# Pre-Remedial Design Investigation Work Plan

## Jack's Drycleaners Site (734112)
## Brewerton, New York

*Prepared for*

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

*Prepared by*

EA Engineering, P.C., and Its Affiliate
EA Science and Technology
6712 Brooklawn Parkway, Suite 104
Syracuse, NY 13211
(315) 431-4610

July 2012
Version: DRAFT
EA Project No.: 14368.38

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Project Manager

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| | |
|---|---|
| CVOC | Chlorinated Volatile Organic Compounds |
| DCE | Dichloroethene |
| DER | Department of Environmental Remediation |
| DHB | *Dehalobacter* |
| DHC | *Dehalococcoides* |
| DO | Dissolved Oxygen |
| DSM | *Desulfuromonas* |
| EPA | United States Environmental Protection Agency |
| $f_{oc}$ | Fraction Organic Carbon |
| FS | Feasibility Study |
| HASP | Health and Safety Plan |
| IRM | Interim Remedial Measure |
| MGN | *Methanogens* |
| NAD | North American Datum |
| NYSDEC | New York State Department of Conservation |
| ORP | Oxidation Reduction Potential |
| PCE | Tetrachloroethene |
| PID | Photoionization Detection |
| QAPP | Quality Assurance Project Plan |
| RD | Remedial Design |
| RI | Remedial Investigation |
| TCE | Trichloroethene |
| U.S. | United States |
| VC | Vinyl Chloride |
| VOC | Volatile Organic Compound |

# 1. INTRODUCTION

This work plan describes the activities proposed for the pre-remedial design (RD) investigation at the Jack's Drycleaners site (734112) located in the village of Brewerton, New York (Figure 1). EA will be conducting a pre-RD investigation to assess the potential effectiveness of the recommended remedial alternative in meeting the remediation goals and objectives defined by the feasibility study (FS), to be completed by EA following the implementation of this work plan. The objectives of the pre-RD investigation are as follows:

- Determine if natural attenuation processes are occurring under current conditions.
- Evaluate the hyrdogeologic, geochemical, and microbiological characteristics to define pre-RD parameters for recommended remedial alternative.

EA's Generic Field Activities Plan[1] will provide the basis for conducting the pre-RD field investigation activities at the Jack's Drycleaners site. The protocol and procedures for this investigation will be conducted in accordance with New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation, May 2010[2].

## 1.1 SITE HISTORY

### 1.1.1 Operational History

According to a review of town of Cicero assessment information for the site, the current 1,400 $ft^2$ structure was built in 1945. According to discussions with the property owner and nearby residents, the site was historically utilized as a gasoline station in the 1950s and as a dry-cleaning facility since at least 1972. Jack's Drycleaners site is currently utilized as a dry-cleaning facility and is owned by Mr. Young Kyu Shin. The parcel is approximately 0.17-acres and is zoned as commercial. The area immediately behind Jack's Drycleaner's was identified as the potential source area, which was later identified as a septic system connected to the drycleaners building. The septic system and impacted soils were removed as an interim remedial measure (IRM) conducted during the remedial investigation (RI) at the site.

### 1.1.2 Site Characterization

Site investigations were initiated following the identification of chlorinated volatile organic compounds (CVOCs) in soil and groundwater during an investigation at an adjacent property south of Jack's Drycleaners. Based upon the data collected during of the subsurface

1. EA Engineering, P.C. 2007. Generic Field Activities Plan for Work Assignments under NYSDEC Contracts D004438 and D004441. September.
2. NYSDEC. 2010. Division of Environmental Remediation DER-10 Technical Guidance for Site Investigation and Remediation. May.

investigation and groundwater sampling activities associated with the adjacent site, the NYSDEC DER tasked EA to complete a site characterization at the Jack's Drycleaners site. EA completed a site characterization at the site from February to March 2008 which included the installation of four soil borings and groundwater monitoring wells, excavation of two test pits, collection of two soil vapor samples, one ambient air sample, and collection of eight groundwater samples for volatile organic compounds (VOCs). Four of the groundwater samples were collected from the newly installed groundwater monitoring wells and four were collected from existing site monitoring wells.

Soil samples collected from one test pit and a soil boring contained concentrations of tetrachloroethene (PCE) and other CVOCs including trichloroethene (TCE), *cis*-1,2-dichloroethene (DCE), ethylbenzene, xylenes, and methylene chloride. Soil vapor and ambient air samples also contained concentrations of PCE and xylenes.

During the investigation, the groundwater flow direction was determined to flow southeast across the site. Groundwater samples collected downgradient and within the former source area contained CVOCs of concern that exceeded the NYSDEC groundwater standards including PCE, TCE, *cis*-1,2-DCE, *trans*-1,2-DCE, and vinyl chloride (VC).

### 1.1.3 Remedial Investigation

Following the completion of the site characterization, NYSDEC tasked EA with the completion of the RI and FS. The RI was completed in 2009 and 2010 to define the vertical and horizontal extents of the dissolved phase CVOC groundwater plume, as well as to perform an IRM of disconnecting and removing the septic system, which was the supposed source area. Fourteen groundwater monitoring wells were added to the existing monitoring well network, and were sampled before and after the completion of the IRM. Subsurface soil samples and sub-slab soil gas samples were also collected from beneath the foundation of the Jack's Drycleaners structure to assess the sub-slab environment and determine if migration through foundation cracks or utilities from the interior of the building had contributed to the CVOC impacts observed within groundwater.

The RI revealed that CVOCs exceeded standards, criteria, and guidance (SCGs) in shallow groundwater as far as 360 ft downgradient from the suspected source area, and in bedrock groundwater as far as 450 ft downgradient from the suspected source area. The shallow unconfined groundwater and bedrock aquifer appear to be hydraulically connected, and flow in an east/southeast direction across the area. CVOCs detected included PCE and breakdown compounds TCE, *cis*-1,2-DCE, *trans*-1,2-DCE, and VC.

Sub-slab soil and soil gas samples indicated the presence of CVOCs beneath the building; however, due to the continued use of cleaning solvents, indoor air was not sampled.

# 2. PRE-REMEDIAL DESIGN INVESTIGATION FIELD ACTIVITIES

This section provides a summary of data that will be collected during the pre-RD investigation activities along with the number, types, and locations of samples. The specific procedures for the collection, analysis, and evaluation of data that will be legally and scientifically defensible are presented in the Quality Assurance Project Plan (QAPP) Addendum provided in Jacks Drycleaners Site Characterization QAPP (EA 2007)[3]. Table 1 of this report identifies sample collection and analysis for the pre-RD investigation. The site-specific hazards and levels of protective measures to be implemented in order to protect the safety and health of field personnel are detailed in the site Health and Safety Plan (HASP) Addendum (EA 2007)[4] prepared during the Site Characterization Investigation which will be kept on site during the field activities. Emergency phone numbers and directions to the hospital are provided as Appendix A to this report. Daily field reports will be completed for each day on site that field activities are conducted during the course of the work. Any and all original sampling forms used during the field activities will be submitted to NYSDEC as part of the final report. Field and sampling procedures will be photo documented where appropriate.

## 2.1 ENVIRONMENTAL SAMPLING

EA will collect the following samples during the pre-RD field investigation. Specific sampling protocols for each media are described in more detail in the following section.

- Four subsurface soil samples will be collected to determine characteristics for *in-situ* fraction organic carbon ($f_{oc}$) ratios and soil bulk density (grain size analysis).

- Fifteen groundwater samples will be collected and analyzed for monitored natural attenuation parameters as defined in the QAPP Addendum[3] (Table 1). Groundwater samples will be field screened for dissolved oxygen (DO), pH, conductivity, and oxidation reduction potential (ORP). In addition, hydraulic conductivity testing will be completed on selected monitoring wells in the aquifer.

- Bio-traps will be placed in six monitoring wells within the plume to determine the existence and structure of *in-situ* microbiological communities within the aquifer. The microbiological data will be evaluated to determine if indigenous organisms present are capable of degrading CVOCs and will provide initial design parameters for the proposed enhanced anaerobic bioremediation remedial alternative.

### 2.1.1 Soil Borings and Subsurface Soil Sampling

Two soil borings will be advanced for the purposes of collecting subsurface soil samples from vertically discrete depth intervals. Soil borings will be advanced using direct-push technologies

3 EA. 2007. Quality Assurance Project Plan Addendum.
4 EA. 2007. Health and Safety Plan Addendum.

(Geoprobe®). All soil borings will be located within the known dissolved-phase plume. Two subsurface soil samples will be collected using macro core sampler at each soil boring location from the 7 to 12 ft depth interval, and from the 15 to 20 ft depth interval which are within the screen interval of the site shallow monitoring wells within the plume.

The subsurface soil samples will be submitted for analysis of total organic carbon (TOC) via the Lloyd Kahn Method. Analytical results for TOC will be used to determine the $f_{oc}$ ratio of the subsurface environment. In addition, a soil characteristic analysis (grain size analysis) will be performed on the subsurface soil samples to determine soil bulk densities via American Society for Testing and Materials D-422. Each of these analyses will provide input parameters for the design of the enhanced reductive dechlorination alternative. Figure 2 identifies the proposed soil boring locations.

### 2.1.2 Groundwater Sampling

Fifteen of the 20 existing monitoring wells will be included in a groundwater sampling event. Groundwater samples will be collected using U.S. Environmental Protection Agency (EPA) Region 2 low-flow sampling procedures and protocols.

Groundwater monitoring well sampling procedures will include water level measurements, well purging, field water quality measurements (including DO and ORP), and sample collection at each monitoring well location. Samples will be analyzed for VOCs by USEPA 8260. Purging and sampling log forms will be used to record well purging, water quality measurements, and sampling flow rates. The objective of the groundwater sampling protocol is to obtain samples that are representative of the aquifer in the well vicinity so that analytical results reflect the composition of the groundwater as accurately as possible.

Rapid and significant changes can occur in groundwater samples upon exposure to sunlight, temperature, and pressure changes at ground surface. Therefore, groundwater sampling will be conducted in a manner that will minimize interaction of the sample and the surface environment. The equipment and protocol for collecting groundwater samples are described below. The existing monitoring wells to be sampled as part of this investigation are displayed on Figure 3.

## 2.2 PURGING AND SAMPLING EQUIPMENT

Monitoring well purging will be performed and groundwater samples will be collected from the monitoring wells using a peristaltic pump and dedicated section of polyethylene tubing. Equipment for sampling will include the following:

- Peristaltic pump to be used for well purging.
- Electronic water level measurement unit with accuracy of 0.01 ft.
- Flow measurement device (containers graduated in milliliters) and stop watch.

- Water quality meter (Horiba U-52 or similar) with flow-through cell (flushed with distilled water before use at each well) for field measurement of pH, specific conductance, temperature, ORP, turbidity, and DO.

- Photoionization detector (PID) instrument (MiniRAE or similar) to monitor vapor concentrations during purging and sampling as required by the site-specific HASP Addendum[4].

## 2.3 GROUNDWATER SAMPLING PURGE METHOD

The following procedures will be used for monitoring well groundwater sampling:

- Wear appropriate personal protective equipment as specified in the site-specific HASP Addendum[4]. In addition, samplers will use new nitrile sampling gloves for the collection of each sample.

- Unlock and remove the well cap.

- Obtain PID readings and record them on the field sampling form.

- Measure the static water level in the well with an electronic water level indicator. The water level indicator will be washed with Alconox detergent and water, then rinsed with deionized water between individual monitoring wells to prevent cross-contamination.

- Calculate the volume of water in the well.

- Purge 1-3 well volumes of water from the well, using the method described below.

  — Pump with a peristaltic pump equipped with new polyethylene tubing dedicated to each well. Set pump or tubing intake at the approximate mid-point of the monitoring wells screened interval and start purging.

- Allow field parameters of pH, ORP, DO, specific conductivity, turbidity, and temperature to stabilize before sampling. Purging will be considered complete if the following conditions are met:

  — Consecutive pH readings are ±0.1 pH units of each other
  — Consecutive DO readings are ±10 percent of each other
  — Consecutive ORP readings are ±0.10 units of each other
  — Consecutive measured specific conductance is ±3 percent of each other
  — Turbidity < 50 nephelometric turbidity units
  — Purge rate of 250 ml/min with a draw down less than 0.3 ft.

The flow rate during monitoring well purging will not exceed 250 mL per minute. If these parameters are not met after purging a volume equal to 1-3 times the volume of standing water in the well or within 2-hours of the start of well purging, the EA Project Manager will be contacted to determine the appropriate action(s).

- If the well is purged dry before the required volumes are removed, the well may be sampled when it recovers (recovery period up to 24 hours).

- Obtain final field measurement of pH, DO, ORP, temperature, turbidity, and specific conductivity and record on the purging and sampling form. The water quality instrument will be flushed with de-ionized water between wells to prevent cross-contamination.

- Collect the sample aliquot for VOC analysis directly from the polyethylene tubing. Sample bottles containing appropriate preservative for the parameter to be analyzed will be obtained from the laboratory.

- Place analytical samples in cooler packed with ice and chill to 4°C. Samples will be shipped to the analytical laboratories within 24 hours.

- The polyethylene suction/discharge line will be properly discarded.

- Re-lock well cap.

- Fill out field sampling form, labels, custody seals, and chain-of-custody forms.

Groundwater samples will be placed in appropriate sample containers, sealed, and submitted to the laboratory for analysis. The samples will be labeled, handled, and packaged following the procedures described in the site-specific QAPP Addendum[3]. Quality assurance/quality control samples will be collected at the frequency detailed in Table 1.

Each groundwater sample will be analyzed by Chemtech Consulting Group, Inc. for monitored natural attenuation parameters and VOCs as defined in Table 1. All analyses will be conducted in accordance with the NYSDEC Analytical Services Protocol.

## 2.4 HYDROGEOLOGIC EVALUATION

Prior to the start of the groundwater sampling event, water levels will be collected from the entire monitoring well network to prepare a groundwater contour map and evaluate groundwater flow patterns across the site.

In addition to water level gauging, slug tests will be performed at a subset of monitoring wells (estimated to be five wells located across the site) to determine site-specific hydraulic conductivities and groundwater velocities. Hydraulic conductivity will be used to determine potential effectiveness of an enhanced reductive dechlorination remedy. It is anticipated that

both rising and falling head tests will be conducted in wells where the screen does not bridge the water table.

### 2.4.1 General Slug Test Procedures

Slug tests consist of inserting (rising head test) and/or removing (falling head test) either a slug of inert material of known volume, or a "slug" of water of known volume. Either method will cause an instantaneous rise or fall and subsequent recovery of the water table within the aquifer. The following general procedures will be used for both the rising head and falling head tests:

- All well intrusive equipment must be decontaminated prior to and after use.
- The accuracy of the reading(s) from the pressure transducer and data logger output should be verified prior to beginning any test, periodically during the test, and immediately after the test by measuring groundwater level with a water level indicator.
- All water level tapes and meters should be calibrated against one master tape which is traceable to the National Institute of Standards and Technology. This calibration should be recorded in the field logbook.
- Repeated measurements at any one well should be made using the same tape.
- One field logbook shall be used for the Jack's Drycleaners site. The first page must include the well number, location, date of test, persons conducting the test, and reference plane for drawdown measurements. Next page(s) must be in table format with the columns designating time/date, water volume withdrawn/added or displaced by the inert cylinder, water levels, etc.

Following the tests, the collected data is to be reduced from feet of water above pressure transducer to potentiometric head (in feet), relative to the initial water level as measured from the top of casing. Alternatively, data can be reduced electronically when downloaded from the transducers into software such as AQTESOLV®; this is software designed to calculate hydraulic conductivity, storativity, and other aquifer properties from data sets collected during slug tests.

Text files, which are generated by commonly used pressure transducers, can be imported into the software and data can also be manually entered or pasted from a spreadsheet. After importing, the raw data can be manipulated using mathematical functions. For example, hydraulic head data can be converted to drawdown data. The program will also produce visual and automatic curve matching methods for confined, unconfined and leaky aquifers. Visual curve matching is analogous to traditional methods of aquifer test analysis with graph paper and type curves. The software is also capable of producing error logs which enable the user to quickly identify any deficiencies or inconsistencies detected in the data set.

### 2.4.2 Rising Head Test

The rising head test involves removing a slug of inert material of known volume or a "slug" of water of known volume. The rise and subsequent recovery of the water table is monitored using a data logger, which can be downloaded into AQTESOLV® as described above. The following procedure will be used to perform the rising head test:

- Measure static water level in monitoring well and total depth of the well.
- Hang pressure transducer probe in well at appropriate depth.
- Connect pressure transducer to data logger.
- Submerge bailer below water table.
- Allow water level in well to re-equilibrate to undisturbed depth.
- Measure depth to water using an electronic water level meter.
- Start the data logger and remove a volume of water via bailer.
- Record the rate of recharge with the data logger and water level meter (for backup) until the water level has recovered to approximately 85 percent or greater.

### 2.4.3 Falling Head Test

The falling head test involves inserting a slug of inert material of known volume or a "slug" of water of known volume. The fall and subsequent recovery of the water table is monitored using a data logger, which can be downloaded into AQTESOLV® as described above. The following procedure will be used to perform the falling head test:

- Measure static water level in monitoring well.
- Hang pressure transducer probe in well at appropriate depth.
- Connect pressure transducer to data logger.
- Allow water level in well to re-equilibrate to undisturbed depth.
- Start the data logger and insert slugs to displace a volume of water instantaneously.
- Record the water level using the data logger and water level meter until the water level has recovered to 85 percent or greater.

## 2.5 MICROBIOLOGICAL SAMPLING AND ANALYSIS

As part of the pre-RD investigation, microbiological samples will be collected utilizing bio-trap samplers at six monitoring well locations located across the groundwater contamination plume. Bio-trap samplers will be supplied and analyzed by Microbial Insights, Inc.

The following procedures will be used for bio-trap sampling:

- Prior to installation, bio-trap samplers are to remain sealed and be stored in a refrigerator. Samplers should be stored for a minimal amount of time prior to deployment to prevent contamination.

- Purge each monitoring well approximately three well volumes prior to bio-trap sampler deployment. Purging may be accomplished using a submersible pump or dedicated bailer.

- Handle bio-traps using clean nitrile gloves (or similar).

- Attach the bio-trap sampler's nylon loop to a nylon line and suspend within the center of the screened interval.

- Allow to stabilize within the closed and locked monitoring well for a period of 30 days.

- For retrieval, open the monitoring well and pull up the bio-trap sampler. Cut and remove from the nylon line.

- Place the bio-trap sampler to a labeled zippered bag, seal, and double bag in a larger zipper bag; and immediately place on ice in a cooler. Hold time is 24-48 hours.

The community structures will be analyzed using Microbial Insights CENSUS analysis for *Dehalococcoides* spp. (DHC), *DHC Functional Genes* (tceA, bvcA, vcrA), *Dehalobacter* (DHB), *Desulfuromonas* (DSM), and *Methanogens* (MGN). Further biofeasibility testing may be performed based on the results of the bio-trap analyses.

## 2.6 DECONTAMINATION PROCEDURES

Non-dedicated equipment and tools used to collect samples for chemical analysis will be decontaminated prior to and between each sample interval using an Alconox rinse and potable water rinse. Additional cleaning of the equipment with steam may be needed under some circumstances. Decontamination fluids will be discharged to the ground surface unless a visible sheen or odor is detected either on the equipment or the fluids, at which point the decontamination water will be staged in an appropriate container and disposed of appropriately.

## 2.7 LABORATORY ANALYSIS AND REPORTING

It is anticipated that preliminary analytical results for microbiological, soil and groundwater samples will be available within 2 weeks of receipt at the laboratory, and final results will be provided to the NYSDEC within the standard turnaround time (i.e., 30 days).

### 2.7.1 Data Validation/Determination of Usability

The collection and reporting of reliable data is a primary focus of the sampling and analytical activities. Samples collected will be validated by a party independent (Environmental Data Validation, Inc.) of the laboratory that performed the analyses and the consultant that performed the field work. A usability analysis will be conducted by a qualified data validator and a Data Validation/Usability Report will be submitted to NYSDEC 30 days following the data validator's data package receipt. Laboratory and field data will be reviewed to determine the limitations, if any, of the data, and to ensure that the procedures are effective and that the data generated provide sufficient information to achieve the project objectives. An independent qualified third-party will evaluate the analytical data according to NYSDEC DER Data Usability Summary Report guidelines, as detailed in the Generic QAPP.

# 3. POST-FIELD INVESTIGATION UPDATES

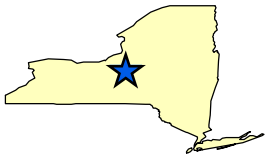
## 3.1 SITE SURVEY

Following the completion of the pre-RD field investigation activities, a certified land surveyor will survey the horizontal locations and ground surface elevations of newly advanced soil borings. Any additional sampling locations will be updated to the base map developed during the RI.

Vertical control will be established to the nearest +/-0.1 ft for all ground surface elevations. Horizontal coordinates will be given in the State Plane Central Zone (feet), North American Datum (NAD) of 1983, to an accuracy of +/-0.5 ft.

## 3.2 PRE-REMEDIAL DESIGN REPORT

After pre-RD field investigation activities are completed, a report will be prepared that summarizes the findings of the field investigation and discusses potential implications for the recommended enhanced anaerobic bioremediation remedial alternative. The report will include all field data obtained during investigation activities, including field notes and AQTELOLV® output from slug test data, soil sampling logs from soil boring activities, well logs from groundwater sampling activities, groundwater contour maps from monitoring well gauging, and daily field reports with photos from each day field activities were completed. This report will be submitted to NYSDEC for review.

Legend

★ Jack's Drycleaners

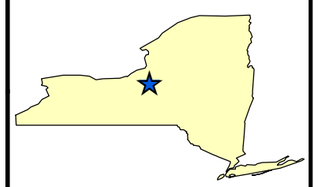
0 0.5 1 2 Miles

Source: ESRI Base Layer

# JACK'S DRYCLEANERS (734112)
# PRE-DESIGN INVESTIGATION
# BREWERTON, NEW YORK

FIGURE 1
Site Location

| PROJECT MGR: | DESIGNED BY: | CREATED BY: | CHECKED BY: | SCALE: | DATE: | PROJECT NO: | FILE NO: |
|---|---|---|---|---|---|---|---|
| JAG | CJS | DCC | JAG | AS SHOWN | JULY 2012 | 14368.38 | GIS/PROJECTS/ FIGURE1.MXD |

**Legend**

- Jack's Drycleaners
- Proposed soil boring location
- Approximate 0 ppb VOC Isopleth (July 2011) for shallow groundwater
- Approximate 0 ppb VOC Isopleth (July 2011) for bedrock groundwater

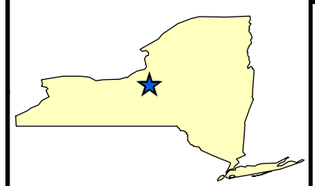
Source: NYS GIS Clearing House

JACKS DRYCLEANERS (734112)
PRE-DESIGN INVESTIGATION
BREWERTON, NEW YORK

FIGURE 2
Proposed Soil Boring Locations

Feet
0 62.5 125 250

| PROJECT MGR: | DESIGNED BY: | CREATED BY: | CHECKED BY: | SCALE: | DATE: | PROJECT NO: | FILE NO: |
|---|---|---|---|---|---|---|---|
| JAG | MEM | MEM | JAG | AS SHOWN | JULY 2012 | 14368.38 | GIS/PROJECTS/ FIGURE6.MXD |

**Legend**

- Existing Bedrock Monitoring Well Included in MNA Sampling
- Existing Overburden Monitoring Well Excluded From MNA Sampling
- Existing Overburden Monitoring Well Included in MNA Sampling

Source: NYS GIS Clearing House

JACKS DRYCLEANERS (734112)
PRE-DESIGN INVESTIGATION
BREWERTON, NEW YORK

FIGURE 3
MNA Groundwater Sampling
Monitoring Well Network

Feet
0 50 100 200

| PROJECT MGR: | DESIGNED BY: | CREATED BY: | CHECKED BY: | SCALE: | DATE: | PROJECT NO: | FILE NO: |
|---|---|---|---|---|---|---|---|
| JAG | MEM | MEM | JAG | AS SHOWN | JULY 2012 | 14368.38 | GIS/PROJECTS/ FIGURE6.MXD |

# TABLE 1 PRE-DESIGN INVESTIGATION ANALYTICAL PROGRAM

| | Sample Matrix | VOC | Alkalinity | Methane/ ethane/ ethene | Sulfate | Nitrate | TAL Metals | Grain Size Analysis | TOC |
|---|---|---|---|---|---|---|---|---|---|
| **GROUNDWATER SAMPLING PROGRAM** | | | | | | | | | |
| No. of Samples | Aqueous | 15 | 15 | 15 | 15 | 15 | 15 | --- | 15 |
| Field Duplicate | | 1 | 1 | 1 | 1 | 1 | 1 | --- | 1 |
| Trip Blank[(a)] | | 1 | --- | --- | --- | --- | --- | --- | --- |
| MS/MSD | | 2 | 2 | 2 | 2 | 2 | 2 | --- | 2 |
| **Total No. of Analyses** | | 19 | 18 | 18 | 18 | 18 | 18 | --- | 18 |
| **SOIL SAMPLING PROGRAM** | | | | | | | | | |
| No. of Samples | Soil | --- | --- | --- | --- | --- | --- | 4 | 4 |
| Field Duplicate | | --- | --- | --- | --- | --- | --- | --- | --- |
| MS/MSD | | --- | --- | --- | --- | --- | --- | --- | --- |
| **Total No. of Analyses** | | --- | --- | --- | --- | --- | --- | 4 | 4 |

(a) Trip blanks are required for VOC sampling of aqueous media at a rate of one per sample shipment.

NOTE: VOC = Volatile organic compound
TAL = Target Analyte List metals
TOC = Total organic carbon
--- = No Sample Taken
MS/MSD = Matrix Spike/Matrix Spike Duplicate
Laboratory quality control samples will be collected at a rate of 1 per 20 samples, per matrix.
VOC by U.S. Environmental Protection Agency (EPA) Method 8260B; Alkalinity by EPA Method 310.1; Methane/Ethane/Ethene by RSK175; Sulfate by EPA Method 375.4; Nitrate by EPA Method 352.1; TAL metals by EPA Method 6010B; Gain Size Analysis by ASTM-D422; and TOC by EPA Method 9060 (aqueous), Lloyd Kahn Method (non-aqueous).

# Appendix A

# Emergency Numbers and Directions to Hospital

# APPENDIX A

## EMERGENCY TELEPHONE NUMBERS AND HOSPITAL DIRECTIONS

| SITE: Jack's Drycleaner Site, 9626 Brewerton Road, Brewerton, New York | |
|---|---|
| ***Police:*** Onondaga County Sheriff's Department | 9-1-1 |
| ***Fire:*** Brewerton Fire Department | 9-1-1 |
| ***Ambulance:*** | 9-1-1 |
| ***Hospital:*** Al Lee Memorial Hospital, 7 Bridge St., Phoenix, New York | (315) 695-4100 |
| ***New York Regional Poison Control Center: 750 East Adams Street, Syracuse, NY*** | (315) 464-7078<br>800-222-1222 |
| **Directions to Al Lee Memorial Hospital, 7 Bridge St., Phoenix, New York**<br><br>Start at 9626 Brewerton Road, Brewerton going toward Jerome Street. Continue on US-11. Turn left on County Route 37 (CR-37). Turn left on CR-12. Turn right on Main Street (CR-57). Turn left on Bridge Street, Phoenix, NY. End at Al Lee Memorial Hospital, 7 Bridge Street.<br><br>Total trip is 11.9 miles; travel time is approximately 22 minutes. | |
| Program Safety and Health Officer:<br>***Peter Garger, CIH*** | (410) 771-4950 |
| Program Manager:<br>***Christopher Canonica, P.E.*** | (315) 431-4610 |
| EA Project Manager<br>***Judy Graham*** | (315) 431-4610 |
| In case of spill, contact *Judy Graham* | (315) 431-4610 |
| EA Medical Services<br>EMR<br>4360 Chamblee Dunwoody Road, Suite 202<br>Atlanta, Georgia 30341<br>***Contact: Dr. Elayne F. Theriault*** | (800) 229-3674 |
| Site Manager/Site Health and Safety Officer:<br>***Megan Miller*** | (315) 431-4610 |
| In case of accident or exposure incident, contact Corporate Health and Safety Officer<br>***Peter Garger*** | (410) 771-4950 |