datafile:**	VF000987

CAS Number	Parameter	Results	Qualifier	Units	DL	Retention Time	DF	DIL/RE
75-71-8	Dichlorodifluoromethane	ND	U	ug/L	0.50		10	1
74-87-3	Chloromethane	ND	U	ug/L	0.50		10	1
75-01-4	Vinyl Chloride	ND	U	ug/L	0.50		10	1
74-83-9	Bromomethane	ND	U	ug/L	0.50		10	1
75-00-3	Chloroethane	ND	U	ug/L	0.50		10	1
75-69-4	Trichlorofluoromethane	ND	U	ug/L	0.50		10	1
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	U	ug/L	0.50		10	1
75-35-4	1,1-Dichloroethene	ND	U	ug/L	0.50		10	1
67-64-1	Acetone	6.8	JB	ug/L	0.50		50	1
75-15-0	Carbon Disulfide	ND	U	ug/L	0.50		10	1
1634-04-4	Methyl tert-butyl Ether	ND	U	ug/L	0.50		10	1
79-20-9	Methyl Acetate	1.7	J	ug/L	0.50		10	1
75-09-2	Methylene Chloride	ND	U	ug/L	0.50		10	1
156-60-5	trans-1,2-Dichloroethene	ND	U	ug/L	0.50		10	1
75-34-3	1,1-Dichloroethane	ND	U	ug/L	0.50		10	1
110-82-7	Cyclohexane	ND	U	ug/L	0.50		10	1
78-93-3	2-Butanone	ND	U	ug/L	0.50		50	1
56-23-5	Carbon Tetrachloride	ND	U	ug/L	0.50		10	1
156-59-2	cis-1,2-Dichloroethene	1.3	J	ug/L	0.50		10	1
67-66-3	Chloroform	ND	U	ug/L	0.50		10	1
71-55-6	1,1,1-Trichloroethane	ND	U	ug/L	0.50		10	1
108-87-2	Methylcyclohexane	ND	U	ug/L	0.50		10	1
71-43-2	Benzene	ND	U	ug/L	0.50		10	1
107-06-2	1,2-Dichloroethane	ND	U	ug/L	0.50		10	1
79-01-6	Trichloroethene	ND	U	ug/L	0.50		10	1
78-87-5	1,2-Dichloropropane	ND	U	ug/L	0.50		10	1
75-27-4	Bromodichloromethane	ND	U	ug/L	0.50		10	1
108-10-1	4-Methyl-2-Pentanone	ND	U	ug/L	0.50		50	1

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-8922

Report of Analysis

Client:	MACTEC Inc.	Date Collected:	02/07/06
Project ID:	D003826 Region 8 Dry Cleaners-American MEC02060003	Date Received:	02/08/06
Customer Sample No.:	AMPW00102101XX	Lab Sample ID:	X1523-01
Test:	VOC-TCLVOA 4.3-10NP	SDG ID:	X1523
Analytical Method:	EPA OLM04.3 - VOA	% Moisture:	100.00
Result Type:		DataFile:	VF000987

CAS Number	Parameter	Results	Qualifier	Units	DL	Retention Time	DF	DIL/RE
108-88-3	Toluene	ND	U	ug/L	0.50	10	1	
10061-02-6	t-1,3-Dichloropropene	ND	U	ug/L	0.50	10	1	
10061-01-5	cis-1,3-Dichloropropene	ND	U	ug/L	0.50	10	1	
79-00-5	1,1,2-Trichloroethane	ND	U	ug/L	0.50	10	1	
591-78-6	2-Hexanone	ND	U	ug/L	0.50	50	1	
124-48-1	Dibromochloromethane	ND	U	ug/L	0.50	10	1	
106-93-4	1,2-Dibromoethane	ND	U	ug/L	0.50	10	1	
127-18-4	Tetrachloroethene	ND	U	ug/L	0.50	10	1	
108-90-7	Chlorobenzene	ND	U	ug/L	0.50	10	1	
100-41-4	Ethyl Benzene	ND	U	ug/L	0.50	10	1	
126777-61-2	m/p-Xylenes	ND	U	ug/L	0.50	10	1	
95-47-6	o-Xylene	ND	U	ug/L	0.50	10	1	
100-42-5	Styrene	ND	U	ug/L	0.50	10	1	
75-25-2	Bromoform	ND	U	ug/L	0.50	10	1	
98-82-8	Isopropylbenzene	ND	U	ug/L	0.50	10	1	
79-34-5	1,1,2,2-Tetrachloroethane	ND	U	ug/L	0.50	10	1	
541-73-1	1,3-Dichlorobenzene	ND	U	ug/L	0.50	10	1	
106-46-7	1,4-Dichlorobenzene	ND	U	ug/L	0.50	10	1	
95-50-1	1,2-Dichlorobenzene	ND	U	ug/L	0.50	10	1	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	U	ug/L	0.50	10	1	
120-82-1	1,2,4-Trichlorobenzene	ND	U	ug/L	0.50	10	1	
000556-67-2	Cyclotetrasiloxane, octamethyl-	11	J	ug/L	0	0	1	TIC
	unknown22.98	6.2	J	ug/L	0	0	1	TIC
	unknown27.33	15	J	ug/L	0	0	1	TIC